# SECTION 02 81 10

# ENVIRONMENTAL MANAGEMENT OF EXCAVATED MATERIALS

## PART 1—GENERAL

### 1.1 DESCRIPTION

A. Work in this Contract may involve working environments that may be hazardous, contaminated, or non-hazardous to activities associated with the excavation, handling, transportation, and disposal of all excavated materials and other wastes in the project area with emphasis to hazardous and contaminated materials.

B. Such hazardous, contaminated, and non-hazardous environments include, and are not limited to hazardous and non-hazardous materials, soils, groundwater, heavy metals, petroleum hydrocarbons, polynuclear aromatic hydrocarbons, organic compounds, serpentine rock and ultramafic material (which may contain natural occurring asbestos - NOA), lead-based paint materials, sewage, sludge, debris, grit, sewer gases, bacterial/biological contamination, rail road ties, oxygen deficiency, and confined spaces.

C. If hazardous and contaminated material is unexpectedly discovered, the Contractor shall immediately notify the City Representative both verbally and in writing. Upon receipt of such notification, the City, at its sole option, may either (a) perform the remediation work using its own forces or using an outside contractor specializing in remediation work or, (b) direct the Contractor to perform all or any part of the remediation and hazardous materials removal work.

D. The Contractor shall be responsible for providing its employees with all levels of personal protective equipment (PPE). The Contractor shall be responsible, and the City will not pay any additional compensation to the Contractor for providing its employees with all levels of training and personnel protective equipment (PPE), including personal air monitoring if required. This includes areas where hazardous and contaminated soils and waste is encountered.

E. For work in this Contract, the Contractor shall have taken into account the productivity losses, if any, due to the use of respirators and personal protective equipment. The City will not pay any additional compensation to the Contractor due to its use of respirators, and personal protective equipment. For work in this Contract, the Contractor shall have taken into account the productivity losses, if any, due to the use of respirators and personal protective equipment.

F. The Contractor shall not use the Project site as a storage facility for work its doing at another site.

G. Lead Hazards: All work that affects any level of lead will at a minimum be performed by the General Contractor or its subcontractors under the Cal/OSHA Lead in Construction Standard 8 CCR 1532.1 as well as all Federal, State, and Local regulations at no additional cost to the City.

H. Hazardous and non-hazardous waste shall only be disposed at permitted California landfills (22 CCR 66262), equivalent out-of-state landfills (40 CFR 262), permitted recycling facilities, and at other projects as approved by the City.

I. The Contractor is hereby notified that any screening or crushing operations of excavated materials cannot proceed without the appropriate BAAQMD and Cal-EPA/DTSC permits.

J. All work in this Section (including but not limited to pre-excavation profiling and environmental training, excavation, handling, stockpiling, and re-use of excavated soils) shall be incidental to mobilization (Bid Item SW-37, Mobilization) unless noted otherwise.

K. Bid Item Nos. CS-1, CS-2, CS-3, CS-4 are for the Transportation; and Disposal of Class I and Class II / III soils.

L. Bid Item No. CS-5, Allowance for Unforeseen Environmental Work: This allowance is for the work associated with the discovery unforeseen hazardous materials, additional environmental testing, (in addition to that required for pre-excavation soil profiling in this section) and other unforeseen environmental work that is not covered by the Contract, and as determined by the City Representative only. The unused portion of the cash allowance shall be credited to the City. Mark up and profit for all tiers of sub-contracted work shall be limited to 5% each, with a maximum of two-tiers, and as approved by the City Representative.

M. Pre excavation environmental soil profiling to classify the excavated soil for disposal is incidental to mobilization.

1.2 RELATED SECTIONS

A. Section 00 31 00 Available Project Information

B. Section 01 35 45 Health and Safety Criteria

C. Section 01 35 49 Minimum Environmental Procedures

D. Section 01 35 50 Additional Environmental Procedures

E. Section 01 41 00 Regulatory Requirements

1.3 SUBMITTALS

A. The Contractor shall submit the documents listed below, and have the Plans approved by the City Representative at least 15 calendar days before any soil disturbing activity, and no later than 30 calendar days after the Notice to Proceed.

B. Pursuant to the provisions of the General Conditions and Section 01 33 00 - Submittal Procedures, the Contractor shall submit the following as separate submittals:

1. Name and qualification of the environmental consultant, and the accredited environmental laboratory to be used.

2. Pre-Excavation Soil Profiling Sampling Plan in accordance with Part 1.4 herein.

3. An Environmental Site Assessment (Phase II) results in accordance with Part 1.4 herein.

4. Waste Profile Application Package on each waste stream that the Contractor plans for disposing the excavated soil. The Contractor shall prepare and submit waste profile application to each proposed disposal facilities for acceptance. The formal waste profile application will also include, if any, additional information (such as slurry additive applied by the construction contractor as part of the construction) will be included in the formal waste profile application. Only the Generator (City) will sign the profile application.

5. Waste Profile # (s) from the permitted landfills or the permitted disposal & recycling facilities that the Contractor will use.

6. Workers Mandatory Environmental Training Records in accordance with Part 1.7 herein, as requested by the City's Representative.

7. Transporter's current Class 1 Certificate of Compliance from the California Highway Patrol and Hazardous Substance Removal Certification in accordance with Part 1.9 herein, as warranted.

8. Copy of the Non-Hazardous Waste form for and subsequent copies attached to the monthly Soil Disposal Spreadsheet in accordance with Part 1.10 herein.

9. Hazardous Waste Manifest in accordance with Part 1.11 herein, as warranted.

10. The original source of where the import soils are coming from, the name of the laboratory used to analyze the soils, and the date of chemical analysis, and the analytical test results, and frequency of the analytical testing in accordance with Part 3.3 herein.

11. Monthly Import Fill Spreadsheet in accordance with Part 3.3 herein.

12. Cal/OSHA asbestos Competent Person training records as pertaining to requirements specified in the Cal/OSHA standard 8 CCR § 1529, and when Serpentine, serpentinite, or other ultramafic rocks containing Naturally Occurring Asbestos (NOA) is present.

13. Cal/OSHA asbestos worker training records as pertaining to requirements specified in the Cal/OSHA standard 8 CCR § 1529, and when Serpentine, serpentinite, or other ultramafic rocks containing Naturally Occurring Asbestos (NOA) is present.

## 1.4 PRE-EXCAVATION ENVIRONMENTAL SOIL PROFILING (PHASE II ENVIRONMENTAL SITE ASSESSMENT)

A. The Contractor may choose an environmental consultant from current list of as needed environmental consultants with master agreements with San Francisco Public Works to perform the pre-excavation soil profiling (Subsurface Investigation Work Plan and Phase II Environmental Site Assessment). If the Contractor seeks an exemption from the list of environmental consultants listed below, then the Contractor, shall submit the name and qualifications of another environmental Consultant to be approved by the City Representative.

B. NOTE: Environmental Consultants that work on the planning, design and construction phase of this project are not allowed to work under the Contractor to perform this pre-excavation profiling.

C. The current list of as needed environmental consultants with master agreements with San Francisco Public Works is alphabetically listed as follows.

1. AEW Engineering, Inc; telephone: (415) 495-8400

2. Baseline Environmental Consulting; telephone: (510) 420-8686

3. Fugro USA Land, Inc; telephone: (916) 773-2600, ext. 128

4. Ninyo & Moore; telephone: (510) 343-3000, ext.15212

5. SCA Environmental, Inc; telephone: (415) 867-9540

6. TRC-Avila JV LLC; telephone: (925) 688-2479

7. Ward & Associates; telephone: (415) 626-3030

D. The pre-excavation profiling (Phase II Environmental Site Assessment) shall be done so as to classify the excavated soils for disposal to a permitted landfill or to a reuse facility. The Contractor is responsible for working with the landfill or to a reuse facility to correctly profile the soils to the depth of the excavation, for landfill acceptance, and to ensure a load and go off-hauling during construction, with no further environmental testing. The pre-excavation profiling shall be done at least 40 days prior to excavation work. It is therefore necessary for the Contractor to identify this work in its schedule.

E. Pre excavation environmental soil profiling to classify the excavated soil for disposal is incidental to mobilization.

F. The Contractor shall submit a Pre-Excavation Soil Profiling Sampling Plan for review and approval by the City's Representative prior to any drilling or potholing. The Pre-Excavation Soil Profiling Sampling Plan shall:

1. Include excavation volumes in cubic yards.

2. Include a diagram showing sampling locations and depths.

3. Include sampling analytical tests and sampling methods.

4. Include the collection and compositing strategy.

G. After receipt of the above approval, obtaining the required drilling permits and coordinating with the Department pf Public Health, the Contractor shall collect soils samples to the required depths of the excavation. Collect a minimum of 2 vertical composite soil samples per hole. This sampling strategy is subject to change pending the review and approval of the City's Representative. At a minimum, the Contractor shall analyze each sample for:

1. Total Petroleum Hydrocarbons-Gasoline/BTEX/MTBE (EPA Method 8015 mod/8021).

2. TPH-Diesel/Motor Oil (EPA Method 8015 with silica gel cleanup).

3. Volatile Organic Carbons VOCs (EPA Method 8260). NOTE: All RCRA regulated compounds, including MEK must be reported.

4. Semi-Volatile Organic Carbons SVOCs (EPA Method 8270C Full Scan/entire suite) with organic cleanup to achieve the lowest extent possible detection limits below the current San Francisco Regional Water Quality Control's Residential Shallow Soil Exposure Environmental Screening Level (ESLs). (http://www.waterboards.ca.gov/rwqcb2/water_issues/programs/esl.shtml). NOTE: All RCRA regulated compounds must be reported including pyridine and cresols.

5. Organochlorine Pesticides (EPA Method 8081) and Polychlorinated Biphenyls (PCB's) by EPA Method 8082 with organic cleanup to achieve the lowest extent possible detection limits below the current San Francisco Regional Water Quality Control's Residential Shallow Soil Exposure Environmental Screening Level (ESLs). (http://www.waterboards.ca.gov/rwqcb2/water_issues/programs/esl.shtml). NOTE: All RCRA regulated compounds must be reported.

6. Title 22 Metals (EPA Methods 6000/7000 Series) and soluble Total Concentration Leaching Potential (TCLP) and Soluble Threshold Limit Concentration (STLC) metals (as warranted – 10x STLC & 20x TCLP).

7. pH and Corrosivity tests.

8. Asbestos (CARB Method 435, 400-point count for 0.25% sensitivity).

9. Chromium +6 (EPA Method 7199).

10. NOTE: For the above analyses, the Laboratory Reporting Limit (RL) for all constituents must be reported below state or federal limits to determine waste disposal classification.

H. The Contractor shall forward the samples to an accredited environmental laboratory. The furnishing of all labor, materials, and equipment for sample collection and delivery to the testing laboratory will not be separate measures for payment.

I. The approximate 13 borings/pothole locations along the alignment will be at:

1. Intersection of Mission St & Ney St

2. Intersection of Mission St & Silver Ave

3. Intersection of Mission St & Theresa St/Avalon Ave

4. Intersection of Mission St & Excelsior Ave

5. Intersection of Mission St & Brazil Ave

6. Intersection of Mission St & Persia Ave

7. Intersection of Mission St & Russia Ave

8. Intersection of Mission St & France Ave

9. Intersection of Mission St & Amazon Ave

10. Intersection of Geneva Ave & London St

11. Intersection of Geneva Ave & Madrid St

12. Intersection of Geneva Ave & Athens St

13. Intersection of Geneva Ave & Munich St

J. The Contractor shall determine the exact location of the drill holes/potholes, with reference to utility plans and Underground Service Alert clearance. The Contractor shall be responsible for all permits, utility clearance and traffic routing during the pre-excavation environmental soil profiling and as per other Sections in this Contract.

K. The Contractor shall coordinate with the City Representative prior to scheduling the sampling to allow the City Representative to witness the sampling.

L. The pre-excavation environmental soil profiling (Phase II Environmental Site Assessment) required in this Article shall be conducted by a California licensed Professional Geologist or Professional Civil Engineer, and the driller (if used) shall possess a State of California C-57 (Well Drilling) license.

M. The Contractor shall provide the City Representative with a schedule for drilling the bore holes, at least 72 hours in advance of drilling the first hole or change any thereof.

N. The Contractor shall allow in its schedule of work the time required in obtaining environmental analytical results of the soil samples on a standard (normal) turnaround time. The standard turnaround time to obtain environmental analytical results varies between 5 to 20 working days.

O. Analytical testing shall be done at a California State accredited laboratory (or an out-of-state

accredited laboratory if appropriate). The selected laboratory shall guarantee a maximum of 10 days standard turnaround time at standard rates for results of analytical testing. All original copies of test results shall be forwarded to the City Representative. Emailed copies of results are acceptable as an interim step.

P. The Contractor shall tabulate the results from the laboratory results and submit it to the City Representative. Tabulation of the results shall compare the results against ESLs for Direct Exposure Human Health Risk Levels - Residential Shallow Soil Exposure, and for Construction Worker, TTLC, STLC, 10x STLC, TCLP, 20x TCLP values.

## 1.5 CLASSIFICATION AND MANAGEMENT OF EXCAVATED MATERIALS

A. The pre-excavation profiling shall be done so as to classify the excavated soils for a “load and go” disposal to a permitted California landfill or equivalent out of State landfill for Class I, II & III disposal, or permitted disposal & recycling facilities.

B. An intermediate soil staging and loading facility is not provided as part of this Contract. The Contractor may use its own or a subcontracted intermediate soil staging and loading facility. Such a facility shall be permitted in accordance with federal, State, and local regulations and meet the definitions of the California Code of Regulations (CCR) Title 22, 66260.10 for "Individual generation site", "Onsite", "Onsite facility".

C. Except as otherwise stated in the Contract Documents, the Contractor is responsible for the excavation, loading, handling, transportation, and disposal of all surplus waste excavated soils and sediments from dewatering activities, meeting requirements of a certified and permitted California landfill or an equivalent out-of-state landfill. All such disposal activities shall require the approval of the City Representative prior to actual loading and disposal.

D. Conditions for acceptance at various local landfills/waste disposal facilities include, filling out of a waste profile, that the surplus waste excavated soil hauled to the landfill will have greater than 50 percent solids, and cannot have any free liquids. It is the Contractor’s responsibility to meet landfill requirements for disposal.

E. The Contractor shall maximize reuse of excavated soils. Excavated soils can be reused anywhere along the project alignment. If the soils from this area cannot be reused, such surplus waste excavated soils shall be disposed at a certified and permitted California landfill for Class I, or Class II, or Class III, disposal or an equivalent out-of-state landfill. Acceptable landfills/waste disposal facilities for California Class I, II and III wastes are:

1. Republic Services, http://www.republicservices.com/Corporate/Business/WasteRecycling/Facilities/landfills.aspx

2. Waste Management Inc, https://www.wm.com/find-a-facility.jsp

3. Clean Harbors Buttonwillow LLC, www.cleanharbors.com

F. With the exception of this Article 1.4 herein, the Contractor shall not conduct any environmental or hazardous materials sampling or analysis without prior permission from the City Representative. This does not include the Contractor’s obligation for any personnel air monitoring.

G. The Contractor shall inform the City Representative in writing and obtain City’s approval prior to any sale, supply, or offer to sell excavated material. The Contractor shall similarly comply with Bay Area Air Quality Management District’s (BAAQMD's) Regulation 11, Rule 14 for asbestos-containing serpentine. Additional information may be found at http://www.baaqmd.gov/~/media/dotgov/files/rules/reg-11-rule-14-asbestoscontaining-

serpentine/documents/rg1114.pdf?la=en, the California Air Resource Board Advisory #161 (https://ww2.arb.ca.gov/enforcement-advisory-161-serpentine-rock, and Title 17, Section 93106 of the California Code of Regulation (CCR). In such a case, the Contractor, at its own expense, shall perform all the engineering and chemical testing as required by the City and by federal, State, and local statutes, laws, regulations, and policies.

H. Asphalt, concrete, aggregate base, vegetation, debris, wood, obstructions, and other organic, unsound or deleterious matter shall be excavated separately from the soil layer, and shall not be reused as backfill. The removal, management, transportation, and disposal of asphalt, concrete, aggregate base, vegetation, debris, wood, obstructions, and other organic, unsound, or deleterious matter shall be incidental to its respective bid items.

I. Soils of different waste disposal classification shall be segregated when excavated, managed, transported, and disposed separately with no mixing of the different types of wastes.

J. For work in this Contract, the Contractor shall take into account the productivity losses, if any, due to but not limited to encountering and managing hazardous or non-hazardous materials, the use of respirators and personal protective equipment. The City will not pay additional compensation to the Contractor due to encountering and managing hazardous or non-hazardous materials, use of respirators, and personal protective equipment.

K. The City reserves the option and right, at any time, to use its own forces to excavate, remediate, bioremediate, haul, recycle, or dispose of both, hazardous and non-hazardous materials at its own facilities, California State approved facilities, contracted facilities or contracted out-of-state facilities.

## 1.6 DEFINITIONS

A. Generator: The City is the "generator" as defined in Section 66260.10 of Article 2, Chapter 10, Division 4.5 of Title 22 of the California Code of Regulations (CCR) and in Title 40, Code of Federal Regulations (CFR) of any excavated pre-existing hazardous waste. The City will be responsible as the generator to the extent of the law.

B. Waste: Discarded material of any form as defined by the Code of Federal Regulations 40 CFR 261.2 (http://www.access.gpo.gov/nara/cfr) and the California Code of Regulations 22 CCR 66261.2 (http://ccr.oal.ca.gov).

C. Hazardous Waste: This may include excavated material, friable asbestos containing material (ACM) that is not naturally occurring in rock and soil, loose and peeling lead–based paints, and other material that is regulated by and requires management, handling, transport, treatment, storage, and disposal according to the requirements of the Federal Resource conservation Recovery Act (RCRA) and associated regulation 42 U.S.C. 6901 et seq. (https://www.epa.gov/laws-regulations/summary-resource-conservation-and-recovery-act) and 40 CFR Part 260 et seq., or the California Hazardous Waste Control Law (https://www.epa.gov/rcra/resource-conservation-and-recovery-act-rcra-regulations) and associated regulations (Health and Safety Code 25000 et seq. (https://leginfo.legislature.ca.gov/faces/codes_displayexpandedbranch.xhtml?tocCode=HSC&division=20.&title=&part=&chapter=&article=) and 22 CCR 66260 et seq.).

D. References to hazardous material or contaminated material incorporate definitions of hazardous pollutants, hazardous contaminants, hazardous material, hazardous substances, hazardous waste, toxic pollutants, and toxic substances applicable in accordance with federal, State, and local statutes, laws, and regulations.

E. Management of excavated materials or “management” means transportation, transfer, recycling, recovery, disposal, handling, processing, storage, and treatment of excavated

materials in accordance with federal, State, and local laws and regulations

F. Soil: earth material composing the superficial geologic strata (material overlying bedrock), consisting of clay, silt, sand, or gravel size particles as classified by the U.S. Soil Conservation Service. Soil does not include asphalt, concrete, aggregate base, vegetation, debris, wood, obstructions, and other organic, unsound, or deleterious matter.

G. Excavated material includes all soils (fill, alluvium, bedrock), and other materials generated in the course of the project work, which are to be excavated, handled, or disposed of as part of the Contract.

H. Waste excavated soil is excavated soil that is a waste and cannot be reused within the project site in accordance with reuse criteria of this Section. It is surplus and shall be managed, transported, and disposed of as part of the Contract. Waste excavated soil does not include asphalt, concrete, vegetation, wood, debris, obstructions, and other organic, unsound, or deleterious matter.

I. Naturally Occurring Asbestos (NOA): NOA in the City and County of San Francisco is typically associated with ultramafic, metamorphic or metamorphosed rocks within the Franciscan mélange, including serpentinite, greenstone, and blueschist. There are six regulated naturally occurring asbestos minerals: chrysotile, crocidolite (asbestiform riebeckite), amosite (grunerite-cummingtonite), tremolite, actinolite, and anthophyllite (CGS 2002). The six asbestos minerals are divided into two distinct mineral groups; serpentine minerals (chrysotile), and amphibole minerals, which include the remaining five above-mentioned minerals. These asbestos minerals are classified as known human cancer-causing substances by local, state, and federal health agencies (DTSC 2004), and regulated by name.

J. The following soil classifications with corresponding requirements are established solely for the purpose of payment for the handling, transportation and disposal of the excavated materials determined to be a waste:

1. California Class I (non-RCRA) hazardous waste: is waste excavated material that is classified as California (non-RCRA) hazardous waste, requires disposal at a California Class I disposal facility or a similarly permitted out-of-state facility and requires transport by a registered hazardous waste transporter.

2. California Class II and Class III designated waste (Class II and Class III): is non-hazardous waste, and is not a California or Federal hazardous waste. It requires disposal at a California Class II or Class III disposal facility or at a similarly permitted out-of-state facility without the need of a registered hazardous waste transporter.

3. Asbestos containing rock and soil where the asbestos is naturally occurring and not associated with cross contamination by building materials may be classified as California Class II waste. The Contractor shall contact the landfill it identifies to receive waste to assure that asbestos containing naturally occurring materials meet the acceptance criteria of the California Class II landfill.

## 1.7 WORKER'S MANDATORY ENVIRONMENTALTRAINING

A. At no cost to the City, the Contractor shall provide sufficient numbers of properly trained personnel (including its subcontractors) who may come in contact with, may be exposed to, disturb, operate equipment in, or otherwise excavate, handle, transport and dispose hazardous or contaminated excavated materials, asbestos, naturally occurring asbestos (NOA), and silica.

B. At no cost to the City, the Contractor shall ensure that its workers and that of its

subcontractors have the following appropriate environmental training. It is the Contractors responsibility (and not that of the City) to ensure that its workers and its subcontractors have the necessary training certifications, and personal protective equipment (PPE) as required by federal, state and local laws and regulations. The Contractor shall submit certifications or proof of such training when requested by the City.

C. At no cost to the City, the Contractor shall hire an experienced Certified Industrial Hygienist (CIH) and a Registered Geologist (RG) to assist it with the following:

1. HAZWOPER: This training is required of the Contractor's employees (including its subcontractors) who may come in contact with, may be exposed to, disturb, operate equipment in, or otherwise excavate, handle, transport and dispose hazardous or contaminated excavated materials, asbestos, naturally occurring asbestos (NOA), and silica. Employee(s) shall possess a current 40-hour Hazardous Waste Operation and Emergency Response ("HAZWOPER") training and certification and the associated 8-hour HAZWOPER refresher training (in accordance with Sections 5192 and 5144 of Title 8, CCR and Title 29 CFR, Sections 1910.120 and 1910.134), and shall be certified to wear appropriate personal protective equipment and respirators.

2. Cal/OSHA Asbestos Class II asbestos operations and Asbestos Competent Person (ACP): The Contractor shall meet its obligations under CCR Title 8, Section 1529 when Serpentine, serpentinite, or other ultramafic rocks containing Naturally Occurring Asbestos (NOA) is present.

   a. The Contractor and its subcontractors shall have its workers, trades people and Competent Person that will come in contact with serpentine, serpentinite, or other ultramafic rocks containing Naturally Occurring Asbestos (NOA) be trained for the Class II work activity level as per the Cal/OSHA standard 8 CCR § 1529.

   b. The Contractor shall have a Cal/OSHA asbestos Competent Person as it pertains to requirements specified in the Cal/OSHA standard 8 CCR § 1529, and when serpentine, serpentinite, or other ultramafic rocks containing Naturally Occurring Asbestos (NOA) is present.

3. SILICA: The Contractor shall meet its obligations under the Respirable Crystalline Silica standard for construction, found in the California Code of Regulations, Title 8, sections 1530.1, 1532.3, and 5155; and OSHA Regulation 29 CFR 1926.1153.

4. Health and Safety training.

5. Lead awareness training (for all trades who will come in contact and disturb lead containing paints as per Cal/OSHA 1532.1 Lead in Construction standard). If personal exposures to the workers exceed the 8-hr Permissible Exposure Level (PEL) of 50 micrograms/cubic meters, such worker(s) must have received training as a CDPH Certified Lead Worker (as per 17 CCR Division 1, Chapter 8).

6. Dust Control and Mitigation awareness training to enable the Contractor's personnel to comply with Sections 01 35 49 Minimum Environmental Procedures and 01 35 50 Additional Environmental Procedures.

7. Medical examination and blood tests (as warranted).

8. Respiratory protection (including current respirator fit test records).

9. Storm water pollution prevention awareness training to enable the Contractor's personnel to comply with Section 01 57 13.

10. Other training as necessary and pertaining to the work being conducted.

D. Only qualified persons shall engage in hazardous materials-related work. Contractor and Subcontractor personnel, who come in contact with, are exposed to, disturb, operate equipment in, or otherwise handle hazardous or contaminated materials, or demolition debris shall have appropriate hazards communication, environmental training and medical monitoring.

E. The City will not grant extensions of time or increases in payment for costs associated with the Contractor's productivity losses, inability to provide properly trained personnel, costs of training Contractor's workers, or hiring of required personnel.

F. It is the Contractor's responsibility and liability to ensure that its workers and that of its subcontractors have the proper training, personal protective equipment (PPE), and respiratory protection.

G. The Contractor, not the City, is responsible for the health and safety, training, personal protective equipment (PPE), and monitoring and protection from exposure risks of its employees and subcontractors, as per federal, state and local statutes, laws and regulations.

H. The Contractor is obligated to conduct any required personal air monitoring of its workers, at its own expense, in accordance with Section 01 35 45 Health and Safety Criteria.

## 1.8 REGULATORY INDEMNIFICATION

A. The City will not indemnify against liability of the Contractor resulting from the activities or duties, which are the responsibility of the Contractor under the terms of this Contract. This includes, but is not limited to, liability arising from the arrangement of transportation of excavated material, whether on- or off-site. Therefore, the City will not assume any liability, present or future, incurred by the Contractor by reason of these activities.

B. The Contractor is specifically alerted to, and shall familiarize itself and its Subcontractor(s) to, the liability statutes of:

1. The Comprehensive Environmental Responses, Compensation, and Liability Act (CERCLA) of 1980 found in 42 USC, Section 9601 et seq.

2. The Superfund Amendments and Re-authorization Act (SARA) of 1986 found in 42 USC, Section 9601 et seq.

3. The California Hazardous Substance Account Act (HSAA) of 1981 found in California Health and Safety Code, Section 25300 et seq.

4. California Health and Safety Code, Division 20, Regulations and CCR 22 Section 6600 et. seq.

5. Cal/OSHA Lead in Construction Standard, Title 8, CCR, Section 1532.1.

6. BAAQMD Regulation 6 for Particulate Matter and Visible Emissions (http://www.baaqmd.gov/~/media/files/planning-and-research/rules-and-regs/workshops/2017/rg0601-pdf.pdf?la=en) and Regulation 11 for Hazardous Pollutants (http://www.baaqmd.gov/regs/rulereg.htm). The Final Regulation Order of the California Code of Regulations (CCR) Title 17, Public Health, Section 93105, on Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations (http://www.baaqmd.gov/~/media/Files/Compliance%20and%20Enforcement/Asbestos/final_reg_order.ashx).

7. The California Air Resources Board (CARB) Asbestos Airborne Toxic Control Measure for Surfacing Applications.

8. The San Francisco Building Code Section 106.3.2.6

9. San Francisco Health Code, Article 22B - Construction Dust Control Requirements.

10. The DPW Dust Control Order 171,378.

C. The Contractor shall be responsible for all liability and costs necessary to prevent its own or Subcontractors' operations from violating federal, State, or local statues, laws, regulations, and policies.

## 1.9 REQUIREMENTS FOR THE TRANSPORTER

A. As warranted, the Contractor shall ensure that its drivers as well as the subcontractor drivers have in their possession, during the hauling of material and soil, all applicable California State and local vehicle insurance requirements, valid driver's license, and vehicle registration and licensing. A current Class 1 Certificate of Compliance from the California Highway Patrol shall be affixed to each vehicle.

B. All hazardous materials/waste haulers shall possess a Hazardous Substance Removal Certification granted by the State of California, Contractors State License Board (1 800-321-2752 or http://www.cslb.ca.gov), and all other required certifications and insurance.

C. Haul trucks carrying excavated material shall be loaded so that the material does not extend above the walls of the truck bed, and there is no leakage from any vehicle. All truckloads shall be covered.

D. All truckloads containing Naturally Occurring Asbestos (NOA) and Serpentinite require both covering the load as well as lining the underneath of the truck bed (“burrito wrap”) with 10mil HDPE. This is required regardless if the material is wet, hazardous, or non-hazardous.

E. The Contractor shall be responsible for cleaning up excavated material spill, which occurs during loading, handling, and transportation.

F. Preparation for shipment: Marking, labeling, placards, and packaging prior to transport shall be in accordance with all regulations and shall be the responsibility of the Contractor.

## 1.10 USE OF NON-HAZARDOUS WASTE MANIFEST FOR CLASS II MATERIAL OR LESSER

A. For transportation and disposal of the non-hazardous waste, the Contractor shall initiate and fill out a non-hazardous waste profile form with the Class II/III landfill of its choosing. Then, submit this waste profile form to the City Representative’s for its approval & signature. Next the Contractor shall prepare a Non-Hazardous Waste Manifest form from the landfill. The Non-Hazardous Waste Manifest form shall be completed for each vehicle carrying excavated material classified as California Class II and Class III designated waste, or of a lesser waste classification. The Contractor shall submit the Non-Hazardous Waste Manifest form to the City Representative for the Generator’s signature at least 72 hours in advance of the day of the off-haul with an estimate of the number of loads scheduled for off-haul. The Non-Hazardous Waste Manifest form shall contain the following information before providing the final copy for the City Representative to sign:

1. Name, address and phone number of the Generator, Project name, and Specification Section number.

2. The Contractor’s billing information

3. The soil profile approval number and description of the waste.

4. Name, address and phone number of the transport company.

5. The Name, address, and telephone number of the receiving facility i.e., disposal facility.

B. The City will not be responsible for off haul delays if the Contractor does not notify the City Representative in a timely manner to sign the Non-Hazardous Waste Manifest forms.

C. On a monthly basis, the Contractor shall provide the City Representative with a copy of each completed Non-Hazardous Waste Manifest Form (with the landfills signature) and its corresponding certified weight ticket.

## 1.11 HAZARDOUS WASTE MANIFESTING PROCEDURES FOR CLASS I MATERIAL

A. As warranted, the Contractor shall furnish all labor, materials, equipment, and incidentals required to transport those materials identified as hazardous waste for the purpose of disposal.

B. The Contractor shall comply with all applicable regulatory requirements listed as well as other applicable federal, State, or local laws, codes, and ordinances, which govern or regulate transportation of wastes (including but not limited to DOT-HM 181 in accordance with 49 CFR 172).

C. All material classified as hazardous waste (Federal Class1 RCRA and California Class1 non-RCRA wastes only) shall be hauled off using a licensed hazardous waste transporter and the uniform hazardous waste manifest form (DTSC Form 8022A and/or EPA Form 8700-22 a.k.a. the manifest).

D. Preparation and handling of waste manifests:

1. For transportation and disposal of the hazardous waste, the Contractor shall initiate and fill out a hazardous waste profile form with the Class I landfill of its choosing. Then, submit this hazardous waste profile form to the City Representative's for its approval & signature. Next the Contractor shall provide and prepare the hazardous waste manifest for each shipment of hazardous wastes from the site. The Contractor is hereby notified that hazardous waste manifest, waste profiling, and landfill service agreements have to be prepared and have to be approved by the landfill in advance of the off haul. The Contractor shall consult with the City Representative for local requirements in filling out the forms.

a. The manifest shall describe the contents of each truck carrying materials to the waste disposal site, including the weight of the waste materials. Weight, not volume, shall be used to measure waste quantities.

b. The City Representative will provide a hazardous waste generator identification number for use on the manifest. The Contractor shall provide the State Transporter identification number and telephone number.

c. The licensed transporter shall also sign and date the manifest indicating that it has accepted the load described in the manifest on that particular day.

d. Only a City employee (and not the Contractor) will sign the manifest for the "generator" of the waste.

E. The Contractor shall notify the City Representative 72 hours prior to off-haul of all excavated material. If the manifest and other forms above are to be signed by the City Representative during periods other than the hours stipulated above, the Contractor shall give an additional

72-hour advance notice to the City Representative.

F. The City Representative will sign and keep the Generator's copy and give the remaining copies to the licensed transporter.

G. The licensed transporter shall carry the hazardous waste manifest with each truckload using the traffic control approved routes for off haul

H. Within 2 days of its return, the Contractor shall provide the City Representative with the completed waste manifest. The completed waste manifest shall be certified by the receiver of the waste shipment, confirming that the shipment was received at the waste treatment or disposal facility designated in the Contractor's bid, and certifying the weight of the shipment.

I. Should any waste manifest not be returned within 35 days of shipment, the Contractor shall initiate follow-up, shall document such follow-up effort in writing with an Exception Report in accordance with 40 CFR 262.42 and/or 22 CFR 66262.42, and shall provide a copy to the City Representative.

J. Mandatory City Information for the Manifest

1. Manifest Item 1: Generator’s US EPA ID Number for Project. (Will be provided by the City Representative after NTP as deemed necessary)

2. Manifest Item 3: Emergency response Phone: # 24 hours line to be provided by the Contractor

3. Manifest Item 5:

   a. Generator’s Name and Mailing Address:

      SFDPH
      Municipal Hazardous Waste Program
      49 South Van Ness Avenue, Suite 600
      San Francisco, Ca 94103

   b. Generator’s Site Address:

      Name of the project: 0000005626 Mission Street and Geneva Avenue Infrastructure Improvements

4. Manifest Item 14: The following information is mandatory:

   Contract JO # & Name of Project: 0000005626 Mission Street and Geneva Avenue Infrastructure Improvements

   a. Project Manager: Paul Barradas

   b. Project Manager Phone Number #: (628) 271-2580

   c. Profile # _____(Defined when manifest is generated. To be obtained and provided by the Contractor)

5. If applicable, include the following statement for soil disposal on line 14 of the manifest: The City & County of San Francisco applies for an exemption from the BOE Hazardous Waste Generator fees in accordance with H&SC 25174.7, 25174.1; 25205.5, and 25345. (1) Hazardous wastes which result when a government agency, or its contractor, removes or remedies a release of hazardous waste in the state caused by another person, and in an area from beneath a public street and originated from earthquake fill.”

## 1.12 UNDERGROUND TANK REMOVAL PROCEDURES

A. The Contractor is alerted to the fact that underground structures and tanks may be encountered during excavation. In the event that an underground storage tank, pipes, and associated fixtures are encountered, the Contractor shall immediately suspend the work in the immediate area and notify the City Representative as well as the San Francisco Department of Public Health (415) 252-3900.

B. The City Representative reserves the right to use City forces or City Contractors to remove any underground storage tank that may be discovered as part of this Contract. The Contractor shall work cooperatively with any City Contractor or City force in an effort to expedite the removal of the underground tank.

C. If directed by the City, the Contractor under differing site conditions, shall be responsible for removing and disposing the underground storage tank, pipes, and associated piping in the excavation area according to applicable laws and regulations including:

1. California Health and Safety Code (H&SC), Division 20, Chapter 6.9 (Section 25280 et.seq.)

2. California Code of Regulations (CCR), Title 23, Division 3, Chapter 16 (Section 2610 et.seq.)

3. California State Water Resources Control Board (SWRCB), Leaking Underground Fuel Tank (LUFT) Manual.

4. City & County of San Francisco, Department of Public Health, Underground Storage Tank Removal Regulations. Information available at but not limited to https://www.sfdph.org/dph/EH/HMUPA/UST.asp

D. The Contractor shall obtain all permits, excavate, sample, analyze and prepare all reports as required by the San Francisco Health Code.

E. The Contractor shall prepare an Underground Storage Tank (UST) Closure Plan in compliance with Article 21 of the San Francisco Health Code, if UST's will be removed. The Contractor shall only remove the underground tanks, pipes, and related appurtenances only in the presence of an inspector from the City's Department of Public Health, the City's Fire Department, and the City's Representative.

F. The Contractor shall furnish three (3) copies of the draft report for review, and five (5) copies of the final report documenting the removal of an underground tank.

G. Such work will be considered as change order work.

## 1.13 DISPOSAL OF RAILROAD TIES AND TREATED WOOD WASTE

A. Railroad ties and wood treated with preservatives (e.g. utility poles, piers, pilings, posts, pressure treated lumber, etc), such as creosote, and/or pentachlorophenol, and/or Copper Napthenate, Zinc Napthenate, and/or Copper, Chromium, Arsenate (CCA), and/or Ammonical Chromium, Zinc, and Arsenate (ACZA) (that are not otherwise recycled by the Contractor) shall be transported and disposed of at a California Class 2 (non-hazardous) landfill.

B. For wood treated with chemical preservatives such as Chromate Copper Arsenate (CCA) treated wood: The Contractor shall comply with the Federal Insecticide, Fungicide, Rodenticide Act (FIFRA) and by the California Department of Pesticide Regulation (DPR) and Department of Toxic Substances Controls (DTSC) Regulations or for the treated wood waste

as per the Health and Safety Code (HSC) 25150.7 and 25150.

C. The Contractor shall fill out a separate waste profile with the landfill for such materials.

D. The transportation and disposal of the railroad ties and treated wood waste shall be paid as a change order.

1.14 POLLUTION INSURANCE

A. All Work that involves the management, handling, transportation, and disposal of hazardous and contaminated (non-hazardous) materials shall be performed either by the Contractor or a properly licensed subcontractor, who shall furnish evidence of Contractor's Environmental Pollution Liability Insurance as specified in Section 00 73 16 – Insurance Requirements.

PART 2 – PRODUCTS (Not Used)

PART 3—EXECUTION

3.1. TEMPORARY STOCKPILING OF EXCAVATED MATERIAL AND IMPORT MATERIAL

A. The Contractor shall comply with Article 2.4: Excavation in the Public-Right of-Way and specifically Article 2.4.53(c) Storage of Materials and Equipment.

B. If feasible and in the event that the City Representative permits the Contractor to temporarily stockpile excavated and import material along the project alignment, the following conditions shall apply (including those in Sections 01 35 49 Minimum Environmental Procedures and 01 35 50 - Additional Environmental Procedures):

1. Material shall be stockpiled at a location approved by the City Representative. The volume of the stockpile will be limited within the discretion of the City Representative.

2. Stockpiled materials shall not be stored for more than 48 hours.

3. The City Representative retains the right to suspend the use of temporary stockpiling in the event of negative public perception, aesthetic concerns, and regulatory concerns. In such an event, the Contractor is directed to remove the stockpile within 24 hours.

4. After a stockpile has been removed, the Contractor shall wet sweep and vacuum the area, street, and sidewalk to remove residual soil, restore the site to its original condition.

5. Stockpiles of site backfill soils shall be tarped using a different colored tarp from that of import soils.

6. Stock piles must be kept adequately wetted, treated with a chemical dust suppressant, or covered when material is not being added to or removed from the pile, and securely tarped & braced (weighted or tied down).

7. Stockpile Maintenance requirements in Section 01 35 49 Minimum Environmental Procedures and Section 01 35 50 Additional Environmental Procedures.

C. All costs associated with the temporary stockpiling of soils shall be borne by the Contractor, unless necessitated by an event that is otherwise compensable under the terms of the Contract. Such related incidental costs include, but are not limited to dust control, vacuum and wet sweeping, covering of stockpiles, multiple handling and transportation, multiple staging, work re-sequencing or rescheduling, time loss and standby time due to the duration

of storage, and complying with Federal, State, and local requirements.

3.2. REUSE OF EXCAVATED SOILS AS BACKFILL

A. For backfill work: The Contractor shall maximize the reuse of native soils from the excavation, unless directed otherwise by the City Representative. In such a case, the following conditions shall apply:

1. The reuse of native soils as backfill material shall meet the requirements of the contract specification, Section 31 23 33 - Trenching and Backfilling, and Part 7 – Excavation, Backfill and Embankment of the Standard Specifications and Plans, Department of Public Works, City and County of San Francisco. The Standard Specifications and Standard Plans are accessible online at http://www.sfpublicworks.org/services/standards-specifications-and-plans

2. For additional requirements for water work, refer to Section 31 23 36 Excavation and Backfill for Water Work.

3. Native soils to be reused must not contain asphalt, concrete, bentonite, bay mud, clay, bricks, cobblestones, rocks, rubble, scrap metal, railroad tracks and ties, debris, contaminated soils, vegetation, wood obstructions, and other organic, unsound, objectionable, or deleterious matter. The Contractor shall remove such materials matter prior to the placement and reuse of fill.

4. Native soils must meet sieve and chloride requirements. The Contractor shall submit sample results to the City Representative prior to placement.

5. With the City Representative's approval, native soils that are visually contaminated or are classified as a California Class I (non-RCRA) may be reused within the "area of contamination" and within 150 linear feet from its origin. Re-use of native soils must meet the engineering backfill and compaction requirements, is delineated with markers, documented, and meets the San Francisco Department of Public Health (SFDPH) requirements.

6. The Contractor shall notify the City Representative when and where the soils are used as backfill.

7. Surplus native soils shall be properly characterized and disposed of.

3.3. REUSE AND RECYCLING OF EXCAVATED SOILS AT OTHER FACILITIES

A. If the Contractor seeks to reuse or recycle surplus excavated soils at other projects or recycling facilities rather that dispose of them at a permitted landfill, the contractor at its cost shall:

1. Demonstrate that with the existing environmental test results that the soils can be reused or recycled. The Contractor at its expense may be allowed to conduct additional testing, and characterization of the soils, only with the City's prior approval.

2. Submit the acceptance criteria of the receiving facility or project.

3. Submit a letter of acceptance from the receiving facility or project. The letter shall indicate the volumes of soils accepted. Submit a value engineering calculation demonstrating cost savings to the City. Savings should be a spilt 50/50.

B. If the City accepts the above, the Contractor shall prior to reuse or recycling:

1. Incur on the risk of, and indemnify the City from any and all increased cost and future

liability arising from the reclassification, recycling, or reuse or the surplus excavated soils if, upon reuse or recycling of such soils at any time thereafter, it is determined that the surplus excavated soils are in fact hazardous, and should not have been reused or recycled.

2. Submit a copy of the letter of acceptance and all records, including the financial statements for the value engineering saving prior to the approval of the reuse or recycling of these soils.

3. Bear all costs for any additional testing, characterization and profiling of the soils, including the value engineering cost.

4. Bear all costs for the transportation, and any other associated cost for moving these soils to another project or to a recycling facility.

5. Revise and retain its Pollution Liability insurance to cover this work.

6. Repay any cost that the City at its discretion will incur to conduct its own testing to confirm the Contractor's findings.

7. Submit a monthly Reuse and Recycling spreadsheet of all reused and recycled materials generated from the project. The spreadsheet shall include information of the receiving facility or project, quantity transported (Cubic Yards), weight tags from the recycling facility.

8. The City will issue a Change Order for this work to effectuate any saving that may accrue from this Section.

9. Such work will only be done as a change order after the acceptance and approval of the City and after the change order is processed.

3.4. IMPORT SOIL (FILL)

A. Import Soil (Fill) is soil or fill material received from sources outside of the project right-of-way. Import soil (fill) includes import bedding sand and import recycled backfill sand used in the base and subbase layers of a pavement or roadway or sporting field.

B. Environmental/chemical testing is required for each source and of the same soil classification type (based on the unified soil classification system) of the import soil (fill).

C. In advance of hauling in and use of import soil (fill) the Contractor for each source of import soil (fill), shall provide the City the original source of where the import soil (fill) is coming from, the name of the laboratory used to analyze the soils, and the date of chemical analysis. Laboratory results shall not be over 6 months old.

D. The Contractor shall provide chemical analytical results for each source and of the same soil classification type (based on the unified soil classification system) of import soil (fill) in accordance with the Recommended Fill Material Sampling Schedule stated in the Department of Toxic Substances Control (DTSC) Advisory Note for Clean Imported Material (as shown below). If the Contractor brings import soils from different sources, then the "Sample per Volume" count re-starts for each of different source of import soil (fill) (as shown below).

| Import Fill Volumes (for each source of import soil (fill) and of the same soil classification type) | Samples Per Volume for each source of import soil (fill) and of the same soil classification type |
|---|---|
| Up to 1,000 cubic yards | 1 sample per 250 cubic yards |
| 1,000 to 5,000 cubic yards | 4 samples for the first 1,000 yards + 1 sample per each additional 500 cubic yards |
| Greater than 5,000 cubic yards | 12 samples for the first 5,000 cubic yards + 1 sample per each additional 1,000 cubic yards |

E. Each source of import soil (fill), import bedding sand and import recycled backfill sand of the same type, shall be analyzed as a four-point composite. Each composite shall be analyzed for Total Petroleum Hydrocarbons-Gasoline/BTEX/MTBE (EPA Method 8015 mod/8021), TPH-Diesel/Motor Oil (EPA Method 8015 with silica gel cleanup), Volatile Organic Carbons VOC's (EPA Method 8260), Semi-Volatile Organic Carbons SVOC's (EPA Method 8270), Organochlorine Pesticides (EPA Method 8081), Polychlorinated Biphenyls (EPA Method 8082), Title 22 Metals (EPA Methods 6000/7000 Series), Asbestos (CARB Method 435), Chromium +6 (EPA Method 7199), and soluble Total Concentration Leaching Potential (TCLP) and Soluble Threshold Limit Concentration (STLC) metals (as warranted – 10x STLC & 20x TCLP).

F. Import soils (fill) has to meet both the engineering backfill criteria and the chemical criteria of these contract specifications.

G. Chemical Criteria: To be accepted, the chemical concentrations of the import soil (fill) has to be equal or less than the values set forth in the Regional Water Quality Control Board (RWQCB)'s Environmental Screening Levels (ESLs), Tier 1 levels. Soils (fill) with the following chemical levels shall not be accepted as import soils (fill).

1. Exceedance of the chemical values set forth in the Regional Water Quality Control Board (RWQCB)'s Environmental Screening Levels (ESLs), Tier 1 levels.

2. Lead that exceeds 80 mg/kg.

3. Serpentine (naturally occurring asbestos) and odorous soils

4. Petroleum Hydrocarbons or Oil and Grease of any type that exceed 100 mg/kg.

5. Asphalt, concrete, bentonite, bay mud, clay, bricks, cobblestones, rocks, rubble, scrap metal, railroad tracks and ties, debris, soils containing asbestos, imported contaminated soils, vegetation, wood, debris, slag, obstructions, and other organic, unsound, unsatisfactory, or deleterious matter.

H. Environmental/chemical testing is not required of the base and subbase layers for the following materials that are used to build a pavement or roadway or sporting field: Base rock, Class II Aggregate Base (AB), Class II Recycled Base, Crushed Aggregate Base (CAB), Crushed Miscellaneous base (CMB), Processed Miscellaneous Base (PMB), Recycled Aggregate, Aggregate Subbase (ASB), reclaimed/recycled asphalt concrete (AC), and drain/crushed rock.

I. Reclaimed/recycled asphalt concrete (AC) is acceptable for the base and subbase layers to build a pavement or roadway or sporting field.

J. Crushed concrete is acceptable for the base and subbase layers to build a pavement or roadway or sporting field.

K. Import material for backfill shall comply with the Section 714 Standard Specifications and

Plans, Department of Public Works, City and County of San Francisco. The Standard Specifications and Standard Plans are accessible online at http://www.sfpublicworks.org/services/standards-specifications-and-plans; and the specifications of the Water Department for work under the jurisdiction of the SFPUC's Water Department.

L. The City reserves the right to spot check and analyze the import soils (fill) as it deems necessary, including prior to it being brought on to the project site, even after the approval of the submittal of analytical results from the Contractor, as well as after its brought onsite.

M. Should the analyses of the import soils (fill) test out to exceed the above criteria, then the Contractor shall be given a chance to re-sample and spilt the samples with the City, for re-analyses. Should the re-analyses import soils (fill) test out to exceed the above criteria, then the Contractor shall have to remove the import soils (fill) brought onsite at its own expense and replace with clean import soil (fill). In such a case, the Contractor shall bear all the cost (including the City's cost) for re-analysis.

N. For Recreation and Park projects, and Community/Urban Gardens, the Contractor shall install a visual barrier (such as a plastic orange snow fence) in all areas between the native fill, backfill from other areas of the site, and the import (soil) fill. The Contractor shall call the City Representative for an inspection of the visual barrier, and wait for the approval of it, prior to the Contractor filling soil over it.

O. The Contractor shall call the City Representative for an inspection of the subbase placement, and wait for the approval of it, prior to the Contractor filling soil over it, so that the City Representative may check the proper grades and depths.

P. Analytical costs for imported fill (soil) incurred by the Contractor shall be Incidental Work to Division 31- Earthwork and Section 31 23 33 - Trenching and Backfilling.

Q. The Contractor shall furnish the above analytical results at least 10 working days prior to bringing in the import soil (fill). The acceptance of import soil (fill) will be made by the City Representative and will depend on the results of the analytical testing, backfill requirements in this Contract, regardless if it meets the testing requirements of Division 31 - Earthwork and Section 31 23 33 - Trenching and Backfilling.

R. Import soil (fill) shall not be brought on-site, prior to the City Representative's approval of the analytical results submittal. Analytical results submitted shall be referenced on the import fill spreadsheet submittal.

S. Import soil (fill) shall be brought on-site at a rate where it is immediately used in the excavation. If the City Representative allows for import material to be stored overnight (only, and not longer) on site, then such import material shall be covered and placed at the Contractor's soils management yard, approved soil stockpile staging area or an area within the project alignment authorized by the City Representative. Stockpiles being stored overnight shall be completely covered with 10 mil HDPE plastic and braced (weighted or tied down) securely.

T. Import Fill Spreadsheet: As warranted, the Contractor shall submit five hardcopies or a digital copy of a monthly spreadsheet of all imported fill deposited at the project site to the City Representative. The spreadsheet shall include information on the project name, contract No., origin of import (street address, city), location of deposit (street address and depth range), quantity (cubic yards), soil type based on the unified soil classification system, the corresponding chemical, correspondent environmental analytical results submitted, truckers and trucking firm(s) used and trucking logs and invoices.

## 3.5. SECURING AREAS WITH EXPOSED, EXISTING SOIL

A. Wherever construction work exposes the existing soil or where existing soil is stockpiled, these areas shall be barricaded all around with continuous (no gaps greater than 4 inches) fencing (either metal wire or orange plastic), Triton barriers or other barricades at least 3 feet high. The Contractor shall ensure that barricades are installed taunt and secured against strong winds. Alternatively, the exposed, existing soil in excavation areas such as trenches, may be covered over with plates or other acceptable means. The intent is to secure the exposed, existing soil from public contact.

END OF SECTION