INITIAL STUDY

SEWER INTERCEPTOR PHASE VIA PROJECT

File No. PP10-160

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

MAY 2011

TABLE OF CONTENTS

1.0 INTRODUCTION AND PURPOSE 1

2.0 PROJECT INFORMATION 2
- 2.1 PROJECT TITLE 2
- 2.2 PROJECT LOCATION 2
- 2.3 PROPERTY OWNER/PROJECT PROPONENT 2
- 2.4 LEAD AGENCY CONTACT 2
- 2.5 ZONING DISTRICT AND GENERAL PLAN DESIGNATION 2

3.0 PROJECT DESCRIPTION 7

4.0 ENVIRONMENTAL SETTING, CHECKLIST AND DISCUSSION OF IMPACTS 11
- 4.1 AESTHETICS 11
- 4.2 AGRICULTURAL AND FOREST RESOURCES 21
- 4.3 AIR QUALITY 23
- 4.4 BIOLOGICAL RESOURCES 28
- 4.5 CULTURAL RESOURCES 34
- 4.6 GEOLOGY AND SOILS 37
- 4.7 GREENHOUSE GAS EMISSIONS 42
- 4.8 HAZARDS AND HAZARDOUS MATERIALS 45
- 4.9 HYDROLOGY AND WATER QUALITY 52
- 4.10 LAND USE 58
- 4.11 MINERAL RESOURCES 61
- 4.12 NOISE 62
- 4.13 POPULATION AND HOUSING 70
- 4.14 PUBLIC SERVICES 71
- 4.15 RECREATION 73
- 4.16 TRANSPORTATION 74
- 4.17 UTILITIES AND SERVICE SYSTEMS 77
- 4.18 MANDATORY FINDINGS OF SIGNIFICANCE 83

5.0 REFERENCES 85

6.0 AUTHORS AND CONSULTANTS 86

TABLE OF CONTENTS

FIGURES

Figure 2.0-1: Regional Map 4
Figure 2.0-2: Vicinity Map 5
Figure 2.0-3: Aerial 6
Figure 3.0-1: Project Alignment 10
Figure 4.12-1: Noise Measurement Locations 64

TABLES

Table 4.3-1: Construction-Related Criteria Air Pollutants 25
Table 4.12-1: Reaction of People to Buildings for Continuous Vibration Levels 63
Table 4.12-2: Construction Noise Levels On the Project Alignment 68
Table 4.17-1: Existing Sewer Bypass Flows During Construction 80

PHOTOS

Photos 1 and 2 13
Photos 3 and 4 14
Photos 5 and 6 15
Photos 7 and 8 16
Photos 9 and 10 17
Photos 11 and 12 18
Photos 13 and 14 19

APPENDICES

APPENDIX A: Project Alignment Cross-Sections
APPENDIX B: Biotic Study, H.T. Harvey
APPENDIX C: Phase I Environmental Site Assessment, AMEC Geomatrix, Inc.
APPENDIX D: Environmental Noise Study, Illingworth & Rodkin, Inc.

1.0 INTRODUCTION AND PURPOSE

This Initial Study of environmental impacts is being prepared to conform to the requirements of the California Environmental Quality Act (CEQA), the CEQA Guidelines (California Code of Regulations §15000 *et.seq.*) and the regulations and policies of the City of San Jose, California.

The City of San Jose is the Lead Agency under CEQA and has prepared this Initial Study to address the impacts of implementing the proposed project. This Initial Study evaluates the potential environmental impacts which might reasonably be anticipated to result from the implementation of the 60-Inch Brick Interceptor Phase VIA Project. The project proposes to redirect the majority of existing flow through existing 60-inch brick sewer interceptor located approximately 600 feet east of North Fourth Street, to a new sewer line proposed in Commercial Street and North Fourth Street. The proposed sewer interceptor would replace the existing west 54-inch west interceptor in North First Street between North Fourth Street and U.S. 101, with a new 72-inch and 84-inch interceptor. Under a future phase of the project, the existing 60-inch brick sewer may be rehabilitated or abandoned in place.

2.0 PROJECT INFORMATION

2.1 PROJECT TITLE

Sewer Interceptor Phase VIA Project

2.2 PROJECT LOCATION

The project alignment begins at the intersection of North Fifth Street and Commercial Street, travels west down Commercial Street for approximately 300 feet in the existing right-of way (ROW) to North Fourth Street, then travels north in the North Fourth Street ROW for approximately 4,200 feet, turns east and continues under U.S. Highway 101 for approximately 400 feet before it terminates at Structure E, located just north of U.S. 101 at Zanker Road and Old Bayshore Highway, in the City of San Jose. Regional and vicinity maps of the project alignment are shown on Figures 2.0-1 and 2.0-2, respectively.

The surrounding land uses include commercial, industrial, office, hotel and residential uses on Commercial Street and North Fourth Street. An aerial photograph showing surrounding land uses is provided in Figure 2.0-3.

2.3 PROPERTY OWNER/PROJECT PROPONENT

City of San Jose, Alan Kam, Associate Engineer, Department of Public Works
200 East Santa Clara Street, 5th Floor
San Jose, CA 95113
(408) 793-4150

2.4 LEAD AGENCY CONTACT

City of San Jose
Janis Moore, Planner II
Department of Planning, Building, and Code Enforcement
200 East Santa Clara St, 3rd Floor
San Jose, CA 95113
(408) 535-7815

2.5 ZONING DISTRICT AND GENERAL PLAN DESIGNATION

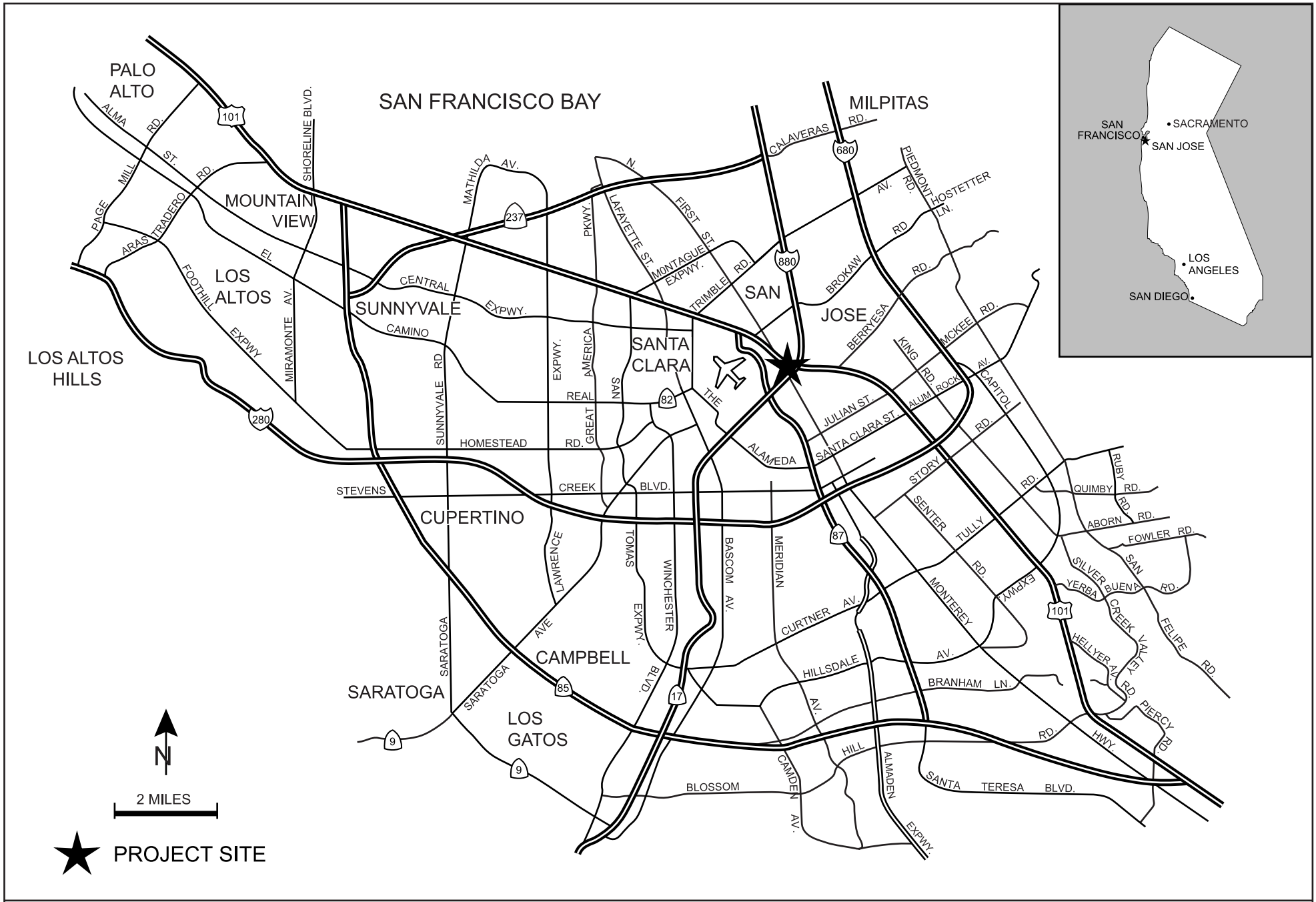
Zoning District:

A(PD) Planned Development (Residential)
Two Family Residential (R-2)
Commercial Pedestrian (CP)
Commercial Neighborhood (CN)
Commercial General (CG)
A(PD) Planned Development (Industrial)
Light Industrial (LI)
Heavy Industrial (HI)

General Plan Designation:

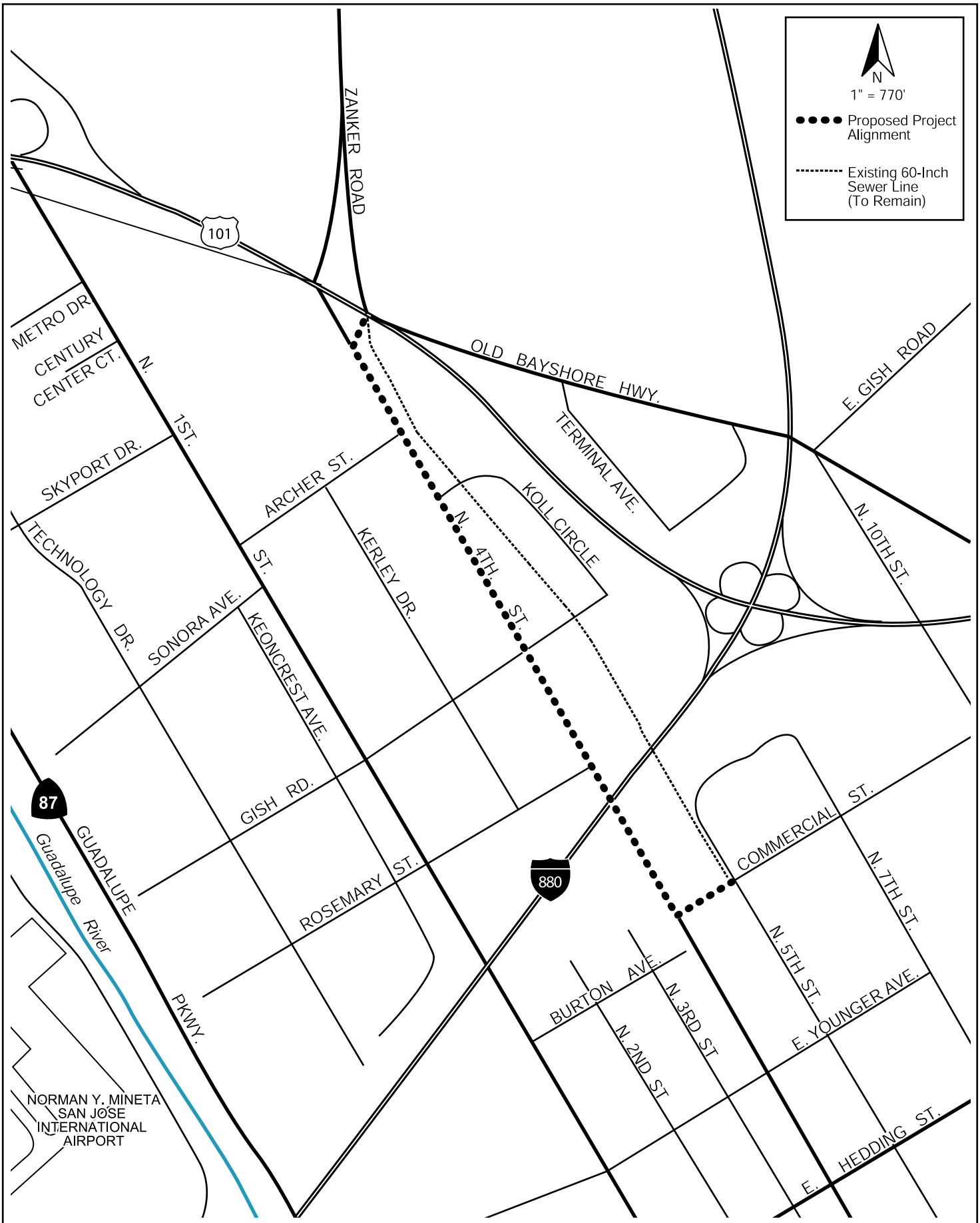
Medium Density Residential (8-16 DU/AC)

Transit Corridor Residential (25-65 DU/AC)/General Commercial
Combined Industrial/Commercial
Industrial Park
Light Industrial
Public Park/Open Space



REGIONAL MAP

FIGURE 2.0-1



VICINITY MAP

FIGURE 2.0-2

AERIAL

FIGURE 2.0-3

3.0 PROJECT DESCRIPTION

3.1 BACKGROUND

The wastewater collection system of City of San Jose is responsible for conveying wastewater from the City of San Jose, West Valley Sanitary District, City of Santa Clara, and County Sanitation District No. 2-3.

The City is in the process of implementing improvements to the sanitary system in order to meet future system demands and to remedy existing and future capacity and operational deficiencies. These improvements are based on a series of assessments and the October 2004 *Sanitary Sewer Master Plan Capacity Assessment*, which refined the sanitary system hydraulic model based on land use and projected future demands, identified sanitary system sewer capacity deficiencies, and developed a prioritized list of capital improvement projects to address the predicted system capacity deficiencies.

These prior efforts identified improvements for Phase VI of the interceptor system, which consists of replacing approximately 4,500 linear feet of an existing 60-inch-diameter brick interceptor sanitary sewer with a new interceptor sewer upstream, between Structure G located at North Fourth Street and Commercial Street to Structure E located at Zanker Road and Old Bayshore Freeway, just north of U.S. Highway 101. The circular 60-inch, unreinforced, eight-inch thick brick interceptor was built in 1898 through rural lots along the current projection of North Fifth Street. Figure 3.0-1 shows the existing and proposed project alignments, as well as the existing junction structure locations.

3.2 PROPOSED PROJECT

The project proposes to redirect flow from the existing 60-inch brick sanitary sewer, which extends along North Fifth Street, turns west along Commercial Street, and runs north approximately 600 feet east along/within North Fourth Street, terminating at the existing Structure E located just north of U.S. Highway 101 at Zanker Road and Old Bayshore Freeway. The proposed project would intercept and divert the existing flows from the 4,500 foot long 60-inch sewer line to a new reinforced concrete pipe (RCP) sewer interceptor line. The proposed RCP line would be installed within the existing right-of-way of Commercial Street, North Fourth Street and finally under U.S. Highway 101 to connect to the existing Structure E (refer to Figure 3.0-1).

The new interceptor located in Commercial Street would be 72-inches in diameter, and would replace the existing eight-inch sewer line. The line would run for approximately 300 feet west to the intersection of Commercial and North Fourth Streets. From the intersection of Commercial and North Fourth Streets, an 84-inch line would continue north in North Fourth Street for approximately 4,200 feet, replacing the existing 48 and 54-inch RCP (constructed in 1959 and relined in 1995, reducing the inside diameters to 40 and 42-inches, respectively). The proposed sewer interceptor line would then turn east and continue under U.S. Highway 101 for approximately 450 feet before finally connecting to Structure E. Complete cross-sections of the proposed project alignment are in Appendix A.

By upsizing the existing sanitary sewer lines in Commercial and North Fourth Streets, the system would be able to convey substantially more flow with fewer pipelines, and reduce operation and maintenance requirements.

3.2.1 *Junction Structure*

The project area contains four existing concrete junction structures (refer Figure 3.0-1 for structure locations). These structures hydraulically join different interceptor lines in order to allow flow diversion during normal operations and maintenance. The proposed project would maintain all of the existing structures located in the project alignment. In addition, modifications would be made to the existing Structure G located at the intersection of Commercial Street and North Fifth Street, and a new junction box would be installed at the intersection of Commercial Street and North Fourth Street to connect the existing and proposed interceptors.

3.2.2 *Trenching, Excavation, Fill, and Tunneling*

Site preparation for the project area will require abandoning in place the existing 60-inch sewer line, and trenching and excavating in North Fourth Street to remove the existing interceptor lines and installing the new infrastructure. Most of the sewer interceptor installation will be installed utilizing open trench construction. A traced excavator would be used for trenching and lifting the pipe sections into the trench. The trench would be an average of 15 feet deep to allow a nominal four feet of cover over the top of the pipe. The sides of the trench will have vertical walls with temporary shoring for worker safety.

An estimated 32,000 cubic yards of soil will be excavated from trenches, tunnel, and vault locations. Of this amount, approximately 10,300 cubic yards (cy) will not be replaced, due to the volume of the pipe. Excess subsoil material displaced by the pipe and bedding material will be hauled offsite to an approved local disposal site. An estimated 1,350 cy of bedding material will be required for placement under and around the pipe. A flowable controlled low-strength material (CLSM) may be used to backfill a majority of the trench once the bedding material is placed. During backfilling, bedding material will be placed around the pipe followed by placement of CLSM (approximately 4,000 cy of CLSM will be required). Finally, asphaltic concrete will be installed to finish grade. Final paving and grading will restore the original grade and drainage patterns to the extent feasible.

The proposed alignment crosses U.S. Highway 101 slightly east of the existing 84-inch interceptor in North Fourth Street. The proposed sewer line would be installed using trenchless construction as it crosses under U.S. Highway 101 for approximately 400 feet. The tunnel length would be extended on the southwestern extent of the crossing due to the location of the North Fourth Street/Old Bayshore Highway/U.S. 101 on ramp interchange. Cover from the top of pipe excavation to the ground surface may range from about 10 feet to 17 feet across this section of U.S. Highway 101.

Construction of the proposed tunnel opening will require the following steps:

1. Excavate the ground;
2. Control both the ground and the groundwater during the excavation process;
3. Support the ground as the opening is being enlarged and/or advanced, and
4. Install the final lining. It may be possible at this site to combine steps three and four above and install the final lining as the tunnel is being advanced.[1]

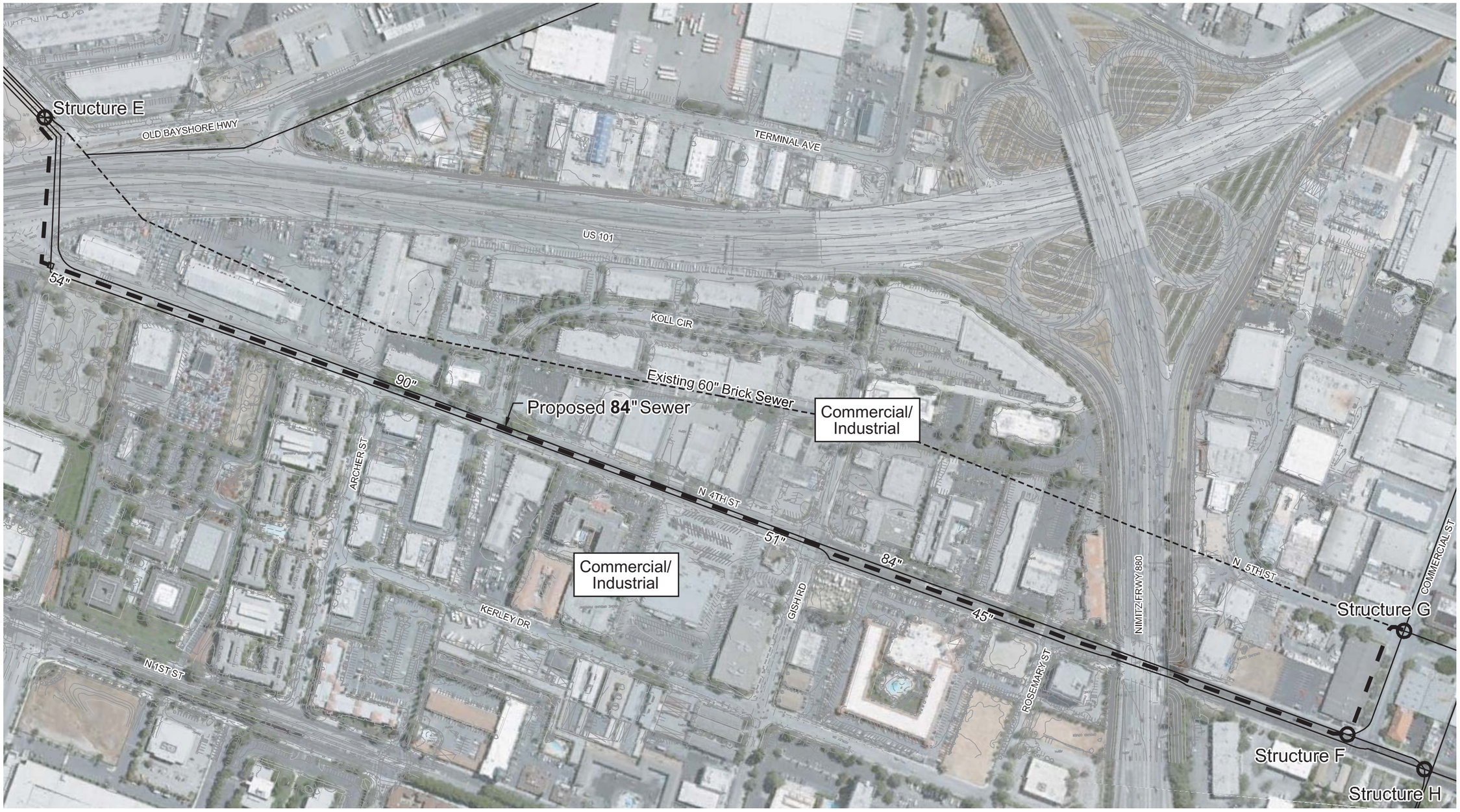
[1] AECOM, Inc. Communications providing Environmental Project Description. May 21, 2010.

3.2.3 *Site Access*

During pipeline removal and construction, it is likely that a portion of Commercial Street and North Fourth Street will be closed, with one lane open to allow traffic. Construction of both junction structures within the intersections of North Fifth Street and Commercial Street, and North Fourth Street and Commercial Street would require shutdown of traffic through these intersections for approximately two months during these activities.

Construction at the northern end of the alignment, in the vicinity of Structure E, would affect both northbound and southbound traffic along Zanker Road, as well as eastbound and westbound traffic along Old Bayshore Highway in the project vicinity.

The overall pipeline installation would take approximately 24 months. Tunneling under U.S. 101 is anticipated to approximately last four months. Construction of the proposed junction structures would take approximately two months, and site restoration is anticipated to last one month.



PROJECT ALIGNMENT

FIGURE 3.0-1

4.0 ENVIRONMENTAL SETTING, CHECKLIST AND DISCUSSION OF IMPACTS

This section describes the existing environmental conditions on and near the project alignment, as well as the environmental impacts associated with the proposed project. The environmental checklist, as recommended in the California Environmental Quality Act (CEQA) Guidelines, identifies environmental impacts that could occur if the proposed project is implemented.

The right-hand column in the checklist lists the source(s) for the answer to each question. The sources cited are identified at the end of this section. Mitigation measures are identified for all significant project impacts. Measures that are standard and required by the City or law are categorized as "Standard Measures." Measures that are proposed by the applicant that will further reduce already less than significant impacts are categorized as "Avoidance Measures." Measures that are required to reduce significant impacts to a less than significant level are categorized as "Mitigation Measures." All measures shall be printed on all construction documents, contracts, and project plans.

4.1 AESTHETICS

4.1.1 Setting

The project alignment is located in Commercial Street from North Fifth Street to North Fourth Street, and extends along North Fourth Street from Commercial Street to U.S. Highway 101, and under U.S. 101 to Structure E located at Zanker Road and Old Bayshore Freeway, north of U.S. Highway 101. Commercial Street, between North Fifth and North Fourth Streets, is a two-lane commercial/industrial roadway. There are street trees on the north side of the street, sidewalks on both sides of the street, and a bike lane on the north side of the street. This area consists of urban development including industrial buildings at the intersection of Commercial and North Fifth Streets (auto body shops, auto glass, roofing supply, and engraving), shown in Photos 1 and 2. The industrial buildings are one and two-story, stucco, warehouse structures with offices and entrances fronting onto North Fifth Street. Single and multi-family residential development is located south of Commercial Street on North Fifth Street.

North Fourth Street between Commercial and Structure E is a four-lane arterial roadway, with two-lanes in each direction. Trees intermittently line both sides of the street, sidewalks are located on both sides of the roadway, and on-street parking is located intermittently on both sides of the street (see Photos 3 and 4). The area is generally industrial and commercial in nature.

There are ranch-style single family residences located immediately west of the intersection of Commercial and North Fifth Streets. On North Fourth Street and Commercial Street, south of the Interstate 880 overpass, there are various commercial and office uses (auto parts shop, business park, semiconductor, and public services) and associated surface parking lots, shown in Photos 5 and 6.

To the north of the Interstate 880 overpass on North Fourth Street there are various commercial, residential, and industrial uses, including two hotels (Days Inn and Holiday Inn Express), a senior living facility (Golden Heritage), and industrial buildings and associated parking lots, shown in Photos 7 and 8.

To the north of Gish Road on the west side of Fourth Street is a bowling alley (4th Street Bowl) which is a one-story building with a surface parking lot fronting onto North Fourth Street, and a Radisson hotel, which is a four-story stucco building with a flat roof and surrounding landscaping. The intersection of North Fourth Street and Gish Road and 4th Street Bowl are shown in Photos 9 and 10. To the north of Gish Road, on the east side of Fourth Street there are several single-story office and commercial buildings with adjacent surface parking. Between Koll Circle and Archer Street on North Fourth Street there are commercial, retail, and industrial uses including restaurants, printing shops, a fireplace shop, and an industrial/office building (see Photos 11 and 12).

At the intersection of Archer Street and North Fourth Street there is a three-story, multi-family residential development (Waterford Place). Industrial, office, public and commercial uses are located north of Archer Street, south of U.S. Highway 101 on North Fourth Street. Businesses include Peterbilt, Hertz Equipment Rental, EZ Park and Fly, Happy Vans Conversion, and the Practice Place. The California Water Service Company has land on the west side of North Fourth Street north of Archer, as well. Photos 13 and 14 show Peterbilt lot and the Hertz Equipment Rental lot. The U.S. Highway 101 on-ramp can be accessed from the north end of North Fourth Street. U.S. Highway 101 is an at-grade highway.

Views of the project alignment are shown in Photos 1-14.

The project site is not located near a scenic highway or scenic vista. U.S. Highway 101 and Interstate 880 are not designated scenic highways in this area.

Photo 1 - Intersection of Fifth Street and Commercial Street, looking east.

Photo 2 - Commercial Street, east of North Fourth Street, looking west.

PHOTOS 1 AND 2

Photo 3 - North Fourth Street north of Commercial Street, looking north.

Photo 4 - North Fourth Street north of Interstate 880, looking north.

PHOTOS 3 AND 4

Photo 5 - North Fourth Street south of Interstate 880, looking south. The coast redwood tree located at the far right of the photo shall be protected as part of the project.

Photo 6 - Office park located on the west side North Fourth Street, south of Interstate 880, looking southwest.

PHOTOS 5 AND 6

Photo 7 - Days Inn Hotel located on the east side North Fourth Street, just north of Interstate 880, looking southeast.

Photo 8 - Golden Heritage Senior Living Facility located at North Fourth Street and Rosemary Street, looking southwest.

PHOTOS 7 AND 8

Photo 9 - Intersection of North Fourth Street and Gish Road, looking north.

Photo 10 - 4th Street Bowling Alley, located on the west side of North Fourth Street, looking northwest.

PHOTOS 9 AND 10

Photo 11 - Office/industrial building located on the west side of North Fourth Street, north of Gish Road, looking northwest.

Photo 12 - Commercial businesses located on the east side of North Fourth Street at Koll Circle, looking east.

PHOTOS 11 AND 12

Photo 13 - Peterbilt lot located on east side of North Fourth Street, just south of U.S. 101, looking southeast.

Photo 14 - Hertz Equipment Rental lot located on west side of North Fourth Street, north of Archer Street, looking west.

PHOTOS 13 AND 14

4.1.2 Environmental Checklist and Discussion

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

The project proposes to replace the existing 54-inch sanitary sewer interceptor with a new 84-inch interceptor. The total length of the new sewer interceptor would be approximately 4,900 feet underground in Commercial Street, North Fourth Street, and under U.S. Highway 101. The proposed sewer project would not create a new type of land use, would be placed underground, and therefore, would not result in any long term aesthetic impacts. The proposed roadway alignment would be restored to its current condition following installation of the proposed 84-inch sewer line. The proposed project would not result in impacts to scenic vistas or create new sources of light and glare.

During project construction, there would be temporary construction equipment storage adjacent to the project alignment, as well as general construction activity and soil disturbance; however, this would only occur during the construction phase of the project. The proposed project may remove street trees along the project alignment (refer to *Section 4.4 Biological Resources*), however, the trees will be replaced in accordance with the City of San Jose's Tree Ordinance. For these reasons, the project would not impact scenic resources (i.e., trees) or degrade the visual character of the site.

4.1.3 Conclusion

The proposed project will not degrade the existing visual character or quality of the site and its surroundings, due to the fact that the new interceptor will be installed underground. The project, therefore, would have a less than significant adverse aesthetic impact. **(Less Than Significant Impact)**

4.2 AGRICULTURAL AND FOREST RESOURCES

4.2.1 Setting

According to the Santa Clara County Important Farmland 2008 Map, the project area is designated *Urban and Built-Up Land*. *Urban Built-Up Land* is defined as residential land with a density of at least six units per 10-acre parcel, as well as land used for industrial and commercial purposes, golf courses, landfills, airports, sewage treatment, and water control structures.

The project area is currently developed and is not used for agricultural purposes. The site is not designated by the California Resources Agency as Farmland of any type, and is not the subject of a Williamson Act contract. There is no property used for agricultural purposes adjacent to the project site.

4.2.1.1 *Forest Land Resources*

Forest land is land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits (California Public Resources Code 12220(g)). The campus does not include timberlands as defined in the California Public Resources Code.

4.2.2 Environmental Checklist and Discussion

AGRICULTURAL AND FOREST RESOURCES						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒	☐	1,4
2) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒	☐	1,4
3) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒	☐	1,4
4) Result in a loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒	☐	1,4

5) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒	☐	1,4

The project site is not currently used for agricultural purposes and is not designated as farmland of any type. For these reasons, the proposed project would not result in a significant impact on agricultural resources.

4.2.3 Conclusion

The project would not result in impacts to agricultural or forest resources. **(No Impact)**

4.3 AIR QUALITY

4.3.1 Setting

Air quality and the amount of a given pollutant in the atmosphere are determined by the amount of pollutant released and the atmosphere's ability to transport and dilute the pollutant. The major determination of transport and dilution are wind, atmospheric stability, terrain, and for photochemical pollutants, sun light.

The project area is within the San Francisco Bay Area Air Basin. The Bay Area Air Quality Management District (BAAQMD) is the regional government agency that monitors and regulates air pollution within the air basin.

Both the U.S. Environmental Protection Agency and the California Air Resources Board have established ambient air quality standards for common pollutants. These ambient air quality standards are levels of contaminants which represent safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called "criteria" pollutants because the health and other effects of each pollutant are described in criteria documents. The major criteria pollutants are ozone, carbon monoxide, nitrogen dioxide (NOx) sulfur dioxide, and particulate matter.

Three pollutants are known at times to exceed the state and federal standards in the project area: ozone, particulates (PM_{10}), and carbon monoxide. Both ozone and PM_{10} are considered regional pollutants because their concentrations are not determined by proximity to individual sources, but show a relative uniformity over a region. Carbon monoxide is considered a local pollutant because elevated concentrations are usually only found near the source (e.g., congested intersections).

In addition to the criteria pollutants discussed above, Toxic Air Contaminants (TACs) are another group of pollutants of concern. There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor exhaust. Cars and trucks release at least forty different toxic air contaminants. The most important, in terms of health risk, are diesel particulate, benzene, formaldehyde, 1,3-butadiene and acetaldehyde. Public exposure to TACs can result from emissions from normal operations, as well as accidental releases.

Sensitive Receptors

BAAQMD defines sensitive receptors as facilities where sensitive receptor population groups (children, the elderly, the acutely ill and the chronically ill) are likely to be located. These land uses include residences, school playgrounds, childcare centers, retirement homes, convalescent homes, hospitals and medical clinics. Single-family residential located at Commercial and North Fourth Streets, the senior living facility located at Rosemary and Fourth Street, and the multi-family residential located at Fourth and Archer Streets would be considered sensitive uses.

4.3.2 Environmental Checklist and Discussion

AIR QUALITY						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒	☐	1,5
2) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐	☐	1,5
3) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is classified as non-attainment under an applicable federal or state ambient air quality standard including releasing emissions which exceed quantitative thresholds for ozone precursors?	☐	☐	☒	☐	☐	1,5
4) Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐	☐	1,52
5) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒	☐	1

4.3.2.1 *Long Term Air Quality Impacts*

The proposed sanitary sewer project would not create a new type of land use, and would not result in any new long-term traffic trips. The long-term operation of the proposed sewer interceptor would not result in air quality impacts.

4.3.2.2 *Short Term Air Quality Impacts*

The project proposes to replace the existing 54-inch sanitary sewer interceptor located in North Fourth Street with a new 84-inch interceptor. The project also proposes a 72-inch interceptor along Commercial Street between Fourth and North Fifth Streets, and a new junction structure at North Fourth Street and Commercial Street. The installation of the proposed sewer interceptor could result in short-term construction-related air quality impacts. During excavation and other construction activities, dust and pollutant emissions would be generated.

During construction, proposed construction equipment exhaust systems would generate various pollutant emissions, including reactive organic gases (ROG) and nitrogen oxide (NOx). Both of these pollutants are subject to construction-related thresholds of significance by the Bay Area Air Quality Management District's (BAAQMD) CEQA Guidelines. Criteria pollutants and precursors screening was prepared for the proposed sewer project, using the Urban Land Use Emissions Model (URBEMIS). Conservative estimates were used for the modeling, assuming grading, trenching, and

paving activities along the entire project alignment would be performed during 24 consecutive months. Results of the URBEMIS model showed the project would not exceed any of the thresholds of significance for construction-related criteria pollutants and precursors. Table 4.3-1 shows the results of the URBEMIS modeling compared to the BAAQMD construction-related thresholds of significance.

Table 4.3-1: Construction-Related Criteria Air Pollutants

Pollutant/Precursor	BAAQMD Threshold (Daily average emissions in lbs/day)	Proposed Construction Emissions (Daily average emissions in lbs/day)
ROG	54	7
NO_x	54	53
PM_{10}	82	17
$PM_{2.5}$	54	5

The amount of dust generated would be highly variable and is dependent on the size of the area disturbed, amount of activity, soil conditions, and meteorological conditions. Nearby land uses, including residences at North Fifth Street and Commercial Street, a senior living facility located at Rosemary and North Fourth Street, and the multi-family residential use at Fourth and Archer Streets could be adversely affected by dust and pollutants generated during construction activities.

Although construction activities would be temporary, they would have the potential to cause both health air quality impacts and nuisance. PM_{10} is the pollutant of greatest concern associated with dust. If uncontrolled, PM_{10} levels downwind of actively disturbed areas could possibly exceed state standards. In addition, dust fall on adjacent properties could be a nuisance.[2]

Impact AIR – 1: Construction-generated dust, if uncontrolled, could result in a significant air quality impact. **(Significant Impact)**

MM AIR 1: The proposed project includes the following measures that can reduce construction impacts to a less than significant level. BAAQMD has prepared a list of feasible construction dust control measures that can reduce construction impacts to a level that is less than significant. The following construction practices shall be implemented during construction of the proposed project:

- All exposed surfaces (e.g. parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material offsite shall be covered.

[2] The word nuisance is used in this Initial Study to mean "annoying, unpleasant or obnoxious" and not in its legal sense.

- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible.
- Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
- Vegetative ground cover (e.g. fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
- The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.
- All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
- Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.
- Pave, apply water at least three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.
- Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more).
- Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

4.3.3 Conclusion

The proposed project, with the implementation of the above mitigation measures, would not result in short-term or long-term air quality impacts. **(Less Than Significant Impact with Mitigation Incorporated)**

4.4 BIOLOGICAL RESOURCES

The following discussion is based on a biotic study completed by *H.T. Harvey & Associates* in June 2010. Copies of the biotic study are included in Appendix B of this Initial Study.

4.4.1 Setting

The project site is located in a heavily urbanized area of San Jose. The project alignment extends from the intersection of Commercial Street and North Fifth Street, west approximately 350 feet along Commercial Street to the intersection of Commercial and North Fourth Street, approximately 4,200 feet north along North Fourth Street, and east under U.S. 101 for approximately 400 feet.

4.4.1.1 *Biotic Habitats*

The project area is composed of a mixture of developed hardscape and associated landscaping. Hardscape includes all paved surfaces including road, parking lots, buildings and sidewalks. Vegetation in this area is comprised of intentionally planted and maintained landscaping which includes a mixture of street trees, shrubs, and grass. Naturally occurring plants observed at the site included non-native weedy species such as wild oats, Italian thistle, bristly ox tongue, and yellow sweet clover.

4.4.1.2 *Trees*

City of San José Tree Ordinance

The City of San Jose Tree Ordinance defines an ordinance-size tree as any woody perennial plant characterized by having a main stem or trunk which measures 18 inches or greater in diameter at a height of 24 inches above natural grade slope. A multi-stem tree is considered a single tree and measurement of that tree includes the sum of the diameter of the tree trunks of that tree. A tree removal permit is required from the City for the removal of ordinance-sized trees.

A tree survey was completed by *H.T. Harvey and Associates* in June 2010. A copy of the complete tree survey is included as Appendix B of this Initial Study. A variety of street trees and shrubs border the west side of North Fourth Street, and both sides of Commercial Street. Common street trees on the site included London planetree, tree of heaven, white alder, and chitalpa. The street trees are typically young, ranging in size from approximately 10 to 20 inches (diameter at breast height, DBH), and approximately 10 to 25 feet tall.

The largest and most mature trees are located on the west side of North Fourth Street, between the I-880 underpass and Commercial Street. These include mature white alders growing approximately 30 to 50 feet tall with a 25 to 32 inch DBH, and mature olive trees growing to heights of approximately 15 to 20 feet. There is one ordinance-size tree adjacent to the project alignment. There is a native coast redwood that measured approximately 72 inches in circumference (23 inches in diameter). It is located near the southwest corner of North Fourth Street and Commercial Street.

A variety of landscape shrubs were observed on the project site toward the northern end of North Fourth Street bordering the hotel, and other properties adjacent to the project alignment. These include escallonia, photinia, and oleander. At the northern portion of the project site, east of North Fourth Street and just north of Highway 101, there is a large grouping of oleander (10 to 15 feet tall), mixed with pine and various other volunteer shrubs, forming a dense stand bordering the street.

4.4.1.3 *Wildlife*

Developed habitats primarily support common, urban-adapted wildlife species, and overall wildlife abundance and diversity are low. Common butterflies such as cabbage whites, as well as honeybees and other common invertebrate species, are expected to forage on the flowering shrubs and trees in the project area. A few common bird species including northern mockingbirds, American crows, bushtits, black phoebes, as well as nonnative house sparrows and rock pigeons may utilize vegetation within the project alignment. Common urban-associated mammals, including nonnative black rats, likely shelter in the vegetation within the project alignment, and the ubiquitous Brazilian free-tailed bat may occasionally forage in the area or roost on buildings immediately adjacent to the project footprint in small numbers.

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) prohibits killing, possessing, or trading migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. Species protected by the MBTA include all native migratory birds that occur in the United States, whether they are common or protected by state or federal laws. This act encompasses whole birds, parts of birds, and bird nests and eggs. Generally, construction disturbance during the breeding season violates the MBTA if it results in the incidental loss of fertile eggs or nestlings, or otherwise leads to nest abandonment.

Migratory birds are also protected by the State of California. The State Fish and Game Code (Section 3503) emulates the MBTA and protects birds' nests and eggs from all forms of take. Disturbance that causes nest abandonment resulting in the loss of eggs or young may be considered "take" by the California Department of Fish and Game (CDFG). Nesting raptors (birds of prey) are specifically protected under CDFG Code, Section 3503.5.

Habitat Conservation Plan

To promote the recovery of endangered species while accommodating planned development, infrastructure and maintenance activities, the Local Partners, consisting of the City of San Jose, Santa Clara Valley Transportation Authority, Santa Clara Valley Water District, Santa Clara County and the cities of Gilroy and Morgan Hill, are preparing a joint Habitat Conservation Plan/Natural Community Conservation Plan (Habitat Plan). The Santa Clara Valley Habitat Plan (Plan) is being developed in association with the U.S. Fish & Wildlife Service (USFWS), California Department of Fish and Game (CDFG), and the National Marine Fisheries Service (NMFS) and in consultation with stakeholder groups and the general public to protect and enhance ecological diversity and function within more than 500,000 acres of southern Santa Clara County.

The Santa Clara Habitat Plan Planning Agreement outlines the Interim Project Process to ensure coordination of projects approved or initiated in the Planning Area before completion of the Habitat Plan to help achieve the preliminary conservation objectives of the plan, and not preclude important conservation planning options or connectivity between areas of high habitat values. The Interim Project Process requires the local participating agencies to notify the wildlife agencies (DFG and USFWS) of projects that have the potential to adversely impact Covered Species, natural communities, or conflict with the preliminary conservation objectives of the Habitat Plan. The Wildlife Agencies comments on Interim Projects should recommend mitigation measures or project alternatives that would help achieve the preliminary conservation objectives of the Habitat Plan.

The subject site does not meet the threshold that requires an interim HCP project referral because it does not meet all of the required criteria for referral to the California Department of Fish and Game (CDFG) and U.S. Fish and Wildlife Service (USFWS).

4.4.1.4 *Special Status Plant and Wildlife Species*

Plants

Sixty-nine special-status plant species have been identified by the California Native Plant Society (CNPS) and are known to occur in the vicinity of the project site. However, all of these species require specific conditions or habitat types that are not present within the project area because the entire project area has been heavily disturbed and is maintained as development and landscaping.

Wildlife

Twenty-six special-status wildlife species are known to occur in the vicinity of the sewer interceptor alignment. However, the project area is unsuitable for each of these species due to a lack of habitat. The project alignment lacks sensitive habitats that tend to support special-status wildlife species such as wetlands, riparian habitat, or oak woodlands. The area is also isolated from suitable habitat for special-status wildlife species and from wildlife movement corridors by multi-lane roads and highways, including Highway 101 and Interstate 880, and by extensive residential and commercial development.

4.4.2 <u>Environmental Checklist and Discussion</u>

BIOLOGICAL RESOURCES						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐	☐	1,2
2) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒	☐	1,2

BIOLOGICAL RESOURCES						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
3) 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?	☐	☐	☐	☒	☐	1,2
4) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, impede the use of native wildlife nursery sites?	☐	☐	☐	☒	☐	1,2,6
5) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐	☐	1,3,6
6) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒	☐	1,2

The project site does not include riparian habitat, wetlands, or any other sensitive habitat. Implementation of the proposed project would not have any impact, direct or indirect, on wetlands.

4.4.2.1 *Trees*

The project proposes to preserve all the trees within the project area. The project will preserve all trees located along North Fourth Street and Commercial Street, adjacent to the project alignment.[3]

<u>Standard Measure:</u> The following tree protection measures will be included in the project in order to protect trees to be retained during construction:

<u>Pre-construction Treatments</u>

- The applicant shall retain a consulting arborist. The construction superintendent shall meet with the consulting arborist before beginning work to discuss work procedures and tree protection.
- Fence all trees to be retained to completely enclose the TREE PROTECTION ZONE prior to demolition, grubbing or grading. Fences

[3] Personal Communication. Andy Romer, AECOM. March 28, 2011.

shall be six feet chain link or equivalent as approved by consulting arborist. Fences are to remain until all grading and construction is completed.

- Prune trees to be preserved to clean the crown and to provide clearance. All pruning shall be completed or supervised by a Certified Arborist and adhere to the Best Management Practices for Pruning of the International Society of Arboriculture.

During Construction

- No grading, construction, demolition or other work shall occur within the TREE PROTECTION ZONE. Any modifications must be approved and monitored by the consulting arborist.
- Any root pruning required for construction purposes shall receive the prior approval of, and be supervised by, the consulting arborist.
- Supplemental irrigation shall be applied as determined by the consulting arborist.
- If injury should occur to any tree during construction, it shall be evaluated as soon as possible by the consulting arborist so that appropriate treatments can be applied.
- No excess soil, chemicals, debris, equipment or other materials shall be dumped or stored within the TREE PROTECTION ZONE.
- Any additional tree pruning needed for clearance during construction must be performed or supervised by an Arborist and not by construction personnel.
- As trees withdraw water from the soil, expansive soils may shrink within the root area. Therefore, foundations, footings and pavements on expansive soils near trees shall be designed to withstand differential displacement.

4.4.2.2 *Special Status Bird Species*

The London plane trees, alders, eucalyptus, and other trees along the project alignment provide potential nesting habitat for several regionally abundant raptor species including red-tailed hawks, Cooper's hawks, and red-shouldered hawks. Landscape trees within the project alignment provide potential nesting and foraging habitat for many species of migratory birds. Several of these trees and shrubs are likely to be removed during the installation of the new sewer interceptor. However, trees and shrubs in heavily urbanized places are limited in their value to breeding and foraging raptors and migratory birds.

While unlikely, the mature trees on-site may be utilized by nesting and/or foraging raptors if prey species are abundant in the area or by other migratory birds. As discussed above, nesting raptors (i.e., nests of falcons, hawks, eagles, or owls) and other migratory birds are protected under provisions of the Migratory Bird Treaty Act and California Department of Fish and Game (CDFG) Code Sections 3503, 3503.5, and 2800.

Impact BIO-3: Construction disturbance of or near nests can result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes abandonment and/or loss of

reproductive effort is considered a taking by the CDFG. **(Significant Impact)**

MM BIO-3: The project proposes to implement the following mitigation measures to reduce the impact to nesting birds to a less than significant level:

- **Pre-construction/Pre-disturbance Surveys.** If construction is to occur during the breeding season (February 1 through August 31), pre-construction surveys shall be conducted by a qualified ornithologist no more than 7 days prior to the initiation of construction in any given area. Pre-construction surveys will identify active nests of species protected by the MBTA and State Code.
- **Avoid the Nesting Season.** If possible, potential nesting substrates (e.g., bushes, trees, grass, buildings, burrows) to be removed by the project should be removed between September 1 and January 31, to avoid the nesting season.
- **Buffer Zones.** If an active nest is found and is greater than half completed, a qualified ornithologist, in consultation with the CDFG, will determine the extent of a construction-free buffer zone to be established around the nest, until nesting is complete. Typical buffer widths are 250 feet for a nesting raptor and 100 feet for other species. The establishment of construction-free buffer zones will ensure that no active nests of species protected by the MBTA and California Fish and Game Code will be disturbed by construction.

4.4.3 Conclusion

With implementation of the standard and mitigation measures identified above, the proposed project would not result in significant impacts to biological resources. **(Less Than Significant Impact with Mitigation Incorporated)**

4.5 CULTURAL RESOURCES

The following discussion is based upon an archaeological records/limited literature review prepared by *Basin Research Associates* in June 2010. As the archaeological literature review may discuss the location of specific archaeological sites, it is considered administratively confidential and is not included in this Initial Study. Qualified personnel may request a copy from the City's Planning Division located at 200 East Santa Clara Street, Floor 3, during normal business hours.

4.5.1 Setting

The archaeological records/limited literature review prepared for the project area relies on the results of various records searches conducted at the California Historical Resources Information System, Northwest Information Center (CHRIS/NWIC), Sonoma State University, Rohnert Park. Reference material from the Bancroft Library, University of California, Berkeley and Basin Research Associates, San Leandro was also consulted.

The Native American Heritage Commission (NAHC) was contacted for a review of the Sacred Lands File. Letters soliciting additional information were sent to nine Native American individuals/groups recommended by the NAHC.

Archaeological Resources

The project alignment is located within an area favored by prehistoric Native Americans for occupation as well as hunting and collecting activities. The general area is on a flat alluvial plain with the Guadalupe River approximately 0.5-0.6 miles to the west and Coyote Creek approximately 0.9-1.2 miles to the east. Numerous recorded/reported prehistoric archaeological sites are located in the wider general study area. The project site is located within an area of moderate archaeological sensitivity.

Historic Resources

The first City of San Jose sanitary sewer was constructed in 1865 from Market Street to the Guadalupe River in the vicinity of William Street The first section of the drainage system, consisting of three by four wooden sewer pipes, was completed under Fourth Street from San Fernando to Taylor Street. An open sewer was excavated on Seventh Street in 1868. Near the end of 1869, Coleman Younger was granted permission by the council to extend the Fourth Street sewer with an open ditch north about a mile directly to his 200 acre farm north of Rosa Street (now Hedding Avenue).

In 1872 temporary sewers, consisting principally of redwood box drains, were built in several streets and connected by branches from the Fourth Street sewer. Although this was intended as a temporary arrangement, due to lack of funds, it was 1887 before the sewerage system was completed. The main sewer was on North Fifth Street, extending from San Fernando to the Bay, a distance of about eight miles. From San Fernando to Younger's land the sewer was built of brick, from Younger's to Alviso it was of redwood, and from Alviso to its outlet on the Guadalupe River it was an open ditch. Branches within the city were constructed of brick or were 'vitrified stone' (or clay)[4] pipe.[5]

[4] http://en.wikipedia.org/wiki/Vitrified_clay_pipe. Vitrified clay pipe (VCP) is pipe made from clay that has been subjected to vitrification, a process which fuses the clay particles to a very hard, inert, glass-like state. VCP is commonly used in sewer gravity collection mains because of its reasonable price and resistance to almost all

4.5.2 Environmental Checklist and Discussion

CULTURAL RESOURCES						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						1,2,7
1) Cause a substantial adverse change in the significance of an historical resource as defined in §15064.5?	☐	☐	☐	☒	☐	
2) Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?	☐	☐	☒	☐	☐	1,2,7
3) Directly or indirectly destroy a unique paleontological resource or site, or unique geologic feature?	☐	☐	☐	☒	☐	1,2,7
4) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐	☐	1,2,7

4.5.2.1 *Archaeological Resources*

The project site is located within a moderately archaeologically sensitive area, and has a potential for containing prehistoric archaeological resources due to the proximity to the Guadalupe River and Coyote Creek. The NAHC record search was negative for Native American resources within or adjacent to the project area. The proposed construction of the new sewer interceptor is not anticipated to affect buried cultural resources. Although it is unlikely that buried cultural materials would be encountered, standard conditions for excavation activities would be applied to the project as described below.

Standard Measures: The proposed project shall implement the following standard measures:

- Should evidence of prehistoric cultural resources be discovered during construction, work within 50 feet of the find shall be stopped to allow adequate time for evaluation and mitigation by a qualified professional archaeologist. The material shall be evaluated and if significant, a mitigation program including collection and analysis of the materials at a recognized storage facility shall be developed and implemented under the direction of the City's Director of Planning.

  As required by Country ordinance, this project has incorporated the following guidelines. Pursuant to Section 7050.5 of the Health and Safety Code, and Section 5097.94 of the Public Resources Code of the State of California in the event of the discovery of human remains during construction, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains. The Santa Clara County Coroner shall be notified and shall make a determination as to whether the remains are Native American. If the Coroner determines that the remains are not subject to his authority,

domestic and industrial sewage, particularly the sulfuric acid that is generated by hydrogen sulfide, a common component of sewage.

[5] G.A. Laffey. Water Management and Urban Growth in San Jose. M.A. thesis, San Jose State University. 1982.

he shall notify the Native American Heritage Commission who shall attempt to identify descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this State law, then the land owner shall re-inter the human remains and items associated with Native American burials on the property in a location not subject to further subsurface disturbance.

- A final report shall be submitted to the City's Director of Planning containing a description of the mitigation programs and its results including a description of the monitoring and testing program, a list of the resources found, a summary of the resources analysis methodology and conclusions, and a description of the disposition/curation of the resources. The report shall verify completion of the mitigation program to the satisfaction of the City's City's Director of Planning.

4.5.2.2 *Historic Resources*

The open ditch sewer (circa 1870) along North Fourth Street and the existing 60-inch brick sanitary sewer or other infrastructure within North Fourth Street do not appear to satisfy any of the criteria for inclusion on the National Register of Historic Places (NRHP) and/or the California Register of Historic Places (CRHR). In particular, the existing, functioning sewer system does not satisfy criteria of integrity and/or age (generally over 50 years under NRHP criteria unless under criterion G, a property "is of exceptional importance"). The potential for significant and/or unique archaeological data cannot be demonstrated. The system cannot be associated with any significant event, individual, or the "distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction."

Searches of the California Resources Information System, Northwest Information Center (CHRIS/NWIC) did not find recorded historic sites in or adjacent to the proposed project.

The proposed project would have a less than significant impact on historical resources within the project area.

4.5.3 <u>Conclusion</u>

The proposed project, with the implementation of the above standard measures, would not result in significant impacts to cultural resources. **(Less Than Significant Impact)**

4.6 GEOLOGY AND SOILS

The following discussion is based on a Phase I Environmental Assessment report prepared by *AMEC Geomatrix, Inc.* in January 2010. The report is provided in Appendix C of this Initial Study.

4.6.1 Setting

4.6.1.1 *Regional Geology and Soils*

The project area is located in the broad valley floor of the Santa Clara Valley in the southern part of the San Francisco Bay region. The valley is crossed by several stream channels that flow towards the San Francisco Bay to the north. Located approximately 0.5 miles west of the project area, the Guadalupe River is the largest channel draining the Santa Clara Valley, with Coyote Creek located approximately 0.75 miles to the east of the project area.

The City of San Jose is located in the eastern portion of Santa Clara Valley. The Santa Clara Valley is surrounded by the Santa Cruz Mountains to the west, the Diablo Mountain Range to the east, and the San Francisco Bay to the north. The geology consists of Franciscan-Knoxville, marine sedimentary rocks, and Pliocene strata. The valley floor consists mostly of Quaternary clay, sand, and gravel with isolated areas of Tertiary volcanic rock.

4.6.1.2 *On-Site Geologic Conditions*

Soils

The project site is relatively flat, consisting of the existing Commercial Street, North Fifth Street, North Fourth Street, and U.S. Highway 101 roadways. The sewer alignments are underlain by Holocene alluvium (Qhf and Qhff). The near-surface soils are primarily fine-grained, clayey deposits, with locally variable amounts of sand. The clayey native soils are underlain by dense to very dense sand and gravel layers. Areas along the southern end of the alignment may include little to no sand in the shallow subsurface. These conditions generally extend to depths of approximately 20 to 30 feet, or greater.[6]

Trenching, Fill, and Tunneling

The majority of the sanitary sewer interceptor installation will be installed utilizing open trench construction. The proposed sewer will be installed using trenchless construction as it crosses U.S. Highway 101. The proposed trenchless crossing at this alignment is approximately 400 feet long. The tunnel length is anticipated to be extended on the southwestern extent of the crossing due to the location of the North Fourth Street/Old Bayshore Highway/U.S. 101 on-ramp interchange.

Groundwater

Groundwater within the project area occurs at depths of approximately eight to 10 feet below the ground surface (bgs) with historical high groundwater levels of approximately four feet bgs. Groundwater flow is to the northwest towards San Francisco Bay. Continuous dewatering will likely be required during construction.

[6] AMEC Geomatix, Inc. Phase I Environmental Assessment: 60-Inch Brick Interceptor Phase VIA Project. January 2010.

Seismicity and Seismic Hazards

The San Francisco Bay Area is one of the most seismically active regions in the United States. An earthquake of moderate to high magnitude generated within the San Francisco Bay region could cause considerable ground shaking at the project site. The degree of shaking is dependent on the magnitude of the event, the distance to its zone of rupture and local geologic conditions.

The San Andreas Fault runs north/south and parallel to the San Andreas Fault, Calaveras Fault, and Hayward Fault. The San Andreas Fault is approximately 13 miles west of the site, the Calaveras Fault is approximately 10 miles east of the site, and the Hayward Fault is approximately eight miles east of the site. Contribution to ground motion in the event of an earthquake can also be expected from the Silver Creek Fault, located approximately three miles east of the project site.

Seismic hazards may arise from three sources: surface fault rupture, ground shaking, and liquefaction. Since no active faults pass through the site, the potential for fault rupture is relatively low. Based on the available geological and seismic data, the possibility for the site to experience strong ground shaking is considered moderate to high.

Liquefaction

Liquefaction is a phenomenon in which saturated cohesionless soils are subject to a temporary, but essentially total, loss of shear strength associated with earthquake shaking. According to the Santa Clara County Liquefaction Hazard Zones Map,[7] the site is susceptible to liquefaction. Lateral spreading is a failure within a nearby horizontal soil zone, commonly associated with liquefaction, which causes the overlying soil mass to move toward a free face or down a gentle slope. There are no slopes or free faces of the site that would be susceptible to lateral spreading. The landslide potential is non-existent, due to the flat nature of the project site.[8]

[7] Santa Clara County. http://www.sccgov.org/SCC/docs%2FPlanning%2C%20Office%20of%20%28DEP%29%2Fattachments%2FGeoHazards%2FLiquefaction%2FAtlas-Liquefaction2006-10-18.pdf

[8] Santa Clara County. http://www.sccgov.org/SCC/docs/Planning,%20Office%20of%20(DEP)/attachments/58260520.pdf

4.6.2 Environmental Checklist and Discussion

GEOLOGY AND SOILS						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:						1
a) Rupture of a known earthquake fault, as described on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	☐	☐	☒	☐	☐	
b) Strong seismic ground shaking?	☐	☐	☒	☐	☐	1
c) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐	☐	1
d) Landslides?	☐	☐	☐	☒	☐	10
2) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐	☐	8,10
3) Be located on a geologic unit or soil that is unstable, or that will become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐	☐	10
4) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐	☐	10
5) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒	☐	1

The proposed sewer project would not create a new type of land use, and would not result in any long term geologic or soil impacts. The proposed roadway alignment would be restored to its current condition following installation of the proposed 84-inch sewer line.

4.6.2.1 *Geology and Soils*

Soils

The project alignment is generally flat and the potential for erosion and siltation occurring at the site during construction would be low. The proposed project is not expected to be exposed to slope instability, erosion, or landslide-related hazards, due to the flat topography of the project site.

Trenching, Fill and Tunneling

Site preparation for the project area will require trenching and excavation to install the infrastructure. The majority of the sewer interceptor installation will be installed utilizing open trench construction. A traced excavator would be used for trenching and lifting the pipe sections into the trench. The trench would be an average of 15 feet deep to allow a nominal four feet of cover over the top of the pipe. The sides of the trench will have vertical walls with temporary shoring for worker safety.

The proposed alignment crosses U.S. Highway 101 slightly east of the existing 84-inch interceptor in North Fourth Street. The project proposes trenchless crossing under US 101, which would extend for approximately 400 feet.

Construction of the project as described above and in Section 3.0 is not anticipated to result in significant geologic or soil impacts.

Standard Measures: The project proposes to implement the following standard measure to reduce geologic and soil impacts:

- The project will comply with the City of San Jose Grading Ordinance, including erosion and dust control during site preparation and with the City of San Jose Zoning Ordinance requirement for keeping adjacent streets free of dirt and mud during construction. The following specific BMPs will be implemented to prevent substantial erosion and siltation during construction activities:

  1. Restriction of grading to the dry season (April 15 through October 15) or meet City requirements for grading during the rainy season.
  2. Utilize on-site sediment control BMPs (such as fiber rolls, sand bag barriers, sediment traps, silt fences, straw bales, and storm drain inlet protection) to retain sediment on the project site;
  3. Utilize stabilized construction entrances and/or wash racks;
  4. Provide temporary cover of disturbed surfaces to help control erosion during construction;
  5. Provide permanent cover to stabilize the disturbed surfaces after construction has been completed.
  6. Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.

Groundwater

Based on the depth to groundwater within the project area footprint, it is likely that groundwater will be encountered during construction activities. Continuous dewatering would be required during construction. Groundwater levels should be lowered to two to three feet below the bottom of the planned trench excavation. Levels should not be allowed to rise until the trench is backfilled and compacted to a point that will prevent flotation of the pipe.

4.6.2.2 *Seismicity, Seismic Hazards, and Liquefaction*

Although the project site is not on an earthquake fault, it is within the seismically active San Francisco Bay Area, and moderate to severe ground shaking is probable during the useful life of the proposed sewer line. The site is located within the State of California Seismic Hazard Zone for Liquefaction and the project has a moderate potential for liquefaction. However, the liquefaction potential is not considered significant because standard engineering and design practices will be used for the project.

4.6.3 Conclusion

With implementation of the standard measures identified above, development of the proposed project, in conformance with standard engineering practices, would not result in significant geologic impacts due to soils and/or geology. **(Less Than Significant Impact)**

4.7 GREENHOUSE GAS EMISSIONS

4.7.1 Setting

This section provides a general discussion of global climate change and focuses on emissions from human activities that alter the chemical composition of the atmosphere. The discussion on global climate change and greenhouse gas emissions is based upon the California Global Warming Solutions Act of 2006 (Assembly Bill (AB) 32), the 2006 and 2009 Climate Action Team (CAT) reports to Governor Schwarzenegger and the Legislature, and research, information and analysis completed by the International Panel on Climate Change (IPCC), the United States Environmental Protection Agency, California Air Resources Board, and the CAT.

Global climate change refers to changes in weather including temperatures, precipitation, and wind patterns. Global temperatures are modulated by naturally occurring and anthropogenic (generated by mankind) atmospheric gases such as carbon dioxide, methane, and nitrous oxide.[9] These gases allow sunlight into the Earth's atmosphere but prevent heat from radiating back out into outer space and escaping from the earth's atmosphere, thus altering the Earth's energy balance. This phenomenon is known as the "greenhouse" effect.

Naturally occurring greenhouse gases include water vapor[10], carbon dioxide, methane, nitrous oxide, and ozone. Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also greenhouse gases, but are for the most part, solely a product of industrial activities.

Agencies at the international, national, state, and local levels are considering strategies to control emissions of gases that contribute to global warming. There is no comprehensive strategy that is being implemented on a global scale that addresses climate change; however, in California, a multi-agency "Climate Action Team", has identified a range of strategies and the California Air Resources Board (CARB), under Assembly Bill (AB) 32, has approved the *Climate Change Scoping Plan***.** AB 32 requires achievement by 2020 of a statewide greenhouse gas emissions limit equivalent to 1990 emissions, and the adoption of rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions. The ARB and other state agencies are currently working on regulations and other initiatives to implement the *Scoping Plan*. By 2050, the state plans to reduce emissions to 80 percent below 1990 levels.

The California Natural Resources Agency, as required under state law (Public Resources Code §21083.05), has amended the State CEQA Guidelines to address the analysis and mitigation of greenhouse gas emissions, effective March 18, 2010. In these changes to the CEQA Guidelines, Lead Agencies, such as the City of San Jose, retain discretion to determine the significance of impacts from greenhouse gas emissions based upon individual circumstances.

Neither CEQA nor the CEQA Guidelines provide a specific methodology for analysis of greenhouse gases. Given the global scope of global climate change, the issue becomes one of cumulative

---

[9] IPCC, Summary for Policymakers. In: Climate Change 2007: The Physical Science Bases. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [S. Solomon, D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor, and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. 2007. Available at: http://ipcc.ch/

[10] Concentrations of water are highly variable in the atmosphere over time, with water occurring as vapor, cloud droplets and ice crystals. Changes in its concentration are also considered to be a result of climate feedbacks rather than a direct result of industrialization or other human activities. For this reason, water vapor is not discussed further as a greenhouse gas.

impacts and translating the issue down to the level of a CEQA document for a specific project in a way that is meaningful to the decision making process.

The Bay Area Air Quality Management District **(**BAAQMD) is primarily responsible for assuring that the national and state ambient air quality standards are attained and maintained in the Bay Area. On June 2, 2010, BAAQMD adopted thresholds of significance for greenhouse gas emissions for both Plan-level and Project-level CEQA analyses and describes methods for estimating greenhouse gas and assessing whether projects make a cumulatively considerable contribution to greenhouse gas emissions.

4.7.2 Environmental Checklist and Discussion of Impacts

GREENHOUSE GAS EMISSIONS						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐	☐	1
2) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐	☐	1

4.7.2.1 *Impacts From the Project*

Given the overwhelming scope of global climate change, it is not anticipated that a single development project would have an individually discernable effect on global climate change. It is more appropriate to conclude that the greenhouse gas emissions generated by the proposed project would combine with emissions across the state, nation, and globe to cumulatively contribute to global climate change.

The project proposes redirecting the majority of sanitary sewer flow from the existing 60-inch underground sewer to a new sewer line in Commercial Street and North Fourth Street, measuring 72-inches and 84-inches, respectively. The project would incrementally temporarily increase greenhouse gas emissions from construction equipment operations, truck trips, and asphalt paving during the short term construction period; however, once construction is complete, the project would not contribute to global climate change or emit greenhouse gas emissions. Table 4.3-1 shows the levels of construction-related pollutant and precursor emissions resulting from the proposed project.[11]

[11] BAAQMD does not have an adopted threshold of significance for construction-related greenhouse gas emissions. Bay Area Air Quality Management District. CEQA Guidelines, Section 2.6.2 Greenhouse Gases. June 2010.

4.7.2.2 *Impacts to the Project*

Impacts to the project from global climate change may include the potential for reduced water availability due to changes in the Sierra snowpack and/or droughts. Energy use could also rise as average temperatures rise. The project area is located more than five miles from San Francisco Bay and is not within the possible inundation areas from an estimated three meter (approximately 10 feet) rise in sea level. The project would not be impacted by reduced potable water supplies or increased energy usage because the proposed sewer interceptor transports waste and, therefore, does not utilize potable water or energy.

4.7.2.3 *Significance of Cumulative Global Climate Change Impacts*

Declaring an impact significant or not implies some knowledge of incremental effects that is several years away, at best. In an effort to disclose environmental impacts and to conform with the CEQA Guidelines [16064(b)], based on the nature of this project and its location within an established urban area (rather than a greenfield site), the proposed project would not impede the state's ability to reach the emission reduction limits/standards set forth by the State of California by Executive Order S-3-05 and AB 32.

4.7.3 Conclusion

With the minimal new net energy and water needs, the project would not result in a significant climate change impact due to greenhouse gas emissions, nor would it result in a cumulatively considerable contribution to global climate change. **(Less Than Significant Impact)**

4.8 HAZARDS AND HAZARDOUS MATERIALS

The following discussion is based upon a Phase I Environmental Assessment for the 60-Inch Brick Interceptor Phase VI Project by *AMEC Geomatix, Inc.* in January 2010. This report is located in Appendix C of this document.

4.8.1 Setting

Hazardous materials are commonly used by large institutions, commercial, and industrial businesses. Hazardous materials include a broad range of common substances such as motor oil and fuel, pesticides, detergents, paint, and solvents. A substance may be considered hazardous if, due to its chemical and/or physical properties, it poses a substantial hazard when it is improperly treated, stored, transported, disposed of, or released into the atmosphere in the event of an accident.

A review of published agency documents, agency files, and other pertinent documents was completed for a one-mile radius of the site. The potential for site impact was based on information from the database records regarding sites with past environmental releases, and/or those that use, store or dispose of regulated chemicals. A screening process was implemented to prioritize the sites of greater potential impact to the project area. This process consisted of evaluating the database listing, the type of release, current case status, distance and direction from the site, and professional judgment.

- Two unknown vent pipes were observed. One vent pipe was located at Thedy Auto Repair at 1169 North Fifth Street and one at Eastern Electric Appliances Repair at 1138 North Fifth Street.
- Two groundwater monitoring wells were located in North Fourth Street near Interstate 880, associated with the Commercial Fueling Corporation, and along Terminal Avenue, associated with the Western Exterminator site. Both wells are associated with known LUST sites.

4.8.1.1 *Site Conditions*

On-Site Observations

An inspection of the project alignment area was performed on November 23, 2009 by *AMEC Geomatrix, Inc.* The reconnaissance focused on the storage or dumping of hazardous materials or waste on the project area or hazardous use, storage, or spillage at facilities within and adjacent to the project area including evidence of underground storage tanks. The following issues were noted during the field inspection:

- The project area southeast of Interstate 880 is predominantly industrial consisting of automotive and light industrial manufacturing and repair facilities. The former Commercial Fueling Corporation at 1170 North Fourth Street, which is one of the sites associated with a contamination incident along the southern portion of the North Fourth Street corridor, is currently a vacant lot.
- The project area between Interstate 880 and Highway 101 is a mix of commercial, light industrial, and hospitality services (hotels and restaurants). A condominium complex is located along North Fourth Street. Several former commercial properties along North Fourth Street are currently vacant lots including the former Armored Transport property at east Rosemary Street and North Fourth Street, the former Chevron Station at East Gish Avenue

and North Fourth Street, and an unknown former facility located on the southwestern side of North Fourth Street across from the Coast Counties facility.

- A commercial development is located around Koll Circle, which is occupied with numerous small businesses. Businesses include plating operations, telecommunications companies, and professional services. The businesses appear to use limited amounts of chemicals.
- The area northeast of Highway 101 is predominantly industrial. The area remains industrial. The industrial park with Reynolds Circle also consists of numerous small businesses that generally appeared to have limited chemical use.
- Throughout the project area a large number of commercial properties were available for lease, including one hotel property at the northern end of North Fourth Street. The buildings that house small businesses were occupied, while those buildings structured for single use businesses were frequently vacant.
- Truck washing activities at the Hertz Rental facility at 1695 North Fourth Street and at the Bayshore Internationals Trucks facility at 1505 North Fourth Street. Both sites have existing USTs to fuel the trucks.
- Two unknown pipes were observed. One pipe was located at Thedy Auto Repair at 1169 North Fifth Street and one at Eastern Electric Appliance Repair at 1138 North Fifth Street. Groundwater monitoring pipes were located in North Fourth Street near Interstate 880, associated with the Commercial Fueling Corporation, and along Terminal Avenue, associated with the Western Exterminator site. Both wells are associated with known LUST sites.
- A five-gallon drum of what appeared to be waste oil dumped on the right side northbound lane at 1560 North Fourth Street. Oily material had flowed across the traffic lane and pooled in the gutter.
- A boiler vent at the rear of the Deluxe Dye Works site at 1488 North Fourth Street. The area may be associated with the former dry cleaning activities at the property. Dry cleaning is not currently performed at the site.
- A treatment system in the open at the northwestern terminus of the project area, which is a pilot project to control odors associated with the sanitary sewer interceptor. The system consists of a series of above ground storage tanks (ASTs) and an associated series of injection pipes going into manholes within the sewer interceptor.
- Two unknown vent pipes were observed. One vent pipe was located at Thedy Auto Repair at 1169 North Fifth Street and one at Eastern Electric Appliance Repair at 1138 North Fifth Street.
- Two groundwater monitoring wells were located in North Fourth Street near Interstate 880, associated with the Commercial Fueling Corporation, and along Terminal Avenue, associated with the Western Exterminator site. Both wells are associated with known LUST sites.

Groundwater

Groundwater within the project area occurs at depths of approximately 10 feet below the ground surface (bgs) with historical high groundwater levels of approximately four feet bgs.

4.8.1.2 *Potential On-Site and Off-Site Sources of Contamination*

Agricultural Use Impact

The vicinity of the project area was historically used for agricultural purposes. Several of the pesticides historically used in the area, including organochlorinated pesticides, are persistent in the environment. In addition, arsenical pesticides were frequently used in the Santa Clara Valley. As a result, shallow soils may contain residual pesticides. Generally, shallow soils along the project

alignment have been significantly disturbed as a result of existing development, which likely diluted (or removed) residual impact. However, in those areas where shallow soils have not been disturbed, pesticides may remain in the shallow soils.

Regulatory Database Review

A records search was completed for the project alignment area. The purpose of the search was to identify all sites within one mile of the project area where there are known or suspected sources of contamination, as well as sites that handle or store hazardous materials. Local, state and federal environmental regulatory lists were searched. The databases searched and the results are provided in Appendix C of this Initial Study. The identification of contaminated or hazardous materials sites within the project area is important so that potential land use compatibility and public safety impacts can be avoided and/or mitigated.

Based on a review of available documentation, a complete listing and map of priority sites within and in the vicinity of the project area is provided in Appendix C. A brief summary of potential areas of concern within the vicinity of the project area is provided below.

- The area east of Interstate 880 between North Fourth Street and North Seventh Street and between Commercial Street and Interstate 880 is industrialized. The Commercial Fueling Corporation (ID #44) at 1170 North Fourth Street is impacted with petroleum hydrocarbons extending along North Fourth Street to the northwest, and potentially with backfill materials associated with various utilities within the North Fourth Street corridor. The area in the vicinity of North Fifth Street and North Seventh Street is impacted by both petroleum hydrocarbons and chlorinated solvents including at BW/IP International, Inc. (ID #38).

- Several sites of potential concern were identified along North Fourth Street including: a possible former dry cleaning facility (ID #25); former gas stations where no documentation regarding removal of underground storage tanks was available for review (ID #31 and #32); and the presence of residual impacts at Coast Counties Truck (ID #9) at 1740 North Fourth Street within the existing 60-inch brick sewer alignment.

- The area northeast of Highway 101 along Terminal Avenue and Old Bayshore Highway is industrialized. Numerous underground tank sites were noted as were plating operations and high tech surface treatment facilities.

- Based on the age of the 60-inch brick sewer, which was constructed approximately 113 years ago, and the likelihood that, historically, industrial facilities discharged hazardous materials to the sewer, underlying soil and groundwater may be impacted due to releases from the line.

- Based on the presence of U.S. Highway 101 and Interstate 880, shallow soils in the area may be impacted with aerially deposited lead. Typically, soil affected with aerially deposited lead is limited to the first few inches to one foot bgs. Within this depth interval, significantly elevated concentrations of lead may be present.

4.8.2 Environmental Checklist and Discussion

HAZARDS AND HAZARDOUS MATERIALS						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐	☐	8
2) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐	☐	8
3) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐	☐	1
4) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☒	☐	☐	☐	1
5) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☒	☐	☐	8
6) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒	☐	1
7) Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒	☐	1
8) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒	☐	1

The project site is not within the Santa Clara County Airport Land Use Commission (ALUC) jurisdiction, nor is it on a City designated evacuation route. The site is not located in an area subject to wildfires.

The proposed project area is not included on the CORTESE List. The CORTESE database is a hazardous waste and substances sites list. The sites on this list are designated by the State Water Resources Control Board, the Integrated Waste Board, and the Department of Toxic Substances Control.

4.8.2.1 *Potential On-Site and Off-Site Sources of Contamination*

Groundwater

Based on the depth to groundwater within the project area footprint, it is likely that groundwater will be encountered during construction activities. Generally, shallow soils in the area are relatively fine-grained (i.e. silt and clay) suggesting hydraulic conductivities are limited. As a result migration of contaminants and the zone of influence of required dewatering activities within the native materials may be limited.

Due to the presence of coarse-grained backfill below the water table, the existing utilities underlying streets within the project area may act as conduits for contaminant transport. In addition, these coarse grain-materials may also provide significant water during construction activities.

Impact HAZ-1: The project does not propose any sensitive land uses, and the proposed sewer line would not be impacted by the potential presence of hazardous materials in the soil or the groundwater along the proposed alignment. However, excavation of the project alignment could result in exposure of construction workers and other potential receptors to soil and/or groundwater contamination, increased handling/disposal costs, and possible treatment or disposal of groundwater associated with dewatering activities, in the event these hazardous materials are encountered. **(Significant Impact)**

Conformance with the following mitigation measures upon completion of design and prior to project construction would reduce risks of the potential soil or groundwater contamination at the site to future construction workers.

MM HAZ-1.1: Prior to project development, a soil and groundwater investigation shall be completed to determine if residual contaminants of concern (COCs: petroleum hydrocarbons, volatile organic compounds, metals, or agricultural chemicals) are present in the proposed excavated soil. The analytical results will be compared against applicable environmental screening levels for construction workers and hazardous waste criteria. Based on these results, the investigation will provide recommendations regarding soil handling procedures and disposal of affected soils in the project area including the potential reuse of affected soil during project development. Impacted soil deemed for removal shall be disposed of at a licensed facility. If contaminants are present in the soil and/or groundwater, the extent of the impact shall be evaluated to determine if the appropriate regulatory agency (i.e. Regional Water Quality Control Board or Department of Toxic Substances Control) should be contacted and regulatory oversight sought.

MM HAZ-1.2: A site management plan shall be developed to establish management practices for construction worker safety while handling contaminated soil, groundwater, or other materials if encountered during excavation and construction activities.

MM HAZ-1.3: A hazardous materials licensed contractor shall conduct construction earthwork activities with properly trained employees in areas where contaminated soil or ground water are present. Employees conducting earthwork activities at the site must complete a 40-hour training course, including respirator and personal protective equipment training. Each contractor working at the site shall prepare a health and safety plan (HSP) that addresses the safety and health hazards of each phase of site operations that includes the requirements and procedures for employee protection.

Agricultural Use Impacts

Based on the history of the project area, it is possible that agricultural pesticides and/or herbicides may be present in the site soils at concentrations which exceed Environmental Screening Levels (ESLs) developed by the California Regional Water Quality Control Board (RWQCB). The project proposes excavation and removal of the existing 54-inch interceptor located in North Fourth Street, and installation of an 84-inch interceptor in the same location. Shallow soils along the project alignment have been significantly disturbed as a result of existing development, which likely diluted the contamination residual. However, shallow soils that have not been disturbed, with residual agricultural chemical contamination, could be encountered during project construction.

Impact HAZ-2: Excavation of the project alignment could result in exposure of construction workers to soils contamination with residual pesticides and/or herbicides. **(Significant Impact)**

MM HAZ-2: See MM HAZ-1.1-1.3.

Regulatory Database Search

Numerous sites within the project area and adjacent areas are known to have underlying soils and groundwater impacted with a variety of chemicals including petroleum hydrocarbons and chlorinated volatile organic compounds (VOCs). In addition, based on the history and types of businesses operating in the area, other sites may be impacted by petroleum hydrocarbons, chlorinated VOCs, and ADL.

<u>Aerially-Deposited Lead (ADL)</u>

The project area is adjacent to two major highways, Interstate 880 and Highway 101. As a result, shallow soils in the vicinity of these highways may contain elevated levels of aerially-deposited lead primarily associated with historical use of leaded gasoline.

Impact HAZ-3: Excavation of the project alignment could result in exposure of construction workers to soils and groundwater contamination with lead. **(Significant Impact)**

MM HAZ-3.1: Prior to project development, a soil investigation shall be completed to determine whether ADL has affected soils that will be excavated as part of the proposed project. The investigation for ADL shall be performed in accordance with the Caltrans' *Lead Testing Guidance Procedure* (dated March 16, 2001). The analytical results will be compared against applicable environmental screening levels for construction workers and hazardous waste criteria. Based on analytical results, the investigation will provide recommendations regarding soil handling procedures, management and disposal of affected soils in the project area including the reuse potential of ADL-affected soil during project development. The provisions of a variance granted to Caltrans by the California Department of Toxic Substances Control (DTSC) on September 22, 2000 (or any subsequent variance in effect when the project is constructed) regarding aerially-deposited lead shall be followed, and will reduce this impact to a less than significant level.

4.8.3 Conclusion

With implementation of the above mitigation measures, the proposed project will avoid hazards from hazardous materials contamination and will not create a significant hazard to people or the environment. **(Less Than Significant Impact with Mitigation Incorporated)**

4.9 HYDROLOGY AND WATER QUALITY

4.9.1 Setting

4.9.1.1 *Background*

The discharge of stormwater from the City's municipal storm sewer system is regulated primarily under the federal Clean Water Act (CWA) and California's Porter-Cologne Water Quality Control Act. The San Francisco Bay Regional Water Quality Control Board (RWQCB) implements these regulations at the regional level. Under the CWA, the RWQCB has regulatory authority over actions in waters of the United States, through the issuance of water quality certifications. Under Section 401 of the CWA, permits are issued in combination with permits issued by the Army Corps of Engineers (ACOE), under Section 404 of the CWA. When the Water Board issues Section 401 certifications, it simultaneously issues general Water Discharge Requirements for the project, under the Porter-Cologne Water Quality Control Act. Activities in areas that are outside of the jurisdiction of the ACOE (e.g. isolated wetlands, vernal pools, or stream banks above the ordinary high water mark) are regulated by the Water Board, under the authority of the Porter-Cologne Water Quality Control Act. Activities that lie outside of ACOE jurisdiction may require the issuance of either individual or general waste discharge requirements (WDRs) from the Water Board.

New construction in San Jose is subject to the conditions of the City's National Pollutant Discharge Elimination System (NPDES) Permit, which was reissued by the RWQCB in February 2001. Additional water quality control measures were approved in October 2001 (revised in 2005), when the RWQCB adopted an amendment to the NPDES permit for Santa Clara County. This amendment, which is commonly referred to as "C3" requires all new and redevelopment projects that result in the addition or replacement of impervious surfaces totaling 10,000 square feet or more to 1) include storm water treatment measures; 2? Ensure that the treatment measures be designed to treat an optimal volume or flow of storm water runoff from the project site; and 3) ensure that storm water treatment measures are properly installed, operated, and maintained.

The City has developed a policy that implements Provision C.3 of the NPDES Permit, requiring new development projects to include specific construction and post-construction measures for improving the water quality of urban runoff to the maximum extent feasible. The City's Post-Construction Urban Runoff Management Policy (6-29) established general guidelines and minimum Best Management Practices (BMPs) for specified land uses, and includes the requirement of regular maintenance to ensure their effectiveness. Later, the City adopted the Post-Construction Hydromodification Management Policy (8-14) to manage development related increases in peak runoff flow, volume and duration, where such hydromodification is likely to cause increase erosion, silt pollutant generation or other impacts to local rivers, streams and creeks. Implementation of these Policies will reduce potential water quality impacts to less than significant levels.

4.9.1.2 *Drainage and Flooding*

The project alignment is approximately 4,900 feet long and located within Commercial Street and North Fourth Street. The project alignment consists of impervious surfaces (e.g., roadways) and pervious surfaces (e.g., gravel and dirt areas) within the public right of way.

Based on the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps (Map No. 0603490019E, dated December 16, 1988), the entire project area is within Zone AO. Flood

Zone AO is defined as areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but not flood hazard factors are determined.[12]

The site is not subject to inundation by tsunami, seiche or mudflow.[13]

4.9.1.2 *Water Quality*

The water quality of ponds creeks, streams, and other surface water-bodies can be greatly affected by pollution carried in contaminated surface runoff. Pollutants from unidentified sources, known as "non-point" source pollutants, are washed from streets, construction sites, parking lots, and other exposed surfaces into storm drains. Stormwater runoff often contains contaminants such as oil and grease, plant and animal debris (e.g., leaves, dust, and animal feces), pesticides, litter, and heavy metals. In sufficient concentrations, these pollutants have been found to adversely affect the aquatic habitats to which they drain.

Storm drainage lines in the site area are provided and maintained by the City of San Jose. Several storm drainage lines are located in the project alignment area. At the intersection of Commercial Street and North Fifth Street there are 42-inch and 78-inch storm drain lines.

At the intersection of Commercial and North Fourth Street, there are 66-inch and 78-inch storm drain lines. At Fourth and Rosemary Streets the 66-inch and 78-inch lines continue. At Fourth Street and Gish Road there is a 60-inch line, and at Fourth and Archer Streets there is a 27-inch storm drain line. At Fourth Street and U.S. Highway 101, there is a 30-inch storm drain line.

4.9.1.3 *Regulatory Overview*

The Santa Clara Valley Urban Runoff Pollution Prevention Program was developed in accordance with the requirements of the revised 1995 San Francisco Bay Basin Water Quality Control Plan, for the purpose of reducing water pollution associated with urban storm water runoff. The State Water Resources Control Board (SWRCB) also administers the National Pollutant Discharge Elimination System (NPDES) General Permit for Construction Activities, which is intended to reduce construction-related stormwater pollution.

The State NPDES General Construction Permit requires development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) and uses stormwater Best Management Practices (BMPs) to control runoff, erosion, and sedimentation from the site both during and after construction. The SWPPP has two major objectives: 1) to help identify the sources of sediments and other pollutants that affect the quality of stormwater discharges; and 2) to describe and ensure the implementation of practices to reduce sediment and other pollutants in stormwater discharges.

---

[12] Federal Emergency Management Agency. Flood Insurance Rate Map. Community-Panel Number 0603490019E. December 16, 1988.
[13] Association of Bay Area Governments (ABAG). http://www.abag.ca.gov/bayarea/eqmaps/tsunami/tsunami.html

4.9.2 Environmental Checklist and Discussion

HYDROLOGY AND WATER QUALITY						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐	☐	1
2) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒	☐	1
3) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on-or off-site?	☐	☐	☐	☒	☐	1
4) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or off-site?	☐	☐	☐	☒	☐	1
5) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	☐	☒	☐	☐	☐	1
6) Otherwise substantially degrade water quality?	☐	☐	☒	☐	☐	1
7) Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒	☐	11
8) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒	☐	11

HYDROLOGY AND WATER QUALITY						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
9) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒	☐	11
10) Be subject to inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒	☐	12

The new sewer interceptor would be installed in Commercial Street and North Fourth Street in the existing right-of-way (ROW). The installation of the proposed sanitary sewer interceptor would require trenches of approximately 10-feet wide and 20-feet deep (see full site plans in Appendix A). The new interceptor located in Commercial Street would be 72-inches in diameter, and would replace the existing eight-inch sewer line. The line would run for approximately 300 feet west to the intersection of Commercial and North Fourth Streets. From the intersection of Commercial and North Fourth Streets, an 84-inch line would continue north in North Fourth Street for approximately 4,200 feet, replacing the existing 48 and 54-inch RCP.

4.9.2.2 *Drainage and Flooding*

The proposed sanitary sewer interceptor would be replaced below ground and would not impact the drainage patterns in the project area or be subject to direct damage from flood waters. In addition, final paving and grading following removal, trenching, and installation of the new piping, will restore the original grade and drainage patterns to the extent feasible.

As mentioned above, the project site is located in a Zone AO and AH according to the Flood Insurance Rate Map (FIRM). Although the project area is located within a 100-year flood zone, the project does not propose structures or buildings that would be impacted by floods. For these reasons, the proposed project would not result in drainage or flooding impacts.

4.9.2.3 *Water Quality*

Project construction activities would affect the water quality of storm water surface runoff. Removal of the existing interceptor and installation of the new interceptor will result in a disturbance to the underlying soils, thereby increasing the potential for sedimentation and erosion. When disturbance of underlying soils occurs, the surface runoff that flows across the site may contain sediments that are ultimately discharged into the storm drainage system. Best management practices are incorporated into the project to prevent erosion and storm water runoff during construction activities. These BMPs are listed below under Standard Construction Measures.

Groundwater within the project area occurs at depths of approximately eight to 10 feet below the ground surface (bgs) with historical high groundwater levels of approximately four feet bgs. Groundwater flow is to the northwest towards San Francisco Bay. Continuous dewatering will likely be required during construction.

Construction activities could temporarily increase pollutant loads in stormwater runoff. The following standard measures are included in the project, consistent with NPDES Permit and City Policy requirements, which will further reduce the potential for temporary construction impacts to surface water quality:

Standard Construction Measures

Construction Measures

- Prior to the commencement of any clearing, grading or excavation, the project shall comply with the State Water Resources Control Board's National Pollutant Discharge Elimination System (NPDES) General Construction Activities Permit, to the satisfaction of the Director of Public Works, as follows:

    1. The City shall develop, implement and maintain a Storm Water Pollution Protection Program (SWPPP) to control the discharge of stormwater pollutants including sediments associated with construction activities;
    2. The City shall file a Notice of Intent (NOI) with the State Water Resources Control Board (SWRCB).

- The project shall incorporate Best Management Practices (BMPs) into the project to control the discharge of stormwater pollutants including sediments associated with construction activities. Examples of BMPs are contained in the *Blueprint for a Clean Bay*. Prior to grading, the City will prepare an Erosion Control Plan approved by the City Project Engineer, Department of Public Works, 200 E. Santa Clara Street, San Jose, California 95113. The Erosion Control Plan may include BMPs as specified in ABAG's *Manual of Standards Erosion & Sediment Control Measures* for reducing impacts on the City's storm drainage system from construction activities. For additional information about the Erosion Control Plan, the NPDES Permit requirements or the documents mentioned above, please call the Department of Public Works at (408) 535-8300.

- The project will comply with the City of San Jose Grading Ordinance, including erosion and dust control during site preparation and with the City of San Jose Zoning Ordinance requirement for keeping adjacent streets free of dirt and mud during construction. The following specific BMPs will be implemented to prevent stormwater pollution and minimize potential sedimentation during construction:

    1. Restriction of grading to the dry season (June 15 through October 15) or meet City requirements for grading during the rainy season.
    2. Utilize on-site sediment control BMPs (such as fiber rolls, sand bag barriers, sediment traps, silt fences, straw bales, and storm drain inlet protection) to retain sediment on the project site;
    3. Utilize stabilized construction entrances and/or wash racks;
    4. Implement damp street sweeping;
    5. Provide temporary cover of disturbed surfaces to help control erosion during construction;
    6. Provide permanent cover to stabilize the disturbed surfaces after construction has been completed.

Post Construction

- The project shall comply with applicable provisions of the following City Policies-1) Post-Construction Urban Runoff Management Policy (6-29) which establishes guidelines and minimum BMPs for all projects and 2) Post-Construction Hydromodification Management Policy (8-14) which provides for numerically sized (or hydraulically sized) TCMs.

4.9.3 Conclusion

With the implementation of the standard measures identified above, the proposed project will further avoid any potential hydrology or water quality impacts. **(Less Than Significant Impact)**

4.10 LAND USE

4.10.1 Setting

The project site is located within a developed, urban area of San Jose. The existing land uses in the project area include commercial, industrial, office, and residential uses. The land uses on Commercial Street include industrial and residential. South of Interstate 880, land uses include office, residential, and industrial. Land uses north of Interstate 880 and south of U.S. Highway 101 include industrial (automotive repair, Peterbilt, Hertz Rental Equipment, and airport parking), residential (senior living and multi-family), commercial (bowling alley, car wash, etc.), and restaurants. An aerial photograph with surrounding land uses is shown on Figure 2.0-3.

As discussed in Biology, Section 4.4.1.3 the project would not adversely impact protected species, natural communities, or conflict with the preliminary conservation objectives of the Habitat Conservation Plan (HCP).

4.10.2 Environmental Checklist and Discussion

LAND USE						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Physically divide an established community?	☐	☐	☐	☒	☐	1,2
2) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒	☐	1,2,3
3) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒	☐	1,2

The project proposes redirecting the majority of sanitary sewer flow from the existing 60-inch brick interceptor which extends from approximately 600 feet north of North Fourth Street and south of Commercial Street in North Fifth Street, to a new sewer line in Commercial Street and North Forth Street, measuring 72-inches and 84-inches, respectively.

The proposed sewer project would not create a new type of land use, and would not result in any long term land use impacts. The proposed roadway alignment would be restored to its current condition following installation of the proposed 84-inch sewer line.

4.10.2.1 *Consistency with the Sanitary Sewer Master Plan Capacity Assessment*

The wastewater collection system of City of San Jose is responsible for conveying wastewater from City of San Jose, West Valley Sanitary District, City of Santa Clara and County Sanitation District No. 2-3.

The City is in the process of implementing improvements to the sanitary system in order to meet future system demands and remedy existing and future capacity and operational deficiencies. These improvements are based on a series of condition assessments and the October 2004 Sanitary Sewer Master Plan Capacity Assessment which refined the sanitary system hydraulic model based on land use and projected future demands, identified sanitary system sewer capacity deficiencies, and developed a prioritized list of capital improvement projects to address the predicted system capacity deficiencies.

These prior efforts identified improvements for Phase VI of the interceptor system consisting of: "replacing approximately 4,500 linear feet of an existing 60-inch-diameter brick interceptor sanitary sewer with a new interceptor sewer upstream between Structure G located upstream at North Fourth Street and Commercial Street downstream to Structure E located at Zanker Road and Old Bayshore Freeway."

The proposed sewer interceptor project is intended to accommodate existing and planned growth as envisioned in San Jose's General Plan.

4.10.2.2 *Construction Easements and Permitting*

A temporary construction easement may be provided for storage of excavated material, pipe segments, and vehicle access. If not provided, it would be incumbent upon the contractor to lease an empty lot for the duration of the project. The areas of this easement will vary depending on available space, but would be located as far as possible from any sensitive receptors, and in no case closer than 200 feet to any sensitive receptor site.

For the tunnel crossings, it is anticipated that 800 square feet of temporary construction easement will be required for the construction of the launching shaft location for U.S. Highway 101. A potential location for the launching shaft may be in the overflow parking lot area of the Holiday Inn adjacent to North Fourth Street. The receiving shaft will be located within the roadway area on Zanker Road to the southeast of the existing Structure E.

The proposed project would require permits from Caltrans for site access and borings proposed under I-880 and U.S. 101. Procurement of temporary construction easements from various property owners for creating staging areas and launching and receiving pits used for trenchless construction would also be required.

4.10.2.3 *Property Access*

During project construction, there may be temporary limitations to access for businesses located on Commercial Street and North Fourth Street, along the project alignment. Disruption to access would occur during the trenching, excavation, installation, fill, and paving stages of project construction. Proposed construction activities would impact the following areas of the project site:

- Closure of eastbound Bayshore to southbound North Fourth Street during construction of the US-101 tunnel, and during installation of the pipe in North Fourth from the tunnel pit to about 200 ft. south of that. The duration of closure would be up to four months.
- Portions of North Fourth Street will be closed during some stages of construction, however, it is anticipated that one lane will remain open for through traffic during construction to provide access to local businesses.
- The East Gish at North Fourth and East Rosemary at North Fourth intersections may be closed for construction of structures. These intersection closures are anticipated to last from one month to four months. The possibility of maintaining traffic along North Fourth Street during this phase of construction will be determined at a later design phase.
- The North Fourth and Commercial Street intersection may be closed intermittently to allow removal of existing pipes and manholes, and new construction. The intersection closure would be four months, with the possibly of going longer.

The proposed road closures would be short-term, and one-lane of access to North Fourth Street is anticipated during all phases of construction. Any access disruption to businesses would be short-term.

The proposed project would not divide an established community, conflict with any applicable land use plan, policy or regulation, or conflict with a habitat conservation plan or natural community conservation plan. The proposed project, therefore, would not result in significant land use impacts.

The project does not conflict with any adopted habitat or other conservation plan. The project area is not within the Santa Clara County Airport Land Use Commission (ALUC) jurisdiction boundaries.

4.10.3 Conclusion

The proposed project will not result in significant land use impacts. **(Less Than Significant Impact)**

4.11 MINERAL RESOURCES

4.11.1 Setting

The project is within a developed urban area. It does not contain any known or designated mineral resources.

4.11.2 Environmental Checklist and Discussion

MINERAL RESOURCES						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒	☐	1,2
Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒	☐	1,2

Extractive resources known to exist in and near the Santa Clara Valley include cement, sand gravel, crushed rock, clay, and limestone. Santa Clara County has also supplied a significant portion of the nation's mercury over the past century. Pursuant to the mandate of the Surface Mining and Reclamation Act of 1975 (SMARA), the State Mining and Geology Board has designated the Communications Hill Area (Sector EE), bounded generally by the Southern Pacific Railroad, Curtner Avenue, State Route 87, and Hillsdale Avenue, as containing mineral deposits which are of regional significance as a source of construction aggregate materials.

Neither the State Geologist nor the State Mining and Geology Board has classified any other areas in San Jose as containing mineral deposits which are either of statewide significance or the significance of which requires further evaluation. Therefore, other than the Communications Hill area cited above, San Jose does not have mineral deposits subject to SMARA.

The project is outside of the Communications Hill area, and will therefore not result in a significant impact from the loss of availability of a known mineral resource.

4.11.3 Conclusion

The project would not result in significant impacts to known mineral resources. **(No Impact)**

4.12 NOISE

The following discussion is based upon an environmental noise study prepared by *Illingworth & Rodkin Inc.*, in July 2010. This report is located in Appendix D of this document.

4.12.1 Setting

4.12.1.1 *Background Information*

Several factors influence sound as it is perceived by the human ear, including the actual level of sound, the period of exposure to the sound, the frequencies involved, and fluctuation in the noise level during exposure. Noise is measured on a "decibel" scale which serves as an index of loudness. Because the human ear cannot hear all pitches or frequencies, sound levels are frequently adjusted or weighted to correspond to human hearing. This adjusted unit is known as the "A-weighted" decibel or dBA. Further, sound is averaged over time and penalties are added to the average for noise that is generated during times that may be more disturbing to sensitive uses such as early morning, or late evening.

Since excessive noise levels can adversely affect human activities (such as conversation and sleeping) and human health, federal, state, and local governmental agencies have set forth criteria or planning goals to minimize or avoid these effects. The noise guidelines are almost always expressed using one of several noise averaging methods such as L_{eq}, DNL, or CNEL.[14] Using one of these descriptors is a way for a location's overall noise exposure to be measured, realizing of course that there are specific moments when noise levels are higher (e.g., when a jet is taking off or a leafblower is operating) and specific moments when noise levels are lower (e.g., during lulls in traffic flows or in the middle of the night). For this report, the DNL will be used as it is consistent with the guidelines for the City of San Jose and the State of California.

Vibration

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. The Peak Particle Velocity (PPV) vibration velocity amplitude is used to evaluate human response to vibration. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. A PPV descriptor with units of mm/sec. or in/sec. is used to evaluate construction generated vibration for building damage and human complaints. Table 4.12-1 displays the reactions of people and the effects on buildings that continuous vibration levels produce. The annoyance levels shown in Table 4.12-1 should be interpreted with care since vibration may be found to be annoying at much lower levels than those shown, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying.

Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage. In high noise

[14] **L_{eq}** stands for the Noise Equivalent Level and is a measurement of the average energy level intensity of noise over a given period of time such as the noisiest hour. **DNL** (also known as L_{dn}) stands for Day-Night Level and is a 24-hour average of noise levels, with 10 dB penalties applied to noise occurring between 10:00 PM and 7:00 AM. **CNEL** stands for Community Noise Equivalent Level; it is similar to the DNL except that there is an additional five (5) dB penalty applied to noise which occurs between 7:00 PM and 10:00 PM. As a general rule of thumb where traffic noise predominates, the CNEL and DNL are typically within two (2) dBA of the peak-hour L_{eq}.

environments, which are more prevalent where groundborne vibration approaches perceptible levels, this rattling phenomenon may also be produced by loud airborne environmental noise causing induced vibration in exterior doors and windows.

Table 4.12-1

Reaction of People and Damage to Buildings for Continuous Vibration Levels

Vibration Level, PPV (in/sec)	Human Reaction	Effect on Buildings
0.006 to 0.019	Threshold of perception, Possibility of intrusion	Vibration unlikely to cause damage of any type
0.08	Vibrations readily perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
0.10	Level at which continuous vibrations begin to annoy people	Virtually no risk of "architectural" damage to normal buildings
0.20	Vibrations annoying to people in buildings	Threshold at which there is a risk of "architectural" damage to normal dwellings such as plastered walls or ceilings.
0.4 to 0.6	Vibrations considered unpleasant by people subjected to continuous vibrations	Vibration at this level would cause "architectural" damage and possibly minor structural damage.

4.12.1.2 *Regulatory Background*

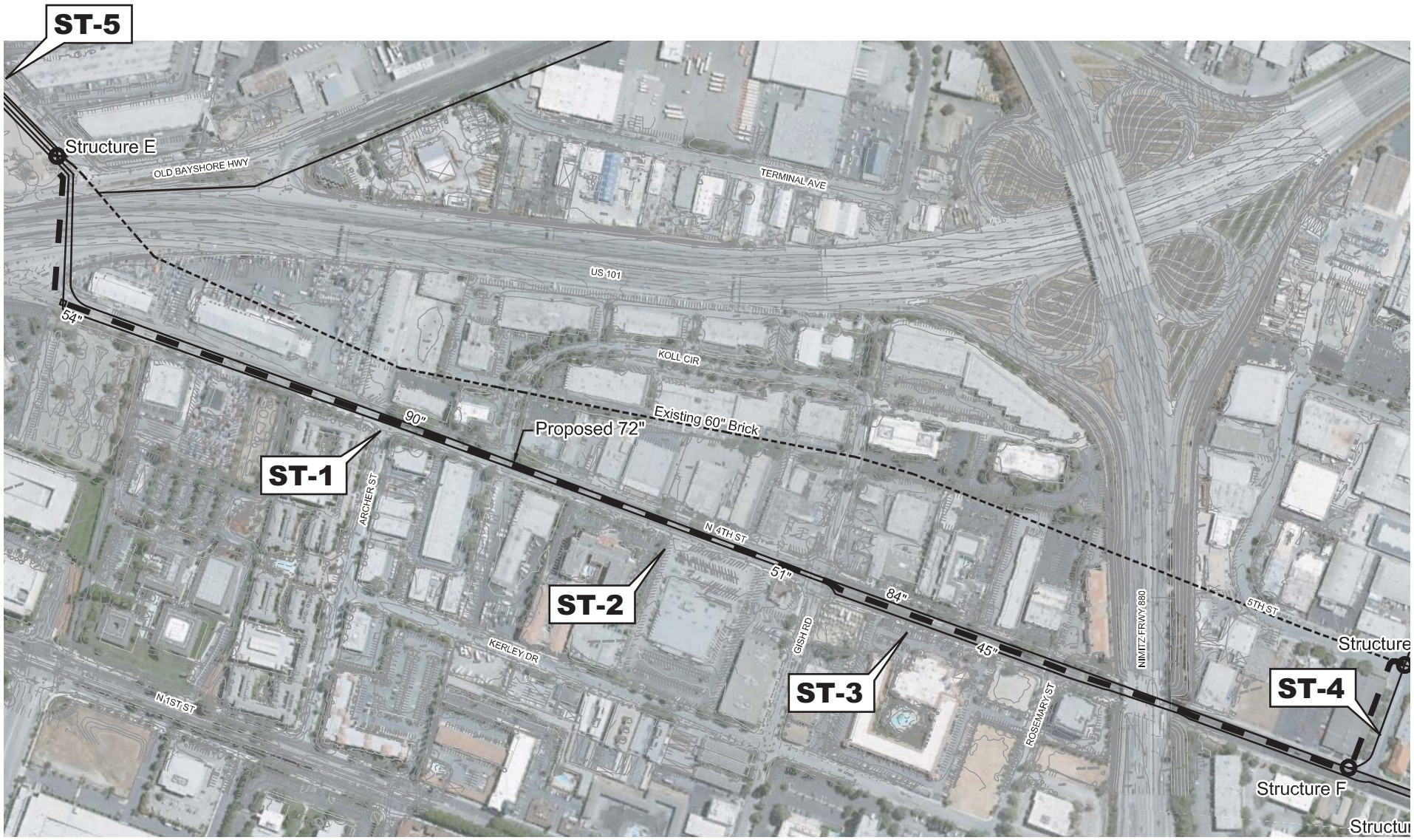
The San Jose 2020 General Plan states that the City's acceptable exterior noise level is 55 DNL long term, and 60 DNL short term. The acceptable interior noise level is 45 DNL. The plan recognizes that the noise levels may not be achieved in the Downtown, and in the vicinity of major roadways and the Mineta San Jose International Airport.

General Plan Policy 9: Construction operations should use available noise suppression devices and techniques.

4.12.1.3 *Existing Noise Conditions*

A noise monitoring survey was prepared to quantify ambient noise levels along the project alignment. Four short-term noise measurements were made adjacent to sensitive uses bordering the proposed project alignment for periods of ten minutes. Three of the four measurements were made along North Fourth Street which is the predominant noise source in the project vicinity. One short-term noise measurement (ST-5) was taken from a previous project. Figure 4.12-1 shows the location of the five total noise monitoring locations.

When normalized to a reference distance of 50 feet from the roadway center, average traffic noise levels along North Fourth Street typically ranged from 67 to 69 dBA Leq. Daytime noise levels in noise sensitive areas nearest Highway 101 and Commercial Street ranged from 63 to 66 dBA Leq. Nighttime average traffic noise levels are typically five to ten dBA lower than the traffic noise levels occurring during daytime hours.



NOISE MEASUREMENT LOCATIONS

FIGURE 4.12-1

4.12.2 Environmental Checklist and Discussion

NOISE						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project result in:						
1) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐	☐	1,2,13
2) Exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐	☐	1,2,13
3) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒	☐	1,2,13
4) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐	☐	1,2,13
5) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐	☐	1,2,13
6) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒	☐	1,2,13

The proposed sewer interceptor project would not create a new type of land use or generate traffic trips, and therefore, would not result in any long term noise impacts. The proposed roadway alignment would be restored to its current condition following installation of the proposed 84-inch sewer line.

4.12.2.1 *Noise Impacts to the Project*

The proposed project would not include any sensitive use areas and would not be impacted by future noise conditions adjacent to the project alignment.

4.12.2.2 *Noise Impacts From the Project*

Vibration

The majority of project construction activities would employ open trench construction methods to install new pipe sections or to replace existing pipelines. Activities with the potential of generating perceptible vibration levels would include the removal of pavement and soil, shoring, and the compacting of backfill after the new pipeline is installed.

Equipment anticipated during project construction would include: backhoes, excavators, cranes, dump trucks, front end loaders, water trucks, dozers, and various passenger vehicles. Vibration levels generated by the majority of proposed equipment would be equal to or below the 0.2 in/sec PPV criteria to assess the potential for cosmetic or structural damage. Impact and vibratory pile driving is not proposed as part of the construction of the project. Vibration levels would be below 0.2 in/sec PPV when located at a distance of 25 feet from sensitive receivers and damage would not be expected. In addition, planned construction hours are during the daytime, limiting the possibility of annoyance due to night time off-site vibration.

The impact resulting from the project would be considered less than significant as vibration levels would not exceed the 0.2 in/sec PPV criteria established to evaluate the risk for cosmetic or structural damage to fragile buildings.

Construction Noise

Noise from the construction of the proposed project could potentially pose a significant impact to the surrounding residential properties. To limit the construction noise impacts on nearby properties, various measures have been incorporated into the proposal.

Project construction is anticipated to begin in late 2011 and last up to 24 months. Mobilization of equipment and site clearing and preparation will take approximately two months and will overlap with pipeline and junction structure installation (22 months). Pipeline installation will take approximately 16 months while junction structures will take approximately two months to construct. The tunneling portion of the project duration is anticipated to be four months, and site restoration is anticipated to last one month. Noise levels at sensitive receivers adjacent to the project alignment would increase during the construction period. Construction noise would be temporary and would only occur during the daytime.

Construction noise would primarily consist of the operation of vehicles and equipment during pavement removal, excavation, pipeline installation, backfill operations, and the repaving of the portion of the street disturbed by the project.

Noise impacts from project construction activities are a function of the level of noise generated by individual pieces of construction equipment, the amount of equipment operating at any given time, the distance and sensitivities of nearby land uses, the presence of noise barriers or other structures that provide acoustical shielding, and the timing and duration of the noise-generating activities. Where noise from construction activities exceeds 60 dBA L_{eq} and exceeds the ambient noise environment by at least five dBA L_{eq} at noise-sensitive residential uses in the project vicinity for a period of more than one construction season, the impact would be considered significant.

Hourly average noise levels generated by public works-type projects typically range from 79 to 88 dBA L_{eq} measured at a distance of 50 feet from the center of a busy construction site. During

construction activities, maximum instantaneous noise levels would vary depending on the specific pieces of equipment operating on site. The typical range of maximum instantaneous noise levels would be 75 to 82 dBA L_{max} at a distance of 50 feet.

Hourly average noise levels resulting from the construction of the project would range from 83 to 85 dBA Leq at a distance of 50 feet. These hourly average noise levels would exceed ambient traffic noise levels at receivers along North Fourth Street and Commercial Street by 17 to 19 dBA Leq. The rate of pipeline installation is approximately 60 feet per day. Therefore, construction noise levels would only exceed the significance criterion at any individual receiver or group of receivers over a short period of time, often for less than three weeks. Pipeline construction activities are calculated to generate noise levels seven dBA Leq above the ambient noise environment near the southernmost terminus of Zanker Road. Construction activities near Structure E would be further than 500 feet from the nearest noise sensitive receiver and would not exceed the projected ambient noise environment by five dBA Leq or more. Table 4.12-3 shows the construction noise levels at various locations along the project alignment.

Table 4.12-2: Construction Noise Levels On the Project Alignment

Roadway Segment	Noise Level (dBA)			
	Maximum Instantaneous Noise Level (L_{max})	**Average Noise Level (L_{eq})**	**Typical Daytime Ambient (L_{eq})**	**Noise Increase above Ambient**
N. 4th St., Hwy 101 ramps to Archer St.	82	85	68	17
N. 4th St., Koll Cir. to E. Gish Rd.			67	18
N. 4th St., E. Gish Rd. to I-880 overpass.			67	18
Commercial St., N. 4th St. to N. 5th St.			66	19
Zanker Rd., Reynolds Cir. Adjacent to Hwy 101	81	83	76	7

Project construction activities anticipated along North Fifth Street and North Fourth Street , Commercial Street, and Zanker Road would be relatively short in duration, and the overall construction activities would occur for less than a year in duration, therefore, the project construction noise would be considered a less than significant impact.

Standard Measures: The project shall implement the following standard noise control measures, to reduce construction noise levels as low as practical.

- Construction will be limited to the hours of 7:00 a.m. to 7:00 p.m. Monday through Friday for any on-site or off-site work within 500 feet of any residential unit. Construction outside of these hours may be approved through a development permit based on a site-specific construction noise mitigation plan and a finding by the Director of Planning, Building, and Code Enforcement that the construction noise mitigation plan is adequate to prevent noise disturbance of affected residential uses.

- Use the best available noise control techniques (including mufflers, intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds) for all equipment and trucks to minimize construction noise impacts.

- Locate stationary noise generating equipment as far from sensitive receptors. If they must be located near receptors, adequate muffling (with enclosures where feasible and appropriate) will be used as necessary to comply with daytime noise limits. Any enclosure openings or venting will face away from sensitive receptors.

- Locate material stockpiles as well as maintenance/equipment staging and parking areas a minimum of 200 feet from noise sensitive receptors, such as residential uses.

- Designate a project liaison that will be responsible for responding to noise complaints during the construction phase. The name and phone number of the liaison will be conspicuously posted at construction areas and on all advanced notifications. This person will take steps to resolve complaints, including periodic noise monitoring, if necessary. Results of noise monitoring will be presented at regular project meetings with the project contractor, and the liaison will coordinate with the contractor to modify any construction activities that generated excessive noise levels to the extent feasible.

- Require a reporting program that documents complaints received, actions taken to resolve problems, and effectiveness of these actions.

The project site is not located within the Santa Clara County Airport Land Use Commission (ALUC) jurisdiction. The project alignment is within two miles of a public airport, but is not a noise sensitive land use.

4.12.3 Conclusion

With the implementation of the standard construction measures identified above, the proposed project would not result in significant noise impacts. **(Less Than Significant Impact)**

4.13 POPULATION AND HOUSING

4.13.1 Setting

According to the Association of Bay Area Governments' (ABAG) *Projections 2007*, within the City of San José's Sphere of Influence, the population for 2005 was 993,000 in 309,400 households. For 2020, the projected population for San José is 1,140,097 in 355,924 households. The proposed project is located in Council Districts 3 and 4 (north of U.S. Highway 101).

No housing exists within the project alignment. Multi-family housing is adjacent to the project site, near the intersection of North Fifth Street and Commercial Street, as well as at the south end of the alignment, near North Fourth Street and Archer Street. A senior living facility is located adjacent to the site, at the intersection of Rosemary and Fourth Streets.

4.13.2 Environmental Checklist and Discussion

POPULATION AND HOUSING						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐	☐	1
2) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒	☐	1
3) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒	☐	1

The project does not propose any housing development. The proposed project would not induce population or job growth or displace either housing or persons.

The proposed project is designed to serve projected growth in the City and provide capacity for peak wet weather flows in the City's sanitary sewer system. The project proposes redirecting the majority of sanitary sewer flow from the existing 60-inch brick interceptor which extends from approximately 600 feet north of North Fourth Street and south of Commercial Street in North Fifth Street, to a new sewer line in Commercial Street and North Fourth Street, measuring 72-inches and 84-inches, respectively. The proposed project would not indirectly induce substantial population growth in San Jose beyond what is anticipated in the City's General Plan.

4.13.3 Conclusion

The proposed project will not result in significant population and housing impacts. **(No Impact)**

4.14 PUBLIC SERVICES

4.14.1 Setting

Fire Service

Fire protection to the project site is provided by the San Jose Fire Department (SJFD), which serves a population of approximately 920,000 and an incorporated area of 176 square miles. The SJPD responds to all fires, hazardous materials spills, and medical emergencies (including injury accidents) in the project area. It is the SJFD's goal to not exceed four minutes for the "first response" and six minutes for the "second response" times.

The nearest fire station is station No. 5, located at 1380 North 10th Street, approximately one mile east of the project alignment. In the 2007-2008 fiscal year, this station responded to 1917 calls including 1421 medical, 147 fires, and 349 other emergencies.[15]

Police Station

Police protection services are provided to the project site by the City of San Jose Police Department (SJPD). Officers patrolling the project area are dispatched from police headquarters, located at 201 West Mission Street. The SJPD presently consists of approximately 1,374 sworn officers and operates 338 marked police cars.[16]

The SJPD has four patrol divisions (plus San Jose International Airport), 16 patrol districts, 83 patrol beats and 357 patrol beat building block (BBB). The project site is located in the Central Division, of the SJPD's service area.

Schools

The project site is located in the San Jose Unified School District, East Side Union High School District, and Orchard Elementary School District. The nearest elementary school is Bachrodt Elementary School, located at 102 Sonora Avenue, approximately 0.5 miles northwest of the project alignment. The nearest middle school is Burnett Middle School, located at 850 North 2nd Street, 0.9 miles north of the project site. The nearest high school is San Jose High School, located at 275 North 24th Street, approximately 3.7 miles southeast of the project site.[17]

Parks

The project site is located in Council Districts 3 and 4. The next nearest park is Rosemary Garden Park, located approximately 0.6 miles east of the project alignment.

---

[15] City of San José. San José Fire Department. August 5, 2010. http://www.sjfd.org/Stats/0708Station.asp.
[16] Sergeant Michael Kihmm. San José Police Department. Personal Communication. March 9, 2007.
[17] San Jose Unified School District. August 5, 2010. http://www.sjusd.org/

4.14.2 Environmental Checklist and Discussion

PUBLIC SERVICES						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project: 1) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:						
Fire Protection?	☐	☐	☐	☒	☐	1
Police Protection?	☐	☐	☐	☒	☐	1
Schools?	☐	☐	☐	☒	☐	1
Parks?	☐	☐	☐	☒	☐	1
Other Public Facilities?	☐	☐	☐	☒	☐	1

The project proposes redirecting the majority of sanitary sewer flow from the existing 60-inch brick interceptor which extends from approximately 600 feet north of North Fourth Street and south of Commercial Street in North Fifth Street, to a new sewer line in Commercial Street and North Forth Street, measuring 72-inches and 84-inches, respectively. The proposed project, installation of utility improvements, would not impact fire and police protection services, schools, parks, or other public facilities.

The proposed sewer interceptor project would not create a new type of land use, and would not result in any long term public service impacts. The proposed roadway alignment would be restored to its current condition following installation of the proposed 84-inch sewer line.

During construction, one lane of traffic will remain open to allow for access to local businesses, as well as emergency response vehicles.

4.14.3 Conclusion

The proposed project would not result in impacts to public services. **(No Impact)**

4.15 RECREATION

4.15.1 Setting

The City of San Jose provides parklands, open space, and community facilities for public recreation and community services. Park and recreation facilities vary in size, use and type of service and provide for regional and neighborhood uses. The project alignment is currently paved roadway and associated landscaping.

The project site is located in Council Districts 3 and 4. The next nearest park is Rosemary Garden Park, located approximately 0.6 miles east of the project alignment

4.15.2 Environmental Checklist and Discussion

RECREATION						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
1) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒	☐	1
2) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒	☐	1

The project proposes redirecting the majority of sanitary sewer flow from the existing 60-inch brick interceptor which extends from approximately 600 feet north of North Fourth Street and south of Commercial Street in North Fifth Street, to a new sewer line in Commercial Street and North Forth Street, measuring 72-inches and 84-inches, respectively. The proposed project would not impact nor create a need for additional recreational facilities.

4.15.3 Conclusion

The proposed project will not result in significant impacts to parks and recreational facilities. **(Less Than Significant Impact)**

4.16 TRANSPORTATION

4.16.1 Setting

The primary roadways in the project area are Commercial Street, North Fourth Street, Interstate 880, and U.S. Highway 101. Other roadways in the project area include: Rosemary Street, Gish Road, Koll Circle, Archer Street, and North Fifth Street. The existing roadways in the project area are shown in Figure 2.1-3.

There are bike lanes on both sides of Commercial Street in the project area. Sidewalks are located on the north side of Commercial Street, and along the east and west sides of North Fourth Street. No bus routes operate on the project alignment. The nearest public transportation to the project area is the light rail located on North First Street, to the west of the project area. Express bus routes 121 and 122 run on U.S. Highway 101, adjacent to the project area. Route 121 provides commuter service from Lockheed/Moffet Park in Sunnyvale to the Gilroy Transit Center via the Morgan Hill Caltrain Station, and Route 122 provides commuter service from Lockheed/Moffett Park in Sunnyvale to the Santa Teresa light rail station in South San Jose.

Employee Parking

The number of employees will vary, but it is anticipated that no more than 20 construction workers will be on-site at any one time. It is anticipated that employees will find parking on public streets near the project site. At the north side of the US 101 tunnel, employees will be permitted to park on the Zanker Road median.

4.16.2 Environmental Checklist and Discussion

TRANSPORTATION/TRAFFIC						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project: 1) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☐	☒	☐	1

TRANSPORTATION/TRAFFIC						
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
Would the project:						
2) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒	☐	1
3) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒	☐	1
4) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible land uses (e.g., farm equipment)?	☐	☐	☐	☒	☐	1
5) Result in inadequate emergency access?	☐	☐	☐	☒	☐	1,2
6) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒	☐	1,2

4.16.2.1 *Long Term Traffic Impacts*

The proposed sanitary sewer project would not create a new type of land use, and would not generate any long term, operational project trips. For this reason, the proposed project is not anticipated to result in transportation level of service impacts to signalized intersections or freeway segments. The proposed roadway alignment would be restored to its current condition following installation of the proposed 84-inch sewer line.

The proposed project is a sanitary sewer interceptor closure and redirection of flow, and would therefore not have any impact on transit facilities. Other than temporary impacts during construction, the project would not result in conflicts with pedestrian and bicycle facilities in the area.

4.16.2.2 *Short Term Traffic Impact*

The project proposes redirecting the majority of sanitary sewer flow from the existing 60-inch brick interceptor which extends from approximately 600 feet north of North Fourth Street and south of Commercial Street in North Fifth Street, to a new sewer line in Commercial Street and North Forth Street, measuring 72-inches and 84-inches, respectively.

Project construction will temporarily affect right-of-way access within Commercial Street and North Fourth Street south of I-880, and North Fourth Street north of I-880. The project would require short-term road closure and rerouting of traffic for these roadways during construction.

During pipeline closure and construction, it is likely that a portion of North Fourth Street will be closed, with one lane open to allow traffic access. It is likely that access to the on-ramp for southbound U.S. 101 from Northbound Fourth Street, ramps off of southbound Zanker Road, and ramps to northbound Zanker Road would be limited during construction hours. It is not anticipated that access to the on-ramp to southbound U.S. 101 from Old Bayshore highway would be limited during construction hours. However, for safety, traffic to southbound North Fourth Street would be blocked at that location during tunnel construction. The tunneling portion of the project is anticipated to last four months, and site restoration is anticipated to last one month.[18]

The overall pipeline installation would take approximately 16 months, while junction structures would take approximately two months to construct. The rate of pipeline installation is approximately 60 linear feet per day. The project would be incrementally installed along the alignment, therefore, disruption to businesses would be temporary and would occur only during pipeline installation adjacent to their property.

It is likely that traffic will require temporary rerouting onto adjacent streets to circumnavigate the project area during project construction. A rerouting plan will be prepared prior to initiation of construction, and signage will be provided for alternate local traffic routes.

Construction Truck Trips

An estimated 32,000 cubic yard (cy) of soil will be excavated from trenches, tunnel, and vault locations. Excess subsoil material displaced by the pipe and bedding material will be hauled offsite to an approved local disposal site. If found, any contaminated soils proposed to be hauled offsite shall be disposed of at a licensed facility. An estimated 1,800 truck trips will be needed (assuming 12 cy capacity dump trucks), which is approximately 11 truck trips per day, assuming eight months of construction. The number of trips will be less if the contractor utilizes double bottom dump trailers.

Reinforced Concrete Pipe and bedding material (gravel or sand) will be delivered to the site by truck. For the 72-inch and 84-inch pipes in 12 to 16 foot length, 300 tractor-trailer truck trips will be needed to deliver the pipe. An estimated 1,350 cy of bedding material will be required for placement under and around the pipe. This material will be delivered to the site in dump trucks from local sand and gravel pits. An estimated 115 truck trips will be needed.

4.16.3 Conclusion

While the proposed project would create some short-term, localized disruption to property access and circulation during construction, the proposed project would not result in significant long-term transportation impacts. **(Less Than Significant Impact)**

[18] AECOM, Inc. Environmental Project Description. May 21, 2010.

4.17 UTILITIES AND SERVICE SYSTEMS

4.17.1 Setting

4.17.1.1 *Water Service*

Water service to the project alignment area is supplied by the San Jose Water Company. A six-inch water line is located in North Fourth Street at the intersection of Commercial Street and North Fourth Street. A 12-inch water line is located in the east side of North Fourth Street from Commercial Street to U.S. Highway 101. There is also a water line located on the east side of Zanker Road.

4.17.1.2 *Wastewater*

Wastewater from the City of San Jose is treated at the San Jose/Santa Clara Water Pollution Control Plant, located near Alviso. The Water Pollution Control Plant (WPCP) is owned jointly by the Cities of San Jose and Santa Clara and is operated by the City of San José's Department of Environmental Services. The WPCP is one of the largest advanced wastewater treatment facilities in California and serves over 1,500,000 people in San Jose, Santa Clara, Milpitas, Campbell, Cupertino, Los Gatos, Saratoga, and Monte Sereno. The WPCP provides primary, secondary, and tertiary treatment of wastewater and has the capacity to treat 167 million gallons of wastewater a day (mgd).

The WPCP is currently operating under a 120 million gallon per day dry weather effluent flow constraint. This requirement is based upon the State Water Resources Control Board and the Regional Water Quality Control Board concerns over the effects of additional freshwater discharges from the WPCP on the saltwater marsh habitat, and pollutant loading to the Bay from the WPCP. Approximately ten percent of the plant's effluent is recycled for non-potable uses and the remainder flows into San Francisco Bay.

Currently, there are several sanitary sewer lines located in North Fourth Street, North Fifth Street, Commercial Street, and under U.S. Highway 101. In the intersection of Commercial Street and North Fifth Street is a 72-inch sanitary sewer line. In North Fifth Street is the 60-inch brick sanitary sewer line. In addition, there is a junction box (Structure G) located at the intersection of Commercial and North Fifth Streets. The junction box connects the existing 60-inch brick sewer interceptor and the 72-inch reinforced concrete piping (RCP) sanitary sewer.

At the intersection of North Fourth Street and Burton Street (just south of Commercial Street) there is a junction box (Structure F) as well. Structure F holds an existing 60-inch RCP sanitary sewer in North Fourth Street and the 48-inch RCP interceptor in North Fourth Street. Another junction box (Structure H) is located at the intersection of North Fourth Street and Commercial Street. This structure connects the 72-inch RCP sewer in Commercial Street, and the 60-inch RCP from Structure H. The 84-inch interceptor exits Structure H and flows north in North Fourth Street (replacing the 60-inch RCP). These sewers continue under Interstate 880 and at North Fourth Street and Rosemary Street there is an eight-inch, 84-inch and a 54-inch sanitary sewer. At North Fourth Street and Archer Street there is an 84-inch and a 54-inch sanitary sewer. The 84-inch sewer line, as well as a 54-inch line goes under U.S. Highway 101 where they both meet with the 60-inch brick sanitary sewer line at another junction box (Structure E) just north of U.S. Highway 101, at the intersection of Old Bayshore highway and Zanker Road.

Sanitary Laterals

In addition to the interceptors, there are sanitary sewer laterals which convey flow into the three main interceptors. For the east interceptor, the largest lateral connection is the 30-inch "Berryessa" sewer which ties into the east interceptor at a manhole about 160 feet upstream of Structure E. There are other lateral connections throughout this alignment ranging in size from two to 12 inches. For the west interceptor, the largest lateral connection is a 15-inch lateral sewer which connects at the East Gish Road intersection. There are also lateral connections throughout this alignment ranging in size from six to 12 inches. Because this interceptor is within North Fourth Street, there are many existing utilities that cross the large interceptor including storm drain lines and laterals, electrical, gas, water, and telecommunications. Some of these may be relocated to avoid the proposed sewer.

4.17.1.3 *Storm Drainage*

One hundred percent of the current project alignment is impervious, principally consisting of roadways.

Storm drainage lines in the site area are also provided and maintained by the City of San Jose. Several storm drainage lines are located in the project alignment area. There is a 24-inch storm drain line present at the intersection of Commercial Street and North Fifth Street.

At the intersection of Commercial and North Fourth Street, there are 42-inch, 66-inch, and 78-inch storm drain lines. These storm drain lines currently siphon under the existing sewer line in Commercial Street. At Fourth and Rosemary Streets there is a 78-inch line and a 12-inch storm drain line. At North Fourth Street and Gish Road there is a 60-inch storm drain line, at Koll Circle there is a 12-inch and a 21-inch storm drain line, and at North Fourth Street and Archer Streets there is a 27-inch storm drain line, and at North Fourth Street and U.S. Highway 101 there is a 30-inch storm drain line. A 15-inch storm drain line crosses under U.S. Highway 101.

4.17.1.4 *Solid Waste*

Solid waste and recycling collection services for the site area are provided by the *Green Team* of San Jose. San Jose has a contract with Newby Island Landfill which extends until the year 2019. The City of San Jose disposes approximately 250,000 tons of residential garbage per year at Newby Island Landfill. The proposed project would not produce solid waste.

4.17.1.5 *Natural Gas*

Natural gas and electric service is provided to the site area by Pacific Gas and Electric Company. The site area is currently served from underground natural gas facilities located in the east and west sides of North Fourth Street, and the east side of Zanker Road.

4.17.2 Environmental Checklist and Discussion

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

The proposed project would not require construction of new facilities for wastewater treatment, storm drainage, water, or waste disposal because the subject site is located within the City of San Jose Urban Service Area where such facilities exist, and have the capacity to serve the proposed project.

4.17.2.1 *Sanitary Sewer*

The City of San Jose owns and operates approximately 2,200 miles of sanitary sewer lines ranging in size from six to 90 inches in diameter within the City limits. The City of San Jose is in the process of implementing improvements to the sanitary sewer system in order to meet future system demands, and to solve existing and future capacity and operational deficiencies.

The Phase VI project proposes redirecting the majority of sanitary sewer flow from the existing 60-inch brick interceptor which extends from approximately 600 feet north of North Fourth Street and south of Commercial Street in North Fifth Street, to a new sewer line in Commercial Street and North Forth Street, measuring 72-inches and 84-inches, respectively.

The project also proposes a new 72-inch sanitary sewer line, which will traverse Commercial Street then intercept the proposed 84-inch interceptor in North Fourth Street. The 72-inch sewer will replace the existing eight-inch sewer within the Commercial Street corridor. The proposed 84-inch sewer would start at the intersection of Commercial and North Fourth Street. A new junction structure is required at the intersection of Commercial and North Fourth Streets in order to hydraulically connect the proposed and the existing large interceptors. The sewer then continues approximately 4,200 feet along the western portion of North Fourth Street, then turns east and continues under U.S. Highway 101 for approximately 400 feet before finally connecting to Structure E (refer to Figure 3.0-1). At Structure E the existing large interceptor will be rerouted to connect to the existing connection point of the existing 60-inch brick sewer, and the existing 60-inch interceptor will then be rerouted to connect to the existing 66 stub-out at the eastern portion of the structure.

The proposed project will increase the system capacity and will allow the City the ability to perform regularly scheduled inspections and maintenance to the existing large pipelines while the proposed pipeline is operational. The existing total flow is estimated as 164 and 210 million gallons per day (mgd) for peak dry weather and peak wet weather flows, respectively. Operational flexibility will increase, due to the ability to convey higher flow (at least 250 mgd peak wet weather flow and 167 mgd dry weather flow) without overflow into city streets.

During construction, some of the sewers will be redirected to allow construction of junction boxes and the new interceptor, and will require above ground flow-bypass. Table 4.17-1 shows the sewer bypass flows during construction.

Table 4.17-1: Existing Sewer Bypass Flows During Construction

Sewer	Dry Weather Flow (mgd)	Wet Weather Flow (mgd)
Existing 72-Inch in Commercial	66	81
Existing 84-inch in N. 4th Street	90	115
Existing 54-inch in N. 4th Street	25	32

Sanitary Laterals

There are approximately 18 sanitary sewer laterals connecting to the existing 54-inch interceptor in North Fourth Street. Those laterals will require temporary bypass pumping during construction and permanent connection to the proposed pipeline.

Junction Structures

Junction structures are required in various locations throughout each alternative sanitary sewer alignment. Junction structures will be constructed of reinforced concrete, lined with polyvinyl chloride (PVC) T-Lock lining, and vary in size depending on location. The primary purpose of these junction structures is to hydraulically join different interceptor lines in order to allow flow diversion during normal and maintenance operational scenarios. The structures will be designed to allow an upstream pipeline to enter and allow the flow to discharge from the structure to various connected interceptors. Junction structures will be outfitted with means to allow each interceptor to be redirected. In addition, junction structures may also serve as a means to allow a proposed sanitary interceptor alignment to cross an existing sanitary system interceptor if clearance for the crossing utilizing 84-inch RCP is infeasible.

Junction structures are required in the following areas:

- At the intersection of North Fifth and Commercial Streets to allow the connection of a proposed interceptor along Commercial Street between North Fourth and North Fifth Streets. The structure will be designed to avoid hydraulic issues such as pressurization and partial flow mixing.

- At the intersection of Fourth and Commercial Streets in order to connect both the existing large 84-inch and new 84-inch interceptors. This junction structure is required because it allows the isolation of each interceptor for maintenance. It also controls the amount of flow entering the new 84-inch interceptor during the maintenance scenario when the existing large interceptor is redirected. There are existing utilities within this intersection including telecommunications, electrical, gas, water, large storm drain lines, and large sanitary pipes.

- At the intersection of Old Bayshore Highway and North Fourth Street.

- At Zanker Road on the north side of U.S. Highway 101 to allow shifting the connection points of the sewers into Structure E.

- At the proposed 30-inch sewer relocation at Old Bayshore Highway and Zanker Road.

Electrical, Water, and Natural Gas

Numerous existing utilities are located within the North Fourth Street right-of-way, including electrical, telecommunications, water and gas. It is assumed that some of these utilities will require relocation in order to construct the new 84-inch sewer within North Fourth Street.

Underground utility lines crossed by the proposed pipeline will be excavated with small equipment or by hand to maintain their integrity. The pipeline will pass under existing underground utilities

with a minimum clearance of 12 inches wherever practicable. Advance notice of this activity will be given to utility owners.[19]

4.17.2.2 *Water Supply, Storm Water System, and Solid Waste Disposal*

The project proposes redirecting the majority of sanitary sewer flow from the existing 60-inch brick interceptor which extends from approximately 600 feet north of North Fourth Street and south of Commercial Street in North Fifth Street, to a new sewer line in Commercial Street and North Forth Street, measuring 72-inches and 84-inches, respectively. The proposed project would not require new water supplies or generate additional stormwater runoff. It also would not generate solid waste beyond the capacity of existing landfills serving the area.

The proposed project would not result in impacts to water, or solid waste services and facilities. The existing 66-inch and 78-inch storm drain lines at the intersection of Commercial and North Fourth Street are siphoned under the existing sewer line in Commercial Street. The siphons would need to be lengthened or modified to allow the new 72-inch sewer line to pass.

4.17.3 Conclusion

The proposed project would not result in significant impacts to utilities and service systems. **(Less Than Significant Impact)**

[19] AECOM, Inc. Environmental Project Description. May 21, 2010.

4.18 MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact	Beneficial Impact	Information Source(s)
1) Does the project have the potential to substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; substantially reduce the number or restrict the range of an endangered, rare or threatened species; or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐	☐	26-31
2) Does the project have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals?	☐	☐	☐	☒	☐	1-77
3) Does the project have possible environmental effects that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☐	☒	☐	1-77
4) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐	☐	1-77

The project includes mitigation measures to avoid or reduce temporary air quality, biological resources, hydrology and water quality, and hazardous materials impacts to a less than significant level. As described in the respective sections of this Initial Study, with implementation of standard and mitigation measures the proposed project would not result in other significant environmental impacts or substantially adversely affect human beings directly or indirectly (refer to *Section 4.0 Environmental Setting, Checklist, and Discussion of Impacts* of this Initial Study).

Conclusion: The project would result in significant biological resources and hazardous materials impacts. However, standard and mitigation measures are included in the project to reduce these impacts to a less than significant level. Construction-related and temporary air quality and hydrology and water quality impacts would be mitigated to a less than significant level with standard and mitigation measures included in the project. There are two large projects that have been approved within the project vicinity. One is a 42-unit single-family residential project located at Archer Street and Kerley Drive. The other is a 290-unit multi-family residential (senior housing) project located at First Street and Rosemary Street. Neither project is located immediately within the project area and the proposed project is not anticipated to create a significant impact. Therefore, the project would not have a cumulatively considerable contribution towards a cumulative impact.

Checklist Sources

1. CEQA Guidelines - Environmental Thresholds (Professional judgment and expertise and review of project plans).

2. City of San Jose 2020 General Plan.

3. City of San Jose Zoning Ordinance.

4. Santa Clara County Important Farmlands Map 2008.

5. Bay Area Air Quality Management District CEQA Guidelines, 2010.

6. H.T. Harvey and Associates. City of San Jose Sewer Interceptor Project: Abbreviated Biotic Study. June 2010.

7. Basin Research Associates, Inc. Archaeological Records/Limited Literature Review and Native American Consultation 60-Inch Sewer Interceptor Replacement. June 2010.

8. AMEC Geomatrix, Inc. Phase I Environmental Site Assessment: 60-Inch Brick Interceptor Phase VIA Project. January 2010.

9. Santa Clara County. http://www.sccgov.org/SCC/docs%2FPlanning%2C%20Office%20of%20%28DEP%29%2Fattachments%2FGeoHazards%2FLiquefaction%2FAtlas-Liquefaction2006-10-18.pdf

10. Santa Clara County. http://www.sccgov.org/SCC/docs/Planning,%20Office%20of%20(DEP)/attachments/58260520.pdf

11. Federal Emergency Management Agency. Flood Insurance Rate Map. Community-Panel Number 0603490019E. December 16, 1988.

12. Association of Bay Area Governments (ABAG). http://www.abag.ca.gov/bayarea/eqmaps/tsunami/tsunami.html

13. Illingworth & Rodkin, Inc., San Jose 60-Inch Sewer Interceptor, Phase IVA Construction Noise Assessment. June 2010.

5.0 REFERENCES

AECOM, Inc. Environmental Project Description. May 21, 2010.

AMEC Geomatrix, Inc. Phase I Environmental Site Assessment: 60-Inch Brick Interceptor Phase VIA Project. January 2010.

Association of Bay Area Governments (ABAG). http://www.abag.ca.gov/bayarea/eqmaps/tsunami/tsunami.html

Basin Research Associates, Inc. Archaeological Records/Limited Literature Review and Native American Consultation 60-Inch Sewer Interceptor Replacement. June 2010.

Bay Area Air Quality Management District CEQA Guidelines, 2010.

California Department of Conservation. Important Farmlands Map of Santa Clara County. 2008.

City of San Jose, (Revisions), San José 2020 General Plan.

City of San Jose. San José Fire Department. August 5, 2010. http://www.sjfd.org/.

City of San Jose, Zoning Ordinance.

Federal Emergency Management Agency. Flood Insurance Rate Map. Community-Panel Number 0603490019E. December 16, 1988.

H.T. Harvey and Associates. City of San Jose Sewer Interceptor Project: Abbreviated Biotic Study. June 2010.

Illingworth & Rodkin, Inc. San Jose 60-Inch Sewer Interceptor, Phase IVA Construction Noise Assessment. June 2010.

IPCC, Summary for Policymakers. In: Climate Change 2007: The Physical Science Bases. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [S. Solomon, D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor, and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. 2007. Available at: http://ipcc.ch/

Santa Clara County. Website: http://www.sccgov.org/SCC/docs%2FPlanning%2C%20Office%20of%20%28DEP%29%2Fattachments%2FGeoHazards%2FLiquefaction%2FAtlas-Liquefaction2006-10-18.pdf

Santa Clara County. Website: http://www.sccgov.org/SCC/docs/Planning,%20Office%20of%20(DEP)/attachments/58260520.pdf

San Jose Police Department, Sergeant Michael Kihmm. Personal Communication. March 9, 2007.

San Jose Unified School District. August 5, 2010. http://www.sjusd.org

6.0 AUTHORS AND CONSULTANTS

Authors: **City of San Jose, Department of Planning, Building, and Code Enforcement**
Janis Moore, Planner II

Consultants: **David J. Powers & Associates**
John Schwarz, Principal Project Manager
Karli Grigsby, Assistant Project Manager
Stephanie Francis, Graphic Artist

AMEC Geomatrix, Inc.
Donald C. Daniels, PG, Senior Geologist
Joseph de Larios, PE, GE, Senior Engineer

Basin Research Associates
Colin Busby, Ph.D., RPA, Principal

H.T. Harvey and Associates
Max Busnardo, M.S., Associate Restoration Ecologist

Illingworth & Rodkin, Inc.
Jordan Roberts
Michael Thill, Project Manager

Appendix A

Project Alignment Cross-Sections

Appendix B

Biotic Study
H.T. Harvey & Associates

Appendix C

Phase I Environmental Site Assessment
AMEC Geomatrix, Inc.

Appendix D

Environmental Noise Study
Illingworth and Rodkin, Inc.