

Prepared for
City of Santa Rosa
Transportation and Public Works Department
69 Stony Circle
Santa Rosa, California 95401

PRE-CONSTRUCTION HAZARDOUS MATERIAL ASSESSMENT WORK PLAN

**SANTA ROSA AVENUE AT BELLEVUE AVENUE TRAFFIC SIGNAL
PROJECT
SANTA ROSA, CALIFORNIA**

AUGUST 2025

EBA Project No. 24-3523

Prepared by

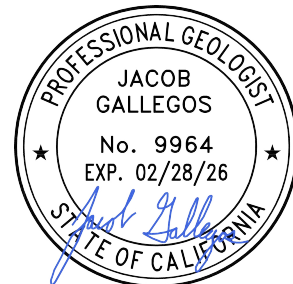
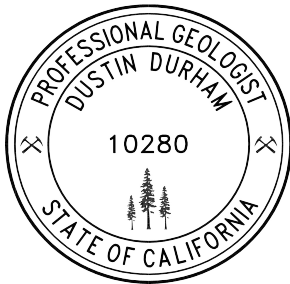


Dustin Durham, P.G., QSD
Project Geologist

Reviewed by



Jacob Gallegos, P.G.
Senior Geologist





August 1, 2025

Mr. Peter Porata
City of Santa Rosa
Transportation and Public Works Department
69 Stony Circle
Santa Rosa, California 95401
pporata@srcity.org

**RE: PRE-CONSTRUCTION HAZARDOUS MATERIAL ASSESSMENT WORK
PLAN
SANTA ROSA AVENUE AT BELLEVUE AVENUE TRAFFIC SIGNAL
PROJECT
SANTA ROSA, CALIFORNIA
EBA Project No. 24-3523**

Dear Mr. Porata:

Please find enclosed a Pre-Construction Hazardous Material Assessment Work Plan (Work Plan) for the Santa Rosa Avenue at Bellevue Avenue Traffic Signal Project at the intersection of Santa Rosa Avenue and Bellevue Avenue in Santa Rosa, California, hereinafter referred to as the "project site". EBA Engineering (EBA) is pleased to submit this Work Plan as part of the City Capitol Improvement Project (CIP) pertaining to the project site.

If you have any questions regarding this Work Plan, please contact EBA at (707) 544-0784.

Sincerely,
EBA ENGINEERING

A handwritten signature in blue ink that reads "Dustin Durham". The signature is written in a cursive style and is positioned above a horizontal line.

Dustin Durham, P.G., QSD
Project Geologist



Enclosed: Pre-Construction Hazardous Material Assessment Work Plan

825 Sonoma Avenue, Suite C • Santa Rosa, California 95404
(707)544-0784 • FAX (707)544-0866 • www.ebagroup.com

INTRODUCTION

EBA Engineering (EBA) has prepared this *Pre-Construction Hazardous Material Assessment Work Plan* (Work Plan) on behalf of the City of Santa Rosa (City), for the Santa Rosa Avenue at Bellevue Avenue Traffic Signal Project at the intersection of Santa Rosa Avenue and Bellevue Avenue in Santa Rosa, California (Figure 1, Appendix A), hereinafter referred to as the “project site”. EBA understands that the construction of a four-way traffic signal is planned as part of an upcoming City Capital Improvement Project (CIP). Several closed leaking underground storage tank (LUST) sites, as well as one regulated Cleanup Program Site (CPS), are located in the immediate vicinity of the subject intersection. As such, the soil sampling in this Work Plan has been modified to coincide with the ground disturbing activities at the project site associated with the aforementioned City CIP.

Specifically, this Work Plan provides details of a proposed site investigation consisting of the advancement of three soil borings at the project site to pre-profile the potentially impacted soil for soil disposal to a licensed disposal facility using four-point composite sampling methodology.

INVESTIGATIVE PROCEDURES

Proposed Soil Boring Locations

Soil borings SB-1 through SB-3 will be drilled in the immediate vicinity of the proposed traffic signal pole locations at three separate corners of the intersection as shown on Figure 2 (Appendix A). Soil boring SB-1 is located on the southwest corner of the intersection, which is adjacent to a closed LUST site located at 3111 Santa Rosa Avenue. Whereas SB-2 is located on the northwest corner of the intersection and is in close proximity to two closed LUST sites located at 3025 and 3032 Santa Rosa Avenue, as well as Golden Technology CPS located at 3017 Santa Rosa Avenue. Lastly, SB-3 is located on the southeast corner of the intersection, which is adjacent to two closed LUST sites located at 3100 and 3102 Santa Rosa Avenue. It should be noted that an additional traffic signal pole is proposed on the northeast corner of the intersection, however, after a review of available information, no LUST site or CPS activities are associated with this location, therefore a soil boring has not been proposed at this location.

Permits and Utility Clearance

An environmental drilling permit from the County of Sonoma Department of Health Services - Environmental Health Division (CSDHS-EHD) will be obtained by EBA. An encroachment permit is not required to be obtained from the City because this is a City CIP. However, due to a portion of the project being within the County of Sonoma (southeast corner of the intersection), an encroachment permit is required to be

obtained from the County of Sonoma. Prior to the start of work, the project site will be marked for Underground Service Alert (USA).

Drilling and Soil Sampling

EBA will direct and oversee the advancement of three exploratory soil borings in the immediate vicinity of the proposed traffic signal pole locations. The proposed soil borings will be advanced using either a track-mounted direct-push limited access drilling rig equipped with dual-walled tooling or by hand auger drilling method. The depths of each boring will range from approximately 10 to 14 feet below the ground surface (BGS) which corresponds to the maximum depths of ground disturbing activities at each respective location. Soil samples will be screened in the field for the presence of volatile organic compounds (VOCs) using a photo-ionization detector (PID) and the results will be recorded on the corresponding soil boring logs. These boring logs will include measured thickness for concrete and base rock, depth to contact with native soil, depth to groundwater (if encountered), lithologic description in accordance with the Unified Soil Classification System (USCS), moisture and other relevant observations.

The total anticipated volume of soil to be generated during the construction project is less than 250 fluffed cubic yards (i.e., approximately 25 fluffed cubic yards). Based on this anticipated volume, the soil sampling has been formulated to yield one composite soil sample from three soil borings. Soil samples retained for chemical analysis will be collected in 2-inch diameter by 6-inch-long stainless-steel tubes, covered with Teflon™ sheeting, capped, labeled and placed under refrigerated conditions pending transport under chain-of-custody (C-O-C) procedures to K Prime, Inc. (K Prime), a California State-certified analytical laboratory located in Santa Rosa, California. The depth of soil sample collection for analytical testing will be determined based upon field screening for indications of contamination (i.e., elevated PID readings, visual and/or olfactory signs of contamination, etc.).

Equipment Decontamination

The drilling equipment will be steam cleaned before drilling each soil boring to minimize the possibility of cross-contamination. The sampling equipment, in turn, will be cleaned prior to collecting each soil sample with Alconox® or similar solution and a potable water rinse. Following the completion of the work, the decontamination water will be stored in properly labeled Department of Transportation (DOT) 17H 55-gallon drums pending characterization and disposal.

Groundwater Grab Sampling

As previously noted, the soil borings will be advanced to depths ranging from approximately 10 to 14 feet BGS. Surrounding site information indicates that historic groundwater levels in the area have been as shallow as seven feet BGS. If groundwater is encountered during the site investigation activities, a maximum of one sample will be collected. In this case, upon reaching the target completion depth, the inner rod of the dual-walled tooling will be removed to allow groundwater infiltration into the open

borehole. A groundwater grab sample will then be collected from the borehole using a peristaltic pump or disposable bailer. Temporary polyvinyl chloride (PVC) casing may be placed into the open boreholes to assist in collection of the groundwater grab samples. Following collection, the groundwater samples will be sealed, labeled, and placed under refrigerated conditions pending transport under C-O-C procedures to a California State-certified analytical laboratory for chemical analysis.

Disposal of Drill Cuttings and Decontamination Water

EBA will transport the soil cuttings to the City's corporation yard (55 Stony Point Road) for storage until analytical results are received. One 55-gallon drum containing drill spoils will be produced under the direct push/hand auger drilling scenario. EBA will prepare a disposal package and dispose of the drum based on the laboratory data obtained from the investigation. Water generated as part of the investigation will be transported and disposed of through EBA's treatment system under EBA's Industrial User Permit #SR-GW-7010.

Borehole Abandonment

The soil borings will be backfilled with cement grout using tremie pipe to within four inches of grade. The remaining four inches will be filled with asphalt, a concrete patch or native soil, as appropriate.

ANALYTICAL TESTING

A total of one composite soil sample will be analyzed for total petroleum hydrocarbons as gasoline (TPH-g), TPH as diesel (TPH-d), and TPH as motor oil (TPH-m) by Environmental Protection Agency (EPA) Method 8015 Modified, full list VOCs by EPA 8260B, semi-volatile organic compounds (SVOCs) including phenols by EPA Method 8270, California Administrative Manual (CAM) 17 Metals by EPA Method 6020, and polychlorinated biphenyls (PCBs) by EPA Method 8080. If applicable, one groundwater samples will be analyzed for TPH-g, TPH-d, VOCs, and total lead.

LANDFILL PROFILING

Given the documented impacts to soil in the area and the anticipated volume of soil being disposed of, the preferred landfills are Hay Road Landfill in Vacaville, California and Potrero Hills Landfill in Suisun City, California. Both are licensed, Class II, non-hazardous waste disposal facilities. In the event the material is not suitable for Class II acceptance, it will be profiled to a Class I (hazardous waste) disposal facility. EBA will coordinate with all landfills and gain acceptance letters from the most cost-effective landfills.

REPORTING

The information collected during the investigation will be summarized in a Report of Investigation for review approximately 30 days following the cessation of field work. Included in the transmittal will be a description of work completed, soil boring logs, and analytical results. The report will include recommendations for soil disposal and landfill acceptance based on analytical findings, and a site map showing locations of borings with areas demarcated for landfill disposal.

GROUNDWATER CONTINGENCY PLAN

If necessary, EBA will provide a draft copy of Groundwater Contingency Plan to the City for review and approval. Copies of the final report will be provided to the City only. The report will include recommendations for groundwater disposal based on analytical findings and exhibit showing location of trench dams.

SCHEDULE

Work will begin after the City's approval of this Work Plan, receipt of appropriate permits, and at the direction of the City.

SITE HEALTH AND SAFETY PLAN

A Site Health and Safety Plan for the proposed scope of work is included with this Work Plan (Appendix B).

CLOSING

We trust that this Work Plan provides the information you require at this time. Should you have any questions or comments regarding this proposed scope of work, please contact EBA at (707) 544-0784.

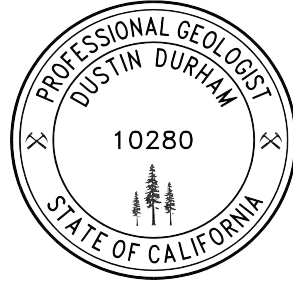
Sincerely,

EBA ENGINEERING

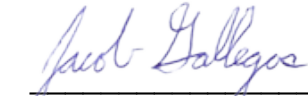
Prepared by



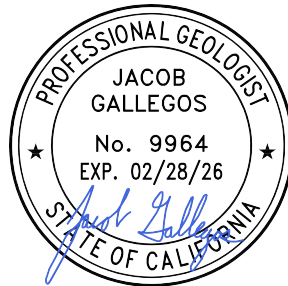
Dustin Durham, P.G., QSD
Project Geologist



Supervised by



Jacob Gallegos, P.G.
Senior Geologist

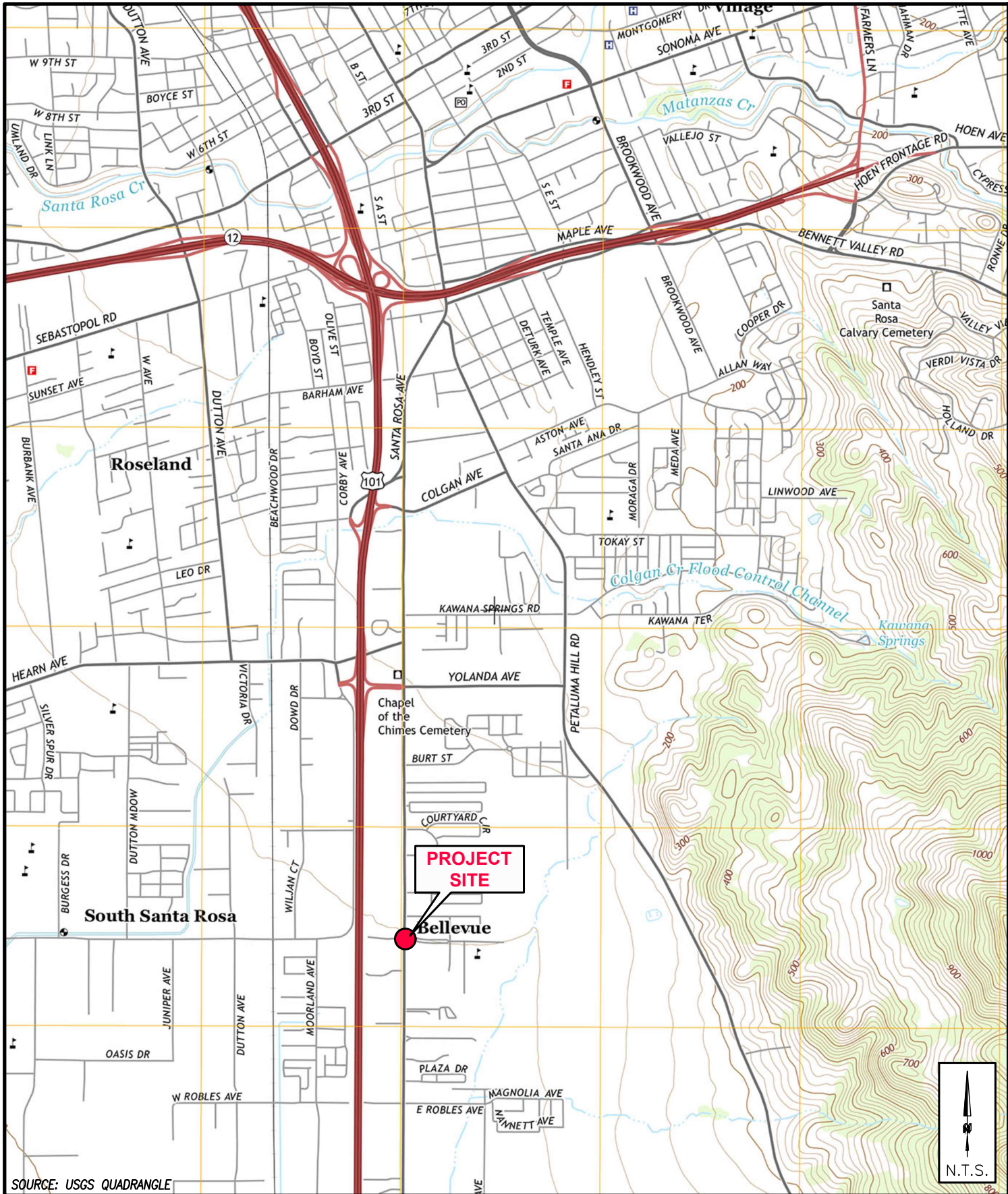


Enclosed: Appendix A - Figures
Appendix B - Site Health and Safety Plan

cc: County of Sonoma Department of Health Services - Environmental Health
Division, 2350 Professional Drive, Santa Rosa, CA. 95403

APPENDIX A

FIGURES



EBA
ENGINEERING

825 SONOMA AVENUE
SUITE C
SANTA ROSA, CA 95404
TEL: (707) 544-0784

LOCATION MAP

INTERSECTION OF SANTA ROSA AVENUE AND BELLEVUE AVENUE
SANTA ROSA, CALIFORNIA

FIGURE
1
24-3523

NOTE

PARCEL LINES FROM PUBLICLY AVAILABLE COUNTY OF SONOMA GIS SHAPEFILE.
AERIAL IMAGERY FROM BING MAPS.

3017 SANTA ROSA AVE
(CLEANUP PROGRAM SITE)
3032 & 3025 SANTA ROSA AVE
(FORMER LUST SITES)

3'-6" DIAMETER
13' DEPTH

SB-2

3'-6" DIAMETER
10' DEPTH

BELLEVUE AVENUE

3'-6" DIAMETER
10' DEPTH

SB-1

4' DIAMETER
14' DEPTH

SB-3

3111 SANTA ROSA AVE
(FORMER LUST SITE)

3100 & 3102
SANTA ROSA AVE
(FORMER LUST SITES)

SANTA ROSA AVENUE

LEGEND

- APPROXIMATE ADJACENT PROPERTY BOUNDARY
- SB-1 PROPOSED SOIL BORING LOCATION
- ▲ PROPOSED TRAFFIC SIGNAL POLE



SCALE : 1" = 40'

PROPOSED SOIL BORING LOCATION MAP

INTERSECTION OF SANTA ROSA AVENUE AND BELLEVUE AVENUE
SANTA ROSA, CALIFORNIA

FIGURE

2

24-3523



825 SONOMA AVENUE
SUITE C
SANTA ROSA, CA 95404
TEL: (707) 544-0784

APPENDIX B

SITE HEALTH AND SAFETY PLAN

SITE HEALTH AND SAFETY PLAN

Project No.: 24-3523

Field Activities Date: Fall 2025

Client: City of Santa Rosa
Transportation and Public Works
Department

Address: 69 Stony Circle
Santa Rosa, California

Contact Person: Mr. Peter Porata

Telephone No.: (707) 543-3865

Job Location: Intersection of Bellevue Ave and Santa Rosa Ave, California

Project Description: Pre-Construction Hazardous Material Assessment

Project Manager: Jacob Gallegos **Site Health & Safety Manager:** Dustin Durham

Chemical Hazards:

| <u>CHEMICAL NAME</u> | <u>DESCRIPTION</u> | <u>HEALTH & SAFETY STANDARDS</u> | <u>POTENTIAL ROUTES OF EXPOSURE</u> | <u>SYMPTOMS ACUTE EXPOSURE</u> |
|------------------------|----------------------------|--|---|--|
| Benzene | Carcinogen, aromatic HC | 8-hr. TLV=10 ppm PEL=1 ppm | Inhalation, dermal | Headache, dizziness |
| Toluene | Aromatic HC | 8-hr. TLV=100 ppm | Inhalation, dermal | Headache, dizziness |
| Xylenes | Aromatic HC | 8-hr. TLV=100 ppm | Inhalation, dermal | Headache, dizziness |
| Ethylbenzene | Aromatic HC | 8-hr. TLV=100 ppm | Inhalation, dermal | Headache |
| Tetrachloroethene | Colorless Liquid | 8-hr. TLV = 100 ppm IDLH = 150ppm | Inhalation, absorption ingestion, dermal contact | Headache, dizziness, eye/skin irritation |
| Trichloroethene | Colorless Liquid | 8-hr. TLV=10 ppm IDLH = 100 ppm | Inhalation, absorption ingestion, dermal contact | Dermal irritant, CNS depressant, organ damage |
| Cis-1,2 Dichloroethene | Colorless Liquid | TWA = 200 ppm IDLH = 1000 ppm | Inhalation, absorption ingestion, dermal contact | Dermal irritant, CNS depression |
| Vinyl Chloride | Colorless Liquid | 8-hr. TLV = 1 ppm OSHA PEL 5 ppm/15 min | Inhalation, absorption ingestion, dermal contact | Weakness, abdominal pain, gastrointestinal bleeding, pallor |
| Gasoline | Flammable liquid | 8-hr. TLV=300 ppm Flashpt.=-50° F LEL=1.4%, UEL=7.6% | Inhalation, dermal | Headache, dizziness, eye/skin irritation |
| Diesel | Combustible liquid | | Inhalation, dermal | Headache, dizziness, eye/skin irritation |
| Motor oil | Heavy petroleum distillate | 8-hr. TLV=5mg/m ³ | Inhalation of vapor, (high temp) dermal contact | Eye/skin irritation |
| Cadmium | Solid | 8- hr. TWA =0.005 mg/m ³ | Inhalation, ingestion | Pulm. edema, cough |
| Chromium | Solid | 8-hr. TWA=0.5 mg/m ³ | Inhalation, ingestion dermal contact | Eye/skin irritation |
| Lead | Solid | 8-hr. TWA=0.050 mg/m ³ | Inhalation, ingestion dermal | Weakness, insomnia |

SITE HEALTH AND SAFETY PLAN (Continued)

| | | | | |
|--------------------------------------|------------------------------|------------------------------------|---|-----------------------------------|
| Nickel | Solid | 8- hr. TWA=0.015 mg/m ³ | Inhalation, ingestion Sensitive skin | abdominal pain Allergic asthma |
| Zinc (ZnO) | Solid | 8-hr. TWA=5 mg/m ³ | Inhalation | Eye irritation |
| MtBE | Combustible Liquid | 8-hr. TLV=100 ppm | Inhalation, dermal | Dizziness eye/skin irritation |
| DIPE | Class 1b Flammable Liquid | IDLH: 1400 ppm | Inhalation, dermal | Dizziness eye/skin irritation |
| tBA | Combustible Liquid | 8-hr. TLV=150 ppm | Inhalation, dermal | Dizziness eye/skin |
| Poly-chlorinated Biphenyls (PCBs) | Oily Liquid or Solids | 8-hr. TLV=0.5mg/m ³ | Inhalation, dermal | Eye/skin irritation |

Note: Health and safety standards refer to airborne concentrations to which nearly all workers may be repeatedly exposed daily without harmful effects. The concentrations are time-weighted averages for a normal 8-hour work period.

Physical Hazards: Traffic, fire and explosion (primarily gasoline), heat stress, heavy equipment, noise, overhead and underground utilities.

Personal Protective Equipment Required: First aid kit, hardhat, eye protection, noise protection, chemical-protective gloves, steel-toed rubber boots, respirator with organic vapor cartridge, and reflective vests.

Air Monitoring Strategy (including action levels): Monitor breathing zone for total volatile organic compounds (VOCs) with photoionization detector (PID) meter (parts per million by volume [ppmv] scale). If greater than 5 ppmv in breathing zone for five minutes or greater than 30 ppmv instantaneous, don respirator and/or go upwind of source. Record all measurements in field notebook.

Site Control Measures: 1) Place used protective gear and decontamination equipment in containers for proper disposal; 2) no eating, drinking, or smoking in work area; 3) bring drinking water; 4) decontaminate boots and sampling equipment prior to leaving site; 5) inform workers (including non EBA workers) on-site of health and safety plan.

Decontamination Procedures (personal and equipment): Decontaminate boots and soil sampling equipment with trisodium phosphate (TSP) or Alconox ® and water. Wash and rinse sampling equipment with clean water. Store rinse water in 55-gallon drums (labeled) pending receipt of laboratory results or discharge rinse water into contained stockpile awaiting final disposal or treatment.

Decontaminate heavy equipment by scraping loose material, then wash with steam cleaning unit. Collect and combine loose material and rinsate in stockpile or drums awaiting final disposal or treatment.

**SITE HEALTH AND SAFETY PLAN
(Continued)**

Hospital: Providence Santa Rosa Memorial Hospital

Phone: (707) 525-5300

Address: 1165 Montgomery Drive, Santa Rosa, California

Directions from Project Site to Hospital:

- 1 From project site proceed north on Santa Rosa Avenue to Bennett Valley Road
- 2 Turn right on Bennett Valley Road and proceed to Brookwood Avenue
- 3 Turn left onto Brookwood Avenue and proceed to Montgomery Drive
- 4 Turn right on Montgomery Drive. The hospital is on the left at 1165 Montgomery Drive. (A map of the Hospital route is attached)

Directions from Hospital to Project Site:

- 1) From Memorial Hospital turn right onto Montgomery Drive and proceed to Brookwood Avenue
- 2) Turn left onto Brookwood Avenue and proceed to Maple Avenue.
- 3) Turn right onto Maple Avenue and proceed to Santa Rosa Avenue.
- 4) Turn left onto Santa Rosa Avenue and proceed to the project site at the intersection of Bellevue Avenue and Santa Rosa Avenue.

Paramedic: 911

Fire/Police Dept.: 911

Emergency Procedures: Call 911 for fire or serious injury. Proceed to hospital (see map) if necessary for minor injuries. Call EBA (707) 544-0784.

Prepared by: Dustin Durham

Reviewed/Approved by: Jacob Gallegos

Date:

Date:

Read by:

Date:

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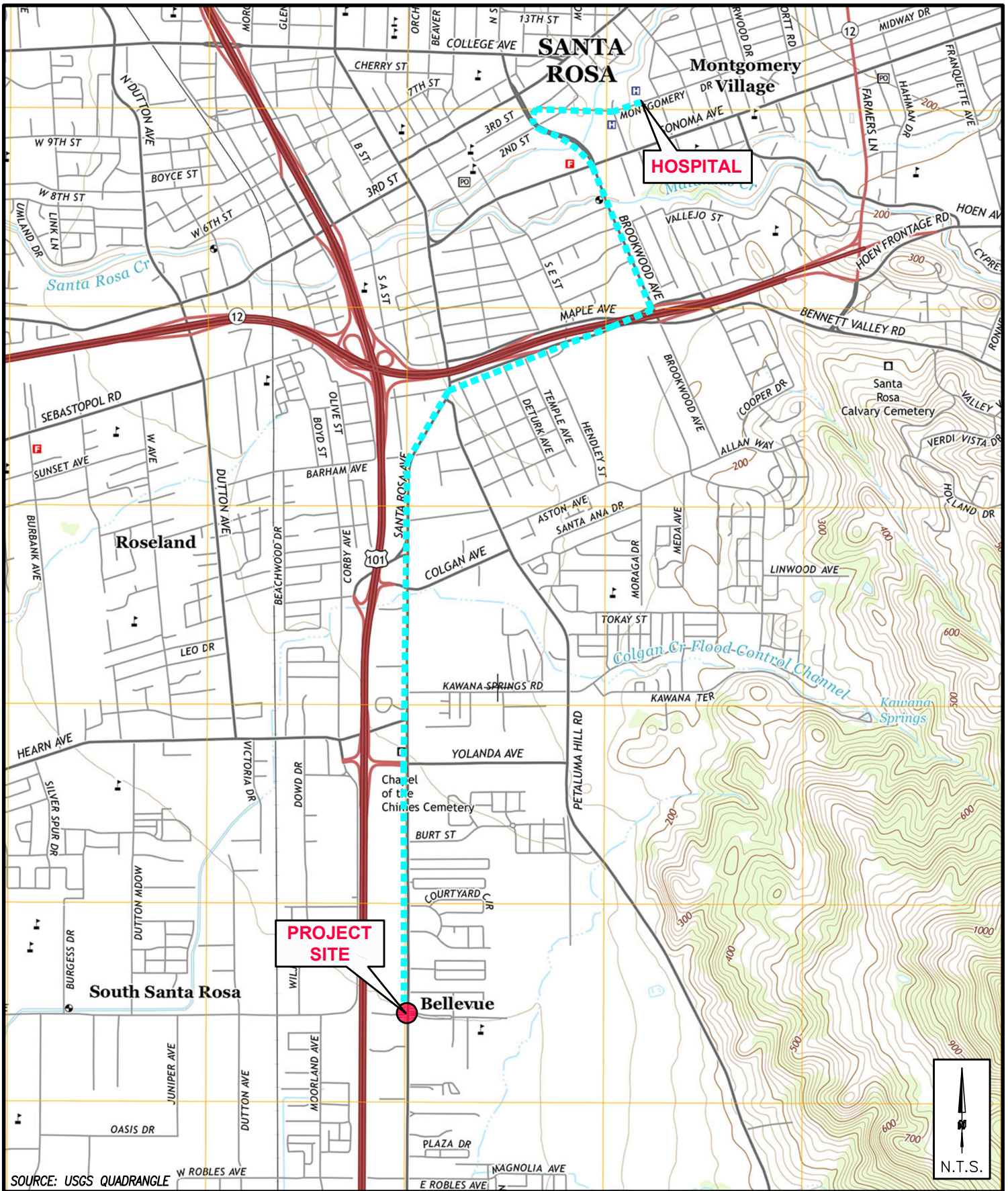
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EBA
ENGINEERING

825 SONOMA AVENUE
SUITE C
SANTA ROSA, CA 95404
TEL: (707) 544-0784

HOSPITAL MAP

INTERSECTION OF SANTA ROSA AVENUE AND BELLEVUE AVENUE
SANTA ROSA, CALIFORNIA

FIGURE

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24-3523