The California Government Code does not require the collection of fees; rather, it limits the collection of fees. If a school district chooses to impose impact fees on new development, building permits may not be issued prior to the payment of the required fees. The affected school districts require the payment of school fees up the State's specified maximum. School fees are collected by the City of Milpitas, and transferred to the applicable school district.

Based on the current statutory limit for school fees, development envisioned by the Specific Plan in the Midtown planning area would generate approximately $9.3 million for the affected school districts over the next 20 years.[5]

It is anticipated that the school districts would have adequate capacity to absorb the additional students generated from the Midtown planning area over the next 20 years if the developer fee structure remains in place. The affected school districts would accommodate anticipated students within their existing and planned system. If required, the expansion of facilities on existing school district property would not cause significant impacts to the physical environment as the facilities would be developed on previously disturbed sites. The fair share cost of these facilities would be borne by the project developer through the collection of school fees in accordance with California Government Code 65995 and Education Code 17620. For these reasons, no significant environmental impacts would result form the provision of school services. No mitigation is required.

PARKS

The City of Milpitas currently has a citywide standard of 5 acres of parkland per 1,000 population. As specified in Policy 3.24 of the Midtown Milpitas Specific Plan, new residential development in the Midtown planning area would provide public parks at a ratio of 3.5 acres per 1,000 persons, which is lower than the current parkland standard. The reduction for required parkland is desirable in the Midtown area to ensure that development density and intensity are higher in Midtown than other areas of the City. The proposed density and intensity of development would encourage pedestrian activity and take advantage of transit opportunities. In the Midtown area, land area is limited. The development of large expanses of parkland is not feasible in combination with other desired transit-oriented land uses. The proposed General Plan Amendment would modify the parkland requirement in the Midtown area only.

With adoption of the Midtown Milpitas Specific Plan, up to 1.5 acres per 1,000 persons of the requirement could be developed as usable on-site common or private open space within new residential developments. The remaining 2.0 acres per 1,000 would be required as public parkland. Developers of residential projects that are 20 units or less would be able to pay a fee in-lieu of providing parkland. These in-lieu fees would be used in to develop new park facilities and trails within the Midtown planning area. Any new facilities would be located within the Midtown planning area.

With the Specific Plan, the City would also establish a separate account for park in-lieu fees collected from development in Midtown in order to ensure that the fees go toward improving parks and open space

[5] This total includes 4,860 residential units multiplied by an average of 900 square foot per unit, plus 1,081,000 square feet of commercial/office development multiplied by the school fees as limited by Government Code Section 65995.

in Midtown. With this provision, the dedication of park fees to the Midtown planning area will ensure that substantial physical deterioration of the park facilities would not occur. Other potential environmental impacts of park and trail development are addressed in the other sections of this Draft EIR (e.g., potential biological resource impact of trail development, or development of vacant lands in the Midtown planning area). No additional environmental impacts would occur with the development of the proposed parklands.

CHAPTER 3.7. BIOLOGICAL RESOURCES

This chapter describes regulations protecting sensitive biological resources, the biological resources that occur or potentially occur in the Specific Plan planning area, and the potential impacts to sensitive biological resources that could occur with implementation of the Specific Plan. Mitigation measures for any identified significant impacts are identified. This assessment is based on familiarity with current planning area conditions obtained through a planning area reconnaissance survey (conducted on September 13, 2000), and earlier environmental review documents for projects in the planning area.

3.7.1. EXISTING SETTING

REGULATORY BACKGROUND

Biological resources in California are protected and/or regulated by a variety of federal, State and local laws and policies, as described below. New development proposals associated with the Specific Plan would be reviewed for their potential to affect protected species and habitat. The review process for projects potentially affecting protected biological resources would include coordination with the appropriate agencies prior to project approval.

Special-Status Species

Special-status species include plants and animals that are legally protected, or that are otherwise considered sensitive by federal, State, or local resource conservation agencies and organizations. This includes species listed as State and/or federally Threatened or Endangered, those considered as candidates for listing as Threatened or Endangered, species identified by California Department of Fish and Game (CDFG) and/or United States Fish and Wildlife Service (USFWS) as Species of Special Concern, and plants considered by the California Native Plant Society (CNPS) to be rare, threatened or endangered (i.e., plants on CNPS List 1B).

A number of occurrences of special-status wildlife species in the vicinity of the planning area are documented in the California Natural Diversity Database (CNDDB 2000). However, most of these species are generally restricted to sensitive plant communities, such as vernal pools, salt and brackish marsh, and tidal sloughs, which are not present in the planning area. Sensitive biological resources having potential habitat in the planning area are discussed later in this chapter.

Federal Endangered Species Act. Pursuant to the federal Endangered Species Act (ESA), the USFWS has authority over projects that may affect the continued existence of a federally-listed species. Either an incidental "take" permit, under Section 10(a) of the ESA, or an interagency consultation, under Section 7 of the ESA, is required if the project may affect a federally-listed species. Under the ESA, the definition of take includes killing, harming, or harassing. USFWS has also interpreted the definition of harm to include substantial habitat modification.

California Endangered Species Act. Pursuant to the California Endangered Species Act (CESA), a permit from CDFG is required for projects that could result in the take of a State-listed Threatened or Endangered species. Under CESA, take is defined as an activity that would directly or indirectly kill an individual of a species, rather than also including "harm" or "harass" as is included in the federal act. As a result, the threshold for a take under the CESA is higher than under the ESA (i.e., habitat modification is not necessarily considered take under CESA).

Waters of the United States, including Wetlands

The United States Army Corps of Engineers (USACE) regulates Waters of the United States and wetlands under the federal Clean Water Act. Pursuant to Section 404 of the Clean Water Act, a permit must be obtained from USACE prior to any activity that involves the discharge of dredged or fill materials into Waters of the United States. Waters of the United States include wetlands (e.g., special aquatic sites such as seasonal ponds and marshes) and other jurisdictional waters, such as lakes, ponds, rivers, and intermittent drainages. Wetlands are defined as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. The majority of jurisdictional wetlands meet three wetland delineation criteria: hydrophytic vegetation, hydric soil types, and wetland hydrology.

In general, if fill to be placed in Waters of the United States is limited to an area of no more than ½ acre, such fill could occur through a Nationwide Permit (NWP) program, provided the project satisfies the terms and conditions of the particular NWP. Where Waters of the United States could be affected in excess of ½ acre, a detailed wetland delineation would be required determining the extent of jurisdictional wetlands that would be affected and an individual permit would be required.

Local Policies and Ordinances

The Biotic Resources section of the City of Milpitas General Plan (1994) includes several principles designed to conserve and protect natural resources. Guiding Principle 4.b-G-1 requires the protection and conservation of open spaces that provide wildlife habitat and maintain ecological patterns, and Guiding Principle 4.b-G-2 requires preservation and protection of special-status species populations and habitat. A number of Implementing Policies (4.b-I-1 through 4.b-I-5) are presented to facilitate adherence to these principles, including regulation of vegetation removal on hillsides, preservation of remaining stands of trees, minimization of disruptive effects on natural vegetation resulting from recreation activities, preparation of biological assessments for project sites that support sensitive species or their habitats, and utilization of information regarding sensitive species.

In addition, there are City ordinances that protect certain existing trees and require permits for tree removal (Sections X-2-4.02 and X-2-7.01). Trees protected under the Tree Protection Ordinance include: trees with a 56-inch or greater truck circumference if located on developed residential property; some trees with a 37-inch or greater truck circumference, depending on land use characteristics; and all heritage trees and specimen plantings.

VEGETATION AND WILDLIFE

The planning area is largely developed with commercial, industrial, residential, and public facility buildings. Less than ten percent of the planning area includes undeveloped and/or vacant lands. Undeveloped land includes areas that have never been developed, while vacant land includes those that may have been developed but are currently vacant or supporting a transitional use, such as truck storage.

Due to the developed nature of the planning area, vegetation in most areas is restricted to ornamental landscape plantings. Undeveloped and vacant lots are typically adjacent to development and are either barren or vegetated with introduced annual grasses, such as Italian ryegrass (*Lolium multiflorium*) wild oat (*Avena spp.*), and forbs such as Russian thistle (*Salsola tragus*), dove weed (*Eremocarpus setigerus*), and bindweed (*Convolvulus arvensis*). Natural vegetation in the planning area occurs primarily along the creeks that flow through the area, including Berryessa Creek, Penitencia Creek, and Lower Wrigley Ford. Although these creeks are largely channelized and portions are concrete lined, some areas (primarily in the northern portion of the planning area) support wetland and riparian vegetation, such as willows (*Salix* spp.) and cattails (*Typha* spp.).

Due to the urbanized character of the planning area, wildlife diversity is expected to be relatively low. Common wildlife species observed during the field survey or expected to occur in developed areas include western fence lizard (*Sceloporus occidentalis*), rock dove (*Columba livia*), northern mockingbird (*Mimus polyglottus*), American crow (*Corvus brachyrhynchos*), Brewer's blackbird (*Euphagus cyanocephalus*), European starling (*Sturnus vulgaris*), house finch (*Carpodacus mexicanus*), house sparrow (*Passer domesticus*), house mouse (*Mus musculus*), and Norway rat (*Rattus norvegicus*). Additional species, such as burrowing owl (*Athene cunicularia*) and California ground squirrel (*Spermophilus beechyii*) may utilize undeveloped lots adjacent to developed areas, and red-shouldered hawk (*Buteo lineatus*) could nest in stands of large trees (e.g., O'Toole elms).

SENSITIVE BIOLOGICAL RESOURCES

Sensitive biological resources addressed in the following sections include those that are afforded special protection through the California Environmental Quality Act, California Fish and Game Code, ESA, CESA, and the federal Clean Water Act. Previously completed biological studies and the CDFG California Natural Diversity Database (1999) were reviewed for specific information on documented observations of special-status species in the planning area.

Special-Status Plant Species

Five special-status plants have been recorded in the vicinity of the planning area: Congdon's tarplant (*Hemizonia parryi congdonii*), Contra Costa goldfields (*Lasthenia conjugens*), alkali milk-vetch (*Astragalus tener tener*), robust spineflower (*Chorizanthe robusta robusta*), and Point Reyes bird's-beak (*Cordylanthus maritimus palustris*). Contra Costa goldfields and robust spineflower are federally-listed as Endangered and all five species are on the California Native Plant Society's 1B List (considered rare or endangered in California and elsewhere). Historically, a population of Congdon's tarplant was located near the Milpitas northern city limits (outside the planning area); however, no tarplants have been found

at this location during recent surveys (CNDDB 2000). All five of these special-status plants are considered extirpated from the vicinity of the planning area (CNPS 1994).

Special-Status Wildlife Species

A number of occurrences of special-status wildlife species in the vicinity of the planning area are documented in the California Natural Diversity Database (CNDDB 2000). However, most of these species are generally restricted to sensitive plant communities, such as vernal pools, salt and brackish marsh, and tidal sloughs. None of these sensitive plant communities are currently present in the planning area, although suitable habitat has been identified. The following sections provide more information on the species that have the greatest potential for occurring in the planning area.

California Red-Legged Frog. The only State- and/or federally-listed (i.e., Threatened or Endangered) species for which potentially suitable habitat occurs in the planning area is the California red-legged frog (*Rana aurora draytonii*). Specifically, California red-legged frogs are listed as federally Endangered, and are a California Species of Concern. Red-legged frogs prefer areas with permanent sources of fresh water that include riparian or emergent vegetation. The planning area does not include high quality habitat for the California red-legged frog, but some segments of the creeks within the planning area provide habitat that may be suitable. The planning area does not fall within the recovery area presented in the USFWS Draft Recovery Plan for the California Red-Legged Frog, and none of the creeks within the planning area are within watersheds that have known red-legged frog populations (USFWS 2000). Consequently, it is unlikely that red-legged frogs occupy any portions of the planning area, and red-legged frogs are not further considered in this analysis.

Burrowing Owl. The CNDDB contains records in the vicinity of the planning area for burrowing owl, which is a non-listed, but special-status species (California Species of Special Concern). Burrowing owls prefer grasslands and other dry, open habitats and typically nest and roost in burrow systems created by medium-sized mammals (e.g., ground squirrels) or in artificial sites (e.g., drain pipes and culverts). The nesting season for this species extends from February 1 to August 31, with a peak nesting period of April 15 to July 15. Burrowing owls have been encountered in the City (Robert Bein, William Frost & Associates 1999), and potentially suitable nesting habitat occurs at several undeveloped areas, including vacant lots between South Abel Avenue and South Main Street, from immediately north of Highway 237 to immediately south of West Capitol Avenue. Suitable habitat also occurs along Berryessa Creek near the northern boundary of the planning area. These areas of suitable habitat are depicted in Figure 3.7-1, which is provided at the end of this chapter. City staff have also observed burrowing owls in the vicinity of Hammond Way. During the field survey, a ground squirrel was observed in the vacant area on the west side of South Main Street, immediately north of Highway 237; this indicates the potential presence of suitable nest burrows.

Tricolored Blackbird. The tricolored blackbird (*Agelaius tricolor*) is a California Species of Special Concern. A limited amount of potentially suitable habitat is available for tricolored blackbird along the creeks in the planning area. However, the nearest CNDDB record for tricolored blackbird is from southern Alameda County in 1985. Therefore, tricolored blackbird is not expected to occur in the planning area, and is not further discussed in this analysis.

Raptors. Raptors (birds of prey, such as hawks and owls) are protected under Section 3503.5 of the California Fish and Game Code. Removal or destruction of an active raptor nest is considered a violation of the Fish and Game Code. Raptors could be negatively affected when activities disturb their nesting and breeding season, which is February 1 to August 31. During the field survey, a red-shouldered hawk was observed soaring over the planning area; this and other raptor species may utilize trees in the planning area, such as the O'Toole elms, for nesting.

Waters of the United States, including Wetlands

The planning area includes jurisdictional Waters of the United States subject to the regulatory authority of USACE. These are Berryessa Creek, Penitencia Creek, and Lower Wrigley Ford. Although these creeks are channelized, they have not been lined with artificial material (e.g., concrete) and are likely to have soil, hydrology, and vegetation characteristic of wetland habitats. The creeks support some wetland and riparian vegetation, such as common cattail, water primrose (*Ludwigia peploides*) and several willow species (*Salix spp.*). Vegetation in Penitencia Creek is limited and the creek runs through a concrete channel in the southern portion of the planning area. Berryessa Creek and Lower Wrigley Ford in the northern portion are more heavily vegetated. Bird species observed or likely to occur in the drainages include great blue heron (*Ardea herodias*), great egret (*Ardea alba*), snowy egret (*Egretta thula*), belted kingfisher (*Ceryle alcyon*), red-winged blackbird (*Agelaius phoeniceus*), and song sparrow (*Melospiza melodia*). In addition, there are two wetland areas located on the Elmwood site. One is located on the north side of the site, south of the existing residences; the second is located on the southwest corner of the site.

SPECIFIC PLAN RECOMMENDATIONS

The Midtown Milpitas Specific Plan does not explicitly consider biological resources, but it does propose increasing the number of trees in the area and introducing additional landscaping throughout the planning area. Design Guidelines propose providing public parkland and improving the creek trail system in the planning area. Creek corridors could be developed as multi-purpose greenways, as envisioned by the Specific Plan. Landscaping is recommended for the variety of residential and mixed-use building development in the planning area. Landscaping also is proposed for accessways and residential lanes. Streets are to be enhanced with landscaping and viewed as an overall component of the open space system. In addition, Policy 3.28 of the Specific Plan provides for the protection of the O'Toole Elms.

3.7.2. THRESHOLDS OF SIGNIFICANCE

Based on the Environmental Checklist Form contained in Appendix G to the CEQA Guidelines, the proposed Specific Plan could have a significant impact to biological resources if it would:

- 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 CDFG or USFWS.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFG or USFWS.

- 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.
- 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.

3.7.3. ENVIRONMENTAL EVALUATION

GENERAL BIOLOGICAL RESOURCES

Vacant and undeveloped lands in the planning area total approximately 87 acres. New development on these lands envisioned by the Specific Plan may remove habitat for non-sensitive plant and wildlife species (those not considered sensitive by the resource agencies), which could reduce or eliminate the local populations of some common plants and animals in the planning area. Some affected animals would relocate to similar habitats in the general vicinity of the planning area. This loss of vegetation and individual animals would not substantially reduce the regional or Statewide populations of any of these plant or wildlife species and would therefore not be considered a significant environmental impact. No mitigation is required for this less-than-significant impact.

SPECIAL-STATUS SPECIES AND HABITATS

Burrowing Owl

Burrowing owl is a California Species of Special Concern, and individuals and their nests are protected under Section 3503.5 of the California Fish and Game Code, which prohibits the destruction of raptors and their nests. Potentially suitable nesting habitat occurs within undeveloped sites in the planning area, and the presence of ground squirrels indicates the potential presence of suitable nest burrows. Developing these sites could result in take of individuals and destruction of burrowing owl nests, which would be a violation of the California Fish and Game Code.

Impact Bio-1

Burrowing Owl. New development envisioned by the Specific Plan of undeveloped lands in the planning area could result in the loss of burrowing owls or active nests, which would be a significant environmental impact.

Mitigation Measure Bio-1: Undeveloped areas proposed for development during the nesting season (April 15 to July 15) shall be surveyed for burrowing owls. The survey must follow the California Department of Fish and Game (CDFG) protocol. The survey report shall be submitted to Milpitas Planning Division for review and approval. If owls are observed during the surveys, or if a burrowing owl nest has been documented on the site within the last three years, a burrowing owl habitat map and mitigation plan must be prepared by a qualified ornithologist and submitted to the City for approval. Implementing this mitigation measure would reduce potential impacts to burrowing owls to a less-than-significant level.

Raptors

Red-shouldered hawks and other raptor species may utilize trees in the planning area for nesting. Implementing the Specific Plan could remove existing trees, which could result in the loss or disturbance of active raptor nests. This loss would be a violation of Section 3503.5 of California Fish and Game Code. Raptor nests could be affected by the removal of large trees during the breeding season (February 1 to August 31). A large tree can generally be defined as a tree 20 feet tall, or more, although raptors could use smaller trees. Active raptor nests could also be affected by nearby construction activity (i.e., within 500 feet) during the breeding season. The O'Toole elms provide the primary raptor nesting habitat in the planning area, though other stands of large trees (e.g. 20 feet tall or greater), could provide suitable nest sites.

Impact Bio-2

Raptors. Implementation of the Specific Plan could result in the loss or disturbance of active raptor nests. Breeding and nesting raptors could be negatively affected by the removal of large tress or nearby construction activity during the breeding season. This would be a potentially significant impact.

Mitigation Measure Bio-2: Most hawks build bulky nests of twigs, bark, and leaves high in trees. Red-shouldered hawks (the species observed in the project area) nest in deciduous or coniferous trees, usually 20-60 feet above the ground. The birds construct well-made cupped nests of sticks and twigs, lined with bark, mosses, leaves, feathers and down. A red-shouldered hawk nest is approximately 2 feet wide and 1 foot deep. For proposed projects that would remove any large tree with a potential raptor nest during the raptor-nesting season (February 1 to August 31), the following mitigation measures shall be implemented

a. If construction or large tree (i.e., 20 feet or more in height) removal is proposed during the raptor-nesting season (February 1 to August 31), Planning Division staff shall conduct a site visit to determine whether any nest structure is visible in the trees to be removed.

b. If a nest is observed, a focused survey shall be conducted by a qualified biologist during the nesting season to identify if they are active. The survey shall be conducted no less than 14 days and no more than 30 days prior to the beginning of construction or tree removal.

c. If nesting raptors are found during the focused survey, no construction or tree removal will occur within 500 feet of an active nest (or an alternative distance deemed appropriate by the California Department of Fish and Game (CDFG), depending on the existing degree of disturbance in the vicinity of the nest) until the young have fledged (as determined by a qualified biologist). If nest trees are unavoidable, they shall be removed during the non-breeding season.

Implementing these mitigation measures would reduce potential impacts to raptors to a less-than-significant level.

Waters of the United States, Including Wetlands

Creeks in the planning area, including Berryessa Creek, Penitencia Creek, and Lower Wrigley Ford represent potential jurisdictional Waters of the United States subject to the regulatory authority of USACE. Construction of the citywide trail system along these creeks could result in discharge of dredged or fill material into the creeks.

Impact Bio-3

Waters of the United States, Including Wetlands. Development of the Elmwood site could result in loss or disturbance of wetlands. In addition, implementing the trails along the creeks identified in the Specific Plan could result in the loss or disturbance of Waters of the United States, including jurisdictional wetlands. Proposed trails are shown in Figure 2-8 of Chapter 2: Project Description. This impact is considered potentially significant.

Mitigation Measure Bio-3: If a project in the planning area has the potential to result in discharge of dredged or fill material into Waters of the United States, including wetlands, the following measures shall be implemented. Waterways in the planning area that could be Waters of the United States are Berryessa Creek, Lower Wrigley Ford Creek, and East Penitencia Creek.

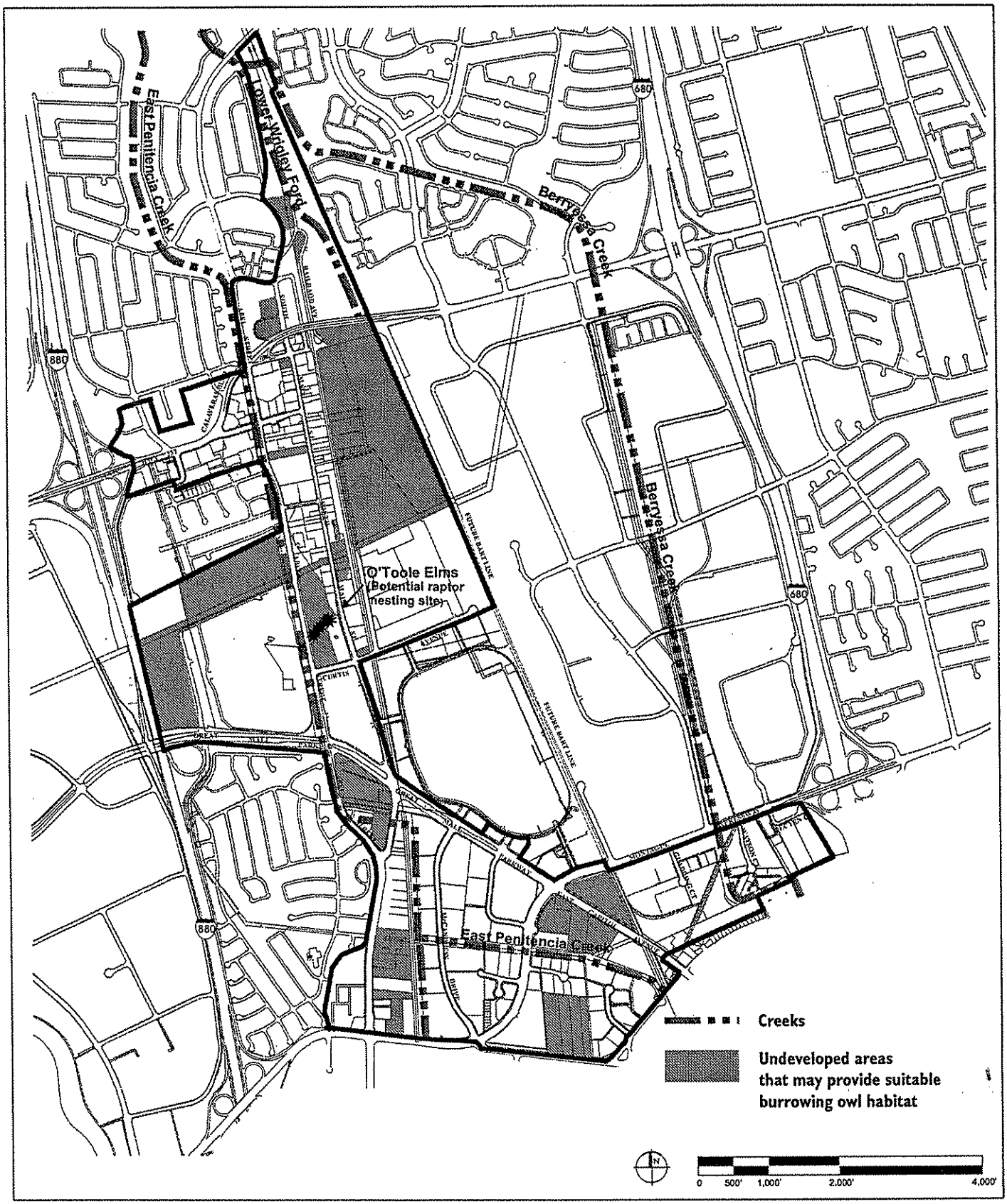
a. Prior to implementation of a project in the vicinity of known waterways in the planning area, qualified biologists shall make a determination as to whether Waters of the United States, including jurisdictional wetlands, are present in the development area. If no Waters of the United States, including jurisdictional wetlands, would be filled or degraded as a result of the proposed project, no further mitigation will be required.

b. If Waters of the United States would be filled or degraded as a result of the proposed project, authorization for the fills shall be secured from USACE via the Section 404 permitting process.

c. The acreage of Waters of the United States removed will be replaced or rehabilitated on a "no-net-loss" basis in accordance with USACE regulations. Habitat restoration, rehabilitation, and/or replacement shall be at a location and by methods agreeable to USACE.

d. Measures to minimize erosion and runoff into drainage channels shall be included in all drainage plans and implemented during construction adjacent to creeks.

Implementing these mitigation measures would reduce potential impacts to Waters of the United States, including wetlands, to a less-than-significant level.



Source: EDAW, Inc.

Figure 3.7-1 Potential Habitat for Sensitive Biological Species

This page is intentionally left blank.

CHAPTER 3.8. CULTURAL RESOURCES

This chapter describes applicable cultural resource regulations, the prehistoric and historic background of the Midtown Milpitas planning area, and the potential effects to cultural resources from implementation of the Midtown Milpitas Specific Plan.

3.8.1. EXISTING SETTING

REGULATORY BACKGROUND

Plans and policies that guide cultural resource preservation in the City of Milpitas include the City of Milpitas General Plan and the City's Cultural Resources Preservation Program, which is included in the City's Zoning Ordinance.

Milpitas General Plan

The Open Space/Conservation Element of the City of Milpitas General Plan provides the following policies related to the protection of cultural resources as summarized below:

4.f-G-1 Preserve existing historical and cultural resources, especially those sites where an Historical Park may prove feasible.

4.f-G-2 Undertake efforts that promote Milpitas as a historical community, and undertake efforts to increase public awareness towards preservation.

4.f-I-1 Continue to maintain, rehabilitate, and restore City-owned historic buildings and sites.

4.f-I-2 Acquire historic sites that would benefit from public ownership. The Historic Resources Master Plan has identified the following properties deserving consideration for acquisition:

- DeVries/Smith Home; (in Midtown Milpitas; city-owned)
- Weller/Curtner Estate;
- Alviso Adobe and site (city-owned); and
- Winsor Blacksmith Shop (in Midtown Milpitas).

4.f-I-3 Develop a program to survey and catalog artifacts, documents and other historic material.

4.f-I-4 Increase the prominence and access to the City's historic resources by developing paths and trails linking the historic sites.

4.f-I-5 Develop programs to promote Milpitas' history. Sponsor cultural events, such as a Rancho Festival or History Days, that increase public awareness of historic resources.

4.f-I-6 Encourage private involvement in historic preservation through the establishment of a revolving City loan program.

4.f-I-7 Establish a program to award plaques, awards and small grants to recognize private preservation efforts.

4.f-I-8 Continue implementing design guidelines and standards that reflect an "early California" theme.

Cultural Resources Preservation Program, City of Milpitas Zoning Ordinance

The Cultural Resources Preservation Program is identified in Chapter 4 of the City's Zoning, Planning, and Annexation Code and applies to all cultural resources in the City of Milpitas. The program created the nine-member Parks, Recreation and Cultural Resources Commission and empowers the Commission to identify potential cultural resources in Milpitas and to recommend designation of official cultural resources for consideration by the City Council. The program makes it unlawful for a person to alter a locally-designated cultural resource or cultural resource site without obtaining a permit from the City. Application for this permit shall be accompanied by plans, materials samples, photographs, historical data, illustrations of proposed actions, and any other materials reasonably necessary for the proper review of the project. The Commission is empowered to review the application and make a recommendation to the City Council as to whether the permit shall be granted, granted conditionally, or denied. Additionally, the commission will assist property owners or occupants upon their request on the restoration, alteration, decoration, landscaping or maintenance of any cultural resource or neighboring property within public view of a cultural resource.

CULTURAL RESOURCES CONTEXT

Prehistoric Period

The lands now occupied by the City of Milpitas were once a part of the home territory of the Tamyen tribelet of Costanoan (Ohlone) Indians. Like other Costanoan groups, the Tamyen maintained a few year-round village sites, but also visited various temporary camps at different seasons of the year to hunt and gather food as it became available (Milpitas 1994). Early Milpitas was traversed by a network of paths from village to village and from village to camp.

The presence of a deposit of cinnabar (later famous as the mines of New Almaden) within Tamyen territory increased traffic through the early Milpitas area. The cinnabar (used as a body paint) stimulated considerable trade. The deposits were known over much of northern California, and parties from as far away as the Columbia River journeyed to Costanoan territory to obtain it. Trade for other items, such as wooden bows, salt, and pine nuts, also brought many visitor to the Tamyen territories.

Two notable Costanoan village sites lie within the Milpitas city limits, with one of these sites located in the planning area. This large shellmound site, near the present-day Elmwood Rehabilitation Center, was discovered in 1949 and dates back to the eighteenth century. Outside of the planning area, near the Alviso Adobe near the corner of Calaveras and Piedmont, is an important archaeological site is at least

3,000 years old that is one of only a handful of archaeological sites in California with such a long history of continuous occupation (Milpitas 1994).

Historic Period

In 1769 the expedition of Gaspar de Portola passed through the Milpitas area, inaugurating the historic era. The Spanish presence in the South Bay region was initiated with the missions. Over the following half-century, the mission holdings were broken up by secularization, supplanted by private land grants such as the Rancho de Milpitas. The name Milpitas, meaning "little cornfields," was given to the area by these early Spanish settlers (Milpitas 1999).

The area that was to become Milpitas was established as a stopover point by the late 1840s when the Higuera Adobe welcomed travelers on the immigrant trail between Sutter's Fort and San Jose, via Livermore Pass. In 1855, settlers in the Calaveras Valley petitioned for a county road across the flats to Alviso. The resulting intersection - where the Alviso Road crossed the Mission Road - encouraged the development of Milpitas. By the late 1850s, a stage line was operating between San Jose and Oakland, with stops at Milpitas, including one at the Higuera Adobe, operating as a hotel and stage depot. Soon businesses such as general stores, stables, saloons, hotels, blacksmiths, carriage shops, and a post office catered to the needs of farming families. The first structures to be built in Milpitas were adobe houses located along the foothills east of town (now east of Piedmont and Evans Road) and along both sides of Calaveras Road between Main Street and the foothills. During the 1850s to 1870s, many frame farmhouses were constructed.

Businesses that catered to travelers (saloons, restaurants, blacksmiths, service stations, and hotels) and those that supplied the local population (general stores, meat markets, and lumberyards) developed near the intersection of the Alviso-Milpitas Road (Calaveras Boulevard) and the San Jose-Oakland Road (Main Street). Clustered around this nucleus of commercial and service buildings were the homes of the merchants, railway employees, and working members of the community. In the latter part of the 19th century, Milpitas emerged as a marketing center for farmers. The Southern Pacific Railroad ran a line from Stockton to San Jose reaching Milpitas in 1869, which initiated new commercial enterprises and consolidation of Milpitas' position as an important shipping point of the rapidly growing valley. In the 1920s, construction of the San Jose branch of the Western Pacific Railroad gave the community access to a second rail line. As late as the early 1950s, orchards and farms dotted the Milpitas landscape.

The Ford Motor Company began constructing an assembly plant south of downtown in a strip between the two railroad tracks in 1953, and the town was incorporated in the following year. When incorporated in 1954, Milpitas covered 2.9 square miles and had a population of 825 people. Over the next two decades Milpitas' population grew at a rate of 38 percent each year, making it one of the fastest growing areas in Santa Clara County. During the City's rapid expansion, many of the older buildings in the Midtown planning area were demolished and replaced. The remaining recognized historic sites and structures are described in the following section.

CULTURAL RESOURCES PRESENT IN THE PLANNING AREA

Resources having potential for historical significance are documented in the City's Historic Sites Inventory, which was prepared in 1990. This document provides an inventory of the most significant historic buildings in the City of Milpitas based on the architectural styles, historic use of buildings, and important events or people in Milpitas' past. In addition, archival research was conducted for the planning area, that included examination of the Historical Resources Information System files at the Northwest Information Center (NWIC), located at Sonoma State University. Documents reviewed at the NWIC included the Historic Properties Directory (1999) which identifies listings in the National Register of Historic Places, State Registered Landmarks, and Historic Points of Interest; the California Inventory of Historic Resources (1976); U.S. Geological Survey Open File Maps (1971), and archaeological maps and site records on file. A records search of sacred lands files maintained by the Native American Heritage Commission conducted in October 2000 revealed no records of Native American cultural resources in the planning area.

Archaeological Resources

Archaeological resources include material remains indicating the presence of Native Americans. Material remains include artifacts, which were made, used, or altered by people, such as lithic (stone) material, groundstone, discarded artifacts, and human remains. These are often found in midden deposits, a rich organic dark brown soil that contains charcoal, ash, and food wastes such as shell, bone, and seeds. Midden deposits are evidence of human activity and generally reflect a use of an area over a long period of time. Intermittent use of an area by Native Americans can also be seen in lithic scatters, and food processing sites such as bedrock mortar sites or areas with mortars and pestles.

Thirty archaeological investigations have been conducted in the planning area, covering approximately 75 percent of the area. An archaeological investigation in the planning area was performed by Archaeological Resource Management for the Elmwood Rehabilitation Center Master Plan EIR in 1985 (NBBJ Group 1986). This investigation discussed a 1949 finding of Native American shell mounds, and provided further explanation of the site's contents and general location. The Master Plan EIR stated that the site, known as CA-SCL-38, is located near the Elmwood Correctional Facility and extends beyond the facility's property line east to Abel Street (NBBJ Group 1986). It is a large habitation site that includes human burials and a midden rich in artifacts, such as fire-cracked rock, chipped lithic material, shell and bone fragments, and groundstone fragments. The site contains both surface and subsurface deposits. The literature review found that Native American archaeological sites in this portion of Santa Clara County tend to be situated through the alluvial flats, with the highest density occurring along existing and extinct water courses. The planning area is situated on alluvial flats that have been known to contain "aboriginal artifacts and skeletal remains" (NWIC 2000). Because several archaeological sites in the planning area have been discovered underneath alluvium, unknown archaeological resources could be buried beneath the planning area (NWIC 2000).

Historic Resources

Historic resources generally include historic structures (residential, commercial, civic, and transportation-related), as well as sub-surface deposits relating to historic occupation of an area. The older buildings in

the planning area include a few remaining commercial buildings, a few civic structures, and numerous former and current residences. The architectural style of these structures dates from 1885 to 1930 and includes Queen Anne, Italianate, Mission, Craftsman Bungalow, Prairie, and False-Front Commercial. These buildings are primarily clustered along North and South Main Street.

The City of Milpitas maintains a Register of Cultural Resources within the city limits (Milpitas 1988). The following cultural resources located in the Midtown planning area are identified in the General Plan as historic resource sites (shown on Figure 3.8-1, provided at the end of this chapter). While these resources are considered locally significant, except for the Milpitas Grammar School, they have not been evaluated for their eligibility for listing in the California Register of Historic Resources.

- Milpitas Grammar School/Senior Center (1916); 160 North Main Street. This neo-classical public building is listed in the National Register of Historic Places. Resources listed in the National Register are automatically placed on the California Register of Historic Resources.
- DeVries/Smith Home (1915); 163 North Main Street. The DeVries/Smith Home is a locally rare example of a Prairie style building and home to Dr. Renselaer J. Smith, the second doctor to set up practice in Milpitas. This structure served as both Dr. Smith's residence and medical office.
- Winsor Blacksmith Shop (ca 1920); 112 North Main Street. The Winsor Blacksmith Shop is a locally rare surviving early false-front commercial building. The Winsor family settled in Milpitas in 1863. Brothers Tom and George Winsor built the blacksmith shop.
- Cadillo House (1899, 280 S. Main Street). Locally rare example of a Queen Anne style building. This building was renovated in 1999, which included the addition of a first story office use.
- Campbell's Corner (a.k.a. Smith's Corners) (1908); 167 South Main Street. Campbell's Corner is an historic structure located at an historic intersection (Alviso Road and South Main Street). This corner has been the site of a saloon since Milpitas was first established as a community in the mid-1800s. This structure is currently being renovated.

Additionally, a row of Elmwood trees that once lined the entrance to a large mansion are considered locally significant (personal communication, Beth Wyman, Santa Clara County Historical Heritage Commission, December 15, 1999). These trees are planted in a double row from Main Street (northeast end) to Abel Avenue (southwest end). The existing stand consists of 55 specimen trees and an estimated 100 one-foot to ten-foot second-generation root sprouts.

SPECIFIC PLAN RECOMMENDATIONS

The Specific Plan Community Design Element provides goals and policies that encourage the preservation of cultural resources in the planning area. The Specific Plan Main Street Mixed-Use Design Guidelines are intended to facilitate the late nineteenth century and early twentieth century architectural character of the Main Street area representative of its historic development.

Community Design Element

The Community Design Element identifies architectural and landscape elements that contribute to the planning area's identity and sense of history, and specifically recommends that new development be

harmonious with older structures without falsely attempting to reproduce historic features. The Specific Plan establishes the following policies:

Policy 5.7: Encourage the rehabilitation and adaptive reuse of designated buildings or features. Consider financial incentives, such as waiving city development fees and establishing a historical building preservation fund, to assist property owners who wish to pursue an historically accurate restoration of their building.

The following resources are existing buildings or landscape features that the Specific Plan identifies for preservation: Milpitas Grammar School/Senior Center, DeVries/Smith Home, St. John's Church Site and Chapel, Campbell's Corners (a.k.a. Smith's Corners), Caudillo House, and Elm Allee (O'Toole Elm Trees).

Policy 5.8: Ensure that building restorations receiving City support meet standards of architectural integrity.

Policy 5.9: Consolidate the Milpitas Historical Commercial District into the Midtown Specific Plan; replace the architectural design guidelines with the design guidelines included within this plan.

The Milpitas Historical Commercial District was designated in 1975 along with the City's Architectural Guidelines and Standards specifying an "Early California" theme. The district boundaries are: the Union Pacific (former Southern Pacific) rail lines on the east; Weller Street on the north; Abel Street on the west; and the Hetch-Hetchy right-of-way on the south. This district includes several City of Milpitas designated cultural resources and these resources are recognized by this plan. The architectural guidelines, however, designates a theme of "Early California" for Main Street. This theme is inappropriate for Main Street, which developed in the late nineteenth and early twentieth centuries, and not in the pre-1850 period that the theme is referencing. Rather than attempting to falsely recreate historic buildings, new development along Main Street should incorporate forms and patterns that are sympathetic to the true architectural traditions of the street, namely late nineteenth and early twentieth century commercial architecture. The Midtown Milpitas Specific Plan includes guidelines which would achieve this intent.

Design Guidelines

As identified under Policy 5.9 above, the Specific Plan proposes that the Milpitas Architectural Guidelines and Standards, which currently apply to the Main Street area, be replaced by the Specific Plan Design Guidelines. This is because the "Early California" theme represented by the architectural guidelines does not reflect the actual historic period of downtown development, and continuance of this theme could create a false sense of history for the area. The Specific Plan recognizes the late nineteenth and early twentieth century architectural style representative of the period during which the Main Street area developed.

The Specific Plan guidelines for the mixed-use district are sympathetic to this period of commercial architecture, without identifying specific building materials and colors. For example, buildings cannot exceed three stories or 45-feet in height; commercial uses would be built to the edge of the sidewalk and any setback area for commercial or mixed-use buildings would be primarily paved to allow for outdoor

seating or display of goods; special architectural features, such as bay windows entry features such as trellises, canopies and awnings may project into the public right-of-ways; buildings must provide a prominent presence facing the public street; the primary façade should have a direct relationship to the location of building entries and detail of building articulation; and the primary entries for commercial establishments and second floor residential units would be visible and accessible directly from the street.

3.8.2. THRESHOLDS OF SIGNIFICANCE

Based on the Environmental Checklist Form contained in Appendix G to the CEQA Guidelines, the proposed Specific Plan could have a significant impact to cultural resources if it would:

- Cause a substantial adverse change in the significance of an historical resource.

  CEQA Guidelines Section 15064.5(a) defines the term historical resources to include a resource listed in, or determined to be eligible for listing in, the California Register of Historic Resources, a resource included in a local register of historic resources, or identified as significant in an historical resource survey. Substantial adverse change in the significance of an historic resource means physical demolition, destruction, relocation, or alteration to the resource or its immediate surroundings such that it demolishes or materially alters in an adverse manner those physical characteristics that convey its historical significance.

- Cause a substantial adverse change in the significance of an archaeological resource.

  Determination of archaeological significance generally involves archaeological excavation to determine data potentials, site content, integrity of deposits, and the nature of constituent features and artifacts.

- Disturb any human remains, including those interred outside of formal cemeteries.

3.8.3. ENVIRONMENTAL EVALUATION

The following sections evaluate the potential for the Specific Plan to significantly impact cultural resources in the planning area including known historic and archaeological resources, and those subsurface resources that could exist, but have yet to be discovered.

POTENTIAL IMPACTS TO KNOWN HISTORIC RESOURCES

Through their inclusion on the City of Milpitas Cultural Resources Register, the City of Milpitas has identified five important historic resources clustered along North Main Street in the planning area, shown on Figure 3.8-1. In addition, the Historic Sites Inventory (Milpitas 1990) identifies several other resources that may be eligible for the California Register of Historic Resources, or could be eligible in the future when the structure is 50 years old. Any adverse change to a resource eligible for the California Register of Historic Resources is considered significant.

Impact Cult-1

Reduction of Historic Significance. Implementing the Specific Plan may cause a substantial adverse change in the significance of historic resources through demolition or alteration. Historic resources include locally-designated resources and those identified as potentially significant in the Historic Sites Inventory (Milpitas 1990).

Mitigation Measure Cult-1: The following mitigation measures shall be implemented to ensure that substantial adverse changes do not occur to historical resources within the planning area. These measures shall be implemented when modification or demolition is proposed for any of the sites identified on Figure 3.8-1.

a. Where maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation, or reconstruction of the historic resource would be conducted in a manner consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstruction Historic Buildings (1995), Weeks and Grimmer, the project's impact on the historic resource shall be considered mitigated to a less-than-significant level. This is the preferred mitigation approach.

b. If removal or modification of any potentially significant resource is proposed and is not consistent with the Standards described in (a), the resource shall be evaluated for its integrity and structural values pursuant to the California Register criteria by a licensed architect specialized in historic buildings. This shall occur prior to the approval of any proposed modification or demolition.

c. If these resources are determined ineligible for the California Register of Historic Resources, no further mitigation is required. However, if a resource is listed or determined eligible for the California Register of Historic Resources, documentation of the structure's architectural values by a licensed architect specialized in historic buildings shall be completed prior to demolition or alteration. At least one additional mitigation measure also will be implemented at the recommendation of the architect in consultation with the City of Milpitas; this might include on-site interpretation of the lost resource or documentation of the resource to Historic American Building Survey/Historic American Engineering Recordation (HABS/HAER) standards.

Implementation of these mitigation measures would reduce the potential impacts to historic resources to a less-than-significant level.

POTENTIAL IMPACTS TO KNOWN ARCHAEOLOGICAL RESOURCES

Site specific impacts that may occur as a result of the Specific Plan would include construction of a 23-acre pedestrian and bicycle trails system, much of which would be along Penitencia Creek, as well as construction on vacant properties in this area. One known archaeological site in the vicinity of Penitencia Creek includes site (CA-SCL-38), located within the Elmwood Correctional Facility but extending beyond the facility's property line toward Abel Street. This site could be affected by subsurface activities associated with the planned bicycle and trail system in this area.

Impact Cult-2

Potential Impacts to Known Archaeological Sites. Known archaeological resources in the vicinity of Penitencia Creek (site CA-SCL-38) may be adversely affected by a planned bicycle and trail system identified in the Specific Plan and/or development of the vacant parcels to the north and east of the Elmwood Correctional Facility. This is considered a potentially significant adverse impact.

Mitigation Measure Cult-2: When proposed for development, the planned bicycle and pedestrian improvements in the vicinity of the Penitencia Creek and development of vacant lands in the vicinity of Penitencia Creek (within 100 feet of the creek bank) shall be reviewed for their potential to adversely affect archaeological site CA-SCL-38. Mitigation, including site avoidance, data recovery and/or construction monitoring may be necessary, depending on the nature of the site, and the project's potential impact to it. A qualified archaeologist shall make project-specific recommendations, which shall be implemented prior to the development of the path or construction on these vacant lands.

Implementation of this mitigation measure would reduce this potential impact to a less-than-significant level.

POTENTIAL IMPACTS TO UNKNOWN CULTURAL RESOURCES

In addition to the resources discussed above, there is the potential to discover subsurface resources anywhere within the planning area. It is impossible to be sure about the presence or absence of buried historical or archaeological resources until site excavation and grading occurs. Considering the level of development and corresponding subsurface excavation that is envisioned within the Specific Plan's development program, there is a potential to encounter buried cultural resources.

Impact Cult-3

Potential Impacts to Unknown Cultural Sites. Previously undiscovered cultural resources may be encountered during construction efforts related to implementation of the Specific Plan's development program. Damage or destruction to these unknown resources prior to the assessment of their importance and development of resource-specific mitigation measures would be considered a potentially significant adverse impact.

Mitigation Measure Cult-3: Project developers shall be required to implement provisions for historical or unique archaeological resources accidentally discovered during construction in accordance with CEQA Guidelines Section 15064.5(e)(f). This requirement shall be specified in all building and grading permits. These provisions required the immediate evaluation of the find by a qualified archaeologist or historic archaeologist meeting the Secretary of the Interior's Professional Qualification Standards. If the find is determined to be an historical or unique archaeological resource, funding will be made available by the project developer and a schedule identified for implementing avoidance measures or appropriate mitigation. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place.

Implementation of this mitigation measure would reduce this potential impact to a less-than-significant level.

POTENTIAL DISTURBANCE OF HUMAN REMAINS

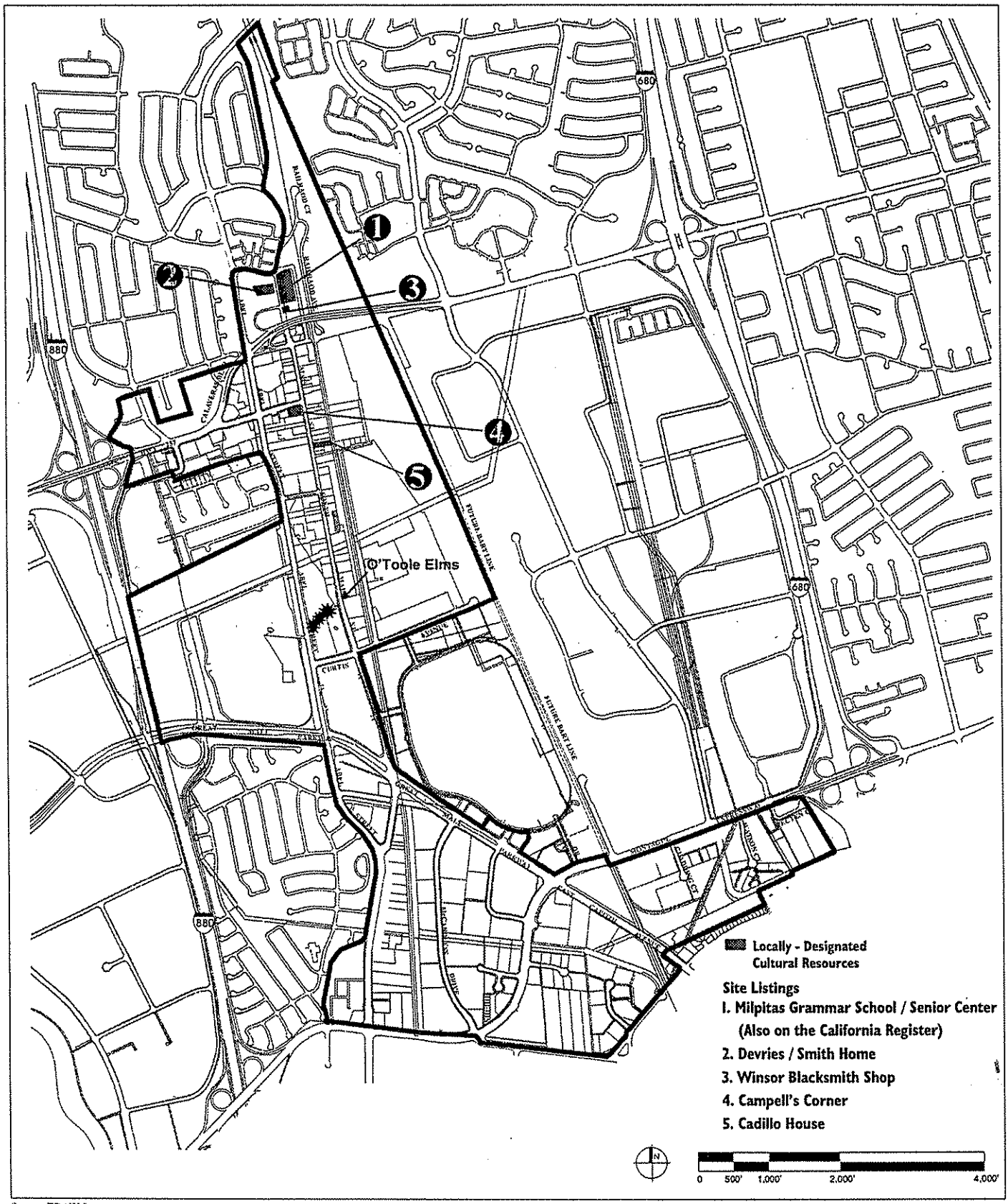
The planning area has no known human remains, including those interred outside of formal cemeteries, except for those remains which may be located within site CA-SLR-38, which is addressed above in **Impact Cult-2**. However, it is impossible to be sure about the presence or absence of human remains until site excavation and grading occurs.

Impact Cult-4

Potential Disturbance of Human Remains. Implementation of the Specific Plan may disturb unknown human remains in the planning area. This is considered a potentially significant adverse impact.

Mitigation Measure Cult-4: In the event that human remains are encountered, City planning staff will be contacted and excavation or disturbance activities at the site or at any nearby area reasonably suspected to overlie adjacent human will be halted. This requirement shall be specified in all building and grading permits. The Santa Clara County coroner will be contacted and appropriate measures implemented. These actions would be consistent with the State Health and Safety Code Section 7050.5, which prohibits disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery. If the County coroner determines the remains to be Native American, the coroner shall contact the Native American Heritage Commission within 24 hours. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American. The most likely descendent may make recommendations to the landowner for the person responsible for the excavation work, for means of treating or disposing of, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98.

Implementation of this mitigation measure would reduce this potential impact to a less-than-significant level.



Source: EDAW, Inc.

Figure 3.8-1 Locally - Designated Historic Resources

This page is intentionally left blank.

CHAPTER 3.9. TRAFFIC AND CIRCULATION

This chapter describes the potential transportation impacts associated with development of the Midtown Specific Plan. This section was developed by Fehr and Peers Associates, Inc., in consultation with the City of Milpitas. All figures are provided at the end of the chapter. Detailed technical information, including the traffic count data and calculation worksheets, is provided in Appendix E.

3.9.1. EXISTING SETTING

REGULATORY BACKGROUND

The evaluation of potential impacts to the circulation system is based on City of Milpitas General Plan, City transportation impact analysis (TIA) guidelines, and the guidelines published by the Santa Clara Valley Transportation Authority (VTA). The City maintains and has jurisdiction over all roadways within the planning area with several exceptions. The California Department of Transportation (Caltrans) has jurisdiction over State-designated routes including Interstates 880 and 680 and State Route (SR) 237 (Calaveras Boulevard up to the I-680 interchange). The Santa Clara County Roads and Airports Department has jurisdiction over local county roads and the expressway system that includes Montague Expressway near the project site.

The VTA is an independent special district responsible for congestion management, countywide transportation planning, and bus and light rail operations in Santa Clara County. As the Congestion Management Agency for the County, the VTA determines with input from the member agencies, State and Federal funding priorities for transportation improvements. The CMA monitors Congestion Management Program (CMP) facilities that include the freeways/key intersections along state routes listed above, the County expressways, and other arterial roads that serve regional traffic.

Operating standards for facilities vary depending on the governing jurisdiction and CMP designation. The City of Milpitas maintains a Level of Service (LOS) D standard on all City streets that are not included in the CMP network. LOS E is the minimum acceptable operating level for all CMP intersections. A detailed description of Level of Service is included under the Analysis Methodology section.

Based on City policy and VTA guidelines, a transportation impact analysis (TIA) is required for all projects that are expected to generate more than 100 peak hour trips. This study is used to identify the specific transportation issues for a given development project and the corresponding specific improvements that need to be made to address deficiencies. Since this document identifies major improvements required to mitigate potential project impacts, subsequent TIAs will be used to identify minor operational improvements (e.g., longer lane transitions, additional turn lanes, or new raised medians) that may be required to provide improved traffic operations. The City of Milpitas requires new development to mitigate for their fair share of improvements through the payment of traffic mitigation fees or through the implementation of specific roadway improvements.

EXISTING ROADWAY NETWORK

In the vicinity of the Midtown area, the existing transportation system is almost exclusively represented by roadways. Automobiles and bus service are the primary travel mode for most trips in this area, while bicycle and pedestrian travel is somewhat limited. This section describes the existing roadway network, which is illustrated on Figure 3.9-1.

SR 237/Calaveras Boulevard, Interstate 880 (I-880), I-680, Montague Expressway, and Great Mall Parkway provide regional access to the Midtown planning area. Local access is provided by Milpitas Boulevard, Main Street, Abel Street, Serra Way, Corning Avenue, and Curtis Avenue. Detailed descriptions of the key roadway facilities are presented below, and existing lane configurations and traffic control devices are illustrated on Figure 3.9-2.

SR 237 is a six-lane east-west freeway between Highway 101 in Mountain View and McCarthy Boulevard just west of I-880 with two mixed-flow lanes and a high occupancy vehicle (HOV) lane in each direction. The reconstruction of the I-880/SR 237 interchange will complete the upgrade of SR 237 to a full freeway and will provide diagonal ramp connections to the McCarthy Boulevard overpass. The reconstruction of the SR 237/I-880 interchange is currently underway with completion anticipated by spring 2002. Between I-880 and I-680, SR 237 known as Calaveras Boulevard is a four- to six-lane major arterial street with at-grade, signalized intersections. Calaveras Blvd serves as a major commute route with heavy directional travel during the peak hours (westbound in the morning and eastbound in the evening).

I-880 is a four- to eight-lane, north-south freeway that links communities on the east side of San Francisco Bay with San Jose. All of the eight-lane segments are located north of Milpitas in Alameda County. Adjacent to the planning area, I-880 contains six lanes except for the four-lane section located between Montague Expressway and Highway 101 in San Jose. This reduction in freeway capacity results in extensive congestion throughout the day and impacts the adjacent freeway ramp operations.

I-680 is a six- to eight-lane, north-south freeway that extends from Highway 101 in San Jose through the East Bay hills. The six-lane segment is located north of Calaveras Boulevard. This freeway serves extremely heavy commute volumes from East Bay communities as well as commuters from Livermore, Tracy and other Central Valley communities. The directional commute travel is predominantly southbound into Santa Clara Valley in the morning and northbound in the evening. Access to the Midtown area from I-680 is provided via Calaveras Boulevard and Montague Expressway.

Montague Expressway is a six-lane, limited access, divided arterial roadway extending in an east-west direction between Highway 101 and I-680. West of Highway 101, this facility becomes San Tomas Expressway and east of I-680, Montague Expressway becomes Landess Avenue. Montague Expressway provides limited driveway access to and from adjacent developments and includes directional HOV lanes during peak periods (westbound during the AM peak period and eastbound during the PM peak period). Montague Expressway has full cloverleaf interchanges at I-880 and I-680. Plans are underway to widen Montague Expressway to eight lanes between Great Mall Parkway-Capitol Avenue and I-680.

Great Mall Parkway/Tasman Drive is a six-lane, east-west, divided arterial roadway extending between Montague Expressway and the Milpitas-San Jose city limit along Coyote Creek. The portion west of I-880 is designated as Tasman Drive, while the segment east of Montague Expressway is designated as Capitol Avenue. The future light rail extension will be located in the median of Tasman Drive-Great Mall Parkway-Capitol Avenue and will include two aerial stations in the Midtown area.

Alder Drive is a two-lane street with a center two-way left-turn lane between Barber Lane and Tasman Drive. North of Tasman Drive to McCarthy Boulevard, Alder Drive includes four lanes plus a two-way center left-turn lane.

Main Street is a two- to four-lane, north-south, minor arterial roadway that is parallel to Abel Street and extends between Railroad Avenue north of Calaveras Boulevard (SR 237) and Montague Expressway. It continues to the north and west as Marilynn Drive. South of Montague Expressway, Main Street becomes Oakland Road. Main Street includes two lanes north of Curtis Avenue, and is striped for four lanes plus a two-way left-turn lane south of Curtis Avenue with bike lanes and parking on one side of the street. South of Curtis Avenue, Main Street includes four lanes plus a two-way left-turn lane. Signalized intersections are provided at Weller Lane, Serra Way, Curtis Avenue, Great Mall Drive, Great Mall Parkway, Abel Street, Cedar Way and Montague Expressway. Direct access to eastbound SR 237 is provided via the ramp from Carlo Street. A future traffic signal is expected at Main and Carlo Streets.

Abel Street is a four-lane, north-south, minor arterial roadway extending between Milpitas Boulevard and Main Street (south of Great Mall Parkway). At Milpitas Boulevard, Abel Street becomes Jacklin Road. The section of Abel Street between Corning and Curtis Avenues includes four travel lanes plus a two-way left-turn lane.

Serra Way is a four-lane, east-west collector roadway extending between Calaveras Boulevard (SR 237) and Main Street. Signalized intersections are located at SR 237, Abel Street, and Main Street.

Corning Avenue is a two-lane, east-west local roadway connecting Abel and Main Street. Corning Avenue extends west of Abel Street.

Curtis Avenue is a four-lane, east-west collector roadway between Abel Street and the Union Pacific railroad tracks. Between the private street of Comet Drive (east of Main Street) and its eastern terminus, Curtis Avenue is two lanes wide.

Carlo Street is a two-lane, east-west local roadway between Abel Street and the Union Pacific railroad tracks. The west end of Carlo Street is one way eastbound between Abel Street and the on-ramp to eastbound Calaveras Boulevard (SR 237). A turn around is provided west of the on-ramp.

McCandless Drive is a two-lane, north-south collector roadway between Great Mall Parkway and Montague Expressway and includes a two-way left-turn lane. The north end of the street is opposite one of the primary entrances to the Great Mall of the Bay Area shopping center, while at the south end, McCandless Drive becomes Trade Zone Boulevard.

Trade Zone Boulevard is a four-lane east-west minor arterial roadway extending between Montague Expressway and N. Capitol Avenue in San Jose. East of Capitol Avenue, this street becomes Cropley Avenue.

Lundy Avenue is a two-lane, north-south roadway extending from the Union Pacific Railroad tracks west of Capitol Avenue to south of Trade Zone Boulevard.

ANALYSIS METHODOLOGY

The operations of the key intersections, roadway segments, and freeway segments were evaluated using Level of Service (LOS) calculations. Level of Service is a qualitative description of a roadway or intersection operation, ranging from LOS A, or free-flow conditions, to LOS F, or over-saturated conditions. Different methodologies were used for the near-term and cumulative analysis based on city and regional policies. These different methodologies are described below.

Near-term Analyses

The following sections describe the analysis methodology used for the near-term analysis contained in this chapter.

Signalized Intersections

For signalized intersections, the level of service methodology described in the 1985 Highway Capacity Manual (HCM) (Special Report 209, Transportation Research Board) was applied with adjusted saturation flow rates per VTA guidelines. The average stopped vehicular delay is calculated using the TRAFFIX analysis software program and is correlated to a level of service as shown in Table 3.9-1. The minimum acceptable level of service standard for local (i.e., non-CMP) City of Milpitas and San Jose intersections is LOS D, while the standard for designated CMP intersections is LOS E.

Unsignalized Intersections

Unsignalized intersections were evaluated using the methodology presented in the 1997 update to the HCM. This methodology evaluates a stop sign-controlled intersection operation based on average control delay for the worst-case movement or approach. Control delay is different from the total delay used in the 1994 HCM for unsignalized intersections. Control delay includes delay during acceleration, deceleration and moving queues. Accordingly, the ranges of delay were adjusted upward. The unsignalized intersection levels of service were also calculated using TRAFFIX and are correlated to the levels of service as shown in Table 3.9-2. In addition to calculating changes in delay, the need for a traffic signal was evaluated at all unsignalized intersections using the volume thresholds for Peak Hour Volume Warrant #11 published in the Caltrans Traffic Manual.

Table 3.9-I
Signalized Intersection Level of Service Definitions Using Average Stopped Vehicular Delay

Level of Service	Average Stopped Delay Per Vehicle (Seconds)	Description
A	≤ 5.0	Operations with very low delay occurring with favorable progression and/or short cycle length.
B+	5.0< delay ≤ 7.0	Operations with low delay occurring with good progression and/or short cycle lengths.
B	7.0< delay ≤ 13.0	
B-	13.0< delay ≤ 15.0	
C+	15.0 < delay ≤ 17.0	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.
C	17.0 < delay ≤ 23.0	
C-	23.0 < delay ≤ 25.0	
D+	25.0 < delay ≤ 28.0	Operations with longer delays sue to a combinations of unfavorable progression, long cycle lengths, and high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.
D	28.0 < delay ≤ 37.0	
D-	37.0 < delay ≤ 40.0	
E+	40.0 < delay ≤ 44.0	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.
E	44.0 < delay ≤ 56.0	
E-	56.0 < delay ≤ 60.0	
F	> 60.0	Operations with delays unacceptable to most drivers occurring due to over-saturation, poor progression, or very long cycle lengths.

Source: Transportation Impact Analysis Guidelines (VTA Congestion Management Program Guidelines, May 7, 1998).

Table 3.9-2
Level of Service Criteria for Unsignalized Intersections
(Two-Way or All-Way Stop Controlled)

Level of Service	Average Control Delay Per Vehicle (Seconds)
A	≤ 5
B	5 < delay ≤ 15
C	15 < delay ≤ 25
D	25 < delay ≤ 40
E	40 < delay ≤ 55
F	> 55

Source: 1997 Update to the Highway Capacity Manual (Special Report 209, Transportation Research Board).

Table 3.9-3
Density Based Freeway Level of Service Criteria

Level of Service	Density (vehicles/mile/lane)
A	≤ 10
B	10.0 < density ≤ 16.0
C	16.0 < density ≤ 24.0
D	24.0 < density ≤ 46.0
E	46.0 < density ≤ 55.0
F	> 55.0

Source: Transportation Impact Analysis Guidelines (VTA Congestion Management Program Guidelines, May 7, 1998).

Freeway Segments

Freeway level of service was analyzed according to VTA guidelines, which is based on the methodology described in the 1994 HCM. Freeway LOS is calculated based on the density of traffic flow or the number of passenger cars per mile per lane. Density is calculated based on the peak hour traffic volume, the number of travel lanes, and the average travel speed for a given mainline segment. The level of service criteria are shown in Table 3.9-3.

Cumulative Analyses

The City of Milpitas uses a roadway segment analysis approach to evaluate potential impacts of General Plan amendments under far-term (2015) conditions. Although performance of travel demand forecasting models has improved over the last decade, the City has determined that forecasting detailed intersection turning movement peak hour volumes 15 years or more in the future based on presumed roadway network and land use assumptions is not appropriate for long-range transportation planning studies. Accordingly, the City has determined that a link-volume roadway segment analysis is a superior method to evaluate the impacts of General Plan amendments. More detailed intersection-based traffic impact analyses will be required to analyze the specific transportation impacts of individual development proposals. However, the results of these analyses will be used to identify minor improvements; this EIR describes the significant impacts and the major improvements required to mitigate them.

Traffic operations of roadway segments are determined based on the volume-to-capacity ratio, which is correlated to a level of service. The capacity of each roadway type depends on a number of factors including intersection spacing, lane widths, signal timing and coordination, and side friction (on-street parking, driveway spacing), and was originally developed in consultation with City staff. Table 3.9-4 presents the lane capacity assumptions and LOS thresholds for each facility type.

Table 3.9-4
City of Milpitas Density Based Freeway and Roadway Level of Service Criteria for Future Roadway Segment Analysis

Facility Type	Lane Capacity Vehicles per Hour	A	B	C	D	E	F
Freeway	2,000	1,200	1,600	1,600	1,800	2,000	>2,000
Expressway	1,100	660	770	880	990	1,100	>1,100
Major	1,000	600	700	800	900	1,000	>1,000
Arterial	900	540	630	720	810	900	>900

Source: City of Milpitas Planning and Neighborhood Preservation Division, 2000.

EXISTING TRAFFIC CONDITIONS

Existing Traffic Volumes

Intersection and freeway segments were analyzed under weekday AM and PM peak hour traffic conditions. Peak conditions usually occur during the morning and evening commute periods between 7:00 and 9:00 am and 4:00 and 6:00 pm, respectively. Available existing peak hour traffic counts were obtained from recent traffic studies and new counts were conducted in January 2000. Existing peak hour traffic volumes are presented on Figure 3.9-3. Copies of new traffic counts are included in Appendix E.

The existing lane configurations and the peak-hour turning movement volumes were used to calculate the levels of service for each of the 24 study intersections during each peak hour. The results of the existing LOS analysis are presented in Tables 4.9-5 and 4.9-6, and the calculation worksheets are included in Appendix E.

Table 3.9-7 contains the existing freeway level of service results as reported in the 1998 CMP's Monitoring and Conformance Report (Valley Transportation Authority). Existing data includes the maximum density, volume and level of service for each segment by direction and peak hour. A detailed discussion of existing intersection and freeway operations is presented in the following section.

Table 3.9-5
Existing Intersection AM Peak Hour Levels of Service

Intersection	Type of Control	Count Date	Average Stopped or Control Delay [b]	LOS
1. Milpitas Boulevard/Abel Street-Jacklin Road	Signal	06/06/2001	**44.0 sec**	E+
2. N. Abel Street/Marilynn Drive	Signal	01/18/2000	16.6 sec	C+
3. Calaveras Blvd. (SR 237)/S. Abbott Ave.	Signal	01/27/2000	**57.6 sec**	E-
4. Calaveras Boulevard (SR 237)/Serra Way	Signal	01/27/2000	12.0 sec	B
5. Calaveras Boulevard (SR 237)/Abel Street [a]	Signal	01/19/2000	34.7 sec	D
6. Calaveras Blvd. (SR 237)/Milpitas Blvd. [a]	Signal	01/27/2000	26.1 sec	D+
7. S. Abel Street/Serra Way	Signal	01/20/2000	16.2 sec	C+
8. S. Main Street/Serra Way	Signal	01/20/2000	4.4 sec	A
9. S. Abel Street/Corning Avenue	Signal	01/25/2000	11.5 sec	B
10. S. Main Street/Corning Avenue	Stop Sign	01/25/2000	14.9 sec	B
11. S. Abel Street/W. Curtis Avenue	Signal	01/20/2000	11.7 sec	B
12. S. Main Street/W. Curtis Avenue	Signal	01/19/2000	12.4 sec	B
13. Tasman Drive/Alder Drive	Signal	01/25/2000	11.0 sec	B
14. Tasman Drive/I-880 Southbound Ramps	Signal	01/20/2000	22.4 sec	C
15. Great Mall Pkwy./I-880 Northbound Ramps	Signal	01/20/2000	24.2 sec	C-
16. Great Mall Parkway/Abel Street	Signal	01/26/2000	35.1 sec	D
17. Great Mall Parkway/Main Street	Signal	01/20/2000	21.5 sec	C
18. S. Abel Street/S. Main Street	Signal	01/27/2000	10.6 sec	B
19. Montague Expy./S. Main St.-Oakland Rd. [a]	Signal	01/19/2000	42.6 sec	E+
20. Montague Expy./McCandless Dr.-Trade Zone Blvd. [a]	Signal	01/20/2000	29.1 sec	D
21. Montague Expy./Great Mall Pkwy.-Capitol Ave. [a]	Signal	01/20/2000	59.9 sec	E-
22. Montague Expressway/Milpitas Boulevard [a]	Signal	01/19/2000	**118.8 sec**	F
23. Trade Zone Boulevard/Lundy Avenue	Signal	02/27/2001	26.0 sec	C-
24. Main Street/Carlo Street	Stop Sign	10/13/1999	21.0 sec	C

Unacceptable operations are shown in **bold** type.

a CMP intersection

b Average stopped delay per vehicle for signalized intersections and average control delay for stop sign controlled intersections. LOS at unsignalized intersections represents worst-case movement or approach. Delay values are capped at 500 seconds due to unstable delay calculations at high levels of congestion. See text for details.

LOS = Level of service.

Source: Fehr & Peers Associates, Inc. 2001.

Table 3.9-6
Existing Intersection PM Peak Hour Levels of Service

Intersection	Type of Control	Count Date	Average Stopped or Control Delay [a]	LOS
1. Milpitas Boulevard/Abel Street-Jacklin Road	Signal	06/06/2001	38.1 sec	D-
2. N. Abel Street/Marilynn Drive	Signal	10/12/1999	38.1 sec	D-
3. Calaveras Blvd. (SR 237)/S. Abbott Ave.	Signal	09/29/1999	26.3 sec	D+
4. Calaveras Boulevard (SR 237)/Serra Way	Signal	09/28/1999	16.9 sec	C+
5. Calaveras Boulevard (SR 237)/Abel Street [a]	Signal	04/26/2000	37.6 sec	D-
6. Calaveras Blvd (SR 237)/Milpitas Blvd [a]	Signal	04/26/2000	50.2 sec	E
7. S. Abel Street/Serra Way	Signal	09/28/1999	17.7 sec	C
8. S. Main Street/Serra Way	Signal	10/04/1999	7.5 sec	B
9. S. Abel Street/Corning Avenue	Signal	01/25/2000	7.9 sec	B
10. S. Main Street/Corning Avenue	Stop Sign	01/25/2000	24.9 sec	C
11. S. Abel Street/W. Curtis Avenue	Signal	10/07/1999	5.7 sec	B+
12. S. Main Street/W. Curtis Avenue	Signal	10/14/1999	13.9 sec	B-
13. Tasman Drive/Alder Drive	Signal	10/21/1999	**60.1 sec**	F
14. Tasman Drive/I-880 Southbound Ramps	Signal	10/21/1999	17.7 sec	C
15. Great Mall Pkwy/I-880 Northbound Ramps	Signal	10/21/1999	**69.6 sec**	F
16. Great Mall Parkway/Abel Street	Signal	10/12/1999	29.4 sec	D
17. Great Mall Parkway/Main Street	Signal	10/13/1999	26.7 sec	D+
18. S. Abel Street/S. Main Street	Signal	09/29/1999	7.3 sec	B
19. Montague Expy/S. Main St.-Oakland Rd [a]	Signal	04/26/2000	**60.2 sec**	F
20. Montague Expy/McCandless Dr-Trade Zone Blvd [a]	Signal	03/16/2000	**68.9 sec**	F
21. Montague Expressway/Great Mall Pkwy-Capitol Ave [a]	Signal	04/26/2000	**121.5 sec**	F
22. Montague Expressway/Milpitas Boulevard [a]	Signal	04/26/2000	**80.3 sec**	F
23. Trade Zone Boulevard/Lundy Avenue	Signal	02/27/2001	33.9 sec	D
24. Main Street/Carlo Street	Stop Sign	10/13/1999	**38.0 sec**	E

Unacceptable operations are shown in **bold** type.

a CMP intersection

b Average stopped delay per vehicle for signalized intersections and average control delay for stop sign controlled intersections. LOS at unsignalized intersections represents worst-case movement or approach. Delay values are capped at 500 seconds due to unstable delay calculations at high levels of congestion. See text for details.

LOS = Level of service.

Source: Fehr & Peers Associates, Inc. 2001.

Table 3.9-7
Existing Freeway Segment Level of Service

Freeway	Segment	Direction	Peak Hour	Existing Conditions [a]				
				Lanes	Volume	Average Speed	Density	LOS
SR 237	Zanker to McCarthy	WB	AM	3	4,970	25	**66.3**	**F**
SR 237	Zanker to McCarthy	WB	PM	3	5,360	60	29.8	D
SR 237	McCarthy to Zanker	EB	AM	3	3,700	60	20.6	C
SR 237	McCarthy to Zanker	EB	PM	3	4,090	10	**136.2**	**F**
SR 237	Zanker to McCarthy	WB HOV	AM	1	760	65	11.7	B
SR 237	Zanker to McCarthy	WB HOV	PM	1	550	65	8.5	A
SR 237	McCarthy to Zanker	EB HOV	AM	1	350	65	5.3	A
SR 237	McCarthy to Zanker	EB HOV	PM	1	1,960	40	48.9	E
I-680	Calaveras to Jacklin	NB	AM	3	3,600	60	20.0	C
I-680	Calaveras to Jacklin	NB	PM	3	5,110	10	**170.2**	**F**
I-680	Jacklin to Calaveras	SB	AM	3	5,440	60	30.2	D
I-680	Jacklin to Calaveras	SB	PM	3	4,530	10	**151.0**	**F**
I-680	Yosemite to Calaveras	NB	AM	4	4,430	60	21.1	C
I-680	Yosemite to Calaveras	NB	PM	4	5,010	20	**71.6**	**F**
I-680	Calaveras to Yosemite	SB	AM	4	4,330	65	19.0	C
I-680	Calaveras to Yosemite	SB	PM	4	5,640	10	**161.1**	**F**
I-680	Capitol to Montague	NB	AM	4	5,700	60	23.8	C
I-680	Capitol to Montague	NB	PM	4	5,070	65	19.5	C
I-680	Montague to Capitol	SB	AM	4	5,070	65	19.5	C
I-680	Montague to Capitol	SB	PM	4	7,350	10	**183.8**	**F**
I-880	North of SR 237	NB	AM	3.6 [b]	3,590	65	15.4	B
I-880	North of SR 237	NB	PM	3.6 [b]	4,410	10	**122.4**	**F**
I-880	North of SR 237	SB	AM	3.6 [b]	6,030	60	27.9	D
I-880	North of SR 237	SB	PM	3.6 [b]	7,770	55	39.2	C
I-880	SR 237 to Tasman	NB	AM	3	2,350	65	12.0	B
I-880	SR 237 to Tasman	NB	PM	3	4,080	15	**90.7**	**F**
I-880	SR 237 to Tasman	SB	AM	3	3,750	60	20.8	C
I-880	SR 237 to Tasman	SB	PM	3	2,800	65	14.4	B
I-880	Tasman to Montague	NB	AM	3	3,450	65	17.7	C
I-880	Tasman to Montague	NB	PM	3	4,030	15	**89.5**	**F**
I-880	Tasman to Montague	SB	AM	3	3,710	65	19.0	C
I-880	Tasman to Montague	SB	PM	3	3,920	15	**87.1**	**F**
I-880	Montague to Brokaw	NB	AM	2	3,240	60	27.0	D
I-880	Montague to Brokaw	NB	PM	2	4,560	50	45.6	D
I-880	Montague to Brokaw	SB	AM	2	4,030	55	36.7	D
I-880	Montague to Brokaw	SB	PM	2	4,100	10	**205.2**	**F**

a Lanes, volume and density from VTA 1997 CMP Monitoring Data; LOS criteria are summarized in Table 3.9-3.

b The "0.6" lane is allocated due to the presence of an auxiliary lane (where a right lane is only present on the freeway between an entrance and an exit).

LOS = Level of Service Unacceptable operations are shown in **bold** type.

Source: Fehr & Peers Associates, Inc. 2001.

Intersections

The results of the LOS calculations indicate that the following locations currently operate at unacceptable levels according to City of Milpitas and CMP criteria:

1. Milpitas Blvd./Abel St.-Jacklin Rd. (AM peak hour)
2. Calaveras Blvd. (SR237)/S. Abbott Ave. (AM peak hour)
3. Tasman Dr./Alder Dr. (PM peak hour)
4. Great Mall Pkwy./I-880 NB ramp (PM peak hour)
5. Montague Expy./Main St.-Oakland Rd. (PM peak hour)
6. Montague Expy./McCandless Dr.-Trade Zone Bl. (PM peak hour)
7. Montague Expy./Great Mall Pkwy-Capitol Ave. (PM peak hour)
8. Montague Expy./Milpitas Blvd. (AM and PM peak hour)
9. Main St./Carlo St. (PM peak hour)

It is important to note that poor operations at some of the key intersections are due in part to traffic diversion caused by roadway construction. The primary cause of this diversion is the on-going work at the SR 237/I-880 interchange which has affected traffic volumes on Calaveras Boulevard and Tasman Drive/Great Mall Parkway. In addition, the current construction of the Tasman East light rail line on Great Mall Parkway has contributed to degraded operations. Once the interchange capacity improvements at the interchange are completed and the traffic detours for light rail construction are removed, overall intersection operations are expected to be better than those presented in this document.

The traffic analysis focuses on intersection operations during the AM and PM peak hours when overall traffic volumes are highest. However, there are several areas in the City of Milpitas that experience substantial congestion during the midday peak period between 12:00 pm and 1:00 pm. Recent studies of the existing Saturday midday peak hour volumes plus traffic from approved projects show that one intersection is projected to operate unacceptably (Great Mall Parkway/Montague Expressway), and two intersections may operate close to the LOS D/E threshold (Montague Expressway/McCandless Drive-Trade Zone Boulevard and Montague Expressway/Main Street) (Joe Oliva, City of Milpitas, personal communications with Fehr & Peers, Inc., April 2000).

Freeway Segments

According to data provided by the VTA, the following freeway segments are operating at unacceptable levels (LOS F) under Existing Conditions:[1]

1. SR 237 Westbound - Zanker Rd. to McCarthy Blvd. (AM peak hour)
2. SR 237 Eastbound - McCarthy Blvd. to Zanker Rd. (PM peak hour)
3. I-680 Northbound - Calaveras Blvd. to Jacklin Rd. (PM peak hour)
4. I-680 Southbound - Jacklin Rd. to Calaveras Blvd. (PM peak hour)

[1] The existing volumes and levels of service shown in Table 3.9-7 for freeway segments represent baseline conditions according to VTA and City of Milpitas transportation impact analysis standards. The addition of traffic to freeway segments from approved and pending developments in Milpitas and surrounding jurisdictions, as well as increased through traffic, is included in the analysis of cumulative conditions.

5. I-680 Northbound - Yosemite Dr. to Calaveras Blvd. (PM peak hour)
6. I-680 Southbound - Calaveras Blvd. to Yosemite Dr. (PM peak hour)
7. I-680 Southbound - Montague Expy. to Capitol Ave. (PM peak hour)
8. I-880 Northbound - North of SR 237 (PM peak hour)
9. I-880 Northbound - SR 237 to Tasman Dr (PM peak hour)
10. I-880 Northbound - Montague Expy. to Tasman Dr. (PM peak hour)
11. I-880 Southbound - Tasman Dr. to Montague Expy. (PM peak hour)
12. I-880 Southbound - Montague Expy. to Brokaw Rd. (PM peak hour)

BASELINE TRAFFIC CONDITIONS

This section discusses the operations of the key intersections and freeway segments under baseline conditions. Baseline conditions form the basis against which impacts of the proposed project are identified. For intersection analysis, this scenario includes existing traffic volumes plus traffic from approved but not yet constructed developments and approved and funded changes to the study roadway system. Consistent with VTA analysis methodology, existing freeway traffic volumes are used to represent baseline conditions. Traffic volumes under far-term future conditions are analyzed under cumulative conditions.

Baseline Roadway Improvements

Several roadway improvements in the planning area will be constructed prior to development under the proposed Specific Plan. The roadway network assumptions used in the baseline conditions intersection analysis and the current schedule for improvement implementation are listed below.

I-880/SR 237 Interchange

This interchange is currently undergoing major reconstruction that is scheduled to be completed in Spring 2002. As noted previously, this construction will continue to cause traffic diversion to other streets and cause degraded intersection operations. Listed below are the important changes in the roadway network:

- New off-ramp from eastbound SR 237 to McCarthy Boulevard;
- Cypress Drive ramps are closed, and during reconstruction traffic to and/from I-880 and SR 237 (East) has been detoured to Tasman Drive;
- New ramp connection from eastbound SR 237 to southbound I-880;
- New on-ramp from McCarthy Boulevard to eastbound SR 237; traffic is no longer detoured to Tasman Drive; traffic from eastbound SR 237 to southbound I-880 is detoured to this intersection;
- New off-ramp from westbound SR 237 to McCarthy Boulevard;
- New on-ramp from McCarthy Boulevard to westbound SR 237, access from Ranch Drive to westbound SR 237 is removed, traffic from westbound Calaveras Boulevard is diverted through this intersection (late 2001); and

- New flyover from eastbound SR 237 to northbound I-880 is expected to be completed in March 2002.

Upon completion of the interchange, traffic from McCarthy Boulevard will no longer be able to access I-880 southbound. Therefore, it is expected that substantial amounts of traffic will reroute to the Tasman Drive and I-880 interchange.

Dixon Landing and I-880 Interchange

Currently, the Dixon Landing Road overcrossing at I-880 is only two lanes (one eastbound and one westbound). As part of the interchange reconstruction project, the following improvements will be constructed at this location:

- Widen the overcrossing from to six through lanes plus turn lanes;
- Construct a diagonal on-ramp to connect eastbound Dixon Landing Road to southbound I-880;
- Widen the southbound I-880 exit ramp approach from one to four lanes with a signal;
- Relocate existing ramps east of I-880; and
- Provide a new on-ramp from California Circle to northbound I-880.

Construction of these improvements has begun and is scheduled for completion in late 2004.

Great Mall Parkway/I-880 Northbound Ramps

The intersection of Tasman Drive and the I-880 northbound ramps will be improved per the Cisco Systems development in north San Jose. As part of this improvement, the eastbound approach will be reconstructed to provide three through lanes. This modification is funded in part by Cisco and the City is pursuing completion of this improvement by 2002.

Tasman Drive/I-880 Southbound Ramps

The intersection of Tasman Drive and the I-880 southbound ramps will also be improved as a result of the Cisco Systems development in north San Jose. This improvement includes converting the eastbound right-turn lane to a free-turning right,[2] and widening the southbound approach to provide one left-turn lane, one shared left-through-right movement, and one right-turn lane. This improvement is partially funded and scheduled for completion by 2004. Initial design reviews have indicated that these improvements may require some widening, which will increase project costs.

Montague Expressway Widening

The Montague Expressway is planned to be widened to four lanes in each direction between Great Mall Parkway-Capitol Avenue and I-680. One lane in each direction will be dedicated for HOV use during both peak hours. This improvement was identified in an overall plan line study and operations study that evaluated improvements for the entire length of the expressway between U.S. Highway 101 and I-680. The funding of the widening in Milpitas was obtained through traffic impact fees and from the City's

[2] A "free" right-turn lane is a right-turn lane with its own receiving lane on the departure leg such that a vehicle turning right does not have to stop or yield to other vehicles.

Capital Improvement Program (CIP). As part of the widening and the future light rail extension on Great Mall Parkway, the Great Mall Parkway-Montague Expressway intersection will be modified to include the following lane configurations: eastbound/westbound approaches will include two left-turn lanes, four through lanes, and one right-turn lane; northbound approach will include two left-turn lanes, two through lanes, and one right-turn lane; southbound approach will include two left-turn lanes. This project is scheduled to begin construction in summer 2001 and is expected to be completed by the end of 2002.

Widening of the remainder of Montague Expressway from Great Mall Parkway-Capitol Avenue to I-880 is one of the highest priority regional transportation improvements in Santa Clara County. The cities of Milpitas, San Jose and Santa Clara, and the County of Santa Clara have signed a memorandum of understanding (MOU) to aggressively pursue funding and facilitate completion of this project. Although expected to be completed in the near future, these additional improvements were not included in the technical analysis, except as potential mitigation measures..

Montague Expressway/McCarthy Boulevard-O'Toole Avenue

The north and east legs of this intersection were modified in the Spring of 2000 to provide 8-phase signal operation with protected left-turn movements on all approaches. As part of this improvement, the north leg now includes two left-turn lanes, one through lane, and one right-turn lane, while a second left-turn lane was added to the east leg.

Traffic Signal Timings

Several of the roadway projects listed above will change the travel patterns and traffic volumes within the planning area. With these projects, signal timings will be modified to improve operations at each intersection and to establish coordination along McCarthy Boulevard and Tasman Drive. For purposes of this analysis, the cycle lengths at all of the intersections on McCarthy Boulevard between SR 237 and Tasman Drive were changed to 110 seconds for both the AM and PM peak hours. The cycle length at the Tasman Drive/Alder Drive intersection was assumed to be 105 seconds for both peak hours to be consistent with the cycle length at the adjacent I-880 southbound ramp intersection to the east.

Baseline Traffic Volumes

The intersection peak hour traffic volumes for baseline conditions were estimated by adding existing volumes and traffic estimates for approved but not yet constructed projects in the planning area. Approved trip inventories (ATIs) were obtained from both the City of Milpitas and the City of San Jose. The ATIs and volume summary sheets at each intersection are included in Appendix E. Trips from the approved projects were added to existing traffic volumes, and the resulting baseline intersection traffic volumes are shown on Figure 3.9-4.

Baseline Intersection Levels of Service

Levels of service were calculated for all of the study intersections using the baseline traffic volumes on Figure 3.9-4 with the planned baseline roadway improvement described above. Tables 4.9-8 and 4.9-9 present the LOS results under baseline conditions. The corresponding LOS calculation sheets are provided in Appendix E.

At selected intersections listed in Tables 4.9-8 and 4.9-9, the expected traffic volumes cause the level of service calculation method to project excessive delays (greater than 300 seconds or five minutes). These delays are considered unreliable because the methodology becomes unstable as described in Chapter 9 of the Highway Capacity Manual. For purposes of this analysis, the delay values were capped at 500 seconds of delay.

The addition of traffic from approved projects causes the following study intersections to degrade from acceptable to unacceptable levels, or exacerbates unacceptable operations during either the AM and/or PM peak hour:

1. Milpitas Blvd./Jacklin Rd.-Abel St. (AM peak hour)
1. Calaveras Blvd.(SR 237)/Abbott Ave. (AM peak hour)
2. Calaveras Blvd.(SR 237)/Milpitas Blvd. (PM peak hour)
3. Tasman Dr./Alder Dr. (PM peak hour)
4. Tasman Dr./I-880 Southbound Ramps (AM peak hour)
5. Great Mall Pkwy./I-880 Northbound Ramps (AM and PM peak hour)
6. Great Mall Pkwy./Abel St. (AM peak hour)
7. Montague Expy./S. Main St-Oakland Rd. (AM and PM peak hour)
8. Montague Expy./McCandless Dr.-Trade Zone Bl. (PM peak hour)
9. Montague Expy./Great Mall Parkway-Capitol Ave.(PM peak hour)
10. Montague Expy./Milpitas Blvd. (PM peak hour)
11. Main St. Carlo St. (PM peak hour)

Table 3.9-8
Baseline Intersection AM Peak Hour Levels of Service

Intersection	Type of Control	Count Date	Average Stopped or Control Delay [b]	LOS
1. Milpitas Boulevard/Abel Street-Jacklin Road	Signal	06/06/2001	**45.8 sec**	**E**
2. N. Abel Street/Marilynn Drive	Signal	01/18/2000	17.4 sec	C
3. Calaveras Boulevard (SR 237)/S. Abbott Avenue	Signal	01/27/2000	**69.0 sec**	**F**
4. Calaveras Boulevard (SR 237)/Serra Way	Signal	01/27/2000	12.3 sec	B
5. Calaveras Boulevard (SR 237)/Abel Street [a]	Signal	01/19/2000	45.1 sec	E
6. Calaveras Boulevard (SR 237)/Milpitas Boulevard [a]	Signal	01/27/2000	26.4 sec	D+
7. S. Abel Street/Serra Way	Signal	01/20/2000	15.9 sec	C+
8. S. Main Street/Serra Way	Signal	01/20/2000	4.4 sec	A
9. S. Abel Street/Corning Avenue	Signal	01/25/2000	11.2 sec	B
10. S. Main Street/Corning Avenue (unsignalized)	Stop Sign	01/25/2000	15.0 sec	B
11. S. Abel Street/W. Curtis Avenue	Signal	01/20/2000	12.7 sec	B
12. S. Main Street/W. Curtis Avenue	Signal	01/19/2000	13.2 sec	B-
13. Tasman Drive/Alder Drive	Signal	01/25/2000	15.9 sec	C+
14. Tasman Drive/I-880 Southbound Ramps	Signal	01/20/2000	**52.3 sec**	**E**
15. Great Mall Parkway/I-880 Northbound Ramps	Signal	01/20/2000	**94.7 sec**	**F**
16. Great Mall Parkway/Abel Street	Signal	01/26/2000	**68.2 sec**	**F**
17. Great Mall Parkway/Main Street	Signal	01/20/2000	17.5 sec	C
18. S. Abel Street/S. Main Street	Signal	01/27/2000	11.0 sec	B
19. Montague Expy/S. Main St-Oakland Rd. [a]	Signal	01/19/2000	**64.3 sec**	**F**
20. Montague Expy/McCandless Dr-Trade Zone Blvd.[a]	Signal	01/20/2000	29.8 sec	D
21. Montague Expy/Great Mall Pkwy-Capitol Ave. [a]	Signal	01/20/2000	49.1 sec	E
22. Montague Expressway/Milpitas Boulevard [a]	Signal	01/19/2000	55.0 sec	E
23. Trade Zone Boulevard/Lundy Avenue	Signal	04/29/1999	26.1 sec	D+
24. Main Street/Carlo Street	Stop Sign	1/20/1999	21.8 sec	C

Unacceptable operations are shown in **bold** type. Based on local (LOS D) and CMP (LOS E) minimum operating standards

a CMP intersection

b Average stopped delay per vehicle for signalized intersections and average control delay for stop sign controlled intersections. LOS at unsignalized intersections represents worst-case movement or approach. Delay values are capped at 500 seconds due to unstable delay calculations at high levels of congestion. See text for details.

LOS = Level of service.

Source: Fehr & Peers Associates, Inc., 2001.

Table 3.9-9
Baseline Intersection PM Peak Hour Levels of Service

Intersection	Type of Control	Count Date	Average Stopped or Control Delay [b]	LOS
1. Milpitas Boulevard/Abel Street-Jacklin Road	Signal	06/06/2001	32.5 sec	D
2. N. Abel Street/Marilynn Drive	Signal	10/12/1999	23.8 sec	C-
3. Calaveras Boulevard (SR 237)/S. Abbott Avenue	Signal	09/29/1999	26.8 sec	D+
4. Calaveras Boulevard (SR 237)/Serra Way	Signal	09/28/1999	17.0 sec	C+
5. Calaveras Boulevard (SR 237)/Abel Street[a]	Signal	04/26/2000	43.0 sec	E+
6. Calaveras Boulevard (SR 237)/Milpitas Boulevard[a]	Signal	04/26/2000	**66.9 sec**	**F**
7. S. Abel Street/Serra Way	Signal	09/28/1999	18.6 sec	C
8. S. Main Street/Serra Way	Signal	10/04/1999	7.5 sec	B
9. S. Abel Street/Corning Avenue	Signal	01/25/2000	7.7 sec	B
10. S. Main Street/Corning Avenue (unsignalized)	Stop Sign	01/25/2000	25.8 sec	D
11. S. Abel Street/W. Curtis Avenue	Signal	10/07/1999	5.6 sec	B+
12. S. Main Street/W. Curtis Avenue	Signal	10/14/1999	14.2 sec	B-
13. Tasman Drive/Alder Drive	Signal	10/21/1999	**404.4 sec**	**F**
14. Tasman Drive/I-880 Southbound Ramps	Signal	10/21/1999	17.6 sec	C
15. Great Mall Parkway/I-880 Northbound Ramps	Signal	10/21/1999	**62.4 sec**	**F**
16. Great Mall Parkway/Abel Street	Signal	10/12/1999	29.0 sec	D
17. Great Mall Parkway/Main Street	Signal	10/13/1999	27.9 sec	D+
18. S. Abel Street/S. Main Street	Signal	09/29/1999	8.1 sec	B
19. Montague Expressway/S. Main Street-Oakland Road[a]	Signal	04/26/2000	**78.9 sec**	**F**
20. Montague Expy/McCandless Dr.-Trade Zone Blvd. [a]	Signal	03/16/2000	**63.2 sec**	**F**
21. Montague Expy/Great Mall Pkwy-Capitol Ave. [a]	Signal	04/26/2000	**213.1 sec**	**F**
22. Montague Expressway/Milpitas Boulevard [a]	Signal	04/26/2000	36.3 sec	D
23. Trade Zone Boulevard/Lundy Avenue	Signal	02/27/2001	33.9 sec	D
24. Main Street/Carlo Street	Stop Sign	10/13/1999	**39.5 sec**	**E**

Unacceptable operations are shown in **bold** type. Based on local (LOS D) and CMP (LOS E) minimum operating standards.

a CMP intersection

b Average stopped delay per vehicle for signalized intersections and average control delay for stop sign controlled intersections. LOS at unsignalized intersections represents worst-case movement or approach. Delay values are capped at 500 seconds due to unstable delay calculations at high levels of congestion. See text for details.

LOS = Level of service.

Source: Fehr & Peers Associates, Inc., 2001.

TRANSIT SERVICE

The VTA operates fixed route and commuter bus service, as well as paratransit service, in all jurisdictions of Santa Clara County including the City of Milpitas. Light rail transit operated by the VTA is located at the west end of the Midtown area with an interim end station on Tasman Drive at Alder Drive.

Bus Service

Currently, Midtown includes an important component of bus transportation in the city with the transit hub located at Main Street and Weller Lane at the northern end of the Midtown area. This facility accommodates 14 VTA bus lines with more than 400 daily bus trips and also provides a transfer point between the Santa Clara County VTA system and the AC (Alameda-Contra Costa) Transit systems.

Route 33 provides fixed-route service between San Jose Baypointe Light Rail station and Weller and Main. Weekday service is provided between 5:00 am and 11:00 pm at 20 to 60 minute headways. Weekend service is provided between 7:00 am and 11:00 pm at 30- to 60-minute headways.

Route 56 provides fixed-route service between Fair Oaks-El Camino Real and Milpitas. Weekday service is provided between 5:30 am and 6:30 pm at 30 to 60 minute headways. Weekend service is not provided.

Route 66 provides fixed-route service between Santa Teresa Hospital and Milpitas. Weekday service is provided between 5:00 am and midnight at 15 to 60 minute headways. Weekend service is provided between 5:30 am and 11:30 pm at 30- to 60-minute headways.

Route 70 provides fixed-route service between Milpitas and Capitol Light Rail Station. Weekday service is provided between 5:00 am and 11:30 pm at 15 to 60 minute headways. Weekend service is provided between 6:30 am and 11:00 pm at 15- to 60-minute headways.

Route 71 provides fixed-route service between Milpitas and Eastridge. Weekday service is provided between 5:30 am and 11:00 pm at 15 to 60 minute headways. Weekend service is provided between 7:00 am and 9:00 pm at 30- to 60-minute headways.

Route 74 provides fixed-route service between Eastridge and Baypointe Light Rail Station. Weekday service is provided between 6:00 am and 10:30 pm at 20 to 60 minute headways. Weekend service is provided between 7:30 am and 10:30 pm at 30- to 60-minute headways.

Route 77 provides fixed-route service between Milpitas and Evergreen College. Weekday service is provided between 5:30 am and 7:30 pm at 15 to 30 minute headways. Weekend service is provided between 7:00 am and 7:30 pm at 30 minute headways.

Route 104 provides express bus route service between Piedmont Hills and Palo Alto. Weekday service is provided between 5:30 am and 8:30 am and 3:00 pm and 6:00 pm at 30 minute headways. Weekend service is not provided.

Route 140 provides express bus route service between Fremont BART Station and Sunnyvale Caltrain Station. Weekday service is provided between 6:00 am and 8:30 am and 4:00 pm and 6:30 pm at 30 to 45 minute headways. Weekend service is not provided.

Route 141 provides express bus route service between Fremont BART Station and Great America. Weekend service is only provided March through October between 9:00 am and 10:00 pm at 30 to 90 minute headways.

Route 180 provides express bus route service between San Jose Diridon Station and Fremont BART Station. Weekday service is provided between 4:30 am and 12:30 am at 15 to 60 minute headways. Weekend service is provided between 6:30 am and 12:30 am at 30 to 60 minute headways.

Route 321 provides service between Eastridge Shopping Center and Lockheed Martin Transit Center. Weekday service is provided westbound between 4:00 am and 7:30 am at 30 to 60 minute headways. Weekday service is also provided eastbound between 2:30 pm and 6:00 pm at 30 to 60 minute headways. Weekend service is not provided.

Route 345 provides service between Eastridge Transit Center and Downtown Mountain View Transit Center. Weekday service is provided eastbound between 4:00 pm and 6:30 pm at 60 minute headways. Weekday service is also provided westbound between 6:00 pm and 8:00 pm at 60 minute headways. Weekend service is not provided.

Route 520 provides express bus route service between Fremont BART Station and Shoreline Industrial Park. Weekday service is provided between 5:00 am and 8:00 am and 2:30 pm and 6:30 pm at 30 to 60 minute headways. Weekend service is not provided.

Paratransit Service

Paratransit service is operated under contract with OUTREACH, a private, non-profit paratransit broker. This door-to-door service is provided to riders (including Milpitas residents and employees) who meet the eligibility requirements established by the Americans with Disabilities Act (ADA) of 1990.

ACE Shuttle Service

Shuttle service (operated by the VTA) for Altamont Commuter Express (ACE) rail is provided between the employment centers in the City of Milpitas and the Great America rail station in the City of Santa Clara. ACE passenger rail service is provided between Stockton and San Jose. (ACE is governed by the ACE Joint Powers Authority comprised of San Joaquin COG, Alameda County Congestion Management Agency, and the Santa Clara VTA.) Service to employment areas is provided in the morning and return service is provided in the afternoon. The VTA also operates free shuttle service between the Component Drive light rail station and the Oak Creek and Milpitas Business Parks located west of the Midtown area. Shuttle service will be re-evaluated once light rail is extended along Tasman Drive through the City of Milpitas and may be re-routed to complement this new transit option.

Future Transit Center Relocation

With the opening of the new Tasman East light rail line, a substantial portion of the bus operations at the existing Main Street/Weller Lane transit center will be relocated to a new transit center at the Great Mall. The purpose of this relocation is to serve the new multi-modal station at the Great Mall, which will also include a park-and-ride lot. Thus, the number of daily bus operations at the northern end of the Midtown area will be substantially reduced; however, bus service will still be provided throughout the Midtown area.

Future BART Expansion

BART is planned to be extended to the Midtown area in the future. On November 7, 2000, Santa Clara County voters approved a 30-year extension of a ½-cent sales tax to fund transit projects and improvements. A key element of this measure (Measure A), which was sponsored by the VTA, is funding for the extension of BART from its current terminus in Fremont through Milpitas to downtown San Jose and ultimately the City of Santa Clara Caltrain station. The alignment through Milpitas is the existing Union Pacific Rail line and is expected to include two stations: one in the vicinity of Abel Street or Calaveras Boulevard, and one adjacent to the Great Mall Parkway/Montague Expressway intersection. This latter station will provide a direct link to the VTA light rail line that is planned to be extended along Great Mall Parkway from its current terminus at Baypoint in North San Jose. In addition to the sales tax funding, the State of California has pledged over $760 million dollars towards the project. Some additional funding from the federal government will be required. The next step in the process is the preparation of a major investment study in the Fremont-to-San Jose corridor to evaluate project alternatives.

PEDESTRIAN AND BICYCLE FACILITIES

Sidewalks

Most pedestrian facilities along city streets are comprised of sidewalks, crosswalks, and pedestrian signals. Crosswalks and pedestrian signals are provided at all of the signalized study intersections. Gaps in the sidewalk system are located primarily on undeveloped parcels on: the east side of Abel Street between Main Street (south of Great Mall Parkway) and Corning Avenue; the west side of Abel Street from Calaveras Boulevard to Weller Lane; a segment on the south side of Serra Way between Abel and Main Street; and a portion of the south side of Great Mall Parkway between McCandless Drive and Montague Expressway. Many of these missing segments are to be provided upon development of adjacent parcels and/or in association with roadway improvements and the light rail extension project.

Trails

The City of Milpitas City Council has adopted a Trails Master Plan for an off-street trail system. The Trails Master Plan has proposed several city trails to pass through the Midtown area. These are along Penitencia Creek, Wrigley Creek/Union Pacific Railroad, Berryessa Creek, and Hetch-Hetchy right-of-way. These trails would provide recreation and transportation alternatives for walkers and bicyclists. These trails are, for the most part, planned but not yet developed. As an exception, the Crossings

apartment development is responsible for providing funds to construct a segment of the Berryessa Creek trail in the southeastern portion of the Midtown area.

Bicycle Facilities

Bicycle facilities comprise bike paths (Class I), lanes (Class II), and routes (Class III). Bike paths are paved trails that are separated from roadways. Bike lanes on roadways are designated for bicycle use by striping, pavement legends, and signs. Bike routes are signed roadways that accommodate bicycle use. In the vicinity of the Midtown area, bike lanes are designated on Tasman Drive-Great Mall Parkway between I-880 and Montague Expressway, S. Main Street between Weller Lane and Montague Expressway, McCandless Drive between Great Mall Parkway and Montague Expressway, Milpitas Boulevard beginning at Yosemite Drive and continuing north of Calaveras Boulevard, and Yosemite Drive beginning at Milpitas Boulevard and continuing east over I-680. Bike routes are located on Main Street continuing to Marilynn Drive north of Weller Lane.

The City of Milpitas Bikeway Master Plan also adopted by the City Council proposes new bikeways on Serra Way continuing on Calaveras Boulevard west of I-880, on Curtis Avenue traveling east to Yosemite Drive with a pedestrian/bicycle bridge over the Union Pacific railroad, and on Milpitas Boulevard between Montague Expressway and Yosemite Drive.

PARKING

Parking is provided in off-street lots and in on-street spaces on numerous facilities throughout the planning area. On-street parking is prohibited on Montague Expressway, Calaveras Boulevard (SR 237) up to Milpitas Boulevard, Tasman Drive-Great Mall Parkway, Milpitas Boulevard, and McCandless Drive. On-street parking is provided on sections of Main Street, North Abel Street, Serra Way, Corning Avenue, and Curtis Avenue.

3.9.2. THRESHOLDS OF SIGNIFICANCE

The proposed Specific Plan has been evaluated according to the significance thresholds listed below for each component of the transportation system.

SIGNALIZED INTERSECTIONS

Significant traffic impacts at signalized intersections would occur if the project would cause:

- Intersection operations to change from an acceptable level (LOS D or better for city intersections) under baseline conditions to an unacceptable level; or
- Exacerbation of unacceptable operations (LOS E or F) by increasing the critical delay by more than four seconds and increasing the volume-to-capacity (V/C) ratio by 0.01 or more; or
- An increase in the V/C ratio of 0.01 when the change in critical delay is negative (i.e., decreases). This can occur if the critical movements change.

UNSIGNALIZED INTERSECTIONS

Significant impacts at unsignalized intersections would occur if:

- The addition of project traffic causes an intersection to meet or exceed peak hour volume signal warrant criteria; or
- Project traffic is added to an intersection that already meets or exceeds peak hour warrant criteria under baseline conditions.

FREEWAY SEGMENTS

According to VTA guidelines and City of Milpitas standards, significant impacts to freeway segments would occur if:

- The addition of project traffic causes a segment to drop below its level of service standard (LOS E); or
- The amount of project traffic added to a segment already operating at LOS F is more than one percent of its capacity.

ROADWAY SEGMENTS

Significant impacts to a roadway segment would occur if:

- The addition of traffic from a proposed General Plan amendment degrades operations under the current General Plan from an acceptable (LOS D or better) to an unacceptable level (LOS E or F); or
- The amount of traffic added to a segment already operating at LOS F is more than one percent of the segment's capacity.

PEDESTRIAN, BICYCLE, AND TRANSIT FACILITIES AND SERVICES

The project would cause a significant impact to pedestrian, bicycle, and transit facilities and services if:

- An element of the proposed project conflicts with existing or planned pedestrian, bicycle, and transit services; or
- The proposed project will create a hazardous condition for pedestrians or bicyclists that does not currently exist.

PARKING

The project would result in a significant parking impact if implementation of the Specific Plan causes or exacerbates a parking deficiency that would result in excessive demand for on-street spaces or parking in adjacent (i.e., non-project) areas.

3.9.3. ENVIRONMENTAL EVALUATION

Impacts resulting from the implementation of the proposed project were evaluated under the following scenarios: 1) Baseline Plus Project Conditions (assuming completion of Specific Plan developments under Baseline Conditions), 2) Baseline Plus Project Conditions in 2005 (assuming only a portion of project development), and 3) Cumulative (2015) Conditions with the proposed project. Both of the baseline plus project scenarios analyze impacts using intersection analysis. The amount of traffic associated with the project for these scenarios was estimated using trip rates and manually assigned to the roadway network. The 2005 analysis is provided for informational purposes to show the need for transportation improvements based on the level of development anticipated in the next five years.

The analysis of Cumulative Conditions in 2015 was conducted based on projected roadway link volumes and is consistent with the City's approach to long-range transportation planning. Traffic volumes for 2015 Conditions were developed using the City's travel demand model, and the corresponding analysis compared operations between the current General Plan designations and the land use changes proposed as part of the Midtown Specific Plan project. Each study scenario is described below.

Subsequent to this environmental analysis, detailed traffic impact analyses will be conducted to identify minor improvements or modifications that may be required as each individual use is developed. However, this environmental evaluation is intended to identify the significant transportation impacts of the Specific Plan as a whole and the major improvements required to mitigate those impacts.

BASELINE PLUS PROJECT CONDITIONS

The impacts of the proposed development on the surrounding transportation system are discussed in this section. First, the methodology used to estimate the amount of traffic generated by the proposed project is described. Then, the results of the level of service calculations for Baseline Plus Project Conditions are presented and compared to Baseline Conditions (without the project) to identify potential impacts.

The amount of traffic associated with a project is estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In the first step, the amount of traffic entering and exiting the sites within the Midtown area is estimated on a daily and peak-hour basis. In the second step, the directions vehicles use to approach and depart the site are estimated. The trips are assigned to specific street segments and intersection turning movements in the third step. The results of the process for this analysis are described below.

Trip Generation

The amount of traffic generated by the Midtown area under near-term conditions was estimated based on rates published in "Trip Generation" (Sixth Edition, Institute of Transportation Engineers). These rates were applied to the development anticipated under the proposed Specific Plan at various sites within the Midtown area. (A figure showing the undeveloped parcels within the Midtown planning area is provided in Chapter 2: Project Description as Figure 2-7; this are the parcels where new development is anticipated.)

Reductions to trip generation were applied to account for the availability of transit services, use of the EcoPass,[3] and the integration of complementary land uses within the same geographic area. The proposed mix of uses and the policies in the proposed Specific Plan would encourage the use of alternative travel modes, most notably bicycling and walking, and would reduce the number of vehicle trips. The total reduction for each land use ranged from 15 to 18 percent, and is consistent with the reductions permitted under VTA guidelines. Trip rates for the highway retail uses were also reduced by 15 percent to account for pass-by trips, where pass-by trips represent trips made to a site by vehicles already on the adjacent street. All trip rates and trip reductions were reviewed and approved by City of Milpitas staff (Joseph Oliva III, City of Milpitas Planning and Neighborhood Preservation Division).

It should be noted that the project trip generation estimate and subsequent analysis includes traffic from the Home Depot store located at the Great Mall. The store has since approved. For this reason, Home Depot is technically not a part of the anticipated development attributable to the proposed Specific Plan. However, because the traffic associated with the Home Depot would still occur, the traffic associated with the Specific Plan was not recalculated to remove Home Depot.

A summary of trip generation is presented in Table 3.9-10. As shown in Table 3.9-10, the land uses proposed in the Specific Plan are estimated to generate a total of 55,941 net new daily trips, 3,745 net new AM peak hour trips (1,627 inbound and 2,118 outbound), and 5,750 net new PM peak hour trips (2,813 inbound and 2,937 outbound). These traffic levels do not include traffic generated by parking lots serving a possible future BART stations in the Midtown area.

TRIP DISTRIBUTION AND ASSIGNMENT

The net new AM and PM peak hour trips were distributed to the baseline roadway network based on the location of complementary land uses and previous distributions used for other developments in Milpitas. Project trips were then assigned to specific roadway segments based on potential paths and major access points from adjacent streets. Estimated turning movement volumes generated by the Specific Plan were added to baseline volumes to obtain baseline plus project peak hour intersection volumes (see Figure 3.9-5). Although development under the Specific Plan is expected to take 10 years or more to complete, these volumes were used to provide a conservative estimate of traffic operations for environmental analysis purposes.

[3] EcoPass allows employees to ride all VTA bus and light rail vehicles at no cost. Employers purchase annual EcoPass stickers at a fraction of the cost of standard monthly passes. The cost for employers in the Midtown area with bus and light rail service will likely be $60 or less per employee. Employees simply affix the stickers to the back of their employer photo ID badges (or VTA - produced photo ID cards, if an employer doesn't have photo IDs).

Table 3.9-10
Summary of Trip Generation

Parcel/Area	Net New Trips						
	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
N. Main, Elmwood, Railyards							
Vacant Paratransit Yard	131	14	2	16	3	15	18
City Property/DeVries	128	2	9	11	9	4	13
'Loop Site'/Caltrans	131	14	2	16	3	15	18
Vicinity of Serra and Main	723	7	29	36	40	29	69
Serra Center (ptn.)	9,184	1,010	138	1,148	215	1,048	1,263
Sinnott Lane/Main	425	3	2	4	18	20	38
Hetch-Hetchy Area/Main	1,105	9	22	30	54	48	102
County Surplus	765	10	55	65	51	25	77
Elmwood Surplus	11,475	151	129	281	491	554	1,046
Railyards	4,488	61	320	381	301	148	449
Subtotal North Area	28,554	1,283	707	1,989	1,185	1,906	3,092
S. Main Street, Montague							
Great Mall	5,049	67	57	123	216	244	460
Abel/Great Mall Parkway	6,035	62	248	310	340	237	576
S. Main/Abel	1,938	26	138	165	130	64	194
S. Main/Midblock	1,020	14	73	87	68	34	102
S. Main/Montague	2,295	31	164	195	154	76	230
Capitol/Montague	11,050	144	732	876	720	376	1,097
Trade Zone	0	0	0	0	0	0	0
Subtotal South Area	27,387	344	1,411	1,755	1,628	1,030	2,658
GRAND TOTAL	**55,941**	**1,627**	**2,118**	**3,745**	**2,813**	**2,937**	**5,750**

Note: No reductions were applied for existing uses, and trips in table above do not include those generated by BART stations. Trip generation estimate for the Great Mall parcel includes the Home Depot store, which has since been removed from the proposed project. Thus, the trip generation estimates are considered conservative.

Source: Fehr & Peers Associates, Inc., 2000.

BASELINE PLUS PROJECT TRAFFIC OPERATIONS

Intersection Levels of Service

The traffic volumes under Baseline Plus Project Conditions were used with the baseline roadway network to calculate levels of service for all of the study intersections. The results of this analysis are summarized in Tables 4.9-11 and 4.9-12 and show that nine (9) intersections would be significantly affected by project traffic in the AM peak hour, and eleven (11) intersections would be significantly impacted in the PM peak hour.

Each of these impacts is summarized below, along with an analysis of the feasibility of transportation system improvements. Feasible mitigation measures and the resultant projected operating conditions at these impacted intersections are summarized in Table 3.9-13. Because the area is highly urbanized, there are some cases where mitigation has been determined to be infeasible because of physical constraints, lane geometry limitations, or limitations of the jurisdictional authority of the City of Milpitas. Where this is the case, Table 3.9-13 indicates that the impact of traffic attributable to the Midtown Milpitas Specific Plan will not be fully mitigated. Where applicable, the rationale for not implementing the modifications necessary to achieve less-than-significant impacts is provided in the summary text following the numbered impact and mitigation measure below.

It is also important to note that the projected intersection operations listed in Tables 4.9-11 and 4.9-12 assume full development of vacant and undeveloped land within the Specific Plan area within a very short timeframe. As such, the completion of a variety of transportation improvements and associated benefits are not reflected in the technical calculations. Thus, the projected intersection operations are considered conservative.

In actuality, Specific Plan development will occur over 10 to 15 years, by which time the interchange reconfigurations on I-880 at Dixon Landing Road and SR 237 will be completed, as will as the widening of I-880. These major improvements will reduce diversion onto some City streets and will improve overall traffic flows. Accordingly, traffic conditions at particular intersections will very likely be better than presented in this environmental document.

Table 3.9-II
Baseline Plus Project Intersection AM Peak Hour Levels of Service

Intersection	Baseline Conditions		Baseline Plus Project Conditions				Sig. Impact?
	Average Delay[b]	LOS	Average Delay[b]	LOS	•• in Delay	•• in V/C	
1. Milpitas Boulevard/Abel Street-Jacklin Road	**45.8 sec**	**E**	**48.3**	**E**	**+4.5**	**+0.027**	Y
2. N. Abel Street/Marilynn Drive	17.4 sec	C	18.8	C	+1.2	+0.017	N
3. Calaveras Boulevard (SR 237)/S. Abbott Avenue	**69.0 sec**	**F**	**79.2**	**F**	**+17.0**	**+0.029**	Y
4. Calaveras Boulevard (SR 237)/Serra Way	12.3 sec	B	15.2	C+	+4.4	+0.046	N
5. Calaveras Boulevard (SR 237)/Abel Street [a]	45.1 sec	E	47.7	E	+0.7	+0.002	N
6. Calaveras Boulevard (SR 237)/Milpitas Boulevard [a]	26.4 sec	D+	29.0	D	+2.3	+0.075	N
7. S. Abel Street/Serra Way	15.9 sec	C+	18.7	C	+4.9	+0.216	N
8. S. Main Street/Serra Way	4.4 sec	A	7.2	B	+3.8	+0.147	N
9. S. Abel Street/Corning Avenue	11.2 sec	B	10.7	B	+0.0	+0.113	N
10. S. Main Street/Corning Avenue (unsignalized)	15.0 sec	B	21.7	C	N/A	N/A	N
11. S. Abel Street/W. Curtis Avenue	12.7 sec	B	14.2	B-	+9.5	+0.084	N
12. S. Main Street/W. Curtis Avenue	13.2 sec	B-	16.5	C+	+2.5	+0.169	N
13. Tasman Drive/Alder Drive	15.9 sec	C+	15.0	B-	-5.3	0.028	N
14. Tasman Drive/I-880 Southbound Ramps	**52.3 sec**	**E**	**73.4**	**F**	**+24.5**	**+0.049**	Y
15. Great Mall Parkway/I-880 Northbound Ramps	**94.7 sec**	**F**	**129.8**	**F**	**+53.4**	**+0.127**	Y
16. Great Mall Parkway/Abel Street	**68.2 sec**	**F**	**180.6**	**F**	**+166.4**	**+0.233**	Y
17. Great Mall Parkway/Main Street	17.5 sec	C	24.8	C-	+10.8	+0.196	N
18. S. Abel Street/S. Main Street	11.0 sec	B	11.4	B	+1.0	+0.093	N
19. Montague Expy/S. Main St-Oakland Rd. [a]	**64.3 sec**	**F**	**119.1**	**F**	**+128.4**	**+0.106**	Y
20. Montague Expy/McCandless Dr-Trade Zone Blvd. [a]	29.8 sec	D	32.7	D	+4.3	+0.067	N
21. Montague Expy/Great Mall Pkwy-Capitol Ave. [a]	49.1 sec	E	**86.4**	**F**	**+38.8**	**+0.479**	Y
22. Montague Expressway/Milpitas Boulevard [a]	55.0 sec	E	**68.4**	**F**	**+18.0**	**+0.048**	Y
23. Trade Zone Boulevard/Lundy Avenue	26.1 sec	D+	27.6	D+	+2.2	+0.025	N
24. Main Street/Carlo Street (unsignalized)	21.8 sec	C	**43.8**	**E**	N/A	N/A	Y

Unacceptable operations are shown in **bold** type, based on local (LOS D) and CMP (LOS E) minimum operating standards. Analysis is considered conservative because of the inclusion of traffic from Home Depot, which has since been removed from the proposed project. Impact significance based on City of Milpitas and Valley Transportation Authority criteria.

a CMP intersection

b Average stopped delay per vehicle for signalized intersections and average control delay for stop sign controlled intersections. LOS at unsignalized intersections represents worst-case movement or approach.

LOS = Level of service

V/C = volume-to-capacity

•• = change (change in critical delay versus average delay as required by City of Milpitas and VTA guidelines)

Source: Fehr & Peers Associates, Inc., 2001.

Table 3.9-12
Baseline Plus Project Intersection PM Peak Hour Levels of Service

Intersection	Baseline Conditions		Baseline Plus Project Conditions				Sig. Impact?
	Average Delay [b]	LOS	Average Delay [b]	LOS	•• in Delay	•• in V/C	
1. Milpitas Boulevard/Abel Street-Jacklin Road	32.5 sec	D	32.6	D	+0.2	+0.021	N
2. N. Abel Street/Marilynn Drive	23.8 sec	C-	26.4	D+	+3.8	+0.040	N
3. Calaveras Boulevard (SR 237)/S. Abbott Avenue	26.8 sec	D+	29.0	D	+19.6	+0.063	N
4. Calaveras Boulevard (SR 237)/Serra Way	17.0 sec	C+	24.5	C-	+10.0	+0.118	N
5. Calaveras Boulevard (SR 237)/Abel Street [a]	43.0 sec	E+	**105.2**	**F**	**+87.4**	**+0.209**	Y
6. Calaveras Boulevard (SR 237)/Milpitas Boulevard [a]	**66.9 sec**	**F**	**92.7**	**F**	**+50.3**	**+0.086**	Y
7. S. Abel Street/Serra Way	18.6 sec	C	24.4	C-	+14.1	+0.289	N
8. S. Main Street/Serra Way	7.5 sec	B	9.8	B	+2.0	+0.181	N
9. S. Abel Street/Corning Avenue	7.7 sec	B	7.9	B	+1.4	+0.182	N
10. S. Main Street/Corning Avenue (unsignalized)	25.8 sec	D	**76.1**	**F**	N/A	N/A	Y
11. S. Abel Street/W. Curtis Avenue	5.6 sec	B+	17.6	C	+16.4	+0.306	N
12. S. Main Street/W. Curtis Avenue	14.2 sec	B-	16.6	C+	+3.8	+0.239	N
13. Tasman Drive/Alder Drive	**404.4 sec**	**F**	**452.4**	**F**	**+76.7**	**+0.052**	Y
14. Tasman Drive/I-880 Southbound Ramps	17.6 sec	C	**103.3**	**F**	**+102.0**	**+0.283**	Y
15. Great Mall Parkway/I-880 Northbound Ramps	**62.4 sec**	**F**	**212.3**	**F**	**+664.7**	**+0.527**	Y
16. Great Mall Parkway/Abel Street	29.0 sec	D	38.5	D-	+13.2	+0.239	N
17. Great Mall Parkway/Main Street	27.9 sec	D+	35.3	D	+10.7	+0.232	N
18. S. Abel Street/S. Main Street	8.1 sec	B	9.7	B	+1.8	+0.170	N
19. Montague Expy/S. Main St-Oakland Rd. [a]	**78.9 sec**	**F**	**136.1**	**F**	**+131.5**	**+0.136**	Y
20. Montague Expy/McCandless Dr-Trade Zone Blvd.[a]	**63.2 sec**	**F**	**110.1**	**F**	**+78.6**	**+0.178**	Y
21. Montague Expy/Great Mall Pkwy-Capitol Ave .[a]	**213.1 sec**	**F**	**384.2**	**F**	**263.1**	**+0.116**	Y
22. Montague Expressway/Milpitas Boulevard [a]	36.3 sec	D	**72.4**	**F**	**+52.0**	**+0.148**	Y
23. Trade Zone Boulevard/Lundy Avenue	33.9 sec	D	34.4	D	+0.3	+0.006	N
24. Main Street/Carlo Street	**39.5 sec**	**E**	**47.6**	**E**	N/A	N/A	Y

Unacceptable operations are shown in **bold** type, based on local (LOS D) and CMP (LOS E) minimum operating standards. Analysis is considered conservative because of the inclusion of traffic from Home Depot, which has since been removed from the proposed project. Impact significance based on City of Milpitas and Valley Transportation Authority criteria.

a CMP intersection

b Average stopped delay per vehicle for signalized intersections and average control delay for stop sign controlled intersections. LOS at unsignalized intersections represents worst-case movement or approach.

LOS = Level of service

V/C = volume-to-capacity

•• = change (change in critical delay versus average delay as required by City of Milpitas and VTA guidelines)

Source: Fehr & Peers Associates, Inc., 2001.

Impact Traffic-I

Unacceptable Intersection Operations (Baseline+Project). Implementation of the proposed Midtown Milpitas Specific Plan would result in significant traffic impacts at fourteen (14) intersections in and surrounding the Midtown planning area. Of these intersections, nine (9) intersections would be significantly affected by project traffic in the AM peak hour, and eleven (11) intersections would be significantly impacted in the PM peak hour. A summary of these impacts is provided in Table 3.9-13.

Mitigation Measure Traffic-1: With implementation of the Specific Plan the City shall implement the improvements summarized in Table 3.9-13, consistent with Policy 4.8 of the Draft Midtown Milpitas Specific Plan. Historically, the City has required development to pay its pro-rata share of improvement costs on a project by project basis. The City shall continue to use this approach or identify alternative funding mechanisms such as RDA funds or General Funds prior to development in Midtown. Improvements may be phased, according to actual development and the demonstrated need for the improvements. With the implementation of the traffic improvements specified in Table 3.9-13 (Draft EIR), six of the intersection impacts would be mitigated to a less than significant level. However, impacts at eight of the intersections would still be considered significant. Feasible mitigation measures are not available. **Thus, these remaining impacts are considered significant and unavoidable.**

The following sections provide more detail on the proposed roadway improvments, and reasons why additional mitigation measures are not feasible.

Milpitas Blvd./Jacklin Rd.-Abel St. Development under the proposed Specific Plan would result in a decrease in the currently substandard AM peak operating conditions at Milpitas Blvd./Jacklin Rd.-Abel St. Development anticipated under the proposed Specific Plan would generate traffic that would exacerbate LOS E operations at this intersection under baseline conditions. The measure required to mitigate the AM peak hour impact includes re-constructing the east and west approaches and replacing the existing split phasing with protected left-turn phasing on Abel Street/Jacklin Road. This measure would address the incremental traffic impact of the proposed Specific Plan at this intersection.

Calaveras Blvd. (SR 237)/Abbott St. Development under the proposed Specific Plan would result in a decrease in the currently substandard AM peak operating conditions at Calaveras Blvd. (SR 237)/Abbott St. This intersection would operate at LOS F under baseline conditions; delays would increase at this intersection with implementation of the development anticipated under the proposed Specific Plan. A mitigation that could alleviate this impact would be to add another westbound through lane (for a total of four through lanes) at the intersection. However, the City does not consider this mitigation measure feasible because of right-of-way and existing structural constraints. Buildings are located close to the roadway and would require modification or removal to accommodate the mitigation measures. This impact is considered significant and unavoidable. Completion of the SR 237/I-880 interchange re-construction will likely improve overall traffic flows in the area. Accordingly, operations should be monitored and the need for this improvement should be re-considered in the future.

Table 3.9-13
Mitigation Measures and LOS under Baseline Plus Project Conditions

Ref. Number	Intersection	Required Mitigation	Peak Hour	Unmitigated		Mitigated		Specific Plan Impact Fully Mitigated?
				Delay	LOS	Delay	LOS	
1	Milpitas Blvd./ Jacklin Rd.-Abel St. (AM)	Re-configure east-west approaches to permit east-west phasing.	AM	48.3	E	45.7	E	Yes
2	Calaveras Blvd. (SR 237)/ Abbott St. (AM)	None feasible.	AM	79.2	F	79.2	F	No
3	Calaveras Blvd. (SR 237)/Abel St. (PM)	Add a 2nd EB left-turn lane and separate NB right-turn lane with overlap.	PM	105.2	F	39.3	D-	Yes
4	Calaveras Blvd. (SR 237)/Milpitas Bl. (PM)	None feasible.	PM	92.7	F	92.7	F	No
5	S. Main St./ Corning Ave. (PM)	Signalization (if warranted).	PM	76.1	F	26.5	D+	Yes
6	Tasman Dr./ Alder Dr. (PM)	Restripe NB shared through/right-turn lane as a separate right-turn lane and provide overlap phase.	PM	452.4	F	263.3	F	Yes
7	Tasman Dr./ I-880 SB Ramps (AM/PM)	None feasible.	AM PM	73.4 103.3	F F	73.4 103.3	F F	No No
8	Great Mall Pkwy./ I-880 NB Ramps (AM/PM)	None feasible.	AM PM	129.8 212.3	F F	129.8 212.3	F F	No No
9	Great Mall Pkwy./ Abel St. (AM)	Additional NB left-turn lane.	AM	180.6	F	105.4	F	No
10	Montague Expy./ S. Main St.-Oakland Rd. (AM/PM)	None feasible.	AM PM	119.1 136.1	F F	119.3 136.1	F F	No No
11	Montague Expy./ McCandless Dr.-Trade Zone Blvd. (PM)	Add third EB mixed-flow lane on Montague Expressway (part of future widening project). No additional feasible measures.	PM	110.1	F	68.7	F	No
12	Montague Expy./ Great Mall Pkwy. (AM/PM)	None feasible.	AM PM	86.4 384.2	F F	86.4 384.2	F F	No No
13	Montague Expy./ Milpitas Blvd. (AM/PM)	Extend WB merge lane on Montague Expy. And create "free" SB right-turn lane.	AM PM	68.4 72.4	F F	20.4 38.2	C D	Yes Yes
14	S. Main St./ Carlo St.	Signalization.	AM PM	43.8 47.6	E E	12.0 10.2	B B	Yes Yes

Notes: NB = Northbound, SB = Southbound, WB = Westbound, EB = Eastbound.

Source: Fehr & Peers Assoc. Inc., 2001.

Calaveras Blvd. (SR 237)/Abel St. Development under the proposed Specific Plan would result in a worsening of the currently substandard PM peak operating conditions at Calaveras Blvd. (SR 237)/Abel St. This intersection would operate at LOS E under baseline conditions, and would degrade to LOS F with the proposed project. The improvements required to mitigate the PM peak hour impact include installation of a separate northbound right-turn lane with overlap phase and installation of a second eastbound left-turn lane. This mitigation would provide LOS D or better operation in both peak hours and would meet the CMP criteria for this intersection. The provision of a second eastbound left-turn lane is a partially funded CIP project. Provision of a northbound overlap phase would preclude westbound U-turns at this intersection. The eastbound entrance to Carlo Street would have to be closed to properly implement this improvement. The City would commit to funding and implementing these improvements with adoption of the Specific Plan (Draft Midtown Milpitas Specific Plan, Policy 4.8).

It should be noted that Calaveras Boulevard (SR 237) is a Caltrans-maintained facility and any improvements would required that agency's approval for encroachment permits. The lane additions will require some right-of-way acquisition. With these improvements, impacts at this intersection would be reduced to a less-than-significant level.

Calaveras Blvd. (SR 237)/Milpitas Blvd. Development under the proposed Specific Plan would result in a worsening of the currently substandard PM peak operating conditions at this intersection. This intersection would exacerbate LOS F operations under baseline conditions by increasing the critical delay and critical turning movement volumes. The improvement required to mitigate the PM peak hour impact is the construction of a third westbound through lane. This improvement would require construction of a receiving/merge lane on the other side of the intersection of at least 500 feet in length. Since this improvement would require substantial reconstruction of the bridge structure over the Union Pacific Railroad and would likely require the removal of existing buildings, the City does not consider this improvement feasible. The impact to this intersection is considered significant and unavoidable.

S. Main St./Corning Ave. Development under the proposed Specific Plan would result in a worsening of the currently PM peak operating conditions at S. Main St./Corning Ave. to a substandard condition. This intersection would operate at LOS D under baseline conditions, and would degrade to LOS E with the proposed project. The City of Milpitas will monitor this intersection to identify locations requiring signalization. The signal priority list is updated annually based on new count data and other information (i.e., number and severity of accidents, pedestrian demand, etc.). A signal will be installed if needed based on operating level and standard warrant criteria. This mitigation measure would reduce the impact at this intersection to a less-than-significant level.

Tasman Dr./Alder Dr. Development under the proposed Specific Plan would result in a worsening of the currently substandard PM peak operating conditions at Tasman Dr./Alder Dr. This intersection is projected to operate at LOS F under baseline conditions; and delays would increase with the addition of project. The improvement required to mitigate this impact according to the technical calculations is the restriping of the northbound shared through/right-turn lane as a separate right-turn lane and the provision of an overlap signal phase. Provision of a northbound overlap phase would preclude westbound U-turns at this intersection. It should be noted that traffic in the eastbound direction on Tasman Drive often queues back to the Alder Drive intersection, and modifications to signal timings due to impending light rail operation will change operating conditions at this location. The city would commit to funding and

implementing these improvements with adoption of the Specific Plan (Draft Midtown Milpitas Specific Plan, Policy 4.8). However, the need for this improvement could be re-evaluated in the future. It should be also be noted that traffic naturally operates with right-turning vehicles in the curb lane and through vehicles in the adjacent through lane. If future conditions demonstrate that the intersection operates acceptably, the improvement would not be required.

Tasman Dr./I-880 SB Ramps. Development under the proposed Specific Plan would result in a worsening of the currently substandard AM and PM peak operating conditions at Tasman Dr./I-880 SB Ramps. This intersection would operate at LOS E/F (AM/PM) under baseline conditions; delays would increase at this intersection with implementation of the development anticipated under the proposed Specific Plan. The intersection would operate at LOS F under both AM and PM peak periods. A measure that could alleviate this impact is the addition of a fourth through lane in each direction (westbound for the AM impact and eastbound for the PM impact). This measure would require the widening of the existing Tasman-Great Mall overcrossing and modification of ramps at and near the adjacent intersections. The VTA is considering adding a fourth through lane in the westbound direction and an eastbound "free" right-turn lane among other capacity enhancements. The I-880 freeway and its ramps are Caltrans-maintained facilities. Modification of these facilities would require Caltrans approval. The City does not have legal authority to implement the required improvements. In addition, it is unlikely that these improvements would be supported by Caltrans in light of other priority roadway projects in the region. Thus, the impact at this intersection would remain significant and unavoidable.

Great Mall Pkwy./I-880 NB Ramps. Development under the proposed Specific Plan would result in a worsening of the currently substandard AM and PM peak operating conditions at Great Mall Pkwy./I-880 NB Ramps. This intersection would operate at LOS F under baseline conditions, and delays would increase at this intersection with implementation of the development anticipated under the proposed Specific Plan. The measure required to alleviate this impact is the addition of a second westbound left-turn lane, a northbound right-turn overlap phase, and either an additional exclusive northbound left-turn lane or an additional exclusive westbound through lane. This physical mitigation measures would require the widening of Tasman-Great Mall overcrossing. The I-880 freeway and its ramps are Caltrans-maintained facilities. Modification of these facilities would require Caltrans approval. The City does not have legal authority to implement the required improvements. In addition, it is unlikely that these improvements would be supported by Caltrans in light of other priority roadway projects in the region. Thus, this impact would remain significant and unavoidable.

Great Mall Pkwy./Abel St. Development under the proposed Specific Plan would result in a worsening of the currently substandard AM peak operating conditions at Great Mall Pkwy./Abel St. This intersection would operate at LOS F under baseline conditions; delays would increase at this intersection with implementation of the development anticipated under the proposed Specific Plan. To fully reduce this impact to a less-than-significant level, an additional northbound left-turn lane and a second southbound right-turn lane would have to be constructed at this intersection. These improvements would require the widening of the southbound leg of the intersection over Penitencia Creek, and may require narrowing of the southbound departure leg and elimination of the bus stop shoulder. However, installation of the second southbound right-turn lane could result in potential vehicle-pedestrian conflicts and is not considered desirable by City staff. Thus, this impact would remain significant and unavoidable. It is

expected that a substantial amount of traffic on Abel Street and Main Street currently diverts from I-880 because of existing congestion. Some of this traffic is expected to shift back to I-880 upon completion of the SR 237/I-880 and Dixon Landing Road projects on I-880, as well as the widening of I-880 from four to six lanes between U.S. 101 and Montague Expressway. At that time, overall traffic operations on Abel Street and Main Street are expected to be better than presented in this document for Project Conditions.

Montague Expy./S. Main St.-Oakland Rd. Development under the proposed Specific Plan would result in a worsening of the currently substandard AM and PM peak operating conditions at Montague Expy./S. Main St.-Oakland Rd. This intersection would operate at LOS F under baseline conditions; and delays would increase at this intersection with implementation of the development anticipated under the proposed Specific Plan. Partial mitigation of this impact could be achieved with the addition of a fourth lane in each direction on the expressway with one lane in each direction continuing to be designated for high occupancy vehicle (HOV) use. However, additional turn lanes on Montague Expressway (e.g., triple left-turn lanes) would be required to completely mitigate the project's evening peak hour impacts. The Montague Expressway widening four lanes per direction is a future regional improvement that is one of the region's top transportation priorities. However, no additional mitigation is considered feasible to fully alleviate the PM peak hour condition because these improvements are outside the City's jurisdiction. Montague Expressway is a Santa Clara County-maintained facility and modification of this roadway would require County approval. The impact at this intersection is considered significant and unavoidable.

Montague Expy./McCandless Dr.-Trade Zone Blvd. Development under the proposed Specific Plan would result in a worsening of the currently substandard PM peak operating conditions at Montague Expy./McCandless Dr.-Trade Zone Blvd. This intersection would operate at LOS F under baseline conditions; delays would increase at this intersection with implementation of the development anticipated under the proposed Specific Plan. Partial mitigation of this impact could be achieved with the addition of a fourth lane in each direction on the expressway with one lane in each direction continuing to be designated for HOV use. The Montague Expressway widening (four lanes per direction) is a future regional improvement that is one of the region's top transportation priorities. However, additional turn lanes on Montague Expressway (e.g., triple left-turn lanes) would be required to completely mitigate the project's evening peak hour impacts. An alternative measure to fully mitigate the project impact is provision of an overlap phase for the southbound right-turn movement. Either of these measures would reduce this impact to a less-than-significant level. However, Montague Expressway is a Santa Clara County-maintained facility and modification of this roadway would require County approval. Improvement of this roadway is outside of the jurisdiction of the City of Milpitas. Thus, this impact is considered significant and unavoidable.

Montague Expy./Great Mall Pkwy.-Capitol Avenue. Development under the proposed Specific Plan would result in a worsening of the currently substandard AM and PM peak operating conditions at Montague Expy./Great Mall Pkwy. This intersection would operate at LOS F under baseline conditions; delays would increase at this intersection with implementation of the development anticipated under the proposed Specific Plan. The at-grade improvements required to mitigate the AM and PM peak hour impacts include a third northbound through lane (AM) and a separate southbound right-turn lane (PM). However, the intersection will be effectively built out under baseline conditions without the proposed project. The City does not consider thee additional lanes feasible because of right-of-way and existing

structural constraints. Buildings are located close to the roadway and would require modification or removal to accommodate the mitigation measures. This intersection is planned to be grade-separated in the future as part of an overall regional improvement. This impact is considered significant and unavoidable unless the intersection is grade-separated. If the Silicon Valley Rapid Transit Corridor selects BART as the preferred alternative, this intersection would be grade-separated as part of the BART project and thus mitigate this impact. However, this improvements can not be assumed; thus, impacts at this intersection are considered significant and unavoidable.

Montague Expy./Milpitas Blvd. Development under the proposed Specific Plan would result in a worsening of both the AM and PM peak operating conditions at Montague Expy./Milpitas Blvd. This intersection would operate at LOS E and D under baseline conditions in the AM and PM peak hours, respectively. Delays would increase at this intersection with implementation of the development anticipated under the proposed Specific Plan and operations would be LOS F during both peak hours. The City of Milpitas will extend the existing westbound merge lane and create a "free" movement for southbound right-turning vehicles (i.e., these vehicles would not be controlled by the traffic signal). This measure would reduce the impact at this intersection to a less-than-significant level. (Striping of the center lane as a shared left/right-turn lane would nor mitigate the projected impacts.)

S. Main St./Carlo St. Development under the proposed Specific Plan would result in a worsening of the currently PM peak operating conditions at S. Main St./Carlo St. to a substandard condition This intersection would operate at LOS D under baseline conditions, and would degrade to LOS E with the proposed project. The City of Milpitas shall continue to monitor this intersection as part of its annual monitoring program to identify locations requiring signalization. A signal will be installed if warranted based on operating level and standard warrant criteria. This mitigation measure would reduce the impact at this intersection to a less-than-significant level.

FREEWAY LEVELS OF SERVICE

Project-generated traffic volumes were added to baseline (i.e., existing) traffic volumes for each freeway mainline segment. These volumes were then used to re-calculate density for each segment under Baseline Plus Project Conditions. The resultant freeway segment conditions are presented in Appendix E. The addition of traffic from the proposed Midtown Specific Plan under Baseline Conditions would exacerbate already unacceptable traffic operations at impacts on one (1) of the ten (10) study freeway segments during the AM peak hour and all ten (10) segments (one or both directions) during the PM peak hour. The freeway segments that would operate at unacceptable conditions are the following:

1. SR 237 Westbound - Zanker to McCarthy (AM peak hour)
2. SR 237 Eastbound - Zanker to McCarthy (PM peak hour)
3. I-880 Northbound - Dixon Landing to SR 237 (PM peak hour)
4. I-880 Northbound - SR 237 to Tasman (PM peak hour)
5. I-880 Northbound - Tasman to Montague (PM peak hour)
6. I-880 Southbound - Tasman to Montague (PM peak hour)
7. I-880 Southbound - Montague to Brokaw (PM peak hour)

8. I-680 Northbound - Scott Creek to Jacklin (PM peak hour)
9. I-680 Southbound - Scott Creek to Jacklin (PM peak hour)
10. I-680 Northbound - Jacklin to Calaveras (PM peak hour)
11. I-680 Southbound - Jacklin to Calaveras (PM peak hour)
12. I-680 Northbound - Calaveras to Montague (PM peak hour)
13. I-680 Southbound - Calaveras to Montague (PM peak hour)
14. I-680 Southbound - Montague to Capitol (PM peak hour)
15. I-680 Southbound - Capitol to Hostetter (PM peak hour)

The project by itself would not degrade operations along any segments from an acceptable level (LOS D or better) to an unacceptable level (LOS E or F).

Impact Traffic-2

Unacceptable Freeway Operations (Baseline+Project). The addition of traffic from the proposed Midtown Specific Plan under Baseline Conditions would exacerbate already unacceptable traffic operations at impacts on one (1) of the ten (10) study freeway segments intersections during the AM peak hour and all ten (10) segments (one or both directions) during the PM peak hour. These changes are considered a significant impact.

Mitigation Measure Traffic-2: According to VTA policy direction, mitigation measure for regional freeway impacts is participation in the Countywide Deficiency Plan (CDP) prepared by the VTA, which would require additional impact fees to provide for regional roadway improvements, including freeways. However, the CDP has not received final approval. Thus, the mitigation of regional impacts to freeway operations cannot be guaranteed, as the City of Milpitas does not have legal authority to mitigate freeway impacts. **For this reason, the contribution of development under the Milpitas Specific Plan to unacceptable freeway operations is considered a significant and unavoidable impact.**

BASELINE PLUS PROJECT CONDITIONS (2005)

The Baseline Plus Project Conditions analysis presented above adds all project traffic to baseline conditions. However, development or redevelopment of the sites identified in the Midtown Specific Plan is estimated to take at least 10 years to complete. A preliminary phasing plan shows that 3,060 dwelling units, 345,000 square feet of office, 432,000 square feet of highway retail (including the Home Depot store at the Great Mall), and 15,000 square feet of retail/dining space will develop within the plan area by 2005. This interim level of development was analyzed to illustrate near-term conditions based on market rate absorption of the proposed uses. For this scenario, only intersections were analyzed.

Tables summarizing intersection level of service under this scenario are included Appendix E. With market rate absorption, the addition of traffic from the Midtown Specific Plan is expected to exacerbate already unacceptable traffic operations or degrade operations at seven (7) of the 24 study intersections during the AM peak hour and nine (9) of the study intersections during the PM peak hour. Intersection LOS calculations for this scenario are included in Appendix E.

In terms of number of intersections impacted, the level of development under Baseline Plus Project Conditions (2005) will significantly impact two fewer intersections during the AM peak hour, and one less intersection during the PM peak hour as compared to full development of the new uses identified under the Specific Plan. Except for the Montague Expressway/Milpitas Boulevard intersection in the PM peak hour, all of the intersections projected to operate at LOS F with completion of all Specific Plan development under Baseline Conditions will operate at LOS F by 2005. The only intersection that will be degraded with development beyond 2005 is the intersection of Milpitas Boulevard at Abel Street-Jacklin Road.

CARLO STREET CLOSURE

The implementation of the proposed project will add traffic to Carlo Street west of Main Street. City staff has previously discussed the possibility of closing Carlo Street immediately east of Abel Street because this leg acts as fifth departure leg at the intersection and results in a non-standard intersection configuration. Closure of the on-ramp from westbound Carlo Street to eastbound Calaveras Boulevard (SR 237) has also been discussed as a possible modification. The merge area for on-ramp traffic is relatively short and requires vehicle to accelerate rapidly to join the flow of eastbound traffic especially during the PM peak period.

To address these issues, two traffic scenarios were analyzed under Baseline Project Conditions, which includes the highest intersection turning movement volumes. The first scenario assumes only closure of eastbound Carlo Street at Abel Street. The second scenario assumes both the closure of Abel Street access to Carlo Street, as well as closure of the ramp to eastbound SR 237. However, the west leg of the Main Street/Carlo Street intersection is still expected to provide access to the Pacific Bell parking lot located at the southeast quadrant of this intersection.

The effects of these closures were evaluated by re-assigning traffic to the adjacent streets and conducting a focused level of service analysis at the adjacent study intersections. Traffic from Carlo Street is expected to divert to selected segments of Main Street, Weller Lane, Abel Street, and Serra Way. The results of this analysis are presented in Tables 4.9-14 and 4.9-15 for the partial and full closures of Carlo Street, respectively. The corresponding LOS calculation worksheets are included in Appendix E.

The results of this analysis show that closure of the Abel Street access to Carlo Street would result in the same or slightly worse operations at most of the study intersections. All of the projected changes in average delay under this scenario are less than three (3) seconds except for the Main Street/Carlo Street intersections, where decreases of up to nine (9) seconds are expected. Thus, this closure could be implemented without significantly affecting traffic operations in the area.

Closure of the on-ramp from Carlo Street to eastbound SR 237 would have essentially the same operations (i.e., level of service) except for the Calaveras Boulevard (SR 237) Abel Street intersection. At this location, the on-ramp traffic from northbound Main Street would be diverted to the northbound right-turn lane on Abel Street at Calaveras Boulevard.

Table 3.9-14
Project Conditions Peak Hour Levels of Service with Carlo Street Closed East of Abel Street

Intersection	Peak Hour	Baseline Plus Project Conditions		Baseline Plus Project Conditions w/ Abel Street Access Closed		
		Average Delay [b]	LOS	Average Delay [b]	LOS	Better, Same or Worse
2. N. Abel Street/Marilynn Drive	AM	18.8	C	18.8	C	Same
	PM	26.4	D+	26.4	D+	Same
5. Calaveras Boulevard (SR 237)/Abel Street [a]	AM	66.1	F	67.3	F	**Worse**
	PM	145.8	F	143.5	F	**Better**
7. S. Abel Street/Serra Way	AM	18.7	C	18.8	C	Same
	PM	24.4	C-	24.5	C-	Same
8. S. Main Street/Serra Way	AM	7.2	B	8.0	B	Worse
	PM	9.8	B	10.6	B	Worse
24. Main Street/Carlo Street (unsignalized)	AM	43.8	E	35.9	E	**Better**
	PM	47.6	E	38.6	E	**Better**

Table 3.9-15
Project Conditions Peak Hour Levels of Service with Carlo Street Closed East of Abel Street and Ramp to Eastbound SR 237 Closed

Intersection	Peak Hour	Baseline Plus Project Conditions		Baseline Plus Project Conditions w/ Abel Street Access and Ramp Closed		
		Average Delay [b]	LOS	Average Delay [b]	LOS	Better, Same or Worse
2. N. Abel Street/Marilynn Drive	AM	18.8	C	19.0	C	Same
	PM	26.4	D+	26.9	D+	Same
5. Calaveras Boulevard (SR 237)/Abel Street [a]	AM	66.1	F	66.8	F	**Worse**
	PM	145.8	F	375.7	F	**Worse**
7. S. Abel Street/Serra Way	AM	18.7	C	18.9	C	Same
	PM	24.4	C-	30.3	D	Worse
8. S. Main Street/Serra Way	AM	7.2	B	8.1	B	Worse
	PM	9.8	B	10.6	B	Worse
24. Main Street/Carlo Street (unsignalized)	AM	43.8	E	31.2	D	**Better**
	PM	47.6	E	42.1	E	**Better**

Substantial changes to intersections projected to operate unacceptably are shown in **bold** type. Changes of less than 0.5 seconds of average delay are considered negligible (i.e., categorized as "Same").

a CMP intersection

b Average stopped delay per vehicle for signalized intersections and average control delay for stop sign controlled intersections. LOS at unsignalized intersections represents worst-case movement or approach.

LOS = Level of service

Source: Fehr & Peers Associates, Inc., 2001.

The addition of approximately 390 vehicles to this already congested movement is projected to more than double the average vehicle delay at the intersection. A separate northbound right-turn lane with an overlap phase would have to be installed to provide similar operations and average delay to conditions with the on-ramp open. Thus, closure of the on-ramp could be implemented with this improvement and provide comparable operations.

It is important to note that conditions in the Main Street and Abel Street corridors are expected to improve over the next few years as several regional transportation projects will be completed. The Dixon Landing Road/I-880 and SR 237/I-880 interchange reconstruction projects plus the widening of I-880 from four to six lanes between U.S. 101 and Montague Expressway will provide substantial additional capacity and improve traffic flows. These improvements are expected to reduce the amount of diversion to Abel and Main Streets from I-880 that currently occurs during peak periods.

FUTURE (2015) CONDITIONS

As noted at the beginning of this section, the analysis of Cumulative Conditions was conducted based on projected roadway link volumes. Traffic volumes for 2015 Conditions were developed using the City's travel demand model. A brief description of the City's model and the corresponding land use and future input assumptions is presented below followed by the 2015 roadway segment analysis.

City of Milpitas Model

The City of Milpitas travel demand model is a subset of the Center for Urban Analysis (CUA) model maintained by the Valley Transportation Authority. This regional model is used by the VTA to produce traffic projections for use in transportation and air quality planning. Although the CUA model produces reasonable forecasts for freeways and major arterials in Santa Clara County, the model does not include enough traffic analysis zone or roadway network detail to produce accurate forecasts for minor arterial and local streets in the City of Milpitas. Thus, the City developed its own model based on the CUA methodology and validated this model for 1997 conditions.

2015 Land Use Assumptions

The City's current model includes land use forecasts based on the City's General Plan and land use assumptions published for Santa Clara County in "Projections '98" by the Association of Bay Area Governments (ABAG). It should be noted that the current General Plan model includes recent changes such as buildout of the McCarthy Ranch office development and the Cisco Systems campus.

2015 Transportation Network Assumptions

The City's year 2015 roadway network includes various planned transportation improvements. The highway and transit networks in the 2015 CUA model formed the basis for the City's model. The improvements included in the CUA model are funded or have a probability of receiving funding in the near future. Although exact schedules and completion dates are not known at this time, projects expected to be completed by 2015 were included in this analysis. Within the City of Milpitas, the following improvements are included:

I-880 Widening Projects

I-880 will be widened to include a high occupancy vehicle lane and auxiliary lane in each direction from Montague Expressway north into Alameda County. South of Montague Expressway, this freeway will be widened to include a third mixed-flow lane in each direction to the Highway 101 interchange.

Fremont Boulevard Extension to Dixon Landing Road

Fremont Boulevard will be extended southward from its current terminus near Lakeview Drive to Dixon Landing Road. The Fremont Boulevard extension will include two lanes in each direction and will form the fourth leg of the McCarthy Boulevard/Dixon Landing Road interchange.

2015 Roadway Segment Levels of Service

The purpose of this analysis is to compare roadway segment operations based on the current General Plan designations to operations with the land use changes proposed as part of the Midtown Specific Plan project. The roadway segments included in this analysis were selected by City of Milpitas staff. In addition, City staff provided adjusted 2015 forecasts and the capacities for each roadway type. Appendix E includes table that show the 2015 roadway segment analysis for northbound/eastbound and southbound/westbound segments for the AM and PM peak hours, respectively.

The addition of traffic from the proposed Midtown Specific Plan under Cumulative Conditions would significantly exacerbate AM peak hour operations on ten (10) roadway segments that are projected to operate at unacceptable levels under the current General Plan. The project would also cause two (2) segments to degrade from LOS D or better (under the current General Plan) to LOS E of F. During the PM peak hour, development within the Midtown area is expected to significantly exacerbate operations on ten (10) of the 35 study roadway segments and cause two (2) additional segments to operate unacceptably. The roadway segments that would be affected negatively by development of the proposed project are summarized below:[4]

1. Main Street Northbound - Curtis to Carlo (AM peak hour)
2. I-680 Southbound - Jacklin to Calaveras (AM peak hour)
3. SR 237 Westbound - McCarthy to I-880 (AM peak hour)
4. SR 237 Eastbound - Zanker to I-880 (PM peak hour)
5. Calaveras Blvd Westbound - I-880 to Abbott (AM peak hour)
6. Calaveras Blvd Westbound - Abel to I-680 (AM peak hour)
7. Calaveras Blvd Eastbound - I-880 to Abel (PM peak hour)
8. Calaveras Blvd Eastbound - Hillview to I-680 (PM peak hour)
9. Montague Expressway Eastbound - McCarthy to S. Main (PM peak hour)
10. Abel Street Southbound - Calaveras to Great Mall Pkwy. (AM peak hour)
11. Abel Street Northbound - N. Milpitas to Calaveras (PM peak hour)
12. Abel Street Northbound - Great Mall Pkwy. to S. Main (PM peak hour)

[4] Where two or more roadway segments are directly adjacent to each other, and both are projected to operate unacceptably, they have been combined in this listing.

13. Great Mall Parkway Westbound - I-880 to S. Main (AM peak hour)
14. Tasman Drive Westbound - Zanker to I-880 (AM peak hour)
15. Tasman Drive Eastbound - Zanker to McCarthy (PM peak hour)
16. Main Street Southbound - Curtis to Carlo (AM peak hour)
17. Main Street Northbound - Montague to Abel (PM peak hour)

Implementation of the Specific Plan is also expected to improve operations on twelve (12) segments in the AM peak hour and eleven (11) segments in the PM peak hour in comparison to development anticipated under the current General Plan.

Impact Traffic-3

Future Conditions - Unacceptable Roadway Segment Operations. The addition of traffic from the proposed Midtown Specific Plan under Cumulative Conditions would significantly exacerbate AM peak hour operations on 10 roadway segments that are projected to operate at unacceptable levels under the current General Plan. The project would also cause two segments to degrade from LOS D or better (under the current General Plan) to LOS E or F. During the PM peak hour, development within the Midtown area is expected to significantly exacerbate operations on 10 of the 35 study roadway segments and cause two additional segments to operate unacceptably. Tables detailing these impacts are provided in Appendix E of the Draft EIR. These changes are considered a significant impact.

Mitigation Measure Traffic-3: The City of Milpitas has taken on the administration and construction of widening Montague Expressway between Great Mall Parkway-Capitol Avenue and I-680. This widening includes the addition of a fourth through lane in each direction, one of which will be a dedicated HOV lane during the AM and PM peak commute periods. Although this improvement will not reduce the projected impacts to a less-than-significant level, it will reduce overall congestion and improve traffic flow in the Midtown Area.

The VTA, Santa Clara County Roads and Airports Department, City of Santa Clara, City of San Jose, and the City of Milpitas recently completed a plan line study and operations analysis to assess the right-of-way, design, and cost issues to widen the remaining section of Montague Expressway from Highway 101 in San Jose to Great Mall Parkway-Capitol Avenue in Milpitas. At this time, funding for this project has not been obtained; however, the agencies listed above are preparing a financing plan to pay for the improvements.

No mitigation measures are considered feasible for any of the other roadway segments; however, historically the City has required development to pay its pro-rata share of improvement costs toward improvements on a project by project basis. All of those segments projected to operate at unacceptable levels under the current General Plan will do so because no feasible mitigation measure can be implemented to increase vehicle capacity. All of these roadways are already built out and cannot be widened within the existing right-of-way. The secondary impacts of widening these roadways, which

include right-of-way acquisition and demolition of existing buildings, is expected to result in a greater negative impact on the environment than accommodating the additional congestion. **This impact is considered significant and unavoidable.**

TRANSIT SERVICES

As previously described, the VTA operates fixed route and commuter bus service, paratransit service, and will soon extend light rail transit to the Midtown area. In addition, a potential future BART service extension could occur along the existing Union Pacific rail line. The proposed project has been designed in consideration of these existing and planned transit services. Specifically, Policy 4.3 of the Specific Plan directs the City to support the establishment of BART service on the Union Pacific Rail Line. The project would create an increased demand in transit services, especially in light of the traffic congestion that currently exists, and is anticipated to continue to be present in and around the Midtown area. In addition, newly developed sites within the Midtown area would be developed with enhanced pedestrian and bicycle facilities to provide direct links to existing and future transit stations. Thus, the Specific Plan is consistent with policies that encourage transit use and other alternative forms of transportation.

BICYCLE AND PEDESTRIAN FACILITIES

The Midtown Specific Plan includes the provision of additional facilities to encourage the use of alternative modes of transportation. The policies included in the Specific Plan related to bicycle and pedestrian facilities include the following:

Policy 4.1: Work with the VTA and BART to ensure that the transit stations are attractive facilities that accommodate pedestrians and bicyclists.

Policy 4.2: Provide pedestrian connections between the transit stations and commercial, employment and residential destinations that are direct, attractive and interconnected with the larger City sidewalk and pedestrian path system.

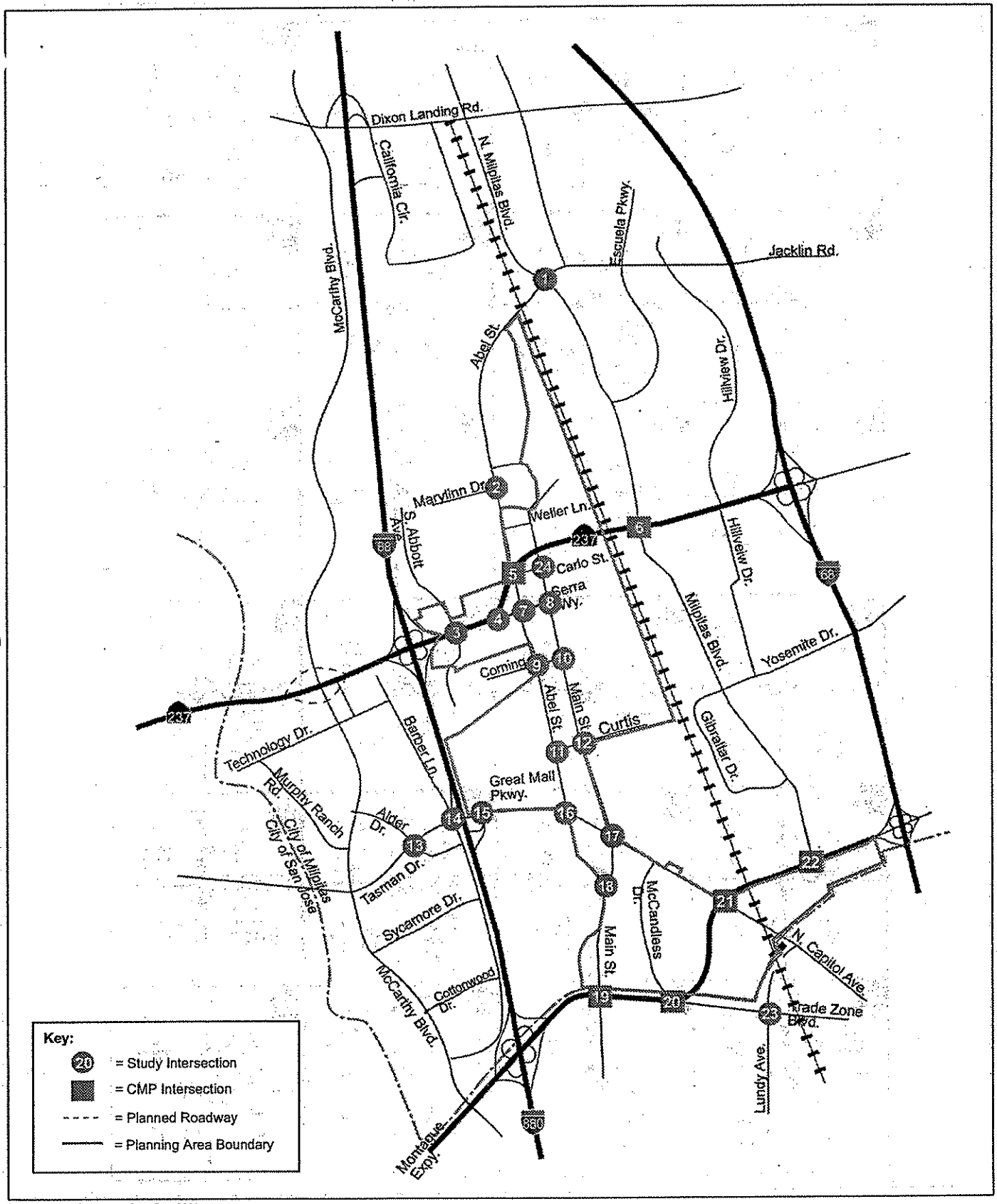
Policy 4.12: Consider adding trails along the Hetch-Hetchy right-of-way, through the O'Toole Elms, and a bike lane along Abel Street to the Milpitas Trail System.

Policy 4.13: Establish an interconnected system of sidewalks and pedestrian paths that provides safe and convenient pedestrian access between the transit stations and other destinations within the Midtown area.

These improvements, along with those planned in the Milpitas Trail Master Plan, would help to distribute bicycle and pedestrian traffic through the Midtown area. As part of the Specific Plan guidelines and through the development review process for each individual project, sidewalks and pedestrian connections would be required to further expand the non-automobile transportation network. These additions to the bicycle and pedestrian network would ensure that alternative forms of transportation are encouraged, and that these facilities are provided for new development in the Midtown area.

PARKING

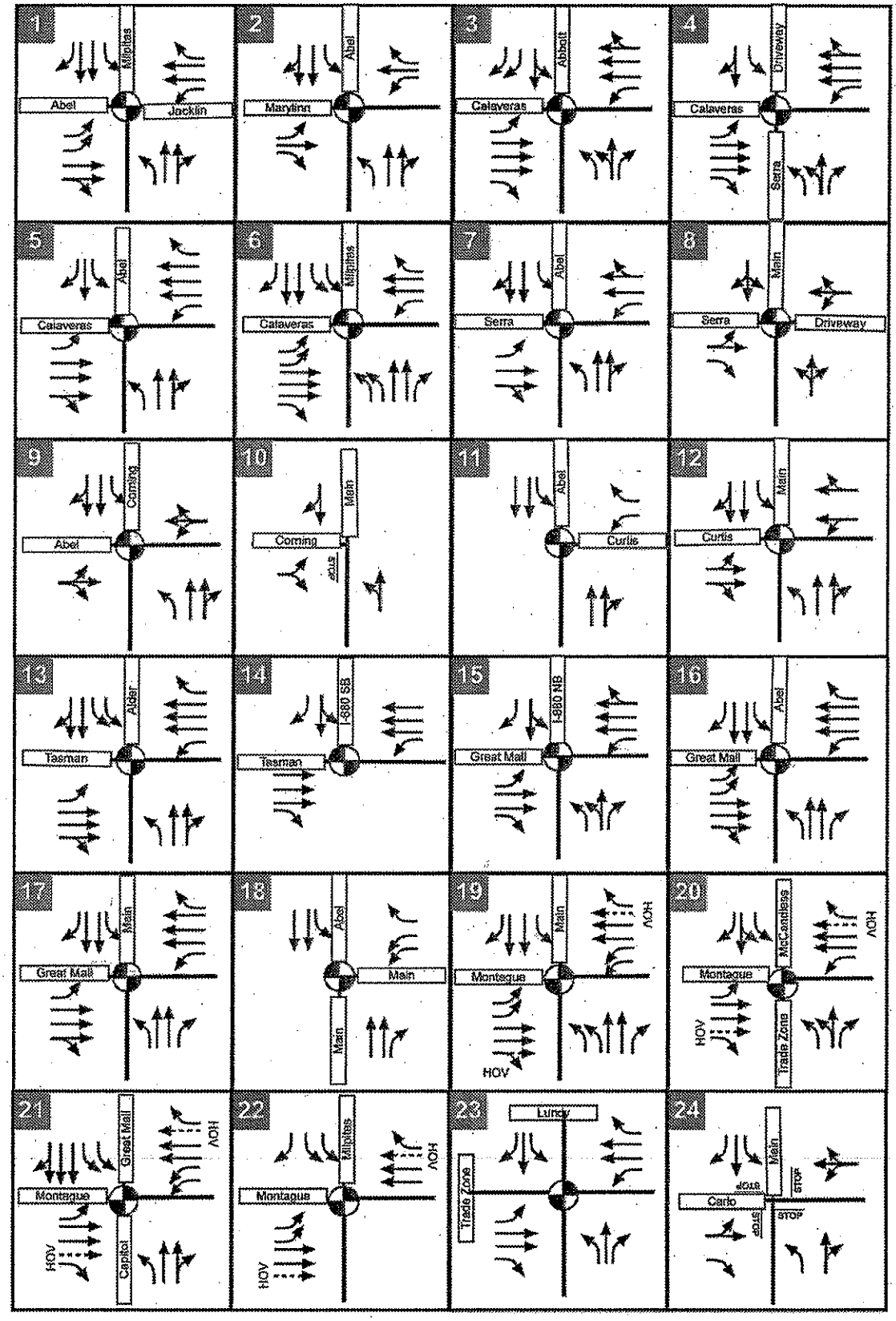
As previously described, parking is currently provided in off-street lots and in on-street spaces on numerous facilities throughout the Midtown area. On-street parking is provided on some sections of Main Street, Abel Street, Serra Way, Corning Avenue, and Curtis Avenue. The land uses proposed for the Midtown area would generate an increased parking demand compared to existing conditions. Based on typical peak parking demand rates, the proposed uses would generate a demand for over 10,000 spaces. Parking for new development will be required to be accommodated on-site, as currently required by the City of Milpitas Zoning Ordinance. Along Main Street, it may be difficult to achieve the higher-density mixed-use development envisioned for the area and to provide adequate off-street parking. This is primarily due to small parcel sizes along the street. The Specific Plan proposes to expand on-street parking along Main Street, and that the City evaluate the need for additional public parking lot(s) as new development along Main Street progresses. With these provisions in place, an overall parking shortage is not anticipated in the Midtown area. No mitigation is required for this less-than-significant impact.



Source: Fehr & Peers Associates, Inc., 2001.

Not to Scale

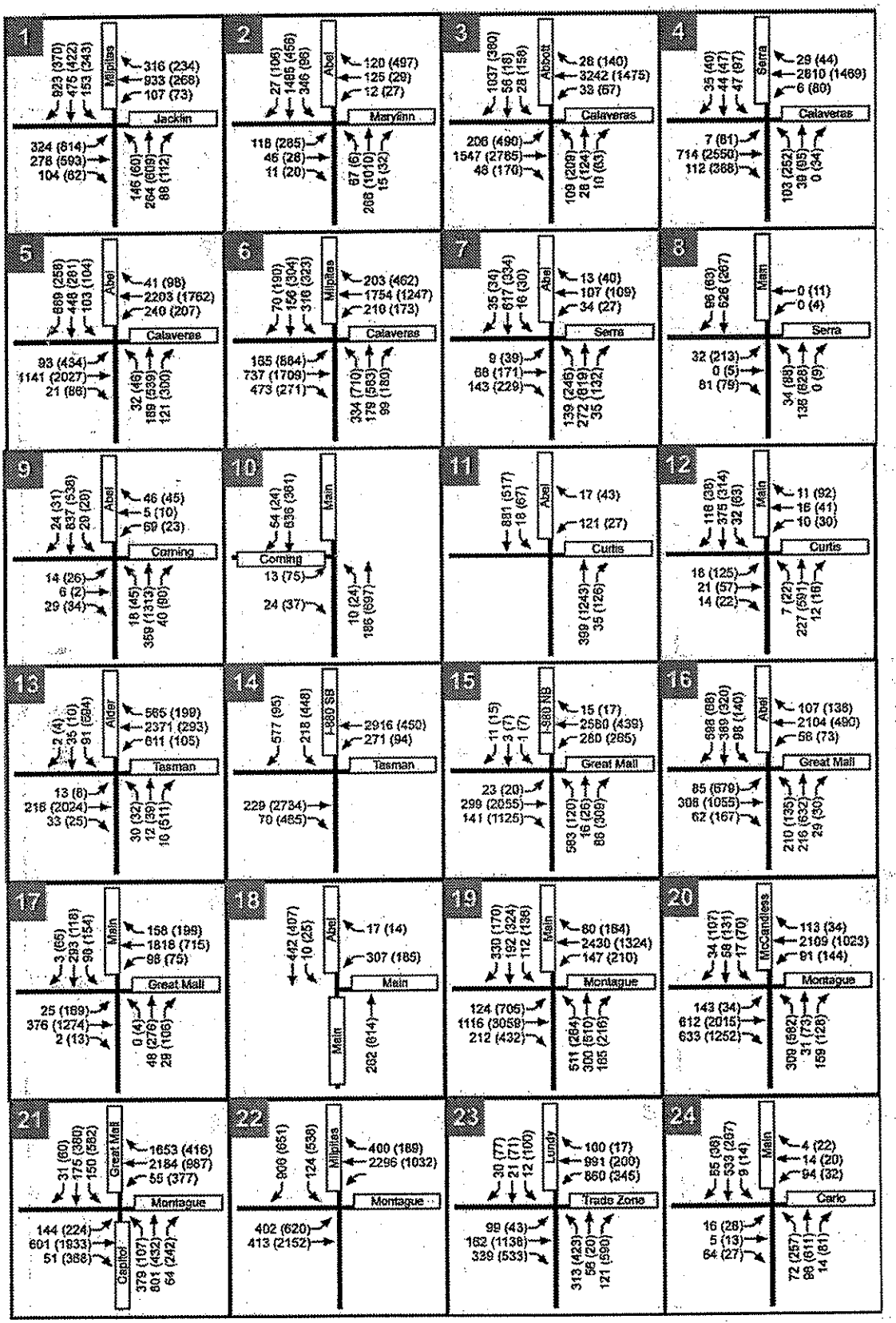
Figure 3.9-1 Existing Road Network



Source: Fehr & Peers Associates, Inc., 2001.

Figure 3.9-2 Existing Intersection Lane Configurations

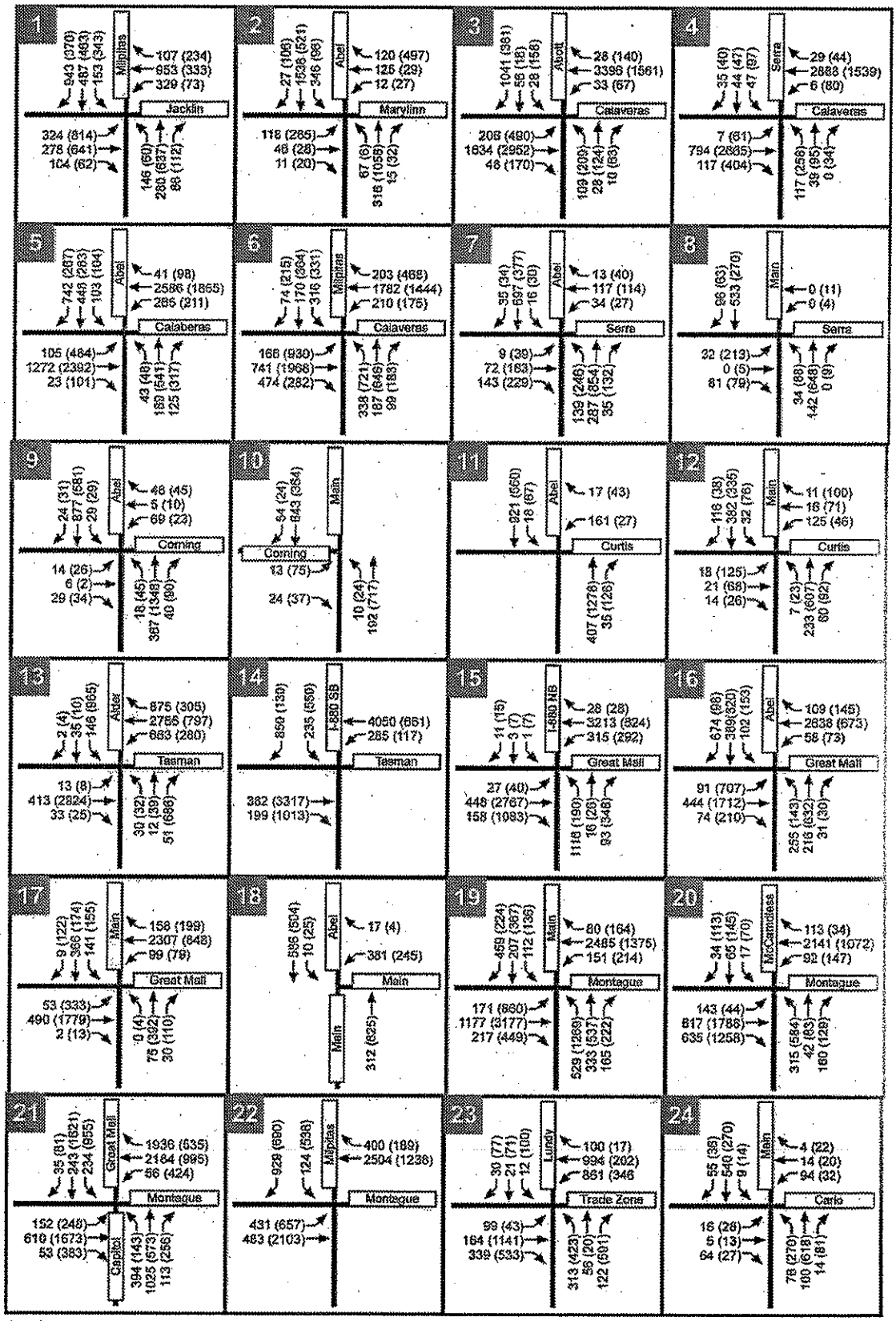
Not to Scale



Source: Fehr & Peers Associates, Inc., 2001.

Not to Scale

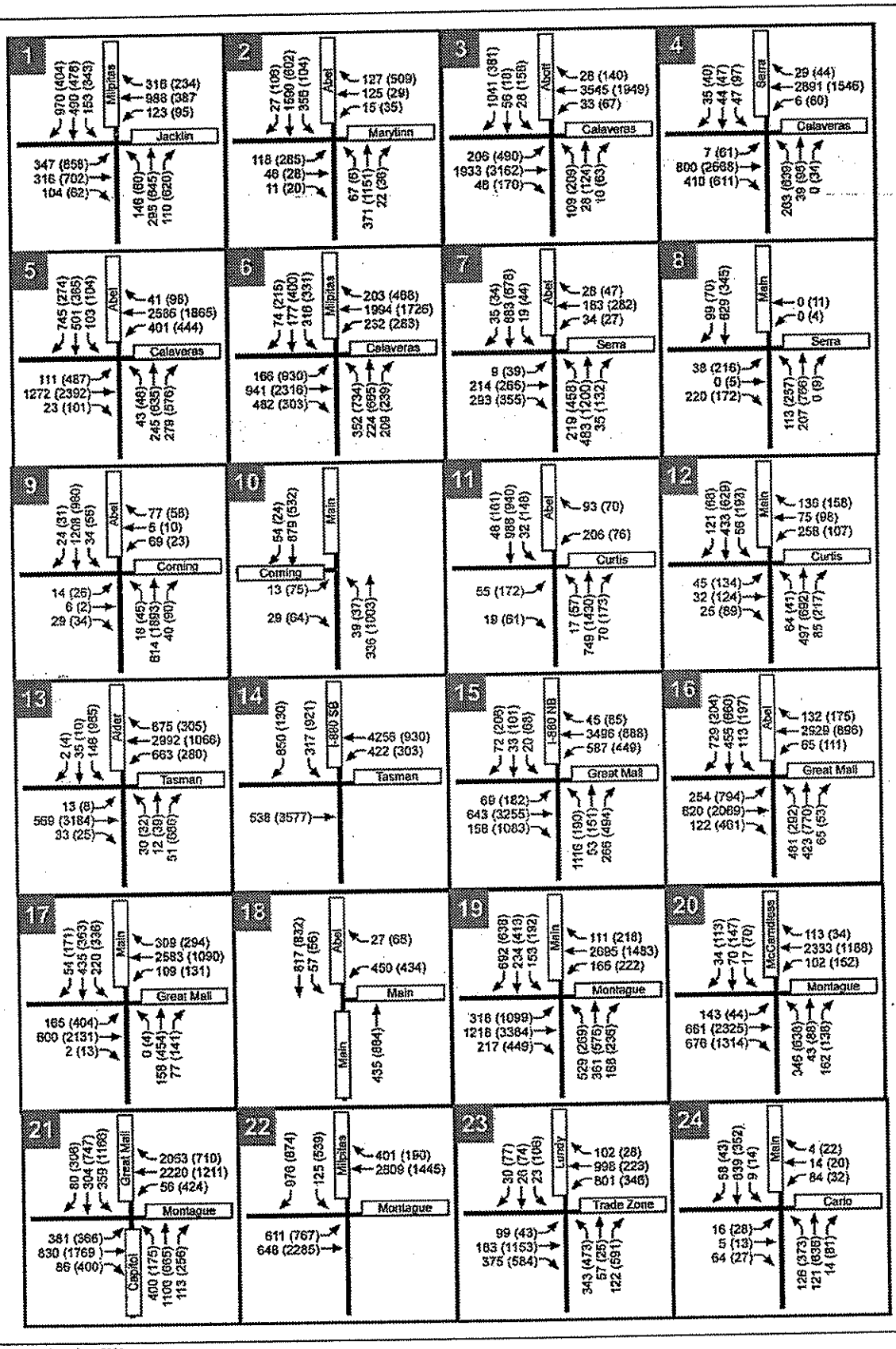
Figure 3.9-3 Existing Peak Hour Intersection Volumes



Source: Fehr & Peers Associates, Inc., 2001.

Figure 3.9-4 Baseline Peak Hour Intersection Traffic Volumes

Not to Scale



Source: Fehr & Peers Associates, Inc., 2001.

Not to Scale

Figure 3.9-5 Baseline Plus Project Peak Hour Intersection Volumes

This page is intentionally left blank.

CHAPTER 3.10. AIR QUALITY

3.10.1. EXISTING SETTING

CLIMATE AND METEOROLOGY

Ambient air quality is commonly characterized by climatological conditions, the meteorological influences on air quality, and the quantity and type of pollutants released. The Milpitas area is subject to a combination of topographical and climatic factors that affect the dispersal of regional and local air pollutants. The following section describes pertinent characteristics of the air basin and provides an overview of the physical conditions affecting pollutant dispersion in the Milpitas area.

Regional Climate

The project site is located in the western portion of the San Francisco Bay Area Air Basin, an area encompassing all of Marin, Napa, Contra Costa, Alameda, Santa Clara, San Mateo, San Francisco, and parts of Sonoma and Solano counties. The basin is characterized by a complex terrain consisting of coastal mountain ranges, and inland valleys and bays. The basin is bounded on the west by the Pacific Ocean, on the north by the Coast Range, and on the east and south by the Diablo Range.

The climate of the basin is dominated by the strength and location of a semipermanent, subtropical high-pressure cell over the northeastern Pacific Ocean. Climate is also affected by the moderating effects of the adjacent oceanic heat reservoir. Mild summers and winters, moderate rainfall, daytime onshore breezes, and moderate humidities characterize regional climatic conditions. In summer when the high pressure cell is strongest and farthest north, fog forms in the morning and temperatures are mild. In winter, when the high pressure cell is weakest and farthest south, conditions are characterized by occasional rain storms.

Moderate temperatures and humidities characterize the planning area where temperatures average 50 degrees Fahrenheit (F) annually (Felton 1965). Average daytime high temperatures range from 65 degrees F in July to 56 degrees F in December. Average overnight low temperatures range from 59 degrees F in July to 50 degrees F in January. Precipitation varies greatly in the planning area, depending on season. Rainfall averages approximately 22 inches annually and occurs almost exclusively from October through April. Summers are mild and relatively dry with 4 to 5 months without rain and conditions in the bay produce periodic fog during the morning. Winters are mild and generally rainy.

Meteorological Influences on Air Quality

Regional wind flow patterns have an effect on air quality patterns by directing pollutants downwind of sources. Localized meteorological conditions, such as moderate winds disperse pollutants and reduce pollutant concentrations. When a warm layer of air traps cooler air close to the ground, an inversion layer is produced. Such temperature inversions especially hamper dispersion by creating a ceiling over the area and trapping air pollutants near the ground. During summer mornings and afternoons, such inversions can be present over the Midtown planning area. During summer's longer daylight hours, plentiful

sunshine provides the energy needed to fuel photochemical reactions between nitrogen oxides (NOx) and reactive organic gases (ROG), which result in ozone (O_3) formation.

In the winter, temperature inversions dominate during the night and early morning hours but frequently dissipate by afternoon. At this time, the greatest pollution problems are from carbon monoxide (CO) and NOx. High CO concentrations occur on cold winter mornings with strong surface inversions and light winds.

CRITERIA AIR POLLUTANTS

Currently, most of the effort to improve air quality in the United States and California is directed toward the control of five pollutants, called "criteria" air pollutants: photochemical oxidants (ozone), carbon monoxide, fine particulate matter (PM_{10}), nitrogen dioxide, and sulfur dioxide. Fifteen years ago, suspended particulate lead would have been included in this list, but the widespread availability and use of unleaded gasoline has effectively eliminated lead as an air quality concern. Criteria pollutants, including their formation and health effects, are discussed below:

Ozone (O_3)

O_3 is a colorless gas with a pungent odor that causes eye irritation and respiratory function impairment. Most ozone in the atmosphere is formed as a result of the interaction of ultraviolet light, ROG, and NOx. ROG is composed of nonmethane hydrocarbons, and NOx is made of different chemical combinations of nitrogen and oxygen, mainly nitrogen oxide and nitrogen dioxide (NO_2). Motor vehicles are the primary source of ROG and NOx. Because these photochemical reactions occur on a regional scale, O_3 is considered a regional pollutant.

Fine Particulate Matter (PM_{10})

PM_{10} are atmospheric particles resulting from fume-producing industrial and agricultural operations, and natural activities. Health impacts from breathing the particulates resulted in revision of the Total Suspended Particulate (TSP) standard to reflect particulates that are small enough to be inhaled (i.e., 10 microns or less in size). Current standards define acceptable concentrations of particulates that are smaller than 10 microns in diameter, referred to as PM_{10}. PM_{10} includes a wide range of solid and liquid particles, including smoke, dust, aerosols, sulfates, and nitrates, which can cause lung damage.

Carbon Monoxide (CO)

CO is an odorless, colorless, gas that causes a number of health problems including fatigue, headache, confusion, and dizziness. The incomplete combustion of petroleum fuels in on-road vehicles is a major cause of CO. CO is also produced during the winter from wood stoves and fireplaces. CO tends to dissipate rapidly into the atmosphere; consequently, violations of the CO State standard are generally limited to major intersections during peak hour traffic conditions.

Nitrogen Dioxide (NO_2)

NO_2 is an indirect product of fuel combustion in industrial sources, motor vehicles, and other mobile sources (e.g., off-road vehicles, trains, aircraft, mobile equipment, and utility equipment). NO_2 causes a number of health problems including risk of acute and chronic respiratory disease.

Sulfur Dioxide (SO_2)

SO_2 is a colorless gas with a pungent, irritating odor (Horowitz 1982). The major source of SO_2 emissions is fuel-burning equipment in which fuel oil and/or coal are consumed. SO_2 causes a number of health problems including aggravation of chronic obstructive lung disease.

REGULATORY SETTING

Air quality in the project vicinity is regulated by several jurisdictions including the Environmental Protection Agency (EPA), California Air Resources Board (CARB), and the Bay Area Air Quality Management District (BAAQMD). Each of these jurisdictions develop rules, regulations, policies, and/or goals to attain the goals or directives imposed upon them through legislation. Although EPA regulations may not be superseded, both State and local regulations may be more stringent.

Pollutants subject to federal ambient standards are referred to as "criteria" pollutants because the EPA publishes criteria documents to justify the choice of standards. One of the most important reasons for air quality standards is the protection of those members of the population who are most sensitive to the adverse health effects of air pollution, termed "sensitive receptors." The term sensitive receptors refers to specific population groups as well as the land uses where they would reside for long periods. Commonly identified sensitive population groups are children, the elderly, the acutely ill, and the chronically ill. Commonly identified sensitive land uses are residences, schools, playgrounds, childcare centers, retirement homes or convalescent homes, hospitals, and clinics. The federal and State standards for the criteria pollutants and other State regulated air pollutants are shown in Table 3.10-1.

Federal

The federal 1970 Clean Air Act authorized the establishment of national health-based air quality standards, and also set deadlines for their attainment. The federal Clean Air Act Amendments of 1990 (1990 CAAA) made major changes in deadlines for attaining National Ambient Air Quality Standards (NAAQS) and required actions in areas of the nation that exceeded these standards. The 1990 CAAA requires designated agencies in any area of the nation that does not meet the NAAQS to prepare a plan demonstrating the steps that will be taken to bring the area into compliance. The 1990 CAAA completely revised the federal statute for achieving attainment of NAAQS and a new set of guidelines and planning processes for carrying out the requirements of the Amendments. Provisions of Section 182, which relates to O_3 nonattainment areas, and Section 187, which relates to CO nonattainment areas, emphasize strategies for reducing vehicle miles traveled. Section 182 requires submission of a plan revision that "identifies and adopts specific enforceable transportation control measures to offset any growth in emissions from growth in vehicle miles traveled or number of vehicle trips in such an area to meet statutory requirements for demonstrating periodic emission reduction requirements."

Table 3.10-1
Ambient Air Quality Standards

California [a]		National [b]	
Air Pollutant	**Concentration**	**Primary (>)**	**Secondary (>)**
Ozone	0.09 ppm, 1-hr avg	0.12 ppm, 1-hr avg 0.08 ppm, 8-hr avg.[c]	0.12 ppm, 1-hr avg 0.08 ppm, 8-hr avg.[c]
Carbon Monoxide	9 ppm, 8-hr avg 20 ppm, 1-hr avg	9 ppm, 8-hr avg 35 ppm, 1-hr avg	9 ppm, 8-hr avg 35 ppm, 1-hr avg
Nitrogen Dioxide	0.25 ppm, 1-hr avg	100 $\mu g/m^3$ annual	100 $\mu g/m^3$ annual
Sulfur Dioxide	0.04 ppm, 24-hr avg 0.25 ppm, 1-hr avg	0.03 ppm, annual avg 0.14 ppm, 24-hr avg	0.5 ppm, 3-hr avg
Suspended Particulate Matter (PM_{10})	30 $\mu g/m^3$ annual geometric mean 50 $\mu g/m^3$, 24-hr avg	50 $\mu g/m^3$ annual arithmetic mean 150 $\mu g/m^3$, 24-hr avg	50 $\mu g/m^3$ annual arithmetic mean 150 $\mu g/m^3$, 24-hr avg
Lead	1.5 $\mu g/m^3$, 30-day avg	1.5 $\mu g/m^3$ calendar quarter	1.5 $\mu g/m^3$ calendar quarter
Sulfates	25 $\mu g/m^3$, 24-hr avg	--	--
Hydrogen Sulfide	0.03 ppm, 1-hr avg	--	--
Vinyl Chloride	0.01 ppm, 24-hr avg	--	--
Visibility Reducing Particles	Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to particles when the relative humidity is less than 70%.	--	--

[a] California standards for ozone, carbon monoxide, sulfur dioxide (1-hour), suspended particulate matter-PM_{10} visibility reducing particles, are values that are not to be exceeded. The sulfur dioxide (24-hour), sulfates, lead, hydrogen sulfide, and vinyl chloride standards are not to be equaled or exceeded.

[b] National standards, other than ozone and those based on annual averages or annual arithmetic means, are not to be exceeded more than once a year. The ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above the standard is equal to or less than one.

[c] Based on newly established 8-hour EPA standard. The 0.12 ppm 1-hour standard will not be revoked in a given area until that area has achieved 3 consecutive years of air quality data meeting the 1-hour standard.

ppm = parts per million by volume

$\mu g/m^3$ = micrograms per cubic meter

Source: California Air Resources Board, 1998.

The 1990 CAAA requires that projects receiving federal funds demonstrate conformity to the approved State Implementation Plan (SIP)/local air quality attainment plan for the region. In 1982, each air district within California submitted its prospective air quality attainment plan to the EPA for approval and inclusion in the federally enforceable SIP. Until the 1982 SIP is updated, conformity can be fulfilled by showing a project's consistency with the most recent adopted air quality attainment plan for each district.

State

The California Clean Air Act (CCAA 1988) requires that all air districts in the State endeavor to achieve and maintain California Ambient Air Quality Standards (CAAQS) for O_3, CO, SO_2 and NO_2 by the earliest practical date. Plans for attaining CAAQS were to be submitted to the CARB by June 30, 1991; however, some districts are still in the draft process. The CCAA specifies that districts focus particular attention on reducing the emissions from transportation and area-wide emission sources, and the act provides districts with new authority to regulate indirect sources. Each district plan is to achieve a 5 percent annual reduction, averaged over consecutive three-year periods, in district-wide emissions of each nonattainment pollutant or its precursors.

Bay Area Air Quality Management District

The BAAQMD is responsible for implementing emissions standards and other requirements of federal and State laws regarding most types of stationary emission sources. The BAAQMD regulates air quality in Santa Clara County through its permit authority and its planning and review activities.

In an effort to reach attainment of the State standards of O_3 as required by the CCAA, the BAAQMD completed its Bay Area '97 Clean Air Plan (CAP) (BAAQMD 1997). The CAP stresses attainment of O_3 standards and focuses on strategies for progressive reduction of NOx and ROG air emissions by promoting active public involvement, by encouraging compliance, by influencing behavior, and by educating both the public and private sectors. Specific planning efforts related to PM_{10} have yet to be undertaken by the BAAQMD. An Ozone Attainment Plan was also adopted in 1999 in response to the region being redesignated as nonattainment for the federal ozone standard.

EXISTING AIR QUALITY MONITORING DATA

Air pollutant concentrations are measured at monitoring stations throughout the air basin. Baseline air quality in the planning area can be inferred from ambient air quality measurements conducted at the San Jose monitoring station. This monitoring station records several pollutants, and is the closest station in proximity to the planning area that is representative of the air quality in Milpitas. While close to the site, caution should be taken when extrapolating these measurements to describe pollutant levels in Milpitas. The two locations are separated by about 8 miles, and all data may not be precisely representative of Milpitas air quality. Table 3.10-2 summarizes the last three years of published data from this monitoring station.

Table 3.10-2
Summary of Annual San Jose Air Quality Monitoring Data

	1997	1998	1999
OZONE (O_3)			
State Standard (1-hr avg, 0.09 ppm)			
Federal Standard (1-hr avg, 0.12 ppm)			
Maximum Concentration	0.09	0.15	0.11
Number of Days State Standard Exceeded	0	4	3
Number of Days Federal Standard Exceeded	0	1	0
NITROGEN DIOXIDE (NO_2)			
State Standard (1-hr avg, 0.25 ppm)			
Federal Standard (0.053 ppm AAM)			
Maximum Concentration	0.12	0.08	0.13
Annual Mean	0.025	0.025	0.026
Number of Days State Standard Exceeded	0	0	0
Federal Standard Exceeded	No	No	No
CARBON MONOXIDE (CO)			
State Standard (1-hr/8-hr avg, 20/9.1 ppm)			
Federal Standard (1-hr/8-hr avg, 35/9.5 ppm)			
Maximum Concentration (1-hr/8-hr)	10/6.1	9/6.3	9/6.3
Number of Days State Standard Exceeded (1-hr/8-hr)	0/0	0/0	0/0
Number of Days Federal Standard Exceeded (1-hr/8-hr)	0/0	0/0	0/0
SUSPENDED PARTICULATES (PM_{10})			
State Standard (24-hr avg, 50$\mu g/m^3$)			
Federal Standard (24-hr avg, 150$\mu g/m^3$)			
Maximum Concentration	78	92	114
Number of Days Exceeding State 24-hr Standard	3	3	5
Number of Days Exceeding Fed 24-hr Standard	0	0	0

ppm : parts per million
AAM : annual arithmetic mean
$\mu g/m^3$: micrograms per cubic meter
NA : not available

Source: California Environmental Protection Agency Air Resources Board, Website, Adamquery, 2000.

EXISTING ATTAINMENT STATUS

Monitored criteria air pollutants are classified in each air basin, county, or in some cases within a specific urbanized area. The classification is determined by comparing actual monitoring data with State and federal standards. If a pollutant concentration is lower than the standard, the pollutant is classified as "attainment" in that area. If an area exceeds the standard, the pollutant is classified as "non-attainment." If data are insufficient to determine whether or not the standard is exceeded, the area is designated "unclassified."

The Bay Area Air Basin is considered a State nonattainment area for the 1-hour O_3 standard, and the 24-hour and annual geometric mean standards for PM_{10} (BAAQMD 1995). The basin is in attainment for the State CO, NO_2, SO_2, sulfates, and lead standards, and unclassified for the State hydrogen sulfide and visibility reducing particles. The planning area is considered a federal nonattainment area for O_3, and a federal attainment area for annual arithmetic PM_{10}, CO, NO_2, SO_2, and lead standards, and unclassified for the federal 24-hour standard for PM_{10}.

SENSITIVE RECEPTORS

Commonly identified sensitive population groups are children, the elderly, the acutely ill, and the chronically ill. Commonly identified sensitive land uses are residences, schools, playgrounds, childcare centers, retirement homes or convalescent homes, hospitals, and clinics.

The sensitive receptors in the Midtown area include residential areas, such as those located north of Weller Drive and along Marilyn Drive in the northern portion of the planning area, as well as the Monte Vista Apartments, south of Curtis Street between Abel Street and South Main Street. In addition, the new Parc Metro and the Crossings apartments will introduce sensitive receptors into the planning area. Residential neighborhoods also exist immediately adjacent to the Midtown area, including along Alton Street (west of Abel Street), the Pines, and areas between the Union Pacific railroad (eastern line) and North Milpitas Boulevard.

Other sensitive receptors in the planning area include churches, a senior center, and childcare centers. Church uses include St. John's church and school, located between South Abel and South Main Streets, the Jain Temple, located between South Main Street and the Union Pacific railroad (formerly Southern Pacific - western line), and several others. The Milpitas Senior Center is located between South Main Street and the rail line. In addition, several childcare centers are operated in Midtown Milpitas.

3.10.2. THRESHOLDS OF SIGNIFICANCE

For the purposes of this analysis, the BAAQMD's thresholds of significance are used to determine if the project would result in a significant air quality impact. Using the BAAQMD's CEQA Guidelines (April 1996), significant air quality impacts are measured as follows:

- Construction-related impacts would be considered significant if feasible BAAQMD construction control mitigation measures listed in the BAAQMD CEQA Guidelines are not incorporated.

- Project emissions would be considered significant at a regional level if the resulting emissions of ROG, NOX, or PM_{10} exceeds 15 tons per year.
- Localized CO concentrations would be considered significant if a project contributes to CO concentrations exceeding the State Ambient Air Quality Standard of 9.0 parts per million (ppm) averaged over 8 hours or 20 ppm for 1 hour.

3.10.3. ENVIRONMENTAL EVALUATION

CONSTRUCTION-RELATED IMPACTS

Although an overall development intensity and density is identified through proposed land use designations and regulations, the Specific Plan does not specify individual development projects. However, any construction activities implemented in the Midtown planning area would temporarily generate NOx, ROG, SO_2, CO, and PM_{10} emissions during clearing, grading, and general construction activities. The emissions produced during clearing, grading, and general construction activities are "short-term" in the sense that they would be limited to the construction period. Emissions generated during the clearing of vegetation and demolition of any existing buildings and structures would vary substantially from day-to-day depending on the level of activity, the specific construction activity, and weather conditions. Each acre of soil disturbed is estimated to create approximately 51 pounds per day per acre of PM_{10} (BAAQMD 1996). In addition, the operation of heavy-duty diesel-powered construction equipment would generate NOx, ROG, and CO.

Construction-related emissions could affect sensitive receptors. The Specific Plan includes the introduction of additional high-density housing. Any construction activities in the Specific Plan area near the existing sensitive receptors or new residential units could be considered a short-term potentially significant impact.

The Specific Plan does not include BAAQMD PM_{10} construction control measures. Because construction significance is determined by means of whether BAAQMD PM_{10} construction mitigation measures are implemented, construction emissions would be considered a short-term significant air quality impact.

Impact Air-1

Construction-Related Air Emissions from Development of the Midtown Milpitas Specific Plan. Construction activities associated with the proposed development would temporarily produce new air emissions. Emissions would vary substantially from day-to-day and could potentially produce substantial amounts of PM_{10}. The Specific Plan does not include BAAQMD PM_{10} construction control measures. Because construction significance is determined by means of whether BAAQMD PM_{10} construction mitigation measures are implemented, construction emissions is a short-term significant air quality impact.

Mitigation Measure Air-1: The following basic control measures are required to be implemented at all construction sites in the Midtown area. These measures shall be incorporated into construction contracts for projects in the Midtown area.

a. Water all active construction areas twice daily and more often during windy periods. Active areas adjacent to existing land uses shall be kept damp at all times, or shall be treated with non-toxic stabilizers or dust palliatives.

b. Cover all trucks hauling soil, sand, and other loose materials, or require all trucks to maintain at least two feet of freeboard.

c. 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.

d. Sweep daily (preferably with water sweepers) all paved access roads, parking areas and staging areas at construction sites.

e. Sweep streets daily (preferably with water sweepers) if visible soil material is carried on to adjacent public streets.

f. Hydroseed or apply non-toxic soil stabilizers to inactive construction areas.

g. Enclose, cover, water twice daily or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.).

h. Limit traffic speeds on unpaved roads to 15 miles per hour.

i. Install sandbags or other erosion control measures to prevent silt runoff to public roadways.

j. Replant vegetation in disturbed areas as quickly as possible.

k. Suspend excavation and grading activity whenever the wind is so high that it results in visible dust plumes despite control efforts.

After implementation of the listed mitigation measures, construction-related air emissions would be less-than-significant.

LONG-TERM REGIONAL IMPACTS

Implementation of the Specific Plan would result in long-term direct and indirect air pollutant emissions. Direct emissions would be produced by motor vehicles and natural gas usage. Indirect emissions would be generated through additional electricity usage.

Emissions from motor vehicle operation are anticipated to represent the greatest long-term air quality impact associated with development of the proposed project. Operational activities associated with the proposed land uses would also result in additional dispersed and intermittent sources of pollutants, primarily associated with the use of space and water heaters, household solvents and paints, and

landscape maintenance equipment. The estimated increases in mobile and area source emissions, assuming development of the vacant parcels in the planning area, were calculated using the urban emission model, URBEMIS7G (CARB 1995). These development assumptions are detailed in Chapter 2: Project Description. The default assumptions contained in the model for the San Francisco Bay area were used in the analysis. Mobile source emissions were calculated based on the estimated net increase in vehicle trips, obtained from the traffic analysis prepared for this project.

Estimated daily increases in regional emissions are summarized in Table 3.10-3.

Table 3.10-3
Specific Plan-related Long-term Emissions

Emission Sources	Emissions Generated (Tons perYear)		
	ROG	NO_x	PM_{10}
Mobile Sources	82.48	145.79	63.12
Area Sources	44.39	12.90	0.02
BAAQMD Significance Threshold	15	15	15
TOTAL	126.87	158.69	63.14

Note: Project-generated emissions were calculated using URBEMIS7G computer program, based on the estimated net increase in vehicle trips obtained from the traffic analysis prepared for this project and the default model assumptions for the San Francisco Bay Area. Area sources include emissions associated with the use of natural gas-fired appliances, consumer products, and landscape maintenance equipment.

Source: EDAW, Inc., 2000.

Impact Air-2

Long-term Regional Air Emissions from Development of the Midtown Milpitas Specific Plan. Based on the modeling conducted, the Specific Plan would generate approximately 127 tons per year of ROG, 159 tons per year of NOx, and 63 tons per year of PM_{10}. The estimated increases in regional emissions would exceed the BAAQMD's annual significance threshold of 15 tons per year for each of the regional criteria pollutants. This is a significant impact.

Mitigation Measure Air-2: The Specific Plan contains policies directed at reducing vehicle miles traveled. The Specific Plan encourages a compatible mixture of land uses, provides for a land-use mix that supports major transit facilities, locates higher density development around hubs and commercial centers, provides for the continuation of pedestrian-oriented retail development, and provides pedestrian connections between the transit stations and important destinations.

Though these policies would help to reduce emissions, they would not reduce them to a level of insignificance. Due to the intensity of the development proposed, the proposed Specific Plan could not be feasibly developed without an increase in air emissions above the significance thresholds of 15 tons per year for ROG, NOx, and PM_{10}. **This impact is considered significant and unavoidable.**

LOCAL MOBILE SOURCE CARBON MONOXIDE CONCENTRATIONS

Implementation of the Specific Plan would add additional peak-hour vehicle trips through nearby intersections. This increase in peak-hour traffic volumes would cause greater congestion at those intersections. The combination of increased traffic volumes and increased congestion would result in generating increased concentrations of CO at nearby intersections.

Implementation of the Specific Plan would result in increasing 1-hour CO concentrations near intersections. The BAAQMD's CO Screening method was used to calculate CO concentrations at intersections in the planning area for background and background plus project scenarios (BAAQMD 1996). Peak hour traffic volumes, speed limit, and lane configuration data were provided by Fehr and Peers, Inc. As shown in Table 3.10-4, vehicle emissions would produce 1-hour CO concentration increases in all but one of the intersections (Tasman Drive/I-880 Southbound Ramps). Due to the low background CO levels, limited increase in traffic volumes, and minor congestion, the California and federal 1-hour and 8-hour CO standards would not be exceeded at any intersection under background plus project conditions. No mitigation measure is required for this less-than-significant impact.

CUMULATIVE LONG-TERM REGIONAL IMPACTS

The Specific Plan would result in cumulative long-term direct and indirect air pollutant emissions. Direct emissions produced by natural gas usage and indirect emissions generated with electricity usage would be the same as those previously discussed. Cumulative emissions from motor vehicle operation, however, would be lower than project levels due to the phasing-out of dirty older motor vehicles and the introduction of cleaner newer vehicles.

The urban emission model, URBEMIS7G, was used to predict the quantities of NOx, ROG, and PM_{10} emissions generated under conditions for the year 2015 (CARB 1995). The model results indicate that trips produced by the proposed project would generate approximately 127 tons per year of ROG, 159 tons per year of NOx and 63 tons per year of PM_{10}.

The Bay Area Air Quality Management District's significance thresholds for ROG, NOx, and PM_{10}, would be exceeded. Project generated emissions, together with emissions from existing and reasonably foreseeable future projects, would cumulatively contribute to existing and projected exceedances of the State and federal air quality standards in the air basin.

Table 3.10-4
Predicted Maximum 1-Hour and 8-Hour Carbon Monoxide Concentrations
(in parts per million)

Location	Averaging Time	Background	Background Plus Project
California Standards	*1-hr* *8-hr*	*20.0* *9.0*	*20.0* *9.0*
Calaveras Boulevard (SR 237)/Abel Street	1-hr 8-hr	10.3 6.0	10.8 6.3
Calaveras Boulevard (SR 237)/Milpitas Blvd.	1-hr 8-hr	10.4 6.0	10.9 6.4
Tasman Drive/Alder Drive	1-hr 8-hr	9.6 5.5	9.9 5.7
Tasman Drive/ I-880 Southbound Ramps	1-hr 8-hr	9.3 5.4	9.3 5.4
Great Mall Parkway/I-880 Northbound Ramps	1-hr 8-hr	9.0 5.2	10.1 6.0
Montague Expressway/McCandless Dr-Trade Zone Blvd.	1-hr 8-hr	9.2 5.3	9.5 5.5
Montague Expressway/Great Mall Pkwy-Capitol Ave.	1-hr 8-hr	10.4 6.1	11.2 6.7
Trade Zone Boulevard/Lundy Avenue	1-hr 8-hr	7.6 4.2	7.7 4.3

Note: The tabulated concentrations are the sums of a background component, which includes the cumulative effects of all CO sources in the project vicinity, and a local component, which reflects the effects of vehicular traffic on roadways

Source: EDAW, Inc., 2000.

Impact Air-3

Cumulative Long-term Regional Impacts. Implementation of the proposed Specific Plan would generate cumulative regional mobile source emissions associated with increased vehicle use and residential emissions. Direct and indirect emissions produced by the proposed project would cumulatively contribute to existing and projected exceedances of the State and federal air quality standards in the air basin. This is a significant impact.

Mitigation Measure Air-3: Due to the intensity of the development proposed, the Specific Plan could not be feasibly developed without causing an increase in regional emissions, and all feasible mitigation measures have been incorporated into the Specific Plan as policies (e.g., policies directed at encouraging non-automotive transportation). **This impact is considered significant and unavoidable.**

CUMULATIVE LOCAL MOBILE SOURCE CARBON MONOXIDE CONCENTRATIONS

The Specific Plan, in conjunction with other developments in the surrounding area, would result in producing more peak-hour vehicle trips through nearby intersections than what currently exists. This increase in peak-hour traffic volumes would cause slightly greater congestion at those intersections. The highest 1-hour and 8-hour measured CO concentrations in the planning area within the last three years, 10 and 6.3 respectively, are well below the State and federal standards. However, it is anticipated that future background CO levels will continue to drop as older cars are removed from the vehicle pool and replaced by newer, more efficient vehicles. CO levels would most likely not exceed the State and federal standards after project implementation. This impact is considered less-than-significant. No mitigation is required.

AIR QUALITY MANAGEMENT PLAN CONSISTENCY ANALYSIS

As previously discussed, the proposed project's cumulative long-term contribution to regional emissions is substantial (approximately 127 tons per year of ROG, 159 tons per year of NO_x, and 63 tons per year of PM_{10}). Project generated emissions, together with emissions from existing and reasonably foreseeable future projects, would cumulatively contribute to existing and projected exceedances of the State and federal air quality standards in the air basin. As previously discussed, these cumulative impacts are considered significant.

However, as discussed in Chapter 6: Growth Inducement, the proposed project has been developed by the City of Milpitas to address the 1999-2006 Regional Housing Needs (RHNF) 1999-2006 Allocation (ABAG 2000). In total, the Association of Bay Area Governments (ABAG) has determined that the City of Milpitas "share" of the regional housing need is 4,348 housing units. Accordingly, the average yearly fair share housing need for the City of Milpitas is 580 housing units. Though the proposed Specific Plan would generate additional housing units, and thus population, in the Midtown area, the project is not expected to result in significant growth in the San Francisco Bay region as a whole. In addition, because the proposed project encourages the use of transit, it is expected that the vehicle miles traveled associated with the units proposed under the Specific Plan would be less compared to a development in a more

suburban location in the region. Thus, the Specific Plan is consistent with the projected growth for the region, and has been designed to address regional air quality considerations. No mitigation is required.

ODORS

The occurrence and severity of odor impacts depends on the frequency, intensity of source, wind speed and direction of wind, and sensitivity of the receptors. The BAAQMD regulates stationary odor sources. Odor sources within the jurisdiction of the BAAQMD are assessed for impacts on a case-by-case basis. The proposed project would include land uses that are not known odor generators. In addition, the existing industrial land uses within the planning area have not be known to generate odor complaints. The introduction of residential land uses into the Midtown planning area has already occurred, with no increase in odor complaints. In general, the implementation of the proposed Specific Plan would reduce the potential for odor complaints as a result of a general shift from industrial land uses to commercial and office-oriented land uses. No mitigation is required.

CHAPTER 3.11. NOISE

Noise is "unwanted sound" and is known to have several adverse effects on people. The known effects include hearing loss (not generally a factor with community noise), communication interference, sleep interference, physiological responses, and annoyance. This section provides a summary of existing and projected noise conditions in the Midtown Milpitas planning area and provides an analysis of the potential for noise impacts.

3.11.1. EXISTING SETTING

NOISE MEASUREMENTS AND DESCRIPTORS

Sound is described in terms of the loudness (amplitude) of the sound and frequency (pitch) of the sound. Sound levels are measured and expressed in decibels (dB). A weighted scale is used to describe environmental noise at any one particular time; however, community noise levels vary continuously. In order to account for the time-varying characteristics of noise, all of the individual noise readings must be averaged over a 24-hour period to give an equivalent level. This equivalent noise level is expressed as Day-Night Noise Level (DNL) or Community Noise Equivalent Level (CNEL, normally within 0.5 dB of the DNL value). DNL used in this section represents a sound level that is equivalent to the total varying sound levels that occur over a 24 -hour period plus a 10 dB penalty for nighttime noise (i.e. between 10 am and 7 am). Figure 3.11-1, provided at the end of the chapter, presents typical noise levels for different types of noise sources within communities.

NOISE COMPATIBILITY STANDARDS

Based on the known effects of noise, criteria have been established to help protect public health and safety and prevent disruption of certain human activities. The City of Milpitas has adopted standards for evaluating the compatibility of land uses with respect to outdoor and certain indoor noise levels. The purpose of the land use compatibility analysis is to screen projects that may require specific design considerations to mitigate noise impacts. The noise compatibility, provided in Table 3.11-1, are derived from the California Office of Planning and Research and are provided in the Noise Element of the City of Milpitas General Plan (1998).

NOISE SOURCES AND PROJECTED NOISE LEVELS

Vehicular traffic along the major arterials and freight traffic along the railroads are the principal noise sources in the Midtown area. In addition, future commuter rail uses, such as the Tasman Light Rail Corridor project, will introduce new noise sources into the Midtown planning area.

Table 3.11-1
Land Use Compatibility for Community Noise Environments

Land Use Category	Exterior Day/Night Noise Levels DNL, dB			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential – Single Family	50 - 60	60 - 70	70 - 75	75 - 85
Residential – Multiple Family	60 - 65	60 - 70	70 - 75	75 - 85
Transient Lodging-Motels, Hotels	50 - 65	60 - 70	70 - 80	80 - 85
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 - 70	60 - 70	70 - 80	80 - 85
Auditoriums, concert Halls, Amphitheaters	NA	50 - 70	NA	65 - 85
Sports Arena, Outdoor Spectator Sports	NA	50 - 75	NA	70 - 85
Playgrounds, Parks	50 - 70	NA	67.5 - 75	72.5 - 85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 - 75	NA	70 - 80	80 - 85
Office Buildings, Business Commercial and Professional	50 - 70	67.5 - 77.5	75 - 85	NA
Industrial, Manufacturing, Utilities, Agriculture	50 - 75	70 - 80	75 - 85	NA

Normally Acceptable: Specified land use is satisfactory , based upon the assumption that any building involved are of normal conventional construction, without any special noise insulation requirements.

Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design.

Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Clearly Unacceptable: New construction or development clearly should not be undertaken.

NA: Not applicable.

Source: Office of Planning and Research, State of California General Plan Guidelines, 1990; obtained from the City of Milpitas General Plan, 1998.

Interstate 880 is located on the western boundary of the Midtown area, and is projected to generate 80 DNL by 2010. Noise levels decrease with distance to 65 DNL approximately 1,300 feet from the freeway. The Great Mall Parkway, located in the southern portion of the Midtown area, is projected to generate 70 DBL immediately adjacent to the roadway. Noise levels decrease with distance to 60 DNL approximately 400 feet from the roadway. Similarly, the Montague Expressway is projected to generate 70 DBL, with noise levels diminishing to 60 DNL approximately 700 feet from the roadway. Calaveras Boulevard, located in the northern section of the Midtown area, is projected to generate 70 DNL, with noise levels diminishing to 60 DNL approximately 800 feet from the roadway

There are two railroad lines that traverse the Midtown area and are used for freight rail transportation. Both lines are now owned and operated by Union Pacific; the western line was formerly a part of the Southern Pacific Transportation Company. Freight operation noise levels would be in excess of 70 DNL immediately adjacent to the railroad tracks. Noise levels decrease with distance from the tracks to 60 DNL approximately 300 feet from the rail line. Noise levels may change if BART is established on the eastern Union Pacific corridor.

The Tasman Light Rail Corridor project will extend the existing light rail in the County through Milpitas (Milpitas 1998). The eastern segment of the Tasman Corridor would extend east from the existing terminus of the Guadalupe Corridor in San Jose, pass through Midtown Milpitas within the median of the Great Mall Parkway, and terminate just east of I-680 in San Jose. As part of this project, three new stations will be constructed in Milpitas; two of which would be located within Midtown. This project is anticipated to begin service in 2004 (RBF 1999). According to the Tasman Corridor FEIR/EIS (1992), the operation of the light rail would generate noise levels of 54 to 56 DNL at a distance of 285 feet from the tracks (RBF 1999).

For all rail uses, the most intrusive noise are the train whistles. Maximum noise levels for train whistles typically range from 90 to 100 dB at a distance of 140 feet from the tracks. Train whistles are required for safety purposes. Further, noise regulations typically do not address instantaneous noise events, rather, noise is regulated by standards based on noise measurements averaged over a 24-hour period. The City of Milpitas' standards are based on noise measurements averaged over a 24-hour period.

REGULATORY BACKGROUND

Policies which regulate noise levels in the City of Milpitas are described in the City of Milpitas General Plan Noise Element (1998) and the City of Milpitas Noise Abatement Ordinance (April 1998). These are describe below.

Milpitas General Plan

The General Plan provides noise contour maps for the City of Milpitas. The data from these maps for the Midtown Milpitas planning area is provided in Figures 3.11-2 and 3.11-3, which are provided at the end of this chapter. These maps show linear bands subject to similar average noise levels. Figure 3.11-2 shows noise levels in the Midtown planning area in 1988. A noise survey conducted in November and December 1993 confirmed that noise levels had not changed substantially from 1988 to 1993. A similar assessment has not been completed since 1993. Figure 3.11-3 depicts projected 2010 noise levels based

upon anticipated traffic volumes. These projections do not included future commuter rail uses, which were not known when the contours were developed.

Contours along roadways represent the predicted noise level and do not reflect the mitigating effects of noise barriers, structures, or topography. Because landforms and structures may significantly affect noise exposure at a particular location, the noise contours should not be considered site-specific.

The two guiding principles described in the City of Milpitas General Plan Noise Element direct that the City of Milpitas shall maintain land use compatibility with noise levels similar to those set by State guidelines, and that unnecessary, annoying, or injurious noise shall be minimized. The policies used to implement these goals include the following:

6-I-1 Use the guidelines in Table 6-1 (Noise and Land Use Compatibility) as review criteria for development projects.

6-I-2 Require an acoustical analysis for projects located within a "conditionally acceptable" or "normally unacceptable" exterior noise exposure area. Require mitigation measures to reduce noise to acceptable levels.

6-I-3 Prohibit new construction where the exterior noise exposure is considered "clearly unacceptable" for the use proposed.

6-I-4 Where actual or projected rear yard and exterior common open space noise exposure exceeds the "normally acceptable" levels for new single-family and multifamily residential projects, use mitigation measures to reduce sound levels in those areas to acceptable levels.

6-I-5 All new residential development (single family and multifamily) and lodging facilities must have interior noise levels of 45 dB DNL or less. Mechanical ventilation will be required where use of windows for ventilation will result in higher than 45 dB DNL interior noise levels.

6-I-6 Assist in enforcing compliance with noise emissions standards for all types of vehicles, established by the California Vehicle Code and by federal regulations, through coordination with the Milpitas Police Department, Santa Clara County Sheriff's Department, and the California Highway Patrol.

6-I-7 Avoid residential DNL exposure increases of more than 3 dB or more than 65 dB at the property line, whichever is more restrictive.

City of Milpitas Noise Abatement Ordinance

The City of Milpitas Noise Abatement Ordinance (1988) establishes that it is unlawful to create or permit disturbing noise in the City of Milpitas (Section V-213-3). The ordinance states that it is unlawful for any person in any district zoned for residential use to make, continue, or cause to be made any disturbing noise between the hours of 10:00 pm and 7:00 am and that construction shall not be allowed in all zoning districts between 7:00 pm and 7:00 am.

State of California Noise Insulation Standard (Title 24, Part II)

The State of California requires that all multi-family housing, hotels and motels exposed to a Ldn in excess of 60 dBA have an acoustical study to show how interior levels will be reduced to 45 dBA Ldn. If windows must be closed to meet the indoor goal, then ways to provide a habitable environment (e.g., mechanical ventilation) must be provided. This standard is consistent with the City Noise Element goals.

3.11.2. THRESHOLDS OF SIGNIFICANCE

Based on the Environmental Checklist Form contained in Appendix G to the CEQA Guidelines and relevant City of Milpitas guidance, the proposed Specific Plan could have a significant noise impact if it would:

- Result in construction activities occur outside the City of Milpitas Municipal Code Section V-213-3 hours of 7:00 am to 7:00 pm, Monday through Friday.
- Generate residential DNL exposure increases of more than 3 dB or more than 65 dB at the property line, whichever is more restrictive.
- Locate land uses within an area that exceeds the City's 'normally acceptable' noise levels (as previously identified in Table 3.11-1).

3.11.3. ENVIRONMENTAL EVALUATION

CONSTRUCTION-RELATED IMPACTS

Construction noise would be temporary and would include noise from activities such as site preparation, truck hauling of material, use of cranes, and building construction. Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., land clearing, grading and excavation, erection). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. Although noise ranges are similar for all construction phases, the initial site preparation phase tends to involve the most equipment.

The EPA has found that the noisiest equipment types operating at construction sites typically range from 88 dBA to 91 dBA at 50 feet. Typical operating cycles may involve two minutes of full power, followed by 3 or 4 minutes at lower settings (EPA 1971). Table 3.11-2 lists noise levels generated by typical construction equipment at a distance of 50 feet.

Noise from localized point sources (such as construction sites) typically decreases by about 6 dBA with each doubling of distance from source to receptor. Given this noise attenuation rate, outdoor receptors within approximately 1,000 feet of construction sites could experience maximum instantaneous noise levels of greater than 65 dBA when on-site construction-related noise levels exceed 91 dBA at the project site boundary (EPA 1971).

Table 3.II-2
Typical Construction Equipment Sound Levels

Equipment	Typical Sound Level @ 50 Ft (in dBA)
Dump truck	88
Portable air compressor	81
Concrete mixer (truck)	85
Jackhammer	88
Scraper	88
Dozer	87
Paver	89
Generator	76
Pile driver	101
Rock drill	98
Pump	76
Pneumatic tools	85
Backhoe	85

Source: U.S. Environmental Protection Agency, 1974.

With implementation of the proposed Specific Plan, new noise-sensitive receptors (e.g., residential dwellings) would be introduced to the Midtown planning area. Residential and retail development would be constructed along Main Street, and higher density residential areas around the two light rail stations.

Depending on the specific construction activities being performed, the time and duration of construction, and distance to these receptors, construction-generated noise could result in speech interference for occupants of these newly developed land uses. Excessive noise levels occurring during the evening and nighttime hours can result in sleep disruption and would have the greatest impact and annoyance to these noise-sensitive receptors. However, the City of Milpitas Municipal Code restricts construction activities to the hours of 7:00 am to 7:00 pm, Monday through Friday. This restriction would ensure that sleep disruption would generally not occur, and that annoyance related to construction activities would be minimized. Thus, this potential impact is considered less-than-significant.

STATIONARY NOISE SOURCES

Implementation of the proposed Specific Plan would not result in the introduction of any new major stationary noise sources into the Midtown planning area. Stationary noise sources associated with the proposed land uses would be primarily associated with the operation of heating, ventilation, and air conditioning (HVAC) units.

Commercial use HVAC units can reach maximum levels of approximately 70 dBA at 3 feet. Assuming a maximum noise level of 70 dBA, projected noise levels at 10 feet would be less than 60 dBA. For the most part, the units associated with commercial and office uses are located on the roof top of structures and, as a result, are not anticipated to result in a substantial increase in ambient noise levels at any nearby noise-sensitive receptors.

Additional noise generated from commercial development includes intermittent and short-term noise associated with the opening and closing of vehicle doors, adult and children voices, and lawn maintenance equipment. However, because such noise occurs on an infrequent basis, substantial increases in ambient noise levels (i.e., 3 dBA, or greater) at nearby noise sensitive receptors would not be anticipated. Area and stationary source would not be anticipated to exceed 65 dBA Ldn at nearby noise-sensitive receptors.

Occupation of the proposed residential dwellings would expose nearby noise-sensitive receptors to increased noise levels. Stationary noise sources associated with residential development is primarily associated with the operation of air conditioning units. Noise levels associated with residential use air conditioning units typically range from 50 to 60 dBA at 3 feet and, as a result, are not anticipated to result in a substantial increase (i.e., 3 dBA, or greater) in ambient noise levels. Additional noise commonly associated with residential development includes intermittent and short-term noise associated with amplified music, adult and children voices, and lawn maintenance equipment. However, because such noise occurs on an infrequent basis, substantial increases in ambient noise levels would not occur. Although noise from stationary and area noise sources associated with the proposed land uses would be audible, overall increase in ambient noise levels are not expected to exceed the exterior noise threshold of 65 dBA Ldn. As a result, this impact would be less-than-significant.

PROJECT-GENERATED TRAFFIC NOISE IMPACTS

Implementation of the proposed Specific Plan would result in the addition of about 56,000 new daily traffic trips. The estimated increase in daily traffic trips assumes development of the vacant parcels in the planning area. These development assumptions are detailed in Chapter 2: Project Description. Predicted increases in traffic noise levels along area roadways are presented in Table 3.11-3. Noise levels would increase by less than 3 dBA for each of the modeled roadway segments. Noise increases less than 3 dBA would not be a noticeable increase in ambient noise levels. Usually it requires a doubling of traffic to result in a noticeable increase in local noise levels. No mitigation is required for this less-than-significant impact.

Table 3.II-3
Projected Traffic Noise Levels

Roadway	Link	Ldn in dBA, 50 ft. from Roadway Centerline		
		Background	Background Plus Project	Increase
Calveras	Abel to Main	70.1	70.4	0.3
Capitol	Abel to Lundy	67.4	68.3	0.9
Main	Calveras to Capitol	64.0	65.6	1.6
Montague	Abel to Lundy	70.4	70.7	0.3
Abel	Calveras to Capitol	65.0	66.6	1.6

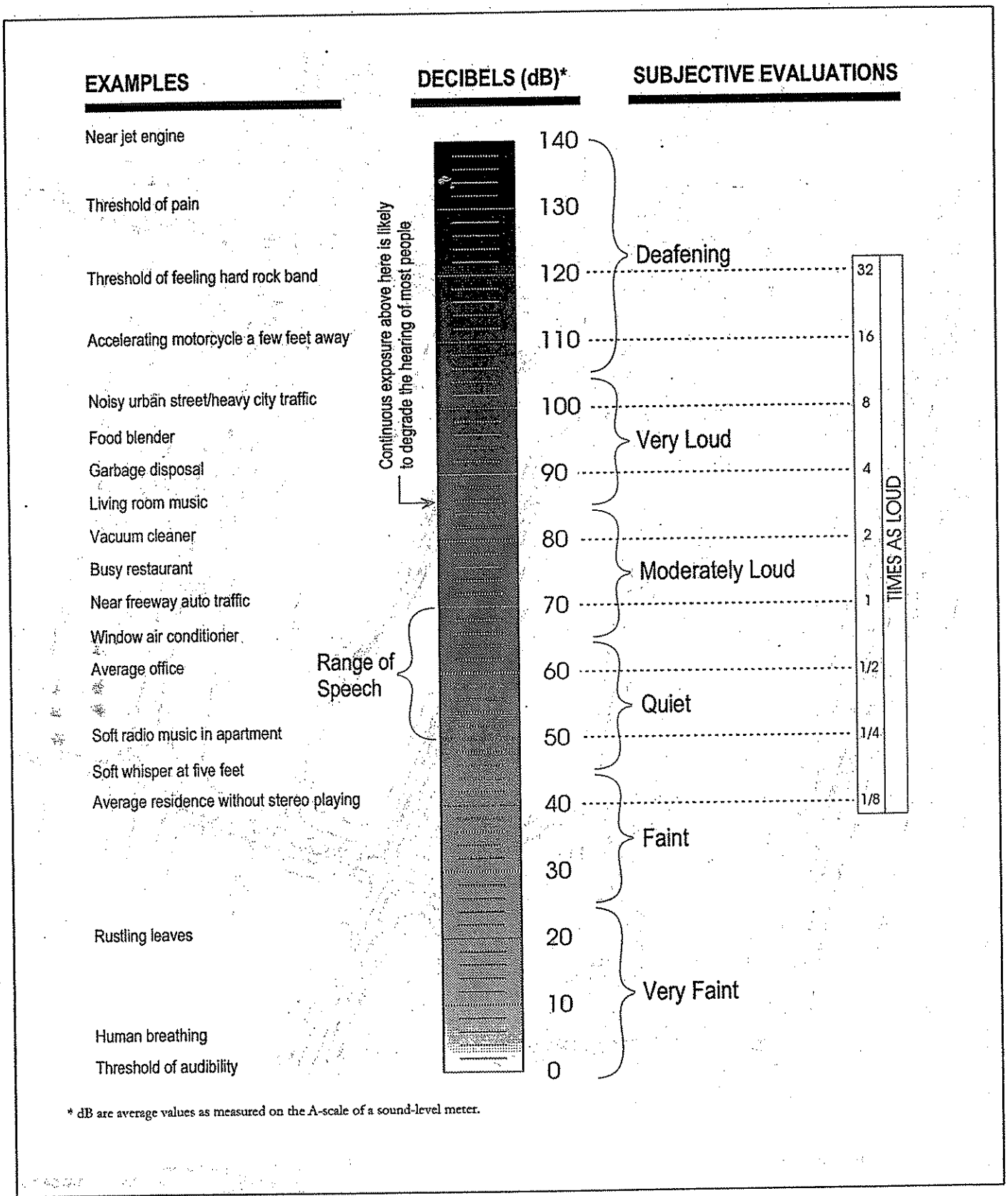
Note: Projected noise levels were modeled using the FHWA Noise Prediction Model, based on the average daily traffic noise levels obtained from the traffic analysis prepared for the project.

Source: EDAW, Inc., 2000.

COMPATIBILITY OF PROPOSED LAND USE WITH THE NOISE ENVIRONMENT

As previously discussed, the City of Milpitas has identified a 'normally acceptable' noise compatibility goal of 65 dBA Ldn, or less, for multi-family residential land uses. Noise levels of 60 to 70 dBA Ldn are considered 'conditionally acceptable' and noise levels of 70 to 75 dBA Ldn are considered normally unacceptable. As previously discussed, predicted traffic noise levels along major roadway segments in the planning area would range from approximately 65.6 to 70.0 dBA Ldn for background plus project conditions. Based on the traffic noise analysis prepared for the Specific Plan, predicted noise levels in the vicinity of the proposed multi-family residential land uses would likely exceed the City's 'normally acceptable' land use compatibility noise standard of 65 dBA Ldn.

Title 24 of the California Code of Regulations requires the preparation of an acoustical analysis for multi-family residences that demonstrates how interior noise levels will achieve a 45 dBA Ldn, where the exterior noise levels exceed 60 dBA Ldn. This types of analysis is also required by the City of Milpitas through General Plan Policy 6-I-5. A Title 24 analysis would be prepared as part of the final design of any multi-family development proposed in the Specific Plan area. Noise control measures would be designed according to the type of building construction and specified sound rating for each building element. These measures could include, but are not limited to: construction of walls with resilient channels, staggered studs, or double-stud walls, and dual glazed windows with laminated glass and a 2½- to 4-inch airspace. If the windows must remain closed to obtain the required noise reduction, then mechanical ventilation shall be installed in these units. Implementation of Title 24 of the California Code of Regulations would ensure that the proposed residential uses in the Midtown planning area would not be exposed to an incompatible noise environment. No mitigation is required for this less-than-significant impact.



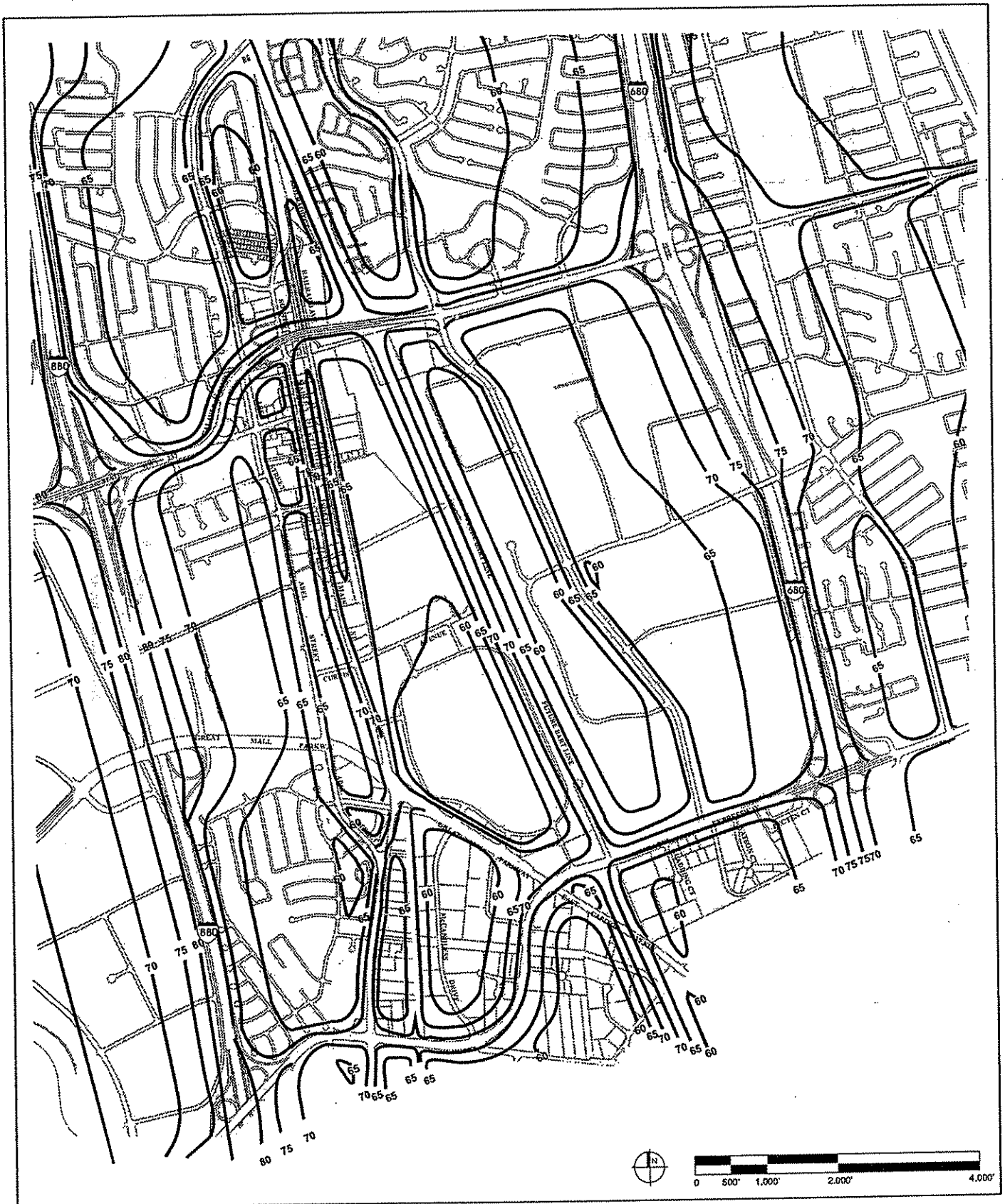
* dB are average values as measured on the A-scale of a sound-level meter.

Sources: Concepts in Architectural Acoustics, M. David Egan, McGraw Hill, 1972, The Noise Guidebook, US Department of Housing and Urban Development, Office of Community Planning and Development.

Figure 3.11-1 Common Sounds in Decibels

Source: City of Milpitas, Community Development Department, Engineering Service Division, May 14, 1988.

Figure 3.11-2 Existing Day-Night Average Sound Levels (1988)



Source: City of Milpitas, Community Development Department, Engineering Service Division, May 14, 1988.

Figure 3.11-3 Year 2020 Day-Night Average Sound Levels

This page is intentionally left blank.

CHAPTER 4. CUMULATIVE IMPACTS

Cumulative impacts refer to two or more individual effects that, when considered together, are considerable or that compound or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related reasonably foreseeable projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time (CEQA Guidelines Section 15355).

A list of the anticipated future projects that could produce cumulative impacts when combined with the proposed project are summarized in Table 4-1. To avoid double-counting of impacts, projects which have been assumed within the development projections for the Specific Plan have not been included in this listing. Though some of these projects are close to completion, or have recently been completed, they are not fully occupied (i.e., Parc Metropolitan). For these reasons, their potential service and infrastructure demands have been added to the cumulative impact analyses contained in this EIR to appropriately consider their demands when fully operational. The projects in this table include those that that have specific development proposals as of October 1, 2000. Minor projects (e.g., less than 5,000 square feet of commercial development or replacement/redevelopment of an existing use) have not been included in this analysis as they would not change the findings contained in this chapter.

Longer-term cumulative conditions (2020) have also been analyzed in this EIR by considering future forecasted conditions. The forecast is consistent with the Specific Plan's 20-year planning horizon. Currently, the Association of Bay Area Governments (ABAG) projects the population of Milpitas to be 77,100 in 2020. As discussed in more detail in Chapter 5: Growth Inducement, approval of the Midtown Specific Plan would result in a corresponding increase in the projected 2020 population to 83,500 persons.

The following sections provide more detailed discussion of the cumulative issues for each of the environmental topics examined in this EIR. Where applicable, these analyses integrate the above assumptions about planned growth, and indicate how cumulative conditions have been considered in this EIR for each of the environmental topics.

4.1. AESTHETICS

In general, the proposed Specific Plan is anticipated to result in a beneficial aesthetic affect to the Specific Plan area as a result of streetscape improvements and private property revitalization, which would be encouraged by the Specific Plan. Though implementation of the Specific Plan could increase the development intensity in the area, this additional development would not be expected to result in adverse visual impacts because the area already has an urbanized character, and no City-designated visual resources occur in the Midtown planning area. Further, there are no developments in the planning area that would contribute to a cumulative adverse visual impact.

Table 4-I
Cumulative Projects

In Plan Area? (• = yes)	Project Name and Location	Type of Use	Size
•	Parc Metropolitan South Side of Curtis, East of South Main Street	Residential (multi-family)	450 du
	Piedmont Housing 1156 Jacklin Road	Residential (single family)	15 du
•	The Crossings North Side of Capitol Ave, East of UPRR	Residential	468 du
	Foothill Square 251 & 481 Jacklin Road	Retail Commercial	10,000 sq. ft.
	Great Mall Remodel 447 Great Mall Drive	Commercial and Entertainment	20-screen theater (3,866 seats) 6,300 sq. ft. restaurant
	McCarthy Ranch Bank and Retail Buildings Southeast corner of McCarthy Boulevard and Ranch Road	Retail Commercial Bank	4,000 sq. ft. 4,500 sq. ft.
•	Oral Care Dental Office 27 South Main Street	Office (Dental)	14,275 sq. ft.
	24-Hour Fitness 577 East Calaveras Boulevard	Fitness Club	36,571 sq. ft.
	Peery-Arrillaga McCarthy, Tasman and Alder	R&D/Office	397,320 sq. ft.
	Barber Lane Associates 1590 Buckeye Drive	R&D/Office	51,215 sq. ft.
	Longmeadow Office West side of California Circle, South of I-880 off-ramp	R&D/Office	52,000 sq. ft.
	McCarthy Center McCarthy Boulevard & Ranch Road	R&D/Office	1,034,062 sq. ft.
	Cisco Systems Barber, Tasman, and Alder	R&D/Office	1,100,000 sq. ft.
	Fleming Business Park Northwest quad I-680 and Montague Expressway	Industrial Park	879,000 sq. ft.
	Veritas, McCarthy Ranch	Industrial Park	999,000 sq. ft.
	Hawthorne Suites 321 Cypress	Hotel	85 rooms
	Renaissance Hotel Site bound by Tasman Drive, Alder Drive and Barber Lane, west of I-880.	Hotel	400 rooms
•	South Main Street Office	Office	16,000 sq. ft.

du = dwelling units

sq. ft. = square feet

Source: City of Milpitas Planning and Neighborhood Preservation Division, October 2000.

The Parc Metropolitan, the Crossings, the South Main Street Office Building, and a dental care office project (which are the developments located within the Midtown planning area) are urban in nature and would not, individually or cumulatively, substantially degrade the existing visual character or quality of the plan area or other surrounding urbanized areas. Of these projects, two are high density residential developments. Their density and visual quality are consistent with the vision of the Specific Plan. In general, implementation of the Specific Plan would result in more unified, high-quality design by requiring development to adhere to design guidelines which have been developed specifically for the Midtown planning area. For these reasons, the proposed project would not have a negative adverse impact on the visual or scenic character of the city, either individually or cumulatively. Rather, the Midtown Specific Plan would enhance the image and the aesthetics of Midtown Milpitas.

4.2. GEOLOGY, SOILS, AND SEISMICITY

The analysis of geology and seismic hazards takes into consideration cumulative impacts of project development. Geology and soils issues associated with the Specific Plan are site- and project-specific. No geologic or soils conditions exist around the project site that could, in combination with other potential geologic and soils effects, result in a larger cumulative impact.

4.3. HAZARDOUS MATERIALS

There are no known substantial hazardous materials issues in close proximity to the Midtown planning area that would compound existing hazardous materials issues in the area. Though existing and future businesses are anticipated to continue to use hazardous substances in the Midtown and surrounding area, if appropriate regulatory requirements are followed, no unusual or significant impacts related to the storage, handling and use of hazardous materials are anticipated. Development within the Specific Plan area would be required to complete a Phase I or II environmental assessment, as deemed necessary by the Milpitas Building Department, when building permits are pursued. These provisions would ensure that the potential for release of hazardous materials into the environmental would be reduced to a less-than-significant level when considering development within the Midtown planning area and in the City and region as a whole. Thus, no significant cumulative hazardous materials impacts are anticipated.

4.4. HYDROLOGY AND WATER QUALITY

Cumulative hydrology and water quality impacts are addressed in Chapter 3.4: Hydrology and Water Quality. In consideration of the city as a whole, substantial development is not anticipated in the flood plains of the City or in the upper watersheds. Thus, the analysis contained in Chapter 3.4 would not change in consideration of cumulative development. Generation of typical urban area contaminants in runoff would be addressed through the implementation of existing regulatory requirements that ensure that water quality would not be impaired. These are addressed in more detail in Chapter 3.4. In addition, street sweeping occurs on a regular basis in the Midtown planning area, which also addresses cumulative water quality concerns.

4.5. UTILITIES

The analysis of utilities contained in this EIR takes account of the potential effects of the proposed Specific Plan in combination with other growth in the City and the region (i.e., the service area of the applicable utility providers). Specifically, the analysis of future water demand and wastewater discharge capacity considers long-term, consistent with the population projections referenced in the introduction to this chapter.

4.6. PUBLIC SERVICES

The analysis of public services contained in this EIR takes into account of the potential effects of the Specific Plan in combination with other growth in the City. Specifically, the demand and generation ratios used in this EIR have been developed in consideration of an individual project's contribution to cumulative impacts. In addition, the service providers within the City have been directly contacted as part of this environmental review, and they have assisted in providing an analysis of the project's effects on their systems in consideration of other planned projects.

4.7. BIOLOGICAL RESOURCES

The analysis of biological resources issues takes into consideration cumulative impacts of project development, including the effect of the removal of habitat at the project site on the sustainability of biological resources in the region. The mitigation measures suggested in the biological resources section would ensure that cumulative impacts would not occur to sensitive or other biological resources in the area.

4.8. CULTURAL RESOURCES

Potential site-specific cultural resource impacts are identified in Section 3.8. Cultural resource issues associated with the Specific Plan are site- and project-specific. No cultural resource conditions exist around the project site that could, in combination with other cultural effects, result in a larger cumulative impact. Further, none of the projects in the cumulative project listing provided in Table 4-1 involve known cultural resources.

4.9. TRAFFIC AND CIRCULATION

The traffic and circulation section of this EIR (Section 3.9) includes a cumulative future analysis to consider long-term forecasted conditions that take background growth, future anticipated development and the proposed project into account. The traffic analysis contained in this EIR considers both baseline plus project conditions, as well as cumulative plus project conditions (2015). The forecast year of 2015 has been established by the City of Milpitas as the cumulative horizon appropriate when considering traffic impacts.

Baseline conditions include those projects that have been approved as of January 1, 2000, consistent with the Approved Trip Inventory that has been developed by Barton Aschman Associates and Hexagon Transportation Consultants. This listing does not include several of the more recent projects listed in Table 4-1. However, more than half of the anticipated approved square footage listed in Table 4-1 is assumed in the baseline traffic analysis. In total, the Approved Trip Inventory adds the trip generation of over 8 million square feet of office and commercial development onto the existing traffic count numbers. These projects include projects in the City of Milpitas, in addition to several projects in the surrounding community of San Jose.

Cumulative conditions were assessed within the context of future traffic conditions occurring to the year 2015. The cumulative analysis assesses the effects of the proposed Specific Plan in combination with anticipated future traffic volumes. For this analysis, the City of Milpitas used the City's travel demand model to project traffic volumes for 2015 in consideration of the land use changes proposed as part of the Midtown Specific Plan project.

Using these methodologies for cumulative impact assessment, the traffic analysis indicates several significant traffic impacts. These are provided in Section 3.9. Several of these impacts are considered significant and unavoidable.

4.10. AIR QUALITY

The air quality section of this EIR (Section 3.10) includes a cumulative future analysis to consider long-term forecasted air quality conditions. As identified in Impact Air-3, project occupation would generate cumulative regional mobile source emissions associated with increased vehicle use and residential emissions. Motor vehicle and residential emissions cumulatively produced by the proposed project would exceed BAAQMD significance thresholds. This is a significant and unavoidable impact.

4.11. NOISE

The projection of future noise conditions in the planning area included in this EIR uses the traffic projections to appropriately consider the cumulative traffic noise conditions in the planning area. To predict the increase in noise associated with traffic on the analyzed roadways, traffic noise levels were calculated using the Federal Highway Administration's traffic noise prediction model for baseline plus project conditions. Further, an analysis of the land use compatibility within the Specific Plan area was conducted. As additional traffic is anticipated both within and in the vicinity of the Specific Plan area, cumulative noise with continue to result in cumulative land use compatibility impacts. However, as identified in Section 3.11, continued implementation of existing City and State regulations would reduce these potential impacts to less-than-significant levels. These include using sound-rated windows to achieve an acceptable interior noise level of 45 dBA L_{dn}, or less and constructing walls with resilient channels, staggered studs, or double-studs. Thus, cumulative noise impacts of project-generated and future anticipated traffic can be reduced to less-than-significant levels. No other cumulative noise impacts are anticipated in the planning area.

This page is intentionally left blank.

CHAPTER 5. GROWTH INDUCEMENT

An EIR must discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment (CEQA Guidelines Section 15126.2(d)). Projects that would remove obstacles to population growth, such as an expansion of a wastewater treatment plant, are also considered when discussing growth inducement. Increases in population also may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects.

The Milpitas Midtown Specific Plan proposes development of approximately 4,860 housing units, 61,000 square feet of retail, 720,000 square feet of office, and 300,000 square feet of highway-oriented retail in the planning area. Improved infrastructure to serve the projected development is included as part of the Specific Plan. This growth would occur over the long-term, on a parcel-by-parcel basis as individual development projects were proposed. There is no set time schedule for the implementation of the Specific Plan, nor is there an established sequence for the phasing of new development within the plan area. The timing and phasing of projects pursuant to the plan would depend primarily on market demand, financial feasibility and the availability of construction financing.

The proposed project has been developed by the City of Milpitas to address the 1999-2006 Regional Housing Needs (RHNF) 1999-2006 Allocation (ABAG 2000). In total, ABAG has determined that the City of Milpitas "share" of the regional housing need is 4,348 housing units. Accordingly, the average yearly fair share housing need for the City of Milpitas is 580 housing units. The regional housing need is specified by the California State Department of Housing and Community Development (HCD).

The Specific Plan would directly induce growth in the planning area through the construction of 4,860 new multiple family housing units, which when added to the already approved or completed 1,224 multiple family units, results in a total of 6,084 units in the planning area. The Association of Bay Area Governments (ABAG) projected the 2020 population of Milpitas to be approximately 77,100 based on current land use regulations and future land availability data developed by the City. In ABAG's projections, the land availability data envisioned approximately 3,705 multiple family units for the Specific Plan planning area. The total housing proposed for the planning area would exceed this projection by approximately 2,379 units or 6,400 persons assuming 2.69 people/unit[1]. Assuming that other projected residential growth in the City would occur as envisioned in Projections 2000, the City's projected 2020 population would increase to 83,500.

Though growth inducement would be expected from the proposed project in the local area (i.e., Midtown and, perhaps, the City of Milpitas as a whole), the proposed project is not anticipated to result in an overall increase in growth in the region. The Midtown Specific Plan has been designed to encourage the development of housing around transit stations, which will soon be developed in the Midtown area. The encouragement of more densely populated transit-oriented development is intended to encourage regional

[1] It is important to note that ABAG anticipates a slight decrease in household size, which would also be anticipated in the Midtown area as a result of a higher percentage of multiple family units being incorporated into the housing stock. This reduction in household size could reduce this population projection.

growth around transit, rather than in the outlying suburban areas, thereby reducing urban "sprawl". In comparison, the environmental impacts associated with the Specific Plan's proposed housing is expected to be less than the irreversible changes and impacts that can occur when developing previously undeveloped lands on the edge of urban areas. As an example, the increased use of transit encouraged by the Specific Plan could reduce the number of vehicle miles traveled by the residents, when compared to a development in a more suburban location. Additionally, the proposed urbanized development would not convert undeveloped open space lands or affect agricultural resources, as can occur with more suburban development.

CHAPTER 6. OTHER CEQA-REQUIRED DISCUSSIONS

As required by CEQA, this chapter provides discussion of the following CEQA-mandated discussions: unavoidable significant effects, and significant irreversible environmental changes that would be involved in the proposed project should it be implemented.

6.1. UNAVOIDABLE SIGNIFICANT EFFECTS

As required by the CEQA Guidelines (Section 15126.2(b)), an EIR must describe any significant impacts that cannot be avoided, including those that can be mitigated but not reduced to a level of insignificance. Chapter 3 of this EIR provides a description of the potential environmental impacts of the proposed project and recommends various mitigation measures to reduce impacts, to the extent feasible. After implementation of the recommended mitigation measures, most of the impacts associated with the proposed project would be reduced to a less-than-significant level.

The following significant effects may not be able to be mitigated to a less-than-significant level, and therefore could be considered unavoidable. These unavoidable adverse impacts would require a Statement of Overriding Considerations if the project were to be approved by the City.

6.1.1. IMPACT TRAFFIC-1: UNACCEPTABLE INTERSECTION OPERATIONS (BASELINE+PROJECT)

Implementation of the proposed Midtown Milpitas Specific Plan would result in significant traffic impacts at fourteen (14) intersections in and surrounding the Midtown planning area. Of these intersections, nine (9) intersections would be significantly affected by project traffic in the AM peak hour, and eleven (11) intersections would be significantly impacted in the PM peak hour. A summary of these impacts is provided in Table 6-1 (which is a reproduction of Table 3.9-13, contained in the Traffic and Circulation chapter of this Draft EIR).

With implementation of the Specific Plan the City shall implement the improvements summarized in Table 3.9-13, consistent with Policy 4.8 of the Draft Midtown Milpitas Specific Plan. Historically, the City has required development to pay its pro-rata share of improvement costs on a project by project basis. The City shall continue to use this approach or identify alternative funding mechanisms such as RDA funds or General Fund prior to development in Midtown. Improvements may be phased, according to actual development and the demonstrated need for the improvements.

With the implementation of the traffic improvements specified in Table 6-1, six (6) of the intersection impacts would be mitigated to a less-than-significant level. However, impacts at eight (8) of the intersections would still be considered significant. Feasible mitigation measures are not available. The analysis contained in Chapter 3.9 provides information on an intersection by intersection basis as to why feasible improvements or mitigation measures are not available. Thus, these remaining impacts are considered significant and unavoidable.

Table 6-I
Intersection Impacts and Mitigation Measures, with Resulting Level of Significance

Ref. Number	Intersection	Required Mitigation	Peak Hour	Unmitigated		Mitigated		Specific Plan Impact Fully Mitigated?
				Delay	LOS	Delay	LOS	
1	Milpitas Blvd./ Jacklin Rd.-Abel St. (AM)	Re-configure east-west approaches to permit east-west phasing.	AM	48.3	E	45.7	E	Yes
2	Calaveras Blvd. (SR 237)/ Abbott St. (AM)	None feasible.	AM	79.2	F	79.2	F	No
3	Calaveras Blvd. (SR 237)/Abel St. (PM)	Add a 2nd EB left-turn lane and separate NB right-turn lane with overlap.	PM	105.2	F	39.3	D-	Yes
4	Calaveras Blvd. (SR 237)/Milpitas Bl. (PM)	None feasible.	PM	92.7	F	92.7	F	No
5	S. Main St./ Corning Ave. (PM)	Signalization (if warranted).	PM	76.1	F	26.5	D+	Yes
6	Tasman Dr./ Alder Dr. (PM)	Restripe NB shared through/right-turn lane as a separate right-turn lane and provide overlap phase.	PM	452.4	F	263.3	F	Yes
7	Tasman Dr./ I-880 SB Ramps (AM/PM)	None feasible.	AM PM	73.4 103.3	F F	73.4 103.3	F F	No No
8	Great Mall Pkwy./ I-880 NB Ramps (AM/PM)	None feasible.	AM PM	129.8 212.3	F F	129.8 212.3	F F	No No
9	Great Mall Pkwy./ Abel St. (AM)	Additional NB left-turn lane.	AM	180.6	F	105.4	F	No
10	Montague Expy./ S. Main St.-Oakland Rd. (AM/PM)	None feasible.	AM PM	119.1 136.1	F F	119.3 136.1	F F	No No
11	Montague Expy./ McCandless Dr.-Trade Zone Blvd. (PM)	Add third EB mixed-flow lane on Montague Expressway (part of future widening project). No additional feasible measures.	PM	110.1	F	68.7	F	No
12	Montague Expy./ Great Mall Pkwy. (AM/PM)	None feasible.	AM PM	86.4 384.2	F F	86.4 384.2	F F	No No
13	Montague Expy./ Milpitas Blvd. (AM/PM)	Extend WB merge lane on Montague Expy. And create "free" SB right-turn lane.	AM PM	68.4 72.4	F F	20.4 38.2	C D	Yes Yes
14	S. Main St./ Carlo St.	Signalization.	AM PM	43.8 47.6	E E	12.0 10.2	B B	Yes Yes

Notes: NB = Northbound, SB = Southbound, WB = Westbound, EB = Eastbound.

Source: Fehr & Peers Assoc. Inc., 2001.

6.1.2. IMPACT TRAFFIC-2: UNACCEPTABLE FREEWAY OPERATIONS (BASELINE+PROJECT)

The addition of traffic from the proposed Midtown Specific Plan under Baseline Conditions would exacerbate already unacceptable traffic operations at impacts on one (1) of the ten (10) study freeway segments intersections during the AM peak hour and all ten (10) segments (one or both directions) during the PM peak hour. These changes are considered a significant impact.

According to VTA policy direction, mitigation measure for regional freeway impacts is participation in the Countywide Deficiency Plan (CDP) prepared by the VTA, which would require additional impact fees to provide for regional roadway improvements, including freeways. However, the CDP has not received final approval. Thus, the mitigation of regional impacts to freeway operations cannot be guaranteed, as the City of Milpitas does not have legal authority to mitigate freeway impacts. For this reason, the contribution of development under the Milpitas Specific Plan to unacceptable freeway operations is considered a significant and unavoidable impact.

6.1.3. IMPACT TRAFFIC-3: FUTURE CONDITIONS - UNACCEPTABLE ROADWAY SEGMENT OPERATIONS

The addition of traffic from the proposed Midtown Specific Plan under Cumulative Conditions would significantly exacerbate AM peak hour operations on 10 roadway segments that are projected to operate at unacceptable levels under the current General Plan. The project would also cause two segments to degrade from LOS D or better (under the current General Plan) to LOS E of F. During the PM peak hour, development within the Midtown area is expected to significantly exacerbate operations on 10 of the 35 study roadway segments and cause two additional segments to operate unacceptably. Tables detailing these impacts are provided in Appendix E of the Draft EIR. These changes are considered a significant impact.

The City of Milpitas has taken on the administration and construction of widening Montague Expressway between Great Mall Parkway-Capitol Avenue and I-680. This widening includes the addition of a fourth through lane in each direction, one of which will be a dedicated HOV lane during the AM and PM peak commute periods. Although this improvement will not reduce the projected impacts to a less-than-significant level, it will reduce overall congestion and improve traffic flow in the Midtown Area.

The VTA, Santa Clara County Roads and Airports Department, City of Santa Clara, City of San Jose, and the City of Milpitas recently completed a plan line study and operations analysis to assess the right-of-way, design, and cost issues to widen the remaining section of Montague Expressway from Highway 101 in San Jose to Great Mall Parkway-Capitol Avenue in Milpitas. At this time, funding for this project has not been obtained; however, the agencies listed above are preparing a financing plan to pay for the improvements.

No mitigation measures are considered feasible for any of the other roadway segments. All of those segments projected to operate at unacceptable levels under the current General Plan will do so because no feasible mitigation measure can be implemented to increase vehicle capacity. All of these roadways are already built out and cannot be widened within the existing right-of-way. The secondary impacts of widening these roadways, which include right-of-way acquisition and demolition of existing buildings, is

expected to result in a greater negative impact on the environment than accommodating the additional congestion.

6.1.4. IMPACT AIR-2: LONG-TERM REGIONAL AIR EMISSIONS FROM DEVELOPMENT OF THE MIDTOWN MILPITAS SPECIFIC PLAN

Based on the modeling conducted, the Specific Plan would generate approximately 127 tons per year of ROG, 159 tons per year of NOx, and 63 tons per year of PM10. The estimated increases in regional emissions would exceed the BAAQMD's annual significance threshold of 15 tons per year for each of the regional criteria pollutants. This is a significant impact.

The Specific Plan contains policies directed at reducing vehicle miles traveled. The Specific Plan encourages a compatible mixture of land uses, provides for a land-use mix that supports major transit facilities, locates higher density development around hubs and commercial centers, provides for the continuation of pedestrian-oriented retail development, and provides pedestrian connections between the transit stations and important destinations.

Though these policies would help to reduce emissions, they would not reduce them to a level of insignificance. Due to the intensity of the development proposed, the proposed Specific Plan could not be feasibly developed without an increase in air emissions above the significance thresholds of 15 tons per year for ROG, NOx, and PM10. This impact is considered significant and unavoidable.

6.1.5. IMPACT AIR-3: CUMULATIVE LONG-TERM REGIONAL IMPACTS

Implementation of the proposed Specific Plan would generate cumulative regional mobile source emissions associated with increased vehicle use and residential emissions. Direct and indirect emissions produced by the proposed project would cumulatively contribute to existing and projected exceedances of the State and federal air quality standards in the air basin. This is a significant impact.

Due to the intensity of the development proposed, the Specific Plan could not be feasibly developed without causing an increase in regional emissions, and all feasible mitigation measures have been incorporated into the Specific Plan as policies (e.g., policies directed at encouraging non-automotive transportation). This impact is considered significant and unavoidable.

6.2. SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WOULD BE CAUSED BY THE PROPOSED PROJECT

"Significant irreversible environmental changes" include the use of nonrenewable natural resources during the initial and continued phases of the project, should this use result in the unavailability of these resources in the future. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with projects. Irretrievable commitments of these resources are required to be evaluated in an EIR to assure that such current consumption is justified (CEQA Guidelines Section 15126.2(c)).

Natural resources include minerals, energy, land, water, forestry, and biota. Nonrenewable resources are those resources that cannot be replenished by natural means, including oil, natural gas, and iron ore. Renewable natural resources are those resources that can be replenished by natural means, including water, lumber, and soil.

Although the project would use minor amounts of both renewable and nonrenewable natural resources for project construction, this use would not increase the overall rate of use of any natural resource, or result in the substantial depletion of any nonrenewable natural resource.

The Midtown Specific Plan is not proposing the development of a previously inaccessible area. Incremental development would be anticipated in the plan area with or without the proposed plan. Thus, the project would not commit future generations to the significant irreversible change.

Lastly, the Midtown Specific Plan is not anticipated to result in irreversible damage from environmental accidents, such as an accidental spill or explosion of a hazardous material. During the construction of individual projects under the Specific Plan, equipment would be using various types of fuel. In the State of California, the storage and use of hazardous substances are strictly regulated and enforced by various local and regional agencies. The enforcement of these existing regulations would preclude credible significant project impacts related to environmental accidents.

This page is intentionally left blank.

CHAPTER 7. ALTERNATIVES TO THE SPECIFIC PLAN

The Midtown Milpitas Specific Plan, as proposed by the City of Milpitas, has been described and analyzed in the previous chapters with an emphasis on potentially significant impacts and recommended mitigation measures to avoid these impacts. The State CEQA Guidelines also require the description and comparative analysis of a range of reasonable alternatives.

The following discussion is intended to inform the public and decision-makers of some of the project alternatives that could be developed and the positive and negative aspects of those alternatives. This chapter also includes an analysis of the No Project Alternative, as required by CEQA.

The CEQA Guidelines direct lead agencies that the "range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects" (Section 15126.6(c)). Based on the authority of the above-cited Guidelines, this EIR evaluates alternatives that would lessen or avoid significant impacts that have been identified in Chapter 3.

The proposed Specific Plan would result in significant impacts in the following resource areas: hazardous materials, wastewater, biological resources, cultural resources, traffic and circulation, and air quality. Of these impacts, those to wastewater, traffic and circulation, and air quality, could either be reduced or avoided through the alternatives presented in this chapter. Other potential impacts identified in this Draft EIR (hazardous materials, biological resources, and cultural resources) have the potential to occur with any development scenario in the Specific Plan area, and would not be substantially changed (i.e., reduced or increased) by a different land use scenario. For these issue areas, the most appropriate and feasible mitigation is the implementation of the measures recommended in this Draft EIR. For these reasons, these issue areas are not addressed further in the alternatives evaluation presented in this chapter.

The three alternatives that are compared in this chapter are the following:

1. No Project Alternative - Existing General Plan Land Use Designations
2. Higher Residential Development Alternative
3. Lower Density Alternative

In the following sections, each alternative is first described, and is then analyzed in consideration of proposed Specific Plan, according to whether it would have a mitigating or adverse effect. Section 7.4 summarizes these findings and presents conclusions about which alternative is the environmentally superior alternative.

7.1. NO PROJECT ALTERNATIVE

7.1.1. ALTERNATIVE DESCRIPTION

As directed by the CEQA Guidelines (Section 15126.6 (e)(3)(A)), when a project is the revision to an existing land use or regulatory plan, the "no project' alternative will be the continuation of the existing plan. Development would continue to occur in the Midtown area according to the existing General Plan land use and zoning regulations. The assumed development with the existing General Plan designations is summarized in Table 7-1. These estimated development yields have been derived by applying land uses and densities allowed by the existing General Plan to key vacant sites in Midtown. The land use designations for this development scenario are illustrated in Figure 7-1, which is provided at the end of this chapter (for a delineation of planning areas, please refer to Figure 2-6)

When compared to the proposed Specific Plan, the No Project Alternative has a much greater emphasis on light industrial and general commercial uses rather than the housing and office uses proposed by the Specific Plan. In addition, the No Project Alternative does not provide for a mixture of uses along the Main Street Corridor - the existing General Commercial land use designation would continue to apply.

The most substantial difference in the types of uses allowed when comparing the Specific Plan with existing land use designations is that the existing land use designations fail to allow the development of needed regional housing. The existing land use designations in the Midtown area would only accommodate an additional 664 residential units above and beyond those units already within the Midtown planning area. This allocation is more than 4,000 units less than the proposed project. Thus, the No Project Alternative would accommodate a much smaller permanent population in the Midtown area. The Association of Bay Area Governments (ABAG) has estimated that Milpitas' share of the regional housing need is a total of 4,348 housing units for the period of January 1999 to June 2006 (ABAG 2000). This alternative would not provide a substantial portion of this housing stock.

7.1.2. IMPACT DISCUSSION

Wastewater

When compared to the proposed project, the No Project Alternative would have less wastewater discharge when considering the vacant parcels in the Midtown area. Comparatively, the No Project Alternative would discharge approximately 58 percent of the wastewater when compared to the proposed Specific Plan (0.57 versus 0.98 million gallons per day, average dry weather peak week flow). Although this reduction in wastewater outflows would not avoid the potential cumulative wastewater discharge impact identified in this Draft EIR, it would reduce the severity of the impact.

Transportation and Circulation

Impacts to the transportation system caused by each alternative were assessed based on a comparison of vehicle trip generation. Table 7-2 presents the detailed trip generation estimates for the alternatives.

As shown in Table 7-2, the No Project Alternative is estimated to generate a total of 70,664 net new daily trips, 2,167 net new AM peak hour trips, and 6,715 net new PM peak hour trips. Although the AM peak hour trip generation is less compared to the proposed Specific Plan, the No Project Alternative is expected to result in greater negative impacts based on the increased number of daily and PM peak hour trips. The increased impacts would result from further exacerbation of unacceptable of operations at some locations and would likely cause significant impacts at additional intersections. Also, higher traffic volumes on the adjacent freeway segments would result in increased significant impacts as compared to the proposed Specific Plan.

Air Quality

Several significant air quality impacts were identified for the proposed Specific Plan, as detailed in Chapter 3.10. Of the impacts identified, the major concern is the increase of regional emissions associated with the proposed project, which is specifically linked to the increase in vehicle miles traveled that are associated with the project. Housing units are one of the principle reasons for the addition of vehicle miles traveled; however, these units have been included in the Specific Plan to address regional housing needs. Though the proposed project encourages the use of alternative forms of transportation, additional housing of the magnitude envisioned by the Specific Plan would continue to result in an increase in regional emissions.

Because the daily vehicle trips associated with the No Project Alternative would be greater than for the proposed Specific Plan, the regional air quality impacts directly attributable to the No Project Alternative would be more than the proposed project. It should also be noted that this analysis only considers what contribution development in the Midtown area would have to regional emissions. It is highly likely that if housing is not developed in an area such as Milpitas (i.e., close to transit and regional employment centers), housing development would be in greater demand in outlying suburban areas. Housing development in such areas would comparably result in a greater contribution to regional emissions because the benefits of transit could not be utilized, and because trips would likely be longer as people would generally travel greater distances to employment centers.

Table 7-3
Higher Residential Development Alternative [a]
(in gross square feet, unless otherwise noted)

Area [b]	Residential (units)	Retail / Dining	Office	General Commercial	Park and Open Space (acres)
Calaveras	200	-		-	-
Upper Main Street	300	19,000	20,000	-	4
Elmwood Center	300	-	-	200,000	10
Railyards	880	-	-	-	4
South Main / Abel	1,680	32,000	-	-	3
McCandless Park	-	-	-	-	-
Montague / Capitol	2,000	10,000	-	-	5
Creek Trails	-	-	-	-	23
TOTAL Midtown	**5,360**	**61,000**	**20,000**	**200,000**	**48**

a These estimated development yields have been derived by applying the densities allowed by the land use designations (as shown in Figure 7-2) to key vacant sites in Midtown.

b The boundaries of these areas are provided in Figure 2-6, which is provided in Chapter 2: Project Description.

Source: EDAW, Inc., 2001.

Table 7-I
No Project Alternative - Existing General Plan Land Use Designations [a]
(in gross square feet, unless otherwise noted)

Area [b]	Residential (units)	General Commercial [c]	Office	Highway Service	Park and Open Space (acres)	R&D [d]
Calaveras	-	80,000	-	-	-	-
Upper Main Street	174	124,450	-	-	-	-
Elmwood Center	80	-	-	200,000	10	-
Railyards	150	-	-	-	-	700,000
South Main / Abel	-	145,000	-	129,000	-	-
McCandless Park	-	-	-	-	-	-
Montague / Capitol	260	363,000	-	-	-	-
Creek Trails	-	-	-	-	23	-
TOTAL Midtown	**664**	**712,450**	**-**	**329,000**	**33**	**700,000**

a These estimated development yields have been derived by applying land uses and densities allowed by the existing General Plan to key vacant sites in Midtown.

b The boundaries of these areas are provided in Figure 2-6, which is provided in Chapter 2: Project Description.

c The existing General Commercial General Plan land use designation is similar to the Retail/Dining land use designation proposed by the Specific Plan.

d The R&D land use designation is similar to the Manufacturing and Warehouse land use designation proposed by the Specific Plan.

Source, EDAW, Inc. 2001.

2. Densities of new residential development is assumed at a maximum of 40 units per acre around the transit stations, rather than 60 units per acre as allowed by the Specific Plan. This alternative would yield 2,950 new dwelling units, rather than the 4,860 units envisioned by the Specific Plan. This reduction in units is due to two factors: (1) lower development densities and (2) fewer acres of land being redeveloped for housing

3. This alternative assumes that infill development on Main Street will be primarily small-scale offices (such as medical offices, real estate, etc.) which results in less residential development and more retail and office development than envisioned by the proposed Specific Plan.

4. A combination of highway oriented retail uses and residential uses are assumed on the Elmwood surplus land, rather than all general commercial uses proposed by the Specific Plan.

5. Fewer sites are assumed to be developed with residential uses in the southern portion of the planning area, although new residential development would be anticipated around the future transit stations at Capitol/Montague and Main Street.

The development that would likely occur under the Lower Density Alternative is presented in Table 7-4. The land use designations for this development scenario are illustrated in Figure 7-3, which is provided at the end of this chapter.

This alternative is considered in this analysis because the Lower Density Alternative would generate less water demand and associated wastewater outflow. The capacity of existing contractual agreements in the long-term for these resources has been identified as a potential environmental impact in this Draft EIR.

7.3.2. IMPACT DISCUSSION

Wastewater

When compared to the proposed project, the Lower Density Alternative would have less wastewater discharge. The Lower Density Alternative would discharge approximately 64 percent of the wastewater when compared to the proposed Specific Plan (0.62 versus 0.98 mgd average dry weather peak week flow). Though this reduction in wastewater outflows would not avoid the potential wastewater discharge impact identified in this Draft EIR, it would reduce the severity of the impact.

Transportation and Circulation

The Lower Density Alternative is estimated to generate a total of 38,570 net new daily trips, 2,461 net new AM peak hour trips, and 3,949 net new PM peak hour trips as shown in Table 7-2. This alternative is estimate to generate approximately 70 percent of traffic volumes estimated for the proposed Specific Plan. Similar to the Higher Residential Development Alternative, some of the intersection impacts are expected to less with this alternative based on reduced intersection delays and possible improvements in levels of service with reduced traffic volumes. However, most of the significant impacts, including freeway segment impacts, would still occur with this alternative, albeit at a reduced level. Overall, significant impacts would be reduced but could not be avoided with the Lower Density Alternative.

Table 7-2
Project Alternatives – Estimated Net New Trip Generation

Development Scenario	Daily Vehicle Trips	AM Peak Hour Vehicle Trips			PM Peak Hour Vehicle Trips		
		In	Out	Total	In	Out	Total
Proposed Specific Plan	55,940	1,627	2,118	3,745	2,813	2,937	5,750
No Project Alternative - Existing General Plan Land Use Designations	70,664	1,316	852	2,167	2,994	3,721	6,715
Higher Residential Development Alternative	45,482	601	2,119	2,720	2,605	1,788	4,393
Lower Density Alternative	38,570	1,125	1,336	2,461	1,888	2,061	3,949

7.2. HIGHER RESIDENTIAL DEVELOPMENT ALTERNATIVE

7.2.1. ALTERNATIVE DESCRIPTION

This alternative is generally reflective of the land use designations proposed by the Specific Plan, with the following exceptions:

1. The Serra Center site would be designated as Multi-Family / High-Density Residential under this alternative, rather than General Commercial, as proposed by the Specific Plan.

2. The northern potion of the Elmwood Surplus site would be designated as Multi-Family / High-Density Residential under this alternative, rather than General Commercial, as proposed by the Specific Plan.

The redesignation of these two sites would yield additional residential units, which are much needed in the region. This adjustment would also decrease potential environmental impacts related to traffic.

This alternative is addressed in this chapter because the above changes in land use would result in a slight decrease in vehicle trips, which would reduce traffic and air quality impacts, though not to a less-than-significant level. The CEQA Guidelines direct that alternatives be examined which can mitigate environmental impacts.

The development that would be anticipated under the Higher Residential Development Alternative is presented in Table 7-3. The land use designations for this development scenario are illustrated in Figure 7-2, which is provided at the end of this chapter.

Air Quality

Because the Lower Density Alternative would result in fewer daily vehicle trips, the associated vehicle miles traveled would be less. Thus, the regional air quality impacts directly attributable to the Lower Density Alternative would be less than the proposed project. However, it should be noted that this alternative would provide for less development of housing units around transit centers. It is highly likely that if housing is not developed in an area such as Milpitas (i.e., close to transit and regional employment centers), housing development would be in greater demand in outlying suburban areas. Housing development in such areas would comparably result in a greater contribution to regional emissions because the benefits of transit could not be utilized, and because trips would likely be longer as people would generally travel greater distances to employment centers.

7.4. SUMMARY OF PROJECT ALTERNATIVES AND COMPARATIVE IMPACTS

This section provides a summary of the Specific Plan alternatives considered in this evaluation and the comparative benefits and drawbacks of each of the alternatives. Table 7-5 summarizes the development anticipated under each development scenario. The relative environmental consequences of each of the alternatives, when compared to the Specific Plan, are presented in Table 7-6 and Table 7-7.

Because the No Project Alternative and the Lower Density Alternative allow for the development of fewer housing units, wastewater outflows are decreased. Thus, the potential cumulative impacts related to this resource would be reduced. For these reasons, the No Project and Lower Density alternatives are considered better than the proposed Specific Plan from a utilities perspective. However, these alternatives would reduce the potential for the City to meet their regional housing needs, as specified by ABAG.

As summarized in Table 7-7, with regards to traffic and circulation (and the related impacts of air quality) the Higher Residential Development Alternative and the Lower Density Alternative reduce the number of vehicle trips attributable to projected growth in the Midtown area. The Lower Density Alternative provides for more of a reduction because this alternative is less intense than either the proposed Specific Plan or the Higher Residential Development Alternative.

In summary, as reflected by Table 7-7, the Lower Density Alternative is the environmentally superior alternative. This is because it reduces wastewater outflows and slightly reduces the vehicle trips attributable to the Specific Plan area. In general, the selection of this alternative as the environmentally superior alternative is due in large part to the lower intensity of development envisioned. However, this alternative would continue to result in significant and unavoidable traffic and air quality impacts. Further, this alternative would not provide as much housing as the proposed Specific Plan, for which there is a substantial demand in the region. It is highly likely that if housing is not developed in an area such as Milpitas (i.e., close to transit and regional employment centers), housing development would be in greater demand in outlying suburban areas. Housing development in such areas would comparably result in a greater contribution to traffic and regional emissions because the benefits of transit could not be utilized, and because trips would likely be longer as people would generally travel greater distances to employment centers.

7.2.2. IMPACT DISCUSSION

Wastewater

When compared to the proposed project, the Higher Residential Development Alternative would have more wastewater discharge. The Higher Residential Development Alternative would discharge approximately 105 percent of the wastewater as would the proposed Specific Plan (1.03 versus 0.98 mgd average dry weather peak week flow). Thus, this alternative would be worse than the proposed Specific Plan when considering cumulative wastewater discharge demands; however, this difference is not considered substantial.

Transportation and Circulation

As shown in Table 7-2, the Higher Residential Development Alternative is estimated to generate a total of 45,482 net new daily trips, 2,720 net new AM peak hour trips, and 4,393 net new PM peak hour trips. All of these trip totals are less than those estimated for the proposed Specific Plan. With reduced traffic volumes, some of the intersection impacts are expected to less with this alternative based on reduced intersection delays and possible improvements in levels of service; however, most of the significant impacts would still occur with this alternative given the projected congestion under baseline conditions. This alternative would still result in most, if not all, of the freeway impacts identified for the proposed Specific Plan. Overall, significant impacts would be reduced but could not be avoided with the Higher Residential Development Alternative.

Air Quality

Because the Higher Residential Development Alternative would result in fewer daily vehicle trips, the associated vehicle miles traveled would be less. Thus, the regional air quality impacts directly attributable to the Higher Residential Development Alternative would be less than the proposed project. In addition, this alternative would provide for the greater development of housing units around transit centers, which could further decrease the vehicle miles traveled in the region, conceivably further reducing regional air quality emissions.

7.3. LOWER DENSITY ALTERNATIVE

7.3.1. ALTERNATIVE DESCRIPTION

This alternative carries out current development trends in the area, and results in development densities that are somewhat lower than those permitted in the proposed Specific Plan. Key differences when compared to the proposed Specific Plan are summarized below:

1. In the Calaveras area, redevelopment of retail development with office development is proposed at a lower density (FAR of 0.7) than the Specific Plan (FAR 1.5). The reduced density would yield up to 400,000 square feet of new office development rather than up to 700,000 square feet as proposed in the Specific Plan.

Table 7-7
Summary of the Environmental Consequences of Specific Plan Alternatives

Potential Impact	No Project Alternative	Higher Residential Alternative	Lower Density Alternative
WASTEWATER Impact Util-1: Effluent Treatment Capacity	Reduced, but not avoided	Increased	Reduced, but not avoided
TRAFFIC AND CIRCULATION Impacts Traffic-1, Traffic-2, and Traffic-3: Substandard Operating Conditions	Increased	Reduced, but not avoided	Reduced, but not avoided
AIR QUALITY Impacts Air-2 and Air-3: Long-term Regional Emissions associated with Specific Plan Development	Increased	Reduced, but not avoided [a]	Reduced, but not avoided

a This analysis only considers what contribution development in the Midtown area would have to regional emissions. It is highly likely that if housing is not developed in an area such as Milpitas (i.e., close to transit and regional employment centers), housing development would be in greater demand in outlying suburban areas. Housing development in such areas would comparably result in a greater contribution to regional emissions because the benefits of transit could not be utilized, and because trips would likely be longer as people would generally travel greater distances to employment centers.

Source: EDAW, Inc., 2001.

Although the Lower Density Alternative is considered the environmentally superior alternative, CEQA does not require the Lead Agency to adopt this alternative. In short, CEQA requires that the Lead Agency adopt mitigation measures or alternatives, where feasible. The concept of feasibility encompasses the question of whether a particular alternative promotes the underlying goals and objectives of the project to the extent that these are based on a reasonable balancing of the relevant economic, environmental, social, and technological factors.

7.5. OFF-SITE ALTERNATIVES

Per Section 15126.6(f)(2) of the CEQA Guidelines, the key question to ask when considering whether alternative locations should be analyzed in an EIR is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR.

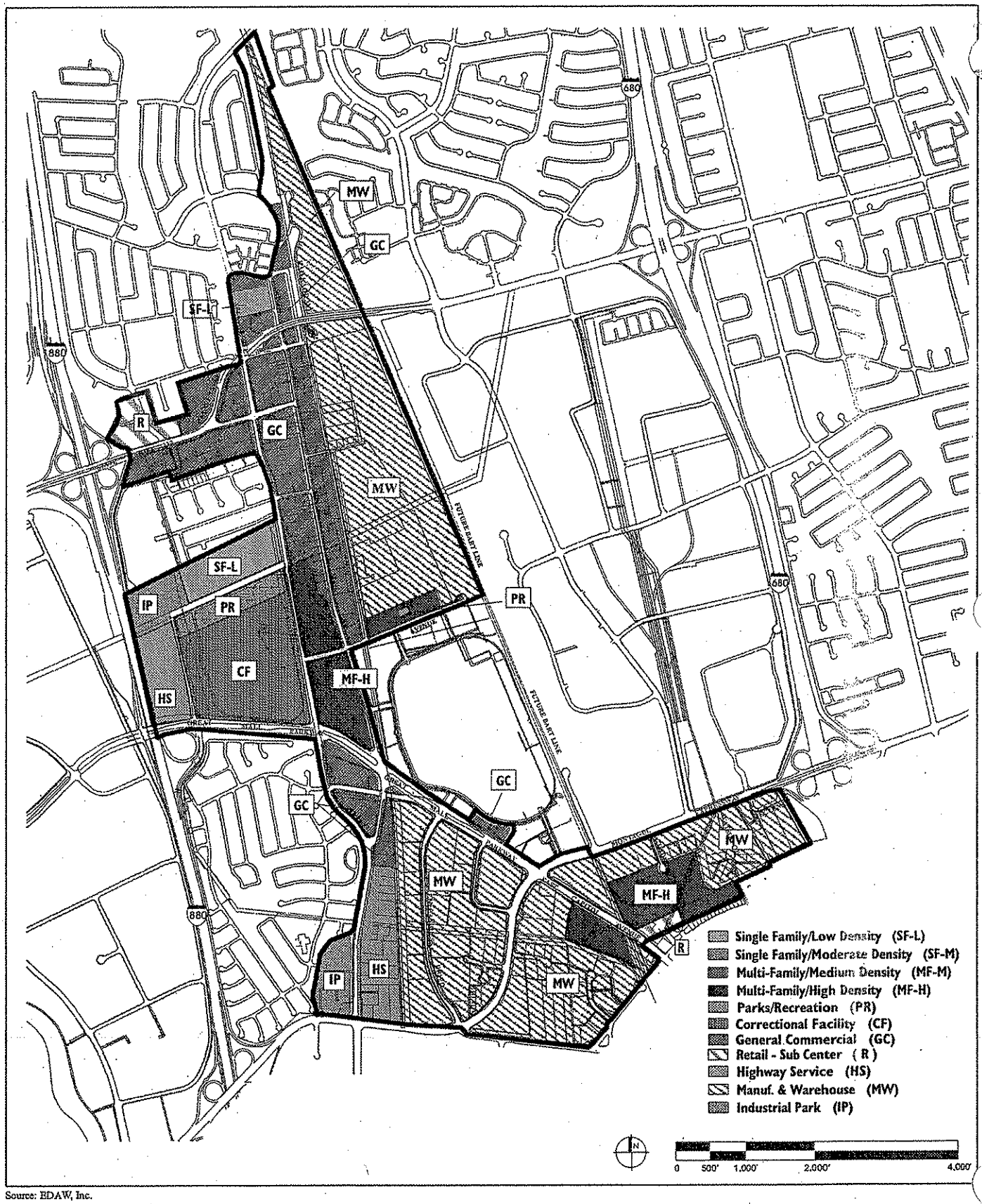
Table 7-4
Lower Density Alternative [a]
(in gross square feet, unless otherwise noted)

Area [b]	Residential (units)	Retail / Dining	Office	General Commercial	Park and Open Space (acres)	Manuf. & Warehouse
Calaveras	-		400,000	-	-	-
Upper Main Street	210	8,000	70,000	-	4	-
Elmwood Center	300	-	-	200,000	10	-
Railyards	300	-	-	-	4	-
South Main / Abel	490	32,000	-	-	3	50,000
McCandless Park	-	-	-	-	-	-
Montague / Capitol	1,650	10,000	-	-	5	-
Creek Trails	-	-	-	-	23	-
TOTAL Midtown	**2,950**	**50,000**	**470,000**	**200,000**	**48**	**50,000**

a These estimated development yields have been derived by applying the densities allowed by the land use designations (as shown in Figure 7-3) to key vacant sites in Midtown.

b The boundaries of these areas are provided in Figure 2-6, which is provided in Chapter 2: Project Description.

Source: EDAW Inc., 2001.



Source: EDAW, Inc.

Figure 7-1 No Project Alternative (Existing General Plan Land Use Categories)

Table 7-5
Comparison of Proposed Alternatives - Development [a]
(in gross square feet, unless otherwise noted)

Alternative	Residential (units)	Retail / Dining	Office	General Commercial	Manuf. & Warehouse
Proposed Specific Plan	4,860	61,000	720,000	300,000	-
No Project Alternative - Existing General Plan Land Use Designations	664	712,450	-	329,000	700,000
Higher Residential Development Alternative	5,360	61,000	520,000	200,000	-
Lower Density Alternative	2,950	50,000	470,000	200,000	50,000

a These estimated development yields have been derived by applying the densities allowed by the assumed land use designations to key vacant sites in Midtown.

Source: EDAW, Inc., 2001.

Table 7-6
Comparison of Proposed Alternatives - Environmental Resources

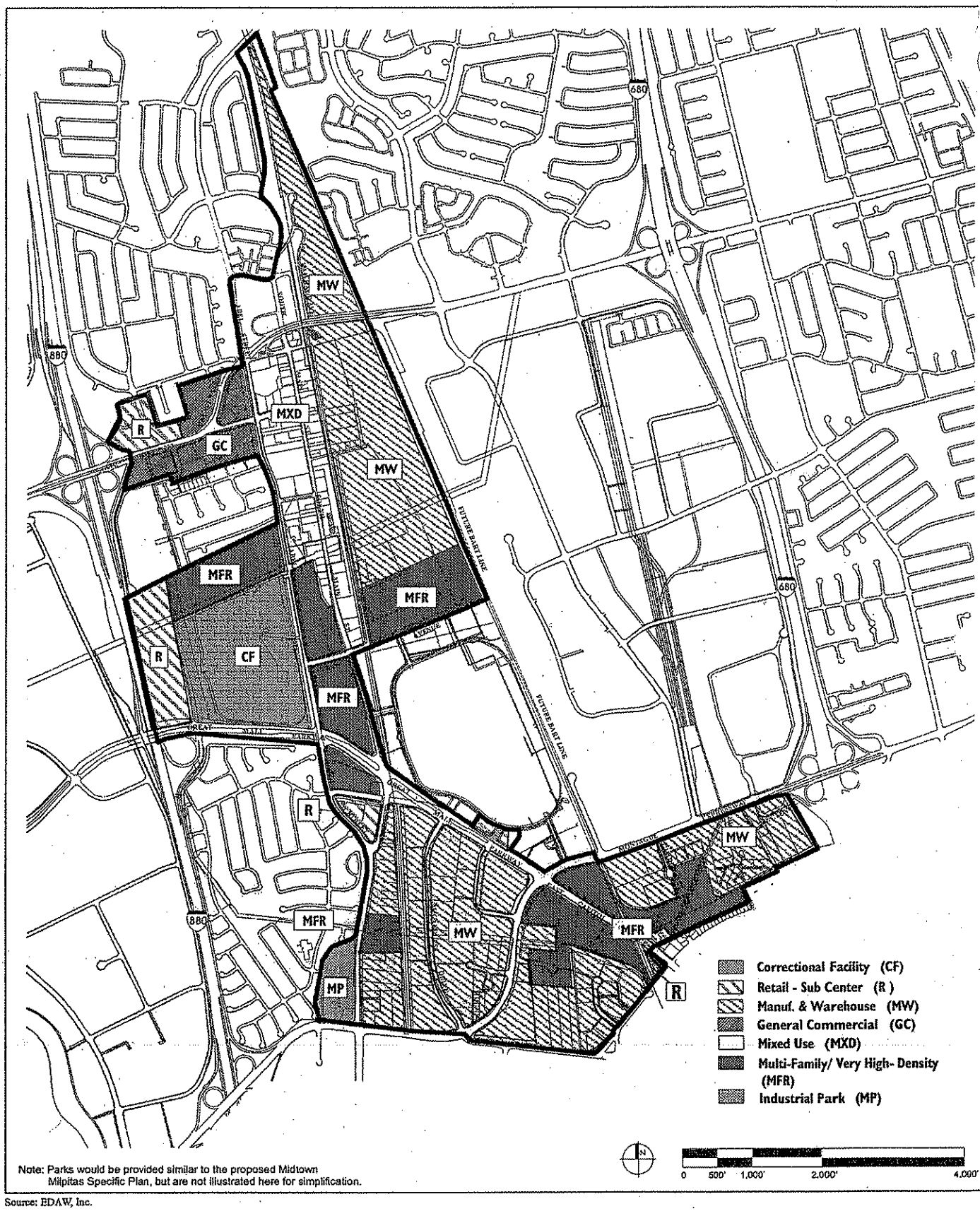
Alternative	Domestic Water Demand (afy) [a]	Wastewater Flows (mgd average dry weather peak week flow) [a]	Vehicle Trip Generation (Daily Total)
Proposed Specific Plan	1,402	0.98	55,940
No Project Alternative - Existing General Plan Land Use Designations	806	0.57	70,664
Higher Residential Development Alternative	1,483	1.03	45,482
Lower Density Alternative	866	0.62	38,570

afy = acre-feet per year

mgd = million gallons per day

a Water demand and wastewater flows have been calculated based upon the development summarized in Table 7-5. Increases in use and discharge are the difference between existing conditions and anticipated development, and do not consider cumulative growth.

Source: EDAW, Inc., 2001



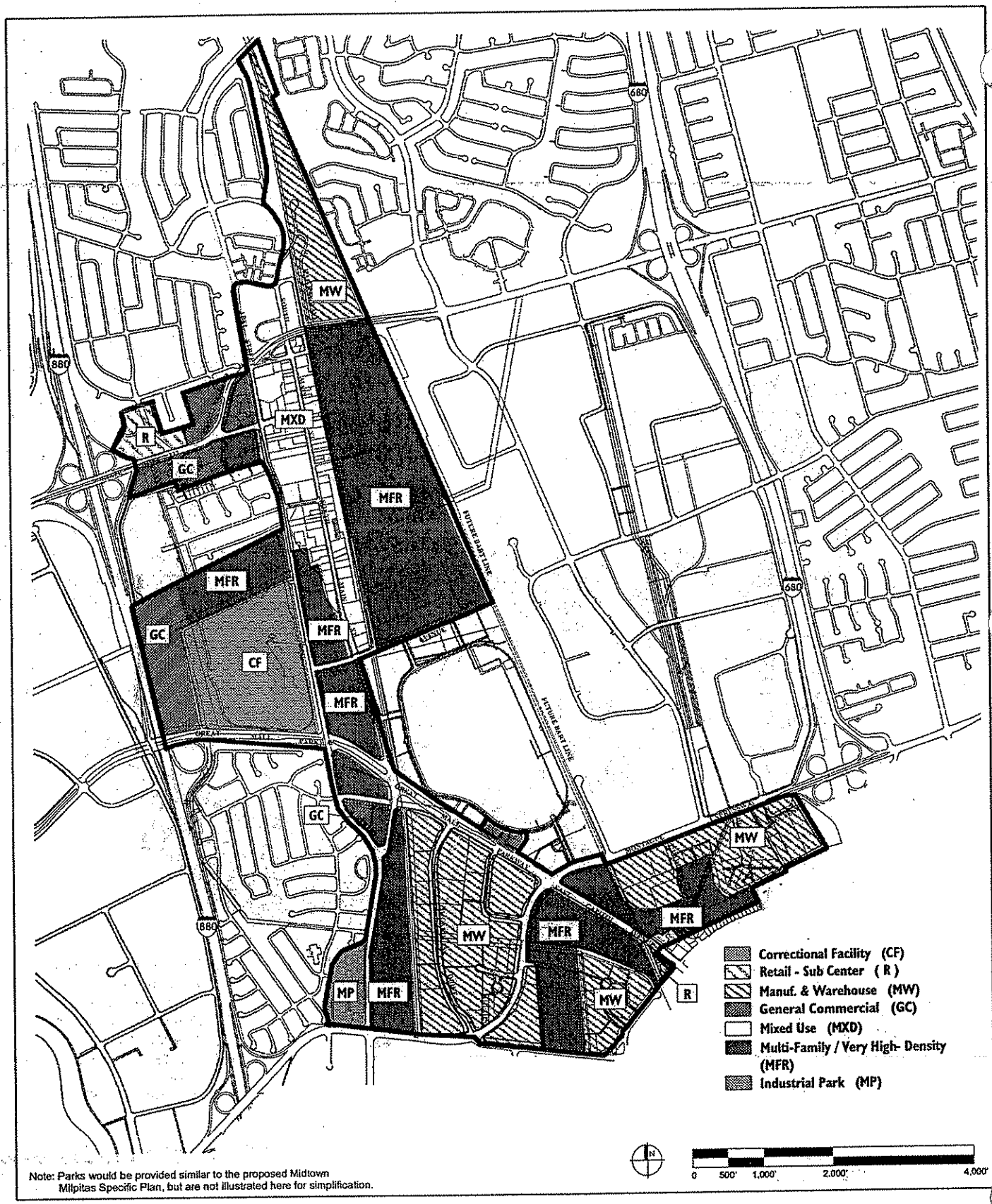
Note: Parks would be provided similar to the proposed Midtown Milpitas Specific Plan, but are not illustrated here for simplification.

Source: EDAW, Inc.

Figure 7-3 Lower Development Alternative

Alternative locations would not avoid the impacts discussed in the preceding sections. Wastewater impacts are related to the intensity of a development. Shifting the location of this development would not reduce these impacts or demands. Further, alternative locations would likely increase circulation impacts (and associated air quality impacts) because alternative sites would not benefit from the new transit stations located at Great Mall Parkway and Montague, along the Tasman East Light Rail line. Thus, similar development scenarios in other locations of the City would increase vehicle trip generation. Trip reductions that are afforded by the Midtown area are on the order of 15 percent.

In addition, construction-related impacts (e.g., potential noise, air quality, and water quality) would exist at other areas of the city of Milpitas or the region. These types of construction-related impacts are most appropriately mitigated to less-than-significant levels with the implementation of construction-related measures and best management practices, as outlined in this Draft EIR, and should not drive the consideration of alternative locations.



Note: Parks would be provided similar to the proposed Midtown Milpitas Specific Plan, but are not illustrated here for simplification.

Source: EDAW, Inc.

Figure 7-2 Higher Residential Development Alternative