

**DEPARTMENT OF TRANSPORTATION**  
**DIVISION OF ENGINEERING SERVICES**  
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December 8, 2006

07-LA-213-3.3/8.2  
07-257904

Addendum No. 1

Dear Contractor:

This addendum is being issued to the contract for construction on State highway in LOS ANGELES COUNTY IN LOS ANGELES, LOMITA, AND RANCHO PALOS VERDES FROM SUMMERLAND AVENUE TO PACIFIC COAST HIGHWAY.

Submit bids for this work with the understanding and full consideration of this addendum. The revisions declared in this addendum are an essential part of the contract.

Bids for this work will be opened on December 14, 2006.

This addendum is being issued to revise the Notice to Contractors and Special Provisions.

In the Special Provisions, Section 10-1.02, "EXCAVATION (CONTAMINATED SOIL)," is replaced with the attached Section 10-1.02, "HANDLING OF POTENTIALLY CONTAMINATED MATERIAL."

To Proposal and Contract book holders:

Inquiries or questions in regard to this addendum must be communicated as a bidder inquiry and must be made as noted in the NOTICE TO CONTRACTORS section of the Notice to Contractors and Special Provisions.

Indicate receipt of this addendum by filling in the number of this addendum in the space provided on the signature page of the proposal.

Submit bids in the Proposal and Contract book you now possess. Holders who have already mailed their book will be contacted to arrange for the return of their book.

Inform subcontractors and suppliers as necessary.

This office is sending this addendum by confirmed facsimile to all book holders to ensure that each receives it. A copy of this addendum is available for the contractor's use on the Internet Site:

**[http://www.dot.ca.gov/hq/esc/oe/weekly\\_ads/addendum\\_page.html](http://www.dot.ca.gov/hq/esc/oe/weekly_ads/addendum_page.html)**

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If you are not a Proposal and Contract book holder, but request a book to bid on this project, you must comply with the requirements of this letter before submitting your bid.

Sincerely,

ORIGINAL SIGNED BY

REBECCA D. HARNAGEL, Chief  
Office of Plans, Specifications & Estimates  
Division of Engineering Services - Office Engineer

Attachments

### **10-1.02 HANDLING OF POTENTIALLY CONTAMINATED MATERIAL**

Soils within the right-of-way of the project limits are potentially contaminated with aerially deposited lead (ADL), petroleum chemicals, and agricultural chemicals or combinations thereof.

ADL is typically found within the top 0.6-m of material in unpaved areas within the highway right of way. A site specific site investigation for ADL has not been performed. Levels of lead along the Department's roadways generally range from non-detectable to 3,000 mg/kg total lead as analyzed by EPA Test Method 6010 or EPA Test Method 7000 series. Concentrations are generally highest in highly urbanized areas

At locations where the installation of Modify Signal and Closed Circuit Television (CCTV) Camera are to be performed, petroleum and agricultural chemicals are expected. A site investigation for these chemicals has not been performed within the project limits.

Handling of potentially contaminated material shall consist of the following:

1. Preparing a project specific Health and Safety Plan (HSP) and a Sampling and Analysis Plan (SAP) for approval by the Engineer.
2. Conducting the Health and Safety Training.
3. Conducting soil sampling at a designated contaminated soil staging area.
4. Evaluating laboratory analytical results and conducting statistical analysis according to the approved SAP and in conformance with USEPA, SW 846, "Test Methods for Evaluating Solid Waste," Volume II: Field Manual Physical/Chemical, Chapter Nine, Section 9.1.
5. Preparing a draft and final Soil Sampling Report with conclusions and recommendations on characterization and handling of contaminated soil for review and concurrence by the Engineer.
6. Preparing a Transportation and Disposal Plan.
7. Transporting and disposing of excavated contaminated soil.

### **APPLICABLE RULES AND REGULATIONS**

Transportation and disposal of contaminated soil shall be in accordance with the rules and regulations of the following agencies:

1. United States Department of Transportation (USDOT)
2. United States Environmental Protection Agency (USEPA)
3. California Environmental Protection Agency (Cal-EPA)
4. California Department of Toxic Substances Control (DTSC), Southern Region 3
5. California Department of Health Services
6. California Integrated Waste Management Board
7. Regional Water Quality Control Board (RWQCB), Region 4
8. State Air Resources Board
9. South Coast Air Quality Management District (SCAQMD)
10. California Division of Occupational Safety and Health Administration (Cal-OSHA)
11. Los Angeles County

Laws and regulations that govern work related to contaminated soils, and to which reports and plans shall conform, include, but are not limited to:

1. Health and Safety Code, Division 20, Chapter 6.5 (California Hazardous Waste Control Act)
2. Title 22, California Code of Regulations, Division 4.5 (Environmental Health Standards for the Management of Hazardous Waste)
3. Title 8, California Code of Regulations

### **PERMITS AND LICENSES**

The Engineer will obtain the USEPA Generator Identification Number and Board of Equalization Identification Number and will sign manifests as the generator for soil characterized as hazardous waste.

## **HAZARDOUS MATERIALS MITIGATION PLANS**

Hazardous Materials Mitigation plans shall consist of a Health and Safety Plan (HSP), Health and Safety Training, Sampling and Analysis Plan (SAP), Soil Profiling and Soil Sampling Report, Transportation and Disposal Plan (TDP), and air monitoring as required by HSP conforming to the requirements of this special provision.

Attention is directed to "Sampling and Analysis Plan" and "Transportation and Disposal Plan" of this special provision, regarding the review and approval process, including review and resubmittal time requirements.

## **HEALTH AND SAFETY PLAN**

The Contractor shall prepare a project specific Health and Safety Plan (HSP) for site personnel, including State personnel, to prevent or minimize worker exposure to chemical, physical, and environmental hazards while performing soil sampling and handling soil potentially contaminated with ADL, petroleum chemicals, and agricultural chemicals during excavation, transportation and disposal. The HSP shall be approved and signed by a Certified Industrial Hygienist (CIH) certified in comprehensive practice by the American Board of Industrial Hygiene, and submitted within 15 days of the contract award.

The HSP shall identify potential health and safety hazards associated with performing soil sampling for ADL, petroleum chemicals, and agricultural chemicals and onsite construction operations and activities, including excavation, transportation, and disposal. The HSP shall protect workers from hazards in conformance with the DTSC and CAL-OSHA regulations. The requirements of 29CFR1910.120 shall be applicable to potentially contaminated soils. At a minimum, the HSP shall identify key site safety personnel, describe risks associated with soil sampling for ADL, petroleum chemicals, and agricultural chemicals and onsite construction operations and activities; training requirements; appropriate personal protective equipment; site-specific medical surveillance requirements; periodic air monitoring requirements; and decontamination requirements, and shall define appropriate site work zones.

The Contractor shall be responsible for the health and safety of employees and personnel onsite.

Daily safety meetings, health and safety training, and use of appropriate personal protective equipment and appropriate site work zones shall be utilized.

The HSP shall include perimeter air monitoring for airborne contaminants such as lead, volatile petroleum constituents and agricultural chemicals during excavation of soil characterized as contaminated. When deemed necessary by the Engineer, additional air monitoring shall be performed. Monitoring shall be done under the direction of, and data reviewed by and signed by a Certified Industrial Hygienist (CIH).

The Engineer will notify the Contractor of acceptance or rejection of submitted or revised HSP not more than 10 working days after submittal.

## **HEALTH AND SAFETY TRAINING**

Prior to the start of work, the Contractor shall provide Health and Safety training, including initial and subsequent training required until completion of the project, and provide a certification of completion to personnel. The Health and Safety training program shall communicate the potential health and safety hazards associated with work and instruct personnel on procedures for conducting the work safely and minimizing hazards. The level of training provided shall be consistent with the personnel's job function and conform to CALOSHA regulations.

Health and Safety training program, personal protective equipment, and medical surveillance required by the Contractor's HSP for personnel working within exclusion zones shall be supplied to State personnel by the Contractor. The number of State personnel requiring the Health and Safety training program, personal protective equipment, and medical surveillance will be 5.

## **SAMPLING AND ANALYSIS PLAN**

Within 15 days of the contract approval, the Contractor shall prepare and submit a draft Sampling and Analysis Plan (SAP) for review and comment by the Engineer. The SAP shall characterize the excavated material generated during construction to determine whether they are unregulated wastes, designated wastes, California hazardous wastes, or RCRA wastes and at what type of facility they can be disposed of (Class 3, Class 2, or Class 1). The Engineer will have 15 days to review the SAP. If revisions are required, as determined by the Engineer, the Contractor shall revise and resubmit the Sampling and Analysis Plan within 7 days of receipt of the Engineer's comments. The Engineer will have 7 days to review the revisions. The final SAP shall address and incorporate comments by the Engineer. The final SAP shall be signed by a California Professional Geologist who has supervised the preparation of the plan, and be submitted for review and approval by the Engineer.

Excavated materials shall be containerized and stored or stockpiled at a contaminated material staging area designated by the Engineer prior to soil profiling and disposal. Excavated materials may be containerized and stored or stockpiled in portions or consolidated to accommodate project staging. Prior to leaving the excavation location, loose and extraneous soil shall be removed from surfaces outside the cargo areas of the transporting vehicles and placed in the cargo area or back in the excavation, and the cargo shall be covered with tarpaulins or other cover. No excavated soil shall be deposited on public roads. The Contractor shall indemnify the State from any cost due to spillage during loading or transport of the excavated soil to contaminated material staging area. Within 15 days of the contract award, the Contractor shall obtain from the Engineer, in writing, the address and specific locations of the State's potentially contaminated material staging area.

In the event a suitable location is not identified by the Engineer for stockpiling of material, excavated material shall be containerized.

Soil from the CCTV camera work locations shall be segregated and stored separately from material generated from the Adaptive Traffic Signal and Communication System Routing excavations. Soil from the CCTV pole foundation, pull box, and splice vault excavations are anticipated to be contaminated with petroleum chemicals.

The SAP shall describe, at a minimum, means of collecting soil samples and analyzing for ADL, petroleum chemicals, and agricultural chemicals. The procedures for soil sampling, at a minimum, must meet the following requirements:

- A. Divide each volume of excavated soil into sections of approximately equal volume (100 cubic meters maximum).
- B. Mark 4 locations randomly at each section.
- C. At each random location (within a section), using a hand-auger, collect a soil sample from approximately 300 mm below the soil surface. Soil samples from each location should be collected from the same depth.
- D. The 4 sample volumes from each 100 cubic meter soil volume will be shipped to an offsite laboratory where they will be analyzed individually.

The SAP shall meet standards set by local, state and federal regulatory agencies. Deviations from standards must be approved in advance, and in writing, by the Engineer. The SAP shall include, at a minimum, the following:

1. Excavated soil storage methodology.
2. Soil sampling method and proposed number of samples.
3. Sample handling procedures
4. Methodology of disposing of investigation derived wastes
5. Laboratory and field Quality Assurance/Quality Control (QA/QC) procedures
6. Laboratory analyses and analytical methodologies
7. Statistical Analysis of the sample data in accordance with EPA SW-846 guideline.
8. Schedule for completing soil sampling, including schedules for draft and final Soil Sampling reports submittal
9. Recommendation for disposal of excavated soil when characterized as contaminated.

The SAP shall meet the requirements for the design and development of the sampling plan, statistical analysis, and reporting of test results contained in USEPA, SW 846, "Test Methods for Evaluating Solid Waste," Volume II: Field Manual Physical/Chemical, Chapter Nine, Section 9.1 and shall be performed in accordance with these special provisions, as required by the disposal facility that will accept the excavated soils, and approved by the Engineer.

Sampling for ADL, petroleum chemicals, and agricultural chemicals shall be at a minimum rate of 4 samples for each 100 cubic meters of excavated soil. The size of stockpiles or amount of material containerized and sampled shall be dependent on the size and accessibility of the material storage area and project staging. Soil samples shall be analyzed by the following EPA analytical methods.

1. For excavated soil generated from Adaptive Traffic Signal and Communication System Routing excavations, the following analytical methods shall be used:
  - A. Total lead by EPA Method 6010
  - B. Soluble lead by California Waste Extraction Test (Ca WET),
  - C. Soluble lead by DI WET,
  - D. Soluble lead by Toxicity Characteristic Leaching Potential (TCLP)E.                      pH by EPA Method 9045
  - F. Pesticides by EPA Method 8081

2. For soils generated from Modify Signal and CCTV camera location excavations, the following analytical methods shall be used:
  - A. Total metals by EPA Method 6010
  - B. Soluble metals by Ca WET (if total metals greater than 10x Soluble Threshold Limit Concentration (STLC))
  - C. Soluble lead by DI WET
  - D. Soluble metals by TCLP (if total metals greater than TTLC).
  - E. Total Petroleum Hydrocarbons (TPH) (gas and diesel) by EPA Method 8015 Modified
  - F. VOCs by EPA Method 8260
  - G. SVOCs by EPA method 8270
  - H. Pesticides by EPA Method 8081

Laboratory analyses shall be performed by an environmental laboratory certified by the California Department of Health Services Lab Accreditation Program certified for each of the analyses to be performed.

The SAP shall be prepared under the guidance of and signed by a California Professional Geologist.

#### **STAGING AREA SOIL STORAGE**

Potentially contaminated soil shall be temporarily stockpiled at the staging area. Temporary stockpiling shall consist of lining and covering the contaminated material with sheets of polyethylene at a designated area within the project location as approved by the Engineer or placing it in covered storage containers. Stockpiles of material containing potentially contaminated material shall not be placed where affected by surface run-on or run-off. Stockpiled material shall be stored on undamaged 1.52-mm high-density polyethylene or an equivalent impermeable barrier unless the stockpiling location is on a paved surface. If the location is on a paved surface the thickness of the barrier can be reduced to 0.51-mm high-density polyethylene or its equivalent. The dimensions of the barrier shall exceed the dimensions of the stockpile. Seams in barriers shall be sealed. Stockpiles shall be covered with plastic sheeting 0.33 mm minimum thickness. Stockpiles shall not be placed in environmentally sensitive areas. If containers are used they shall be a type approved by the United States Department of Transportation for the transportation and temporary storage of hazardous waste. The containers shall be handled so no spillage will occur. Stockpiled material shall not enter storm drains, inlets, or waters of the State.

#### **SOIL PROFILING**

The Contractor shall conduct soil profiling in accordance with the approved final SAP and the disposal facility that will accept the waste. Activities during soil profiling shall be performed in conformance with the approved HSP, approved final SAP and the requirements of these special provisions.

The Contractor shall ensure that necessary equipment and materials are present at the site and in good operating condition at the beginning of each workday and shall supply backup equipment when needed.

Soil sampling shall be conducted under the responsible charge of a California Certified Engineering Geologist or a California Professional Geologist. The Engineer shall be notified at least 24 hours before the commencement of fieldwork for soil sampling.

Sampling equipment shall be decontaminated between sample locations in conformance with generally accepted industry standards and in conformance with the approved final SAP. Water from decontamination procedures shall be collected and disposed of at an appropriate disposal site at the Contractor's expense. Once used, non-reusable protective equipment shall be collected and disposed of at an appropriate disposal site at the Contractor's expense.

Sequential procedures for laboratory analysis on samples collected for lead shall be performed in compliance with the following requirements:

1. A minimum of 50% of the total number of Total Lead (TTLC) samples shall be tested for soluble lead using the California Waste Extraction Test. All samples with total lead levels greater than or equal to 50 mg/kg shall be included in the set of samples analyzed by the Ca WET.
2. When the Soluble Threshold Limit Concentration (STLC) is equal or greater than 5 mg/l, the Contractor shall proceed with the soluble lead waste extraction test on the samples using de-ionized water.
3. A minimum of one or 10% of the total number of samples, whichever is greater, shall be tested per 100 m<sup>3</sup> of temporary stockpiled soil for pH using EPA Method 9045.

4. The laboratory limit on analysis shall be reported as Method Detection Limit and as Practical Quantification Limit.
5. When TTLC is over 1,000 mg/kg, or it is likely that soil will be disposed of at a Class 1 Landfill, a minimum of 30% of the total number of samples shall be tested for soluble lead using Toxicity Characteristic Leaching Procedure (TCLP) according to USEPA Method 1311. TCLP test shall be performed on samples exceeding 1,000 mg/kg, or samples with highest TTLC.
6. The Contractor shall select one or 10% of the total number of samples, whichever is greater, that exhibits the highest total lead level and analyze them for Title 22 metals.

The Contractor shall perform laboratory analyses in conformance with the following QA/QC procedures for each method of analysis with specificity for every appropriate analyte requested or representative analytes listed in the test method's QA/QC. QA/QC data shall be reported in summary form for all samples submitted. QA/QC procedures specified by each test method shall include the following:

1. One method blank for every 10 samples, batch of samples or type of matrix, whichever is more frequent;
2. One sample analyzed in duplicate for every 10 samples, batch of samples or type of matrix, whichever is more frequent;
3. One spiked sample for every 10 samples, batch of samples or type of matrix, whichever is more frequent, with spikes made at 10 times the detection limit or at the analyte level;
4. One equipment blank for every chain of custody by pouring de-ionized water onto the sampling device and into a laboratory container;
5. One trip blank for every ice chest or sample shipment container. Samples shall accompany one laboratory prepared trip blank for each individual group of samples transported to the laboratory. The contents of each ice chest or refrigerated container constitute an individual group of samples. The trip blank is a clean water sample that shall be opened at the site in the same location as field sampling. The trip blank shall be analyzed for the same compounds as the other samples.

Upon completion of soil sampling, the Contractor shall prepare a draft Soil Sampling Report that includes, at a minimum, the items described below.

1. Investigative summary and project description.
2. Field investigative methods and deviations from the approved SAP.
3. Investigative results and field observations.
4. Data Evaluation and Discussion, including maps showing boring locations and feature locations.
5. Statistical analysis of sample results, estimating trends, contaminant distribution and average concentration including the following statistical analysis for samples tested for lead. The statistical analysis shall include the appropriate regression analysis and data grouping based on the Contractor's excavation scenario or the proposed construction staging plan.
  - A. The mean, median, standard deviation, 90% and 95% Upper Confidence Limits (UCL) shall be calculated and histograms of the original data and transformations (arcsine or square root) shall be supplied in accordance with USEPA, SW 846, "Test Methods for Evaluating Solid Waste," Volume II: Field Manual Physical/Chemical Methods.
  - B. A regression analysis graph showing the total versus soluble lead levels and a least-squares regression line shall be performed.
  - C. Arcsine data transformation shall be used to determine the confidence interval and shall be referenced or reproduced.
  - D. A determination of the concentration and total and soluble lead concentrations that would be expected in the excavated soil generated from the contract work. The data shall be compared to Title 22 criteria. Statistical calculations and results shall be clearly described in the text.
  - E. Maps and graphs shall be supported by data and shall be included in the reports.

6. Summary of laboratory results.
7. Conclusions describing types, levels, and estimated amount of contamination and recommendations for waste classification of soil and disposal or relinquishment options based on applicable State and Federal laws and regulations.
8. Appendices containing data used to support the report such as complete laboratory analysis reports and chain-of-custody documents.

The Contractor shall submit a draft Soil Sampling Report for review and approval by the Engineer within 15 days of the completion of soil profiling activities. The Engineer will have 15 days to review the draft report. If revisions are required, as determined by the Engineer, the Contractor shall revise and resubmit the report within 10 days of receipt of the Engineer's comments. The Engineer will have 10 days to review the revisions. Once the Engineer is satisfied that all comments have been adequately addressed, the Contractor shall prepare and submit a final report that incorporates all of the Engineer's comments. The report shall be prepared under the guidance of and signed by a California Professional Geologist.

Disposal or relinquishment of excavated material will be determined and directed by the Engineer based on the results, conclusions, and recommendations of the approved final report.

#### **TRANSPORTATION AND DISPOSAL PLAN**

The Contractor shall submit a Transportation and Disposal Plan (TDP) that incorporates and addresses soil characterized as contaminated with ADL, petroleum chemicals, agricultural chemicals, or combinations thereof. Characterization of soil shall be determined based on the results, conclusions, and recommendations of the approved final Soil Sampling Report.

Within 15 days after approval of the final Soil Sampling Report, the Contractor shall submit 2 copies of the Transportation and Disposal Plan to the Engineer. The Engineer will have 15 days to review the Transportation and Disposal Plan. If revisions are required, as determined by the Engineer, the Contractor shall revise and resubmit the Transportation and Disposal Plan within 10 days of receipt of the Engineer's comments. The Engineer will have 10 days to review the revisions. Upon the Engineer's approval of the Transportation and Disposal Plan, 2 copies of the final Transportation and Disposal Plan incorporating the required changes shall be submitted to the Engineer.

The Transportation and Disposal Plan shall conform to the regulations of the Department of Toxic Substance Control and the California Division of Occupational Safety and Health Administration (Cal-OSHA). The plan shall contain, but not be limited to the following elements:

1. Transportation and waste disposal Schedule
2. Results of sampling and analysis for the excavated soil
3. Dust control measures
4. Air monitoring if required by the HSP
5. Location and type of equipment
6. Sampling frequency and methodology for any material not previously characterized
7. Analytical laboratory
8. Truck waiting and staging areas
9. Transportation equipment and routes
10. Registered transporter information
11. Method for preventing spills and tracking soil onto public roads
12. Site for disposal of non-hazardous waste and hazardous waste
13. Spill Contingency Plan for excavated contaminated soil

Contaminated soil shall be transferred directly from staging area to registered transport vehicles or storage containers approved for transportation of contaminated soil by the United States Department of Transportation.

Prior to leaving the staging area, loose and extraneous soil shall be removed from surfaces outside the cargo areas of the transporting vehicles and placed in the cargo area or back in the excavation or stockpile, and the cargo shall be covered with tarpaulins, or other cover, as outlined in the approved Transportation and Disposal Plan. No contaminated soil shall be deposited on public roads. The Contractor shall indemnify the State from any cost due to spillage during loading or transport of the contaminated or hazardous soil to the disposal or treatment facility.

Excavated soil characterized as contaminated shall be transported to and disposed of at a permitted facility by the Contractor in conformance with Division 4.5 of Title 22 of the California Code of Regulations, Section 2521 of Title 23 of the California Code of Regulations, and Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications, and these special provisions.

### **DUST CONTROL**

Transportation, stockpiling, and handling of excavated material shall result in no visible dust migration.

### **EARTHWORK**

Earthwork shall conform to the provisions in Section 19, "Earthwork," of the Standard Specifications and these special provisions.

### **MEASUREMENT AND PAYMENT**

The contract lump sum price paid for hazardous materials mitigation plan shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in preparing and updating the Health and Safety Plan (HSP), Health and Safety Training, Sampling and Analysis Plan (SAP), Soil Profiling and Soil Sampling Report submittal, Transportation and Disposal Plan (TDP), and air monitoring as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

Full compensation for excavation, stockpiling, and containerizing of potentially contaminated material shall be considered as included in prices paid for various contract items of work involved and no additional compensation will be allowed therefor.

Transporting and disposal of contaminated soil will be paid as extra work as provided in Section 4-1.03D, "Extra Work," of the Standard Specifications.

Disposal of contaminated material shall include the transferring of contaminated material from temporary stockpiling location directly to registered transport vehicles and shall be transported to and disposed of at a permitted facility by the Contractor in conformance with Division 4.5 of Title 22 of the California Code of Regulations, Section 2521 of Title 23 of the California Code of regulations, and Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specification, and these special provisions.

If the Engineer fails to complete the review of submittals by the Contractor, including HSP, SAP, Soil Sampling Report, and Transportation and Disposal Plan, within the time allowed, and if, in the opinion of the Engineer, completion of the work is delayed or interfered with by reason of the Engineer's delay in completing the review, the Contractor will be compensated for resulting losses, and an extension of time will be granted, in the manner as provided for in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

If completion of the work is impeded by delay in submitting acceptable reports or plans by the Contractor, the State will not be liable to the Contractor for loss of work days due to such failure or delay.