6.10 Hazards and Hazardous Materials

6.10.1 Introduction

This section discusses existing conditions and the regulatory setting regarding hazards and hazardous materials, and describes impacts under CEQA that would result from construction and operation of the CEQA Alternatives.

6.10.2 Existing and Regulatory Setting

6.10.2.1 Environmental Setting

The hazardous materials information contained herein is based on *VTA's BART Silicon Valley—Phase II Extension Project Initial Site Assessment* (ISA), prepared by BASELINE Environmental Consulting (2016).

Hazardous Materials

The ISA identified numerous sources of hazardous materials in soil, railroad ballast, groundwater, and buildings within the alignment that could possibly be encountered during construction and operation. Please see Chapter 4, Section 4.10, *Hazards and Hazardous Materials*, for environmental setting information.

Additional environmental setting information pertinent to CEQA is provided below.

Nearby Schools

Based on a review of federal records for public and private schools with grades ranging from pre-kindergarten to 12 (National Center for Education Statistics 2015), there are 11 schools within 0.25 mile of the BART Extension (under both Twin-Bore and Single-Bore Options) (see Table 6.10-1).

Table 6.10-1: Schools within One-Quarter Mile of the BART Extension

Type	School Name	Address
Private	Bellarmine College Prep School	960 W. Hedding Street, San Jose
Private	St Leo The Great School	1051 W. San Fernando Street, San Jose
Private	St Patrick School	51 N. 9th Street, San Jose
Public	Anne Darling Elementary	333 N. 33rd Street, San Jose
Public	Horace Mann Elementary	55 N. Seventh Street, San Jose
Public	Rocketship Discovery Prep	370 Wooster Street, San Jose
Public	San José High	275 N. 24th Street, San Jose
Public	San Jose Community High	855 Lenzen Avenue, San Jose
Public	San Jose Community Middle	855 Lenzen Avenue, San Jose
Public	San Jose High Academy Plus	275 N. 24th Street, Building 1, San Jose
Public	Sunrise Middle	1149 E. Julian Street, Building G, San Jose

Nearby Airports

There are no private airstrips within 2 miles of the BART Extension (under both Twin-Bore and Single-Bore Options) (Federal Aviation Administration 2015). The nearest public-use airport is the Norman Y. Mineta San Jose International Airport, approximately 0.5 mile northeast of Santa Clara Station. The Diridon Station South and North Options (which are within the Diridon Station Area Plan Development) are approximately 0.8 mile to the southeast (City of San Jose 2014). The BART Extension would be within the Airport Influence Area due to height restrictions established by Federal Aviation Regulations (FAR) Part 77, *Objects Affecting Navigable Airspace*. The FAR Part 77 height restrictions are designed to protect navigable airspace around the airport (Santa Clara County Airport Land Use Commission 2011). The height restrictions for structures (including construction equipment) at the BART Extension locations range from about 212 feet to 362 feet.

Emergency Planning

The cities of Santa Clara and San Jose participated in the Association of Bay Area Governments' development of the Santa Clara County Local Hazard Mitigation Plan, which focuses on the assessment and mitigation of risks associated with large natural and human-made disasters (e.g., hazardous materials spills, wildfire). The Santa Clara Fire Department (SCFD) and San Jose Office of Emergency Services are responsible for providing disaster planning and recovery assistance to protect citizens within their jurisdictions from injury and loss due to natural and human-made disasters.

Wildfire Risk

The California Department of Forestry and Fire Protection (CAL FIRE) has mapped Very High Fire Hazard Severity Zones in Santa Clara County to assist responsible local agencies, such as SCFD and San Jose Fire Department, in identifying measures to reduce the potential for losses of life, property, and resources from wildland fire. CAL FIRE has determined that

there are no Very High Fire Hazard Severity Zones in the cities of Santa Clara and San Jose (CAL FIRE 2008).

6.10.2.2 Regulatory Setting

The following state, regional, and local regulations are relevant to the BART Extension.

State

California Health and Safety Code

The Department of Toxic Substances Control (DTSC), part of the California Environmental Protection Agency (Cal/EPA), is the primary agency in California for regulating hazardous waste, cleaning up existing contamination, and finding ways to reduce the amount of hazardous waste produced in California. DTSC regulates hazardous waste primarily under the authority of the federal Resource Conservation and Recovery Act (RCRA) and the California Health and Safety Code (primarily Division 20, Chapters 6.5 through 10.6, and Title 22, Division 4.5). Division 20, Chapter 6.5 of the California Health and Safety Code deals with hazardous waste control through regulations pertaining to transportation, treatment, recycling, disposal, enforcement, and permitting of hazardous waste. Division 20, Chapter 6.10 contains regulations applicable to the cleanup of hazardous materials releases. Title 22, Division 4.5 contains the environmental health standards for the management of hazardous waste. This includes standards for identification of hazardous waste (Chapter 11) and standards applicable to transporters of hazardous waste (Chapter 13).

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (California Health and Safety Code, Chapter 6.11, Sections 25404–25404.9)

In California, hazardous waste and material handling and storage are regulated under the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program), which ensures consistency throughout the state with regard to administrative requirements, permits, inspections, and enforcement. Cal/EPA oversees the program as a whole, and certifies 83 local government agencies known as Certified Unified Program Agencies (CUPAs) to implement the hazardous waste and materials standards set by five different state agencies.

SCFD and Santa Clara County Hazardous Materials Compliance Division (HMCD) are the CUPAs that oversee the implementation and enforcement of permitting requirements for the routine management of hazardous materials in the cities of Santa Clara and San Jose, respectively. As established by Cal/EPA, the Unified Program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities for the following six environmental and emergency response programs.

- Hazardous Waste Generator Program (Health and Safety Code Chapter 6.5)
- Hazardous Waste Tiered Permitting (Health and Safety Code Chapter 6.5)
- Underground Storage Tank (Health and Safety Code Chapter 6.7)

- Aboveground Storage Tank Spill Prevention, Control, and Countermeasure Plan (Health and Safety Code Chapter 6.67)
- Hazardous Materials Business Plan (Health and Safety Code Chapter 6.95)
- California Accidental Release Prevention Program (Health and Safety Code Chapter 6.95)

The purpose of the Unified Program is to ensure that facilities properly manage and disclose hazardous materials used to minimize the risk of a hazardous materials release and improve emergency response actions in the event of a release.

California Code of Regulations, Title 8—Industrial Relations

Occupational safety standards exist in federal and state laws to minimize worker safety risks from both physical and chemical hazards in the workplace. The California Division of Occupational Safety and Health (Cal/OSHA) and the federal Occupational Safety and Health Administration (OSHA) are the agencies responsible for assuring worker safety in the workplace. Cal/OSHA assumes primary responsibility for developing and enforcing standards for safe workplaces and work practices. These standards would be applicable to both construction and operation of the BART Extension. The standards included in Cal/OSHA's Title 8 include regulations pertaining to hazard control (such as administrative and engineering controls), hazardous chemical labeling and training requirements, hazardous exposure prevention, hazardous material management, and hazardous waste operations.

California Labor Code (Division 5, Parts 1 and 7)

The California Labor Code is a collection of regulations that include the regulation of the workplace to ensure appropriate training on the use and handling of hazardous materials and the operation of equipment and machines that use, store, transport, or dispose of hazardous materials. Division 5, Part 1, Chapter 2.5 ensures that employees that are in charge of the handling of hazardous materials are appropriately trained on, and informed of, the materials they are handling. Division 5, Part 7 ensures that employees who work with volatile flammable liquids are outfitted in appropriate safety gear and clothing.

California Department of Forestry and Fire Protection Fire Prevention Program

This program encompasses multiple different facets of fire prevention techniques, including fire engineering, vegetation management, fire planning, education, and law enforcement. These techniques can include fire break construction and other fire fuel reduction activities that lessen the risk of wildfire to communities and evacuation routes, and brush clearance around communities, along roadways, and evacuation routes. The fire prevention program also includes defensible space inspections, emergency evacuation planning, fire prevention education, fire hazard severity mapping, implementation of the state Fire Plan, and fire-related law enforcement activities such as arson investigation.

State Water Resources Control Board Construction Storm Water Program

Dischargers whose projects disturb 1 or more acres of soil or whose projects disturb less than 1 acre but are part of a larger common plan of development that in total disturbs 1 or more acres are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit under Order 2009-0009-DWQ. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation. The Construction General Permit requires the completion and implementation of a site-specific Storm Water Pollution Prevention Plan (SWPPP).

Airport Land-Use Compatibility

Development near airports can pose a potential hazard to people and property on the ground, as well as create obstructions and other hazards to flight. The Santa Clara County Airport Land Use Commission (ALUC) has adopted Comprehensive Land Use Plans (CLUPs) for areas surrounding public-use airports within the County. The CLUPs generally apply regulations and policies promulgated by the Federal Aviation Administration (FAA) to protect the safety and compatibility of aircraft operations.

FAR Part 77, *Objects Affecting Navigable Airspace*, sets forth standards and review requirements for protecting navigable airspace near airports by restricting the height of potential structures and minimizing other potential hazards (e.g., reflective surfaces, flashing lights, electronic interference) to aircraft approaching or departing an airport. FAR Part 77 includes criteria that define sloped imaginary surfaces extending several miles from the airport runways that are used to identify structures that could obstruct air navigation.

FAA requires notification at least 30 days prior to beginning construction of proposed construction or alteration projects that would penetrate the imaginary surfaces defined by FAR Part 77 or projects that would stand 200 feet tall or taller (FAA Form 7460-1). Following notification of proposed construction or alteration, FAA may conduct an aeronautical study to determine if proposed structures and construction equipment would create an airspace hazard. FAA commonly requires proposed structures and construction equipment affecting navigable airspace to be marked and/or lighted for increased visibility (Federal Aviation Administration and U.S. Department of Transportation 2007). The City of San Jose oversees proposed developments near the Norman Y. Mineta San Jose International Airport to ensure compliance with the FAR Part 77 notification requirements and FAA's aeronautical determinations. Compliance measures may include coordination with a property owner to grant an avigation easement to the City of San Jose to establish elevation limits over project locations and protect the navigable airspace for the airport.

Regional and Local

Bay Area Air Quality Management District

The Bay Area Air Quality Management District (BAAQMD) oversees the protection of air quality in the San Francisco Bay Area Air Basin, which includes the BART Extension alignment. Hazardous and acutely hazardous emissions during construction (e.g., demolition of buildings containing asbestos) and facility operations are subject to health risk assessment regulations and permitted conditions of operation to protect nearby sensitive receptors.

Santa Clara County Local Hazard Mitigation Plan

The cities of Santa Clara and San Jose participated in the development and have adopted the Association of Bay Area Governments' Santa Clara County Local Hazard Mitigation Plan, which focuses on the assessment and mitigation of risks associated with large natural and human-made disasters (e.g., hazardous materials spills, wildfire).

6.10.3 CEQA Methods of Analysis

The significance of impacts from hazards and hazardous materials were evaluated based on the review of the existing conditions along the alignment. Sources reviewed included the ISA (BASELINE Environmental Consulting 2015), Norman Y. Mineta San Jose International Airport's CLUP (Santa Clara County ALUC 2011), federal school records (National Center for Education Statistics 2015), and fire hazard severity mapping (CAL FIRE 2008). In addition, VTA has prepared a Contaminant Management Plan (CMP) and associated Remedial Action Plans (RAPs) for the BART Extension that will be used to assess and manage hazardous materials in soil, ballast, groundwater, and building materials that could be encountered during construction. A detailed discussion regarding the CMP and associated RAPs are included in Chapter 4, Section 4.10, *Hazards and Hazardous Materials*.

6.10.4 CEQA Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines, a project would have a significant impact if it would result in any of the conditions listed below.

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- 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.
- Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.

- Be located within an airport land use plan area or, where such a plan has not been adopted, be within 2 miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the alignment.
- Be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the alignment.
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- 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.

6.10.5 Environmental Consequences and Mitigation Measures

This section identifies the impacts related to hazards and hazardous materials under CEQA, as well as mitigation measures necessary to reduce the level of potentially significant impacts.

6.10.5.1 No Build Alternative

The No Build Alternative consists of the existing transit and roadway networks and planned and programmed transportation improvements (see Chapter 2, Section 2.2.1, *NEPA No Build Alternative,* for a list of these projects) and other land development projects planned by the Cities of San Jose and Santa Clara.

The No Build Alternative projects could result in effects on hazardous materials typically associated with transit, highway, bicycle, and pedestrian facilities, and roadway projects, as well as land development projects. The No Build Alternative projects would likely require consideration of hazardous materials exposure during construction and operation. Typically a worker health and safety plan would be prepared and adopted to prevent exposure of maintenance workers, control emissions of hazardous dusts, and safeguard offsite transport of hazardous materials. Additionally, a Phase 2 site assessment, CMP, and associated permits could be required.

All individual projects planned under the No Build Alternative would undergo separate environmental review to identify effects due to exposure to hazardous materials. Review would include an analysis of impacts and identification of mitigation measures to reduce potential impacts.

6.10.5.2 BART Extension Alternative

Impact BART Extension HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials

Construction

Construction activities for the BART Extension would include the routine transport, use, or disposal of hazardous materials, such as motor fuels, oils, solvents, and lubricants. Common construction activities, such as fueling, maintenance, and operation of construction equipment, could result in the exposure of workers, the public, and/or the environment to hazardous materials if the materials are not properly managed. Such transport, use, and disposal must be compliant with applicable regulations such as the RCRA, Department of Transportation Hazardous Materials Regulations (discussed in Section 4.10, *Hazards and Hazardous Materials*), and the local CUPA regulations mentioned under Section 6.10.2.2, *Regulatory Setting*. Although motor fuels, oils, solvents, and lubricants would be transported, used, and disposed of during the construction phase, these materials are typically used in construction projects and would not represent the transport, use, and disposal of acutely hazardous materials. Furthermore, a SWPPP must be prepared for coverage under the Construction General Permit in accordance with the requirements of the State Water Resources Control Board. The SWPPP requires implementation of Best Management Practices for hazardous materials storage and soil stockpiles, inspections, maintenance, training of employees, and containment of releases to prevent runoff into existing stormwater collection systems or waterways. As compliance with these regulations is mandatory, the routine transport, use, or disposal of hazardous materials during construction of the BART Extension would have a *less-than-significant* impact on human health or the environment, and no mitigation is required.

Operation

Hazardous materials, such as motor fuels, oils, solvents, and lubricants, would be routinely managed during operation of the BART Extension, particularly at the Newhall Maintenance Facility. Diesel would also be used for standby generators at each station, yard, shop, and pump station, and possibly at the train control buildings. Workers, the public, and/or the environment could be exposed to hazardous materials during routine operations if the materials are not properly managed. Workers handling hazardous materials are required to adhere to OSHA and Cal/OSHA health and safety requirements. Handling of these materials would also be compliant with applicable regulations such as the RCRA, Department of Transportation Hazardous Materials Regulations, and local CUPA regulations via implementation of a Hazardous Materials Business Plan (HMBP). HMBPs are designed to protect both human and environmental health from adverse effects as a result of the storage or possible release of hazardous materials. This is accomplished by documenting significant amounts of hazardous materials (thresholds are 55 gallons of a liquid, 200 cubic feet of a gas, and 500 pounds of a solid) so that emergency responders can effectively protect the public in

case of an emergency. Furthermore, the HMBP would be modified, if necessary, to include a description of any new hazardous materials that might be used during future operations and would be subject to approval and oversight by SCFD and HMCD, including routine inspections. As compliance with existing regulations is mandatory, the routine transport, use, or disposal of hazardous materials during operation of the BART Extension would have a *less-than-significant* impact on human health or the environment, and no mitigation is required.

Impact BART Extension HAZ-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

Construction

Hazardous Materials Use

As mentioned under Impact BART Extension HAZ-1, construction activities for the BART Extension would include the use of hazardous materials, such as motor fuels, oils, solvents, and lubricants. Common construction activities, such as fueling, maintenance, and operation of construction equipment, could result in an accidental release of hazardous materials into the environment. The use of hazardous materials during construction would be subject to applicable regulations such as the RCRA, Department of Transportation Hazardous Materials Regulations, and local CUPA regulations, and adherence to these standards would reduce the potential occurrence of an accidental release. Furthermore, a site-specific SWPPP would be prepared for coverage under the Construction General Permit. As compliance with existing regulations is mandatory, the construction of the BART Extension would have a *less-than-significant* impact on human health or the environment related to an accidental hazardous materials release, and no mitigation is required.

Building Demolition

Construction activities for the BART Extension would include demolition of buildings that may contain hazardous materials, such as asbestos-containing materials (ACM) and lead-based paint (LBP). Improper removal and/or disposal of hazardous building materials during demolition activities could potentially result in an accidental release of hazardous materials into the environment. The removal of hazardous building materials prior to demolition is governed by federal and state regulations. Section 19827.5 of the California Health and Safety Code requires that local agencies not issue demolition or alteration permits until an applicant has demonstrated compliance with notification requirements under applicable federal regulations regarding hazardous air pollutants.

Friable ACM is considered a regulated material subject to the U.S. Environmental Protection Agency's (EPA) Asbestos National Emission Standard for Hazardous Air Pollutants requirements (40 Code of Federal Regulations Part 61, Subpart M) and BAAQMD's demolition requirements (Regulation 11-2). EPA's and BAAQMD's asbestos regulations

include requirements for agency notifications, engineering controls, waste handling, worker certifications, and reporting. All friable ACM materials must be disposed of at a landfill certified to accept friable ACM.

Loose and peeling LBP may be present and must be disposed of as a state and/or federal hazardous waste if the concentration of lead equals or exceeds applicable waste thresholds. State and federal OSHA regulations require a supervisor who is certified to identify existing and predictable lead hazards to oversee air monitoring and other protective measures during demolition activities where LBP may be present. Special protective measures and notification of Cal/OSHA are required for highly hazardous construction tasks related to lead, such as manual demolition, abrasive blasting, welding, cutting, or torch burning of structures where LBP is present.

Fluorescent lighting tubes and ballasts, mercury thermometers, and several other common items containing hazardous materials are regulated under the California Universal Waste Rule, which is less stringent than most other federal and state hazardous waste regulations. To manage universal waste in accordance with the streamlined state requirements, generators must relinquish the waste to a universal waste transporter, another universal waste handler, or a universal waste destination facility.

Prior to demolition, the CMP requires that a hazardous materials building survey be conducted by the demolition contractor to identify the presence of hazardous and contaminated materials to be disturbed and/or removed during demolition activities. If hazardous building materials (including remaining chemicals that will be removed during demolition) are identified during the hazardous building materials survey, the CMP requires the preparation of a site-specific Hazardous Materials Management Plan that describes how the materials will be handled according to applicable laws and regulations. As required by the Regional Water Quality Control Board, the CMP requirements for building demolition will be further described by site-specific RAPs (Mitigation Measure HAZ-CNST-A; see Chapter 5, Section 5.5.11, *Hazards and Hazardous Materials*). As compliance with the CMP, RAPs (Mitigation Measure HAZ-CNST-A), and existing regulations is mandatory, construction of the BART Extension would have a *less-than-significant* impact on human health or the environment related to hazardous building materials after implementation of Mitigation Measure HAZ-CNST-A.

Operation

As previously mentioned, hazardous materials would be routinely managed during operation of the BART Extension, particularly at the Newhall Maintenance Facility. An accidental release of hazardous materials during operations could pose a potential threat to human health and the environment. The management of hazardous materials is subject to applicable regulations such as the RCRA, Department of Transportation Hazardous Materials Regulations, and particularly the Unified Program administered by SCFD and HMCD. The Unified Program would ensure that the BART Extension properly manages and discloses hazardous materials used to minimize the risk of a hazardous materials release and improve

emergency response actions in the event of a release. As compliance with existing regulations is mandatory, an accidental release of hazardous materials during BART Extension operations would have a *less-than-significant* impact on human health or the environment. No mitigation is required.

Impact BART Extension HAZ-3: Emission of hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school

Construction

The handling or emission of hazardous or acutely hazardous materials near schools must consider potential health effects on children, who are considered sensitive receptors. There are 11 schools within 0.25 mile of the BART Extension (under both Twin-Bore and Single-Bore Options). Emissions or releases related to construction activities for the BART Extension would be from commonly used materials such as fossil fuels, solvents, and paints and would not include substances listed in 40 Code of Federal Regulations 355 Appendix A, *Extremely Hazardous Substances and Their Threshold Planning Quantities.*

The primary exposure pathway of concern is commonly the inhalation of air contaminants, such as particulate matter. Hazardous emissions near sensitive receptors, such as school children, are discussed in detail under Section 4.2, *Air Quality*. The primary hazardous emission of concern during construction is diesel particulate matter from heavy-duty diesel vehicles and equipment. Based on the results of air dispersion modeling and a health risk assessment, emissions of toxic air contaminants during construction of the BART Extension would have a *less-than-significant* impact on nearby sensitive receptors, such as school children, and no mitigation is required.

Hazardous materials used during construction would be managed in accordance with applicable laws and regulations. Therefore, emissions and handling of hazardous materials during construction of the BART Extension would have a *less-than-significant* impact on nearby schools. No mitigation is required.

Operation

The handling or emission of hazardous or acutely hazardous materials near schools must consider potential health effects on children, who are considered sensitive receptors. There are 11 schools within 0.25 mile of the BART Extension (under both Twin-Bore and Single-Bore Options). The BART Extension would include the emission and handling of hazardous materials, but not the handling of acutely hazardous materials.

The primary exposure pathway of concern is commonly the inhalation of air contaminants, such as particulate matter. Hazardous emissions near sensitive receptors, such as school children, are discussed in detail under Section 4.2, *Air Quality*. The primary hazardous emission of concern during operations is diesel particulate matter from backup diesel generators. Based on the results of air dispersion modeling and a health risk assessment,

emissions of toxic air contaminants during operations would have a *less-than-significant* impact on nearby sensitive receptors, such as school children, and no mitigation is required.

Furthermore, the handling of hazardous materials is subject to laws and regulations, such as the Unified Program administered by SCFD and HMCD. Therefore, emissions and handling of hazardous materials during operation of the BART Extension would have a *less-than-significant* impact on nearby schools. No mitigation is required.

Impact BART Extension HAZ-4: Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment

Construction

Based on the ISA (BASELINE Environmental Consulting 2015), hazardous materials may be present in soil, ballast, and groundwater beneath the alignment. The ISA identified 437 sites with known releases of hazardous materials within a 1-mile radius of the BART Extension. A total of 43 of the 437 hazardous materials release sites are under active regulatory oversight and/or have land use restrictions and are located on, adjacent to, or hydraulically upgradient of the BART Extension (under both Twin-Bore and Single-Bore Options). Petroleum hydrocarbons, chlorinated solvents, and metals are the primary contaminants of concern in soil and groundwater from the 43 known hazardous materials release sites. Arsenic and lead are the primary contaminants of concern in shallow soil and ballast along existing railroad corridors. The disturbance of contaminated materials during construction activities, such as excavation and dewatering, could pose a potential threat to human health and the environment.

Dewatering of the shallow groundwater zone would be required during certain excavation activities. As described in the CMP, all extracted groundwater would be considered potentially contaminated and would require characterization to determine the appropriate treatment requirements (if necessary) for discharge/disposal. The extracted groundwater would be collected and managed for disposal/treatment in compliance with local and/or state regulations. Groundwater handling may include any of the following.

- Discharge to the local sanitary sewer system
- Discharge to the storm drain system
- Containment and disposal at an appropriately permitted offsite facility

As described in the CMP, aboveground treatment of the extracted groundwater, such as by gravity sedimentation followed with activated carbon adsorption using granular activated carbon vessels, would be performed prior to discharge. Removal of metals may be required based on permit conditions, dewatering rates, and concentrations of metals encountered during dewatering. Discharge of treated dewatering groundwater to the local sanitary sewer system is regulated by the San Jose/Santa Clara Water Pollution Control Plant for the cities of San Jose and Santa Clara. Discharge of treated dewatering groundwater to the storm drain

system is regulated by the Regional Water Quality Control Board, under a National Pollutant Discharge Elimination System (NPDES) general permit. As compliance with the CMP and existing regulations is mandatory, construction would have a *less-than-significant* impact on human health and the environment related to hazardous materials in extracted groundwater, and no mitigation is required.

The approach for assessing and managing hazardous materials in soil and ballast materials that would be encountered during earthwork activities is described in the CMP. The CMP would be implemented through site-specific RAPs prepared for and approved by the Regional Water Quality Control Board. Under the oversight of the Regional Water Quality Control Board, compliance with the CMP and RAPs is mandatory.

Implementation of Mitigation Measure HAZ-CNST-A would ensure that site-specific RAPs are prepared and implemented to reduce impacts on human health and the environment that could result from the disturbance of hazardous materials in soil and ballast materials during construction to a *less-than-significant* level.

Operation

Based on the ISA (BASELINE Environmental Consulting 2015), hazardous materials may be present in soil, ballast, and groundwater. Sources of known and/or anticipated subsurface contamination include 43 known release sites, 5 permitted underground storage tank facilities, 69 RCRA generators sites, and existing railroad corridors. Petroleum hydrocarbons, chlorinated solvents, and metals are the primary contaminants of concern in soil and groundwater from the 43 known hazardous materials release sites. Arsenic and lead are the primary contaminants of concern in shallow soil and ballast along existing railroad corridors. Operation of the BART Extension could expose people and/or the environment to subsurface hazardous materials as described below.

Maintenance Workers

The disturbance of contaminated soil and/or ballast during maintenance activities (e.g., trenching for utilities) could pose a direct exposure hazard to maintenance workers. The highest acceptable reuse concentrations for soil and ballast materials identified in the CMP under the *Encapsulation* scenario were modeled based on potential health risks to construction workers, which would be an equivalent exposure scenario for maintenance workers. Implementation of the CMP prior to and during construction would remove any soil or ballast materials that could pose a significant health risk to maintenance workers for offsite disposal. The CMP would be implemented through site-specific RAPs prepared and approved by the Regional Water Quality Control Board. Under the oversight of the Regional Water Quality Control Board, compliance with the CMP and RAPs is mandatory.

Implementation of Mitigation Measure HAZ-CNST-A would ensure that site-specific RAPs are prepared and implemented that would reduce impacts on maintenance workers that could result from the disturbance of hazardous materials in soil and ballast materials during operation of the BART Extension to a *less-than-significant* level.

Indoor Workers and Residents

Vapor intrusion of groundwater contaminants (e.g., chlorinated solvents) into future BART Extension buildings, such as the stations, system facilities, and maintenance facilities, could pose an inhalation hazard to indoor workers and residents. The CMP and existing RAP for the former Union Pacific Railroad Newhall Maintenance Facility do not address vapor intrusion concerns.

Implementation of Mitigation Measure HAZ-CNST-A would require the preparation of new and/or amended site-specific RAPs to assess potential vapor intrusion concerns for indoor workers and residents to reduce potential vapor intrusion impacts during operation of the BART Extension to a *less-than-significant* level.

Passengers and Offsite Residents

BART passengers at the above-grade Santa Clara Station could be exposed to hazardous materials in soil and/or ballast (if any) by direct contact and/or inhalation of dust. Offsite residents near the Santa Clara Station and above-grade corridors of tracks could also be exposed to hazardous materials in soil and/or ballast (if any) by inhalation of dust disturbed by passing trains. The CMP establishes acceptable reuse concentrations for soil and ballast materials that account for potential health impacts on passengers and offsite residents. Implementation of the CMP prior to and during construction would either encapsulate or remove any soil or ballast materials that could pose a significant health risk to passengers or offsite residents for offsite disposal. The CMP would be implemented through site-specific RAPs prepared for and approved by the Regional Water Quality Control Board. Under the oversight of the Regional Water Quality Control Board, compliance with the CMP and RAPs is mandatory.

Implementation of Mitigation Measure HAZ-CNST-A would require the preparation of new and/or amended site-specific RAPs that incorporate the findings of the ISA to reduce potential impacts on passengers and offsite residents that could result from the disturbance of hazardous materials in soil and ballast materials during operation of the BART Extension to a *less-than-significant* level.

Pump Station Dewatering

The discharge of groundwater collected by pump stations could potentially contain elevated concentrations of hazardous materials that could adversely affect the environment if not properly managed. The treatment and discharge of contaminated groundwater (if any) collected by pump stations would be subject to NPDES permits. Therefore, the extraction of contaminated groundwater during operation of the BART Extension would have a *less-than-significant* impact on the environment, and no mitigation is required.

Impact BART Extension HAZ-5: Be located within an airport land use plan area or, where such a plan has not been adopted, be within 2 miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the alignment

Construction

Based on review of the CLUPs adopted by the Santa Clara County ALUC, any construction equipment that would exceed an elevation of approximately 212 feet could potentially affect navigable airspace associated with the Norman Y. Mineta San Jose International Airport. The most conservative height restriction for the BART Extension would apply to construction near the Santa Clara Station and Newhall Maintenance Facility about 0.5 mile southwest of the airport, where equipment exceeding a maximum height of about 150 feet above the ground surface could affect navigable airspace. As such, construction equipment would not exceed a height of 150 feet. Therefore, impacts on navigable airspace for public-use airports during construction of the BART Extension would be *less than significant* because construction equipment would not exceed the designated height restrictions for protected airspace, and no mitigation is required.

Operation

To comply with the Santa Clara County ALUC restrictions, no structures would exceed an elevation of 150 feet above the ground surface near the Santa Clara Station and Newhall Maintenance Facility, nor the 212-foot limit in any other portions of the alignment. Therefore, impacts on navigable airspace for public-use airports during operation of the BART Extension would be *less than significant* because structures would not exceed the designated height restrictions for protected airspace. No mitigation is required.

Impact BART Extension HAZ-6: Be located within the vicinity of a private airstrip, resulting in a safety hazard for people residing or working in the alignment

Based on a review of FAA records, there are no private airstrips in the vicinity of the BART Extension. Therefore, construction and operation of the BART Extension would have *no impacts* related to the obstruction of navigable airspace in the vicinity of a private airstrip. No mitigation is required.

Impact BART Extension HAZ-7: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan

Construction

Construction activities associated with the BART Extension would likely result in some temporary traffic delays, but would not be expected to completely interrupt or obstruct emergency vehicle access along nearby roadways. Moreover, the BART Extension would not include any characteristics (e.g., permanent road closures, long-term blocking of road access) that would physically impair or otherwise interfere with emergency response or evacuation.

All large construction vehicles entering and exiting the construction staging areas would be guided by personnel using signs and flags to direct traffic. Also, during construction activities, the BART Extension would be required to comply with applicable requirements set forth by the Santa Clara County Local Hazard Mitigation Plan, SCFD, and San Jose Office of Emergency Services. Therefore, construction of the BART Extension would have a *less-than-significant* impact related to emergency response and evacuation activities. No mitigation is required.

Operation

As described in Chapter 3, *NEPA and CEQA Transportation Operation Analysis*, operation of the BART Extension would result in localized increases in traffic near the stations. However, the BART Extension is a transit project that is expected to reduce the number of cars on the road at a regional level. VTA and BART would work with the local emergency providers to ensure adequate emergency response and evacuation procedures. Any potential increase in the level of traffic congestion would not impair future emergency response and evacuation procedures. Impacts would be *less than significant*. No mitigation is required.

Impact BART Extension HAZ-8: Exposure of people or structures to a significant risk involving wildland fires

Based on review of CAL FIRE (2008) mapping, there are no Very High Fire Hazard Severity Zones on or adjacent to the alignment, as it would be located in fully developed areas of Santa Clara County and not intermixed with wildland areas. Therefore, construction and operation of the BART Extension would have *no impacts* related to wildland fires, and no mitigation is required.

6.10.5.3 BART Extension with TOJD Alternative

Impact BART Extension + TOJD HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials

Construction

Construction impacts and mitigation measures would be similar to those discussed under the BART Extension Alternative.

Operation

Hazardous materials would be routinely managed during BART Extension with TOJD Alternative operations (see the detailed discussion under Impact BART Extension HAZ-1). Because transit-oriented joint development (TOJD) would consist of office, retail, and residential land uses, its operations are expected to involve materials such as solvents, cleaning agents, paints, pesticides, propane, antifreeze, batteries, and aerosol cans. These materials are generally used in small, localized amounts, and any spills that may occur would be cleaned up as soon as they occur. Although TOJD might account for an increase in

amounts of common types of hazardous materials, routine use of these products would not result in a significant hazard to residents or workers in the vicinity of the BART Extension with TOJD Alternative. In addition, it is not expected that TOJD would handle acutely hazardous materials, substances, or waste. As such, the BART Extension with TOJD Alternative would not result in a significant hazard to the public or to the environment through the routine transport, use, or disposal of hazardous waste during operations. Impacts would be *less than significant*. No mitigation is required.

Impact BART Extension + TOJD HAZ-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

Construction

Construction impacts and mitigation measures would be similar to those discussed under the BART Extension Alternative.

Operation

As previously mentioned, hazardous materials would be routinely managed during operation of the BART Extension with TOJD Alternative. However, TOJD operations are expected to involve materials common to commercial and residential uses. These materials are generally used in small, localized amounts, and any spills that may occur would be cleaned up as soon as they occur. Impacts would be *less than significant*. No mitigation is required.

Impact BART Extension + TOJD HAZ-3: Emission of hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school

Construction

Construction impacts would be similar to those discussed under the BART Extension Alternative.

Operation

The handling of hazardous materials during operation of the TOJDs is expected to involve materials common to commercial and residential uses and would not include acutely hazardous substances. As such, the TOJDs would not result in emissions or handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school during operations. Impacts would be *less than significant*. No mitigation is required.

Impact BART Extension + TOJD HAZ-4: Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment

Construction

Construction impacts and mitigation measures would be similar to those discussed under the BART Extension Alternative.

Operation

Based on the ISA (BASELINE Environmental Consulting 2015), hazardous materials may be present in soil, ballast, and groundwater. Petroleum hydrocarbons, chlorinated solvents, and metals are the primary contaminants of concern in soil and groundwater from known hazardous materials release sites. Arsenic and lead are the primary contaminants of concern in shallow soil and ballast along existing railroad corridors.

Maintenance Workers

Impacts on maintenance workers under the BART Extension with TOJD Alternative would be similar to those discussed under the BART Extension Alternative. Implementation of Mitigation Measure HAZ-CNST-A would ensure that site-specific RAPs are prepared and implemented that would reduce impacts on maintenance workers that could result from the disturbance of hazardous materials in soil and ballast materials during operation of the BART Extension with TOJD Alternative to a *less-than-significant* level.

Indoor Workers and Residents

Vapor intrusion of groundwater contaminants (e.g., chlorinated solvents) into future BART Extension and TOJD structures could pose an inhalation hazard to indoor workers and residents.

Implementation of Mitigation Measure HAZ-CNST-A would require the preparation of new and/or amended site-specific RAPs to assess potential vapor intrusion concerns for indoor workers and residents to reduce potential vapor intrusion impacts during operation of the BART Extension with TOJD Alternative to a *less-than-significant* level.

Passengers and Offsite Residents

BART passengers at the above-grade Santa Clara Station could be exposed to hazardous materials in soil and/or ballast (if any) by direct contact and/or inhalation of dust. Offsite residents near the Santa Clara Station and above-grade corridors of tracks could also be exposed to hazardous materials in soil and/or ballast (if any) by inhalation of dust disturbed by passing trains. The CMP establishes acceptable reuse concentrations for soil and ballast materials that account for potential health impacts on passengers and offsite residents. Implementation of the CMP prior to and during construction would either encapsulate or remove any soil or ballast materials that could pose a significant health risk to passengers or offsite residents for offsite disposal. The CMP would be implemented through site-specific

RAPs prepared for and approved by the Regional Water Quality Control Board. Under the oversight of the Regional Water Quality Control Board, compliance with the CMP and RAPs is mandatory.

Implementation of Mitigation Measure HAZ-CNST-A would require the preparation of new and/or amended site-specific RAPs that incorporate the findings of the ISA to reduce potential impacts on passengers and offsite residents that could result from the disturbance of hazardous materials in soil and ballast materials during operation of the BART Extension with TOJD Alternative to a *less-than-significant* level.

Pump Station Dewatering

Impacts related to pump station dewatering under the BART Extension with TOJD Alternative would be similar to those discussed under the BART Extension Alternative. Extraction of contaminated groundwater during operation of the BART Extension with TOJD Alternative would have a *less-than-significant impact* on the environment, and no mitigation is required.

Impact BART Extension + TOJD HAZ-5: Be located within an airport land use plan area or, where such a plan has not been adopted, be within 2 miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the alignment

Construction

Construction impacts and mitigation measures would be similar to those discussed under the BART Extension Alternative.

Operation

To comply with Santa Clara County ALUC restrictions, no structures would exceed an elevation of 150 feet above the ground surface near the Santa Clara Station and Newhall Maintenance Facility. The TOJD at the Diridon Station (both South and North Options) is within the approach zone of the Norman Y. Mineta San Jose International Airport and within the Diridon Station Area Plan Development, and is therefore subject to restrictive height limits of 263 feet. The TOJD in the area would consist of a maximum height of eight stories (or 120 feet) and would be well below height restrictions found in the CLUP (of 263 feet) for this area. Therefore, impacts on navigable airspace for public-use airports during operation of the BART Extension with TOJD Alternative would be *less than significant* because structures would not exceed the designated height restrictions for protected airspace. No mitigation is required.

Impact BART Extension + TOJD HAZ-6: Be located within the vicinity of a private airstrip, resulting in a safety hazard for people residing or working in the alignment

Construction and operations impact and mitigation measures would be similar to those discussed under the BART Extension Alternative.

Impact BART Extension + TOJD HAZ-7: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan

Construction and operations impacts and mitigation measures would be similar to those discussed under the BART Extension Alternative.

Impact BART Extension + TOJD HAZ-8: Exposure of people or structures to a significant risk involving wildland fires

Construction and operations impacts and mitigation measures would be similar to those discussed under the BART Extension Alternative.

6.10.6 CEQA Conclusion

The BART Extension Alternative and the BART Extension with TOJD Alternative would have *less-than-significant impacts* after mitigation related to upset and accident conditions involving the release of hazardous materials and being located on a hazardous material site.

Given compliance with applicable regulations, the BART Extension Alternative and the BART Extension with TOJD Alternative would have *less-than-significant impacts* related to the routine transport, use, or disposal of hazardous materials, emission or handling of hazardous or acutely hazardous materials near a school, or being located within 2 miles of a public airport or public use airport.

The BART Extension Alternative and the BART Extension with TOJD Alternative would have *no impacts* related to being located in the vicinity of a private airstrip or public airport or potential exposure of people or structures to wildland fires.