

The Goodyear Tire & Rubber Company
Akron, Ohio 44316 - 0001

February 11, 2009

Mr. Paresh Khatri
Alameda County Health Care Services Agency
Environmental Health Services
1131 Harbor Parkway, Suite 250
Alameda, CA 94502-6577

RECEIVED

2:19 pm, Feb 13, 2009

Alameda County
Environmental Health

Re: Goodyear DEX Lease Location # 9578
3430 Castro Valley Boulevard
Castro Valley, California

TO WHOM IT MAY CONCERN:

Attached for your review is the Preferential Pathway Study of the Goodyear DEX #9578, 3430 Castro Valley Boulevard, Castro Valley, California. This report was prepared for the Goodyear Tire & Rubber Company by Stantec Consulting Corporation. I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct, to the best of my knowledge.

If you have any questions, please don't hesitate to contact me or Stantec Project Manager Jack Hardin at 408-356-6124 extension 230.

Sincerely,



Matthew McClellan
The Goodyear Tire & Rubber Company
Global Environmental Management, D110F

cc: Mr. Jack Hardin, Stantec - Los Gatos

GOODYEAR



Stantec

February 10, 2009

Mr. Paresh Khatri
Alameda County Health Care Services Agency
Environmental Health Services
1131 Harbor Parkway, Suite 250
Alameda, CA 94502-6577

Dear Mr. Khatri:

**Reference: Preferential Pathway Study
Goodyear DEX #9578
3430 Castro Valley Boulevard
Castro Valley, California
Fuel Leak Case No. : RO0000474 / Global ID T0600101801
PN: 06GY.66050.07**

The Goodyear Tire & Rubber Company (Goodyear) retained the services of Stantec Consulting Corporation (Stantec) to perform a preferential pathway study at the Goodyear DEX #9578 (Site) in response to a directive letter issued by the Alameda County Health Care Services Agency (the County) dated July 17, 2008. The objective of this pathway study was to identify potential subsurface migration pathways and conduits (i.e., wells, utilities, pipelines) beneath the Site and assess the potential for vertical and lateral migration of contamination. In a subsequent telephone conversation on October 7, 2008 between Stantec and the County it was agreed upon by both parties that this study would consist of a utility survey that will essentially include a figure illustrating the depth and areal extent of subsurface utilities (including sewers, storm drains, pipelines, etc.) within and near the Site, along with their associated gradient. This agreed upon study would not include a well survey, as described in the County's July 17, 2008 letter.

The Site location is shown on Figure 1; monitoring well locations and groundwater elevation contours are shown on Figure 2; and underground utilities are shown on Figure 3. Castro Valley is an unincorporated area in Alameda County.

The conclusions presented in this report are professional opinions based on data described herein. Limitations associated with this report are described in Appendix A.

BACKGROUND

Previous Investigations

Prior to 1993, a 550-gallon used oil underground storage tank (UST) was removed from the Site (Figure 2). In September 1993 two soil borings (No.1-South and No.2-North) were advanced to 8 feet below ground surface (bgs) in proximity to the former UST. In September 1994, three groundwater monitoring wells (MW-1 through MW-3) were installed to assess subsurface groundwater conditions. In December 1996, in support of a Tier 1 risk-based corrective action (RBCA) evaluation, four soil borings (PB-1 through PB-4) were advanced, and PB-4 was converted to a monitoring well (MW-4).

Stantec (formerly SECOR) was retained by Goodyear in August 2002 to conduct groundwater sampling and reporting.. Measurable free product was encountered in MW-3 (located down-gradient of the former UST), thus, a groundwater sample has not been collected from MW-3 since

August 2002. Free product has been measured and removed using enhanced free product removal (FPR) methods from August 2002 to December 2007. At the direction of the County, enhanced FPR was discontinued in 2007 until such time that the County and Goodyear could agree on a suitable remedial action for the Site.

Subsurface Lithology

Soils beneath the Site consist of clay and silty clay to approximately 14 feet bgs, underlain by clayey to silty sand to approximately 20 feet bgs. During installation of monitoring wells MW-2 and MW-3 in 1994, groundwater was encountered in these relatively coarse-grained sediments present between 14 and 20 feet bgs. At MW-1, the water-bearing zone occurs at a shallower depth, where saturated sediments (silty clay with minor sand) were encountered at approximately 10 feet bgs. During installation of wells MW-1, MW-2, and MW-3, the field geologist observed a stiff, dry silty clay underlying the saturated zone at approximately 20 feet bgs.

Subsequent investigations have confirmed the presence of stiff clay and silty clay in the upper 12 feet bgs. SECOR advanced a series of soil borings at the Site in 2004 to a depth of 12 feet bgs, with one soil boring advanced to 15 feet bgs adjacent to the oil-water separator (see Figure 3). Each of these soil borings encountered clay to the total depth of investigation.

Groundwater

During installation of wells in 1994 and 1996, groundwater was encountered in sandy silt and clay at depths ranging from 10 to 14 feet bgs. The depth to groundwater measured in wells MW-1 through MW-4 is typically approximately 4.5 to 6.5 feet bgs, suggesting groundwater is confined by overlying fine-grained soils. As measured in December 2008, the groundwater flow direction is to the south-southeast at an approximate gradient of 0.012 feet per foot. Groundwater elevation contours from the December 2008 monitoring event are illustrated on Figure 2.

Preferential Pathway Study

Stantec conducted a preferential pathway study of the Site vicinity to assess the potential for subsurface utility trenches to act as potential conduits for groundwater and petroleum hydrocarbon migration. To identify utilities in the Site vicinity, Stantec contacted the following agencies:

- Pacific Gas & Electric Company (PG&E);
- East Bay Municipal Utility District (EBMUD);
- Castro Valley Sanitation District;
- AT&T North Bay/Pacific Bell; and
- The County of Alameda Building Department.

Additionally, Stantec contacted Underground Services Alert (USA) for identification of other utilities in the Site vicinity.

The City of Castro Valley is an unincorporated area of Alameda County; therefore the County of Alameda maintains records of significance for the Site. On January 6, 2009, Stantec visited the County of Alameda Building Department to review building permits and as-built drawings for the Site. Files available were on microfiche only and consisted of copies of permits for sign installation and did not include as-built drawings or information regarding utilities.

Water, sanitary sewer, and underground gas and electric utilities were identified south and east of the Site, as well as within the Site boundaries. Technical aspects of the underground utilities, including flow direction and pipe diameter are shown on Figure 3. Locations and depths of the utilities were based on the following:

- Maps and permits provided by Castro Valley Sanitation District dated 1944, 1959, and 1974;
- Maps provided by EBMUD dated 1931 and 1960; and
- Goodyear conceptual design drawings dated 1973.

Summaries of the findings are presented below:

Water Lines

An 8-inch diameter water line, traversing east to west and sloping to the west, is located within a utility trench beneath Castro Valley Boulevard at 3 feet bgs. A 4-inch diameter water line, set approximately 3 feet bgs, enters the Site from the south and supplies water to the Site.

Sanitary Sewer Lines

A 6-inch diameter vitrified clay pipe (VCP) sewer line, set at a minimum 2% slope, is located within a utility trench beneath Castro Valley Boulevard and lies approximately 5.5 to 6 feet bgs. Floor drains in the Site service bays and tire wash area are connected to a 4-inch diameter VCP sanitary sewer line set at a minimum 2% slope that slopes southward discharging into an oil/water separator (OWS) on the Site. Historically, floor wash water (consisting of either tap water or tap water and commercial soap) was discharged into the floor drains. According to the current store manager, the floor drains adjacent to the hydraulic lifts are sealed and only the tire wash drain currently discharges into the OWS. The OWS collects sediments and oil and discharges the water into the sanitary sewer.

Floor drains located within the restrooms flow south and connect with the discharged water from the OWS and discharge into the sanitary sewer line beneath Castro Valley Boulevard.

Storm Drains

A 21-inch diameter storm sewer drain line is located along the north side of Castro Valley Boulevard. The depth of the utility trench containing the storm drain line is approximately 6 feet bgs.

Gas and Electric Lines

Two to 4-inch diameter gas and electric lines lay in utility trenches located north, south, and west of the Site building. PG&E trenches are approximately 1 to 2 feet wide and 2 to 4 feet bgs. Two underground transformers are located on the northwest corner of the asphalt driveway and the southeast corner of the front parking area.

Communication Lines

AT&T telephone and cable lines are located in the Site vicinity; however, at the time of this report preparation, no information regarding pipe diameter, location, or depth was available.

Abandoned Sewer Line

According to records reviewed at the Castro Valley Sanitation District, an abandoned 6" VCP sewer line traverses the Site from north to south (see Figure 3). The line previously serviced the Castro Valley Bowl located immediately north of the Site, and connected to the main sewer line on the north side of Castro Valley Boulevard at a depth of approximately 6 feet bgs. Historical records did not contain information regarding trench specifications such as depth of placement. Assuming a minimum slope of 2% to the main sewer line located at approximately 6 feet bgs, the approximate depth of the abandoned sewer line between the former UST and the OWS is 2 to 4 feet bgs.

SUMMARY AND CONCLUSIONS

Historical groundwater monitoring indicates the presence of free-phase petroleum hydrocarbons within well MW-3, located approximately 25 feet downgradient of the former used oil UST. Well MW-4, located approximately 70 feet further downgradient, has historically been 'non-detect' for constituents of concern, indicating that the boundary of free product and dissolved-phase hydrocarbons in groundwater is between wells MW-3 and MW-4. Therefore, the area of interest relating to the potential interception of free product or impacted groundwater by utility trenches is the area bounded by the former UST to the north, MW-4 to the south, the existing building to the east, and the property line to the west. Utility lines identified in this area are the gas and electrical service lines (approximately 2 to 4 feet bgs), the abandoned sewer lateral from Castro Valley Bowl (approximately 2 to 4 feet bgs in the area of interest), and the floor drain line (sanitary sewer line) beneath the building (maximum depth of approximately 4 feet bgs at the OWS).

Based on the depth of identified utilities in the area of interest (up to approximately 4 feet bgs) and the depth to first-encountered groundwater (documented at 9.5 to 12 feet bgs), Stantec concludes that utility lines at the Site have a very low potential to intercept free-phase product or impacted groundwater associated with the former used oil UST.

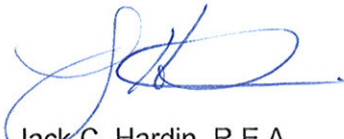
Stantec

Mr. Khatri
February 10, 2008

If you have any questions regarding this submittal, please contact Jack Hardin at (408) 356-6124 extension 230.

Sincerely,

STANTEC CONSULTING CORPORATION



Jack C. Hardin, R.E.A.
Managing Principal

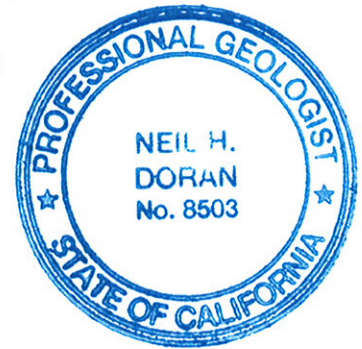
cc: Matthew McClellan - Goodyear

Attachments:

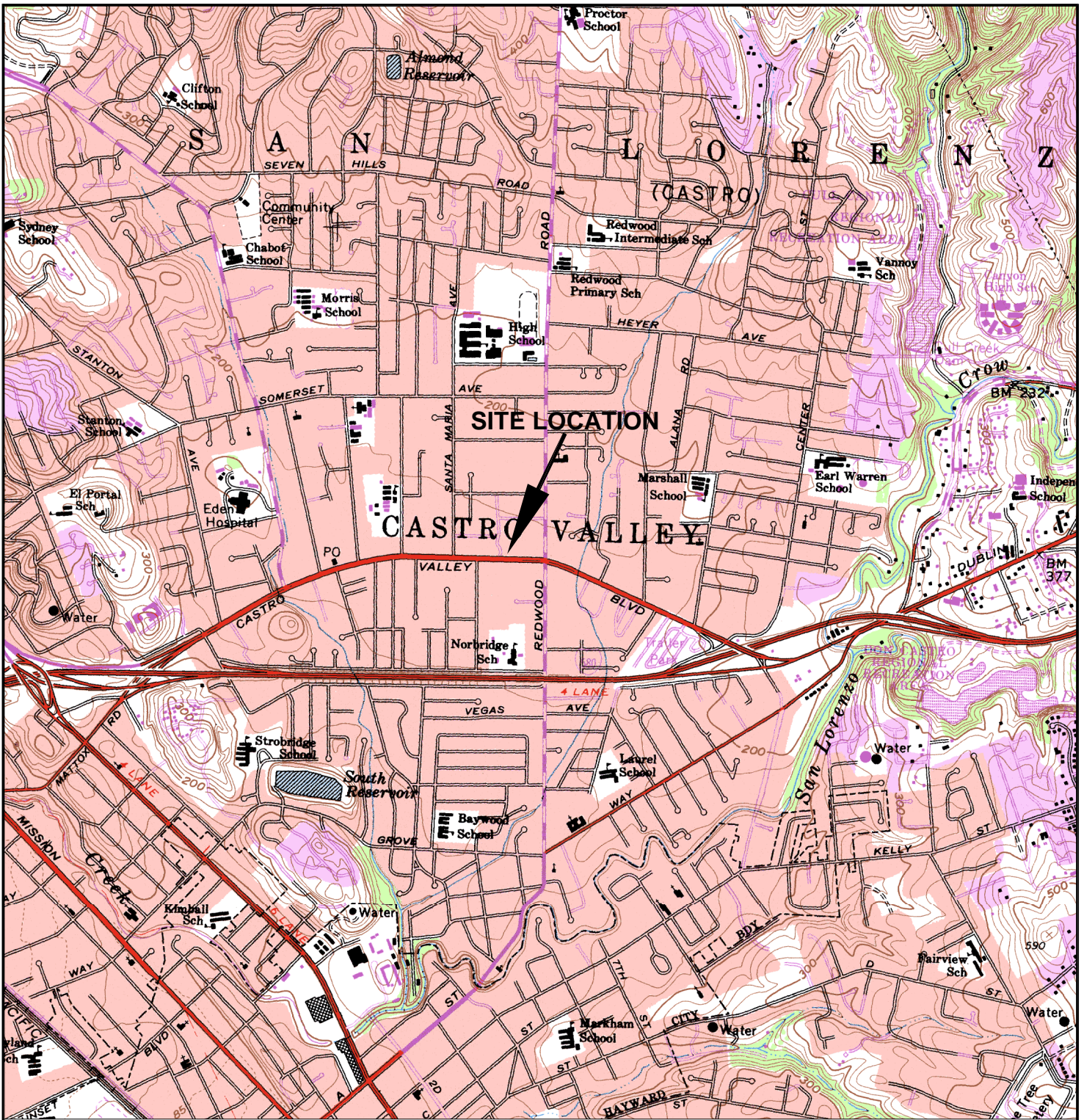
- Figure 1 – Site Location Map
 - Figure 2 – Groundwater Contour Map
 - Figure 3 – Underground Utility Map
- Appendix A – Statement of Limitations



Neil Doran, P.G.
Senior Geologist



FIGURES




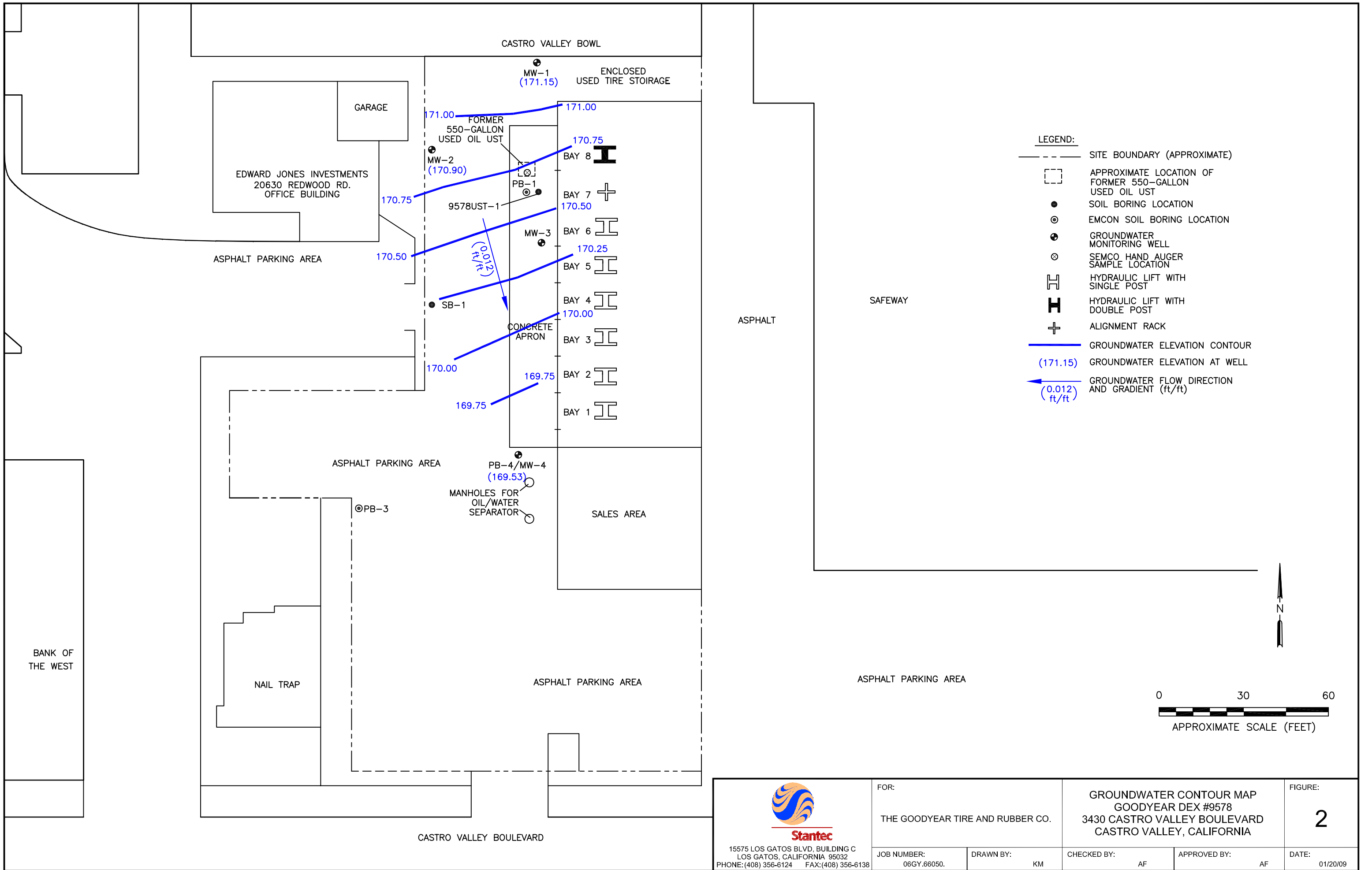
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USGS 7.5 MINUTE
TOPOGRAPHIC MAP—
HAYWARD, CALIFORNIA
QUADRANGLE


QUADRANGLE
LOCATION

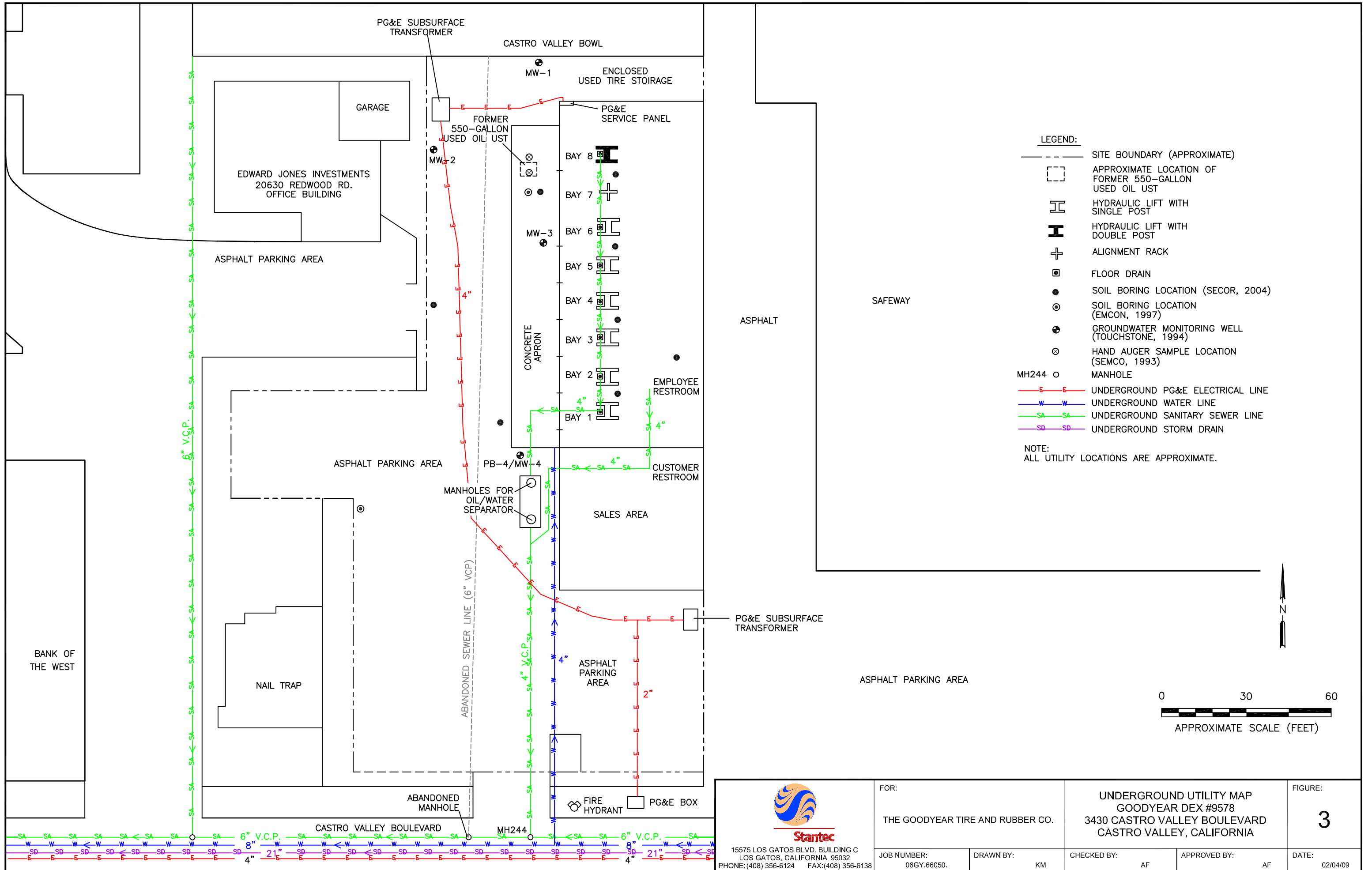
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APPROXIMATE SCALE (FEET)

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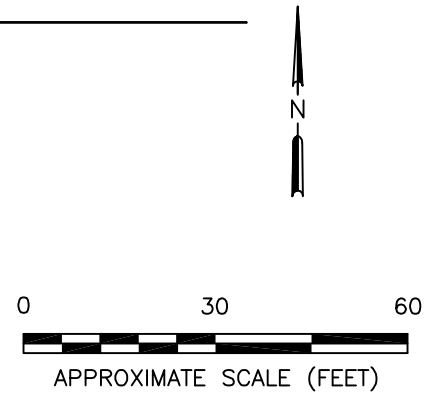
 Stantec 15575 LOS GATOS BLVD, BUILDING C LOS GATOS, CALIFORNIA 95032 PHONE: (408) 356-6124 FAX: (408) 356-6138	FOR:		SITE LOCATION MAP GOODYEAR DEX #9578 3430 CASTRO VALLEY BOULEVARD CASTRO VALLEY, CALIFORNIA		FIGURE:
	THE GOODYEAR TIRE AND RUBBER CO.				1
JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:	
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 Stantec 15575 LOS GATOS BLVD, BUILDING C LOS GATOS, CALIFORNIA 95032 PHONE:(408) 356-6124 FAX:(408) 356-6138	FOR:		GROUNDWATER CONTOUR MAP		FIGURE:
	THE GOODYEAR TIRE AND RUBBER CO.		GOODYEAR DEX #9578 3430 CASTRO VALLEY BOULEVARD CASTRO VALLEY, CALIFORNIA		2
JOB NUMBER: 06GY.66050.	DRAWN BY: KM	CHECKED BY: AF	APPROVED BY: AF	DATE: 01/20/09	



- LEGEND:**
- SITE BOUNDARY (APPROXIMATE)
 - APPROXIMATE LOCATION OF FORMER 550-GALLON USED OIL UST
 - ⌊ HYDRAULIC LIFT WITH SINGLE POST
 - ⌊ HYDRAULIC LIFT WITH DOUBLE POST
 - ⊕ ALIGNMENT RACK
 - ⊠ FLOOR DRAIN
 - SOIL BORING LOCATION (SECOR, 2004)
 - ⊙ SOIL BORING LOCATION (EMCON, 1997)
 - ⊕ GROUNDWATER MONITORING WELL (TOUCHSTONE, 1994)
 - ⊗ HAND AUGER SAMPLE LOCATION (SEMCO, 1993)
 - MH244 ○ MANHOLE
 - E—E— UNDERGROUND PG&E ELECTRICAL LINE
 - W—W— UNDERGROUND WATER LINE
 - SA—SA— UNDERGROUND SANITARY SEWER LINE
 - SD—SD— UNDERGROUND STORM DRAIN
- NOTE:
ALL UTILITY LOCATIONS ARE APPROXIMATE.



 Stantec 15575 LOS GATOS BLVD, BUILDING C LOS GATOS, CALIFORNIA 95032 PHONE: (408) 356-6124 FAX: (408) 356-6138	FOR: THE GOODYEAR TIRE AND RUBBER CO.		UNDERGROUND UTILITY MAP GOODYEAR DEX #9578 3430 CASTRO VALLEY BOULEVARD CASTRO VALLEY, CALIFORNIA		FIGURE: 3
	JOB NUMBER: 06GY.66050.	DRAWN BY: KM	CHECKED BY: AF	APPROVED BY: AF	DATE: 02/04/09

APPENDIX A
STATEMENT OF LIMITATIONS



**LIMITATIONS AND CERTIFICATIONS FOR
NON-PHASE I REPORTS**

QA/QC-302B

Page 1 of 1

Rev. 1.1

Apr 3, 2007

This report was prepared in accordance with the scope of work outlined in Stantec's contract and with generally accepted professional engineering and environmental consulting practices existing at the time this report was prepared and applicable to the location of the Site. It was prepared for the exclusive use of The Goodyear Tire & Rubber Company for the express purpose stated above. Any re-use of this report for a different purpose or by others not identified above shall be at the user's sole risk without liability to Stantec. To the extent that this report is based on information provided to Stantec by third parties, Stantec may have made efforts to verify this third party information, but Stantec cannot guarantee the completeness or accuracy of this information. The opinions expressed and data collected are based on the conditions of the Site existing at the time of the field investigation. No other warranties, expressed or implied are made by Stantec.

Prepared by:

Reviewed by:

Alicia Falk, R.E.A.
Project Scientist

Jack Hardin, R.E.A.
Managing Principal

All information, conclusions, and recommendations provided by Stantec in this document regarding the Site have been prepared under the supervision of and reviewed by the Licensed Professional whose signature appears below:

Licensed Approver:

Name: Neil Doran, P.G.

Signature:

Date:

2-9-09

Stamp:

