

**DRAFT  
INITIAL ENVIRONMENTAL SITE ASSESSMENT  
REPORT**

**VAN NESS AVENUE  
BUS RAPID TRANSIT PROJECT  
SAN FRANCISCO, CALIFORNIA**

Prepared for:

**PARSONS**

Submitted by:

AGS , INC .

**OCTOBER 2009**

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## **1.0 INTRODUCTION**

AGS, Inc., (AGS) conducted an Initial Environmental Site Assessment of the Van Ness Avenue Bus Rapid Transit (BRT) Project for the San Francisco County Transportation Authority (SFCTA) according to guidelines set forth in the subconsultant agreement between Parsons Transportation Group, Inc., (PTG) and AGS, dated August 1, 2007.

### **1.1 PROJECT DESCRIPTION**

San Francisco County Transportation Authority (SCFTA), in cooperation with the Federal Transit Administration (FTA) and the San Francisco Municipal Transportation Agency (SFMTA), proposes to implement bus rapid transit (BRT) improvements along a 2.2 mile stretch of Van Ness Avenue (including a one-block portion of South Van Ness Avenue) in San Francisco, from Mission Street at the south to North Point Street at the north. The proposed project would reconfigure the existing roadway cross section to provide for dedicated bus lanes and transit platforms between Mission and Lombard Streets, while upgrading pedestrian safety and urban design features, and will upgrade the OCS support poles/streetlight system (overhead wires and supporting trolley/light poles) between Market and North Point Streets. Left and right turn pocket locations would be adjusted to smooth traffic flow and reduce conflicts with transit. The Van Ness Avenue BRT Project corridor is shown on Plate 1.

Four alternatives have been defined for the proposed Van Ness Avenue BRT Project, including one no-build alternative and three build alternatives. All of the build alternatives include the following elements: a lane dedicated to transit (except for Alternative 2, which would allow shared use for right-turning traffic and parking); higher capacity bus vehicles; level boarding from curb to bus; replacement of the MUNI Overhead Contact System (OCS) support poles/streetlights; sidewalk extension, or bulbs, at corners; pedestrian safety, landscaping and streetscape improvements and amenities; access and lighting improvements; high quality stops/stations; proof of payment/all door boarding/fare prepayment; and, transportation system management (TSM) capabilities, including transit signal priority.

The build alternatives for the Van Ness Avenue BRT Project would convert either the inside or outside traffic lanes in both the north and southbound directions into dedicated bus lanes. The project improvements would be confined largely within the right-of-way along Van Ness Avenue. The three proposed configurations for the BRT are: (1) a dedicated side bus lane with parallel parking; (2) a dedicated center bus lane with right side boarding platforms and dual medians; and (3) a dedicated center bus lane with left side boarding platforms and a single center median. In order to implement the BRT improvements, there would be accompanying changes to the parking lanes and bus stops along the corridor. Expected project work would include asphalt paving and repairs, wherever necessary; various types of marking and remarking of pavement; construction of concrete ramps, boarding platforms, and pedestrian walkways, as necessary; and installation of bus shelters and signs. A majority of the excavations for these improvements are anticipated to be relatively shallow, to be limited by the weight and foundation types of the planned new structures.

Approximate areas and depths of anticipated construction activities requiring earthwork are provided in Table 1. As shown in Table 1, traffic signal poles will require the deepest excavation, up to 16.0 feet below modern ground surface (bgs) in an approximate three foot diameter area. Additional deep excavations will include removal and replacement of the existing OCS support poles and relocation of a sewer pipeline at proposed station platform locations. Remaining earthwork would occur within 5.5 feet bgs.

**Table 1. ANTICIPATED CONSTRUCTION AREAS AND EXCAVATION DEPTHS**

Construction Item	Area	Depth 1
OCS Support Pole Replacements	3.0 ft diameter excavation area for each pole, within sidewalk; located throughout project limits.	11.0 ft
Removal of Existing OCS Support Pole Foundations	3.0 ft diameter excavation area for each pole, within sidewalk; located throughout project limits.	13.0 ft
OCS Conduit Trench	2.0 ft wide trench, within sidewalk; located throughout project limits.	3.0 ft
Sewer Pipeline Relocation	6.0 ft wide trench, within street; replace or relocate within the BRT lanes under project Alternative 3; relocate outside of platform areas proposed under project Alternative 4.	11.5 ft
Traffic Signal Poles	3.0 ft diameter excavation area, located at intersections throughout project limits.	16.0 ft
Controller Cabinets	2.5 ft x 4.0 ft excavation area, located within the sidewalk at intersections throughout project limits.	3.0 ft

**Table 1. ANTICIPATED CONSTRUCTION AREAS AND EXCAVATION DEPTHS**

Construction Item	Area	Depth <sup>1</sup>
Curb Bulbs & Sidewalk Reconstruction	Approximate 30 ft of full-width sidewalk disturbance area, located at intersections throughout project limits (vary by project alternative).	1.5 ft
Pavement Rehabilitation	Curb-to-curb rehabilitation or resurfacing under each project alternative.	0.7 ft
Pavement Reconstruction	Spot improvements as needed to travel lanes and parking lanes to remedy failed pavement areas.	1.5 ft
New Pavement	22.0 ft wide area within median throughout project limits, under project Alternative 3.	1.5 ft
Station Platform	8.0 ft – 14.0 ft wide by 150.0 ft long area at platforms, platform locations vary by project alternative.	1.0 ft
Station Canopy Foundation	2.5 ft diameter excavation area at platforms, platform locations vary by project alternative.	5.0 ft

<sup>1</sup> Depth below ground surface (bgs).

The SFMTA, together with the Public Utilities Commission (PUC), would replace the OCS support poles, which also function as streetlights. This construction would be coordinated as part of the build alternatives, and would include removal of existing OCS support poles/streetlights, and installation of new poles and lights. . In most cases, the new poles would be installed approximately three to five feet north or south in the same longitudinal plane as the existing poles, designed to handle modern loads as required by the BRT, and modern lighting requirements as required by the PUC.

Installation of new poles is anticipated to involve excavations up to 13.0 feet below ground surface (bgs) to install the new pole foundations that are 9.5 to 10.0 feet in depth and approximately 3.0 feet in diameter. Following installation of the new poles and electrical wiring, the existing poles and foundations would be removed to approximately 3.0 feet below street grade, while the remainder of the original pole foundations would be left in place below the ground surface. It is anticipated that in up to 10 to 20 percent of cases, the existing pole locations may need to be reused as new pole locations because no other alternatives would be possible. In these cases, once the wire support spans are installed on temporary wood poles located adjacent to the existing poles, the original poles and foundations would be removed in their entirety (except for salvageable attachments) before the new pole foundations would be constructed in the same excavation. Removal of the original pole foundations is anticipated to involve excavations up to 13.0 feet bgs. Once the new poles and lights are installed and connected, the temporary wooden poles would be removed.

Additionally, the deepest excavation work is anticipated to involve installation of new signal poles with excavations to 16.0 feet bgs, as shown in Table 1.

## 1.2 PURPOSE AND SCOPE

The purpose of this Initial Environmental Site Assessment of the Van Ness Avenue BRT Project is to identify, to the extent feasible, if the Project limits contain recognized environmental conditions, such as subsurface contamination or other materials, which could adversely affect project construction activities and costs.

This Initial Environmental Site Assessment of the Van Ness Avenue BRT Project generally follows accepted professional practice and requirements for conducting Phase 1 Environmental Site Assessments according to the American Society for Testing and Materials (ASTM) Designation: E 1527-05. It includes the following: (1) historical information; (2) records reviews of standard environmental sources and local sources; (3) site reconnaissance; and, (4) evaluation and report preparation. This assessment does not include interviews with property owners or agency officials. The interview requirements of ASTM E 1527-05 were not performed as the proposed project is anticipated to occur entirely within the existing right-of-way, and would not involve acquisition of any properties that may contain hazardous materials or wastes.

## 1.3 SITE HISTORY

The distribution of environmental risk sites within the project corridor is reflective of the industrial and commercial development of the area, particularly the development of automotive businesses. Area history is described in the Van Ness Avenue Area Plan, from which an overview of development is summarized below.

Maps cited in the Area Plan include the U.S. Coast Survey of 1869, the 1884 Coast and Geodetic Survey, and the Sanborn Fire Insurance Maps produced from 1899 to as recently as 1950. The 1869 map indicates only scattered structures then existed along Van Ness Avenue between Market Street and the northern terminus at the U.S. military

reserve at Black Point. By 1884, the Coast and Geodetic Survey shows buildings were concentrated on the streets with cable lines intersecting Van Ness Avenue, including Fulton Street, McAllister Street, Ellis Street, and Geary Boulevard. Van Ness Avenue remained mostly undeveloped. Non-residential structures shown on the 1899 to 1905 Sanborn Maps included the Mechanics Library, Concordia Club, St. Luke's Episcopal Church, the First Presbyterian Church, and St. Dunston's Hotel. Livery stables, small industries, a school, and other miscellaneous use structures were located on side streets.

Commercial development accelerated after the 1906 earthquake, as downtown businesses relocated onto Van Ness Avenue. Sanborn Maps indicate that by 1911 there were several auto body, wagon and bicycle repair shops, as well as numerous undeveloped sites. A National Guard Armory was located at the southeast corner of Van Ness Avenue and California Street, while clubs and hotels were scattered along the middle section of the avenue.

By the 1920s, the Sanborn Maps indicated the two most common land uses on Van Ness Avenue between the Civic Center and Jackson Street were large apartment buildings and automotive businesses, including repair shops, gasoline stations, and showrooms. After the Second World War, with the designation of Van Ness Avenue as U.S. Highway 101, the number of automotive businesses in the area increased, but was followed by a general decline starting in the late 1970s.

## 2.0 DATABASE SEARCHES

### 2.1 ENVIRONMENTAL DATA RESOURCES, INC.

AGS requested a corridor search for the Project limits of standard Federal, State, and local regulatory databases by Environmental Data Resources, Inc., (EDR). In their DataMap™ Environmental Atlas™, EDR integrates data from governmental agency lists into one database, which is continuously updated as data is released. This integrated database also contains postal service data in order to enhance address matching. Records from one government source are compared to records from another to clarify any address ambiguities. Appendix A includes only the EDR DataMap™ Environmental Atlas™ Focus Map Summary and Executive Summary, since the entire atlas report is a total of 2,338 pages and can be made available upon request. The EDR Geocheck® Report includes a physical setting source report with maps, map findings, and records searched. Appendix B includes the entire EDR Geocheck® Report.

AGS specified approximate minimum search distances for standard environmental record sources conforming to ASTM E 1527-05. After reviewing the records obtained in the EDR summaries, AGS reduced the number of sites to those with addresses located on Van Ness Avenue, sites located within 1/8 mile of Van Ness Avenue, and sites located between 1/8 mile and 1/4 mile from Van Ness Avenue. The reduced list of sites provides a more useful catalogue of environmental risk sites pertaining to the project work since it is restricted to Van Ness Avenue and project work would be limited to the Van Ness Avenue pavement and sidewalk areas.

Federal databases reviewed include the Federal Environmental Protection Agency (EPA) National Priority List (NPL) of Superfund Program sites, Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) sites including the No Further Remedial Action Planned Report (NFRAP), Resource Conservation and Recovery Act (RCRA) sites, U.S. Brownfields sites, as well as several other databases.

Important State databases reviewed include the California Department of Toxic Substances and Control (DTSC) database also known as ENVIROSTOR, Integrated Waste Management Board Solid Waste Information System (SWIS) database, and Water Resources Control Board Leaking Underground Storage Tank (LUST) information system. The greatest number of previously and/or currently contaminated sites identified in the vicinity of the Van Ness Avenue BRT Project limits are LUST sites. The results of several other State databases are also included. The Certified Unified Program Agency (CUPA) databases maintained by local agencies were reviewed, including those of the San Francisco Environmental Health Department Local Oversight Program, the Hazardous Waste Generator and Hazardous Materials Business Plan Programs, and Lists of Deed Restricted Sites.

The information obtained from EDR, including the Federal, State and local databases that were searched, is summarized below. Information is provided for databases updated within the past year, and which supersede the older databases, some of which have not been updated since the 1990s. The total number of sites identified within the approximate minimum search distance from the Van Ness Avenue BRT Project limits is given after the description of the database. Details of each site, maps showing each of the site locations, and all of the historical and current database information, are included in the complete EDR reports.

### **NPL DATABASE**

The National Priority List (NPL) or Superfund List is the Federal EPA's registry of the nation's worst uncontrolled or abandoned hazardous waste sites. NPL sites are targeted for possible long-term remedial action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980. The NPL database is updated quarterly, and was last updated for the report on April 8, 2008.

NPL sites were searched to one mile from the Project limits. No NPL sites were identified within one mile of the Project limits.

### **CERCLIS DATABASE**

The CERCLA Information System (CERCLIS) database is a comprehensive listing of known or suspected uncontrolled or abandoned hazardous waste sites. These sites have either been investigated, or are currently under investigation by the Federal EPA for the release, or threatened release of hazardous substances. Once a site is placed in CERCLIS, it may be subjected to several levels of review and evaluation, and ultimately placed on the NPL. The CERCLIS database is updated quarterly, and was last updated for the report on April 8, 2008.

CERCLIS sites were searched to ½ mile from the project limits. One CERCLIS site was identified between ⅛ and ¼ mile from the project limits, Building 20 at the Fort Mason Center. Fort Mason is located approximately one mile northwest of the northern project terminus, at Lombard Street. No other sites were identified.

### **NFRAP DATABASE**

The No Further Remedial Action Planned Report (NFRAP), also known as the CERCLIS Archive, contains information pertaining to sites, which have been removed from the CERCLIS database. NFRAP sites may be sites where, following an initial investigation either: (1) no contamination was found, (2) contamination was removed quickly without need for the site to be placed on the NPL, or (3) the contamination was not serious enough to require Federal Superfund action or NPL consideration. The CERC-NFRAP list that was reviewed was dated December 3, 2007.

NFRAP sites were searched to within ½ mile from the Project limits. One NFRAP site was identified between ⅛ and ¼ mile from the Project limits and two sites were identified between ¼ and ½ mile from the Project limits. These sites are the PG&E Gas Plant at 680 Beach Street, the Red Star Laundry at 920 Chestnut Street, and the Phillip Burton Federal Building at 450 Golden Gate Avenue.

### **RCRA TSD DATABASE**

The EPA's Resource Conservation and Recovery Agency (RCRA) program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Information System (RCRIS) Treatment, Storage, and Disposal (TSD) database is a listing of permitted TSD facilities. The RCRA TSD database is updated quarterly, and was last updated for the report on March 6, 2008.

RCRA TSD sites were searched to ½ mile from the Project limits. No RCRA TSD sites were identified within ½ mile of the Project limits.

### **RCRA CORRACTS DATABASE**

The RCRA CORRACTS database contains information concerning RCRA facilities that have conducted, or are currently conducting a corrective action. A Corrective Action Order is issued pursuant to RCRA Section 3008(h) when there has been a release of hazardous waste or constituents into the environment from a RCRA facility. Corrective action may also be imposed as a requirement of receiving and maintaining a TSD facility permit. The RCRA CORRACTS database is updated quarterly, and was last updated for the report on March 6, 2008.

RCRA CORRACTS sites were searched to one mile from the Project limits. One site was identified within 1.0 mile of the Project limits, the C&M Plating Works at 598 Sixth Street.

### **RCRA LQG and SQG DATABASES**

RCRA large quantity generators (LQG) and small quantity generators (SQG) databases were searched. These are hazardous waste generator sites with no reported violations. The RCRA LQG and SQG databases are updated quarterly, and were last updated for the report on March 6, 2008.

RCRA sites were searched to ¼ mile from the Project limits. A total of 22 RCRA sites were identified within the Project limits, 31 sites were identified within ⅛ mile from the Project limits, and an additional 23 sites were identified between ⅛ and ¼ mile from the Project limits.

**RCRIS NONGEN DATABASE**

RCRA Nongen sites are RCRA sites that are not recognized as current generators of hazardous waste. The RCRA Nongen database is updated quarterly and was last updated for the report on March 6, 2008.

RCRA Nongen sites were searched to 1/8 mile from the Project limits. One RCRA Nongen site was identified within the Project limits and a total of 6 additional RCRA Nongen sites were identified within 1/8 mile of the Project limits.

**ERNS DATABASE**

The Emergency Response Notification System (ERNS) is a national computer database system that is used to store information on the sudden and/or accidental release of hazardous substances, including petroleum, into the environment. The ERNS reporting system contains preliminary information on specific releases, including the spill location, the substance released, and the responsible party. The ERNS database was last updated for the report on December 1, 2007.

ERNS sites were searched to 1/8 mile from the Project limits. Two ERNS sites were identified within the Project limits. These sites are the San Francisco Auto Center at 1701 Van Ness Avenue, and the PG&E site at 2550 Van Ness Avenue. No other sites were identified within 1/8 mile of the Project limits.

**ENVIROSTOR DATABASE**

The California Department of Toxic Substances Control (DTSC) has developed an electronic database system with information about sites that are contaminated with hazardous substances, as well as information on uncharacterized properties where further studies may reveal problems. The database is known as ENVIROSTOR and is available for public searching online at <http://www.envirostor.dtsc.ca.gov>.

The ENVIROSTOR database includes the Brownfields Reuse Program Database (SMBRPD), school property evaluation program sites, military cleanup sites, voluntary cleanup program sites, unconfirmed properties needing further evaluation, unconfirmed

properties referred to another local or state agency, and properties where a no further action determination has been made. The database was searched on July 31, 2008.

ENVIROSTOR sites were searched to one mile from the Project limits. Two evaluation sites were identified between  $\frac{1}{8}$  and  $\frac{1}{4}$  mile from the Project limits. These sites are the Parkview Terraces at 871 Turk Street, and the Naval Dispensary on Hayes Street. Fort Mason was also identified approximately one mile distant.

One school investigation site was identified, which is the School of the Arts, located at 135 Van Ness Avenue. The record shows that the results of a Phase 1 ESA conducted for the school site in 2001, indicates no contamination is likely.

Another site was identified as a voluntary cleanup site, which is the BMW of San Francisco automotive dealer, located at 1675 Howard Street. This site is at a distance of between  $\frac{1}{8}$  and  $\frac{1}{4}$  mile southeast of the southern project terminus at the Mission Street intersection.

### **US BROWNFIELDS**

The US EPA has identified a listing of Brownfields properties addressed by cooperative agreement recipients and by targeted Brownfields assessments. The US BROWNFIELDS database is updated quarterly, and was last updated for the report on April 1, 2008.

US BROWNFIELDS sites were searched to one mile from the Project limits. One site was identified between  $\frac{1}{2}$  and  $\frac{1}{4}$  mile southwest from the southern end of the Project limits, which is listed as the "Friendship House," located near 68 and 80 Julian Avenue.

### **FUDS**

FUDS is a listing of the locations of Formerly Used Defense Sites Properties where the U.S. Army Corps of Engineers is actively working or will take necessary cleanup actions. The FUDS database was last updated for the report on December 1, 2006.

The only identified site was Fort Mason, as previously mentioned, it is located approximately one mile northwest of the northern project terminus.

### **FTTS**

FTTS is a federal database of sites with administrative cases, pesticide enforcement actions, and compliance activities. The FTTS database was last updated for the report on April 11, 2008.

The FTTS database was searched to one mile from the project limits. Three sites were identified, which are the AMSI Property Management at 2800 Van Ness Avenue, the Victor and Linda Huang Residence at 601 Van Ness Avenue, and the San Francisco Unified School District building at 135 Van Ness Avenue. These same sites were identified in a search of the Historical FTTS database.

### **FINDS**

The Facility Index System (FINDS) database is maintained by the US EPA and US Department of Commerce. The database contains both facility information and "pointers" to other sources of information that contain more detail. These include: RCRIS; Permit Compliance System (PCS); Aerometric Information Retrieval System (AIRS); FATES (FIFRA [Federal Insecticide Fungicide Rodenticide Act] and TSCA Enforcement System, FTTS [FIFRA/TSCA Tracking System]; CERCLIS; DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes); Federal Underground Injection Control (FURS); Federal Reporting Data System (FRDS); Surface Impoundments (SIA); TSCA Chemicals in Commerce Information System (CICS); PADS; RCRA-J (medical waste transporters/disposers); TRIS; and TSCA. The FINDS database was last updated for the report on April 3, 2008.

FINDS sites were searched to ¼-mile from the Project limits. A total of 26 sites were identified within the Project limits. An additional 47 sites were located between ⅛ and ¼ mile from the Project limits. Most of these sites are automotive repair sites, gasoline stations, or dry cleaners. Note that these sites are listed for use or storage of potentially

hazardous materials and petrochemicals, not for identified ground or subsurface contamination.

**SCH**

This database lists proposed or existing school sites being evaluated for possible hazardous materials contamination by the DTSC. The SCH database was last updated for the report on February 26, 2008.

SCH database sites were searched to a distance of one mile from the Project limits. The Bessie Carmichael Elementary School (375 7<sup>th</sup> Street) was identified, which is located approximately 0.7 miles east of the Market Street/Van Ness Avenue intersection.

**SWF/LF DATABASE**

The California Integrated Waste Management Board maintains the Solid Waste Inventory System (SWIS), which includes information on solid waste facilities, operations, and disposal sites throughout the state. The types of facilities in this database include landfills, transfer stations, material recovery facilities, composting sites, waste tire sites, and closed disposal sites. The SWF/LF database is updated periodically, and was last updated for the EDR report on March 10, 2008.

SWL sites were searched to ½ mile from the Project limits. One SWL site was identified within ½ mile of the Project limits, the CALTRANS District 4 Office/Yard at 150 Oak Street.

**LUST DATABASE**

The Leaking Underground Storage Tank (LUST) database contains sites based on incident reports provided by the California Water Resources Control Board Leaking Underground Storage Tank Information System. The LUST database is updated periodically, and was last updated for the EDR report on April 8, 2008.

LUST sites were searched to a distance of ¼ mile from the Project limits. A total of 29 LUST sites were identified within the Project limits, 62 sites were identified within ⅛

mile, and 86 sites were identified between  $\frac{1}{8}$  and  $\frac{1}{4}$  mile from the Project limits. A majority of these sites have received regulatory case closure status, while a few sites still have open case status. Sites are discussed in some detail in Section 4.0 since they constitute the most likely source of potential ground contamination in the project area.

### **CA FID UST**

This database is an inventory of registered active and inactive underground storage tank (UST) sites. The CA FID UST database is no longer updated periodically, and was last updated for the EDR report on October 31, 1994.

CA FID UST sites were searched to  $\frac{1}{4}$  mile from the Project limits. A total of 20 UST sites were identified within the Project limits, 35 sites were identified within  $\frac{1}{8}$  mile, and 29 sites were identified between  $\frac{1}{8}$  and  $\frac{1}{4}$  mile from the Project limits. Site cases typically fall into two categories; (1) those cases involving leaking underground fuel tanks at automotive repair or gasoline station sites; and (2) those cases involving leaking underground heating fuel tanks associated with some of the apartment buildings and other residential structures.

### **UST**

The Underground Storage Tank database contains registered USTs, regulated under RCRA, Subtitle 1, and is provided by the SWRCB Hazardous Substance Storage Container Database. The UST database is updated periodically, and was last updated for the EDR report on April 8, 2008

UST sites were searched to  $\frac{1}{4}$  mile from the Project limits. A total of 10 UST sites were identified within the Project limits, 12 sites were identified within  $\frac{1}{8}$  mile, and 5 sites were identified between  $\frac{1}{8}$  and  $\frac{1}{4}$  mile from the Project limits.

### **AST**

The Aboveground Storage Tank database contains registered ASTs. The database is provided by the SWRCB Hazardous Substance Storage Container Database. The AST

database is updated periodically, and was last updated for the EDR report on November 1, 2007.

AST sites were searched to  $\frac{1}{4}$  mile from the Project limits. One AST site was identified within the Project limits, which is the Jiffy Lube #1349 at 2020 Van Ness Avenue. An additional two AST sites were located within  $\frac{1}{4}$  mile of the Project limits.

### **DEED**

The DEED database includes sites with recorded land use restrictions and is one of the methods the DTSC uses to protect the public from unsafe exposure to hazardous substances and waste. The DEED database is updated periodically, and was last updated for the EDR report on April 1, 2008.

DEED sites were searched to a distance of one mile from the Project limits. The nearest site, located at the corner of Natoma and Seventh Streets, is located approximately  $\frac{1}{2}$  mile east of the intersection of Van Ness Avenue and Grove Street. Four other sites are located between a distance of  $\frac{1}{2}$  and one mile from the project limits.

### **VCP Database**

The VCP database provides a list of sites with voluntary cleanup from low threat level properties and is maintained by the DTSC. The VCP database is updated periodically, and was last updated for the EDR report on February 26, 2008.

VCP sites were searched to one mile from the Project limits. A total of 7 sites were identified. The nearest site is the BMW dealership located approximately  $\frac{1}{8}$  mile south of the Project limits at 1675 Howard Street. Two other sites are located between  $\frac{1}{4}$  and  $\frac{1}{2}$  mile east of the Project limits. These sites are the Trinity Property at 1169 Market Street, and the property at the corner of 7<sup>th</sup> and Natoma Streets.

### **DRYCLEANERS**

This database provides a list of drycleaner facilities that have EPA ID numbers. The VCP database is updated periodically, and was last updated for the EDR report on February 26, 2008.

Sites were searched to within ½ mile from the Project limits. A total of 28 separate sites were identified, including three on Van Ness Avenue within the project limits. These sites are the Astoria Cleaners at 2529 Van Ness Avenue, Dry Clean USA at 2045 Van Ness Avenue, and Van Ness Quick Cleaners at 1930 Van Ness Avenue.

### **RESPONSE**

This database identifies confirmed release sites where the DTSC is involved in remediation. RESPONSE sites were searched to within one mile of the Project limits. Three RESPONSE sites were identified between a distance of ½ and one mile from the Project limits. No nearer sites were identified.

### **HAZNET**

The HAZNET database contains a list of sites with data extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000-1,000,000 annually, representing approximately 350,000-500,000 shipments. Data from non-California manifests & continuation sheets are not included at the present time. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements, such as generator identification, TSD identification, waste category, and disposal method. Sites were searched to within one mile from the Project limits and 364 sites were identified, of which 110 were identified as being individual businesses with addresses on Van Ness Avenue.

## **2.2 STATE WATER RESOURCES CONTROL BOARD (GEOTRACKER)**

The State Water Resources Control Board maintains an internet accessible electronic database called Geotracker (<https://geotracker.waterboards.ca.gov/>). The database contains information about leaking underground storage tank (LUST) sites and

permitted underground storage tank (UST) sites. The database was reviewed on July 7, 2009, to access the latest available information for LUST/UST environmental risk sites located on Van Ness Avenue.

#### **851 Van Ness Avenue (Former Texaco Station)**

According to the database, a leak was reported in 1965, and another leak was discovered in 1987. The potential contaminant of concern was gasoline affecting soil and groundwater. The cleanup was completed and the site received regulatory case closure status on November 22, 1994; therefore, any potential residual concentrations of petroleum hydrocarbons remaining in the soil or groundwater are below the regulatory limits and are expected to attenuate naturally.

#### **1501 Van Ness Avenue (Chevron Station #90030)**

According to the database, a leak was reported in 1987. The potential contaminant of concern was gasoline affecting soil. The most recent regulatory activity was a file review conducted on June 23, 2009. The cleanup status for this site is listed as, "Open – Site Assessment as of January 20, 1987." Further discussion of this site is given in subsequent sections of this report.

#### **1898 Van Ness Avenue (Shell Station # 2205)**

According to the database, this site was reported for leaking gasoline fuel tanks. Included in the database file was Well MW-8, located approximately 130 feet north of the Washington Street intersection and on the east side of the central median of Van Ness Avenue, and Wells MW-4 and MW-7, both located on the property next to the Van Ness Avenue sidewalk. Groundwater samples taken from each of these wells on June 26, 2002, did not contain detectable concentrations of BTEX, MTBE, or TPH-gasoline. Groundwater depths measured in these wells in 2002 indicate the water table ranged from approximately 55 to 67 feet below the ground surface in the area. This site received regulatory case closure status on August 21, 2003; therefore, any potential residual concentrations of petroleum hydrocarbons remaining in the soil or groundwater are below the regulatory limits and are expected to attenuate naturally.

**2465 Van Ness Avenue (Chevron Station # 90034)**

According to the database, this site was reported for leaking gasoline fuel tanks. The two nearest monitoring wells included in the database file were Wells MW-1 and MW-9, located approximately 30 feet west of the Van Ness Avenue curb, and southwest of the Union Street intersection. In a groundwater sample taken from Well MW-9 on December 20, 2001, a TPH-gasoline concentration of 150 micrograms per liter (ug/L) was measured. In a sample taken from Well MW-1 on December 20, 2001, a TPH-gasoline concentration of 83 ug/L was measured. This site received regulatory case closure status on August 22, 2002; therefore, any potential residual concentrations of petroleum hydrocarbons remaining in the soil or groundwater are below the regulatory limits and are expected to attenuate naturally.

**2559 Van Ness Avenue (Former Mobil / BP Station #11184)**

According to the database, the case status is open, with ongoing groundwater monitoring. Two Monitoring Wells KEI-1 and AMW-4 are located in close proximity to the project limits in the vicinity southwest of Filbert Street. The database map shows both wells are located approximately 15 feet west of the Van Ness Avenue curb. Groundwater depths measured in these wells since 2002, indicate the water table occurs between 18.7 to 21.6 feet below the surrounding pavement surface.

Groundwater samples taken from Well KEI-1, on March 4, 2009, showed residual contamination remains in groundwater, with elevated concentrations of BTEX at 5 ug/L, gasoline range organics at 110 ug/L, MTBE at 5 ug/L, tetrachloroethene at 150 ug/L, and trichloroethene at 5 ug/L. Groundwater samples taken from Well AMW-4 had concentrations of BTEX at 10 ug/L, gasoline range organics at 280 ug/L, MTBE at 10 ug/L, tetrachloroethene at 450 ug/L, and trichloroethene at 100 ug/L. Further discussion of this site is given in subsequent sections of this report.

**2601 Van Ness Avenue (Shell Station #6107)**

According to the database, a leak was reported in 1965, and another leak was discovered in 1987. The potential contaminant of concern was gasoline affecting soil and groundwater. The cleanup was completed and the site received regulatory case closure status on February 2, 1999; therefore, any potential residual concentrations of petroleum hydrocarbons remaining in the soil or groundwater are below the regulatory limits and are expected to attenuate naturally.

### 3.0 RECORDS REVIEWS

Public records of potential environmental risk sites that were available for review were reviewed by AGS on July 11, 2008, at the San Francisco Environmental Health Department, located at 1390 Market Street, in San Francisco, CA. Prior to the review, requests to search public records forms were completed and submitted to the Hazardous Materials Unified Program Agency (HMUPA), and the Local Oversight Program (LOP).

The records reviewed by AGS were selected based upon the results of the EDR and Geotracker database searches. Sites were selected that are located on Van Ness Avenue and have a past history of leaking underground tanks and/or piping, because these sites are considered to have either had, or still present, the greatest likelihood of a release affecting soil and/or groundwater underneath the Project. Records requested for review included gasoline stations located at 851 Van Ness Avenue (Texaco), 1501 Van Ness Avenue (Chevron), 1898 Van Ness Avenue (Shell), 2465 Van Ness Avenue (Chevron), 2559 Van Ness Avenue (BP), and 2601 Van Ness Avenue (Shell). According to the LOP quarterly site roster, dated July 7, 2008, the case status was “open” for two of the six gasoline stations (sites at 1501 and 2559 Van Ness Avenue) with records available for review and the case status was “closed” for remainder of the sites. AGS reviewed the records for the sites at 1501 and 2559 Van Ness Avenue, which are discussed below. In addition, records were available for review for the site at 2601 Van Ness Avenue with a “closed” status, and AGS reviewed these records also, since this site is situated just across the street, opposite to the site at 2559 Van Ness Avenue.

Table 2 presents a summary of environmental risk sites on Van Ness Avenue, including the sites with records reviewed at the San Francisco Environmental Health Department, and additional sites identified from the EDR reports.

**1501 Van Ness Avenue (Chevron #90030)**

At the time of the file review, the case status was open, with ongoing groundwater monitoring. The site is located northwest of the Pine Street intersection, on ground that slopes gently toward the southeast.

The records indicate that on October 8, 1987, three USTs were removed from the site. Soil samples taken at the time of removal from near the bottom of the tanks, at a depth of 12 feet, identified waste oil concentrations as high as 300 parts per million (ppm), and oil and grease at 48,000 ppm. Oil and grease was also measured at a concentration of 4,900 ppm from a soil sample taken at a depth of 14 feet. In December 1988, a 50-foot boring was drilled next to the former waste oil tank: groundwater was not encountered, soil samples collected did not contain concentrations of BTEX above the laboratory method reporting limits, and oil and grease was not measured (Weiss Associates, 1988).

In November 1996, product piping was removed and twelve soil samples were obtained from underneath the piping. TPH gasoline and diesel concentrations of 47 and 1,100 ppm, respectively, were measured in soil sample P-11 at a depth of 3 feet. A TPH diesel concentration of 340 ppm was measured in soil sample P-1 at a depth of 2.5 feet, which was taken approximately 65 feet west of Van Ness Avenue (Touchstone Developments, 1996). In the other soil samples, including P-3 and P-4, which were taken approximately 40 to 50 feet west of Van Ness Avenue, only very low or non-detectable concentrations of TPH diesel were measured, with no detectable concentrations of BTEX or MTBE (San Francisco Environmental Health Department, 2002).

**2559 Van Ness Avenue (Former Mobil / BP #11184)**

At the time of the file review, the case status was open, pending review. The site is located southwest of the Filbert Street intersection on ground that slopes gently toward the northwest.

The records indicate that contamination resulted from a leak of a former waste oil tank located near the southwest corner of the property, approximately 80 feet west of Van

Ness Avenue, and from an area of USTs located near the northeast corner of the property, as near as 25 feet west of Van Ness Avenue. Groundwater appears to flow northwest in this area, away from Van Ness Avenue (EMCON Associates, 1994).

In 2002, groundwater samples collected from Wells KEI-3 and MW-6 contained the highest concentrations of benzene at 1,000 micrograms per liter and 6,150 micrograms per liter, respectively (Cambria, 2002). The nearest monitoring well on the site with respect to Van Ness Avenue that was sampled, Well AMW-4, contained a concentration of MTBE at 27.8 micrograms per liter and benzene was not detected.

### **2601 Van Ness Avenue (Shell #6107)**

The site is located northwest of the Filbert Street intersection. The records indicate that contamination resulted from a leak of a former waste oil tank located near the northwest corner of the property, approximately 100 feet west of Van Ness, and from an area of USTs located near the northeast corner of the property, approximately 25 feet west of Van Ness Avenue. No sampling or testing data was available for this site and the case status is closed.

TABLE 2: ENVIRONMENTAL RISK / LOP<sup>A</sup> SITES WITHIN THE PROJECT LIMITS

Site Address	Station Identification	Street Location	Groundwater Flow Direction (EDR <sup>B</sup> )	Estimated Groundwater Depth (ft bgs)	LOP Status July 7, 2008	Site Observation May 31, 2009
2601 Van Ness Avenue	Former Shell #6107	NW corner Filbert Street intersection	NW, gradient away from Van Ness	NA	Case Closed (9)	Vacant, Long Closed
2559 Van Ness Avenue	Former Mobil / BP #11184	SW corner Filbert Street intersection	NW, gradient away from Van Ness	18.70 to 21.16 <sup>C</sup>	Case <b>Open</b> , In Review (8)	Recently Closed
2465 Van Ness Avenue	Former Chevron #90034	SW corner Union Street intersection	NW, gradient away from Van Ness	NA	Case Closed (9)	Recently Closed
1898 Van Ness Avenue	Former Shell #2205	SE Corner of Washington Street intersection	Neutral Gradient	55.36 to 63.50 <sup>D</sup>	Case Closed (9)	Vacant, Long Closed
1501 Van Ness Avenue	Chevron #90030	NW corner of Pine Street intersection	SE, gradient toward Van Ness	> 50.00 <sup>E</sup>	Case <b>Open</b> , Ongoing Groundwater Monitoring (3B)	Open for business
851 Van Ness Avenue	Former Texaco	SE corner of Willow Street intersection	SE, gradient away from Van Ness	< 20.00 <sup>F</sup>	Case Closed (9)	Site Redeveloped
1601 Mission Street	Chevron (Former Bridgestone/Firestone)	SW corner of Van Ness Avenue intersection	Slight NE gradient, toward Van Ness.	< 20.00 <sup>G</sup>	Case Closed (9)	Open for business

<sup>A</sup> Local Oversight Program. The LOP is administered by the San Francisco Environmental Health Department, which oversees environmental cleanup of leaking underground storage tank sites and certain other contaminated sites.

<sup>B</sup> EDR Geocheck<sup>®</sup> Report.

<sup>C</sup> Geotracker Database. Monitoring Wells KEI-1 and AMW-4, measured January 4, 2008 and March 4, 2009.

<sup>D</sup> Geotracker Database. Monitoring Wells MW-1 and MW-8, measured June 26, 2002.

<sup>E</sup> Weiss Associates. Boring BH-A drilled December 13, 1988: groundwater not encountered to bottom of borehole at depth of 50 feet.

<sup>F</sup> EDR Geocheck<sup>®</sup> Report. Position H water levels.

<sup>G</sup> EDR Geocheck<sup>®</sup> Report. Position AO water levels.

NA – available data not found.

## 4.0 SITE RECONNAISSANCE

### 4.1 SITE RECONNAISSANCE

AGS conducted a site reconnaissance of the Van Ness Avenue BRT Project area on May 31, 2009. This consisted of a drive from North Point to Mission Street, stopping where necessary to observe the condition of potential environmental risk sites and any other recent construction activities.

The area north of Lombard Street was primarily a residential neighborhood, with only limited commercial land use, and no gasoline stations. The most obvious recent work was the site of an excavation at Galileo High School, east of the Bay Street intersection. At the time of the site reconnaissance, a hydraulic excavator was noticed near the excavation and sandy soil was stockpiled on the school site. The excavation work was observed to be limited to the school site and did not encroach onto Van Ness Avenue.

Based on the database and file reviews, the north-facing hillside, south of Lombard Street, was known to have been formerly occupied by three different gasoline station sites. These were located northwest and southwest of the Filbert Street intersection, and also southwest of the Union Street intersection. At the time of the site reconnaissance, the former Shell Station located northwest of Filbert Street (2601 Van Ness Avenue) was observed to be vacant, with no apparent recent activity. Both the BP Station located southwest of Filbert Street (2559 Van Ness Avenue) and the Chevron Station located southwest of Union Street (2465 Van Ness Avenue) appeared to have recently closed.

South of Union Street to Washington Street, the land use in the immediate area was observed to consist mainly of residential apartments with small commercial enterprises. The former Chevron Station located southeast of Washington Street (1898 Van Ness Avenue) appeared to have been long vacant. Near the top of the hill, northwest of the Pine Street intersection, the Chevron Station (1501 Van Ness Avenue) was open for

business. Further south, on the south-facing hillside, the land use in the immediate area was observed to consist mainly of residential apartments and large commercial enterprises, including the Holiday Inn, Ellis Brooks Chevrolet, and the Regency Center. No obvious recent construction activities or evidence of environmental work, such as excavations, stockpiled soil, or tank removals, were observed on the south-facing hillside as far south as the vicinity of City Hall.

At the time of the site reconnaissance, a total of two active gasoline stations were observed within the Van Ness BRT Project limits: 1) the Chevron Station at the Pine Street intersection (1501 Van Ness Avenue); and, 2) the Chevron Station and Car Wash located south of the Mission Street intersection (1601 Mission Street).

During the site reconnaissance, no major street construction work was observed within the Van Ness BRT Project limits; however, relatively new asphalt patches were observed near the Broadway Street intersection. The landscaping in the median strip of Van Ness Avenue appeared to be in good condition.

#### 4.2 ADJACENT AND NEARBY SITE USES

Going south from North Point Street to Broadway Street, the adjacent and nearby land use is predominantly residential, consisting mainly of medium density residential units, some of which have ground floor retail use. Galileo High School occupies a large area east of the Bay Street intersection.

Going south from Broadway Street to McAllister Street, the adjacent and nearby land use is mixed commercial and residential. Going south from McAllister Street to Market Street, there are a number of major civic and municipal buildings, which include the City Hall, Herbst Theater, and Davies Symphony Hall.

Going south from Market Street to Mission Street, the adjacent and nearby land use is mainly commercial. Major businesses operating in this vicinity include the Bank of America, a Honda automotive dealership, and Goodwill Industries.

## 5.0 CONCLUSIONS

Since heavy industrial use has been limited along Van Ness Avenue, the most prevalent environmental risks are associated with sites of existing or former automotive businesses, gasoline stations, and other sites which have had, or still have, underground tanks. Of particular concern are any leaks from underground tanks of gasoline or diesel fuel, oil and grease, or other hydrocarbon compounds that may have contaminated the subsurface. Other potential environmental risk sites include drycleaners and print shops. It is also possible that contamination may also be present as a result of undocumented historical fill present underneath roadways, median strips, and pavements, if petroleum hydrocarbons, metal debris or past building materials, such as lead, mercury, asbestos, or debris now considered potentially hazardous, were included in the fill. Contamination may also be present from seepage of oil, grease, and pavement coatings into the shallow subgrade soil through cracks in the roadway. The contaminants of concern are gasoline, diesel fuel, and associated petroleum hydrocarbons, such as MTBE and BTEX. Other items, such as pavement markings and the OCS support poles (some of which date to the mid-1930s), for example, are likely to contain some lead-based paint; therefore, their handling during the removal and replacement process may include some risk of exposure.

### 5.1 DISCUSSION OF ENVIRONMENTAL RISK SITES

The database search results and record reviews suggest the most likely type of contamination to impact the Van Ness Avenue BRT Project limits is from active LUST sites (environmental risk sites) that are located within the Project limits, which have leaked petroleum hydrocarbons and affected shallow subsurface soil, and perhaps groundwater. Also considered are sites with closed regulatory cases (potential environmental risk sites) that are located within the Project limits, or less than ¼-mile (approximately 2 blocks) upgradient of the Project limits. The groundwater gradients were determined based upon the area topography and the information provided in the EDR Geochek<sup>®</sup> Report. In general, the groundwater flow direction is to the east or

southeast on the south-facing hillside south of Clay Street and in the area of Market Street. The groundwater flow direction changes to the north to northwest in the area north of Pacific Avenue.

While other types of sites exist, such as Federal regulatory sites or DTSC sites, they are located either a sufficient distance (greater than ¼-mile) from the Project limits, or downhill from the Project, such that there is considered to be negligible risk of contamination having spread into the Project limits.

The most likely source of significant contamination to impact the Project limits would be from the two (2) environmental risk sites discussed below in Section 5.1.1. In addition, there are 36 potential environmental risk sites, which are also discussed below, and which have closed cases but are still considered to pose a risk to the Project limits since some cases may have been closed without sampling and testing to determine the full extent of contamination, including underneath roadway and sidewalk areas.

The approximate locations of each of the environmental risk sites are shown on **Plate 1**, based on EDR Focus Maps 3, 6, and 9; however, incorrect addresses provided in the Focus Maps were corrected on **Plate 1**. For example, the Target Auto Site is located at 600 South Van Ness Avenue (south of Market Street) at the 17<sup>th</sup> Street intersection; however, the EDR report shows the mapped location at 600 Van Ness Avenue (north of Market Street).

#### 5.1.1 ENVIRONMENTAL RISK SITES

##### ***Map ID 39 – Former Mobil / BP Station #11184, 2559 Van Ness Avenue***

The site is located southwest of the Filbert Street intersection, where there used to be a Mobil/BP Station. Underground fuel tanks were found to be leaking gasoline and other hydrocarbon constituents. Contamination has involved soil and groundwater. Post remedial action groundwater monitoring is ongoing. The case status is open and in review.

##### ***Map ID 153 – Chevron Station #90030, 1501 Van Ness Avenue***

The site is located at the northwest corner of the Pine Street intersection. A leaking underground tank with soil contamination was discovered in 1987. Groundwater was reportedly not encountered to 50 feet below the ground surface. The abatement method was to excavate and dispose of the contaminated soil and piping with some sampling and testing. Groundwater monitoring is ongoing. The case status is open and the site is still being assessed.

#### 5.1.2 POTENTIAL ENVIRONMENTAL RISK SITES WITHIN THE PROJECT LIMITS (CLOSED CASES, 22 Sites)

##### ***Map ID 31 – Apartment Property, 2815 Van Ness Avenue***

A leak due to corrosion of an underground tank containing heating oil fuel was identified in 2005. MTBE was detected in soil during testing. Details regarding an abatement method were not reported. The case was closed in November of 2005.

##### ***Map ID 39 – Marina Chateau Condominiums, 2701 Van Ness Avenue***

This site was reported in the Haznet database for generating waste oil and mixed oil waste. A heating oil fuel tank was found to be leaking in 1996, and the tank was repaired. The abatement method was to excavate and dispose of the contaminated soil, and remove the floating product from the water table. The case was closed in 1997.

##### ***Map ID 39 – Former Shell Station #6107, 2601 Van Ness Avenue***

The site is located northwest of the Filbert Street intersection, where there used to be a Shell Station. Underground fuel tanks were found to be leaking gasoline and other constituents upon removal in 1987. The abatement method was to excavate and treat/dispose of the contaminated soil, including venting of volatiles through the boreholes drilled onsite. The case was closed in February of 1999.

##### ***Map ID 49 – Residential Apartment, 2526 Van Ness Avenue***

A leaking underground heating oil fuel tank contaminating the soil was identified in 2000. The abatement method was to excavate and dispose of the contaminated soil. The case was closed.

***Map ID 49 – Residence, 2500 Van Ness Avenue***

A leaking underground heating oil fuel tank contaminating the soil was identified in 1996. The abatement method was to excavate and dispose of the contaminated soil, and remove the floating product from the water table. The case was closed in 1997.

***Map ID 49– Chevron Station #90034, 2465 Van Ness Avenue***

A leaking underground tank with soil and groundwater contamination was discovered in 1991. The abatement method was to remove the tank and piping with some of the contaminated soil. Post remedial action monitoring began in 1991, and the case was closed in 2002.

***Map ID 49 – Rodriguez Property, 2444 Van Ness Avenue***

A leaking underground heating oil fuel tank contaminating the soil was identified in 1996. The abatement method was to excavate and dispose of the contaminated soil. The case was closed in 1996.

***Map ID 49 – Commercial Property, 2420 Van Ness Avenue***

A leaking underground heating oil fuel tank contaminating the soil was identified in 2007. No abatement method is reported. The case was closed in 2007.

***Map ID 49 – Apartment Property, 2400 Van Ness Avenue***

A leaking underground heating oil fuel tank was identified in 2004. No abatement method is reported. The case was closed in 2005.

***Map ID 49 – Apartments, 2363 Van Ness Avenue***

A leaking underground heating oil fuel tank was identified in 2003. No abatement method is reported. The case was closed in 2003.

***Map ID 70 – Commercial Property, 2360 Van Ness Avenue***

A leaking underground heating oil fuel tank was identified in 2004. No abatement method is reported. The case was closed in 2004.

***Map ID 87 – Commercial Building, 2000 Van Ness Avenue***

A leaking underground heating oil fuel tank was identified in 1996. The abatement method was to excavate and dispose of the contaminated soil. The case was closed in 1997.

***Map ID 103 – Shell Station #2205/Ben's Shell, 1898 Van Ness Avenue***

A leaking underground gasoline tank was identified in 1990. The abatement method was to excavate and dispose of contaminated soil. Post remediation monitoring began in 2000. The case was closed.

***Map ID 164 – Ellis Brooks Chevrolet, 1395 Van Ness Avenue***

A leaking underground gasoline tank was discovered in 1998. No abatement method is reported. The case was closed in 2007.

***Map ID 164– St. Clare Hotel, 1332 and 1334 Van Ness Avenue***

A heating oil fuel tank was found to be leaking in 1997, and the tank was repaired. The abatement method was to excavate and dispose of the contaminated soil, and remove the floating product from the water table. The case was closed in 1997.

***Map ID 195 – Ford Leasing Dev. Co., 1000 Van Ness Avenue***

A leaking underground diesel fuel tank contaminating soil on the site was discovered in 1991. The abatement method was to excavate and dispose of the contaminated soil, and the case was closed in 1991. The site is also reported as a small quantity generator of polychlorinated biphenyls (PCBs), oil-containing waste, and asbestos-containing waste.

***Map ID 209 – Former Texaco Station, 851 Van Ness Avenue***

A leaking underground gasoline tank with soil and groundwater contamination was discovered in 1987. The abatement method was to excavate and dispose of the contaminated soil, and remove the floating product from the water table. The case was closed in 1994.

***Map ID 218 – Walgreens 2153, 790 Van Ness Avenue***

A leaking gasoline tank was discovered in 1989. The abatement method was to excavate and dispose of the contaminated soil. The case was closed in 1996.

***Map ID 263 – Commercial Property, 527 Gough Street***

A leaking underground gasoline tank contaminating soil was discovered in 1999. The abatement method was not reported, and the case was closed in 1999.

***Map ID 269 – Residential Apartments, 200 Van Ness Avenue***

A leaking underground gasoline tank contaminating soil was discovered in 1999. The abatement method was to excavate and dispose of the contaminated soil. The case was closed in 1999.

***Map ID 273 – San Francisco Unified School District, 135 Van Ness Avenue***

A leaking underground heating oil fuel tank was identified in 1998. The abatement method was to excavate and dispose of the contaminated soil, and remove the floating product from the water table. The case was closed in 1999.

***Map ID 283 – San Francisco Honda, 10 South Van Ness Avenue***

A leaking waste oil tank was identified in 1988. The abatement method was to excavate and dispose of the contaminated soil. The case was closed in 1994.

**5.1.3 POTENTIAL ENVIRONMENTAL RISK SITES NEAR THE PROJECT LIMITS  
( < 1/4 MILE UPGRADIENT DISTANCE, 14 Sites)**

***Map ID 52 – Residential Apartments, 1455 Union Street***

A leaking underground heating oil fuel tank was identified in 2003. No abatement method was reported, and the case was closed.

***Map ID 58 – Arundel Green Partners, 1438 Green Street (<1/8-mile east)***

This site is located approximately ½ block east of Van Ness Avenue. A 300-gallon diesel UST was removed from beneath the sidewalk in 1997. During the removal, soil contamination was encountered and soil was overexcavated to a depth of approximately 9 feet, but no further excavation could be conducted due to the sidewalk and basement proximity that could be compromised. No groundwater was encountered during the excavation. The case was closed in August of 2008.

***Map ID 76 – China Town Community Development Center/Notre Dame Apartments 1590 Broadway Street***

A leaking underground diesel tank contaminating soil was discovered in 2002. The abatement method was to excavate and dispose of contaminated soil. The case was closed.

***Map ID 119 – Residential Apartments, 1830 and 1840 Clay Street***

An underground tank at 1830 Clay Street was found to be leaking heating oil contaminating soil in 2001. The abatement method was to excavate and dispose of contaminated soil. The case was closed in 2002. In 1995, an underground tank was found to be leaking gasoline at 1840 Clay Street. The abatement method is not reported. The case was closed in 1995.

***Map 140 – German Motors Corporation, 1765 California Street***

The site is reported in the LUST database for leaks of diesel fuel and gasoline that were discovered in 1991. The abatement method is not reported. This case was closed in 1994. A pad mounted non-PCB containing transformer is also reported to have leaked in 2003. No further action was reported.

***Map ID 187 – Former Auto Repair, 1336 Post Street***

The site is reported in the LUST database for a gasoline leak that was discovered in 1989. The abatement method is not reported. The case was closed in 1995.

***Map ID 229 – Shell Station #2106, 800 Turk Street***

A leaking underground gasoline tank was discovered contaminating soil in 1997. The abatement method was to excavate and dispose of contaminated soil. The case was closed in 1998.

***Map ID 254 – Commercial Property, 355 Fulton Street***

An underground heating oil fuel tank was discovered to be leaking in 2005. The abatement method is not reported. The case was closed in 2005.

***Map ID 269 – California Automobile Association, 150 Hayes Street***

An underground fuel tank was found to be leaking gasoline in 1987, and the leak was confirmed in 1998. Draft case closure was issued on November 9, 1999, pending confirmation of well abandonment. Due to a discrepancy in the data, the case was not closed. Despite the incident being reported as minor, there is reported to be some post remedial action monitoring. Another gasoline tank was found to be leaking in 1986, and the case was closed in 1994.

***Map ID 287 – International Center, 50 Oak Street***

A leaking underground diesel fuel tank contaminating soil was discovered in 2000. The abatement method was to excavate and dispose of contaminated soil. The case was closed in 2000.

***Map ID 294 – Mixed commercial and residential property, 1594 Market Street***

An underground heating oil fuel tank was discovered to be leaking in 2003. The abatement method is not reported. The case was closed in 2004.

***Map ID 303 – Coca Cola Bottling Company, 1560 Mission Street***

A leaking diesel fuel tank was identified in 1988. The abatement method is not reported. The case was closed in 1995.

***Map ID 303 – Unocal Station #5455/Pyramid Union 76, 1600 Mission Street***

A leaking gasoline tank was identified in 1987. The abatement method was to remove the contaminated soil from the site, and pump and treat the contaminated groundwater. The case was closed in 1999.

***Map ID 312 – Firestone Tire/ Chevron Station and Tower Car Wash, 1601 Mission Street***

Leaking underground diesel fuel and waste oil tanks contaminating soil were discovered in 1995. The abatement method is not reported. The case was closed in 1996.

## 5.2 AERIALY DEPOSITED LEAD

The Project area along Van Ness Avenue has historically been a heavy traffic-bearing thoroughfare through San Francisco. Due to this heavy vehicular activity, the soil in the median(s) of Van Ness Avenue may be contaminated with aeriaily deposited lead from the exhaust of cars burning leaded gasoline. The lead levels present in surface soil along busy arterial roads can reach concentrations in excess of the hazardous waste threshold, requiring on-site stabilization or disposal at a Class 1 landfill.

## 5.3 LEAD-BASED PAINT

Hazardous materials consisting of lead-based paint may be present in OCS support poles/streetlights, other light poles, traffic lane striping, and pavement marking materials. Prior to construction, samples should be collected from these items and tested for lead. If lead is detected, appropriate procedures should be used during construction to avoid contact with these materials, or generation of dust or vapors.

## 5.4 CONSTRUCTION WASTE HANDLING/TRANSPORT/DISPOSAL

The contractor will be responsible for handling all construction wastes, including debris, soil and water, in conformance with applicable state and federal regulations.

## 6.0 RECOMMENDATIONS

Recommended mitigations pertaining to any existing ground contamination or usage of hazardous materials that could generate hazardous waste impacts as a result of the Van Ness Avenue Bus Rapid Transit (BRT) Project are summarized below. In general, precautionary measures and contingencies for the emergency response to accidents involving all types of hazardous materials (including hazardous wastes) and physical hazards should be implemented into the design of construction for health and safety purposes.

The risk of exposure to any ground contamination will depend upon the scope of construction and the construction techniques that are employed. Even if subgrade soil is contaminated, it is unlikely to be penetrated during much of the surface construction work, including pavement overlaying, painting, striping, and related work. The potential risk of exposure becomes higher for deeper construction, which is expected to include foundation excavations for new signal poles, shelters and ramps; removal and replacement of existing OCS support poles, wherever necessary; subsurface utility work; reconstruction of entire pavement sections; and, some of the concrete slab or platform constructions. The deepest excavation work will likely involve installation of signal poles with excavations to 16.0 feet bgs. Additional deep excavations will include removal and replacement of the existing OCS support poles, since their existing concrete footings reportedly extend as deep as 13.0 feet bgs.

### 6.1 ADDITIONAL ENVIRONMENTAL REVIEWS

Following selection of the Locally Preferred Alternative and more detailed design information, the project will require updated database searches and field review for those environmental risk sites listed in Section 5.1.1 and any other sites that may be identified, that occur in the vicinity of proposed excavation work. These reviews would occur as part of the project design phase, i.e., just prior to project implementation. In addition, potential environmental risk sites that occur in the vicinity of proposed excavation work should be checked on a case-by-case basis to examine whether or not

there is a reasonable likelihood that contamination could have spread into the subsurface. Once the underground construction areas are determined in the project design phase, AGS recommends the following:

- Updated database searches should be conducted for the Project corridor. If there are only limited areas where there will be underground construction, then searches could be conducted for these areas only.
- Regulatory agency files should be reviewed for each of the environmental risk sites identified in the updated database searches, in order to determine the current status of the site, and if possible, the extent of contamination (e.g., where the leak occurred, location of wells, levels of contamination in wells, plume diagrams, etc.).
- Based on the results of the updated database searches and file reviews, field surveys should be conducted of the environmental risk sites identified in close proximity to, and possibly overlapping the underground construction areas of the Project, and also of those sites identified 1/8-mile or less upgradient from these areas. Observations made during the field surveys should verify the physical locations of the sites with respect to the Project limits; note the current conditions of the sites, such as the types of facilities at the sites and the presence of drums, tanks, pumps, wells, remediation systems, etc; and, include a study of any other pertinent details about the sites.
- Finally, if construction of the project warrants, Phase II subsurface investigations should be conducted within the project limits, adjacent to, or downgradient from any environmental risk sites still of concern.

## 6.2 IMPLEMENTATION OF A RISK MANAGEMENT PLAN

A risk management plan should be developed and implemented for construction. It should include the following components to address procedures to follow if contaminated soil and/or groundwater is encountered:

- Worker Site Health and Safety Plan. The site health and safety plan should address the following: (1) a safety and health risk/ hazard analysis for each site task and operation found in the workplan; (2) employee training assignments; (3) personal protective equipment to be used by site workers for each of the site tasks and operations being conducted; (4) medical surveillance requirements; (5) air monitoring, and environmental sampling techniques and instrumentation to be used, including methods of maintenance and calibration of monitoring and sampling equipment to be used; (6) an emergency response plan, including the

necessary PPE and equipment, valve shutoff or evacuation procedures should there be an accidental line rupture; and (7) a spill containment program in case of an accidental leak or spill from machinery, or of construction materials.

- Safe Storage and Disposal measures for any contaminated soil, groundwater or debris, including temporary storage locations, labeling, and containment procedures.
- Procedures to contain any possible contamination, including methods to protect storm drains, and prevent any contaminated runoff or leakage either into or onto the exposed ground surface. These measures should be incorporated into the project construction storm water pollution prevention plan and/or the spill prevention and control countermeasure plan.
- Necessary Public Health and Safety Measures to be implemented during construction.

## **7.0 CLOSURE**

This assessment was prepared for the exclusive use of Parsons Transportation Group, Inc., and its consultants for the specific application to the Van Ness Avenue BRT Project. It was prepared in accordance with generally accepted professional practice. No other warranty, expressed or implied, is made.

The recommendations submitted in this report are based upon available data obtained from the database search by Environmental Data Resources, Inc., other online sources, records reviews, and a site reconnaissance. No site-specific subsurface studies were conducted for this assessment. The conclusions and recommendations presented in this report are preliminary and should be updated and verified by further site-specific studies once the Locally Preferred Alternative is selected and more detailed design information is available. If changed conditions are encountered, it will be necessary to reevaluate the recommendations of this report.

Respectfully submitted,  
AGS, Inc.

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## 8.0 REFERENCES

- California State Water Resources Control Board, 2008, Online Environmental Database, <http://geotracker.swrcb.ca.gov/>
- California Department of Toxic Substances Control, 2008, Online Environmental Database, <http://www.envirostor.dtsc.ca.gov/public/>
- Cambria, 2002, First Quarter 2002. Groundwater Monitoring Report, BP Oil Site No. 11184, 2599 Van Ness Avenue, San Francisco, California.
- Cooper Clark and Associates, 1976, Soil Investigation for Proposed Safe Deposit Vault Building Addition, 1595 Van Ness Avenue, San Francisco, California, August 25, 1976.
- Earth Mechanics Consulting Engineers, 2003, Geotechnical Reconnaissance for Planned Improvements, 2433-2425 Larkin Street, San Francisco, California, April 16, 2003.
- Emcon Associates, 1994, Quarterly Groundwater Monitoring Report, Shell Oil Company, 2601 Van Ness Avenue, San Francisco, California.
- Engineering Remediation Resources Group, Inc., 2003, Geotechnical Investigation Helen Wills Park Redevelopment, 1401 Broadway, San Francisco, California.
- Environmental Data Resources, Inc., June 3, 2008, EDR DataMap™ Environmental Atlas™, Van Ness Avenue BRT EIR/EIS.
- Environmental Data Resources, Inc., May 30, 2008, EDR Geocheck® Report, Van Ness Avenue BRT EIR/EIS.
- Geomatrix, 1994, Geotechnical Recommendations for Design of Loading Dock, West Side of Goodwill Building, 1500 Mission Street, San Francisco, California, October 19, 1994.
- Globe Soil Engineers, 1998, Geotechnical Investigation 900 Van Ness Avenue, San Francisco, California, August 21, 1998.
- Golden Gate Tank Removal, 2007, Corrective Action Workplan and Feasibility Study for Target Auto, 600 South Van Ness Avenue, San Francisco, CA, April 11, 2007.
- Goldman, H. B., 1969, Geologic and Engineering Aspects of San Francisco Bay Fill; CDMG Special Report 97, p. 11-29.

Helley, E.J., and LaJoie, K.R., 1979, Flatland Deposits of the San Francisco Bay Region, California – their geology and engineering properties, and their importance to comprehensive planning, USGS Professional Paper 943.

San Francisco Environmental Health Department, June 2006, Site Remediation and Voluntary Cleanup Inventory List and Leaking Underground Tank Oversight Program Inventory List

San Francisco Municipal Transit Authority, 2008, Van Ness Overhead Contact System (OCS) and Streetlights Project Basic Fact Sheet – prepared by SFMTA staff, dated 8-25-08.

San Francisco Municipal Transit Authority, 2008, Van Ness Overhead Contact System (OCS) and Streetlights Project Basic Fact Sheet – prepared by SFMTA staff, dated 8-25-08.

San Francisco Planning Department, Van Ness Avenue Area Plan

San Francisco Public Utilities Commission, 2006, Van Ness Avenue Streetlights Project Description, dated 2-6-2006.

Treadwell & Rollo, 1997, Geotechnical Investigation for Seismic Upgrade, 30 Van Ness Avenue, San Francisco, California, November 26, 1997.

URS, 2005, First Semi-Annual 2005 Groundwater Monitoring Report, Former BP Station No. 11184, 2559 Van Ness Avenue, San Francisco, CA.

Weiss Associates, 1988, Environmental Site Assessment for Chevron Station No. 90030, 1501 Van Ness Avenue, San Francisco, CA.