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**City and County of San Francisco  
SAN FRANCISCO PUBLIC WORKS  
SAN FRANCISCO REAL ESTATE DIVISION**

## **STEAM PIPE REPAIR AT LARKIN AND MCALLISTER**

**SOURCING EVENT ID 0000004818  
PW STM PP RPR LRKN AND MCLLSTR**

### **PROJECT MANUAL**

**DECEMBER 2020**

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Each Bid shall bear the description:  
"BID FOR STEAM PIPE REPAIR AT LARKIN AND MCALLISTER  
(San Francisco Public Works Sourcing Event ID 0000004818)".

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# IMPORTANT SPECIAL NOTICE

- This solicitation requires submission of quotations by email. Refer to Section 00 21 13 Instructions to Bidders for more details, with special attention to the following subparagraphs:
  - Section 00 21 13 – 1.14D
  - Section 00 21 13 – 1.14K

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## SECTION 00 01 03

**PROJECT INFORMATION**

- SOURCING EVENT ID: 0000004818
- PROJECT TITLE: STEAM PIPE REPAIR AT LARKIN AND MCALLISTER
- BID DUE DATE: **January 4, 2020:** Sealed bids will be received by email to [contractadmin.staff@sfdpw.org](mailto:contractadmin.staff@sfdpw.org) until 2:30 PM.
- DESCRIPTION: The Work is replacement of steam pipe and around the intersection of Larkin Street and McAllister Street, including traffic control, excavation and shoring, street restoration, hazardous materials abatement, removal and replacement of steam pipe, permits, fees, and all associated work.
- PROJECT MANAGER: Bill Pressas (SF Public Works) at (415) 695-2059 and Chris Anderson (SF Real Estate Division) at 415-676-9688
- CONTRACT DURATION: **19** consecutive calendar days from NTP to substantial completion.
- ESTIMATE: Approximately **\$250,000**.
- BID DOCUMENTS: Digital files of Bid Documents, Plan Holders Lists, and Addenda may be downloaded <https://bsm.sfdpw.org/ContractAdmin/> at no cost. Notices regarding Addenda and other bid changes will be distributed by email to Plan Holders.
- PRE-BID MEETING: There is no pre-bid conference. Site visits can be scheduled by appointment only. Contact Chris Anderson at 415-676-9688.
- REQUIREMENTS (*Refer to Project Manual for a complete list*):
- 1) **Class "A"** license required to bid.
  - 2) Pursuant to San Francisco Administrative Code ("Administrative Code") Section 6.25 and Chapter 25 of the Environment Code, "Clean Construction" is required for the performance of all work.

END OF SECTION

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## SECTION 00 01 10

## TABLE OF CONTENTS

<u>Section No.</u>	<u>Section Title</u>
--------------------	----------------------

**PROCUREMENT AND CONTRACTING GROUP*****Introductory Information***

00 01 03	PROJECT INFORMATION
00 01 07	SEALS PAGE
00 01 10	TABLE OF CONTENTS

**PROCUREMENT REQUIREMENTS**

00 11 13	INVITATION FOR QUOTATIONS
00 21 13	INSTRUCTIONS TO BIDDERS

***Bidding Forms (To Be Submitted With Bid)***

00 40 13	BIDDING FORMS CHECKLIST
00 41 00	BID FORM
00 43 20	ACKNOWLEDGMENT OF RECEIPT OF ADDENDA
00 43 36	PROPOSED SUBCONTRACTORS FORM (CMD FORM 2A)
00 45 16	RELEASE AND WAIVER AGREEMENT
00 45 60	HIGHEST PREVAILING WAGE RATE CERTIFICATION
00 45 78	CERTIFICATE OF BIDDER REGARDING CONTRACTING IN STATES THAT ALLOW DISCRIMINATION
00 45 80	NONCOLLUSION AFFIDAVIT
00 45 82	CERTIFICATION OF BIDDER REGARDING DEBARMENT AND SUSPENSION

***Supplements to Bidding Forms (To Be Submitted After Bid Opening)***

00 49 00	SUPPLEMENTARY BIDDING FORMS CHECKLIST
00 49 12	EXPERIENCE STATEMENT
00 49 14	CERTIFICATION OF SUBCONTRACTOR, LOWER-TIER SUBCONTRACTOR OR SUPPLIER REGARDING DEBARMENT AND SUSPENSION

**CONTRACTING REQUIREMENTS**

00 52 00	AGREEMENT FORM
00 72 00	GENERAL CONDITIONS
00 73 02	CONTRACT TIME AND LIQUIDATED DAMAGES
00 73 16	INSURANCE REQUIREMENTS
00 73 20	EXISTING UTILITY FACILITIES
00 73 21	UTILITY CROSSINGS SPECIFICATIONS
00 73 27	SPECIFIC PROJECT REQUIREMENTS
00 73 73	STATUTORY REQUIREMENTS

**SPECIFICATIONS GROUP**

**GENERAL REQUIREMENTS SUBGROUP**

**DIVISION 01 - GENERAL REQUIREMENTS**

01 11 00	SUMMARY OF WORK
	APPENDIX A: MAP OF WORK AREA
	APPENDIX B: S SFMTA FORMS
01 20 00	PRICE AND PAYMENT PROCEDURES
01 21 50	MOBILIZATION ITEM
01 26 00	CONTRACT MODIFICATION PROCEDURES
01 29 73	SCHEDULE OF VALUES
01 31 13	PROJECT COORDINATION
01 31 19	PROJECT MEETINGS
01 32 16	CONSTRUCTION PROGRESS SCHEDULE
01 33 00	SUBMITTAL PROCEDURES
01 35 44	HAZARDOUS BUILDING MATERIALS - SCOPE OF WORK
01 35 49	MINIMUM ENVIRONMENTAL PROCEDURES
	APPENDIX A: ALERT SHEET AFFIDAVIT
01 42 00	REFERENCES
01 45 00	QUALITY CONTROL
01 50 00	TEMPORARY FACILITIES AND CONTROLS
01 57 26	TEMPORARY PROTECTION OF CATCH BASIN AND STORM DRAIN INLETS
01 60 00	PRODUCT REQUIREMENTS
01 71 23	FIELD ENGINEERING
01 73 29	CUTTING AND PATCHING
01 74 50	CONSTRUCTION & DEMOLITION DEBRIS RECOVERY PLAN
	FORM A, FORM B, FORM C, FORM D, FORM E
01 77 00	CLOSEOUT PROCEDURES
01 77 13	APPENDIX A: WAIVER AND RELEASE OF CLAIMS ON FINAL PAYMENT
01 78 36	WARRANTIES
01 78 39	PROJECT RECORD DOCUMENTS

**FACILITY CONSTRUCTION SUBGROUP**

**DIVISION 02 – EXISTING CONDITIONS**

02 80 13	HAZARDOUS BUILDING MATERIALS REMEDIATION
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END OF SECTION

## SECTION 00 11 13

## INVITATION FOR QUOTATIONS

This Section includes a facsimile of the legal notice informing all qualified Bidders of the City's intent to solicit and receive Bids for the construction of the Project covered by the Bid Documents as defined herein for Sourcing Event ID 000004818.

**INVITATION FOR QUOTATIONS  
CITY & COUNTY OF SAN FRANCISCO  
SAN FRANCISCO PUBLIC WORKS**

Sourcing Event ID 000004818  
PW STM PP RPR AT LRKN AND MCLLSTR

**STEAM PIPE REPAIR AT LARKIN AND MCALLISTER**

Quotations will be received by email at [contractadmin.staff@sfdpw.org](mailto:contractadmin.staff@sfdpw.org) until **2:30 p.m. on January 4, 2020**. Digital files of Bid Documents, Plan Holders Lists, and Addenda may be downloaded at no cost from the Public Works Electronic Bid Documents Download site at <https://bsm.sfdpw.org/ContractAdmin/Login.aspx>. Please visit the Contracts, Bids and Payments webpage at <https://stgint.sfdpw.org/Pages/Contract.aspx> for more information. Notices regarding Addenda and other bid changes will be distributed by email to Plan Holders. There will be no public bid opening and no protest period.

The Work is replacement of steam pipe and around the intersection of Larkin Street and McAllister Street, including traffic control, excavation and shoring, street restoration, hazardous materials abatement, removal and replacement of steam pipe, permits, fees, and all associated work. The time allowed for completion is 19 calendar days. The Engineer's estimate is approximately \$250,000. Bid Quotations in excess of \$600,000 may not be awarded through this informal bidding process. For more information, contact the Project Manager, Bill Pressas (SF Public Works) at (415) 695-2059 and Chris Anderson (SF Real Estate Division) at 415-676-9688.

**No contractor or subcontractor may be listed in a bid or awarded a contract for a public works project unless registered with the DIR as required by Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)].**

This Contract is subject to the requirements of Administrative Code Chapter 12X, which prohibits contracting in states with laws that allow discrimination. The City is prohibited from entering into any Contract with a Contractor that has its United States headquarters in a state on the Covered State List or where any or all of the work on the contract will be performed in any of those states on the Covered State List. Administrative Code Chapter 12X and a list of states on the Covered State List can be found at: <http://sfgsa.org/chapter-12x-anti-lgbt-state-ban-list..>

The Specifications include liquidated damages. Contract will be on a Lump Sum Bid Items basis. Progressive payments will be made.

A bid may be rejected if the City determines that any of the bid item prices are materially unbalanced to the potential detriment of the City.

There is no pre-bid conference. Site visits can be scheduled by appointment only. Contact Chris Anderson at 415-676-9688.

**Class "A"** license required to bid.

Minimum requirements of San Francisco Administrative Code Chapter 6 Sections 6.21 and 6.22 requires bidders to include with their quotes information concerning their experience and financial qualifications.

Pursuant to Charter Section 3.105, all contract awards are subject to certification by the Controller as to the availability of funds.

Minimum wage rates for this project must comply with the current General Prevailing Wage as determined by the State Department of Industrial Relations. Minimum wage rates other than applicable to General Prevailing Wage must comply with San Francisco Administrative Code, Chapter 12P, Minimum Compensation Ordinance.

Right reserved to reject any or all bids and waive any minor irregularities.

## SECTION 00 21 13

## INSTRUCTIONS TO BIDDERS

## 1.1 BIDDING DEFINITIONS

- A. The Bid Documents consist of the Invitation for Quotations, Instructions to Bidders, the Bid and all accompanying Bid forms, the Project Manual, and all Addenda issued prior to receipt of Bids.
- B. Addenda are written or graphic instruments issued by the City prior to the receipt of Bids which modify or interpret the Bid Documents by additions, deletions or other changes.
- C. A Bid is a complete and properly executed offer, submitted in accordance with the Bidding requirements, to provide products and services and to perform the Work in accordance with the requirements of the Contract Documents.
- D. The Total Bid Price is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bid Documents and it shall include the entire cost of all Work necessary for a complete and fully operational structure or facility in accordance with the requirements of the Contract Documents.
- E. A Bidder is a person or entity who submits a Bid.
- F. All definitions set forth in the General Conditions (Section 00 72 00) and in other Contract Documents are applicable to the Bid Documents.

## 1.2 DRAWING INDEX

- A. There are no drawings.

## 1.3 BIDDING CONTACT INFORMATION

- A. For obtaining Bid Documents, and submittal of Bids and other required bidding and contract documents, contact the following "Contract Administration Division":

Contract Administration Division  
San Francisco Public Works  
City and County of San Francisco  
49 South Van Ness Avenue, Suite 1600  
San Francisco, California 94103  
Telephone: 628-271-3159

- B. For technical questions on the Bid Documents, scheduling of special field visits, and submittal of Request for Product Substitutions, contact the following "Project Engineer/Architect":

Chris Anderson  
San Francisco Real Estate Division  
Telephone: 415-676-9688

## 1.4 ISSUANCE OF BID DOCUMENTS

- A. Bid Documents may be obtained from Contract Administration Division and downloaded from DPW website as described in the Invitation for Quotations.

- B. A full set of Bid Documents is available for inspection during business hours without charge at the Contract Administration Division. Bidders may be allowed to perform inspection only, but not to inspect and perform bid take offs. The Bid Documents are also available for inspection at various builders' exchanges and agencies. For a current distribution list of such agencies contact the Contract Administration Division.

#### 1.5 EXAMINATION OF BID DOCUMENTS AND SITE

- A. Before submitting a Bid, Bidder shall carefully examine the Bid Documents, visit the Site, and fully inform themselves of existing conditions and limitations, including all items described in the Bid Documents. No consideration will be granted for any alleged misunderstanding of the materials to be furnished, Work to be performed or of actual conditions at the Site, it being understood that the tender of a Bid carries with it the agreement to complete all Work and comply with all conditions specified herein and indicated in the Bid Documents.
- B. All special Site access for facility inspection and subsurface investigations shall be requested, approved and scheduled through the Project Engineer/Architect.
  - 1. Persons requesting special site access must identify the Bidder being represented, who must be on file with the San Francisco Public Works as a plan holder.
  - 2. No discussion, dissemination of information or clarification of the Bid Documents will be given during Site access. A City representative must accompany each person or group requesting special site access.
  - 3. Length of time of tours, number of tours per day and areas open for special Site access are limited and must be scheduled in advance.
  - 4. No adjustment in the Contract Sum will be allowed because of a Bidder's inability to gain access to the Site during the Bid period.
- C. Reference Documents are available to Bidders as described in Section 00 31 00.
- D. The submission of a Bid will constitute an incontrovertible representation by Bidder of the following:
  - 1. Bidder has complied with every requirement of this Article "Examination of Bid Documents and Site";
  - 2. the Total Bid price is premised upon performing and furnishing the Work required by the Contract Documents without exception;
  - 3. the Contract Documents are sufficient in scope and detail to accurately describe all terms and conditions for the performance of the Work; and
  - 4. it is understood that information about hazardous materials, physical or other conditions or obstructions, indicated on the Bid Documents, has been obtained with reasonable care and has been recorded in good faith. There is no express or implied warranty that such information is correctly shown. Bidder must take into account the possibility that actual conditions affecting cost or quantities of Work may differ from those indicated on the Bid Documents.
- E. Bidder shall give due consideration to the intricate and difficult conditions which involve coordinating and interfacing with other contractors at the Site and which may affect the scheduling of the Work.
- F. Bidder shall include in its Total Bid Price the entire cost of all Work necessary for a complete and fully operational structure or facility in accordance with the requirements of the Contract Documents.

## 1.6 QUESTIONS ON BID DOCUMENTS, ADDENDA, SUBSTITUTIONS

- A. Questions on Bid Documents: Prior to receipt of Bids, should a Bidder find discrepancies, ambiguities, or conflicts in the Bid Documents, or should there be doubt as to meaning of a provision or requirement, the Bidder shall promptly contact the Project Manager or Project Engineer/Architect.
- B. Addenda: Interpretations or clarifications considered necessary by the City in response to QBDs will be issued by written Addenda to all Bidders of record. Only questions answered by formal written Addenda will be binding; oral and other interpretations or clarifications will be without legal effect.
1. The City may also issue Addenda to modify the Bid and/or Contract Documents as deemed necessary or advisable by the City.
  2. Each Bidder shall be responsible for ascertaining, prior to submittal of its Bid, that it has received all issued Addenda. Bidders shall acknowledge Addenda by number and date received using Section 00 43 20 (Acknowledgement of Receipt of Addenda). Refer to Section 00 43 20 for additional instructions.
- C. Substitutions: The products specified in the Bid Documents establish a minimum standard of required type, function and quality that substitutions must meet to be considered acceptable to the City. To obtain acceptance of unspecified "or equal" products, systems, materials, or services, Bidders shall submit a completed QBD form accompanied by a Request for Substitution form (Section 00 49 18) and required supporting documentation. The City will consider properly-completed substitution requests submitted no later than 10 calendar days prior to the date for opening bids. After that date, the City will not accept substitution requests during the Bid period.
1. The burden of proof of the merit of the proposed substitute item is upon the Bidder. Insufficient information will be grounds for rejection of a proposed substitution.
  2. The City's decision of approval or disapproval of a proposed substitute item will be final and conclusive as to all Bidders.
  3. If the City approves a proposed substitute item, such approval will be set forth in an Addendum issued to all prospective Bidders.
  4. Refer to Article "Information to be Submitted after Bid Opening" for requirements regarding requests for substitution submitted by the successful Bidder after award of the Contract.
  5. Bidders must base their Bids on materials, products, services and systems specified in the Contract Documents or listed by name in Addenda.

## 1.7 PRE-BID CONFERENCE

- A. There is no pre-bid conference. Site visits can be scheduled by appointment only. Contact Chris Anderson at 415-676-9688.

## 1.8 BID SECURITY

- A. Bid Security does not apply.

## 1.9 STATUTORY BIDDING REQUIREMENTS

- A. Pursuant to Administrative Code section 6.21(a)(9), Bidder must submit on the Proposed Subcontractors Form attached to the Bid forms (refer to Section 00 43 36) information regarding Subcontractors that Bidder intends to employ to perform Work in an amount in excess of one-half of one percent, or \$10,000, whichever is greater. Bidder shall list only one such Subcontractor for each portion of the Work. Bidder shall complete and submit the Proposed Subcontractors Form with its Bid.

- B. Pursuant to Section 4104 of the California Public Contract Code, Bidder must provide the following information with its Bid for each listed subcontractor: i) the name of business; ii) the location of the place of business; iii) portion of work that will be performed by the subcontractor; and iv) the California contractor license number of each subcontractor who will perform work
1. An inadvertent error in listing the California contractor license number for each subcontractor listed number shall not be grounds for filing a bid protest or grounds for considering the bid nonresponsive if the corrected contractor's license number is submitted within 24 hours after the bid opening and provided the corrected contractor's license number corresponds to the submitted name and location for that subcontractor.
  2. Failure to complete the required forms as described above, e.g., if the box on the form is blank, the Bidders failure to provide the required information may result in a determination that the Bid is non-responsive.
- C. Bidder shall provide DIR Registration Number for the Bidder and all identified subcontractors and ensure that such subcontractors are currently registered with the California Department of Industrial Relations under California Labor Code section 1725.5.
- D. In conformance with Public Contract Code Section 7106, a Noncollusion Affidavit (Section 00 45 80) is included with the Bid Form. Signing the Bid Form shall also constitute signature of the Noncollusion Affidavit.
- E. Bidder shall complete and submit with its Bid a Highest Prevailing Wage Rate Certification form (Section 00 45 60) certifying its intention to comply with Section A7.204 of the San Francisco Charter, Administrative Code section 6.22(e), and California Labor Code section 1770 *et. seq.*
- F. This Contract is subject to the requirements of Administrative Code Chapter 12X, which prohibits contracting in states with laws that allow discrimination. The City is prohibited from entering into any Contract with a Contractor that has its United States headquarters in a state on the Covered State or where any or all of the work on the contract will be performed in any of those states on the Covered State List. Administrative Code Chapter 12X and a list of states on the Covered State List can be found at: <http://sfgsa.org/chapter-12x-anti-lgbt-state-ban-list>. Bidder shall certify compliance with this requirement by submitting with its Bid a Certificate of Bidder Regarding Contracting in States that Allow Discrimination (Section 00 45 78).
- G. Contractor License: In accordance with the provisions of the California Business and Professions Code section 7028.15, a bid submitted to the City by a contractor who does not hold the license(s) required to perform the Work, issued in accordance with chapter 9 of the Business and Professions Code, shall be considered non-responsive and shall be rejected by the City. Failure of the Bidder to obtain proper and adequate licensing for award of the Contract shall constitute a failure to execute the Contract and shall result in the forfeiture of the Bidder's Bid Security. Bidder must be properly licensed at all times during the performance of the Work. Bidder shall list on the Bid Form its current contractor license number.
1. Refer to the Invitation for Quotations for Contractor's license requirements.
- H. Chapter 12B and chapter 14B of the Administrative Code do not apply.

#### 1.10 DEBARMENT AND SUSPENSION CERTIFICATION REQUIREMENTS

- A. Bidder shall complete and submit with its Bid the Certification of Bidder Regarding Debarment and Suspension form (Section 00 45 82).

- B. Bidder further agrees by submitting its Bid that it will require its subcontractors, lower-tier subcontractors and suppliers to complete and submit to the City within 10 working days after the date of the City's notification of the lowest Bidder the Certification of Subcontractor, Lower-Tier Subcontractor or Supplier Regarding Debarment and Suspension form (Section 00 49 14) for lower tier covered transactions of \$25,000 or more.
- C. The inability of Bidder or its subcontractors, lower-tier subcontractors or suppliers to provide the above certifications will not necessarily result in denial of award of the Contract. In the event that Bidder or its subcontractor, lower-tier subcontractor or supplier is unable to provide such certification because it currently violates or has previously violated conditions of the certification, a description of each instance of violation and explanation shall be attached to its certification. The certification or explanation will be considered in connection with the City's determination whether to award the Contract. However, failure of Bidder or its subcontractors, lower-tier subcontractors or suppliers to furnish a certification or an explanation may disqualify such Bidder from eligibility for award of the Contract.
- D. Bidder agrees by submitting its Bid that, should bidder be awarded the Contract, bidder shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this Contract, unless authorized by the City.
- E. The certifications (Sections 00 45 82 and 00 49 14) are a material representation of fact upon which reliance is placed when the City determines to enter into this Contract.
1. Contractor shall provide immediate written notice to the City if any time Contractor learns that its certification or the certification of a lower tier participant was erroneous when submitted or has become erroneous by reason of changed circumstances.
- F. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this Article "Debarment and Suspension Certification Requirements", shall have the meanings set forth in the "Definitions" and "Coverage" sections of rules implementing Federal Executive Order 12549.
- G. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded From Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.
- H. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this Article "Debarment and Suspension Certification Requirements". The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- I. Except for transactions authorized under Paragraph C of this Article "Debarment and Suspension Certification Requirements", if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this Contract, in addition to other remedies available, the City or other government agency may terminate this Contract for cause or default.

## 1.11 CONTRACTOR BIDDER QUALIFICATIONS

- A. As a condition to the award of the Contract, apparent low Bidder, and any other Bidder so requested, shall submit to the Contract Administration Division the information required by this Article "Contractor Bidder Qualifications" regarding the qualifications and experience of Bidder and certain proposed key team members and entities (i.e., Subcontractors and/or Suppliers) proposed to perform the Work. Failure to timely provide and furnish complete information prior to contract award may result in a determination that Bidder is not responsible and result in the rejection of Bidder's bid. No award will be made until a Bidder submits complete qualification information to the City.
1. Specifically, the Bidder shall submit with its Bid (i) a completed Bidder's Qualifications form (Section 00 45 13), as required by Subparagraph "Bidders' Qualification Statement" below; and (ii) a completed and executed Release and Waiver Agreement (Section 00 45 16).
  2. To evaluate Bidder's ability to perform the Work in accordance with the Contract Documents to the City's satisfaction, the City may conduct reasonable investigations and reference checks of Bidder, proposed Subcontractors, Suppliers, key personnel and other persons and organizations as City deems necessary to assist in its evaluation of Bidder's Bid and to establish Bidder's responsibility.
- B. Bidders' Qualification Statement. Submit sufficient information on the Bidder's Qualification form (Section 00 45 13), and additional sheets as necessary, to demonstrate to the satisfaction of the City that Prime Contractor has 10 years of experienced with excavation and pipeline installation of high pressure steam.
1. Bidder shall provide a list of emergency projects performed within the past three years including scope of work and client contact information (name, title, phone number, email and address).
  2. Bidder shall identify the staff, equipment, and other resources to start work within 24 hours after receiving Notice-To-Proceed (NTP) from the City.
- C. Experience Statements. The apparent low Bidder and any other Bidder so requested shall submit to the Contract Administration Division within ten working days after the date of the City's notification of the lowest Bidder sufficient information on completed Experience Statement forms (Section 00 49 12), and additional sheets as necessary, to demonstrate to the satisfaction of the City the qualifications and experience of the key personnel and Subcontractors identified below. Submit a separate Experience Statement for each key person and Subcontractor identified below:
1. Project Manager or General Superintendent shall have experience with emergency projects or other high-urgency projects within the past 5 years.
  2. Steam Pipe Contractor: Prime Contractor or Subcontractor performing steam pipeline work shall have a minimum of ten years of experience involving high-pressure steam pipeline replacement and welding that meets ASME Section 9-Boiler and Pressure Vessel welding code. Experience shall include successfully completing at least one project per year for the last five years involving replacement of at least 50 feet of high-pressure steam piping in each project. Experience with emergency projects is preferred.
  3. Traffic Control Subcontractor, in the event that such subcontractor is used to perform traffic control work, as specified in Specifications Section 01 11 00 – Summary of Work.
- D. Key Team Members Qualifications. The City will promptly notify the apparent low Bidder in writing if the City, after due investigation, has any reasonable objection to any such proposed person proposed in response to Paragraph "Experience Statements" above, and will request the apparent low Bidder to submit an acceptable substitute without an increase in Bid price.

1. If the apparent low Bidder declines or fails to make such substitution within 10 working days from the date of the City's request, the City may proceed to award the Contract to the responsible Bidder who submitted the next lowest responsive Bid and proposes to use acceptable persons. Declining to make requested substitutions may constitute, as determined by the City at its sole discretion, Bidder's refusal to enter into the Contract and result in forfeiture of the Bid Security of such Bidder.
  2. Any person listed for whom the City does not make a written objection before award of the Contract will be deemed acceptable to the City, subject to revocation of such acceptance after the effective date of the Agreement as provided in Section 00 72 00 (refer to Paragraphs 3.04, 3.05 and 4.01).
  3. No acceptance by the City of any such person shall constitute a waiver of the right of the City to reject defective work.
  4. In the event that the Contractor seeks to substitute a key team member during the performance of the contract, the Contractor shall submit, at least 7 days prior to engaging the person, an Experience Statement (Section 00 49 12) to the City in the same manner as described above for the City's review and acceptance. The substitution is subject to the approval of the City Representative based upon qualifying experience on similar projects. Failure to obtain the City's acceptance shall not constitute a cause for delay. In addition, the City may exercise its right to stop the Work under Paragraph 2.03 of the General Conditions (Section 00 72 00) until such time as the Contractor engages persons possessing skills and qualifications acceptable to the City.
- E. Equipment Suppliers List. The apparent low Bidder and any other Bidder so requested shall submit to the Contract Administration Division within five (5) working days after the Bid opening the following information on the Equipment Suppliers List (Section 00 49 11), and additional sheets and attachments as necessary, to demonstrate, to the satisfaction of the City, Bidder's understanding of the complexities of the Work. The City's receipt and review of this information neither constitutes the City's acceptance of Bidder's proposed manufacturers and Suppliers, nor waives the submittal or other requirements of the Contract Documents.

#### 1.12 LOCAL BUSINESS ENTERPRISE (LBE) PROGRAM

- A. Administrative Code Chapter 14B does not apply.

#### 1.13 LOCAL HIRING REQUIREMENTS

- A. Local Hiring requirements do not apply.

#### 1.14 SUBMISSION AND OPENING OF BIDS

- A. Bids shall be submitted at Contract Administration Division no later than the date and time, and at the place specified in the Invitation for Quotations, or as subsequently specified if changed by Addendum.
1. The deadline for submitting Bids will be the time stated in the Invitation for Quotations, exactly, the time to be determined per United States Official Time (Pacific), accessed at: [www.time.gov](http://www.time.gov).
  2. The City may decline to accept Bids received after the specified date and time.
- B. Bidder shall fill in all blanks as appropriate on the Bid Form (Section 00 41 00) and shall submit with its Bid the forms listed in the Bidding Forms Checklist (Section 00 40 13) properly completed and executed as needed.
- C. The City reserves the right in its sole discretion to allow the successful Bidder a period of time reasonable under the circumstances after Bid opening, which shall be no more than 14

days unless extended in writing by the City, to submit additional forms or documents required by the City and to reject the Bid if such forms or documents are not properly submitted within the time allotted by the City.

- D. Submit bids as a single file in PDF format containing all pages of the Bid and named "**Bid for Sourcing ID No. 0000004818 by <Bidder Name>.pdf**" via email to [contractadmin.staff@sfdpw.org](mailto:contractadmin.staff@sfdpw.org). Email subject line shall read "**Bid for Sourcing ID No. 00000004818 by <Bidder Name>**".
- E. Bids that are mailed or sent by messenger service shall have the previously described envelope placed inside an envelope addressed as described in Paragraph A of this Article "Submission and Opening of Bids". It shall be Bidder's responsibility to see that Bids are sent in sufficient time to be received at that address and taken to the place of the Bid opening prior to the time specified in the Invitation for Quotations.
  - 1. Oral, telephonic, or facsimile Bids are invalid and will not be accepted.
- F. Bids that are in any way conditional or which make alterations, omissions, or qualifications to the terms of the Bid or Bid Documents may be rejected as incomplete or qualified.
- G. All Bid data, except signatures, shall be typed or printed legibly in non-erasable ink, with all strikeovers and corrections initialed by the person signing the Bid.
- H. Each Bid shall show the full business address of the Bidder and be executed with its usual signature. A Bid by a partnership shall furnish the full names of all partners and shall be signed in the partnership name by one member of the partnership or by an authorized representative, followed by the signature and title of the person signing. A Bid by a corporation, with corporate seal affixed, shall be executed with the legal name of the corporation, followed by the name of the state of incorporation, and the signature and title of the person executing. The name and title of the person executing shall also be typed or printed below the signature. When required by the City, satisfactory evidence of the authority of the officer executing on behalf of the corporation shall be furnished. **Bidder shall furnish satisfactory evidence that the Bidder is currently registered with the California Department of Industrial Relations as required by California Labor Code section 1725.5.**
- I. The City reserves the right after opening Bids to reject any or all Bids, and to waive any minor irregularity in a Bid.
- J. A bid may be rejected if the City determines that any of the bid item prices are materially unbalanced to the potential detriment of the City.
- K. Bids will not be publicly opened and read for this solicitation.
  - 1. Bidders requesting information on the Bid results shall make such requests in writing at least 24 hours after the receipt of Bids to Contract Administration Division.

#### 1.15 INFORMATION TO BE SUBMITTED AFTER BID OPENING

- A. After the Bid Opening, required Bidders shall submit properly completed and executed Supplementary Bid Forms within the specified time and to the appropriate person as listed in the Supplementary Bidding Forms Checklist (Section 00 49 00) and as described below.
- B. Within 10 working days after the date of the City's notification of the lowest Bidder, the low Bidder, and any other Bidder so requested, shall submit the following:
  - 1. Certification of Subcontractor, Lower-Tier Subcontractor or Supplier Regarding Debarment and Suspension form (Section 00 49 14) completed by each

subcontractor, lower-tier subcontractor and supplier for lower tier covered transactions of \$25,000 or more.

2. (Not used)
- C. (Not Used)
- D. Refer to Article "Bidder's Qualifications" of this Section 00 21 13 for additional qualifications submittal requirements after Bid opening.
- E. (Not Used)
- F. (Not Used)

#### 1.16 WITHDRAWAL OR REVISION OF BID

- A. Prior to the deadline for Bid opening, a submitted Bid may be revised or withdrawn by notice to Contract Administration Division. Such notice shall be in writing and signed by Bidder and, to be effective, must be received on or before the deadline for Bid opening.
  1. A revised Bid shall be worded so as to not reveal the amount of the original Bid's Total Bid Price. Bid Security shall be in an amount sufficient for the Bid as revised or resubmitted.
  2. A withdrawn Bid may be submitted on or before the deadline for Bid opening.
- B. Those Bids not withdrawn prior to the scheduled time for receipt of Bids shall not be withdrawn or modified for a period of 90 days thereafter.

#### 1.17 OBJECTIONS TO BID DOCUMENTS, BID PROTESTS

- A. Failure by a Bidder to comply with the procedures set forth in this Paragraph will render any Objection or Protest inadequate and may result in its rejection by the City.
- B. The City may not accept and consider Objections and Protests for this solicitation.

#### 1.18 AWARD OF CONTRACT

- A. **In accordance with California Labor Code sections 1771.1 and 1725.5, no contract can be awarded to a Bidder without proof that the Bidder and all identified subcontractors are currently registered with the California Department of Industrial Relations.**
- B. In accordance with San Francisco Administrative Code Chapter 6, no bid is accepted and no contract in excess of the Threshold Amount is awarded by the City until such time as the Mayor or the Mayor's designee approves the contract for award, and the Director of Public Works then issues an order of award.
- C. Pursuant to Charter section 3.105, all contract awards are subject to certification by the Controller as to the availability of funds.
- D. The Contract, if awarded, will be awarded to the responsible Bidder who submits the lowest responsive Bid based on the lowest overall cost to the City for the Total Bid Price with or without additive or deductive alternate(s) selected by the City in a descending order of priority as announced prior to opening of Bids.
- E. The City will issue a written notification of award of the Contract to the successful Bidder.

## 1.19 CONTRACT SECURITY

- A. Performance and payment (labor and material) bonds do not apply to this contract.

## 1.20 EXECUTION OF CONTRACT

- A. The successful Bidder shall deliver within 10 working days after the date of the City's written notification of award of the Contract the following properly completed and signed documents to Contract Administration Division.
1. Contract Agreement (Section 00 52 00), 2 original copies with the successful Bidder's signature affixed thereto.
    - a. If successful Bidder is "doing business as" company, attach a copy of "dba" certificate filed with and certified by the County Clerk.
  2. Performance bond and payment (labor and material) bond (Section 00 61 13), 2 original copies of each.
  3. Insurance certificates and endorsements, 2 original copies of each, including the following:
    - a. The Sourcing Event ID "000004818" and Project title "STEAM PIPE REPAIR AT LARKIN AND MCALLISTER", the agent names and telephone numbers, and name the certificate holder as follows:
 

Contract Administration Division  
San Francisco Public Works  
49 South Van Ness Avenue, Suite 1600  
San Francisco, CA 94103
    - b. Name as additional insured the parties as specified in Section 00 73 16, Article "Insurance for Others".
    - c. Otherwise comply with applicable requirements as specified in Section 00 73 16.
  4. Corporate authority in the form of resolution or certified extract from the minutes authorizing the signatory to sign on behalf of the corporation.
  5. Power of Attorney authorizing signatories to execute Performance and Payment Bonds.
  6. **Proof that Bidder and all subcontractors are currently registered with the California Department of Industrial Relations under California Labor Code section 1725.5.**
  7. Proof of Status as Signatory to Apprenticeship Program or Proof of Payment if Bidder's Total Bid Price is \$30,000 or more or if the Contract Time is 20 days or more:
    - a. If successful Bidder declared that it is a signatory to a recognized apprenticeship or training program on the Certificate of Bidder Regarding Apprenticeship Training Program form (Section 00 45 65), successful Bidder shall submit written proof of its status as a signatory.
    - b. For each subcontractor that declared it is a signatory to a recognized apprenticeship or training program on the Certificate of Subcontractor Regarding Apprenticeship Training Program form (Section 00 49 15), successful Bidder shall submit written proof of each such subcontractor's status as a signatory.
    - c. Contractor and all of its subcontractors that are not signatories to a recognized apprenticeship or training program as described herein shall be required after award of the Contract to submit with each progress payment request, beginning with the second such request, proof that successful Bidder (Contractor) or its subcontractor(s) contribute to a fund or funds to administer and conduct the apprenticeship program(s) in the area of the Site for each apprenticeable trade or craft that Contractor or its subcontractor(s) is

providing labor to the Project. Such contributions shall be made on the same basis and in the same manner as the other contractors do, or, where the trust fund administrators are unable to accept such funds, Contractor and its subcontractor(s) must provide written proof of payment of a like amount to the California Apprenticeship Council.

- B. Additionally, if not included with the Bid, the successful Bidder shall deliver to Contract Administration Division within the time limit set forth above, the required San Francisco business tax registration numbers and contractor license numbers as specified in Article "Statutory Bidding Requirements."
- C. Failure to deliver to the San Francisco Public Works one or more of the documents listed in this Article "Execution of Contract" shall constitute a refusal to enter into the Contract and may result in forfeiture of Bidder's bid security.
- D. The successful Bidder must be in compliance with the Equal Benefits Provisions of Chapter 12B of the City's Administrative Code either at the time of Contract Award, or within 2 weeks of the date of Contract Award. Bidder's failure to timely obtain Chapter 12B compliance certification from CMD may result in Award of the Contract to the next lowest responsible, responsive Bidder, or re-bidding of the Contract at the discretion of the City. The Equal Benefits Provisions of Chapter 12B do not apply to this federally funded project.

END OF SECTION

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## SECTION 00 40 13

## BIDDING FORMS CHECKLIST

*To be submitted with Bid for:***STEAM PIPE REPAIR AT LARKIN AND MCALLISTER  
(San Francisco Public Works Sourcing Event ID 0000004818)**

- A. Each Bidder shall submit with its Bid the following forms, properly completed and executed:
- Executed Bid Form (Section 00 41 00), with contractor's license number and expiration date.
  - Acknowledgment of Receipt of Addenda (Section 00 43 20).
  - Proposed Subcontractors Form (Section 00 43 36).
  - Bidder's Qualifications (Section 00 45 13).
  - Release and Waiver Agreement (Section 00 45 16).
  - Highest Prevailing Wage Rate Certification (Section 00 45 60).
  - Certificate of Bidder Regarding Contracting in States that Allow Discrimination (Section 00 45 78)
  - Noncollusion Affidavit (Section 00 45 80).
  - Certification of Bidder Regarding Debarment and Suspension (Section 00 45 82).
- B. Digital file containing scanned copy of Bid shall be submitted by following the instructions in Section 00 21 13. Submitted Bid shall be a single file in PDF format containing all pages of the Bid and named as "**Bid for Sourcing ID No. 0000004818 by <Bidder Name>.pdf.**" Unreadable files or pages may result in a Bid being found non-responsive.
- C. The Director of the San Francisco Public Works reserves the right after opening Bids to reject any or all Bids, and to waive any minor irregularity in a Bid.
- D. Bids must be submitted no later than the date and time specified in the Invitation for Quotations, or as subsequently specified if changed by Addendum.

END OF SECTION

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## SECTION 00 41 00

## BID FORM

Date of Bid: \_\_\_\_\_

TO THE DIRECTOR OF PUBLIC WORKS, CITY AND COUNTY OF SAN FRANCISCO

In response to the Invitation for Quotations for the following public work:

STEAM PIPE REPAIR AT LARKIN AND MCALLISTER  
(San Francisco Public Works Sourcing Event ID 0000004818)

the undersigned Bidder hereby proposes and agrees to execute the required Contract, should it be awarded to the undersigned Bidder, and to do all the work and furnish all the materials therefor all in accordance with the Specifications and Drawings referred to in said Invitation for Quotations and at the prices named in the attached Schedule of Bid Prices.

The undersigned declares: That it is the Bidder (or by holding the position below indicated is authorized to execute this Bid Form on behalf of the Bidder); that said Bidder submits this Bid; that said Bidder has not, nor have any of its agents, officers, representatives or employees, been guilty of collusion with any officer or representative of the City and County of San Francisco, or with any other party or parties in the submission of this Bid; nor has said Bidder received any preferential treatment by any officer or employee of the City and County in the making or submitting of this Bid. The undersigned declares under penalty of perjury that all representations made on this Bid Form are true and correct.

The undersigned declares, under penalty of perjury under the laws of the State of California that the Bidder has read and agrees to the requirements of the San Francisco Administrative Code and applicable requirements of the California Labor Code for each of the attached list Sections:

<i>Section No.</i>	<i>Title</i>
00 43 20	Acknowledgment of Receipt of Addenda
00 43 36	Proposed Subcontractors Form
00 45 13	Bidder's Qualifications
00 45 60	Highest Prevailing Wage Rate Certification
00 45 70	Certificate of Bidder Regarding Nondiscrimination in Contracts and Benefits
00 45 80	Noncollusion Affidavit
00 45 82	Certification of Bidder Regarding Debarment and Suspension

***The undersigned  
acknowledges that he or  
she has read and agrees  
to these documents:*** \_\_\_\_\_

**SIGN HERE**

**BUSINESS TAX REGISTRATION DECLARATION:** The undersigned further declares and understands that if I am awarded the Contract, each of my Subcontractors and I must maintain a current business tax registration number. If the Tax Collector of the City and County of San Francisco determines that any of my Subcontractors or I do not have or maintain a current business tax registration number, the City may either cancel the Contract or withhold payment.

The undersigned, having examined all referenced documents and the Drawings, understanding the terms and conditions of the Contract Documents and the local conditions affecting the performance and costs of the Work, and having fully inspected the Site in all particulars, hereby proposes and agrees to fully

perform the Work as indicated on the Drawings and in accordance with the requirements of the Contract Documents within the time stated therein, and for the following price(s):

**SCHEDULE OF BID PRICES**

Bid Item No.	Bid Item Description	Amount
1	STEAM PIPE AND ASSOCIATED EQUIPMENT AND PARTS	\$ _____
2	EXCAVATION, SHORING, BACKFILL, AND STREET RESTORATION	\$ _____
3	HAZARDOUS MATERIALS ABATEMENT	\$ _____
4	TRAFFIC CONTROL	\$ _____
5	MOBILIZATION AND DEMOBILIZATION	\$ _____
TOTAL BID PRICE (Summation of Bid items 1 through 5) =		\$ _____

The City reserves the right after opening Bids to reject any or all Bids, and to waive any minor irregularity in a Bid. In case of discrepancy between the sum of Bid item amounts and the Total Bid Price, the sum of said amounts shall prevail. In the case of discrepancy between words and figures, the words shall prevail. In case of discrepancy between unit prices Bid and extensions thereof, said unit prices shall prevail.

Bidder acknowledges and agrees that this Bid, if not withdrawn prior to the scheduled time for receipt of Bids, shall not be withdrawn for a period of **90** days thereafter.

Department of Industrial Relations Registration: The undersigned further declares that the Bidder is compliant with the registration requirements of the California Department of Industrial Relations (“DIR”) under California Labor Code section 1725.5, and that its registration with the DIR will be current as of the Bid date.

Time allowed for completion of all Work shall be as specified in Section 00 73 02, beginning with and including the official date of Notice to Proceed as established by the Director of the San Francisco Public Works, regardless of whether the Contract is awarded under the Total Bid Price or on the basis of the Total Bid Price and any Alternate or any combination of Alternates.

Check if you are: <input type="checkbox"/> Certified Small-LBE (10% Discount) <input type="checkbox"/> Micro-LBE (10% Discount) <input type="checkbox"/> Certified SBA-LBE (5% Discount if applicable)	For certified <b>LBE only</b> (check applicable): * <input type="checkbox"/> MBE <input type="checkbox"/> WBE <input type="checkbox"/> OBE
---	---

\* **MBE** = Minority Business Enterprise, **WBE** = Women Business Enterprise, **OBE** = Other Business Enterprise

Executed on \_\_\_\_\_ 20 \_\_\_\_\_

\_\_\_\_\_  
Name of Firm, Corporation, Partnership or Joint Venture

\_\_\_\_\_  
E-mail Address

\_\_\_\_\_  
Signature of Bidder or Authorized Representative

\_\_\_\_\_  
Telephone Number

\_\_\_\_\_  
Print Name of Authorized Representative

\_\_\_\_\_  
Contractor's California License No.

\_\_\_\_\_  
Position in Firm or Corporation

\_\_\_\_\_  
License Expiration Date

\_\_\_\_\_  
Address of Firm or Corporation

\_\_\_\_\_  
S.F. Business Tax Registration  
Certificate Number

\_\_\_\_\_  
City State Zip Code

\_\_\_\_\_  
Contractor's DIR Registration No.

**Note:** If Bidder is a corporation, set forth the legal name of the corporation together with the signature of the officer or officers authorized to sign contracts on behalf of the corporation. If Bidder is a partnership, set forth the name of the firm together with the signature of the partner or partners authorized to sign contracts on behalf of the partnership.

END OF SECTION

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SECTION 00 43 20

ACKNOWLEDGMENT OF RECEIPT OF ADDENDA

If Addenda to the Bid Documents have been issued for this Contract, please indicate receipt thereof by filling in the appropriate Addendum number and filling in date received below. If there are any questions on any Addenda that may have been issued, please contact Bill Pressas, City and County of San Francisco, San Francisco Public Works, (415) 695-2059 or [williaml.pressas@sfdpw.org](mailto:williaml.pressas@sfdpw.org).

Addendum No.	_____	Date Received	_____
Addendum No.	_____	Date Received	_____
Addendum No.	_____	Date Received	_____
Addendum No.	_____	Date Received	_____
Addendum No.	_____	Date Received	_____
Addendum No.	_____	Date Received	_____
Addendum No.	_____	Date Received	_____
Addendum No.	_____	Date Received	_____
Addendum No.	_____	Date Received	_____

A BID MAY BE RENDERED NONRESPONSIVE IF THE BIDDER DOES NOT ACKNOWLEDGE THE RECEIPT OF ALL ADDENDA WHICH MAY HAVE BEEN ISSUED FOR THIS CONTRACT.

*Note: The above form is part of the Bid. Signing the Bid Form (Section 00 41 00) shall also constitute signature of this form and Bidder acknowledges that information provided above is true and correct.*

END OF SECTION

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SECTION 00 43 36  
(This form replaces CMD FORM 2A)

PROPOSED SUBCONTRACTORS FORM

---

Date

---

Name of Firm, Corporation, Partnership, or Joint Venture

This Document implements listing requirements for subcontractors who will perform work in excess of one-half of one percent of the Total Bid Price [Admin. Code § 6.21(A)(9) and California Public Contract Code §§ 4100 – 4114].

**Important Notice: No subcontractor may be listed in a bid for a public works project unless registered with the California Department of Industrial Relations (“DIR”) pursuant to Labor Code § 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code § 1771.1(a)]. An inadvertent listing of a subcontractor who is not registered under § 1725.5 will not be grounds for a bid protest or for determining a bid nonresponsive if the conditions set forth in Labor Code § 1771.1(c)(1) or (2) are met.**

A. Subcontractors Who Will Perform Work In Excess of ½ of 1% Of Total Bid Price

Bidder shall submit with its bid a subcontractor list using the form below. Bidder shall identify each subcontractor<sup>1</sup> who will perform work in an amount in excess of one-half of one percent of Bidder's Total Bid Price. If this project involves the construction of streets, highways, or bridges, Bidder shall submit with its bid a subcontractor list, using the form below, identifying each subcontractor who will perform work in excess of one-half of one percent of the Total Bid Price, or \$10,000, whichever is greater.

At a minimum, Bidder must provide the following information with its Bid for each listed subcontractor: (i) name and email [Box 2]; (ii) location of the place of business [Box 3]; (iii) portion of work that will be performed by the subcontractor [Box 4] and (iv) the current valid subcontractors license [Box 8]. In addition, for items or portions of work not fully subcontracted, e.g., indicated as "partial," Bidder must provide the amount of subcontract work [Box 10] either at the time of Bid or within 24 hours after Bid opening. Bidders may provide additional identifying information [e.g., Boxes 5, 6, 7 and/or 9] within 24 hours of Bid opening.

If the City cannot identify the intended subcontractor or portion of work based on the information provided by Bidder, or where Bidder provides conflicting information, the City may consider the subcontractor or portion of work unlisted for purposes of Public Contract Code § 4106. An "unlisted" determination may render a Bid non-responsive if the technical specifications require that the work in question be performed by a subcontractor. In addition, an "unlisted" determination may render a Bidder not responsible if Bidder is not qualified to self-perform the work in question.

B. LBE Subcontractors, Suppliers and Service Contractors

Subcontracting goal does not apply to this Contract. LBE subcontractors, suppliers and service contractors are not required to be identified and listed, except as required under paragraph A above.

<sup>1</sup>For the purposes of Paragraph A, the term "subcontractor" shall mean a contractor as defined in California Public Contract Code § 4113.

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**Copy this page as needed to provide a complete listing.**

**Page \_\_\_\_\_ of \_\_\_\_\_**

1. TYPE OF SUBCONTRACTOR: <input type="checkbox"/> First Tier; <input type="checkbox"/> Lower Tier; <input type="checkbox"/> Supplier; <input type="checkbox"/> Service Contractor (e.g. Trucker)		
2. SUBCONTRACTOR NAME		EMAIL
3. ADDRESS		PHONE NO.
4. BID ITEMS/PORTION OF WORK		
5. DIR REGISTRATION NO.	6. VENDOR NO.	7. FEDERAL ID NO.
8. LICENSE NO.	9. SF BUSINESS TAX REG. NO.	10. AMOUNT OF SUB-CONTRACT WORK: \$
11. CERTIFIED LBE? <input type="checkbox"/> Yes; <input type="checkbox"/> No	12. IF LBE, CHECK APPLICABLE: <input type="checkbox"/> MBE; <input type="checkbox"/> WBE; <input type="checkbox"/> OBE* <input type="checkbox"/> Small LBE; <input type="checkbox"/> Micro LBE; <input type="checkbox"/> SBA-LBE	

1. TYPE OF SUBCONTRACTOR: <input type="checkbox"/> First Tier; <input type="checkbox"/> Lower Tier; <input type="checkbox"/> Supplier; <input type="checkbox"/> Service Contractor (e.g. Trucker)		
2. SUBCONTRACTOR NAME		EMAIL
3. ADDRESS		PHONE NO.
4. BID ITEMS/PORTION OF WORK		
5. DIR REGISTRATION NO.	6. VENDOR NO.	7. FEDERAL ID NO.
8. LICENSE NO.	9. SF BUSINESS TAX REG. NO.	10. AMOUNT OF SUB-CONTRACT WORK: \$
11. CERTIFIED LBE? <input type="checkbox"/> Yes; <input type="checkbox"/> No	12. IF LBE, CHECK APPLICABLE: <input type="checkbox"/> MBE; <input type="checkbox"/> WBE; <input type="checkbox"/> OBE* <input type="checkbox"/> Small LBE; <input type="checkbox"/> Micro LBE; <input type="checkbox"/> SBA-LBE	

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2. SUBCONTRACTOR NAME		EMAIL
3. ADDRESS		PHONE NO.
4. BID ITEMS/PORTION OF WORK		
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1. TYPE OF SUBCONTRACTOR: <input type="checkbox"/> First Tier; <input type="checkbox"/> Lower Tier; <input type="checkbox"/> Supplier; <input type="checkbox"/> Service Contractor (e.g. Trucker)		
2. SUBCONTRACTOR NAME		EMAIL
3. ADDRESS		PHONE NO.
4. BID ITEMS/PORTION OF WORK		
5. DIR REGISTRATION NO.	6. VENDOR NO.	7. FEDERAL ID NO.
8. LICENSE NO.	9. SF BUSINESS TAX REG. NO.	10. AMOUNT OF SUB-CONTRACT WORK: \$
11. CERTIFIED LBE? <input type="checkbox"/> Yes; <input type="checkbox"/> No	12. IF LBE, CHECK APPLICABLE: <input type="checkbox"/> MBE; <input type="checkbox"/> WBE; <input type="checkbox"/> OBE* <input type="checkbox"/> Small LBE; <input type="checkbox"/> Micro LBE; <input type="checkbox"/> SBA-LBE	

\* MBE = Minority Business Enterprise, WBE = Women Business Enterprise, OBE = Other Business Enterprise.

**Copy this page as needed to provide a complete listing.**

**Page \_\_\_\_\_ of \_\_\_\_\_**

1. TYPE OF SUBCONTRACTOR: <input type="checkbox"/> First Tier; <input type="checkbox"/> Lower Tier; <input type="checkbox"/> Supplier; <input type="checkbox"/> Service Contractor (e.g. Trucker)		
2. SUBCONTRACTOR NAME		EMAIL
3. ADDRESS		PHONE NO.
4. BID ITEMS/PORTION OF WORK		
5. DIR REGISTRATION NO.	6. VENDOR NO.	7. FEDERAL ID NO.
8. LICENSE NO.	9. SF BUSINESS TAX REG. NO.	10. AMOUNT OF SUB-CONTRACT WORK: \$
11. CERTIFIED LBE? <input type="checkbox"/> Yes; <input type="checkbox"/> No	12. IF LBE, CHECK APPLICABLE: <input type="checkbox"/> MBE; <input type="checkbox"/> WBE; <input type="checkbox"/> OBE* <input type="checkbox"/> Small LBE; <input type="checkbox"/> Micro LBE; <input type="checkbox"/> SBA-LBE	

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2. SUBCONTRACTOR NAME		EMAIL
3. ADDRESS		PHONE NO.
4. BID ITEMS/PORTION OF WORK		
5. DIR REGISTRATION NO.	6. VENDOR NO.	7. FEDERAL ID NO.
8. LICENSE NO.	9. SF BUSINESS TAX REG. NO.	10. AMOUNT OF SUB-CONTRACT WORK: \$
11. CERTIFIED LBE? <input type="checkbox"/> Yes; <input type="checkbox"/> No	12. IF LBE, CHECK APPLICABLE: <input type="checkbox"/> MBE; <input type="checkbox"/> WBE; <input type="checkbox"/> OBE* <input type="checkbox"/> Small LBE; <input type="checkbox"/> Micro LBE; <input type="checkbox"/> SBA-LBE	

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2. SUBCONTRACTOR NAME		EMAIL
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11. CERTIFIED LBE? <input type="checkbox"/> Yes; <input type="checkbox"/> No	12. IF LBE, CHECK APPLICABLE: <input type="checkbox"/> MBE; <input type="checkbox"/> WBE; <input type="checkbox"/> OBE* <input type="checkbox"/> Small LBE; <input type="checkbox"/> Micro LBE; <input type="checkbox"/> SBA-LBE	

\* MBE = Minority Business Enterprise, WBE = Women Business Enterprise, OBE = Other Business Enterprise.

END OF SECTION

SECTION 00 45 13

BIDDER'S QUALIFICATIONS

Refer to Section 00 21 13 (Instructions to Bidders – Contractor Bidder Qualifications) for instructions. Add additional sheets as necessary to demonstrate compliance with the requirements specified in Section 00 21 13.

1. BIDDER'S NAME:	
2. IS THIS A JOINT VENTURE? <input type="checkbox"/> Yes, <input type="checkbox"/> No; If "Yes," list name of each joint venture partner:	
3. FEDERAL ID NO.:	4. SF BUSINESS TAX REG. NO.:
5. NAME OF RESPONSIBLE MANAGEMENT OFFICER:	
6. DID BIDDER INSPECT THE PROJECT SITE? <input type="checkbox"/> Yes, <input type="checkbox"/> No; If "Yes," list name and phone of person who did the inspection:	
7. NAME:	8. PHONE NO.:
9. NUMBER OF YEARS BIDDER'S ORGANIZATION HAS HAD EXPERIENCE IN WORK COMPARABLE WITH THAT REQUIRED UNDER THE PROPOSED CONTRACT: _____ Years as a General Contractor _____ Years as a Subcontractor	

10. RECENT WORK SIMILAR IN CHARACTER TO THAT REQUIRED IN THE PROPOSED CONTRACT, WHICH BIDDER HAS COMPLETED IN THE PAST 10 YEARS:

(a)

PROJECT TITLE:		
PROJECT DESCRIPTION / SCOPE OF WORK: <input type="checkbox"/> Check box if project was considered an emergency		
LOCATION: <i>Address, City, State</i>		
START DATE:	PLANNED COMPLETION DATE:	ACTUAL COMPLETION DATE:
CONTRACT AMOUNT: \$	CHANGE ORDER AMOUNT: \$	
ROLE (Check One): <input type="checkbox"/> General Contractor <input type="checkbox"/> Subcontractor	IF GENERAL CONTRACTOR, LIST NAMES OF MAJOR SUBCONTRACTORS EMPLOYED:	
NAME OF OWNER'S REPRESENTATIVE:		
TITLE:	TELEPHONE:	
BUSINESS ADDRESS:		

(b)

PROJECT TITLE:		
PROJECT DESCRIPTION / SCOPE OF WORK: <input type="checkbox"/> Check box if project was considered an emergency		
LOCATION: <i>Address, City, State</i>		
START DATE:	PLANNED COMPLETION DATE:	ACTUAL COMPLETION DATE:
CONTRACT AMOUNT: \$		CHANGE ORDER AMOUNT: \$
ROLE (Check One): <input type="checkbox"/> General Contractor <input type="checkbox"/> Subcontractor	IF GENERAL CONTRACTOR, LIST NAMES OF MAJOR SUBCONTRACTORS EMPLOYED:	
NAME OF OWNER'S REPRESENTATIVE:		
TITLE:		TELEPHONE:
BUSINESS ADDRESS:		

(c)

PROJECT TITLE:		
PROJECT DESCRIPTION / SCOPE OF WORK: <input type="checkbox"/> Check box if project was considered an emergency		
LOCATION: <i>Address, City, State</i>		
START DATE:	PLANNED COMPLETION DATE:	ACTUAL COMPLETION DATE:
CONTRACT AMOUNT: \$		CHANGE ORDER AMOUNT: \$
ROLE (Check One): <input type="checkbox"/> General Contractor <input type="checkbox"/> Subcontractor	IF GENERAL CONTRACTOR, LIST NAMES OF MAJOR SUBCONTRACTORS EMPLOYED:	
NAME OF OWNER'S REPRESENTATIVE:		
TITLE:		TELEPHONE:
BUSINESS ADDRESS:		

(Add sheets if necessary.)

11. LIST ALL CONTRACTS DURING THE PAST 10 YEARS FOR WHICH THE BIDDER, OR A MEMBER OF THE BIDDER'S ORGANIZATION, RECEIVED AN UNSATISFACTORY PERFORMANCE RATING, WAS CITED FOR OSHA VIOLATIONS OR FAILED TO COMPLETE WORK.

(a)

PROJECT:	NAME OF OWNER:
LOCATION: <i>Address, City, State</i>	
EXPLAIN:	

(b)

PROJECT:	NAME OF OWNER:
LOCATION: <i>Address, City, State</i>	
EXPLAIN:	

*(Add sheets if necessary.)*

12. LIST MAJOR CONSTRUCTION EQUIPMENT, FACILITIES OR AIDS THAT BIDDER REPRESENTS IT POSSESSES OR CAN OBTAIN IN TIME TO PERFORM THE WORK; INDICATING WHETHER OWNED OR RENTED AND WHERE OBTAINED:

EQUIPMENT	OWNED	LEASED	RENTED	RENTAL AGENT NAME	TELEPHONE
(a)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
(b)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
(c)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
(d)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
(e)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

13. BIDDER REFERS TO THE FOLLOWING BANK(S) AS TO FINANCIAL RESPONSIBILITY OF BIDDER:

(a)

NAME OF BANK:	
BUSINESS ADDRESS:	
CONTACT NAME:	TELEPHONE:

(b)

NAME OF BANK:	
BUSINESS ADDRESS:	
CONTACT NAME:	TELEPHONE:

14. INSURANCE AND SURETY COMPANIES AND AGENTS WHO WILL PROVIDE THE REQUIRED INSURANCE AND BONDS ON THIS CONTRACT:

(a)

NAME OF COMPANY:	TYPE OF INSURANCE OR BOND:
BUSINESS ADDRESS:	
AGENT'S NAME:	TELEPHONE:

(b)

NAME OF COMPANY:	TYPE OF INSURANCE OR BOND:
BUSINESS ADDRESS:	
AGENT'S NAME:	TELEPHONE:

*(Add sheets if necessary.)*

*Note: The above Bidder's Qualifications form is part of the Bid. Signing the Bid Form shall also constitute signature of this form.*

*By Signing the Bid Form, the Contractor permits the City to contact the Owner of each sample project submitted above.*

END OF SECTION

SECTION 00 45 16

RELEASE AND WAIVER AGREEMENT

STEAM PIPE REPAIR AT LARKIN AND MCALLISTER  
(San Francisco Public Works Sourcing Event ID 0000004818)

This Release and Waiver Of Liability (hereinafter the "Release") is entered into between the City and County of San Francisco through San Francisco Public Works and \_\_\_\_\_, a Bidder.

**RECITALS**

1. The City and County of San Francisco through its Department of Public Works has issued Bid Documents for Sourcing Event ID 0000004818 with a requirement that Bidders submit certain information to demonstrate their qualifications to perform the Work for the STEAM PIPE REPAIR AT LARKIN AND MCALLISTER.
2. In accordance with the Bid Documents, Bidder has submitted information pertaining to its qualifications, including a list of projects and project owners/owner representatives as references for its qualifications.
3. The City seeks candid comments on the Bidder's performance on the listed projects from the owners and the owners' representatives.

**RELEASE AND WAIVER**

Bidder hereby fully and forever releases, exonerates, discharges, and covenants not to sue, the City, its commissions and boards, officers and employees, and all individuals and entities furnishing comments on Bidder's performance, from and for, and does hereby waive, any and all claims, causes of action, demands, damages and any and all other liabilities of any kind or description, in law, equity, or otherwise, arising out of information furnished about Bidder's performance on the projects that Bidder has identified pursuant to Recital number 2, above.

**INTENDED BENEFICIARIES**

The City, its commissions and boards, officers and employees and all individuals and entities furnishing any information relating to Bidder's qualifications are intended beneficiaries of this Release and Waiver and are entitled to enforce its terms.

\_\_\_\_\_  
Signature of Bidder or Authorized Representative

\_\_\_\_\_  
Title

\_\_\_\_\_  
Bidder's Name

\_\_\_\_\_  
Date

END OF SECTION

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## SECTION 00 45 60

## HIGHEST PREVAILING WAGE RATE CERTIFICATION

Bidder, by submitting the attached Bid Form, hereby acknowledges that Bidder has read the San Francisco Charter section A7.204, San Francisco Administrative Code section 6.22(e), and California Labor Code section 1770 et. seq.

Bidder further acknowledges and certifies that, if awarded the Contract, Bidder will comply with the requirement that any person performing labor or rendering service under a contract for public work or improvement shall be paid not less than the highest general prevailing rate of wages in private employment for similar work. Bidder is aware that failure to comply with such wage provision shall result in a forfeiture of back wages due plus the penalties as set forth in Labor Code section 1775, but not less than \$50 per day per worker, and may result in disqualification as a contractor or subcontractor on any public work or improvement for the City and County of San Francisco for a period of up to five years.

Bidder further attests by submitting the attached Bid Form, that Bidder will require from all of its subcontractors that they acknowledge having read San Francisco Charter section A7.204, San Francisco Administrative Code section 6.22(e), and California Labor Code section 1770 et. seq., and that they will comply with the same requirements under this Contract.

*Note: The above Certification is part of the Bid. Signing the Bid Form shall also constitute signature of this Certification.*

*Bidder must submit this certification with its Bid.*

END OF SECTION

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SECTION 00 45 78

CERTIFICATE OF BIDDER REGARDING CONTRACTING IN STATES THAT ALLOW DISCRIMINATION

Bidder, by submitting the attached Bid Form, hereby acknowledges that Bidder has read San Francisco Administrative Code Chapter 12X "Prohibiting City Travel and Contracting in States that Allow Discrimination" ("Chapter 12X") and understands that the City and County of San Francisco cannot enter into contracts with companies with United States headquarters in states that perpetuate discrimination against LGBT individuals or have restrictive abortion laws ("Covered States") or where any or all of the work on the contract will be performed in Covered States.

I \_\_\_\_\_, certify that at the time of submitting my Bid, the address of the United States headquarters for my company is \_\_\_\_\_.

I will notify the City if my company's headquarters moves. I also certify that none of the Work performed on this Contract will be performed in any Covered State.

\_\_\_\_\_  
Signature of Bidder or Authorized Representative

\_\_\_\_\_  
Print Name of Authorized Representative

\_\_\_\_\_  
Position in Firm or Corporation

- Notes:
- The text of Admin Code Chapter 12X and a list of Covered States is posted at this website: <https://oag.ca.gov/ab1887>

*Bidder must submit this completed form with its Bid.*

END OF SECTION

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SECTION 00 45 80  
NONCOLLUSION AFFIDAVIT

TO THE DIRECTOR OF PUBLIC WORKS, CITY AND COUNTY OF SAN FRANCISCO

In accordance with California Public Contract Code section 7106 the Bidder declares that the Bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the Bid is genuine and not collusive or sham; that the Bidder has not directly or indirectly induced or solicited any other Bidder to put in a false or sham Bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any Bidder or anyone else to put in a sham Bid, or that anyone shall refrain from Bidding; that the Bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the Bid price of the Bidder or any other Bidder, or to fix any overhead, profit, or cost element of the Bid price, or of that of any other Bidder, or to secure any advantage against the public body awarding the Contract of anyone interested in the proposed Contract; that all statements contained in the Bid are true; and, further, that the Bidder has not, directly or indirectly, submitted his or her Bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham Bid.

*Note: The above Noncollusion Affidavit is part of the Bid. Signing the Bid Form shall also constitute signature of this Noncollusion Affidavit. Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.*

*Bidder must submit this form with its Bid.*

END OF SECTION

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SECTION 00 45 82

CERTIFICATION OF BIDDER REGARDING DEBARMENT AND SUSPENSION\*

The Bidder, by signing the attached Bid Form, under penalty of perjury, certifies that, except as noted below, the Bidder and its principals:

1. are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by a government agency;
2. have not within a 3-year period preceding this Bid been convicted of or had a civil judgment rendered against us for: (i) commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state or local) transaction or contract under a public transaction; (ii) violation of federal or state antitrust statutes; or (iii) commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
3. are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state or local) with commission of any of the offenses enumerated in item 2 above; and
4. have not within a 3-year period preceding this Bid had one or more public transactions (federal, state or local) terminated for cause or default.
5. Where the Bidder is unable to certify to any of the statements in this certification because it currently violates or has previously violated the above conditions 1 to 4, such prospective participant shall provide a description of each instance of violation and attach an explanation to this Bid. The Bidder declares the following exceptions to the above representations: *(If there are exceptions to this Certification, insert the exceptions in the space provided below.)*

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Exceptions will not necessarily result in denial of award of the Contract, but will be considered in determining Bidder responsibility. For each exception noted above, Bidder shall indicate below to whom it applies, name of the government entity and dates of action:

<u>Exception</u>	<u>Person</u>	<u>Government Entity</u>	<u>Dates Inclusive</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

*\*Fulfills requirements of Title 49, CFR, Part 29*

*Note: The above Certification is part of the Bid. Signing the Bid Form shall also constitute signature of this Certification. Providing false information may result in criminal prosecution or administrative sanctions.*

*Bidder must submit this completed form with its Bid.*

END OF SECTION

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SECTION 00 49 00

SUPPLEMENTARY BIDDING FORMS CHECKLIST

*To be submitted after bid opening for:*

**STEAM PIPE REPAIR AT LARKIN AND MCALLISTER  
(San Francisco Public Works Sourcing Event ID 0000004818)**

A. Bidders shall immediately submit the following completed forms and additional sheets as necessary:

- Experience Statement (Section 00 49 12).
- Certification of Subcontractor, Lower-Tier Subcontractor or Supplier Regarding Debarment and Suspension (Section 00 49 14), completed by each subcontractor, lower-tier subcontractor and supplier for lower tier covered transactions of \$25,000 or more.

Submit above forms to: Contract Administration Division via email at [contractadmin.staff@sfdpw.org](mailto:contractadmin.staff@sfdpw.org) with subject line "**Supplementary Bidding Forms for Sourcing Event ID No. 0000004818 from <Bidder Name>**"

END OF SECTION

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SECTION 00 49 12

EXPERIENCE STATEMENT

Refer to Section 00 21 13 (Instructions to Bidders – Contractor Bidder Qualifications) for instructions. Add additional sheets, as necessary, to demonstrate compliance with the requirements specified in Section 00 21 13. RESUMES WILL NOT BE ACCEPTED IN LIEU OF COMPLETED EXPERIENCE STATEMENT FORMS.

1. EXPERIENCE FOR (CHECK ONE): <input type="checkbox"/> Key Team Member ; <input type="checkbox"/> Subcontractor	
2. PROJECT POSITION OR SUBCONTRACTOR WORK:	
3. NAME OF PROPOSED PERSON OR SUBCONTRACTOR:	4. TELEPHONE:
5. BUSINESS ADDRESS:	
6. NUMBER OF YEARS WITH BIDDING CONTRACTOR:	7. TOTAL NUMBER OF YEARS EXPERIENCE IN CONSTRUCTION INDUSTRY:
8. IS PROPOSED PERSON EMPLOYED BY BIDDER? <input type="checkbox"/> YES; <input type="checkbox"/> NO; IF "NO", LIST NAME AND PHONE OF EMPLOYER:	
9. NAME OF EMPLOYER:	10. TELEPHONE:

**Project Experience:**

(a)

PROJECT NAME:	
POSITION OR SCOPE OF WORK: <input type="checkbox"/> CHECK BOX IF PROJECT WAS CONSIDERED AN EMERGENCY	
DATES SPENT AT PROJECT:	PROJECT COST: \$
DESCRIPTION OF POSITION OR SCOPE OF WORK:	
NAME OF OWNER'S REPRESENTATIVE:	
TITLE:	TELEPHONE:
BUSINESS ADDRESS:	

(b)

PROJECT NAME:	
POSITION OR SCOPE OF WORK: <input type="checkbox"/> CHECK BOX IF PROJECT WAS CONSIDERED AN EMERGENCY	
DATES SPENT AT PROJECT:	PROJECT COST: \$
DESCRIPTION OF POSITION OR SCOPE OF WORK:	
NAME OF OWNER'S REPRESENTATIVE:	
TITLE:	TELEPHONE:
BUSINESS ADDRESS:	

(c)

PROJECT NAME:	
POSITION OR SCOPE OF WORK: <input type="checkbox"/> CHECK BOX IF PROJECT WAS CONSIDERED AN EMERGENCY	
DATES SPENT AT PROJECT:	PROJECT COST: \$
DESCRIPTION OF POSITION OR SCOPE OF WORK:	
NAME OF OWNER'S REPRESENTATIVE:	
TITLE:	TELEPHONE:
BUSINESS ADDRESS:	

(d)

PROJECT NAME:	
POSITION OR SCOPE OF WORK: <input type="checkbox"/> CHECK BOX IF PROJECT WAS CONSIDERED AN EMERGENCY	
DATES SPENT AT PROJECT:	PROJECT COST: \$
DESCRIPTION OF POSITION OR SCOPE OF WORK:	
NAME OF OWNER'S REPRESENTATIVE:	
TITLE:	TELEPHONE:
BUSINESS ADDRESS:	

(e)

PROJECT NAME:	
POSITION OR SCOPE OF WORK: <input type="checkbox"/> CHECK BOX IF PROJECT WAS CONSIDERED AN EMERGENCY	
DATES SPENT AT PROJECT:	PROJECT COST: \$
DESCRIPTION OF POSITION OR SCOPE OF WORK:	
NAME OF OWNER'S REPRESENTATIVE:	
TITLE:	TELEPHONE:
BUSINESS ADDRESS:	

*Copy this page as needed to provide a complete listing.*

END OF SECTION

SECTION 00 49 14

CERTIFICATION OF SUBCONTRACTOR, LOWER-TIER SUBCONTRACTOR OR SUPPLIER REGARDING DEBARMENT AND SUSPENSION\*

I, \_\_\_\_\_, by affixing my signature hereto, under penalty of perjury, hereby certify that, except as noted below, that my principals and I are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any government agency.

Where the subcontractor, lower-tier subcontractor or supplier is unable to certify to any of the statements in this certification because it currently violates or has previously violated the above conditions of the certification, such subcontractor, lower-tier subcontractor or supplier shall provide description of each instance of violation and attach an explanation to this Document. The subcontractor, lower-tier subcontractor or supplier declares the following exceptions to the above representations: *(If there are exceptions to this Certification, insert the exceptions in the space provided below.)*

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Exceptions will not necessarily result in denial of award of the Contract, but will be considered in determining Bidder responsibility. For each exception noted above, indicate below to whom it applies, name of the government entity and dates of action:

<u>Exception</u>	<u>Person</u>	<u>Government Entity</u>	<u>Dates Inclusive</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

\_\_\_\_\_  
Name of Firm, Corporation, Partnership or Joint Venture

\_\_\_\_\_  
Name and Title of Authorized Representative

\_\_\_\_\_  
Signature of Bidder or Authorized Representative

\_\_\_\_\_  
Date

**NOTICE:** Providing false information may result in criminal prosecution or administrative sanctions.

*\*Fulfills requirements of Title 49, CFR, Part 29 (applicable to all subcontracts, purchase orders and other lower tier transactions of \$25,000 or more)*

Submit this completed form within 10 working days after date of the City's notification of the lowest Bidder to: Contract Administration Division, San Francisco Public Works, 49 South Van Ness Avenue, Suite 1600, San Francisco, California 94103.

END OF SECTION

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## SECTION 00 52 00

## AGREEMENT FORM

THIS AGREEMENT made for the convenience of the parties this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_ by and between \_\_\_\_\_ located at \_\_\_\_\_ ("CONTRACTOR"), and the City and County of San Francisco, State of California (the "CITY"), acting through the Director (the "DIRECTOR") of the San Francisco Public Works, under and by virtue of the Charter and Administrative Code of the City and County of San Francisco.

WHEREAS, the DIRECTOR awarded this AGREEMENT to CONTRACTOR on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, under AWARD OF FORMAL CONTRACT ORDER NO. \_\_\_\_\_, as more fully appears in the formal record of the DIRECTOR:

**STEAM PIPE REPAIR AT LARKIN AND MCALLISTER**  
(San Francisco Public Works Contract No. 1000XXXX)

NOW, THEREFORE, CONTRACTOR, in consideration of the mutual covenants set forth in this AGREEMENT, promises and agrees to provide all services to construct the Project in accordance with the requirements of the Contract Documents, to perform the Work in good and workmanlike manner to the satisfaction of the DIRECTOR, to prosecute the Work with diligence from day to day to Final Completion, to furnish all construction work, labor and materials to be used in the execution and completion of the Work in accordance with the Contract Documents, and to otherwise fulfill all of CONTRACTOR's obligations under the Contract Documents, as and when required under the Contract Documents to the satisfaction of the DIRECTOR.

CONTRACTOR's execution of this AGREEMENT signifies its acceptance of the Contract Time and Contract Sum as being sufficient for completion of the Work, as well as acceptance of the other terms and conditions of the Contract Documents.

**ARTICLE 1 - CONTRACT DOCUMENTS; CONTRACTOR'S GENERAL RESPONSIBILITIES**

- 1.01 Contract Documents. CONTRACTOR shall Provide all Work according to the Contract Documents, which are incorporated into and made a part of this AGREEMENT by this reference, and all labor and materials used in providing the Work shall comply with the Contract Documents. The Contract Documents, which comprise the entire agreement between CONTRACTOR and the CITY concerning the Provision of the Work, are defined in the General Conditions (Section 00 72 00). Any undefined term used in this AGREEMENT shall be given the definition set forth in the General Conditions (Section 00 72 00).
- 1.02 Contractor's General Responsibilities. CONTRACTOR shall provide a fully functional, complete and operational Project constructed in accordance with the Contract Documents, including but not limited to, all investigations, analyses, surveys, engineering, procurement, materials, labor, workmanship, construction and erection, commissioning, equipment, shipping, subcontractors, material suppliers, permits, insurance, bonds, fees, taxes, duties, documentation, spare parts, materials for initial operation, security, disposal, startup, testing, training, warranties, guarantees, and all incidentals.

**ARTICLE 2 - CONTRACT TIME**

- 2.01 Completion Dates. As set forth in Section 00 73 02, the Work shall be Substantially Complete within **19** consecutive calendar days, beginning with and including the official date of Notice to Proceed as established by the DIRECTOR, and Finally Complete in accordance with Article 9 of the General Conditions (Section 00 72 00) within **60** consecutive calendar days after the date the CITY issues a Notice of Substantial Completion.

- 2.02 Critical Milestone Dates. Contractor shall complete all critical milestone Work during the periods specified in Section 00 73 02.
- 2.03 Liquidated Damages. It is understood and agreed by and between CONTRACTOR and the CITY that time is of the essence in all matters relating to the Contract Documents and that the CITY will suffer financial loss if the Work is not completed within the above-stated Contract Times, plus any extensions thereof allowed in accordance with Article 7 of the General Conditions (Section 00 72 00). The CITY and CONTRACTOR further understand and agree that the actual cost to CITY which would result from CONTRACTOR's failure to complete the Work within the Contract Time is extremely difficult, if not impossible, to determine. Accordingly, CONTRACTOR and the CITY agree that as liquidated damages for delay (but not as a penalty), CONTRACTOR shall pay the CITY the amounts set forth in Section 00 73 02 (Contract Time and Liquidated Damages) for each calendar day that expires after the above Contract Times and the Work remains incomplete.

### ARTICLE 3 – CONTRACT SUM

#### 3.01 Contract Sum.

- A. CONTRACTOR and the CITY agree that, upon performance and fulfillment of the mutual covenants set forth herein, the CITY will, in the manner provided by law and as set forth in the Contract Documents, pay or cause to be paid to CONTRACTOR the following price(s), as indicated in the Schedule of Bid Prices on the Bid Form (Section 00 41 00):
1. Lump sums for specified portions of the Work.
  2. The total of all Unit Price Items bid.
  3. The allowance specified.

Total awarded contract amount: \$\_\_\_\_\_.

The price(s) and amount set forth above shall be adjusted during performance or upon final completion of the Work in accordance with the Contract Documents.

- B. CONTRACTOR understands and agrees that the CONTRACTOR shall be solely responsible for providing all resources that may be necessary to provide the Work, and that the CITY shall have no obligation whatsoever to finance any part of such costs except with respect to those amounts which become due under the terms and conditions of the Contract Documents.

- 3.02 Certification by Controller. This AGREEMENT is subject to the budget and fiscal provisions of the CITY's Charter. Charges will accrue only after prior written authorization certified by the Controller, and the amount of the CITY's obligation hereunder shall not at any time exceed the amount certified for the purpose and period stated in such advance authorization.

### ARTICLE 4 – LABOR REQUIREMENTS

- 4.01 Applicable Laws and Agreements. Compensation and working conditions for labor performed or services rendered under this AGREEMENT shall be in accordance with the Contract Documents, the San Francisco Charter, and applicable sections of the San Francisco Administrative Code, including section 6.22(e).
- 4.02 Prevailing Wages. The latest Wage Rates for Private Employment on Public Contracts in the City and County of San Francisco, as determined by the San Francisco Board of Supervisors and the

Director of the California Department of Industrial Relations, and, when federal funds are involved, the current General Wage Determination Decisions, as determined by the U.S. Secretary of Labor, as same may be changed during the term of this AGREEMENT, shall be included in this AGREEMENT and are hereby incorporated by this reference. CONTRACTOR agrees that any person performing labor in the provision of the Work shall be paid not less than the highest general prevailing rate of wages as so determined. If federal funds are involved, where the minimum rate of pay for any classification differs among State, City and Federal wage rate determinations, the highest of the three rates of pay shall prevail. CONTRACTOR shall include, in any contract or subcontract relating to the Work, a requirement that all persons performing labor under such contract or subcontract shall be paid not less than the highest prevailing rate of wages for the labor so performed. CONTRACTOR shall require any contractor to provide, and shall deliver to CITY every month during any construction period, certified payroll reports with respect to all persons performing labor in the Provision of the Work.

- A. Copies of the latest prevailing wage rates are on file at the San Francisco Public Works, City and County of San Francisco, Nicolas King, 49 South Van Ness Avenue, Suite 1100, San Francisco, CA, 94103 and are also available on the Internet at <http://www.dir.ca.gov/oprl/DPreWageDetermination.htm>.

4.03 Penalties. CONTRACTOR shall forfeit to the CITY back wages due plus not less than fifty dollars (\$50.00) for:

- A. Each laborer, workman, or mechanic employed in the provision of the Work, for each calendar day or portion thereof during which such laborer, workman, or mechanic is not paid the highest general prevailing rate of wage for the work performed; or
- B. Each laborer, mechanic or artisan employed in the provision of the Work, for each calendar day or portion thereof during which such laborer, mechanic or artisan is compelled or permitted to work for a longer period than five days (Monday-Friday) per calendar week of eight hours each, and not compensated in accordance with the prevailing overtime standard and rate.

#### ARTICLE 5 – NOTICES TO PARTIES

5.01 Unless otherwise indicated in the Contract Documents, all written communications sent by the Parties may be by U.S. mail, e-mail or by fax, and shall be addressed as follows:

To CITY: [Insert name or title of department contact person, name of department, mailing address, e-mail address and fax number.]

To CONTRACTOR: [Insert name of Contractor, mailing address, e-mail address and fax number]

5.02 From time to time, the parties may designate new address information by notice in writing, delivered to the other Party.

5.03 The delivery to CONTRACTOR at the legal address listed above, as it may be amended upon written notice, or the depositing in any post office or post office box regularly maintained by the United States Postal Service in a postage paid wrapper directed to CONTRACTOR at such address, of any drawing, notice, letter or other communication shall be deemed legal and sufficient service thereof upon CONTRACTOR.

#### ARTICLE 6 – TERMINATION AND SURVIVAL

6.01 This AGREEMENT and the other Contract Documents shall terminate when all obligations required

to be performed by CONTRACTOR and the CITY have been fulfilled, unless sooner terminated as set forth in Article 14 of the General Conditions (Section 00 72 00).

- 6.02 The provisions of the Contract Documents which by their nature survive termination of the Contract, including without limitation all warranties, indemnities, payment obligations, and the City's right to audit Contractor's books and records, shall remain in full force and effect after termination of the Contract.

THIS SPACE WAS INTENTIONALLY LEFT BLANK

IN WITNESS WHEREOF, the CONTRACTOR and the CITY have hereunto set their hands and seals, and have executed this AGREEMENT in duplicate, the day and year first above written.

CONTRACTOR:

By my signature hereunder, as CONTRACTOR, I certify that I have read and understand the section captioned MacBride Principles – Northern Ireland included in Section 00 73 73, the CITY's statement urging companies doing business in Northern Ireland to move towards resolving employment inequities, encouraging compliance with the MacBride Principles, and urging San Francisco companies to do business with corporations that abide by the MacBride Principles.

I further certify that I am aware of the provisions of section 3700 of the Labor Code which require every employer to be insured against liability for worker's compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the Work of this Contract.

\_\_\_\_\_  
Principal

BY: \_\_\_\_\_

\_\_\_\_\_  
Title

CITY:

Recommended By:

Project Manager: \_\_\_\_\_

Division Manager: \_\_\_\_\_

Deputy Director: \_\_\_\_\_

Approved as to form:  
DENNIS J. HERRERA  
City Attorney

APPROVED:

\_\_\_\_\_  
Director

By: \_\_\_\_\_  
Deputy City Attorney

END OF SECTION

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**SECTION 00 72 00**  
**GENERAL CONDITIONS**  
**Crisis/Emergency Contracts**  
**(June 2018)**

**TABLE OF CONTENTS**

<u>Article or Paragraph Number &amp; Title</u>	<u>Page</u>
ARTICLE 1 - GENERAL.....	1
1.01 DEFINITIONS .....	1
1.02 CONTRACT DOCUMENTS AND CONTRACTING REQUIREMENTS .....	4
1.03 AMENDMENT OF CONTRACT DOCUMENTS .....	5
1.04 RESOLUTION OF CONFLICTING TERMS; PRECEDENCE OF CONTRACT DOCUMENTS .....	5
ARTICLE 2 - CITY'S RESPONSIBILITIES AND RIGHTS.....	5
2.01 ADMINISTRATION OF THE CONTRACT .....	5
2.02 RIGHT TO STOP THE WORK; CONTRACTOR'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH CONTRACT .....	5
2.03 RIGHT TO CARRY OUT THE WORK .....	5
2.04 RIGHT TO CHANGE, SUSPEND OR DELAY THE WORK.....	5
2.05 NO WAIVER OF RIGHTS.....	6
2.06 CITY NOT LIABLE FOR CONSEQUENTIAL DAMAGES .....	6
ARTICLE 3 - CONTRACTOR'S RESPONSIBILITIES.....	6
3.01 REVIEW OF CONTRACT DOCUMENTS AND SITE CONDITIONS .....	6
3.02 SUPERVISION OF THE WORK .....	6
3.03 UNFORESEEN OR DIFFERING CONDITIONS .....	6
3.04 SUPERINTENDENTS AND OTHER KEY TEAM MEMBERS .....	7
3.05 LABOR, MATERIALS AND EQUIPMENT.....	7
3.06 PERMITS, FEES AND NOTICES .....	7
3.07 RECORD DOCUMENTS .....	7
3.08 CONTRACTOR'S DAILY REPORT .....	7
3.09 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES .....	7
3.10 USE OF SITE .....	8
3.11 ACCESS TO WORK.....	8
3.12 CUTTING AND PATCHING.....	8
3.13 CLEANING UP AND REMOVING DEBRIS .....	8
3.14 INTELLECTUAL PROPERTY; ROYALTIES AND INDEMNIFICATION.....	8
3.15 WARRANTY .....	8
3.16 TAXES .....	9
3.17 INDEMNIFICATION.....	9
3.18 COMPLIANCE WITH LAWS.....	9
ARTICLE 4 - SUBCONTRACTORS.....	9
4.01 SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK .....	9
4.02 SUBCONTRACTUAL RELATIONS .....	9
ARTICLE 5 - CONSTRUCTION BY CITY OR BY SEPARATE CONTRACTORS .....	10
5.01 CITY'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS.....	10
5.02 COORDINATION.....	10

ARTICLE 6 - CLARIFICATIONS AND CHANGES IN THE WORK ..... 10

    6.01 GENERALLY ..... 10

    6.02 REQUESTS FOR INFORMATION, CLARIFICATIONS AND FIELD ORDERS ..... 10

    6.03 CHANGE ORDER REQUESTS (COR) ..... 10

    6.04 CHANGE ORDERS ..... 11

    6.05 UNILATERAL CHANGE ORDERS ..... 11

    6.06 COST OF CHANGE ORDER WORK ..... 11

ARTICLE 7 - TIME ..... 12

    7.01 PROGRESS AND COMPLETION ..... 12

    7.02 ADJUSTMENTS TO THE CONTRACT SUM FOR COMPENSABLE DELAY/ COMPENSABLE TIME  
EXTENSION ..... 13

ARTICLE 8 - INSPECTION AND CORRECTION OF WORK ..... 13

    8.01 UNCOVERING OF WORK ..... 13

    8.02 TESTS AND INSPECTIONS ..... 14

    8.03 CORRECTION OF NON-CONFORMING WORK AND GUARANTEE TO REPAIR PERIOD ..... 14

    8.04 ACCEPTANCE OF NON-CONFORMING WORK ..... 15

ARTICLE 9 - PAYMENTS AND COMPLETION ..... 15

    9.01 CONTRACT SUM ..... 15

    9.02 SCHEDULE OF VALUES FOR LUMP SUM WORK ..... 15

    9.03 PROGRESS PAYMENTS ..... 15

    9.04 RETENTION ..... 16

    9.05 PAYMENT AUTHORIZATION ..... 16

    9.06 WITHHOLDING PAYMENT ..... 16

    9.07 PARTIAL UTILIZATION ..... 16

    9.08 SUBSTANTIAL COMPLETION ..... 16

    9.09 FINAL COMPLETION AND FINAL PAYMENT ..... 16

ARTICLE 10 - INSURANCE AND BONDS ..... 17

    10.01 INSURANCE REQUIREMENTS ..... 17

    10.02 PERFORMANCE BOND AND PAYMENT BOND ..... 17

ARTICLE 11 - LABOR STANDARDS ..... 17

    11.01 PREVAILING WAGES ..... 17

    11.02 PAYROLLS ..... 17

    11.03 LABOR STANDARDS ENFORCEMENT ..... 18

ARTICLE 12 - SAFETY ..... 18

    12.01 PRECAUTIONS AND PROGRAMS ..... 18

    12.02 PERSONS AND PROPERTY ..... 19

    12.03 SAFETY PERMITS ..... 20

    12.04 EMERGENCIES ..... 20

ARTICLE 13 - CONTRACT AND GOVERNMENT CODE CLAIMS ..... 20

    13.01 CLAIMS GENERALLY ..... 20

    13.02 NOTICE OF POTENTIAL CLAIM ..... 21

    13.03 CONTRACT CLAIM ..... 21

    13.04 GOVERNMENT CODE CLAIM ..... 22

ARTICLE 14 - TERMINATION OR SUSPENSION OF THE CONTRACT ..... 23

14.01 NOTICE OF DEFAULT; TERMINATION BY THE CITY FOR CAUSE.....23  
14.02 TERMINATION BY THE CITY FOR CONVENIENCE .....23

ARTICLE 15 - MISCELLANEOUS PROVISIONS.....25

15.01 GOVERNING LAW AND VENUE .....25  
15.02 RIGHTS AND REMEDIES .....25  
15.03 COMPLETE AGREEMENT .....25  
15.04 SEVERABILITY OF PROVISIONS .....25

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## GENERAL CONDITIONS (June 2018)

[Note: Paragraphs with major revisions are identified with a vertical bar on the right side.]

### ARTICLE 1 - GENERAL

#### 1.01 DEFINITIONS

A. Wherever a word or phrase defined below, or a pronoun used in place thereof, is used in the Contract Documents (as defined in Paragraph 1.02), it shall have the meaning set forth in this Paragraph 1.01. References to related Paragraphs or Documents are provided for convenience but not to exclude other Paragraphs or Documents where such terms may be used. The colon (":") is employed in this Paragraph as a symbol for "shall mean". A colon also may be employed in these General Conditions or elsewhere in the Contract Documents to set off a paragraph title or heading from the text that follows or as a punctuation mark in a sentence to direct attention to the matter that follows.

1. **Accepted, Approved:** Accepted or approved, or satisfactory for the Work, as determined in writing by the City, unless otherwise specified. Where used in conjunction with the City's response to submittals, requests, applications, inquiries, proposals and reports by Contractor, the term "approved" shall be held to limitations of the City's responsibilities and duties as specified in these General Conditions. In no case shall the City's approval be interpreted as a release of Contractor from its responsibilities to fulfill the requirements of the Contract Documents or a waiver of the City's right under the Contract.

2. **Agreement:** The Agreement or Contract between the City and Contractor covering the Work to be performed; other Contract Documents are attached to the Agreement and made part thereof as provided herein. The Contract is fully executed upon certification by the Controller of the City and County of San Francisco as to the availability of construction funds. Refer to Section 00 52 00, Agreement Form.

3. **Application for Payment:** Written request submitted by Contractor to City for payment of Work completed in accordance with the Contract Documents and approved schedule of values. Refer to Article 9, Payments and Completion.

4. **Approved Equal:** Approved in writing by the City as being of equivalent quality, utility and appearance. Equivalent means equality in the opinion of the City Representative. The burden of proof of equality is the responsibility of Contractor. Refer to Division 01 for procedures for proposing substitutions.

5. **Bid, Bid Documents:** Refer to Section 00 21 13, Instructions to Bidders.

6. **Bidding Requirements:** The Sections listed in Section 00 01 10, Table of Contents, under the heading "Procurement Requirements."

7. **Bonds:** Bid, performance and payment (labor and materials) bonds and other instruments of security acceptable to the City. Refer to Paragraph 10.02, Performance Bond and Payment Bond, and Sections 00 43 13 and 00 61 13 for Bond forms.

8. **Bulletin:** Refer to "Field Order."

9. **By Others:** Work on this Project that is outside the scope of Work to be performed by Contractor under this Contract, but that will be performed by the City, other contractors, or other means and at other expense.

10. **Change Order:** A written instrument prepared by the City issued after the effective date of the Agreement and executed in writing by the City and Contractor, stating their agreement upon all of the following: (i) a change in the Work; (ii) the amount of the adjustment in the Contract Sum, if any; (iii) the extent of the adjustment in the Contract Time, if any; and (iv) an amendment to any other Contract term or condition. Refer to Article 6, Clarifications and Changes in the Work.

11. **Change Order Request (COR):** Refer to Paragraph 6.03, Change Order Requests and Proposed Change Orders.

12. **City:** The City and County of San Francisco, California, identified as such in the Agreement and referred to throughout the Contract Documents as if singular in number. The term "Owner" means the City and its authorized agent or representative.

13. **City Representative:** The authorized on-Site representative of the City, as identified at the pre-construction conference convened by the City, in the performance of on-Site inspection and administration of the Contract. All liaisons between the City and Contractor shall be directed through the City Representative.

14. **Claim:** A written demand or assertion by Contractor seeking an adjustment or interpretation of the terms of the Contract Documents, an adjustment in the Contract Sum or Contract Time, or both, or other relief with respect to the Contract Documents, including a determination of disputes or matters in question between the City and the Contractor arising out of or related to the Contract Documents of the performance of the Work, which is submitted in accordance with the requirements of the Contract Documents. Refer to Article 13.

15. **Clarification:** A document consisting of supplementary details, instructions or information issued by the City which clarifies or supplements the Contract Documents. Clarifications do not constitute a change in Contract Work, Contract Sum or an extension of Contract Times unless requested by Contractor and approved by the City in accordance with the Contract Documents. Refer to Article 6, Clarifications and Changes in the Work.

16. **Code:** The latest editions of the San Francisco Municipal Code, as well as any State of California, Federal, or local law, statute, ordinance, rule or regulation having jurisdiction or application to the Project.

17. **Commission:** Refers to the Contract awarding authority for City departments with boards or commissions (i.e., the San Francisco Public Utilities Commission, the San Francisco Recreation and Park Commission, the San Francisco Port Commission, the San Francisco Airport Commission, or the Board of Directors of the San Francisco Municipal Transportation Agency, as appropriate). Refer to Section 00 52 00, Agreement Form.

18. **Contract:** Refer to Paragraph 1.02, Contract Documents and Contracting Requirements.

19. **Contract Documents:** Refer to Paragraph 1.02, Contract Documents and Contracting Requirements.

20. **Contract Sum:** The sum stated in the Agreement and, including authorized adjustments, the total amount payable by the City to Contractor for the performance of the Work under the Contract Documents. Refer to Section 00 52 00, Agreement Form.

21. **Contract Time(s):** The number of consecutive days to: (i) achieve Substantial Completion; (ii) complete the Work so that it is ready for final acceptance as evidenced by the City's issuance of written acceptance as required by section 6.22(k) of the San Francisco Administrative Code; and (iii) achieve any interim Milestones specified in the Contract Documents.

22. **Contracting Requirements:** The Contracting Requirements establish the rights and responsibilities of the parties and include these General Conditions (Section 00 72 00) and the Sections as listed under Contracting Requirements in the Table of Contents (Section 00 01 10).

23. **Contractor:** The person or entity with whom the City has executed the Agreement and identified as such therein and referred to throughout the Contract Documents as if singular in number and neuter in gender. The term "Contractor" means Contractor or its authorized representative.

24. **Critical Path:** A continuous chain of activities with zero float running from the start event to the finish event in the schedule.

25. **Day:** Reference to "day" shall be construed to mean a calendar day of 24 hours, unless otherwise specified.

26. **Default:** Refer to Paragraph 14.01, Notice of Default; Termination by the City for Cause.

27. **Delivery:** In reference to an item specified or indicated shall mean for the Contractor and/or Supplier to have delivered and to unload and store with proper protection at the Site. Refer to Paragraph 9.03, Progress Payments, for delivery to another (off-Site) location.

28. **Department Head:** The contracting officer for the Contract (i.e., the General Manager of the San Francisco Public Utilities Commission, the Director of San Francisco Public Works, the Executive Director of the Port of San Francisco, the General Manager of the San Francisco Recreation and Parks Department, the Director of Transportation of the San Francisco Municipal Transportation Agency, or the Director of the San Francisco International Airport, as appropriate), or his/her designee, acting directly or through properly authorized representatives, agents, and consultants, limited by the particular duties entrusted to them. Refer to Section 00 52 00, Agreement Form.

29. **Designated, Determined, Directed:** Required by the City, unless otherwise specified. Refer to Paragraph 2.01, Administration of the Contract.

30. **Differing Conditions:** Refer to Paragraph 3.03, Unforeseen or Differing Conditions.

31. **Division:** A grouping of sections of the Specifications describing related construction products and activities. Refer to Section 00 01 10, Table of Contents, for a listing of Division and section numbers and titles.

32. **Drawings:** The graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams.

33. **Effective Date of the Agreement:** The date indicated in the Agreement on which it was executed, but if no such date is indicated it shall mean the date on which the Agreement is signed by the last of the two parties to sign, or when the Controller of the City and County of San Francisco certifies the availability of funds, whichever is later.

34. **Field Order:** A written order issued by the City which provides instructions or requires minor changes in the Work but which does not involve a change in the Contract Sum or the Contract Time. Refer to Paragraph 6.02, Request for Information, Clarifications and Field Orders.

35. **Final Completion:** The date of written acceptance of the Work by the City, issued in accordance with section 6.22(k) of the San Francisco Administrative Code, when the Contract Work has been fully and

satisfactorily completed in accordance with the Contract Documents.

36. **Furnish:** Purchase and deliver to the Site, including proper storage only; no installation is included. The term "Furnish" also means to supply and deliver to the Site.

37. **General Requirements:** The General Requirements include all Documents in Division 1, and govern the execution of the Work of all sections of the Specifications.

38. **Guarantee To Repair Period:** The period specified in Paragraph 8.03 or Division 1 during which Contractor must correct Non-conforming Work.

39. **Indicated:** Shown or noted on the Drawings or written in the Specifications.

40. **Install:** Apply, connect or erect items for incorporation into the Project; Furnishing or Supplying is not included. The term "Install" also describes operations at the Site, including unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.

41. **Installer:** A person engaged by Contractor, its Subcontractor or Lower-Tier Subcontractor for performance of a particular element of construction at the Site, including installation, erection, application and similar required operations.

42. **Item:** A separate, distinct portion of the whole Work, which may comprise material, equipment, article, or process.

43. **Lower-Tier Subcontractor or Supplier:** A person or entity who has a direct contract with a Subcontractor or Supplier, or with another Lower-Tier Subcontractor or Supplier, to perform a portion of the Work at the Site or to furnish materials or equipment to be incorporated in the Work by Contractor, Subcontractor or Lower-Tier Subcontractor, as applicable.

44. **Milestone:** A principal date or time specified in the Contract Documents relating to an intermediate event prior to Substantial Completion.

45. **Modification:** A document incorporating one or more Change Orders approved by the City to comply with the Certification by Controller requirements of the City's Charter as stated in Section 00 52 00.

46. **Non-conforming Work:** Work that is unsatisfactory, faulty, defective, omitted, incomplete or deficient; Work that does not conform to the requirements of the Contract Documents; Work that does not meet the requirements of inspection, reference standards, tests, or approval referred to in the Contract Documents; or Work that has been damaged or disturbed by Contractor's operations contrary to the Contract Documents prior to Final Completion.

47. **Notice of Default:** Refer to Paragraph 14.01, Notice of Default; Termination by the City for Cause.

48. **Notice of Potential Claim:** Refer to Paragraph 13.02, Notice of Potential Claim.

49. **Notice of Substantial Completion:** The written notice issued by the City to Contractor acknowledging that the Work is Substantially Complete as determined by the City. Said Notice shall not be considered as final acceptance of any portion of the Work or relieve Contractor from completing the punch list items attached to said Notice within the specified time and in full compliance with the Contract Documents.

50. **Notice to Proceed or "NTP":** The written notice issued by the City to Contractor authorizing Contractor to proceed with the Work and establishing the date of commencement of the Contract Time. The Contract Documents may specify more than one NTP applicable to different phases of the Work.

51. **Owner:** Refer to "City."

52. **Paragraph:** A paragraph under an Article of these General Conditions. Refer to "General Conditions-Table of Contents" for a listing of Article and Paragraph numbers and titles.

53. **Partial Utilization:** Right of the City to use a portion of the Work prior to Substantial Completion of the Work.

54. **Project:** Refer to "Work".

55. **Project Manual:** The bound written portion of the Contract Documents prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which consists of the Procurement and Contracting Sections and Specification Sections and may include schedules, is contained in Section 00 01 10, Table of Contents.

56.

57. **Provide:** Furnish and Install or Supply and Install complete in place at the Site.

58. **Punch List / Final Completion:** A punch list prepared by the City identifying deficient Items to be corrected by Contractor prior to Final Completion. Refer to Paragraph 9.09, Final Completion and Final Payment.

59. **Punch List / Substantial Completion:** The list provided by the City identifying Items that shall be corrected or completed before the City considers the Work Substantially Complete. Refer to Paragraph 9.08, Substantial Completion.

60. **Quality Assurance (QA):** All those planned and systematic actions necessary to provide adequate confidence that a Quality Control Program has been applied.

61. **Quality Control (QC):** Those actions that control and measure the characteristics of an item, process, or facility against established requirements to ensure that a product or service will satisfy given requirements for quality.

62. **Reference Documents:** Refer to Section 00 21 13, Instructions to Bidders, and Section 00 31 00 for identification of Reference Documents, if any.

63. **Regular Working Hours:** 7:00 a.m. to 5:00 p.m., Monday through Friday, except City legal holidays.

64. **Request for Information (RFI):** A document prepared by Contractor requesting information from the City regarding the Project or Contract Documents.

65. **Request for Substitution (RFS):** A request from Contractor in accordance with the conditions specified in Division 01 to substitute a material, product, thing or service specified in the Contract Documents with an equal material, product, thing or service.

66. **Required:** In accordance with the requirements of the Contract Documents.

67. **Resident Engineer:** See "City Representative."

68. **Samples:** Physical examples of materials, equipment, or workmanship that are submitted for adjudication of their compliance with the specification.

69. **Section:** Refer to Section 00 01 10, Table of Contents, for a listing of the Sections.

70. **Shop Drawings:** All drawings, diagrams, illustrations, schedules and other data or information which are prepared or assembled by or for Contractor and submitted to City.

71. **Site:** Geographical location of the Project as indicated elsewhere in the Contract Documents.

72. **Special Provisions:** The part of the Contract Documents that amends, modifies, or supplements these General Conditions. The Special Provisions include the 00 73 00-series Sections as listed in Section 00 01 10, Table of Contents.

73. **Specifications:** The portion of the Project Manual comprising Division 01 through Division 49 and listed in Section 00 01 10, Table of Contents, consisting of requirements and technical descriptions of materials, equipment, systems, standards and workmanship for the Work, and performance of related administrative services.

74. **Specified:** Written or indicated in the Contract Documents.

75. **Subcontractor:** A person or entity who has a direct contract with Contractor to perform a portion of the Work. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in

number and neuter in gender and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor. The term "Subcontractor" shall also include contracts assigned to Contractor if so provided in the Supplementary Conditions or specified in the General Requirements (Division 01).

76. **Substantial Completion:** The stage in the progress of the Work, when the Work (or a specified part thereof) is sufficiently complete in accordance with the Contract Documents including receipt of a temporary certificate of occupancy, if applicable, issued by the agency having jurisdiction over the Work so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended.

77. **Supplementary Conditions:** The part of the Contract Documents that amends, deletes or modifies these General Conditions. The Supplementary Conditions are set forth in Section 00 73 00.

78. **Supplier:** A manufacturer, fabricator, distributor, or vendor having a direct contract with Contractor or with a Subcontractor to furnish materials or equipment to be incorporated in the Work.

79. **Supply:** Refer to "Furnish."

80. **Total Bid Price:** Refer to Section 00 21 13, Instructions to Bidders.

81. **Unilateral Change Order:** A written Change Order to Contractor issued after the effective date of the Agreement in accordance with Paragraph 6.05.

82. **Unit Price Work:** Work to be paid for on the basis of unit prices and actual quantities of Work.

83. **Work:** The performance by Contractor of all its responsibilities and obligations set forth in the Contract Documents. Work shall include, but not be limited to, providing all labor, services, and documentation required by the Contract Documents. References in the Contract Documents to "Work" may be to items of Work..

84. **Working Day:** Any day of the week except Saturdays, Sundays and statutory holidays.

## 1.02 CONTRACT DOCUMENTS AND CONTRACTING REQUIREMENTS

A. The Contract Documents form the entire Contract for the construction of the Work, and consist of the following:

1. the Drawings, Project Manual, and all Addenda thereto;
2. the Agreement and other documents listed in the Agreement;

3. Change Orders, Unilateral Change Orders, Clarifications, and Field Orders issued after execution of the Contract; and

B. Nothing in the Contract Documents shall be construed to create a contractual relationship between the City and a Subcontractor, Supplier, Lower Tier Subcontractor or Supplier or a person or entity other than the City and Contractor.

### **1.03 AMENDMENT OF CONTRACT DOCUMENTS**

A. The Contract Documents may be amended after execution of the Agreement to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof in one or more of the following ways: (i) Change Order; (ii) Modification, or (iii) Unilateral Change Order.

B. In addition, the requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, in one or more of the following ways: (i) a Field Order; (ii) a Clarification, written interpretation or other bulletin issued by the City; or (iii) the City's review and acceptance of a shop drawing or sample in accordance with Paragraph 2.01.

### **1.04 RESOLUTION OF CONFLICTING TERMS; PRECEDENCE OF CONTRACT DOCUMENTS**

A. The Contract Documents are intended to be read together and integrated as a whole, and shall be construed and interpreted in a manner so as to avoid any conflicts to the extent possible.

## **ARTICLE 2 - CITY'S RESPONSIBILITIES AND RIGHTS**

### **2.01 ADMINISTRATION OF THE CONTRACT**

A. The City shall administer the Contract as described in the Contract Documents.

B. The Department Head will designate in writing an authorized representative with limited authority to act on behalf of the City. The City may at any time during the performance of this Contract make changes in the authority of any representative or may designate additional representatives in accordance with the City's Charter and codes. These changes will be communicated to Contractor in writing. Contractor assumes all risks and consequences of performing work pursuant to any order, including but not limited to instruction, direction, interpretation or determination, of anyone not authorized to issue such order.

### **2.02 RIGHT TO STOP THE WORK; CONTRACTOR'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH CONTRACT**

A. The City may order Contractor to stop the Work, or a portion thereof, until the cause for such order has been eliminated. Any such order to stop the Work shall be in writing, provide Contractor with an effective date for stopping Work, and shall be signed by the City Representative. Unless otherwise agreed to by the City, Contractor shall not be entitled to an adjustment of the Contract Time or Contract Sum as a result of any such order to stop the Work.

B. In the event that Contractor (i) fails to maintain current certificates of insurance on file with the City; (ii) commits criminal or unlawful acts; (iii) creates safety hazards; or (iv) commits acts or creates conditions that would have an immediate adverse impact on the well-being of the Project, the City, the public, and/or Contractor's employees, the City shall have the right to order Contractor to stop the Work immediately, without prior notice.

### **2.03 RIGHT TO CARRY OUT THE WORK**

A. In the event that Contractor fails to carry out the Work in accordance with the Contract Documents and fails to promptly correct or prosecute the Work within a 3-day period following a written notice of a deficiency from the City, or other such period as may be specified elsewhere in the Contract Documents, the City may, without prejudice to other remedies the City may have, correct such deficiencies at Contractor's expense.

### **2.04 RIGHT TO CHANGE, SUSPEND OR DELAY THE WORK**

A. By executing this Contract, Contractor agrees that the City has the right to do any or all of the following, which are reasonable and within the contemplation of the parties: (i) order changes, additions, deletions and extras to the Work after execution of the Contract and issued from time to time throughout the period of construction, regardless of their scope, number, cumulative value, or complexity, to correct errors, omissions, conflicts and ambiguities in the Contract Documents, or to implement discretionary changes to the scope of Work requested by the City; (ii) issue changes, additions, deletions and extras in a manner that is not in sequence with the as-built or as-planned progress of the Work; (iii) issue changes due to Unforeseen or Differing Conditions; (iv) suspend the Work, or parts thereof, or limit access to portions of or all of the Work, for the convenience of the City or in the interests of the Project; and (v) delay or disrupt the Work due to failure of the City to timely perform any contractual obligation.

## **2.05 NO WAIVER OF RIGHTS**

A. None of the following shall operate as a waiver of any provision of this Contract or of any power herein reserved by the City or any right to damages herein provided:

1. inspection by the City or its authorized agents or representatives; or
2. any order or certificate for payment, or any payment for, or acceptance of the whole or any part of the Work by the City; or
3. any extension of time; or
4. any position taken by the City or its authorized agents or representatives.

## **2.06 CITY NOT LIABLE FOR CONSEQUENTIAL DAMAGES**

A. The City, its boards and commissions, and all of their officers, agents, members, employees, and authorized representatives shall have no liability to Contractor for any type of special, consequential or incidental damages arising out of or connected with Contractor's Work. This limit of liability applies under all circumstances including, but not limited to, the breach, completion, termination, suspension, cancellation or rescission of the Work or this Contract, negligence or strict liability by the City, its boards and commissions, and their representatives, consultants or agents.

## **ARTICLE 3 - CONTRACTOR'S RESPONSIBILITIES**

### **3.01 REVIEW OF CONTRACT DOCUMENTS AND SITE CONDITIONS**

A. Contractor shall carefully study and compare each of the Contract Documents with the others and with information furnished by City, and shall promptly report in writing to City's Representative any errors, inconsistencies, or omissions in the Contract Documents or inconsistencies with applicable code requirements observed by Contractor.

B. Contractor shall take field measurements, verify field conditions, and carefully compare with the Contract Documents such field measurements, conditions, and other information known to Contractor before commencing the Work. Errors, inconsistencies, or omissions discovered at any time shall be promptly reported in writing to City's Representative.

C. If Contractor performs any construction activity which it knows or should know involves an error, inconsistency, or omission without notifying and obtaining the written consent of City's Representative, Contractor

shall be responsible for the resultant losses, including, without limitation, the costs of correcting Non-conforming Work.

D.

### **3.02 SUPERVISION OF THE WORK**

A. Contractor shall be solely responsible to fully and skillfully supervise and coordinate the Work and control the construction means, methods, techniques, sequences and procedures. Contractor shall be solely responsible for Contractor's failure to carry out the Work in accordance with the Contract Documents and for the acts or omissions of Contractor, its Subcontractors, or their agents or employees, or of any other persons performing portions of the Work. Contractor is solely responsible for maintaining safe conditions on the site at all times, in accordance with Article 12.

B. Contractor shall at all times permit the City, its agents and authorized representatives to: (i) visit and inspect the Work, the materials and the manufacture and preparation of such materials; (ii) subject them to inspection at all such places; and (iii) reject if the Work does not conform to the requirements of the Contract Documents.

C. Whenever Contractor desires to perform Work outside regular working hours, Contractor shall give notice to the City of such desire and request and obtain the City's written permission at least 3 working days in advance, or such other period as may be specified, except in the event of an emergency prior to performing such Work so that the City may make the necessary arrangement for testing and inspection.

D. During all disputes or disagreements with the City, Contractor shall carry on the Work and adhere to the progress schedule required to be submitted under the requirements of the Contract Documents. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as the City and Contractor may otherwise agree in writing.

### **3.03 UNFORESEEN OR DIFFERING CONDITIONS**

A. If Contractor encounters any of the following conditions at the Site, Contractor shall immediately, and before such conditions are disturbed, notify the City in writing.

1. Material that Contractor believes may be material that is hazardous waste, as defined in section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing Law.

2. Subsurface or latent physical conditions at the Site differing materially from those indicated by information about the Site made available to Contractor.

3. Unknown physical conditions at the Site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in the work of the character provided for in the Contract Documents.

B. Only if the City determines, in its sole and reasonable discretion, that the conditions reported do materially so differ, or do involve hazardous waste, and cause a decrease or increase in Contractor's cost or time required to perform all or part of the Work, will the City issue a Change Order as provided in Article 6 of these General Conditions.

C. Failure by Contractor to comply with the requirements of this Paragraph concerning the timing and content of any notice of unforeseen or differing site conditions or of any request for adjustment of the Contract Sum and/or Contract Time based on alleged unforeseen or differing site conditions shall be deemed a waiver of any Contract Claim or subsequent proceedings (e.g., Government Code Claims and litigation) by Contractor for adjustments to the Contract Sum or Contract Time arising from or relating to such conditions.

### **3.04 SUPERINTENDENTS AND OTHER KEY TEAM MEMBERS**

A. Contractor shall at all times be represented at the Site by Contractor's competent project manager or superintendent whom it has authorized in writing to make decisions and receive and carry out any instructions given by the City.

### **3.05 LABOR, MATERIALS AND EQUIPMENT**

A. Contractor shall employ only competent and skillful persons to perform the Work, and shall at all times maintain good discipline and order at the Site. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all materials, equipment, labor, transportation, construction equipment, machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, field offices, storage facilities and incidentals necessary for the performance, testing, start-up and completion of the Work.

### **3.06 PERMITS, FEES AND NOTICES**

A. Contractor shall pay all utility charges for temporary connections to the Work.

B. Unless otherwise provided in the Contract Documents, Contractor shall secure and pay for all permits (other than the building permit), governmental fees (other than permanent utility service connection fees), licenses, and inspections (other than inspections which are to be performed at the expense of the City as provided in Article 8) necessary for proper execution and

completion of the Work. Contractor shall secure all permits and pay all applicable permit fees prior to performing excavation in the public right of way. Contractor shall be solely responsible for coordinating and performing its excavation and street restoration operations in accordance with the conditions of such excavation permits and applicable regulations. Contractor shall be responsible for preparing and submitting for approval to the appropriate agency having jurisdiction all shop drawings, product data, and manufacturer's certificates as may be required under the conditions of applicable permits.

C. Contractor shall submit to the City Representative as a condition precedent to Final Completion signed permit documents including, but not limited to, job cards, permit applications, permit Drawings, and certificates of occupancy.

### **3.07 RECORD DOCUMENTS**

A. Contractor shall maintain a current record copy of all Contract Documents including, but not limited to, Drawings, Specifications, Addenda, Change Orders, RFIs, Clarifications, Field Orders, and approved shop drawings, samples and other submittals, in good order and clearly marked to record accurately the Work as actually constructed ("as-built"), including changes, adjustments, and other information relative to the Work as actually constructed, all in accordance with the Specifications.

B. Record documents shall be available for inspection by the City at all times and shall be delivered to the City prior to Substantial Completion.

### **3.08 CONTRACTOR'S DAILY REPORT**

A. Contractor shall complete, and submit to the City on the next day, consecutively numbered daily construction reports in accordance with Division 01.

B. In addition, whenever Force Account Work is in progress, Contractor shall complete and submit to the City detailed written daily Force Account Work reports.

### **3.09 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES**

A. Contractor shall review, approve, and submit to City, submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of City or of separate contractors. Contractor shall perform no portion of the Work requiring submittals until the respective submittal has been reviewed by City's Representative and no exceptions have been taken by City's Representative. Contractor shall not be relieved of responsibility for errors or omissions or deviations in submittals by City's review, acceptance, comment, or approval thereof.

### **3.10 USE OF SITE**

A. Contractor shall confine its operations at the Site to areas permitted by law, ordinances, permits and the Contract Documents and shall not unreasonably encumber the Site with materials or equipment.

B. Pumping, draining and control of surface and ground water and excavating or other earthwork shall be carried out so as to avoid endangering the Work or adjacent facility or property, or interrupting, restricting or otherwise infringing or interfering with the use thereof. Contractor shall conform to the Code and applicable laws and regulations and shall obtain all permits necessary to perform grading or excavation or dispose of surface or ground water or excavated materials at the Site.

C. Contractor shall not load nor permit any part of any structure to be loaded in a manner that will endanger the structure, nor shall Contractor subject part of the Work or adjacent property to stresses or pressures that will endanger it.

### **3.11 ACCESS TO WORK**

A. During the performance of the Work, the City and its authorized representatives, including City consultants, or other persons deemed necessary by any of them acting within the scope of the duties entrusted to them, may at any time, and for any purpose, enter upon the Work, the shops where any part of such Work may be in preparation, the facilities where any part of the Work may be in storage, or the factories where any materials for use in the Work are being, or are to be, manufactured. Contractor shall not require City personnel or City consultants performing necessary project-related functions on behalf of the City to sign visitor hold harmless agreements or similar agreements requiring the signatory to defend, hold harmless and/or indemnify Contractor for claims arising out of or relating to the Work, the Project, or the Site.

### **3.12 CUTTING AND PATCHING**

A. Contractor shall be responsible for performing, in accordance with the requirements of the Specifications, all cutting, fitting, and patching of the Work that may be required to make all parts fit together or to receive the work of other contractors shown on, or reasonably implied by, the Contract Documents for the completed Work.

B. Contractor shall not damage or endanger the Work, the project, or adjacent property by excavation or by cutting, patching or otherwise altering such construction. Contractor shall not cut or otherwise alter such construction by the City or a separate contractor except with written consent of the City. Contractor shall not withhold from the City Contractor's consent to cut or otherwise alter the Work.

### **3.13 CLEANING UP AND REMOVING DEBRIS**

A. Contractor shall keep the Site and surrounding area, including public areas immediately adjacent to the Site such as temporary pedestrian walkways and sidewalks, free from accumulation of excess materials, rubbish, graffiti, and debris. Prior to Substantial Completion Contractor shall remove from and about the Site excess materials, rubbish, Contractor's tools, construction equipment, and machinery and shall perform final cleaning as specified in accordance with the requirements of the Specifications.

### **3.14 INTELLECTUAL PROPERTY; ROYALTIES AND INDEMNIFICATION**

A. Contractor shall be responsible at all times for compliance with applicable patents, copyrights, trademarks, and/or other intellectual property rights held by others encompassing, in whole or in part, any invention, design, process, product, device, material, article or arrangement used, directly or indirectly, in the performance of the Work or incorporated into the Work.

B. Contractor shall pay, all royalties and license fees and assume all costs incident to the use in the performance of the Work or the incorporation into the Work of any invention, design, process, product, device, material, article or arrangement which is the subject of a patent right, copyright, trademark, and/or other intellectual property right held by others.

C. To the fullest extent permitted by law, Contractor shall save, defend, hold harmless, and fully indemnify the City and all its officers and employees connected with the Project, and all of their officers, agents, members, employees, authorized representatives, or any other persons deemed necessary by any of them acting within the scope of the duties entrusted to them, from all damages, claims for damage, costs, or expenses in law or equity, including attorney's fees and costs, that may at any time arise or be set up for any infringement or unauthorized use of any patent rights, copyrights, trademarks or other intellectual property claims by any person in consequence of the use by the City, or any of its officers, agents, members, employees, authorized representatives, or any other person deemed necessary by any of them acting within the scope of the duties entrusted to them, of articles to be supplied under the Contract and of which Contractor is not the patentee or assignee or does not have the lawful right to sell the same.

### **3.15 WARRANTY**

A. Contractor warrants and guarantees to the City that materials and equipment provided under the Contract shall be at least of the quality specified and new unless otherwise required or permitted by the Contract Documents and if no quality is specified, then the materials and equipment shall be of commercial grade, suitable for heavy public use in facilities of similar size

and complexity; that the Work will be free from defects, and that the Work will conform to the requirements of the Contract Documents.

B. Contractor's warranty excludes damage or defects caused by abuse, modifications to equipment by the City and not authorized by Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear. Testing shall not be construed as operation.

### **3.16 TAXES**

A. Contractor shall be responsible for paying all taxes applicable during the performance of the Work.

### **3.17 INDEMNIFICATION**

A. Contractor shall assume the defense of, indemnify and hold harmless the City, its boards and commissions, , and all of their officers, agents, members, employees, authorized representatives, or any other persons deemed necessary by any of them acting within the scope of the duties entrusted to them, from all claims, suits, actions, losses and liability of every kind, nature and description, including but not limited to attorney's fees, directly or indirectly arising out of, connected with or resulting from the performance of the Work. This indemnification shall not be valid in the instance where the loss is caused by the sole negligence or willful misconduct of any person indemnified herein. Contractor's obligations under this Paragraph apply regardless of whether or not such claim, suit, action, loss or liability was caused in part or contributed to by an Indemnitee. However, without affecting the rights of the City under any provision of this Contract, Contractor shall not be required to indemnify and hold harmless City for liability attributable to the active negligence of City, provided such active negligence is determined by agreement between Contractor and City or by the findings of a court of competent jurisdiction. In instances where City is shown to have been actively negligent and where City's active negligence accounts for only a percentage of the liability involved, the obligation of Contractor will be for that entire portion or percentage of liability not attributable to the active negligence of City.

B. Contractor's liability shall not be limited to the amount of insurance coverages required under the Contract Documents.

### **3.18 COMPLIANCE WITH LAWS**

A. Contractor shall keep itself fully informed of and comply with the Charter, ordinances and regulations of the City and other local agencies having jurisdiction over the Work, and all federal and state laws, regulations, orders or decrees in any manner affecting or applicable to the Contract Documents, the performance of the Work, or those persons engaged therein.

## **ARTICLE 4 - SUBCONTRACTORS**

### **4.01 SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK**

A. Under section 1725.5 of the California Labor Code, all Subcontractors who bid or work on a public works project must register and pay an annual fee to the California Department of Industrial Relations. No unregistered Subcontractor, regardless of the dollar amount of subcontract work, may be awarded a contract for public work on a public works project. Contractor shall not employ a Subcontractor who does not maintain a current registration with the California Department of Industrial Relations.

B. Contractor shall not employ a Subcontractor, Supplier or other person or entity that the City has determined unqualified or non-responsible. The City may give written notice of such determination prior to award of the Contract or at any time during the Contract Time, and upon receipt thereof Contractor shall provide replacement with a qualified person or entity. The City shall have the right of approval and shall not be responsible for added costs to Contractor, if any, of employing such replacement person or entity.

### **4.02 SUBCONTRACTUAL RELATIONS**

A. Contractor shall have an appropriate written agreement specifically binding each Subcontractor or Supplier to Contractor by the applicable terms and conditions of the Contract Documents, in the same manner Contractor is bound to the City. Each subcontract agreement shall preserve all rights of the City with regards to the Work to be performed by the Subcontractor or Supplier. All Subcontractors and Suppliers shall have similar agreements with Lower-Tier Subcontractor and Lower-Tier Suppliers. All Subcontractors and Suppliers shall be given copies of the contract documents to which the Subcontractor or Supplier will be bound, and upon written request of the Subcontractor or Supplier, shall have identified written terms and conditions of their proposed subcontract agreement that vary from the Contract Documents. Subcontractors and Suppliers shall fulfill the same requirements toward their respective proposed Lower-Tier Subcontractors and Lower-Tier Suppliers.

## **ARTICLE 5 - CONSTRUCTION BY CITY OR BY SEPARATE CONTRACTORS**

### **5.01 CITY'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS**

A. Should the Contract Documents indicate that construction work, or work of any other nature, be performed by other contractors or other forces within or adjacent to the limits of Work, or be underway at the time the Work was advertised for Bids, Contractor shall cooperate with all such contractors or forces to the end so as to avoid delay or hindrance to their work. The cost of such cooperation shall be considered as included in Contractor's bid price and no direct or additional payment will be made therefor.

B. The City reserves the right to perform other or additional work within or adjacent to the limits of Work at any time during the Contract by the use of other forces or contractors.

C. If the City gives Contractor written notice to vacate a location so that other work may be performed by other forces or contractors at the location(s) where Contractor is already performing Work, Contractor shall promptly suspend Work at that location and clean up and demobilize its operations from the location to the extent necessary as determined by the City to allow the other forces or contractors to perform their work. Contractor shall provide the City Representative written notice when cleanup and demobilization has been completed. The City Representative will issue to the other forces or contractors a notice to proceed with their work. After the date of said notice to proceed, Contractor shall allow proper and safe access to the Work at the subject location and shall schedule and coordinate its Work with the other contractors' work.

D. If Contractor requires access to a location where another contractor is performing work, Contractor shall request such access in writing from the City Representative. The City Representative will provide written notice to Contractor when the work of other forces or contractors at the subject location is completed, and upon receipt of such notification, Contractor shall have full access and shall commence or resume its operations in that location.

### **5.02 COORDINATION**

A. Contractor shall afford other contractors and the City reasonable opportunity for storage of materials at the Site, shall ensure that the execution of the Work properly coordinates with work of such contractors, and shall cooperate with such other contractors to facilitate the progress of the Work in such a manner as the City may direct.

## **ARTICLE 6 - CLARIFICATIONS AND CHANGES IN THE WORK**

### **6.01 GENERALLY**

A. The City may, at any time between the Notice to Proceed and Final Completion and without notice to Contractor's surety, order additions, deletions, or revisions in the Work by Change Order, Unilateral Change Order, or Field Order. Contractor shall promptly comply with such orders and proceed with the Work, which shall be performed under the applicable requirements of the Contract Documents.

B. Contractor shall not be entitled to an increase in the Contract Sum or an extension of the Contract Time if Contractor performs work that is not required by the Contract Documents as amended, modified, or supplemented in writing.

### **6.02 REQUESTS FOR INFORMATION, CLARIFICATIONS AND FIELD ORDERS**

A. Should there appear to Contractor to be a discrepancy in the Contract Documents, should questions arise as to the meaning or intent of the Contract Documents, or should the City's comments on submittals returned to Contractor appear to Contractor to change the requirements or scope of the Contract Documents, Contractor shall promptly submit a Request for Information ("RFI") to the City

B. Clarifications of the Contract Documents and Field Orders issued by the City shall be binding on Contractor and shall be promptly executed by Contractor. The City's right to clarify any element of the Contract Documents shall not be construed to entitle Contractor to a modification of the Contract Sum or a change in the Contract Time.

### **6.03 CHANGE ORDER REQUESTS (COR)**

A. COR Procedures: Should the City's Clarification or other written directive or determination, in the opinion of Contractor, materially exceed or change the requirements of the Contract Documents, Contractor shall submit to the City a written Change Order Request (COR) within 5 working days of receipt of the Clarification or other written directive or determination, unless additional time is allowed in writing by City Representative. A COR must state that it is a Change Order Request, state and justify the reason for the request, and specify the amount of any requested adjustment of the Contract Sum or Contract Time. Upon request of City Representative, Contractor shall submit such additional information as may be requested by City for the purpose of evaluating the COR. Failure to submit a timely, fully documented COR shall constitute a waiver of any future claim for additional compensation or time relating to such Work, including any claim for delay, disruption, extended overhead and other associated costs or damages.

B. COR Review: City will make a decision on the COR within a reasonable time after receipt of the COR. A final determination is any determination on a COR which states that it is final. If the City issues a final determination denying a COR in whole or in part, Contractor may contest the decision by filing a timely claim per Article 13 of these General Conditions. If the City does not issue a determination within the 10 working-day period, or such other period as set forth in a written notice, then the COR is deemed rejected, and the City's failure to issue a determination shall be treated as the issuance, on the last day of the applicable period, of a final decision denying the COR in its entirety.

#### **6.04 CHANGE ORDERS**

A. Execution of Change Orders; Modifications: When the City and Contractor agree on the total cost and time of a COR, the City will prepare for signatures of parties a Change Order to implement the changed Work. No oral instructions of any person whomsoever shall in any manner or degree modify or otherwise affect the terms of this Contract. Change Orders that result in an increase to the amount certified by the Controller for the Project are subject to the Certification by Controller requirements of the City's Charter (see Article 3 of Section 00 52 00) and are effective upon incorporation into an approved Modification.

B. Release of Claims: The parties agree to make good faith efforts to settle all Change Orders full and final at the time of Change Order execution. Accordingly, City and Contractor acknowledge and agree that Change Orders shall contain the following provision, unless and only if the City determines that good cause exists to use different release language for a specific change order:

"The compensation (time and cost) set forth in this Change Order comprises the total compensation due to Contractor, all Subcontractors and all Suppliers, for the Work or change defined in the Change Order, including impact on unchanged Work. By executing this Change Order, Contractor acknowledges and agrees on behalf of itself, all Subcontractors, and all Suppliers, that the stipulated compensation includes payment for all Work contained in the Change Order, plus all payment for the interruption of schedules, extended field and home overhead costs (if any), delay, and all impact, ripple effect or cumulative impact on all other Work under this Contract. The execution of this Change Order indicates that the Change Order constitutes full mutual accord and satisfaction for the change, and that the time and/or cost under the Change Order constitutes the total equitable adjustment owed the Contractor, all Subcontractors, and all Suppliers as a result of the change. The Contractor, on behalf of itself, all Subcontractors, and all Suppliers, agrees to waive all rights, without exception or reservation of any kind whatsoever, to file any further claim related to this Change Order. No further

claim or request for equitable adjustment of any type for any reasonably foreseeable cause shall arise out of or as a result of this Change Order or the impact of this Change Order on the remainder of the Work under this Contract."

C. Change Orders issued under this Article or extensions of Contract Time made necessary by reason thereof shall not in any way release any guarantees or warranties given by Contractor under the provisions of the Contract Documents, nor shall they relieve or release Contractor's sureties of bonds executed under such provisions. The sureties, in executing such bonds, shall be deemed to have expressly agreed to any such Change Orders and to any extension of time made by reason thereof. Contractor shall be responsible for giving notice of any change affecting the Work, Contract Sum or Contract Times that is required to be given to its sureties by the provisions of any bond.

#### **6.05 UNILATERAL CHANGE ORDERS**

A. General: When time does not allow for a Change Order to be negotiated, or when the City and Contractor are unable to agree on the cost or time required to complete the change in the Work, the City may issue a Unilateral Change Order instructing Contractor to proceed with a change in the Work based on the City's estimate of cost and time to perform the change in the Work. Upon receipt of a Unilateral Change Order, Contractor shall proceed with the ordered Work.

B. Protest: If Contractor disagrees with any terms or conditions set forth in a Unilateral Change Order and wishes to protest the Unilateral Change Order, Contractor shall submit, within 5 working days of receipt of the Unilateral Change Order, a complete Change Order Request (COR) in accordance with the requirements of Paragraph 6.03. If a COR is not timely submitted as required, Contractor waives all rights to additional compensation for said Work, and payment, which shall constitute full compensation for Work included in the Unilateral Change Order, will be made as set forth in the Unilateral Change Order. The City will review the COR and issue a determination per Para

#### **6.06 COST OF CHANGE ORDER WORK**

A. Compensation for Change Order Work shall be computed on the basis of one or more of the following:

1. Where the Work involved is covered by Unit Prices contained in the Contract Documents, by application of the Unit Prices to the quantities of the items involved.
2. Where Unit Prices are not applicable, a mutually agreed upon lump sum
3. Where Contractor and City cannot agree upon a lump sum, by Cost of Change Order Work plus Contractor Fee applicable to such Change Order Work, as provided in subparagraphs B through D below.

B. The term "Cost of Change Order Work" as used in this subparagraph 6.06 shall mean actual costs incurred or to be incurred by Contractor and each Subcontractor regardless of tier involved, and shall be limited to the following (to the extent the Contractor demonstrates that the costs are both reasonable and actually incurred, if such costs have been incurred):

1. Straight-time wages or salaries for employees employed at the Project site, or at fabrication sites off the Project site, in the direct performance of the Change Order Work.

2. Fringe Benefits and Payroll Taxes for employees employed at the Project site, or at fabrication sites off the Project site, in the direct performance of the Change Order Work.

3. Overtime wages or salaries, specifically authorized in writing by City's Representative, for employees employed at the Project site, or at fabrication sites off the Project site, in the direct performance of the Change Order Work.

4. Fringe Benefits and Payroll Taxes for overtime Work specifically authorized in writing by City's Representative, for employees employed at the Project site, or at fabrication sites off the Project site, in the direct performance of the Change Order Work.

5. Costs of materials and consumable items which are furnished and incorporated into the Change Order Work, as approved by City's Representative. Such costs shall be charged at the lowest price available to the Contractor but in no event shall such costs exceed competitive costs obtainable from other subcontractors, suppliers, manufacturers, and distributors in the area of the Project site. All discounts, rebates, and refunds and all returns from sale of surplus materials and consumable items shall accrue to City and Contractor shall make provisions so that they may be obtained.

6. Sales taxes on the costs of materials and consumable items which are incorporated into and used in the performance of the Change Order Work pursuant to Subparagraph 5 above.

7. Rental charges for necessary machinery and equipment, whether owned or hired, as authorized in writing by City's Representative, exclusive of hand tools, used directly in the performance of the Change Order Work. Such rental charges shall not exceed the current Equipment Rental Rates published by the California Department of Transportation for the area in which the work is performed. Such rental rates are found at <http://www.dot.ca.gov/hq/construc/equipment.html>. The charges for any machinery and equipment shall cease when the use thereof is no longer necessary for the Extra Work.

8. Additional costs of royalties and permits due to the performance of the Change Order Work.

9. The cost for Insurance and Bonds, if applicable, shall not exceed 2% of items in Subparagraph 1 through 8 above.

City and Contractor may agree upon rates to be charged for any of the items listed in this Subparagraph 6.06B. Contractor shall promptly refund to City any amounts (including associated mark-ups) in excess of the actual costs of such items.

C. Cost of Change Order Work shall not include any of the following: Supervision, Superintendent(s); Assistant Superintendent(s); Project Engineer(s); Project Manager(s); Scheduler(s); Estimator(s); Drafting or Detailing; Small tools (Replacement value does not exceed \$300); Office expenses including staff, materials and supplies; On-site or off-site trailer and storage rental and expenses; Site fencing; Utilities including gas, electric, sewer, water, telephone, facsimile, copier equipment; Data processing personnel and equipment; Federal, state, or local business income and franchise taxes; Overhead and Profit; or Costs and expenses of any kind or item not specifically and expressly included in subparagraph 6.06A.

D. The term "Contractor Fee" shall mean the full amount of compensation, both direct and indirect (including without limitation all overhead and profit), to be paid to Contractor for its own Work and the Work of all Subcontractors, for all costs and expenses not included in the Cost of Change Order Work, whether or not such costs and expenses are specifically referred to in subparagraph 6.06D. The Contractor Fee shall not be compounded. The Contractor Fee shall be computed as follows:

1. Fifteen percent (15%) of the cost of that portion of the Change Order Work to be performed by the prime contractor with its own forces.

2. Fifteen percent (15%) of the cost of that portion of the Change Order Work to be performed by a Subcontractor with its own forces, plus 5% for the prime contractor. Total combined Contractor and Subcontractor fee shall not exceed 20%.

3. Fifteen percent (15%) of the cost of that portion of the Change Order Work to be performed by a sub-subcontractor with its own forces, or any lower tier of Subcontractor, plus 5% for the Subcontractor, plus 5% for the prime contractor. Total combined Contractor, Subcontractor and all sub-subcontractor fee shall not exceed 25%.

## **ARTICLE 7 - TIME**

### **7.01 PROGRESS AND COMPLETION**

A. Contractor shall commence the Work as established in the Notice to Proceed and continuously prosecute the Work to its completion.

B. The Work of this Contract shall be brought to Substantial Completion and Final Completion, as determined by the City, in the manner provided for in the Contract Documents, from and after the official start date established in the written Notice to Proceed.

1. Issuance of a Notice of Substantial Completion may not precede the issuance of a Temporary Certificate of Occupancy, if such Temporary Certificate of Occupancy is required by the authority having jurisdiction over the Work.

2. During the time between Substantial Completion and Final Completion, Contractor shall complete the punch list work, but Contractor shall not disrupt the City's beneficial occupancy of the Project or any public use of the Work.

3. Final Completion is a condition precedent to final payment. The City will issue final payment to Contractor acknowledging that the Project is complete and the Work is acceptable to the City.

4. The specified limits of Contract Time may be changed only by a Change Order.

C. Contractor shall at all times keep on the premises sufficient material and employ sufficient supervision and workers to prosecute the Work at the rate necessary to reach completion of the Project within the specified limits of Contract Time required by the Contract Documents. Contractor shall not start the Work unless it has sufficient equipment and materials available for the Project to allow diligent and continuous prosecution of the Work.

D. Contractor shall be responsible to maintain its schedule so as not to delay the progress of the Project or the schedules of other contractors. Contractor is required by virtue of this Contract to cooperate in every way possible with other contractors in order to maintain its schedule and complete the Work within the specified limits of Contract Time. No additional compensation will be paid for such cooperation.

E. Should Contractor at any time during the progress of Work, refuse, neglect, or be unable for avoidable reasons to supply sufficient resources to prosecute the Work continuously and at the rate necessary to complete the Work within the specified limits of Contract Time, the City shall have the right to enter Default and terminate the Contract for cause as set forth in Paragraph 14.01.

#### **7.02 ADJUSTMENTS TO THE CONTRACT SUM FOR COMPENSABLE DELAY/ COMPENSABLE TIME EXTENSION**

A. To the maximum extent allowed by law, any adjustment of the Contract Sum as the result of delays shall be limited to the amounts specified in Article 6. Such adjustment shall, to the maximum extent allowed by law, constitute payment in full for all delay related costs (including costs for disruption, interruption and

hindrance, general conditions, on and off-site overhead and profit) of Contractor, its Suppliers and Subcontractors of all tiers and all persons and entities working under or claiming through Contractor in connection with the Project.

B. Absent extraordinary circumstances, extended home office overhead is not allowable. Extended home office overhead and its application to a compensable time extension will not be allowed unless Contractor demonstrates to the satisfaction of the City that each and every of the following conditions apply to the delay period: (i) the delay was caused by the City; (ii) such City-caused delay was of an indefinite (unknown) duration; (iii) the City-caused delay suspended most, if not all, project Work; (iv) the City caused delay resulted in a substantial disruption or decrease in the income stream from the project; (v) during the City-caused delay, Contractor was required to remain ready to resume Contract Work immediately; and (vi) Contractor was unable to secure comparable replacement work during the impacted period to replace the reduced cash flow from this project. If Contractor believes that it may be entitled to extended home office overhead, it must notify the City in writing. Within the time and in the format specified by the City, Contractor shall submit detailed evidence of entitlement and the requested rate, including all supporting evidence from which the City may make a determination. If the City determines that extended home office overhead is available, then the City shall have the discretion to determine the methodology for calculation of the rate.

### **ARTICLE 8 - INSPECTION AND CORRECTION OF WORK**

#### **8.01 UNCOVERING OF WORK**

A. No Work or portion of Work shall be covered until inspected by the City or other public authorities having jurisdiction as required by the Contract Documents.

B. If any part of the Work is covered contrary to the request or direction of the City Representative or other public authority having jurisdiction, or contrary to the requirements of the Contract Documents, Contractor must, upon written request, uncover it for inspection by the City or other public authorities having jurisdiction and subsequently cover the Work in accordance with the requirements of the Contract Documents without adjustment to the Contract Time or Contract Sum. The provisions and obligations set forth in this subparagraph shall apply even if the City or other public authorities having jurisdiction ultimately determine (after uncovering and inspection) that the underlying Work in question conforms to the requirements of the Contract Documents.

## 8.02 TESTS AND INSPECTIONS

A. All testing and inspection of the Work required by the Contract Documents (other than special inspections as set forth in subparagraph 8.02B below) shall be arranged and paid for by Contractor through an independent testing laboratory, unless specifically indicated in the Contract Documents to be the responsibility of the City or other authority having jurisdiction.

B. Special inspections to be performed by the City as specified in the Contract Documents or as required to comply with the Code or other agency having jurisdiction shall be performed at the City's expense. Contractor shall give the City Representative, the City's independent testing laboratory, special inspectors, and representatives from other authorities having jurisdiction a minimum of 10 working days notice, excluding weekends and City holidays, of when and where such special inspections are required so the City may arrange for the appropriate City representatives and inspectors, and representatives from other public authorities having jurisdiction, to be present to perform the necessary inspections or tests.

C. If the City or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included in subparagraph 8.02A, the City will order the performance of such services by qualified independent testing agencies, or consultants as may reasonably be required. The City shall bear such costs except as otherwise provided in subparagraph 8.02D.

D. If such testing, inspection or approval reveal failure of the portion of the Work to comply with requirements of the Contract Documents, Contractor shall bear all costs made necessary by such failure including costs of repeated procedures and compensation for the City's additional testing and inspection services and expenses.

1. If the City's observation of any inspection or testing undertaken pursuant to this Paragraph 8.02 reveals a failure in any one of a number of identical or similar items or elements incorporated in the Work to comply: (i) with the requirements of the Contract Documents or (ii) with laws, ordinances, rules, regulations, or orders of any public authority having jurisdiction with respect to the performance of the Work, then the City will have the authority to order inspection and testing of all such items or elements of the Work, or of a representative number of such items or elements of the Work, as it may consider necessary or advisable.

2. Contractor shall bear all costs thereof, including reimbursement to the City for the City's additional testing and inspection services if any are required, made necessary thereby. However, neither the City's authority to act under Paragraph 8.02 nor any decision made by the City Representative in good faith either to exercise or not to exercise such authority,

shall give rise to any duty or responsibility of the City to Contractor, any subcontractor, or any of their agents or employees, or any other person performing any of the Work.

E. Failure or neglect on the part of the City or any of its authorized agents or representatives to condemn or reject Non-conforming Work or defective materials shall not be construed:

1. to imply acceptance of such Non-conforming Work or materials; or

2. as barring the City at any subsequent time from the recovery of money needed to build anew all portions of such Non-conforming Work; or

3. to relieve Contractor from the responsibility of correcting Non-conforming Work or materials.

F. Unless otherwise required by the Contract Documents, required certificates of testing, inspection or approval shall be secured by Contractor and furnished to the City in accordance with the Specifications.

## 8.03 CORRECTION OF NON-CONFORMING WORK AND GUARANTEE TO REPAIR PERIOD

A. Contractor shall (i) correct Non-conforming Work that becomes apparent during the progress of the Work or during the Guarantee to Repair Period and (ii) replace, repair, or restore to the City's satisfaction any other parts of the Work and any other real or personal property which is damaged or destroyed as a result of Non-conforming Work or correction of Non-conforming Work. Contractor shall promptly commence such correction, replacement, repair, or restoration upon notice from the City Representative, but in no case later than 10 days after receipt of such notice; and Contractor shall diligently and continuously prosecute such correction to completion. Contractor shall bear all costs resulting from such Non-Conforming Work.

B. The term "Guarantee to Repair Period" means a period of one (1) year, unless a longer period of time is specified in the Contract Documents or prescribed by applicable laws and regulations, commencing as follows:

1. For any Work not described as incomplete in the Punch List / Final Completion, on the date of Substantial Completion.

2. For space beneficially occupied or for separate systems fully utilized prior to Substantial Completion per Paragraph 9.07 (Partial Utilization), as established in a Notice of Partial Utilization.

3. For all Work other than B.1 and B.2, above, from the date of Final Completion.

C. The requirement to correct Non-conforming Work shall continue until one year after the date of correction of repaired or replaced items, or such longer

period as may be specified in the Contract Documents or mutually agreed to by Contractor and City.

D. Contractor's obligations under this Paragraph 8.03 are in addition to and not in limitation of its warranty obligations under Paragraph 3.15 or any other obligation of Contractor under the Contract Documents. Enforcement of Contractor's express warranties and guarantees to repair contained in the Contract Documents shall be in addition to and not in limitation of any other rights or remedies City may have under the Contract Documents or at law or in equity for Non-conforming Work.

#### **8.04 ACCEPTANCE OF NON-CONFORMING WORK**

A. If, in the sole and unfettered judgment of the City, it is undesirable or impractical to repair or replace any Non-conforming Work, the City may accept such Non-conforming Work in exchange for a reduction in the Contract Sum by such amount as the City or its authorized representatives deem equitable, or Contractor shall rebate moneys previously paid by the City.

### **ARTICLE 9 - PAYMENTS AND COMPLETION**

#### **9.01 CONTRACT SUM**

A. Payment to Contractor at the Contract Sum shall be full compensation for furnishing all labor, materials, equipment and tools necessary to the Work; for performing and completing all Work in accordance with the requirements of the Contract Documents; and for all expenses incurred by Contractor for any purpose incidental to performing and completing the Work.

#### **9.02 SCHEDULE OF VALUES FOR LUMP SUM WORK**

A. Within 30 days after receipt of the Notice to Proceed, or as otherwise agreed to by the City Representative, Contractor shall submit a detailed cost breakdown of Contract Sum. This breakdown shall be referred to as the schedule of values and, when approved by the City Representative, shall serve as the basis for progress payments for lump sum Items.

#### **9.03 PROGRESS PAYMENTS**

A. On the 25th day of each month, Contractor shall submit to the City for review an Application for Payment, on a form approved by the City and signed by Contractor, covering the Work completed by Contractor as of the date of the Application and accompanied by such supporting documentation as required by the City Representative.

B. Monthly progress payment amounts to Contractor shall be based upon completed Work or percentages of Work completed prior to the end of the payment period. Except as approved by the City Representative, no allowance will be made for materials or equipment not incorporated into the Work

C. As soon as practical after estimating the progress of the Work, the City will pay to Contractor in a manner provided by law an amount based upon Contract prices, of labor and materials incorporated in the Work at the Site until midnight of the 25th day of the current month, less the aggregate of the amount of previous payments. Payments, however, may be withheld at any time that the Work, in the City's estimation, is not proceeding in accordance with the Contract

1. The City shall endeavor to make progress payments for undisputed amounts within 15 business days, but no later than 45 business days, of receiving a payment request and the required documentation. In no event shall the City become liable for interest or other charges for late payment except as set forth in San Francisco Administrative Code section 6.22(j)(7).

D. The granting of any progress payment, or the receipt thereof by Contractor, shall not constitute acceptance of the Work or any portion thereof and shall in no way lessen the liability of Contractor to replace unsatisfactory Work or material, though the unsatisfactory character of such Work or material may not have been apparent or detected at the time such payment was made.

E. It is mutually understood and agreed that the City may withhold from any payment otherwise due Contractor such amounts as may be necessary to protect the City to ensure completion of the Project pursuant to the requirements of this Contract. The failure or refusal of the City to withhold any moneys from Contractor shall in no way impair the obligations of any surety or sureties under any bonds furnished under this Contract.

F. Submission of Electronic Certified Payrolls. No monthly progress payments will be processed until Contractor has submitted weekly certified payrolls to the City for the applicable time period. Certified payrolls shall be prepared pursuant to Section 1770 et seq. of the California Labor Code for the period involved for all employees and owner-operators, including those of Subcontractors and Suppliers of all tiers, for all labor and materials incorporated into the Work.

G. No monthly progress payments will be processed until Contractor has also submitted weekly certified payrolls to the California Department of Industrial Relations (in addition to the City) for the applicable time period.

1. Contractor shall submit certified payrolls to the City electronically via the Project Reporting System ("PRS") selected by the City, an Internet-based system accessible on the World Wide Web through a web

browser. The Contractor and each Subcontractor and Supplier will be assigned a log-on identification and password to access the PRS.

2. Contractor shall submit certified payrolls to the California Department of Industrial Relations in the manner specified by the DIR.

#### **9.04 RETENTION**

A. As required by and in conformance with the procedures set forth in section 6.22(j) of the Administrative Code, the City shall hold five (5) percent in retention from each progress payment.

#### **9.05 PAYMENT AUTHORIZATION**

A. The City will, after receipt of Contractor's Application for Payment, approve such amount as the City determines is properly due.

B. Payment will be issued by the City based on the City's determination that the Work has progressed satisfactorily to the point stated in the application for payment. Payment will not be a representation that the City has:

1. inspected the Work exhaustively to check that the quality or quantity are in conformance to the requirements of the Contract Documents; or
2. reviewed Contractor's means, methods, techniques, sequences or procedures of construction; or
3. ascertained how or for what purpose Contractor has used money paid, or determined that title to any of the Work, materials, or equipment has passed to the City free and clear of any liens.

#### **9.06 WITHHOLDING PAYMENT**

A. The City may decide not to authorize payment, in whole or in part, to the extent reasonably necessary to protect itself, up to a maximum of 125% of the estimated cost, as determined by the City, to cure or otherwise correct or account for Contractor's failure, if, in the City's judgment, the determination required by subparagraph 9.05B cannot be made. If the City does not authorize payment in the amount of the application, the City will notify Contractor of the reasons for withholding payment.

#### **9.07 PARTIAL UTILIZATION**

A. City reserves the right, at its option and convenience, to occupy or otherwise make use of any part of the Work at any time prior to Substantial Completion or Final Completion upon reasonable notice to Contractor. Such Partial Utilization shall be subject to the following condition: Contractor shall continue to maintain all insurance required by the Contract in full force and effect.

#### **9.08 SUBSTANTIAL COMPLETION**

A. When Contractor gives notice to City's Representative that the Work is substantially complete, unless City's Representative determines that the Work is not sufficiently complete to warrant an inspection to determine Substantial Completion, City's Representative will inspect the Work, and prepare and give to Contractor a comprehensive Punch List/Final Completion to be completed or corrected before establishing Substantial Completion. Contractor shall proceed promptly to complete and correct items on the list. Failure to include an item on such list does not alter the responsibility of Contractor to complete all Work in accordance with the Contract Documents. If City's Representative's inspection discloses any item, whether or not included on the list, which must be completed or corrected before Substantial Completion, Contractor shall complete or correct such item. Contractor shall then submit a request for another inspection by University's Representative to determine Substantial Completion. Costs for additional inspection by University's Representative shall be deducted from any monies due and payable to Contractor.

B. When the City determines that the Work is Substantially Complete, the City will issue a Notice of Substantial Completion, which shall establish the Substantial Completion date.

C. At the time of delivery of the Notice of Substantial Completion, the City will deliver to Contractor (i) a Punch List / Final Completion identifying deficient items to be corrected by Contractor prior to Final Completion; and (ii) a written determination as to the division of responsibilities regarding close-out requirements including, but not limited to, security, operation, safety, maintenance, heat, utilities, insurance and warranties.

#### **9.09 FINAL COMPLETION AND FINAL PAYMENT**

A. When Contractor considers all Work complete, including all items of Work on the Punch List / Final Completion and all closeout requirements, Contractor shall notify the City in writing and request that the City issue a certificate of acceptance.

B. Within 5 working days of receipt of Contractor's written notice, the City will verify whether all Punch List / Final Completion items are completed. If the City finds that any of the Punch List / Final Completion items are not complete, the City will notify Contractor in writing. Contractor shall promptly take actions necessary to complete such Punch List / Final Completion items.

C. Once Contractor considers all deficient Punch List / Final Completion items complete, Contractor shall notify the City in writing and request a second inspection. If the City finds the Punch List / Final Completion items are still not complete, Contractor shall be responsible for all costs for conducting such additional inspections incurred by the City and its consultants before Final Completion. The cost of such inspections shall

not be considered a delay cost and shall be charged in addition to any liquidated damages which may become due as a result of Contractor's failure to achieve Final Completion within the time prescribed in Section 00 73 02. All such costs of the City and its consultants shall be deducted from amounts which are due or become due to Contractor.

D. While deficient Punch List / Final Completion Work is outstanding, the City may, at its option, pay Contractor any earned Contract funds, including retention, subject to offset for the following: (i) funds subject to a certification of forfeiture by the Office of Labor Standards Enforcement and/or stop notice claims and/or funds to be withheld as otherwise required by law or court order; (ii) an amount not to exceed 200 percent of the total estimated cost of labor and materials to correct any Non-conforming, unacceptable, or incomplete Work; and (iii) amounts assessed for liquidated damages.

E. After Contractor has completed to the satisfaction of the City all Punch List / Final Completion items and close-out requirements in accordance with the Contract Documents, the City will issue a written certificate of acceptance as required by section 6.22(k) of the San Francisco Administrative Code stating that the Work is acceptable, and Contractor may submit the final application for payment.

F. Contractor and each assignee under any assignment in effect at the time of final payment shall, if required by the City, execute and deliver at the time of final payment, as a condition precedent to final payment, a release in the form specified in Division 01 and containing such exemptions as may be found appropriate by the City, discharging the City and the City's consultants, and their directors, officers, members, employees, agents and authorized representatives of all liabilities, obligations and Claims arising under this Contract.

## **ARTICLE 10 - INSURANCE AND BONDS**

### **10.01 INSURANCE REQUIREMENTS**

A. Contractor shall purchase and maintain in force throughout the Contract Time such liability and other insurance as provided in Section 00 73 16.

### **10.02 PERFORMANCE BOND AND PAYMENT BOND**

A. Contractor shall file with the City bonds covering the faithful performance of the Contract ("Performance Bond"); and payment of labor, materials, supplies, and equipment used in the performance of the Contract ("Payment Bond") on forms provided by the City.

B. The Payment and Performance Bond shall each be in the amount of the Contract Sum.

C. Corporate sureties issuing these bonds shall be legally authorized to engage in the business of furnishing surety bonds in the State of California. All sureties shall have either a current A.M. Best Rating not less than "A-, VIII" or shall be listed in the current version of the United States Department of the Treasury's Listing of Approved Sureties (Department Circular 570), and shall be satisfactory to the City.

## **ARTICLE 11 - LABOR STANDARDS**

### **11.01 PREVAILING WAGES**

A. It is hereby understood and agreed that all provisions of section 1770, et seq., of the California Labor Code are required to be incorporated into every contract for any public work or improvement and are provisions of this Contract.

B. It is hereby understood and agreed that all provisions of sections 6.22(e) and 6.22(f) of the San Francisco Administrative Code are incorporated as provisions of the Contract Documents.

C. All Work is subject to compliance monitoring and enforcement of prevailing wage requirements by the California Department of Industrial Relations and the San Francisco Office of Labor Standards Enforcement.

### **11.02 PAYROLLS**

A. Certification of Payroll Records: Contractor shall comply with the requirements of section 1776 of the California Labor Code, or as amended from time to time, regarding the preparation, keeping, filing and furnishing of certified copies of payroll records of wages paid to its employees and to the employees of its Sub-contractors of all tiers.

1. The payroll records shall be certified under penalty of perjury and shall be submitted electronically to the City and, where required, to the California Department of Industrial Relations, as set forth in Paragraph 9.03F, N and O. In addition, Contractor shall make the payroll records available for inspection at all reasonable hours at the job site office of Contractor on the following basis:

a. A certified copy of an employee's payroll record shall be made available for inspection or furnished to such employee or his or her authorized representative upon request.

b. A certified copy of all payroll records shall be made available for inspection or furnished to a representative of the City upon request.

c. A certified copy of all payroll records shall be made available upon request to the public for inspection or copies thereof made; provided, however,

that a request by the public shall be made through either the City, the Division of Apprenticeship Standards, or the Division of Labor Standard Enforcement. The public shall not be provided access to such records at the job site office of Contractor.

d. Contractor shall file a certified copy of the payroll records with the entity that requested such records within 10 days after receipt of a written request.

2. In providing copies of payroll records to any requestor, the City shall redact or obliterate such information as may be required under California Labor Code section 1776(e), as that section may be amended from time to time.

3. Contractor shall inform the City of the location of the payroll records, including the street address, city and county, and shall, within 5 working days, provide a notice of a change of location and address.

4. In the event that Contractor receives a written notification of noncompliance with section 1776, Contractor shall have 10 days from receipt of such written notice to comply. Should noncompliance still be evident after such 10-day period, Contractor shall forfeit the penalties set forth in Administrative Code section 6.22(e) and (f) and/or Labor Code section 1776. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, such penalties shall be withheld from the Contract Sum.

5. Contractor is solely responsible for compliance with section 1776. The City shall not be liable for Contractor's failure to make timely or accurate submissions of certified payrolls.

### **11.03 LABOR STANDARDS ENFORCEMENT**

A. All Work is subject to compliance monitoring and enforcement of prevailing wage requirements by the California Department of Industrial Relations ("DIR") and the San Francisco Office of Labor Standards Enforcement.

B. In accordance with Administrative Code section 6.22(e) and section 6.24 and the applicable sections of the California Labor Code, Contractor further acknowledges and agrees as follows:

1. Contractor will cooperate fully with the DIR and the Labor Standards Enforcement Officer and other City employees and agents authorized to assist in the administration and enforcement of the prevailing wage requirements and other labor standards imposed on public works contractors by the Charter, Chapter 6 of the San Francisco Administrative Code, and the applicable sections of the California Labor Code.

2. Contractor agrees that the DIR and the Labor Standards Enforcement Officer and his or her designees, in the performance of their duties, shall have the right to engage in random inspections of job sites and to have access to the employees of the contractor,

employee time sheets, inspection logs, payroll records and employee paychecks.

3. Contractor shall maintain a sign-in and sign-out sheet showing which employees are present on the job site.

4. Contractor shall post job site notices prescribed by the California Department of Industrial Relations at all job sites where Work is to be performed.

5. The DIR and the Labor Standards Enforcement Officer may audit such records of Contractor as is deemed reasonably necessary to determine compliance with the prevailing wage and other labor standards imposed by the Charter, Chapter 6 of the San Francisco Administrative Code, and the applicable sections of the California Labor Code.

C. Under California Public Contract Code section 6109, Contractor or Subcontractors who are ineligible to bid or work on, or be awarded, a public works project under California Labor Code sections 1777.1 or 1777.7 are prohibited from performing Work on the Project.

1. Any contract for the Project entered into between Contractor and a debarred subcontractor is void as a matter of law.

2. A debarred subcontractor may not receive any public money for performing work as a subcontractor on a public works project. Contractor shall return to the City any public money that may have been paid to a debarred subcontractor by Contractor.

3. Contractor shall be responsible for the payment of wages to workers of a debarred subcontractor that has been allowed to work on the Project.

## **ARTICLE 12 - SAFETY**

### **12.01 PRECAUTIONS AND PROGRAMS**

A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Contractor shall be solely responsible for any and all fines, penalties or damages which result from Contractor's failure to comply with applicable health and safety laws and regulations during performance of the Work.

B. Contractor shall designate in writing a responsible competent person of Contractor's organization at the Site as Project safety representative whose principal duties shall be the prevention of accidents and the maintenance and supervision of safety precautions and programs in accordance with the requirements of applicable laws and regulations. This person shall be available 24 hours a day, 7 days a week by telephone or other approved means.

C. Contractor shall perform all Work relating to hazardous materials as required by the Contract Documents. Contractor and its Subcontractors shall comply with all federal, state and local statutes and regulations on training, handling, storage, public notification and disposal of hazardous materials and hazardous wastes. In the event that Contractor or its Subcontractors introduces and/or discharges, spills or releases a hazardous material onto the site in a manner not specified by the Contract Documents; and/or (ii) disturbs a hazardous material identified in the Contract Documents or Reference Documents, the Contractor shall immediately notify the City Representative and any required agencies of the spill, release or discharge and Contractor shall stop the Work, and cordon off the affected area to secure entry. Removal and disposal of the hazardous material, if deemed necessary by the City, will, at the discretion of the City, be performed either by the City at Contractor's expense or by Contractor, through a qualified remediation Subcontractor, at Contractor's expense. Under no circumstance shall the Contractor perform remediation Work for which it is not qualified.

D. Should Contractor or any of its Subcontractors, while performing Work on the Site, unexpectedly encounter any hazardous material not show in the Contract Documents or Reference Documents, or have reason to believe that any other material encountered may be a hazard to human health and safety and/or the environment, Contractor shall stop the Work, cordon off the affected area to secure entry, and shall immediately notify the City Representative. Removal and disposal of the hazardous material not shown in the Contract Documents or Reference Documents, if deemed necessary by the City, will be performed as directed by the City at the City's expense. In the event that Contractor is delayed in the completion of the Contract Work solely because of such hazardous materials or conditions not previously identified in the Contract Documents or Reference Documents, the Contractor shall be entitled to an extension of time in accordance with Article 7 of these General Conditions.

## 12.02 PERSONS AND PROPERTY

A. Contractor shall take all necessary precautions for safety of, and shall provide the necessary protection to prevent damage, injury or loss to the following:

1. all persons on the Site or others who may be affected by the Work;
2. the Work and the materials and equipment to be incorporated therein, whether in storage on or off the Site; and
3. other property at the Site or adjacent thereto including, but not limited to, trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not indicated to be removed, relocated or replaced on the Contract Documents.

B. Contractor shall give notices pursuant to California Civil Code section 832 and shall comply with all applicable laws, ordinances, rules, regulations and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.

C. Contractor shall notify owners of adjacent property, underground facilities and utilities, such as PG&E, AT&T, Municipal Railway, Hetch Hetchy Water and Power, and the San Francisco Public Utilities Commission, of Contractor's operations a reasonable time in advance thereof so as to permit the owners to make suitable markings on the street surface of the locations of such facilities. After such markings have been satisfactorily made, Contractor shall maintain them as long as necessary for the proper conduct of the Work.

D. Contractor shall not hinder or interfere with an owner or agency having underground facilities and utilities when removing, relocating, or otherwise protecting such facilities.

E. Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, safeguards for safety and protection, such as posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying owners and users of adjacent sites, underground facilities and utilities of Contractor's operations.

F. Contractor shall perform all Work in such manner as to avoid damage to existing underground facilities and other utilities in the process of their removal or adjustment and to avoid damage to such facilities lying outside of or below a required excavation or trench area which are intended to remain in place.

G. Contractor shall be responsible for coordinating the exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with applicable laws and regulations.

H. In the event of damage or loss to property referred to in the previous subparagraphs, whether caused by Contractor, its Subcontractors or Lower-Tier Subcontractors, Contractor shall promptly remedy such damage or loss, except such damage or loss attributable to the sole negligent acts or omissions of the City. The foregoing obligations of Contractor are in addition to Contractor's obligations under Paragraph 3.17 of these General Conditions.

I. Pursuant to section 6705 of the California Labor Code, excavation for trenches 5 feet or more in depth shall not begin until Contractor has received acceptance from the City of Contractor's detailed plan for worker protection from the hazards of caving ground during excavation of such trenches. Contractor's shoring plan shall be submitted in accordance with the requirements of the Specifications and shall show the

details and supporting calculations of the design of shoring, bracing, sloping, or other provisions to be made for worker protection during such excavation. No plan shall allow the use of shoring, sloping or other protective system less effective than that required by the Construction Safety Orders of the Division of Occupational Safety and Health. If Contractor's shoring plan varies from the shoring system standards established by the Construction Safety Orders, the plan shall be prepared and sealed by an engineer retained by Contractor who is registered as a civil or structural engineer in the State of California. The City's acceptance of Contractor's shoring plan shall not be construed to relieve Contractor of its sole responsibility for damage or injuries related to the excavation resulting from unsafe shoring.

J. Contractor shall be responsible for each operation and all Work, both permanent and temporary. Contractor shall protect its Work and materials and fully or partially completed work of the City or separate contractors from damage due to construction operations, the action of the elements, the carelessness of its subcontractors, vandalism, graffiti, or any other cause whatsoever, until Final Completion of the Work. Should improper Work of any trade be covered by another contractor and damage or defects result, Contractor shall make the whole Work affected good to the satisfaction of the City and without expense to the City.

### **12.03 SAFETY PERMITS**

A. A California industrial safety permit shall be obtained and paid for by Contractor if the following occurs:

1. the construction of a building, structure, false work or scaffolding more than 3 stories or the equivalent of 35 feet height; or
2. the demolition of a building, structure, false work or scaffolding more than 3 stories or the equivalent of 35 feet height; or
3. the excavation of a trench 5 feet deep or deeper into which a person must descend.

B. Contractor shall obtain and pay for all other required safety permits.

### **12.04 EMERGENCIES**

A. In emergencies affecting the safety or protection of persons or property at the Site, Contractor shall act promptly to prevent threatened damage, injury or loss. Contractor shall give prompt written notice to the City if Contractor believes that, due to the nature of the emergency or circumstances related thereto, any significant changes in the Work or variations in the Contract Documents have been caused thereby or are required as a result thereof. If the City determines that a change in the Contract Documents is required because of action

taken by Contractor in response to such an emergency, a Change Order or Unilateral Change Order will be issued as provided in Article 6.

## **ARTICLE 13 - CONTRACT AND GOVERNMENT CODE CLAIMS**

### **13.01 CLAIMS GENERALLY**

A. The City and Contractor acknowledge and agree that early identification and resolution of potential claims or disputes benefits all parties and advances the success of the Project.

B. The notice requirements and procedures set forth under this Article 13 are necessary for the City to address potential claims and disputes. Having knowledge of potential claims prior to the Contractor performing disputed Work and having documentation from the Contractor concerning a dispute as Work is being performed is critical for the City to make informed decisions which could impact the budget and schedule for the Project.

C. Compliance with the Notice of Potential Claim, and Contract Claim submission procedures prescribed in this Article are condition precedents to the right to file a Government Code Claim under California Government Code section 900, et seq., and San Francisco Administrative Code Chapter 10. As set forth in subparagraph 13.05, Contractor's submittal of timely and proper Notices of Potential Claims and Contract Claims may, in some circumstances, toll Contractor's compliance with the Government Code Claim requirements until the Contract Claim process is finally completed. Refer to subparagraph 13.05, below. The timely submittal of both a properly completed Contract Claim and a Government Code Claim are conditions precedent to commencing litigation against the City for disputes arising out of or related to this Contract and not expressly excluded from the Contract Claim process per subparagraph 13.01(D), below. Disputed issues not timely raised and properly documented in conformance with this Article shall be deemed waived by the Contractor and may not be asserted in a Government Code Claim, subsequent litigation, or legal action. Furthermore, by executing this Contract, Contractor waives any and all claims or defenses of waiver, estoppel, release, bar, or any other type of excuse of non-compliance with the Contract Claim submission requirements.

D. The Contract Claim procedures specified in this Article 13 do not apply to the following: (1) claims respecting penalties for forfeitures prescribed by statute or regulation which a government agency is specifically authorized to administer, settle, or determine; (2) claims respecting personal injury, death, reimbursement, or other compensation arising out of or resulting from personal injury of death; (3) claims by the City; or (4) claims respecting stop notices.

E. The requirements of this Article 13 shall survive expiration or termination of this Contract.

### 13.02 NOTICE OF POTENTIAL CLAIM

A. If, during the course of the Project, the Contractor seeks an adjustment of the terms of the Contract Documents, an adjustment to the Contract Sum and/or Contract Time, or other relief with respect to the Contract Documents, including a determination of disputes or matters in question between the City and the Contractor arising out of or related to the Contract Documents or the performance of Work (including without limitation determination of delay, assessment of liquidated damages, Proposed Change Orders, Unilateral Change Order, denial of Change Order Requests, payment, nonpayment, termination for cause, termination for convenience, or other act by the City impacting or potentially impacting payment, nonpayment, withholding, or the performance of the Work), then the Contractor must submit to the City a timely Notice of Potential Claim to preserve its right to seek such additional compensation and/or time.

B. Contractor must submit a Notice of Potential Claim to the City within 7 days of the event, activity, occurrence, or other cause giving rise to the potential Claim.

C. A Notice of Potential Claim shall describe the nature and circumstances of the potential claim event, set forth the reason(s) for which Contractor believes additional compensation and/or time will or may be due, and provide a good faith estimate of the cost and/or time impact to which Contractor believes it may be entitled. Notices of Potential Claims submitted per Paragraph 3.03 (Unforeseen or Differing Conditions) must also identify the Escrow Bid Documents that formed the basis of Contractor's Bid to perform the Work affected by the alleged unforeseen or differing condition.

D. The Notice of Potential Claim provides early notice to the City of a disputed issue and provides the City with the opportunity to mitigate associated costs, allowing for early resolution. Failure by Contractor to submit a timely Notice of Potential Claim shall constitute a waiver of any claim arising out of the event, activity, occurrence, or other cause giving rise to the potential Claim.

E. The requirements of subparagraph 13.02A, above, apply regardless of whether or not the disputed issue underlying a potential claim event has been or will be submitted to an issue resolution/escalation ladder, Dispute Review Board or similar dispute resolution process that may be required by the Contract Documents.

### 13.03 CONTRACT CLAIM

A. General Contract Claim Requirements. If the disputed issue(s) underlying a Notice of Potential Claim remains unresolved after 45 days from the submittal of a Notice of Potential Claim, and Contractor wishes to pursue the disputed issue(s), Contractor must submit a Contract Claim that provides a complete and final justification for additional compensation and time adjustments. Contractor must submit a Contract Claim to the City within 45 days of submitting the Notice of Potential Claim. The Contract Claim shall be the Contractor's sole and exclusive administrative remedy for additional compensation or time associated with its performance of the Work under the Contract. Failure to submit a timely, certified, and documented Contract Claim in conformance with this Article shall constitute a waiver by the Contractor as to any claims relating to its performance of the Work under the Contract and a failure to exhaust its administrative remedies.

1. The time requirement for submitting a Contract Claim set forth in subparagraph 13.03A, above, shall be extended in accordance with the applicable Contract Documents if the Contract Documents require the establishment of an issue resolution/escalation ladder, Dispute Review Board or similar supplemental dispute resolution process(es) and Contractor timely refers a disputed issue to the applicable process. Contractor's timely referral of a disputed issue to any mandatory supplemental dispute resolution process(es) set forth in the Contract Documents is a prerequisite to filing a Contract Claim under this Article. By failing to timely refer a disputed issue to the applicable mandatory supplemental dispute resolution process specified in the Contract Documents, Contractor waives future Contract Claims relating to the disputed issue.

#### B. Contract Claim Certification Requirement:

1. Contractor, under penalty of perjury, shall submit with the Contract Claim certification by Contractor and its Subcontractor(s), as applicable, that:

- a. the Claim is made in good faith;
- b. supporting data are accurate and complete to the best of Contractor's and/or Subcontractor's knowledge and belief; and
- c. the amount requested accurately reflects the Contract adjustment for which Contractor believes the City is liable.

2. An individual or officer who is authorized to act on Contractor's behalf shall execute the certification. Failure to certify a claim under penalty of perjury shall render the Contract Claim a nullity and the underlying claim waived by the Contractor.

3. In regard to a Claim or portion of a Claim by a Subcontractor, Contractor shall fully review the Subcontractor's Claim and shall certify the Subcontractor's Claim or such relevant portion(s) of the Subcontractor's Claim, under penalty of perjury, in the same manner

the Contractor would certify its own claim under the foregoing subparagraph 13.03B.1. The City will not consider a direct claim by any Subcontractor. Subcontractors at any tier are not third-party beneficiaries of this Contract.

4. Contractor hereby agrees that failure to furnish certification as required in this Article shall constitute a waiver by the Contractor as to the subject Claim.

5. Contractor further acknowledges and agrees that if it submits a false claim, on behalf of itself or a Subcontractor, Contractor may be subject to civil penalties, damages, debarment, and criminal prosecution in accordance with local, state, and federal statutes.

**C. Format of a Contract Claim:**

1. The Contractor shall document its Contract Claim in the following format:

- a. Cover letter and certification.
- b. Narrative Summary of Claim merit and amount, and clause under which the Claim is made.
- c. List of documents relating to Claim:
  - 1) Specifications
  - 2) Drawings
  - 3) Clarifications/RFIs
  - 4) Correspondence
  - 5) Schedules
  - 6) Other
- d. Chronology of events and correspondence.
- e. Analysis of Claim merit.
- f. Analysis of Claim cost (money and time).
- g. Attachments:
  - 1) Specifications
  - 2) Drawings
  - 3) Clarifications/RFIs
  - 4) Correspondence
  - 5) Schedules
  - 6) Other

**D. Additional Requirements for Contract Claims Regarding Time Extensions:**

1. All Contract Claims regarding time extensions or assessments of delay and/or liquidated damages shall include, in addition to all other applicable requirements of this Article 13, an analysis of the delays impacting the as-built critical path. The as-built critical path shall be determined by (1) comparing the late dates for schedule activities indicated within the

Contractor's "as-planned" CPM schedule (as approved by the City) with the actual dates for the same activities, and then (2) determining the longest path through the as-built schedule using the Contractor's originally-approved as-planned activity to activity logic. The "as-built" CPM shall reflect the exact manner in which the Project was actually constructed (including start and completion dates, actual sequence and durations of work activities, and logic).

2. The City will not review or consider any Contract Claim regarding time extensions based upon an impacted as-planned CPM, collapsed as-built schedule, time impact analysis or similar method that does not take into account actual events on the Project.

**E. Procedure For Review of a Contract Claim:**

1. The City shall review only a timely, certified, and properly documented Contract Claim.

2. The City shall respond to a Contract Claim in writing, within 45 days of receipt of such Claim. In its response, the City shall either grant or deny the Claim in whole or in part. If the City does not respond to a Claim within the 45-day period, the Claim is deemed denied in its entirety.

3. Within 10 days of the date of the City's response or expiration of the 45-day period, whichever is earlier, the Contractor may request review of the Contract Claim and the City's response by the Department Head. The request must be in writing, directed to the Department Head and copied to the City Representative. Failure by the Contractor to make a timely request to the Department Head, copied to the City Representative, shall constitute acceptance by the Contractor of the City's original response.

4. Upon a timely and proper request, the Department Head, or his/her designee (other than personnel assigned to the Project), shall review the relevant documents, meet with the Contractor and City personnel assigned to the Project, and confirm or revise the City's response to the Contract Claim. The Department Head, or his/her designee, shall issue such determination within 60 days of the date of the request for review. The determination by the Department Head, or his/her designee, shall constitute the final administrative determination of the City. If the Department Head takes no action on a request for review within the 60-day period, the City's original response shall constitute the final administrative determination by the City.

**13.04 GOVERNMENT CODE CLAIM**

A. For the purposes of this Contract, the City and the Contractor hereby agree that any action at law against the City arising out of or relating to Contractor's performance of the Work shall accrue either on the effective date of termination (under Article 14 of these General Conditions) or on the date of Substantial Completion, whichever is earlier. Notwithstanding the foregoing, the timely submittal of a complete and proper

Notice of Potential Claim and Contract Claim under the administrative procedure specified in this Article 13 shall operate to toll Contractor's compliance with the Government Code Claim requirements under California Government Code section 900, et seq., and San Francisco Administrative Code Chapter 10 until the City issues a final administrative determination per subparagraph 13.03E.4.

## **ARTICLE 14 - TERMINATION OR SUSPENSION OF THE CONTRACT**

### **14.01 NOTICE OF DEFAULT; TERMINATION BY THE CITY FOR CAUSE**

A. Grounds for Default. Contractor is in Default of the Contract if Contractor:

1. refuses or fails to supply enough properly skilled workers, adequate and proper materials, or supervision to prosecute the Work at a rate necessary to complete the Work within the specified limits of Contract Time, in accordance with the currently accepted updated progress schedule; or
2. is adjudged bankrupt, makes a general assignment for the benefit of its creditors, or a receiver is appointed on account of its insolvency; or
3. refuses or fails in a material way to replace or correct Work not in conformance with the Contract Documents; or
4. repeatedly fails to make prompt payment due to Subcontractors or for labor; or
5. materially disregards or fails to comply with any law, ordinance, rule, regulation or order of any public authority having jurisdiction; or
6. intimidates or sexually harasses a City employee, agent, or member of the public; or
7. is otherwise in material breach of any provision of the Contract Documents.

B. Notice of Default. When any of the above grounds for Default exist, the City may, without prejudice to any other rights or remedies that the City may have, issue a written Notice of Default to the Contractor. The City shall provide a copy of any Notice of Default to the Contractor's surety.

1. The Notice of Default shall identify the ground(s) for Default and provide the Contractor with a 14-day cure period to complete necessary corrective Work and/or actions.

2. In the event that necessary corrective Work and/or actions cannot be completed within the 14-day cure period through no fault of Contractor or its subcontractors/suppliers, Contractor shall, within the 14-day cure period, (i) provide the City with a schedule, acceptable to the City, for completing the corrective

Work and/or actions; and (ii) commence diligently the corrective Work and/or actions. The City, after accepting Contractor's proposed schedule, will amend the Notice of Default in writing to set forth the agreed-upon cure period. The City will provide a copy of the amended Notice of Default to the Contractor's surety.

C. Termination for Cause. If Contractor fails to completely cure the Default either (i) within the 14-day cure period set forth in the Notice of Default; or (ii) within the agreed-upon cure period set forth in an amended Notice of Default, the City may, without prejudice to any other rights or remedies that the City may have, immediately terminate employment of Contractor and, subject to the prior rights and duties of the surety under any bond provided in accordance with the Contract Documents:

1. take possession of the Site and use any materials, equipment, tools, and construction equipment and machinery thereon owned by Contractor to complete the Project;
2. accept assignment of subcontracts and agreements; and
3. finish the Work by whatever reasonable method the City may deem expedient.

D. When the City terminates the Contract for one of the grounds set forth in subparagraph 14.01A, Contractor shall not be entitled to receive further payment until the Work is finished. If the unpaid balance of the Contract Sum exceeds the cost of finishing the Work, including all liquidated damages for delays, such excess shall be paid to Contractor. If such costs exceed the unpaid balance, Contractor shall pay the difference to the City. The amount to be paid to Contractor or City, as the case may be, upon application, shall be an obligation for payment that shall survive termination of the Contract.

1. Upon completion of all Work, Contractor shall be entitled to the return of all its materials which have not been used in the Work, its plant, tools, equipment and other property provided, however, that Contractor shall have no claim on account of usual and ordinary depreciation, loss, wear and tear.

E. If, after termination of the Contractor's right to proceed, it is determined that the Contractor was not in default, or that the delay was excusable, the rights and obligations of the parties, including adjustment of the Contract Sum, will be the same as if the termination had been issued for the convenience of the City, as

### **14.02 TERMINATION BY THE CITY FOR CONVENIENCE**

A. Pursuant to section 6.22I of the San Francisco Administrative Code the City may terminate the performance of Work under this Contract in accordance with this Paragraph 14.02 in whole or, from time to time, in

part, whenever the City shall determine that such termination is in the best interest of the City. Any such termination shall be effected by delivery to Contractor of a notice of termination specifying the extent to which performance of Work under the contract is terminated, and the date upon which such termination becomes effective.

B. After receipt of a notice of termination, Contractor shall submit to the City its termination claim, in the form and with the certification the City prescribes. Such termination claim shall be submitted promptly, but in no event later than 3 months from the effective date of termination, unless one or more extensions in writing are granted by the City upon written request of Contractor within such 3-month period or an authorized extension period. However, if the City determines that the facts justify such action, it may receive and act upon any such termination Claim at any time after such 3-month period or extension period. If Contractor fails to submit its termination Claim within the time allowed, the City may determine, on the basis of information available to the City, the amount, if any, due to Contractor because of the termination. The City shall then pay to Contractor the amount so determined.

C. Subject to the previous provisions of this Paragraph 14.02, Contractor and the City may agree upon the whole or any part of the amount or amounts to be paid to Contractor because of the total or partial termination of Work. The amount or amounts may include a reasonable allowance for profit on Work done. However, such agreed amount or amounts, exclusive of settlement costs, shall not exceed the total Contract Sum as reduced by the amount of payments otherwise made and as further reduced by the Contract Sum of Work not terminated. The Contract shall be amended accordingly, and Contractor shall be paid the agreed amount. Nothing following, prescribing the amount to be paid to Contractor in the event of failure of Contractor and the City to agree upon the whole amount to be paid to Contractor because of the termination of Work under this Paragraph 14.02, shall be deemed to limit, restrict, or otherwise determine or affect the amount or amounts which may be agreed upon to be paid to Contractor pursuant to this subparagraph 14.02C.

D. If Contractor and the City fail to agree, as subparagraph 14.02C provides, on the whole amount to be paid to Contractor because of the termination of Work under Paragraph 14.02, the City shall determine, on the basis of information available to the City, the amount, if any, due to Contractor by reason of the termination and shall pay to Contractor the amounts determined as follows:

1. For all Contract Work performed before effective date of the notice of termination, the total (without duplication of any items) of the following items:

a. The cost of such Work.

b. The cost of settling and paying Claims arising out of the termination of Work under subcontracts or orders as previously provided. This cost is exclusive of the amounts paid or payable on account of supplies or materials delivered or services furnished by Contractor before the effective date of the notice of termination. These amounts shall be included in the cost on account of which payment is made for the cost of Work previously provided.

c. A sum, as profit on the cost of the Work as provided in subparagraph 14.02C, that the City determines to be fair and reasonable. But, if it appears that Contractor would have sustained a loss on the entire Contract had it been completed, no profit shall be included or allowed, and an appropriate adjustment shall be made reducing the amount of the settlement to reflect the indicated loss.

2. The reasonable cost of the preservation and protection of property incurred as previously provided. The total sum to be paid to Contractor shall not exceed the total Contract Sum as reduced by the amount of payments otherwise made and as further reduced by the Contract price of Work not terminated. Except for normal spoilage, and except to the extent that the City shall have otherwise expressly assumed the risk of loss, there shall be excluded from the amounts payable to Contractor the fair value, as determined by the City, of property which is destroyed, lost, stolen, or damaged, to the extent that it is undeliverable to the City, or to a buyer as previously provided.

E. Contractor shall have the right to dispute in a court of competent jurisdiction within the State of California any determination the City makes under subparagraph 14.02D. But, if Contractor has failed to submit its termination Claim within the time provided and has failed to request extension of such time, it shall have no such right to dispute the City's determination. In any case where the City has determined the amount owed, the City shall pay to Contractor the following:

1. if there is no right to dispute hereunder or if a right to dispute has not been timely exercised, the amount so determined by the City; or

2. if a proceeding is initiated in a court of competent jurisdiction within the State of California, the amount finally determined in said proceeding.

F. In arriving at the amount due Contractor under this clause there shall be deducted:

1. all unliquidated advance or other payments on account theretofore made to Contractor, applicable to the terminated portion of this Contract;

2. any Claim which the City may have against Contractor in connection with this Contract; and

3. the agreed price for, or the proceeds of sale of, any materials, supplies, or other things kept by Contractor or sold, under the provisions of this Paragraph

14.02, and not otherwise recovered by or credited to the City.

G. If the termination hereunder be partial, before the settlement of the terminated portion of this Contract, Contractor may file with the City a request in writing for an equitable adjustment of the price or prices specified in the Contract relating to the continued portion of the Contract (the portion not terminated by the notice of termination). Such equitable adjustment as may be agreed upon shall be made in the specified price or prices. Nothing contained herein shall limit the right of the City and Contractor to agree upon the amount or amounts to be paid to the continued portion of the Contract when the Contract does not contain an established Contract price for the continued portion.

H. Contractor understands and agrees that the foregoing termination of Contract for convenience provisions shall be interpreted and enforced pursuant to cases interpreting and enforcing similar provisions in federal procurement contracts.

## **ARTICLE 15 - MISCELLANEOUS PROVISIONS**

### **15.01 GOVERNING LAW AND VENUE**

A. The Contract Documents shall be interpreted in accordance with the laws of the State of California and the provisions of the City's Charter and Administrative Code, including but not limited to Chapter 6 of the San Francisco Administrative Code, which is incorporated by this reference as if set forth herein in full.

B. Venue for all litigation relative to the formation, interpretation and performance of the Contract Documents shall be in San Francisco.

### **15.02 RIGHTS AND REMEDIES**

A. All of City's rights and remedies under the Contract Documents will be cumulative and in addition to and not in limitation of all other rights and remedies of City under the Contract Documents or otherwise available at law or in equity.

B. No action or failure to act by the City or the City Representative will constitute a waiver of a right afforded them under the Contract Documents, nor will such action or failure to act constitute approval of or acquiescence in a condition or breach thereunder, except as may be specifically agreed in writing. No waiver by City or the City Representative of any condition, breach or default will constitute a waiver of any other condition, breach or default; nor will any such waiver constitute a continuing waiver.

### **15.03 COMPLETE AGREEMENT**

A. The Contract Documents constitute the full and complete understanding of the parties and supersede any previous agreements or understandings, oral or written, with respect to the subject matter hereof. The Contract Documents may be modified or amended only as specified in Paragraph 1.04 of these General Conditions.

### **15.04 SEVERABILITY OF PROVISIONS**

A. Should the application of any provision of this Agreement to any particular facts or circumstances be found by a court of competent jurisdiction to be invalid or unenforceable, then (a) the validity of other provisions of this Agreement shall not be affected or impaired thereby, and (b) such provision shall be enforced to the maximum extent possible so as to effect the intent of the parties and shall be reformed without further action by the parties to the extent necessary to make such provision valid and enforceable.

**END OF SECTION**

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SECTION 00 73 02

CONTRACT TIME AND LIQUIDATED DAMAGES

1.1 SUMMARY

- A. This Document specifies the limits of Contract Time and amounts of liquidated damages agreed to be assessed should the Work be incomplete after the limits of Contract Time.

1.2 CONTRACT TIME

- A. The Work shall be commenced immediately upon issuance of the Notice to Proceed by the City, prosecuted diligently thereafter, and brought to Substantial Completion within the time limit of **19** consecutive calendar days.
  - 1. The date of the Notice to Proceed will be set by the City as soon as possible.
  - 2. The time allowed for achieving Substantial Completion as specified above shall include the time required for public notification, application and approval for all required permits, and submittals prior to start of construction work.
- B. Final Completion shall occur no later than **60** consecutive calendar days after the date of Notice of Substantial Completion.

1.3 LIQUIDATED DAMAGES

- A. The City and Contractor agree that as liquidated damages for delay (but not as a penalty) Contractor shall pay the City and County of San Francisco the sum of two thousand five hundred dollars (\$2,500.00) for each calendar day that transpires with the Work not Substantially Completed after the time limit for achieving Substantial Completion specified in Paragraph 1.2A.
- B. In addition, Contractor shall pay the sum of five hundred dollars (\$500.00) for each calendar day that transpires with the Project not Finally Completed after the time limit for achieving Final Completion specified in Paragraph 1.2B.

END OF SECTION

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## SECTION 00 73 16

## INSURANCE REQUIREMENTS

## 1.1 SUMMARY

- A. This Document includes insurance requirements, which amend Article 11 of the General Conditions.

## 1.2 CONTRACTOR'S LIABILITY INSURANCE

- A. Contractor shall maintain in full force and effect, for the period covered by the Contract, the following liability insurance with the following minimum specified coverages or coverages as required by laws and regulations, whichever is greater:
  - 1. Worker's Compensation in statutory amount, including Employers' Liability coverage with limits not less than \$1,000,000.00 each accident, injury, or illness, including coverage for U.S. Long Shore and Harbor Workers' Act benefits, and Jones Act benefits, and Federal Employers Liability Act. The Worker's Compensation policy shall be endorsed with a waiver of subrogation in favor of the City for all work performed by the Contractor, its employees, agents and subcontractors.
  - 2. Commercial General Liability insurance with limits not less than \$1,000,000.00 each occurrence, and \$2,000,000 general aggregate, combined single limit for bodily injury and property damage, including coverage for Contractual Liability, independent contractors, Explosion, Collapse, and Underground (XCU), Personal Injury, Broadform Property Damage, and completed operations.
  - 3. Commercial Automobile Liability insurance with limits not less than \$1,000,000.00 each occurrence combined single limit for bodily injury and property damage, including owned, hired or non-owned vehicles, as applicable.

## 1.3 ADDITIONAL COVERAGES

- A. Professional Liability Insurance: In the event that Contractor employs professional engineering or land surveyor services for performing field engineering or preparing design calculations, plans and specifications, Contractor shall require the retained engineers and land surveyors to carry professional liability insurance with limits not less than \$1,000,000 each claim with respect to negligent acts, errors, or omissions in connection with professional services to be provided under this Contract.
- B. Environmental Pollution Liability: In the event that hazardous and/or contaminated material is discovered during the course of the work, and the Contractor or its subcontractor is required to perform abatement or disposal of such material, then the Contractor, or its subcontractors, who perform abatement of hazardous or contaminated materials removal shall maintain in force, throughout the term of this Contract, Contractor's Pollution Liability and/or Asbestos Pollution Liability and/or Errors & Omissions insurance applicable to the work being performed with limits not less than \$1,000,000 per claim or occurrence and \$2,000,000 aggregate per policy period of one year, including coverages for on-site or off-site third party claims for bodily injury and property damage. This coverage shall also be endorsed to include Non-Owned Disposal Site coverage.

## 1.4 INSURANCE FOR OTHERS

- A. For general liability, environmental pollution liability and automobile liability insurance, Contractor shall include as additional insured, the City, its board members and commissions, and all authorized agents and representatives, and members, directors,

officers, trustees, agents and employees of any of them.

- B. Other parties to be protected by Contractor's liability insurance shall be as follows:
1. City's consultants and/or subconsultants: None
  2. Non-City Agencies: None

#### 1.5 FORMS OF POLICIES AND OTHER INSURANCE REQUIREMENTS

- A. Before commencement of the Work of this Contract, or in an emergency, as soon thereafter as possible, certificates of insurance and policy endorsements in form and with insurers acceptable to the City, evidencing all required insurance and with proper endorsements from Contractor's insurance carrier identifying as additional insureds the parties indicated under Article "Insurance for Others" above, shall be furnished to the City, with complete copies of policies to be furnished to the City promptly upon request. Contractor will be allowed a maximum of 10 working days, after the date on which the Contract is awarded, or after the emergency work is commenced, in which to deliver appropriate bond and insurance certificates and endorsements.
- B. Approval of the insurance by the City shall not relieve or decrease the extent to which Contractor or subcontractor of any tier may be held responsible for payment of any and all damages resulting from its operations. Contractor shall be responsible for all losses not covered by the policy, excluding damage caused by earthquake and flood consistent with section 7105 of the California Public Contract Code in excess of 5 percent of the Contract Sum, including the deductibles. All policies of insurance and certificates shall be satisfactory to the City.
- C. The Contractor and its subcontractors shall comply with the provisions of California Labor Code section 3700. Prior to commencing the performance of work, the Contractor and all of its subcontractors shall submit to the awarding department a certificate of insurance against liability for workers compensation or proof of self-insurance in accordance with the provisions of the California Labor Code.
- D. Liability insurance, with an allowable exception for professional liability insurance, shall be on an occurrence basis, and said insurance shall provide that the coverage afforded thereby shall be primary coverage (and non-contributory to any other existing valid and collectable insurance) to the full limit of liability stated in the declaration, and such insurance shall apply separately to each insured against whom claim is made or suit is brought, but the inclusion of more than one insured shall not operate to increase the insurer's limits of liability.
- E. Except for professional liability insurance, should any of the required insurance be provided under a form of coverage that includes an annual general aggregate limit or provides that claims investigation or legal defense costs be included in such annual general aggregate limit, such general annual aggregate limit shall be two times the occurrence limits stipulated. City reserves the right to increase any insurance requirement as needed and as appropriate.
- F. Should any of the required insurance be provided under a claims-made form, Contractor shall maintain such coverage continuously throughout the term of this Contract, and without lapse, for a period 4 years beyond the Contract Final Completion date, to the effect that, should occurrences during the Contract term give rise to claims made after expiration of the Contract, such claims shall be covered by such claims-made policies.
- G. Contractor shall provide 30 days' advance written notice to the City of cancellation, intended non-renewal, or reduction in coverage, except for non-payment for which no less than 10 days' notice shall be provided to City. All notices shall be made to:

Manager, Contract Administration Division

City and County of San Francisco  
49 South Van Ness Avenue, Suite 1600  
San Francisco, CA 94103.

- H. Contractor, upon notification of receipt by the City of any such notice, shall file with the City a certificate of the required new or renewed policy at least 10 days before the effective date of such cancellation, change or expiration, with a complete copy of the new or renewed policy.
- I. If, at any time during the life of this Contract, Contractor fails to maintain any item of the required insurance in full force and effect, all Work of this Contract may, at City's sole option, be discontinued immediately, and all Contract payments due or that become due will be withheld, until notice is received by the City as provided in the immediately preceding Subparagraph "G" that such insurance has been restored to full force and effect and that the premiums therefor have been paid for a period satisfactory to the City.
- J. Any failure to maintain any item of the required insurance may, at City's sole option, be sufficient cause for termination for default of this Contract.

1.6 QUALIFICATIONS

- A. Insurance companies shall be legally authorized to engage in the business of furnishing insurance in the State of California. All insurance companies shall have a current A.M. Best Rating not less than "A-,VIII" and shall be satisfactory to the City.

END OF SECTION

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## SECTION 00 73 20

## EXISTING UTILITY FACILITIES

## 1.1 SUMMARY

- A. This Section includes special requirements for existing utilities and underground facilities owned or controlled by any person or entity, private or governmental, referred to herein as "Utility Operators," which may be encountered by Contractor performing the Work.
- B. Utility facilities in public streets that are within the jurisdiction of the Department of Public Works shall be governed by the applicable provisions of the San Francisco Public Works Code, Sections 906, 907, 908, 909, and 910. The Utility Crossings Specifications is based on agreements with non-governmental agencies for removal, support and relocation of privately-owned utility facilities.

## 1.2 EXISTING UTILITIES INDICATED

- A. The Contract Documents may identify or include utility occupancy drawings or utility reference drawings, hereinafter called "reference drawings," showing the approximate locations and other details, of pipes, conduits, structures and other utility facilities which are based on information and data furnished the City by the Utility Operators.
  - 1. Reference drawings do not form part of the Contract Documents. It is understood that the City makes no representation as to the completeness or accuracy of said reference drawings or other information available to Contractor and assumes no responsibility therefor.
- B. With respect to existing utility facilities, the Contractor shall assume the cost and responsibility for the following:
  - 1. Reviewing and checking all such reference drawings or information.
  - 2. Locating all underground facilities indicated in the reference drawings or other information available to Contractor.
  - 3. Coordinating the Work with the Utility Operators and construct the Work to clear existing utility facilities.
  - 4. The safety and protection of all such utility facilities as provided in Article 12 of the General Conditions (Section 00 72 00) and repairing damage thereto which may result from the Work.
  - 5. Removing, adjusting, and relocating existing utility facilities located in, over or around the location of the Work as necessary to allow the prosecution of the Work, when such work to the existing utility facilities is indicated in the Contract Documents.

## 1.3 EXISTING UTILITIES NOT INDICATED

- A. Consistent with the provisions of section 4215 of the California Government Code, the City will assume the responsibility for the timely removal, relocation, or protection of existing main or trunk line utilities located on the site of the Work, if such utilities are not identified in the Contract Documents, reference drawings or other information available to Contractor.
- B. Contractor shall notify promptly the City and the Utility Operators in writing, and before further disturbing conditions affected thereby, of such unforeseen or differing utilities it discovers while performing the Work.
- C. Contractor shall negotiate with the Utility Operator, who shall have the sole discretion to perform repairs or relocation work or permit Contractor to do such repairs or relocation work at a reasonable price.

- D. For Work which physically conflicts with existing non-City owned utilities that were not indicated in the Contract Documents, the Contractor shall seek reimbursement for additional cost incurred from the non-City Utility Operator.
- E. For Work which physically conflicts with existing City owned utilities that were not indicated in the Contract Documents, the Contractor will be compensated per Subsection 1.4
- F. Contractor will be granted a non-compensable time extension and shall not be assessed liquidated damages for delay in completion of the Work if the delay was caused by such existing main or trunk line utilities in direct conflict with the Work and not indicated in the Contract Documents, reference drawings or other information available to Contractor.
- G. Contractor shall not be entitled to any adjustment in the Contract Sum or Time if the extra work could have been avoided by:
  - 1. reasonable examination, investigation, exploration, test or study of the site and contiguous areas as required by the Contractor to locate all underground utility facilities and coordinate such existing utilities with the work prior to commencing the Work; or
  - 2. reasonable inference from the presence of other visible facilities, such as buildings, meter, utility castings, junction boxes, vaults, and etc., to locate all underground utility facilities and coordinate such existing utilities with the Work prior to commencing the Work.

#### 1.4 GOVERNMENTAL FACILITIES IN THE CITY OF SAN FRANCISCO

- A. Contractor shall satisfactorily support, work around, and protect, as approved by the City, all facilities, whether shown on the Drawings or not, which exist within any excavation and which are owned or controlled, and maintained, by a City department or other authority in the exercise of a governmental function, including, but not limited to, traffic control, lighting, police communication and fire alarm systems, and all conduits, wiring and related appurtenances for such systems; sewers and sewer structures; Water Enterprise facilities; pipes and facilities of the Auxiliary Water Supply System for Fire Protection; the Municipal Railway and Hetch Hetchy Water and Power overhead lines and power feeder systems serving the Municipal Railway; and other Hetch Hetchy Water and Power facilities.
  - 1. Municipal Railway facilities, Hetch Hetchy Water and Power facilities serving the Municipal Railway, and other Hetch Hetchy Water and Power facilities, if encountered, shall be supported in a manner satisfactory to the City.
  - 2. Auxiliary Water Supply for Fire Protection facilities, if encountered, shall be supported by a minimum of one cable with turnbuckle, a strongback, and a beam spanning the trench; however, where a joint falls within the trench area, a cable with turnbuckle shall be placed on each side of the joint. All such support work shall be subject to the approval of the City before commencement thereof. After supports are removed and the pipe is sufficiently supported by partial backfill, but with the joints exposed, the pipe shall be subjected to a hydrostatic field test of 350 psi pressure in accordance with section 908.22 of the DPW Standard Specifications (refer to Division 1 for reference standards) before final backfill is placed. If a joint is visibly wet, Contractor shall repair the joint in accordance with section 910 of the DPW Standard Specifications.
  - 3. If vitrified clay pipe side sewers or culverts are encountered, Contractor may elect, in lieu of supporting such side sewers and culverts, to cut and restore those portions of the side sewers and culverts which obstruct the prosecution of the Work, provided that it complies with the provision of section 301 of the DPW Standard Specifications regarding the handling and disposal of seepage, storm water and sewage.
  - 4. Water Enterprise facilities, if encountered, shall be supported as follows:

- a. Push-on joint pipes: Pipes shall be supported by a minimum of one cable with turnbuckle, a pipe clamp and a beam spanning the trench; however, where a joint falls within a trench area, a cable with turnbuckle and pipe clamp shall be placed on each side of the joint.
  - b. Copper tubing and plastic pipes (service pipes 2 inches or smaller in diameter): If the trench is less than 8-foot wide, no support is required. For trenches wider than 8 feet, one support is required for every additional 8 feet or part thereof.
  - c. Steel welded pipes: Pipes shall be supported in a manner satisfactory to the General Manager of the Public Utilities Commission of the City and County of San Francisco.
  - d. Contractor shall submit support designs for approval and start work only with approved support designs.
5. The adjustment of manhole castings and other castings of governmental facilities, and the paving adjacent thereto, shall be done in accordance with the requirements of section 217 of the DPW Standard Specifications.
- B. Supporting, working around, and protecting existing governmental facilities indicated in the Contract Documents, reference drawings or other information available to Contractor shall be considered incidental work and no direct or additional payment will be made therefor.
- C. Governmental facilities not shown on the Contract Documents, reference drawings or other information available to Contractor that require removal, adjustment or relocation to avoid direct physical conflict with the facilities to be constructed under the Contract shall:
1. be removed or adjusted by Contractor in accordance with the provisions of the Contract Documents; or
  2. in the absence of such provisions, be removed or adjusted by Contractor on a force account basis as set forth in Paragraph 6.07 of General Conditions (Section 00 72 00); or
  3. be removed or adjusted by other suitable procedure at the City's expense.

#### 1.5 NON-GOVERNMENTAL FACILITIES IN THE CITY OF SAN FRANCISCO

- A. The procedure to be followed with respect to non-governmental utility facilities owned or controlled by any person, company, firm or corporation, in the exercise of a proprietary function is covered by sections 906, 907, 908, 909, and 910 of the San Francisco Public Works Code (part II, chapter X, of the Municipal Code).
- B. The method of application of the provisions of these Public Works Code sections is described in the following subparagraphs:
1. If the cost of removing or adjusting a utility facility, (a) materially exceeds the cost of so modifying the Work that it can be done satisfactorily without the removal or adjustment of the facility, or (b) materially exceeds the increase in the cost of Contractor's operations that would be occasioned to it by the uninterrupted presence of the facility if it were not removed or adjusted, then, in either case, the City will, if requested by the Utility Operator, waive the requirement that the facility be removed or adjusted and allow it to remain in place, provided that (1) the Utility Operator obtains the consent of Contractor to such waiver in return for such compensation, if any, by the Utility Operator as may be just and equitable and no expense is occasioned either directly or indirectly to the City by such waiver, (2) the City determines that it is economically and technically feasible to change the Project design without affecting its performance, and (3) the Utility Operator agrees to compensate the City for the expense, if any, of revising the Drawings and Specifications as necessary to accomplish the appropriate modification of the Work. Should a Utility Operator, in satisfying the requirements of the immediately preceding subparagraph, notify Contractor of its intention to leave the facility in place,

Contractor shall, within 10 days, furnish to the Utility Operator a quotation covering the entire cost of supporting, working around or protecting, as necessary, such facility. In the event a Utility Operator and Contractor cannot agree upon the amount of the compensation, if any, to be paid by the Utility Operator to Contractor, then the Director of the San Francisco Public Works, with or without the consent of Contractor, will, if he or she determines that it would be uneconomical and contrary to the public interest to remove or adjust the utility facility, and if the Utility Operator promises in writing to pay to the City the amount of the expense incurred by the City under the Change Order next hereinafter mentioned, waive the requirement that the facility be removed or adjusted and will issue an appropriate Change Order to Contractor in accordance with the provisions of Article 6 of the General Conditions (Section 00 72 00) to modify the Work or to modify its operations, as the case may be, as necessary to accommodate the continued presence of the facility.

2. In lieu of the procedures set forth in subparagraph 1.5B.1, agreements have been executed between various utility companies and agencies, and the City, enabling such companies and agencies to have included in City contracts the work of supporting, working around, and protecting their facilities. Such work will be paid for by the various utility companies and agencies directly to Contractor in conformance with the provisions of the Utility Crossing Specifications (Section 00 73 21). Requirements for performance of this work are also contained in the Utility Crossing Specifications.
- C. Pursuant to the provisions of subparagraphs 1.5B.1 and 1.5B.2, Bidders shall not include in their Bids expense on account of the presence, or possible presence, of non-governmental utility facilities, except only that which might be included for forming around manhole frames and other castings with boxes as specified in section 217 of the DPW Standard Specifications.
  - D. If during the course of the Work an unexpected interference by a non-governmental utility facility is discovered, Contractor shall immediately notify the Utility Operator of the interfering facility so that the required procedure outlined in subparagraph 1.5B.1 or 1.5B.2, as applicable, may be followed in a manner to cause no delay in the Work.

#### 1.6 ABANDONED UTILITY FACILITIES

- A. These provisions do not apply to abandoned utility facilities. Any increase in the cost of Contractor's operations occasioned by the presence and/or removal of abandoned facilities shall be at the sole expense of Contractor and no additional payment will be made by the former Utility Operators or by the City, except that removal of abandoned utility facilities, not shown on the Drawings or specified to be removed, shall be removed by Contractor on a force account basis as provided in Paragraph 6.07 of the General Conditions (Section 00 72 00).

#### 1.7 USE OF PAVEMENT BREAKER ADJACENT TO UTILITY FACILITIES LIMITED

- A. In accordance with the requirements of section 373 of the Public Works Code, Contractor may use pavement breakers or other labor-saving devices; however, the use of any machine or device that breaks pavement by blows struck by a falling or driven hammer or weight is prohibited within a horizontal distance of 6 feet from any gas, sewer, water or Auxiliary Water Supply System pipe, communications duct or any other utility facility.
  1. Such prohibition, however, shall not be construed as barring the use of hand tools or manually operated air tools such as jackhammers.

END OF SECTION

## SECTION 00 73 21

## UTILITY CROSSINGS SPECIFICATIONS (Effective January 2020)

## SECTION U1. SUPPORT, WORK AROUND, AND PROTECT EXISTING UTILITY COMPANY FACILITIES-GENERAL SPECIFICATIONS

**I. General**

Contractor shall support, work around, and protect the following utility company facilities, as applicable, where shown on the Drawings or where directed, at utility crossings which exist within the excavations and interfere with the prosecution of the work because of their presence:

Pacific Gas and Electric Company (PG&E), Pacific Bell Telephone Company D/B/A AT&T California (AT&T), Comcast Corp. (Comcast), Astound Broadband, LLC dba Wave (Astound), Webpass Telecommunications LLC (Webpass), Zayo Group, LLC (Zayo), Century Link Communications LLC f/k/a Qwest Communications Company LLC (Century), Sonic Telecom, LLC (Sonic), GTE Mobilnet d/b/a Verizon Wireless (Verizon), Mobilitie, LLC (Mobilitie), Crown Castle NG West LLC (Crown Castle), ExteNet Systems (California) LLC (Extenet), MCImetro Access Transmission Services Corp., PAXIO, INC., Electric Lightwave Holdings, Inc. fka Integra Telecom Holdings, Inc. (Electric Lightwave), Mpower Communications Corporation, T-Mobile West LLC (T-Mobile), Level 3 Communications LLC (Level 3), TW Telecom of California l.p, formerly known as Time Warner Telecom of California, L.P (TW Telecom).

This Section covers supporting documentation required from Contractor and direct payment by Utility Company to the Contractor for all costs incurred as a result of the work performed by the Contractor to support, work around and/or protect Utility Facility within the Project Limit.

A "Utility Crossing" is defined as any facility (Utility Main, Duct Structure, or Service) located within the excavation area, where the facility will remain in place and will not be relocated, abandoned in place, or removed.

If provided by the Utility Companies prior to advertisement of this Contract, Utility Contract Drawings showing Utility Crossings will be incorporated into the Contract Drawings. Utility facilities which the Utility Company intends to adjust or abandon thus eliminating the need for Contractor to support, work around, or protect will also be shown. Estimates of the cost of Utility Crossing work will be included with the Drawings.

Within 45 calendar days of notification of the award of the City contract, the Utility Companies listed above, as applicable, will execute a payment agreement with the Contractor and will pay said Contractor directly for the work of supporting, working around, and protecting such facilities, according to the Cost of Fixed Price Schedule, hereinafter set forth. The Utility Company is not required to accept or pay invoices submitted to Utility Company by a subcontractor. Prime contractor will not be allowed to mark up the invoices for the support and work around costs from the Subcontractor.

Work at crossings of other non-governmental utility company facilities in public streets shall be in accordance with the provisions of Section 00 73 20, Article 1.5, unless otherwise specified.

Any facility owned by Utility Companies mentioned above, or other non-governmental facilities, as applicable, that require relocation to avoid physical conflict with the facilities to be constructed under this Contract will be relocated by the appropriate Utility Company in accordance with the requirements of Section 00 73 20, Article 1.5, or treated as otherwise allowed therein.

**Fixed Price Schedule**

Utility Crossings where the length of the Facility is not more than 3 times the width of the excavation for excavation widths less than 18 feet, shall be priced pursuant to the Fixed Price Schedules hereinafter set forth, and submitted to the Utility Company for payment.

Excavation width will be the outside diameter or width of the City structure plus 3 feet. The length of a Utility Crossing is the centerline distance, in feet, of the portion of the Facility within the excavation area.

#### **Utility Co. Facility Support, Etc., Work Located in Contract but Utility Contract Drawings Omitted from Contract**

In the event that Utility Contract Drawings from PG&E, AT&T, Comcast and other Utility Companies listed above, as applicable, are not included in the Contract but the Estimate and General Location of the Support, Work Around and Protect Work are known and included in the Contract, all such work performed will be paid for by the Utility according to the Cost of Fixed Price Schedule hereinafter set forth.

Abandoned and other facilities which the DPW Standard Specifications provide may be cut or treated by Contractor at its expense are excluded from this coverage.

#### **Utility Co. Facility Support, Etc., Work Overlooked, Unexpected, and Not Shown on Utility Contract Drawings, but Ownership Known**

Support, Work Around and Protect Work for those Utility Crossings overlooked, unexpected, and not shown on Utility Contract Drawings and Estimates will be paid for by the Utility Company according to the Cost of Fixed Price Schedule hereinafter set forth plus an additional fifteen (15) percent surcharge for Contractor's profit and overhead.

Abandoned and other facilities which the DPW Standard Specifications provide may be cut or treated by Contractor at its expense are excluded from this coverage.

#### **No Surcharge for Certain Work**

Due to urgent and contingency nature of the following contracts and related work, an additional fifteen percent (15%) surcharge does not apply:

- Emergency Contract Work
- As Needed Contracts including As Needed Spot Sewer Repair and Job Order Contracts
- Added Scope (Via Change Order or Addendum)
- Work performed under conditional Bid items

#### **Negotiated Payment**

Notwithstanding the Fixed Price Schedules hereinafter set forth, the Utility Company and the Contractor shall directly negotiate the costs for other crossings and encroachments including following:

- "Parallel" Utility Crossings,
- Utility Crossings with lengths more than three times the width of the excavation, and/or
- Where the computed cost of any crossing exceeds \$10,230.

If a utility facility is located longitudinally and directly on top of the City trench or multiple utility facilities crossing the City trench are located too close to each other leaving no space in between for the Contractor to excavate and shore the trench, and there is a need to change the construction method to install City facilities, the increased cost shall be shared by various utility agencies and City based on the number and size of each Utility agency or City department facilities.

#### **Duct Structure**

Duct structure is one or more ducts, conduits or pipes, of any size, or a combination of such ducts, conduits or pipes, which are grouped together but which may or may not be banded, encased in concrete, or otherwise incorporated into a solid unit.

### **Nested Utility Facilities**

Nested utility facilities are defined as facilities six- inches (6") or less in outside diameter or width and are less than 3 feet clear distance from each other regardless of ownership. In the case of nested facilities, each crossing shall be paid for according to the Cost of Fixed Price Schedule reduced by 33-1/3%.

### **Abandoned or Inactive/Deactivated Facilities**

#### Abandoned Facilities

Utility Company identifies abandoned facilities as facilities that they have stopped using with the intent of never using again. Utility Company may, but is not required to, specify abandoned facilities on its utility contract drawings. If City Contractor encounters unidentified utility company facility during construction, Contractor shall notify the Utility Company in accordance with paragraph "Unexpected or Unidentified Facilities". The Utility Company Inspector shall visit the site within the time mentioned to confirm that the facility is abandoned. If the Utility Company fails to confirm that facility is abandoned, the contractor will receive full payment per Fixed Price Schedule for support, work around and protect work performed.

#### Inactive/Deactivated Facilities

Utility Company identifies Inactive/Deactivated facilities as facilities that they have temporarily stopped using with the possible intent of future use. Utility Company will specify on its utility contract drawings Inactive Facilities. The Contractor will perform Utility Company Reimbursed Work around Inactive Facilities unless otherwise instructed by the Utility Company on the Utility Contract Drawings.

Within 48 hours of the receipt of notice pursuant to paragraph "Unexpected or Unidentified Facilities", PG&E will perform necessary investigation and clear Abandoned/Inactive/Deactivated gas Facilities for removal by the Contractor.

#### Removal of Abandoned Facilities or Inactive Facilities

If necessary to construct City Project, the removal of Abandoned Facilities, and Inactive Facilities that the Company specifies on its Utility Contract Drawings that it intends to abandon will be at the Contractor's sole expense, except for removal of duct banks, and conduits or pipes larger than twelve-inch (12") in outside diameter owned by Utility Companies listed above. Utility Company and the Contractor will negotiate the cost for removal of such Utility Company duct banks, and conduits or pipes larger than twelve-inch (12") in diameter.

Any increase in the cost of the Contractor's operations occasioned by the presence and/or removal of other abandoned subsurface facilities shall be handled in accordance with section 700.09 of the DPW Standard Specifications.

### **Payment Only for Work Performed by the Contractor**

The Utility Company will not pay the Contractor unless actual work to support, work around and/or protect Utility Company's Facilities was performed. No payment shall be due to the Contractor if the Utility Company crews respond and are supporting, working around, and/or protecting their Company's Facilities, such as in an emergency, or if the Contractor does not actually perform any work or undertake any action to support, work around or protect the Utility Company's Facilities.

### **Third Party Insurance**

The Contractor shall provide third party insurance naming the affected Utility Company or Utility Companies in addition to the City as an insured against claims for property damage and personal liability arising directly or indirectly from Utility work performed by the Contractor.

## **II. Contract Activities**

### **The Contractor Measurement**

The Contractor shall measure the outside diameter or width of Utility Crossings to the nearest inch (outside diameter **excluding** any fittings, bells, or gate valves) and length of the Utility Crossings to the nearest foot to determine the cost of each Utility Crossing according to the Fixed Price Schedule hereinafter set forth.

### **Utility Company's Right of Confirmation**

The Utility Company shall have the right to confirm measurements with the Contractor but all disagreements shall be resolved without delay to the City Project.

### **Variations and Cost Adjustments**

The Contractor shall notify the Utility Company immediately of any variation of Utility Crossings from the Utility Contract Drawings and/or estimate that require cost adjustment and such cost adjustments shall be settled within no more than two business days without delay to the City Project. Contractor shall also notify the City Representative immediately of any such variations, and any disagreement between Contractor and the Utility Companies regarding Utility Crossings will be decided prior to backfilling by the Director of Public Works or his or her designated City representative. The decision of the Director of Public Works will be final. The Contractor's only recourse is to file a claim.

### **Verification and the Contractor Itemization**

Contractor shall keep an itemized record of the Utility Crossing work done, noting any variations from the Utility Contract Drawings and Estimates. The itemized record shall be maintained and copies submitted monthly to Company and the City as the City Contract work progresses, or as otherwise agreed by Company and City Contractor.

### **Supporting Documentation for City Projects other than Spot Sewer Repair Contracts**

The Contractor shall, at a minimum, submit the following supporting documentation with each invoice submitted to the Utility Company for payment:

- Utility Facility Crossing Support and Work Around Summary and "Drawing for Support and Work Around Invoice for Utility Facilities" identifying Company reimbursed work by type of facility, and shall include following:
  - Identification of all Utility Crossings by alpha-numerical numbering system (e.g., E1, E2, G1, G2);
  - Location and size of all Utility Crossings
  - Length of all Utility Crossings
- Photos of following Utility Crossings:
  - Utility Crossings where the size of the Facility varies from that shown on Utility Contract drawings or estimates; any change of measurement requires one photo per block per size variation.
  - Utility Crossings not shown on Company's Utility Contract Drawings or estimates.
  - Parallel Utility Crossings showing measurements and potential facilities support
  - Utility Crossings six-feet (6') or longer unless:
    - Shown on Utility Contract Drawings and/or estimates and no variance.
    - Facility is a lateral that is crossing the City main facility trench having 6 feet or greater trench width and crossing length does not exceed the trench width.

## Supporting Documentation for Spot Sewer Repair Contracts

The Contractor shall, submit following documentation with each invoice submitted to the Company for payment for Spot Sewer Repair Contracts:

- Utility Facility Crossing Support and Work Around Summary.
- "Drawing for Support and Work Around Invoice for Utility Facilities" identifying company reimbursed work by block, type of facility and shall include following:
  - Identification of all Utility Crossings by alpha-numerical numbering system (e.g., E1, E2, G1, G2);
  - Location and size of all Utility Crossings
  - Length of all Utility Crossings.
  - Invoice and as-built templates should be utilized and all information filled out in its entirety (e.g. City Representative's Name and Signature, Date, the Contractor's Full Name, Signature, etc.)
- Photos of following Utility Crossings:
  - All Duct Bank Structures and related measurements
  - All Utility Crossings six-feet (6') or greater in length
  - All unmarked active Utility Crossings that are supported
  - Each utility that varies in size and/or location from USA street marking(s).
- Underground Service Alert ticket number

### Photos

All photos must include:

- Label with Utility Crossing Reference Number
- Name of Street or Intersection
- Above-ground picture that includes a landmark (street sign, or house) that helps identify location of the crossing.

### Unexpected or Unidentified Facilities

If, during the course of the work, an unexpected or unidentified interference is discovered, the Contractor shall immediately call this fact to the attention of all Utility Companies, including appropriate City Departments. The City Departments and Utility Company shall have 48 hours from receipt of such notification including at least 8 working hours to determine ownership and provide direction to the Contractor for disposition of the facility which are not in direct conflict with City Project work and can be supported, worked around and protected in the trench. However, if the unidentified facility is in direct physical conflict with the City Project work and the Contractor cannot proceed further without resolution, the Utility Company and City Departments will visit the site as soon as possible within the 24 hours from receipt of such notification to determine ownership and provide direction to the Contractor. The time allowance shall include at least 8 working hours. If the ownership of the unidentified facility is unknown, the Contractor shall call Underground Service Alert (USA) requesting Utility Agencies to visit the site to identify the ownership. If no determination can be made after the aforementioned procedure is followed, the Contractor will follow the direction of the City Representative or authorized designee to either remove the facility as abandoned or support and work around the facility. Disposition shall be in accordance with the applicable requirements of Section 00 73 20, Article 1.5, if such facilities are owned by companies other than listed above. If ownership is by one or more of the companies listed above, disposition shall be as hereinbefore set forth under the heading, "Utility Co. Facility Support, Etc., Work Overlooked, Unexpected, and Not Shown on Utility Contract Drawings, But Ownership Known." If City Representative directs the contractor to support and work around a facility whose ownership is unknown and can not be confirmed that it is abandoned, support and work around work of such facility will be paid for by the City according to the Cost of Fixed Price Schedule hereinafter set forth plus an additional fifteen (15) percent surcharge for Contractor's profit and overhead.

### Progress Payments

Progress payment for the utility crossing work done shall be made by Company within ninety (90) days of receipt of an invoice from the Contractor submitted along with the supporting documentation listed above.

### III. METHOD OF DETERMINING UTILITY CROSSING COSTS

#### Fixed Price Schedule

The cost of support, work around and protection of utility mains, duct structures and services shall be based on the outside diameter or width of said Facilities and the length of the Utility Crossing.

In the following schedules the maximum outside diameter shall mean outside diameter of pipe, conduit, service, duct or main **excluding** any fittings, bells, or gate valves, and width shall mean the distance measured horizontally across the duct structure.

$$\text{Cost of Utility Crossing} = \text{Fixed Cost} + \text{Support Cost}$$

#### Group I: Length of Crossing less than Six (6) Feet

Maximum Outside Diameter Of Main And Service Or Width Of Duct Structure	Fixed Cost	Support Cost Per Foot of Length of Crossing
4 inches or less	\$588	0
Over 4 inches to 20 inches	\$588 + \$98 per inch over 4 inches	0
Over 20 inches	\$2,155 + \$163 per inch over 20 inches	0

#### Group II: Length of Crossing Six (6) Feet to Twelve (12) Feet

Maximum Outside Diameter Of Main And Service Or Width Of Duct Structure	Fixed Cost	Support Cost Per Foot of Length of Crossing Over Six Feet
4 inches or less	\$751	\$98
Over 4 inches to 20 inches	\$751 + \$104 per inch over 4 inches	\$98
Over 20 inches	\$2,422 + \$176 per inch over 20 inches	\$98

**Group III: Length of Crossing greater than Twelve (12) Feet**

<b>Maximum Outside Diameter Of Main And Service Or Width Of Duct Structure</b>	<b>Fixed Cost</b>	<b>Support Cost Per Foot of Length of Crossing Over Twelve Feet</b>
4 inches or less	\$1,388	\$131
Over 4 inches to 20 inches	\$1,338 + \$118 per inch over 4 inches	\$131
Over 20 inches	\$3,219 + \$196 per inch over 20 inches	\$163

**SECTION U2. SUPPORT, WORK AROUND, AND PROTECT EXISTING PACIFIC GAS AND ELECTRIC COMPANY (PG&E) UNDERGROUND FACILITIES - STANDARD TECHNICAL SPECIFICATIONS**

The requirements for supporting, working around, and protecting existing Pacific Gas and Electric Company (PG&E) underground electric, gas and steam facilities are as follows:

For pipe and conduit in sizes up to and including 6 inches inside diameter, spans of less than 6 feet shall be considered self-supporting unless otherwise directed by the City or by the PG&E inspector through the City Representative. Spans of 6 feet and more, but not to exceed 12 feet, shall be supported by a beam with at least one cable and turnbuckle. For spans over 12 feet, an additional cable and turnbuckle shall be installed for each additional 6 feet or fraction thereof of span. Cables and turnbuckles shall be located to support joints, valves and other fittings. Cast iron joints and valves, where encountered, shall be supported on both sides.

For pipe and conduit in sizes larger than 6 inches inside diameter, spans shall be supported by beams with cables and turnbuckles located at intervals not to exceed ten times the diameter of the pipe measured in inches, unless otherwise directed by the City or PG&E inspector through the City Representative. Cable and turnbuckles shall be located to support joints, valves, and other fittings. Cast iron joints and valves, where encountered, shall be supported on both sides.

Concrete-encased duct lines and/or concrete-encased steam lines shall not be considered as self-supporting, but may be so designated by the City or PG&E inspector through the City Representative, upon a visual examination of the concrete envelope.

Beams, cables and turnbuckles for supporting steel pipe and/or conduit shall be adequately sized to limit the deflection so as not to exceed length of span in feet divided by 360.

**Length of Span in Feet**

Beams, cables and turnbuckles used for supporting cast iron pipe shall be adequately sized to insure that no deflection will occur.

Beams, cables and turnbuckles used for supporting concrete encased duct lines and/or concrete encased steam lines shall be adequately sized and spaced to insure that no deflection will occur.

For multi-way conduits, spacers shall be placed to maintain conduit separation at point of support. 2-inch x 4-inch wood softeners shall be used with all cable slings to prevent damage to pipe, coating, wrapping or concrete encasement. However, slings supporting unreinforced concrete encased pipe must also incorporate strongbacks to prevent cracking of concrete.

Contractor shall exercise due care to avoid damage to pipe and pipe coatings, wrapping or concrete encasement. To help prevent damage to gas pipelines and other PG&E underground utilities, call 811 at least two (2) working days before and up to fourteen (14) days in advance of an excavation so that all

crossings can be verified. Should Contractor damage or displace any PG&E facility: move to a safe location, call 911, and then contact PG&E at 1-800-743-5000 (gas and electric facilities). Repairs or replacements will be made by the PG&E. However, all expenses in connection therewith shall be borne solely by Contractor.

**SECTION U3. SUPPORT, WORK AROUND, AND PROTECT EXISTING PACIFIC BELL TELEPHONE COMPANY D/B/A AT&T CALIFORNIA (AT&T) UNDERGROUND FACILITIES - STANDARD TECHNICAL SPECIFICATIONS**

**General**

The requirements for supporting, working around, and protecting existing AT&T underground facilities are as follows:

**Requirements for Supporting AT&T Ducts**

A single duct spanning less than 6 feet shall be considered self-supporting unless otherwise directed by the City or by the AT&T inspector through the City Representative.

A single duct spanning more than 6 feet shall be supported by a beam with at least one cable and turnbuckle. For spans over 12 feet, an additional cable and turnbuckle shall be installed for each additional 6 feet or fraction thereof of span. Cables and turnbuckles shall be located to support duct joints.

Duct structures consisting of 2 or more single ducts not encased in concrete and spanning more than 4 feet, shall be banded with at least 2 bands and supported by a beam with at least one cable and turnbuckle. For spans over 8 feet, an additional set of bands, cable and turnbuckle shall be installed for each additional 4 feet or fraction thereof of span. Banding of ducts shall be done in such a manner as to not distort the normal configuration of the structure.

Duct structures consisting of 2 or more single ducts, encased in concrete and spanning more than 4 feet, shall be supported by a beam with at least one cable and turnbuckle. For spans over 8 feet, an additional cable and turnbuckle shall be installed for each additional 4 feet or fraction thereof of span.

Multiple-duct structures of vitrified clay and/or concrete shall be supported for the complete width of the trench. The support shall consist of planking or beams equal in width to the width of the structure and banded to it. This structure in turn shall be supported by a beam with at least one cable and turnbuckle placed every 4 feet or fraction thereof so as to maintain the existing position and alignment of the duct structure.

Duct structures consisting of dissimilar conduit materials shall be supported in the manner applicable to the most fragile portion of the structure.

**Requirements for Protecting AT&T Ducts**

Single ducts shall be protected if required. This determination will be made by the City or by the AT&T inspector through the City Representative.

Duct structures having top and bottom wood planking or encased in concrete will not require additional protection unless otherwise directed by the City or by the AT&T inspector through the City Representative.

All other multiple duct structures, with the exception of steel pipe in good condition, shall be protected by the placement of wood planking or sheeting no less than 1/2-inch in thickness and equal in width to the width of the structure.

**Damage or Displacement of AT&T Facilities**

Should Contractor damage or displace any AT&T owned facility, the Cable Maintenance Department of AT&T shall be notified immediately by calling 611, press Option 1, and then Option 5. Repairs or replacements will be made by AT&T. However, all expenses in connection therewith shall be borne solely by Contractor.

**SECTION U4. SUPPORT, WORK AROUND, AND PROTECT EXISTING COMCAST CORP. (COMCAST) UNDERGROUND FACILITIES - STANDARD TECHNICAL SPECIFICATIONS****General**

The requirements for supporting, working around, and protecting existing Comcast underground facilities are as follows:

**Requirements for Supporting Comcast Corp. Ducts**

A single duct spanning less than six (6) feet shall be considered self-supporting, unless otherwise directed by the Comcast engineering coordinator or the Comcast inspector, through the City Representative.

A single duct spanning more than six (6) feet shall be supported by a beam with at least one cable and turnbuckle. For spans over twelve (12) feet, an additional cable and turnbuckle shall be installed for each additional six (6) feet or fraction thereof of span. Cables and turnbuckles shall be located to support duct joints.

Duct Structures consisting of two (2) or more single ducts spanning more than four (4) feet shall be banded with at least two (2) bands and supported by a beam with at least one (1) cable and turnbuckle. For spans over eight (8) feet an additional set of bands, cable, and turnbuckle shall be installed for each additional four (4) feet or fraction thereof of span. Banding of ducts shall be done in such a manner as to not distort the normal configuration of the structure.

Duct structures consisting of dissimilar conduit materials shall be supported in the manner applicable to the most fragile portion of the structure.

**Requirements for Protecting Comcast Ducts**

Single ducts shall be protected if required. This determination will be made by the Comcast engineering coordinator or by the Comcast Corp. inspector, through the City Representative.

Duct Structure having top and bottom wood planking will not require additional protection unless otherwise directed by the Comcast engineering coordinator or the Comcast Corp. inspector through the City Representative.

All other multiple duct structures shall be protected by the placement of wood planking or sheeting no less than 1/2-inch in thickness and equal in width to the width of the structure.

**Damage or Displacement of Comcast Facilities**

Should Contractor damage or displace any Comcast owned facility the proper authorities shall be notified immediately by calling 1-888-824-8399. Repairs or replacements will be made by Comcast. However, all expenses in connection therewith shall be borne solely by Contractor.

**SECTION U5. SUPPORT, WORK AROUND, AND PROTECT EXISTING MUNI TRANSIT POWER (MTP) UNDERGROUND FACILITIES - STANDARD TECHNICAL SPECIFICATIONS****General**

The requirements for supporting, working around, and protecting existing Muni Transit Power (MTP) underground conduit and ducts are as follows:

**Requirements for Supporting MTP Conduits and Ducts**

Steel conduit spanning less than six feet shall be considered self-supporting unless otherwise directed by the City or by the MTP inspector through the City Representative.

Steel conduit spanning six feet and more shall be supported by a beam with at least one cable and turnbuckle. For spans over 12 feet, an additional cable and turnbuckle shall be installed for each additional six feet or fraction thereof of span. Cables and turnbuckles shall be located to support duct joints.

Beams, cables and turnbuckles for supporting steel conduit shall be adequately sized to limit the deflection so as not to exceed length of span in feet divided by 360.

Spacers shall be placed between multiple conduits in a manner to maintain conduit separation at points of support.

Concrete-encased ducts spanning more than four feet shall be supported by a beam with at least one cable and turnbuckle. For spans over eight feet, an additional cable and turnbuckle shall be installed for each additional four feet or fraction thereof of span for the complete width of the excavation.

Beams, cables and turnbuckles for supporting concrete-encased duct lines shall be adequately sized and spaced to insure that no deflection will occur.

Contractor shall provide adequate support and protection to prevent differential movement at the juncture of manholes and duct banks.

Duct structures consisting of dissimilar conduit materials shall be supported in the manner applicable to the most fragile portion of the structure.

**Requirements for Protecting MTP Conduits and Ducts**

Steel conduit shall be protected if required. This determination will be made by the City or by the MTP inspector through the City Representative.

Duct structures having top and/or bottom wood planking or encased in concrete will not require additional protection unless otherwise directed by the City or by the MTP inspector through the City Representative.

All other duct structures, such as unprotected tile and the like, shall be adequately protected by the placement of wood planking or sheeting no less than 1/2-inch in thickness and equal in width to the width of the structure. The top, bottom and sides shall be covered as necessary, depending on Contractor's operations and the conditions of the work.

**Damage or Displacement of MTP Facilities**

Should Contractor damage or displace any MTP-owned facility, John Orkes, Overhead Lines Superintendent of the Traction Power Group (TPG), shall be notified immediately by calling 1-415-554-9221. Repairs or replacements will be made by MTP. However, all expenses in connection there with shall be borne solely by Contractor. Repairs or replacements will be made by MTP. However, all expenses in connection there with shall be borne solely by Contractor.

**Conduits to Pole Risers to be Considered as Services**

For the purpose of payment, conduits that run directly from a manhole or pull box to a pole riser shall be considered to be a service and will be paid for according to the Cost of Utility Crossing Schedule.

END OF SECTION

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## 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 3 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.sfpublishworks.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/index.aspx?page=953>. 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 trucks 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. 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 latest revision of the manual "Regulations for Excavating and Restoring Streets in San Francisco" 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. Contractor shall provide proper public notices prior to commencing excavations in accordance with article 2.4 of the San Francisco Public Works Code. 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 days, post and maintain notices every 100 feet along the block of excavation work at least 72 hours prior to starting excavation.
  2. For excavations completed and restored in 15 days or longer, provide written notice delivered by U.S. mail to each property owner affected by the excavation at least 30 days but not more than 60 calendar days prior to starting excavation. Additionally, post and maintain notices every 100 feet and deliver written notices to each dwelling unit along the block of excavation work at least 10 days but not more than 15 days prior to starting excavation.
  3. For emergency excavation post and maintain notices every 100 feet along the block of excavation work during the excavation work.
- D. 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.
- E. 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 11 00, Summary of Work, 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.
- F. 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 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  
3801 3rd Street, Suite 600  
San Francisco, CA 94124  
Telephone (415) 695-7321.

END OF SECTION

## SECTION 00 73 73

## STATUTORY REQUIREMENTS

## 1.1 GENERAL

- A. All requirements in this Section are incidental work, unless specified otherwise.
- B. Contractor shall be solely responsible and fully liable for any and all failures to comply with the requirements specified herein, and shall unconditionally and fully indemnify the City for any damages resulting therefrom. If Contractor fails to comply with the requirements specified herein, or fails to promptly take all required remedial actions to the City's satisfaction, the City may withhold progress payments to Contractor until satisfactory compliance has been accomplished and/or may assess statutory liquidated damages or penalties, as applicable.
- C. The full text of the City Requirements provided below are incorporated by reference in the Contract Documents, and are available at [http://www.amlegal.com/nxt/gateway.dll?f=templates&fn=default.htm&vid=amlegal:sanfrancisco\\_ca](http://www.amlegal.com/nxt/gateway.dll?f=templates&fn=default.htm&vid=amlegal:sanfrancisco_ca)

## 1.2 CONFLICT OF INTEREST

- A. By executing the Agreement (Section 00 52 00), Contractor certifies that it does not know of any fact which constitutes a violation of Section 15.103 of the City's Charter; Article III, Chapter 2 of City's Campaign and Governmental Conduct Code; or Section 87100 *et seq.* or Section 1090 *et seq.* of the California Government Code of the State of California, and further agrees promptly to notify the City if it becomes aware of any such fact during the term of this Contract. All requirements in this Section are incidental work, unless specified otherwise.

## 1.3 NONDISCRIMINATION REQUIREMENTS

- A. **Incorporation of Administrative Code Chapters 12B and 12C.** The provisions of Chapters 12B and 12C of the San Francisco Administrative Code are incorporated herein by this reference. Contractor shall comply with any and all of the provisions that apply to this Agreement under such Chapters, and be bound by the remedies provided in such Chapters. Contractor shall incorporate by reference in all subcontracts the provisions of §§12B.2(a), 12B.2(c)-(k), and 12C.3 of the San Francisco Administrative Code and shall require all subcontractors to comply with such provisions.
- B. **Nondiscrimination in the Provision of Employee Benefits.** Contractor does not as of the date of this Agreement, and will not during the term of this Agreement, in any of its operations in San Francisco, on real property owned by San Francisco, or where Work is being performed for the City elsewhere in the United States, discriminate in the provision of employee benefits between employees with domestic partners and employees with spouses and/or between the domestic partners and spouses of such employees, subject to the conditions set forth in San Francisco Administrative Code §12B.2.
- C. **Title VI Requirements.** During the performance of this Contract, the Contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "Contractor") agrees as follows:
  - (1) **Compliance with Regulations:** The Contractor shall comply with the Regulation relative to nondiscrimination in Federally-assisted programs of the Department of

Transportation (hereinafter, "DOT") Title 49, Code of Federal Regulations, Part 21, and the Federal Highway Administration (hereinafter "FHWA") Title 23, Code of Federal Regulations, Part 200 as they may be amended from time to time, (hereinafter referred to as the "Regulations"), which are herein incorporated by reference and made a part of this Contract.

- (2) **Nondiscrimination:** The Contractor, with regard to the work performed by it during the Contract, shall not discriminate on the grounds of race, color, or national origin, sex, age, and disability/handicap and low income in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor shall not participate either directly or indirectly in the discrimination prohibited by 49 CFR, section 21.5 of the Regulations, including employment practices when the Contract covers a program set forth in Appendix B of the Regulations.
- (3) **Solicitations for Subcontractors, Including Procurements of Materials and Equipment:** In all solicitations either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the Contractor of the Contractor's obligations under this Contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin, sex, age, and disability/handicap and low income.
- (4) **Information and Reports:** The Contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the City and County of San Francisco ("City") or the FHWA to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish this information the Contractor shall so certify to the City, or the FHWA as appropriate, and shall set forth what efforts it has made to obtain the information.
- (5) **Sanctions for Noncompliance:** In the event of the Contractor's noncompliance with the nondiscrimination provisions of this Contract, the City shall impose such Contract sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:
  - (a) withholding of payments to the Contractor under the Contract until the Contractor complies, and/or
  - (b) cancellation, termination or suspension of the Contract, in whole or in part.
- (6) **Incorporation of Provisions:** The Contractor shall include the provisions of paragraphs (1) through (6) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. The Contractor shall take such action with respect to any subcontract or procurement as the City or the FHWA may direct as a means of enforcing such provisions including sanctions for non-compliance, provided, however, that, in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the Contractor may request the City to enter into such litigation to protect the interests of the City, and, in addition, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

#### 1.4 REQUIRING MINIMUM COMPENSATION FOR COVERED EMPLOYEES

- A. Contractor shall pay covered employees no less than the minimum compensation required by San Francisco's Minimum Compensation Ordinance (MCO), and shall otherwise comply

with the MCO as set forth in San Francisco Administrative Code Chapter 12P (Chapter 12P). The provisions of Chapter 12P, including but not limited to the penalties for noncompliance provided therein, are incorporated herein by this reference, and made part of this Agreement as though fully set forth herein:

#### 1.5 REQUIRING HEALTH BENEFITS FOR COVERED EMPLOYEES

- A. Contractor shall choose and perform one of the Health Care Accountability options set forth in Section 12Q.3 of the Health Care Accountability Ordinance (HCAO), and shall otherwise comply with the HCAO as set forth in San Francisco Administrative Code Chapter 12Q. The provisions of Chapter 12Q, including but not limited to the penalties for noncompliance provided therein, are incorporated herein by this reference, and made part of this Agreement as though fully set forth herein.

#### 1.6 MACBRIDE PRINCIPLES - NORTHERN IRELAND

- A. The provisions of San Francisco Administrative Code §12F are incorporated herein by this reference and made part of this Agreement as though fully set forth. By signing this Agreement, Contractor confirms that Contractor has read and understood that the City urges companies doing business in Northern Ireland to resolve employment inequities and to abide by the MacBride Principles, and urges San Francisco companies to do business with corporations that abide by the MacBride.

#### 1.7 PROHIBITION ON USE OF PUBLIC FUNDS FOR POLITICAL ACTIVITY

- A. In performing the Work, Contractor shall comply with San Francisco Administrative Code Chapter 12.G, which prohibits funds appropriated by the City for this Agreement from being expended to participate in, support, or attempt to influence any political campaign for a candidate or for a ballot measure. The provisions of Chapter 12.G, including but not limited to the penalties for noncompliance provided therein are incorporated by reference and made a part of this Agreement as though fully set forth herein.

#### 1.8 LIMITATIONS ON CONTRIBUTIONS

- A. By executing the Agreement (Section 00 52 00), Contractor acknowledges that it is familiar with section 1.126 of the City's Campaign and Governmental Conduct Code, which prohibits any person who contracts with the City for the rendition of personal services, for the furnishing of any material, supplies or equipment, for the sale or lease of any land or building, or for a grant, loan or loan guarantee, from making any campaign contribution to (1) an individual holding a City elective office if the contract must be approved by the individual, a board on which that individual serves, or the board of a state agency on which an appointee of that individual serves, (2) a candidate for the office held by such individual, or (3) a committee controlled by such individual, at any time from the commencement of negotiations for the contract until the later of either the termination of negotiations for such contract or six months after the date the contract is approved. The prohibition on contributions applies to each prospective party to the contract; each member of Contractor's board of directors; Contractor's chairperson, chief executive officer, chief financial officer and chief operating officer; any person with an ownership interest of more than 20 percent in Contractor; any subcontractor listed in the bid or contract; and any committee that is sponsored or controlled by Contractor. Contractor must inform each such person of the limitation on contributions imposed by Section 1.126 and provide the names of the persons required to be informed to City.

#### 1.9 NONDISCLOSURE OF PRIVATE, PROPRIETARY OR CONFIDENTIAL INFORMATION

- A. If the Contract Documents require City to disclose "Private Information" to Contractor within the meaning of San Francisco Administrative Code Chapter 12M, Contractor shall use such information only in accordance with the restrictions stated in this Agreement and as necessary in performing the Services. The provisions of Chapter 12M, including but not limited to the penalties for noncompliance provided therein, are incorporated herein by this reference, and made part of this Agreement as though fully set forth herein.
- B. In the performance of Work, Contractor may have access to City's proprietary or confidential information, the disclosure of which to third parties may damage City. If City discloses proprietary or confidential information to Contractor, such information must be held by Contractor in confidence and used only in performing the Agreement. Contractor shall exercise the same standard of care to protect such information as a reasonably prudent contractor would use to protect its own proprietary or confidential information.

#### 1.10 UNFAIR BUSINESS PRACTICES CLAIMS; ASSIGNMENT TO AWARDING BODY

- A. Under Public Contract Code section 7103.5, Contractor and its Subcontractors shall conform to the following requirements:
  - 1. In entering into the Agreement or subcontract to supply goods, services, or materials under this Agreement, Contractor or its Subcontractors offer and agree to assign the City all rights, title, and interest in and to all causes of action they may have under section 4 of the Clayton Act (15 U.S.C. Section 15) or under the Cartwright Act (chapter 2, commencing with section 16700, of part 2 of division 7 of the Business and Professions Code), arising from purchases of goods, services or materials pursuant to the Agreement or subcontract.
  - 2. The assignment shall be made and become effective at the time the City tenders Final Payment to Contractor, without further acknowledgement by the Parties.
  - 3. Contractor shall include the provisions of this Article in its subcontracts and purchase agreements to supply goods, services, or materials pursuant to the Agreement.

#### 1.11 TROPICAL HARDWOOD AND VIRGIN REDWOOD PRODUCTS BAN

- A. Except as expressly permitted by the application of Sections 802(b) and 803(b) of the San Francisco Environment Code, Contractor shall not provide any items to the City in performance of this contract which are tropical hardwoods, tropical hardwood wood products, virgin redwood or virgin redwood wood products. The City urges Contractor not to import, purchase, obtain, or use for any purpose, any tropical hardwood, tropical hardwood product, virgin redwood or virgin redwood wood product.

#### 1.12 PRESERVATIVE-TREATED WOOD CONTAINING ARSENIC

- A. Contractor may not purchase preservative-treated wood products containing arsenic in the performance of this Agreement unless an exemption from the requirements of Chapter 13 of the San Francisco Environment Code is obtained from the Department of the Environment under Section 1304 of the Code. The term "preservative-treated wood containing arsenic" shall mean wood treated with a preservative that contains arsenic, elemental arsenic, or an arsenic copper combination, including, but not limited to, chromated copper arsenate preservative, ammoniacal copper zinc arsenate preservative, or ammoniacal copper arsenate preservative. Contractor may purchase preservative-treated wood products on the list of environmentally preferable alternatives prepared and adopted by the Department of the Environment. This provision does not preclude Contractor from purchasing preservative-treated wood containing arsenic for saltwater immersion. The term "saltwater immersion" shall mean a pressure-treated wood that is used for construction purposes or facilities that are partially or totally immersed in saltwater.

#### 1.13 FOOD SERVICE WASTE REDUCTION REQUIREMENTS

- A. Contractor shall comply with the Food Service Waste Reduction Ordinance, as set forth in San Francisco Environment Code Chapter 16, including but not limited to the remedies for noncompliance provided therein. The provisions of Chapter 16 are incorporated herein by reference and made a part of this Agreement as though fully set forth herein.

#### 1.14 NON-DISCRIMINATION IN CONTRACTING REQUIREMENTS

- A. Pursuant to chapter 14B of the San Francisco Administrative Code the following requirements are made part of the Contract:
1. Chapters 12B and 14B of the San Francisco Administrative Code, their implementing Rules and Regulations, and CMD Attachment 1 – Requirements for Construction Contracts, are incorporated by reference herein as though fully set forth. These documents are available to be viewed and downloaded on the Contract Monitoring Division's website: <http://sfgov.org/cmd/important-forms> Alternatively, contact the CMD Contract Compliance Officer assigned to this Contract for assistance in obtaining any of these documents.
  2. The willful failure of Contractor or its subcontractors to comply with any of the requirements of chapter 14B shall be deemed a material breach of contract.
  3. In the event that the Director of Contract Monitoring Division finds that Contractor or any of its subcontractors willfully fails to comply with any of the provisions of Chapter 14B, rules and regulations implementing Chapter 14B, Contractor or its subcontractor shall be liable for liquidated damages as specified in CMD Attachment 1, article 1.05 "Noncompliance and Sanctions," which shall be payable to the City upon demand and may be set off against moneys due to Contractor or its subcontractor for any contract with the City. Contractor agrees that progress payments shall be withheld, and Contractor's liability for liquidated damages assessed will be subject to the collection procedures specified in Section 14B.7(H)(2) of the Administrative Code and CMD Attachment 1, article 1.05 "Noncompliance and Sanctions."
  4. Contractor shall maintain, and shall require its subcontractors to maintain, records including such information requested by CMD necessary for monitoring their compliance with Chapter 14B. Such records shall be maintained for 3 years after the date of Final Completion.
  5. Contractor shall pay its subcontractors within 3 working days after receiving payment from the City unless Contractor notifies the Director of the CMD in writing prior to receiving payment from the City that there is a bona fide dispute between Contractor and the subcontractor. The Director of the CMD may, upon making a determination that a bona fide dispute exists between Contractor and the subcontractor, waive this 3-day payment requirement.
  6. Contractor and subcontractors shall use the web-based Local Business Utilization Tracking System (LBEUTS) to submit 14B prime contractor and subcontractor payment information, including monthly progress payment invoices. The LBEUTS replaces CMD Forms 7 and 9. Contractor shall submit CMD Form 8 in paper format. Refer to CMD Attachment 1, article 1.03 for more details, or visit the CMD website: <https://sfgov.org/cmd/lbe-tracking-system-lbeuts>.
  7. Contractor shall comply with the Non-Discrimination provisions as set forth in Part IV of CMD Attachment 1.

#### 1.15 SUNSHINE ORDINANCE

- A. Contractor acknowledges that the Contract Documents and all records related to their formation, Contractor's performance of Work, and City's payment are subject to the California Public Records Act, (California Government Code §6250 et. seq.), and the San Francisco Sunshine Ordinance, (San Francisco Administrative Code Chapter 67). Such records are subject to public inspection and copying unless exempt from disclosure under federal, state or local law.

#### 1.16 SUBMITTING FALSE CLAIMS; REMEDIES

- A. Pursuant to Article V of Chapter 6 of the San Francisco Administrative Code, any contractor, subcontractor, supplier, consultant or subconsultant who submits a false claim may be subject to monetary penalties, investigation and prosecution and may be declared an irresponsible bidder or an unqualified consultant and debarred as set forth in that Article. A contractor, subcontractor, supplier, consultant or sub consultant will be deemed to have submitted a false claim to the City if the contractor, subcontractor, supplier, consultant or subconsultant: (a) knowingly presents or causes to be presented to an officer or employee of the City a false claim or request for payment or approval; (b) knowingly makes, uses, or causes to be made or used a false record or statement to get a false claim paid or approved by the City; (c) conspires to defraud the City by getting a false claim allowed or paid by the City; (d) knowingly makes, uses, or causes to be made or used a false record or statement to conceal, avoid, or decrease an obligation to pay or transmit money or property to the City; or (e) is a beneficiary of an inadvertent submission of a false claim to the City, subsequently discovers the falsity of the claim, and fails to disclose the false claim to the City within a reasonable time after discovery of the false claim.

#### 1.17 CLEAN CONSTRUCTION

- A. Contractor agrees to comply fully with and be bound by the Clean Construction requirements set forth in Section 6.25 of the San Francisco Administrative Code and Chapter 25 of the Environment Code. The provisions of Section 6.25 and Chapter 25 are incorporated herein by reference and made a part of this Agreement as though fully set forth.
- B. Contractor may seek waivers from the Clean Construction requirements as set forth in Chapter 25 of the Environment Code.
- C. By entering into the Agreement, Contractor and City agree that if Contractor uses off-road equipment and/or off-road engines in violation of the Clean Construction requirements set forth in Section 6.25 of the Administrative Code and Chapter 25 of the Environment Code, the City will suffer actual damages that will be impractical or extremely difficult to determine. Accordingly, Contractor and the City agree that Contractor shall pay the City the amount of \$100 per day per each piece of off-road equipment and each off-road engine used to complete Work on the Project in violation of the Clean Construction requirements. Such amount shall not be considered a penalty, but rather agreed monetary damages sustained by City because of Contractor's failure to comply with the Clean Construction requirements.

#### 1.18 CONSIDERATION OF CRIMINAL HISTORY IN HIRING AND EMPLOYMENT DECISIONS

- A. Contractor agrees to comply fully with and be bound by all of the provisions of Chapter 12T "City Contractor/Subcontractor Consideration of Criminal History in Hiring and Employment Decisions," of the San Francisco Administrative Code (Chapter 12T), including the remedies provided, and implementing regulations, as may be amended from time to time. The provisions of Chapter 12T are incorporated by reference and made a part of this Agreement as though fully set forth herein. The text of the Chapter 12T is available on the web at [www.sfgov.org/olse/fco](http://www.sfgov.org/olse/fco). A partial listing of some of Contractor's obligations under Chapter 12T is set forth in this Section. Contractor is required to comply with all of the applicable provisions of 12T, irrespective of the listing of obligations in this Paragraph. Capitalized terms used in this Paragraph and not defined in this Agreement shall have the meanings assigned to such terms in Chapter 12T.
- B. The requirements of Chapter 12T shall only apply to a Contractor's or Subcontractor's operations to the extent those operations are in furtherance of the performance of this

Agreement, and shall apply only to applicants and employees who would be or are performing work in furtherance of this Agreement.

- C. Contractor shall incorporate by reference in all subcontracts the provisions of Chapter 12T, and shall require all subcontractors to comply with such provisions. Contractor's failure to comply with the obligations in this subsection shall constitute a material breach of this Agreement.
- D. Contractor or Subcontractor shall not inquire about, require disclosure of, or if such information is received base an Adverse Action on an applicant's or potential applicant for employment, or employee's: (1) Arrest not leading to a Conviction, unless the Arrest is undergoing an active pending criminal investigation or trial that has not yet been resolved; (2) participation in or completion of a diversion or a deferral of judgment program; (3) a Conviction that has been judicially dismissed, expunged, voided, invalidated, or otherwise rendered inoperative; (4) a Conviction or any other adjudication in the juvenile justice system; (5) a Conviction that is more than seven years old, from the date of sentencing; or (6) information pertaining to an offense other than a felony or misdemeanor, such as an infraction.
- E. Contractor or Subcontractor shall not inquire about or require applicants, potential applicants for employment, or employees to disclose on any employment application the facts or details of any conviction history, unresolved arrest, or any matter identified in subparagraph D, above. Contractor or Subcontractor shall not require such disclosure or make such inquiry until either after the first live interview with the person, or after a conditional offer of employment.
- F. Contractor or Subcontractor shall state in all solicitations or advertisements for employees that are reasonably likely to reach persons who are reasonably likely to seek employment to be performed under this Agreement, that the Contractor or Subcontractor will consider for employment qualified applicants with criminal histories in a manner consistent with the requirements of Chapter 12T.
- G. Contractor and Subcontractors shall post the notice prepared by the Office of Labor Standards Enforcement (OLSE), available on OLSE's website, in a conspicuous place at every workplace, job site, or other location under the Contractor or Subcontractor's control at which work is being done or will be done in furtherance of the performance of this Agreement. The notice shall be posted in English, Spanish, Chinese, and any language spoken by at least 5% of the employees at the workplace, job site, or other location at which it is posted.
- H. Contractor understands and agrees that if it fails to comply with the requirements of Chapter 12T, the City shall have the right to pursue any rights or remedies available under Chapter 12T, including but not limited to, a penalty of \$50 for a second violation and \$100 for a subsequent violation for each employee, applicant or other person as to whom a violation occurred or continued, termination or suspension in whole or in part of this Agreement.

#### 1.19 CONTRACTOR PERFORMANCE

- A. The City will review Contractor's performance in accordance with Administrative Code Section 6.26. Reviews will be based on a number of criteria, including, but not limited to, safety, quality, timeliness, and expertise. Assessments of past performance may be used as part of future responsibility determinations. Performance reviews shall not confer any express or implied rights upon Contractor, nor shall they shift any liability to the City for the Contractor's performance of the Contract.

END OF SECTION

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## SECTION 01 11 00

## SUMMARY OF WORK

## PART 1 - GENERAL

## 1.1 SUMMARY

The Work is replacement of steam pipe and around the intersection of Larkin Street and McAllister Street, including traffic control, excavation and shoring, street restoration, hazardous materials abatement, removal and replacement of steam pipe, permits, fees, and all associated work.

## 1.2 PROJECT DESCRIPTION

## A. Work includes, but not limited to:

1. Labor, material, equipment and other items necessary to perform this scope.
2. All required permits, inspections and fees for completion of the project.
3. Remediation of any existing asbestos insulation material and associated testing and certification.
4. Identification and coordination of work with all existing utilities such as water, sewer, power, telecommunication, etc.
5. Traffic control for duration of the project.
6. Excavation, shoring, backfill and restoration of all affected areas such as the street, pavement, sidewalk, bus stop, etc. in accordance to the San Francisco Public Works Standard.
7. Removal of the existing 8" steam and 4" condensate pipelines between Manhole #2 and Manhole #3. Manhole #2 is located on the South-East corner of Larkin and McAllister, and Manhole #3 is located on the South-West corner of Larkin and McAllister street.
8. Installation of new 4" schedule 80 domestic seamless steam and condensate pipelines, welded, thermally insulated with foam glass, and protected by concrete cladding.
9. Replacement of equipment in Manhole #3 with new equipment include all steam and condensate valves, condensate traps, piping, expansion joints, and expansion guides, installation of new anchors and supports, and replacement of the thrust block.
10. If the contractor chooses to remove curb and sidewalk to excavate the pipe section under the roadway, the sidewalk will be demolished and reconstructed and curb will be restored with granite, either salvaged or supplied from City stockpiles.
11. Removal and disposal of all replaced material and final cleaning of the job site.

B. Refer to Appendix A to this Section for a map outlining the approximate work area.

C. Refer to Appendix B to this Section for SFMTA Forms, if needed.

## 1.3 HAZARDOUS OR CONTAMINATED SOILS, DUST CONTROLS, &amp; EXCAVATION LIMITATIONS

A. Work will involve working in contaminated soils and environments. The Contractor shall adhere to the following requirements as written in its specific section:

1. Health & Safety Criteria - Refer to Section 01 35 45.
2. Regulatory Requirements - Refer to Section 01 41 00.
3. For stormwater, and erosion and sediment controls requirements - Refer to Section 01 57 13.

4. Environmental Mitigation Measures - Refer to Section 01 57 30.
  5. Excavation area limits (at any given time) that shall trigger additional requirements of the San Francisco Department of Public Health (SFPDH) Dust Control Ordinance - Article 22B, and the California Code of Regulations, Title 17, Section 93105 - Asbestos Airborne Toxic Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations in areas of Serpentine containing Naturally Occurring Asbestos (NOA) - Refer to Section 01 57 30.
  6. Providing HAZWOPER trained workers - Refer to Section 02 81 10.
  7. For handling, transportation and disposal of excavated materials and contaminated soils - Refer to Section 02 81 10.
  8. For pre-excavation soil profiling, environmental training, manifest requirements, stockpiling, re-use of excavated soils, import fill criteria - Refer to Section 02 81 10.
  9. For dewatering requirements during construction - Refer to Section 31 23 30.
  10. The Contractor is alerted that hazardous and/or contaminated soil, and Serpentine (Naturally Occurring Asbestos) will be encountered at the site during the excavation phase of this Contract - Refer to Section 01 57 30 and 02 81 10.
  11. This project is located within 1,000 feet of a Sensitive Use, as set forth in Chapter 25 of the Environment Code and Section 6.25 of the Administrative Code. Therefore, Section 01 35 48 incorporates additional requirements of the San Francisco Clean Construction Ordinance ("Ordinance") for projects that meet the requirements of Environment Code Section 2504(a).
- B. The Contractor is strongly advised to familiarize itself as to the actual site conditions that may be encountered during construction by all means available including, but not limited to, the use of USGS geologic maps.
- C. If the Contractor by its means and methods disturbs, grades or excavates more than one half acre surface area (21,780 sq ft) at any given time, then the Contractor shall submit a Site-Specific Dust Control Plan (including Air Monitoring Protocols) for the review and approval from the City Representative and the San Francisco Department of Public Health, prior to start of construction. The Contractor at its own cost shall then furnish all labor, equipment, and means required to conduct the ambient and perimeter air monitoring as required by the San Francisco Department of Public Health (SFPDH) Dust Control Ordinance - Article 22B, and the Air Quality Monitoring Guidelines for San Francisco Health Code (SFHC) Article 22B, Real Time Dust Monitoring and Reporting. Refer to Section 01 57 19.
- D. If the Contractor by its means and methods disturbs, grades or excavates more than one acre (43,560 sq ft) of the site at any given time in an area containing Serpentine/Naturally Occurring Asbestos (NOA), then the Contractor at its own cost shall then furnish all labor, equipment, and means to comply with the BAAQMD's requirements, terms of approval of the Asbestos Dust Mitigation Plan (ADMP) and California Code of Regulations, Title 17, Section 93105. Refer to Section 01 57 19.
- E. Unforeseen hazardous/contaminated material work: In the event that unforeseen hazardous/contaminated material is discovered beyond the above referenced reports, the Contractor shall immediately notify the City Representative both verbally and in writing. In the event that unforeseen Hazardous material is discovered, all work in the affected area will stop pending further direction from the City Representative. Upon receipt of such notification, the City, at its sole option, may either
1. Stop all work in the affected area pending further direction from the City Representative

2. The City Representative shall determine whether the remediation/abatement and hazard removal process requires suspension of all, none or any part of the work under this Contract.
  3. The City will perform the remediation/abatement work using its own forces or using an outside contractor specializing in remediation/abatement work or
  4. Direct the Contractor to perform all or any part of the remediation/abatement and hazardous materials removal work.
  5. If the City Representative directs the Contractor to perform the unforeseen remediation/abatement and removal of the hazardous materials, the City Representative will do so by change order, and the Contractor must promptly provide a properly licensed and insured subcontractor (with CSLB hazardous substance removal certification and C-22 license pertinent to the task as per applicable law) to perform remediation/abatement work.
  6. Refer to Section 00 73 16 – Insurance Requirements for a description of the Contractor's required insurance.
- F. All work that affects intact paint with any level of lead will be performed by the Contractor or its sub contractors 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.

#### 1.5 COORDINATION WITH LOCAL RESIDENTS, BUSINESSES AND VISITORS

- A. Contractor is required to Coordinate Construction efforts and minimize impacts to the neighborhood residents, businesses and visitors. This shall be incidental to the Work, except graffiti removal within an approved and secured storage area may be compensable under a bid allowance, if explicitly included as a bid item.
1. No area within the public right of way (from property line to property line and including but not limited to streets, parking strips, bicycle lanes, gutters, curbs, paths and sidewalks) shall have restricted public access for more than five (5) calendar days, with the exceptions of areas of new curb ramp and bus pad construction if specified in Section 01 55 26. Contractor shall restore and reopen to the public any and all areas of the public right of way within these specified time limits.
  2. Work shall not prevent pedestrians from entering operating businesses.
  3. At any time that the Contractor occupies the sidewalk along any block, the Contractor shall coordinate with the businesses that are located on or require access through occupied area to maintain daily delivery access and access to garbage/recycling removal services. If the Contractor's activities prevent a business from placing its garbage or recycling on the curb for pickup, Contractor shall at its expense assist the business with handling and transport of garbage and recycling refuse to nearby designated garbage/recycling collection locations. The Contractor's attention is directed to the existing garbage/recycling collection times, which are typically at night or early morning.
  4. Contractor shall coordinate with and assist businesses that receive deliveries at night or early morning to ensure that delivery areas, including sub-sidewalk access doors, are accessible.
  5. Contractor shall daily remove all graffiti on all barricades, equipment, buildings and pavement in the Work area. Contractor shall no less than daily and as often as may be required by the Engineer to remove trash, litter, and debris from businesses along the alignment when Contractor is performing Work in front of or immediately adjacent to said businesses. Contractor is not expected to provide litter and trash removal services to the businesses not directly impacted by

Contractor's immediate Work. However, Contractor shall take all reasonable measures to ensure that the business entrances and public areas immediately adjacent to where it is performing Work are to be kept, clean, orderly, and accessible to the public.

6. Contractor shall coordinate and provide access to businesses for window cleaning and if safe access is not available, the Contractor shall make safe access within 24 hours of request, which shall be incidental to the Work.

#### 1.6 SUBMITTALS, PUBLIC NOTIFICATION, AND MEETINGS BEFORE NOTICE TO PROCEED (NTP)

- A. The City Representative will schedule a Pre-Construction meeting as soon as possible after NTP in order to discuss schedules and sequence of operations with the Contractor.

#### 1.7 SEQUENCING OF CONSTRUCTION

- A. After award and certification of the contract, a pre-construction meeting will be scheduled with the Contractor to determine the official date for commencement of the work. No fieldwork can begin prior to the Contractor's receipt of written permission from the City Representative. The City shall have full jurisdiction and responsibility of the property until the commencement date for fieldwork.

- B. Maximum durations within which to complete units of work in the field are identified below.

1. Curb Ramp: Each curb ramp is one unit. Four (4) calendar days per unit.
2. Bus Pad: Each bus pad is one unit. Eleven (11) calendar days per unit.
3. Bulb Out: Each bulb out is one unit. Four (4) calendar days per unit.
4. Concrete Sidewalk: Each flag is one unit. Seven (7) calendar days per unit.
5. Manhole or Other Structure: Each manhole or structure is one unit.
  - a. Excavation, installation and/or repair complete within fourteen (14) calendar days per unit.
  - b. Full restoration, including but not limited to backfill, compaction, base and repaving complete within one hundred twenty (120) hours after installation or repair of manhole or structure.
6. Buried utilities (e.g. sewer, water, electrical, etc.): Six hundred (600) lineal feet (inclusive of work through intersections, side sewers, services, etc.) is one unit.
  - a. Excavation, installation and/or repair complete within forty (40) calendar days per unit.
  - b. Full restoration, including but not limited to backfill, compaction, base and repaving within one hundred twenty (120) hours after installation or repair of facilities.
7. All other units of work: Five (5) calendar days per unit.

- C. Whenever completion is dependent on and delayed by work of others (e.g. SFWD connection, testing, etc.), additional time for completion will be allowed for this delay, provided the contractor complies with its requirements including but not limited to have

work area ready and available, providing required notification and coordinating with all other parties. Should said work by others result in a critical path delay, any contract duration time extension would be non-compensable.

- D. Failure to comply with maximum construction durations will result in liquidated damages per calendar day as shown in Specification Section 00 73 03 – Additional Liquidated Damages.
- E. Once construction begins at a location, all work must be completed. Contractor may have multiple headings at one time, but each location is given a construction duration for the Contractor to complete all work continuously from start to final paving.
- F. The maximum duration of construction work at each location shall not exceed the durations tabulated below. The duration shall include completion of Final Paving and completion of punch list for all work at the location. Maximum duration includes two weeks of time for the City to process, review and approve post construction videos.
- G. After notification of the commencement date, the Contractor shall be allowed ninety (90) calendar days for shop drawings submittal and approval, procurement and delivery of the custom fabricated site furnishings.
- H. Contractor shall be familiar with the terms, conditions, and payment schedule required by suppliers prior to submitting bid. Any delays to the custom fabricated item procurement schedule caused by incomplete or inaccurate shop drawing submittals and/or failure to comply with these terms, conditions and payment schedule required by the material suppliers, shall be the responsibility of the Contractor.

#### 1.7 WORK SCHEDULING

- A. Refer to schedule, Temporary Street Closures, appended to this Section for traffic lane requirements that may affect the Contractor's schedule of operations.
- B. The Contractor shall coordinate its operations with the City and shall incorporate in its Progress Schedule activities for all special events that will require the Contractor to suspend its operations at the project site.
- C. The Contractor's working hours shall be as specified in Section 00 72 00 - General Conditions, subparagraph 1.01A.67, except as specified otherwise in these Specifications.
- D. The Contractor shall not commence site work prior to receiving the Engineer's approval of the Construction Schedule. No Work shall commence prior to the approval of applicable traffic control plans, storage and parking plans, and flagger resumes and certificates. The Contractor will be levied damages, as specified in Section 00 73 03 - Additional Liquidated Damages for delay of Work.
- E. The Contractor shall not commence any excavation in the public right-of-way without a valid excavation permit issued by the San Francisco Department of Public Works, Bureau of Street Use and Mapping. The Contractor shall submit a copy of the excavation permit.

#### 1.8 TRAFFIC ROUTING WORK

- A. The Contractor shall be responsible to provide incidental traffic routing work, such as described below, to ensure adequate protection of the general public and the Work.
- B. The Contractor shall provide incidental traffic routing work in accordance with the requirements of the "Regulations for Working in San Francisco Streets (Blue Book)" by

the San Francisco Municipal Transportation Agency (SFMTA), latest edition. Refer to the following website for the latest copy of the Blue Book:

<http://www.sfmta.com/services/streets-sidewalks/construction-regulations>

- C. The Contractor shall obtain the approval of the SFMTA for any required prohibition of stopping from the Traffic Bureau (415) 554-9928, at least 72 hours in advance of the effective date and time. The Contractor shall post the signs at least 72 hours in advance of the effective date and time.
- D. In the event the Contractor occupies parking areas within the Public Right of Way including the sidewalk, the Contractor shall obtain the approval of, and pay for any required permits for occupation of the sidewalk and parking spaces from the SFMTA.

#### 1.9 CONTRACTOR USE OF SITE

- A. Use of Site: Limit use of the site for construction operations necessary to perform the Work indicated on the Drawings. Obtain prior written approval from the City for access to areas of the site occupied by the City. Protect and repair or restore to the existing condition surrounding areas damaged by the Contractor's operations.
- B. Contractor's Work Area: The Contractor's work area is limited to the areas included within the limits of work as shown on the Contract Drawings and as adjusted by the temporary construction fencing.
  - 1. Refer to Section 01 50 00 - Temporary Facilities and Controls for work area maintenance requirements.
- C. Parking and Storage Location Plan
  - 1. Only one storage location shall be used on the project at one time. If more than one parking and storage location is desired, Contractor must submit request for multiple locations. The City may require the Contractor to cease or modify parking and storage plans, even if previously approved, and may rescind approval of all parking and storage areas. Refer to Section 01 55 26-1.4.C for additional requirements.
  - 2. Tow Away / No Parking (TANS) zones are allowed only in area of approved parking and storage plans and/or as indicated on the applicable traffic control plan and only while the applicable work is being performed. Prior approval in writing of each instance of posting and tow away activation must be obtained from the City Representative. If prior written approval is not obtained, the City may remove signage and/or may deactivate tow away authorization. Refer to Section 01 55 26-3.9 for additional requirements.
  - 3. Do not utilize City streets for additional staging and storage areas.
  - 4. Do not enter upon or use any property not under control of the City until a written temporary construction easement agreement has been executed by the Contractor and the property owner, and a copy of said agreement furnished to the City Representative prior to said use. Neither the City nor the City Representative shall be liable for any claims or damages resulting from the Contractor's unauthorized trespass or use of any such properties.
- D. Maintenance of Work Area: Maintain the work areas in a safe condition at all times. Remove all graffiti and accumulated rubbish and debris material deposited within the construction site at the end of each work day. The Contractor is responsible to maintain the project area for the entire duration of the Contract. Clean and restore the work site at completion of the work to the condition that existed prior to the start of work.
- E. Security Of Contractor's Work Areas: Security of the Contractor's work areas and its property, equipment, construction materials and all other items contained in the

Contractor's staging areas or elsewhere on the construction site shall be the Contractor's sole responsibility at all times.

#### 1.10 AS-NEEDED TRANSIT SUPPORT PROVIDED BY CONTRACTOR

- A. De-Pole / Re-Pole Operations is the work of retracting and reattaching the trolley pole (attached to the bus) from and to the Overhead Contact System (OCS).
- B. Contractor shall perform all De-Pole / Re-Pole Operations with its own forces, who shall be trained and certified to perform said Work, as provided below. All coordination work with SFMTA staff for De-Pole / Re-Pole Operations shall be Incidental Work.
- C. Contractor shall provide appropriate labor force(s) as required by the SFMTA Transit Operations through the City Representative to supplement the City's transit and service support work related to De-Pole / Re-Pole Operations at specified locations within the project site limits.
- D. Contractor shall submit an initial list of personnel designated for the De-Pole / Re-Pole Operations to the City Representative for review and approval fifteen (15) days in advance of the work to be executed. Suggested personnel background and qualifications shall include flagger certification.
- E. Contractor personnel designated for said operations is intended solely for De-Pole / Re-Pole operations; NOT traffic controls for the project site.
- F. SFMTA shall provide basic training and certification to Contractor's labor forces to perform De-Pole / Re-Pole Operations. At the completion of the training, personnel shall receive proof of certification.
- G. Contractor shall sign SFMTA Safety Training Waiver for OCS DeEnergization with respect to the safety training (Refer to Appendix C to this Section 01 11 00)
- H. Only certified personnel may perform De-Pole / Re-Pole Operations. All such designated personnel must have valid certification in their possession at all times; and be able to provide proof of certification at the site when requested by SFMTA personnel. If non-certified personnel are performing such work, the SFMTA has the right to stop work.
- I. The SFMTA, at its sole discretion, shall determine the level of support needed to safely and efficiently perform De-Pole / Re-Pole Operations based on the Contractor's submitted work plan. If the Contractor's work plan is modified, the SFMTA will reassess the level of support required to determine whether the level of support should change.
- J. The Contractor shall be paid for actual time spent by its workforce on De-Pole / Re-Pole Operations. Training shall be considered Incidental Work.
- K. Certification shall last for two years. The SFMTA may revoke certification at its discretion based on the performance of Contractor's personnel.

#### 1.11 SPECIAL INSTRUCTIONS

- A. Refer to Section 01 55 26 - Traffic Control for other special instructions.
- B. The Contractor's attention is directed to Article 37 of General Order 95 of the Public Utilities Commission State of California. CAL OSHA regulations require that any equipment that moves vertically must maintain a 10 feet radial clearance, and any other equipment must maintain a 6 feet clearance from MUNI overhead electric wires. The Contractor shall observe these regulations during the entire duration of the construction work unless isolation/re-energizing is provided in Section 01 55 26 – Traffic Control. The Contractor shall choose the appropriate construction means and methods to meet all CAL-OSHA rules and regulations while accommodating MUNI's operational and facility's requirements.

- C. Unless provided in Section 01 55 26 – Traffic Control, relocating or isolating/re-energizing MUNI overhead wires will not be allowed for roadway related work, which includes, but is not limited to curb ramps, curbs, gutters, sidewalk, parking strips, paving, and adjustment of castings.
- D. Initial Curb Ramps: The Contractor shall complete the construction of the initial curb ramps at two curb returns and have them inspected and approved by the City Representative prior to proceeding with construction of the other curb ramps. No additional curb ramps shall be constructed until the City Representative has approved the initial curb ramps. Inspection will include workmanship, color, finishes, and to verify that the curb ramps conform to the plans and specifications. The approved initial curb ramps shall be a standard of comparison for all curb ramps work.
- E. The Contractor shall ensure that the existing fire hydrants on site are not removed or relocated prior to curb ramp layout. The existing fire hydrant and flange shall be removed prior to final curb ramp or concrete finishing.
- F. The Contractor shall ensure there is proper coordination of new fire hydrant and water meter box locations with new curb ramp construction locations, so that new fire hydrants and water meter boxes do not negatively impact the curb ramp design requirements in accordance with SFDPW Standard Plans 102,854 thru 102,864.
- G. The Contractor shall use proper equipment to prevent unnecessary damages to facilities at the project site such as no heavy equipment on the top of sidewalks.
- H. The Contractor shall use temporary hot mix asphalt concrete to provide longitudinal and/or transverse transitions with a slope of 1:18 between the newly constructed concrete base, manhole, etc. and existing pavement (whenever the difference in the grade of the pavement and the concrete base, manhole, etc. exceeds 3/4 inch) by the end of the work shift or before opening the lanes to traffic. Temporary hot mix asphalt paving shall conform to Section 211.01 of DPW Standard Specifications. Installing and removing temporary paving shall be considered incidental work.
- I. Prior to the start of construction, the Contractor shall provide the Engineer with sufficient spray paint, at no cost to the City and as Incidental Work, for markings necessary for the Contract.
- J. Five working (5) days prior to construction work, Contractor shall notify Mark Middleton of the San Francisco Public Utilities Commission at (415) 262-2144 or (415) 254-3538 to schedule removal of flow meters installed in sewer manholes, if encountered within the work scope.
1. Three days (3) after completion of sewer work, Contractor shall contact Mark Middleton for PUC to reinstall flow meters at affected locations.
- K. (Not Used)
- L. If completion of the Work will require temporary closure of the roadway, such closure shall be coordinated so that neighbors are as minimally impacted as possible in multiple phases of construction.
- M. Through the City Representative, Contractor shall coordinate with Recology for neighborhood garbage collection and contact Tom Lavazolli, Operations Manager for Recology at (415)330-1300.

- N. Through the City Representative, Contractor shall coordinate with neighbors to allow for ingress and egress to properties during construction.
- O. Contractor shall not have more than 0.5 acres open with active construction at any one time.
- P. Contractor shall notify the MTA Meter Shop ten (10) business days prior to demolition work in areas with parking meters and once parking areas are reopened to the public. Refer to Specification Section 01 55 26 – Traffic Control for details.
- Q. Contractor shall notify the MTA Meter Shop ten (10) business days in advance of new concrete sidewalk pours to coordinate the installation of parking meter sleeves in new concrete sidewalk areas. Refer to Specification Section 01 55 26 – Traffic Control for details.
- R. Tree trimming, replanting and removal shall be coordinated with BUF (Bureau of Urban Forestry). Provide ninety (90) calendar day notice. Tree trimming and tree removal shall be part of incidental cost. Tree removal or relocation shall require a permit application and fee to BUF. Refer to Section 01 55 26-3.11 for additional requirements.
- S. Contractor shall notify owners of sub-sidewalk basements in writing at least 30 days prior to performing any work within sub-sidewalk basements to coordinate access to the basements.

#### 1.13 CONSERVING DISTINCTIVE SIDEWALK ELEMENTS

- A. The Contractor is hereby informed that the following limits of work are located within a Landmark and/or Conservation Historic District.
- B. All distinctive sidewalk elements (such as granite curbs, non-standard sidewalk scoring and streetscape elements that appear to be 45 years or older) will be treated as potentially character defining features of their respective historic districts.
- C. Historic materials shall be protected in place, salvaged and re-installed, or replaced in kind to match the character of the existing condition.
- D. Granite curb shall only be replaced with concrete curb on curved sections and as part of the curb ramp construction.
- E. Contractor shall avoid damaging and protect in place any features described above and shall notify the City Representative of any feature not identified on the plans that is in conflict with the proposed work.

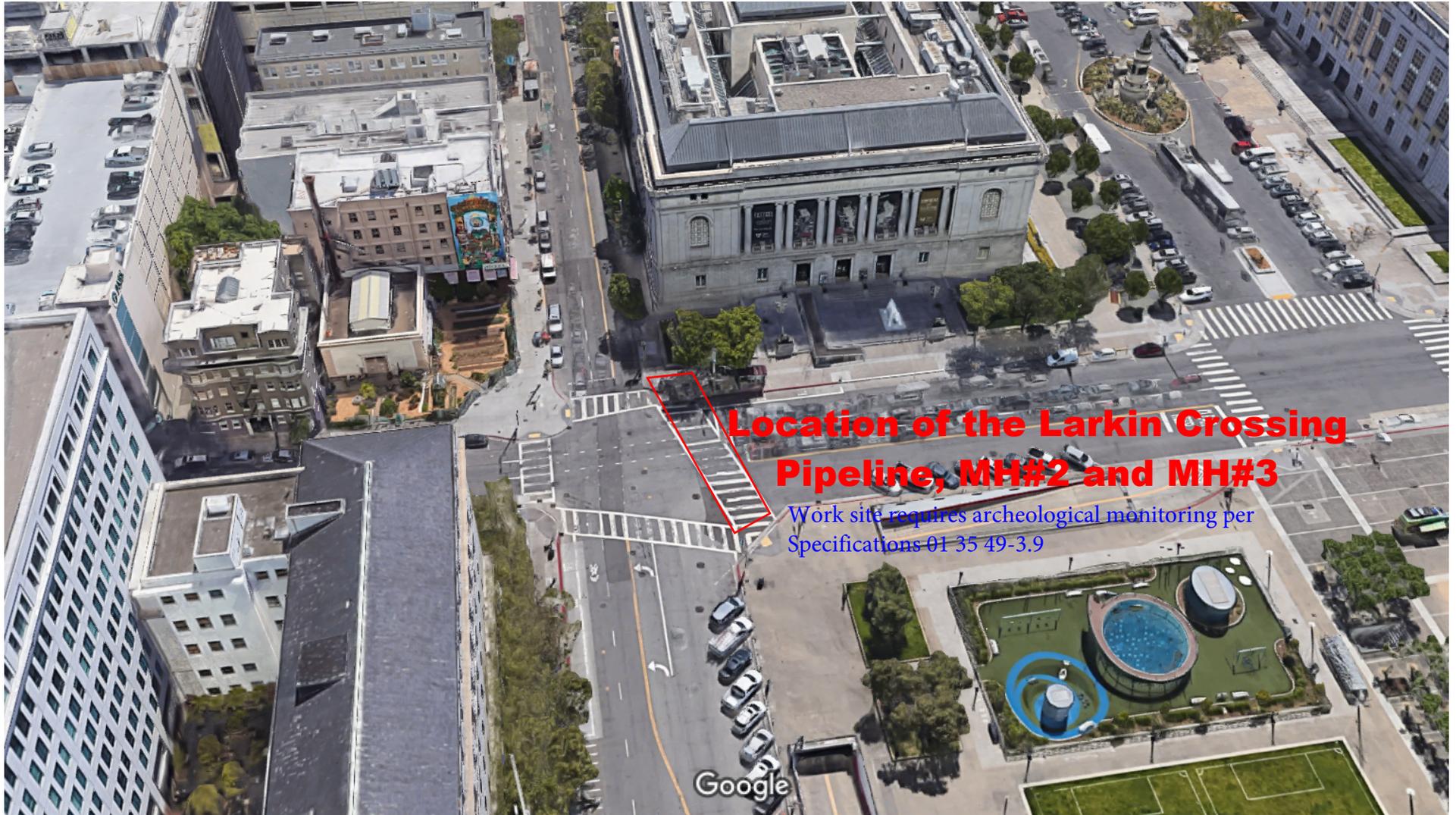
PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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SECTION 01 11 00 APPENDIX A  
MAP OF WORK AREA



Imagery ©2020 Google, Imagery ©2020 CNES / Airbus, Maxar Technologies, U.S. Geological Survey, Map data ©2020 20 ft

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**TEMPORARY BUS ZONE & REROUTE RELOCATION REQUEST**

REQUEST TO ORDER     REQUEST TO CANCEL    DATE

<b>Company Name:</b>	<b>Company Contact:</b>
<b>Contact Phone:</b>	<b>Contact Email:</b>
<b>Name:</b>	<b>Phone #:</b>
<b>Contract / Project #:</b>	<b>Site / Location:</b>

**1 NOTIFICATION DATE** \_\_\_\_\_ (10 working days in advance)

**2 LOCATION** \_\_\_\_\_ (ie. Mission @ 8th)

**3 BUS LINE(S) AFFECTED** \_\_\_\_\_ (Line Numbers ie. 14, 49)

Inbound/Outbound: (Check one)  Inbound                       Outbound

Reroute Needed? (Check one)  Yes                               No

**4 EXISTING BUS ZONE**                       Near Side                       Far Side

**5 PROPOSED BUS ZONE LOCATION** \_\_\_\_\_ (ie. Mission @ 8th)

Near Side                       Far Side

Remarks: \_\_\_\_\_

**6 EFFECTIVE START DATE** \_\_\_\_\_

**7 ESTIMATED END DATE** \_\_\_\_\_

**8 TIME LIMITS** \_\_\_\_\_

- 9 ATTACHMENTS:**
- A. Plan of (E) & Proposed Bus Zone
  - B. Photos of (E) & Proposed Bus Zone
  - C. Photo of (E) Bus Zone Sign
  - D. Plan of Proposed Routing with Map

ICM / Contractor Use

Date Received: \_\_\_\_\_  Approved     Rejected

Request Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_

MUNI Use

Date Received: \_\_\_\_\_  Approved     Rejected

Request Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_





**INSPECTOR AND VEHICLE CHARTER REQUEST FORM**

CHECK PROJECT TYPE		FILM		CONSTRUCTION
--------------------	--	------	--	--------------

**THE FOLLOWING CONDITIONS MUST BE UNDERSTOOD AND ACCEPTED TO COMPLETE THE PROCESSING OF YOUR REQUEST.**

- Requests for **inspector support** are to be made **5 business days** to the start of project.
- Requests for LRV, Motor coach, PCC and Cable car **charters** are to be made **10 business days** to the start of the project.
- Cancellations must be made by **12:00pm (noon)** the day PRIOR of a scheduled work day. Untimely cancellations will be assessed for an entire day's fee.
- Inspectors will be scheduled at a **minimum of 8 hours**. Hours are to include a total of 1 hour travel time.
- Proper permits are to be obtained before projects can begin including street closure permits and SFMTA clearances when working near tracks, overhead power lines and subway stations.  
**NOTE: CLEARANCES are reviewed and approved every TUESDAY of the week.**
- SFMTA bus/rail services remain a priority. Obstruction to service is not allowed unless specified below.
- Any activities performed outside the limits of the activities described below will cause the project to be terminated and will be subjected to a fine.
- Work hours must be performed outside peak service hours.  
**Construction** hours (based on blue book): M-F 9a-3p, Weekends – based on approval  
**Film:** M-F 10-3pm, Weekends – based on approval

**PROJECT INFORMATION**

PROJECT				COMPANY NAME	
DAY				DATE	
START TIME				END TIME	
INSPECTORS	Y or N			NO. OF INSPECTORS	
CHARTER	Y or N	TYPE OF VEHICLE (CABLE CAR, PCC, LRV)		ALTERATION TO VEHICLE	
LOCATION				MUNI LINES	
# OF PEOPLE ON SITE		CAMERA & EQMNT SET-UP			
ACTIVITIES					

*I have read the conditions mentioned above. Failure to comply with this agreement may be subjected to a fine.*

CONTACT PERSON'S SIGNATURE		CONTACT NUMBER	
----------------------------	--	----------------	--

**FOR INTERNAL USE ONLY**

RECEIPT DATE		APPROVAL DATE		BY	
ACTIONS TAKEN					
BRIEF SUMMARY					

DATE SENT TO FINANCE		INVOICE NO.	
----------------------	--	-------------	--



CANCELLATION

**INSPECTOR AND VEHICLE CHARTER CANCELLATION FORM**

CHECK PROJECT TYPE		FILM		CONSTRUCTION
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**THE FOLLOWING CONDITIONS MUST BE UNDERSTOOD AND ACCEPTED TO COMPLETE THE PROCESSING OF YOUR REQUEST.**

- Requests for **inspector support** are to be made **5 business days** to the start of project.
- Requests for LRV, Motor coach, PCC and Cable car **charters** are to be made **10 business days** to the start of the project.
- Cancellations must be made by **12:00pm (noon)** the day PRIOR of a scheduled work day. Untimely cancellations will be assessed for an entire day's fee.
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**PROJECT INFORMATION**

PROJECT				COMPANY NAME	
DAY				DATE	
START TIME				END TIME	
INSPECTORS	Y or N			NO. OF INSPECTORS	
CHARTER	Y or N	TYPE OF VEHICLE (CABLE CAR, PCC, LRV)		ALTERATION TO VEHICLE	
LOCATION				MUNI LINES	
# OF PEOPLE ON SITE		CAMERA & EQMNT SET-UP			
ACTIVITIES					

**CANCELLATION**

*I have read the conditions mentioned above. Failure to comply with this agreement may be subjected to a fine.*

CONTACT PERSON'S SIGNATURE		CONTACT NUMBER	
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**FOR INTERNAL USE ONLY**

RECEIPT DATE		APPROVAL DATE		BY	
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ACTIONS TAKEN					
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BRIEF SUMMARY					
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DATE SENT TO FINANCE		INVOICE NO.	
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## TRACK DEPARTMENT RWP REQUEST FORM

**THE FOLLOWING CONDITIONS MUST BE UNDERSTOOD AND ACCEPTED TO COMPLETE THE PROCESSING OF YOUR REQUEST.**

- Requests for **TRACK DEPARTMENT RWP** are to be made **5 business days** to the start of project.
- Cancellations must be made by **12:00pm (noon)** the day **PRIOR** of a scheduled work day. Untimely cancellations will be assessed for an entire day's fee.
- **TRACK DEPARTMENT RWP** will be scheduled at a **minimum of 8 hours**. Hours are to include a total of 1 hour travel time.
- Proper permits are to be obtained before projects can begin including street closure permits and SFMTA clearances when working near tracks, overhead power lines and subway stations.  
**NOTE: CLEARANCES are reviewed and approved every TUESDAY of the week.**
- SFMTA bus/rail services remain a priority. Obstruction to service is not allowed unless specified below.
- Any activities performed outside the limits of the activities described below will cause the project to be terminated and will be subjected to a fine.
- Work hours must be performed outside peak service hours.  
**Construction hours (based on blue book):** M-F 9a-3p, Weekends – based on approval

**PROJECT INFORMATION**

<b>PROJECT</b>		<b>COMPANY NAME</b>	
<b>DAY</b>		<b>DATE</b>	
<b>START TIME</b>		<b>END TIME</b>	
<b>NO. of RWP Locations</b>		<b>NO. OF TRACK PERSONNEL</b>	
<b>LOCATION</b>		<b>MUNI LINES</b>	
<b>NO. OF PEOPLE ON SITE</b>		<b>RWP LIMITS</b>	

**Activities:**


*I have read the conditions mentioned above. Failure to comply with this agreement may be subjected to a fine.*

<b>CONTACT PERSON'S SIGNATURE</b>		<b>CONTACT NUMBER</b>	
-----------------------------------	--	-----------------------	--

**FOR INTERNAL USE ONLY**

<b>RECEIPT DATE</b>		<b>APPROVAL DATE</b>		<b>BY</b>	
---------------------	--	----------------------	--	-----------	--

<b>ACTIONS TAKEN</b>	
----------------------	--

**BRIEF SUMMARY:**


<b>DATE INVOICE NO.SENT TO FINANCE</b>		<b>INDEX CODE #</b>	
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CANCELLATION

## TRACK DEPARTMENT RWP REQUEST FORM

**THE FOLLOWING CONDITIONS MUST BE UNDERSTOOD AND ACCEPTED TO COMPLETE THE PROCESSING OF YOUR REQUEST.**

- Requests for **TRACK DEPARTMENT RWP** are to be made **5 business days** to the start of project.
- **Cancellations must be made by 12:00pm (noon) the day PRIOR of a scheduled work day.** Untimely cancellations will be assessed for an entire day's fee.
- **TRACK DEPARTMENT RWP** will be scheduled at a **minimum of 8 hours**. Hours are to include a total of 1 hour travel time.
- Proper permits are to be obtained before projects can begin including street closure permits and SFMTA clearances when working near tracks, overhead power lines and subway stations.  
**NOTE: CLEARANCES are reviewed and approved every TUESDAY of the week.**
- SFMTA bus/rail services remain a priority. Obstruction to service is not allowed unless specified below.
- Any activities performed outside the limits of the activities described below will cause the project to be terminated and will be subjected to a fine.
- Work hours must be performed outside peak service hours.  
**Construction hours (based on blue book):** M-F 9a-3p, Weekends – based on approval

**PROJECT INFORMATION**

PROJECT		COMPANY NAME	
DAY		DATE	
START TIME		END TIME	
NO. of RWP Locations		NO. OF TRACK PERSONNEL	
LOCATION		MUNI LINES	
NO. OF PEOPLE ON SITE		RWP LIMITS	

Activities:


*I have read the conditions mentioned above. Failure to comply with this agreement may be subjected to a fine.*

CONTACT PERSON'S SIGNATURE		CONTACT NUMBER	
----------------------------	--	----------------	--

**FOR INTERNAL USE ONLY**

RECEIPT DATE		APPROVAL DATE		BY	
ACTIONS TAKEN					

**BRIEF SUMMARY:**


DATE INVOICE NO.SENT TO FINANCE		INDEX CODE #	
---------------------------------	--	--------------	--

# SF MTA- CENTRAL CONTROL

131 Lenox Way, SF CA 94127 (415) 759-4327, (415) 661-0187 Fax

## APPLICATION FOR SUBWAY, SURFACE AND ELECTRICAL PERMIT (REV 08/01/11)

Date Submitted: \_\_\_\_\_ By: \_\_\_\_\_ On-Track Safety# \_\_\_\_\_ Permit # \_\_\_\_\_

**AREA REQUESTED:** Check all that apply.

Permit numbers will be assigned by OCC

Platform  Track  Signal System  Catwalk  Surface  Subway   
Electrical  Lone Worker  Freight Track/Interlocking  Other  \_\_\_\_\_

1. Direction of work TR  TL  DR  DL  SR  SL  IB  OB  EPR  EPL

2. Location (street name) \_\_\_\_\_

at or Between \_\_\_\_\_

(for subway, use marker numbers or stations)

3. Feeders Requested \_\_\_\_\_

THE ELECTRICAL SUBCONTRACTOR MUST GUARANTEE COMPLIANCE WITH GO95

Local Isolation  Open with Rackout  Open without Rackout  Closed and Energized

4. Work to be started: Day \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_:

5. Work to be completed: Day \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_:

Additional Requests for identical permits may be submitted by entering up to four start dates

Dates: 1) \_\_\_\_\_ 2) \_\_\_\_\_ 3) \_\_\_\_\_ 4) \_\_\_\_\_

Permit #: \_\_\_\_\_ # \_\_\_\_\_ # \_\_\_\_\_ # \_\_\_\_\_

6. Is ATCS Protection required? Y  N  Protection Requested: \_\_\_\_\_

7. Compliance with current Rules and Instructions Handbook Work Zone Protection  Yes. Permit will be cancelled if not in compliance.

8. Test Train Required: Y  N  Test train must be verified by permit holder prior to start of work.

9. Vehicle / Equipment to be used: \_\_\_\_\_

10. Time required to clear work area and make area available for service during an emergency \_\_\_\_\_

11. Clearance to be issued to: \_\_\_\_\_ On-Track Safety # \_\_\_\_\_

12. Work authorized by(dept.): \_\_\_\_\_

13. Permit requested by \_\_\_\_\_ Title: \_\_\_\_\_

14. Work to be performed \_\_\_\_\_

15. All required personnel on job site are On-Track Safety Certified: YES  If not checked permit will not be issued

Work#( ) \_\_\_\_\_ Home#( ) \_\_\_\_\_ Cell#( ) \_\_\_\_\_ Fax#( ) \_\_\_\_\_

Comments: \_\_\_\_\_

Electrical permit holders must communicate directly with Operations Control Center: **759-4321** and Bryant Power Control **554-9204** prior to beginning and upon completion of work.

CLEARANCE APPLICATION REQUEST MUST BE SUBMITTED BY FIRST/THIRD WEDNESDAY OF THE MONTH PRIOR TO THE REQUESTED WORK WEEK (STARTS SATURDAY) OR AT LEAST 72 HOURS IN ADVANCE OF THE DATE NEEDED. THE CLEARANCE HOLDER SHOULD KEEP A COPY OF THE ISSUED NUMBERED PERMIT.

NOTE: APPLICANTS TO FILL OUT ALL APPLICATION ITEMS COMPLETELY.

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## SECTION 01 20 00

## PRICE AND PAYMENT PROCEDURES

## PART 1 - GENERAL

## 1.1 SUMMARY

- A. Section Includes: Procedures for preparation and submittal of Progress Payment Requests.
- B. Related Sections:
  - 1. Section 00 72 00 – General Conditions, Article 9, Payments and Completion.
  - 2. Section 00 41 00 – Bid Form.
  - 3. Section 01 29 73 – Schedule of Values.
  - 2. Section 01 32 16 – Construction Progress Schedule.

## 1.2 SCOPE

- A. Payment for the various items of the Schedule of Bid Prices, as further specified herein, shall include all compensation to be received by Contractor for furnishing all tools, equipment, supplies, and manufactured products, and for all labor, operations, overhead and profit, applicable taxes, and incidentals appurtenant to the items of Work being described, as necessary to complete the various items of work as specified and as shown on the Drawings. No separate payment will be made for any item that is not specifically set forth in the Schedule of Bid Prices, and all costs therefore shall be included in the prices named in the Schedule of Bid Prices for the various appurtenant items of Work.
- B. Contract Prices shall be deemed to include all bonds and insurance, all appurtenances necessary to complete the required Work, including all costs for compliance with the regulations of public agencies having jurisdiction, including Health and Safety Requirements of the California Division of Industrial Safety and the Occupational Safety and Health Administration of the U.S. Department of Labor (OSHA), and including all costs for loss or damage arising from the Work, or from action of the elements, for any unforeseen difficulties which may be encountered, and for all risks of every description connected with the prosecution of the Work until Project Completion, also for all expenses incurred in consequence of the suspension or discontinuance of the Work as provided in the Contract.
- C. Except as otherwise expressly stipulated in the Contract Documents, no payment shall be made for materials stored on or off site, and for materials not yet incorporated into the Work on site.
- D. Neither the payment of any estimate nor of any retained percentage shall relieve Contractor of its obligation to make good all defective work or material.

## 1.3 BASIS OF PAYMENT

- A. Unit Price Work
  - 1. The City shall determine the quantities of Work to be paid for any item for which a unit price is fixed in the Contract.
  - 2. Unless otherwise provided, determination of the number of units of Work so completed shall be based, as far as practicable, on the actual measurement or count made by the City Representative of the Work satisfactorily completed within the prescribed limits.

3. Measurement and computations shall be made by methods as the City may consider appropriate for the class of Work measured.
  4. Should the actual quantities of Work performed under any unit price be greater or less than the estimated quantity stipulated on the Schedule of Bid Prices, or if an item of Work is deleted, the final Contract cost shall be adjusted by Change Order to reflect the actual quantities and actual costs including fixed costs for unit price items.
- B. Lump Sum: When the estimated quantity for specific portions of Work is not indicated on the Schedule of Bid Prices and unit is designated as lump sum, payment will be on a lump sum basis for Work satisfactorily completed as set forth in the Specifications and shown on the Drawings.
- C. Monthly payment requests shall be based upon information developed at monthly Application for Payment meetings and shall be prepared by Contractor. The approved Schedule of Values will be the basis for Contractor's payment requests.
1. No partial progress payment shall be made to Contractor until all cost information requested by the City is submitted and reviewed.
  2. Submission of a progress schedule update in accordance with Section 01 32 16 for the same period of the progress payment application shall be a condition precedent to making the progress payment application.

#### 1.4 APPLICATION AND SCHEDULE PROCEDURES

- A. On the 25th of each month submit an itemized Application of Payment to the City Representative by email with all required supporting documents attached in PDF format or in other Windows file formats (except Certified Payrolls) covering the Work completed as of the date of the Application for Payment.
1. Submit a progress schedule update with each Application for Payment.
  2. List each authorized Change Order executed prior to date of submission by Change Order Number and description, as for original items of work.
  3. When the City requires substantiating data, Contractor shall submit suitable information with cover letter identifying Application of Payment number and date, line item by number and description.
  4. Submit Certified Payrolls through the City's internet-based Project Reporting System. Refer to Paragraph 9.03M of the General Conditions.
  5. Specify the desired Method of Payment, either electronic funds transfer or check.
- B. Progress payments for the work performed under this Contract will be made in the manner described in Paragraph 9.03 of the General Conditions.
1. Progress payments will be based upon progress estimates by Contractor and verified by the City of the actual physical progress of the work, utilizing the Schedule of Values approved by the City.
  2. Progress payments will be made on a monthly basis and no mid-monthly payments will be made regardless of the value of the work and material incorporated prior thereto.
  3. Contractor shall certify its estimate of the quantities of the work completed, contained in the monthly progress payment estimate, by signing each such estimate prior to its submission.
  4. Contractor shall submit Project Record Drawings as specified below under article "Project Record Drawings."
  5. The City will make final determination if agreement cannot be reached on Contractor's progress payment request.
- C. The City shall issue payments to Contractor through the City's electronic payment system. Contractor acknowledges and agrees to receive payment electronically through

this system. Contractor shall not be entitled to any additional cost or charge under this Contract for using or failing to use the electronic payment system. Nor shall Contractor be entitled to any additional cost or charge for delays or failures of the electronic payment system to complete a payment transaction.

- D. Pursuant to California Public Contract Code Section 22300, Contractor may substitute securities for any money withheld by the City to insure performance under the Contract. Said securities shall be in a form and of a type acceptable to the City.
1. At the request and expense of Contractor, securities equivalent to the amount withheld shall be deposited with City Controller or with a state or federally chartered bank as the escrow agent, who shall return such securities to Contractor upon satisfactory completion of the Contract.
  2. Securities eligible for investment under Public Contract Code Section 22300 shall be limited to those listed in Section 16420 of the Government Code and to bank or savings and loan certificates of deposit.
  3. Contractor shall enter into escrow agreement with City Controller for in-lieu construction payment retention provided by City, specifying amount of securities to be deposited, terms and conditions of conversion into cash in case of Contractor's default, and termination of escrow upon completion of Contract.
  4. Contractor shall be beneficial owner of securities substituted for monies withheld and shall receive any interest thereon.

#### 1.5 PROGRESS ESTIMATES

- A. Upon receiving Contractor's monthly progress payment application, the City will review progress breakdown and make adjustments to percent of completion of each item of Work.
1. Monthly progress payments will be made based on the total value of Work items completed or partially completed, as determined by the City with participation of Contractor.
  2. Accumulated retainage will be shown as separate item in payment summary.
- B. After approving the finalized Progress Payment Report, the City will commence payment processing electronically. The payments will be made in accordance with Contractor's specified Method of Payment.

#### 1.6 PROJECT RECORD DRAWINGS

- A. If requested by the City Representative, submit original and one (1) copy of the Project Record Drawings (As-Built) with the monthly progress payments to the City Representative in the field for review. The original Record Drawings will be returned to the Contractor within fourteen (14) calendar days of submittal. The Contractor shall update the Record Drawings based on the City Representative's comments and resubmit the drawings for record. If the Record Drawings are not kept current or not furnished when specified herein, Progress Payments and if necessary the Final Payment will be withheld.

#### 1.7 ELECTRONIC CERTIFIED PAYROLLS

- A. In accordance with the requirements of Paragraph 9.03M of the General Conditions, Contractor shall submit certified payrolls to the City electronically via the City-selected Project Reporting System ("PRS"), an internet-based program. This submittal is required for Progress Payments as specified in this Section 01 20 00 - Price and Payment Procedures. In addition to data relating to weekly payroll information, the Contractor, Subcontractors and Suppliers shall enter in appropriate fields of the PRS information regarding new hires, including name and date hired of each new employee.

**PART 2 – PAYMENT SCHEDULE****2.1 Bid Item No. 1: STEAM PIPE AND ASSOCIATED EQUIPMENT AND PARTS**

- A. Removal of the existing 8” steam and 4” condensate pipelines between Manhole #2 and Manhole #3. Manhole #2 is located on the South-East corner of Larkin and McAllister, and Manhole #3 is located on the South-West corner of Larking and McAllister street.
- B. Installation of new 4” schedule 80 domestic seamless steam and condensate pipelines, welded, thermally insulated with foam glass, and protected by concrete cladding.
- C. Replacement of equipment in Manhole #3 with new equipment include all steam and condensate valves, condensate traps, piping, expansion joints, and expansion guides, installation of new anchors and supports, and replacement of the thrust block.
- D. Removal and disposal of all replaced material.

**2.2 Bid Item No. 2: EXCAVATION, SHORING, BACKFILL, AND STREET RESTORATION**

- A. Trench and excavation support work, as specified, including adequate sheeting, shoring and bracing, dewatering (if necessary), etc., or equivalent method for the protection of life and limb, and conforming to applicable safety orders of OSHA and the State of California Division of Industrial Safety.
- B. Backfill, street base, and pavement restoration per City Standard Plans and Specifications.
- C. Identification and coordination of work with all existing utilities.
- D. All required permits and fees.

**2.3 Bid Item No. 3: HAZARDOUS MATERIALS ABATEMENT**

- A. Remediation of any existing asbestos in pipe insulation material and adjacent soils and associated testing and certification.

**2.4 Bid Item No. 4: TRAFFIC CONTROL**

- A. The contract lump sum price paid for traffic control work includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals (including traffic water-filled barriers and flag persons) and for doing all the work involved in placing, removing, storing, maintaining, moving to new locations, replacing, and disposing of the components of the traffic control work as shown on the plans; and doing all other work as specified in the applicable portions of the DPW Standard Specifications, and as directed by the City Representative. The traffic control work satisfactorily performed will be paid for at the lump sum price bid therefore prorated over the duration of field construction, proportionally to the percentage of field construction completed to date.
- B. Coordination and associated work for MUNI bus route accommodations, if applicable.
- C. All required permits and fees.

2.5 Bid Item No. 5: MOBILIZATION AND DEMOBILIZATION

A. Refer to Section 01 21 53 - Mobilization/Demobilization Items.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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## SECTION 01 21 53

## MOBILIZATION / DEMOBILIZATION ITEMS

## PART 1 - GENERAL

## 1.1 SUMMARY OF WORK

- A. This Specification Section outlines the Contractor's responsibilities for both mobilization and demobilization.
- B. The work under the Mobilization Bid Item consists of preparatory work including, but not limited to, work necessary for the mobilizing and furnishing at the site, equipment, materials, supplies and incidentals; for the establishment of all offices, buildings and other temporary facilities necessary for work on the project; cost for pre-paid bonds and insurances; and for all other work and operations which must be performed or costs incurred to begin work on the various Bid Items at the project site. Compensation for mobilization includes, but is not limited to, the following principal items:
  - 1. Permits: Refer to Section 00 73 00 - Supplementary Conditions; including Bureau of Street Use and Mapping (BSM) Excavation Permit and Bureau of Urban Forestry (BUF) Tree Removal or Relocation Permit.
  - 2. Moving onto the site of all Contractors' equipment required for operations.
  - 3. Installing temporary construction power and wiring.
  - 4. Developing and installing construction water supply.
  - 5. Providing all on-site communication facilities, including telephones.
  - 6. Providing on-site sanitary facilities and potable water facilities.
  - 7. Arranging for and erection of Contractor's work and storage yard(s), and installation of temporary construction fence.
  - 9. Obtaining and paying for all required bonds and insurances including the bond required by Article 2.4 of the Public Works Code.
  - 10. Posting all OSHA-required notices and establishing safety programs.
  - 11. Having the Contractor's superintendent at the job site full time, whenever construction is in progress.
  - 12. Submitting a Schedule of Values in accordance with Section 01 29 73 – Schedule of Values.
  - 13. Preparation of plan and schedule for work affected by operations and events as required by Section 01 31 13 – Project Coordination.
  - 14. Submitting preconstruction submittals, including Construction Schedule as specified in Section 01 32 16 – Construction Progress Schedule.
  - 15. Photographic or video documentation of existing historic details prior to demolition.
  - 16. Preparation of Site-Specific Health and Safety Plan as required by Section 01 35 45 – Health and Safety Criteria.
  - 17. Submittals as required by Section 01 35 49 – Minimum Environmental Procedures.

18. Complying with regulatory criteria as per Section 01 41 00 – Regulatory Requirements.
  19. Fabrication and erection of Project Signs as required by Section 01 50 00 – Temporary Facilities and Controls.
  20. Preparation and implementation of Stormwater Best Management Practices (BMP) at construction site as required by Section 01 57 13 – Stormwater Best Management Practices (BMPs).
  21. Implementation of all mitigation measures as per Section 01 57 19 / 01 57 30 – Environmental Mitigation Measures and preparation of all submittals required in this Section.
  22. Conducting the pre-construction property survey required by Section 01 71 33 – Protection of Adjacent Construction.
  23. Excavating, handling and management of site contaminated and hazardous soils, groundwater and storm water controls, environmental mitigation controls, imported backfill, and preparation of all submittals as required by Section 02 81 00 / 02 81 10 – Environmental Management of Excavated Materials.
  24. Preparation of Dewatering as required by Section 31 23 19.
  25. Complying with Section 33 24 00 - Groundwater Wells and preparation of all submittals required in this Section.
- C. Demobilization work shall include, but not be limited to, the following principal items:
1. Demobilizing and removal of the Contractor's facilities and equipment.
  2. Removing all project signs from project site, and removing all construction area signs, traffic handling and detour signs, and temporary traffic control devices from project vicinity.
  3. Removing all temporary construction facilities including Contractor's field office and other equipment and utilities from the site as Contractor's property within fourteen (14) calendar days after Final Completion. Cleanup of all debris and restoring the site as specified.
  4. Furnishing all required equipment installation certification forms, warranty documents and Operations and Maintenance (O&M) data and manuals and spare parts, special tools and keys.
  5. Performing all required training sessions.
  6. Performing and submitting all manufacturer installation checkouts.
  7. Furnishing all information and completing all forms required by the San Francisco Contract Monitoring Division (CMD).
  8. Reconcile any outstanding payroll issues with the Office of Labor Standards Enforcement (OLSE).
  9. Reconcile any outstanding local hire issues with Office of Economic and Workforce Development (OEWD).
  10. Preparing and submitting all final documents, including certified payroll, and other records of payments to suppliers and subcontractors, and lien releases/claims waivers required to close the contract within the time requirements.
  11. Furnishing the Contractor's Final Updated Construction Drawings (Record Drawings).
  12. Finishing all punch list work within the time requirements.
  13. Furnishing all post-construction pipeline TV DVDs and logs.

- 14. Performing final site cleanup and restoration as required.
- 15. Providing signoffs from affected property owners and permitting agencies confirming that their requirements have been met.
- 16. Completing all specified close-out requirements per Specification Section 01 77 00 – Closeout Procedures.
- 17. Requesting final payment.

1.2 RELATED SECTIONS

- A. Section 01 33 00 – Submittal Procedures
- B. Section 01 50 00 – Temporary Facilities and Controls
- C. Section 01 77 00 – Closeout Procedures

1.3 SUBMITTALS

- A. Contractor shall submit drawings to scale indicating materials, details, and calculations for all permits in a format as required by the San Francisco Department of Public Works.

1.4 PAYMENT PROCEDURES

- A. Payment for “Mobilization” shall be the fixed amount shown in the Schedule of Bid Prices and will be paid as a lump sum payment over the course of the project based on a percentage of completion.

<u>Percentage Bid Item</u> <u>Mobilization</u>	<u>Percentage Project</u> <u>Completion</u>
25%	2%
50%	5%
75%	10%
100%	20%

- B. The retention of funds provisions in Paragraph 9.06 – Withholding Payment of the General Conditions apply to the sum of all the contract work done, including that under the Schedule of Values Bid Items “Mobilization & Demobilization.”
- C. Any extension of the contract time that may be granted will not of itself constitute grounds for a claim for additional payment.
- D. Payment for “Demobilization” shall be the fixed amount shown in the Schedule of Bid Prices and will be paid upon completion of all items specified in section 1.1.C. No partial payments for demobilization will be made.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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## SECTION 01 26 00

## CONTRACT MODIFICATION PROCEDURES

## PART 1 - GENERAL

## 1.1 SUMMARY

- A. Section Includes: General procedural requirements for changes, modifications, and extras.
- B. Related Sections:
  - 1. 00 72 00 – General Conditions, Article 6
  - 2. 01 20 00 – Price and Payment Procedures: Application Procedures
  - 3. 01 31 13 – Project Coordination: Requests for Information
  - 4. 01 33 00 – Submittal Procedures: Construction Schedule
  - 5. 01 78 39 – Project Record Documents

## 1.2 MINOR CHANGES

- A. Clarifications: The City will advise of minor changes in the Work not involving an adjustment to Contract Sum or Contract by issuing written interpretations or clarifications of the Contract Documents as the City deems necessary such as supplemental instructions on Request for Information (RFI) Form or by a written field order by the City Representative.
  - 1. Refer to Section 01 31 13 – Coordination for procedures for requesting information or clarifications on Contract Documents.
  - 2. Pursuant to Paragraph 6.03, Change Order Requests and Proposed Change Orders, of the General Conditions, such written interpretations and clarifications shall be binding on the City and Contractor. Promptly execute the work required by the City's written interpretation or clarification.
- B. Notification: If Contractor believes that a written interpretation or clarification justifies an adjustment in the Contract Sum or Time, submit to the City Representative a request for Change Order therefore before beginning the work required by the written interpretation or clarification or within seven calendar days from the date of the City's response.

## 1.3 DOCUMENTATION

- A. Document each quotation for a change in cost or time with sufficient data to allow evaluation of the quotation.
- B. On request and within a reasonable period of time, provide additional data to support computations:
  - 1. Quantities and type of products.
  - 2. Labor breakdown by trade classification, wage rates, and estimated hours.
  - 3. Equipment breakdown by type, size, rental rates, and equipment hours.
  - 4. Taxes, insurance and bonds.
  - 5. Mark-ups, including overhead and profit.
  - 6. Justification for any change in Contract Time, including a schedule analysis identifying critical progress schedule activities delayed by the PCO.
  - 7. Credit for deletions from Contract and work estimates of subcontractors, similarly documented.
- C. Support each claim for additional costs, and for work done on a force account basis, with additional information:

1. Origin and date of claim.
  2. Date of authorization for extra work by the City Representative as per Force Account Change Order issued to Contractor.
  3. Dates and times work was performed, and by whom.
  4. Time records and wage rates paid.
  5. Invoices and receipts for products, equipment, and subcontracts, similarly documented.
- D. Failure to properly document or provide supporting documents related to additional work or credit of a claim shall invalidate such claims or upon decision of the City, proceed with the City's best cost estimate of disputed additional work or credits.
- E. Documentation, data preparation, and administration of change orders shall be considered as incidental work and no additional payment will be made therefore.

#### 1.4 CHANGE PROCEDURES

- A. The City may issue a Proposed Change Order (PCO) Memorandum which includes a detailed description of a proposed change with supplementary or revised Drawings and Specifications, and a change in Contract Time for executing the change if necessary.
1. Prepare and submit a cost proposal estimate to the City Representative for approval upon receiving a PCO within the number of calendar days per General Conditions Paragraph 6.03D, furnishing a complete breakdown of costs of both credits and extras, itemizing materials, labor, taxes, and mark-up for overhead and profit. Subcontract work shall also be indicated on the same form as for Contractor's breakdown.
  2. Limit Contractor's and subcontractor's mark-ups to the maximum percentages as specified for force account work under Paragraph 6.06, Cost of the Change Order Work, of the General Conditions. Contractor's mark-up on work performed by a subcontractor shall be in accordance with Paragraph 6.06C of the General Conditions. No additional payment will be made by reason of performance of additional work by a subcontractor.
  3. All requests for time extensions pursuant to Paragraph 7.02, Delays and Extensions of Time, of the General Conditions or claims for damages for delay caused by the City's processing of Change Orders will be reduced by the additional time in excess of that allowed for Contractor to submit a PCO cost proposal as provided herein, provided that the activity was shown on the critical path on the base line schedule.
  4. Submit additional data as specified under Article "Documentation" as requested by the City Representative.
  5. The City will review Contractor's cost proposal estimate and will negotiate the final terms of Change Order with Contractor.
  6. Upon approval of PCO by the City, the City will issue Change Order directing Contractor to proceed with the change in the work.
- B. Contractor may propose a change by submitting a request for a PCO number to the City, describing the proposed change and its full effect on the Work, with a statement describing the reason for the change, and the effect on the Contract Sum and Contract Time with full documentation and a statement describing the effect on the Work schedule and operations.
1. Document any requested substitutions in accordance with Section 01 25 13.
  2. Contractor's RFI submittal shall not constitute a request for change.

#### 1.5 UNILATERAL CHANGE ORDER

- A. When time does not allow for the Change Order to be negotiated through the PCO process, or when the City and Contractor are unable to agree on the cost or time required to

complete the change in the Work described in a PCO, the City may issue a document instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order based on the City's estimate of costs, if any.

- B. The document will describe changes in the Work, and will indicate the City's determination of any change in cost.
- C. Promptly execute the change in Work.
- D. If Contractor disagrees with the City's estimate of cost and time or other conditions of a Unilateral Change Order, Contractor shall submit a written protest in accordance with Paragraph 6.05, Unilateral Change Orders, of the General Conditions within 15 calendar days of its receipt and before proceeding with the required work.
  - 1. After the written protest has been filed and within 7 calendar days of completing said disputed work, submit a notice of potential claim for the cost differential between Contractor's actual cost and the City's estimate included in the Unilateral Change Order.
  - 2. Within 30 calendar days of the date of said notice of potential claim submit to the City Representative a claim with written documentation as specified under Article "Documentation".

#### 1.6 FORCE ACCOUNT WORK

- A. All Force Account work shall be witnessed, documented and approved in writing by the City on the day that the work is performed. No Force Account work that is not so reported to the City Representative will be paid by the City. The Contractor shall notify the City Representative in writing at least 24 hours in advance of its schedule before proceeding with the Force Account work. See also Section 00 73 00 - 1.5
- B. Force account charges, a definite price for which has not been agreed on in advance, shall be recorded daily upon a Daily Force Account Report Form obtained from the City Representative.
  - 1. Contractor or authorized representative shall complete and sign Form.
  - 2. The Form shall provide an itemized account and supporting data and shall be countersigned by the City Representative.

#### 1.7 EXECUTION OF CHANGE ORDERS

- A. Execution of Change Orders: The City will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.
- B. The City shall have the right to audit all records in possession of Contractor relating to activities covered by Contractor.

#### 1.8 CORRELATION OF CONTRACTOR SUBMITTALS

- A. Promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.
- B. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust time for other items of work affected by the change, and resubmit.
- C. Promptly enter changes in Project Record Documents.

## 1.9 CONTINUING WORK DURING DISPUTES

- A. The Contractor shall carry on and prosecute the work and maintain the progress schedule during all disputes and disagreements with the City. Time is of the essence. No work shall be delayed or postponed pending resolution of any disputes or disagreements, except as the City Representative and the Contractor may otherwise agree in writing.
- B. The Contractor shall notify the City Representative at the beginning of each single day, shift, or phase before performing the disputed work. Failure to notify the City Representative at the beginning of each day, shift or phases will result in no verification of any work performed under dispute or disagreement. The Contractor and the City Representative shall agree upon the size and number of manpower, equipment, and materials for documentation at the end of every day, shift or phase until resolution or completion of the disputed work.
- C. Submit a Disputed Work Report Form, obtained from the City Representative, on the day that work is performed if the City and Contractor disagree as to the City's determination of said work. See also Section 00 73 00 – 1.5

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 29 73  
SCHEDULE OF VALUES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Submittal requirements, coordination, review and acceptance of the schedule of values for evaluating progress payment applications.
- B. Related Sections:
  - 1. 00 72 00 – General Conditions, Article 9, Payments and Completion
  - 2. 01 20 00 – Price and Payment Procedures

1.2 SUBMITTAL REQUIREMENTS

- A. Submit within 15 calendar days after the Notice to Proceed date but in no event later than 7 days before Contractor's initial application for payment, a schedule of values covering the lump sum items.
- B. The schedule of values shall consist of a detailed cost breakdown of Contractor's Bid covering the Lump Sum Work and Lump Sum Items of Work by classification, in accordance with the Construction Specifications Institute's MasterFormat® (2010 Update) as represented by the Specifications Table of Contents.
- C. The specific format and detail shall be acceptable to the City Representative for estimating and evaluating progress payments, as follows:
  - 1. An unbalanced schedule of values providing for overpayment of Contractor on items of work that would be performed first will not be accepted.
  - 2. The sum of the individual costs listed in the schedule of values shall equal the lump sum price bid under the Bid Item in the Schedule of Bid Prices for the Work activity.
  - 2. Provide breakdown in sufficient detail to facilitate continued evaluation of progress payment applications.
  - 3. Show the total cost of each item of work including all labor, material, equipment, fixed cost elements, incidental expenses, and overhead and profit.
  - 4. Overhead and profit shall not be listed as separate items.
  - 5. Identify separate line items for temporary items, mobilization, final cleaning, operations and maintenance manuals, and start-up, adjusting and testing.
  - 6. Coordinate the preparation of the schedule of values with Contractor's progress schedule.

1.3 REVIEW AND ACCEPTANCE

- A. The City Representative will review and return Contractor's schedule of values with comments within 7 days of its receipt. Contractor shall make corrections requested by the City Representative and resubmit for approval within 3 days.
- B. Final acceptance by City Representative shall indicate only consent to the schedule of values as a basis for preparation of applications for progress payments, and shall not constitute an agreement as to the value of each indicated item.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 31 13  
PROJECT COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Provisions of coordination of the Work of the Contract and requesting clarifications and interpretations of the Contract Documents.
- B. Related Sections:
  - 1. 01 31 19 – Project Meetings.
  - 2. 01 33 00 – Submittal Procedures.

1.2 GENERAL COORDINATION

- A. Contractor shall be responsible for all project coordination.
- B. Coordinate scheduling, submittals, and work of various sections to assure efficient and orderly sequence of installation of interdependent construction elements.
- C. Coordinate the requirements for operation and maintenance data with suppliers and manufacturers of equipment and systems and the City to ensure timely delivery of required submittals in accordance with Section 01 33 00.

1.3 SUBCONTRACT COORDINATION

- A. Coordinate the Work and do not delegate responsibility for coordination to any Subcontractor.
- B. Anticipate the interrelationship of all Subcontractors and their relationship with the Work.
- C. Resolve differences or disputes between Subcontractors, and other contractors concerning coordination, interference, or extent of work between sections of the specifications including assigned Contract work. Contractor's decisions, if consistent with the Contract Document requirements, shall be final.
- D. Coordinate the work of Subcontractors so that their portions of the work are performed in a manner that minimizes interference with the progress of the Work.

1.4 ADMINISTRATION

- A. General: Prepare a written memorandum on required coordination activities. Include such items as required notices, reports and attendance at meetings. Distribute this memorandum to each trade performing work at the project site. Prepare similar memorandum for separate contractors where interfacing of their work is required.
- B. Coordination Meetings: Conduct general project coordination meetings with Subcontractors at least weekly at regularly scheduled times convenient for all parties involved. These meetings are in addition to specific meetings held for other purposes, such as regular project meetings and special preinstallation meetings. Request representation at each meeting by every party currently involved in coordination or planning for the work of the entire project. Keep the City informed about coordination meetings. Conduct meetings in a manner which will resolve coordination problems.

Record results and minutes of each meeting and distribute copies to everyone in attendance and to the City.

- C. Submittals shall be submitted to the City using the City provided Submittal Control Form using the City numbering system. Requests for Information (RFI) shall be submitted to the City using the City RFI Form and numbered sequentially. All other Contract deliverables shall be submitted via sequentially numbered and dated transmittal. After Notice to Proceed, all other Contract required written communication shall be provided to the City via sequentially numbered letter.

Examples of communication to be provided via sequentially numbered letter include but are not limited to: notice of unforeseen or differing conditions, change order requests, notification before proceeding with force account work, notice of potential, anticipated, and/or actual delay, notification that Contractor considers work substantially complete and request for inspection, notification that Contractor considers work complete and request for certificate of acceptance, designation of responsible competent person, notice of potential claims, and contract claims.

All written communications including but not limited to Submittals, RFIs, transmittals, and letters shall include the Contractor's wet signature. Such written communications may be transmitted as attachments via email to the City Representative, provided wet signature originals are received by the City immediately following and no later than 7 calendar days from date of email.

#### 1.5 REQUEST FOR INFORMATION (RFI)

- A. Requirement: It is Contractor's responsibility to review Contract Documents a minimum of 30 days in advance of the work to be executed, and to request for information so that the City will have sufficient time to respond to Requests for Information prior to the start of actual construction of that part of the Work to which the RFI relates.
- B. Form:
1. When an interpretation or clarification of the Contract Documents is required from the City, make the request on Form obtained from the City Representative.
  2. Fill in all applicable information on the form.
  3. Use one form for each request; limit the subject to one design discipline to expedite reply. Attach supplementary information where necessary.
  4. The City will reply or give summary of reply on the same form and include supplementary information where necessary.
  5. The completed form shall be the written record of each RFI.
  6. Do not use any other RFI form on this Project.
- C. Uses:
1. The RFI form shall be used for interpretation or clarification of the Contract Documents only.
  2. Do not use the RFI form for the following; the City will not reply and will reject the RFI:
    - a. Product or material substitution.
    - b. Questions relating to construction means, methods, techniques, sequences, procedures or safety precautions. (These are Contractor's responsibilities exclusively.)
    - c. Questions relating to construction schedule, coordination between trades, or division of work among subcontractors. (These are also Contractor's responsibilities exclusively.)
    - d. Questions on contract administration procedural matters, unless they require interpretation or clarification of the Contract Documents.

- e. Dimensions or quantities which are shown on the Contract Documents, or which can be measured from the building, or calculated from the information contained in the Contract Documents.
- f. Confirmation of interpretations or clarifications previously provided by the City.
- g. The City will reject requests for interpretations or clarifications of the Contract Documents which can reasonably be derived from a review of the Contract Documents.

D. Reply:

- 1. The City will endeavor to reply to all RFI's promptly, generally no later than 15 days from the day received.
- 2. When an RFI involves a complex subject, extensive research or development, or substantial input from other governmental agency, the City will inform Contractor and request additional time to prepare the reply. Contractor shall cooperate and agree to a reasonable time extension.
- 3. The reply shall be a clarification or an interpretation of the Contract Documents; the reply is not an authorization of change in the Contract Sum or Time.
- 4. Such written interpretation or clarification will be binding on Contractor and City. If Contractor believes that a written interpretation or clarification justifies an adjustment in the Contract Sum or Time, then Contractor shall make a written claim therefore as provided in Paragraph 6.03, Change Order Requests and Proposed Change Orders, of the General Conditions.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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SECTION 01 31 19  
PROJECT MEETINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes requirements and procedures for pre-construction and other project meetings to ensure quality of work.

1.2 GENERAL

- A. The City Representative will arrange project meetings after consultation with Contractor and will inform the Contractor of the meeting time and location.
- B. The Contractor's attendance is required at all meetings.
- C. The City Representative will be responsible for taking the meeting minutes and providing the Contractor with a copy. The Contractor shall duplicate them and distribute the meeting minutes to the other participants of the meeting. There will be a fifteen-day limit for protesting items recorded in the minutes.

1.3 PRE-CONSTRUCTION CONFERENCE

- A. Prior to commencement of Work, the City Representative will schedule and conduct a preconstruction conference.
- B. Contractor shall be prepared to review and discuss the construction schedule and sequence of operations. The conference will be held at a time and location selected by the City Representative.

1.4 PROGRESS MEETINGS

- A. The City Representative will schedule, prepare agenda, and administer meetings throughout progress of the Work at weekly intervals or more frequently, as required by the City Representative.
- B. Attendance Required: Job superintendent, major Subcontractors and suppliers, as appropriate to agenda topics for each meeting.
- C. Location: Project field office, unless otherwise notified.
- D. Contractor shall provide a 3-Week Look Ahead Schedule.

1.5 PRE-INSTALLATION CONFERENCES

- A. When required in individual specification Sections, Contractor shall convene a pre-installation conference at work site prior to commencing work of the Section.
- B. Contractor shall require attendance of parties directly affecting, or affected by, work of the specific Specification Section.
- C. Contractor shall notify City Representative four days in advance of meeting date.

- D. City Representative will prepare agenda, preside at conference, record minutes, and distribute copies within two days after conference to participants, with two copies to Contractor.
- E. Contractor shall review conditions of installation, preparation and installation procedures, and coordination with related work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

## SECTION 01 32 16

## CONSTRUCTION PROGRESS SCHEDULES - CPM

## PART 1 - GENERAL

## 1.1 SUMMARY

- A. Scheduling of Work under the Contract shall be performed by Contractor in accordance with requirements of this Section.
  - 1. Development of Schedule Submittals shall employ computerized Critical Path Method (CPM) scheduling.
  - 2. The Baseline Schedule and Project Schedule Updates shall be cost and resource loaded based on the Schedule of Values as approved by the City.

## 1.2 RELATED SECTIONS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-01 Specification Sections, apply to this Section.

## 1.3 GENERAL REQUIREMENTS

- A. CPM Schedule Submittals: Contractor shall submit the digital file with a .XER or .XML extension for all reviews, including but not limited to, the Baseline Schedule, Progress Schedule, Recovery Schedule, Notices of Delay, Time Impact Analysis, and all Claims.
- B. Contractor is required to involve all subcontractors in the development, implementation, and updating process of its schedule.
- C. Acceptance or approval of the CPM Schedule Submittals is of general nature only. Failure by Contractor to include any element of work required for the performance of this contract shall not excuse the Contractor from completing all work required within any applicable completion date, notwithstanding the City approval of the CPM diagrams. Items missing from the schedule after City approval are assumed to be incidental work, and at not cost to the city the Contractor may submit a revised schedule to include these items. The revised schedule is subject to review and approval by the City as described in "Revised Schedule" clause. No extension of time will be granted because of errors or omissions on the schedule. It is Contractor's responsibility to incorporate all necessary activities to cover the work required by the Contract Documents.
- D. The Baseline Schedule and analysis when approved by the City shall constitute the official project work schedule throughout the construction period. No alteration of the logic, duration of activities, etc. will be allowed without the approval of the City.

## 1.4 SUBMITTALS

- A. The Baseline Schedule, Progress Schedule Update, Revised Schedule, Recovery Schedule, and reports prepared by Contractor shall be used for planning, organizing, directing, controlling, and reporting all work required by the Contract Documents.
- B. The CPM Schedule Submittals shall be at a minimum of three (3) hard copies and a CD-ROM in a case, or other acceptable digital format. Digital submittal shall be the original and editable file with a .xer or .xml file extension.
- C. The timely submission of the following is required:

1. Digital copy and three (3) hard copies of the Baseline Schedule fourteen (14) calendar days prior to commencing the Work of the Contract;
  2. Progress Schedule Update including written narrative as per specifications on a monthly basis;
  3. Activity Schedule on a weekly basis at the weekly progress meetings;
  4. Revised schedule within ten (10) working days when requested by the City;
  5. Resubmittal of any rejected Baseline Schedule, Progress Schedule Update, or revised schedule within five (5) working days after receipt of the returned schedule marked "RESUBMIT," if necessary;
  6. Daily Construction Reports, per section 1.11 of this specification.
- D. Failure to comply with timely submission of any schedule will be just cause to withhold the progress payment of any portions thereof by the City and will trigger liquidated damages listed in Section 00 73 02.
- E. Schedule Reviews: Unless otherwise stated, the City will review and respond to scheduling submittals within ten (10) working days after the submittal is received. If the schedule is not accepted, Contractor shall re-submit within five (5) working days after receipt of the City's response if changes or additional information is requested. This review and resubmittal cycle will repeat until the schedule has been accepted by the City.

#### 1.5 PLAN OF OPERATION

- A. At the Pre-Construction Conference, the Contractor shall submit for the City's review a Plan of Operation for the first 60 days of the Contract commencing after the Notice to Proceed. This schedule shall serve the project schedule needs until the Baseline Schedule has been accepted. Sufficient detail shall be included for the identification of submittals, permits, equipment procurement, construction activities.

#### 1.6 CPM SCHEDULE SUBMITTALS

- A. The CPM Schedule shall be prepared by Contractor using the precedence method of network diagramming.
- B. Time Scaled Graphic network diagram showing the critical path shall not be larger than 24" x 48".
- C. Activity Description: Each Activity shall have a unique narrative description consisting of a work function and location.
- D. All submittals that require City review and approval shall be incorporated in the CPM Schedules.
- E. All Activities shall have succeeding Activities except Work completion. At least one successor shall be a FF or FS relationship.
- F. Contractor shall disclose in detail how weather delays, as specified in the General Provisions of the Contract, will be incorporated into the Baseline Schedule. Contractor must keep a current "weather delay registry" that would be reviewed and agreed to by both parties during the Monthly Schedule Update submittal process.
- G. Contractor shall furnish the following computer-generated reports with the project identification, schedule and run date, and sort-type on the first page of each report.

1. List of all activities sorted by total float including ES, LS, EF, LF, and Total Float duration.
  2. List of all activities sorted numerically including ES, LS, EF, LF, and Total Float duration.
  3. List of all activities sorted numerically including ES, LS, EF, LF, Total Float duration, and Predecessor/Successor information of precedence network.
  4. List of all activities sorted by responsibility including ES, LS, EF, LF and Total Float duration.
  5. List of activities on the critical path sorted numerically including ES, LS, EF, and LF.
  6. List of near critical activities (activities with total float less than ten (10) working days) sorted numerically including ES, LS, EF, and LF.
- H. All CPM activity time duration in working days shall be specified in five (5) day work weeks excluding holidays to be identified by Contractor, unless specifically allowed by the Contract.
- I. A maximum of fifteen (15) days duration shall be given to each CPM construction activity. Any activity in excess of the fifteen (15) days shall be broken down in detail so that each detail activity will not exceed the fifteen (15) days maximum.

#### 1.7 BASELINE SCHEDULE

- A. Fourteen (14) calendar days prior to start of Work, Contractor shall furnish a Baseline Schedule showing in detail the proposed sequence of activities. The City will not process any progress payments until the required schedule is submitted and accepted by the City.
- B. The Baseline Schedule shall be calendar-based, using a precedence method network diagram in the CPM format indicating the critical path for the execution of the work utilizing the entire contract time.
- C. Baseline Schedule shall include the following tabulated information for each Activity:
1. Activity beginning and ending event numbers
  2. Estimated duration in working days
  3. Trade code (responsibility code including Contractor, all Subcontractors, Supplier, and Owner)
  4. Early start date (ES) and early finish date (EF) (calendar dated).
  5. Late start date (LS) and late finish date (LF) (calendar dated).
  6. Print the total and free float for each activity.
- D. The network diagram(s) level of detail shall include but not be limited to:
1. Required approvals, permits, notices, etc. necessary for Contractor's execution of the proposed work.
  2. Preparation of shop drawing and working drawing submittals.
  3. Administrative activities, procedures, and subsidiary actions that will affect the critical path, such as submittal and review of shop drawings, substitutions, alternative construction methods or alternative designs, and submittal to and review by the City and all utility companies involved including a schedule for coordination of all utility relocation work necessitated by Contractor's operations.
  4. Procurement of materials and equipment including ordering, fabrication, and delivery.
  5. Construction activities and sub activities tasks, including all activities shown on the Schedule of Values.
  6. Order and delivery of long lead items.

7. Approvals and permits required by regulatory agencies or other third parties.
  8. Schedules for Subcontractor's Work, including engineering and design services.
  9. Actual tests, submission of test reports and approval of test results.
  10. Testing, training and assistance required under the Contract.
  11. Punchlist and final cleanup.
  12. Scheduled completion date shall be as specified within the time allowed.
- E. The Baseline Schedule shall provide a practical schedule of activities performed within the specified contract completion time and within the contract bid price to complete the Work. A schedule extending beyond the contract completion date will not be accepted.
- F. Contractor shall incorporate all Milestones into the Baseline Schedule. These include, but are not limited to Substantial Completion and Milestones. These are unique zero (0) duration Activities containing corresponding dates and logic ties. Designate these Activities as start or finish Milestones. If necessary, utilize constraints of "start on or after" or "finish on or before" for Contract requirements. The use of float suppressing date constraints including "start on," "finish on," "mandatory start," and "mandatory finish" are not allowed.
- G. In preparing the Baseline Schedule, Contractor shall consider the nature and complexity of each submittal and shall allow ample time for review, revisions or corrections. Under no circumstances will an extension of time be given for any submittal for which a re-submittal is required and a re-submittal time was not included in the Baseline Schedule.
- H. Time impacts resulting from submittals and re-submittals of shop drawings are Contractor's responsibility.
- I. All constraints, dates, and lags will require the City's approval. All activities shall have succeeding activities except project completion. Contractor shall demonstrate the necessity of having any dummy activities.
- J. Negative float will not be allowed on the Baseline Schedule on the initial submittal. Initial Baseline Schedule with negative floats shall be rejected immediately. Contractor shall provide sufficient manpower (multiple crews) and maximize working hours (extended hours and /or weekend work) to perform the required work within the specified completion time and contract bid price.
- K. The Baseline Schedule's critical activities shall not exceed fifteen percent (15%) of the total number of activities. Critical activities are those which have the least float.
- L. Submit a written narrative with the Baseline Schedule that discusses basic assumptions, productivity and installation rates, construction staging plans, maintenance of traffic quantities, manpower and crew development, construction equipment planned, and other element related to developing the schedule.
1. Explain Activity durations and describe Contractor's approach for meeting Contract Milestone dates. Include as a minimum: basis and assumptions used in preparing the schedules, including crew sizes, equipment requirements, and anticipated delivery dates; restraints; critical path activities; production rates; Activities requiring overtime or additional shifts; holidays, City-specific events; potential problem areas; permits; coordination; required with SFMTA, railroads, utilities and other parties; and long lead delivery items requiring more than thirty (30) days from order to delivery. Identify Work items that may be expedited by use of overtime or additional shifts. Identify and explain sequencing and other constraints such as manpower, material and equipment.

2. All constraints, dates, and lags will require City's approval and shall be clearly identified and explained in the narrative.
3. Description and analysis of the Critical Path.

#### 1.8 PROGRESS SCHEDULE UPDATE

- A. The Baseline Schedule shall be updated monthly by Contractor and submitted to the City for review as a Progress Schedule Update. It shall not have any change in the logic of the network or in the duration of activities.
- B. Each Progress Schedule Update shall continue to show all work activities including those already completed. Computer calculations of the updated schedule will be made starting from the current date to the end of the project. Work completed shall be shown with actual start and finish dates for each activity. Work in progress shall be shown with the actual start date and the percentage completed for each activity.
- C. Progress Schedule Updates shall include the requirements stated above and the additional requirements:
  1. Include resource requirement as required.
  2. Actual start and completion dates of completed activities.
  3. Actual start dates and percent completion of activities in progress.
  4. Print the total and free float for each activity.
  5. Project percentage completed.
- D. The Progress Schedule Update shall, at all times, represent the actual history of accomplishment of all activities as well as Contractor's current projected plan for orderly completion of the work. Contractor shall, at monthly intervals, evaluate work progress with the City by reviewing the actual accomplishments since the previous update.
- E. In conjunction with each monthly Progress Schedule Update, Contractor shall submit to the City a written narrative report of the status of the Project as specified herein.
- F. Contractor's monthly written narrative of the critical path analysis shall include the following:
  1. Description of critical path and progress on Contract Milestones with explanations for any lack of work on critical path activities planned to be performed during last month;
  2. Anticipated completion time of entire work;
  3. Description of problem area;
  4. Current and anticipated delaying factors and their impacts;
  5. Explanation of corrective action taken or proposed to bring project back on schedule if delays have occurred;
  6. Description of critical activities scheduled to be performed next month;
  7. Discuss the incorporation of any approved Change Orders. Identify a proposed schedule Change Orders submitted during the last reporting period.
  8. Status of major material and equipment procurement.
- G. Progress Schedule Update reports, and the information contained therein, shall not be construed as claims, notice of claims, notice of delay, or requests for changes or compensation.
- H. Actual start and finish date and Work in progress shall not be automatically updated by default mechanisms that may be included in CPM scheduling software systems. Actual start and finish dates shall be updated manually and shall represent actual history and

match daily reports. Work in progress shall be shown with the actual start date, the remaining duration will represent the current expected completion date, and the physical percent completed for each activity. The remaining Activities should represent Contractor's current projected plan for orderly completion of the Work.

- I. This Progress Schedule Update shall not have any change in the logic of the network or in the duration of activities.
- J. Contractor during the course of the construction desires to make changes in its method of operating and scheduling, it shall notify the City in writing stating the reasons for the change. Any change to the schedule in the logic, order, or sequence of work, duration activities, etc. shall constitute a revised schedule. A revised schedule will not be in effect until it is approved by the City.
- K. If a COR for a schedule adjustment in the Contract duration is approved, the logic revisions and their relationship to other activities shall be reflected on the Progress Schedule Update.
- L. The Progress Schedule Update for the same period as the Application for Payment shall be submitted showing all work completed as of that date as a precedent to making progress payment Applications.

#### 1.9 ACTIVITY SCHEDULE

- A. Contractor shall present and discuss the Activity Schedule at the progress meetings, or as directed by the City.
- B. The Activity schedule shall be in the bar chart format and include the following:
  - 1. Completed activities for last week.
  - 2. Scheduled activities for the succeeding two weeks.
  - 3. Correlation to appropriate Baseline Schedule including Activity ID, description, start and finish, duration, responsible party performing the Work and pertinent remarks on Activity status.

#### 1.10 REVISED SCHEDULE

- A. Contractor shall submit to the City a revised critical path schedule with a description and justification of the changes within ten (10) working days whenever a schedule revision is requested or any of the following occurs:
  - 1. A change order affects the completion date or the sequence of the activities;
  - 2. Progress of any critical activity falls significantly behind schedule;
  - 3. Delay on a non critical activity changes the course of the critical path; or
  - 4. Contractor elects to change any sequence of activities affecting the critical path.
- B. The revised schedule shall be submitted in writing to the City Representative for review and approval. The submission of a revised schedule shall not relieve the Contractor of the responsibility for the notification required by Section 6.22H.2.d of the San Francisco Administrative Code and as required by subparagraph 7.02.D – Notice of Delay of the General Conditions.

#### 1.11 DAILY CONSTRUCTION REPORTS

- A. On a daily basis, Contractor shall submit to the City a Daily Construction Report for each working day, including weekends and holidays, when worked. Include in report:

1. Project name and Contract number
  2. Contractor's name and address
  3. Weather, temperature, and any unusual site conditions.
  4. Brief description and location of the day's scheduled activities and any special problems and accidents, including Work of Subcontractors. Descriptions shall be referenced to CPM scheduled activities.
  5. Worker quantities, names, and labor classifications for its own Work force and for Subcontractors of any tier.
  6. Equipment, other than hand tools, utilized by Contractor and Subcontractors by description and number.
- B. Failure to submit a copy of the Daily Construction Report by the end of the next working day will result in an assessment of \$100.00 for liquidated damages per report to be deducted from the Progress Payment.

#### 1.12 LIQUIDATED DAMAGES

- A. Failure to submit any one of the above schedules will result in an assessment of two hundred dollars (\$200) per calendar day as liquidated damages per schedule to be deducted from the contract until the required submittals are provided by Contractor.
- B. Liquidated damages are in addition to any remedies taken by the City under the Supplementary Conditions of this Contract.

#### 1.13 APPROVED STANDARD

- A. CPM, as required by this section, shall be interpreted to be generally as outlined and defined in "CPM in Construction Management" by James O'Brien, McGraw-Hill Company, latest issue, Chapters 1 through 7.
- B. Free float is defined as the amount of time that any activity can be delayed without adversely affecting any succeeding activity for the project completion.
- C. Total float is defined as the amount of time that an activity can be delayed without adversely affecting the overall time for the project completion.

#### 1.14 ADJUSTMENT OF THE CONTRACT TIME AND CHANGE ORDER

- A. Adjustments of the contract time due to delays, additional work, or any other cause will only be issued through a contract change order and only for causes specified in the Contract Documents.
1. In the event that the Contractor requests an adjustment of the contract time, it shall submit a Change Order Request (COR) with such justification and supporting evidence as the City may deem necessary for a determination as to whether or not the Contractor is entitled to an adjustment of time under the provisions of the Contract.
  2. The latest version of the Progress Schedule Update shall clearly indicate that Contractor has used, in full, all the float time available for work involved in the request.
  3. Total and free float are not for the exclusive use of benefit of either the City or Contractor, but is a resource available to both parties on a first needed basis. Contractor shall not be entitled to additional compensation due to schedule impacts for change order work that extends the contract beyond the scheduled completion date, but not beyond the contract completion date.

4. The City determination as to the adjustment of the contract time will be based upon the latest version of the Progress Schedule Update accepted at the time of the alleged delay, and all other relevant information.
  5. Actual delays in activities which, according to the Progress Schedule Update, do not affect the critical path work will not be the basis for an adjustment to the Contract time.
  6. No contract time extensions will be allowed for contract change orders for which there are concurrent contract work delays, unless the excusable delays affect the critical path in the schedule and after all available float has been used.
- B. Contractor shall include, as part of each COR for which it is requesting an adjustment in the Contract duration, a sub network showing logic revisions, duration changes, and cost changes for the work in question and its relationship to other activities on the Progress Schedule Update. Contractor shall incorporate each Change Order into the revised schedule.
- C. The City will, within ten (10) working days after receipt of such request and supporting evidence, review the facts and issue to the Contractor a written merit determination accepting or rejecting the COR in whole or in part.
- D. The new revised schedule, if accepted by the City shall be in compliance with the requirements under "Revised Schedule" as defined within this section.
- E. Where the City has not yet made a final determination as to the adjustment of the contract time, and the parties are unable to agree to the amount of the adjustment to be reflected in the Progress Schedule, the current schedule will be in effect and be updated regularly every month until a revised schedule is agreed and approved by the City.

#### 1.15 EARLY COMPLETION SCHEDULE

- A. Contractor may submit a Monthly Schedule Update which contains a Milestone or Substantial Completion dates earlier than the dates specified in the Contract. Contractor agrees to the following:
1. The time difference between the Contractor's early scheduled completion date and the Contract completion date will be considered as absolute float.
  2. The absolute float is not for the exclusive use of benefit of either the City or Contractor, but is a resource available to both parties on a first needed basis.
  3. Contractor's original bid has included all cost for the full duration of the Project from the date of NTP through the official Contract completion date. Specifically, Contractor has provided through its bid the overhead, construction equipment and facilities cost including overhead, field office, home office, other off-site yard, and extended overhead cost for the duration of the Project in its Bid Items on the Schedule of Bid Prices or Bid Proposal as specified.
  4. If the City requires additional work through a Change Order, which shall be done after the early proposed Substantial Completion Date, but prior to the Contract Time Substantial Completion Date, then no additional money will be paid to the Contractor for extended overhead.
  5. Contractor waives any and all claims or right of action against the City for damages, loss of profit or other additional compensation based on the Engineer's rejection or approval of a proposed Early Completion Schedule.

### 1.16. RECOVERY SCHEDULE

- A. Submit a Recovery Schedule within seven (7) Days, if the Monthly Schedule Update, reflects negative float of minus fourteen (-14) Days or more for a Contract Milestone Activity.
- B. Use a fragnet showing Activities that delayed the Contract Milestones Date. Submit a similar fragnet showing Contractor's plan to mitigate delay or disruption and subsequent impacts to schedule. Provide the digital schedule files, as well as, hard copies of the analysis. Provide a written narrative describing circumstances, extent of delay or disruption, and the methodology used to determine extent of delay or disruption. Submission of such fragnet does not constitute permission to proceed with plan.
- C. Addition of equipment or construction forces, increasing Work hours or other methods, manner, or procedures to return to the Contract completion date shall not be justification for a Change Order, nor shall it be treated as compensable acceleration where the need for a recovery schedule is due to or arises from any action of Contractor and/or its Subcontractors or Suppliers, at any tier.
- D. Contractor shall implement the Recovery Schedule after acceptance from the Engineer without additional cost to City and provide for completion of the Work in accordance with the remaining Milestone dates without a time extension. Should the logic and/or durations of the Recovery Schedule not receive acceptance of the Engineer, Contractor is responsible to use concurrent operations, additional manpower, additional shifts, overtime, etc., as required to put the Project back on schedule at no additional cost to the City.

### 1.17 TIME IMPACT ANALYSIS SCHEDULE (TIA)

- A. Prepare a Time Impact Analysis (TIA) Schedule: When unforeseen conditions or delays are experienced by Contractor and a time extension is requested. Contractor shall submit a written TIA illustrating the influence of each change or delay on the Contract Milestone completion date to the level of detail that the Engineer may require to determine whether Contractor is entitled to an extension of time.
- B. Actual delays in activities, which according to the Progress Schedule Update do not affect the Critical Path work, shall not be the basis for an adjustment to the contract time.
- C. To prepare the TIA, Contractor shall use the most recent version of the Progress Schedule Update that has been accepted by the City at the time of the alleged delay. Contractor shall use a sub network or fragnet of the Activities with the proposed delay. The impacted fragnet will show new Activities for the work in question and its relationship to other activities in the schedule. Provide the electronic schedule files as well as hard copies of the analysis. Provide a written narrative describing the time impact analysis and all other relevant information.
- D. After the City's review and acceptance of the TIA, Contractor shall incorporate it into the Progress Schedule Updates and Revised Baseline Schedules.
- E. Because float within Progress Schedule Updates is jointly owned, delays to the Work that are outside the control of Contractor may be offset by time savings realized

### 1.18 AS-BUILT SCHEDULE

- A. The last Monthly Progress Schedule update with all dates actualized will be considered the As-Built Schedule. This schedule will have incorporated all actual start and finish

dates and all the accepted Change Orders, Contract Modifications and TIAs. Schedule and approval of the Schedule will be a condition precedent to reduction/release of final Contract retention.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 33 00  
SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: This section specifies the general procedures and requirements for submission of shop drawings, product data and samples by Contractor to the City for review. See Technical Specifications for specific submittals.

1.2 DEFINITIONS

- A. "Shop drawings" are drawings, diagrams, schedules and other data specially prepared for the Work by Contractor or a subcontractor, sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work. Shop drawings shall not be reformatted Contract Documents.
- B. "Product data" are illustrations, specifications, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by Contractor to illustrate materials or equipment for some portion of the Work.
- C. "Samples" are physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.
- D. Shop drawings, product data, samples and similar submittals are not Contract Documents. The purpose of their submittal is to demonstrate for those portions of the Work for which submittals are required the way Contractor proposes to conform to the requirements of the Contract Documents.
- E. The term "manufactured" applies to standard units usually mass-produced. The term "fabricated" means items specifically assembled or made out of selected materials to meet individual design requirements.
1. Shop drawings shall establish the actual detail of manufactured or fabricated items, indicate proper relation to adjoining Work, and amplify design details of mechanical and electrical equipment in proper relation to physical spaces in the structure.
- F. "Manufacturer's instructions" shall mean the manufacturer's written instructions on the use or application of the product under conditions similar to those at the job site.
- G. "Work description" is a detailed description of the means, methods, tools, equipment, materials, sequence, and any other pertinent information about performance of work.
- H. "Subcontractor qualifications" is a detailed statement of the subcontracting entity or personnel scheduled to perform work including general description of qualifications, representative list of applicable projects, number of years experience, and references complete with telephone numbers and contact persons. Refer to Section 00 72 00 – General Conditions for requirements regarding Subcontractor qualifications prior to award of the contract.
- I. "Field sample" is a sample at the project site to demonstrate the final technique, finish, and construction quality by which the Work will be judged.

- J. A Submittal is defined as any drawing, calculation, specification, product data, samples, manuals, requests for substitutes, spare parts, photographs, survey data, demolition plans, record drawings, bonds, or similar items required to be submitted to the City Representative under the terms of the Contract.
- K. "Certificate of Compliance" is defined as a certificate signed by the manufacturer of materials stating that the materials involved comply in all respects with the requirements of the specifications.

### 1.3 REQUIREMENTS

- A. The Contractor shall be responsible for distributing approved submittals as required for constructions and for fabricating, furnishing, and constructing work in accordance with approved submittals. The Contractor shall keep one copy of reviewed submittals at the site at all times.
- B. The Contractor shall not use unacceptable submittals nor submitted materials without the City Representative's review stamp for reference in doing work. Submittals returned DISAPPROVED shall be revised by the Contractor and resubmitted to the City Representative for approval; the Contractor shall revise submittals returned APPROVED EXCEPT AS NOTED before proceeding with the subject work.
- C. Approval of submittals shall not relieve the Contractor of the responsibility for errors or omissions in the submittals or from deviations in the Contract Documents unless such deviations were specifically called to the attention of the City Representative in the Submittal Control Form for the submittal.
- D. The Contractor shall be responsible for the correctness of the submittals, for shop fits and field connections, and for the results obtained by use of such submittals. The City Representative will review submittals for conformance with the design concept of the project and for conformance with the requirements of the Contract Documents.
- E. Wherever submittals are required herein, all submittals shall be submitted by Contractor to the City through the City Representative for recording and reviewing by the City.
  - 1. Submittals received from sources other than Contractor will be returned to Contractor without the City's review.
- F. The Contractor shall schedule submittals, enough in advance of scheduled installation dates, to allow time for review or revision.
  - 1. Review and coordinate submittal with other submittals, the construction schedule, testing, procurement, fabrication, delivery and similar sequential activities.
  - 2. Contractor shall be responsible for changes made necessary by Contractor's failure to coordinate submittals in a complete and timely manner.
- G. Make submittals in groups containing all associated items as complete packages of information for review. The City will reject partial submittals.
  - 1. Provide submittal package in a three-ring binder, with table of contents and tab sheet for each system. Tab sheet shall include a list of material and equipment furnished and shall provide ample space for City's review stamp and comments.
  - 2. The City reserves the right to withhold action on submittals requiring coordination with other submittals until related submittals are furnished.
- H. Submittals shall be reviewed, stamped, and approved by Contractor prior to forwarding them for City's review.

1. By approving and submitting shop drawings, product data, and samples, Contractor represents that it has determined and verified dimensions, materials, field measurements, and related field construction criteria, and that it has checked and coordinated the information contained within such submittals with the requirements of the work and of the Contract Documents.
  2. When professional certification of performance criteria of materials, systems or equipment is submitted, submittal shall be stamped and signed by the responsible design professional with license number and expiration date representing that the City could rely upon the accuracy and completeness of such calculations and certifications.
- I. No portion of the Work requiring submission of a shop drawing, product data, or sample shall commence until the submittal has been reviewed and accepted by the City. All such portions of the Work shall be executed in accordance with accepted submittals.
    1. No portion of the Work requiring submission of work description, subcontractor qualification or field sample shall commence until the submittal has been reviewed and accepted by the City. All such portions of the Work shall be executed in accordance with accepted submittals.
  - J. No change shall be made by Contractor in any submittal after it has been accepted by the City.
  - K. If the submittal shows any variation from the Contract requirements because of standard shop practice or other reasons, Contractor shall make specific mention of each variation in its submittal.
  - L. The City will review Contractor's submittals only for general conformance with the design concept of the Project and general compliance with the requirements of the Contract Documents. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of Contractor as required by the Contract Documents.
  - M. The City's review of Contractor's submittals shall not relieve Contractor of the obligations to comply with the requirements of the Contract Documents. The City's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences or procedures. The City's acceptance of a specific item shall not indicate acceptance of an assembly of which the item is a component.
  - N. If Contractor makes a submittal which is not required to be submitted, the City will not review such submittal. Contractor shall execute the Work in accordance with the Contract Documents.
  - O. Adequate quantities submitted are required for review. No submittal will be processed unless the specified quantities are furnished.
  - P. Contractor's submittal packages shall include a digital copy of each Submittal on CD-ROM.

#### 1.4 SUBMITTAL SCHEDULE

- A. The time of submission of a shop drawings, product data, samples, work description, subcontractor qualifications and field samples by Contractor and their processing and returning by the City is a matter which shall be jointly agreed upon by both parties in order that the submittals will be available when needed by the construction process and so that each party can plan its workload in an orderly manner. Allow sufficient review time

so that installation will not be delayed as a result of the time required to process submittals, including time for resubmits.

1. Allow two weeks for initial review. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. The City Representative will promptly advise the Contractor when a submittal being processed must be delayed for coordination.
  2. If an intermediate submittal is necessary, process the same as the initial submittal.
  3. Allow two weeks for reprocessing each submittal.
  4. No extension of Contract Time will be authorized because of failure to transmit submittals to the City Representative sufficiently in advance of the Work to permit processing.
- B. Prepare the Submittal Schedule in the format acceptable to the City, integrating it with or as a by-product of the Construction Schedule, and shall submit it to City 15 calendar days prior to the submission of the first such submittals or simultaneously with the CPM Schedule, whichever is earlier. No submittals will be processed before the Submittal Schedule has been reviewed and accepted by the City.
- C. In preparing the Submittal Schedule, the Contractor shall first determine from the Construction Schedule the date the particular item related to a particular system is needed for the Work. Working backwards, the Contractor shall add the required number of days for processing the submittal, shipment, fabrication, delivery of operation and maintenance manuals, and similar activities to determine the date of the submittal.
1. Contractor shall allow minimum 21 calendar days for the City's review of the submittal and shall anticipate that incomplete, inadequate, or incorrect submittal will require resubmission.
  2. Contractor shall include a minimum 21 calendar days of float in the construction schedule for each submittal activity to allow for resubmissions.
  3. If more than one resubmittal is required, the costs of reviewing the extra resubmittals will be deducted from progress payments due Contractor. Such costs shall include the City's costs and the City's consultant fees.
- D. Adjust the Submittal Schedule monthly with the Construction Schedule to produce an orderly, even workload, without peak loads if possible, and yet able to meet the needs of the review and construction processes. Submit two copies of the Submittal Schedule after it is completed and each time it is updated by Contractor.
- E. Contractor shall be solely responsible for scheduling of submittals. No extension of Contract Time will be granted for untimely submittals or required resubmittals.
- F. Delays caused by the need for resubmittal shall not constitute a basis for an extension of Contract Time.
- G. Delays in the work caused by an incorrect submission or insufficient data will not constitute reason for an extension of Contract Time.

## 1.5 PROCEDURES

- A. Submittal cover sheet will be provided by the City. The following information will be provided by the Contractor:
1. Identification of the project, Contractor, subcontractor, major supplier.
  2. Identify pertinent Drawing sheet and detail number, and Specification section number as appropriate.
  3. Identify deviations from Contract Documents.
  4. Submittals shall be sequentially numbered by the Contractor.

5. Provide space for the Contractor's approval and City Representative's review stamps on submittals.
- B. Transmit each submittal to the City with a Submittal Control Form to be supplied by the City Representative. Deliver submittals to the City Representative at the address to be provided at the preconstruction meeting.
  - C. Transmittal Form: Use Submittal Record forms available from the City at no cost to Contractor. Consecutively number the transmittal forms. Resubmittals shall have original number with a numbered suffix. Fill in information as applicable.
  - D. Identification: Identify submittals with the following information:
    1. Project name and location.
    2. Contractor's, Subcontractor's, supplier's, or manufacturer's name, address, and telephone number.
    3. Submittal number.
    4. Product identification or shop drawing title, number, revision, and date as applicable. Where product data contain more than one product, model, selection, etc., clearly mark and identify the information intended to be reviewed by City.
    5. Reference to (Contract) Drawing or Specification Section as applicable.
    6. Apply Contractor's stamp, signed or initialed, certifying that review, verification of products required, field dimensions, adjacent construction work, and coordination of information are in accordance with the requirements of the Work and Contract Documents.
    7. Provide space for City's review stamp. Space shall be minimum 4" x 6".
    8. Where multiple Specification Sections govern any portion of the work or where multiple trades are involved in any portion of the work (e.g., steel, mechanical and electrical items embedded in concrete), indicate all pertinent Specification Sections in its submittal identification.
    9. Revise any resubmittals as required and identify all changes made since previous submittal.
  - E. Packaging of Submittals:
    1. Submittals shall be wrapped or packaged to prevent damage during delivery.
    2. Reproducible drawings shall be rolled and not folded.

## 1.6 SHOP DRAWINGS

- A. Submit in the form of one reproducible and 6 copies. The reproducible of drawings greater than 11" x 17" shall be unbound white paper.
- B. Shop drawings shall be submitted only by Contractor. Submittal of incomplete or unchecked shop drawings will not be acceptable.
- C. When the shop drawings have been reviewed by the City, two copies and one marked-up reproducible will be returned to Contractor appropriately stamped.
- D. If the shop drawings are not accepted, five copies will be returned to Contractor with the City's review comments indicated.
- E. Resubmit shop drawings in the same manner and quantity as specified for the original submittal.
- F. Clearly identify and provide explanation of changes made by Contractor on the resubmitted shop drawings.

- G. Each shop drawing submitted shall be sized as follows:
  - 1. Maximum sheet size: 34"x 22" ("D"-size) with a 1" border and a 2" binding edge to the left of the border on the short side of the sheet.
  - 2. Minimum sheet size: 8-1/2" x 11" with 1/4" border on three sides and 1/2" binding edge on the long side.
- H. Catalog sheets meeting the specific requirements may be substituted for the required drawings.

#### 1.7 PRODUCT DATA

- A. The submittal requirements shall be as follows:
  - 1. Submit six (6) copies of product data. After review, two will be returned to Contractor.
  - 2. Mark each copy to identify applicable products, models, options and other data. Supplement manufacturer's standard data to provide information unique to this project.
- B. Product data and manufacturers' standard drawings submitted for review shall show only the pertinent information.
  - 1. Identify the pertinent information by circling it with black ink pen or by crossing out the inapplicable information with black ink pen.
  - 2. Any submittal which contains information not clearly identified for review will be rejected and returned to Contractor for resubmission.

#### 1.8 SAMPLES

- A. Submit samples to illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
- B. Submit samples of finishes in custom colors selected, textures, and patterns for the City's selection.
- C. Include identification on each sample, with full Project information.
- D. Furnish three (3) samples in the following sizes, unless otherwise specified; after review one (1) sample will be returned to Contractor.
  - 1. Flat or Sheet Products: Minimum 6 inches square, maximum 12 inches square.
  - 2. Linear Products: Minimum 6 inches long, maximum 12 inches long.
  - 3. Bulk Products: Minimum one pint, maximum one gallon for liquids; minimum one pound, maximum three pounds or minimum one cubic foot, maximum one cubic yard, as applicable for solids.

#### 1.9 MANUFACTURER'S INSTRUCTIONS

- A. When required by individual Specification Sections or by the City during submittal reviews, submit six (6) copies of manufacturers' printed instructions for delivery, storage, assembly, installation, start-up adjusting, field testing and finishing.
- B. Identify conflicts between manufacturers' instructions and Contract Documents.
- C. Maintain copies of manufacturers' installation instructions and recommendations in Contractor's field office for review, regardless of whether such submittals are requested.

### 1.10 MANUFACTURER'S CERTIFICATES

- A. Submit certificates, in duplicate.
- B. Submit on 8-1/2" by 11" white paper.
- C. The City will retain certificates; no approval reply is intended.
- D. The certificate shall state that:
  - 1. The equipment or system has been:
    - a. installed in accordance with the manufacturer's recommendations,
    - b. inspected by a manufacturer's authorized representative, and
    - c. serviced with the proper initial lubricants.
  - 2. Applicable safety equipment has been properly installed.
  - 3. The proper electrical and mechanical connections have been made.
  - 4. The equipment is ready for startup.

### 1.11 CERTIFICATE OF COMPLIANCE

- A. The Contractor shall submit, to the City, Certificates of Compliance for all applicable materials as specified in the table of Materials Accepted by Certificate of Compliance of the current edition of the Construction Manual published by the California Department of Transportation (Caltrans) and available for download at [http://www.dot.ca.gov/hq/construc/constmanual/construction\\_manual.pdf](http://www.dot.ca.gov/hq/construc/constmanual/construction_manual.pdf) (Table 6-2.3 in September 2014 Edition).
- B. Certificates of Compliance shall contain the following information:
  - 1. Name of company.
  - 2. Lot number traceable to a specific lot.
  - 3. A statement naming the applicable type and brand, and that the materials meet the requirements of the Contract specifications.
  - 4. Contract number.
  - 5. Signature of responsible officer of the company.
  - 6. Any other information required by the table of Materials Accepted by Certificate of Compliance in the Construction Manual referenced in Part A.
- C. The City will retain certificates; no approval reply is intended.

### 1.12 ACTION AND DISTRIBUTION

- A. The City will return the submittals stamped "NO EXCEPTIONS TAKEN," "MAKE CORRECTIONS NOTED," "SUBMIT SPECIFIED ITEM(S)," "REVISE AND RESUBMIT" or "REJECTED."
  - 1. When "NO EXCEPTIONS TAKEN" is indicated, Contractor is advised that fabrication, manufacturer, or construction may proceed, providing it complies with the Contract Documents.
  - 2. When "MAKE CORRECTIONS NOTED" is indicated, Contractor is advised that fabrication, manufacture, or construction may proceed, providing it complies with the City's notations and the Contract Documents.
  - 3. Submittals returned with stamps as per Item 1 or 2 above shall be considered as acceptable submittals.
  - 4. When other notation is indicated, Contractor is advised that no work shall be fabricated, manufactured, or constructed. Contractor shall make a new submission in accordance with the procedures specified.

- B. Contractor shall make additional copies of the accepted submittals and shall within 3 calendar days from date of receipt distribute one copy to its subcontractors, vendors, or manufacturers as applicable. Copies shall be made from the accepted copy bearing the City's stamp of acceptance.
- C. Contractor shall be responsible for recording work completed in accordance with approved submittals on the Record Drawings in accordance with the requirements of Section 01 78 39, Project Record Drawings.

#### 1.13 USE OF SUBMITTALS

- A. Work shall be fabricated, constructed, and furnished in accordance with the acceptable submittals. One copy of such acceptable submittals shall be kept at the job site.
- B. Contractor shall not use unacceptable submittals or submittal materials in the work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

## SECTION 01 35 44

## HAZARDOUS BUILDING MATERIALS – SCOPE OF WORK

## PART 1 - GENERAL

## 1.1 SUMMARY

- A. As part of this contract, the Contractor qualified in hazardous materials abatement, removal and remediation shall conduct such work prior to the demolition or renovation or disturbance activity.
- B. This Section includes scope of work for the abatement and/or removal of hazardous and toxic materials, environmental training requirements, minimum qualifications, regulatory requirements, project requirements, and handling procedures as required to the work and existing conditions of the project.
- C. Many of the materials and items of equipment used to construct the improvements and facilities at the Project Site contain materials known to the State of California to be either carcinogenic or reproductive toxins. Such hazardous, contaminated, and non-hazardous environments include, and are not limited to, hazardous and non-hazardous materials, soils, heavy metals, asbestos; serpentine rock (which may contain natural asbestos); soils with naturally-occurring asbestos; lead-containing paints and coatings; lead sheeting; mercury; debris, mold and fungi; bacterial/biological contamination; . Materials to be encountered may include PCB ballasts, mercury containing lamps; asbestos; lead and other hazardous materials.
- D. The Contractor shall not conduct any environmental or hazardous materials sampling or analysis without written permission from the City Representative. This does not include the Contractor's obligation for any personnel air monitoring of its employees.
- E. ENVIRONMENTAL TRAINING REQUIREMENTS: 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 as a submittal as per Section 02 80 13 Hazardous Building Materials Remediation.
  - 1. Health and Safety training
  - 2. HAZWOPER training
  - 3. Cal/OSHA Competent Person training for the field supervisor overseeing activities that disturb asbestos, or Naturally Occurring Asbestos (NOA) as per Title 8 CCR 1529.
  - 4. Cal/OSHA Asbestos training (for all trades who will come in contact and disturb asbestos or Naturally Occurring Asbestos (NOA)).
  - 5. Lead training (for all trades who will come in contact and disturb lead containing paints as per Cal/OSHA 1532.1 Lead in Construction standard)
  - 6. Medical examination and blood tests (as warranted)
  - 7. Respiratory protection (including current respirator fit test records)

- 8. Other training pertaining to the work being conducted.
- F. Payment: All work in this Section shall be inclusive of the lump sum bid.
- G. In the event the Contractor discovers hazardous material not found in above-mentioned reports refer to Section 01 11 00.

## 1.2 RELATED DOCUMENTS AND SECTIONS

- A. Section 01 35 45 Health and Safety Criteria
- B. Section 01 41 00 Regulatory Requirements
- C. Section 02 80 13 Hazardous Building Materials Remediation

## 1.3 SCOPE OF WORK – HAZARDOUS BUILDING MATERIALS

- A. The Contractor is hereby notified that hazardous waste and/or contaminated material is present on the site as known by previous projects. Hazardous Materials Remediation is part of the scope of the work of the Contract.
- B. Abatement, removal and remediation of all materials shall be performed by a licensed abatement contractor under proper Cal-OSHA work procedures. The waste stream generated by the abatement work shall be classified, handled, containerized, labeled, manifested, transported, and disposed in full compliance with all applicable federal, states and local regulatory requirements.
- D. In conducting its work, the Contractor shall verify if its work will involve the disturbance, removal, abatement, remediation, clean up, transportation and disposal of the following environmentally-regulated materials which are shown in the above report(s), identified or otherwise implied in these Contract Documents. If it does, the Contractor is responsible for the removal, abatement, remediation, clean up, transportation and disposal of such environmentally-regulated materials.
- E. Hazardous Material Abatement work includes but is not limited to the following work at locations described in the project plans, specifications, and Section 02 80 13 Hazardous Building Materials Remediation.
- F. Hazardous Material Abatement work includes, but is not limited to the following work at locations described in the Contract Documents:
  - 1. Pipe insulation (asbestos containing) on steam supply and condensate return lines, as needed to facilitate renovation. 70 Linear feet of thermal system insulation on 8" steam supply and 70 Linear feet of thermal systems insulation on 4" condensate return.
  - 2. Pipe insulation Debris in surrounding soil (asbestos containing), as needed to facilitate renovation.
  - 3. The removal, abatement, remediation, clean up, transportation and disposal of any other hazardous materials encountered.

- G. The City has not verified that any paints, coatings, dusts, or other materials are not lead containing, therefore all "trigger 1" construction activities, such as demolition of painted surfaces, manual scraping or sanding of painted surfaces, or renovations impacting painted surfaces and primed structural steel shall be completed using dust controls and personal protective measures in compliance with the Cal/OSHA Construction Lead Standard, 8 CCR 1532.1. All settled dust within ductwork, ceiling plenums, crawl spaces, attics, chases and non-regular housekeeping areas shall be treated as having measurable lead content requiring compliance with Cal OSHA 1532.1.

#### 1.4 ABATEMENT CONTRACTOR'S QUALIFICATIONS

- A. The Contractor may self-perform abatement work if it is qualified and licensed or it may subcontract the Work. If the Contractor uses a hazardous materials abatement subcontractor, then the abatement subcontractor shall meet the following requirements.
- B. The Contractor or its hazardous materials abatement subcontractor shall submit current licenses and certifications for the specific type of abatement work to be performed and a letter of confirming compliance to regulations, both current and as described in the specifications listed in paragraph below.
- C. The Contractor or its hazardous materials abatement subcontractor shall submit copies of any notice of safety and environmental violations received from the regulatory agencies notifications that they may have received in the last 20 years.

1. Minimum Qualifications (MQ's)

The Contractor or its hazardous materials abatement subcontractor shall meet the following requirement:

- a) The Contractor or its hazardous materials abatement subcontractor must be a legal entity to enter into contract and licensed in good standing with the State of California and the City of San Francisco, including compliance with City contracting requirements, and be qualified to do business in San Francisco.
- b) The Contractor or its hazardous materials abatement subcontractor partner must possess a valid State of California Contractors State License Board (CSLB), **Class "B"**, General Building Contractor's license. <http://www.cslb.ca.gov>
- c) The Contractor or its hazardous materials abatement subcontractor a valid State of California Contractors State License Board (CLSB), **Class C-22**, Asbestos Abatement Contractor license per Title 16, Division 8, Article 3. Classifications of the Business and Professions Code.
- d) The Contractor or its hazardous materials abatement subcontractor must possess a valid State of California Contractors State License Board (CLSB) Certification **ASB (Asbestos Certification)** in accordance with the provisions of Division 3, Chapter 9 of the Business and Professions Code.
- e) The Contractor or its hazardous materials abatement subcontractor must be a current **Asbestos Registrant** with the California Department of Industrial Relations, Division of Occupational Safety and Health (DOSH), as required by Title 8 of the California Code of Regulations, Article 2.5.

- f) The Contractor or its hazardous materials abatement subcontractor must possess a valid **USEPA Lead Safe** Certificate to conduct lead-based paint renovation, repair and painting activities pursuant to 40 CFR Part 745.89 and fulfilling the requirements of the Toxic Substance Control Act (TSCA) Section 402.
- g) Workers documentation, medical records, and training required to perform the hazardous materials abatement work from either Contractor or its hazardous materials abatement subcontractor.
- h) The Contractor or its hazardous materials abatement subcontractor shall have five (5) years of hazardous materials abatement and/or removal experience

D. Other Abatement Contractor's Qualifications

- 1. Before commencing any abatement Work, the Contractor or its hazardous materials abatement subcontractor shall submit to the City Representative a Hazardous Materials Management Plan in accordance to the requirements of this Section, and Section 02 80 13 Building Related Hazardous Materials Remediation.
- 2. The Contractor or its hazardous materials abatement subcontractor shall submit current licenses and certifications for the specific type of abatement Work to be performed; copies of regulatory agencies notifications, abatement work plans, workers and competent person's documentation, waste disposal plan and documentation as required for the removal of the hazardous materials.

E. Project Safety Representative (PSR): In accordance to the requirements specific to this Section listed below and with those in Section 01 35 45- Health and Safety Criteria, the Contractor shall assign a qualified person directly responsible under the Contractor's Superintendent trained and knowledgeable in the identification, control, and management of the hazardous materials and conditions on-Site. The PSR is responsible for the following:

- 1. Enforcing safe work and hygiene practices in compliance with the Contractor's Health and Safety Program and Hazardous Materials Management Plan (HMMP)
- 2. Advising subcontractors, vendors, and visitors to the Site of potential hazards and minimum general requirements of the Contractor's Health and Safety Program
- 3. Coordinating subcontractor's Work regarding hazardous material procedures and controls.
- 4. Establishing and maintaining restricted Work Areas.
- 5. Enforcing proper use of personal protective equipment.
- 6. Communicating approved modified safety requirements to Site personnel as well as visitors to the site.
- 7. Notifying to and coordinating with the City Representative for the immediate assessment and remediation Work for unforeseen hazardous materials conditions discovered in the course of the Work.
- 8. Notifying and coordinating signing of waste manifests with the City Representative in a timely manner

9. Ensuring Contractor's personnel have proper training to perform the work
- F. Hazardous Materials Handlers: Only qualified persons shall engage in hazardous material- related Work. Contractor and subcontractor personnel, who come into contact with, are exposed to, disturb, operate equipment or otherwise handle hazardous or contaminated material, or debris shall have appropriate hazard communication and required training, personal and medical monitoring, and shall be certified to wear appropriate personal protective equipment as required by the applicable laws and regulations. Special qualifications may be required depending on the Contractor's means and methods.
- G. For Asbestos-Related Work Involving Asbestos-Containing Materials equal to or greater than 100 square feet or 100 linear feet or affecting friable asbestos surfacing materials, Thermal System Insulation (TSI) and Regulated Asbestos Containing Materials (RACM), the Contractor or its hazardous materials abatement subcontractor shall:
1. Possess a valid asbestos handling license issued by the California State Contractors Licensing Board (SCLB) and a valid current Certificate of Registration for Asbestos-Related Work as issued by the California Department of Industrial Relations – Division of Occupational Safety and Health (Cal/OSHA).
  2. Work shall be completed under the on-Site supervision of a Competent Person as defined by Federal OSHA under Regulation 29 CFR Part 1926.1101 and Cal/OSHA under 8 CCR 1529.
  3. All abatement workers shall have AHERA training with current annual 8-hour refresher training, annual medical exams for the use of respiratory protection, and a fit test of appropriate respirators every 6 months.
- H. Lead Hazard Control Work: Only qualified persons with California Department of Public Health (CDPH) approved Lead Workers training, annual medical examinations and approval for the use of respiratory protection, and semi-annual fit testing of respirators under the direct supervision of a CDHS approved Lead Supervisor shall engage in work defined under Cal/OSHA regulation 8 CCR 1532.1 affecting lead-based paints and lead construction hazards, including but not limited to:
1. Working in an environment where lead exposures exceed 30 micrograms per cubic meter (mg/m<sup>3</sup>).
  2. Controlling lead hazards, but not limited to, removal of loose and peeling lead-based paints, demolition and disposal of concrete-encased primed structural steel, removal of lead jacketed telephone cables and stripping of lead coatings from structural steel prior to torching or welding.
- I. As defined under Title 17, California Code of Regulations (CCR), Division 1, Chapter 8 "Accreditation, Certification and Work Practices in Lead-Related Construction," Article 1, Sections 35001 et al, and Article 16, Sections 36000 and 36100. Lead Hazard Work: All affected workers shall have lead awareness training, current medical examinations and approval for the use of respiratory protection, and current fit testing of respirators complying with Cal/OSHA regulation 8 CCR 1532.1 when affecting lead paints and lead construction hazards including, but not limited to:
1. Demolishing or salvaging structural items where lead or materials containing lead are present.
  2. Removing or encapsulating materials containing lead.

3. Constructing, altering, repairing or renovating structures, substrates, or portions thereof, that contain lead or materials containing lead.
  4. Installing of products containing lead.
  5. Cleaning-up of lead contamination.
  6. Transporting, disposing, storing, or containing lead or lead-containing materials on the site or other locations where construction and renovation activities are performed.
- J. Polychlorinated Biphenyls (PCBs) Related Work: Removal of non-leaking Polychlorinated Biphenyls (PCBs)-containing ballasts and transformers shall be completed by workers with PCBs hazard awareness training as verified by the Contractor's Project Safety Representative (PSR). Removal of leaking or damaged PCBs-containing ballasts, transformers, and oils shall be only completed by trained workers, wearing protective gloves and following safety procedures as outlined in the HMMP. Hazardous waste shall be handled according to the U.S. Environmental Protection Agency's Standards 40 CFR 761.60 and 761.65, and 22 CCR Section 66699(b).
- K. Mercury-Containing-Lamp-Related Work: May be completed by workers with mercury hazard awareness training as verified by the Contractor's Health and Safety Officer or Superintendent.
- L. Other Hazardous Materials-Related Work: May be completed by workers with specific hazard awareness training of the material in question as verified by the Contractor's Project Safety Representative (PSR) or Superintendent.
- M. Contaminated Soils-Related Work including Underground Storage Tanks and CCA treated Wood: workers shall have current 40-hour HAZWOPER training and 8-hour annual refresher training per regulation 29 CFR 1910.120, and 8 CCR 5192. The Contractor shall comply with the health and safety requirements, and the approved Site-Specific Hazardous Materials Management Plan (HMMP).
- N. Bio-hazard Work: Work areas contaminated with fecal matter and human excretions, along with needles and syringes and other materials potentially contaminated with infectious blood borne pathogens or other biohazards shall comply with the health and safety requirements and the approved in a Site-Specific Hazardous Materials Management Plan.
- O. Mold and Fungi Remediation Work: May be completed by workers with mold hazard awareness training as verified by the Project Safety Representative (PSR) or Superintendent.
- P. Hazardous Materials Haulers shall:
1. Possess during the hauling of hazardous material, applicable federal, state, and local vehicle insurance requirements, valid driver's license, vehicle registration and licenses, and a current Class 1 Certification of Compliance from the California Highway Patrol affixed to each vehicle or container.
  2. Possess a Hazardous Substance Removal Certification granted by the State of California Department of Toxic Substances Control (510-540-3802) and other required certifications and insurance.
  3. Contractor shall be responsible for informing drivers of hauling vehicles about:

- a) The nature of the material hauled.
- b) Any recommended or required routes to and from the site.
- c) Applicable city street use regulations and requirements, and State of California Department of Transportation (Caltrans) codes, regulations and requirements.
- d) The City's requirements for proper handling and transportation of hazardous waste including mitigation controls and manifesting procedures.
- e) The legal maximum loads for each vehicle.

## 1.5 REGULATORY REQUIREMENTS

- A. The Contractor shall comply with the procedures of this Section, and all applicable laws and regulations regarding the generation, management, characterization, removal, abatement, remediation, transportation and disposal of hazardous building materials. The Contractor is solely responsible for identifying which apply. Examples of regulations that may apply include but are not limited to:
  1. Resources Conservation and Recovery Act, 42 U.S.C. Section 6901 et seq.
  2. Regulations 40 CFR Part 260 et seq.
  3. California Health and Safety Code, Division 20.
  4. Regulations, and 22 CCR Section 66000 et seq.
- B. For asbestos (building materials) hazards, comply with the applicable requirements of the following federal, state and local regulations and requirements:
  1. For asbestos hazards: Comply with the applicable requirements of:
    - a) Cal/OSHA Construction Asbestos Standard, 8 CCR Section 1529.
    - b) BAAQMD Regulation 11, Rule 2 and Regulation 11 Rule 14.
    - c) Environmental Protection Agency NESHAP and AHERA regulations (40 CFR Part 763, as applicable).
    - d) Occupational Safety and Health Administration (inclusive of OSHA 29 CFR 1926.1101).
    - e) California Environmental Protection Agency (Cal/EPA) Title 22.
    - f) Other applicable federal, state, and local governmental regulations pertaining to asbestos-containing materials (ACM) and asbestos waste.
    - g) 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.
    - h) All other applicable regulations, rules, ordinances, guidance documents and regulatory clarification letters and memos related to asbestos,

Asbestos-Containing Materials (ACM), Asbestos Containing Building Materials (ACBM), Asbestos Containing construction Materials (ACCM), and asbestos-containing waste.

2. For Naturally Occurring Asbestos (NOA) in on-site soil and fill, comply with the applicable requirements of:
  - a) Cal/OSHA Construction Asbestos Standard, 8 CCR Section 1529.
  - b) Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations (CCR 17, Section 93105).
  - c) Bay Area Air Quality Management District (BAAQMD) rules, permits, notification forms, and regulatory information regarding Naturally Occurring Asbestos (NOA). (<http://www.baaqmd.gov/permits/asbestos/naturally-occurring-asbestos>)
  - d) Guidelines for Geologic Investigations of Naturally Occurring Asbestos in California, Special Publication 124, California Geologic Survey (<http://www.capcoa.org/Docs/nea/%5B24%5D%20CA%20Geol%20Survey%20Asbestos%20Guidelines.pdf>).
  - e) Determination of Asbestos Content of Serpentine Aggregate, Method 435", California Air Resources Board (<https://www.arb.ca.gov/toxics/asbestos/tm435/workshops/m435-asbestosguidance-appacd2017.pdf>).
  - f) Implementation Guidance Document, Air Resource Board Test Method 435, Determination of asbestos Content of Serpentine Aggregate- Field and Laboratory Practices: ARB Monitoring and Laboratory Division, Quality Management Branch, Quality Management Section (<https://www.arb.ca.gov/toxics/asbestos/tm435/guidancedocument.pdf>).
  - g) Asbestos and Other Fibers by Phase Contrast Microscopy (PCM), NIOSH Method 7400 (<https://www.cdc.gov/niosh/docs/2003-154/pdfs/7400.pdf>).
  - h) Asbestos by Transmission Electron Microscopy (TEM), NIOSH Method 7402 (<https://www.cdc.gov/niosh/docs/2003-154/pdfs/7402.pdf>).
  - i) All other applicable regulations, rules, ordinances, guidance documents and regulatory clarification letters and memos related to Naturally Occurring Asbestos, asbestos, and Asbestos-Containing Materials (ACM), and asbestos-containing waste.
- C. For lead hazards, comply with the applicable requirements of the following federal, state and local regulations:
  1. Cal/OSHA Lead in Construction Standard, 8 CCR Section 1532.1 ([https://www.dir.ca.gov/title8/1532\\_1.html](https://www.dir.ca.gov/title8/1532_1.html)), and Cal/OSHA Lead in Construction Standard (Fact Sheet) ([https://www.dir.ca.gov/dosh/dosh\\_publications/lead-fft-sheet-rev.pdf](https://www.dir.ca.gov/dosh/dosh_publications/lead-fft-sheet-rev.pdf)).
  2. Cal/EPA Regulation 22 CCR Section 66000 (<https://www.dtsc.ca.gov/LawsRegsPolicies/Title22/>).
  3. Federal Lead Standard for the Construction Industry, 29 Code of Federal Regulations (CFR) part 1926.62

4. California Department of Health Services (17 CCR Sections 35001 -35099).
  5. Title 17, California Code of Regulations, Division 1, Chapter 8 Accreditation, Certification and Work Practices in Lead Related Construction.
  6. Lead as a water pollutant:
    - a) Federal Clean Water Act (CWA), 40 CFR part 427.
    - b) California's Porter Cologne Water Quality Control Act.
  7. Federal Safe Drinking Water Act (SDWA), 40 CFR parts 141-143.
  8. Lead as a hazard to children: California's Childhood Poisoning Prevention Act, 17 CCR section 33001 et seq.
  9. Lead as a waste:
    - a) Federal Resource Conservation and Recovery Act (RCRA) of 1976, 40 CFR part 240 et seq.
    - b) California's Hazardous Waste Control Law (HWCL), 22 CCR section 66260.1 et seq.
  9. San Francisco Building Code (SFBC), Chapter 34, as required where there is disturbance to painted surfaces on the exterior of buildings or structures within the City and County of San Francisco.
  10. Society for Protective Coatings Paintings Contractors' Certification Program (SSPC/PCCP) for the QP1 and QP2 Certifications.
- D. Respiratory Protection: The Contractor shall assess potential exposures to hazardous materials and conditions and comply with Cal/OSHA Regulations included in 8 CCR Sections 1529, 1532.1, and 5144, ANSI Standard Z88.2 - "Practices for Respiratory Protection", and 29 CFR 1926.62 (f). Workers shall wear appropriate respiratory protection during lead, asbestos and any other hazards work, unless negative exposure assessment testing verifies that employee exposures are below the PEL or Action levels.
- E. For PCB work: The Contractor shall comply with Cal/EPA Regulation 22 CCR Sections 66268.110 and 66508, and 40 CFR 761.  
<https://www.epa.gov/pcbs/polychlorinated-biphenyls-pcbs-building-materials#Information-Contractors>
- F. For Universal Waste the Contractor shall comply with Cal/EPA Regulation 22 CCR Sections 66261.50 and 66273.8 (CCR Title 22, Division 4.5, Chapter 34) Examples of universal waste: batteries, fluorescent tubes (lamps), electronic devices (cell phones, computers, televisions), cathode ray tubes (CRTs), mercury wastes (thermometers and toys), and non-empty aerosol cans.
- G. 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.

## 1.6 DEFINITIONS

- A. Lead Abatement: as defined by the Department of Public Health for lead hazard work, includes any set of measures designed to reduce or eliminate lead hazards or lead-based paint, but excludes containment or cleanup. Abatement for Lead is designed to permanently reduce or eliminate lead hazards for public (non-industrial) buildings or to last more than twenty (20) years.
- B. Asbestos-Containing Material (ACM) for the purpose of Cal/OSHA compliance: Any material which contains more than one percent (>1%) asbestos by weight for the purposes of abatement, waste disposal and fiber controls specified under this Contract.
- C. Asbestos-Containing Material (ACM) for the purposes of CARB compliance under the ATCM: Any material that has an asbestos content of 0.25% or greater.
- D. Asbestos Containing Construction Materials (ACCM): Defined by Cal OSHA 8CCR§341.6 as any manufactured construction material which contains more than one tenth of one percent (0.10 %) asbestos by weight.
- E. Asbestos Regulated Area: An area established where asbestos disturbance work is conducted and any adjoining area where disturbed material, debris and waste from such asbestos work occurs or is accumulated; and a work area within which airborne concentrations of asbestos exceed, or there is reasonable possibility that may exceed the permissible exposure limit (PEL).
- F. Asbestos-Related Construction Work: Defined by Cal OSHA 8CCR§1529 as construction work that includes but is not limited to the following:
1. Demolition or salvage of structures where asbestos is present;
  2. Removal or encapsulation of materials containing asbestos;
  3. Construction, alteration, repair, maintenance, or renovation of structures, substrates, or portions thereof, that contain asbestos;
  4. Installation of products containing asbestos;
  5. Asbestos spill/emergency cleanup;
  6. Transportation, disposal, storage, containment of and housekeeping activities involving asbestos or products containing asbestos, on the site or location where construction activities are performed;
  7. Excavation and any disturbance of rock, soil, alluvium, or fill that may involve exposure to asbestos as a natural constituent that is not related to asbestos mining and milling activities;
  8. Erection of new electric transmission and distribution lines and equipment, and alteration, conversion and improvement of the existing transmission and distribution lines and equipment; and
  9. Routine facility maintenance.
- G. BAAQMD: Bay Area Air Quality Management District (Air District) is a regional agency with jurisdiction over the demolition and renovation of buildings and structures that may contain asbestos, and the manufacture of materials known to contain asbestos. BAAQMD regulations must always be followed when removing asbestos or demolishing buildings. The Air District has been delegated the authority to enforce federal asbestos

regulation. The Air District developed its own asbestos rule in 1976 that is more stringent than the federal rule.

- H. Cumulative Renovations: A series of small (less than 30.8 m [100 feet] linear, 9.4 m<sup>2</sup> [100 ft<sup>2</sup>] or 1 m<sup>3</sup> [35 ft<sup>3</sup>]) renovations or removals of RACM performed during a calendar year at a single plant or facility which, taken together, would add up to a reportable amount under the provisions of BAAQMD Regulation 11, Rule 2.
- I. Demolition: Defined by BAAQMD as wrecking, intentional burning, moving or dismantling of any load supporting structural member, or portion thereof, of a building, facility or ship. This includes, but is not limited to, any related cutting, disjoining, stripping or removal of structural elements.
- J. Deteriorated Lead-Based Paint Hazard: painted areas with any of the following characteristics:
1. More than two square feet of deteriorated lead paint on interior components with large surfaces such as walls, ceilings, floors, and doors.
  2. More than ten square feet of deteriorated lead paint on exterior components with large surfaces such as outside walls.
  3. Deteriorated lead paint on more than ten percent of the total surface area of interior or exterior components with small surface areas such as windowsills, baseboards, trim, etc.
- K. Lead Activities: Lead hazard evaluation, lead-related construction work, or any activity which disturbs lead-based paint, presumed lead-based paint, or creates a lead hazard
- L. Lead Action Level: 30 micrograms per cubic meter based on an eight-hour time-weighted average (8 hr. TWA).
- M. Lead-Based Paint (LBP): LBP is defined in Title 17, CCR Division1, Chapter 8, Section 35033 as any paint, varnish, shellac, or other surface coating that contains lead equal to or greater than 1.0 mg/cm<sup>2</sup> as measured by X-ray Fluorescence (XRF) or laboratory analysis, or 0.5 percent by weight (5,000 µg/g, 5,000 ppm, or 5,000 mg/kg) as measured by laboratory analysis.
- N. Lead-Based Paint Activities: EPA's Title IV of the Toxic Substances Control Act defines Lead-Based Paint Activities as the following, among others:
- In any public building constructed before 1978, commercial building, bridge, or other structure or superstructure:
1. Identification of lead-based paint and materials containing lead-based paint
  2. De-leading
  3. Demolition
- O. Lead-Based Paint Debris: Any component, fixture, or portion of a building coated wholly or partly with LBP. LBP debris can also be any solid material coated wholly or partly with LBP resulting from a demolition. Examples among many others include ceilings, crown molding, walls, chair rails, doors, door trim, floors, fireplaces, shelves, and radiators, jacketed telephone cables and other heating units.
- P. Lead-Based Paint Hazard: A condition in which exposure to lead from lead-contaminated dust, lead-contaminated soil, or deteriorated lead-based paint would have an adverse

effect on human health (as established by the EPA Administrator under Title IV of the Toxic Substances Control Act). Lead-Based paint hazards include for example, deteriorated lead-based paint, leaded dust levels above applicable standards, and bare leaded soil above applicable standards.

In Title 17, California Code of Regulations (CCR), Division 1, Chapter 8, Section 35037, the California Department of Public Health (CDPH) adds to this definition by stating “disturbing lead-based paint or presumed lead-based paint without containment, or any other nuisance which may result in persistent and quantifiable lead exposure.”

- Q. Lead-Based Paint Hazard Abatement: Any set of measures designed to permanently eliminate lead-based paint hazards according to standards established by the appropriate federal agencies. Abatement measures include the following activities:
1. Removal of lead-based paint and lead-contaminated dust,
  2. Permanent containment or encapsulation of lead-based paint,
  3. Replacement of lead-painted surfaces or fixtures, and
  4. Removal or covering of lead-contaminated soil.
- Removal also includes all associated preparation, cleanup, disposal, and post-abatement clearance testing activities, record keeping, and monitoring.
- R. Lead-Based Paint Hazard Control: Activities to control and eliminate lead-based paint hazards, including interim controls, abatement, and complete abatement.
- S. Lead-Contaminated Dust: Surface dust containing an area or mass concentration of lead in excess of the standard established by the EPA Administrator, pursuant to Title IV of the Toxic Substances Control Act. CDPH's threshold limits are as follows: 10 µg/ft<sup>2</sup> on interior floors, 100 µg/ft<sup>2</sup> on interior horizontal window surfaces, and 100 µg/ft<sup>2</sup> on exterior floors and exterior horizontal window surfaces. The most stringent criteria set forth by CDPH and/or the EPA will apply to the work on this project
- T. Lead-Containing Material: Any material, coating, substrate or product, which contains any measurable amount of lead, with the definition of lead being in accordance to OSHA's definition.
- U. Lead Hazard: Title 17, California Code of Regulations (CCR), Division 1, Chapter 8, sections 35000 -36100, the California Department of Public Health (CDPH) defines: lead hazard as deteriorated lead-based paint, lead contaminated dust, lead contaminated soil, disturbing lead-based paint or presumed lead based paint without containment, or any other nuisance which may result in persistent and quantifiable lead exposure.
- V. Lead Permissible Exposure Limit (PEL): 50 micrograms per cubic meter based on an eight-hour time-weighted average (8hr. TWA).
- W. Lead Related Construction Work: Any construction, alteration, painting, demolition, salvage, renovation, repair, or maintenance of any residential or public building, including preparation and cleanup that, by using or disturbing lead-containing materials or soil, may result in significant exposure of adults and children to lead.
- X. Presumed Asbestos Containing Material (PACM) is thermal system insulation and surfacing material found in buildings constructed no later than 1980. PACM can be sampled to confirm whether it is ACM or not.

- Z. Project Safety Representative (PSR): Qualified person directly responsible under the Contractor's Superintendent having the necessary training to be knowledgeable in the identification, control, and management of the hazardous materials/waste on site, and health and safety.

## 1.7 PROJECT REQUIREMENTS

- A. The Contractor shall ensure that all Project personnel, including Subcontractors' personnel, receive appropriate and required awareness training and orientation that will prevent inadvertent or unauthorized disturbance of hazardous materials that are present at the Site.
- B. In the event that hazardous/contaminated material or Naturally Occurring Asbestos (NOA) not identified on the survey report is 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 abatement work using its own forces or using an outside contractor specializing in abatement work or (b) direct the Contractor to perform all or any part of the abatement and hazardous materials removal work.
- C. If the City Representative directs the Contractor to perform the removal of the hazardous materials not identified on the survey report, the City Representative will do so by change order. The Contractor must promptly provide a properly licensed and insured subcontractor (with CSLB hazardous substance removal certification) to perform abatement work.
- D. If unforeseen hazardous/contaminated material is discovered, then all work in the affected area will stop pending further direction from the City Representative. The City Representative shall determine whether the abatement and removal process require suspension of all, none or any part of the work under this Contract.
- E. Lead Hazards: All construction work that disturbs or affects intact paint and materials containing any detectable level of lead will be performed by the Contractor or its subcontractors under the Cal/OSHA Lead in Construction Standard 8 CCR 1532.1, Federal/OSHA's Lead Standard for the Construction Industry, Title 29 Code of Federal Regulations 1926.62, as well as all applicable Federal, State, and Local regulations. OSHA Lead in Construction Standard (29 C.F.R. part 1926.62 and title 8 CCR section 1532.1) requires awareness training and compliance on the part of an employer when there is any possibility that an employee could be exposed to lead as a result of his or her activities.
- F. The Contractor is prohibited from starting hazardous material removal work without Hazardous Materials Submittals as described on Section 02 80 13 approved. The Contractor shall not conduct any sampling or analysis of suspected building materials without prior permission from the City Representative. Only qualified AHERA certified building inspectors for asbestos sampling and the California Department of Public Health (CDPH) certified Project monitors for lead assessment will be allowed to conduct the sampling.
- G. Pursuant to 29 CFR 1926.1101, the Contractor shall be deemed to exercise general supervisory authority over the work covered by the standard, even though the General Contractor is not qualified to serve as the asbestos "Competent Person," as defined by the standard. As supervisor of the entire Project, the General Contractor shall ascertain whether any subcontractor is in compliance with the standard and shall require such contractor to come into compliance with the standard when necessary. The Contractor shall provide competent supervision by a designated Project Safety Representative

- (PSR) who can identify potential hazards at the Site and oversee implementation of appropriate protective measures to comply with all Cal/OSHA requirements applicable for hazardous building materials.
- H. The Contractor is responsible for the general supervisory authority over all hazardous materials activities, both incidental and primary, for the demolition, renovation and construction work of this Contract. The Contractor shall pay all costs associated with the compliance with applicable hazardous materials regulations or requirements incurred by the Contractor or its subcontractors for this Project.
- I. The Contractor shall coordinate the activities that may have the potential to directly or indirectly impact hazardous materials. Work that may typically impact hazardous materials includes, as applicable and is not limited to:
1. Demolition.
  2. Disturbance to any paints or coatings.
  3. Torch cutting.
  4. Welding.
  5. Excavation.
  6. Dewatering.
  7. Shoring and Underpinning Work.
- J. The Contractor shall retain, and the City will not indemnify against, any liability of Contractor resulting from the activities or duties which are the responsibility of Contractor under the terms of this contract, including but not limited to, liability arising from the arrangement of transportation or disposal of any hazardous material or hazardous waste, whether on or off-site. Therefore, the City will not assume liability, present or future, incurred by the Contractor by reason of these activities.
- K. The Contractor shall not create any condition that may endanger the health and safety of City employee's and its representatives, facility staff, construction workers, site visitors, outside consultants, and the general public, including exposure to hazardous materials. If the City Representative observes such conditions, then the City Representative has the authority to suspend work until the Contractor corrects the condition as provided.
- L. The Contractor and its personnel shall have all the applicable hazard determination, exposure assessment, medical surveillance, engineering and work practice controls, respiratory protection, protective clothing and equipment, employee information and training, certifications, and monitoring program necessary to perform the Work and as required by Codes. Compliance with Codes is Incidental Work.
- M. Clean up, remediation and disposal of any hazardous building materials disturbed during this Work will be the responsibility of the Contractor. The level of engineering control and medical monitoring required should be based on the governing regulations of Cal/OSHA that are effective for the Project duration for the level and extent of hazards exposure at the site.
- N. The Contractor shall maintain all work areas within and outside the project boundaries free from environmental pollution, which would be in violation of any federal, state or local regulations. Conduct construction activities in strict compliance in this Section and other related Sections.

- O. Minimize migration and prevent contamination or further contamination of any material or area by hazardous or contaminated material, waste, dust, fumes or debris. The Contractor shall schedule and coordinate construction activities with the City to time limitations indicated in the Contract Documents, allowing work shifts for asbestos, lead-based paint, PCB ballast, PCB Building Materials, and other abatement as indicated.
- P. As per Health and Safety requirements specified under Section 01 35 45, the Contractor is responsible for monitoring its employees and Sub-Contractors employees for exposure to hazardous materials, either used in construction or otherwise uncovered or intrinsically present at the Site.
- Q. If hazardous materials are disturbed or uncontrolled asbestos or lead based paint release occurs, notify the City Representative immediately. The City retains the right to clean up the spill or to remove hazardous materials using other Contractors. The Contractor shall not be allowed to resume work in the contaminated area until directed by the City Representative. The City will not compensate delays and cleanup costs incurred due to the result of Contractor's negligence.
- R. If removal of asbestos pipe insulation, treated wood, metal structures containing hazardous coatings or other building materials identified as hazardous require accessing areas or where torching, cutting and welding will be needed for, notify the City Representative immediately. The Contractor shall not remove hazardous materials unless properly trained and certified for the handling of the hazardous materials encountered. (For example: workers trained and certified for Class I Asbestos Work with accordance to Title 8 CCR Section 1529).

#### 1.8 WASTE HANDLING AND CHARACTERIZATION

- A. The Contractor shall submit to the City Representative a Waste Management Plan (WMP) as specified under Section 02 80 13 Building Related Hazardous Materials Remediation.
- B. At its cost, the Contractor shall characterize and profile the waste to ensure proper handling, transportation and disposal. The Contractor shall be responsible for the handling, transportation and disposal of the waste.
- C. The Contractor shall segregate all waste streams. The Contractor shall accurately identify waste in accordance with all applicable Codes. Individual waste containers must be labeled in accordance with Cal/OSHA labeling requirements.
- D. The Contractor shall obtain and pay for all sampling and profiling analyses required for waste disposal. California CDPH-accredited laboratories shall perform analyses. Submit results to the City prior to scheduling the waste off haul.
- E. All waste shall remain stored on Site in a secured and designated waste storage area until results of waste characterization tests are available. Due to the time required to perform some analytical tests, this may require storage for up to 10 Working Days or more.
- F. All contaminated and non-friable waste shall be hauled off the site using a bill of lading approved by the City, to an approved treatment/disposal facility, in accordance with all applicable Federal, State and local regulations.
- G. The Contractor shall provide and prepare a bill of lading and the non-hazardous waste manifest form for each shipment of material from the site. The bill of lading shall describe the contents of each truck carrying materials to the waste disposal site, including the

name, address and phone number of the ultimate disposal site, the weight or yardage of the waste materials (as applicable), original location of the material, and an emergency phone number. The hauler shall sign and date the bill of lading indicating that he/she has accepted the load described in the manifest on that day. The City will sign the bill of lading before off haul and retain the Generator's copy. Copies of bills of lading accepted by the treatment/disposal sites shall be provided to the City Representative. The Contractor shall follow manifesting procedures for the transportation and disposal of Class II material or lesser as specified this Section.

- H. The Contractor shall provide and prepare a hazardous waste manifest for each shipment of hazardous waste determined from the site. The manifest shall describe the contents of each truck carrying materials to the waste disposal site, including the name, address, and phone number of the ultimate disposal site, the weight or yardage of the waste materials (as applicable), original location of the material, and an emergency phone number. The hauler shall sign and date the manifest indicating that it has accepted the load described in the manifest on that day. The City will sign the manifest before off haul and retain the Generator's copy. Copies of manifests accepted by the treatment/disposal sites shall be provided to the City Representative. The Contractor shall follow hazardous waste manifesting procedures for the transportation and disposal of Class I hazardous waste.
- I. The City is the generator, as defined in 22 CCR Section 66260.10 and 40 CFR Part 261, of any hazardous waste, and will be responsible for that hazardous waste to the extent required by law. Only a City employee (and not the Contractor) will sign the waste manifests.
- J. The Contractor shall package, label, transport, and dispose of hazardous waste in accordance with applicable Cal/EPA regulations under Title 22 CCR and the California Health and Safety Code, including completion of the Uniform Hazardous Waste Manifest (UHW). Information on the UHW must include the quantity of waste in cubic yards and the name and address of the BAAQMD to comply with EPA Waste Shipment Record requirements. The Contractor shall follow the waste disposal; and manifesting requirements as specified this Section.
- K. The Contractor shall provide and prepare the Bill of Lading, the non-hazardous waste manifest form, and the hazardous waste manifests forms by typing in a neat, correct, and legible fashion for signing by the generator. The Contractor shall notify the City Representative at least 48 hours in advance of the time at which the manifest is ready to be signed.
- L. All lead-containing waste or debris, including, but not limited to, painted building components, ceramic tile glazes, jacketed telephone cables, respirator cartridges, disposable suits, and other associated debris generated during this work, shall be packaged for disposal as hazardous waste until waste characterization has been completed and analytical results are available. Waste shall be segregated into distinct waste streams according to the waste categories suggested in the *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*, (a.k.a. "the HUD Guidelines"), dated June 1995 (Revised July 2012), which include the following:
  - 1. Category I: Low Lead Waste – typically non-hazardous construction materials, filtered wash water, cleaned plastic sheeting, and other items that test as non-hazardous;
  - 2. Category II: Architectural components such as painted finished items like siding, doors, windows, trim, etc. which demonstrate intact or stabilized surface coatings;

3. Category III: Concentrated Lead Waste - typically hazardous materials such as paint sludge, paint chips vacuum debris, vacuum filters, and any waste testing hazardous; and
  4. Category IV: Other lead-containing waste requiring characterization testing.
- M. Disposal of intact lead-coated architectural or structural elements may occur as non-hazardous waste in accordance with Cal/EPA's and the Department of Toxic Substance Control's requirements.
- N. Waste characterization for lead hazard content shall be performed in accordance with 22 CCR §66262, ET. seq., including using one or more of the following testing procedures, as required, and shall be manifested and properly disposed:
1. Total Threshold Limit Concentration (TTLC)
  2. Waste Extraction Test (WET)
  3. Toxicity Characteristic Leaching Procedure (TCLP)
  4. SW 846
- O. Miscellaneous Hazardous Waste Disposal
1. Disposing of PCB-containing ballasts in landfills is prohibited by Federal and state law. Drums containing PCB ballasts and other PCB-contaminated materials must be disposed of, or otherwise treated, at an EPA-approved facility.
  2. Ballasts with "Non-PCB" fluids, must be disposed of at a legally permitted disposal/recycling facility as assumed DEHP-containing ballasts.
  3. Fluorescent lamps must be stored in packaging or containers that are designed to minimize breakage/damage during both storage and shipping. Containers shall be labeled as "Universal Waste – Spent Fluorescent Lamps" or "Universal Waste," as appropriate, and each container shall be marked with the date on which storage of said waste began.
  4. The Contractor shall use a bill of lading or non-hazardous waste form that contains the following information when shipping fluorescent lamps to a recycler: name and address of generator, transporter, and recycler; number of lamps shipped; date of shipment and date of receipt by recycler; and obtain a dated signature of the receiving recycler. A copy of the bill of lading shall be submitted to the City Representative at abatement completion.
- P. Universal Waste Disposal
1. The following universal wastes are subject to specific disposal procedures under 22 CCR 66273.10 through 66273.21:
    - a) Batteries, as described in section 66273.2, subsection (a);
    - b) Electronic devices, as described in section 66273.3, subsection (a);
    - c) Mercury-containing equipment, as described in section 66273.4, subsection (a);
    - d) Lamps, as described in section 66273.5, subsection (a) (including, but not limited to, M003 wastes);

- e) Cathode ray tubes, as described in section 66273.6, subsection (a);
  - f) Cathode ray tube glass, as described in section 66273.7, subsection (a); and
  - g) Aerosol cans, as specified in Health and Safety Code section 25201.16.
- 2. Universal Wastes shall be segregated and shipped for disposal following DOT shipping requirements in 49 CFR 171 through 180.
  - 3. Universal Wastes can be shipped using a bill of lading to a Universal Waste Handler licensed under the requirements of 22 CCR 66273.

Q. Asbestos Waste Disposal

- 1. A waste that is friable and contains asbestos over 1 percent is regulated as a California (Non-RCRA) hazardous waste under 22 CCR 66261.24. The Contractor shall characterize and profile asbestos-containing waste to determine its correct waste disposal classification.
- 2. The following requirements apply to transportation and disposal of asbestos hazardous waste:
  - a) Packaging in sealed, leak-tight, non-returnable containers from which the fibers cannot escape following 40 CFR 61.150 or, in order to prevent breakage of larger items, in bulk containers lined with plastic sheeting and covered it with a tarp following 22 CCR 66263.23.
  - b) Labeling of the asbestos hazardous wastes will follow 29 C.F.R. 1910.1001, 29 CFR 1926.1101, and 8 CCR 5208.
  - c) Asbestos hazardous wastes shall be shipped using a registered hazardous waste hauler to landfills permitted to accept asbestos wastes.
  - d) Contractor shall provide, prepare and submit to the City Representative a Uniform Hazardous Waste Manifest Form for asbestos hazardous waste shipments.

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

- A. For the profiling of each waste stream, the Contractor shall fill out the waste acceptance profile form, set up an account, and obtain the waste profile number from the landfill provider. The City Representative will assist the Contractor in filling out the waste acceptance form. The City is the Generator. Only a City employee (and not the Contractor) will sign the waste acceptance profile form.
- B. For transportation and disposal of the waste, the Contractor shall provide and prepare for the City Representative's signature, a Non-Hazardous Waste Manifest form obtained from the landfill provider. The Non-Hazardous Waste Manifest form shall be completed for each vehicle carrying excavated material classified as California Class II non-RCRA 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. Name, address and phone number of the transport company.
  4. The Name, address, and telephone number of the receiving facility i.e., disposal facility.
- C. 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.
- D. Within 30 days of the off haul, the Contractor shall submit to the City Representative with copies of each completed Non-Hazardous Waste Manifest Form (with the landfills signature).
- E. The Contractor shall furnish all labor, materials, equipment, and incidentals required to transport those materials identified as non-hazardous waste for the purpose of disposal.
- F. The Contractor shall prepare and submit waste characterization and profiling information documenting the non-hazardous nature of this category of waste
- G. By the end of the workday, the Contractor shall provide and prepare for the City Representative, bills of lading for each vehicle, for all excavated material loads classified as non-hazardous waste (California Class II or lesser), for the purpose of off-site transportation and disposal purposes. The bill of lading shall be designed to contain the following information:
1. Name, address and phone number of the transport company
  2. Name of the driver, a dated signature from the driver, vehicle license number, trip number.
  3. Weight as recorded at the landfill of waste excavated material.
  4. Date of transport.
  5. Name, address and phone number of the receiving facility i.e., disposal facility. A dated signature from the receiving facility.
  6. Name, address and phone number of the generator, along with the Contract No. and Project name.
- H. A copy of each bill of lading and a certified weight ticket is an indication of the weight of the shipment, which has been received at the disposal facility. The Contractor shall furnish such information to the City Representative, so payment can be made as per specification.
- I. The transporter shall sign and date the bill of lading indicating that they accepted the load described in the bill of lading on that day for that particular trip.
- 1.10 HAZARDOUS WASTE MANIFESTING PROCEDURES FOR CLASS I MATERIAL
- A. 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. Packing, labeling, transporting, and disposing of hazardous waste shall comply with regulations under 22 CCR, including providing and completing the Uniform Hazardous Waste Manifest Form.
- D. Follow applicable regulations under 40 CFR Part 263, and 22 CCR Section 66263, "Standards Applicable to Transporters of Hazardous Waste," including licensing, manifest system, record keeping, and discharges.
- E. 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).
- F. Preparation and handling of waste manifests
1. The Contractor shall provide and prepare the waste manifests and landfill profiles 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.
    - 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 DOT Certified City employee (and not the Contractor) will sign the manifest for the "generator" of the waste.
  2. The Contractor shall notify the City Representative 72 hours prior to off-haul of all excavated material. Off-haul shall occur between the hours of 8:00 a.m. and 4:30 p.m. Monday through Friday (excluding City holidays). 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.
  3. The City Representative will sign and keep the Generator's copy of the manifest and give the remaining copies to the licensed transporter.
  4. The licensed transporter shall carry the hazardous waste manifest with each truckload using the traffic control approved routes for off haul.
  5. 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.

6. 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.

G. Mandatory City Information for the Manifest

1. Manifest Item 1: Generator's US EPA ID Number for Project:

TBD

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

3. Manifest Item 5:

Generator's Name and Mailing Address:

City and County of San Francisco  
Department of Public Health/BEHM  
1390 Market St., Suite 210  
San Francisco, CA. 94102

*Generator's Site Address:*

City and County of San Francisco

To be provided by the City Representative

4. Manifest Item 14: The following information is mandatory:
  - i. Contract JO # & Name of Project (ADD)
  - ii. Project Manager: (ADD) or to be provided by City Representative
  - iii. Project Manager Phone Number #: (ADD) or to be provided by City Representative

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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## SECTION 01 35 49

## MINIMUM ENVIRONMENTAL PROCEDURES

## PART 1 - GENERAL

## 1.1 SUMMARY

- A. This Section includes minimum provisions for compliance with City, state, and federal laws and regulations for environmental protection, and notes to which Standard Construction Measure (SCM) the section refers.
1. Geotechnical Considerations (SCM-1): For projects involving excavation in the public right-of-way, Contractor is directed to Article 2.4 of the San Francisco Public Works Code, "Excavation in the Public Right-of-Way" and San Francisco Public Works Order No. 187,005, "Regulations for Excavating and Restoring Streets in San Francisco." It is unlawful for any person to make or to cause or permit to be made any excavation in any public right-of-way that is under the jurisdiction of the Public Works without first obtaining from Public Works a permit authorizing such excavation.
  2. Air Quality (SCM-2): For execution, see 3.1 of this section.
  3. Water Quality (SCM-3). For execution, see 3.2 of this section.
  4. Traffic (SCM-4): For execution, see 3.3 of this section.
  5. Noise (SCM-5): For execution, see 3.4 of this section.
  6. Hazardous Materials (SCM-6)
    - (a) Refer to applicable Divisions 01 and 02 Hazardous Materials-related specifications.
  7. Bird Protection and Bat (SCM-7): For execution, see 3.5 of this section.
  8. Tree Conservation (SCM-7): For execution, see 3.6 of this section.
  9. Environmentally Sensitive Area (SCM 7, SCM-9): For execution, see 3.7 of this section.
  10. Construction Staging (SCM-8): For execution, see 3.8 of this section.
  11. Archaeological and Paleontological Discovery (SCM-9): For execution, see 3.9 of this section.
- B. This section is to be understood as follows:
1. **1.4(B) Regulatory Requirements**, supplemented by the **1.2 References** section, list the state, federal, and City requirements addressed by this section.
  2. **1.6 Project Conditions** contains determinations as to what factors determining means of environmental compliance with state, federal, and City requirements are present for the project.
  3. **3 Execution** provides specific execution requirements for compliance, some of which are conditional and triggered by the conditions listed in **1.6 Project Conditions**.
  4. Submittals triggered by conditional execution requirements are noted as such in **1.4 Submittals**.

## C. Related Sections:

1. Section 00 41 00 Bid Form
2. Section 01 35 44 Hazardous Building Materials Scope of Work
3. Section 02 80 13 Hazardous Building Materials Remediation

## 1.2 REFERENCES

## A. Refer to the following references:

1. American National Standards Institute (ANSI). 2008. *American National Standard for tree care operations – Tree Shrub and Other Woody Plant Maintenance – Standard Practices (A300 Part 1): Pruning*. New York, NY
2. American National Standards Institute (ANSI). 2006. *Safety Requirements for arboricultural Operations (Z133)*. New York, NY
3. Asbestos Airborne Toxic Control Measure For Construction, Grading, Quarrying, And Surface Mining Operations (California Code Of Regulations Title 17, Section 93105)
4. Bald and Golden Eagle Protection Act, 16 USC § 668
5. Bay Area Air Quality Management District, “Current Rules”. Available at <http://www.baaqmd.gov/rules-and-compliance/current-rules>
6. Bay Area Air Quality Management District, *California Environmental Quality Act Air Quality Guidelines*. May 2017. Available at <http://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa>
7. Berglund, B. *Guidelines for Community Noise - A complete, authoritative guide on the effects of noise pollution on health*. World Health Organization, Geneva, 1999
8. California Code of Regulations, Title 8 Sec. 1592
9. California Department of Food and Agriculture, 2014. *Plant Quarantine Manual*, 3700. Oak Mortality Disease Control.
10. California Department of Transportation, *Storm Water Quality Handbooks Construction site Best Management Practices Manual*. Available at <http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm>
11. California Fish and Game Code §§ 3503, 3513, and 3800
12. California State Water Resources Control Board, Construction General Permit Order
13. California Stormwater Quality Association, *Construction Best Management Practice Online Handbook*. Available at <https://www.casqa.org/resources/bmp-handbooks>
14. City and County of San Francisco Municipal Transportation Agency, 2012. *Regulations for Working in San Francisco Streets*, 8<sup>th</sup> ed.
15. City of San Francisco, June 27, 2006. “Pruning Standards for Trees”. Available at [http://sfdpw.org/sites/default/files/FileCenter/Documents/234-SF\\_Pruning\\_Std\\_6.27approved.pdf](http://sfdpw.org/sites/default/files/FileCenter/Documents/234-SF_Pruning_Std_6.27approved.pdf)
16. Federal Migratory Bird Treaty Act (16 USC § 703–711, 50 CFR 10)

17. Geological Features & Special Permits (California Public Resources Code Section 4307 and Section 4309)
18. National Historic Preservation Act of 1966, (16 U.S.C. 470)
19. Native American Historic Resource Protection Act; Archaeological, Paleontological, and Historical sites; Native American Historical, Cultural, and Sacred sites (California Public Resources Code Section 5097-5097.993)
20. Nuru, M. "Standard Construction Measures for all Public Works Projects". San Francisco Public Works, July 1, 2017
21. San Francisco Department of Public Health, "Monitoring Guidelines for SFHC Article 22B"
22. San Francisco Industrial Waste Ordinance #19-92
23. San Francisco Planning Department, "Consultant & Sponsor Resources". <http://sf-planning.org/consultant-sponsor-resources>
24. San Francisco Police Code, Article 29, Ordinance #274-72 ("Noise Ordinance")
25. San Francisco Public Health Code, Article 22B
26. San Francisco Public Utilities Commission, "Re: Application of the Stormwater Design Guidelines Requirements to the Public Right-of-Way", Rev. September 2013. Available at <http://www.sfwater.org/modules/showdocument.aspx?documentid=4228>.
27. San Francisco Public Utilities Commission, *Construction Best Management Practices Handbook*. Available at <http://sfwater.org/index.aspx?page=235>
28. San Francisco Public Works Code, Article 4.1 Sewer Use Ordinance
29. San Francisco Public Works Code, Article 4.2 Sewer System Management Ordinance
30. San Francisco Public Works Code, Ordinance No. 260-13, Construction site Runoff Ordinance
31. San Francisco Public Works Dust Control Order (DPW Order No. 171,378)
32. San Francisco Public Works Order No. 158,170, "Wastewater discharges into the City sewerage system"
33. San Francisco Public Works Order No. 178.940, "Regulations for Excavating and Restoring Streets in San Francisco"

### 1.3 DEFINITIONS

- A. For the purposes of this Section, the following definitions apply:
1. Air Pollutant Exposure Zone: A zone having a substantially greater than average concentration of air pollutants as defined in Health Code Section 3804.
  2. "ALERT" sheet: Single-page flyer produced by the San Francisco Planning Department and provided to the contractor by the City Representative, containing a notification that the project site may be located in an archaeologically sensitive area.
  3. Alternative Fuels: Any transportation fuel that is less polluting than gasoline or petroleum diesel fuel, as determined by the California Air Resource Board and that is shown to have lower lifecycle carbon emissions than gasoline or petroleum diesel. Alternative Fuels may include but are not limited to natural

- gas; propane; biofuels from low carbon, sustainable and preferably local sources; hydrogen produced from low carbon and/or renewable sources; and electricity.
4. Alternative Sources of Power: Utility-based electric power or other power sources other than diesel engines.
  5. ARB: The California Air Resources Board.
  6. Archaeological resources: Remains of past human activity, including historic and prehistoric material such as tools and tool fragments, hearth and food remains, structural remains, and human remains.
  7. Bridge: A structure that carries a utility or railroad or vehicle, pedestrian, or other traffic over, under, or around obstructions or waterways.
  8. Building: A building as defined in the San Francisco Planning Code Section 102, "Definitions".
  9. CDFW: The California Department of Fish and Wildlife.
  10. Clean Construction: The performance of all work required to be performed under a Public Works contract meeting the requirements in Sections 2504, 2505 and 2506 of the Environment Code, as applicable.
  11. Construction Activities means the performance of all work involved in or required for Construction, except for the issuance or obtaining of a site permit for a project.
  12. Construction means building, demolition, excavation, grading or foundation work, whether or not the work requires a City permit.
  13. Construction Phase: A particular construction activity over a certain period of time. Construction phases may include, but are not limited to, demolition, site preparation, grading, building construction, architectural coatings, and paving. Multiple Construction Phases of a single project may take place at the same time.
  14. DPH: The San Francisco Department of Public Health.
  15. Environmentally sensitive area: Area within or near construction limits where access is prohibited or limited in order to protect environmental resources.
  16. Equipment Type: A category of off-road equipment. Types of off-road equipment include bore/drill rigs, cranes, crawler tractors, excavators, graders, off-highway tractors, off-highway trucks, other construction equipment, pavers, paving equipment, rollers, rough terrain forklifts, rubber-tired dozers, rubber-tired loaders, scrapers, skid steer loaders, surfacing equipment, tractors/loaders/backhoes, and trenchers.
  17. Feasible: When applied to an action required of the Contractor, that action, in the opinion of the City Representative, can be accomplished without resorting to extraordinary means and measures.
  18. Inactive nests: Nests that do not contain eggs, chicks, or raptors displaying reproductive behavior.
  19. Land disturbance: Any movement of earth or a change in the existing natural soil cover or existing topography that may result in soil erosion from wind, or water, and the moving of sediments into or upon waters, lands or public rights-of-way within the City of County of San Francisco, including, but not limited to building demolition, clearing, grading, grubbing, filling, stockpiling, excavating and transporting over land.

20. Major Construction Project: A public work to be performed within the geographic limits of the City that uses off-road equipment and that is estimated to require 20 or more cumulative days of work, including non-consecutive days, to complete.
21. Most Effective Verified Diesel Emission Control Strategy (VDECS): a device, system or strategy that is verified, pursuant to Division 3, Chapter 14, of Title 13 of the California Code of Regulations, to achieve the highest level of pollution control from an off-road vehicle.
22. Nesting Season: The City anticipates nesting or attempted nesting by migratory and non-game birds from February 15 to August 31.
23. Off-Road Engine: A non-road engine as defined in Title 40 of the Code of Federal Regulations, Section 89.2.
24. Off-Road Equipment: Equipment with an off-road engine having greater than 25 horsepower and operating for more than 20 total hours over the entire duration of Construction Activities.
25. On-Road Equipment: A heavy-duty vehicle as defined in Title 40 of the Code of Federal Regulations, Section 86.1803-01.
26. Paleontological resources: Fossils and the deposits in which they are found. Fossils are evidence of ancient life preserved in sediments and rock. Examples of paleontological resources are the remains of (1) animals, (2) animal tracks, (3) plants, and (4) other organisms. Archaeological resources are not paleontological resources. Fossils found within an archaeological resource are generally considered archaeological not paleontological resources.
27. Plant species that may harbor Phytophthora: The City considers host species to include: Coast Live Oak (*Quercus agrifolia*), Canyon Live Oak (*Quercus chrysolepis*), California Black Oak (*Quercus kelloggii*), Shreve's Oak (*Quercus parvula* var. *shrevei*), Tanoak (*Notholithocarpus densiflorus*), California bay laurel (*Umbellularia californica*), Rhododendron (*Rhododendron* species), and Camellia (*Camellia* species).
28. Portable Diesel Engine: A diesel engine that is portable as defined in 71 California Code of Regulations, Section 93116.2(bb).
29. Rain event: A rain event is a forecast for the project area by the National Weather Service of a 50 percent chance of occurrence within the following 72 hours of an amount of precipitation of 0.50 inch or greater.
30. Rainy season: Refer to General Conditions, Section 00 72 00 of the Project Manual for the dates of the rainy season.
31. Sensitive receptor (air quality): Means residence, school, childcare center, hospital or other health-care facility or group living quarters.
32. Sensitive receptor (noise): Any environment listed in *Guidelines for Community Noise - A complete, authoritative guide on the effects of noise pollution on health* (World Health Organization, Geneva, 1999). Table 4.1, for which the recommended noise levels are low, as low as possible, or a maximum LA<sub>eq</sub>[dB] <70. These include:
  - (a) Outdoor living areas
  - (b) Dwellings, indoors
  - (c) Inside bedrooms
  - (d) Outside bedrooms (window open)
  - (e) School classrooms and pre-schools, indoors
  - (f) Pre-school bedrooms, indoors
  - (g) School, playground outdoor
  - (h) Hospital, ward rooms, indoors

- (i) Hospitals, treatment rooms, indoors
  - (j) Outdoors in parkland and conservation areas
33. Sensitive Use: A category of building use identified as a Sensitive Use in Health Code Section 3804.
34. Soil: Native fill or introduced earthen fill. It does not include materials that were previously introduced as part of roadway pavement section (including asphalt concrete wearing surface, roadway base, and subbase).
35. Standard Construction Measures (SCMs): The City has established Standard Construction Measures that are contained in the project's Categorical Exemption Determination. As applicable, Contractor-related measures are included in this section, or their location is indicated in 1.1(B) of this section.
36. Take: Legal definition regarding harm to protected species as defined in 16 USC § 1532 and California Fish & Game Code § 86.
37. Tier 2 Off-Road Emission Standards: The Tier 2 new engine emission standards in Title 13, California Code of Regulations, Section 2423(b)(1)(A) and/or Title 40, Code of Federal Regulations, Part 89.112(a).
38. VDECS: A verified diesel emission control strategy, designed primarily for the reduction of diesel particulate matter emissions, which has been verified by ARB pursuant to Verification Procedures, Warranty and In-Use Strategies to Control Emissions from Diesel Engines, Title 13, California Code of Regulations, Sections 2700-2710. VDECS can be verified to achieve Level 1 diesel particulate matter reductions (at least 25 percent), Level 2 diesel particulate matter reductions (at least 50 percent), or Level 3 diesel particulate matter reductions (at least 85 percent).
39. Visible dust: Dust comprising visible emissions as defined in Bay Area Air Quality Management Board Regulation 6 – Particulate Matter.

#### 1.4 SUBMITTALS

- A. Contractor is directed to 1.6 PROJECT CONDITIONS and PART 3 EXECUTION of this section for which of the following submittals are required.
- B. Where required by 1.6(B) and 3.1(C) of this section, Contractor shall submit Contractor's initial Dust Control Plan no less than 28 days prior to mobilization. Dust control plan shall conform to the following:
- 1. The site-specific dust control plan shall contain mapping identifying locations of sensitive receptors.
  - 2. The site-specific dust control plan shall contain site-specific dust monitoring and control measures that will apply to the project. These site-specific measures may include the following or equivalent measures, which accomplish the goal of minimizing visible dust:
    - (a) Wetting down areas around soil improvement operations, visibly dry disturbed soil surface areas, and visibly dry disturbed unpaved driveways at least three times per shift per day.
    - (b) Analysis of the wind direction.
    - (c) Placement of upwind and downwind particulate dust monitors.
    - (d) Recordkeeping for particulate monitoring results.
    - (e) Hiring of an independent third party to conduct inspections for visible dust and keeping records of those inspections.
    - (f) Requirements for when dust generating operations have to be shut down due to dust crossing the property boundary or if dust is contained within the property boundary but not controlled after a specified number of minutes.

- (g) Establishing a hotline for surrounding community members to call and report visible dust problems so that the Applicant can promptly fix those problem; posting signs around the site with the hotline number and making sure that the number is given to adjacent residents, schools and businesses.
  - (h) Limiting the area subject to excavation, grading, and other demolition or construction activities at any one time.
  - (i) Minimizing the amount of excavated material or waste materials stored at the site.
  - (j) Installing dust curtains, plastic tarps or windbreaks, or planting tree windbreaks on the property line on windward and down windward sides of construction areas, as necessary.
  - (k) Paving, applying water three times daily, or applying non-toxic soil stabilizers on all unpaved access roads, parking areas and staging areas at the construction site. Reclaimed water must be used if required by Section 1100 et seq. of the San Francisco Public Works Code, Article 22. If not required, reclaimed water should be used whenever possible.
  - (l) Establishing speed limits so that vehicles entering or exiting construction areas shall travel at a speed that minimizes dust emissions. This speed shall be no more than the speed specified in paragraph 3.1B.
  - (m) Installing wheel washers to clean all trucks and equipment leaving the construction site. If wheel washers cannot be installed, tires or tracks and spoil trucks shall be brushed off before they reenter City streets to minimize deposition of dust-causing materials.
  - (n) Terminating excavation, grading, and other construction activities when winds speeds exceed 25 miles per hour.
  - (o) Hydroseeding inactive construction areas, including previously graded areas inactive for at least 10 calendar days, or applying non-toxic soil stabilizers.
  - (p) Sweeping of surrounding streets during demolition, excavation and construction at least once per day to reduce particulate emissions.
- C. Where required by 1.6(A) and 3.1(E) of this section, Contractor will submit Construction Emissions Minimization Plan submittals:
- 1. Contractor shall submit Contractor's initial Construction Emissions Minimization Plan no less than 28 days prior to mobilization.
  - 2. Contractor shall submit an updated Construction Emissions Minimization Plan on a quarterly basis and submit each quarterly report within seven business days of the end of each quarter.
  - 3. Contractor shall submit a final Construction Emissions Minimization Plan report summarizing construction activities within two weeks of achieving Substantial Completion.
  - 4. Waiver Request: Contractor shall submit a waiver request to the DPH Head no less than two weeks prior to the planned use of a specific piece of off-road equipment.
  - 5. The Emissions Plan shall include estimates of the construction timeline by phase, with a description of each piece of off-road equipment required for each Construction Phase.
    - (a) The description may include, but is not limited to equipment type, equipment manufacturer, equipment identification number, engine model year, engine certification (Tier rating), horsepower, engine serial number, and expected fuel usage and hours of operation.
    - (b) For the VDECS installed, the description may include, but is not limited to technology type, serial number, make, model, manufacturer, ARB verification

- number level, and installation date and hour meter reading on installation date.
- (c) For off-road equipment using alternative fuels, the description shall also specify the type of alternative fuel.
  - (d) Contractor may use the Clean Construction Equipment Inventory Template to satisfy the Emissions Plan requirements. Refer to the following link for that template: <https://www.sfdph.org/dph/EH/Air/CleanConstruction.asp>
- 6. Submittal of initial, quarterly, and final Construction Emissions Minimization Plans is a prerequisite to payment.
  - 7. The Contractor agrees to comply fully with the Emissions Plan and acknowledges that a significant violation of the Emissions Plan shall constitute a material breach of the Agreement. Contractor must submit a signed Clean Construction Emissions Plan Certification Statement to the City Representative. Contractor shall submit this statement with its Construction Emissions Minimization Plan. Refer to the following link for the Emissions Plan Certification Statement Template: <https://www.sfdph.org/dph/EH/Air/CleanConstruction.asp>
  - 8. After City review and approval, the Contractor shall make the Emissions Plan available to the public for review onsite during working hours.
    - (a) The Contractor shall post at the construction site a legible and visible sign summarizing the Emissions Plan. Refer to the following link for the Clean Construction Sign Template: <https://www.sfdph.org/dph/EH/Air/CleanConstruction.asp>
    - (b) The sign shall also state that the public may ask to inspect the Emissions Plan for the project at any time during working hours and shall explain how to request to inspect the Emissions Plan.
    - (c) The Contractor shall post at least one copy of the sign in a visible location on each side of the construction site facing a public right-of-way.
  - 9. Reporting:
    - (a) After Construction Activities begin, the Contractor shall update the Emissions Plan on a quarterly basis documenting changes from the original plan and demonstrating compliance with the Emissions Plan. The report shall be submitted to the City Representative quarterly and a copy shall also be maintained at the construction site.
    - (b) Prior to receiving a Notice of Final Completion, or within six months of completion of Construction Activities if a final certificate of acceptance is not required, the Contractor shall submit to the City Representative a final report summarizing Construction Activities, including the start and end dates and duration of each Construction Phase, and the specific information required in the Emissions Plan.
- D. Where required by 1.6(C), 1.6(D), and/or 1.6(E), and 3.2 of this section, contractor shall submit Construction Erosion Control Submittals:
- 1. Contractor must submit documentation of the approval of the Erosion and Sediment Control Plan (ESCP) and/or Stormwater Pollution Prevention Plan (SWPPP) by the San Francisco Public Utilities Commission and/or the Regional Water Quality Control Board to the City Representative before the beginning of construction.
  - 2. For project work within the jurisdiction of the Port of San Francisco (Port), contractor shall provide the City Representative before the beginning of construction with the Port's written assent that the Port's construction-stormwater requirements have been met.

3. Contractor shall provide written and schematic details to the satisfaction of the City Representative of site-specific implementation of the Best Management Practices (BMPs) of the ESCP or SWPPP to be applied before the beginning of construction.
  - (a) Descriptions of BMPs and their implementation may be found at:
    - (i) SFPUC's Construction Best Management Practices Handbook, available for download at: <http://sfwater.org/>
    - (ii) California Stormwater Quality Association's Construction Best Management Practice Handbook, available for download at: <https://www.casqa.org/>
    - (iii) Caltrans Storm Water Quality Handbooks Construction site Best Management Practices Manual available for download at: <http://www.dot.ca.gov/hq/construc/stormwater>
- E. Qualification Data: For firms and persons specified in subsection 1.5 "Quality Assurance" of this Section to demonstrate their capabilities and experience.
- F. Where required by 3.6(D) of this section, Contractor shall provide City Representative with documentation of disposal of plant materials potentially harboring the *Phytophthora ramorum* pathogen.
- G. Written and/or photographic documentation of methods for avoidance of Environmentally Sensitive Areas, where Environmentally Sensitive Areas are shown on project plans.
- H. The contractor shall submit the "ALERT" sheet affidavit where required by 1.6(G) and 3.9(B) (2) of this section within five business days of the start of construction activities.
- I. The contractor shall provide to the City Representative documentation of an approved SFPUC sewer-discharge permit in advance of any discharge of runoff and dewatering into the City's combined sewer system.
- J. Where required by 1.6(I) and 3.1(B)(11)(b) of this section, the contractor shall provide a copy of written notice, accompanied by proof of submittal, provided to the Bay Area Air Quality Management District in accordance with the requirement of the "Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations," in advance of roadway construction and maintenance activities in areas soils containing naturally occurring asbestos. The contractor shall use the "Notification Form for Road Construction and Maintenance Operations" provided at BAAQMD's website at <http://www.baaqmd.gov/permits/asbestos/naturally-occurring-asbestos>.
- K. Contractor shall pay all costs associated with the obtaining of and compliance with any required permits in this subsection 1.4.

## 1.5 QUALITY ASSURANCE

- A. Qualifications
  1. Qualified Acoustical Consultant: A Board Certified Institute of Noise Control Engineering (INCE) member or other qualified consultant or engineer approved by the City Representative.
  2. Qualified Arborist: The Qualified Arborist is one provided by Contractor who possesses a professional certification from the International Society of Arboriculture, and/or possesses a valid C-27 and/or a C-61/D-49 license in the State of California.

3. Specialty Environmental Monitor – archaeologist: One who in the determination of the City representative is qualified to monitor land-disturbing activities for effects to buried archaeological resources.
4. Qualified Biologist: The Qualified Biologist is one provided by Contractor whose activities must be approved by a state or federal agency as provided in applicable permit, license, agreement, certification, or any combination of these. In the event that none of these apply, the biologist must possess at a minimum a bachelor's degree in Wildlife Biology or a closely related discipline, as approved by the City Representative.
5. Qualified Historic Architect or Historic Preservation Professional: Any consultant within the "Historic Resource Consultant Pool" as established by the San Francisco Planning Department.
6. Qualified SWPPP Practitioner (QSP): Individual who is authorized by the State Water Resources Control Board (SWRCB) to develop and revise Stormwater Pollution Prevention Plans.

B. Regulatory Requirements

1. All work shall comply with the following:
  - (a) Bald and Golden Eagle Protection Act, 16 USC § 668.
  - (b) Bay Area Air Quality Management District (BAAQMD), Current Rules.
  - (c) BAAQMD Regulation 6-305, Particulate Matter and Visible Emissions, (<http://www.baaqmd.gov/regs/rq0600.pdf>)
  - (d) California Fish and Game Code §§ 3503, 3513, and 3800
  - (e) California State Water Resources Control Board, Construction General Permit Order
  - (f) City and County of San Francisco Municipal Transportation Agency, *Regulations for Working in San Francisco Streets*, 8<sup>th</sup> ed., 2012.
  - (g) Federal Migratory Bird Treaty Act (16 USC § 703–711, 50 CFR 10)
  - (h) Geological Features & Special Permits (California Public Resources Code Section 4307 and Section 4309)
  - (i) National Historic Preservation Act of 1966, (16 U.S.C. 470)
  - (j) Native American Historic Resource Protection Act; Archaeological, Paleontological, and Historical sites; Native American Historical, Cultural, and Sacred sites (California Public Resources Code Section 5097-5097.993)
  - (k) San Francisco Building Code Section 106.3.2.6, Ordinance 176-08 ("Construction Dust Control")
  - (l) San Francisco Environment Code Section 2504-2405
  - (m) San Francisco Health Code Article 22B – Construction Dust Control Requirements
  - (n) San Francisco Police Code, Article 29, Ordinance #274-72 ("Noise Ordinance")
  - (o) San Francisco Public Works Code, Article 2.4 ("Excavation in the Public Right-of-Way")
  - (p) San Francisco Public Works Code, Article 4.1 ("Sewer Use Ordinance")
  - (q) San Francisco Public Works Code, Article 4.2 ("Sewer System Management Ordinance")
  - (r) San Francisco Public Works Code, Ordinance #19-92 ("San Francisco Industrial Waste Ordinance").
  - (s) San Francisco Public Works Code Ordinance #175-91, Sections 1100-1107
  - (t) San Francisco Public Works Code, Ordinance No. 260-13, ("Construction site Runoff Ordinance")
  - (u) San Francisco Public Works Dust Control Order (Order No. 171,378)
  - (v) San Francisco Public Works Order No. 158170, ("Wastewater discharges into the City sewerage system").

- (w) San Francisco Industrial Waste Ordinance No. 116-97 (Chapter X (Public Works Code), Part II,
  - (x) San Francisco Public Works Order No. 1581-70 for wastewater discharges into the City's sewerage system.
  - (y) Requirements for Batch Wastewater Discharges from the San Francisco Public Utilities Commission, Waste Water Enterprise (SFPUC-WWE).
- C. The City will inspect and monitor Contractor's adherence to the requirements specified herein and will report on Contractor's compliance.
- 1. Said inspection, monitoring, and reporting activities may include, but are not limited to, qualitative, quantitative and photographic observations and data collection on the impacts of noise, vibration, air quality, traffic, street pavement damage, water quality, cultural resources, biological resources, and hazardous materials.
  - 2. Contractor shall cooperate with such inspection and 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.
  - 3. The City will issue a Non-Compliance Notice to Contractor for any detected non-compliance with the provisions herein or of any environmentally objectionable acts and the corrective action to be taken.
- D. Accountability and Remedial Action
- 1. Contractor shall be held responsible for any damage resulting from Contractor operations, to natural vegetation, wildlife, cultural resources, waters of the State and of the United States and water quality, and any other environmental resources located either:
    - (a) Outside the Work areas permitted in the Contract Documents or
    - (b) Within Environmentally Sensitive Areas as per 3.7 of this section.
  - 2. For the monetary consequences of failures to comply with this section, including but not limited to those resulting in monetary fines, requirements for restoration of or compensation for damage, additional environmental training, and/or project delays and/or stoppage of work, any and all costs or fines shall be paid by contractor.

## 1.6 PROJECT CONDITIONS

- A. Project IS NOT a major construction project as defined at 1.3(A)(20) above; IS within a sensitive receptor as defined at 1.3(A)(31) above; IS in an Air Pollution Exposure Zone as defined at 1.3(A)(1) above, and IS NOT within 100 feet of a school zone. (See 3.1(D) and 3.1(E) Air Quality of this section.)
- B. The project WILL NOT grade or excavate more than one-half acre surface area at any given time, and the project IS within 1,000 feet of a sensitive receptor as defined at 1.3(A)(31) above. (See 3.1(C) Air Quality of this section.).
- C. The project IDOES NOT INCLUDE construction or demolition activity disturbing 5,000 square feet or more of the ground surface, measured cumulatively, including any land-disturbance as defined at 1.3(A)(19) above. (See 3.2(A) Water Quality of this section.)
- D. The project DOES NOT FALL within the Municipal Separate Storm Sewer System (MS4) area as mapped by the San Francisco Public Utilities Commission, and includes land disturbance of one or more acres of soil, either as a single project or as part of a larger common plan of development. (See 3.2(B) Water Quality of this section.)

- E. The project site(s) DO NOT INCLUDE areas under the jurisdiction of the Port of San Francisco. (See 3.2(C) Water Quality of this section.)
- F. The project DOES NOT include the removal or pruning of trees, and/or DOES NOT include exterior work on buildings, and/or DOES NOT include construction on bridges. (See 3.5 Bird Protection of this section.)
- G. Project DOES INCLUDE soil disturbing activities below a depth of two feet below grade surface. (See 3.9(C) Archaeological and Paleontological Discovery of this section.)
- H. The project DOES NOT include the disturbance by construction and grading unassociated with roadway construction and maintenance of soils known to contain naturally occurring asbestos exceeding one acre. (See 3.1(B)(11) Air Quality of this section.)
- I. The project DOES NOT include the disturbance, by construction and grading associated with roadway construction and maintenance, of soils known to contain naturally occurring asbestos. (See 1.4(J) of this section.)
- J. The project or a portion of the project IS within the boundaries of an area of particular archaeological sensitivity and DOES include land disturbance below two feet of the existing soil surface in such area. (See 3.9(A) Archaeological and Paleontological Discovery of this section.)
- K. Project Weather-Condition Monitoring
  - 1. Contractor shall monitor the National Weather Service forecast daily for forecasts of a rain event.

## 1.7 SEQUENCING

- A. Preconstruction survey: When applicable, the preconstruction surveys to inspect for the presence of nesting birds shall be done 3 days before the commencement of construction activities.
- B. When applicable, surveys to determine the continuing presence of bats in trees to be trimmed or removed shall be conducted three days prior to any tree removal or trimming.
- C. When applicable, prior to start of construction, Contractor shall conduct a meeting with the City Representative to review the results of nesting surveys and determine protective measures. Contractor shall notify the City Representative at least 10 working days before convening meeting.
  - 1. Conduct meeting at Project site to comply with requirements in Section 01 31 19 "Project Meetings."
- D. In advance of construction, Contractor shall photograph all catch basins within the limits of work. Each catch basin shall have at least two photos, one from the top view and one from the side view along the flow line.
- E. Submittals shall be submitted in accordance with the sequencing requirements of 1.4 of this section.
- F. When applicable, in advance of construction, Contractor shall distribute "ALERT" sheet.

## PART 2 - PRODUCTS

## 2.1 MATERIALS

- A. Materials necessary to prevent construction debris from entering the sewer system.
- B. For projects with a SWPPP or an ESCP, materials necessary for the implementation of construction-stormwater BMPs as specified in the SWPPP or ESCP.
- C. For projects doing work affecting trees or bridges during nesting season and/or bat-roosting season, bird-exclusion netting, or other exclusion devices.
- D. Materials necessary for compliance with the Noise Control Program.
- E. Materials required for compliance with all measures under this Section.
- F. Signage as required.
- G. For projects with Environmentally Sensitive Areas indicated on the project plans, materials to be used for protection of Environmentally Sensitive Areas.

## PART 3 - EXECUTION

*NOTE: The Contractor is directed to 1.6 PROJECT CONDITIONS for determinations of project conditions that in turn determine which conditional requirements of this section apply. "Feasible" as used in the section is defined above at 1.3(A)(16) of this section.*

### 3.1 AIR QUALITY

- A. Contractor shall apply the following emissions controls:
  - 1. Contractor shall ensure that all equipment is tuned and maintained in accordance with the manufacturer's specifications.
  - 2. Contractor shall prohibit idling of motors when equipment is not in use or when trucks are waiting in queues. The idling time of all construction equipment used at the site shall not exceed 5 minutes.
  - 3. Contractor shall limit the hours of operation of heavy-duty equipment and/or amount of equipment in use to what is needed.
  - 4. When feasible, alternative fuel or electrical construction equipment shall be used at the project site.
- B. The Contractor shall ensure no visible dust, as defined in 1.3(A)(38) of this section, is generated through construction.
  - 1. Contractor shall clean up spillage on City streets, whether directly or indirectly caused by Contractor's operations. All visible mud or dirt track-out from areas of land disturbance onto adjacent City streets shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
  - 2. Minimize to the extent feasible the amount of excavated material or demolition wastes stored at the site. Remove demolition debris from the site no later than the end of each workday.
  - 3. Contractor shall keep the site and adjacent areas clean and perform wet sweeping at the end of each shift.

4. Contractor shall perform continuous water spraying during dust generating activities. Mist or spraying shall be conducted in such a way as to prevent puddling or generation of runoff. Contractor shall mist any immediate area of demolition with a water spray to prevent airborne dust particles.
  5. Wet all exposed soil surfaces at least three times daily during dry weather or more frequently if dust is blowing or if required by the City.
  6. Whenever feasible, Contractor shall use reclaimed water for dust control activities.
  7. Contractor shall use dust enclosures, curtains, and dust collectors to control dust.
  8. Contractor shall 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. Contractor shall wet each load before covering and tightly cover the surface of each load before the haul truck leaves the loading area.
  9. Contractor shall limit vehicle speed limit on unpaved roads to 15 miles per hour (mph).
  10. Contractor shall cover any inactive (no disturbance for more than seven days) stockpiles greater than ten cubic yards or 500 square feet of excavated materials, backfill material, import material, gravel, sand, road base, and soil with a 10 mil (0.01 inch) polyethylene plastic or equivalent tarp and brace it down, or use other equivalent soil stabilization techniques as approved by the City Representative.
  11. These dust-control measures are adequate for addressing the asbestos state airborne toxic control measure (California Code of Regulations Title 17, Section 93105) for disturbance of naturally occurring asbestos (NOA) through roadway construction and maintenance, and through other construction and grading of less than one acre of soils containing NOA.
    - (a) For management of dust related to disturbance of NOA through construction and/or grading not conducted for the purposes of roadway construction and maintenance of more than one acre of soils containing NOA, refer to applicable Divisions 01 and 02 Hazardous Materials related specifications.
    - (b) If the project includes the disturbance, by construction and grading associated with roadway construction and maintenance, of soils containing naturally occurring asbestos, contractor shall submit the Bay Area Air Quality Management District's (BAAMQD) "Notification Form for Road Construction and Maintenance Operations" to BAAMQD fourteen business days in advance of land disturbance of soils containing NOA.
- C. If the project grades or excavates more than one-half acre surface area at any given time, and the project is within 1,000 feet of a sensitive receptor, Contractor shall submit a site-specific dust control plan for the review and approval by the San Francisco Health Department. Construction, demolition, excavation, grading, foundation work, or other permitted activities may not commence until Contractor has submitted to the City Representative a copy of the Department of Public Health's (DPH) written approval of the dust control plan.
1. In the event that monitoring is required as part of the dust-control plan, Contractor's attention is directed to the Department of Public Health's handout "Monitoring Guidelines for SFHC Article 22B".
- D. If the project is a Major Construction Projects that is not located in the Air Pollutant Exposure Zone and is within 1,000 feet of a sensitive receptor, the following requirements apply:

1. All off-road equipment shall be fueled by biodiesel fuel grade B20 and have engines that (a) meet or exceed either United States Environmental Protection Agency or ARB Tier 2 off-road emission standards, and (b) have been retrofitted with an ARB Level 3 VDECS. Equipment with engines meeting Tier 4 Interim or Tier 4 Final off-road emission standards automatically meet this requirement. See paragraph 3.1G below regarding the waiver procedure for this requirement.
  2. Where access to alternative sources of power is available as determined by the City Representative, use of portable diesel engines to perform work on the project shall be prohibited.
  3. Diesel engines, whether for off-road or on-road equipment, shall not be left idling for more than two minutes at any location, except as allowed for in applicable state regulations regarding idling for off-road and on-road equipment (e.g., traffic conditions, safe operating conditions). If within 100 feet of a school zone idling times shall be limited to 30 consecutive seconds. The Contractor shall post legible and visible signs, in English, Spanish, and Chinese, in designated queuing areas and at the construction site to remind operators of the idling limit. Refer to the following link for the Clean Construction Sign Template:  
<https://www.sfdph.org/dph/EH/Air/CleanConstruction.asp>.
  4. The Contractor shall instruct construction workers and equipment operators on the maintenance and tuning of construction equipment and require that such workers and operators properly maintain and tune equipment in accordance with manufacturer specifications.
- E. Construction Emissions Minimization Plan: If the project is a Major Construction Project that is located in the Air Pollutant Exposure Zone and is within 1,000 feet of a Sensitive receptor, the following requirements apply:
1. Before starting on-site Construction Activities, the Contractor shall submit a Construction Emissions Minimization Plan ("Emissions Plan") to the City Representative for review and approval. (See paragraph 1.4B of this section.)
  2. Waivers
    - (a) Waivers for off-road equipment:
      - (i) The Contractor may request to waive the equipment requirements if: (a) a particular piece of off-road equipment with an ARB Level 3 VDECS is technically not feasible; (b) the equipment would not produce desired emissions reduction due to expected operating modes; (c) installation of the equipment would create a safety hazard or impaired visibility for the operator; or, (d) there is a compelling emergency need to use off-road equipment that is not retrofitted with an ARB Level 3 VDECS.
      - (ii) Contractor shall submit a waiver request to the DPH Head, or designee, no less than two weeks prior to the planned use of a specific piece of off-road equipment.
      - (iii) If the DPH Head, or designee, grants the waiver the Contractor must use the next cleanest piece of off-road equipment, according to the table directly below:

<b>Off-Road Equipment Compliance Step Down Schedule*</b>		
Compliance Alternative	Engine Emission Standard	Emissions Control
1	Tier 2	ARB Level 2 VDECS
2	Tier 2	ARB Level 1 VDECS
3	Tier 2	Alternative Fuel**
<p>* If the City determines that the equipment requirements cannot be met, the Contractor must meet Compliance Alternative 1. If the City determines that the Contractor cannot supply off-road equipment meeting Compliance Alternative 1, then the Contractor must meet Compliance Alternative 2. If the City determines that the Contractor cannot supply off-road equipment meeting Compliance Alternative 2, then the Contractor must meet Compliance Alternative 3.</p> <p>** Alternative fuels are not a VDECS.</p>		

- (iv) The DPH Head, or designee, may waive the alternative source of power requirement if an alternative source of power is limited or infeasible at the project site. If the City grants the waiver, the Contractor must submit documentation that the equipment used for onsite power generation meets the requirements of this subsection.

### 3.2 WATER QUALITY

- A. If the project includes construction or demolition activity disturbing 5,000 square feet or more of the ground surface, measured cumulatively, including any land-disturbing activities, Contractor shall obtain a Construction Site Runoff Control Permit obtained from the San Francisco Public Utilities Commission (SFPUC), which requires the submittal to the SFPUC of an Erosion and Sediment Control Plan (ESCP).
- B. If the project falls within the Municipal Separate Storm Sewer System (MS4) area as mapped by the San Francisco Public Utilities Commission, and includes land disturbance of one or more acres of soil, either as a single project or as part of a larger common plan of development as determined by the City Representative, the Contractor must provide a Storm Water Pollution Prevention Plan (SWPPP) prepared by a certified Qualified SWPPP Developer (QSD) that must be approved by the City Representative before the start of construction.
- C. For work in areas under the jurisdiction of the Port of San Francisco, Contractor shall adhere to the provisions of the State General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ), and the Port of San Francisco’s Stormwater requirements.
- D. The Contractor shall implement the requirements of any project ESCP, SWPPP, and/or General Permit Order in advance of construction and maintain these requirements until the completion of construction activities.
- E. For all projects, all measures specified below shall apply:
  - 1. Drainage Protection
    - (a) Contractor shall be responsible for protecting and keeping in operation all storm water inlets and catch basins throughout the entire project site for the duration of the project until final acceptance.
    - (b) In advance of construction, Contractor shall photograph all catch basins within the limits of work. Each catch basin shall have at least two photos, one from the top view and one from the side view along the flow line.

- (c) Contractor shall provide labor and materials necessary to prevent debris from entering the sewer system.
  - (d) Contractor shall prevent construction material, pavement, concrete, earth, paints, thinner, solvents and other debris or toxic material from entering the sewer structure, including surface flow collection systems such as catch basins and culverts.
  - (e) Prior to the final inspection for acceptance, Contractor shall remove the catchbasin and inlet protection and clean the catchbasins and inlets.
2. Wastewater Discharges and Disposal
- (a) Contractor is permitted to discharge runoff and dewater into the City's combined sewer system only if Contractor submits and obtains approval of a SFPUC sewer discharge permit.
  - (b) 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 in a timely manner. The City shall not honor any claims from Contractor arising from delays in obtaining the sewer discharge permit.
3. Wastewater Contamination
- (a) Should the existing wastewater be uncontaminated, and subsequently become contaminated due to Contractor's operations, all costs related to satisfactory cleanup and disposal shall be the responsibility of Contractor. Such costs shall include, but not be limited to, re-design, re-construction, pretreatment and, sewer service permit and usage fees costs.
  - (b) 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 shall be issued as provided in Article 6 of the General Conditions for additional costs or time extension shall 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.
4. Spill Prevention and Control
- (a) Contractor shall assign and train spill-response personnel, who shall address spills and leaks immediately.
  - (b) Provide spill cleanup material on site to adsorb, remove and contain any spill or releases from leaving the active work area and entering into any storm drain or sewer inlet.
    - (i) Spill cleanup equipment shall include absorbent socks, over pack drums, personal protective equipment, shovel, labels, valves, valve charts, valve wrenches to shut off water supply, etc.
  - (c) On-site vehicles must be monitored for leaks; inactive equipment must be stored with drip pans to contain any fluid leaks. Drip pans containing oil must be drained into waste oil drums on a regular basis.
  - (d) Place all equipment or vehicles, which are to be fueled, maintained or stored in a designated area fitted with functional leak-containment measures.
  - (e) Dispose of spent cleanup materials at a California-permitted waste-disposal facility. Leaked materials that constitute hazardous waste shall be disposed of in accordance with applicable hazardous materials specifications.
  - (f) Containers must remain closed at all times except when transferring contents. Heavy containers (in excess of 60 lb.) of oil or hazardous material shall not be moved by a single unassisted worker unless the worker employs a drum dolly.

- (g) Funnels, pumps with closed hose systems, or other means shall be used to prevent spills while transferring material from large containers to small ones. Pumps in operation shall not be left unattended.
- (h) Contractor's designated Project Safety Officer shall immediately be alerted to of any spill occurring in the work area. It is the responsibility of Project Safety Officer direct the cleanup activities and contact the City Representative immediately.
- (i) Contractor is responsible for recording all steps taken to control spills in the field notes/daily log.

### 3.3 TRAFFIC

- A. Where traffic and/or pedestrian circulation may be affected by project construction, Contractor shall implement traffic control measures to maintain traffic and pedestrian circulation on streets affected by construction of the project.
  - 1. The measures shall, at a minimum, be consistent with the Requirements of San Francisco Municipal Transportation Agency (SFMTA)'s Regulations for Working in San Francisco Streets ("Blue Book").
  - 2. Control measures may include, but not be limited to, flaggers and/or construction warning signage of work ahead; scheduling truck trips during non-peak hours to the extent feasible; and maintaining access to driveways, private roads, and off-street commercial loading facilities by using steel trench plates or other such method.
  - 3. Any traffic-management plans accepted by Public Works for this project take precedence over the traffic provisions of the Standard Construction Measures (SCM-4).
- B. Contractor shall ensure provision for parking management and spaces for all construction workers to ensure construction workers do not park in on-street spaces.

### 3.4 NOISE CONTROL

- A. Contractor shall not operate any powered construction equipment, with the exception of impact tools and equipment, if the operation of such equipment emits noise at a level in excess of 80 dBA when measured at a distance of 100 feet from such equipment.
- B. Impact tools and equipment shall have intake and exhaust mufflers recommended by the manufacturers thereof and approved by City Representative, and that pavement breakers and jackhammers shall also be equipped with acoustically attenuating shields or shrouds recommended by the manufacturers thereof and approved by the City Representative.
- C. Contractor shall pay all fines for Contractor's violations of the San Francisco Noise Ordinance, at no additional cost to the City.
- D. Monitoring
  - 1. The City, at its own discretion, may monitor construction noise as part of the environmental monitoring process. When noise levels exceed the noise limits in 3.4 of this section, Contractor shall stop work or place restrictions on construction operations to further limit the noise as directed by the City.
  - 2. Contractor shall not resume the work before correcting the conditions that cause excessive noise as deemed acceptable by the City Representative.
- E. Night Noise

1. 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 approved by the City Representative and unless a noise permit for such work has been obtained pursuant to the Police Code Section 2908.
2. The use of vehicles for night work that are legally required to be equipped with backing warning alarms shall be reduced to the extent feasible for night work, and administrative controls as defined in the California Code of Regulations, Title 8 Sec. 1592 shall be used for worker protection for backing movements by other vehicles.
3. 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, Contractor must obtain and comply with a City noise permit prior to starting any work. Contractor must 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. The noise permit shall be obtained from and approved by Bureau of Street Use and Mapping, 1155 Market Street, 3rd Floor, San Francisco, CA 94103.

### 3.5 BIRD AND BAT PROTECTION

- A. Contractor is advised that it is unlawful under the California Fish and Game Code at §3503 to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by California Code.
- B. Contractor is advised that it is unlawful under the California Fish and Game Code at §3503.5 to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by California Code.
- C. This subsection © applies only to projects that include the removal or pruning of trees, and/or exterior work on buildings, and/or construction on bridges.
  1. Inspection for bird/nests and bats/roosting habitat during bird nesting season:
    - a) If work shall be performed during bird nesting season (February 15 through August 31), a Qualified Biologist must be obtained by Contractor to provide a pre-construction survey for the trees to be affected during construction work.
    - b) If work shall be performed during bat-roosting seasons (April 16 through August 30 and/or October 16 through February 28), a Qualified Biologist obtained by Contractor shall conduct a habitat assessment of the project area for potentially suitable bat-roosting habitat, including within open expansion joints of bridges and in trees, within the time frames of March 1 to April 1 (for work to be performed April 16 through August 30) or August 31 to October 15 (for work performed October 16 through February 28) prior to construction activities.
  2. Bird Protection Measures
    - a) If active bird nests are identified by the Qualified Biologist, no work may occur at that tree or bridge and in the surrounding area:
      - i. For active nests found in trees, a 100-foot exclusion buffer of temporary fencing shall be erected around the tree with the active nest,

- ii. For active nests found on bridges, a 100-foot exclusion buffer shall be established around the nest site, and no work may occur within the 100-foot buffer until the Certified Biologist has verified that young birds have left the nest and that active nesting has been completed.
    - iii. For any active nests containing raptor species, the exclusion buffer shall be 300-feet.
  - b) If Contractor finds an injured or dead bird or discover migratory or nongame bird nests that may be adversely affected by construction activities, immediately:
    - i. Stop all work within a 100-foot radius of the discovery.
    - ii. Notify the City Representative.
  - c) Contractor shall perform one or a combination of the following protection measures as required to prevent further nesting by birds in trees or structures during project construction:
    - i. Install exclusion devices
    - ii. Use nesting-prevention measures
    - iii. Remove and dispose of partially constructed and unoccupied nests of migratory or nongame birds on a regular basis to prevent their occupation.
- 3. Bat Protection Measures
  - a) If the habitat assessment required by 3.5.B(2) above is conducted on a bridge and reveals the bridge structure is suitable roosting habitat for bats, then the appropriate exclusionary measures will be implemented prior to bridge work during the period between March 1 to April 15 or August 31 to October 15.
    - i. Potential avoidance may include exclusionary blocking or filling potential cavities with foam, visual monitoring and staging Project work to avoid bats.
    - ii. If bats are known to use the bridge structure, exclusion netting shall not be used.
  - b) If the habitat assessment required by 3.5.B(2) above is conducted on trees, and the assessment reveals suitable bat habitat in trees and tree removal is scheduled from April 16 through August 30 and/or October 16 through February 28, then presence/absence surveys shall be conducted two to three days prior to any tree removal or trimming.
    - i. If presence/absence surveys are negative, then tree removal may be conducted by following a two phased tree removal system.
    - ii. If presence/absence surveys indicate bat occupancy, then the occupied trees shall only be removed from March 1 through April 15 and/or August 31 through October 15 by following the two phased tree removal system.
    - iii. The two-phase system shall be conducted over 2 consecutive days. On the afternoon of the first day, limbs and branches are removed by a tree cutter using chainsaws or other hand tools. Limbs with cavities, crevices, or deep bark fissures are avoided and only branches or limbs without those features are removed. On the second day, the entire tree shall be removed.

- c) If bats are found during the roosting season, Contractor shall immediately cease work and notify the City Representative.
- d) No construction activities that in the opinion of the City representative may potentially disturb the bats may proceed until the City Representative provides specific notice to and consults with CDFW.
- e) Before proceeding with construction, Contractor shall incorporate impact-minimization measures as directed by the CDFW representative. These may include the construction and installation of bat boxes of a size and quantity sufficient in the view of the CDFW representative to accommodate the estimated on-site population of bats plus additional structures to account for population growth according to scientifically proven growth rates of the species occurring on site.

### 3.6 TREE CONSERVATION

- A. If trimming of roots greater than 2-inches in diameter is necessary during the course of construction, a Qualified Arborist provided by the contractor shall supervise the trimming of such roots.
- B. Pruning of trees shall be performed in conformance with the City of San Francisco Pruning Standards for Trees (June 27, 2006) (available at [http://sfdpw.org/sites/default/files/FileCenter/Documents/234-SF\\_Pruning\\_Std\\_6.27approved.pdf](http://sfdpw.org/sites/default/files/FileCenter/Documents/234-SF_Pruning_Std_6.27approved.pdf)), in coordination with the City's Bureau of Urban Forestry, and under the supervision of the qualified arborist.
- C. For trees to be retained on site or adjacent to the site, Contractor shall exclude grading, trenching, or placement of heavy equipment within the drip line of trees, unless approved by the City Representative. If approved by the City Representative, Contractor's arborist shall recommend and Contractor shall implement measures to protect the tree (e.g., protecting the roots from compaction). Contractor shall be responsible for replacing any damaged trees as directed by the City Representative.
- D. Disposal of Plant Material That Potentially Harbors Phytophthora
  - 1. This paragraph applies only to projects that involve grubbing or removal of trees and/or other vegetation.
  - 2. Contractor shall identify whether during the course of work plant species that may harbor Phytophthora shall be pruned or removed.
  - 3. Plants of species that may harbor Phytophthora shall be chipped on site and the chips spread at the location of the same trees and/or shrubs that produced the debris. This plant debris may not be used for any purpose at any other location.
  - 4. If spreading on site is not possible, materials shall be disposed of in landfill or at an industrial-scale composting facility. Contractor shall provide documentation of such disposal to the City Representative.
  - 5. For sites identified as potentially harboring Phytophthora, Contractor shall ensure that the following actions are performed:
    - (a) All workers scrape, brush, and/or hose off accumulated soil and mud from clothing, gloves, boots, and shoes before leaving the site.
    - (b) Mud and plant debris are removed by blowing out or power washing chipper trucks, chippers, bucket trucks, fertilization and soil aeration equipment, cranes, and other vehicles before leaving the site.

- (c) Soil and mud are removed or washed off from on vehicle tires, boots, shovels, stump grinders, trenchers, etc., before use at another site.
- (d) Tools used in tree removal/pruning are disinfected with Lysol® spray, a 70% or greater solution of alcohol, or a solution consisting of 1 part household bleach to 9 parts water before leaving the site.

### 3.7 ENVIRONMENTALLY SENSITIVE AREA (ESA)

- A. Contractor shall avoid areas shown on construction plans as being within an above-ground ESA. Contractor shall coordinate methods for avoidance intrusion into ESAs with the City Representative and provide written and/or photographic documentation of these methods on request of the City Representative.

### 3.8 CONSTRUCTION STAGING

- A. Contractor shall locate site construction staging areas away from public view and on paved or previously disturbed areas to the extent feasible.
- B. For night work, Contractor shall ensure that construction lighting shall be directed away from residential areas and have shields to prevent light spillover effects.
  - 1. Lighting systems with flood, spot, or stadium type luminaires shall be aimed downward at the work and rotated outward no greater than 30 degrees from nadir (straight down).
  - 2. When, in the opinion of the City Representative, the lighting is disturbing adjoining property, Contractor shall modify the lighting arrangement or add hardware to shield the light trespass.

### 3.9 ARCHAEOLOGICAL AND PALEONTOLOGICAL DISCOVERY

- A. Where the project or a portion of the project is within the boundaries of an area of particular archaeological sensitivity, as determined by the San Francisco Planning Department and noted and/or depicted on project plans, one of the following shall apply:
  - 1. If the project includes land disturbance below two feet of the top of existing soil in such area of particular archaeological sensitivity as noted and/or depicted on project plans, a City Representative or Specialty Environmental Monitor – archaeologist, provided by the City, shall be present during activities resulting in land disturbance to avoid any impacts to archaeological resources.
    - (a) Contractor shall be responsible for confirming that the required Specialty Environmental Monitor is on-site as required prior to performing said Work.
  - 2. If the project or a portion of the project is within the boundaries of an area of particular archaeological sensitivity, but does not include land disturbance below two feet in such area, potential below-ground archaeological resources shall be protected by a conceptual ESA (see 3.7 of this section) boundary at two feet below the top of existing soil and contiguous with the area depicted on plans of particular archaeological sensitivity. If this ESA boundary is breached, the contractor shall immediately:
    - (a) Stop all work within 50 feet of the ESA or action-plan boundary
    - (b) Secure the area
    - (c) Notify the City's Representative

- B. If potential archaeological resources are discovered at the site, the following procedures shall be instituted:
1. Promptly report all subsurface archaeological finds to the City Representative.
  2. The City Representative shall issue a written order to suspend work in accordance with Paragraph 14.02 of the General Conditions directing Contractor to cease all construction operations only at the location of such potential cultural resources find.
  3. The City's archaeologist shall assess the significance of the find, and immediately report to the City Environmental Review Officer (ERO), who shall recommend specific additional avoidance and minimization measures as necessary to minimize potential effects on cultural resources, which may include additional site security, with which Contractor shall comply.
  4. If human remains are encountered, all work in the area must halt and the San Francisco County Coroner must be contacted, pursuant to California Public Resources Code Sections 5097.98, and 5097.99.
- C. Any soil disturbing activities below a depth of two feet below grade surface shall be preceded by the distribution by Contractor of the San Francisco Planning Department archeological resource "ALERT" sheet to any project subcontractor (including demolition, excavation, grading, foundation, pile driving, etc. firms); or utilities firm involved in soil disturbing activities within the project site, and all field personnel, including machine operators, field crew, pile drivers, supervisory personnel, etc.
1. Following the distribution of the "ALERT" sheet, Contractor will provide City representative with a signed affidavit confirming that all field personnel have received copies of the "ALERT" sheet.
  2. The "Alert" sheet and affidavit are available for download at:  
<https://www.sfpublishworks.org/services/project-manual-and-reference-documents>
- D. If unanticipated paleontological resources are discovered at the job site, do not disturb the resources and immediately:
1. Stop all work within a 50-foot radius of the discovery.
  2. Secure the area.
  3. Notify the City Representative. The City Representative shall investigate the discovery and modify the dimensions of the secured area if needed. The Contractor shall not move paleontological resources or take them from the job site. The Contractor shall not resume work within the radius of discovery until authorized.
- E. For Work suspensions as a result of a suspension under this subsection there shall be no compensation to Contractor for any delays up to a total of 20 working days due to the City's order to suspend Work. Cost or time impacts as a result of a suspension under this subsection longer than a total of 20 hours, or for additional avoidance and minimization measures, shall be resolved as provided in the General Conditions. Refer to Article 6 for Changes and Article 13 for Claims.

END OF SECTION

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PROJECT NAME: Steam Pipe Repair at Larkin and McAllister  
Case# 2020-011977ENV

SECTION 01 35 49 APPENDIX A  
ALERT SHEET AFFIDAVIT

We the undersigned, as representatives of the contracting firm of

\_\_\_\_\_

offer testimony to the fact that the San Francisco Planning Department archaeological resource "ALERT" sheet was distributed to all construction field personnel prior to the start of work on

\_\_\_\_\_ Date, and again during construction on \_\_\_\_\_ Date.

Name of Contractor's Representative: \_\_\_\_\_

Signature of Contractor's Representative: \_\_\_\_\_

Date: \_\_\_\_\_

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## SECTION 01 42 00

## REFERENCES

## PART 1 - GENERAL

## 1.1 SUMMARY

- A. Section Includes:
  - 1. Applicable Publications
  - 2. Standard Specifications
  - 3. Reference Specifications, Codes, and Standards
  - 4. Abbreviations
  - 5. Definitions
- B. Related Documents: Section 00 72 00 - General Conditions, Paragraph 1.01, Definitions.
- C. Related Sections: Refer to individual Specification sections for definitions of terms, which may be used uniquely in the Work covered, by each section.

## 1.2 APPLICABLE PUBLICATIONS

- A. Whenever in these Specifications references are made to published specifications, codes, standards, or other requirements, it shall be understood that whenever no date is specified only the latest specifications, standards, or requirements of the respective issuing agencies in effect on the date of the Contract Documents, except to the extent that said standards or requirements may be in conflict with applicable laws, ordinances, or governing codes.

## 1.3 STANDARD SPECIFICATIONS AND PLANS

- A. Unless otherwise specified, reference in these Specifications to the "DPW Standard Specifications" or "Standard Specifications" shall mean the Standard Specifications of the Department of Public Works, Bureau of Engineering, revised November 2000, except that the provisions for measurement and payment shall not apply. References in Parts 2 through 10 of the Standard Specifications to Sections of Part 1 of the Standard Specifications shall be construed to mean references to the respective provisions of the General Conditions (refer to Section 00 72 00).
- B. Unless otherwise specified, reference in these Specifications to the "DPW Standard Plans" or "Standard Plans" shall mean the Standard Plans of the Department of Public Works, Bureau of Engineering, including latest revisions.
- C. Digital copies of the Standard Specifications and Plans may be obtained from DPW's Standard Specifications and Plans website at: <http://www.sfpublicworks.org/> (select "Services" then "Contractor Resources")
- D. Caltrans Standard Specifications (CTSS) is a reference specification written by the California Department of Transportation and shall be referenced in these Specifications as "CTSS" or "CalTrans Standard Specifications."

## 1.4 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Upon written request, the City Representative will furnish information as to how to obtain copies of the referenced standards.

- B. In case of conflict between codes, reference standards, Drawings, and the other Contract Documents, the most stringent requirements shall apply.
- C. The Standard Specifications is applicable only when referred to in these specifications. Only the specific sections referred to shall apply to this Contract.
- D. The standard referred to, except as modified in the Contract Documents, shall have full force and effect as though printed in these Specifications.
- E. Maintain copies of the codes and reference standards with the Contract Documents at the job site at all times.

## 1.5 ABBREVIATIONS

- A. Abbreviations: Whenever in these Contract Documents the following abbreviations are used, the intent and meaning shall be interpreted as follows:

AA	Aluminum Association, Inc.
AAMA	Architectural Aluminum Manufacturers' Association
AAN	American Association of Nurserymen, Inc.
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ACWS	Asphalt Concrete Wearing Surface
AFBMA	Anti-Friction Bearing Manufacturers Association
AGA	American Gas Association
AGMA	American Gear Manufacturers' Association
AIA	American Institute of Architects
AIEE	American Institute of Electrical Engineers
AISC	American Institute for Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
AMCA	Air Movement and Control Association
ANSI	American National Standards Institute
APA	American Plywood Association
API	American Petroleum Institute
APWA	American Public Works Association
AREA	American Railway Engineering Association
ARI	American Refrigeration Institute
ASA	American Standards Association
ASAE	American Society of Agricultural Engineers
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.
ASLA	American Society of Landscape Architects
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AT&T	American Telephone and Telegraph
AWG	American Wire Gage
AWI	Architectural Woodwork Institute
AWPA	American Wood Preservers Association
AWPB	American Wood Preservers Bureau
AWS	American Welding Society
AWSS	Auxiliary Water Supply System
AWWA	American Water Works Association
BHMA	Builders Hardware Manufacturers Association

BOA	Bureau of Architecture, Department of Public Works
BOE	Bureau of Engineering, Department of Public Works
BWPC	Bureau of Water Pollution Control, Department of Public Works
Caltrans	California Department of Transportation
Cal/OSHA	California Occupational Safety and Health Administration
CBMA	Certified Ballast Manufacturers Association
CCR	California Code of Regulations
CDA	The Copper Development Association, Inc.
CFR	Code of Federal Regulations
CISPI	Cast Iron Soil Pipe Institute
CMAA	Crane Manufacturers Association of America
CRSI	Concrete Reinforcing Steel Institute, Inc.
CS	Commercial Standards - U.S. Department of Commerce
CSI	Construction Specifications Institute
CTSS	Caltrans Standard Specifications
CWP	Clean Water Project
DOT	United States Department of Transportation
DPW	Department of Public Works - City and County of San Francisco
EIA	Electronic Industries Association
EPA	Environmental Protection Agency
FGNA	Flat Glass Marketing Association
FHWA	Federal Highway Administration
FM	Factory Mutual
FS	Federal Specification
HI	Hydraulic Institute
HMI	Hoist Manufacturer's Institute
IAMPO	International Association of Mechanical and Plumbing Officials
ICBO	International Conference of Building Officials
ICEA	Insulated Cable Engineers Association
IEEE	Institute of Electrical and Electronic Engineers
IES	Illuminating Engineering Society
ISA	Instrument Society of America
ITE	Institute of Traffic Engineers
JIC	Joint Industry Conferences of Hydraulic Manufacturers
MCAA	Mechanical Contractors Association of America, Inc.
MLMA	Metal Lath Manufacturers Association
MMA	Monorail Manufacturers Association
MTD	Metro Transit District
NAAM	National Association of Architectural Metal Manufacturers
NBFU	National Board of Fire Underwriters
NBHA	National Builders' Hardware Association
NECA	National Electrical Contractors Association
NEC	National Electric Code
NEMA	National Electrical Manufacturers Association
NESC	National Electrical Safety Code
NFC	National Fire Code
NFPA	National Fire Protection Association
NLMA	National Lumber Manufacturers Association
NTMA	National Terrazzo and Mosaic Association, Inc.
NWMA	National Woodwork Manufacturers Association
OECI	Overhead Electrical Crane Institute
OSHA	Occupational Safety and Health Administration - U.S. Department of Labor
PEI	Porcelain Enamel Institute
PG&E	Pacific Gas and Electric Company
PS	Product Standards Section - U.S. Department of Commerce

RCM	Registered Construction Management
RCP	Reinforced Concrete Pipe
RLM	RLM Standards Institute, Inc.
RMA	Rubber Manufacturers Association, Inc.
SAE	Society of Automotive Engineers
SCPI	Structural Clay Products Institute
SDI	Steel Door Institute
SEWPCCP	Southeast Water Pollution Control Plant
SMACNA	Sheet Metal and Air Conditioning Contractors National Association, Inc.
SJI	Steel Joist Institute
SSDPWSF	Standard Specifications, Department Of Public Works, City & County Of San Francisco
SSPC	Steel Structures Painting Council
STLC	Soluble Threshold Limit Concentration
TCA	Tile Council of America
TEMA	Tubular Exchanger Manufacturers' Association
TMA	Tile Manufacturers Association
TTLC	Total Threshold Limit Concentration
UBC	Uniform Building Code
UL	Underwriters Laboratories Inc.
UMC	Uniform Mechanical Code
UPC	Uniform Plumbing Code
VCP	Vitrified Clay Pipe
WCLIB	West Coast Lumber Inspection Bureau
WIC	Woodwork Institute of California
WWPA	Western Wood Products Association

## 1.6 DEFINITIONS

- A. As directed, As required, As permitted: Interpretation of Phrases - Wherever the words "as directed," "as required," "as permitted," or words of like effect are used, it shall be understood that the direction, requirement, or permission of the City Representative or governmental regulatory agency having jurisdiction is intended. The words "sufficient," "necessary," "proper," and the like shall mean sufficient, necessary, or proper in the judgment of the City Representative. Wherever the words "inspect," "approved," "acceptable," "satisfactory," or words of like import are used to describe a requirement, direction, review, or judgment of the City Representative as to the work, it is intended that such requirement, direction, review, or judgment will be solely to observe and evaluate, in general, the completed work for compliance with the requirements of the Contract Documents, unless otherwise specifically stated.
- B. Engineer, Architect, Landscape Architect, or City Representative: References in these Specifications to "Engineer, Architect, Landscape Architect, or City Representative" shall be deemed to mean the City Representative.
- C. Existing to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by the City Representative, items may be removed to a suitable, protected storage location during selective demolition and then cleaned and reinstalled in their original locations.
- D. Remove and Dispose: Remove and legally dispose of items except those indicated to be reinstalled, salvaged, or to remain the City's property.

- E. Remove and Reinstall: Remove items indicated; clean, service, and otherwise prepare them for reuse; store and protect against damage. Reinstall items in the same locations or in locations indicated.
- F. Remove and Salvage: Items indicated to be removed and salvaged remain the City's property. Remove, clean, and pack or crate items to protect against damage. Identify contents of containers and deliver to City's designated storage area.
- G. Work Site: The space available to Contractor for performance of construction activities, either exclusively or in conjunction with others performing other work as part of the Work. The extent of the Work site is shown on the Drawings and may or may not be identical with the geographical description of the site upon which the Work is to be constructed.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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## SECTION 01 45 00

## QUALITY CONTROL

## PART 1 - GENERAL

## 1.1 SECTION INCLUDES

1.2. Contractor's Quality Control Plan and Services

1.3. Quality Control and Control of Installation

1.4. Tolerances

1.5. References

1.6. Observation by the Owner

1.7. Manufacturer's Field Services

1.8. Testing Agency Services

1.9. Requirements of Tests

3.1 Examination

## 1.2 CONTRACTOR'S QUALITY CONTROL PLAN AND SERVICES

A. The Contractor shall develop and submit to the City, a Quality Control Plan (QCP) for all materials, equipment, and services. The QCP shall be submitted to the City for review and approval prior to the start of Contract Work.

1. The QCP shall include listing of the Contractor's Testing Agency and approved personnel with certifications.
2. The QCP shall include type and frequency of testing for all Work completed under the Contract. It shall also include the identification of all offsite and factory test inspections.
3. Work covered by the Quality Control Plan shall not commence until approval of the QCP.

B. Testing Services: Per General Conditions - 8.02 Tests and Inspections, all testing and inspection of the Work required by the Contract Documents shall be arranged and paid for by the Contractor. The Contractor shall provide the services of a qualified independent testing laboratory(s) or agency(s) to control the quality of Work and materials to fulfill the requirements of the Contract. No separate payment will be made for quality control, and all costs therefore shall be included in the prices named in the Schedule of Bid Prices for the various appurtenant items of Work.

## 1.3 QUALITY CONTROL AND CONTROL OF INSTALLATION

- A. Maintain and monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. When manufacturers' instructions conflict with Contract Documents, request clarification

from Architect/Engineer and/or the City before proceeding.

- D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Perform Work by persons qualified to produce required and specified quality.
- F. Verify field measurements are as indicated on Shop Drawings or as instructed by manufacturer.
- G. Failure of Materials and Equipment Tested or Inspected:
  - 1. Previous acceptance may be withdrawn and material may be subject to removal and replacement with material meeting Specification requirements, at no cost to the City.
  - 2. The City may require submittal and approval of a Remediation Plan, when requested, for failed materials, equipment, products, services, site conditions, and/or workmanship.

#### 1.4 TOLERANCES

- A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. When manufacturers' tolerances conflict with Contract Documents, request clarification from the City and/or Owner's Agent before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

#### 1.5 REFERENCES

- A. For products or workmanship specified by association, trade, or other consensus standards, comply with requirements of standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard by date of issue current on date of Contract Documents, except where specific date is established by code.
- C. Obtain copies of standards where required by product and specification sections.
- D. When specified reference standards conflict with Contract Documents, request clarification from the City and/or Owner's Agent before proceeding.
- E. See Construction Manual, latest edition, published by the California Department of Transportation (Caltrans) and available for download at [http://www.dot.ca.gov/hq/construc/constmanual/construction\\_manual.pdf](http://www.dot.ca.gov/hq/construc/constmanual/construction_manual.pdf) for Materials Accepted on the Basis of a Certificate of Compliance (Section 6-203C of Caltrans Construction Manual).

#### 1.6 DOCUMENTATION

- A. The Contractor shall maintain current quality records to provide factual evidence that all activities, including quality control activities such as inspections and tests have been performed, accepted, and comply with the Contract Documents and the Quality Control Plan (QCP). These quality records shall include the work of the Contractor,

Subcontractors, Suppliers, inspection services and testing laboratories, and shall be on an acceptable form.

- B. Quality records shall include but are not limited to Certificates of Compliance checklist, QCP, Subcontractor and Supplier Quality Programs, inspection reports, receiving inspection reports, calibration test reports, material test reports, Construction Non-Conformance Report (CNCR), personnel information (qualifications, certifications, resumes, and approvals), minutes of the Preparatory Phase, Initial Phase, and Follow up Phase meetings, procedures, Submittals and RFI logs, Punch Lists, and training records.
- C. Contractor Inspector (CI) Daily Inspection Report shall include, as a minimum, the following information provided by the Contractor's Inspectors (CI):
1. Contractor/Subcontractor and their area of responsibility.
  2. Description of the weather conditions encountered and the work performed each day, giving location, description, and by whom. Identify each phase of work performed each day by CPM schedule activity number or Work Break Structure (WBS), as applicable.
  3. Test, inspections and control activities performed with results and references to specifications/drawing requirements. List of deficiencies noted, along with the required corrective actions.
  4. Material and equipment received at the Site with statement as to acceptability (including verification/validation of required material identification, certifications, and quantities), storage and maintenance thereof, as required by the QCP.
  5. Surveillance and audit activities, both on- and off-site, performed and documented as required by the QCP.
  6. Documentation generated from the Preparatory Phase, Initial Phase, and Follow up Phase work.
  7. Each Contractor/Inspector's (CI) daily report shall clearly indicated that the work performed and material and or equipment incorporated into the Contract, is acceptable or unacceptable. Unacceptable work that is considered by the QCP to be in-process, which will be brought into conformance with the Contract Documents; both within one (1) working day, or at a time deemed to be reasonable by the QCP, and subject to approval of the Engineer, shall be clearly indicated on the CI Daily Report as requiring follow –up acceptance inspection. Work that is found to be non-conforming, that can't be brought into conformance with the Contract Documents, shall be documented and processed as required by the QCP with the Contractor's Non-Conformance Report number indicated on the Daily Contractor Inspection Report.
  8. Daily Inspection Reports: completed Quality Control inspection checklists or forms as described in the QCP, and related laboratory test report results for the work performed for the activities described within the Report shall be attached to the Daily Inspection Report and shall be furnished daily to the Engineer within 24 hours after the date covered by the Report. Reports need to be submitted for days on which no work is performed. As a minimum, one report shall be prepared and submitted for every 7 Days of no work shall be for that Day only.
  9. Daily Inspection Reports shall be signed and dated by the Contractor's representative.

#### 1.7 OBSERVATIONS BY THE OWNER

- A. All work (which includes but is not restricted to materials, workmanship, and manufacture and fabrication of components) shall be subject to inspection and/or tests by the owner and by others authorized by the Owner. Any such inspection and/or test is for the sole benefit of the Owner and shall not relieve the Contractor of the responsibility of providing quality control measures to assure that the work strictly complies with the Contract requirement. No inspector or test by the Owner shall be construed as constituting or

implying acceptance. Inspections or tests shall not relieve the Contractor of responsibility for damage to or loss of the material prior to acceptance, nor in any way affect the continuing rights of the Owner after acceptance of the completed work.

The contractor shall make available all offsite fabrication facilities for inspection of fabricated items by the Owner.

During the course of construction, inspections may be conducted by authorized representatives of the City, various inspectors at the site, or independent agencies designated by the City.

1. The presence of inspectors or independent agencies shall not relieve Contractor of the responsibility for the proper execution of the work in accordance with the requirements of the Contract Documents. Compliance is a duty of Contractor, and said duty shall not be avoided by any act or omission on the part of the inspectors.
- B. All products, materials, and equipment furnished by Contractor may be subject to inspection by the City both on-site and at the place of manufacture.
1. Contractor shall at all times provide access to the work for representatives of the City and other agencies designated by the City wherever Contract work is in preparation, in progress or completed.
- If the Contractor does not promptly replace rejected material or correct rejected workmanship, the Owner may, by Contractor or otherwise, replace such material or correct such workmanship and deduct the cost thereof from subsequent progress payments.
- C. Inspection items include, but are not limited to, construction quality, deficiencies, and corrections thereof; technical data on materials, tests, and laboratory analysis; contract change orders, claims, and other contract administration matters; and daily logs.
- D. The Contractor shall be held responsible for delay of inspection or test due to material or work not being acceptable or ready at the time specified by the Contractor for such inspection or test, and due to re-inspection or retest necessitated by prior rejection.
- E. The Contractor shall not cover, or allow to be covered, any of the work installed under this Contract without the Owner's Agent's approval. Should any of the work be covered prior to such approval, the Owner's Agent shall have the authority to require the work to be uncovered for inspection and approval, re-covered, and all resultant damage repaired, all at the Contractor's expense.
- F. Should it be necessary or advisable by the owner, at any time before acceptance of the entire work, to make examination of work already completed, the Contractor shall, on request, promptly furnish all necessary facilities, labor, and material requested. If such work is found to be defective or nonconforming, the Contractor shall be responsible for all the expenses of such examination and for satisfactory reconstruction. If, however, the Owner's Agent was allowed ample opportunity to inspect said work and the work is found to meet the requirements of the Contract, the Contractor will be compensated for the additional services involved in such examination and reconstruction under force account, and if completion of the work has been delayed thereby, he shall, in addition, be granted a suitable extension of time.
- G. Neither inspections nor approvals by the Owner's Agent or by others shall relieve the Contractor from the obligation to perform the work in accordance with the Contract. Contractor shall be responsible for calling Code Enforcement Agencies such as the Bureau of Building Inspection, San Francisco Fire Department, Department of Public

Health, etc.

#### 1.8 MANUFACTURER'S FIELD SERVICES

- A. When specified in the respective Specification Sections, require manufacturer or supplier to have qualified representative(s) perform on-site observations and make recommendations.
  - 1. Observe field conditions, including conditions of surfaces and installation.
  - 2. Observe quality of workmanship.
  - 3. Furnish recommendations to assure acceptable installation and workmanship.
  - 4. Where required, start, test, and adjust equipment as applicable.
  - 5. Where required, certify that work is installed, adjusted, tested, and satisfactorily performs in accordance with the requirements of the Contract Documents.
- B. Representative shall submit written report to City listing observations and recommendations.
- C. Maintain a complete set of manufacturer's instructions at the jobsite during installation and provide to the City and/or City's Agent prior to performing the work described in the instructions and again at the completion of the work as Project Record Documents.
- D. Unless otherwise, indicated or specified, perform work including, handling, installing, connecting, cleaning, conditioning, and adjusting products in strict accordance with such instructions.

#### 1.9 TESTING AGENCY SERVICES

- A. Contractor shall employ and pay for specified services of an independent firm to perform testing and inspection.
- B. The independent firm shall perform tests, inspections, and other services specified in individual specification sections and as required by the City and/or Owner's Agent.
  - 1. Laboratory: Authorized to operate in State of California.
  - 2. Laboratory Staff: Minimum full time registered Engineer on staff to review services. Testing Agency will furnish sufficient personnel to perform testing and inspection in a reasonable manner so the Contractor is not caused undue delays and expense.
  - 3. Testing Equipment: Calibrated at reasonable intervals with devices of an accuracy traceable to National Bureau of Standards or accepted values of natural physical constants.
  - 4. Testing Agency services will be performed in accordance with requirements of governing authorities and with specified standards.
- C. Testing, inspections and source quality control may occur on or off project site. Perform off-site testing as required by the City and/or Owner's Agent.
- D. Cooperate with independent firm; furnish samples of materials, design mix, equipment, tools, storage, safe access, and assistance by incidental labor as requested.
  - 1. Notify the City and/or City's Agent and independent firm 48 hours prior to expected time for operations requiring services.
  - 2. Make arrangements with independent firm and pay for additional samples and tests required for Contractor's use.
- E. Testing and employment of testing agency or laboratory shall not relieve Contractor of obligation to perform Work in accordance with requirements of Contract Documents.
- F. Reports will be submitted to the City and Contractor giving observations and results of

tests, indicating compliance or non-compliance with specified standards and with Contract Documents. Test results and reports shall be submitted to the City upon their completion within 24 hours.

1. Where required, Testing Agency will submit copy of test results directly to enforcing agency.
2. When test or inspection reveals nonconformance with Contract Documents, Testing Agency will orally notify City and Contractor immediately and subsequently by written report.

G. Re-testing or re-inspection required because of unsatisfactory or non-conformance to specified requirements shall be performed by same independent firm on instructions by the City and/or Owner's Agent. Payment for re-testing or re-inspection will be charged to Contractor by deducting testing charges from Contract Sum/Price.

1. Re-testing and inspections of Work revised or replaced by Contractor shall be paid by Contractor where tests were performed on original Work.
2. Contractor shall repair and replace at no cost to the City damage to Work made necessary by re-testing in accordance with the requirements of the Contract Documents.
3. Contractor shall reimburse City for City's inspection or separate Quality Assurance inspection fees for travel and per diem expenses, when shops or plants of fabrication are located more than 50 miles from Project site.
4. If City has reasonable doubt that materials comply with specified requirements, additional inspections or tests will be required as directed by City.
  - a. If additional inspections or tests establish that materials comply with specified requirements, costs for such tests will be paid by City.
  - b. If additional inspections or tests establish that materials do not comply with specified requirements, costs for such tests shall be paid by Contractor.

H. Testing Agency is **not** authorized to:

1. Release, revoke, alter, or enlarge requirements of Contract Documents.
2. Accept any portion of Work.
3. Assume duties of Contractor.
4. Stop Work, except as may be required to perform testing or inspection operations.

I. Contractor's Responsibilities:

1. Prepare a Quality Control Plan (QCP) for all materials and equipment installed under the Contract. The QCP shall be submitted to the City for review and approval prior to the start of Contract Work.
2. Furnish a Testing Agency to provide testing and personnel necessary to comply with the Contractor's Quality Control Plan.
3. Provide access to the Work.
4. Obtain and handle samples of materials and equipment.
5. Furnish storage and assistance as requested.
6. Facilitate inspections and tests.
7. Notify the City to coordinate for City furnished special inspectors (if required) or Quality Assurance inspection (at the discretion of the City) in writing a minimum of 48 hours, excluding weekends and holidays, nor more than 72 hours prior to expected time for operations requiring testing or inspection services.
8. Schedule Work to be tested or inspected to allow tests to be performed within reasonable time period.
9. When a specified test or inspection is not performed due to Contractor's failure to notify the City as specified or when material or workmanship is not ready at the time specified, the City will establish remedial Work and Contractor shall bear cost of remedy.

10. Take steps necessary to ensure no portion of the Work requiring testing or inspection is covered prior to written acceptance by authorized parties.
  11. Ensure that no testing or inspection is scheduled until such times as they are assured that all approvals for the work have been received. This includes welder's certifications, submittals, design/build engineering stamp, and certification.
  12. Contractor shall submit a Certificate of Compliance for all materials incorporated into the Work (as per Section 01 33 00 – Submittal Procedures, subsection 1.11).
- J. Completed Work: Should the City require tests and inspections for completed work that has not been tested or inspected, furnish necessary facilities, labor, and material to uncover or remove Work in question to extent necessary. Contractor shall reconstruct the work after the test or inspection in accordance with the requirements of the Contract Documents.
1. The cost of reconstructing non-conforming work or defective materials shall be at Contractor's expense.

#### 1.10 REQUIREMENTS OF TESTS

- A. Review Specifications Sections for additional requirements for testing and inspection.
- B. Tests referenced shall not be a limitation on City's rights for testing and inspection to verify conformance with Contract Documents.
- C. The Contractor shall provide certified copies of the reports of all tests required in various sections of the Specifications or by Reference Standards. Test results on previously tested products or materials shall be accompanied by notarized certificates from the manufacturer certifying that previously tested products or materials are of the same type, quality, make, and manufacture as those proposed for use on this Contract.
- D. Test reports shall clearly state if the item is in compliance or is not in compliance with the Contract.

#### PART 2 - PRODUCTS (Not Used)

#### PART 3 – EXECUTION

##### 3.1 EXAMINATION

- A. Verify existing site conditions and substrate surface are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.
- B. Verify existing substrate is capable of structural support or attachment of new Work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Verify utility services are available, of correct characteristics, and in correct locations.

END OF SECTION

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## SECTION 01 50 00

## TEMPORARY FACILITIES AND CONTROLS

## PART 1 - GENERAL

## 1.1 SUMMARY

- A. Section Includes:
1. Provide and maintain construction facilities and temporary controls as required to perform the Work; relocate as required by the progress of the Work.
  2. Unless otherwise required by the City, materials for construction facilities and temporary controls may be new or used, and shall be suitable for the purposes intended.
  3. Materials, installation and maintenance of construction facilities and temporary controls shall be in compliance with applicable regulatory requirements.
  4. Maintain construction facilities in sound, neat and clean condition. Remove any graffiti and repair any vandalism to the satisfaction of the City.
  5. Remove construction facilities and controls, including associated utilities and equipment, when their use is no longer required.
- B. Related Sections:
1. Section 01 71 33 - Protection of Adjacent Construction.
  2. Section 01 77 00 - Closeout Procedures.

## 1.2 OPERATION HOURS FOR TEMPORARY CONTROLS

- A. Provide and maintain temporary pumping, piping, power, lighting, controls, instrumentation, alarms, security devices, and all required safety devices at all times. Such items shall be made available for immediate use when Contractor's operations impact existing systems.

## 1.3 TEMPORARY ELECTRICITY

- A. Provide and pay for electrical service and weatherproof, grounded distribution system of sufficient size, capacity, and power characteristics during the construction period. Existing on-site City electrical facilities are not available for contractor's use.

## 1.4 TEMPORARY LIGHTING

- A. Provide and maintain lighting for construction operations, including power to distribution boxes. Required illumination may be provided by approved cord sets with lamp guards. Provide and maintain temporary lighting whenever new permanent lighting fixtures are switched over from existing lighting.

## 1.5 TELEPHONE SERVICE

- A. The Contractor shall provide, maintain and pay for telephone service to Contractor's field office from the time of project mobilization.

## 1.6 TEMPORARY WATER SERVICE

- A. Potable Water: Arrange with the San Francisco Water Department to provide potable water obtained by connecting to City water systems.
1. Contact the Water Department at 415-923-2400 for arranging such water service.

2. Water is available from fire hydrants located in the streets. Obtain permission from the San Francisco Fire Department to use hydrants.
  3. Pay the costs of connection fees, meters, and all water furnished by the San Francisco Water Department under the water service account established above.
- B. The Contractor is advised that Ordinance # 175-91, Article 21, Section 1100 to 1107 of the San Francisco Municipal Code (Public Works Code), restricts the use of potable water for soil compaction or dust control activities, to the extent not directly in conflict with any applicable federal, state and local law.
1. In consideration for potential health concerns, an exemption may be allowed for the use of potable water for soil compaction or dust control activities when human contact and exposure exists. Such exemption will be considered and may be granted on a case by case basis.
  2. Should the Contractor seek to use potable water for soil compaction or dust control activities, the Contractor, shall apply for, and obtain an exemption pursuant to Ordinance #175-91, Article 21, prior to its use. The application for such use of potable water is to be sent to the Department of Public Health, Environmental Health Section, 1390 Market St., Room 910, San Francisco, CA 94102, Telephone 415-252-3945. Permission for such use may be granted by the General Manager of the Water Department, pursuant to Ordinance #175-91, Article 21.
- C. Reclaimed Water: Arrange with the SEWPCP to provide reclaimed water for soil compaction and dust control which is available at no cost to Contractor at the SEWPCP from 8:00 A.M. to 5:00 P.M. on weekdays and Saturdays.
1. Arrangements can be made for access to reclaimed water at other times.
  2. A permit is required to obtain reclaimed water from the City. Contact [mfisher@sfwater.org](mailto:mfisher@sfwater.org) and/or (415) 695-7378 at least three (3) days prior to the date that reclaimed water is required. See <http://sfwater.org/modules/showdocument.aspx?documentid=7234> for more information.
- D. The Contractor shall be required to provide his own water tanker and hoses. Contractor's hoses crossing traveled roadways shall be buried beneath the roadway or ramped over.
- E. Provide and maintain distribution piping, water tankers, hoses, and all appurtenances necessary to supply water at the job site.
1. Bury pipe crossing traveled roadways beneath the roadway. Use hose or ramp over temporary piping on roadway surfaces.

#### 1.7 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required toilet facilities and enclosures. Location of facilities shall be a minimum of 50 feet away from City Representative's Field Office or approved by the City Representative in the field.
- B. The Contractor shall be responsible to provide and maintain all construction facilities, temporary controls, and temporary utilities as required to perform the work of this Contract. The Contractor shall arrange with the utility agencies to provide and pay for such utility services required, including furnishing, installing and removing on completion of all work all temporary connections to said utilities.
- C. The Contractor shall provide and maintain temporary toilet facilities and enclosures as required at no cost to the City.

### 1.8 TEMPORARY SANITARY FACILITIES FOR PUBLIC USE

- A. In addition, the Contractor shall provide and maintain **2 toilet facilities** and enclosures for the Public's use only. Location of facilities to be approved by the City Representative in the field. Each facility shall be ADA compliant, with ADA compliant access. The Contractor shall provide daily maintenance to include daily cleaning of each facility.
- B. The Contractor shall be responsible to provide and maintain all construction facilities, temporary controls, and temporary utilities as required to perform the work of this Contract. The Contractor shall arrange with the utility agencies to provide and pay for such utility services required, including furnishing, installing and removing on completion of all work all temporary connections to said utilities.
- C. The Contractor shall provide and maintain temporary toilet facilities and enclosures as required at no cost to the City.

### 1.9 TEMPORARY CONSTRUCTION FENCE

- A. The Contractor shall furnish and install a temporary 6'-0" chain link construction fence with lockable gates at the limit of work and at areas to isolate and protect the public from hazardous conditions during construction.
- B. Provide fencing as needed to prevent unsafe entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations.
- C. Protect vehicular traffic, stored materials, site and structures from damage.

### 1.10 TEMPORARY ENCLOSURES

- A. Provide temporary enclosure for protection of construction in progress and completed, from exposure, foul weather, other construction operations and similar activities.
  - 1. Where heat is needed and the permanent building enclosure is not complete, provide temporary enclosures where there is no other provision for containment of heat. Coordinate enclosure with ventilating and material drying or curing requirements to avoid dangerous conditions and effects.
  - 2. Install tarpaulins securely, with incombustible wood framing and other materials. Close openings of 25 square feet or less with plywood or similar materials.
  - 3. Close openings through floor or roof decks and horizontal surfaces with load-bearing wood-framed construction.

### 1.11 MAINTENANCE OF THE WORK AREA

- A. Maintain the work areas in a safe condition, remove all accumulations of rubbish (Contractor's waste and public refuse) and surplus materials at the end of each working day, restore them to a condition equal to that which existed prior to the start of work, and leave them at completion of the contract in a clean, orderly fashion.
- B. Demolished concrete, deteriorated masonry, cleared vegetation, and excavated material not indicated for reuse shall be removed from the site at the end of each working day without delay and disposed of in a legal manner.
- C. Cleaning During Construction: Control accumulation of waste materials and rubbish; collect waste from construction areas and elsewhere daily. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly.
  - 1. Clean interior spaces prior to the start of finish work; maintain areas free of dust and other contaminants during finishing operations.

2. Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material off-site in a lawful manner.
3. Maintain the site and all adjacent public areas in a clean and orderly condition. Maintain the site, equipment, fences and signs free of graffiti. Remove all graffiti daily using methods which cause no damage to the work or existing facilities.
4. Sweep all pedestrian walkways and dispose of debris around the site perimeter on a daily basis.

#### 1.12 DRAINAGE CONTROL

- A. Grade site to drain. Maintain excavations free of standing water.
- B. Provide, operate, and maintain pumping equipment as needed to control water at the site.
- C. Protect site from erosion caused by flowing water.

#### 1.13 CONFINED SPACE ENTRY

- A. It is the responsibility of the Contractor to provide all equipment or assistance to make the confined space safe for entry by the Engineer or his representative per The California Administration Code, Title 8, and General Industry Safety Orders Entitled "Confined Spaces".

#### 1.14 TEMPORARY PROJECT SIGN(S)

- A. Project sign image and layout shall conform to the graphical layout and color approved by the City. Refer to the draft project sign appended to this Section 01 50 00 for sample layout and image. The City will provide the final graphical image of the project sign(s) in digital format to the Contractor prior to Notice to Proceed.
  1. The Contractor shall install **a total of 4 projects signs** at the limits of work facing traffic with **2** project signs in accordance with Paragraph H and and **2** project signs in accordance with Paragraph I below, respectively.
  2. For paving and utility construction projects, project sign(s) shall not obstruct or interfere with the operation of all traffic control devices. Project sign(s) shall be placed as directed by the City Representative and shall follow these general guidelines:
    - a. At each location of the Work not exceeding 5 adjacent blocks, place one sign at either end of the block facing oncoming traffic, or facing away from the limit of work on one-way streets.
    - b. At each location of the Work exceeding 5 adjacent blocks, place one sign at either end of the limit of work facing oncoming traffic, and at intermediate locations not to exceed 5 block intervals with one sign placed on either side of the street facing oncoming traffic, or at opposite directions on one-way streets.
- B. The Contractor shall obtain the City Representative's approval of the proposed location(s), height, and mounting details for each project sign. The project sign(s) may be mounted on construction fence, face of wall, or on posts.
- C. Contractor shall submit a mock-up of the project sign in color, on bond paper, 11x17 size, to the City Representative for approval prior to fabrication.

- D. After approval of the mock-up sign by the City, the Contractor shall install the required project sign(s) within 14 days, or as directed by the City Representative.
- E. The Contractor shall maintain project sign(s) in good condition for the duration of the contract.
- F. After substantial completion, Contractor shall remove each project sign from the site as its property, and restore area per plans or as directed by the City Representative at no additional cost to the City.
- G. Damaged project sign that cannot be repaired on site shall be replaced at no additional cost to the City.
- H. **ONESF Project Sign Fabrication**
  - 1. Size: Project sign shall be 4-feet by 6-feet.
  - 2. Printing Specifications and Digital File: Project sign(s) shall match the final graphical layout provided by the City, including the colors and fonts. For more information, refer to the latest Sign Guidelines available from the following website: <http://onesanfrancisco.org/> (Click on "Data + Resources > Signage and Style Guide")
    - a. The design of the Contractor furnished project sign(s) shall be in strict accordance with the 'ONESF' Guidelines established by the City.
    - b. For further assistance, contact Heather Green of the Office of Resilience and Capital Planning at (415) 554-5162 or [heather.green@sfgov.org](mailto:heather.green@sfgov.org).
  - 3. Mounting Material: Project sign shall be mounted on Medium Density Overlay board (MDO), at least 3/4-inch thick.
  - 4. Printing: Project sign shall be printed on a 4-color CMYK printer.
  - 5. Coating: Use UV and Anti-Graffiti coatings.
  - 6. Quality: Project sign shall last the entire construction duration.

#### 1.15 TEMPORARY TOW AWAY/NO-PARKING SIGNAGE

- A. On January 1, 2017, temporary occupancy permits and all other permits that include tow-away signage, aside from excavation permits activated through 311, will not be activated and permittees will not have tow away rights unless and until time and date stamped photos evidencing that signage was posted in the correct location a minimum of 72 hours prior to the time at which the parking restrictions are to become effective under the permit have been uploaded to the San Francisco Public Works, Bureau of Street Use and Mapping (SFPW/BSM) Tow-Away Sign Database. See Appendix B – Tow-Away Sign Activation and Photo Upload Process.
- B. The Contractor is advised that Sign Ordinance PWC Article 15, Section 724 which will require the applicant (Contractor) to input the amount of right of way they will occupy during construction activities for a specific permit, to be issued by SFPW/BSM for all work in the Public Right-of-Way. The Contractor shall enter times of operation during construction with the proposed start and end times and specific calendar days. This information will be printed on the tow-away signs. Refer to Tow Away Manual at <http://www.sfpw.org/sites/default/files/4506-Tow-Away%20User%20Guide.pdf>.
  - 1. The location of the Construction Zone will be entered as part of the excavation permit, which will include the length of occupancy (distance in linear feet). This information and date. Once a permit has been approved, the applicant is

informed off the approval via email and will be provided a hyperlink to create/modify the tow/away signs prior to printing.

2. The information required at time of permit will update the database and will validate that the total linear footage of construction occupancy does not exceed 1,200 linear feet. Upon completion of any adjustment to the tow-away signs, the applicant can determine which street segment to print out and may choose to either print one of two general tow-away sign template or request the Department of Public Works to print the tow-away signs. The Contractor shall pay for the printing of each sign.
3. Size: Tow-Away/No-Parking Signs shall be 11' wide x 17' tall.
4. Digital File: Project sign shall match the final graphical layout provided by the City, including the colors and fonts. The design of the Contractor furnished project signs shall be in strict accordance with the DPW Order for Towaway Signs located at: <http://sfpublicworks.org/sites/default/files/4508-TowAway-2015-Template.pdf>.
  - a. Contract shall use only paper types which shall be waterproof durable; tear resistant' with laser paper labels type and templates: 11 x 17 10 PT CV, 215 grams/m<sup>2</sup>
5. Printing: Project sign can be printed on a Xerox Phaser 7800, or equivalent that can print 11x17 120-130 lb paper. All Tow-Away/No-Parking Signs shall be secured and paid for by the Contractor.
6. The Contractor shall maintain Tow-Away/No-Parking Sign (s) in good condition as needed throughout the duration of the Contract.
7. After substantial completion, Contractor shall remove each Tow-Away/No-Parking Sign from the site as its property.
8. Damaged Tow-Away/No-Parking Sign that cannot be repaired on site shall be replaced at no additional cost to the City.

#### 1.16 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary above grade or buried utilities, construction equipment, temporary structures and facilities, unused materials, rubbish and debris prior to Final Inspection. Restore facilities to conditions prior to construction, to the satisfaction of the City.
- B. Clean and repair damage caused by installation or use of temporary work.
- C. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.
- D. Remove field offices and temporary utility services from the Site.

1.17 STORAGE AND STOCKPILING

- A. The Contractor shall make its own arrangements for off-site storage or shop areas and off-site construction parking facilities. On-site storage shall be limited to materials and equipment currently being installed or utilized.
- B. If necessary, the Contractor shall arrange for temporary off-site storage of equipment and materials at his discretion. No additional compensation shall be provided from the City.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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# ONESF

Building Our Future

onesanfrancisco.org

[ PROJECT TITLE ]

[ Contract No. ]

BEGINS: [MONTH / YEAR]

COMPLETION: [MONTH / YEAR]

Funded by [ Name of Program ]

MORE INFORMATION:

Please visit us at  
[www.sfpublicworks.org](http://www.sfpublicworks.org)

CONTACT:

San Francisco Public Works  
628-XXX-XXXX  
email address

AFTER HOURS:

[Contractor's Name]  
XXX-XXX-XXXX

A PROJECT OF THE CITY'S TEN-YEAR CAPITAL PLAN  
There is only one San Francisco and we're taking care of it.



This project is brought to you by:



MAYOR  
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Dean Preston  
Matt Haney  
Norman Yee\*  
Rafael Mandelman  
Hillary Ronen  
Shamann Walton  
Ahsha Safai



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Beginning on January 1, 2017, temporary occupancy permits and all other permits that include tow-away signage, aside from excavation permits activated through 311, will not be activated and permittees will not have tow-away rights unless and until time and date stamped photos evidencing that signage was posted in the correct location a minimum of 72-hours prior to the time at which the parking restrictions are to become effective under the permit have been uploaded to the Bureau of Street-Use and Mapping Tow-Away Sign Database.



### San Francisco Public Works

1155 Market Street, 3rd Floor  
San Francisco CA, 94103  
Phone: (415) 554-5810  
Fax: (415) 554-6161

Processing Hours: 7:30 AM-4:00 PM  
Monday through Friday, except official holidays



Contact 311 for complaints

# Tow-Away Sign Activation and Photo Upload Process



[www.sfpublicworks.org](http://www.sfpublicworks.org)

# Public Works Tow-Away Sign Activation and Photo Upload Process

EFFECTIVE  
DATE: January 1,  
2017

## PERMITS AFFECTED:

The tow-away sign activation and photo upload process change is applicable to all temporary occupancy permits and all other permits that include tow-away signage.

**Excavation permits activated through 311 will not be impacted.**

## ACTIVATION AND PHOTO UPLOAD PROCESS:

**STEP 1:** Request a street space permit from Public Works.

**STEP 2:** Once permit is approved a link for tow-away signs will be provided via email along with a link to the Bureau of Street-Use and Mapping tow-away sign database.

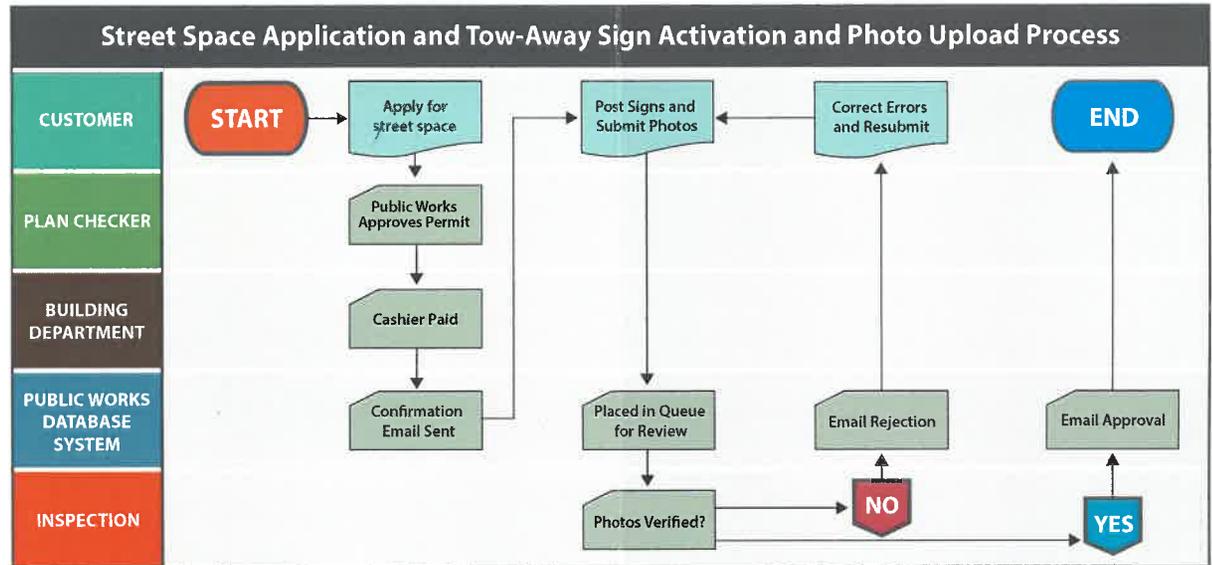
**STEP 3:** Print signs and post them at the permitted location every 20 feet no less than 72 hours in advance of the time the parking restrictions are to become effective.

**STEP 4:** Click on the link provided in the confirmation email and take photos showing the placement of the signs.

**STEP 5:** Click submit and the photos will be submitted to Bureau of Street-Use and Mapping for review.

**STEP 6:** A confirmation email will be sent stating the photos were accepted, the permit is active, and tow-away rights are reserved.

**NOTE:** If photos are inadequate, you will receive a rejection email identifying the deficiencies to be corrected.



## PHOTO REQUIREMENT 1:

A scene-setting photo clearly showing the signs are posted in the permitted location every 20 feet.



## PHOTO REQUIREMENT 2:

A close-up photo of a tow-away sign that enables essential information on the sign to be confirmed.



## SECTION 01 57 26

## TEMPORARY PROTECTION OF CATCH BASINS AND STORM DRAIN INLETS

## PART 1—GENERAL

## 1.01 DESCRIPTION

- A. Documenting and protecting catch basins and storm drain inlets as incidental work.

## 1.02 RELATED SECTIONS

- A. 01 71 33 - Protection of Adjacent Construction
- B. 02 41 00 - Demolition
- C. 31 23 19 - Dewatering
- D. 31 23 33 - Trenching and Backfilling
- E. 32 01 16.71 - Cold-Milling Asphalt Paving
- F. 32 12 16 - Asphalt Paving

## PART 2—PRODUCTS

## 2.01 MATERIALS

- A. Contractor shall provide all labor and materials necessary to protect debris from entering the sewer system.

## PART 3—EXECUTION

## 3.01 PREPARATION

- A. The Contractor shall photograph all catch basins within the limits of work. Each catch basin shall have at least two photos, one from the top view and one from the side view along the flow line. Refer to Section 01 71 33-1.6B.
- B. Contractor shall notify the City Representative of any clogged catch basin or storm water inlet immediately upon discovery.
  - 1. Call SFPUC Sewer Operations at 415-695-2096 to report catch basins or storm water inlets containing debris in the barrels and/or cast iron traps.

## 3.02 DRAINAGE PROTECTION

- A. Contractor shall be responsible for protecting and keeping in operation all storm water inlets and catch basins throughout the entire project site for the duration of the project until Final Acceptance.
- B. Contractor shall take adequate measures to prevent the impairment of the operation of the sewer system. Contractor shall prevent construction material, pavement, concrete, earth, paints, thinner, solvents, and other debris or toxic material from entering a sewer or sewer structure including surface flow collection system, such as catch basins and culverts.
- C. Prior to the final inspection and acceptance, the Contractor shall check all storm water inlets and catch basins within the project limits for debris.

END OF SECTION

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SECTION 01 60 00  
PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 INCLUDED WORK

- A. Section includes procedures and requirements for material and equipment.

1.2 PRODUCTS

- A. Material and equipment incorporated in the Work shall be new, unless otherwise specified or indicated; in a condition acceptable to the City; and suitable for the use intended.
  - 1. Products may also include existing materials or components required for reuse.
- B. No material or equipment shall be used for any purpose other than that for which it is designed, specified, or indicated.

1.3 QUALITY ASSURANCE

- A. Include within Contractor's quality assurance program procedures for full protection of work and materials.

1.4 MANUFACTURER'S SERVICES

- A. Require material suppliers and product manufacturers to provide site representation on the request of the City for qualifying and verifying the use of their materials for the project purpose and conditions. Refer to Section 01 33 00 - Submittal Procedures for submittal requirements regarding manufacturer's instructions and certificates of satisfactory installation.

1.5 MANUFACTURERS' RECOMMENDATIONS

- A. Except as otherwise approved by the City, determine and comply with manufacturers' recommendations on product handling, storage, and protection.

1.6 DELIVERY

- A. Transport and handle products in accordance with manufacturer's instructions.
- B. Transport and deliver manufactured products, undamaged, in manufacturer's original, unbroken containers or packaging, clearly identified with manufacturer's name, product name, and instructions.
- C. Handle products to avoid soiling and damaging the products and their packaging.
- D. Immediately upon delivery, inspect shipments to assure compliance with the Contract Documents and reviewed submittals, and to verify that products are undamaged and properly protected from potential damage.
  - 1. Undamaged products shall be delivered to the project site in manufacturer's sealed containers or wrappings with legends and labels intact. Maintain packaged materials with seals unbroken and labels intact until time of use.
  - 2. Promptly remove damaged material and unsuitable items from the job site, and

- promptly replace with material meeting the specified requirements at no increase in Contract Sum.
3. Unsuitable materials and products not removed promptly from the job site by Contractor may be removed by the City. Removal costs shall be paid by Contractor.
  4. Identify materials and equipment delivered to the site to permit checking against Submittals and Shop Drawings.
- E. The City may reject as non-complying such material and products that do not bear identification satisfactory to the City as to manufacturer, grade, quality, and other pertinent information.

## 1.7 STORAGE

- A. Store materials and equipment at the site at Contractor's own risk. Because of location and visibility, on site storage shall be limited to materials and equipment currently being utilized or installed.
- B. Provide off-site storage and protection when site does not permit on-site storage or protection.
- C. Store and protect products in accordance with manufacturer's instructions, with seals and labels intact and legible.
- D. Store sensitive products in weather tight, climate controlled enclosures.
- E. Store fabricated products above the ground, on blocking or skids, to prevent soiling and staining of the products.
- F. Provide off-site storage and protection when site does not permit on-site storage or protection.
- G. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation or potential degradation of product.
- H. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- I. Arrange storage to facilitate inspection of products. Periodically inspect stored products to assure that products are maintained under specified conditions and free from damage and deterioration.
- J. Store products subject to damage from the elements in weather tight enclosures, maintaining temperature and humidity within the ranges specified by the manufacturers.
- K. Provide coverings as necessary to protect installed products from damage from traffic and construction operations; remove coverings when no longer needed.
  1. Take care to use protective covering and blocking materials which do not soil, stain, or damage materials being protected.

## 1.8 HANDLING

- A. Use means necessary to protect the materials of this Section before, during and after installation and to protect the installed work and materials of other trades.
  1. Protect finished surfaces, including jambs and soffits of openings used as passageways, through which equipment and materials are handled.

2. Provide protection for finished floor surfaces in traffic areas prior to allowing equipment or material to be moved over such surfaces
  3. Maintain finished surfaces clean, unmarred, and suitably protected until accepted by the City.
- B. Clean exposed materials at the time of acceptance of the installation for Substantial Completion.

#### 1.9 REPAIRS AND REPLACEMENTS

- A. Promptly replace lost or damaged materials and equipment with replacements of like kind and quality or repair them at no additional cost to the City.
- B. Damage to any of the work and premises prior to acceptance by the City is the responsibility of Contractor. Should any new equipment become damaged, restore it to its original condition, and finish before final acceptance. Replace or repair damage to City property and to the work of other Divisions, caused by the work of this Division at the expense of, Contractor and to the City's satisfaction.
- C. Additional time required to secure replacements and to make repairs will not justify an extension in the contract time of completion.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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SECTION 01 71 23  
FIELD ENGINEERING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes requirements and procedures for field engineering services to establish elevations and slopes required to layout the proposed design.

1.2 RELATED SECTIONS

- A. Section 01 77 00 - Closeout Procedures: Project Record Documents.

1.3 QUALITY CONTROL

- A. The Contractor shall employ a civil engineer or land surveyor registered in the State of California and acceptable to the City Representative to perform site surveying under the Contract Documents.
- B. The Contractor shall submit evidence of Surveyor's Errors and Omissions insurance coverage in the form of an Insurance Certificate.

1.4 SUBMITTALS

- A. Submit name, address, and telephone number and state registration number of the Surveyor before starting survey work.
- B. Submit a copy of site drawing, and a certificate that the elevations and locations of the Work are in conformance with Contract Documents, all prepared, stamped and signed by the surveyor.

1.5 PROJECT RECORD DOCUMENTS

- A. Maintain a complete and accurate log of control and survey work as it progresses.
- B. Submit Record Documents under provisions of Section 01 77 00 - Closeout Procedures.

1.6 EXAMINATION

- A. Verify locations of survey control points prior to starting work.
- B. Promptly notify the City Representative in writing of any discrepancies discovered.

1.7 SURVEY REFERENCE POINTS

- A. Control datum for survey is that established by City provided survey. The Contractor shall use the City of San Francisco benchmarks. Benchmark information is available from the Bureau of Street Use & Mapping at 49 S. Van Ness Avenue, Suite 300, San Francisco, CA 94103.
- B. Contractor to locate and protect survey control points prior to starting site work; preserve permanent reference points during construction.

- C. Promptly report to City Representative the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.
- D. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to City Representative.

#### 1.8 SURVEY REQUIREMENTS

- A. Provide field-engineering services, using recognized engineering survey practices.
- B. Establish a minimum of one permanent benchmark on site, referenced to established control points. Record locations with horizontal and vertical data on Project Record Documents.
- C. Establish elevations, lines and levels. Locate and layout by instrumentation and similar appropriate means:
  - 1. Site improvements including pavements; stakes for grading, fill and topsoil placement; utility locations, slopes, and invert elevations.
  - 2. Grid or axis for irrigation work.
- D. Periodically verify layouts by same means.

#### 1.9 FIELD LAYOUT

- A. Dimensions, radii, etc., shown on the Drawings for field layout are approximate and are subject to adjustments to accommodate field conditions; smoothness of alignment and profiles supersede dimensions shown. Layout shall be done by the Contractor at its own expense and shall be approved by the City Representative prior to the start of any construction.

#### 1.10 ELEVATION CONTROL

- A. Comply with ADAAG's 5% or less grade requirement for landscape work and pathways.

#### 1.11 LINE AND GRADE FOR THE WORK

- A. The City will furnish the Contractor information on Monuments that will be used for line control and on Benchmarks, including City Datum elevations, which will be used for elevation control. All other lines and grades required for the completion of the work according to the plans shall be the responsibility of the Contractor and shall be obtained by him as Incidental Work. The City reserves the right to make minor line and grade changes of uncompleted work at any time before or after start of construction without claim by the Contractor for extra payment.
- B. A copy of the Contractor's survey notes shall be given to the City Representative weekly.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 73 29  
CUTTING AND PATCHING

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Requirements and limitations for cutting and patching of Work.

1.2 RELATED SECTIONS

- A. Section 01 11 00 – Summary of Work
- B. Section 01 31 13 – Project Coordination
- C. Section 01 25 13 – Product Substitution Procedures

1.3 DEFINITION

- A. "Cutting and Patching" is defined to include the cutting and patching of nominally completed and previously existing concrete, steel, wood and miscellaneous metal structures; piping; and pavement in order to accommodate the installation and coordination of work required under the Contract Documents, to uncover facilities and structures for access or inspection, or to obtain samples for testing or similar purposes.

1.4 REQUIREMENTS OF STRUCTURAL WORK

- A. Do not cut and patch structural work in a manner resulting in a reduction of load-carrying capacity or load/deflection ratio.
- B. Prior to cutting and patching the following categories of work, obtain the City Representative's approval to proceed:
  - 1. Structural concrete
  - 2. Structural steel
  - 3. Foundation construction
  - 4. Bearing and retaining walls
  - 5. Structural decking
  - 6. Timber and primary wood framing
  - 7. Miscellaneous structural metals, including equipment supports, stair systems, and similar categories of work
  - 8. Pressurized piping, tanks and vessels

1.5 OPERATIONAL AND SAFETY REQUIREMENTS

- A. Do not cut and patch operational elements and safety-related components in a manner resulting in a reduction of capacities to perform in the manner intended or resulting in decreased operational life, increased maintenance, or decreased safety.
- B. Obtain the City Representative's approval to proceed prior to cutting and patching the following categories of work:
  - 1. Sheeting, shoring, and cross bracing
  - 2. Operating systems and equipment
  - 3. Water, moisture, vapor, air, smoke barriers, membranes and flashings
  - 4. Noise and vibration control elements and systems

5. Control, communication, conveying and electrical wiring systems

1.6 SUBMITTALS

- A. Submit written request in accordance with Section 01 33 00 in advance of cutting or alteration which affects:
1. Structural integrity of any element of project work or retained adjoining structure.
  2. Integrity of weather-exposed or moisture-resistant element.
  3. Efficiency, maintenance, or safety of any operational element.
  4. Work of City or separate contractor.
  5. Visual qualities of sight exposed elements.
- B. Request shall include the following:
1. Identification of project work.
  2. Location and description of affected work.
  3. Necessity for cutting or alteration.
  4. Description of proposed work, and products to be used including:
    - a. Scope of cutting, patching, alteration or excavation.
    - b. Trades to execute work.
    - c. Products proposed to be used.
    - d. Extent of refinishing to be included.
    - e. How structural elements will be reinforced.
  5. Cost proposal, when applicable.
  6. Alternatives to cutting and patching.
  7. Effect on work of City or separate contractor, or on structural or weatherproof integrity of retained structures or work.
  8. Written permission of affected separate contractor.
  9. Date and time work will be uncovered or executed.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Except as otherwise indicated, provide materials for cutting and patching which will result in equal or better work than the work being cut and patched in terms of performance characteristics and including visual effects where applicable. Use material identical with the original materials where feasible.
- B. Primary Products: Materials shall comply with the requirements of the Technical Specifications and Drawings or those required for original installation where applicable.
- C. Product Substitution: For any proposed change in materials, submit request for substitution under provisions of Section 01 25 13.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Inspect existing conditions prior to commencing Work, including elements subject to damage or movement during cutting and patching.
- B. After uncovering existing work, inspect conditions affecting performance of work.
- C. Beginning of cutting or patching means acceptance of existing conditions.

- D. Report unsatisfactory or questionable conditions to the City Representative in writing; do not proceed with work until City Representative has provided further instructions.

### 3.2 PREPARATION

- A. Provide temporary supports to ensure structural integrity of the Work. Provide devices and methods to protect other portions of work from damage.
- B. Provide protection from elements for areas which may be exposed by uncovering work.
- C. Maintain excavations free of water.

### 3.3 INSTALLATION

- A. Employ skilled tradesmen to perform cutting and patching. Except as otherwise indicated, proceed with cutting and patching at the earliest feasible time and perform the work promptly.
- B. Use methods least likely to damage work to be retained and work adjoining.
  - 1. In general, where physical cutting action is required, use sawing and grinding tools and not hammering and chopping tools. Openings through concrete work shall be core drilled.
  - 2. Comply with the requirements of the Technical Specifications and Drawings wherever applicable.
  - 3. Comply with requirements of the applicable sections of Division 2 where cutting and patching requires excavating and backfilling.
- C. Patch with seams which are not visible and comply with specified tolerances for the work.
- D. Restore exposed seams of patched area; and, where necessary, extend finish restoration onto retained work adjoining, in a manner which will eliminate evidence of patching.

END OF SECTION

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## SECTION 01 74 50

CONSTRUCTION & DEMOLITION DEBRIS RECOVERY PLAN  
(Rev. 6/18/2020)

## PART 1 - GENERAL

## 1.1 SUMMARY

- A. This section governs the recovery of construction and demolition debris.
- B. In October 16, 2006, the San Francisco Mayor issued Executive Directive 06-05 requiring all Construction Contracts to divert 75% of construction and demolition debris from landfill disposal sites. This directive is supported by existing policies that require reuse, recycling, and management of construction and demolition debris. Some of these policies are described below.
- C. The City and County of San Francisco adopted an ordinance (No. 27-06) that creates a mandatory program to maximize the recovery of all construction and demolition debris.
  - 1. The Ordinance requires that mixed construction and demolition debris material be transported off-site by a Registered Transporter and taken to a Registered Facility.
  - 2. Material source separated at the job site should be taken to a facility that reuses or recycles such material.
  - 3. This ordinance applies to all construction projects within the City and County of San Francisco, such as new construction, remodels, tenant improvements, additions, repairs, and full and partial demolitions.
  - 4. This ordinance prohibits any construction and demolition debris from being placed in trash or sent directly to a landfill.
- D. Chapter 7 of the San Francisco Environment Code requires the Contractor to prepare and submit a Construction and Demolition Debris Management Plan, Construction and Demolition Debris Recovery Monthly Summary of Diversion Reports, and Construction and Demolition Debris Recovery Final Diversion Report in accordance with the submittal requirements specified below (Paragraphs 1.5, 1.6 and 1.7). This requirement applies to all Construction and/or Demolition Projects at City-owned Facilities and City leaseholds, located within the nine counties surrounding the San Francisco Bay, regardless of the size of the project.
- E. Chapter 5 of the San Francisco Environment Code requires the Contractor to reduce wastes by maximizing the use of recycled content materials, recycling, and reuse. Failure of the Contractor to comply with any of its requirements shall be deemed a material breach of contract.
- F. The Mandatory Recycling and Composting Ordinance, Chapter 19 of the San Francisco Environment Code, requires that all persons in San Francisco must source separate their refuse into recyclables, compostables and trash, and place each type of refuse in a separate container designated for disposal of that type of refuse. No person may mix recyclables, compostables or trash, or deposit refuse of one type in a collection container designated for another type of refuse.

- G. California Integrated Waste Management Act of 1989 (AB 939) established the procedures for the Highest and Best Use practices to reduce, recycle, and reuse materials.
- H. State regulations require that Universal Wastes and Treated Wood Wastes be handled and disposed of in accordance with the requirements of the California Department of Toxic Substances Control and all applicable laws.
- I. Contractor shall perform all work and meet all requirements in this Section at no additional cost to the City.
- J. Related Requirements:
  - 1. Section 01 50 00 -Temporary Facilities and Controls
  - 2. Section 01 77 00 - Closeout Procedures

## 1.2 REFERENCES

- A. Mayor's Executive Directive 06-05, Recycling and Resource Conservation, October 16, 2006.
- B. San Francisco Ordinance No. 27-06 (Construction and Demolition Debris Recovery Ordinance) with effective date on July 1, 2006.
- C. San Francisco Department of the Environment Regulation #SFE-5-78-CDO, Regulations Implementing the Construction and Demolition Debris Recovery Ordinance (Ordinance No. 27-06)
- D. San Francisco Environment Code, Chapter 5, Resource Conservation Ordinance.
- E. San Francisco Environment Code, Chapter 7, Green Building Requirements for City Buildings.
- F. San Francisco Department of the Environment Regulation #SFE13-03-GB, Regulations Implementing Green Building Requirements for City Buildings Ordinance (Ordinance No. 204-11, amending San Francisco Environment Code, Chapter 7, Section 700 through 713)
- G. San Francisco Environment Code, Chapter 19, Mandatory Recycling and Composting.
- H. California Integrated Waste Management Act of 1989 (California Public Resources Code 40000 et. seq.) - Assembly Bill 939.
- I. Not Used
- J. Universal Waste information from the following website:  
<https://www.calrecycle.ca.gov/HomeHazWaste/uwaste>
- K. Treated Wood Waste Fact Sheet from the following website:  
<https://dtsc.ca.gov/toxics-in-products/treated-wood-waste-information-and-fact-sheets/>
- L. San Francisco Board Of Supervisors Resolution Nos. 530-04 and 679-02 establishing a zero waste goal.
- M. Food Service Waste Reduction Ordinance as set forth in San Francisco Environment Code Chapter 16.

- N. Refuse Collection and Disposal Ordinance, adopted November 8, 1932.

### 1.3 DEFINITIONS

- A. Alternative Daily Cover (ADC): Materials, other than soil, that have been approved by the California Department of Resources Recycling and Recovery ("CalRecycle") or a successor agency for use as a temporary overlay on an exposed landfill face.
- B. Beneficial Reuse: The reuse of material at a landfill that does not include ADC but does include use of materials for the following purposes: alternative intermediate cover; final cover foundation layer; liner operations layer; leachate and landfill gas collection system; construction fill; road base; wet weather operations pads and access roads; and, soil amendments for erosion control and landscaping. "Beneficial reuse" shall not include disposal of material at a landfill
- C. City-owned Facility: Any building owned by the City and County of San Francisco. "City-owned Facility" includes City-owned facilities or portions thereof that the City leases to non-City entities.
- D. City Leasehold: A building or portion thereof owned by others where the City and County of San Francisco is a tenant.
- E. City Representative: The employee of San Francisco who oversees the construction and/or demolition process for a City construction and/or demolition project and is responsible for ensuring that the contractor complies with all aspects of the contract documents.
- F. Compostable: Any material that can be broken down into, or otherwise become part of, usable compost (e.g., soil-conditioning material) in a safe and timely manner as accepted in San Francisco's compostables collection program, such as food scraps, soiled paper and plant trimmings.
- G. Construction and Demolition Debris or C&D Debris: Building materials and solid waste generated from construction and demolition activities including, but not limited to, fully cured asphalt, concrete, brick, rock, soil, lumber, gypsum wallboard, cardboard and other associated packaging, roofing material, ceramic tile, carpeting, fixtures, plastic pipe, metals, tree stumps, and other vegetative matter resulting from land clearing and landscaping for construction, deconstruction, demolition or land developments. This term does not include refuse regulated under the 1932 Refuse Collection and Disposal Initiative Ordinance or sections of the Municipal Code that implement the provisions of that ordinance or materials from the public right-of-way. Hazardous material, as defined in California Health and Safety Code section 25100, et seq., as amended, is not construction and demolition debris.
- H. Construction Project: Any building, planning or construction activity, including demolition, new construction, major alteration, or building additions by a City department at a City-owned Facility or a City Leasehold.
- I. Contractor: The company or person to whom the City awards a contract for a construction and/or demolition project. The Contractor is responsible for complying with all aspects of this Specifications Section and for ensuring that all subcontractors, lower-tier subcontractors and suppliers also comply.

- J. Disposal: The final deposition of material at a legally operating permitted landfill that does not include beneficial reuse or at a permitted transformation facility. A legally operating, permitted landfill includes Class III landfills and inert fills. Disposal of inert materials at inert fills or inert backfill sites does not constitute recycling.
- K. Diversion: Use of material for any purpose other than disposal in a landfill or transformation facility, such as source reduction, reuse, recycling, and composting activities that do not result in material being disposed at permitted landfills and transformation facilities.
- L. Hazardous Material: Hazardous material is a waste with properties that make it potentially dangerous or harmful to human health or the environment. The universe of hazardous materials is large and diverse. Hazardous materials can be liquids, solids, or contained gases. They can be the by-products of manufacturing processes, discarded used materials, or discarded unused commercial products, such as cleaning fluids (solvents) or pesticides. In regulatory terms, a hazardous material is a waste that appears on one of the four RCRA hazardous materials lists (the F-list, K-list, P-list, or U-list) or that exhibits one of the four characteristics of a hazardous material - ignitability, corrosivity, reactivity, or toxicity. However, materials can be hazardous materials even if they are not specifically listed or don't exhibit any characteristic of a hazardous material. For example, "used oil," products which contain materials on California's M-list, materials regulated pursuant to the mixture or derived-from rules, and contaminated soil generated from a "clean up" can also be hazardous materials. The State Department of Toxic Substances Control offers assistance on this complex topic through its Regulatory Assistance Office. Call 1-800-728-6942 (from within California) or (916) 255-3618 (from out-of-state) or email RAO@dtsc.ca.gov.
- M. Landfill: A facility that (i) accepts for disposal in or on land non-hazardous material such as household, commercial, and industrial waste, and waste generated during construction, remodeling, repair and demolition operations, and (ii) has a valid current solid waste facilities permit from the California Department of Resources Recycling and Recovery (CalRecycle).
- N. Mixed Construction and Demolition Debris Material or Mixed C&D Debris Material: Construction and demolition (C&D) debris or C&D debris that are combined on the project site and hauled away for sorting.
- O. Person: A natural person, a firm, joint stock company, business concern, association, partnership or corporation or, to the extent permitted by law, governmental entity, including the City and County of San Francisco and its departments, boards and commissions for projects within the nine counties surrounding the San Francisco Bay, and its or their successors or assigns.
- P. Recover or Recovery: Any activity, including source reduction, deconstruction and salvaging, reuse, recycling, composting, or anaerobic digestion which causes materials to be recovered for use as a resource and diverted from disposal. Recovery shall not include engineered municipal solid waste conversion.
- Q. Recyclable Material: Any material or product that can be sorted and reconstituted, for the purpose of using the altered form in the manufacture of a new product, as accepted in San Francisco's recycling collection program, such as paper, bottles and cans. Recycling does not include burning, incinerating, converting, or otherwise thermally destroying solid waste.
- R. Recycling: The process of collecting, sorting, cleansing, treating, and reconstituting materials that would otherwise become solid waste, and returning them to the economic

mainstream in the form of raw material for new, reused, or reconstituted products which meet the quality standards necessary to be used in the marketplace. Recycling does not include burning, incinerating, or thermally destroying solid waste, nor shall it include disposal.

- S. Recycling Facility: An operation or person that collects and processes materials for recycling.
- T. Registered Transporter: Anyone who is hired to remove Mixed Construction and Demolition Debris Material from a construction and/or demolition site in San Francisco, using a vehicle with more than two axles or two tires per axle (such as a large pickup truck with four tires on the rear axle or three-axle dump trucks) and is hauling at least one (1) cubic yard of Mixed Construction and Demolition Debris Material and holds a valid registration from the City and County of San Francisco pursuant to Chapter 14 of the Environment Code. A Registered Transporter is obligated to take all mixed material only to a Registered Facility.
- U. Registered Facility: Any facility that accepts Mixed Construction and Demolition Debris Material for processing and recycling and holds a valid registration issued by the City and County of San Francisco pursuant to Chapter 14 of the Environment Code.
- V. Reuse: Using an object or material again either for its original purpose or for a similar purpose without significantly altering the physical form of the object or material.
- W. Source Reduction: Any action which causes a net reduction in the generation of solid waste. Source reduction includes, but is not limited to, reducing the use of non-recyclable materials, replacing disposable materials and products with reusable materials and products, reducing packaging, reducing the amount of yard wastes generated, establishing garbage rate structures with incentives to reduce waste tonnage generated, and increasing the efficiency of the use of paper, cardboard, glass, metal, plastic, and other materials.
- X. Source Separated Materials: Materials that have been separated or kept separate from the solid waste stream, at the point of generation, for the purpose of reuse, recycling or composting in order to return them to the economic mainstream in the form of raw material for new, reused, or reconstituted products which meet the quality standards necessary to be used in the marketplace.
- Y. Solid Waste: Materials designated as non-recyclable and discarded for the purposes of disposal.
- Z. Universal Waste (CCR Title 22, Division 4.5, Chapter 23): Certain specified hazardous materials that are more common and pose a lower risk to people and the environment than other hazardous materials. Universal wastes are handled with reduced management requirements. Examples of universal waste: batteries, fluorescent tubes (lamps), electronic devices (cell phones, computers, televisions), cathode ray tubes (CRTs), mercury wastes (thermometers and toys), and non-empty aerosol cans.
- AA. Treated Wood Waste (CCR Title 22, Division 4.5, Chapter 34): Dimensional lumber and other wood products which have been removed from service and were treated with preserving chemicals that protect the wood from insect attack and fungal decay during its use. Examples include fence posts, sill plates, landscape timbers, pilings, railroad ties, guardrails, and decking. Treated Wood Waste is a hazardous material in California and must be managed according to specific regulations.

- BB. Waste Diversion: a management activity that disposes of waste through methods other than incineration or landfilling. Examples include reuse and recycling.

#### 1.4 GENERAL REQUIREMENTS

- A. Diversion Goal: In order to meet the City's zero waste goal, the goal for this contract is to divert no less than 75% of the construction and demolition debris material from landfill disposal through waste prevention, reuse, and recycling. If a construction site contains hazardous materials and/or universal wastes, the 75% minimum diversion requirement should pertain to all non-hazardous material. No construction and demolition debris material shall be disposed in garbage or taken directly to landfill.
- B. In order for construction and/or demolition debris to be considered hazardous, such as containing asbestos or lead, it shall be evaluated and determined to be hazardous by an independent professional such as a Cal/OSHA Certified Asbestos Consultant. The waste determination and other verification shall be included with the C&D Debris Management Plan (refer to Paragraph 1.5 below), together with a list of hazardous materials found at the project site and plans for proper disposal.
- C. If material at the jobsite is deemed hazardous after the project commences, complete Form A (Request to Send Construction & Demolition Debris Material Directly to Landfill), together with official documentation as noted above in article 1.4B and send signed form to City Representative for approval and to San Francisco's Department of the Environment (SFE) for possible review.
- D. All Hazardous Materials, including Universal Wastes and Treated Wood Waste, shall be documented separately, and a summary of all manifests or other disposal documentation, including material description and weights, shall be provided to the City Representative.
- E. Highest and Best Use: The Contractor shall employ the following hierarchy of highest and best use for handling construction and demolition debris as follows:
1. Implement reduced material usage or reuse of materials before any recycling;
  2. Implement recycling or reuse of source separated material before any recycling of mixed construction and demolition debris material;
  3. Implement recycling of mixed construction and demolition debris material before all other forms of disposal.
- F. Recycling Requirements:
1. Source Separated Materials: The Contractor shall develop and implement procedures for source-separation, to the greatest extent feasible, of the following types of recyclable or reusable materials:
    - a. Asphalt.
    - b. Acoustical ceiling tiles.
    - c. Bricks, stone(s), granite, and other finished stone-type materials.
    - d. Carpet and padding.
    - e. Concrete, concrete block, slump stone (decorative concrete block).
    - f. Corrugated cardboard.
    - g. Dimensional lumber and beams.
    - h. Fixtures, hardware, doors, and windows.
    - i. Metal, ferrous and non-ferrous.
    - j. Mixed Inerts.
    - k. Rigid plastic.
    - l. Soil/dirt/rock.
    - m. Trees, Landscape Debris, cleared vegetation and cut-off or other wood scraps.
    - n. Wall board, gypsum sheetrock.



- d. The DDRP is available at the following website:  
<https://sfenvironment.org/construction-demolition-resources>
  
- I. Mixed C&D debris material from projects outside the legal and geographical boundaries of the City and County of San Francisco must be taken to a Recycling Facility that processes the material to achieve maximum recycling. If the material is taken to a facility not registered with San Francisco, the local jurisdiction’s recycling rate for that facility shall be used provided official documentation from the local jurisdiction is attached to all submittals as required in Paragraphs 1.5, 1.6 and 1.7. If a facility does not have a local approved recycling rate, the diversion rate is calculated as zero.
  
- J. Universal Wastes: Contractor shall handle and dispose of all hazardous material, including “Universal Wastes,” in accordance with the requirements of the California Department of Toxic Substances Control (DTSC). Refer to DTSC website: [www.dtsc.ca.gov](http://www.dtsc.ca.gov) . In general, universal waste may not be discarded in solid waste landfills or with non-hazardous materials collected for recycling or composting. Contractor shall comply with all hazardous material regulations, including, but not limited to, the following:
  - 1. Universal wastes shall be stored in containers so that they do not spill, leak, break, or are released into the environment.
  - 2. Label or mark universal wastes, or their containers, to identify their types.
  - 3. Send all universal waste to a facility authorized to collect, recycle or dispose of universal waste.
  - 4. Do not dispose of universal waste in the trash.
  - 5. Do not accumulate more than 5,000 kilograms of universal waste at any one time.
  - 6. Train employees in proper universal waste management including handling, packaging, storing and labeling the universal waste, as well as how to respond to releases. This training may be accomplished by simply giving employees written instructions about universal waste.
  - 7. Keep record of all shipments and receipts of universal waste for three years.
  
- K. Treated Wood Waste: For complete information on handling and disposal of Treated Wood Waste (TWW), refer to the fact sheet available from the DTSC website. For incidental TWW wastes generated during construction, the Contractor shall comply with the following minimum requirements:
  - 1. Keep TWW segregated from other materials.
  - 2. Store no more than 1,000 pounds of TWW for no longer than 30 days. In the event that Contractor stores more than 1,000 pounds of TWW or stores TWW for more than 30 days, Contractor shall comply with additional requirements for routine generators of TWW. Refer to DTSC fact sheet.
  - 3. Label all TWW bundle/shipments with the following information:
 

***TREATED WOOD WASTE – Do not burn  
or scavenge.***

***TWW Handler***  
***Name:*** \_\_\_\_\_  
***Address:*** \_\_\_\_\_  
***Accumulation Date:*** \_\_\_\_\_
  - 4. Take TWW to an authorized TWW facility. See the listings at the end of the factsheet for information on facilities who have been authorized to accept TWW in California.
  - 5. Keep records of all shipments of TWW for three years.

- L. Waste Reduction: Contractor shall implement waste reduction measures, including, but not limited to, the following:
  - 1. Eliminating the procurement of unneeded supplies;
  - 2. Reduce waste by printing and copying double-sided;
  - 3. Submit all submittals, reports, and forms in electronic format (PDF);
  - 4. Fully participate in available and required recycling and composting programs; and
  - 5. Purchase products made with recycled content such as paper and recycled aggregate.
- M. Not Used
- N. Contractor shall submit the following items in electronic format (PDF) to the City Representative and in accordance with Paragraphs 1.5, 1.6, and 1.7 below:
  - 1. Construction and Demolition Debris Management Plan;
  - 2. Construction and Demolition Debris Recovery Monthly Summary of Recovery (Diversion) and supporting documentation.
  - 3. Construction and Demolition Debris Recovery Final Diversion Report.

#### 1.5 CONSTRUCTION AND DEMOLITION DEBRIS MANAGEMENT PLAN

- A. The requirements under this Paragraph 1.5 apply to all City construction contracts for City-owned Facilities or City leaseholds located within the nine counties surrounding the San Francisco Bay, regardless of size of the project.
- B. After Award of Contract and before commencement of the Work at the site, the Contractor shall conduct a site assessment to estimate the types and quantities of materials that will be generated by construction and/or demolition at the site and which materials are anticipated to be feasible and practical for reuse and recycling. Contractor shall complete a Construction and Demolition Debris Management Plan (CDDMP) to be discussed with the City Representative.
- C. Contractor shall schedule a meeting with the City Representative to discuss its proposed CDDMP so as to develop a mutual understanding regarding the City's recycling and reuse policies and goals and their application to this project. The contractor must manage all project Construction and Demolition Debris to meet a minimum recovery (diversion) rate of 75%.
- D. Contractor shall obtain tonnage estimates for all construction and demolition debris from all subcontractors and compile data from all subcontractors into a written and signed CDDMP in a format prescribed by the City. The plan shall include, but not be limited to, the following:
  - 1. The Contractor's information and Project identification.
  - 2. Procedures to be used for debris management.
  - 3. A list of the materials and estimated quantities to be reused or recycled.
  - 4. The names, locations, and permit or license, as applicable, of recycling and reuse facilities and Registered Facilities (for mixed C&D debris material) that the Contractor plans to use for this project.
  - 5. Procedures for source separation for the materials listed in subparagraph 1.4F "Recycling Requirements" of this Section.
  - 6. Source Reduction: Describe any project practices for this project which will reduce waste at the source, such as requiring vendors to deliver materials in reusable packaging.
  - 7. On-site Processing: Describe procedures in which materials are reused on-site, such as grinding materials for use on-site, or reuse of lumber for concrete frames, etc.

8. Procedures to educate and train all employees and subcontractors on recycling and reuse procedures to be used at the jobsite.
- E. Use Form C (Construction & Demolition Debris Recovery Worksheet) and check the first box in the center of page 1 on the form. Provide estimated start and end dates for the project. A written narrative should be attached to the form describing project and job site practices and procedures as noted in subparagraph 1.5D above
- F. The CDDMP is subject to approval by the City Representative. Contractor shall revise and resubmit the CDDMP as required by the City Representative.
- G. If an unforeseen circumstance requires a change to the facilities or transporters named and approved on the original CDDMP, the Contractor must submit a written request to the City Representative for approval prior to the change being made; a copy should be sent to the Department of Environment. The request must provide documentation explaining why the change may be necessary. Use Form D (Request to Change Facilities or Transporters), and complete all sections of the form. If any section is omitted, the request will not be considered.
- H. Review of the Contractor's Construction and Demolition Debris Management Plan will not relieve Contractor of responsibility for compliance with applicable laws and regulations governing control and disposal of solid waste or other pollutants.
- I. In accordance with the Mayor's Directive 06-05 and Chapter 7 of the Environment Code, Contractor shall achieve a recovery (diversion) rate of 75%.

#### 1.6 CONSTRUCTION AND DEMOLITION DEBRIS RECOVERY MONTHLY SUMMARY OF RECOVERY/DIVERSION

- A. Contractor shall submit a signed Summary of Recovery/Diversion to the City Representative with each Progress Payment Application. The Summary shall show actual construction and demolition debris material diversion coinciding with the time period of the Progress Payment. The contractor shall compile data from all subcontractors into one plan/report; all weights are reported in tons and documentation supporting the reported tons shall be attached. Documentation shall include weight tags or other similar proof the hauler received from a facility where material was transported; if a facility issues a receipt with cubic yards only, the contractor shall use the Conversion Rates found in Form E. The documentation issued by the facility shall include the commodity or material type that was delivered to the facility and shall include evidence that the material was from the contracted job; such evidence may include the project address or project/job number provided by the facility on the weight tags or receipts it creates. Recovery reports prepared by vendors, work orders or invoices for services shall not be acceptable unless accompanied by requirements noted above. Use Form C (Construction & Demolition Debris Recovery Worksheet) and check the second box in the center of page 1 of the form and provide the Reporting Period and Progress Payment Number.
- B. Failure to submit the Summary of Recovery and supporting documents shall render the application for progress payment incomplete and delay progress payment.
- C. Contractor shall be responsible for transporting all mixed C&D debris material generated in San Francisco to a Registered Facility by using a Registered Transporter.

## 1.7 CONSTRUCTION AND DEMOLITION DEBRIS RECOVERY FINAL REPORT

- A. The Contractor shall submit a signed Final Recovery Report showing weight of all construction and demolition debris material recovered for the entire project and the overall recovery rate achieved. Use Form C (Construction & Demolition Debris Recovery Worksheet) and check the third box in the center of page 1 of the form. The Final Recovery Report shall be prepared into one plan/report by the Contractor with data from all subcontractors and submitted to the City Representative.

## 1.8 JOB SITE ADMINISTRATION

- A. The Contractor shall review the environmental goals of this project with all subcontractors and sub-subcontractors. The Contractor shall make a proactive effort to increase awareness of these goals and ensure full compliance to the Construction and Demolition Debris Management Plan among the Contractor's job site workers and all subcontractors and other workers.
- B. The Contractor shall communicate the presence of demolition debris which is hazardous material to all workers on the job site and shall establish and clearly identify hazardous material storage areas. The Contractor shall discuss practices and alternatives to minimize worker exposure to potentially harmful substances expected to be encountered on the job site.
- C. For Construction Contracts within the legal and geographical boundaries of the City and County of San Francisco the Contractor shall provide green, blue and black refuse bins and appropriate signs for field offices to separate recyclable and compostable materials from the trash and subscribe to adequate collection services. To subscribe to these services, contact Recology San Francisco at 415-330-1300. For assistance in setting up recycling and composting programs (i.e. signs and training) in field offices, contact: [sfgovrecycling@sfenvironment.org](mailto:sfgovrecycling@sfenvironment.org)
- D. For projects outside the legal and geographical boundaries of the City and County of San Francisco, Contractor shall abide by local jurisdiction's refuse, recycling and composting requirements.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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FORM A
REQUEST TO SEND CONSTRUCTION & DEMOLITION DEBRIS MATERIAL
DIRECTLY TO LANDFILL

City and County of San Francisco

Environment Code 7; Ordinance No. 204-11; SFE Regulation No. SFE13-03-GB

Environment Code Chapter 7 Section 708(a)(3) states that a contractor is prohibited from sending any Construction & Demolition (C&D) debris material directly to a landfill without submitting a request to and receiving approval from the Department of the Environment. This request form must demonstrate that all reuse and recycling options for the material have been evaluated and determined to be not possible.

Section 1: Project Information
City Department:
1. Project Name:
2. Project/Job Number:
3. Reporting Period:
4. Project Street Address:
5. City & County (if not in SF):
6. Contractor's Company Name:
7. Contractor's Address:
8. City, State, Zip Code:
9. Contractor's Contact:
10. Contact's Title:
11. Office Phone:
12. Cell Phone:
13. e-mail:

Section 2: Request Information
15. Type of Request (please check):
Initial Request. Submit to the City Representative with the Construction & Demolition Debris Management Plan (CCDMP), and send a copy to the Department of Environment for review and possible approval.
Request due to unforeseen circumstances occurring during the project affecting disposition of the material. Send to City Representative and to the Department of Environment for review and possible approval.
16. Material Description:
Type of Material:
Approximate Tons:
Why can't this material be reused or recycled?
What landfill do you intend to use (Name & Location)?
17. Provide a comprehensive & detailed description of all efforts you (and/or your subcontractors) have made to find a location to take this material for reuse or recycling. List must include names and locations of all facilities contacted to take the material, name of person(s) you spoke with, date of conversation, and why the material was refused. If the material was deemed hazardous after the project commenced, please provide official documentation from an independent professional (See Env Code Chapt 7, Sec 708(a)(6) for complete requirements). Attach an additional sheet if necessary.

18. Provide information and attach documentation on how this material will be used at the landfill. Your request must demonstrate that the material will be used for beneficial reuse, if possible, before any material is used as alternative daily cover (ADC), and that material is used as landfill disposal only as a last resort if necessary. Please include documentation such as a written statement by the landfill operator that the material will be used as designated.

19. I DECLARE UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE STATE OF CALIFORNIA THAT THE FOREGOING AND INFORMATION IN ALL ATTACHMENTS ARE TRUE AND CORRECT AND THE MATERIAL DESCRIBED WILL BE HANDLED AS NOTED IF THIS REQUEST IS APPROVED.

Submitted by: \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Submittal Instructions:**

**Initial Request:** Submit completed and signed form to the City Representative with the Construction & Demolition Debris Management Plan (CCDMP). City Representative will submit form to the Department of Environment for further review and approval.

**Request due to unforeseen circumstances occurring during the project affecting disposition of the material:** Send completed and signed form to City Representative. City Representative will submit form to Department of the Environment.

For questions regarding completion of this request, please contact the City Representative.

**FOR OFFICIAL CITY USE ONLY**

DATE REQUEST RECEIVED \_\_\_\_\_

APPROVED \_\_\_\_\_ NOT APPROVED \_\_\_\_\_ DATE \_\_\_\_\_

COMMENTS \_\_\_\_\_

\_\_\_\_\_

NAME \_\_\_\_\_ SIGNATURE \_\_\_\_\_ TITLE \_\_\_\_\_



FORM B
REQUEST TO SEND CONSTRUCTION & DEMOLITION DEBRIS MATERIAL
TO BIOMASS ENERGY GENERATION FACILITY

City and County of San Francisco

Environment Code 7; Ordinance No. 204-11; SFE Regulation No. SFE13-03-GB

Environment Code Chapter 7 Section 708(a)(4) states that a contractor is prohibited from sending any Construction & Demolition (C&D) debris material directly to any facility that would incinerate such debris or otherwise process such debris using high temperature technology, unless the debris is used as boiler fuel in Biomass Energy Generation, which will only be allowed after the contractor has submitted a request to and received approval from the Department of the Environment.

Section 1: Project Information
City Department:
1. Project Name:
2. Project/Job Number:
3. Reporting Period:
4. Project Street Address:
5. City & County (if not in SF):
6. Contractor's Company Name:
7. Contractor's Address:
8. City, State, Zip Code:
9. Contractor's Contact:
10. Contact's Title:
11. Office Phone:
12. Cell Phone:
13. e-mail:

Section 2: Request Information
14. Material Description:
Type of Material (wood, wood chips, wood waste, tree or brush prunings):
Approximate Tons:
What facility do you intend to use (Name & Location)?
Why can't this material be reused or recycled?
15. Provide a comprehensive & detailed description of all efforts you (and/or your subcontractors) have made to find a location to take this material for reuse or recycling.

16. I DECLARE UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE STATE OF CALIFORNIA THAT THE FOREGOING AND INFORMATION IN ALL ATTACHMENTS ARE TRUE AND CORRECT AND THE MATERIAL DESCRIBED WILL BE HANDLED AS NOTED IF THIS REQUEST IS APPROVED.

Submitted by: \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Submittal Instructions:**

**Initial Request:** Submit completed and signed form to the City Representative with the Construction & Demolition Debris Management Plan (CCDMP). City Representative will submit form to the Department of Environment for further review and approval.

**Request due to unforeseen circumstances occurring during the project affecting disposition of the material:** Send completed and signed form to City Representative. City Representative will submit form to Department of the Environment.

For questions regarding completion of this request, please contact the City Representative.

**FOR OFFICIAL CITY USE ONLY**

DATE REQUEST RECEIVED \_\_\_\_\_

APPROVED \_\_\_\_\_ NOT APPROVED \_\_\_\_\_ DATE \_\_\_\_\_

COMMENTS \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

NAME \_\_\_\_\_ SIGNATURE \_\_\_\_\_ TITLE \_\_\_\_\_



FORM C

CONSTRUCTION & DEMOLITION DEBRIS RECOVERY WORKSHEET

City and County of San Francisco

Environment Code 7; Ordinance No. 204-11; SFE Regulation No. SFE13-03-GB

Section 1: Project Information. City Department: 1. Project Name: 2. Project/Job Number: 3. Reporting Period: 4. Project Street Address: 5. City & County (if not in SF): 6. Contractor's Company Name: 7. Contractor's Address: 8. City, State, Zip Code: 9. Contractor's Contact: 10. Contact's Title: 11. Office Phone: 12. Cell Phone: 13. e-mail: I DECLARE UNDER PENALTY OF PERJURY... Submitted by: Title: Signature: Date:

- Construction & Demolition Debris Management Plan (CDDMP)\* (Include estimates from all Subcontractors) Estimated Start Date: Estimated End Date: \*Attach a brief description of how this jobsite will be managed to ensure compliance with all aspects of the plan by all persons working on the project Summary of Diversion: Submitted with Progress Payment Application (Compile Diversion Data from all Subcontractors) Reporting Period (mm/yy): Progress Payment No.: Final Diversion Report (Compile Diversion Data for Entire Project) Date Project Completed:

City Representative Review & Approval

I have reviewed all of the information Contractor has provided herein, including supporting documentation, and confirm that Contractor's documentation as submitted complies with all applicable laws and rules, including the requirements of Chapter 7 of the Environment Code as set forth in Section 708, and applicable Department of the Environment regulations promulgated pursuant to Chapter 7. City Representative Signature: Name (print) Date

Instructions for Completing Section 2 on Page 2 - Debris Recovery Worksheet: (refer to Section 701 of Environment Code Chapter 7 for all definitions)

- Contractor is responsible for preparing and submitting all C&D management plans & reports. Contractor shall compile data from all subcontractors into one plan/report. Column (a): Enter the appropriate Diversion Activity Code associated with the kind of material being handled and how the material is being processed. Column (b): Enter Total Tons of material for each type of material being diverted. Column (c): Enter Tons Recycled for each type of material being diverted. Column (d): Enter Tons Reused for each type of material being diverted. Column (e): Enter name of facility where material will be taken. If project is located in San Francisco, Mixed Debris must be taken to a Registered Facility authorized to process the material. Column (f): Enter name of Transporter hauling the material. If project is located in San Francisco, only Registered Transporters are authorized to haul Mixed Debris. Line (g) below worksheet: Calculate Diversion Rate per formulas provided & instructions. Submit completed form to City Representative for review and approval.

Project/Job Number: \_\_\_\_\_

Reporting Period: \_\_\_\_\_

Progress Pmt. Number: \_\_\_\_\_

**Section 2: Debris Recovery Worksheet**

**IMPORTANT: HAZARDOUS MATERIAL OR U-WASTE IS SUMMARIZED SEPARATELY FROM THIS REPORT. ATTACH A SEPARATE LIST OF THESE MATERIALS, DISPOSAL PLANS & PROFESSIONAL WASTE DETERMINATION. DO NOT INCLUDE ANY HAZARDOUS MATERIALS AND UNIVERSAL WASTE ON THIS WORKSHEET,**

**Diversion Activity Codes:**

- |   |  |
|---|--|
| 1 - Recycling source-separated materials at a recycling facility. | 4 - Reuse of salvageable items.                              |
| 2 - On-site concrete or asphalt crushing for use on site.         | 5 - Reuse of soil or dirt on site.                           |
| 3 - Recycling of mixed C&D debris.                                | 6 - Reuse of dirt or mixed inerts for landfill construction. |
|   | 7 - Other diversion - please describe:                       |

**WORKSHEET**

Type of Material	Diversion Activity Code	Total Tons	Tons Recycled	Tons Reused	Facility Used*	Transporter*	Balance from Original Plan
	(a)	(b)	(c)	(d)	(e)	(f)	
<b>MIXED C&amp;D DEBRIS*</b>	<b>3</b>	<b>(A)</b>					
<b>SOURCE SEPARATED MATERIALS</b>							
Asphalt							
Acoustical Ceiling Tiles							
Bricks, Granite, Finished Stone							
Carpet & Padding							
Concrete							
Corrugated Cardboard							
Dimensional Lumber & Beams							
Fixtures, Hardware, Doors, Windows							
Metal							
Mixed Inerts							
Rigid Plastic							
Soil/dirt/rock							
Trees, Landscape Debris, Wood Scraps							
Wallboard, Gypsum Sheet Rock							
Other:							
<b>Sub-Totals (source separated)</b>		<b>(B)</b>	<b>(C)</b>	<b>(D)</b>			
<b>Total (E = A + B)</b>		<b>(E)</b>					

**\* Diversion Rate Calculation Formulas:**  
 Projects in SF:  $[C+D+(A \times \text{Rate}^*)] \div E \times 100$   
 Outside SF:  $[C+D+(A \times \text{Rate}^*)] \div E \times 100$

(g) 
$$\left[ \frac{(C) + (D) + ((A) \times (\text{Rate})^*)}{(E)} \right] \times 100 = \text{DIVERSION RATE } \boxed{\quad \%}$$

\* For projects located in San Francisco: Mixed C&D Debris must be taken to a **Registered Facility** authorized to process the material, and it must be hauled by a **Registered Transporter** (lists available at <https://sfenvironment.org/construction-demolition-resources>).

For projects outside SF: If taken to a non-registered facility, check with local jurisdiction for that facility's recycling rate. ATTACH OFFICIAL DOCUMENTATION FROM LOCAL JURISDICTION. If a facility does not have a local approved recycling rate, the diversion rate is calculated as zero.



FORM D
REQUEST TO CHANGE
FACILITIES OR TRANSPORTERS
APPROVED ON CONSTRUCTION & DEMOLITION DEBRIS MANAGEMENT PLAN

City and County of San Francisco
Environment Code 7; Ordinance No. 204-11; SFE Regulation No. SFE13-03-GB

If an unforeseen circumstance requires a change to the Facilities or Transporters named and approved on the original Construction & Demolition Debris Management Plan (CDDMP), the Contractor may use this form to submit a written request to the City Representative for approval prior to the change being made.

Section 1: Project Information
City Department
1. Project Name: 2. Project/Job Number: 3. Reporting Period:
4. Project Street Address: 5. City & County (if not in SF):
6. Contractor's Company Name:
7. Contractor's Address: 8. City, State, Zip Code:
9. Contractor's Contact: 10. Contact's Title:
11. Office Phone: 12. Cell Phone: 13. e-mail:

Section 2: FACILITY CHANGE REQUEST
From original, approved plan:
Name of facility Type of material Approximate tons
New Facility Requested:
Name of facility Location Approximate tons
Please explain why this change may be necessary. Use an additional sheet if necessary. If material has been determined to be hazardous, please attach written determination or other verification from an independent professional.

Section 3: TRANSPORTER CHANGE REQUEST
From original, approved plan:
Name of Transporter Material hauled Approximate tons
New Transporter Requested:
Name of Company Material hauled Approximate tons
Please explain why this change may be necessary. Use an additional sheet if necessary.

(PLEASE COMPLETE THE BACK PAGE OF THIS REQUEST)

I DECLARE UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE STATE OF CALIFORNIA THAT THE FOREGOING AND INFORMATION IN ALL ATTACHMENTS ARE TRUE AND CORRECT. IF THIS REQUEST IS APPROVED I AGREE TO USE THE NEW FACILITIES AND/OR TRANSPORTERS NAMED.

Submitted by: \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Submittal Instructions:**

**Request due to unforeseen circumstances occurring during the project affecting disposition of the material:** Send completed and signed form to City Representative. City Representative will submit form to Department of the Environment.

For questions regarding completion of this request, please contact the City Representative.

**FOR OFFICIAL CITY USE ONLY**

DATE REQUEST RECEIVED \_\_\_\_\_

APPROVED \_\_\_\_\_ NOT APPROVED \_\_\_\_\_ DATE \_\_\_\_\_

COMMENTS \_\_\_\_\_

\_\_\_\_\_

NAME \_\_\_\_\_ SIGNATURE \_\_\_\_\_ TITLE \_\_\_\_\_



# FORM E CONSTRUCTION & DEMOLITION DEBRIS MATERIAL CONVERSION RATES (CUBIC YARDS TO TONS)

City and County of San Francisco

Environment Code 7; Ordinance No. 204-11; SFE Regulation No. SFE13-03-GB

**IMPORTANT:** The weights shown are in POUNDS, and they need to be converted to TONS for use on the waste management report.  
**2000 pounds = 1 ton**

<u>Material</u>	<u>Size/Amount</u>	<u>Weight/POUNDS</u>
Asphalt/paving, crushed	1 cubic yard	1,380
Brick	1 cubic yard	3,024
Concrete	1 cubic yard	1,855
Dirt	1 cubic yard	2,052
Gravel	1 cubic yard	2,565
Greenwaste - large limbs, stumps	1 cubic yard	1,080
Greenwaste - prunings	1 cubic yard	46.69
Metal, aluminum scrap	1 cubic yard	175
Metal, brass	1 cubic yard	906.43
Metal, copper	1 cubic yard	1,093.52
Metal, ferrous, scrap	1 cubic yard	906
Metal, steel	1 cubic yard	1,620
Mixed C&D Debris	1 cubic yard	400
Mixed inerts	1 cubic yard	2,000
OCC (Cardboard), flattened, uncompactd	1 cubic yard	100
Pallets	1 each 48"x48"	40
Rock	1 cubic yard	2,570
Sand	1 cubic yard	2,441
Wallboard -sheetrock scrap	1 cubic yard	393.5
Wood, scrap	1 cubic yard	329.5

For additional information, visit <http://www.calrecycle.ca.gov/LGCentral/Library/DSG/AppendixI.htm>  
& CLICK ON CONVERSION FACTOR TABLES AT BOTTOM OF PAGE.

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SECTION 01 77 00  
CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes procedures and requirements for Contract Closeout.
- B. Related Sections:
  - 1. Section 00 73 02 – Contract Time and Liquidated Damages
  - 2. Section 01 45 00 – Quality Control
  - 3. Section 01 50 00 – Temporary Facilities and Controls
  - 4. Section 01 78 23 – Operation and Maintenance Data
  - 5. Section 01 78 36 – Warranties
  - 6. Section 01 78 39 – Project Record Documents

1.2 PROCEDURES

- A. Close-out Meeting:
  - 1. The Contractor shall submit all outstanding change orders, claims, and time extension requests by the final date as required by the City Representative before the Work is 95% complete.
  - 2. Prior to Substantial Completion, the City Representative will schedule a closeout meeting with the Contractor, Architects or City Representatives and consultants to determine the status of completion.
  - 3. The Contractor shall attend the Close-out meeting scheduled by the City Representative to discuss the close-out procedure and responsibilities of the Contractor and the City.
  - 4. The City Representative will prepare a list of actions which are still open or pending that need to be resolved during the close-out period. Such actions may include, but are not necessarily limited to, equipment testing, operator training, record documents, final inspection, administrative activities, and documentation of final quantities and force account work.

1.3 SUBSTANTIAL COMPLETION

- A. Prerequisites to Substantial Completion:
  - 1. Submit to the City Representative with the application for payment just before Substantial Completion, a statement of all Change Orders, Modifications, claims, and time extension requests.
  - 2. Verify that the following administrative closeout submittals have been received by the City, if applicable:
    - a. Project Record Documents and approved shop drawings, product data, and samples as specified in Section 01 78 39.
    - b. Warranties as specified in Section 01 78 36.
    - c. Keys and keying schedule.
    - d. Spare parts and materials extra stock.
    - e. Certificates of Final Inspection and Occupancy as evidence of compliance with the requirements of governmental agencies having jurisdiction.
    - f. Comply with requirements listed in Section 00 73 00, amendments to definitions of Substantial Completion and/or Final Completion, as applicable.

3. Advise the City Representative of pending insurance change-over requirements.
  4. Submit to the City Representative written certification that the Contract Documents have been reviewed, Work has been inspected, the Work is complete, including start-up, testing, adjusting, and balancing of equipment and systems, and conforms to the requirements of the Contract Documents.
  5. At no additional cost to the City, restore and replace, as specified and as determined by the City, material and finishes damaged due to the performance of the Work.
  6. Restoration or replacement shall be equal quality and match the appearance of the existing Work.
- B. Substantial Completion Inspection:
1. Notify the City Representative in writing that the Work is substantially complete and ready for inspection.
  2. Upon receipt of Contractor's written notice, the City Representative will make an inspection to determine the status of completion.
  3. Should the City Representative determine that the Work is not substantially complete; the City Representative will so notify Contractor with a deficiency list of all items that shall be completed before the City considers the Work substantially complete.
    - a. Remedy all deficiencies as identified and notify the City Representative, in writing, when the Work is ready for re-inspection.
    - b. Failure to complete this requirement within the time allowed for substantial completion will result in liquidated damages being assessed.
  4. The Contractor shall verify that the Work is complete, including but not necessarily limited to, the items required for Substantial Completion.
  5. If the City Representative concurs that the Work is substantially complete, the City Representative will prepare a Notice of Substantial Completion, and arrange for a punch list inspection by the City's design and maintenance staff, and/or consultants.
    - a. If the Work is not substantially complete, the City Representative will follow the same procedure as for the first inspection, and Contractor shall reimburse the City for all additional re-inspection costs, including but not limited to costs incurred by City staff or for additional consultant visits.
- C. Partial Use or Occupancy of Work: When partial utilization of the Work is required and substantial completion is a condition of such partial utilization, the applicable requirements specified in this Section shall apply to the part of Work to be utilized.

#### 1.4 FINAL ACCEPTANCE

- A. Prerequisites for Final Acceptance:
1. At no additional cost to the City, perform all remedial work noted on the punch list before requesting a final inspection and acceptance.
  2. Coordinate the performance of remedial work with the City Representative to cause minimal inconvenience and interruption of the City's operations.
  3. Perform final cleaning as specified in this Section. Remove protective coverings and similar items.
  4. Remove all temporary controls, utilities, facilities, signage, field offices and sheds.
  5. Submit consent of surety to final payment.
  6. Submit a certified copy of the City Representative's punch list of remedial items to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance by the City.
  7. Failure to complete all remedial work and prerequisites for final inspection within the time allowed after the date of Final Completion as specified in the Supplementary Conditions will result in liquidated damages being assessed.

- B. Final Inspection:
1. Notify the City in writing that all punch list items of remedial work have been completed and the Work is ready for final inspection.
  2. The City Representative will make an inspection to verify the status of completion.
  3. Should the City Representative determine that the Work is not complete or is defective, the City Representative will so notify Contractor, in writing, listing remaining incomplete or defective work.
    - a. Promptly complete the remaining deficiencies and notify the City Representative, in writing, when ready for re-inspection.
    - b. If the City Representative finds the Work is still not complete, Contractor shall be responsible for all subsequent re-inspection and meeting costs incurred by the City to resolve the remaining issues. Such costs will be deducted from progress payments owed to Contractor.
  4. When the City Representative determines that the Work is acceptable under the Contract Documents and Contractor has made all required closeout submittals, the City Representative will initiate the final payment recommendation and prepare the Certificate of Completion.
- C. Prior to the final acceptance, the City Representative shall be furnished with the following administrative close-out submittals:
1. Project Record Documents as specified in Section 01 78 39;
  2. Warranties as specified in Section 01 78 36;
  3. Keys and keying schedule;
  4. Spare parts and materials extra stock;
  5. Operations and Maintenance Manuals;
  6. Relevant Test Reports;
  7. Sewer video records;
  8. Notice to Utilities for completed paving;
  9. Third Party Final Inspection and Sign-Offs (if applicable);
  10. Certificates of Final Inspection and Occupancy as evidence of compliance with the requirements of governmental agencies having jurisdiction;
  11. C&D Management Report as specified in Section 01 74 50;
  12. Evidence of Payment and Release of Liens; and
  13. Comply with all mobilization requirements as specified in Section 01 21 50.
- D. Submittals for final adjustment of accounts shall include, but not necessarily be limited to:
1. Request for Final Payment; and
  2. Final statement of accounting, payroll records, and final change orders showing adjustments to the Contract Price for all force account work and extra payments.
- E. All prior estimates and payments shall be subject to correction in the final estimate and payment.
- 1.5 FINAL CLEANING
- A. Final acceptance of the by the City will be withheld until the Contractor has satisfactorily complied with the requirements herein for final cleanup of the project site.
- B. Should the City elect to partially occupy or use portions of the Work prior to Completion, perform final cleaning for those portions of the Work prior to their being so occupied or used.
- C. Comply with applicable regulatory requirements during cleaning and disposal operations. Use cleaning materials which will not create hazards to health or property or cause damage to products or Work.

- D. Use only cleaning materials and methods which are compatible with the surface being cleaned, as recommended by the manufacturer of the products to be cleaned.
- E. Completely clean the work site including the adjacent sidewalks and street from property line to property line.
- F. Schedule final cleaning operations to prevent resulting dust and other contaminants from adhering to wet or newly finished surfaces and to enable the City Representative to accept a completely clean work.
- G. See additional cleaning requirements specified in Section 01 50 00 - Temporary Facilities and Controls.

#### 1.6 PROJECT RECORD DOCUMENTS

- A. Submit the final approved Project Record Drawings to the City Representative prior to final acceptance. Refer to Section 01 78 39 - Project Record Documents.

#### 1.7 OPERATOR INSTRUCTION

- A. Refer to individual Specification Sections for specific requirements for equipment and systems demonstration and safety, operations, and maintenance training.
- B. Where specified in the individual Specification Sections, furnish qualified personnel and coordinate scheduling for on-site instruction of the City's operating and maintenance personnel.

#### 1.8 FINAL PAYMENT

- A. Prior to the final payment, the Contractor shall:
  - 1. Submit CMD Forms 7, 8, and 9
  - 2. Reconcile any outstanding payroll issues with the Office of Labor Standards Enforcement (OLSE).
  - 3. Reconcile any outstanding local hire issues with Office of Economic and Workforce Development (OEWD).

#### 1.9 RELEASE OF LIENS OR CLAIMS

- A. Before the City issues final payment to Contractor, Contractor shall sign and deliver to the City a release of liens or claims sworn to under oath and duly notarized. The release shall state that Contractor has satisfied all claims and indebtedness of every nature in any way connected with the Work, including, but not limited to, the foregoing, all payrolls, amounts due to the subcontractors, accounts for labor performed and materials furnished, incidental services, liens, and judgments.
- B. If any liens or claims remain unsatisfied after all payments to Contractor have been made, Contractor shall refund to the City all moneys that the latter may be compelled to pay in discharging such a lien or claim, including all costs and a reasonable attorney's fee.
- C. Refer to Section 01 77 13 - Appendix A: Waiver and Release of Claims on Final Payment form.

#### PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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SECTION 01 77 13 - APPENDIX A

**WAIVER AND RELEASE OF CLAIMS ON FINAL PAYMENT FORM**

Date: \_\_\_\_\_

Re: Contract No.: \_\_\_\_\_

Project Title: \_\_\_\_\_

**Waiver and Release of Claims**

Consistent with California Public Contract Code Section 7100, the undersigned Contractor,

\_\_\_\_\_  
(CONTRACTOR NAME)

of \_\_\_\_\_,  
(CONTRACTOR ADDRESS)

having completed work on the subject Contract and Project Title, hereby releases and forever discharges the City and County of San Francisco, its officers, agents, employees, authorized representatives, assignees, and transferees from any and all liabilities, claims, obligations, demands, actions or causes of action, and claims arising under this contract of whatever kind or nature, known or unknown, which have arisen or are in any way concerned with the work under the Contract and Project Title, about which the Contractor knows or should have known except for the Disputed Claims as listed below.

The following claims are disputed (the "Disputed Claims") and are specifically excluded from the operation of this Waiver and Release:

Contract Claim No.	Date Submitted	Description of Claim	Amount of Claim

Guarantees and warranties for Work, and any other continuing obligation of Contractor, shall remain in full force and effect as specified in the Contract Documents.

\_\_\_\_\_  
Signature of Authorized Representative

\_\_\_\_\_  
Print Name of Authorized Representative

\_\_\_\_\_  
Position

\_\_\_\_\_  
Date

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## SECTION 01 78 36

## WARRANTIES

## PART 1 - GENERAL

## 1.1 SUMMARY

- A. Section Includes:
  - 1. Requirements.
  - 2. Submittal Requirements.
  - 3. Quality Assurance.
  - 4. Warranty conditions.
  - 5. Form of Guarantee/Warranty.
- B. Related Sections:
  - 1. Section 00 72 00 – General Conditions:
    - (a) Paragraph 8.03, Correction of Non-Conforming Work;
    - (b) Paragraph 8.04, Correction Period;
    - (c) Paragraph 8.05, Acceptance of Non-Conforming Work;
    - (d) Paragraph 9.07, Partial Utilization.
  - 2. Section 01 77 00 – Contract Closeout.
  - 3. Individual Specifications Sections: Warranties required for specific products or Work.

## 1.2 REQUIREMENTS

- A. Except as otherwise specified in the individual Specification sections, guarantee/warranty the Work against defects in materials and workmanship for **24** months from the date of the Substantial Completion Certificate issued by the City.
  - 1. Upon receipt of written notification by the City Representative, guarantee/warranty the Work, or portions thereof, which are used or occupied by the City before final acceptance from the date of beneficial use or Substantial Completion.
- B. Comply with the guarantee/warranty requirements as specified in the individual Specification sections.
- C. Submit executed guarantees/warranties to the City for review. Deliver them to the City upon Substantial Completion.
- D. These warranties shall be in addition to and not a limitation of other rights the City may have under the Contract and which may be prescribed by law, regardless of the wording of manufacturer's standard warranty.

## 1.3 QUALITY ASSURANCE

- A. Obtain guarantees/warranties, in duplicate, executed by Contractor and subcontractor or installer responsible for that portion of the Work and countersigned by the manufacturer.
- B. Verify that documents are in proper form, contain complete information, and are notarized if warranties are extended beyond the Manufacturers normal warranty period of TWO years.
- C. Co-execute submittals when required. Acceptance of manufacturer's guarantees/warranties by the City shall not be construed to limit the City's recourse to

Contractor for correction of defects under the law and in accordance with the General Conditions.

#### 1.4 WARRANTY CONDITIONS

- A. Contractor shall warrant that work performed under this Contract conforms to the Contract Documents and is free of any defect of equipment, material, installation, design furnished, or workmanship furnished by Contractor, or any of its subcontractors or suppliers. **SUCH WARRANTY SHALL CONTINUE IN EFFECT FOR 24 MONTHS FROM THE DATE OF ACTUAL SUBSTANTIAL COMPLETION ESTABLISHED except where detailed specifications for certain materials, equipment or systems require longer warranty periods.** Refer to technical specification sections to confirm specific warranty needed for such construction material and components.
- B. Warranties are not intended to cover failures which result from the following:
1. Unusual or abnormal phenomena of the elements.
  2. The City's misuse, maltreatment, or improper maintenance of the Work.
  3. Insurrection or acts of aggression including war.
- C. Promptly after the receipt of written notice from the City, remove, replace, or correct Work, or portion thereof, which is damaged or found to be defective and not in accordance with the Contract within 10 calendar days.
1. The City may proceed with the correction work at Contractor's expense if Contractor does not proceed with the corrective work within a within 10 calendar days by written notice from the City, the City may proceed with the work at the expense of the Contractor.
  2. The City reserves the right to remove and store or dispose of defective equipment or material at Contractor's expense.
  3. If Contractor does not pay the costs of such removal and storage within ten days thereafter, the City may, upon ten additional days written notice, sell such defective items and shall account for the net proceeds after deducting all the costs that should have been borne by the City, including compensation for City Representative's additional services.
- If the proceeds from the sale are insufficient to cover all amounts chargeable to Contractor, Contractor shall pay the difference to the City.

1.5 FORM OF GUARANTEE/WARRANTY

- A. For equipment or components of equipment put into service for the City's benefit during the progress of the Work:

(Letterhead of Company)

We (name of Contractor), agree to maintain and repair as recommended by equipment and system manufacturers, any such equipment and systems which have been beneficially used by San Francisco City personnel prior to the approval of Contractor's Application For Substantial Completion.

Owner: <Department>, City and County of San Francisco.

Location of Equipment: <Address>, San Francisco, California.

This guarantee is effective this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ until the date of City Approval of Contractor's Application for Final Payment.

Signed: \_\_\_\_\_(Name of Contractor)

By: \_\_\_\_\_

Contractor's Telephone No. \_\_\_\_\_

- B. For guarantee/warranty of the entire Work against defects in materials and workmanship for the period of warranty after the Notice of Substantial Completion. Refer to Section 1.5- Warranty Conditions, for a list of materials and equipment that have warranties that differ from the typical 24 months.

GUARANTEE/WARRANTY FORM  
for  
<PROJECT NAME>  
<CONTRACT NO.>

GUARANTEE/WARRANTY for \_\_\_\_\_  
We hereby guarantee/warrant that the \_\_\_\_\_  
which we have provided in the \_\_\_\_\_  
has been completed in accordance with the requirements of Specification Section \_\_\_\_\_ and  
the other Contract Documents.

We agree to repair or replace any or all of our Work, together with any other adjacent Work  
which may be displaced by so doing, that may prove to be defective in its workmanship or  
material within a period of \_\_\_\_\_ months from the date of Substantial Completion of the above  
named Project; and we also agree to repair any and all damages resulting from such defects,  
all without any expense to the City, ordinary wear and tear and unusual abuse or neglect  
excepted;

In the event of our failure to comply with the above mentioned conditions within ten (10) days  
after being notified in writing by the City, we collectively or separately do hereby authorize the  
City to proceed to have such defective Work repaired or replaced and made good at our  
expense, and we will honor and pay the costs and charges therefor upon demand.

Signed \_\_\_\_\_ Date \_\_\_\_\_

(Include Contractor's name, address, and license number)

Countersigned \_\_\_\_\_ Date \_\_\_\_\_

(City Representative)

Substantial Completion was granted by the City on \_\_\_\_\_.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 78 39  
PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes requirements for maintenance and submittal of Project Record Drawings and As-Builts.
- B. Related Sections:
  - 1. Section 01 20 00 – Price and Payment Procedures
  - 2. Section 01 33 00 – Submittal Procedures
  - 3. Section 01 77 00 – Closeout Procedures

1.2 REQUIREMENTS

- A. Keep an accurately marked, up-to-date set Record Drawings for the work actually installed. Accurately indicate on Record Drawings all site conditions, locations of utilities, work scope changes, changes in dimensions, locations, and elevations of the work, and changes in details as specified herein and as approved by the City Representative. Contractor shall keep the Record Drawings current as the work is performed.
  - 1. Record Drawings shall be subject to inspection and approval by the City Representative at any time within the duration of the Contract.
  - 2. Such review by the City Representative shall not relieve Contractor of its responsibility for keeping the Record Drawings current and complete.
- B. If the Record Drawings are not kept current, or are not furnished as specified in Price and Payment Procedures Section, then progress payments, and if necessary, final payment will be withheld. Furnishing of Record Drawings shall be done as incidental work.
- C. Prior to acceptance of the work, furnish to the City Representative the Final Record Drawings, or As-Builts, showing all changes in the Contract Drawings neatly in red ink and certified by the City Representative.

1.3 QUALITY ASSURANCE

- A. The City Representative will provide Contractor with a set of base drawings, or conformed prints, if any, with "Record Drawings" stamp for the City inspector's certification of corrections.
- B. Delegate responsibility for maintenance, coordination, and accuracy of the Record Drawings to one person on Contractor's staff.
- C. Record all changes and work progress on the stamped Record Drawings which will be inspected monthly by the City Representative.
- D. Accuracy of Record Drawings shall be such that future searches for items shown on the Contract Documents may rely on information obtained from the approved Record Drawings.
- E. The City Representative will check, initial, and date the Record Drawings upon submittal with Progress Payments to verify the accuracy and completeness of the recorded changes.

- F. The City Representative will sign the corrected Record Drawings to indicate that he or she has reviewed the corrections for completeness.

## PART 2 - PRODUCTS

### 2.1 RECORD DOCUMENTS

- A. Promptly following receipt of the Notice to Proceed, secure from the City Representative the number of copies of Contract Documents as specified in Section 00 73 00, including a full-size set of the Base Contract Drawings to be used as Project Record Drawings or As-Built Drawings.

## PART 3 - EXECUTION

### 3.1 MAINTENANCE OF RECORD DRAWINGS

- A. Store Record Drawings apart from documents used for performing the work; keep in a dry, legible condition, and in good order. Label each document "RECORD DRAWINGS - JOB SET" in large, neatly printed letters. Do not use Record Drawings for construction at the job site.
- B. Record neatly on the Record Drawings all changes made by clarifications, Change Orders, Requests for Information, and other Modifications to the Contract Documents; and changes to reflect the actual existing conditions and utility locations references to permanent accessible features of work
  1. Clearly describe changes on Record Drawings by note as required.
  2. Date all entries, calling attention to the entry by a "cloud" drawn around the area or areas affected.
  3. Record in each Specification Section the manufacturer, trade name, catalog number, and supplier of each product and equipment item incorporated into the Work.
- C. Furnish a copy of the final shop drawings which have been updated to show actual conditions. Furnish additional drawings as necessary to record deviations from the sizes, locations, and other features of the work and to locate piping, conduit, ductwork, and similar elements of utility installations by dimensions referenced to permanent accessible features of the work.
- D. Show on the job set of Record Drawings, by dimension accurate to within one inch, the centerline of each run of conduits, circuits, piping, ducts, and similar items which are shown schematically on the Contract Drawings but where the final physical arrangement is determined by Contractor, subject to the City Representative's approval.
  1. The City Representative will issue a written waiver of the requirements for conversion of schematic layouts where, in the City Representative's judgment, such conversion serves no useful purpose.
- E. Keep Record Drawings up to date during the entire progress of the work, and submit to the City with Progress Payments as specified in Application for Payments Section. Updates shall be accurate and current and be done at the time work is performed.

### 3.2 CHANGE ORDER DRAWINGS

- A. The City will issue to the Contractor one set of drawings, if any, associated with change orders issued. The Contractor shall be responsible for reproducing sufficient copies of the drawings for its subcontractors.
- B. The Contractor shall also update and include the revised or newly issued drawings as part of the Record Drawings. The work of reproducing and issuing change order drawings and updating of Record Drawings shall be done as incidental work.

### 3.3 AS-BUILT DRAWINGS

- A. Contractor shall prepare a separate set of As-Built drawings that will show the final completed work based on the Record Drawings. Prior to start of transfer of recorded data thereto, secure the City Representative's approval of the Record Drawings.
- B. Carefully transfer changed data shown on the job set of Record Drawings to the corresponding drawings, coordinating the changes as required.
- C. Make changes in red pencil neatly, legibly, correctly and consistently.
- D. Sign and date the completed As-Built Drawings and submit them to the City Representative for review prior to final payment as specified in Section 01 77 00 – Closeout Procedures.
- E. If the As-Built Drawings are not approved by the City Representative, Contractor shall make necessary revisions and submit a revised set of As-Built Drawings to the City Representative.
- F. Furnishing of the final approved Project Record Drawings, including required revisions and resubmittal, shall be done as Incidental Work.
- G. If the As-Built Drawings are not furnished when specified, the final payment will be withheld.

END OF SECTION

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## SECTION 02 80 13

## HAZARDOUS BUILDING MATERIALS REMEDIATION

## PART 1 - GENERAL

## 1.1 SUMMARY

- A. Many of the materials and items of equipment used to construct the improvements and facilities at the Project Site contain materials known to the State of California to be either carcinogenic or reproductive toxins. Such hazards include but are not limited to asbestos-containing materials (that are not Naturally Occurring Asbestos), lead based paints, lead-containing materials and demolition associated with hazardous materials.
- B. This Section includes hazardous and toxic materials precautions, general requirements, and handling procedures as required to the work and existing conditions of the project. This Section includes requirements and procedures to be performed by the Contractor for the handling, removal, abatement, remediation, transportation and disposal of hazardous building materials.
- C. Hazardous materials removal shall be conducted as per the construction phasing and staging described as specified in the drawings
- D. The Contractor shall perform all hazardous materials remediation work under this contract as described herein and in Section 01 35 44 Building Related Hazardous Materials Procedure.
- E. Payment: All work in this Section shall be inclusive of the lump sum bid.

## 1.2 RELATED DOCUMENTS AND SECTIONS

- A. Section 01 35 44 Hazardous Building Materials Scope of Work

## 1.3 REFERENCES

- A. American Society for Testing and Materials (ASTM):
  - 1. E84: "Test Method for Surface Burning Characteristics of Building Materials."
  - 2. E849: "Safety and Health Requirements Relating to Occupational Exposure to Asbestos."
  - 3. E119: "Standard Method for Fire Tests of Building Construction and Materials"
- B. American National Standards Institute (ANSI):
  - 1. Z41.1: "Men's Safety Toe Footwear."
  - 2. Z86.1: "Commodity Specification for Air."
  - 3. Z87.1: "Practice for Occupational and Educational Eye and Face Protection."
  - 4. Z89.1: "Requirements for Industrial Head Protection."
  - 5. Z9.2: "Fundamentals Governing the Design and Operation of Local Exhaust Systems"
  - 6. Z88.2: "Practices for Respiratory Protection."

7. Z88.6: "Respiratory Protection - Respiratory Use Physical Qualifications for Personnel."
- C. National Fire Protection Association (NFPA):
1. Standard 701: "Small Scale Fire Test for Flame Resistant Textiles and Films."
  2. Standard 10: "Fire Extinguishers."
  3. Standard 70: "National Electric Code."
- D. California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA):
1. Title 8 California Code of Regulations (8 CCR) Section 5144 - Respiratory Protection.
  2. Title 8 California Code of Regulations (8 CCR) Section 1532.1 - Construction Lead Standard.
  3. Title 8 California Code of Regulations (8 CCR), Article 4, Section 1529 - Asbestos Standard for the Construction Industry.
  4. Title 8 California Code of Regulations (8 CCR) Sections 3203 and 1509 - Injury and Illness Prevention Program.
  5. Title 8 California Code of Regulations (8 CCR), Article 110, Section 5208 - Asbestos Standard for General Industry.
  6. Title 8 California Code of Regulations (8 CCR), Article 2.5, Section 341.6 for employer registration when disturbing more than 100 sq. ft. of ACCM.
  7. Title 8 California Code of Regulations (8 CCR), Section 1537: Welding, Cutting, and Heating of Coated Materials.
- E. California Department of Public Health Title 17 California Code of Regulations (17 CCR) Sections 35001-36100 for Accreditation, Certification, and Work Practices for Lead-based Paint and Lead Hazards.
- F. U. S. Department of Housing and Urban Development (HUD): Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing," referred to as the "HUD Guidelines."

1.4 DEFINITIONS

- A. Activity Class/Category - Lead: Lead hazard designations assigned to work activities that involve lead-containing materials. Activities, which fall into Classes 1 through 3, including as examples the operations defined below, are required to assume the following personal airborne exposure levels, unless otherwise demonstrated.

Lead Hazard Trigger Activities	Work Activity
Trigger Task, Activity 1 Exposure Less than 500 micrograms/m3	<ul style="list-style-type: none"> <li>• Surface clean-up of lead-containing dust or debris less than 15,000 microgram/square feet</li> <li>• Spray painting with lead-based paints</li> <li>• Manual demolition of structures (e.g. drywall, plaster, etc.)</li> <li>• Manual sanding, grinding, needle gunning, chiseling, hammering, wire brushing, milling or scraping of lead-based coatings</li> <li>• Heat gun removal of surface coating power tool Power tool cleaning with dust collection system</li> </ul>

Trigger Task, Activity 2 Exposure 500 micrograms/m <sup>3</sup> or greater but less than 2500 micrograms/m <sup>3</sup>	<ul style="list-style-type: none"> <li>• Using lead mortar</li> <li>• Lead burning</li> <li>• Rivet busting</li> <li>• Power tool cleaning without dust collection systems</li> <li>• Clean-up of dry abrasive</li> <li>• Abrasive blasting enclosure movement and removal</li> </ul>
Trigger Task, Activity 3 Exposure 2,500 micrograms /m <sup>3</sup> or greater	<ul style="list-style-type: none"> <li>• Abrasive blasting of coated surfaces</li> <li>• Welding on coated surfaces</li> <li>• Torching or cutting of coated surfaces</li> <li>• Torch burning of coated surfaces</li> </ul>

B. Asbestos Work Class: Activities for removing asbestos materials by categories as follows:

Asbestos Activity Class/Category	Work Activity
Work Class I	<ul style="list-style-type: none"> <li>• Activity involving removal of Thermal System Insulation (TSI) and surfacing Asbestos-Containing Materials (ACM) or friable Presumed – Asbestos Containing Materials (PACM).</li> </ul>
Work Class II	<ul style="list-style-type: none"> <li>• Activity involving removal of ACM which is not TSI or surfacing material, including, but not limited to, wallboard, floor tiles and sheeting, roofing and siding shingles, naturally occurring asbestos (soil, rock, etc.) and construction mastics. Note also that Class II materials that cannot be removed intact, such as soil, require usage of respiratory protection at all times, regardless of personal monitoring data showing compliance to PEL and EL.</li> </ul>
Work Class III	<ul style="list-style-type: none"> <li>• Repair and maintenance operations where TSI or surfacing is likely to be disturbed, which fits within one standard glove bag or waste bag.</li> </ul>
Work Class IV	<ul style="list-style-type: none"> <li>• Maintenance and custodial activities during which employees contact but do not disturb PACM or ACM and activities to clean up dust, waste bag and debris resulting from Work Class I, II, and III activities.</li> </ul>
Unclassified	<ul style="list-style-type: none"> <li>• Any activities dealing with materials containing detectable but &lt;1.0 % asbestos.</li> </ul>

C. Certified Lead Worker: includes those who do lead-related construction work activities on a work site under the directions of a Certified Lead Supervisor, including:

1. Removal, disposal or abatement of loose and peeling lead-based paints as defined by CDPH, including scraping, demolition or other Cal/OSHA Activity 1 through 3 work as defined above.
2. Removal or repair of lead plumbing.
3. Repainting or general construction on surfaces painted with lead-based paints.
4. Removal, enclosing or covering of lead-contaminated soils.
5. Exemption: renovations, remodeling, painting, operations and maintenance work or other activities listed above that are considered to be interim controls, or lasting less

than 20 years, may be completed by workers satisfying Cal/OSHA's asbestos awareness training requirements only.

- D. Certified Lead Supervisor: includes those who supervise daily work activities on a lead-related construction site, as well as supervision of repainting or general construction performed on surfaces with lead-based paints where abatement is designed to permanently reduce or eliminate lead hazards for public (non-industrial) buildings or to last more than 20 years. The Certified Lead Supervisor shall oversee the Certified Lead Workers, enforce safe work practices, and schedule and coordinate work site activities with the building occupants and other contractors and consultants.
- E. Containment: as defined by the California Department of Public Health includes any system, process or barrier used to contain lead hazards in a work area, including plastic sheeting, wet scraping, and other lead-safe work practices as described in the HUD Guidelines, Chapter 8.
- F. Remediation: abatement, removal, control or containment of hazardous or toxic material(s).

## 1.5 SUBMITTALS

- A. The Contractor or its hazardous materials abatement subcontractor shall submit copies of any notice of safety and environmental violations received from the regulatory agencies that they may have received in the last 20 years in the USA.
- B. The Contractor or its hazardous materials abatement subcontractor shall submit copies all the Minimum Qualification licensing requirements asked for in Section 01 35 44 Hazardous Building Materials Scope of Work.
- C. The Contractor or its hazardous materials abatement subcontractor shall submit proof of its five (5) years of hazardous materials abatement and/or removal experience asked for in Section 01 35 44 - Hazardous Building Materials Scope of Work.
- D. The Contractor or its hazardous materials abatement subcontractor shall submit proof of its environmental training requirements asked for in Section 01 35 44 Hazardous Building Materials Scope of Work.
- E. BAAQMD-issued Approval Letter for Asbestos Demolition. “[Job Number]”. For all demolition of buildings and structures, regardless of whether asbestos is present or not, Contractor shall submit a copy of the BAAQMD-issued Approval Letter for Asbestos for Demolition, “[Job Number]” to the City Representative prior to the start of Demolition. To obtain this letter, Contractor shall submit an Asbestos Demolition Notification to the BAAQMD through their web-based Online Asbestos Notification System (<http://learn.baaqmd.gov/course/view.php?id=4#section-5>) **at least ten (10) business days prior to the start of any demolition.**
- F. As per Section 01 33 00 – Submittal Procedures and Section 01 35 44 – Building Related Hazardous Materials Procedures, the Contractor shall submit a Hazardous Materials Management Plan (HMMP) with the following documentation listed below. The HMMP shall be submitted within (10) ten days after the Notice to Proceed and before commencement of demolition activities. **No hazardous materials work will start without the HMMP reviewed and approved by the City Representative.**

- G. The Hazardous Materials Management Plan (HMMP) is the Contractor's comprehensive plan for the management of hazards encountered during the Work of this project. The HMMP is inclusive the following Plans:
1. An Asbestos Abatement Work Plan.
  2. A Lead Hazard/Removal Control Plan.
  3. A Waste Management Plan (WMP).
  4. Information about the Contractor's designated Project Safety Representative (PSR) as per Section 01 35 44 Building Related Hazardous Materials - Scope of Work. Include his/her training certification, qualifications; his/her name, phone number; fax number, and pager number.
  5. Management spill procedures in the event of asbestos or any hazardous materials release or any event that may require modification or abridgment of site control and decontamination procedures.
  6. Intended methods of compliance for hazardous materials handling work, including description of engineering controls, personal protective equipment as well as compliance monitoring as applicable.
  7. Schedule and sequence of work for all hazardous materials work.
  8. Worksite layout Diagram: Detailing location of each regulated area and construction of each containment identifying location of each decontamination units, fire extinguishers and emergency exits.
  9. A copy of the Site-Specific Hazard Communication Plan in accordance with Federal and California OSHA requirements.
  10. Copies of required licenses, certifications and notifications to handle and control hazardous materials
- H. As part of the Contractor's HMMP, the Contractor shall submit a Waste Management Plan (WMP). The WMP is the Contractor's comprehensive plan for waste management of hazardous and non-hazardous waste generated during the remediation work of this project. The WMP shall include the following:
1. Information about the designated persons who will implement the Plan. Include his/her name, phone number, and his/her roles and responsibilities for implementing the Plan.
  2. Waste segregation procedures for waste generated from demolition debris, abatement, and stabilization.
  3. Proposed location of locked dumpster, if applicable.
  4. Sampling plan and protocol for waste characterization in accordance with 22 CCR §66262, ET. Seq.
  5. Handling, segregation, and waste load-out procedures for hazardous and non-hazardous waste, including TSCA-regulated waste. Include diagrams showing regulated areas for waste segregation, load-out stations, paths of travel for off-hauls of waste, and engineering controls to prevent air pollution and potential exposures to airborne contaminants.

6. Waste hauler identification, information, 24-hour contact number, and copy of licenses.
  7. Asbestos and lead waste disposal sites identification. Include name, address, 24-hour contact number.
- I. For Asbestos Containing Construction Materials (ACCM), or Asbestos Containing Material (ACM), as applicable by regulation, and as part of the Hazardous Materials Management Plan (HMMP) the Contractor shall submit the following, but not limited to:
1. Asbestos Pre-job Submittals:
    - a. Proof of current asbestos contractor's license issued by the California Contractors' State License Board.
    - b. Proof of current California Department of Industrial Relations (CA-DOSH or Cal/OSHA) Asbestos Contractor's registration certification.
    - c. Valid and current Bay Area Air Quality Management District (BAAQMD) notification for the Project and (as applicable).
    - d. Cal/OSHA 24-hour notice per 8 CCR 1529.
    - e. Worker documentation, including:
      - 1) Current AHERA training certification - supervisor/competent person
      - 2) Current AHERA training certifications for workers.
      - 3) Respiratory fit test records within past 12 months.
      - 4) Annual medical examination approvals for respirator use.
    - f. Written Asbestos Abatement Work Plan and schedule with the sequence of work.
    - g. Safety Data sheets (SD) for all materials used.
    - h. Emergency phone numbers, pagers and email addresses.
    - i. Aerosol Challenge Testing Certification
      - 1) Aerosol challenge testing using dioctylphthalate (DOP, also known as Bis(2-ethylhexyl) phthalate) or an approved alternative is required for all equipment fitted with High Efficiency Particulate Air (HEPA) filters including negative pressure units, air machines, fan units and vacuum cleaners.
      - 2) Prior to use, testing must be performed on site:
        - a. Whenever equipment enters the site.
        - b. After replacement of HEPA filters or any other significant repairs or alterations.
      - 3) Equipment which fails testing shall be marked and promptly removed from the site.
      - 4) Equipment which has passed testing shall be marked with a unique identifier number and the date of the testing. The identifier number shall be reflected on all testing documentation.

- 5) Recognized alternatives to DOP include, but are not limited to 4 centistoke (4 cSt) viscosity grade polyalphaolefin (POA) fluids such as Emery 3004 POA and selected mineral oils. Testing equipment modification and/or recalibration may be needed to use DOP alternatives.
  - j. Rotameter calibration data calibrated by a primary standard within past 6 months.
  2. Periodic Submittals: Submitted upon request during abatement:
    - a. Contractor's personal air monitoring results (daily)
    - b. Updated workers documentation (as needed)
    - c. Daily boundary access logs
    - d. Daily negative pressure manometer records (print outs), as applicable
    - e. Copies of updated schedules and notices to the regulatory agencies (as needed)
  3. Project Closeout Submittals: Within 5 calendar days upon the City's request or within 5 calendar days after completion of the abatement or hazard control work, the Contractor shall submit the following:
    - a. Copies of updated schedules and notices to regulatory agencies, as needed.
    - b. Receipt and weight tickets from landfill operator or incinerator, as applicable.
    - c. Copies of completed uniform waste manifests.
    - d. Certification of Completion.
- J. For Lead - Related Work, and as part of the Hazardous Materials Management Plan (HMMP) the Contractor shall submit the following, but not limited to:
1. Pre-job Submittals: The Contractor shall submit documents pertaining, but not limited to, the following
    - a. San Francisco Department of Building Inspections (DBI) notification and posting requirements as deemed required for exterior paint remediation.
    - b. Cal/OSHA notifications as per 8 CCR 1532.1
  2. Workers documentation:
    - a. Current CDPH lead contractor/supervisor training certificates.
    - b. Current lead awareness training certificates - workers or CDPH Certified Lead Workers Certificate, as appropriate.
    - c. Respiratory fit test records within past 6 months.
    - d. Annual Medical Examination approvals.
    - e. Blood lead tests within past 90 days.
  3. Lead Hazard/Removal Control Plan pursuant to 8 CCR 1532.1: Procedures for minimizing and controlling the migration of lead from disturbance of lead-containing materials including a written lead hazard or lead removal work plan and schedule with the sequence of work:

4. Project Close-out Submittals: Within 5 calendar days upon the City's request, or within 5 calendar days after completion of the abatement or hazard control work, the Contractor shall submit the following:
  - a. Updated worker documentation, as needed.
  - b. Contractor periodic personal air monitoring results.
  - c. Receipt and weight tickets from landfill operator or recycler, as applicable.
  - d. Waste profiling data (TCLP, WET, and other analytical data)

K. For Copper Chromate Arsenate (CCA) Treated Wood Related Work

1. As part of the Hazardous Materials Management Plan (HMMP), the Contractor shall submit the following, but not limited to:
  - a. Identification of EPA-approved hazardous waste landfill disposal facility, or an EPA-approved solid waste disposal facility.
  - b. Temporary storage plan.
2. Workers Documentation:
  - a. Certification of the workers and supervisor's forty (40) hour HAZWOPER training in compliance with 40 CFR 1910.120.
  - b. Medical examination approvals for respirator use within the past twelve (12) months, or in compliance with 8 CCR 5144.
  - c. Respiratory fit test records within the past twelve (12) months minimum, or in compliance with 8 CCR 5144.
3. Within 5 calendar days upon the City's request or within 5 calendar days after completion of the abatement or hazard control work, the Contractor shall submit the completed manifest or evidence of shipment date, recycler, and quantities shipped.

L. For Fluorescent Light Tube Related Work

1. As part of the Hazardous Materials Management Plan (HMMP), the Contractor shall submit the following, but not limited to:
  - a. Identification of EPA-approved recycler.
  - b. Temporary storage plan.
2. Project Close-out Submittals: Within 5 calendar days upon the City Representative's request, or within 5 calendar days after completion of the abatement or hazard control work, the Contractor shall submit the completed manifest or evidence of shipment date, recycler, and quantities shipped.

1.6 QUALITY CONTROL

A. Meetings

1. Pre-Abatement Meeting: Prior to any removal of hazardous materials and upon the HMMP submittal approved, a meeting will be conducted at the City's discretion. The

Contractor shall attend a pre-construction meeting with the City Representative, the City's Consultants, and other Subcontractors whose work may be affected. The meeting agenda shall include the following considerations:

- a. Weekly Meetings: At the City's option, abatement work extending over one week in length may require attendance of the Contractor at a weekly progress meeting. The purpose of this meeting is to review abatement and project scheduling, coordination with other trades, security and site-specific requirements.
- b. Start-Up Hazardous Materials Handler's Meeting: Prior to the beginning of on-site work, all hazardous materials handlers shall attend a pre-start-up safety meeting that addresses hazardous materials issues specific for the project.
- c. Review of the Specifications and Plans in detail related to the abatement and hazards control work. All conflicts and ambiguities, if any, shall be discussed.
- d. Review in detail the project conditions, schedule, construction sequencing, site protection, protection of historic building materials abatement application requirements, and quality of completed work.
- e. Review in detail the means of protecting adjoining areas; protection of Contractor's, Subcontractor's, City's workers, and completed work during the abatement and lead removal activities.
- f. Pre-job submittals requirements.
- g. Site security requirements.

B. Field Quality Control Sampling

1. During all asbestos-related work, perimeter sample(s) will be collected by the City's Certified Industrial Hygienist or its Environmental Consultant (DOSH Certified Asbestos Consultant). These sample(s) will be analyzed by Phase Contrast Microscopy (PCM). Sample results that are in excess of the background level or 0.010 fibers per cubic centimeter (f/cc) Project Action Level may be forwarded for analysis by Transmission Electron Microscopy (TEM) with a 12-hour turnaround specified. Handling, shipping, and analysis charges (including the Environmental Consultants time and expenses) will be paid for by the Contractor. Any sample results in excess of 70 asbestos structures per square millimeter of filter area (corrected for a 1,200 - 1,800 liter sample volume as appropriate, or in excess of 0.018 str/cc, normalized to a 1,500-liter air sample) will require cleaning, inspection, and resampling of the affected area at the Contractor's expense.
2. During all lead-related work, such as demolition, torching and welding activities, etc., as applicable, visual inspections, perimeter air sample and/or lead wipe sample results will be collected by the City's Certified Industrial Hygienist or its Environmental Consultant (DOSH Certified Asbestos Consultant). These samples will be analyzed by flame atomic absorption.

C. Clearance and Re-occupancy Sampling

1. Asbestos Clearance Sampling
  - a. Clearance samples will be collected by the City at the completion of the asbestos abatement activity. Clearance will be either by visual inspection and/or phase contrast microscopy (PCM) and/or aggressive air sampling - transmission electron microscopy (TEM). The City Representative reserves the right to

conduct AHERA clearance criteria and limit the number of samples for clearances to be less than AHERA protocol when the City's Representative deems appropriate.

- b. Clearance air samples using aggressive air sampling techniques shall be collected for all abatement zones, unless otherwise designated in the Contract Documents.
- c. Phase Contrast Microscopy (PCM) Clearances: Areas cleared by PCM shall show an airborne concentration of total fibers for each sample at or below 0.010 fibers per cubic centimeter (f/cc) using the NIOSH 7400A counting rules. Any sample result exceeding 0.010 fibers/cc shall require re-cleaning of the work area and retesting. The City Representative will determine the minimum number of samples, based on the quantity and types of materials removed configuration, and sequencing of the work areas, and similar considerations.
- d. When transmission electron microscopy (TEM) clearances are conducted, as designated by the Contract Documents, analysis shall be by the method described in 40 CFR Part 763, Appendix A, Subpart E (AHERA), with an analysis turn-around time of 24 hours, unless otherwise designated by the City. Z-test requirements under the AHERA regulations shall **NOT** apply to this Project. The TEM clearance standard is 0.018 s/cc for **ALL** samples (equivalent to 70 s/mm<sup>2</sup> for a 1500-liter sample volume). The City Representative may opt to adjust the sample volume to prevent possible overloading of the samples from interference dusts (e.g., demolition, welding particulates), if so, the analytical sensitivity shall be at or below 0.005 s/cc, maintained by having adequate number of grids analyzed by the laboratory.

## 2. Lead Wipe Sampling

- a. All areas with regular occupancy affected by disturbance, demolition or scraping of painted surfaces shall be cleared by wipe sampling. Lead wipe sampling will be collected immediately prior to area occupancy.
- b. The City Representative will collect clearance wipe samples after approving the work area cleanliness based on visual inspection. The wipe samples will be collected from building surfaces, NOT from plastic sheeting or other temporary barriers. The Contractor shall re-clean the area if surface lead concentrations exceed any of the following HUD definitions for lead contaminated dust:

<10 micrograms/ft<sup>2</sup>      for interior floors

<10 micrograms/ft<sup>2</sup>      for interior horizontal surfaces other than floors

<100 micrograms/ft<sup>2</sup>      for exterior floor and horizontal surfaces, window sills and troughs

- c. All reoccupancy/clearances will be based on floors and any interior horizontal surfaces. Routine use of other levels is not expected and are for use only as determined by the City on a case by case basis. Areas that do not meet the HUD lead contaminated dust criteria shall continue to be cleaned by and at the Contractor's expense until the specified criteria is achieved. Only after passing re-occupancy clearance, shall the Contractor teardown the containment and demobilize.
- d. Where lead remediation occur concurrently with asbestos remediation activities, the area may be cleared (in addition to the wipe samples) by

aggressive air sampling, where airborne lead concentrations following the final visual inspection shall not exceed the EPA's NAAQS standard of 1.5 micrograms/m<sup>3</sup> as analyzed by NIOSH method 7082 (flame atomic absorption) or 7105 (graphite furnace atomic absorption) or ICP/MS.

D. Final Clearance Criteria

1. The City will pay the cost of the final round of visual inspections, aggressive air sampling, and PCM and/or TEM analyses that will meet the asbestos abatement specification. All rounds of visual inspections, aggressive air sampling, and PCM and/or TEM analyses that fail to meet the contract criteria shall be borne by the Contractor. For the purpose of this paragraph, visual inspection includes the area isolation inspection, pre-encapsulation inspection, and final area clean-up inspection.
2. If wipe sampling for re-occupancy clearance fails the HUD lead contaminated dust criteria, the Contractor will be responsible for additional clean-up costs (including costs associated with delays in time, and costs for the oversight Consultant and the City, and at no additional cost to the City), until clearance is achieved.
3. The Contractor shall pay for all Environmental Consultant costs for delays in completion of work beyond the authorized schedule established by the City. Such charges shall include Consultant's observations and inspections, daily air monitoring, equipment, transportation and analysis charges. Such costs are estimated at \$1,200 per day, exclusive of any costs associated with final clearance air testing. See the Liquidated Damages Section in the General Conditions for further requirements.

E. Inspections

1. Work Area Inspections: Inspections are required at the completions of the following job phases:
  - a. Pre-cleaning Inspection(s)
  - b. Work Area Preparation Inspection (Pre and post 24-hour hold times)
  - c. Pre-Encapsulation Inspection
  - d. Final Visual Inspection
  - e. Waste Handling Inspection
2. The Contractor's Supervisor shall provide in writing a signed or initialed request for inspection to the City. Request all inspections at least 24 hours in advance of the time required; inspections shall be performed between the hours of 8:00 a.m. and 3:00 p.m., Monday through Friday, unless otherwise noted. Written requests may be waived, and verbal requests accepted for short-duration projects at the discretion of the City. Adequate lighting is to be provided by the Contractor.
3. Precede all inspection requests by an evaluation by the superintendent. The superintendent shall be a person who has not participated in the supervision, preparation, abatement, and cleanup of the work area, except on small-scale short-duration projects where the contractor's foreman may serve as the superintendent. The superintendent shall verify that criteria for acceptability have been met prior to requesting an inspection.
4. Pre-cleaning Inspection:

- a. The City Representative shall inspect all surfaces requiring pre-cleaning to verify that dust and debris have been removed and cleaned up to an acceptable condition. Multiple inspections may be required to cover all systems and the required phasing of activities.
  - b. No object shall be covered until inspected or approved by the City Representative as stated in the requirements herein. When covered before such inspections are made and approved, the Contractor shall uncover such work for inspection, subsequently restore it, and replace work of others damaged thereby, all at the Contractor's expense.
5. Work Area Preparation Inspection:
- a. After preparing the work area and decontamination enclosure system(s) for Activity Class I and II work areas, as applicable, the City's Representative shall conduct an initial inspection to ensure completeness of work and type containment according to the specifications.
  - b. No hazardous material removal work shall commence without the approval of the City's Representative following a work area preparation inspection.
6. Pre-Encapsulation Inspection:
- a. After detail cleaning has been completed and the Superintendent has checked and approved the area as adequately cleaned, the City's Representative shall inspect all surfaces requiring encapsulation to verify that hazardous materials have been removed and the area and abated surfaces leaned to an acceptable condition.
  - b. During such inspections, the Contractor will provide adequate lighting, ladders, scaffolding, workers, etc., so as not to curtail the systematic inspection of all surfaces by the City. Areas requiring rework will be tagged in a manner to allow continuation of the inspection in a timely manner. The City's Representative shall not be expected to remain within an area requiring extensive re-cleaning.
  - c. The pre-encapsulation inspection may be staged to allow inspection of detailed surfaces concurrent with the removal activities in adjoining areas ready for inspection, allowing a buffer zone to protect against cross-contaminating inspected surfaces. For lead removal: a final overall inspection will be required to reconfirm the final wipe down of all horizontal surfaces, which may have been subjected to contamination from airborne releases during the staged inspection process. The staging of inspections shall not preclude the Contractor from conducting internal quality control inspections prior to requesting the City Representative's review.
7. Final Visual Inspection: After the encapsulation process is complete, the encapsulant is dry, and all debris bags, tools, supplies, and equipment have been removed from the work area, as applicable, City Representative shall inspect the work area to verify the cleanliness of the area, including but not limited to public and attic areas. The work area must be free of visible debris, dust, water, or loose and peeling lead-based paints as a minimum.
8. Waste Handling Inspection: The City Representative shall inspect waste as it leaves the regulated area. The Contractor shall insure that all waste is packaged, labeled, and handled as required. The City Representative may inspect the waste dumpsters at any time, including prior to transportation. Coordinate temporary relocation to a transport staging area with the City Representative prior to removal.

## 1.7 ADDITIONAL CONTRACT REQUIREMENTS

- A. Specific mandatory asbestos abatement requirements for *occupied and unoccupied spaces* at San Francisco sites are more stringent than current regulations. This summary of additional requirements is not to be read as a stand-alone document.
1. If work procedures are going to change, the City Representative must be notified, in writing, and given the opportunity to notify surrounding employees as the new procedures may impact surrounding areas (e.g., noise, vibration).
  2. Localized occupants must be notified in writing of limited access to the work areas prior to the start of project.
  3. The Contractor is responsible for coordinating with the City Representative and site facility representative as to where the exhaust air is to be directed and to ensure the exhausted air will not be recirculated within the facility prior to the initial setup of the work area.
  4. A rigid and robust secondary perimeter with "Caution Construction" sign or equivalent. The secondary perimeter shall be a full height, 1-hour fire-rated, dust and sound proof construction barricade as per the architectural drawings for this project.
  5. The regulatory signage is to be posted between the secondary construction perimeter and the regulated work area.
  6. All equipment shall be inspected by the City's designated representative prior to being brought into the hospital. All equipment and supplies shall be free of dust and debris.
  7. On-site aerosol challenge testing of negative air machines and HEPA vacuums prior to start of work and every 90 days for longer projects, when machines are relocated between floors. The aerosol challenge testing shall be conducted in the work area.
  8. Sufficient quantities and types of dehumidifier units shall be installed and operated within the Construction Area to reduce humidity levels to 40% relative humidity.
  9. Method of sealing critical barriers including the capping of ducts, supply registers, etc. shall be dust tight and capable of withstanding air flow and pressure generated by the ventilation system. Tape and/or polyethylene sheeting alone shall not be used to seal the supply registers.
  10. Negative pressure differential of -0.04 inches of water with manometer reading records is required for all areas at all times during abatement and general construction activities. Downgrading of negative pressure during construction may be considered on a case by case basis.
  11. The negative pressure enclosure shall maintain the minimum Negative pressure differential of -0.04 inches of water for at least 24 hours prior to the start of abatement unless otherwise approved by the City Representative. Following 24-hours, the City Representative and its Environmental Consultant will review the containments to determine if the integrity of the containments has been maintained. The Containment will have passed when the following 3 conditions are met:
    - a. Containment integrity has been maintained for at least 24-hours; and
    - b. Negative pressure has been maintained at least at -0.04" w.g. for 24-hours; and
    - c. The City Representative and the Environmental Consultant are satisfied that the containment has been constructed sufficiently so as to last for at least two

months without modifications, repairs or improvements.

12. In negative pressure enclosures, a calculated air exchange rate of no less than 10 air exchanges per hour for the entire area in which the renovation activities are being performed.
13. Installation of clear, transparent view ports made of plastic or equivalent, in the polyethylene wall so that activities can be visually monitored from outside the containment. This window shall measure approximately 1' wide by 2' high. It shall remain transparent throughout the duration of the abatement process. It is recognized that viewing ports are not possible in all situations.
14. Adhesive tack ("sticky") mats with multiple layers shall be installed at all construction barricade entrances to prevent tracking of construction dust outside of the construction area.
15. The removal of debris shall be in tightly covered containers, and only at times and routes approved by the City Representative and facility personnel.
16. All HEPA equipment, tools, decontamination chambers, etc. shall be clean upon entering the hospital. Typically, the equipment and materials are inspected at a loading dock prior to bringing them into the facility. NOTE: The use of decontamination showers is limited to Class I work only unless otherwise specified by the Abatement Work Plan.
17. The Contractor is responsible for ensuring that water is properly shut off at lavatory/faucet fixtures at the beginning and ending of each shift. SFGH Facilities shall be immediately notified if the fixtures are unable to be completely shut off.

## PART 2 - PRODUCTS

### 2.1 GENERAL

#### A. Prohibited Materials

1. Mastic or paint removers shall not result in the generation of hazardous waste.
2. Cleaning Agents, equipment, and methods employed shall not in any way damage the substrate or adjoining surfaces and finishes which are to remain. Cleaning solvents shall be non-injurious to the surfaces upon which they are applied. The methods used shall cause no pitting, erosion or damages to the surfaces.
3. Paint removal chemicals may not attach or leave deposits on the substrate material.
4. The following tools and equipment are specifically prohibited unless accepted in writing by the City Representative:
  - a. High- or low-pressure water-blasting equipment for hosing of ductwork or work areas.
  - b. Gasoline, propane, diesel or other fuel powered equipment inside the building.
5. Equipment that creates excessive noise or vibration that would affect safety of the building or its occupants or generate complaints from the occupants. Equipment shall not exceed an A-weighted sound level of 85 dB as measured at 50 ft. from the radiating source.

6. Asbestos-containing materials shall not be disturbed by cutting, sawing, grinding, pulverizing, crumbling, breaking, or otherwise rendered friable or airborne unless these activities are conducted under the requirements of all applicable regulations and guidelines by trained certified workers.

B. Minimum Requirements:

1. Deliver all materials in original packages, containers, or bundles bearing the names of the manufacturers and the brand names and details for proper storage and usage. Store all materials subject to damage off the ground, away from wet or damp surfaces, and under cover sufficient to prevent damage or contamination. Store materials so as not to interfere with the Owner's or other Contractors' operations.
2. Do not use damaged or deteriorating materials. Remove damaged materials from the premises. Dispose of contaminated materials in accordance with applicable regulations.

## 2.2 MATERIALS AND EQUIPMENT

- A. Protective Devices: Temporary wash stations or showers, disposable clothing, respirators, gloves, hard hats, and other required items. Respirators shall protect against appropriate dusts, fumes and mists as approved by the Mine Safety and Health Administration (MSHA) and the National Institute for Occupational Safety and Health (NIOSH) under provisions of 30 CFR Part 11.
- B. Waste Receptacles: Conform to federal and State regulations, with 6-mil minimum thickness waste bags.
- C. Polyethylene Sheeting and Dust Barriers
1. Polyethylene sheeting shall be flame-retardant and approved and listed by the State Fire Marshal in accordance with Section 13121 and/or 13144.1 of the California Health and Safety Code.
  2. Thickness and Size: 6-mil thick minimum, unless otherwise specified, sized to minimize the frequency of joints.
  3. Flammability: Comply with NFPA Standard 701 with a flame spread rating of no greater than 5 and a smoke development rating of no more than 70 when tested in accordance with ASTM accordance with ASTM E84 procedures.
- D. Protective Devices to conform to the following:
1. Polyethylene drop cloths and dust barriers, temporary wash stations or showers, disposable clothing, respirators, gloves, hard hats, and other required items.
  2. Respirators shall protect against asbestos and other appropriate dusts, fumes and mists as approved by the National Institute for Occupational Safety and Health (NIOSH) under provisions of 30 CRF Part 11.
- E. Sealants:
1. Sealants shall, at a minimum, conform to the following:
    - a. Shall be Fire resistant

- b. Shall be compatible with concrete, metals, wood, cable jacketing and other materials capable of preventing fire, smoke, water and toxic fumes from penetrating through sealants.
    - c. Shall be asbestos free and shall have a flame spread, smoke and fuel contribution of zero.
    - d. Shall be ASTM- and UL-rated for 3 hours for standard method of fire test for fire stop systems.
  2. Spray adhesives shall not contain methylene chloride or methyl chloroform (1,1,1-trichloroethane) compounds.
  3. Adhesive tape shall comply, at a minimum, with the following.
    - a. Must be 2" or wider, shall be capable of sealing joints of adjacent sheet of polyethylene and attaching polyethylene sheet to finished or unfinished surfaces of similar materials.
    - b. Tape shall be capable of adhering under dry and wet conditions, including use of amended water. Complete taping to critical or sensitive surfaces utilizing preservation sealing tape, such as:
      - 1) 3M Scotch Brand No. 4811 Preservation Tape; or
      - 2) 3M Scotch Brands No. 472 Plastic Film Tape.
- F. Surfactants and Encapsulants:
  1. Wetting agents or surfactants shall be effective and compatible with the ACM being wetted.
  2. Bridging or penetrating type encapsulants shall have the following characteristics:
    - a. Water based. Do not utilize an organic solvent in which the solid parts of the encapsulant are suspended.
    - b. Non-flammable with no methylene chloride.
    - c. U.L. listed encapsulants, in full-scale ASTM E119 fire test, compatible with W.R. Grace "Retroguard, RG-1" fireproofing with "Spatterkote" Type SKII" bonding treatment for structural and decking widths exceeding 24 inches.
    - d. Compatible with replacement materials, especially mastics, fireproofing, and adhesives.
- G. Mastic and Paint Removers to conform to the following:
  1. Non-flammable solvent or gel, with a flash point above 140 degrees Fahrenheit.
  2. Of low odor type.
  3. Solvent waste shall not result in the generation of hazardous waste as described under 22 CCR, Division 4.
  4. Removers shall NOT contain methylene chloride, halogenated hydrocarbons, or any of the following glycol ethers:

Common Name	Abbreviation	CAS #	Chemical Name
Ethylene glycol methyl ether	EGME	109-86-4	2 - methoxyethanol
Ethylene glycol methyl ether acetate	EGMEA	110-49-6	2- methoxyethyl acetate
Ethylene glycol ethyl ether	EGEEA	111-15-9	2- ethoxyethanol
Ethylene glycol dimethyl ether	EGDME	110-71-4	1,2-dimethoxyethane
Ethylene glycol diethyl ether	EGDEE	629-14-1	1,2 - diethoxyethane
Diethylene glycol	DEG	111-46-6	2,2 - dihydroxyethyl ether
Diethylene glycol methyl ether	DEGME	111-77-3	2-(2-methoxyethoxy) ethanol
Diethylene glycol ethyl ether	DEGEE	111-90-0	2- (2-ethoxyethoxy) ethanol
Diethylene glycol dimethyl ether	DEGDME	111-90-6	Bis-(2-methoxyethoxy) ether
Triethylene glycol dimethyl ether	TEGDME	112-49-2	2,5,8,11-tetraoxadodecane
Dipropylene glycol	DPG	110-98-5	2,2 - dihydroxyisopropyl

- H. Vacuums and Negative Pressure Units (NPU) used for cleanup of materials and detailing shall be HEPA-filtered, clean, without significant dents, marring, or otherwise unprofessional appearance. Coordinate with the Environmental Consultant for inspection and approval prior to bringing this equipment into a building. Conduct DOP testing on-site in the presence of the City's Environmental Consultant for all HEPA-filtered units.
- I. Air Filtration Devices shall, at a minimum, conform to the following:
1. Filtration devices shall be high efficiency particulate absolute (HEPA) filtration systems bearing a UL 586 label indicating its ability to perform under specified conditions. Filters shall be marked with the name of the manufacturer, serial number, airflow rate efficiency and resistance, and the direction of the test airflow. Provide units with two stages of pre-filtering, as follows:
    - a. A low efficiency type first stage pre-filter for particle sizes 100 micrometers and larger.
    - b. A medium efficiency type second stage pre-filter effective for particle sizes down to 5 micrometers.
    - c. Pre-filters installed either on or in the intake grid to the exhaust unit and held in place with special housings or clamps.
  2. HEPA-filtration exhaust units are to include:
    - a. An elapsed time meter showing the total accumulated hours of operation.
    - b. An electrical interlock preventing operation of the unit without a HEPA filter.
    - c. An automatic shutdown system to stop the fan in the event of a rupture in the HEPA filter or a blocked air discharge.
    - d. Warning lights to indicate normal operation (green), moderately high pressure drop across the filters, such as due to filter overloading (yellow), and too high of a

pressure drop due to an overloaded or ruptured HEPA filter or obstructed discharge (red).

- e. An audible alarm if the unit shuts down due to operation of the safety systems.
  - f. Electrical components approved by the National Electrical Manufacturers Association (NEMA) and the Underwriter's Laboratories (UL). Each unit shall be equipped with overload protection sized for the equipment. Properly ground the motor, fan, fan housing, and cabinet.
  - g. A cabinet constructed of steel or aluminum capable of withstanding damage from rough handling and transportation, with a width under 30-inches to fit through a standard-size doorway, mounted on casters or wheels.
  - h. Several spare HEPA-filtered exhaust units on-site to be used as needed should active units fail.
- J. Waste Containers:
- 1. Waste Receptacles to conform to federal and State regulations, with 6-mil minimum thickness or glove bags or waste bags.
  - 2. Sealable drums shall be of 30- or 55-gallon capacity constructed of fiber or metal with tightly fitting lids for hazardous waste disposal. Label the drums and bags in accordance with U.S. EPA and local Air Quality Management District requirements, including the Generator I. D. number or location identification, and manifest number. Provide air and watertight drums. If previously used, the drums shall be food grade and shall be approved by the City Representative prior to their storage or use on-site. Sealable polyethylene bags shall be of 6-mil minimum thickness for asbestos disposal. Size bags to fit within drums specified above.
- K. Cleaning Agents:
- 1. Cleaning agents, equipment, and methods employed shall not in any way damage the substrate or adjoining surfaces and finishes. Cleaning solvents shall be non-injurious to the surfaces upon which they are applied. The methods used shall cause no pitting, erosion or damages to the surfaces.
  - 2. Do not use chemicals that may attach or leave deposits on the substrate material. Modify the process or processes to suit the finish, hardness, and condition of the surface to be cleaned.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Review hazardous materials reports and information and ensure the information is available to all subcontractors and trades.
- B. Promptly notify the City Representative of differing conditions of for suspected materials not identified or listed under Section 01 35 43.
- C. Notify the City Representative, in writing, a minimum of 48 hours in advance of any planned disturbances to any hazardous materials or prior to performing any hazardous materials abatement.

- D. Disturbance of asbestos or lead and other hazardous containing materials, including demolition, surface preparation, or removal of paint, can contaminate air, soil, and water surrounding the work site. It is the responsibility of the Contractor to evaluate and determine the most appropriate level of containment necessary to prevent the uncontrolled release of hazardous materials from the work site.
- E. As per Cal/OSHA regulatory requirements, establish the required site controls, class of containment, of ventilation, and of air monitoring as appropriate for the removal means and methods as selected to perform the specific removal work. These systems shall be sufficient to control exposures to workers, the public, and to protect the surrounding environment.

### 3.2 PREPARATION

- A. Protective Procedures and Workers Protection
  - 1. Protect Visitors and Other Site Personnel: Cordon off the hazardous materials removal and hazard control area(s) with appropriate signs, and provide temporary tunneling or scaffolding, as applicable.
  - 2. Provide site security to assure that no member of the public or any unqualified or untrained person is able to gain access to any hazardous materials work area at any time while maintaining open access and egress routes at all times.
  - 3. Provide worker training, respiratory protection, and medical examinations to meet applicable regulations.
  - 4. Provide temporary lighting and power to work areas, including installation of ground fault interrupters as required. Ensure that all electrical power terminating in the work area, including but not limited to outlets and lights are disconnected and cannot be re-energized during the course of the work. Fully ground all equipment within the work zone and decontamination assemblies.
  - 5. Construct enclosure system(s) for worker and equipment decontamination.
  - 6. Establish negative pressure in work area(s) as required under 8 CCR Section 1529. Follow and follow hazard control procedures as outlined under Cal/OSHA regulations CCR 1532.1 and CDPH regulations 17 CCR Sections 35001 through 36100
  - 7. Provide workers with sufficient sets of protective full-body clothing to be worn in the designated work area and whenever a potential exposure to lead, asbestos, and hazards exists. Such clothing shall include but not be limited to full-body coveralls, headgear, eye protection, and gloves. Disposable-type protective clothing, headgear, and footwear may be provided.
  - 8. Respiratory Protection: Comply with Cal/OSHA Regulations included in 8 CCR Sections 1529, 1532.1 and ANSI Standard Z88.2, "Practices for Respiratory Protection: Workers shall wear appropriate respiratory protection during lead, asbestos and any other hazards work, unless negative exposure assessment testing verifies that employee exposures are below the PEL or Action levels.
- B. Site Protective Controls:
  - 1. Locate temporary scaffolding and dust barriers, as required, and proceed with the construction or demolition, allowing for continued operation of any adjacent occupied areas, as applicable.

2. Erect temporary protective covers over pedestrian walkways and at points of passage for persons or vehicles, which are to remain operational during the work.
3. Where life safety systems shall be made non-operational, coordinate shutoff with City. Protect all wiring associated with the system.
4. Air Filtration Device
  - a. Differential air pressure systems for each work area to be in accordance with Appendix J of the EPA's "Guidance for Controlling Asbestos-Containing Materials in Buildings," EPA 560/5-85-024.
  - b. Minimum work area differential air pressure of -0.025 inches w.g. at all times when required, including during the removal, gross clean-up, waste transfer, and encapsulation activities. Account for fluctuations of the negative pressure by aiming for a higher-pressure differential at the project outset to ensure that the chances of the pressure differential dipping below -0.025 inches w.g. are minimal.
  - c. Provide sufficient number of units for each work area to maintain differential air pressure in the work area at -0.025 inches w.g. between the work area and adjacent non-work areas at all times, allowing for stack and thermal effects. Locate unit(s) so that the primary make-up air enters the zone through the decontamination facilities and traverses the work area as much as possible, unless otherwise approved by the City Representative.
  - d. Provide on-site certification of all HEPA-filtered negative pressure units to document adequate filtration efficiency for all units exhausting internally within the building or as otherwise required by the City. Systems shall be certified by a third-party to conduct onsite dioctylphthalate (DOP) or Portacount challenge testing, signed by an independent tester or the Contractor's Site Safety Representative. DOP testing shall verify an in-situ efficiency of 99.97% or greater. Portacount testing shall verify an in-situ efficiency of 99.3% or better.
5. Exhaust Air:
  - a. Establish negative pressurization within the work area exhausting air ducted through temporary panels located in window frames or exterior doorways. Such panels must be designed to prevent rainwater from entering the work area.
  - b. Unless otherwise directed by the City Representative the Contractor shall replace windows any windows removed at the completion of hazardous materials removal work. Vent exhaust air to the exterior of the building at locations approved by the City Representative unless otherwise noted or directed.
  - c. Do not locate exhaust outlets near or adjacent to other building intake vents or louvers or at the entrances to the building. Do not exhaust air into the building interior spaces or within 50 feet of the building's supply air intakes, unless otherwise noted or directed by the City.
6. Decontamination Enclosure Systems
  - a. Construct a decontamination enclosure system (as a minimum) in accordance with OSHA Regulation 29 CFR Part 1926.1101 and Cal/OSHA Regulation 8 CCR Sections 1529 and 1532.1. The systems shall be contiguous to the work area consisting of three totally enclosed chambers and airlocks. Mobile isolation enclosures will be permitted in areas where space limitations will not permit such construction.

- b. For Work Class I, II and III work areas, provide as a minimum, with a two (2)-stage decontamination assembly, including an equipment and contiguous clean room with bucket wash-up facilities. A shower will be required if the work is greater than 25SF.
- c. Post all emergency phone numbers, notifications, emergency exiting diagrams and procedures, as required.
- d. Post danger signs at the entrance to all decontamination units, per OSHA Regulation 29 CFR Part 1926, 1529 and 1532.1.
- e. The City's Representative prior to construction must approve location of decontamination enclosure systems
- f. Mobile Isolation enclosure(s) shall be constructed of rigid frames (either 2 x 4-inch wood construction or PVC tubing, as appropriate) and polyethylene sheeting or rigid Plexiglas sheets. Do not tape, nail, puncture or disturb asbestos containing building materials to attach, or secure the mini enclosure system.
- g. No eating, drinking, smoking, or chewing gum or tobacco is permitted in or near the asbestos or lead work areas or decontamination enclosure systems except in areas designated by the City. Smoking will not be permitted in the clean room and near storage or usage areas of flammable materials, such as spray adhesive and mastic removers.

### 3.3 ASBESTOS ABATEMENT PREPARATION

#### A. Notifications:

1. Notify the City, in writing, a minimum of 48 hours in advance of any asbestos-abatement work.
2. Notify, in writing, the BAAQMD at least 10 working days prior to commencement of any asbestos project equal or greater than 100 linear feet (LF) or more than 100 square feet (SF) or 35 cubic feet or more of regulated asbestos-containing materials. Obtain a J#.
3. Notify Cal/OSHA a minimum of 24 hours in advance of any disturbances of any amount of friable or non-friable asbestos-containing materials or prior to performing asbestos-related work.
4. Advise the Contractor's Site Safety Representative (SSR) of suspect conditions. Do not remove or disturb suspect materials until tested and approved.

#### B. Prohibited Activities:

1. Asbestos-containing materials shall not be disturbed by cutting, sawing, grinding, pulverizing, crumbling, breaking, or otherwise rendered friable or airborne unless these activities are conducted under the requirements of all applicable regulations and guidelines.
2. Only a registered Asbestos Abatement Contractor per Cal/OSHA regulation 8 CCR 1529 shall complete Work exceeding 100-sq. ft. or 100 linear feet or 35 cubic feet of asbestos-containing construction materials.

#### C. Demolition of non-ACM obstructing known intact ACM:

1. Remove non-contaminated and non-asbestos materials for access using standard dust control procedures as required for painted assemblies and construction housekeeping controls.
  2. Minimize disturbances to substrates concealing friable or damaged asbestos-containing materials, such as laid-in ceiling tiles concealing asbestos-containing fireproofing, demolition of non-ACM partitions which may destabilize sprayed-on asbestos-containing acoustical finishes, etc. Qualified workers shall conduct work impacting asbestos-containing materials.
- D. Unexpected exposure to known or suspect Asbestos-Containing Material (ACM):
1. Where ACMs are discovered intact, such as intact pipe lagging, proceed to cordon off the affected area and immediately post it with a "caution" sign to prevent unintentional disturbances. Immediately alert the Contractor's Site Safety Representative of the conditions for proper removal and disposal procedures.
  2. Where ACMs are damaged or suspect asbestos contaminated conditions are encountered, discontinue work in the immediate suspected area, shutdown the area's HVAC system, if not already disengaged, and alert the Contractor's Site Safety Representative of the conditions for proper removal and disposal procedures.
- E. Unexpected release of asbestos into the environment:
1. Cordon off the immediate area (10 to 20 ft. radius minimum), and shutdown the area's HVAC system (if applicable).
  2. Notify the Client, the City Representative, and the Environmental Health and Safety Department immediately.
  3. Notify the Contractor's Site Safety Representative for proper removal and disposal using wet methods and HEPA-filtered vacuums. Clean-up work shall be completed under the directions of a Competent Person with 16-hour minimum EPA Operations and Maintenance asbestos training and by workers with 2-hours asbestos awareness training minimum unless exposures exceed the permissible exposure limit (PEL) of 0.1 fibers/cc.
  4. Decontaminate or dispose of friable waste in double 6-mil thick goose necked labeled waste bags for manifesting and disposal.
- F. Work area set up and protection:
1. Pre-Cleaning
    - a. Work Areas: Pre-clean surfaces in workspace. If the space has any contamination in the opinion of the City, then the Contractor shall install air locks and negative pressure system prior to pre-cleaning.
    - b. Fixed Objects: Pre-clean all fixed objects within the proposed work areas using HEPA filtered vacuum equipment and/or wet cleaning methods, as appropriate. Enclose with a layer of 6-mil polyethylene sheeting sealed with tape unless specified otherwise.
    - c. Ductwork: Pre-clean and wrap all active and inactive ductwork within the zone with a minimum of two layers of 6-mil polyethylene sheeting sealed with tape, unless otherwise directed by the City Representative.

- d. Removable Objects: Pre-clean removable objects within the proposed work areas exposed to friable ACM or debris using HEPA filtered vacuum equipment and/or wet cleaning methods, as appropriate. Properly remove and dispose of objects from work area before abatement operations commence
  - e. Work area surfaces or items scheduled to remain covered with polyethylene sheeting during the clearance air sampling shall be inspected and approved by the City Representative upon completion of pre-cleaning before critical barriers are erected or any other removal procedures are initiated.
  - f. The Contractor shall inspect all of its equipment and shower pans that it brings to the work site before and after its use and ensure that such equipment is not contaminated.
2. Critical Barriers
- a. Seal off all openings, including but not limited to corridors, doorways, ducts, grilles, diffusers, pipe chases, drains, grates, and any other penetrations of the work areas, with 6-mil polyethylene sheeting sealed with tape. Use caulking where necessary to ensure a complete seal.
  - b. Except for emergency exits, doorways, which will not be used for passage during work, must be sealed by first applying tape over the gap between the closed door and the doorframe and the gap between the bottom of the door and the floor. Then apply 6-mil polyethylene sheeting over the door and seal it with tape to the wall and to the floor.
  - c. Seal windows by applying two layers of 6-mil polyethylene sheeting sealed independently to the wall with tape.
  - d. HVAC registers and returns shall be sealed with metal or rigid plastic covered by polyethylene sheeting. Polyethylene sheeting is not an acceptable alternative.
  - e. At any time during the abatement activities after barriers have been erected, if visible suspect dust is observed outside of the work area or if the barriers are damaged, work in the abatement area shall immediately stop. Repair the barriers, and clean-up debris/residue using appropriate HEPA vacuuming and wet cleaning procedures before work recommences.
3. Regulated Work Area Isolation and Controls
- a. Establish a pressure differential of -0.025 inches w.g. with manometer reading records. Submit manometer readings daily or upon request.
  - b. Conduct DOP testing of the HEPA-filtered negative pressure units and vacuum cleaners on site.
  - c. Install a transparent view port per work area for inspections.
  - d. Notify the City Representative for changes in work practices immediately to allow the facility's Health and Safety Officer the opportunity to notify and prepare the surrounding employees, as the new procedures may impact the surrounding areas (due to noise, vibration, etc.).
  - e. Use a calibrated manometer to monitor the negative pressure, and provide the manometer print out to the City's oversight Consultant at the end of the work shift.

3. For projects on City and County of San Francisco Department of Public Health (SFDPH) sites' public and occupied areas, the following additional regulated work area isolation and controls shall be implemented:
  - a. Install a secondary perimeter with a 'Caution Construction' sign or equivalent. The asbestos sign is to be posted between the secondary construction perimeter and the actual regulated asbestos work area.
  - b. Establish a pressure differential of -0.04 inches w.g. with manometer reading records. The negative pressure containment shall have been setup for 24 hours demonstrating uninterrupted negative pressurization of -0.04 inches w.g. or better. Submit manometer readings daily or upon request. Conduct DOP testing of the HEPA filtered negative pressure units on site.
  - c. Install a transparent view port per work area for inspections.
  - d. Notify the City Representative for changes in work practices immediately to allow the facility's Health and Safety Officer the opportunity to notify and prepare the surrounding employees, as the new procedures may impact the surrounding areas.
  - e. Work shall be scheduled with more than 72 hours' notice to the area's users.
4. Full Isolation Work Areas - Sequence of Major Events
  1. This subsection outlines the sequence of events only. Modify the sequence as required if the work area is considered contaminated or if demolishing ACM or non-asbestos materials is required for access to the required abatement materials. Refer to other applicable sections of this specification for detailed requirements.
  2. Cordon off the area with appropriate signs.
  3. Deactivate HVAC system, unless otherwise noted or directed.
  4. Protect or remove carpeting, if present, as appropriate. Contaminated carpeting will require decontamination by steam cleaning or disposal, as directed by the City
  5. Pre-clean work area, as necessary.
  6. Establish temporary power and lighting.
  7. Construct critical barriers.
  8. Construct decontamination enclosure systems. All work areas shall contain a worker decontamination enclosure system and an equipment decontamination enclosure system, unless otherwise noted or directed.
  9. Erect 6-mil polyethylene sheeting on the walls, windows, ceiling and floor, as applicable.
  10. Establish negative pressure within the work area.
  11. Request and facilitate a second work area preparation inspection from the City's Representative following demolition and preparation of the final critical barriers, where applicable.

12. Remove ACM employing wet cleaning methods, HEPA vacuuming and proper work practices.
13. Clean-up work area.
14. Dispose of asbestos-containing waste.
15. Work area final clean up.

### 3.4 HAZARDOUS MATERIALS REMOVAL PROCEDURES FOR CONTROLLED RENOVATION

- A. Controlled Renovation Procedures for Installation of Anchors and Minor Disturbances to Asbestos-Containing Material under one hundred square feet (<100 SF) or under one hundred linear feet (<100 LF), except thermal system insulation (TSI) or surfacing materials (including but not limited to vinyl floor tiles, carpet or tile mastics, transite board, sheetrock wallboard, ceiling tile mastics):
1. Minor work affecting non-friable materials, such as drilling molly anchors into wallboard or seismically bracing equipment through asbestos-containing may be completed by trained construction workers or maintenance personnel following procedures under the General Industry Asbestos Standards, 8 CCR 5208. All Operations and Maintenance procedures and personnel training records must be pre-approved by the City Representative, or the Environmental Consultant prior to commencement of activities.
  2. Demarcate the area of exposure to minimize traffic within the area and to protect persons outside the area from airborne asbestos exposures, even if a negative exposure assessment has been produced.
  3. Assemble equipment and supplies, including but not limited to a Hudson sprayer, an HEPA- filtered vacuum, polyethylene drop cloths and wetted sponges.
  4. Install a drop cloth below the area to be disturbed on the floor and other surfaces and shoot or drill the anchor through the wetted sponge or cut the material through a wetted sponge, as applicable. HEPA vacuum the area following all work and place the sponge and debris into a sealed plastic disposal bag. Do not use these procedures on asbestos-containing thermal system insulation (TSI) or asbestos-containing surfacing materials, such as asbestos fireproofing or acoustical sprayed-on plaster finishes.
  5. Immediately clean up all debris dislodged from coring or drilling through asbestos and trace asbestos substrates using a wetted sponge and HEPA vacuum. HEPA vacuum the area immediately following completion of the controlled renovation procedures. Dispose of the debris as non-friable asbestos waste. Contamination of the site by use of improper procedures will require extensive clean-up and clearance air sampling by the City, at the Contractor's expense.
  6. The following materials are classified as not "surfacing" materials for controlled renovation purposes involving anchoring or minor disturbances
    - a. Vinyl Floor Tiles: Cordon off the room or area and remove the floor tiles before drilling through the concrete or wooden substrate. Vinyl floor tiles can be removed using heat or manual means such as hand scrappers. Where tiles cannot be removed in advance of coring, saturate the tile with shave cream and core through the tiles, frequently wiping up all chips and debris and disposing as Category 1 non-friable waste. Wet wipe with a clean sponge and HEPA

- vacuums the area upon completion of work. Seal off the area below the core capture any debris that can fall into the ceiling plenum or crawl space below.
- b. Carpet Mastics: Cordon off the room or area and cutout the carpeting and mastics using a carpet knife, saturating the carpet with water to prevent airborne asbestos fiber releases. Remove excess mastics using a mastic remover with a flash point greater than 140 deg. F., as approved by the City. Dispose of the carpet segment and mastics as Category 1 non-friable waste. Wet wipe and HEPA vacuum the area following completion of the controlled renovation procedures.
  - c. Vinyl Floor Tile Mastics: Cordon off the room or area and remove the mastics using a mastic remover with a flash point greater than one hundred and forty degrees Fahrenheit (>140 deg. F.), as approved by City. Dispose of the mastic and rags as Category 1 non-friable waste. Wet wipe and HEPA vacuum the area following completion of the controlled renovation procedures.
  - d. Transite Board and Mastics: Cordon off the room or area and remove the board intact, where feasible, following installation of drop cloths below. If removal is not feasible, drill through the board using the shaving cream methods described
  - e. Sheetrock Wall or Ceiling Board: Shoot or drill anchors through a wetted sponge, where feasible, or use a Hilti-brand rotohammer drill equipped with a spring-loaded local exhaust hood connected to a HEPA-filtered vacuum cleaner. Cordon off the room or area and cut holes for receptacles or other devices using drop cloths on the ground and wet methods. Remove the sheetrock avoiding the joint compounds, where feasible. Continually wet the controlled renovation area during the process and wet wipe and HEPA vacuum the area following completion of the controlled renovation procedures.
  - f. Thin-Layered Asbestos-Containing Paints: Shoot or drill anchors through a wetted sponge or use a Hilti-brand rotohammer drill equipped with a spring-loaded local exhaust hood connected to a HEPA-filtered vacuum cleaner, where feasible. Cordon off the room or area and core using drop cloths on the ground and wet methods. Continually wet the controlled renovation area during the process and wet wipe and HEPA vacuum the area following completion of the controlled renovation procedures. Dispose of the paints as Category 1 or 2 non-friable wastes as determined by the substrate's composition.
  - g. Linoleum Backing: Cordon off the room and work area and cutout the linoleum, using a carpet knife prior to coring. Wet the backing using water and shave cream and remove the asbestos containing backing intact. Dispose of debris as friable asbestos waste. Wet wipe and HEPA vacuum the area of the controlled renovations for final clearance. Do not allow linoleum on cores to fall into the ceiling plenum or the space below, as applicable.
7. Other Non-Friable Materials: Complete controlled renovation procedures in compliance with Cal/OSHA's Work Class 2 procedures per 8 CCR 1529.
  8. A Cal/OSHA & DOSH registered, and licensed Asbestos Abatement Contractor shall complete work equal or greater than one hundred square feet (100 SF) or one hundred linear feet (100 LF) or asbestos-containing construction materials or other work as required in the Abatement Work Plan.
- B. Controlled procedures for installation of anchors or coring through friable asbestos materials, including but not limited to sprayed-on or troweled-on acoustical plasters, structural fireproofing, and linoleum backing (as applicable):

1. Avoid contact with friable ACM where practical. Anchor to non-ACM materials where feasible.
2. Install drop cloths on the ground and use a glovebag or mini-containment constructed of 6-mil polyethylene sheeting to contain work affecting friable materials.
3. Wet the ACM with water and remove limited material as required for installations. Immediately clean up all debris and seal the waste in a double 6-mil disposal bag for disposal as asbestos waste.

C. Core drilling through ACM:

1. Assemble equipment and supplies, including but not limited to Hudson sprayers, nylon brushes, HEPA vacuums, labeled polyethylene disposal bags, approved encapsulant, duct tape, 5-in-1 tools, plastic buckets, etc.
2. Coordinate exact location of the core hole, marking the location on the underside of the structure. Spray material to be disturbed with an approved penetrating encapsulant, restricted to the area of removal and disturbance only.
3. Remove asbestos-containing materials following set-up of the isolation area under full isolation procedures or glove bag removal procedures.
4. Cordon off the area with appropriate signs and deactivate the HVAC systems, as appropriate.
5. Isolate the area with a mini-containment and decontamination assembly, and pre-clean and wrap fixed items and surfaces, as appropriate. Establish a mini-containment and decontamination assembly in the floor below.
6. Establish negative pressure within the mini containment.
7. Begin coring from the floor above, protecting against water seepage or spraying near active electrical or telephone equipment. After coring is complete, double bag, and encapsulate the raw edges of the cored hole with an approved penetrating encapsulant.
8. Clean up any residual debris and insert a non-conductive sleeve into the hole, extending 6-inches minimum below the asbestos coating. Properly secure the sleeve and seal the openings around the circumference with a fire-rated caulking or seal.
9. Dispose of ACM waste and proceed with the final work area clean up and inspection.

D. Hanger installation:

1. Assemble equipment and supplies, including but not limited to Hudson sprayers, nylon brushes, HEPA vacuums, labeled polyethylene disposal bags, approved encapsulant, duct tape, 5-in-1 tools, plastic buckets, etc.
2. Lightly wet the material with an approved penetrating encapsulant, using a 5-gallon bucket lined with a plastic bag as a catch basket during the installation of the hanger or anchor. Cut an appropriately sized hole in the bottom of the bucket for the anchor grip to reach through. Place the plastic bag in the bucket, and with one hand, push the bottom of the anchor through the hole in the bucket sandwiching the plastic bag between the anchor and the gun grip. Locate the anchor location and push the bucket tight against the material before setting the anchor. Carefully lower the bucket and the gun and dispose of the waste gathered in the bag and any loosened materials.

3. As an alternative to the above procedures, lightly wet the material with an approved encapsulant, placing a 3" x 5" sponge dampened with encapsulant against the material. Shoot the anchor or drill through the sponge so that any localized loosened material is trapped between the sponge and substrate. Leave the sponge in place, removing any signs of loose or dislodged debris. Re-spray any loosened materials with an approved encapsulant, restricted to the area of the disturbance
  4. Clean-up the immediate area using wet methods and a HEPA vacuum. Dispose of friable plasters, linoleum backing, fire proofing and thermal system insulation as friable asbestos waste.
- E. Coring on Fireproofing and Textured Acoustical Plasters:
1. Cordon off the area and set-up negative pressurization of the controlled renovation activity using glovebag or mini-containment methods. Do not drill or core openly through friable ACM. A Certified Asbestos Worker only under Cal/OSHA Work Class I or III procedures, as applicable shall complete such work. Wet the materials throughout the controlled renovations. Do not allow ACM on cores to fall into the ceiling plenum or Crawl Space below. Following the controlled renovation activities, clean up the mini containment using wet methods and a HEPA vacuum. Gooseneck and dispose of the glovebags, where applicable, within a double waste bag.
- F. Work within crawl spaces, confined spaces, or plenums with Thermal System Insulation (TSI): Control Renovation Procedures for Friable Asbestos Materials:
1. Core or anchor through adjoining non-ACM materials, where feasible. If not feasible, cordon off the area and set-up negative pressurization of the controlled renovation activity using glovebag or mini-containment methods per 8 CCR 1529.
  2. Do not drill or core openly through friable ACM. Wet the materials throughout the controlled renovations. Do not allow ACM on cores to fall into the ceiling plenum or Crawl Space below. Following the controlled renovation activities, clean-up the mini containment using wet methods and a HEPA vacuum. Gooseneck and dispose of the glovebags and waste in double goose necked bags as friable asbestos waste.
  3. Adhere to all the requirements for confined spaces as follows:
    - a. It is the responsibility of the Contractor to provide all equipment and assistance to make the confined space safe for entry by the Contractor's employees, the City Representative, and its representatives in accordance with the California Code of Regulations, Title 8, General Industry Safety Orders entitled "Confined Spaces."
    - b. If any activities associated with confined space entry become necessary, the Contractor shall be required to consult the City for guidance and prepare an appropriate Permit-Required Confined Space Entry Plan.
- G. Asbestos-Containing Sheetrock and Joint Compound:
1. Lightly spray the material to be disturbed by spot removal, drilling, etc., with an approved penetrating encapsulant, restricted to the area of disturbance only. For anchoring into ACM, locate the attachment location and push an encapsulant-wetted sponge between the stud or joist and the existing sheetrock before setting the anchor. Carefully shoot the anchor or drill through the stud or joist and sponge, and HEPA-vacuum any loosened materials or debris. For small-scale removals, penetrate the material with care, using a sharp utility knife or other appropriate tools, removing the encapsulated section and catching it directly into a lined bucket or waste disposal bag, where feasible, disposing of as asbestos waste. HEPA-vacuum

the edges of the remaining materials and re-encapsulate the friable edges of the remaining sheetrock with penetrating encapsulant. Do not disturb materials beyond the limited scope of work.

### 3.5 HAZARDOUS MATERIALS REMOVAL PROCEDURES

#### A. Asbestos-Containing Thermal System Insulation (TSI)

1. Set-up a full isolation containment or a secondary containment for all glovebags abatement areas. Install critical barriers with two layers of polyethylene sheeting on the floors and on the walls. Set up a full decontamination system with shower for quantities greater than 25 LF, unless otherwise directed by the contract documents.
2. Areas with evidence of damaged TSI will require HEPA-vacuuming of the access to this debris as well as vacuuming of all piping, ductwork and substrate materials within a minimum five (5) ft. radius of all such contamination.
3. Use wet methods and HEPA vacuums. The removal of TSI shall be sufficient to accommodate access by applicable trades within the plenum, wall cavity or crawl space zone for routing of conduit, cables, etc. Coordinate with abatement of other applicable materials.
4. Pipe Insulation Removal: Cut and separate metal bands, where appropriate. Locate the section length (typically three feet) and cut around the circumference at the end of the attached section. Twist the section to ensure it is free from the pipe. Using an airless sprayer, saturate the exterior of the covering with amended water to limit fiber release. Locate the upper and lower half seam and position one seam at the top of the pipe. After positioning, cut along the length of the section and carefully open each half. Immediately saturate the exposed inner surface thoroughly with amended water. Lower both halves into 6-mil polyethylene disposal bags. Do not place or allow insulation to fall on the floor. Pick-up debris falling on the floor and place it in disposal bags immediately. Clean to remove all debris remaining on the pipe.
5. Fitting Insulation: Saturate fitting insulation with amended water. Remove fitting insulation using scraping tools, hand pressure and brushing. Immediately saturate the exposed inner surface thoroughly with amended water. Do not remove insulation by striking or chipping the surfaces. Deposit fitting insulation directly into 6-mil disposal bags. Do not place or allow insulation to fall on the floor. Pick-up debris falling on the floor and place it in disposal bags immediately. Clean to remove all debris left on fitting.
6. At a minimum, use glove bags procedures as per Cal/OSHA Regulation 8 CCR 1529, Asbestos Activity Class/Category - Work Class I when removing Asbestos – Containing Thermal System Insulation (TSI) materials.
7. Disassemble the pipping tanks and mechanical component on the boiler and heater systems using wet methods. Saturate the packing ACM before removing the bricks, pipes, and other ACM insulated (tar paint, canvas, materials).
8. Dispose of TSI and packing material in double goose necked-labeled bags or double wrap cutout sections in 6-mil polyethylene sheeting and properly labeled as friable asbestos waste.

#### B. Friable Insulation, Fireproofing, Acoustical Plaster, and, Laid-in; Splined or Glued-on Acoustical Tiles

1. Mist asbestos material with amended water, using airless sprayers, or spray equipment recommended by the surfactant manufacturer and capable of providing a "mist" application to reduce the release of fibers. Saturate the material sufficiently to wet it to the substrate without causing excessive dripping or de-lamination of the material. Mist the asbestos material continuously during work process to maintain damp conditions and to minimize asbestos fiber dispersion, but without accumulating water on the floor.
2. Remove ACM and overspray from all surfaces, including but not limited to structural steel, deck, walls, ceilings, ducts, insulation, piping, conduit, junction boxes, push-pull clips, cables, etc.
3. Remove the saturated ACM in small sections. As it is removed, place the material in sealable plastic bags. Do not allow materials to dry out prior to insertion into the bags. Do not permit materials to accumulate on floors and other surfaces in the work area.
4. After removing the ACM, wet and wipe all surfaces, or use a soft-bristle brush to remove all residual accumulated material. Clean all surfaces with special emphasis on the top edge of the Spray-Poly or polyethylene covers.

C. Asbestos Floor Coverings

1. Mastic removal solvents, procedures, and equipment information submittals must be approved prior to floor coverings removal.
2. In flooring areas where a solvent-based mastic remover is to be applied, the Contractor shall use a low odor mastic remover. The Contractor shall submit the Safety Data Sheets (SDS) of the mastic remover it intends to use, for the review and approval of the oversight Consultant. After the application of a solvent-based mastic remover, the Contractor shall rinse the flooring areas by wet-mopping, applying "simple green cleaner" or equivalent, scrubbing floors, and finalize the clean up by re-mopping with clean water. The Contractor shall provide adequate ventilation to exhaust out the odors from the solvent-based mastic remover. The Contractor shall ensure that no odors from the solvent-based mastic remover remain.
3. Vinyl floor tiles adhering to old non-ACM linoleum or tiles may require removal of the sub flooring intact to remove the overlying asbestos-containing mastic residues. For Demolition Projects: Remove leveling compounds under VAT and non-VAT removal areas as asbestos containing unless otherwise noted
4. Use an approved mastic removal solvent following the manufacturer's recommended procedures. Wipe residual material and dispose of waste and rags in a proper manner.
5. Where removing the mastic is feasible without the use of solvents, use water with liquid dishwashing detergent (1 ounce of detergent to 1 gallon of water), and scrub surfaces as required to remove residual material, scraping the wetted surface with a stiff-bladed wall or floor scraper. Wipe residual material and dispose of rags as ACM waste. Wet vacuum standing water with a HEPA vacuum.
6. Use of an approved portable shot abrasive "bead blaster" system that strips, cleans, and etches the floor, shall follow the manufacturer's recommended procedures. This method can dislodge sprayed-on fireproofing and/or sprayed-on acoustical plasters on the floor below due to excessive vibrations, where applicable. Therefore, adhesion and cohesion testing of these materials shall be conducted prior to the bead blaster's use. Usage of this system will require a variance from Cal/OSHA and

the local Air Quality Management District as a "dry removal" method and approval of the City Representative.

7. Use of a buffer for mastic removal will require wet buffing only. Using a buffer will render the mastic onto a friable state. The Contractor shall conduct mastic removal using a buffer following the BAAQMD Regulation 11, rule 2. Buffer brushes shall be disposed of after each use as asbestos waste. Thoroughly remove all mastic residues from the buffer before removal from the work area.

D. Vinyl Floor Tiles and Mastics:

1. Remove the flooring and mastics as indicated on the Contract Drawings using full isolation procedures, satisfying the requirements of Cal/OSHA Regulation 8 CCR 1529, Work Class II.
2. Set-up critical barriers and splash guards and establish negative pressurization.
3. Remove the tiles using wet methods to minimize breakage and airborne fiber releases.
4. Remove the mastic using an approved mastic remover.
5. HEPA vacuum the contained area following abatement for clearance.
6. Provide a full decontamination system with shower for areas exceeding 25 SF.
7. Dispose of tiles and mastic as Category 1 wastes.

E. Linoleum Flooring and Mastic:

1. Remove the flooring and mastics as indicated on the Contract Drawings using full isolation procedures, satisfying the requirements of Cal/OSHA Regulation 8 CCR 1529, Work Class II and BAAQMD Regulation 11, Rule 2.
2. Set-up critical barriers and splash guards and establish negative pressurization.
3. Remove the linoleum backing using wet methods to minimize breakage and airborne fiber releases.
4. Remove the mastic using an approved mastic remover.
5. HEPA vacuum the contained area following abatement for clearance; minimize use of encapsulant on substrates to be retiled.
6. Provide a full decontamination system with shower for areas exceeding twenty-five square feet (>25 SF).
7. Dispose of linoleum backing and mastics as friable asbestos waste.

F. Electrical/Wiring Insulation:

1. Remove wiring by cutout of the conduit in manageable sections, where possible. Otherwise, pull the wire through the conduit with a properly sized sponge wetted with encapsulant tied to the distal end, misting the insulation continually and HEPA vacuuming any residual debris. Avoid unnecessary cutting or peeling.

2. Clean up the area and dispose of the asbestos-containing waste. Wire bundles may be wrapped in burlap or cardboard, prior to bagging, to protect against penetrating the disposal wrapping.
- G. Removal of Tar coated Electrical Wrap
1. After confirming that the systems have been de-energized, including the proper deployment of Log out/Tag out procedure, remove materials using full isolation or mini-containment procedures, satisfying the requirements of Cal/OSHA 8 CCR 1529 Work Class 2 procedures. Use wet methods for dust controls. Dispose of materials as non-friable asbestos waste.
- H. ACM Paint of Ceiling Plasters
1. Remove materials using full isolation or mini-containment procedures, satisfying the requirements of Cal/OSHA 8 CCR 1529 Work Class 2 procedures. Use wet methods for dust controls. Dispose of materials as non-friable asbestos waste. Remove substrates as required to access materials and overspray.
  2. Removal of larger ceiling segments, particularly demolition of elements that may impact paint finishes (see Demolition Plans), shall be completed under full isolation or mini-/mobile containment procedures by a licensed Abatement Contractor. The Asbestos Contractor using glovebag and mobile mini-containment methods or full isolation methods, depending on the quantities impacted, shall complete coring greater than two (2) inch diameter, which cannot be properly controlled using a wetted sponge.
  3. If a mobile containment is used, clean-up and reseal the phone booth-type containment and airlock entry between uses.
- I. Window and Door Glazing Compounds
1. Remove windows and doors following abatement of other interior finishes and materials and wrap in a double layer of polyethylene sheeting, where feasible.
  2. Where complete removal and disposal of the frames is not feasible, scrape the glazing compound following installation of polyethylene drop cloths under each window or door.
  3. Scrape residual compounds from wood or metal frames, as applicable. Double bag and dispose of materials as Category I non-friable waste unless otherwise directed by the City.
- J. Exterior/Perimeter Windows and Door Caulking
1. Cordon off the work area, installing critical barriers at the windows, doors, and other penetrations, as applicable.
  2. Remove ACM using wet methods per Cal/OSHA Regulation 8 CCR 1529, Work Class II.
  3. Set-up drop cloths on the ground and nearby objects to contain falling materials on the ground or public access areas surrounding the work area.
  4. HEPA vacuum the sills and frames following abatement.
  5. Provide a full decontamination system with shower for areas exceeding 100 sf.

6. Remove residual caulking from perimeter stucco, wood, metal, window and doorframes and concrete finishes, as applicable. Double bag and dispose of materials as Category I non-friable waste.

K. Roofing Material:

1. Seal any air intakes, operable windows, and skylights within 50 feet of the work area with 6-mil polyethylene sheeting secured in place over the opening. Weather conditions should be dry and wind conditions less than 10 mph with dry. Establish a secured waste storage area where sealed bags of roofing material are stored during removal. Provide such areas for each different roof elevation or section. Line the storage areas with a layer of 6-mil polyethylene sheeting.
2. Employees and authorized visitors at the work site during on-going work shall wear approved respirators and full body disposable protective clothing as described in "Personnel Protection" and are required to fully shower out when exiting the abatement zone.
3. Set-up drop cloths on the ground under roofing removal area and abate the roofing materials using wet methods. Seal rooftop vents, windows, etc. with one layer of 6-mil polyethylene sheeting as a critical barrier. Bag or wrap waste in 2 layers of 6-mil polyethylene sheeting and lower to ground. Debris chutes must be sealed and negatively pressurized, if used.
4. Comply with the following Cal/OSHA requirements:
  - a. Adequate wet ACM per 8 CCR 1529 Para. (g)(B)(2).
  - b. Provide continuous misting of cutting machines per 8 CCR 1529 Para. (g)(B)(3).
  - c. Use HEPA vacuums or dust collectors during power cutting per 8 CCR 1529 Para. (g)(B)(4).
  - d. Do not throw ACM roofing off the roof per 8 CCR 1529 Para. (g)(B)(5).
5. For Disposal & Cleanup: HEPA vacuum the surrounding area following the abatement for final clearance. Dispose of all roofing debris as Category 1 non-friable asbestos waste.
6. Allow for a 20 ft. minimum buffer zone between the roof removal activities and other demolition or renovation work. Dampen the roof surface with a fine spray of amended water before proceeding with removal. Keep roofing material damp throughout the removal process.
7. Double bag roofing material in 6-mil labeled disposal bags and dispose of by methods described herein. Do not drop bags from the roof to the dumpster; transport bags without risk of their integrity utilizing the stairs or a lined waste chute. Where a lined waste chute is used, contain the opening to the dumpster with polyethylene sheeting and install a HEPA-filtration device to scrub the dumpster containment in the event of a bag rupture. Clean and seal the chutes overnight, as applicable.
8. HEPA vacuum and/or wet wipe the entire work site including adjacent roof area and removed areas following the roofing's abatement. The area may be sprayed with a light coat of encapsulant to lockdown all remaining asbestos fibers, except the skylights, as applicable.
9. Provide a full decontamination system with shower for areas exceeding one hundred square feet (100 SF).

10. Non-friable asbestos roofing material is considered non-hazardous and can be disposed of as non-hazardous asbestos waste. This can be transported and disposed of at a landfill-accepting Category I, non-friable ACM.

L. Window Glazing Putty

1. Set up the lead hazard control regulated areas. Ensure that drop cloths extend sufficiently, about ten (10) ft. minimum, in all directions.
2. Remove the windows intact to avoid disturbance to the window glazing putties. Burrito-wrap and dispose of windows as Category 1 non-friable waste. Where full removal intact is not feasible, close and seal windows and scrape putty utilizing drop cloths and wet methods. HEPA-vacuum the sills and surrounding area and use drop cloths, before final visual clearances.

M. Window and Door Glazing Compounds

1. Remove windows and doors following abatement of other interior finishes and materials and wrap in a double layer of polyethylene sheeting, where feasible.
2. Where complete removal and disposal of the frames is not feasible, scrape the glazing compound following installation of polyethylene drop cloths under each window or door.
3. Scrape residual compounds from wood or metal frames, as applicable. Double bag and dispose of materials as Category I non-friable waste unless otherwise directed by the City.

N. Fire Rated Doors

1. Remove fire doors with 45-minute or greater fire rating intact, burrito-wrap in two (2) layers of six (6) mil fire-retardant polyethylene sheeting and dispose as friable asbestos waste.

O. Lead – Containing Ceramic Tiles

1. Set up the lead hazard control regulated areas. Seal vents, windows, etc., with one layer of six (6) mil polyethylene sheeting as a critical barrier. Post signs.
2. Remove the ceramic tiles off from the substrate without bashing, cutting, grinding, or pulverizing the glaze, or include the ceramic tiles as part of the substrate demolition, if applicable. Bashing, cutting, grinding, or pulverizing glazed ceramic tiles is known to create significant airborne lead above the PEL.
3. Manually demolish ceramic wall tiles using drop cloths, wet methods, and HEPA vacuums for dust control in compliance with Cal/OSHA regulation 8 CCR 1532.1. Do not use power tools or airline tools to demolish ceramic wall tiles.
4. Avoid dry sweeping. Clean-up all work areas before leaving the site daily.
5. For tiles mounted to concrete, plaster or masonry substrates, isolate the room and establish negative pressurization of the work areas using HEPA-filtered negative pressure units and demolish the tiles using a pneumatic or electric chipper or jackhammer. Continuously mist the work area during chipping activities.

6. Dispose of debris as hazardous waste if waste characterization determines the waste to be hazardous. HEPA vacuum the fine debris and dust residues and dispose as hazardous waste.

P. Lead Sheeting

1. Set up a negatively-pressurized containment for removal of the sheeting. Seal vents, windows, etc., with one layer of six (6) mil polyethylene sheeting as a critical barrier. Post signs.
2. Remove lead sheeting intact by unscrewing panels from substrate. Doors with sandwiched lead sheeting shall be removed by the pins/hardware without disturbance to the sheeting within the core.
3. If unbolting panels cannot be performed, and cutting of sheeting is required, non-powered tool shall be used. Lead sheeting is relatively soft and pliable, manual tearing / cutting can be easily done. Absolutely no torching or welding on the lead sheeting or in the vicinity of the lead sheeting, until after the zone has been tested, cleared and released as a non-lead containment work zone.
4. Use wet methods and HEPA vacuums for dust control in compliance with Cal/OSHA regulation 8 CCR 1532.1. Do not dry sweep any dust or debris generated by removal of panels.
5. Wrap sheeting to prevent it from scratching and leaving score marks on the floor. Lead sheeting waste shall be rolled up and wrapped with 10-mil plastic sheeting, labeled, before taken out of the containment. All scuff marks left by the lead sheeting on any surfaces must be thoroughly scrubbed and cleaned.
6. Characterize and dispose of sheeting and debris as potentially hazardous waste.
7. HEPA vacuum debris daily for all work areas before leaving the site.
8. Triple wash all surfaces inside the containment prior to final lead wipe sampling by the Environmental Consultant.

Q. Painted Plaster Ceiling/Wall/Column Lead Paint Removal:

1. Provide ladders, scaffolding, etc., to access and remove paint and or paint/substrate from all surfaces, as applicable. Ceilings are to be scraped first in each area.
2. Remove materials at applicable locations. Wet wipe, as required. Lightly dampen the work surface and mist the surrounding area continuously throughout the scraping process.
3. Scrape and nylon brush decorative or rough ceiling surfaces or trusses, as applicable, to remove the paint and or paint/substrate. Then, HEPA vacuum these surfaces.
4. After scraping, HEPA vacuum all surfaces to remove any remaining dust.

R. Exterior Paint Removal:

1. Place drop cloths on the ground surrounding surfaces to catch any debris from scraping lead-based coatings, as applicable.

2. Erect temporary protective covers over pedestrian walkways and at points of passage for persons or vehicles, which may remain operational during the course of the paint removal.
  3. Protect glass, metal trim and attachments, polished stone, or other sensitive materials and finishes from contact with chemical paint removers by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape. Apply masking agent to comply with the manufacturer's recommendations. Do not apply liquid masking agent to painted or porous surfaces, or masonry, as applicable.
- S. Steel/Metal/Piping Spot Removal
1. Remove paints on steel components scheduled for welding or torching using a chemical stripper, needle gun or other approved methods as outlined in the approved Contractor's Hazardous Materials Management Plan (HMMP).
  2. Use drop cloths, polyethylene barriers, Hudson and airless sprayers and other methods as required for dust control.
  3. Characterize and dispose of paints, rags, etc., separately for possible disposal as a hazardous waste.
- T. Removal of Surface Coatings with Power Tools:
1. Where mechanical removal of surface coatings constitutes a Level II activity, provide power tools, to the extent feasible, with local HEPA exhaust or dust collector systems to capture the aerosolized lead.
    - a. Removal with power blasting tools: For steel coated structures and as approved by the City Representative, power blasting tools may be used for removal of the lead-based paint or hazardous coating materials. To the extent a containment construction will be required to emissions. As part of the HMMP a detailed work plan including an enclosure system with dust collection systems and exhaust ventilation as needed shall be submitted and approved by the City Representative prior to using this method.
    - b. Removal with Power Washing: For industrial facilities or where otherwise approved by the City, power washing may be used for removal of the lead-based paint or contamination. Use of this method requires construction of containment, water collection system, a filtering system, and proper disposal of the wastewater. Adequately protect adjoining sensitive materials and equipment from damage or inclusion within the lead abatement waste. Deactivate electrical systems or adequately protect them prior to the power washing. A detailed work plan including an enclosure system shall be submitted and approved by the City Representative prior to conduct such activities.
    - c. Removal with Sodium Bicarbonate Blasting: For areas requiring complete removal of all coating residues, use of sodium bicarbonate blasting may be used to supplement scraping or chemical stripping. Use of this method requires construction of containment and filtering system to segregate activities and waste from active work areas. Adequately protect adjoining sensitive materials and equipment from damage or inclusion within the lead abatement waste. Deactivate electrical systems or adequately protect them prior to the water and sodium bicarbonate blasting. A detailed work plan including enclosure shall be submitted and approved by the City Representative prior to such activities.

- U. Removal of lead containing jacketed telephone cable:
1. Removal, handling and disposal of lead jacketed telephone cables that may be encountered during demolition activities shall be conducted in accordance with the Cal/OSHA's Construction Lead Standards 8 CCR 1532.1 and CDPH Regulation 17 CCR Section 3500 through 36100. This includes, isolation controls, personal protective procedures and dust controls
  2. Prevent dust generated from trimming, cutting and otherwise manhandling lead sheathed telephone cables, dust from deconstructing and hauling off outmoded equipment and dust from soldier waste deposited on floors.
  3. Isolate and remove in its entirety each cable designated for removal. Use appropriate equipment and work practices to prevent lead releases. If at all feasible remove the cables using hand electrical shear tools with local HEPA exhaust or dust collector systems to capture the aerosolized lead. To further minimize lead dust during the cutting, apply isolation materials such as foam or "Vaseline" in the entire area of the cutting.
  4. Segregate, containerize, and characterize the electrical cables for waste disposal.
- V. Transite Wall and Ceiling Board:
1. Remove transite board using wet cleaning methods and HEPA vacuuming. Avoid unnecessary sawing and breakage. Take out as whole sheets, if possible. Remove debris remaining at the nails, screws, or other attachments to the studs and joists. Scrape residue remaining on studs or joists flush with the surface of these materials, if these materials are not scheduled for demolition. Continually mist the air with an airless sprayer or Hudson sprayer to lockdown suspended particulate
  2. Clean up debris from pipe insulation, fireproofing, acoustical insulation, or other sources (as applicable), which may exist on the topside of the studs or within the wall or ceiling cavity.
  3. Clean up the area and dispose of the asbestos-containing waste. Panels may be wrapped in burlap or cardboard, prior to bagging, to protect against penetrating the disposal wrapping.
- W. Transite Pipelines, Ducts, Breechings, or Flues:
1. Remove using full isolation procedures satisfying the requirements of Cal/OSHA Regulation 8 CCR 1529, Work Class II.
  2. Remove transite materials using wet cleaning methods and HEPA vacuuming. Avoid unnecessary sawing and breakage. Take out as whole lengths, if possible, cutting at the hanger supports and wrapping the separated sections in a double layer of polyethylene sheeting [note that water penetration of this material is usually minimal].
- X. Underground transite piping or pipe insulation:
1. Carefully excavate the areas identified for the underground utility or with potential to encounter underground piping. Using wet methods mist the excavated areas, as the pipe gets uncovered. To the extent feasible provide an enclosure for removal as required to control airborne fibers.
  2. Using wet methods and HEPA vacuuming techniques, remove pipe intact to the extent feasible. Cutting abrading or breaking the pipe shall be prohibited.

Immediately place pipe in polyethylene bag or wrap in polyethylene and label the waste.

3. At the end of each work shift, all removed pipe shall be transferred to a closed receptacle
  4. Clean up the regulated area and dispose of the asbestos-containing waste. Duct or flue edges may be wrapped in burlap or cardboard, prior to polyethylene sheeting, to protect against penetrating the disposal wrapping.
  5. Dispose of transite as Category 2 non-friable waste, double wrapping intact segments in six (6)-mil polyethylene sheeting.
- Y. For Exterior Vapor Barrier or Expansion Joint:
1. Cordon area and set up drop cloths on the ground under the removal area and abate using wet methods. Seal vents, windows, etc. with one layer of six (6) mil polyethylene sheeting as a critical barrier. HEPA-vacuum surrounding area and drop cloths before final visual clearances.
- Z. PCBs and Mercury Containing Lamps
1. Disassemble all light fixtures to visually examine the ballasts; ballasts that are not labeled as non-PCB shall be collected and disposed of as PCB-waste. Collect fluorescent tubes for disposal / recycling as mercury containing wastes.
  2. Handling and Disposal of Lamps
    - a. Spent fluorescent and other mercury-containing lamps shall be considered a hazardous waste as per the California Department of Health Services.
    - b. Ship lamps to a commercial recycler (e.g., Mercury Technologies) where they are to be crushed and the mercury reclaimed.
    - c. Comply with DOT requirements for manifests, with evidence of proper disposal provided to the City, including a log of shipping dates and quantities.
    - d. Remove mercury fluorescent lights and load into secured cardboard boxes for shipment to prevent unnecessary breakage.
    - e. In the event of lamp breakage, clean-up broken glass and debris immediately, using a HEPA-filtered vacuum for final clean up.
- AA. Loose Debris Cleanup:
1. Construction operations may occasionally disturb loose and peeling paints outside the immediate work area through building vibration or other means. All such loose paint and debris shall be cleaned-up daily using a HEPA-filtration vacuum. Provide adequate protection to offset future disturbances by abating or otherwise sealing affected surfaces.
  2. Clean-up background or construction-related dusts from demolition of lead-coated elements or other contaminant sources using wet methods and HEPA-filtered vacuums.
  3. Do not dry sweep.
- BB. Stabilization of Loose & Peeling Paints:

1. Post notices, including CDPH, Cal/OSHA and EPA RR&P notices, as applicable, prior to start of work.
2. Manually scrape and stabilize loose and peeling paints prior to demolition of painted substrates using drop cloths, wet methods, and HEPA vacuums for dust control in compliance with Cal/OSHA regulation 8 CCR 1532.11 and the EPA's RR&P rules. Avoid dry sweeping. Burning of paints, use of heat guns greater than 1,100 deg. F, and use of leaf blowers or compressed air for clean-up are prohibited
3. Use of mechanical equipment, such as sanders, grinders and needle guns without a HEPA-vacuum attached thereto are prohibited for sites with children under the age of 6 as occupants (per EPA's RR&P rules).
4. Work areas shall be cleaned-up of lead hazards daily before leaving the site.

CC. For Mechanical Sanding:

1. Sanding is prohibited without written authorization from the City.
2. If approved, work areas requiring mechanical sanding or stripping of painted surfaces with any lead content shall be fully contained with polyethylene dust barriers, establishing negative pressure of the zone, and using HEPA-filtered tools and other dust control procedures as outlined under 8 CCR 1532.1.

DD. Prime or Painted Structural Steel Spot Abatement

1. Manually scrape paints and primers at locations of new welded connections as shown on Structural Drawings. Use an approved chemical stripper with "low odor" and scrape using manual, wet methods, drop cloths, visqueen barriers, and HEPA vacuums for dust control in compliance with Cal/OSHA regulation 8 CCR 1532.1, CDPH regulation 17 CCR Section 35001 through 36100 and the EPA's RR&P rules, as applicable.
2. Avoid dry sweeping, burning of paints, use of heat guns greater than 1,100 deg. F, and use of leaf blowers or compressed air for clean-up. Use of mechanical equipment, such as sanders, grinders and needle guns without a HEPA-vacuum attached thereto are prohibited for this site per the EPA RR&P rules. Work areas shall be cleaned-up of lead hazards daily before leaving the site.
3. Note that 8 CCR 1537(c) and SFPUC require stripping of any painting coating for a distance of at least 12-inches from the area of heat application (torching/welding, etc.), or workers shall be required to use supplied air respirators in accordance with 8 CCR 1532.1 or the provisions of 8 CCR 1536(b)(c). Dispose of stripper and contaminated drop cloths as hazardous waste.
4. Ventilate the abatement zone as required by the stripper manufacturer. Workers shall wear combination organic (charcoal) and HEPA filter respirator cartridges, as necessary.
5. Note that despite the quality of abatement, some minor residues may remain on structural elements as well as paints and primers on inaccessible surfaces, which cannot be abated. During the welding phase, the Contractor shall operate "smog hogs" or localized exhaust units in the vicinity of welding work to prevent build-up of airborne lead contaminants within occupied and other construction areas. Localized exhaust units shall exhaust outdoors.
6. For Disposal & Cleanup: Demolish and dispose of intact painted substrates as non-hazardous waste. Characterize and dispose of loose and peeling paint debris,

chemical strippers, rags, etc. as potentially hazardous waste. Clean-up drop cloths and HEPA vacuum loose and peeling chips and debris daily for all work areas before leaving the site.

EE. Encapsulation Procedures

1. Upon notice to proceed from the City, apply encapsulant.
2. Prepare and apply encapsulant in accordance with the manufacturer's specification, using airless spraying equipment. Because application by spraying could cause dissemination of residual fibers, encapsulant must be applied with as much caution and at as low a nozzle pressure as possible.
3. Apply encapsulant in 2 coats with a tint to be approved by the City. Apply the first coat as a penetrating encapsulant, allowing it to properly dry. Then apply a second coat of bridging encapsulant.
4. Apply penetrating type encapsulant to provide complete penetration of asbestos fireproofing surfaces exposed during the controlled renovation activities in accordance with manufacturer's recommendation. Apply encapsulant using airless spray equipment.

FF. Daily Cleaning

1. Clean asbestos-containing debris and contaminated water from the work area daily using wet methods and HEPA vacuuming equipment. Place asbestos debris and water in bags, sealed and either stored or removed from the work area.
2. Worker decontamination enclosure system; clean the clean room, shower, and equipment room daily or as required more frequently to maintain acceptable clean room perimeter air sample total fiber counts. Keep the clean room floor dry and free of any waste. Repair and replace the clean room flap whenever damaged or torn.

GG. Bagging, Drumming, and Handling Waste:

1. Protect all workers handling waste in full body protective clothing and at least a respirator approved by NIOSH for protection against asbestos. Workers transporting clean, sealed drums or other clean, sealed waste may handle waste with less protective clothing if approved by the City's or its Environmental Consultant.
2. Do not allow asbestos waste to dry out prior to sealing bags.
3. Seal bags of asbestos-containing waste with tape within the work area. Seal bags with a goose neck fold: first twist bag and seal top opening with tape; fold remaining bag extension over the first tape enclosure and re-tape around top of bag there by double sealing the top opening. No free-flowing water shall be present at any time in the bag. If free-flowing water is present, the Contractor shall add absorbent into the bags to remedy the condition.
4. Wrap and seal waste treated as asbestos contaminated that cannot be contained in bags in 6-mil clear polyethylene plastic or other impermeable material approved by the City. Wrap objects that will tear, cut, or damage the integrity of the plastic in a protective material such as canvas or burlap to reduce the potential for damage to the plastic or other impermeable material.
5. Sealing Waste from Glove Bag with Cut-Out: Wrap sections of piping covered with ACM in a minimum of two layers of 6-mil polyethylene sheeting before removal from the work zone.

6. While in the work area, decontaminate bags and/or wrapped objects of any bulk debris by wet wiping. Utilizing the equipment decontamination enclosure system, pass the bags and/or wrapped objects into the washroom where they will be thoroughly decontaminated by wet sponging with amended water. Decontaminated bags will then be passed directly into the holding room where they will immediately be placed in a second clean bag and sealed with tape.
7. Wrap and seal decontaminated objects in a second layer of impermeable material.
8. Deposit bags with friable hazardous waste into clean sealable drums for transport. Seal filled drums. Mark drums with the label prescribed by the EPA, including the Generator I.D. Number or source location and the Waste Manifest Number.
9. Deposit bags into clean sealable dumpster for transport, except non-friable roofing which can be deposited directly into double-lined waste dumpsters for disposal at a landfill accepting Category I, non-friable ACM.
10. The City's Representative must be notified prior to removing materials from the work area and prior to loading waste into dumpsters or other transport containers for removal from the site. At least 24 hours of advance written notification must be given.

END OF SECTION