

## SECTION 00 73 27

## SPECIFIC PROJECT REQUIREMENTS

## 1.1 SUMMARY

- A. This Section includes special project conditions, environmental mitigation measures, and requirements for accessibility, controlling construction noise, use of potable water for construction, excavation in the public right of way, and air and water quality to comply with City regulations affecting construction Work at the Site.
- B. All requirements in this Section are incidental work, unless specified otherwise.
- C. Any and all provisions herein shall be applicable as to all work performed within the City and County of San Francisco.
  - 1. As for work performed outside the legal and geographical boundaries of the City and County of San Francisco, Contractor shall comply with any and all applicable federal, state, and/or local regulations concerning any and all matters addressed by Section 00 73 27 herein.
  - 2. Contractor shall be solely responsible and fully liable for any and all failures to comply with the aforementioned regulations, and shall unconditionally and fully indemnify the City for any damages resulting therefrom.
- D. Refer to Section 00 31 00, paragraph "Environmental Assessment Information" for Reference Documents that may include additional construction mitigation requirements.

## 1.2 PROJECT CONDITIONS

- A. Contractor shall be responsible for all costs necessary to prevent its operations from violating any federal, state, or local governmental regulations and the requirements of the Contract Documents.
- B. If Contractor does not observe said regulations or the requirements specified herein, or promptly take all required remedial actions to the City's satisfaction, the City will withhold progress payments to Contractor until satisfactory compliance has been accomplished.
- C. The City will monitor Contractor's adherence to the requirements specified herein and will report on Contractor's compliance pursuant to California Assembly Bill 3180 (chapter 1232).
  - 1. Said monitoring and reporting activities may include, but are not limited to, qualitative, quantitative and video observations and data collection on the impacts of noise, air quality, traffic, street pavement damage, water quality, archaeology, and hazardous materials.
  - 2. Contractor shall cooperate with such monitoring activities, provide access to the Work Site to establish and secure monitoring stations, and make its facilities and records available to the City for performing such monitoring.
- D. Contractor shall be informed about, coordinate, schedule, and perform Work in consideration of adjacent property owners and other activities and construction work in the area.
  - 1. Contractor will be granted an equitable time extension for Unavoidable Delays caused by the City subject to the provisions of Paragraph 7.02 of the General Conditions.

### 1.3 CONSTRUCTION NOISE REQUIREMENTS

- A. Contractor shall comply with the City's Noise Control Ordinance (article 29 of the San Francisco Police Code, Ordinance No. 274-72).
  - 1. Contractor shall be responsible for fines or violations pertaining to these ordinances, at no cost to the City.
  - 2. Provide advance notice to residents and affected businesses in the area of the Site of times, dates and location of construction activities.
  - 3. Coordinate and schedule Contractor's construction operations to conform to all City requirements and restrictions.
  - 4. Contractor shall implement mitigation controls to ensure compliance with the construction noise levels allowed. The maximum noise level from any powered construction equipment shall not be greater than 80dBA at 100 feet. This translates to 86dBA at 50 feet (dual units not applicable, as these are specific field and instrument measurements).
- B. Use appropriate construction methods and equipment and furnish and install acoustical barriers so that noise emanating from the construction will not exceed noise levels pursuant to the City's Noise Control Ordinance.
  - 1. Muffle and shield intakes and exhausts, shroud or shield impact tools, as feasible,
  - 2. Use electric-powered rather than diesel-powered construction equipment,
  - 3. Enclose equipment such as large compressors, generators, and large de-watering pumps at a minimum in one-inch-thickness plywood sheds.
  - 4. Equip pavement breakers and jackhammers with acoustically attenuating shield or shrouds.
  - 5. Select haul routes that minimize intrusion to residential areas.
  - 6. Select construction processes and techniques that create the lowest noise levels.
- C. Prepare a written Noise Control Program to mitigate the construction noise impacts and to comply with the noise criteria specified herein, including the method of construction, the equipment to be used, and acoustical treatments as necessary. Implement the program and keep a copy at the project site to be submitted to the City Representative upon request.
- D. The City, at its own discretion, will monitor construction noise as part of the environmental monitoring process. When noise levels exceed the noise limits pursuant to article 29 of the San Francisco Police Code, Contractor shall stop work for alternate methods and equipment or place restrictions on construction operations to further limit the noise as directed by the City.

### 1.4 NIGHT AND WEEKEND NOISE REQUIREMENTS

- A. Except as specifically set forth in these Specifications, Contractor shall not perform work between the hours of 8:00 p.m. and 7:00 a.m. of the following day if the noise level created thereby is in excess of the ambient noise level by 5 dBA at the nearest property line, unless a noise permit therefor has been obtained pursuant to the Police Code section 2908.
  - 1. Apply for City noise permits through the City Representative at least 15 working days in advance of night (i.e., between 8:00 p.m. and 7:00 a.m.), weekend, and holiday work. The requirements of the Contract Documents, including safety requirements, shall apply for all night, weekend, and holiday work performed.
  - 2. If Contractor is directed in the Contract Documents or by special written notice from the City Representative to perform any part of the work between the hours of 8 p.m. and 7 a.m. or on weekends or holidays, the Contractor must obtain and comply with a City noise permit prior to starting any work. The noise permit shall be obtained from and approved by Bureau of Street Use and Mapping, 1155 Market Street, 3<sup>rd</sup> Floor, San Francisco, CA 94103.
  - 3. Refer to Section 00 72 00 for definition of Regular Working Hours.

## 1.5 REQUIREMENTS FOR PLACEMENT OF BARRICADES

- A. Comply with the requirements of San Francisco Department of Public Works Guidelines for the Placement of Barricades at Construction Sites (DPW Order No. 167,840). Refer to this website for a copy of DPW Order No. 167,840:  
<http://www.sfpbpublicworks.org/services/project-manual-and-reference-documents>
- B. Provide and maintain at least one accessible path-of-travel for pedestrians around the construction site consistent with applicable federal, state, and local laws, including the Americans with Disabilities Act and the California Building Code (Title 24, Part 2, Accessibility Standards).
- C. Contractor will be assessed liquidated damages in the amount of one thousand dollars (\$1,000) per calendar day for each day Contractor fails to comply with the requirements for accessibility and placement of barricades.

## 1.6 REQUIREMENTS FOR USING WATER FOR CONSTRUCTION

- A. Contractor shall comply with Article 21 of the San Francisco Public Works Code, which restricts the use of potable water for soil compaction and dust control activities to the extent not directly in conflict with any applicable federal, state, or local law.
- B. Contractor shall apply to the San Francisco Public Utilities Commission (SFPUC) Wastewater Enterprise (WWE) for a permit to use recycled water for soil compaction and dust control activities.
  - 1. Contractor shall submit a completed permit application as directed on the SFPUC Recycled Water Fill Station website:  
<http://sfwater.org/modules/showdocument.aspx?documentid=7234>. If SFPUC WWE approves the application, Contractor will be issued a permit and provided instruction for use of the Recycled Water Fill Station.
  - 2. Contractor will be responsible for the handling and transportation of recycled water in accordance with the approved permit. Contractor will also be responsible for any permit and discharge fees.
  - 3. If the SFPUC denies the permit application because the use of recycled water falls within one or more of the restrictions of Title 22, Division 4, Chapter 3 of the California Code of Regulations, and the applicable General Order under which the SFPUC is bound at the time the application is processed, the permit application will be redirected for approval of potable water for these activities as directed in Paragraph C below.
- C. Potable Water:
  - 1. Contractors will be directed to the SFPUC, Customer Service Bureau (CSB), at 525 Golden Gate Avenue, San Francisco, to complete a potable hydrant meter application. Once the application has been completed and approved, CSB will provide Contractor with a receipt.
  - 2. Contractor shall pay the costs of permit fees, connection fees, meters, and all water usage furnished by the SFPUC under the established water service account. The City will not reimburse these costs.

3. Contractor shall bring the receipt as proof of payment to the City Distribution Division (CDD) at 1990 Newcomb Street, San Francisco, to collect the hydrant meter. Contractor shall bring the meter to CDD monthly for readings and payments.

## 1.7 AIR QUALITY REQUIREMENTS

- A. The Contractor shall provide dust control measures during construction in accordance with the requirements of the Contract Documents. Prior to starting Work at the site, the Contractor shall prepare a Dust Control Program to minimize potential public health impacts associated with visible dust emissions and air quality pollutants. Said dust control program shall include measures to minimize impacts to sensitive receptors associated with exposure to respirable nuisance dust (PM10) and the following requirements to achieve a goal of "No Visible Emissions". The Contractor shall implement the dust control program for the project duration and maintain a copy at the project site to be submitted to the City Representative upon request.
- B. Comply with the following requirements in accordance with San Francisco Department of Public Works Dust Control Order (DPW Order No. 171,378). Failure to comply with DPW Order No. 171,378 shall subject Contractor to fines of \$1,000 per day for each day a violation is not corrected.
  1. Minimize dust generation to reduce health risks to workers and the public.
  2. Mist the immediate demolition area with a water spray to prevent airborne dust particles.
  3. Perform continuous water spraying during dust generating activities. Mist or spray in such a way as to prevent puddling or generation of runoff.
  4. Use dust enclosures, curtains, and dust collectors as necessary to control dust. The City may request dust scrubbers installation during demolition to minimize dust migration in the project site's occupied areas.
  5. Minimize the amount of demolition debris stored at the Site. Remove demolition debris, with the exception of hazardous materials or suspected hazardous materials, from the Site no later than the end of each workday.
  6. If hazardous materials or suspected hazardous materials are stored on Site, store such materials in accordance with all applicable Cal/EPA regulations, including providing storage in proper containers and protection from exposure to the elements. Remove such materials from the Site as soon as possible for disposal or recycling in accordance with applicable laws and regulations.
  7. Keep the Site and adjacent areas clean and perform wet sweeping at the end of each shift.
  8. Load haul trucks, hauling debris, soils, sand or other such materials so that the material does not extend above the walls or back of the truck bed. Wet before covering and tightly cover the surface of each load before the haul truck leaves the loading area.
  9. Clean up spillage on City streets, whether directly or indirectly caused by Contractor's operations.
  10. Stockpiles soil, sand and other materials; shall be covered and protected at the end of the shift
- C. Comply with the requirements of the Bay Area Air Quality Management District (BAAQMD) regulation 6 (for particulate matter and visible emissions), regulation 7 "Odorous Substances," regulation 11 "Hazardous Pollutants," and the California Health and Safety Code division 26 "Air Resource", chapter 3 "Emission Limitations", section 41700 "Prohibited Conduct," and related regulations. Notify the BAAQMD 10 working days prior to commencing demolition or hazardous materials abatement work.
  1. Such notification shall include the names and addresses of operations and persons responsible; description and location of the structure to be demolished or altered including size, age and prior use, and the approximate amount of friable asbestos;

- scheduled starting and completion dates of demolition or abatement; nature of planned work and methods to be employed; procedures to be employed to meet BAAQMD requirements; and the name and location of the disposal site.
2. The BBAQMD randomly inspects removal operations and will respond to any complaints received. Cooperate and facilitate all BAAQMD authorized inspections.
- D. Implement the specific air pollution controls to reduce exhaust emissions of particulate matter and other pollutants from construction and related equipment, to a less significant level, by:
1. Preventing the accumulation of toxic concentrations of chemicals.
  2. Preventing harmful or obnoxious dispersal of pollutants into the atmosphere.
  3. Limiting vehicle speed limit on unpaved roads to 15 miles per hour (mph).
  4. Prohibiting idling motors when equipment is not in use or when truck are waiting in queues. The idling time of all construction equipment used at the site shall not exceed five (5) minutes.
  5. Limit the hours of operation of heavy-duty equipment and/or amount of equipment in use to what is needed.
  6. All equipment shall be properly tuned and maintained in accordance with the manufacturer's specifications.
  7. When feasible, alternative fuel or electrical construction equipment shall be used at the project site.
  8. Load haul trucks, excavated materials, hauling debris, soils, sand or other such materials so that the material does not extend above the walls or back of the truck bed. Wet before covering and tightly cover the surface of each load before the haul truck leaves the loading area.
  9. Clean up spillage on City streets promptly, whether directly or indirectly caused by Contractor's operations.
  10. Any stockpiles of excavated materials, backfill, import materials; sand, gravel, road base and soil shall be stored in staging areas approved by the City and shall be completely covered with a 10 ml (0.01 inch) polyethylene plastic or equivalent tarp and braced down and secured daily at the end of the shift. The Contractor shall maintain the covers throughout their use.
  11. During all excavation and dirt moving activities, wet sweep/vacuum the streets, sidewalks, paths and intersections where work is in progress at least three (3) times per shift per day and once at the end of the shift as directed by the City.
  12. For wet sweeping use a vacuum sweeper vehicle with sufficient suction to ensure that the vehicle does not blow dust towards neighboring businesses or residences. The city will evaluate the effectiveness of the Contractor's vacuum sweeper and, if necessary, will require the Contractor to provide a more powerful and effective vehicle.
  13. Vehicles entering or exiting construction areas shall travel at a speed of no more than 15 mph to minimize dust emissions and follow the approved traffic routes.
  14. Wheel washers shall be installed and used to clean truck and equipment tires leaving the construction site. If wheel washers cannot be installed, tires and spoils trucks shall be washed off before they re-enter City streets to minimize deposition of dust-causing materials.
  15. Wet down areas around soil improvement operations, visibly dry disturbed soil surface areas and visibly dry disturbed unpaved driveways at least three (3) times per shift per day or more as needed as directed by the City.

#### 1.8 MAINTENANCE OF THE WORK AREA AND DEBRIS CONTROL

- A. Maintain work areas and adjacent public right-of-ways in orderly and safe condition. Sweep all pedestrian walkways and dispose of debris around the site perimeter on a daily basis, and as often as determined by the City.

- B. Control the accumulation of waste materials and debris; collect waste from construction areas and the project site, daily. Remove accumulations of debris surplus materials and trash from the site at the end of each working day or at frequent intervals or as directed by the City. Burying or burning of trash and debris on the site is not permitted
- C. Perform the work in a manner to minimize the generation of dust and dirt, to prevent dust and dirt from interfering with the progress of the Work, and to keep dust and dirt from accumulating in work areas and adjacent areas.
- D. Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose these types of materials in a lawful manner. Comply with requirements of NFPA 241 for removal of combustible waste material and debris.
- E. For storage areas, ensure that materials to be used for construction are stored in designated structures or areas by the appropriate trades. Maintain such areas or structures in a clean condition for the life of the Contract.
  - 1. Provide and maintain proper storage with secondary containment for lubrication oil, hydraulic fluids, waste oils, fuels, solvents and other hazardous or toxic materials and wastes.
  - 2. Immediately remove materials deposited outside of approved storage areas.

#### 1.9 PARKING RESTRICTIONS

- A. Parking: Employees of the Contractor, sub-contractors, and suppliers shall not park their vehicles within the active construction area when they are currently working and where public access is prohibited. The Contractor shall provide parking for their employees at a site, which will not impact local public parking and transport employees between the parking area and the work.
- B. Vehicle Towing: When a vehicle is removed from a street at the request of the Contractor and a post-storage hearing determines that as a result of the Contractor's improper posting of required signs, reasonable grounds did not exist for removal, the responsible Contractor shall reimburse the City for cost incurred in storage and towing.

#### 1.10 EXCAVATION REQUIREMENTS

- A. Comply with the regulations of California State Standard, CCR Title 8, Chapter 4, Section 1541, regarding coordination and safety of excavations near subsurface installations.
- B. Contractor shall obtain, review and comply with article 2.4, "Excavation in the Public Right of Way," of the San Francisco Public Works Code, as currently amended, and applicable regulations of Public Works for excavating and restoring streets in the public right of way. **Public Works Order No. 187,005 shall apply.** Except for excavations specifically exempted by said article or by written waiver granted by Public Works, no excavation shall be performed in the public right of way under the jurisdiction of Public Works without a valid excavation permit issued by the San Francisco Public Works, Bureau of Street-use and Mapping, telephone (415) 554-6201.
  - 1. Refer to Paragraph 3.06 of the General Conditions (Section 00 72 00) as amended in the Supplementary Conditions (Section 00 73 00) for permit procurement responsibilities.
  - 2. Keep copies of the excavation permit available at the Site for inspection by the City upon request.
  - 3. Excavation permits are not required for excavations completed within 24 hours to install parking meters, street lights, street trees, traffic signs, traffic signals, utility poles or to repair utility boxes in sidewalks; or excavations performed for the sole purpose of repairing sidewalks.

4. For emergency excavations, necessary for protection of life or property, immediately notify Public Works, Bureau of Street-use and Mapping, and apply for an emergency permit within 4 hours after the department offices first open.
  5. Refer to the manual "Regulations for Excavating and Restoring Streets in San Francisco, **DPW Order No. 187,005**" for complete information about excavation code requirements. Copies of the manual may be purchased at Bureau of Street-use and Mapping, 1155 Market Street, 3<sup>rd</sup> Floor, San Francisco, California 94103, telephone (415) 554-5810.
  6. Coordinate with the City and other contractors working at the Site to minimize impacts of the excavation work on the community and local businesses.
- C. Public Works Order No. 187,005 shall apply. In addition, the following requirements apply:
1. The depth of excavation shall not include thickness of roadway pavement section.
  2. For trenches 6 feet in depth or less, a compaction test shall be required at 100% of the backfill height.
  3. At a minimum, one compaction test shall be performed for every 150 lineal feet of main line trench length and at one (1) in four (4) service trenches (e.g. side sewer, water service, etc).
- D. Contractor shall submit to the City for review and approval all 30-Day and 10-Day public notices prior to issuance, distribution to the public, and commencement of work associated with excavations in accordance with article 2.4 of the San Francisco Public Works Code. 30 day public notices shall be distributed to property owners by U.S. mail. 10-Day public notices can be delivered or mailed. Such notices shall include the name, address, and 24-hour telephone number of Contractor's representative who will provide information to, and receive complaints from, the public concerning the excavation.
1. For excavations completed and restored in 2 to 14 calendar days, post and maintain notices every 100 feet along the block of excavation work at least 72 hours prior to starting excavation. Notices must be printed on 11-inch x 17-inch paper in letters at least 1-inch high and must contain:
    - a. The name, address, and telephone number of Contractor's representative;
    - b. A description of the project;
    - c. The start and completion dates of the project;
    - d. If cars will be towed during the entire construction period or during a specific time period.
  2. For excavations completed and restored in 15 calendar days or longer, provide written notice as follows:
    - a. Delivered by U.S. mail at least 30 calendar days but not more than 60 calendar days prior to starting excavation to:
      - (1) Property owners on the affected blocks;
      - (2) Affected neighborhood and merchant organizations listed in the City Planning Department's "Directory of Neighborhood Organization and Service Agencies;"
      - (3) San Francisco Bicycle Coalition and the San Francisco Bicycle Advisory Committee, when excavations occur on designated bicycle routes;
      - (4) Provide the City Representative with a copy of the mailing list;
    - b. At least 10 calendar days but not more than 15 calendar days prior to starting construction, post and maintain notices every 100 feet along the block to be excavated and deliver the same notices to each dwelling unit on the block of excavation work.
    - c. Notices must contain:
      - (1) The name, address, and telephone number of Contractor's representative;
      - (2) A description of the project;
      - (3) The start and completion dates of the project;
      - (4) The name, address and 24 hour telephone number of a contact person.

3. If the Contractor has not been actively performing Work on a block or intersection for a period of 60 consecutive calendar days or more, the Contractor shall reissue written 10-Day Notices prior to recommencing Work.
  4. For emergency excavation post and maintain notices every 100 feet along the block of excavation work as soon as possible but no later than 24 hours after start of construction Notices must be printed on 11-inch x 17-inch paper in letters at least 1-inch high and must contain.
    - a. The name, address, and telephone number of Contractor's representative;
    - b. A description of the emergency project;
    - c. The start and completion dates of the emergency project.
- E. No excavation shall be performed outside the boundaries, times, descriptions or methods set forth on the approved permit; no excavation shall be longer than 1,200 feet in length at any time without prior written approval of the City.
1. Secure permit extension prior to expiration date in the event of delays in excavation work.
  2. Should such delays be caused by the City Contractor will be granted an extension of Contract Time or adjustment of Contract Sum as provided in Paragraph 7.02 of the General Conditions.
- F. Observe regulations concerning excavation sites including the following:
1. Cover open excavations with steel plates ramped to street grade or provide other means of protection acceptable to Public Works. Refer to Section 01 55 26, Traffic Control, for specific requirements on non-skid metal plating.
  2. Clean the Site of loose dirt and debris and remove excavated material from the Site at the end of each work day; comply with DPW Order No. 171,378 (refer to Paragraph 1.7B above).
  3. Materials and equipment to be used for excavation work within 7 calendar days may be stored at the Site, provided that fill material, sand, aggregate, and asphalt-coated material shall be stored only in covered, locked containers and provided that such storage complies with the City's traffic rules and regulations.
  4. Conform to the requirements of the Specifications for handling, removal and disposal of hazardous materials.
- G. Restore excavated street or sidewalk pavement in accordance with the requirements of the Specifications or the applicable requirements of the DPW Standard Specifications and Standard Plans (refer to Division 1 for reference standards) to the extent not in conflict with the Specifications. Comply with the following additional San Francisco Public Works Code requirements:
1. Restore trenches and pavement to a constant width equal to the widest section of the excavation, but not exceeding 13 ft.
  2. Backfill excavation within 72 hours of completing related construction.
  3. Replace pavement base within 72 hours of backfilling excavation.
  4. Complete finished pavement within 72 hours of replacing pavement base.
  5. Correct deficiencies in the restoration respecting timing or manner specified for the above items at no additional cost to the City within 24 hours of notification by the City.
  6. Should Contractor fail to timely restore, correct or repair deficiencies, Public Works will complete or cause to be completed such restoration, correction or repair deficiencies, and the completion costs will be deducted from monies due Contractor.

#### 1.11 REQUIREMENTS FOR PROTECTION OF THE SEWER SYSTEM

- A. Wastewater which is transferred from the Site during this Project shall meet the pre-treatment standards of the San Francisco Municipal Code, section 123, Industrial Waste



Ordinance #19-92 and DPW Order No. 158,170 prior to discharge into the City's sewage system.

- B. Should wastewater become contaminated due to Contractor's operations all costs of satisfactory remediation and disposal shall be at no cost to the City. Such costs shall include, but not be limited to, all redesign, reconstruction and pre-treatment costs necessary to satisfy the requirements of the Industrial Waste Ordinance #19-92, and DPW Order No. 158,170.
- C. Should the existing wastewater be contaminated, or should it be uncontaminated but subsequently become contaminated due to conditions other than Contractor's operations, a Change Order will be issued as provided in Article 6 of the General Conditions for additional costs or time extension will be granted as provided in Article 7 of the General Conditions to pretreat the contaminated water prior to routing the flow into the sewer system or other approved disposal at the direction of the City.
- D. Contractor shall be responsible for obtaining and paying for all water discharge permits and for paying all sewer service charges, penalties and other incidental fees and expenses resulting from discharging wastewater into the City's sewerage system by Contractor's operations.
  - 1. The application for such wastewater discharge permit shall be sent to:

San Francisco Public Utilities Commission  
Wastewater Enterprise, Collection System Division  
3801 3rd Street, Suite 600  
San Francisco, CA 94124  
Telephone (415) 695-7321.

#### 1.12 PUBLIC CONVENIENCE

- A. Compliance with Section 00 73 27 does not relieve you of your responsibility for public safety.
- B. Construction activities must not inconvenience the public or abutting property owners. Schedule and conduct work to avoid unnecessary inconvenience to the public and abutting property owners. Avoid undue delay in construction activities to reduce the public's exposure to construction.
- C. Where possible, route traffic on new or existing paved surfaces.
- D. Maintain convenient access to driveways, houses, and buildings. When an abutting property owner's access across the right-of-way line is to be eliminated or replaced under the Contract, the existing access must not be closed until the replacement access facility is usable. Construct temporary approaches to a crossing and an intersecting highway.
- E. Provide a reasonably smooth and even surface for use by traffic at all times during the excavation of a roadway and construction of an embankment.
- F. Upon completion of rough grading or placing any subsequent layer, bring the surface of the roadbed to a smooth and even condition, free of humps and depressions, and satisfactory for the use of the public.
- G. After subgrade preparation for a specified layer of material has been completed, repair any damage to the roadbed or completed subgrade, including damage caused by public use.
- H. Apply a dust palliative for the prevention or alleviation of dust nuisance.

- I. Install signs, lights, flares, Type K temporary railing, barricades and other facilities to direct traffic. Provide flaggers whenever necessary to direct the movement of the public through or around the work. Flagging must comply with section 01 55 26. This work is incidental to the project.
- J. You are required to pay for the cost of replacing or repairing all facilities installed under change order work for the convenience, direction, or warning of the public that are lost while in your custody or are damaged by your operations to such an extent as to require replacement or repair.
- K. The Engineer may order or consent to your request to open a completed section of surfacing, pavement, or structure roadway surface for public use. You will not be compensated for any delay to your construction activities caused by the public. This does not relieve you from any other contractual responsibility.

#### 1.13 PUBLIC SAFETY

- A. You are responsible to provide for public safety.
- B. Do not construct a temporary facility that interferes with the safe passage of traffic.
- C. Control dust resulting from the work, inside and outside the right-of-way.
- D. Move workers, equipment, and materials without endangering traffic.
- E. your activities create a condition hazardous to the public, furnish, erect and maintain those fences, temporary railing, barricades, lights, signs, and other devices and take any other necessary protective measures to prevent damage or injury to the public.
- F. Any fences, temporary railing, barricades, lights, signs, or other devices furnished, erected and maintained by you are in addition to those for which payment is provided elsewhere in the specifications.
- G. Provide flaggers whenever necessary to ensure that the public is given safe guidance through the work zone. Flagging must comply with section 01 55 26. This work is incidental to the project.
- H. At locations where traffic is being routed through construction under one-way controls, move your equipment in compliance with the one-way controls unless otherwise ordered.
- I. Use of signs, lights, flags, or other protective devices must comply with the California MUTCD and any directions of the Engineer. Signs, lights, flags or other protective devices must not obscure the visibility of, nor conflict in intent, meaning, and function of either existing signs, lights and traffic control devices, or any construction area signs.
- J. Keep existing traffic signals and highway lighting in operation. Other forces within the Department will perform routine maintenance of these facilities during the work.
- K. Cover signs that direct traffic to a closed area. Except for work specified in 01 55 26, maintaining, and removing the covers on construction area signs is change order work.
- L. Install temporary illumination such that the illumination and the illumination equipment do not interfere with public safety. The installation of general roadway illumination does not relieve you from furnishing and maintaining any protective devices.

- M. Equipment must enter and leave the highway via existing ramps and crossovers and must move in the direction of traffic. All movements of workmen and construction equipment on or across lanes open to traffic must be performed in a manner that do not endanger the public. Your vehicles or other mobile equipment leaving an open traffic lane to enter the construction area must slow down gradually in advance of the location of the turnoff to give the traffic following an opportunity to slow down. When leaving a work area and entering a roadway carrying traffic, your vehicles and equipment must yield to traffic.
- N. Immediately remove hauling spillage from a roadway lane or shoulder open to traffic. When hauling on roadways, trim loads and remove material from shelf areas to minimize spillage.
- O. Notify the Engineer not less than 25 days and not more than 125 days before the anticipated start of an activity that will change the vertical or horizontal clearance available to traffic, including shoulders.
- P. If vertical clearance is temporarily reduced to 15.5 feet or less, place low clearance warning signs in compliance with the California MUTCD and any directions of the Engineer. Signs must comply with the dimensions, color, and legend requirements of the California MUTCD and section 12-3.11 of Caltrans 2015 Standard Specifications except that the signs must have black letters and numbers on an orange retroreflective background. W12-2P signs must be illuminated so that the signs are clearly visible.
- Q. Pave or provide full width continuous and cleared wood walks for pedestrian openings through falsework.
- R. Protect pedestrians from falling objects and concrete-curing water. Extend overhead protection for pedestrians at least 4 feet beyond the edge of the bridge deck. Illuminate all pedestrian openings through falsework. Temporary pedestrian facilities must comply with the *California MUTCD*, Part 6, Chapter 6D, "Pedestrian and Worker Safety."
- S. Do not store vehicles, material, or equipment in a way that:
  - 1. Creates a hazard to the public
  - 2. Obstructs traffic control devices
- T. Do not install or place temporary facilities used to perform the work which interfere with the free and safe passage of traffic.
- U. Temporary facilities that could be a hazard to public safety if improperly designed must comply with design requirements described in the Contract for those facilities or, if none are described, with standard design criteria or codes appropriate for the facility involved. Submit shop drawings and design calculations for the temporary facilities and show the standard design criteria or codes used. Shop drawings and supplemental calculations must be sealed and signed by an engineer who is registered as a civil engineer in the State.
- V. If you appear to be neglectful or negligent in furnishing warning devices and taking protective measures, the Engineer may direct your attention to the existence of a hazard. You must furnish and install the necessary warning devices. If the Engineer points out the inadequacy of warning devices and protective measures, that action on the part of the Engineer does not relieve you from your responsibility for public safety or abrogate your obligation to furnish and pay for these devices and measures.
- W. Install Type K temporary railing or other authorized protective systems under any of the following conditions:
  - 1. Excavations: Where the near edge of the excavation is within 15 feet from the edge of an open traffic lane;

2. Temporarily unprotected permanent obstacles: When the work includes the installation of a fixed obstacle together with a protective system, such as a sign structure together with protective railing, and you elect to install the obstacle before installing the protective system; or you, for your convenience and as authorized, remove a portion of an existing protective railing at an obstacle and do not replace such railing completely the same day;
  3. Storage areas: When material or equipment is stored within 15 feet of the edge of an open traffic lane and the storage is not otherwise prohibited by the Contract;
  4. Height differentials: When construction operations create a height differential greater than 0.15 feet within 15 feet of the edge of traffic lane.
- X. Locations for use and details of K temporary railing or authorized protective systems to be in compliance with Contract Specifications 01 55 26 and noted on traffic control plans.
- Y. Installation of Type K temporary railing is not required if an excavation within 15 feet from the edge of an open traffic lane is protected by any of the following:
1. Steel plate or concrete covers of adequate thickness to prevent accidental entry by traffic or the public;
  2. Side slope where the downhill slope is 4:1 (horizontal:vertical) or less unless a naturally occurring condition;
  3. Barrier or railing.
- Z. Offset the approach end of Type K temporary railing a minimum of 15 feet from the edge of an open traffic lane. Install the temporary railing on a skew toward the edge of the traffic lane of not more than 1 foot transversely to 10 feet longitudinally with respect to the edge of the traffic lane. If the 15-foot minimum offset cannot be achieved, the temporary railing must be installed on the 10 to 1 skew to obtain the maximum available offset between the approach end of the railing and the edge of the traffic lane, and an array of temporary crash cushion modules must be installed at the approach end of the temporary railing.
- AA. Secure Type K temporary railing in place before starting work for which the temporary railing is required.
- BB. If a traffic lane is closed with channelizers for excavation work, move the devices to the adjacent edge of the traveled way when not excavating. Space the devices as specified for the closure.
- CC. Do not move or temporarily suspend anything over a traffic lane open to the public unless the public is protected.

#### 1.14 SAN FRANCISCO WATER DEPARTMENT SCHEDULING REQUIREMENTS

- A. The contract time includes the time for the San Francisco Water Department ("SFWD") personnel to complete their work as specified herein. The Contractor shall incorporate the SFWD required times in its schedule. The Contractor shall confer with the City Representative in the preparation of the schedule that needs to satisfy the water distribution operation and minimize disruption of the services. No construction for water work shall be started until the City Representative accepts the schedule.

- B. The time required by SFWD personnel to complete each type of the work is listed in Section 33 11 00 – Water Utility Distribution.
- C. The Contractor shall notify the City Representative in writing 3 weeks before any work by SFWD personnel is required and confirm with the City Representative 72 hours (3 working days) before the actual work is required on the field. The Contractor shall complete the excavation of the pit and install appropriate shoring to the satisfaction of the City Representative before SFWD personnel can do any work.
- D. The Contractor shall comply with Section 00 72 00 “General Conditions” section 7.02D. “Notice of Delay” in notifying the City Representative of any potential delay by SFWD.
- E. Extension of time will only be granted for delay that is on critical path and effectively delays the progress of the construction as stipulated in these specifications. The Contractor shall submit support documents to the satisfaction of the City Representative for any request for time extension due to delay caused by SFWD personnel.

END OF SECTION