

Transbay Transit Center Program

Transbay Transit Center Contract No. 08-04-CMGC-000 Volume One

October 6, 2010



Transbay Transit Center

TRANSBAY TRANSIT CENTER PROGRAM

Contract No. 08-04-CMGC-000

Volume One

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**Prepared for the
Transbay Joint Powers Authority**

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Metropolitan Transportation Commission through a grant of
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LEGEND**Issuer Abbreviations:**

<i>AAI</i>	<i>Adamson Associates, Inc.</i>	<i>Executive Architect</i>
<i>AGF</i>	<i>Auerbach Glasow French</i>	<i>Lighting Consultant</i>
<i>ARC</i>	<i>ARUP Civil</i>	<i>Civil Consultant</i>
<i>ARF</i>	<i>ARUP Fire Life and Safety</i>	<i>Fire Life and Safety Consultant</i>
<i>ARG</i>	<i>ARUP Geotechnical</i>	<i>Geotechnical Consultant</i>
<i>ARS</i>	<i>ARUP Security</i>	<i>Security Consultant</i>
<i>BVM</i>	<i>BVM Engineering</i>	<i>LEED Consultant</i>
<i>EWC</i>	<i>Edgett Williams Consulting Group</i>	<i>Vertical Transportation Consultant</i>
<i>F+K</i>	<i>WSP Flack + Kurtz</i>	<i>MEP Consultant</i>
<i>H&B</i>	<i>Henshell & Buccellato</i>	<i>Waterproofing Consultant</i>
<i>HMA</i>	<i>HMA Consulting</i>	<i>Mechanical Controls Consultant</i>
<i>LB</i>	<i>Lerch Bates</i>	<i>Building Maintenance Consultant</i>
<i>PWP</i>	<i>Peter Walker & Partners</i>	<i>Landscape Consultant</i>
<i>RWDI</i>	<i>Rowan Williams Davies & Irwin Inc.</i>	<i>Wind Consultant</i>
<i>SBP</i>	<i>Schlaich Bergermann and Partner LP</i>	<i>Structural Consultant, Special Construction</i>
<i>SMW</i>	<i>Shen Milsom & Wilke</i>	<i>Acoustic/Audiovisual Systems/Telecom</i>
		<i>Infrastructure Consultant</i>
<i>TJPA</i>	<i>Transbay Joint Powers Authority</i>	<i>Owner</i>
<i>TT</i>	<i>Thornton Tomasetti</i>	<i>Structural Consultant</i>
<i>URS</i>	<i>URS Corporation</i>	<i>Demolition Representative</i>
<i>WRN</i>	<i>WRNS Studio</i>	<i>Environmental Graphics Consultant</i>

END OF SECTION 00 01 10

SPECIFICATION ISSUE LOG

Revision	Issue	Date
1	08-04-CMGC-000 Conformed Volume One	October 6, 2010
2	Field Order: 08-04-CMGC-000-WO-001	December 13, 2010

SECTION 00 02 12 – ESCROW BID DOCUMENTS

1.1 SUMMARY

- A. Trade Subcontractor Escrow Bid Documents shall be placed in escrow by the TJPA for the duration of the Contract.
- B. After award of the Contract, Escrow Bid Documents shall be opened and examined only in the presence of authorized representatives of the TJPA and Contractor in the event of protests, disputes, claims, or negotiations for Contract Sum adjustments.

1.2 DEFINITION

Escrow Bid Documents: Originals of all documentary information generated in preparation of the Bid to be placed in escrow 3 working days after each trade package bid opening excepting Bid Documents provided by the TJPA.

1.3 REQUIREMENTS

- A. The apparent 3 low Bidders shall submit a set of Escrow Bid Documents accompanied by a signed Escrow Bid Document Declaration form (refer to Section 00 04 52) within 3 working days after the date of Bid opening in the manner specified as follows:
 - 1. Submit Escrow Bid Documents in a sealed container clearly marked on the outside with the Bidder's name, date of submittal, project name, and the words: "Escrow Bid Documents—Open only in the presence of authorized representatives of both the TJPA and Contractor."
 - 2. Attach the Escrow Bid Documentation Declaration form (Section 00 04 52), executed by an individual authorized by the Bidder to execute the Bid.
 - 3. Deliver Escrow Bid Documents in person by an authorized representative of Bidder, with a copy of the transmittal provided to Contractor, to

TJPA
201 Mission Street, Suite 2100
San Francisco, CA 94105
- B. Additionally, any other Bidder shall submit promptly Escrow Bid Documents if requested by the TJPA as a condition of the award of the Contract.
 - 1. A Bidder who fails to submit the required Bid documentation in a timely manner or who submits incomplete documents may be deemed non-responsive and its Bid may be rejected. The TJPA reserves the right to examine Bid documentation to verify completeness.
 - 2. The Escrow Bid Documents of the unsuccessful Bidders will be returned after award of the Contract.
- C. Identify in the Escrow Bid Documents all Contract costs included in Trade Subcontractor's Bid prices, including the costs of its subcontractors of any tier and Suppliers. For Bid items amounting to less than \$10,000, estimated unit costs are acceptable without a detailed cost estimate, provided that labor, equipment, materials, and subcontracts, as applicable, are included and provided that indirect costs, contingencies, and markup, as applicable, are properly allocated.
- D. Submit Escrow Bid Documents in customary cost estimating format and within the following guidelines.
 - 1. Use the language of the specifications (i.e., English).
 - 2. Clearly itemize the estimated costs of performing the work of each Bid item contained in the Schedule of Bid Prices.
 - 3. Separate Bid items into sub-items as required to present a detailed cost estimate and to allow a detailed cost review.

4. Include all quantity takeoffs, crews, equipment, calculations of rates of production and progress, copies of quotations from Subcontractors and Suppliers, memoranda, narratives, add/deduct sheets, and all other information used by the Bidder to arrive at the prices contained in its Bid.
5. Break down estimated costs into the customary estimating categories, such as direct labor, repair labor, equipment ownership and operation, expendable materials, permanent materials and subcontract costs, as appropriate.
6. Include direct costs of plant and equipment and indirect costs, contingencies, markup and other items allocated to each Bid item.

1.4 PROJECT CONDITIONS

- A. Contractor and the TJPA mutually agree that nothing in the Escrow Bid Documents shall change or modify the terms or conditions of the Contract Documents and that the Escrow Bid Documents shall be available exclusively to assist in the negotiation of price adjustments and change orders and in the resolution of protests, disputes, and claims.
- B. Escrow Bid Documents are, and shall always remain, the property of Contractor and subject to review if mutually agreed as provided herein. The TJPA stipulates and expressly acknowledges that the Escrow Bid Documents may constitute trade secrets and may contain information which is known only to Contractor's business.
- C. The TJPA will safeguard the Escrow Bid Documents, and all information contained therein, against disclosure to third parties to the fullest extent permitted by law.

1.5 EXAMINATION

- A. The Escrow Bid Documents will be examined at any time during the Contract deemed necessary by the TJPA and Contractor in the following situations:
 1. To ensure that the Escrow Bid Documents are legible and complete.
 2. To assist in the negotiation of price adjustments and Change Orders or the settlement of disputes and claims.
- B. Examination of the Escrow Bid Documents is subject to the following conditions:
 1. The TJPA and Contractor shall each designate, in writing to the other party and 7 days prior to any examination, representatives who are authorized to examine the Escrow Bid Documents. No other person shall have access to the Escrow Bid Documents.
 2. Access to the documents may take place only in the presence of duly designated representatives of both the TJPA and Contractor.
- C. The TJPA's examination of Escrow Bid Documents shall not include review of, and will not constitute approval of, proposed construction methods, estimating assumptions, or interpretations of Contract Documents. Examination shall not alter any condition or term of the Contract.
- D. If all documentation required under the preceding paragraph 1.3 has not been included in the original submittal, Contractor shall submit additional documentation as requested by the TJPA.
 1. If Contractor's Total Bid Price is based upon subcontracting any part of the work, provide Escrow Bid Documents for each Subcontractor required to be listed in accordance with section 4104 of the California Public Contract Code.
 2. The TJPA reserves the right to require Contractor to submit Escrow Bid Documents from the proposed Subcontractor before a subcontract is approved for any portion of the work subcontracted after award of the Contract.
 3. Revise the detailed breakdown of estimated costs to reconcile with the additional documentation requested, if required by the TJPA.

1.6 STORAGE AND FINAL DISPOSITION

- A. After award of the Contract, the TJPA will place Escrow Bid Documents in escrow for the duration of the Contract in a mutually agreeable location in San Francisco. The cost of storage will be paid by the TJPA.
- B. Escrow Bid Documents will be returned to Contractor at such time as the Contract has been completed and final settlement of all pending claims has been achieved.

END OF SECTION 00 02 12

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 00 02 15 – BID PROTESTS

1.1 SUMMARY

- A. Only a Bidder (Trade Subcontractor) through the Contractor may file a protest with the TJPA against another Bidder or Bidders subject to the provisions below.
- B. The procedures and time limits set forth in this Section 00 02 15 are mandatory and are the Bidders' sole and exclusive remedy in protesting other Bidders' bids. Failure to comply with these procedures shall constitute a waiver of any right to pursue the bid protest, including filing a Government Code claim or other legal proceedings.

1.2 TIME LIMITATIONS

- A. A Trade Subcontractor protest shall be in writing and shall be received by the TJPA from the Contractor no later than 5:00 p.m. on the 5th working day after the date of the related Trade Package Bid opening. A copy of the protest with all supporting documentation shall be delivered concurrently by the protesting Bidder to all Bidders against whose Bids the protest is directed.
- B. The TJPA will give the entity representing the protested Bidders 5 working days to respond to the protest.
- C. All protests and responses or comments by opposing Bidders that are received after the time set forth herein will be rejected.
- D. The TJPA will evaluate all protests and responses and issue a written decision on such protests, responses and other matters related to award of the Contract.

1.3 DELIVERY OF PROTEST

- A. If a protest is mailed, the protesting Bidder bears the risk of non-delivery within the required time period. Protests should be transmitted by certified mail with return receipt requested or by other means which objectively establish the date of receipt by the TJPA.
- B. Telephoned protests will not be considered.
- C. Protests shall be transmitted to

Webcor Builders/Obayashi Corporation, A Joint Venture
183 Fremont Street
San Francisco, CA 94105
Att: Contract Officer
- D. Protests not received within the time and in the manner specified will not be considered.

1.4 CONTENT OF PROTEST

- A. The protest document shall state the basis for the protest and provide supporting evidence.
- B. The protest shall refer to the specific portion of the Bid that forms the basis of the protest.

- C. The protest shall include the name, address, and telephone number of the person representing the protesting Bidder.
- D. If the TJPA determines that a protest is frivolous, the protesting Bidder may be determined to be non-responsible and that Bidder may be determined to be ineligible for future contract awards.

END OF SECTION 00 02 15

SPECIFICATION ISSUE LOG

Revision	Date
0	July 30, 2010
1	October 6, 2010

SECTION 00 03 20 – GEOTECHNICAL DATA

1.1 SUMMARY

This section describes reference documents, including existing geotechnical data and soils engineering reports, and the use of data resulting from the various investigations.

1.2 GEOTECHNICAL REPORTS

A. Bidders' attention is directed to the following geotechnical report that was prepared for the Site:

1. *Transbay Transit Center, Final Geotechnical Data Report*, Volumes 1, 2, and 3. Transbay Joint Powers Authority. Prepared by Arup North America Limited, February 2010.

B. The referenced documents are available to prospective Bidders on the TJPA's FTP site at ftp.tjpa.org (username: WebcorBid; password (case sensitive): WebcorBid!).

1.3 PROTOTYPE TEST REPORTS

A. Bidders' attention is directed to the following reports on the results of prototype tests that were performed on the Site:

1. *Final Report, Results of Prototype Test Program, Installation of Shoring Walls Using the Cement Deep Soil Mixing Method*. Transbay Transit Center, Prepared by Arup North America Limited, May 2010.
2. *Final Report, Results of Prototype Test Program and Monitoring during Construction of Drilled Shafts*. Transbay Transit Center, Prepared by Arup North America Limited, May 2010.

B. The referenced documents are available to prospective Bidders on the TJPA's FTP site at ftp.tjpa.org (username: WebcorBid; password (case sensitive): WebcorBid!).

1.4 SOIL AND ROCK SAMPLES

A. Bidders' attention is directed to the soil and rock samples obtained from the site and stored in a warehouse in San Francisco. These samples will be available for viewing by prospective bidders. Requests shall be submitted to the TJPA Representative.

1.5 USE OF DATA

A. Geotechnical data was obtained for the use of the TJPA and its consultants for planning and design only and is not part of the Contract Documents. Contractor is entitled to rely in good faith on the information provided by the TJPA; however, based on the Contractor's expertise and experience, should the Contractor know or have known that the information provided is inaccurate, Contractor shall notify the TJPA of the inaccuracy.

B. All statements, findings, and interpretations in the above-referenced reports are those of the geotechnical consultant, and the TJPA makes no representations, either express or implied, as to the completeness or adequacy of said report.

C. Prototype test reports describe the equipment, materials, and methods used to install overlapping drilled shafts and cement deep soil mixing shoring wall panels similar to those shown on the Drawings, and include observations, measurements, and strength and permeability test results, which may be used by Contractor in the development of Contractor's work plan.

D. Bidders shall visit the Site and familiarize themselves with existing conditions.

1.6 PRE-BID VISIT TO WORK SITE

Prior to bidding, Bidders may make their own investigation to evaluate for themselves the Site and site conditions. Such investigations shall be performed only in accordance with the Instructions to Bidders.

END OF SECTION 00 03 20

SPECIFICATION ISSUES LOG

Revision	Date
0	July 30, 2010
1	August 10, 2010

SECTION 00 03 21 – GEOTECHNICAL DATA – UTILITIES WORK

1.1 SUMMARY

This section describes reference documents, including existing geotechnical data and soils engineering reports, and the use of data resulting from the various investigations.

1.2 GEOTECHNICAL REPORTS

A. Bidders' attention is directed to the following geotechnical report that was prepared for the Site:

1. *Geotechnical Study, Relocation of Utilities Project, San Francisco, California*. Transbay Transit Center. Prepared by AGS Consultants, April 2009.

B. The referenced documents are available to prospective Bidders on the TJPA's FTP site at ftp.tjpa.org (username: WebcorBid; password (case sensitive): WebcorBid!).

1.3 USE OF DATA

- A. Geotechnical data was obtained for the use of the TJPA and its consultants for planning and design only and is not part of the Contract Documents. Contractor is entitled to rely in good faith on the information provided by the TJPA; however, based on the Contractor's expertise and experience, should the Contractor know or have known that the information provided is inaccurate, Contractor shall notify the TJPA of the inaccuracy.
- B. All statements, findings, and interpretations in the above-referenced reports are those of the geotechnical consultant, and the TJPA makes no representations, either express or implied, as to the completeness or adequacy of said report.
- C. Bidders shall visit the Site and familiarize themselves with existing conditions.

1.4 PRE-BID VISIT TO WORK SITE

Prior to bidding, Bidders may make their own investigation to evaluate for themselves the Site and site conditions. Such investigations shall be performed only in accordance with the Instructions to Bidders.

END OF SECTION 00 03 21

SPECIFICATION ISSUE LOG

Revision	Date
0	August 6, 2010

SECTION 00 03 31 – EXISTING CONDITIONS: BUILDINGS AND IMPROVEMENTS

1.1 SUMMARY

- A. This section summarizes reference documents, including the existing building construction documents and record drawings and proposed TJPA utility relocation projects, which are disclosed as information made available to Bidder for preparing its Bid.
- B. The referenced documents are available to prospective Bidders on the TJPA's FTP site at ftp.tjpa.org (username: WebcorBid; password (case sensitive): WebcorBid!).

1.2 EXISTING SITE AND BUILDING CONSTRUCTION DOCUMENTS

- A. 80 Natoma:
 - 1. Drawings. *80 Natoma Indicator Pile Locations*. Myers Development Company & Magnusson Klemencic Associates (1 sheet); *Pile Layout Numbering Drawing*. Webcor, May 5, 2004 (1 sheet).
 - 2. Project Description and Drawings. *80 Natoma Pile Load Tests*. Treadwell & Rollo. Prepared for Webcor Builders, December 2003 (14 sheets).
 - 3. Drawings. (a) *80 Natoma Existing Foundation Conditions*. Webcor Builders, August 19, 2004 (1 sheet); (b) Table, *Pile Layout Numbering Drawing*, Webcor. May 5, 2004 (1 sheet); (c) Table, *Summary of Production Piles*, T&R Project No. 2397.07 (11 sheets); (d) Drawings, *Tubex Grout Injection Pile Details*, American Pile Driving, Inc. (2 sheets).
 - 4. Drawings. *80 Natoma Shoring Plans*. Webcor Builders, Tuan & Robinson Structural Engineers, Inc., May 6, 2004 (9 sheets).
 - 5. Drawings. *80 Natoma Foundation and Structural Plans*. Heller & Manus Architects, June 7, 2004 (23 sheets).
 - 6. Drawings and Reports. *80 Natoma As-Built Shoring Wall*. October 1998, 1999 (67 sheets).
- B. 83 Natoma: Drawings. *83 Natoma Framing Plans and Details*. Wildman & Morris Consulting Engineers, March 11, 1959 (6 sheets).
- C. 301 Mission:
 - 1. Drawings. *301 Mission Temporary Shoring and Earth Retention System*. Condon Johnson & Associates, PB&A, Inc., 2005, 2006 (39 sheets).
 - 2. Drawings. *301 Mission Street Exhibit G, San Francisco, CA*. Handel Architects LLP. July 2006. (5 sheets).
- D. Existing Transbay Terminal and Ramps:
 - 1. Original construction reference drawings. *San Francisco–Oakland Bay Bridge Railway Facilities*. State of California Department of Public Works, March 1937 and February 1939 (75 sheets).
 - 2. Drawings. *Seismic Retrofit Project No. 14B, Transbay Terminal Ramps (Retrofit)*, Caltrans Division of Structures, 2001 (27 sheets).

3. Drawings. *Transbay Transit Terminal Seismic Retrofit Phase II*. Albert C. Martin & Associates. Prepared for the Division of the State Architect, December 1998 (98 sheets).
4. Reference list. *As-built Documents Survey (1939-1992)*. State of California, Department of General Services, Real Estate Services Division, August 2005.
5. Drawings. *San Francisco–Oakland Bay Bridge Reconstruction Terminal Stairways. Project Plan and Elevation*. State of California, Department of Public Works, Division of San Francisco Bay Toll Crossings, 1958 (54 sheets).
6. Drawings. *Project Plans for Construction on State Highway in the City of San Francisco, from Fifth Street to Beale Street*. State of California, Department of Transportation, 2000 (168 sheets).
7. Drawings. *San Francisco Mission Street Plaza Transbay Transit Terminal Passenger Loading Platforms*. State of California, Business and Transportation Agency, Department of Transportation. January 20, 1976 (2 sheets).
8. Original Construction Bid Drawings. *San Francisco Oakland Bay Bridge Railway Facilities San Francisco Terminal*, 1939 (222 sheets).

E. Transbay Terminal and Ramps Demolition:

1. Drawings. *Transbay Transit Center Program Existing Terminal & Ramps Demolition Plans, San Francisco, CA*. Transbay Joint Powers Authority. July 2009 (137 Sheets).
 - a. Change Orders 001 thru 009 to Evans Brothers Inc. cover a variety of change conditions that do not require any change to the Demolition Drawing Set. The change orders are viewable in the File Director Module of Constructware: File Management>File Director>Existing Terminal Building & Ramps Project (110) >8 Contracts>Evans Brothers>05 Contract Docs>CCOs.
 - b. Change Order 010 to Evans Brothers Inc. does involve Demolition Drawing Set changes. Information on how to view those drawings was included in Field Order 08-04-CMGC-000-WO-002. (7 revised sheets; 3 new sheets)

F. Relocation of Utilities:

1. Combined Utility Drawings:
 - a. Issued for Bid, August 6
 - b. Addendum 1, Issued for Bid, August 27
 - c. 100% DD, Issued for Final Review, August 27
 - d. Addendum 2, Issued for Bid, September 3

AECOM and the Department of Public Works—Bureau of Engineering. 2010. (168 sheets).

G. 77 Natoma:

1. Drawings. Original Structural Drawings. John A. Ettler, 1914. (5 sheets)
2. Drawings. Unreinforced Masonry Building Retrofit. Eugene E. St. Onge, August 1997. (5 sheets)

The referenced documents are available to prospective Bidders on the TJPA's FTP site at [ftp.tjpa.org](ftp:tjpa.org) (username: WebcorBid; password (case sensitive): WebcorBid!).

1.3 USE OF REFERENCE DOCUMENTS

- A. The foregoing reference documents are not part of the Contract Documents. Contractor is entitled to rely in good faith on the information provided by the TJPA; however, based on the Contractor's expertise and experience, should the Contractor know or have known that the information provided is inaccurate, Contractor shall notify the TJPA of the inaccuracy.
- B. The TJPA makes no representation, either express or implied, that the conditions indicated in the drawings or records are representative of those existing at the Site, or that different conditions may not occur or materials other than or in proportions different from those indicated may not be encountered.
- C. Bidders shall visit the site and familiarize themselves with existing conditions.

1.4 PRE-BID VISIT TO WORK SITE

Prior to bidding, Bidders may make their own investigations to evaluate actual Site conditions, but such investigations shall be performed only in accordance with the provisions of the Instructions to Bidders.

END OF SECTION 00 03 31

SPECIFICATION ISSUE LOG

Revision	Issue	Date
0	TG03 Issued for Bid	July 30, 2010
1	TG03 Addendum 1 TG4.5.1 Issued for Bid	August 10, 2010
2	TG03 Addendum 2 TG4.5.1 Addendum 1	August 25, 2010
3	TG03 Addendum 3 TG19.1 Issued for Bid	September 23, 2010
4	TG19.1 Addendum 1 Issued:08-04-CMCG-000 Conformed Volume One	October 1, 2010
5	TG03 Addendum 5	October 25, 2010
6	Field Order: 08-04-CMCG-000-WO-001	December 13, 2010

SECTION 00 03 35 – EXISTING CONDITIONS: HAZARDOUS MATERIALS

1.1 SUMMARY

- A. Some of the materials and items found at the Site contain or may contain materials known to the State of California to be either hazardous, carcinogenic, or reproductive toxins.
- B. This section summarizes reference documents, including environmental survey reports prepared for the TJPA, made available to Bidders.
- C. The referenced documents are available to prospective Bidders on the TJPA's FTP site at ftp.tjpa.org (username: WebcorBid; password (case sensitive): WebcorBid!).

1.2 HAZARDOUS MATERIALS REPORTS

- A. The TJPA's environmental consultants have surveyed the facility for the presence of various hazardous materials. Materials investigated may include asbestos, lead, PCB ballasts, mercury-containing lamps, contaminated soils, underground storage tanks, and other hazardous materials. The contractor for the Demolition project (Evans Brothers Inc.) is responsible for removing and abating products containing asbestos, lead, or PCB ballast, and mercury-containing lamps. The survey findings are documented in the following:
 - 1. *Limited Phase II Soil and Groundwater Investigation Report, Transbay Terminal West Loop, Bus Ramps and Future Transit Center Site East of Beale Street, San Francisco, California, December 2008.* ERM-West, Inc.
 - 2. *Phase I Environmental Site Assessment, San Francisco, California, August 2008, Volumes 1 and 2.* AMEC Geomatrix.
 - 3. *Phase I Environmental Site Assessment, Group 4, Block 3736, Lots, 7, 18, 74, 88, 89; Block 3749, Lots 52 and Group 8, Block 3736, Lot 120; Block 3737, Lot 5, 12, 27; Block 3739, Lots 61, 64, 120; Block 3764, Lot 68, San Francisco, California, April 2008.* AMEC Geomatrix.
 - 4. *Phase I Environmental Site Assessment, Group 5, Block 3721, Lots 15A, 16, 19, 20, 29, 31, and 108, San Francisco, California, December 2007.* AMEC Geomatrix.
 - 5. *Phase I Environmental Site Assessment Group 7, Block 3718, Lots 25 and 27, San Francisco, California, December 2007.* AMEC Geomatrix.
 - 6. *Environmental Site Characterization, Transbay Terminal, San Francisco, California, April 2009.* Treadwell & Rollo.
 - 7. *Pre-Demolition Hazardous Material Assessment: Asbestos & Lead Survey, 77/79 & 81/83 Natoma Street, San Francisco, California, November 2009.* ERM-West, Inc.
 - 8. *Soil Investigation Report, 75 Natoma and 546 Howard Streets, San Francisco, California, June 2010.* ERM-West, Inc.
 - 9. *Pre-Demolition Asbestos and Lead Assessment, Transbay Terminal Bus Ramps, State Highway 04-SF-80, Post Mile 5.5, San Francisco, California, January 2009.* Millennium Consulting Associates. Prepared for ERM-West, Inc.
- B. References
 - 1. *Tar Flat – 19th Century Solutions, 20th Century Hazards: Caltrans SF-480 Terminal Separation Rebuild, California.* Resource Consultants. Prepared for Caltrans. 1993.
 - 2. *Tar Flat and the Transbay Terminal: A Survey of Historic Potential Hazardous Materials Sites at the Transbay Terminal Location.* Resource Consultants. Prepared for Caltrans. Revised 1994.

3. *Revised Site Mitigation Plan: 199 Fremont Street Project, San Francisco, California.* Volume 1. Geomatrix Consultants. Prepared for 199 Fremont L.P. 1998.
 4. *Environmental Site Characterization: The Century, San Francisco, California.* Treadwell & Rollo. Prepared for SBE Century, LLC. 1998.
 5. *Site Investigation Report San Francisco–Oakland Bay Bridge West Approach Project including Transbay Terminal Loop.* Caltrans District 4, Program and Professional Service Industries, Inc. 1999.
 6. *Additional Environmental Site Characterization: The Century, San Francisco, California.* Treadwell & Rollo. Prepared for SBE Century, LLC. 1999.
 7. *Groundwater Monitoring Report, Transbay Transit Terminal 150 1st Street, San Francisco.* Caltrans. May 2000.
 8. *Environmental Site Characterization, 301 Mission Street, San Francisco, California.* Treadwell & Rollo. Prepared for Millennium Partners. 2001.
 9. *Additional Site Characterization, 535 Mission Street, San Francisco, California.* Treadwell & Rollo, November 2007.
- C. The referenced documents are available to prospective Bidders on the TJPA's FTP site at ftp.tjpa.org (username: WebcorBid; password (case sensitive): WebcorBid!).

1.3 USE OF DATA

- A. Hazardous materials surveys and reports were obtained for the use of the TJPA and its consultants for planning and design only. Such documentation is not part of the Contract Documents. Contractor is entitled to rely in good faith on the information provided by the TJPA; however, based on the Contractor's expertise and experience, should the Contractor know or have known that the information provided is inaccurate, Contractor shall notify the TJPA of the inaccuracy.
- B. The TJPA makes no representation, either express or implied, that the conditions indicated in the survey reports or analytical results are representative of those existing at the Site, or that different conditions may not occur or materials other than or in proportions different from those indicated may not be encountered.

1.4 PRE-BID VISIT TO SITE

Prior to bidding, Bidders may make their own investigations to evaluate the actual Site conditions, but such investigations shall be performed only in accordance with the provisions of the Instructions to Bidders.

END OF SECTION 00 03 35

SPECIFICATION ISSUE LOG

Revision	Date
0	July 30, 2010
1	August 10, 2010

SECTION 00 04 30 – BID BOND

Bidder shall have this Bid Bond form executed as indicated below unless Bid is accompanied by certified check.

KNOW ALL MEN BY THESE PRESENTS:

That the undersigned General Contractor as principal and the undersigned Surety as obligator are held and firmly bound unto the TJPA, as obligee, in the penal sum of _____ Dollars, lawful money of the United States of America, for the payment of which, well and truly to be made, we bind ourselves, our successors, executors, administrators and assigns, jointly and severally, firmly by these presents.

That the General Contractor as principal is submitting a Bid for certain work to be performed for the said TJPA described as follows:

Construction Manager/General Contractor

(TJPA Contract No. 08-04-CMGC-000)

THE CONDITION OF THIS OBLIGATION IS SUCH that if the Bid submitted by said principal be accepted and the Contract be awarded to said principal and if said principal shall within a period of 10 days after such award enter into the Contract so awarded and file the required performance and payment corporate surety bonds certificates of insurance, then this obligation shall be void, otherwise to remain in full force and effect.

IN WITNESS THEREOF, the above bounden parties have executed this instrument this _____ day of _____, 20 ____.

(Corporate Seal)

Name of Firm, Corporation, Partnership or Joint Venture

Principal

By: _____

(Corporate Seal)

Surety

By: _____

Attorney in Fact

END OF SECTION 00 04 30

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

00 04 40 – REQUEST FOR SUBSTITUTION (RFS)

In accordance with California Public Contract Code Section 3400, Contractor will be provided a period of 10 days after the date of each Trade Package award for submission of data substantiating a request for a substitution with an "or equal" item. Refer to Section 00 07 00, paragraph 3.13, Substitutions, for requirements for requesting substitutions.

Project:	_____	RFS No.:	_____
Submitted By:	_____	Date:	_____
Spec. Section:	_____	Paragraph(s):	_____
Drawing Sheet:	_____	Detail(s):	_____

Proposed Substitution: _____
Manufacturer/Address/Phone: _____
Trade Name/Model No.: _____
On-Site Representative/Address/Phone: _____
Installer/Address/Phone: _____

Product History: ___ New ___ 2-5 years old ___ 5-10 years old ___ More than 10 years old

Differences between proposed substitution and specified product (attach required point-by-point comparative data):

Reason for not providing specified item: _____

Similar installation where proposed substitution has been used (Project/Address/Architect/Owner/Date Installed):

Proposed substitution affecting other parts of Work: ___ No ___ Yes: explain

Changes or modifications needed to coordinate other parts of the Work that will be necessary to accommodate the proposed substitution:

Savings to TJPA for accepting substitution: (\$_____).

Proposed substitution changes Contract Time: ___ No ___ Yes: Add/Deduct _____ days.

Supporting data attached: ___ Product Data ___ Drawings ___ Test Reports ___ Samples Other:

The undersigned certifies that

The proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.

The proposed substitution conforms in all respects to the requirements of the Contract Sections and is appropriate for the applications intended.

The same warranty will be furnished for proposed substitution as for specified product.

The proposed substitution will not affect or delay progress schedule.

The cost data as stated above is complete. There shall be no claims to the TJPA for additional costs related to an accepted substitution.

The proposed substitution does not affect dimensions and functional clearances.

Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

Submitted by: _____ Signature: _____

Firm: _____ Date: _____

Attachments _____

TJPA'S REVIEW AND ACTION

- ☐ Substitution accepted — Make submittals in accordance with Division 01.
- ☐ Substitution accepted as noted — Make corrections and submit in accordance with Division 01.
- ☐ Substitution rejected — Use specified materials and equipment.
- ☐ Substitution Request received too late — Use specified materials.

Signed _____ Date _____

Note: The TJPA's acceptance of Contractor's submittal of shop drawings, product data, or samples supporting this Substitution Request shall not constitute approval of submittals which do not conform to the requirements of the Contract Sections.

Additional Comments: _____

END OF SECTION 00 04 40

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 00 04 52 – ESCROW BID DOCUMENT DECLARATION

The apparent three Trade Subcontractor low Bidders shall submit this form with Escrow Bid Documents within 3 working days after the date of Bid opening; refer to Section 00 02 12.

I, _____, hereby declare under penalty of perjury pursuant to the laws of the State of California that the Bid documentation contained herein constitutes all the information used in preparation of the Bid, that I have personally examined these contents and have found that this Bid documentation is complete and constitutes all written information used in the preparation of my Bid, and that no other documentation is known to me which is necessary to consider in resolving disputes or claims.

Signature of Bidder or Authorized Representative

Title

Bidder's Name

Date

END OF SECTION 00 04 52

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 00 04 54 – BUSINESS TAX REGISTRATION DECLARATION

I understand that if I am awarded the Contract, each of my subcontractors and I must maintain a current business tax registration number. If Contractor or TJPA determines that any of my subcontractors or I do not have or maintain a current business tax registration number, Contractor may either cancel the Contract or withhold payment.

Trade Subcontractor Bidder's Name

Name and Title of Signer

Bidder's Street Address

Bidder's City, State, ZIP

Bidder's Telephone No.

Signature of Bidder or Authorized Representative

Date

END OF SECTION 00 04 54

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 00 04 57 – CITYBUILD/FIRST SOURCE REFERRAL PROGRAM CERTIFICATION

Bidder, by submitting the Bid form, hereby acknowledges that Bidder has read and will participate in the CITYBUILD/First Source Referral Program, as set forth in Section 00 08 20 and San Francisco Administrative Code Chapter 83.

The CITYBUILD Referral Program promotes employment opportunities for economically disadvantaged individuals of all ethnic backgrounds and genders in the construction work force. The Office of Economic and Workforce Development (OEWD) administers the CITYBUILD Referral Program by working with education programs to train construction workers and by working with construction contractors to identify hiring opportunities. The goal of the CITYBUILD Referral Program is to fill every hiring opportunity with a CITYBUILD referral who is trained and prepared to enter the construction industry workforce.

Contractors are required to make good faith efforts to provide hiring opportunities, when available, to CITYBUILD referrals. Contractor must notify OEWD of available hiring opportunities within 30 days of the date of award (Section 00 08 20 Form 1) and must develop a hiring plan for the project (Section 00 08 20 Form 2).

Contractors must coordinate their efforts with OEWD. Bidders may find more information at the OEWD, 50 Van Ness Avenue, San Francisco, CA 94102.

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

END OF SECTION 00 04 57

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 00 04 60 – HIGHEST PREVAILING WAGE RATE CERTIFICATION
FEDERALLY FUNDED PROJECTS

Bidder, by submitting the attached Bid Form, hereby acknowledges that Bidder has read the federal Davis-Bacon Act, 49 U.S.C. 5333(a), as implemented under 29 CFR Part 5 and related Rules (see 29 CFR Parts 1, 3, 5, 6, and 7); San Francisco Charter section A7.204; and San Francisco Administrative Code section 6.22E.

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 to the City and County of San Francisco of back wages plus \$50 per day for each person not receiving the required wage, 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 5 years.

Bidder attests by submitting the attached Bid Form, that Bidder will require from all of its subcontractors that they acknowledge having read the federal Davis-Bacon Act, 49 U.S.C. 5333(a) as implemented under 29 CFR Part 5 and related Rules (see 29 CFR Parts 1, 3, 5, 6, and 7); San Francisco Charter section A7.204; and San Francisco Administrative Code section 6.22E, and that they will comply with the same requirements under this Contract.

I attest by my signature hereto, that I shall require from all my subcontractors that they acknowledge having read the federal Davis-Bacon Act, 49 U.S.C. 5333(a) as implemented under 29 CFR Part 5 and related Rules (see 29 CFR Parts 1, 3, 5, 6, and 7); San Francisco Charter section A7.204; and San Francisco Administrative Code section 6.22E, and that they will comply with the same requirements under this Contract.

Trade Subcontractor Bidder's Name

Name and Title of Signer

Bidder's Street Address

City, State ZIP

Bidder's Telephone No.

Signature of Bidder or Authorized Representative

Date

Bidder must submit this certification with its Bid.

END OF SECTION 00 04 60

SPECIFICATION ISSUE LOG

Revision	Date
0	July 30, 2010
1	September 23, 2010

SECTION 00 04 65 – CERTIFICATE OF BIDDER REGARDING APPRENTICESHIP TRAINING PROGRAM

I, _____, by affixing my signature hereto, acknowledge that I have read San Francisco Administrative Code section 6.22(O) and I make the following declaration regarding each apprenticeable trade for which I will provide labor to the Project: *(Please check the appropriate box(es) and complete the listing of trade(s) in the space provided below)*

- ☐ I am a signatory to a recognized apprenticeship or training program under chapter 4 of the California Labor Code as certified by the State of California Division of Apprenticeship Standards for the following apprenticeable trades for which I will provide labor on the Project, and I will provide written proof of my status as a signatory within 10 days after the date of the TJPA's written notification of award of the Contract:

(List Trades Here) _____

- ☐ I have applied to become a signatory for the trades listed below but have not been accepted. Nevertheless, pursuant to San Francisco Administrative Code section 6.22(O) and California Labor Code section 1777.5, I will pay into the appropriate apprenticeship fund(s) an amount equal to that paid by signatories. I acknowledge that I will be required to submit written evidence of such payments with all progress payment requests for Work on the Project starting with the second such progress payment request and that providing such evidence is a condition that I must meet in order to qualify for payment by the TJPA.

(List Trades Here) _____

Additionally, I attest that I will require each of my subcontractors to submit a completed and signed Certificate of Subcontractor Regarding Apprenticeship Training Program form (Section 00 04 66). I acknowledge that, for subcontractor(s) who declare on said Section 00 04 66 that they have applied to become a signatory but have not been accepted and will pay into the appropriate apprenticeship fund(s) an amount equal to that paid by signatories, I must submit written evidence of such payments with all progress payment requests for Work on the Project starting with the second such request and that providing such evidence is a condition I must meet in order to qualify for payment by the TJPA.

I also attest that I and all of my subcontractors will comply, as a material term of the Contract, with the requirements of the State Apprenticeship Program as set forth in the California Labor Code, division 3, chapter 4 (commencing at section 3070) and section 1777.5 and San Francisco Administrative Code section 6.22(O) and all requests by the TJPA to provide proof that I and all subcontractors are in compliance with those requirements.

I declare (or certify) under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that I am authorized to bind this entity contractually.

If the Contract involves one or more trades with a recognized apprenticeship program for which you have declared that you are a signatory to a recognized apprenticeship or training program, written proof of status must be submitted for each trade within 10 working days after the date of the TJPA's written notification of award of the Contract.

Trade Subcontractor Bidder's Name	Name of Signer
Bidder's Street Address	Title of Signer
Bidder's City, State, ZIP	Signature of Bidder or Authorized Representative
Bidder's Telephone No.	Date

END OF SECTION 00 04 65

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 00 04 66 – CERTIFICATE OF SUBCONTRACTOR REGARDING APPRENTICESHIP TRAINING PROGRAM

I, _____, by affixing my signature hereto, acknowledge that I have read San Francisco Administrative Code section 6.22(O) and I make the following declaration regarding each apprenticeable trade for which I will provide labor to the Project: *(Please check the appropriate box(es) and complete the listing of trade(s) in the space provided below.)*

- ☐ I am a signatory to a recognized apprenticeship or training program under chapter 4 of the California Labor Code as certified by the State of California Division of Apprenticeship Standards for the following apprenticeable trades for which I will provide labor on the Project, and I will provide written proof of my status as a signatory within 10 days after the date of the TJPA's written notification of award of the Contract:

(List Trades Here)

- ☐ I have applied to become a signatory for the trades listed below but have not been accepted. Nevertheless, pursuant to San Francisco Administrative Code section 6.22(O) and California Labor Code section 1777.5, I will pay into the appropriate apprenticeship fund(s) an amount equal to that paid by signatories. I acknowledge that I will be required to submit written evidence of such payments for all progress payment requests for payment for Work on the Project submitted by the Bidder (Trade Subcontractor) to the TJPA starting with the second such progress payment request. Further, I acknowledge that my providing such evidence for the Bidder (Trade Subcontractor) to submit to the TJPA with its progress payment request(s) is a condition that I must meet in order for the Bidder (Trade Subcontractor) to qualify for payment by the TJPA.

(List Trades Here)

I also attest that I will comply, as a material term of the Contract, with the requirements of the State Apprenticeship Program as set forth in the California Labor Code, division 3, chapter 4 (commencing at section 3070) and section 1777.5 and San Francisco Administrative Code section 6.22(O) and all requests by the TJPA to provide proof that I am in compliance with those requirements.

I declare (or certify) under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that I am authorized to bind this entity contractually.

Complete and deliver this declaration form to the TJPA, 201 Mission St., Suite 2100, San Francisco, CA 94105. If the subcontract involves one or more trades with a recognized apprenticeship program for which you have declared that you are a signatory to a recognized apprenticeship or training program, written proof of status must be submitted for each trade within 10 working days after the date of the TJPA's written notification of award of the Contract.

Trade Subcontractor Bidder's Name

Name of Signer

Subcontractor's Name

Title of Signer

Subcontractor's Street Address

Signature of Subcontractor or Authorized Representative

Subcontractor's City, State, ZIP

Date

Subcontractor's Telephone No.

END OF SECTION 00 04 66

SPECIFICATION LOG

Revision	Date
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SECTION 00 04 80 – NONCOLLUSION AFFIDAVIT

TO THE TJPA EXECUTIVE DIRECTOR

In accordance with California Public Contract Code section 7106, _____, the party being first duly sworn, deposes and says that he or she is of _____, the party making the foregoing Bid, 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 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.

Trade Subcontractor Bidder's Name

Name and Title of Signer

Bidder's Street Address

Bidder's City, State, ZIP

Bidder's Telephone No.

Signature of Bidder or Authorized Representative

Date

END OF SECTION 00 04 80

SPECIFICATION LOG

Revision	Date
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SECTION 00 04 82 – CERTIFICATION OF BIDDER 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

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
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

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.)*

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>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Trade Subcontractor Bidder's Name

Name and Title of Signer

Bidder's Street Address

Bidder's City, State, ZIP

Bidder's Telephone No.

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

END OF SECTION 00 04 82

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 00 04 83 – CERTIFICATION OF 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 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 lower-tier subcontractor or Supplier shall provide description of each instance of violation and attach an explanation to this section. The 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>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Trade Subcontractor Bidder's Name

Name and Title of Signer

Bidder's Street Address

Bidder's City, State, ZIP

Bidder's Telephone No.

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).

END OF SECTION 00 04 83

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 00 05 20

AGREEMENT

THIS AGREEMENT is made for the convenience of the parties this 17th day of March, 2009, by and between Webcor Builders/Obayashi Corporation, A Joint Venture, located at San Mateo, California (the "CM/GC"), and the Transbay Joint Powers Authority, located in San Francisco, California (the "TJPA"), acting through its Executive Director (the "EXECUTIVE DIRECTOR"), under and by virtue of the Joint Powers Agreement, the rules of the TJPA Board, the laws of the State of California, the Administrative Code of the City and County of San Francisco, and the rules and regulations of the Federal Transit Administration.

WHEREAS, the TJPA awarded this AGREEMENT to the CM/GC on the 12th day of March, 2009, under TJPA Resolution No. 09-004, as more fully appears in the formal record of the proceedings of the TJPA Board:

TRANSBAY TRANSIT CENTER BUILDING AND RELATED STRUCTURES

**AGREEMENT FOR CONSTRUCTION MANAGER/
GENERAL CONTRACTOR SERVICES**

CONTRACT NO. 08-04-CMGC-000

NOW, THEREFORE, the CM/GC, in consideration of the mutual covenants set forth in this AGREEMENT, promises and agrees to provide all services to construct the Transbay Transit Center Building and Related Structures (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 EXECUTIVE DIRECTOR, to prosecute the Work with diligence from day to day to Final Completion, to furnish all pre-construction services and 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 the CM/GC's obligations under the Contract Documents, as and when required under the Contract Documents to the satisfaction of the EXECUTIVE DIRECTOR.

ARTICLE 1 – WORK

- 1.01 The Project. The Project shall consist of utility relocation, and demolition of the existing structure and ramps, and construction of the Transbay Transit Center Building, the Bus Ramps connecting the Transit Center Building to the Bus Storage Facilities and the West Approach to the Oakland-San Francisco Bay Bridge, and the interconnection and coordination with the Transbay Tower. The Project is located over four blocks (from Fremont to Second Streets) between Mission and Natoma Streets in the City and County of San Francisco.

The new Transit Center Building and Bus Ramps will have six levels: (1) a Train Station Passenger Platform Level, (2) a Train Mezzanine Level, (3) a Ground Level, (4) a Concourse Level, (5) an Elevated Bus Level, and (6) a Park Level. The Train Station Passenger Platform Level (Level (1)) and the Train Mezzanine Level (Level (2)) are the below grade levels of the Transit Center Building and are together sometimes referred to as the "Train Box". The construction shall be in two Phases, "top-down".

Phase I: The elements of the Project constructed in Phase I shall include all above-grade elements of the Transit Center Building, the Bus Ramps, and the ground slab and foundation systems necessary to support the ground slab system for the entire Project. The scope of Phase I construction shall allow for the future construction of the below-grade elements of the Transit Center Building. The design and construction of the Phase I elements shall consider, allow, and provide for the integration and/or expansion of building systems and vertical circulation systems to be constructed in Phase II.

Phase II: The elements of the Project constructed in Phase II shall include all below-grade elements of the Transit Center Building. Phase II construction shall result in a complete Train Box, including the Train Station Passenger Platform Level (Level (1))

and the Train Mezzanine Level (Level (2)), as a functional component of the Transit Center Building.

The scope of this AGREEMENT includes services only for Phase I of the Project. Upon mutual agreement of the TJPA and the CM/GC, the TJPA may add to the scope of Work all or any portion of Pre-Construction and/or Construction Services for Phase II of the Project, by written modification to this AGREEMENT.

- 1.02 Contract Documents. The CM/GC shall provide all Work in conformance with the Contract Documents, which are incorporated into and made a part of this AGREEMENT by this reference as if set forth here in full, 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 the CM/GC and the TJPA concerning the provision of the Work, are defined in the General Conditions (Section 00 07 00). Any undefined term used in this AGREEMENT will be given the definition set forth in the General Conditions (Section 00 07 00).
- 1.03 CM/GC's General Responsibilities. The CM/GC will 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, pre-construction work, 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, which work will be phased as described in Article 2 and Article 3, below.
- 1.04 Integrated Project Delivery. Integrated Project Delivery provides a mechanism to enable the early engagement of the CM/GC so that the CM/GC can work with the TJPA and its Project designers to provide a better designed and constructed Project. Early engagement of the CM/GC also allows for early starts in the construction sequence, as the design is proceeding. Under the Integrated Project Delivery method, the CM/GC will provide Pre-Construction Services in coordination with the TJPA and its Project designers, will select trade subcontractors through pre-qualification and competitive bid, and will coordinate, manage, and oversee construction of the Project through Final Completion.

The CM/GC acknowledges and agrees that the TJPA has retained design professionals under three separate agreements for (a) utility relocation (the "UR Engineer") (b) demolition (the "Demolition Engineer") and (c) the design of the Transit Center Building and Related Structures (the "Architect"). The CM/GC further acknowledges and agrees that coordination and execution of the utility relocation, the demolition, and the construction of the Transit Center Building and Related Structures are all a part of the services under this Contract.

Under this approach, the CM/GC will provide Pre-Construction Services (Article 2) and Construction Services (Article 3) as set forth below. **The CM/GC acknowledges and agrees, however, that the specific scope of work for both Pre-Construction and Construction Services for this Project is currently undefined and will be developed and finalized incrementally as the Project progresses. The services outlined below are intended as summary descriptions of the types of services that the CM/GC may perform as part of its scope of work. Scopes of work shall be incorporated into this AGREEMENT in an incremental fashion as the Project progresses, at which time the TJPA will authorize the CM/GC to proceed with such services.**

- 1.05 Personnel. The CM/GC team members shall at all times have the requisite expertise and experience to provide the Pre-Construction and Construction Services as required by the Contract Documents. See General Conditions (Section 00 07 00), at Article 3.

The CM/GC guarantees that the key personnel identified in its Qualification Statement will provide the required Pre-Construction Services for the duration of such services for the Project. The CM/GC will not make any substitutions to these key personnel without the TJPA's written approval. At a minimum, the CM/GC will demonstrate that any proposed substitution meets all of the applicable qualification requirements as set forth in the TJPA's RFQ.

ARTICLE 2 –PRE-CONSTRUCTION SERVICES

- 2.01 General. The CM/GC shall perform its Pre-Construction Services with a commitment to assisting the TJPA and its design teams in their efforts to meet the Project budgets and schedules. The CM/GC acknowledges and agrees that the UR Engineer, the Demolition Engineer, and the Architect are each designing toward a Fixed Budget Limit set by the TJPA for various aspects of the Project. The CM/GC shall respect the design teams' Fixed Budget Limits and shall perform all reviews, estimates, and other Pre-Construction Services in conformance with the Project budgets and general timelines set by the TJPA in its sole discretion.
- 2.02 Work Plan. Upon Notice To Proceed for Pre-Construction Services, the CM/GC shall prepare a work plan for TJPA approval outlining the scope of services in conformance with the provisions of this Article and the design schedules of the UR Engineer, the Demolition Engineer, and the Architect. The CM/GC shall submit the work plan for the TJPA's written approval within 30 days of the NTP for Pre-Construction Services.
- 2.03 Utility Relocation and Demolition. The CM/GC will consult with the UR Engineer and the Demolition Engineer to establish an effective and cost-efficient plan for the utility relocation and demolition work.
- 2.04 Transit Center Building and Related Structures. For the Transit Center Building and Related Structures, the CM/GC will work with the Architect in reviewing the Schematic Documents, the Design Development Documents, and the Construction Documents, taking into account quality of materials and equipment, to ensure an efficient design and minimum lifecycle cost. The CM/GC will participate in design decisions by providing information, estimates, schemes, and recommendations regarding construction materials, methods, systems, phasing, and costs that will provide the highest quality, energy conserving and efficient building within the budget and schedule for the Project.

The CM/GC shall provide all Pre-Construction Services in conformance with the Architect's Design Schedule and shall provide timely comment, input, reports, or responses as appropriate. Failure by the CM/GC to provide timely services may result in termination of this AGREEMENT for cause.

During the Pre-Construction Services Phase (Design Phase), the CM/GC will work closely with the TJPA and the Architect. The CM/GC's scope of services associated with the Architect's preparation of the Schematic Design, Design Development, and development of the Construction Documents shall include, but may not be limited to, the following tasks:

1. Perform periodic reviews of evolving design and make suggestions with regard to means and methods of construction including but not limited to construction staging management and crane and heavy equipment placement.
2. Review site conditions, site surveys, and soils reports and advise the TJPA as to anticipated site challenges (other than those that would properly be addressed through CM/GC means and methods) and recommended mitigation measures.
3. Provide constructability recommendations and guidance.
4. Perform construction operations planning.
5. Perform final review of Design Development Documents.
6. Provide input on Time and Cost Control to the TJPA and Architect.
7. Identify phased construction opportunities and constraints.
8. Prepare a Critical Path schedule.
9. Employ detailed constructability reviews and workshops including trade sequencing optimization, Architectural/Structural/MEP "clash detection" (using multi-dimensional Building Information Modeling ("BIM") technology), and recognition of and development of prefabrication/pre-assembly economies.

10. Participate in as-required collaboration and coordination efforts including performance evaluation, lifecycle cost analysis and scheduling/coordination impacts at core subcontractor level with respect to:
 - a. Risk Identification Mitigation and Management program with the TJPA and the Architect to identify issues which have the potential to impact project cost and/or schedule.
 - b. Structural Steel erection and fabrication.
 - c. Subsurface waterproofing design including foundations, slabs, and retaining walls.
 - d. Building Cladding and Curtain Wall detailing and erection including moisture and vapor barrier design, possibly as a design-build element of construction.
 - e. Life Safety systems design and specifications.
 - f. Fire Protection Systems design and specifications.
 - g. Conveyance design – elevator.
 - h. Energy Efficiency, Conservation and Generation features.
 - i. Building Automation System Engineering.
 - j. Security Systems and Hardware selections.
 - k. Telecommunications systems planning, design and specifications.
 - l. Digital communications systems planning, design and specifications.
 - m. Window Washing Equipment.
 - n. Life cycle analysis for major building elements and systems will include:
 - Initial cost of system.
 - Energy costs.
 - Maintenance and custodial costs.
 - Life expectancy.
 - Replacement costs.
 - Total cost of ownership over fifty (50) years.
11. Perform Quality Assurance Audit checks for Quantities and Compatibility utilizing computerized BIM technology.
12. Analyze the project for potential alternative equipment, material, and systems selections for LEED-certified Green Building Design feature cost/benefit studies.
13. Monitor market conditions for Project with subcontractors and material suppliers to (a) determine workloads, bonding capacity availability, and worker/mechanic availability; (b) develop interest in the Project and in bidding on the Work; and (c) fine tune the Project schedule.
14. Participate in the TJPA Total Cost Management process.
15. Prepare cost estimates in CSI/Masterformat 2004 edition, and according to the CSI 50 Division classifications at the following phases of design: 100% schematic design, 50% design development, 100% design development, 50% construction documents, 85% construction documents, and 100% construction documents. Estimates prepared during the construction document phase shall reflect the sequential trade packages in conformance with the bidding strategy to be adopted by the TJPA.
16. Coordinate and work with the Architect and the TJPA to reconcile contemporaneous cost estimates by the Architect and the TJPA.

17. Prepare cash flow analyses for both the design and construction phases.
 18. Submit a site use study to be used for allocation of space for storage, parking, and temporary facilities throughout construction phasing.
 19. Develop, review, and update a detailed CPM construction schedule.
- 2.05 Trade Subcontractors – Trade Work Packages. The CM/GC, in consultation with the Architect and the TJPA, shall prepare a Trade Work Package plan outlining the logical, seamless, and distinct Trade Work Packages for all scopes of work. The Trade Work Package plan shall at a minimum present the number of packages, a description of the scope of work for each package, the sequence and schedule for procurement, the Architect's Estimate for each Trade Work package, and an outreach plan. The Trade Work Package plan shall be subject to the TJPA's written approval. The CM/GC shall be responsible for the cost of any scope of Work which the CM/GC neglects or fails to include in the Trade Work Packages; the CM/GC, however, may apply CM/GC Contingency funds to such costs (see Article 6 below).

The CM/GC shall develop and manage the master Project CPM schedule for inclusion in every Trade Work Package and shall develop and include in the Trade Work Package that portion or subset of the master Project schedule that applies to that trade.

The CM/GC shall include the TJPA's standard Contract Documents and General Conditions in the Trade Packages, and will consult with the TJPA to incorporate applicable Federal Transit Administration (FTA) requirements into the Trade Packages. The CM/GC shall develop Supplementary General Conditions (with the TJPA's participation and approval) that address the trade subcontracts, schedule for trade subcontracts, and the responsibilities of all parties under the CM/GC with the agreed-upon procurement method. Awarded trade subcontracts shall not include any CM/GC construction contingency, allowances, or other items which are included in the CM/GC Fee (see Article 5 below). Only those Administrative Code provisions and those Contract provisions between the TJPA and the CM/GC that normally apply to San Francisco public work subcontracts will apply to the Trade Work Package subcontracts. Under no circumstances shall the terms of any subcontract provide for payment on a cost-plus-percentage-of-cost basis or any other basis prohibited under Federal law, as set forth in 49 CFR Part 18.

In conducting procurement and award of Trade Work subcontracts, the CM/GC shall follow the applicable procurement requirements and procedures set forth in local, State, and Federal law and guidelines. The Federal procurement rules and guidelines are set forth in Federal Transit Administration Circular 4220.1F, the Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments, in the FTA Best Practices Procurement Manual, and at 49 CFR Part 18 and Part 26. The CM/GC shall assure that the procurement of subcontractors shall be without regard to race, gender, religion, affiliation, or sexual orientation.

The TJPA will modify the CM/GC's Contract by adding to it the awarded Trade Work Packages, thereby increasing the CM/GC's scope of work and the value of the Contract up to the Contract Sum.

- 2.06 Trade Subcontractors – Competitive Procurement. Except under limited circumstances as provided below, the CM/GC shall assure full and open competition for the procurement of all Trade Subcontractors. In doing so, the CM/GC shall follow a two-step process: (1) pre-qualification and (2) competitive bid.
1. Pre-Qualification of Trade Subcontractors: The CM/GC and the TJPA will jointly develop pre-qualification standards for all trade contracts. The CM/GC will issue RFQs and evaluate responses to establish a pool of no fewer than three pre-qualified trade subcontractors for each trade package, subject to the approval of the TJPA. Only pre-qualified Trade Subcontractors will be allowed to bid, provided that the CM/GC does not preclude potential bidders from qualifying during the solicitation period. The TJPA, with the assistance of the CM/GC, will resolve any protests or disputes relating to the pre-qualification process.
 2. Trade Subcontractor Bid Packages: The CM/GC will receive sealed bids from pre-qualified Trade Subcontractors, including any bidder who qualifies during the solicitation period. The

CM/GC shall require a 5% bid security in conformance with 18 CFR 18.36(h)(1). Representatives from the TJPA will be present to receive the bids to ensure a fair and equitable process. The CM/GC will consult the TJPA before rejecting any bids.

The determination as to whether a Trade Package subcontract will be awarded, rebid, or rescope/repackaged, shall be made with reference to the independent cost estimate issued by the Architect. If awarded, the CM/GC will award a Trade Work Package subcontract to the responsible bidder submitting the lowest responsive bid, except in those limited instances as provided in Article 2.07, below.

- 2.07 Trade Subcontractors – Alternate Procurement Procedures. The CM/GC, with the approval of the TJPA, may select and utilize a procurement procedure other than competitive low bid for specified Trade Work Packages. Any alternate procurement procedures must conform to the standards, limited circumstances, and requirements of 49 CFR 18.36, as may be amended from time to time, and Federal Transit Administration Circular 4220.1F, as may be amended or revised from time to time. The following procurement procedures are acceptable, subject to the prior approval of the TJPA which shall not be unreasonably withheld provided that the CM/GC establishes the criteria under law:

1. Small purchase procedures (49 CFR 18.36(d)(1));
2. Competitive proposals, including value-based selection/competitive negotiation (49 CFR 18.36(d)(3));
3. Noncompetitive (sole source) proposals (49 CFR 18.36(d)(4));

For each subcontract to be awarded under this paragraph, the CM/GC, in consultation with the TJPA, shall perform a cost or price analysis to determine the reasonableness of the proposed subcontract price with reference to the Architect's Estimate for such Trade Work.

- 2.08 Trade Subcontractors – Reprocurement. In the event that any bid or negotiated Trade Package results in a procurement in an amount in excess of 5% of the budget estimate for such Trade Work, the TJPA in its sole discretion may direct the CM/GC to cooperate with the TJPA, its consultants, and the Architect to value engineer, re-package, and/or re-bid any Trade Work at no additional cost to the TJPA. This right reserved by the TJPA is not exclusive or preclusive of any right the TJPA may have under this Contract or under any other instrument. The TJPA also reserves the right, in its sole discretion, to terminate this Contract for convenience under General Conditions Article 14 in the event that the Trade Work Packages do not substantially conform to budget.

ARTICLE 3 – CONSTRUCTION SERVICES

- 3.01 General Requirements. The TJPA and the CM/GC intend that the TJPA will issue the NTP for Construction during the course of and prior to completion of the CM/GC's Pre-Construction Services; the CM/GC shall then contemporaneously perform Pre-Construction and Construction services. The CM/GC and all Subcontractors contracted for the construction of the Project will provide construction services from mobilization through project completion. The CM/GC will furnish construction administration and management services and will perform the Project in an expeditious and economical manner consistent with the requirements of the Contract Documents (see Contract General Conditions Section 00 07 00).

At a minimum, the CM/GC will perform construction services congruent with those of a general contractor who submits a competitive bid with its own list of subcontractors to perform all of the construction work under a contract, including, but not limited to, construction design value engineering/integration services, construction management, contract administration, cost control, subcontractor procurement, scheduling, coordination, testing, shop drawing development, processing/review, and distribution of product warranties/related documentation, commissioning and startup, and project closeout. Representative activities and responsibilities include, but are not limited to:

1. Secure the site to safely demolish the existing building and execute the demolition work in conformance with general and specific requirements of the Contract.
2. Coordinate the termination or installation of utility work during all phases of the demolition and construction work, including the timely notification to responsible parties, relative to the construction schedule, where the utility work is not a contracted responsibility of the CM/GC or its Trade Subcontractors.
3. Conduct, jointly with the TJPA, a pre-construction conference for the Trade Subcontractors and the Architect. The CM/GC's responsibilities will include (a) preparing a conference agenda; (b) preparing job procedures for clarifications, change orders, shop drawings, progress payments, field-testing and inspections, and safety; and (c) preparing and distributing pre-construction conference minutes or notes.
4. Update the master Project schedule, and review and approve the Trade Subcontractors' schedules for compliance with the individual requirements of each trade subcontract and the overall master Project schedule. The CM/GC will also review and approve Trade Subcontractors' proposed construction schedule for logic, reasonableness, and conformance to the requirements of the Contract Documents, and will review and maintain a daily log of the Trade Subcontractors' progress, personnel and conformance with monthly updated construction schedules.
5. Review and approve Trade Subcontractors' monthly progress payment requests. The CM/GC will (a) compare the requested payments to actual work completed in accordance with the pre-approved schedule of values presented by the Trade Subcontractors at the beginning of construction; (b) combine invoices and prepare the CM/GC payment request; (c) prepare a current overall schedule of values; and (d) submit to the TJPA one invoice in a format and process approved by TJPA for approval and payment.
6. Provide monthly updated cash flow requirement projections for each month of construction.
7. Act as liaison between Trade Subcontractors, inspectors, the Architect and the TJPA.
8. Coordinate the scheduling of work and the operational logistics that have an impact on the safety and operations of adjacent buildings and their occupants.
9. Review, assess and make best efforts to resolve Requests for Information (RFIs) from Trade Subcontractors before submitting RFIs to the TJPA. The CM/GC will be responsible for tracking RFIs through the field office. The Architect will be responsible for interpretations and clarifications of the plans and specifications, and will prepare sketches for clarification when necessary. The CM/GC will manage the distribution to its Trade Subcontractors of clarifications and interpretations prepared by the Architect and any other communication or direction by the TJPA.
10. Review submittals from Trade Subcontractors to identify any coordination conflicts between trade work to ensure appropriateness and conformance with the Contract Documents before forwarding submittals to the Architect.
11. Prepare a monthly construction progress report, summarizing the progress of construction and key issues currently pending. The report will indicate the progress of each Trade Subcontractor, and will also summarize the current cash flow projections. The CM/GC will submit the monthly construction progress reports to the TJPA.
12. Prepare occasional presentations to other organizations as requested by the TJPA regarding construction issues of special importance.
13. Provide direct supervision, scheduling and problem resolution for Trade Subcontractors throughout construction.
14. Provide all necessary on-site trailers and office equipment for the staff of the CM/GC.
15. Provide all necessary on-site construction management, supervisory, safety and clerical staff for the proper management of the construction.

16. Ensure and confirm that the Trade Subcontractors are maintaining CAL OSHA-mandated safety requirements and are conducting regular tailgate safety meetings.
 17. Ensure and confirm that the Trade Subcontractors are maintaining as-built drawings in conformance with the requirements of the Contract Documents. The CM/GC shall participate in a regular, monthly meeting with designated representatives of the TJPA, its consultants, and the Architect to review the as-built drawings in detail. The CM/GC will compile the as-built drawings and submit them at the end of the project to the TJPA for review, approval and further processing.
 18. Coordinate the training of TJPA-designated personnel on the operations and maintenance of the building systems.
 19. Prepare a recommendation for final acceptance of the Project after the Trade Subcontractors have corrected deficient work and satisfied all Contract conditions. The CM/GC will prepare a final payment request and final report. CM/GC will provide a complete set of contract files to the Project Manager and necessary closeout documents including, but not be limited to, as-built drawings, operation and maintenance manuals, additional materials, and warranties.
- 3.02 Working Requirements. The CM/GC and Trade Subcontractors must have the ability to prepare documents using the following software applications during all phases of the Work.
1. All drawings shall conform to TJPA CAD Standards
 - a. All drawings on Autodesk AutoCAD 2008, minimum file compatibility of DWG files with Autodesk AutoCAD R17.1.
 - b. Roadway and bridge drawings on Autodesk AutoCAD 2008 and Bentley Microstation V8 XM.
 2. Building Information Modeling on Rhinoceros 4.0 and Autodesk Revit Building 9 or current compatible/adopted National Building Information Modeling Standard.
 3. At the time of construction, the most recent version of Rhinoceros 3-D Modeling software, Autodesk Revit and Autodesk NavisWorks.
 4. Text documents on Microsoft Word TM 2007.
 5. Spreadsheets on Microsoft Excel TM 2007.
 6. Database information on Microsoft Access TM 2007.
 7. Schedules on Primavera 6.0.
 8. Audio/visual presentations in Microsoft PowerPoint TM 2007.
 9. Graphics on Adobe Creative Suite 3 TM.

Project team communication methods may include the following features, either individually, or as part of a dedicated electronic suite of services:

1. E-mail addresses for the Project team will be assigned using the TJPA domain – xxxx@transbaycenter.org.
2. The project has standardized on Constructware, a web-based electronic collaboration tool to connect the Project team, TJPA staff members, and other participants to provide access to project documents, and to facilitate project development tasks. The TJPA will provide licenses and training in the use of Constructware which will be the main information sharing tool for the project. As a minimum, Constructware will be used to document the following program elements:
 - Project Contact List
 - Drawings
 - Meetings
 - ASIs
 - Correspondence
 - Submittals

- RFIs
- Daily Reports
- Punch Lists
- Contract Change Orders
- Payment Applications

3.03 Permit Documents. The San Francisco Department of Building Inspection (DBI), Fire Department, Public Works, and other governmental agencies, will be retained to provide the project with plan check and inspection services as needed. Plan checking will be submitted and reviewed in a manner so as to facilitate the sequence of work as determined by the construction schedule. The plans and specifications may be divided into the following review packages: (1) Foundation package including retaining wall up to street level; (2) Superstructure, as defined by the structural steel and decking; (3) Exterior envelope including the curtain wall; (4) Architectural package, including mechanical, electrical, plumbing, sprinklers and fire alarm; (5) Tenant Improvements; and (6) Final – any additional items not listed above. The CM/GC may propose an alternate packaging plan for TJPA review and approval.

The demolition of the existing building, and the shoring of the excavation work at three sides adjacent to sidewalks, will not be submitted for plan check review by City agencies. The underpinning work at the adjacent property located at 301 Mission Street, however, will require the review, approval and issuance of a building permit by City agencies.

ARTICLE 4 - CONTRACT TIME

4.01 Completion Dates. The Work will be Substantially Complete within 1,825 consecutive calendar days (approximately five years) for Phase I of the Project, beginning with and including the official date of the Notice To Proceed with Pre-Construction Services, as established by the EXECUTIVE DIRECTOR, and Finally Complete in accordance with Article 9 of the General Conditions (Section 00 07 00) within 90 consecutive calendar days after the TJPA issues a Notice of Substantial Completion.

4.02 Liquidated Damages. The TJPA and the CM/GC understand and agree that time is of the essence in all matters relating to the Contract Documents and that the TJPA will suffer financial loss if the Work is not completed within the above-stated Contract Time, as may be extended in accordance with Article 7 of the General Conditions (Section 00 07 00). The TJPA and the CM/GC further understand and agree that the actual cost to the TJPA which would result from CM/GC's failure to complete the Work within the Contract Time is extremely difficult, if not impossible, to determine. Accordingly, the TJPA and the CM/GC agree that as liquidated damages for delay (but not as a penalty), the CM/GC will pay the TJPA as set forth in the following table. The parties acknowledge and agree that the maximum aggregate amount of liquidated damages which may be assessed under this paragraph shall be \$45,000,000.

Delay Period	Liquidated Damages Amount
For the first 30 calendar days (days 1-30) that transpire with the Work not Substantially Complete after the time limit for achieving Substantial Completion specified in Article 4:	\$5,000 per day for calendar days 1-30
For the next 30 calendar days (days 31-60) that transpire with the Work not Substantially Complete after the time limit for achieving Substantial Completion specified in Article 4:	\$10,000 per day for calendar days 31-60

Delay Period	Liquidated Damages Amount
For the next 30 calendar days (days 61-90) that transpire with the Work not Substantially Complete after the time limit for achieving Substantial Completion specified in Article 4:	\$25,000 per day for calendar days 61-90
If the Work is not Substantially Complete more than 90 calendar days (days 91 and later) after the time limit for achieving Substantial Completion specified in Article 4:	\$50,000 per day for calendar days 91 and later
If the Work is not Finally Complete after the time limit for achieving Final Completion specified in Article 4:	\$5,000 per calendar day

ARTICLE 5 – CONTRACT SUM

- 5.01 Contract Sum. The amount to be paid to the CM/GC for all Work performed under this AGREEMENT shall not exceed [REDACTED]. The Contract Sum is comprised of the following: (A) the Pre-Construction Services Fee and (B) the Construction Services Fee of (1) the aggregate value of the awarded Trade Work subcontracts (Direct Costs) and (2) the CM/GC Construction Services Fixed Fee (the "CM/GC Fee"). This not-to-exceed amount does not include any payments made to the CM/GC for allowed and approved expenditures from the CM/GC Contingency, described in Article 6 of this AGREEMENT, or Reimbursable Expenses, as described below. In the event that during the bidding of Trade Work Packages, the TJPA determines that the budgeted amount for the Trade Packages will or most likely will be exceeded, the TJPA shall have the right to direct the re-bid of certain Trade Packages to reduce the cost and shall, if necessary, have the right to terminate the Contract for its convenience. If, upon Final Completion of the Work, the final Contract Sum (less the Pre-Construction Services Fee and Contingency Payments) is less than the budgeted amount, the difference between the final Contract Sum and the not-to-exceed amount will accrue to the benefit of the TJPA.

The TJPA will adjust the value of the Contract Sum during the course of the Project to reflect the amount of: (a) the cost of Pre-Construction Services, (b) awarded Trade Work Subcontracts plus CM/GC Fee, and (c) any other changes in the Work that affect the value of the Contract.

- A. Pre-Construction Services. The CM/GC will be paid for Pre-Construction Services based on the blended rate of [REDACTED] as set forth in the CM/GC's Project Fee Proposal Schedule (attached as Attachment B to this AGREEMENT), up to a maximum of [REDACTED] hours. The blended hours rate includes all of the CM/GC's profit for Pre-Construction Services, and all costs incurred by the CM/GC profit for Pre-Construction Services, including but not limited to any materials, payroll, overhead and administrative costs, travel and living expenses, licenses, insurance, incidents, and any other fees or expenses incurred by CM/GC in providing Pre-Construction Services.
1. The TJPA, at its sole discretion, will assign Pre-Construction phase Work to CM/GC. The TJPA makes no representation that all [REDACTED] hours will be required for Pre-Construction Services during the course of the Project.
 2. The blended hourly rate shall apply to all members of CM/GC's team who provide Pre-Construction Services. Payment for Pre-Construction Services will be subject to CM/GC providing the TJPA with sufficient back-up documentation demonstrating to the TJPA's reasonable satisfaction that services were performed justifying payment at the agreed-upon hourly rate.

B. Construction Services. CM/GC will be paid for Construction Services on the Direct Costs of the Work, as described in subparagraph B.1, below, plus the CM/GC Fee for overhead, profit, and general conditions, as described in subparagraph B.2, below.

1. Direct Costs of the Work include, but are not limited to, the total costs for all awarded Trade Packages. Refer to Attachment 1 to this AGREEMENT for categories of Work included under Direct Costs.
2. The CM/GC Fee will be a [REDACTED]. The CM/GC Fee shall be invoiced at a rate of [REDACTED] of approved Direct Costs, provided that the total CM/GC Fee amount shall not exceed the Fixed Fee amount stated in the first sentence of this subparagraph 5.01B(2). The invoice rate shall remain in effect throughout the term of this Contract, as may be extended by written modification to include Phase II construction.

The CM/GC Fee includes all of CM/GC's overhead, profit, and general conditions fee for administering and coordinating Construction Services. Attachment 1 allocates to the CM/GC and to the TJPA certain anticipated costs. Other general condition costs which may or may not be specifically identified in Attachment 1 and which fall under the following categories of costs shall be the responsibility of the CM/GC and included in its Fee: (i) all field and home/regional office personnel including but not limited to principals, project managers, superintendents, supervisory foremen, estimators, project engineers, detailers, drafts persons, schedulers, consultants, watchpersons, payroll clerks, administrative assistants, and secretaries; (ii) all field and home/regional office expenses including but not limited to field trailers, parking, storage sheds, office equipment and supplies, telephone service, long-distance telephone calls, fax machines, computers and software, internet and e-mail services, temporary utilities, sanitary facilities and services, janitorial services, small tools and equipment with a cost under \$1,000 each, portable scaffolding, blocking, shoring equipment, job vehicles, security and fencing, conformance to all regulatory requirements including safety equipment and compliance with safety regulations, safety programs and meetings, cartage, warranties, record documents, and all related maintenance costs; (iii) administrative functions including but not limited to reviewing, coordinating, distributing, processing, posting, recording, estimating, negotiating, scheduling, schedule updating and revising, expediting, surveying, engineering, drawing, detailing, carting, cleaning, protecting the Work, and other incidental Work; and (iv) costs of insurance (including all premiums).

The CM/GC will perform all categories of Work included in the CM/GC Fee (see Attachment 1 to this AGREEMENT) and will not include any of this Work in any of the Trade Packages.

3. At the time of award of the final Phase I Trade Package, if the total Direct Costs are less than [REDACTED], the TJPA may at its sole option and discretion either (a) add Direct Costs to bring the Contract Sum to [REDACTED] or (b) negotiate with the CM/GC an equitable adjustment to the CM/GC Fee. If at any time the total Direct Costs are or anticipated to be greater than [REDACTED], the TJPA may at its sole option and discretion to either (a) not proceed with Work associated with Direct Costs in excess of [REDACTED] or (b) negotiate with the CM/GC a mutually agreeable fixed CM/GC Fee for the CM/GC services associated with the additional approved Direct Costs in conformance with 49 CFR 18.36(f), so long as the Direct Costs in excess of [REDACTED] are not a result of any action or inaction of the CM/GC or could not have been reasonably avoided by the CM/GC through the exercise of due care and would constitute a material breach of the Contract Documents.

C. Reimbursable Expenses. The TJPA will reimburse the CM/GC for the actual, approved costs of copying and binding the Trade Packages, for permits and specified fees (see Attachment 1 to this AGREEMENT). To be eligible for reimbursement, these and other

reimbursable costs must have the prior written approval of the TJPA. The CM/GC shall not be entitled to any markup or fee on Reimbursable Expenses.

- D. Bond Premiums. For the Phase I Performance and Payment Bonds (each in the amount of [REDACTED] (see paragraph 9.03)), the TJPA shall reimburse the CM/GC's actual Phase I Performance and Payment Bond premium costs, up to the amount stated by the CM/GC in its Cost Proposal. The TJPA shall not be responsible for any CM/GC Fee on any bond premium costs. For any Phase II Performance and Payment Bonds, the TJPA shall reimburse the CM/GC its actual costs as a Reimbursable Expense.
- 5.02 Progress Payments. The CM/GC shall submit separate payments requests for Pre-Construction and Construction Services, in an invoicing procedure to be approved by the TJPA. The TJPA will endeavor to make progress payments for undisputed amounts within fifteen (15) days, but not later than forty-five (45) days, of receiving a payment request and the required documentation including, without limitation, certified payrolls. Under no circumstances, however, shall the TJPA be liable for interest or late fees for failure to issue timely any progress payment. Progress payments involving the work of the Trade Subcontractors shall include a retention as provided in the General Conditions for Construction (Section 00 07 00), Article 9.
- 5.03 Certification by Chief Financial Officer. This AGREEMENT is subject to the budget and fiscal provisions of the TJPA. Charges will accrue only after prior written authorization certified by the TJPA Chief Financial Officer, and the amount of the TJPA's obligation under this AGREEMENT will not at any time exceed the amount certified for the purpose and period stated in such advance authorization. Upon written request from the CM/GC for the status of funds allocated for the Project, TJPA shall respond within fifteen (15) days. If the TJPA becomes aware of any material changes to its ability to fund services to be provided by the CM/GC, it shall promptly notify the CM/GC.
- 5.04 Prompt Payment to Trade Subcontractors.
- A. Requirement. The CM/GC shall comply with the prompt payment to subcontractors requirements set forth in 49 CFR Section 26.29 and with all provisions of State law relating to the payment of subcontractors.
- B. Payment for Satisfactory Work. The CM/GC shall make payment to each Trade Subcontractor for satisfactory performance of its subcontract no later than ten (10) days after receipt of payment from the TJPA.
- C. Payment of Retainage. The CM/GC shall make full payment to each Trade Subcontractor, within thirty (30) days after the subcontractor's Work is satisfactorily completed, of all retainage withheld by the CM/GC pursuant to the relevant subcontract. Accordingly, the TJPA shall pay to the CM/GC the incremental retainage held under the Contract General Conditions (Section 00 07 00), Article 9, for the Work of such Trade Subcontractor upon certification by the CM/GC as to the retainage amount. (49 CFR 26.29(b)(3).)
- D. Reduced retainage. If the TJPA reduces retainage under the Contract General Conditions (Section 00 07 00), Article 9, the CM/GC must proportionately reduce retainage for its Trade Subcontractors.

ARTICLE 6 – CM/GC CONTINGENCY

- 6.01 The TJPA Project budget includes a CM/GC Contingency equal to [REDACTED] of the Direct Costs of the Work, an amount which shall not exceed [REDACTED]. In the event that TJPA approves Direct Costs in excess of [REDACTED] (as provided under paragraph 5.01B(3)), the TJPA shall increase the CM/GC Contingency in proportion to the increase in approved Direct Costs. The CM/GC Contingency is not a design contingency, and is not to be used for changes in

the scope of the Work or for upgrades in the quality of the Work as reflected in the Contract Documents. In general, it is to be used for coordination of items necessary to complete the Work, *i.e.* the cost to complete Work that was inadvertently omitted from trade package(s) but the cost of which would have been a cost to the Project had it been included originally. The CM/GC Contingency is also intended to cover the following categories of costs in connection with the Work:

- A. Coordination issues or other disputes by and between Trade Subcontractors arising from conflicts in the Contract Documents that the CM/GC should have recognized during Pre-Construction Services (made in its capacity as a contractor and not a design professional), requiring revisions and/or reorganization of the Work in the field;
 - B. Additional costs, not covered by bonds, attributable to the insolvency of a subcontractor or supplier;
 - C. Costs incurred for the correction of damaged, defective or non-conforming work, provided that CM/GC shall be required to make all reasonable good faith efforts to first obtain such costs from any and all responsible trade contractors and/or any applicable insurance.
 - D. Costs for overtime to maintain or accelerate the Project Schedule, unless such acceleration is required by TJPA for the TJPA's benefit, provided that CM/GC shall be required to make all reasonable good faith efforts to first obtain such costs from any and all trade contractors responsible for such delay(s).
 - E. Costs for actual delays incurred as a result of Non-Compensable, Unavoidable Delays as provided under paragraph 7.02 of the Contract General Conditions (Section 00 07 00) and as properly documented as a delay to critical path activities.
- 6.02. The costs of the Work identified in Paragraph 6.01, above, will be paid for exclusively from the CM/GC Contingency, to the extent funds are available. The CM/GC may apply for use of the CM/GC Contingency by written request to the TJPA. The TJPA will confirm that the Contingency is being used for the purposes set forth in this Article and may issue approval in writing, which approval will not be unreasonably withheld. CM/GC will not be entitled to a markup or fee on any expenditure from the CM/GC Contingency.
- 6.03. Any and all costs identified in Paragraph 6.01, above, that exceed the CM/GC Contingency amounts set forth above will be the responsibility of CM/GC and will not be chargeable to the TJPA. CM/GC will continue to perform the Work at no additional cost to the TJPA until the Work is complete.
- 6.04. As an incentive for CM/GC to perform in the best interest of the contracting parties and for the overall success of the Project, the TJPA shall pay the CM/GC [REDACTED] the unspent amount of the CM/GC Contingency once the Project is accepted as Finally Complete and provided all conditions for payment are satisfied.

ARTICLE 7 – DISADVANTAGED BUSINESS ENTERPRISE (DBE) OPPORTUNITIES

- 7.01 Disadvantaged Business Enterprise (DBE) Program: The TJPA has set an advisory availability percentage of 17% for DBE participation under this Contract. The DBE Program requirements are set forth in Contract Document Section 00 08 21, as modified in Contract Amendment No. 01 executed on January 26, 2010.

ARTICLE 8 – LABOR REQUIREMENTS

- 8.01 Applicable Laws and Agreements. Compensation and working conditions for labor performed or services rendered under this AGREEMENT will be in accordance with the Contract Documents,

the San Francisco Charter, and applicable sections of the San Francisco Administrative Code, including section 6.22E.

- 8.02 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, will be included in this AGREEMENT and are hereby incorporated by this reference. The CM/GC agrees that any person performing labor in the provision of the Work will be paid not less than the highest general prevailing rate of wages as so determined. Because federal funds are involved, where the minimum rate of pay for any classification may differ among State, City and Federal wage rate determinations, the highest of the three rates of pay will prevail. The CM/GC will include, in any contract or subcontract relating to the Work, a requirement that all persons performing labor under such contract or subcontract will be paid not less than the highest prevailing rate of wages for the labor so performed. The CM/GC will require any contractor to provide, and will deliver to TJPA every month during any construction period, certified payroll reports with respect to all persons performing labor in the Provision of the Work.

Copies of the latest prevailing wage rates are on file at the TJPA, 201 Mission Street, Suite 1960, San Francisco, CA 94105.

- 8.03 Penalties. CM/GC will forfeit to the TJPA back wages due plus 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 9 – INDEMNITY, INSURANCE, BONDS, AND DAMAGES

- 9.01 Indemnification. To the fullest extent permitted by law, and consistent with California Civil Code section 2782 and Contract General Conditions (Section 00 07 00), Article 3, the CM/GC will assume the defense of, indemnify and hold harmless the TJPA, the TJPA Board, TJPA Board members, agency members of the TJPA, the Federal Transit Administration, Caltrans, and the City and County of San Francisco, and all of their officers, directors, employees, and 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, damages, actions, losses and liabilities 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 or nonperformance of the Work.
- A. The liability of the CM/GC will not be limited to the amount of insurance coverages required under the Contract Documents.
 - B. This indemnification will not be valid in the instance where the loss is caused by the sole negligence or intentional tort of any person indemnified herein.
- 9.02 Insurance. The CM/GC shall at all times under this AGREEMENT maintain the insurance coverages as required under Contract Document Section 00 07 00 Article 10 and Section 00 08 05. The TJPA will not fund or participate in any owner-controlled (OCIP) or contractor-controlled (CCIP) insurance program.
- 9.03 Bonds. The CM/GC shall furnish and maintain (1) a corporate surety bond to guarantee the faithful performance of the Contract ("Performance Bond") and (2) a corporate surety bond to guarantee the payment of labor, materials, supplies, and equipment used in the performance of the Contract ("Payment Bond"), each in an amount not to exceed [REDACTED], with the CM/GC as

Principal and the TJPA as sole obligee, in the form provided by the TJPA (Contract Document Section 00 61 00), in conformance with the bond requirements under the General Conditions (Section 00 07 00, Article 10) (together, the "Phase I Performance and Payment Bonds"). The CM/GC shall furnish the Phase I Performance and Payment Bonds within 150 days of the award of the CM/GC Contract, or within 14 days of the request by the TJPA, whichever is earlier. Failure to submit timely Performance and Payments Bonds shall result in a forfeiture of the CM/GC's Bid Bond.

- A. In the event that, upon mutual agreement of the parties, the TJPA adds Phase II Work to the scope of this AGREEMENT, the CM/GC shall furnish either (1) a rider or other appropriate instrument to increase the penal sums of the Phase I Performance and Payment Bonds and to incorporate Phase II Work or (2) furnish new Phase II Performance and Payment Bonds in an amount to be determined by the TJPA and from a surety acceptable to the TJPA.
 - B. In the event that either party opts not to proceed with Phase II Work under this AGREEMENT, the CM/GC shall complete the Work of all awarded Trade Packages in conformance with the terms and conditions of the Contract Documents; the exercise of such option by the CM/GC shall not itself constitute Grounds for Default under the Contract General Conditions (Section 00 07 00), Article 14, or the Bonds already furnished.
- 9.04 Damages. The TJPA and the CM/GC mutually waive claims against each other for incidental or consequential damages arising out of or relating to the Contract. This mutual waiver includes (a) damages incurred by the TJPA for rental expenses, for losses of use, revenue, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and (b) damages incurred by the CM/GC for principal office expenses including the compensation of personnel, for losses of revenue (including profit), financing, business and reputation, and for loss of management or employee productivity or of the services of such persons. (See also General Conditions (Section 00700), paragraph 3.21B.) For the purposes of these Contract Documents, liquidated damages are direct damages and nothing contained in this Article shall preclude an award of liquidated damages, when applicable, in accordance with the terms and conditions of the Contract Documents.

ARTICLE 10 – RIGHTS AND REMEDIES

- 10.01 General. The provisions of the Contract Documents shall not limit the duties, obligations, rights and remedies otherwise imposed or available by law or in equity. No action or failure to act shall in any way abridge the rights and obligations of the Parties to the Contract Documents, or condone a breach thereunder, unless expressly agreed to by the Parties in writing. All remedies provided in the Contract Documents shall be taken and construed as cumulative; that is, in addition to each and every other remedy herein provided, the TJPA shall have any and all equitable and legal remedies that it would in any case have.
- 10.02 No Waiver. No waiver of any breach of any provision of the Contract Documents shall be held to be a waiver of any other or subsequent breach. The only waiver by the TJPA shall be a waiver in writing that explicitly states the item or right being waived.
- 10.03 TJPA's Remedies for False Claims and Other Violations. Under San Francisco Administrative Code section 6.22M, the CM/GC or any Subcontractor or Supplier who fails to comply with the terms of this AGREEMENT, who violates any provision of San Francisco Administrative Code Chapter 6, who submits false claims, or who violates against any governmental entity a civil or criminal law relevant to its ability to perform under or comply with the terms and conditions of the AGREEMENT, may be declared an irresponsible bidder and debarred according to the procedures set forth in San Francisco Administrative Code section 6.80, *et seq.*
- A. Additionally, the CM/GC or its Subcontractor or Supplier who submits a false claim may be subject to monetary penalties, investigation, and prosecution as set forth in San Francisco Administrative Code section 6.80, *et seq.*, California Government Code section 12650, *et seq.*, and the Federal False Claims Act.

- B. CM/GC shall include in each subcontract and purchase order for Work a clause incorporating the provisions of this Article 10.03.

ARTICLE 11 – COMPLETE AGREEMENT; MODIFICATIONS IN WRITING

- 11.01 This AGREEMENT and the Contract Documents as set forth in General Conditions (Section 00700) constitute the complete agreement between the TJPA and the CM/GC. This AGREEMENT supersedes and shall control over any other agreement written or oral as between the TJPA and the CM/GC.
- 11.02 This AGREEMENT and all of the terms and conditions of the Contract Documents shall remain in full force and effect through expiration unless modified in writing and approved by the TJPA or the TJPA Board, as appropriate.

ARTICLE 12 – RESOLUTION OF CONFLICTING TERMS

- 12.01 The Contract Documents and any other agreements between the Parties relating to the Project are intended to be read together and integrated as a whole, and will be construed and interpreted in a manner so as to avoid any conflicts to the extent possible. Supplementary provisions in the Contract Documents will not be deemed to be in conflict. It is expressly agreed by and between the TJPA and the CM/GC that should there be any conflict between the terms of this AGREEMENT and the CM/GC's Proposal, then this AGREEMENT will control and nothing herein will be considered as an acceptance of any terms of the Proposal which conflict with this AGREEMENT.

ARTICLE 13 – GOVERNING LAW AND VENUE

- 13.01 Governing Law. The Contract Documents shall be interpreted in accordance with the laws of the State of California, the TJPA By-Laws, and applicable provisions of the San Francisco Administrative Code.
- 13.02 Venue. All Claims, counter-claims, disputes and other matters in question between the TJPA and the CM/GC arising out of or relating to this AGREEMENT or its breach will be decided by a court of competent jurisdiction with the State of California.

ARTICLE 14 – NOTICES TO PARTIES

- 14.01 Unless otherwise indicated in the Contract Documents, all written communications sent by the Parties may be by U.S. mail, e-mail, or facsimile, and shall be address as follows:
- To TJPA: Maria Ayerdi-Kaplan
Executive Director
201 Mission Street, Suite 2100
San Francisco, CA 94105
mayerdi-kaplan@transbaycenter.org
(415) 597-4615 fax
- To CM/GC: Jes Pedersen
Senior Vice President
951 Mariners Island Blvd., 7th Floor
San Mateo, CA 94404
jes@webcor.com
(650) 524-7399 fax
- 14.02 From time to time, the Parties may designate new address information by notice in writing, delivered to the other Party.
- 14.03 The delivery to the CM/GC at the legal address listed above, as it may be amended upon written notice, or the depositing in any United States Post Office or Post Office Box regularly maintained by the United States Postal Service in a postage-paid wrapper directed to the CM/GC at such address, of any drawing, notice, letter or other communication shall be deemed legal and sufficient service thereof upon the CM/GC.

ARTICLE 15 – PROPRIETARY OR CONFIDENTIAL INFORMATION OF TJPA

- 15.01 CM/GC understands and agrees that, in the performance of the Work under this AGREEMENT or in contemplation thereof, CM/GC may have access to private or confidential information which may be owned or controlled by the TJPA and that such information may contain proprietary or confidential details, the disclosure of which to third parties may be damaging to the TJPA. The CM/GC agrees that all information disclosed by the TJPA to CM/GC and marked or otherwise identified as "confidential" shall be held in confidence and used only in performance of the AGREEMENT. CM/GC shall exercise the same standard of care to protect such information as a reasonably prudent contractor would use to protect its own proprietary data.
- 15.02 CM/GC shall retain all confidential information and maintain such confidentiality for a period of not less than four years from the date of Final Completion. The TJPA at its sole option and discretion may, within the four-year period, notify the CM/GC in writing that it must preserve the information and its confidentiality for longer than four years. At the expiration of the confidentiality period, CM/GC shall request direction from the TJPA as to whether the CM/GC should return or destroy the confidential information. Shipment to a TJPA-designated storage facility, shall be made at TJPA's sole expense.

ARTICLE 16 – TERMINATION

- 16.01 This AGREEMENT and the other Contract Documents, unless sooner terminated, will terminate upon Final Completion of the Work or as set forth in Article 14 of the General Conditions (Section 00 07 00).

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IN WITNESS WHEREOF, the TJPA and the CM/GC have hereunto set their hands and seals, and have executed this AGREEMENT in duplicate, the day and year first above written.

TRANSBAY JOINT POWERS AUTHORITY

[CONSTRUCTION MANAGER/GENERAL
CONTRACTOR]

BY: _____

Maria Ayerdi-Kaplan
Executive Director

BY: _____

[Name]
[Title]

Awarded and Approved by Resolution No.

BY: _____

TJPA Board Secretary

Approved as to form:
Dennis J. Herrera
City Attorney

BY: _____
Deputy City Attorney

END OF SECTION 00 05 20

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 00 05 20 A

AGREEMENT SCHEDULE A

COST CLASSIFICATION
Construction Phase Scope Detail0F¹

	Direct Cost²	Included in Markup³	Reimbursable Expense⁴
Project Staffing⁵			
Accountant/bookkeeper		X	
CADD Drafter		X	
Clean-up/ Trash Remover		X	
Dust Controller		X	
Field Engineer		X	
Independent Surveyor	X		
Night Watchman /Security Guard		X	
Operations Manager		X	
Project Engineer		X	
Project Manager		X	
Project Superintendent		X	
Safety & EEO		X	
Scheduling Engineer		X	
Secretarial/Clerk		X	
Time Keeper/Checker		X	
Traffic Control Flagger		X	
Traffic Officer	X		
Temporary Facilities			
Barricades		X	
Covered Walkways on Public Rights of Ways	X		
Drinking Water/Coolers/Cups		X	
Dry Standpipes		X	
Fencing and K-Rails on Public Rights of Ways	X		
Fire Fighting Equipment		X	
Office Furniture/Equipment/		X	
Office Trailer/Space for CM/GC		X	
Opening Protection		X	
Project Signs		X	
Safety Railing & Nets		X	
Safety/First Aid Supplies		X	
Storage Trailers & Tool		X	
Temporary Fencing/Enclosures		X	
Temporary Toilets (CM/GC, TIPA personnel, visitors)		X	
Temporary Toilets (Trade Work Subcontractors)	X		
Trash Chutes & Hoppers		X	

¹ All references are to the singular and plural.

² "Direct Costs" are the total costs for awarded Trade Packages or as otherwise expressly allowed by the TIPA. The CM/GC is entitled to a Markup on any item categorized as a Direct Cost. (See Document 00520, Article 5.)

³ "Markup" includes all of the CM/GC's overhead, profit, and general conditions fee for administering and coordinating Construction Services. The CM/GC may receive a Markup only on approved Direct Costs. (See Document 00520, Article 5.)

⁴ "Reimbursable Expenses" are actual expenses incurred with the prior written approval of the TIPA.

	Direct Cost ²	Included in Markup ³	Reimbursable Expense ⁴
Temporary Utilities ⁶			
Dump Permits & Fees	X		
Electric Power Distribution Wiring		X	
Electric Power Installation		X	
Electric Power Installation		X	
Electric Power Monthly Charges		X	
Heating & Cooling Costs		X	
Telephone Installation		X	
Telephone Monthly Charges		X	
Trash Removal & Hauling		X	
Water Service Installation	X		
Water Service Monthly Charges	X		
Project Costs			
Bid and Negotiated (awarded) Trade Packages	X		
BIM input and management		X	
Correction of Non-Conforming Work		X	
Correction of Work Damaged by CM/GC		X	
Correction of Work Damaged by Trade Subcontractors		X	
Facility Operator Training		X	
Fees- Curb & Gutter			X
Fees- Gas Service			X
Fees- Plan Check			X
Fees- Power Service			X
Fees- Sanitary Sewer			X
Fees- Sidewalk Permit			X
Fees- Sign			X
Fees- Storm Drain			X
Fees- Water Connection			X
Fees- Water Meter			X
Geotechnical Monitoring During Construction			X
Hoisting and Cranes	X		
Initial Soils Investigation			X
Maintenance after TJPA Occupancy			X
Miscellaneous Office Supplies		X	
Photocopies & Miscellaneous Printing		X	
Postage/UPS/FedEx		X	
Premium - Insurance		X	
Premium- Performance & Payment Bond ⁷			X
Printing Drawings & Specifications		X	
Project Photographs		X	
Record Drawings		X	
Testing and Inspection			X
Warranty Work & Coordination		X	
CM/GC Home Office			
Accounting & Bookkeeping		X	
CADD Drafting and Detailing		X	

⁶ All items included in the CM/GC Markup are for CM/GC Project Facilities only. Trade Package Subcontractors will provide their own Temporary Facilities as part of their bids.

⁷ The TJPA shall reimburse the CM/GC for Premiums - Performance Bond and Payment Bond as provided in the Agreement (Section 00 05 20), Article 5.01D.

	Direct Cost²	Included in Markup³	Reimbursable Expense⁴
Computer/Data Processing		X	
Corporate Executives		X	
Estimating Cost Engineering		X	
Fringe Benefits & Burden		X	
Legal & General Services		X	
Principal in Charge		X	
Purchasing & Contracts		X	
Safety & EEO Officer		X	
Scheduling		X	
Secretarial/Clerk/Typing		X	
Travel & Subsistence		X	
Value Engineering		X	

END OF 00 05 20 A

SPECIFICATION ISSUE LOG

Revision	Date
0	August 25, 2010

SECTION 00 06 10 – PERFORMANCE BOND & PAYMENT (LABOR AND MATERIAL) BOND

KNOW ALL MEN BY THESE PRESENTS, that WHEREAS the TJPA has awarded to

hereinafter designated as the “Principal,” a Contract by AWARD OF FORMAL CONTRACT ORDER NO. _____
_____, approved _____, 20__ for

Construction Manager/General Contractor

(TJPA Contract No. 08-04-CMGC-000)

WHEREAS, said Principal is required under the terms of said Contract to furnish a Bond for the faithful performance of said Contract; and to furnish a separate Bond for the payment of any materials, provisions, or other supplies, used in, upon, for or about the performance of the Work contracted to be done;

NOW, THEREFORE, we the Principal and

as Surety, are firmly bound unto the TJPA in the penal sum of

(PERFORMANCE BOND)

(PAYMENT BOND)

and

lawful money of the United States for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally firmly by these presents for a performance bond and an equal and separate penal sum for a separate payment bond. The conditions of this obligation are such that if the said principal does well and faithfully performs all the conditions and covenants of said Contract, according to the true intent and meaning thereof, upon its part to be kept and performed, then the above obligation is to be null and void, otherwise to remain in full force and effect.

(PERFORMANCE BOND)

THE CONDITION OF THIS OBLIGATION IS SUCH, that if the above bounden Principal, its heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions and agreements in the said Contract, including the provisions for liquidated damages in the said Contract, any changes, additions or alterations thereof made as therein provided, on its part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless the TJPA, its officers and agents, as therein stipulated, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

(PAYMENT BOND)

THE CONDITION OF THIS OBLIGATION IS SUCH that if said principal, its heirs, executors, administrators, successors or assigns of its Subcontractor or Subcontractors shall fail to pay for any materials, provisions, or other supplies used in, upon, for, or about the performance of the Work contracted to be done, or for any work or labor thereon of any kind, or for amounts due the Unemployment Insurance Act with respect to such work or labor, then the surety of this Bond will pay for same, in an amount not exceeding the sum specified in this Bond, and in case suit is brought upon this Bond will also pay a reasonable attorney’s fee, to be fixed by the Court.

This Bond shall inure to the benefit of any and all persons, companies, corporations, political subdivisions and state agencies, entitled to file claims under the provisions of California Civil Code section 3247 et sequitur.

And the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the Work to be performed thereunder or the Specifications accompanying the same and no inadvertent overpayment of progress payments shall in any way affect its obligations on these Bonds, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the Work or to the Specifications or of any inadvertent overpayment of progress payments.

IN WITNESS WHEREOF, the above-bounden parties have executed this instrument under their seal this ____ day of _____, 20____, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Approved as to form:
Dennis J. Herrera
City Attorney

By: _____
Deputy City Attorney

Principal

By: _____

Surety

By: _____

END OF SECTION 00 06 10

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 00 06 30 – ESCROW AGREEMENT FOR SECURITY DEPOSITS IN LIEU OF RETENTION

This Escrow Agreement is made and entered into by and between the TJPA, whose address is 201 Mission St., Suite 2100, San Francisco, CA 94105, hereinafter called "TJPA", and

whose address is _____
_____, hereinafter called "Contractor"
and _____
whose address is _____, hereinafter called "Escrow Agent."

For the consideration hereinafter set forth, the TJPA, Contractor, and Escrow Agent agree as follows:

1. Pursuant to section 22300 of the Public Contract Code of the State of California, Contractor has the option to deposit securities with Escrow Agent as a substitute for retention earnings required to be withheld by the TJPA pursuant to the construction contract entered into between the TJPA and Contractor for Transbay Transit Center (TJPA contract No. 08-04-CMGC-000) in the amount of _____ dated _____ (hereinafter referred to as the "Contract"). Alternatively, on written request of Contractor, the TJPA shall make payments of the retention earnings directly to Escrow Agent. When Contractor deposits the securities as a substitute for Contract earnings, Escrow Agent shall notify the TJPA within 10 days of the deposit. The market value of the securities at the time of substitution shall be equal to the cash amount then required to be withheld as retention under the terms of the Contract between the TJPA and Contractor. Securities shall be held in the name of _____, and shall designate Contractor as the beneficial owner.
2. The TJPA shall make progress payments to Contractor for such funds which otherwise would be withheld from progress payments pursuant to the Contract provisions, provided that Escrow Agent holds securities in the form and amount specified above.
3. When the TJPA makes payment of retentions earned directly to Escrow Agent, Escrow Agent shall hold them for the benefit of Contractor until such time as the escrow created under this Contract is terminated. Contractor may direct the investment of the payments into securities. All terms and conditions of this Escrow Agreement and the rights and responsibilities of the parties shall be equally applicable and binding when the TJPA pays Escrow Agent directly.
4. Contractor shall be responsible for paying all fees for the expenses incurred by Escrow Agent in administering the Escrow Account and all expenses of the TJPA. These expenses and payment terms shall be determined by the TJPA, Contractor, and Escrow Agent.
5. The interest earned on the securities or the money market accounts held in escrow and all interest earned on that interest shall be for the sole account of Contractor and shall be subject to withdrawal by Contractor at any time and from time to time without notice to the TJPA.
6. Contractor shall have the right to withdraw all or any part of the principal in the Escrow Account only by written notice to Escrow Agent accompanied by written authorization from the TJPA to Escrow Agent that the TJPA consents to the withdrawal of the amount sought to be withdrawn by Contractor.
7. The TJPA shall have the right to draw upon the securities in the event of default by Contractor. Upon seven days' written notice to the Escrow Agent from the TJPA of the default, Escrow Agent shall immediately convert the securities to cash and shall distribute the cash as instructed by the TJPA.

8. Upon receipt of written notification from the TJPA certifying that Contract is final and complete, and that Contractor has complied with all requirements and procedures applicable to the Contract, Escrow Agent shall release to Contractor all securities and interest on deposit less escrow fees and charges of the Escrow Account. The escrow shall be closed immediately upon disbursement of all moneys and securities on deposit and payments of fees and charges.
9. Escrow Agent shall rely on the written notifications from the TJPA and Contractor pursuant to sections 5 to 8, inclusive, of this Escrow Agreement, and the TJPA and Contractor shall hold Escrow Agent harmless from Escrow Agent's release and disbursement of the securities and interest as set forth above.
10. The names of the persons who are authorized to give written notice or to receive written notice on behalf of the TJPA and on behalf of Contractor in connection with the foregoing, and exemplars of the respective signatures, are as follows:

a. On behalf of the TJPA:

(Title)

(Name)

(Signature)

(Address)

b. On behalf of Contractor:

(Title)

(Name)

(Signature)

(Address)

c. On behalf of Escrow Agent:

(Title)

(Name)

(Signature)

(Address)

At the time the Escrow Account is opened, the TJPA and Contractor shall deliver to Escrow Agent a fully executed counterpart of this Escrow Agreement.

IN WITNESS WHEREOF, the parties have executed this Escrow Agreement by their proper officers on the date first set forth above.

TJPA:

By: _____
TJPA Executive Director

Approved as to form:
Dennis J. Herrera
City Attorney

By: _____
Deputy City Attorney

CONTRACTOR:

(Title)

(Name)

(Signature)

END OF SECTION 00 06 30

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 00 07 00

GENERAL CONDITIONS

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GENERAL CONDITIONS

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, Sections, or Documents are provided for convenience but not to exclude other Paragraphs, Sections, 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 TJPA, unless otherwise specified. Where used in conjunction with the TJPA's response to submittals, requests, applications, inquiries, proposals and reports by CM/GC, the term "approved" shall be held to limitations of the TJPA's responsibilities and duties as specified in these General Conditions. In no case shall the TJPA's approval be interpreted as a release of CM/GC from its responsibilities to fulfill the requirements of the Contract Documents or a waiver of the TJPA's right under the Contract.
 2. Addenda: Written or graphic instruments issued prior to the opening of Bids which make changes, additions or deletions to the Bid Documents.
 3. Agreement: The Agreement or Contract between the TJPA and CM/GC covering the Work to be performed; other Contract Documents are attached to the Agreement and made part of the Agreement as provided in these General Conditions. The Contract is fully executed upon certification by the Chief Financial Officer of the TJPA as to the availability of construction funds. Refer to Section 00 05 20 for the Agreement.
 4. Alternate Bid Item: A Bid item that may be added to or deducted from the Total Bid Price of any Trade Work package to meet Project construction budget requirements.
 5. Application for Payment: Written request submitted by CM/GC to TJPA for payment of Work completed in accordance with the Contract Documents and approved schedule of values. Refer to Article 9, Section 00 07 00.
 6. Approved Equal: Accepted in writing by the TJPA as being of equivalent quality, utility and appearance. Equivalent means equality in the opinion of the TJPA Representative. The burden of proof of equality is the responsibility of CM/GC. Refer to Division 1 for procedures for proposing substitutions.
 7. BIM: Building Information Modeling, a technological tool used to convey multi-dimensional information for the Project. The CM/GC shall use the BIM system established by the Architect and shall regularly utilize the modeling data provided in the construction process and development of the shop drawings for the Work, and input data based on as-built conditions as part of its Construction Services and General Conditions Markup.
 8. Bonds: Performance and payment (labor and materials) bonds and other instruments of security acceptable to the TJPA, in a form to be provided by the TJPA.
 9. Bulletin: Refer to "Field Order."

10. By Others: Work on this Project that is outside the scope of Work to be performed by CM/GC under this Contract, but that will be performed by the TJPA, other Contractors, or other means and at other expense.
11. Change Order: A written instrument prepared by the TJPA issued after the effective date of the Agreement and executed in writing by the TJPA and CM/GC, 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.
12. Change Order Request (COR): Refer to Paragraph 6.03.
13. City: The City and County of San Francisco, California, where the Project is located, identified as such in the Agreement and referred to throughout the Contract Documents as if singular in number.
14. Claim: A written demand by CM/GC for an adjustment in the Contract Sum or Contract Time, or both, which is submitted in accordance with the requirements of the Contract Documents. Refer to Paragraph 13.02.
15. Clarification: A document consisting of supplementary details, instructions or information issued by the TJPA 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 CM/GC and approved by the TJPA in accordance with the Contract Documents. Refer to Article 6.
16. CM/GC: The Construction Manager/General Contractor providing pre-construction and construction services under these Contract Documents. The entity with which the TJPA has entered the Agreement, identified as such in the Agreement (Section 00 05 20) and referred to throughout the Contract Documents as if singular in number and neuter in gender. The term "CM/GC" means CM/GC or its authorized representative. The "CM/GC" also means the Construction Manager/General Contractor (CM/GC).
17. Code: Code or codes in force under this Contract. Wherever reference is made to Code, that reference shall be construed to mean the codes, laws or orders specified in the Contract Documents.
18. Completion List: A punch list prepared by the TJPA identifying deficient Items to be corrected by CM/GC prior to Final Completion. Refer to Paragraph 9.08.
19. Contract: Refer to "Agreement."
20. Contract Documents: Refer to Paragraph 1.02.
21. Contract Sum: The sum stated in the Agreement and, including authorized adjustments, the total amount payable by the TJPA to CM/GC for the performance of the Work under the Contract Documents. Refer to Section 00 05 20.
22. Contract Time(s): The number of successive days as stated in Section 00 05 20 to: (i) achieve Substantial Completion and (ii) complete the Work so that it is ready for final acceptance as evidenced by the TJPA's issuance of written acceptance as required by section 6.22(K) of the San Francisco Administrative Code.
23. Contracting Requirements: See Paragraph 1.02.
24. Contractor: Refer to "CM/GC".
25. CPM: Refers to critical path method scheduling.

26. Day: Reference to "day" shall be construed to mean a calendar day of 24 hours, unless otherwise specified.
27. Default: Refer to Paragraph 14.01.
28. Deficiency List: The list provided by the TJPA identifying Items that shall be corrected or completed before the TJPA considers the Work Substantially Complete. Refer to Paragraph 9.07.
29. Delivery: In reference to an item specified or indicated shall mean to unload and store with proper protection at the Site. Refer to Paragraph 9.03 for delivery to another (off-Site) location.
30. Designated, Determined, Directed: Required by the TJPA, unless otherwise specified. Refer to Paragraph 2.01.
31. Differing Conditions: Refer to Paragraph 3.05.
32. 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.
33. Document: Refer to Section 00 01 10 – Table of Contents for a listing of the Sections.
34. 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.
35. 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 when the Chief Financial Officer of the TJPA initially certifies the availability of funds.
36. Executive Director: The TJPA Executive Director, the contracting officer for the Contract, acting directly or through properly authorized representatives, agents, and consultants, limited by the particular duties entrusted to them. Refer to Section 00 05 20.
37. Field Order: A written order issued by the TJPA which requires minor changes in the Work but which does not involve a change in the Contract Sum or the Contract Time. Refer to Article 6.
38. Final Completion: The date of written acceptance of the Work by the TJPA, issued in accordance with section 6.22(K) of the San Francisco Administrative Code, when the Contract has been fully performed, including all punch list items, and when all contractual and administrative requirements have been fulfilled.
39. Force Account Work: Change Order Work to be paid for on the basis of direct costs plus markup on direct costs for overhead and profit as provided in Paragraph 6.07.
40. FTA: Federal Transit Administration. The FTA is the federal agency providing funding and oversight for the Project.
41. 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.
42. General Requirements: Refer to Paragraph 1.02.
43. Indicated: Shown or noted on the Drawings or written in the Specifications.
44. 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.

45. Installer: A person engaged by CM/GC, 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. It is a requirement that installers be experienced in the operations they are engaged to perform.
46. Item: A separate, distinct portion of the whole Work, which may comprise material, equipment, article, or process.
47. 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 CM/GC, Subcontractor or Lower-Tier Subcontractor, as applicable.
48. Modification: A document incorporating one or more Change Orders approved by the TJPA.
49. Non-conforming Work: Work that is unsatisfactory, faulty, defective, 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 prior to Final Completion.
50. Notice of Default: Refer to Paragraph 14.01.
51. Notice of Potential Claim: Refer to Paragraph 13.02.
52. Notice of Substantial Completion: The written notice issued by the TJPA to CM/GC acknowledging that the Work is Substantially Complete as determined by the TJPA. Said Notice shall not be considered as final acceptance of any portion of the Work or relieve CM/GC from completing the punch list items attached to said Notice within the specified time and in full compliance with the Contract Documents.
53. Notice to Proceed: The written notice issued by the TJPA to CM/GC authorizing CM/GC to proceed with the Work and establishing the date of commencement of the Contract Time.
54. Owner: Refer to "TJPA."
55. 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.
56. Partial Utilization: Right of the TJPA to use a portion of the Work or assume beneficial occupancy prior to Substantial Completion of the Work.
57. Project: Refer to Agreement (Section 00 05 20), Article 1.
58. 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 Documents and Specification sections and may include schedules, is contained in the Section 00 01 10 – Table of Contents.
59. Proposed Change Order (PCO): A document prepared by the TJPA requesting a quotation of cost or time from CM/GC for additions, deletions or revisions in the Work initiated by the TJPA or CM/GC.
60. Provide: Furnish and Install or Supply and Install complete in place at the Site.

61. Regular Working Hours: 7:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays.
62. Request for Information (RFI): A document prepared by CM/GC or the TJPA during in the performance of Construction Services requesting information from one of the parties regarding the Project or Contract Documents.
63. Request for Substitution: A request from CM/GC in accordance with the conditions specified in Division 1 to substitute an Item, type of construction, or process indicated in the Contract Documents with another item, type of construction or process that shall be equal in all respects to that so indicated.
64. Required: In accordance with the requirements of the Contract Documents.
65. Resident Engineer: See "TJPA Representative."
66. RFP: The Request For Cost Proposals issued on or about October 20, 2008, to the qualified Respondents following the TJPA's Request For Qualification (RFQ) for CM/GC Services.
67. Site: Geographical location of the Project as indicated elsewhere in the Contract Documents.
68. Special Provisions: The part of the Contract Documents that amends, modifies, or supplements these General Conditions.
69. Specifications: The portion of the Project Manual comprising Division 1 through Division 48 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, which the CM/GC acknowledges and agrees shall be developed during the Pre-Construction Services Phase.
70. Specified: Written in the Contract Documents.
71. Subcontractor: A person or entity who has a direct contract with CM/GC 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 CM/GC or subcontracts of a separate CM/GC. The term "Subcontractor" shall also include contracts assigned to CM/GC if so provided in the Supplementary Conditions or specified in the General Requirements (Division 1). Any reference to Trade Contractor shall have the same meaning as "Subcontractor."
72. 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. In the event that either party exercises its option under paragraph 9.03D of the Agreement (Section 00 05 20) not to proceed with further Trade Packages, Substantial Completion will mean completion of all awarded Trade Packages in conformance with the terms and conditions of the Contract Documents.
73. Supplementary Conditions: The part of the Contract Documents that amends, deletes or modifies these General Conditions. The Supplementary Conditions, if any, will be set forth in Section 00 08 00.
74. Supplier: A manufacturer, fabricator, distributor, or vendor having a direct contract with CM/GC or with a Subcontractor to furnish materials or equipment to be incorporated in the Work.
75. Supply: Refer to "Furnish."

- 76. TJPA: The Transbay Joint Powers Authority or its authorized representative.
- 77. TJPA Representative: The authorized on-Site representative of the TJPA, as identified at the pre-construction conference convened by the TJPA, in the performance of on-Site inspection and administration of the Contract. All liaison between the TJPA and CM/GC shall be directed through the TJPA Representative.
- 78. Trade Subcontractor: Refer to "Subcontractor".
- 79. Unavoidable Delay: Refer to Paragraph 7.02.
- 80. Unilateral Change Order: A written Change Order to CM/GC issued after the effective date of the Agreement in accordance with Paragraph 6.05.
- 81. Unit Price Work: Work to be paid for on the basis of unit prices and actual quantities of Work. Refer to Paragraph 6.08.
- 82. Work: The performance by CM/GC of all its responsibilities and obligations set forth in the Contract Documents. Work shall include, but not be limited to, Pre-Construction Services and Construction Services, including all labor services, and documentation to build the Project as required by the Contract Documents. References in the Contract Documents to "Work" may be to items of Work. Refer to Paragraph 1.03.

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, BIM baseline digital data platform (prepared by the Architect through the Design Development Phase of the Architect's Services), and all Addenda thereto;
 - 2. the Agreement, the Bonds, and other documents listed in the Agreement;
 - 3. Change Orders, Unilateral Change Orders, and Field Orders issued after execution of the Contract; and
 - 4. all provisions of the RFQ and the RFP, including all attachments, not in conflict with the foregoing.
- B. Nothing in the Contract Documents shall be construed to create a contractual relationship between the TJPA and a Subcontractor, Supplier, Lower Tier Subcontractor or Supplier or a person or entity other than the TJPA and CM/GC.
- C. The Contracting Requirements and the General Requirements contain information necessary for completion of every part of the Project and are applicable to each section of the Specifications.
 - 1. The Contracting Requirements establish the rights and responsibilities of the parties and include these General Conditions (Section 00 07 00), Sections 00 05 20, and the 00 08 00-series Sections as listed under Special Provisions in the Table of Contents (Section 00 01 10), as provided in the Request For Cost Proposals or as later developed and incorporated by modification into the Contracting Requirements
 - 2. The General Requirements include all Sections in Division 1, and govern the execution of the Work of all sections of the Specifications.
 - 3. Where items of Work are performed under subcontracts, each item shall be subject to the Contracting Requirements and General Requirements.

1.03 MEANING AND INTENT OF CONTRACT DOCUMENTS

- A. The Contract Documents are complementary; what is required by one shall be as binding as if required by all. The Contract Documents will be construed in accordance with the laws of the State of California,

the TJPA's Charter and Administrative Code, and applicable building codes and statutes of the TJPA and/or County where the Project is located.

- B. The intent of the Contract Documents is to describe and provide for a functionally complete and operational Project (or part thereof) to be constructed in accordance with the Contract Documents. All Work, materials, and equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as necessary to properly execute and complete the Work to conform to the requirements of the Contract Documents shall be provided by CM/GC with no change in the Contract Sum or Contract Time.
- C. Arrangement and titles of Drawings, and organization of the Specifications into Divisions, sections and articles in the Contract Documents shall not be construed as segregating the various units of material and labor, dividing the Work among Subcontractors, or establishing the extent of Work to be performed by any trade. CM/GC may arrange and delegate its Work in conformance with trade practices, but CM/GC shall be responsible for planning and assembling logical, seamless, and distinct Trade Work Packages for all scopes of work. The TJPA assumes no liability arising out of jurisdictional issues raised or claims advanced by trade organizations or other interested parties based on the arrangement or manner of subdivision of the content of the Drawings and Specifications. The TJPA assumes no responsibility to act as arbiter to establish subcontract limits between portions of the Work.
- D. In interpreting the Contract Documents, words describing materials or Work with a well-known technical or trade meaning, unless otherwise specifically defined in the Contract Documents, shall be construed in accordance with such well-known meaning.
- E. A typical or representative detail on the Drawings shall constitute the standard for workmanship and material throughout corresponding parts of the Work. Where necessary, and where reasonably inferable from the Drawings, CM/GC shall adapt such representative detail for application to such corresponding parts of the Work. The details of such adaptation shall be submitted to the TJPA for approval. Repetitive features shown in outline on the Drawings shall be in exact accordance with corresponding features completely shown.
- F. In the event of a conflict in the Contract Documents regarding the quality of a product, CM/GC shall request Clarification from the TJPA as provided in Paragraph 6.02 before procuring said product or proceeding with the Work affected thereby.
- G. The layout of mechanical and electrical systems, equipment, fixtures, piping, ductwork, conduit, specialty items, and accessories on the Drawings is shown in diagrams and symbols to illustrate the relationships existing between the parts of the Work; all variations in alignment, elevation, and detail required to avoid interferences and satisfy architectural and structural limitations are not necessarily shown. If rerouting, i.e. relocating a duct, pipe, conduit or similar utilities from the indicated room or space to another room or space to avoid structural interferences, results in a total linear footage which exceeds 125% of the indicated route if the structural interferences did not exist, then CM/GC will be compensated for the amount in excess of 125% under the provisions for Change Orders of Article 6. Actual layout of the Work shall be carried out without affecting the architectural and structural integrity and limitations of the Work; shall be performed in such sequence and manner as to avoid conflicts; shall provide clear access to all control points, including valves, strainers, control devices, and specialty items of every nature related to such systems and equipment; shall obtain maximum headroom; shall provide adequate clearances as required for operation and maintenance; and shall be reflected in the BIM. Clear access shall be defined as within arm's reach without required use of special equipment or the dismantling of building systems or equipment.
- H. The Drawings shall not be scaled for dimensions. When a true dimension cannot be determined from figured dimensions in the Contract Documents, CM/GC shall request promptly the same from the TJPA and shall obtain a written interpretation from the TJPA before proceeding with the Work affected thereby.

- I. In the interest of brevity, the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.
- J. When there is a conflict between existing on-Site conditions and information indicated on the Contract Documents, other than Differing Conditions as defined in Paragraph 3.05, the existing condition shall govern. CM/GC shall perform the Work and adjust to the existing condition at no additional cost to the TJPA, provided CM/GC should have known of such conflicts based on its reasonable investigation of the Site prior to submitting its Cost Proposal in accordance with the requirements of the RFP.
- K. All references in the Contract Documents to satisfactory, sufficient, reasonable, acceptable, suitable, proper, correct, or adjectives of like effect shall be construed to describe an action or determination of the TJPA Representative for the sole purpose of evaluating the completed Work for compliance with the requirements of the Contract Documents and conformance with the intent as expressed in subparagraph 1.03B. Such determinations of the TJPA Representative shall be final and conclusive.
- L. An item of Work shall be deemed reasonably inferable from the Contract Documents if it is a required component of a specific assembly. Such assembly must be indicated in the plans and/or specifications with sufficient detail to determine quantities and be necessary for the proper execution and completion of the Work.

1.04 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 following the NTP for construction, or to modify the terms and conditions thereof in one or more of the following ways: (i) Change Order, or (ii) 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 TJPA; or (iii) the TJPA's review and acceptance of a shop drawing or sample in accordance with Paragraph 2.01.

1.05 PRECEDENCE OF CONTRACT DOCUMENTS

- A. In the case of discrepancy or ambiguity in the Contract Documents, the following order of precedence shall prevail (listed in order of highest to lowest precedence):
 - 1. Modifications in inverse chronological order, and in same order as specific portions they are modifying.
 - 2. Executed Agreement.
 - 3. Addenda.
 - 4. Division 1.
 - 5. The Documents (Bidding and Contracting Requirements).
 - 6. Divisions 2 through 48, CSI MasterFormat 2004 edition..
 - 7. Contract Drawings.
- B. With reference to the Drawings the order of precedence shall be as follows (listed in order of highest to lowest precedence):
 - 1. Written numbers over figures, unless obviously incorrect.
 - 2. Figured dimensions over scaled dimensions.
 - 3. Large-scale Drawings over small-scale Drawings.
 - 4. Schedules on Drawings or in Project Manual over conflicting information on other portions of Drawings.
 - 5. Detail Drawings govern over general Drawings.
 - 6. Drawing with highest revision number prevails.

1.06 REUSE OF CONTRACT DOCUMENTS

- A. The Contract Documents are being prepared for the Work of this Contract only. No part of the Contract Documents shall be used for any other construction or for any other purpose except with the written consent of the TJPA. Any unauthorized use of the Contract Documents is at the sole liability of the user.

ARTICLE 2 - TJPA'S RESPONSIBILITIES AND RIGHTS

2.01 ADMINISTRATION OF THE CONTRACT

- A. The TJPA shall administer the Contract as described in the Contract Documents. Reference is made to Division 1 for administrative requirements and procedures.
- B. The Executive Director will designate in writing an authorized representative with limited authority to act on behalf of the TJPA. The TJPA may at any time during the performance of this Contract make changes in the authority of any representative or may designate additional representatives. These changes will be communicated to CM/GC in writing. CM/GC 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.
- C. The review, acceptance, or other action taken by the TJPA upon CM/GC's submittals such as shop drawings, product data, samples and other submittals, shall apply to general design concepts only, and shall in no way relieve CM/GC from its responsibility to notify the TJPA of errors or omissions therein in accordance with Article 3, nor from providing all labor, equipment, and materials in accordance with the requirements of the Contract Documents necessary for the proper execution of the Work. The TJPA's action will be taken with such reasonable promptness provided that the TJPA shall be provided a reasonable time, as set forth in Division 1, to permit adequate review. Approval or acceptance of submittals shall not affect the Contract Sum, and additional costs that may result therefrom shall be solely CM/GC's obligation. CM/GC shall be responsible to provide engineering or other costs necessary to prepare the submittals and obtain action required by the Contract Documents from the TJPA or other authorities having jurisdiction. The TJPA is not precluded, by virtue of any such approval, from obtaining a credit for construction cost resulting from allowed concessions in the Work or materials therefor.

2.02 INFORMATION AND SERVICES

- A. The TJPA shall furnish surveys and reports describing physical characteristics, legal limitations and known utility locations for the Site.
- B. The TJPA shall apply and pay for the building permit if required for the Work and shall pay all other permits, easements, approvals, permanent utility service connection fees, and other charges required for construction shall be secured by the CM/GC in accordance with Paragraph 3.08 and fees shall be reimbursable expenses as provided in the Agreement (Section 00 05 20) and Schedule A to Section 00 05 20.
 - 1. The TJPA's responsibility with respect to certain inspections, tests, and approvals is set forth in Article 8.

2.03 RIGHT TO STOP THE WORK

- A. The TJPA may order CM/GC 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 and shall be signed by the TJPA Representative.
- B. The right of the TJPA to stop the Work shall not give rise to a duty on the part of the TJPA to exercise this right for the benefit of CM/GC or other person or entity.

- C. Reasons for ordering CM/GC to stop the Work, or a portion thereof, include but are not limited to the following:
1. CM/GC fails to correct Work which is not in accordance with the requirements of the Contract Documents; or
 2. CM/GC fails to carry out Work in accordance with the Contract Documents; or
 3. CM/GC disregards the authority of the authorized TJPA Representative; or
 4. CM/GC disregards the laws and regulations of a public body having jurisdiction over the Project; or
 5. CM/GC violates in any substantial way any provisions of the Contract Documents; or
 6. CM/GC fails to maintain current certificates of insurance on file with the TJPA; or
 7. original Contract Work is proceeding but will be modified by a pending Change Order.

2.04 RIGHT TO CARRY OUT THE WORK

- A. In the event that CM/GC 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 TJPA, or other such period as may be specified elsewhere in the Contract Documents, the TJPA may, without prejudice to other remedies the TJPA may have, correct such deficiencies.
- B. In such case the TJPA will deduct all costs of such corrections, including the costs of TJPA staff and consultants, from amounts due CM/GC. If funds remaining under the Contract are not sufficient to cover the costs of such corrections, CM/GC shall reimburse the TJPA.

2.05 AUDIT

- A. The TJPA shall have the right to examine, copy, and audit all documents (whether paper, electronic, or other media) and electronically stored information, including, but not limited to, any and all books, estimates, records, contracts, escrow bid documents, bid cost data, schedules, subcontracts, job cost reports, and other data, including computations and projections, of CM/GC, Subcontractors, Lower-Tier Subcontractors and Suppliers related to bidding, negotiating, pricing, or performing the Work covered by: (i) a Change Order Request or Proposed Change Order; (ii) Force Account Work; or (iii) a Contract Claim. In the event that CM/GC is a joint venture, said right to examine, copy, and audit shall apply collaterally and to the same extent to the records of the joint venture sponsor, and those of each individual joint venture member. The Pre-Construction Services billing rate and the CM/GC Markup Percentage shall not be subject to audit except to verify that the rate and percentage, respectively, are correct as provided in the Contract Agreement; that the hours billed for Pre-Construction Services are accurate and consistent with the terms and conditions of the Contract Documents; and that the component charges of the CM/GC Markup percentage conform to the terms and conditions of the Contract Documents. These limitations do not affect any other audit rights, including but not limited to the right to audit subcontractor books and records.
- B. Upon written notice by the TJPA, CM/GC immediately shall make available at its office at all reasonable times the materials noted in subparagraph 2.05(A) for examination, audit, or reproduction. Notice shall be in writing, delivered by hand or by certified mail, and shall provide not fewer than five-days' notice of the examination and/or audit. The TJPA may take possession of the records and materials noted in subparagraph (A) by reproducing documents for off-site review or audit. When requested in the TJPA's written notice of examination and/or audit, CM/GC shall provide the TJPA with copies of electronic documents and electronically stored information in a reasonably usable format that allows the TJPA to access and analyze all such documents and information. For documents and information that require proprietary software to access and analyze, CM/GC shall provide the TJPA with two licenses with maintenance agreements authorizing the TJPA to access and analyze all such documents and information.
- C. The TJPA has sole discretion as to the selection of an examiner or auditor and the scope of the examination or audit.

- D. The TJPA may examine, audit, or reproduce the materials and records under this Paragraph from the date of award until four years after Final Completion, unless such period is extended by written notice from the TJPA to the CM/GC within the four-year period.
- E. Failure by the CM/GC to make available any of the records or materials noted in subparagraph (A) or refusal to cooperate with a notice of audit shall be deemed a material breach of the Contract and grounds for Termination For Cause.
- F. CM/GC shall insert a clause containing all the provisions of this Paragraph in all subcontracts of Subcontractors and Lower-Tier Subcontractors and Suppliers for this Contract over \$10,000.

2.06 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 TJPA or any right to damages herein provided:
 - 1. inspection by the TJPA 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 TJPA; or
 - 3. any extension of time; or
 - 4. any position taken by the TJPA or its authorized agents or representatives.

2.07 OWNERSHIP OF DOCUMENTS

- A. All plans, specifications, documents, and electronic information, written or graphic materials, including BIM files, and other computer files created for the Project shall be made and remain the property of the TJPA, including all intellectual property rights to all documents or materials.

ARTICLE 3 - CM/GC'S RESPONSIBILITIES

3.01 GENERAL RESPONSIBILITIES

- A. Services and Standards. The CM/GC shall perform or furnish all pre-construction, construction, and related services as set forth in the Contract Documents. CM/GC shall provide all pre-construction and construction services necessary for receipt of all occupancy permits and authorizations to operate for a facility meeting or exceeding all design and specification requirements as set forth in the Contract Documents, including, but not limited to, compliance with industry standards and all applicable codes and regulations. The CM/GC assumes responsibility for on-budget, on-schedule delivery of the Project regardless of its contractual agreements with parties other than TJPA.
- B. Key Personnel. The CM/GC acknowledges and agrees that the TJPA selected the CM/GC upon the representation that the Key Personnel identified in the CM/GC's Qualification Statement would be the Key Personnel involved in the Pre-Construction Services for the Project. The CM/GC shall identify its Key Personnel for the Construction Services within 30 days of the date the TJPA first approves the Architect's Design Development Documents, or any portion of the Design Development Documents, and authorizes the Architect to proceed with all or any part of the Construction Documents. Any changes in assignment or replacement of the Key Personnel, may be done only with the prior written consent of the TJPA, which consent may be given or withheld in the sole, subjective (but not arbitrary) discretion of the TJPA. In the event of a withdrawal from the Project by Key Personnel due to circumstances outside the control of the CM/GC, such as death, long-term illness, or resignation by any such Key Personnel, the CM/GC shall promptly notify the TJPA in writing and shall submit for TJPA approval its candidate to replace such individual.
- C. Cooperation. The CM/GC shall provide the TJPA, its employees, consultants, and other representatives, and representatives of other authorities having jurisdiction, with full cooperation in the performance of their duties and responsibilities related to the Work covered by the Contract and shall maintain civil decorum on the Project site. Such cooperation may take the form of providing appropriate personnel to

attend meetings, reviews, hearings, inspections, or similar project-related functions, and to provide documents as requested.

- D. Review of Contract Documents. The CM/GC will be acting as a knowledgeable and experienced contractor in carrying out its responsibilities under the Contract Documents. The TJPA acknowledges and agrees that except with respect to any portions of the Work to be provided on a design-build basis, the CM/GC is not acting, and does not purport to act, as a design professional. Except with respect to those portions of the Work to be provided on a design-build basis, the CM/GC is not required to ascertain that the plans and specifications are in accordance with applicable laws, statutes, ordinances, building codes, and rules and regulations. The CM/GC, however, shall promptly report to the TJPA any nonconformity discovered or made known (or which reasonably should have been known). When the CM/GC provides portions of the work on a design-build basis, the Architect shall be responsible for the final coordination of the CM/GC's design work with the Architect's plans and specifications.

3.02 PRE-CONSTRUCTION SERVICES

- A. The scope of Pre-Construction Services to be provided by CM/GC for the Project are set forth in the Contract Agreement at Section 00 05 20. Refer to the Contract Documents for additional, specific requirements.
- B. The CM/GC shall perform all Pre-Construction Services through industry professionals with licenses, certifications, training, experience, and other qualifications appropriate to the discipline involved. The standard of care shall be as a professional performing similar services for a construction project of similar size and complexity in a major city with a dense urban environment such as Boston, New York, or Chicago.
- C. All submittals during Pre-Construction Services, including but not limited to cost estimates, recommendations, and constructability reviews, shall be signed by CM/GC Key Personnel.

3.03 REVIEW OF CONTRACT DOCUMENTS AND SITE CONDITIONS

- A. The Contract Documents are not complete in every detail but show the purpose and intent only, and CM/GC shall comply with their true intent and meaning, taken as a whole, and shall not avail itself of any manifest error, omission, discrepancy or ambiguity which appear in the Contract Documents, instructions or work performed by others.
- B. CM/GC shall verify all dimensions and determine all existing conditions that may affect its Work adequately in advance of the Work to allow for resolution of questions without delaying said Work, and CM/GC shall be responsible for the accuracy of such dimensions and determinations.
- C. CM/GC shall carefully review the appropriate portions of the Contract Documents a minimum of 30 days in advance of the Work to be executed for the express purposes of checking for any manifest errors, omissions, discrepancies or ambiguities. CM/GC shall not be entitled to any compensation for delays, disruptions, inefficiencies or additional administrative effort caused by CM/GC's untimely review of the Contract Documents.
- D. CM/GC shall notify the TJPA in writing promptly as specified in Paragraph 6.02 upon discovery of errors, omissions, discrepancies or ambiguities, and the TJPA will issue a Clarification or RFI reply as to the procedure to be followed. If CM/GC proceeds with any such Work without receiving such Clarification or RFI reply, it shall be responsible for correcting all resulting damage and Non-conforming Work.
- E. CM/GC shall be responsible for its costs and the costs of its Subcontractors to review Contract Documents and field conditions and to implement and administer a Request for Information (RFI) system throughout the Contract Time in accordance with the requirements of Division 1. CM/GC shall be responsible for costs incurred by the TJPA for the work of the TJPA's consultants and TJPA's

administrative efforts in answering CM/GC's RFIs where the answer could reasonably be found by reviewing the Contract Documents.

- F. Prior to start of Work, CM/GC and the TJPA Representative shall visit the site and adjacent properties as necessary to document existing conditions. CM/GC shall document these conditions and shall submit prior to the start of Work a complete report of existing conditions determined by the site survey as indicated in Division 1.

3.04 SUPERVISION OF THE WORK

- A. Unless there are specific provisions in the Contract Documents to the contrary, CM/GC shall be solely responsible to fully and skillfully supervise and coordinate the Work and control the construction means, methods, techniques, sequences and procedures. CM/GC shall be solely responsible for CM/GC's failure to carry out the Work in accordance with the Contract Documents and for the acts or omissions of CM/GC, its Subcontractors, or their agents or employees, or of any other persons performing portions of the Work.
- B. CM/GC shall supervise and coordinate the Work of its Subcontractors so that information required by one will be furnished by others involved in time for incorporation into the Work in the proper sequence and without delay of materials, devices, or provisions for future Work.
- C. Whenever the Work of a Subcontractor is dependent upon the work of other Subcontractors or CM/GCs, then CM/GC shall require the Subcontractor to:
 - 1. coordinate its Work with the dependent work;
 - 2. provide necessary dependent data, connections, miscellaneous items, and other transitional requirements;
 - 3. supply and install items to be built into dependent work of others;
 - 4. make provisions for dependent work of others;
 - 5. examine dependent drawings and specifications and submittals;
 - 6. examine previously placed dependent work;
 - 7. check and verify dependent dimensions of previously placed work;
 - 8. notify CM/GC of previously placed dependent work or dependent dimensions which are unsatisfactory or will prevent a satisfactory installation of its Work; and
 - 9. not proceed with its Work until the unsatisfactory dependent conditions have been corrected.
- D. CM/GC shall immediately comply with and prosecute orders and instructions including, but not limited to, Change Orders, RFI replies and Clarifications given by the TJPA in accordance with the terms of this Contract, but nothing herein contained shall be taken to relieve CM/GC of any of its obligations or liabilities under this Contract, or of performing its required detailed direction and supervision.
- E. CM/GC shall at all times permit the TJPA, 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. This obligation of CM/GC shall include maintaining proper facilities and safe access for such inspection. Where the Contract requires Work to be tested or inspected, it shall not be covered up before inspection and approval by the TJPA as set forth in Article 8.
- F. Whenever CM/GC desires to perform Work outside regular working hours, CM/GC shall give notice to the TJPA of such desire and request and obtain the TJPA'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 TJPA may make the necessary arrangement for testing and inspection.
- G. If CM/GC receives a written notice from the TJPA that a Clarification is forthcoming from the TJPA, all Work performed before the receipt of the Clarification shall be coordinated with the TJPA to minimize the effect of the Clarification on Work in progress. All affected Work performed after receipt of the

TJPA's written notice but before receipt of the Clarification and not so coordinated shall be at CM/GC's risk.

- H. During all disputes or disagreements with the TJPA, CM/GC 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 TJPA and CM/GC may otherwise agree in writing.

3.05 UNFORESEEN OR DIFFERING CONDITIONS

- A. Under section 7104 of the Public Contracts Code, if any of the following conditions are encountered at the Site, CM/GC shall promptly, and before such conditions are disturbed, notify the TJPA in writing.
 - 1. Material that CM/GC 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 the bidding Subcontractors prior to the deadline for submitting bids.
 - 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. CM/GC's written notice shall inform the TJPA as to how such conditions affect its Work and recommend methods to overcome such conditions.
- C. Differing Conditions shall not include:
 - 1. All that is indicated in or reasonably interpreted from the Contract Documents or Reference Documents;
 - 2. All that could be seen on Site;
 - 3. Conditions that are materially similar or characteristically the same as those indicated or described in the Contract Documents or Reference Documents.
 - 4. Conditions where the location of a building component is in the proximity where indicated in or reasonably interpreted from the Contract Documents or Reference Documents.
 - 5. Conditions which the CM/GC knew or reasonably should have known exercising due diligence during Pre-Construction Services.
- D. The TJPA will promptly investigate the conditions reported in CM/GC's written notice, and will issue a written report of findings to CM/GC.
- E. Only if the TJPA determines, in its sole discretion, that the conditions reported do materially so differ, or do involve hazardous waste, or do cause a decrease or increase in CM/GC's scope of Work, will the TJPA issue a Change Order as provided in Article 6 of these General Conditions, and/or a time extension as provided in Article 7 of these General Conditions, as appropriate.
- F. Should CM/GC disagree with the TJPA's determination, CM/GC shall submit a written Notice of Potential Claim to the TJPA as provided in Paragraph 13.02 of these General Conditions. In the event of such disagreement, CM/GC shall proceed with all Work to be performed under the Contract Documents, and shall not be excused from any scheduled completion date provided for by the Contract Documents.
- G. CM/GC shall be responsible for the safety and protection of the affected area of the Work for the duration of the TJPA's investigation of potential Differing Conditions.

3.06 SUPERINTENDENTS

- A. CM/GC shall at all times be represented at the Site by CM/GC'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 TJPA. CM/GC will be held liable for the faithful compliance with such instructions. Prior to the issuance of Notice to Proceed, CM/GC shall inform the TJPA in writing of the names, addresses and telephone numbers of its Key Personnel whom it has authorized to act as its representatives at the Site and who are to be contacted in case of emergencies at the Site during non-working hours, including Saturdays, Sundays and holidays. The CM/GC shall immediately notify the TJPA in writing of any changes to such information.

- B. The TJPA reserves the right to reject CM/GC's project manager, general construction superintendents, project coordinators, and foremen at any time for cause as provided above. The TJPA shall be given written notice of, and shall have the right to approve, replacement of CM/GC's project manager, superintendents and foremen.

3.07 LABOR, MATERIALS AND EQUIPMENT

- A. CM/GC shall employ only competent and skillful persons to perform the Work, and shall at all times maintain good discipline and order at the Site. Upon the TJPA's notification CM/GC shall discharge from the Work and replace at no additional cost to the TJPA an employee, Subcontractor or Supplier used on the Work who, in the TJPA's sole judgment: (i) is incompetent, obnoxious, or disorderly; or (ii) has intimidated or sexually harassed a TJPA employee, agent or member of the public; or (iii) is refusing to carry out the provisions of the Contract.
- B. In order that the TJPA can determine whether CM/GC has complied or is complying with the requirements of the Contract which are not readily enforceable by inspection and test of the Work and materials, CM/GC shall upon request submit properly authenticated documents or other satisfactory proof of its compliance with such requirements.
- C. Before ordering materials, equipment, or performing Work, CM/GC shall verify indicated dimensions in a timely fashion by taking field measurements required for the proper fabrication and installation of the Work as specified in Paragraph 3.03. If a discrepancy exists, CM/GC shall notify the TJPA immediately and request the TJPA to clarify the intended design. Upon commencement of a particular item of Work, CM/GC shall be responsible for dimensions related to such item of Work.
- D. All materials and equipment shall be delivered, handled, stored, installed, and protected to prevent damage in accordance with best current practice in the industry, in their original and sealed containers, marked with the brand and manufacturer's name, in accordance with manufacturers' specifications and recommendations, and in accordance with the requirements of the Contract Documents. CM/GC shall deliver materials and equipment in ample time to facilitate inspection and tests prior to installation.
- E. Unless otherwise specified in the Contract Documents, CM/GC 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 in accordance with Division 1.
- F. In the event that Division 1 does not require a field office for the TJPA Representative, CM/GC shall provide adequate separate sanitary facilities at the Site for the TJPA Representative.

3.08 PERMITS, FEES AND NOTICES

- A. CM/GC shall pay all utility charges for temporary connections to the Work.
- B. Unless otherwise provided in the Contract Documents, CM/GC 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 TJPA as provided in Article 8) necessary for proper execution and completion of the Work.
 - 1. CM/GC shall coordinate and obtain all permits prior to starting Work for which permits are required.

2. The TJPA will reimburse CM/GC for reasonable costs incurred for obtaining permits that are listed in the Agreement (Section 00 05 20), Schedule A.
- C. Pursuant to section 832 of the California Civil Code, CM/GC shall give all notices required by laws, ordinances, rules, regulations and lawful orders of public authorities that relate to performance of the Work.
- D. CM/GC shall secure all permits and pay all applicable permit fees prior to performing excavation in the public right of way. CM/GC shall timely deliver, post and maintain all notices required by such permits. CM/GC 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. Should delays or damages be caused by CM/GC's failure to coordinate or comply with the conditions of such excavation permits, CM/GC shall pay all costs, assessments, fines, and penalties resulting therefrom.
- E. If CM/GC observes that portions of the Contract Documents are at variance with the Code or other applicable laws, statutes, ordinances, rules and regulations, CM/GC shall promptly notify the TJPA in writing. If the TJPA determines that changes to the Contract Documents are necessary to comply with such laws, statutes, ordinances, rules or regulations, the TJPA will make necessary changes to the Contract Documents by appropriate amendment.
- F. If CM/GC performs Work it knows, or reasonably should have known, to be contrary to the Code or other applicable laws, statutes, ordinances, and rules and regulations without written notice to the TJPA, CM/GC shall assume responsibility for such Work and shall bear all costs of correction.
- G. CM/GC shall keep the permits, an approved set of the Contract Documents (including the plans and specifications), and a copy of the Code at the Site readily available for inspection during regular working hours throughout the Contract Time.
- H. CM/GC shall coordinate all required inspections and special inspections with the appropriate agency having jurisdiction. CM/GC shall notify the TJPA Representative and the TJPA's testing agency or special inspector in accordance with Article 8, so that the appropriate TJPA representatives and inspectors will be present at these inspections.
- I. CM/GC 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.
- J. CM/GC shall submit to the TJPA 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.

3.09 RECORD DOCUMENTS

- A. CM/GC shall maintain at the Site a current record copy of all Contract Documents including, but not limited to, Drawings, Specifications, BIM data, Addenda, Change Orders, RFIs, Clarifications, Field Orders, and 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 Contract Documents. Additionally, record documents shall conform to the requirements specified in Division 1.
- B. CM/GC shall furnish on a monthly basis the aforesaid record documents for the TJPA to review and determine their sufficiency in conforming to the requirements set forth in subparagraph 3.09A. The TJPA shall have the right to withhold 10 percent of progress payments due CM/GC until CM/GC has complied with this Paragraph 3.09.

- C. Record documents shall be available for inspection by the TJPA at all times and shall be delivered to the TJPA prior to Substantial Completion.

3.10 CM/GC'S DAILY REPORT

- A. CM/GC shall complete, and submit to the TJPA on the next day, consecutively numbered daily construction reports in accordance with Division 1.
- B. In addition, whenever Force Account Work is in progress, CM/GC shall complete and submit to the TJPA detailed written daily Force Account Work reports as provided under Paragraph 6.07.

3.11 SCHEDULES

In accordance with Section 00 05 20, Article 2, the CM/GC shall prepare a preliminary Construction Schedule upon commencing Pre-Construction Services.

Prior to commencing Construction, CM/GC shall submit to the TJPA for review the following schedules:

1. a baseline schedule for the Work which shall use, unless otherwise specified in Division 1, the critical path method (CPM), activity on arrow or precedence diagramming method, as outlined in the Associated General Contractors publication "The Use of CPM in Construction," and shall indicate the times (number of days or dates) for starting and completing the various stages of the Work, including all milestones and special constraints specified in the Contract Documents, and the resources (crew sizes) to be committed to such tasks; and
 2. a preliminary submittal schedule, coordinated with the baseline schedule in accordance with the requirements of Division 1, listing shop drawings, product data, samples, work descriptions, subcontractor qualifications, and field samples and indicating the times for submitting, reviewing, and processing such submittals.
 3. as the CM/GC awards Trade Packages, the CM/GC shall issue updated schedules to reflect the detailed schedule for the added scope.
- C. Unless specified elsewhere in the Contract Documents, within 10 days after submittal, the TJPA and CM/GC shall meet to review for acceptability to the TJPA the baseline and submittal schedules submitted under subparagraph 3.11(B). CM/GC shall have an additional 5 days to make corrections and adjustments and to complete and resubmit the baseline schedules.
 - D. No progress payments will be made to CM/GC until the baseline schedules are submitted and are acceptable to the TJPA.
 - E. CM/GC shall adhere to the baseline schedules accepted by the TJPA in accordance with subparagraph 3.11B and as may be adjusted during the performance of the Work. CM/GC shall submit to the TJPA for acceptance proposed revisions or adjustments in the baseline schedule. Proposed adjustments in the progress schedule that will change the Contract Times shall be submitted to the TJPA in accordance with Paragraph 7.02. The CM/GC may incorporate such adjustments into its subsequent progress or recovery schedules.
 - F. Acceptance of baseline, progress, and submittal schedules by the TJPA will neither impose on the TJPA responsibility for the sequencing, scheduling, or progress of the Work nor interfere with or relieve CM/GC from its full responsibility therefor.
 - G. CM/GC shall update its baseline progress schedule at least monthly and as a condition precedent to making an Application for Payment as set forth in Paragraph 9.03. All updates shall be submitted to the TJPA for the TJPA's acceptance; if rejected, CM/GC shall correct and resubmit updates to the satisfaction of the TJPA before a pending application for payment is approved.
 1. Each progress schedule update shall continue to show all Work activities including those already completed and those of changed Work.
 2. Each progress schedule update shall accurately reflect "as-built" information by accurately indicating the dates activities were actually started and completed and the actual percent complete of activities.

3. CM/GC's submission of updated, changed or revised progress schedules, reports, curves or narratives, or the TJPA's acceptance of such progress schedules, reports, curves or narratives, shall not amend or modify, in any way, the Contract Time or milestone dates or modify or limit, in any way, CM/GC's obligations under this Contract.
4. CM/GC waives its rights to time extensions based on changed Work if CM/GC has failed to meet its obligations to provide monthly schedule updates as specified herein.

3.12 SHOP DRAWINGS, BIM DATA, PRODUCT DATA AND SAMPLES

- A. Shop drawings, BIM data created, entered, added or altered by the CM/GC or its subcontractors, 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 CM/GC proposes to conform to the information given and the design concept expressed in the Contract Documents. Review or approval of CM/GC's submittals by the TJPA is subject to the limitations stipulated in Paragraph 2.01.
- B. CM/GC shall review, approve, stamp, and submit to the TJPA as specified in Division 1 shop drawings, product data, samples and similar submittals required by the Contract Documents in accordance with the accepted submittal schedule. Submittals made by CM/GC that are not required by the Contract Documents may be returned without action.
- C. By approving and submitting shop drawings, product data, samples and other submittals, CM/GC represents that it has determined and verified materials, field measurements and field construction criteria related thereto, and has checked and coordinated the information contained within such submittals for conformance to the Contract Documents and for coordination of the Work indicated in the submittal and with adjacent work.
- D. CM/GC shall perform no portion of the Work requiring submittal and approval of shop drawings, product data, samples and other submittals until the respective submittal has been received, reviewed, and approved by the TJPA and returned to CM/GC. Such Work shall be in accordance with approved submittals. CM/GC is solely responsible for delays or disruptions to the Work caused by inadequate, uncoordinated, incorrect or late submittals.
- E. Where a shop drawing or sample is required by the Contract Documents, related Work performed prior to the TJPA's review and action on the pertinent submittal shall be at the sole expense, risk and responsibility of CM/GC.
- F. CM/GC shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the TJPA's approval of shop drawings, product data, samples and other submittals unless CM/GC has specifically informed the TJPA in writing, attached to the submittal, of such deviation at the time of submittal and the TJPA has given written approval to the specific deviation.
 1. Deviations shall also be indicated clearly and boldly on such shop drawing, product data, sample or related submittal.
 2. For resubmitted shop drawings, product data, samples and other submittals, CM/GC shall direct specific attention, by written attachment, to revisions other than those requested by the TJPA on previous submittals.
- G. CM/GC shall not be relieved of responsibility for errors or omissions in shop drawings, product data, samples or similar submittals by the TJPA's approval thereof.

3.13 SUBSTITUTIONS

- A. Consistent with section 3400 of the California Public Contract Code, CM/GC, within 10 calendar days after the date of the Award of any Trade Work Package, and related only to that awarded Trade Work Package, the CM/GC shall submit for approval to the TJPA a properly completed Request for Substitution (in a form to be provided by TJPA) for each material, article or equipment that it proposes

to substitute in place of, and as the equal, of a material, article or equipment specified in the Contract Documents by trade name or by the names of any particular patentee, manufacturer or dealer. Failure to submit said Request for Substitution form within the 10-day period will be deemed adequate and reasonable grounds for refusal by the TJPA to consider any subsequent proposed substitutions.

- B. The requirements for obtaining approval of substitutions shall be as specified in Division 1.

3.14 USE OF SITE

- A. CM/GC 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. Notwithstanding the designation of Contract limits or the indication of temporary fences or barricades, the provisions of the Contract Documents governing certain portions or phases of the Work may require that certain operations be carried out beyond such designated limits. In all cases, the Work shall be constructed solely within the boundaries described in the Contract Documents. CM/GC shall coordinate with the TJPA to obtain in advance of said operations all necessary permits, rights-of-way, or easements, and shall give proper notice thereof to owners of affected properties in accordance with section 832 of the California Civil Code. CM/GC shall obtain necessary permits and rights-of-way. CM/GC shall obtain easements for CM/GC operations outside the Project site; the TJPA intends to provide any easements necessary for access to the Project site.
- C. 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. CM/GC 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.
- D. CM/GC shall not load nor permit any part of any structure to be loaded in a manner that will endanger the structure, nor shall CM/GC subject part of the Work or adjacent property to stresses or pressures that will endanger it.
- E. CM/GC shall assume full responsibility and shall promptly settle all claims for damage to areas within the Contract limits, or to adjoining areas or the owners or occupants thereof, resulting from the performance of the Work by CM/GC or its Subcontractors.

3.15 ACCESS TO WORK

- A. During the performance of the Work, the TJPA and its authorized representatives 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.

3.16 CUTTING AND PATCHING

- A. CM/GC 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 CM/GCs shown on, or reasonably implied by, the Contract Documents for the completed Work.
- B. CM/GC shall not damage or endanger a portion of the Work, or fully or other partially completed construction of the TJPA or separate CM/GCs, by excavation or by cutting, patching or otherwise altering such construction. CM/GC shall not cut or otherwise alter such construction by the TJPA or a separate CM/GC except with written consent of the TJPA. CM/GC shall not withhold from the TJPA CM/GC's consent to cut or otherwise alter the Work.

3.17 CLEANING UP AND REMOVING DEBRIS

- A. CM/GC 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.
 - 1. CM/GC shall perform such clean up and removal in accordance with the requirements of the Specifications.
 - 2. Prior to Substantial Completion CM/GC shall remove from and about the Site excess materials, rubbish, CM/GC's tools, construction equipment, and machinery and shall perform final cleaning as specified in accordance with the requirements of the Specifications.
 - 3. Removal and disposal of such excess materials, rubbish, and other debris shall conform to applicable laws and regulations.
- B. If CM/GC fails to clean up as provided in the Contract Documents, the TJPA may do so and deduct the cost of such cleanup from the amount due CM/GC under the Contract.
- C. CM/GC shall salvage and deliver to the TJPA removed equipment, appurtenances and other materials that are not reused in the Work and indicated by the TJPA to be salvaged. CM/GC shall remove from the Site as its property and dispose of in a legal manner all other equipment, appurtenances and other materials to be removed and not indicated to be salvaged or otherwise claimed by the TJPA.

3.18 ROYALTIES AND PATENTS

- A. CM/GC 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. CM/GC shall pay, and include in the Contract Sum, 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, CM/GC shall save, defend, hold harmless, and fully indemnify the TJPA and all its officers and employees connected with the Project, other parties designated in Section 00 08 05, 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 TJPA, 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 CM/GC is not the patentee or assignee or does not have the lawful right to sell the same.
 - 1. This indemnity provision is in addition to all other hold harmless and indemnity clauses in the Contract Documents, and shall survive Final Completion and termination of the Contract.
- D. If the TJPA is enjoined from the operation or use of the Work, or any part thereof, as a result of any suits or claims for infringement or unauthorized use of a patent right, copyright, trademark, and/or other intellectual property right, CM/GC shall, at its sole expense and at no cost to the TJPA, take reasonable steps to procure the right to operate or use the Work. If CM/GC cannot so procure such right within a reasonable time, CM/GC shall promptly, at CM/GC's sole expense and at no cost to the TJPA, (1) modify the Work, consistent with applicable requirements of the Contract Documents, so as to avoid infringement of any such intellectual property right, or (2) replace said Work with work that meets

applicable requirements of the Contract Documents and that does not infringe or violate any such intellectual property right.

3.19 WARRANTY

- A. CM/GC warrants and guarantees to the TJPA 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.
 - 1. CM/GC shall assign and transmit all manufacturers' product warranties to the TJPA as may be required by the Contract Documents.
- B. CM/GC's warranty excludes damage or defects caused by abuse, modifications to equipment by the TJPA and not authorized by CM/GC, improper or insufficient maintenance, improper operation, or normal wear and tear.
 - 1. Testing shall not be construed as operation.
- C. CM/GC shall deliver warranties and guarantees conforming to the requirements of the Specifications to the TJPA Representative prior to Substantial Completion. In the event that TJPA takes beneficial occupancy of Work prior to Substantial Completion, then the warranty for such occupied Work shall commence on the date of early occupancy.
- D. The warranty provisions of this Paragraph 3.19 are separate and additional to the provisions for correction of Non-conforming Work as specified in Article 8.

3.20 TAXES

- A. CM/GC shall be responsible for paying all taxes applicable during the performance of the Work or portions thereof, whether or not said taxes were in effect on or increased after the date of Bid opening. The TJPA will adjust the Contract Sum to account for increases or decreases in sales or payroll taxes. CM/GC shall advise the TJPA of such changes by written COR, documented in conformance with Article 6 of these General Conditions.
- B. Earned Income Credit (EIC) Forms. San Francisco Administrative Code Chapter 12O requires that employers provide their employees with IRS Form W-5 (The Earned Income Credit Advance Payment Certificate) and the IRS EIC Schedule, as set forth below. Employers can locate these forms at the IRS Office, on the Internet, or anywhere that Federal Tax Forms can be found.
 - 1. CM/GC shall provide EIC Forms to each Eligible Employee at each of the following times: (i) within thirty days following the date on which this Contract becomes effective (unless CM/GC has already provided such EIC Forms at least once during the calendar year in which such effective date falls); (ii) promptly after any Eligible Employee is hired by CM/GC; and (iii) annually between January 1 and January 31 of each calendar year during the term of the Contract.
 - 2. Failure to comply with any requirement contained in subparagraph 3.20B.1 shall constitute a material breach by CM/GC of the terms of this Contract. If, within thirty days after CM/GC receives written notice of such a breach, CM/GC fails to cure such breach or, if such breach cannot reasonably be cured within such period of thirty days, CM/GC fails to commence efforts to cure within such period or thereafter fails to diligently pursue such cure to completion, the TJPA may pursue any rights or remedies available under this Contract or applicable Law.
 - 3. Any Subcontract entered into by CM/GC shall require the Subcontractor to comply, as to the Subcontractor's Eligible Employees, with each of the terms of this Paragraph 3.20.
 - 4. Capitalized terms used in this subparagraph 3.20 and not defined in Article 1.01 shall have the meanings assigned to such terms in Chapter 12O of the San Francisco Administrative Code.

- C. The TJPA will adjust the Contract Sum to account for increases or decreases in sales or payroll taxes. CM/GC shall advise the TJPA of such changes by written COR, documented in conformance with Article 6 of these General Conditions.

3.21 INDEMNIFICATION

- A. Consistent with California Civil Code section 2782, CM/GC shall assume the defense of, indemnify and hold harmless the TJPA, its boards and commissions, other parties designated in Section 00 08 05, 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 intentional tort of any person indemnified herein.
- B. The TJPA, its boards and commissions, and all of their officers, agents, members, employees, and authorized representatives shall have no liability to CM/GC for any type of special, consequential or incidental damages arising out of or connected with CM/GC's Work. This limit of liability applies under all circumstances including, but not limited to, the breach, completion, termination, suspension, cancellation or recession of the Work or this Contract, negligence or strict liability by the TJPA, its boards and commissions, and their representatives, consultants or agents.
- C. CM/GC acknowledges that, with respect to any planned or specified hazardous materials Work, any claims, demands, losses, damages, costs, expenses, and legal liability that arise out of, result from, or are in any way connected with the release or spill of any legally designated hazardous material or waste or contaminated material as a result of the Work performed under this Contract are expressly within the scope of this indemnity, and that the costs, expenses, and legal liability for environmental investigations, monitoring, containment, removal, repair, cleanup, restoration, remedial work, penalties, and fines arising from the violation of any local, state, or federal law or regulation, attorney's fees, disbursements, and other response costs are expressly within the scope of this indemnity.
- D. On request, CM/GC shall defend any action, claim or suit asserting a claim covered by this indemnity. CM/GC shall pay all costs that may be incurred by the TJPA and all indemnified parties specified in subparagraph 3.21A, including reasonable attorney's fees.
- E. CM/GC's liability shall not be limited to the amount of insurance coverages required under the Contract Documents.
- F. In the event that CM/GC and its insurance carrier(s) in bad faith refuse to negotiate and compensate a third party or parties for property damage or personal injuries which arise out of CM/GC's performance of the Work, the TJPA shall have the right to estimate the amount of damages and to pay the same, and the amount so paid shall be deducted from the amount due CM/GC under this Contract, or an appropriate amount shall be retained by the TJPA until all suits or claims for said damages shall have been settled or otherwise disposed of and satisfactory evidence to that effect shall have been furnished to the TJPA.

ARTICLE 4 - SUBCONTRACTORS

4.01 SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

- A. Unless otherwise specifically provided by the Contract Documents, subcontracting shall be in accordance with the governing regulations regarding subcontracts and section 6.21 of the San Francisco Administrative Code. Section 6.21 shall govern the designation of, failure to specify, and substitution of Subcontractors and the assignment, transfer and performance of subcontracts.
- B. CM/GC shall not employ a Subcontractor, Supplier or other person or entity that the TJPA has determined unqualified or non-responsible. The TJPA 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 CM/GC shall provide replacement with a qualified person or entity. The TJPA shall have the right of approval and shall not be responsible for added costs to CM/GC, if any, of employing such replacement person or entity.

4.02 SUBCONTRACTUAL RELATIONS

- A. CM/GC shall have an appropriate written agreement specifically binding each Subcontractor or Supplier to CM/GC by the applicable terms and conditions of the Contract Documents, in the same manner CM/GC is bound to the TJPA. Each subcontract agreement shall preserve all rights of the TJPA 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.

4.03 ASSIGNABILITY OF SUBCONTRACTS

- A. All subcontracts of Subcontractors and Lower-Tier Subcontractors and purchase agreements of Suppliers and Lower-Tier Suppliers shall provide that they are freely assignable to the TJPA under the following conditions:
 - 1. the TJPA terminates the Contract for cause under provisions of Article 14;
 - 2. the TJPA requests such assignment; and
 - 3. the surety providing the performance bond for the Project fails to timely fulfill its obligations under the performance bond.
- B. The TJPA will notify the Subcontractors, Lower-Tier Subcontractors and Suppliers in writing of those agreements the TJPA wishes to accept.

4.04 SUCCESSORS AND ASSIGNS

- A. CM/GC shall constantly give its personal attention to the faithful prosecution of the Work. CM/GC shall keep the Work under its personal control and shall not assign by power of attorney or otherwise, nor subcontract the whole or any part thereof, except as herein provided.
- B. All transactions with Subcontractors will be made through CM/GC, and no Subcontractor shall relieve CM/GC of any of its liabilities or obligations under the Contract.
- C. When a Subcontractor fails to prosecute a portion of the Work in a manner satisfactory to the TJPA, CM/GC shall remove such Subcontractor immediately upon written request of the TJPA, and shall request approval of a replacement Subcontractor to perform the Work at no added cost to the TJPA.
- D. The Contract shall not be assigned except upon the approval of the TJPA.

ARTICLE 5 - CONSTRUCTION BY TJPA OR BY SEPARATE CONTRACTORS OR OTHERS

5.01 TJPA'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 other forces within or adjacent to the limits of Work, or be underway at the time the Work was advertised for Bids, CM/GC 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 CM/GC's Bid price and no direct or additional payment will be made therefor.

- B. The TJPA 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 CM/GCs. If the performance of such other or additional work not indicated in the Contract Documents or underway at the time of advertising for Bids materially increases CM/GC's costs, then CM/GC may submit a Change Order Request therefor in accordance with Paragraph 6.03.
- C. If the TJPA gives CM/GC written notice to vacate a location so that other work may be performed by other forces or contractors at the location(s) where CM/GC is already performing Work, CM/GC 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 TJPA to allow the other forces or contractors to perform their work. CM/GC shall provide the TJPA Representative written notice when cleanup and demobilization has been completed. The TJPA Representative will issue to the other forces or contractors a notice to proceed with their work. After the date of said notice to proceed, CM/GC 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 CM/GC requires access to a location where another CM/GC is performing work, CM/GC shall request such access in writing from the TJPA Representative. The TJPA Representative will provide written notice to CM/GC when the work of other forces or CM/GCs at the subject location is completed, and upon receipt of such notification, CM/GC shall have full access and shall commence or resume its operations in that location.
- E. If CM/GC believes it is entitled to a time extension caused by its obligations under subparagraphs 5.01C or 5.01D above, it shall comply with the notification requirements of Paragraph 7.02.
- F. When it is necessary for CM/GC and another contractor or utility owner to work in the same location at the Site, each party shall assume the following mutual responsibilities for the benefit of the other party at no additional cost to the TJPA:
 - 1. both parties shall execute identical agreements mutually indemnifying each other from any loss, damage, or injury that may be incurred as a result of the performance of work by the other while both are performing work in the same location;
 - 2. both parties shall add the other party as an additional insured under their respective liability policies;
 - 3. the party seeking to use portions of the construction Site of the other party to perform its work shall pay all direct costs incurred by the other party to accommodate its operations; and
 - 4. if CM/GC claims that delay or additional cost is involved because of such action by the TJPA, CM/GC shall make such Claim by the procedures as provided in Paragraph 13.02.
- G. The TJPA shall not be a party to any of the agreements between multiple contractors and shall have no liability to any party with regard to the lack of coordination and cooperation or the inability of a party to execute specific work requirements. CM/GC agrees to indemnify and hold the TJPA harmless for all claims or losses that CM/GC or other contractors may incur as a result of their inability to successfully obtain work areas under the control of one of the parties.
- H. In any agreement between the TJPA and other contractors who may affect the Work of the CM/GC, the TJPA shall require such other contractors to carry not less than \$5 Million in General Liability coverage, naming the CM/GC as an additional insured, and to comply with the same requirements of this paragraph 5.01.

5.02 COORDINATION

- A. CM/GC shall afford other CM/GCs and the TJPA reasonable opportunity for storage of materials at the Site, shall ensure that the execution of the Work properly coordinates with work of such CM/GCs, and shall cooperate with such other CM/GCs to facilitate the progress of the Work in such a manner as the TJPA may direct.

- B. Notice of Conflicting Conditions: Where CM/GC's Work is adjacent to or placed on top of that of another CM/GC, CM/GC shall examine the adjacent work and substrate and report in writing to the TJPA any visible defect or condition preventing the proper execution or increased cost of its Contract. If CM/GC proceeds without giving notice, it shall be held to have accepted the work or material and the existing conditions, and shall be responsible for any defects in its own Work consequent thereon, and shall not be relieved of any obligation or any guarantee because of any such condition or imperfection. This provision shall be included in any and all other contracts or subcontracts for Work to be performed where such a conflict could exist.
 - 1. The foregoing does not apply to latent defects. CM/GC shall report to the TJPA latent defects in another CM/GC's work promptly upon discovery.
- C. CM/GC shall notify the TJPA promptly in writing when another CM/GC working at the Site fails to coordinate its work with the Work of this Contract as directed.
- D. Any difference or conflict that may arise between CM/GC and the other CM/GCs or TJPA forces in regard to their work shall be adjusted as determined by the TJPA.
- E. If so directed by the TJPA, CM/GC shall prepare coordination drawings as necessary to satisfactorily coordinate and interface the Work of its Contract with the work of all other contracts thereby avoiding conflicts that may otherwise arise. If such coordination drawings are not required elsewhere in the Contract Documents, then CM/GC may submit a Change Order Request as provided under Paragraph 6.03 for additional costs incurred by it in preparation of such coordination drawings.
- F. At any time during the progress of the Work, the TJPA may, by providing reasonable notice, require CM/GC to attend any conference of any or all of CM/GCs engaged in the Work.
- G. If the TJPA determines that CM/GC is failing to coordinate its Work with the work of other CM/GCs as directed, the TJPA may upon 72 hour written notice:
 - 1. withhold any payment otherwise owed under the Contract until CM/GC complies with the TJPA's directions; or
 - 2. direct others to perform portions of the Contract and charge the cost of Work against the Contract Sum; or
 - 3. terminate any and all portions of the Contract for CM/GC's failure to perform in accordance with the Contract.

5.03 CLEAN UP RESPONSIBILITIES

- A. CM/GC and other CM/GCs shall each bear responsibility for maintaining their respective work areas on the premises and adjoining areas free of waste, rubbish, graffiti, debris, or excess materials and equipment at all times.
- B. In the event of conflicts the TJPA, after issuing 24 hour written notice to the CM/GCs involved, will clean up the premises and deduct from the amount due CM/GC under the Contract the cost of said clean up as the TJPA determines equitable.

ARTICLE 6 - CLARIFICATIONS AND CHANGES IN THE WORK

6.01 GENERALLY

- A. The TJPA may, at any time between the Notice to Proceed with construction and Final Completion and without notice to CM/GC's surety, order additions, deletions, or revisions in the Work by Change Order or Field Order. CM/GC shall promptly comply with such orders and proceed with the Work, which shall be performed under the applicable requirements of the Contract Documents. This Article shall not apply to Change Orders to add the individual Trade Work Subcontractor Packages to the overall scope of the Contract.

- B. CM/GC shall not be entitled to an increase in the Contract Sum or an extension of the Contract Time if CM/GC performs work that is not required by the Contract Documents as amended, modified, or supplemented in writing.
- C. The procedures set forth in this Article 6 are intended to ensure that when Clarifications and Changes in the Work are proposed, the CM/GC provides the TJPA with its best estimate of the costs and impacts associated with each Clarification and/or Change, so that the TJPA may evaluate each potential Change and proceed on an informed basis. The TJPA also intends that the Clarification and Change Order procedures (including the use of Unilateral Change Orders and Force Account) facilitate payment to the CM/GC of additional, undisputed amounts.
- D. Failure by the CM/GC to comply with the procedures of this Article, including the failure to provide timely, sufficient information and/or documentation to the TJPA at the time of any Clarification or Change Order Request, shall constitute a waiver of any subsequent claim by the CM/GC arising out of such Clarification or Change Order.

6.02 REQUESTS FOR INFORMATION, CLARIFICATIONS AND FIELD ORDERS

- A. Should there appear to CM/GC to be a discrepancy in the Contract Documents, should questions arise as to the meaning or intent of the Contract Documents, or should the TJPA's comments on submittals returned to CM/GC appear to CM/GC to change the requirements or scope of the Contract Documents, CM/GC shall submit a Request for Information ("RFI") to the TJPA promptly in accordance with Division 1. CM/GC shall coordinate and schedule its Work to provide the TJPA sufficient time to issue a written reply to the RFI before proceeding with Work affected thereby.
- B. The TJPA shall issue a reply to the RFI within 10 days of receipt of the same. The reply may include written Clarifications as deemed by the TJPA to be necessary and consistent with the Contract Documents, or a Field Order requiring minor changes in the Work. If additional time is needed to issue the reply, the TJPA will, within the 10-day reply period, notify the CM/GC of the longer reply period.
- C. Clarifications of the Contract Documents and Field Orders issued by the TJPA shall be binding on CM/GC and shall be promptly executed by CM/GC. The TJPA's right to Clarify any element of the Contract Documents shall not be construed to entitle CM/GC to a modification of the Contract Sum or a change in the Contract Time.

6.03 CHANGE ORDER REQUESTS AND PROPOSED CHANGE ORDERS

- A. COR Initiation: Should the TJPA's Clarification or other written directive, in the opinion of CM/GC, materially exceed or change the requirements of the Contract Documents, CM/GC shall submit to the TJPA a written Change Order Request (COR) within 21 days of receipt of the Clarification or other written directive. A COR shall reference the Clarification or other written directive and the relevant Specification and Drawings. A COR shall also include a cost proposal and/or a time adjustment proposal, as a good faith estimate of any additional compensation or time associated with the affected Work, documented in accordance with subparagraphs 6.03E and 6.03F, below. Failure to submit a timely, documented COR shall constitute a waiver of any future claim for additional compensation or time relating to such Work.
- B. COR Review: The TJPA will review the COR. Within 10 days after receipt of the COR, together with the required supporting documentation, the TJPA shall render its determination in writing. If the TJPA does not issue a determination within the 10-day period, the COR is deemed rejected. If the TJPA requires additional time to issue a determination, it shall notify the CM/GC of the same in writing, within the initial 10-day period.
- C. PCO Initiation: The TJPA may initiate a change in the Work by issuing a Proposed Change Order (PCO). A PCO will include a detailed description of the proposed additions, deletions or revisions with supplementary or revised Drawings and Specifications, and will request from CM/GC a quotation of cost

and time for completing the proposed changes. After the TJPA issues a PCO, CM/GC shall not submit a COR for the same Work addressed in the TJPA's PCO.

- D. PCO Quotation Time Period: CM/GC shall submit a PCO cost proposal and PCO time adjustment proposal, if applicable, to the TJPA within 10 days after receipt of a PCO. If CM/GC fails to submit a PCO cost proposal and/or PCO time adjustment proposal within the 10-day period, or if the price or time adjustment cannot be agreed upon, the TJPA may either direct CM/GC to proceed with the Work on a Force Account basis or issue a Unilateral Change Order instructing CM/GC to proceed with the PCO Work based on the TJPA's estimate of the cost and/or time adjustment.
- E. COR and PCO Cost Proposal Requirements: CM/GC shall furnish 2 copies of its PCO or COR cost proposal. The Cost Proposal shall include a complete itemized breakdown of labor, material, equipment, taxes, insurance, bonds, and markup for overhead and profit for both additions and deletions on a form supplied by the TJPA. The same shall be required for Subcontractor and Lower-Tier Subcontractor cost proposals, which shall be furnished on the same form as required for CM/GC.
 - 1. At a minimum, CM/GC shall provide the following documentation to the TJPA in support of CM/GC and Subcontractor cost proposals:
 - a. material quantities and type of products;
 - b. labor breakdown by trade classification, wage rates, and estimated hours;
 - c. equipment breakdown by make, type, size, rental rates, and equipment hours; and
 - d. taxes, insurance and bonds.
- F. COR and PCO Time Adjustment Proposal Requirements: If CM/GC asserts it is entitled to an adjustment in Contract Time due to the proposed change order work, whether by COR or PCO, CM/GC shall provide the following documentation to the TJPA in support of any CM/GC and Subcontractor time adjustment proposals:
 - 1. CM/GC shall submit to the TJPA a CPM time impact evaluation using sub-network or fragmentary network and including a written narrative and a schedule diagram or other written documentation acceptable to the TJPA, showing the detailed work activities involved in a change that may affect the Contract Time and impact of the change on other Work and activities of the proposed schedule adjustment. This sub-network shall be tied to the complete and most current TJPA-approved progress schedule network, with appropriate logic so that a true analysis of critical path can be made.
 - 2. Failure to comply with the requirements set forth in this subparagraph 6.03F shall constitute a waiver of any claim for delay, disruption, extended overhead and other associated costs or damages.
- G. Disputed CORs: In the event that the aggregate value of fully documented and timely but unapproved (disputed) CORs exceeds 2% of the unpaid Contract Sum, the TJPA and the CM/GC shall proceed to nonbinding mediation within 30 days of a written request from either party. Neither disputed CORs nor mediation shall relieve the CM/GC from performing approved base contract or change order work or from the Contract Claim requirements set forth in Article 13 of these General Conditions.

6.04 CHANGE ORDERS

- A. Execution of Change Orders: When the TJPA and CM/GC agree on the total cost and time of a COR or PCO, the TJPA will prepare for signatures of parties a Change Order to formally 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.
- B. Release of Claims: CM/GC shall agree to the terms and conditions of Change Orders and to release the TJPA from claims for additional compensation or time relating to the undisputed amount of the change in the Work.
 - 1. If CM/GC fails to provide timely documentation of delay to the TJPA as described in subparagraph 6.03F.1, which shall be sufficient to entitle CM/GC to a time extension pursuant to paragraph 7.02, CM/GC shall execute the Change Order without being granted any extension of time.
 - 2. CM/GC shall not condition or qualify any Change Order with a reservation of rights to seek at a later time additional Contract Amount or Time for the changed Work addressed in the Change Order.

- 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 CM/GC under the provisions of the Contract Documents, nor shall they relieve or release CM/GC'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. CM/GC 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 through the PCO process, or when the TJPA and CM/GC are unable to agree on the cost or time required to complete the change in the Work described in a PCO, the TJPA may issue a Unilateral Change Order instructing CM/GC to proceed with a change in the Work based on the TJPA's estimate of cost and time to perform the change in the Work. Upon receipt of a Unilateral Change Order, CM/GC shall proceed with the ordered Work.
- B. Protest: Should CM/GC disagree with any terms or conditions set forth in a Unilateral Change Order, CM/GC shall submit, within 7 days of receipt of the Unilateral Change Order, a Change Order Request (COR) in accordance with the requirements of Paragraph 6.03. If a COR is not submitted as required, CM/GC 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.
- C. Claim Notification: CM/GC waives all costs exceeding the TJPA's estimate for the Unilateral Change Order Work unless CM/GC submits a written Notice of Potential Claim in accordance with the requirements of Paragraph 13.02. Said Notice shall be submitted no later than 7 days after occurrence of one of the following, whichever occurs first:
 - 1. CM/GC submits an invoice for completion of the Unilateral Change Order Work; or
 - 2. upon CM/GC's receipt of written notice from the TJPA that the TJPA considers the Work completed.

6.06 (1) COST OF THE CHANGE ORDER WORK (**Applies to trade subcontracts issued for bid before January 1, 2011**)

- A. Direct Cost Defined: Direct cost shall mean the sum of the following directly required for the performance of the Work under the Change Order.
 - 1. Labor. Labor rates shall not exceed those prevailing wages required to be paid under the Contract Documents plus any actual payments by the employer for its workers' health and welfare, pension, vacation and similar purposes that do not exceed the charges of the local governing trade organizations for the trades employed. The costs for all supervision, including general superintendents and foremen, shall be in the markup defined herein. Working foremen will be considered a direct cost of the Work only if the individual is on the Site physically installing Work under the Change Order. CM/GC shall furnish to the TJPA within 30 days of the date of the Notice to Proceed a breakdown of CM/GC's and Subcontractors' hourly payroll rates and labor burden for each trade used on the Project, including apprentice levels.
 - a. Labor Surcharge. The Labor Surcharge shall be as set forth in the California Department of Transportation official labor surcharges which is in effect on the date upon which the extra work is accomplished and which schedule is incorporated by reference as though set fully herein. That surcharge is to compensate the CM/GC for all of its costs: under the Federal Insurance Contributions Act ("FICA"); for federal and state unemployment taxes; for any and all other payroll taxes imposed by federal, state and local laws and ordinances; and for its cost of workers' compensation insurance and any and all forms of liability insurance. For projects insured under an Owner Controlled Insurance Policy ("OCIP"), the labor surcharge shall be 50% of the Labor Surcharge set forth in the California Department of Transportation official labor surcharge which is in effect on the date upon which the extra work is accomplished.

2. Materials: The TJPA will pay CM/GC on Change Orders only for those materials furnished by CM/GC and directly required for performing the Change Order. The cost of such material shall be the direct cost, including sales tax, to the purchaser, whether CM/GC, Subcontractor or Lower-Tier Subcontractor, from the Supplier thereof and may include the cost of transportation, but delivery charges will not be allowed unless the delivery is specifically required for the Change Order. If a trade discount by an actual Supplier is available to CM/GC, it shall be credited to the TJPA. If the materials are obtained from a Supplier or source owned wholly or in part by CM/GC, payment thereof shall not exceed the current wholesale price for the materials as determined by the TJPA. The term "trade discount" includes the concept of cash discounting.
 3. Equipment: Payment for equipment costs on Change Orders will be made at the lesser of the rental rates listed for such equipment as specified in the current edition, at the time of the Change Order, of (i) "Labor Surcharge and Equipment Rental Rates," published by Caltrans Publications, 1900 Royal Oaks Drive, Sacramento, California 95815; or (ii) "Cost Reference Guide for Construction Equipment," published by Machinery Information Division of PRIMEDIA Information, Inc., 1735 Technology Drive Suite 410, San Jose, California 95110-1313. Such rental rates shall be adjusted as appropriate and will be used to compute payments for equipment, regardless of whether the equipment is under CM/GC's control through direct ownership, leasing, renting, or other method of acquisition. Daily, weekly, or monthly rates shall be used, whichever are lower. Hourly rates including operator shall not be used. Unless otherwise specified, manufacturer's ratings and manufacturer-approved modifications shall be used to classify equipment for determination of applicable rental rates. If, however, equipment of unwarranted size or type and cost is used, the cost shall be calculated at the rental rate for equipment of proper size and type.
 - a. The actual time to be paid for equipment shall be the time the equipment is in productive operation on the Work under the Change Order. In the event that use of hourly rental rates is appropriate in computing the rental of equipment, any time less than 30 minutes shall be considered one-half hour. No payment will be made for time while equipment is inoperative due to breakdown or for non-work days. In addition, the rental time shall not include the time required to move the equipment to and from the Site. Loading and transportation costs will be paid, in lieu of rental time, only if the equipment does not move under its own power and is utilized solely for the Work of the Change Order. No mobilization or demobilization will be allowed for equipment already on the Site.
 - b. Individual pieces of equipment having a replacement value of \$1,000 or less shall be considered to be small tools or small equipment, and no payment will be made since the costs of these tools and equipment are included as part of CM/GC's markup for overhead and profit as defined in subparagraph 6.06B.
 - c. Payment to CM/GC for the use of equipment as set forth herein shall constitute full compensation to CM/GC for the cost of fuel, power, oil, lubricants, supplies, small equipment, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance, labor (except for equipment operators), and any and all costs to CM/GC incidental to the use of the equipment.
 - d. Costs of equipment not listed in the publications specified in subparagraph 6.06A.3 shall be based on actual rental invoices. Copies of all invoices shall be provided as support documentation with each PCO cost proposal.
- B. Costs Included as Part of Markup for Overhead and Profit: All Change Order costs not specifically listed in subparagraph 6.06A as direct costs shall be included in the markup for overhead and profit. No separate allowance or itemization for overhead costs shall be allowed. The following is a list, not intended to be comprehensive, of the types of costs that are included in the markup for overhead and profit for all Change Orders including Force Account Work:
1. Field and home office personnel including, but not limited to, principals, project managers, superintendents, supervisory foremen, estimators, project engineers, detailers, draftspersons, schedulers, consultants, watchpersons, payroll clerks, administrative assistants, and secretaries.
 2. All field and home office expenses including, but not limited to, field trailers, parking, storage sheds, office equipment and supplies, telephone service at the Site, long-distance telephone calls, fax machines, computers and software, internet and e-mail services, temporary utilities, sanitary facilities and services, janitorial services, small tools and equipment with a cost under \$1,000 each,

- portable scaffolding, blocking, shores, appliances, job vehicles, security and fencing, conformance to all regulatory requirements including compliance with safety regulations, safety programs and meetings, cartage, warranties, record documents, and all related maintenance costs.
3. Administrative functions including, but not limited to, reviewing, coordinating, distributing, processing, posting, recording, estimating, negotiating, scheduling, schedule updating and revising, expediting, surveying, engineering, drawing, detailing, revising shop drawings, preparing record drawings, carting, cleaning, protecting the Work, and other incidental Work related to the Change Order.
 4. All other costs and taxes required to be paid, but not included under direct costs as defined in subparagraph 6.06A.
- C. CM/GC's Markup for Overhead and Profit: The following limitations shall apply to CM/GC's markup for overhead and profit on all Change Orders:
1. For Work performed by CM/GC, the markup shall equal a maximum of 15 percent of its direct costs, as defined herein.
 2. For Work performed by a Subcontractor, the markup shall equal a maximum of 15 percent of its direct costs, as defined herein including Subcontractor bonds and insurance. CM/GC shall receive a maximum 5 percent markup on the Subcontractor's total cost.
 3. For Work performed by a Lower-Tier Subcontractor or Supplier, the markup shall equal a maximum of 15 percent of its direct costs, as defined herein. CM/GC and Subcontractor shall each receive a 5 percent markup on the total cost of their respective Lower-Tier Subcontractors.
 4. In no case shall the sum of the individual markups applied to a Change Order exceed 25 percent, regardless of the number of Subcontractor tiers involved in performing the Work.
 5. For Change Orders that result in a net decrease in direct costs for Work performed by CM/GC or a Subcontractor, the TJPA shall receive a credit based on the actual net decrease in direct costs plus 10 percent of the direct cost credit amount. Neither CM/GC nor the Subcontractor shall receive a markup on their respective Lower-Tier Subcontractors to administer the credit Change Order.
 6. When both additions and credits are involved in any one Change Order, CM/GC's markup shall be computed on the basis of its direct costs and labor productivity for the net change in the quantity of the Work. For example, if a Change Order adds 14 units on one Drawing and deletes 5 units on another Drawing, the markup shall be based on the net addition of 9 units.
- D. Bond and Insurance Costs: Only the actual cost of CM/GC insurance and bond premiums, with no markup for overhead and profit required because of the Change Order, will be allowed.
- E. Costs Not Included in the Work: CM/GC shall be solely responsible for determining which of its subcontractors receive Change Orders. No additional compensation will be provided CM/GC for the cost of its subcontractors to review, post, coordinate, and perform related tasks to administer Change Orders which do not result in direct cost charges from such subcontractors. Such costs shall be considered normal business costs, which are contractually determined between CM/GC and its subcontractors prior to Bid, and such costs shall be included in CM/GC's Total Bid Price.
- F. Records: CM/GC shall maintain its records in such a manner as to provide a clear distinction between the direct costs of Change Orders and the cost of original Contract Work. This requirement pertains to all types of Change Orders, as well as the additions, deletions, revisions, CORs, and Claims initiated by CM/GC.
- 6.06 (2) COST OF THE CHANGE ORDER WORK (Applies to trade subcontracts issued for bid after January 1, 2011)**
- A. For Change Order Work, CM/GC will be paid the sum of the direct costs for labor, materials and equipment used in performing the Work as determined by the procedures set forth in this subparagraph 6.06A.
1. Labor. CM/GC will be paid the cost of labor for the workers used in the actual and direct performance of the Change Order Work. Working foremen will be considered a direct cost of the Change Order Work only if the individual is on Site physically installing the Work. The costs for all

supervision, including general superintendents and foremen, will not be considered a direct cost and shall be included in the markup defined in subparagraph 6.06B, below. The cost of labor, whether the employer is CM/GC, a subcontractor, or other forces, will be the sum of the following:

- a. Actual Wages. The actual wages paid shall include any actual payments by the employer for its workers' health and welfare, pension, vacation, and similar purposes.
 - b. Labor Surcharge. To the actual wages, as defined above, will be added a labor surcharge as set forth in the version of the California Department of Transportation publication entitled Labor Surcharge and Equipment Rental Rates which is in effect on the date upon which the extra work is accomplished and which is incorporated by reference as though set forth in full. That labor surcharge shall constitute full compensation to CM/GC for all of its costs: under the Federal Insurance Contributions Act ("FICA"); for federal and state unemployment taxes; for any and all other payroll taxes imposed by federal, state and local laws and ordinances; and for its cost of workers' compensation insurance and any and all forms of liability insurance. For projects insured under an Owner Controlled Insurance Policy ("OCIP"), the labor surcharge shall be 50% of the Labor Surcharge set forth in the California Department of Transportation official labor surcharges which is in effect on the date upon which the extra work is accomplished.
 - c. Subsistence and Travel Allowance. The actual subsistence and travel allowance paid to such workers.
2. Materials: The TJPA will pay CM/GC on Change Orders only for those materials furnished by CM/GC and directly required for performing the Change Order Work. The cost of such material shall be the direct cost, including sales tax, to the purchaser, whether CM/GC, Subcontractor or Lower-Tier Subcontractor, from the Supplier thereof and may include the cost of transportation, but delivery charges will not be allowed unless the delivery is specifically required for the Change Order Work. If a trade discount by an actual Supplier is available to CM/GC, such discount shall be credited to the TJPA notwithstanding the fact that such discount may not have been taken. If the materials are obtained from a Supplier or source owned wholly or in part by CM/GC, payment thereof shall not exceed the current wholesale price for the materials as determined by the TJPA. The term "trade discount" includes the concept of cash discounting.
3. Equipment: Payment for equipment costs on Change Orders will be made at the lesser of the rental rates listed for such equipment as specified in the current edition, at the time of the Change Order, of (i) the Labor Surcharge and Equipment Rental Ratesbook, published by the California Department of Transportation and available for download at <http://www.dot.ca.gov/hq/construc/equipmnt.html>; or (ii) Rental Rate Blue Book, published by Machinery Information Division of PRIMEDIA Information, Inc., 1735 Technology Drive Suite 410, San Jose, California 95110-1313. Such rental rates shall be adjusted as appropriate and will be used to compute payments for equipment, regardless of whether the equipment is under CM/GC's control through direct ownership, leasing, renting, or other method of acquisition. Daily, weekly, or monthly rates shall be used, whichever are lower. Hourly rates including operator shall not be used. Unless otherwise specified, manufacturer's ratings and manufacturer-approved modifications shall be used to classify equipment for determination of applicable rental rates. If, however, equipment of unwarranted size or type and cost is used, the cost shall be calculated at the rental rate for equipment of proper size and type.
- a. The actual time to be paid for equipment shall be the time the equipment is in productive operation on the Work under the Change Order. In the event that use of hourly rental rates is appropriate in computing the rental of equipment, any time less than 30 minutes shall be considered one-half hour. No payment will be made for time while equipment is inoperative due to breakdown or for non-work days. In addition, the rental time shall not include the time required to move the equipment to and from the Site. Loading and transportation costs will be paid, in lieu of rental time, only if the equipment does not move under its own power and is utilized solely for the Work of the Change Order. No mobilization or demobilization will be allowed for equipment already on the Site.
 - b. Individual pieces of equipment having a replacement value of \$1,000 or less shall be considered to be small tools or small equipment, and no payment will be made since the costs of these tools and equipment are included as part of CM/GC's markup for overhead and profit as defined in subparagraph 6.06B.
 - c. Payment to CM/GC for the use of equipment as set forth herein shall constitute full compensation to CM/GC for the cost of fuel, power, oil, lubricants, supplies, small equipment,

necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance, labor (except for equipment operators), and any and all costs to CM/GC incidental to the use of the equipment.

- d. Costs of equipment not listed in the publications specified in subparagraph 6.06A.3 shall be based on actual rental invoices. Copies of all invoices shall be provided as support documentation with each PCO cost proposal.

B. Costs Included as Part of Markup for Overhead and Profit: A markup for overhead and profit as specified in subparagraph 6.06C shall be added to the total of the direct costs computed as provided in subparagraph 6.06A. The markup shall constitute full compensation for all direct and indirect overhead costs and profit which shall be deemed to include all items of expense not specifically listed in subparagraph 6.06A as direct costs. No separate allowance or itemization for overhead costs shall be allowed. The following is a list, not intended to be comprehensive, of the types of costs that are included in the markup for overhead and profit for all Change Orders including Force Account Work:

1. Field and home office personnel including, but not limited to, principals, project managers, superintendents, supervisory foremen, estimators, project engineers, detailers, draftspersons, schedulers, consultants, watchpersons, payroll clerks, administrative assistants, and secretaries.
2. All field and home office expenses including, but not limited to, field trailers, parking, storage sheds, office equipment and supplies, telephone service at the Site, long-distance telephone calls, fax machines, computers and software, internet and e-mail services, temporary utilities, sanitary facilities and services, janitorial services, small tools and equipment with a cost under \$1,000 each, portable scaffolding, blocking, shores, appliances, job vehicles, security and fencing, conformance to all regulatory requirements including compliance with safety regulations, safety programs and meetings, cartage, warranties, record documents, and all related maintenance costs.
3. Administrative functions including, but not limited to, reviewing, coordinating, distributing, processing, posting, recording, estimating, negotiating, scheduling, schedule updating and revising, expediting, surveying, engineering, drawing, detailing, revising shop drawings, preparing record drawings, carting, cleaning, protecting the Work, and other incidental Work related to the Change Order.
4. All other costs and taxes required to be paid, but not included under direct costs as defined in subparagraph 6.06A.

C. CM/GC's Markup for Overhead and Profit: The following maximum percentage markups shall be applied to the total direct costs for each direct cost category. These markups provide for all indirect and overhead costs and profit:

Changed/Extra Work – Direct Costs	Markup Percentage
CM/GC direct labor	33%
CM/GC direct materials	15%
CM/GC direct equipment	15%
Subcontractor (of any tier) direct labor	33%
Subcontractor/Supplier (of any tier) direct materials	15%
Subcontractor/Supplier (of any tier) direct equipment	15%

1. For Work performed by a Subcontractor, CM/GC shall receive a maximum 5 percent markup on the Subcontractor's total cost (total cost includes Subcontractor's direct costs plus applicable markups specified above). Such additional 5 percent markup shall reimburse CM/GC for additional overhead, job site, home office, and administrative costs.
2. For Work performed by a Lower-Tier Subcontractor or Supplier, CM/GC and Subcontractor shall each receive a maximum 5 percent markup on the total cost of their respective Lower-Tier

- Subcontractors. Such additional 5 percent markup shall reimburse CM/GC and Subcontractor for additional overhead, job site, home office and administrative costs.
3. For Change Orders that result in a net decrease in direct costs for Work performed by CM/GC or a Subcontractor, the TJPA shall receive a credit based on the actual net decrease in direct costs plus 10 percent of the direct cost credit amount. Neither CM/GC nor the Subcontractor shall receive a markup on their respective Lower-Tier Subcontractors to administer the credit Change Order.
 4. When both additions and credits are involved in any one Change Order, CM/GC's markup shall be computed on the basis of its direct costs and labor productivity for the net change in the quantity of the Work. For example, if a Change Order adds 14 units on one Drawing and deletes 5 units on another Drawing, the markup shall be based on the net addition of 9 units.
- D. Bond and Insurance Costs: Only the actual cost of insurance and bond premiums, with no markup for overhead and profit required because of the Change Order, will be allowed.
- E. Costs Not Included in the Work: CM/GC shall be solely responsible for determining which of its subcontractors receive Change Orders. No additional compensation will be provided CM/GC for the cost of its subcontractors to review, post, coordinate, and perform related tasks to administer Change Orders which do not result in direct cost charges from such subcontractors. Such costs shall be considered normal business costs, which are contractually determined between CM/GC and its subcontractors prior to Bid, and such costs shall be included in CM/GC's Total Bid Price.
- F. Records: CM/GC shall maintain its records in such a manner as to provide a clear distinction between the direct costs of Change Orders and the cost of original Contract Work. This requirement pertains to all types of Change Orders, as well as the additions, deletions, revisions, CORs, and Claims initiated by CM/GC.

6.07 FORCE ACCOUNT WORK

- A. General: When additions, deletions, or revisions in the Work are to be paid for on a Force Account basis, all direct costs itemized in subparagraph 6.06A shall be subject to the approval of the TJPA and compensation will be determined as set forth herein.
1. The TJPA will direct CM/GC to proceed with the Work on a Force Account basis, and the TJPA will establish a "not to exceed" budget.
 2. All requirements regarding direct costs and markup for overhead and profit provided in Paragraph 6.06B shall apply to Force Account Work. However, the TJPA will pay only the actual necessary costs verified in the field by the TJPA on a daily basis.
 3. CM/GC shall be responsible for all costs related to the documentation, data preparation, and administration of Force Account Work. Compensation for such costs shall be fully covered by the markup for overhead and profit markup as provided in subparagraph 6.06C.
- B. Notification and Verification: CM/GC shall notify the TJPA in writing at least 24 hours in advance of its schedule before proceeding with the Force Account Work. All Force Account Work shall be witnessed, documented, and approved in writing by the TJPA on the day that the Work is performed. CM/GC will not be compensated for Force Account Work if CM/GC fails to provide timely notice to the TJPA before commencing the Force Account Work. In addition, CM/GC shall notify the TJPA when the cumulative costs incurred by CM/GC for the Force Account Work equal 80 percent of the budget pre-established by the TJPA. CM/GC will not be compensated for Force Account Work exceeding the "not to exceed" budget amount if CM/GC fails to provide the required notice before exceeding 80 percent of the Force Account budget.
- C. Reports: CM/GC shall diligently proceed with the approved Force Account Work and shall submit to the TJPA no later than 12:00 p.m. of the day following performance of Force Account Work a daily Force Account Work report on a form obtained from the TJPA. The report shall provide an itemized, detailed account of the daily Force Account labor, material, and equipment, including names of the individuals and the specific pieces of equipment identified by manufacturer's model type and serial number.

CM/GC's authorized representative shall complete and sign the report. CM/GC will not be compensated for Force Account Work for which said timely report is not completed and submitted to the TJPA.

- D. Records: CM/GC shall maintain detailed records of all Work done on a Force Account basis. CM/GC shall provide a weekly Force Account summary indicating the status of each Force Account Work directive in terms of actual costs incurred as a percent of the budget for the respective Force Account Work directive and the estimated percentage completion of the Force Account Work.
- E. Agreement: If CM/GC and the TJPA reach a negotiated, signed agreement on the cost of a Change Order while the Work is proceeding on a Force Account basis, CM/GC's signed written reports shall be discontinued and all previously signed reports shall become invalid.

6.08 UNIT PRICE WORK

- A. General: Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Sum will be deemed to include for all Unit Price Work an amount equal to the product of the established unit price Bid for each Item of Unit Price Work times the estimated quantity of each Item as indicated in the Schedule of Bid Prices. The estimated quantities of unit price Items are not guaranteed and are solely for the purpose of comparing Bids and determining an initial Contract Total Bid Price. Determination of the actual quantities and classifications of Unit Price Work will be made in accordance with Division 1, and the Contract Sum will be adjusted based on the actual quantities of Work performed.
 - 1. Each unit price on the Schedule of Bid Prices shall include an amount considered by CM/GC to cover CM/GC's markup for overhead and profit as defined in Paragraph 6.06.
- B. Quantity Increases: Should the total quantity of any Item of Unit Price Work performed exceed the estimated quantity indicated on the Schedule of Bid Prices by more than 25 percent, the Work in excess of 125 percent of such estimated quantity will be paid for by adjusting the unit price Bid therefor as follows:
 - 1. The unit price will be adjusted by the difference between the unit price Bid for the Item and the actual unit cost, determined as follows, of the total quantity of Work performed under said Item. The actual unit cost will be determined based on the direct costs per unit less fixed costs, which will be deemed to have been recovered by CM/GC with the payments made for 125 percent of the quantity indicated on the Schedule of Bid Prices, and markup for overhead and profit as provided in Paragraph 6.06.
 - 2. When the compensation payable for the number of units of an Item of Unit Price Work performed in excess of 125 percent of the quantity as indicated on the Schedule of Bid Price is less than \$5,000 at the unit price Bid therefor, the TJPA reserves the right to make no adjustment in said unit price if the TJPA so elects, except that an adjustment will be made if CM/GC submits a Change Order Request (COR) in accordance with the requirements of Paragraph 6.03.
 - 3. At the TJPA's option, payment for Unit Price Work in such excess will be made on a Force Account basis as provided in Paragraph 6.07 in lieu of adjusting the unit price in accordance with subparagraphs 6.08B.1 or 6.08B.2 above.
- C. Quantity Decreases: Should the total quantity of any Item of Unit Price Work performed be less than 75 percent of the estimated quantity indicated on the Schedule of Bid Prices, an adjustment in compensation will not be made unless CM/GC submits a COR in accordance with Paragraph 6.03. If CM/GC so requests, the quantity of said Item performed will be paid for by adjusting the unit price Bid therefor as follows:
 - 1. The unit price will be adjusted by the difference between the unit price Bid for the Item and the actual unit cost, determined based on the direct costs per unit, including fixed costs described under subparagraph 6.08B.1, and markup for overhead and profit as provided in Paragraph 6.06, of the total quantity of Work performed under said Item, provided however, that in no case shall the payment for such Work be less than that which would be made at the unit price Bid therefor.

2. The payment for the total pay quantity of such Item of Unit Price Work will in no case exceed the payment which would be made for the performance of 75 percent of the estimated quantity as indicated on the Schedule of Bid Prices at the unit price Bid therefor.
3. At the TJPA's option, payment for the Work involved in such deficiency will be made on a Force Account basis as provided in Paragraph 6.07 in lieu of adjusting the unit price in accordance with subparagraphs 6.08C.1 and 6.08C.2 above.

6.09 DELETED ITEMS

- A. Should any Bid Item be deleted in its entirety, the Contract Sum shall be reduced by the amount Bid for that Bid Item.
- B. If the TJPA issues written notice of deletion of a Bid Item after the commencement of such Work or after CM/GC has ordered acceptable materials for such Work which cannot be cancelled, or if part or all of such Work is not performed by CM/GC because it is unnecessary due to actual Site conditions, payment will be made to CM/GC for direct costs of such Work actually performed plus markup for overhead and profit as provided in subparagraph 6.06C.
- C. CM/GC shall not be compensated for costs incurred after receipt of the TJPA's written notice deleting the Bid Item.
- D. Materials ordered by CM/GC prior to the TJPA's issuance of a notice of deletion and paid for by the TJPA shall become the property of the TJPA, and the TJPA will pay for the actual cost of any further handling of such material. If the material is returnable to the vendor, and if the TJPA so directs, the material shall be returned and CM/GC will be paid only for the actual charges made by the vendor for returning the material including restocking charges.

ARTICLE 7 - TIME

7.01 PROGRESS AND COMPLETION

- A. CM/GC shall commence the Work of the Contract within 5 days from the start date established in the Notice to Proceed issued by the TJPA and shall diligently and continuously prosecute the Work to its completion.
- B. No demolition, removal, or reconstruction Work at the Site shall be started until CM/GC has presented evidence satisfactory to the TJPA Representative that it can, upon commencement, prosecute the Work continuously and expeditiously, and specific authorization has been issued by the TJPA for Work to start. A progress schedule submitted by CM/GC and accepted by the TJPA in accordance with the requirements of the Contract Documents shall be the basis for determination of the date on which Work at the Site may start.
- C. The continuous prosecution of the Work by CM/GC shall be subject only to the delays defined in Paragraph 7.02. The start of Work shall include attendance at pre-construction conferences; joint survey and documentation of existing conditions, if required by the Contract Documents; preparation and submittal of shop drawings, equipment lists, schedule of values, progress schedule, submittal schedule, and requests for substitutions; and other similar activities.
- D. The Work of this Contract shall be brought to Substantial Completion and Final Completion, as determined by the TJPA, in the manner provided for in the Contract Documents within the limits of Contract Time set forth in Section 00 05 20, 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. In the event that either party exercises its option under paragraph 9.03 of the Agreement (Section 00 05 20) not to proceed with further Trade Packages, Substantial

- Completion will mean completion of all awarded Trade Packages in conformance with the terms and conditions of the Contract Documents; a Temporary Certificate of Occupancy might not, in such circumstances, be a condition precedent to Substantial Completion.
2. During the time between Substantial Completion and Final Completion, CM/GC shall complete the punch list work, but CM/GC shall not disrupt the TJPA's beneficial occupancy of the Project or any public use of the Work; the CM/GC shall submit for TJPA approval a schedule for punch list work which at a minimum shall identify the times and locations of planned work so that physical access and public safety may be coordinated.
 3. Final Completion is a condition precedent to final payment. The TJPA will issue final payment to CM/GC acknowledging that the Project is complete and the Work is acceptable to the TJPA.
 4. The limits of Contract Time as specified in Section 00 05 20 shall not be affected by the acceptance of any of the Alternate Bid Items included in the Contract Documents provided that said Alternate Bid Items were incorporated into the Contract within the number of months after the date of the award of the subject Trade Package.
 5. The specified limits of Contract Time may be changed only by a Change Order. Claims for compensation because of adjustment of the limits of Contract Time shall be made in accordance with the requirements of Paragraph 13.02.
- E. CM/GC 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. CM/GC 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.
- F. CM/GC shall be responsible to maintain its schedule so as not to delay the progress of the Project or the schedules of other CM/GCs. CM/GC is required by virtue of this Contract to cooperate in every way possible with other CM/GCs 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.
- G. If, in the opinion of the TJPA, CM/GC has fallen behind schedule according to CM/GC's most current and TJPA-approved update of the progress schedule submitted as set forth in Paragraph 3.11, or if CM/GC delays the progress of other CM/GCs, and is not entitled to an extension of time as provided in these Contract Documents, CM/GC shall take some or all of the steps as follows to improve its progress at no additional cost to the TJPA and shall submit operational plans to the TJPA to demonstrate the manner in which the desired rate of progress will be regained:
1. increase construction manpower in such quantities and crafts as will substantially eliminate the backlog of Work;
 2. increase, when permitted in writing by the TJPA, the number of working hours per shift, shifts per working day, working days per week, or the amount of construction equipment or any combination of the foregoing, sufficiently to substantially eliminate the backlog of Work;
 3. reschedule activities to achieve maximum practical concurrence of accomplishment of activities;
 4. expedite delivery of materials and equipment such as by airfreight;
 5. accelerate the priority of manufacture, fabrication and shipment preparation of Work on order with the Supplier should such priority lists exist as a normal course of its business; and
 6. any other means deemed appropriate by the TJPA.
- H. The TJPA may direct CM/GC to take steps enumerated in subparagraph 7.01G for the convenience of the TJPA and if CM/GC is not at fault. Should the TJPA Representative direct CM/GC to take measures previously described, the TJPA will reimburse CM/GC for reasonable costs of complying.
- I. Should CM/GC 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, in accordance with the currently accepted progress schedule update, the TJPA shall have the right to enter Default and terminate the Contract for cause as set forth in Paragraph 14.01.

7.02 DELAYS AND EXTENSIONS OF TIME

- A. Unavoidable Delays: Pursuant to section 6.22(H)(2)(c) of the San Francisco Administrative Code and for the purposes of the Contract Documents the term Unavoidable Delay shall mean an interruption of the Work beyond the control of CM/GC that could not have been avoided by CM/GC's exercising care, prudence, foresight, and diligence. Moreover, in accordance with the progress schedule requirements of Paragraph 3.11, CM/GC shall demonstrate that the Unavoidable Delay actually extends the most current Contract Substantial Completion date. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of CM/GC.
1. CM/GC will be entitled to a non-compensable time extension only for the following types of Unavoidable Delay: acts of God; acts of the public enemy; adverse weather conditions; fires; floods; windstorms; tornadoes; earthquakes; wars; riots; insurrections; epidemics; quarantine restrictions; strikes; lockouts; sit-downs; slowdowns; other labor trouble; labor shortages; inability of CM/GC to procure labor; material shortages; inability of CM/GC to procure material; fuel shortages; freight embargoes; accidents; acts of a government agency; priorities or privileges established for the manufacture, assembly or allotment of materials by order, decree, or otherwise of the United States or by any department, bureau, commission, committee, agent or administrator of any legally constituted public authority; the prevention of CM/GC from commencing or prosecuting the Work because of the acts of other persons or parties, excepting the TJPA, TJPA consultants or contractors, the CM/GC, or the CM/GC's Subcontractors, Suppliers, or Lower-Tier Subcontractors or Suppliers; and inability to procure or failure of public utility service.
 - a. Whenever CM/GC has knowledge that any actual or potential labor dispute is delaying or is threatening to delay the timely performance of its Contract, CM/GC shall immediately give written notice thereof, including all relevant information with respect thereto, to the TJPA.
 - b. In addition, CM/GC shall take all appropriate measures to eliminate or minimize the effect of such labor dispute on the current, TJPA-approved progress schedule, including but not limited to such measures as: promptly seeking appropriate injunctive relief; filing appropriate charges with the National Labor Relations Board under the applicable provisions of the Labor Management Relations Act of 1947, as amended; filing appropriate damage actions; taking such measures as establishing a reserved gate, as appropriate; if reasonably feasible, seeking other sources of supply or service; or any other measures that may be appropriately utilized as deemed by the TJPA to limit or eliminate the effect of the labor dispute on the Work. To the extent CM/GC fails to initiate appropriate measures, it is not entitled to an extension of Contract Time. In addition, any delay impact caused by said failure on the progress schedule will be considered a CM/GC-caused delay under any and all applicable provisions of the Contract Documents.
 2. CM/GC shall be entitled to a compensable time extension for an Unavoidable Delay caused by the TJPA or by Unforeseen Conditions as provided in Article 3 of these General Conditions, provided such Unavoidable Delay is critical, extends the most current Contract Substantial Completion Date, and is not concurrent with a CM/GC-caused delay or other type of Unavoidable Delay as previously defined. All other types of Unavoidable Delay shall not entitle CM/GC to a compensable time extension.
 3. CM/GC shall be entitled to a non-compensable time extension in the event a TJPA-caused delay is concurrent with either a CM/GC-caused delay or a non-compensable Unavoidable Delay.
- B. Avoidable Delays: The term Avoidable Delay shall include, but is not limited to, the following:
1. any delay which could have been avoided by the exercise of care, prudence, foresight and diligence on the part of CM/GC; or
 2. any delay in the prosecution of parts of the Work, which may in itself be Unavoidable, but which does not necessarily prevent or delay the prosecution of other parts of the Work, nor delay the date of Substantial Completion based on the specified limits of Contract Time; or
 3. any delay caused by the untimely review by CM/GC of the Contract Drawings and Specifications pursuant to subparagraph 3.03C; or
 4. any delay resulting from the TJPA responding to CM/GC-generated RFIs in accordance with subparagraph 6.02B; or

5. any delay arising from an interruption in the prosecution of the Work resulting from a reasonable interference from other contractors employed by the TJPA, but does not delay the date of Substantial Completion based on the specified limit of Contract Time.

C. Adverse Weather Delays:

1. Adverse weather shall not be a prima facie reason for the granting of a non-compensable time extension, and CM/GC shall make every effort to continue work under prevailing conditions. Such efforts by CM/GC shall include, but are not limited to, providing temporary gravel roads; installing a rain dewatering system; protecting interior and exterior areas exposed to rain, wind, and extreme temperatures; and providing temporary heat where required for Work to proceed without delay.
2. The TJPA may classify an adverse weather day as a non-compensable Unavoidable Delay, provided CM/GC made efforts to work during adverse weather and to avoid the impacts of adverse weather to its schedule. If such an event occurs, and CM/GC is prevented by adverse weather or conditions from proceeding with at least 75 percent of the scheduled labor, material and equipment resources for at least 5 hours per work day on activities shown as critical on the most current and TJPA-approved progress schedule update, the delay will be classified as an Unavoidable Delay, and CM/GC will be granted a non-compensable time extension.
3. Regardless of the type and severity of the adverse weather, CM/GC shall be responsible for all costs of its efforts to mitigate the impacts of adverse weather to its schedule during the Contract Time.
4. Adverse weather shall mean rain, windstorm, flood, or other natural phenomenon occurring at the Site which exceed the anticipated number of days of inclement weather as provided herein and which are proven by CM/GC to be detrimental to the progress of the Work. CM/GC shall plan the Work to allow for the following number of days of inclement weather during normal working hours:

<u>Month</u>	<u>Rain Days</u>	<u>Month</u>	<u>Rain Days</u>
January	3	July	0
February	3	August	0
March	2	September	0
April	1	October	1
May	0	November	1
June	0	December	3

- a. CM/GC's progress schedule shall incorporate prudent allowance for the anticipated number of days of inclement weather specified herein.
- b. The Contract Time allowed for completion of Work specified in Contract Time and Liquidated Damages (Section 00 05 20) is predicated on the anticipated number of days of inclement weather specified herein.
- c. CM/GC shall not be entitled to receive a time extension related to weather until the anticipated number of days specified herein for the month of occurrence of the inclement weather event has been exceeded.
- d. In the event that there are months with less than the anticipated number of inclement weather days specified herein, the TJPA reserves the right to transfer the unused inclement weather days to other months of the Contract Time for which CM/GC has requested a time extension because of adverse weather.

D. Notice of Delay:

1. Pursuant to section 6.22H.2.d of the San Francisco Administrative Code, CM/GC shall notify the TJPA in writing promptly of all anticipated delays in the prosecution of the Work and, in any event, promptly upon the occurrence of a delay. The TJPA may take steps to prevent the occurrence or continuance of the delay, and the TJPA may determine to what extent Substantial Completion is delayed thereby.
2. Said notice shall constitute an application for an extension of time only if it requests such time extension, sets forth CM/GC's estimate of the additional time required together with a full recital of the causes of Unavoidable Delays relied upon, and meets all requirements for a Notice of Potential Claim as set forth in subparagraph 13.02A, including the requirement that such Notice be submitted

to the TJPA within 7 days of the event which the CM/GC contends affected the performance of the Work.

3. The TJPA's determination of whether an extension of time will be granted will be based on CM/GC's demonstration to the TJPA's satisfaction that such Unavoidable Delays will extend CM/GC's current critical path on the current, TJPA-approved updated progress schedule or require the formulation of a new extended critical path.
4. If CM/GC does not submit a notice as set forth in subparagraph 7.02D.2, above, CM/GC thereby admits the occurrence had no effect on the length of its duration of Work and no extension of time is necessary, and CM/GC understands and agrees that no extension of time or adjustment of the Contract Sum will be granted by the TJPA.

E. Extensions of Time:

1. In the event it is deemed necessary by the TJPA to extend the time for completion of the Work to be done under these Contract Documents beyond the specified limits of Contract Time specified in the Contract Documents, such extensions shall in no way release any guarantees or warranties given by CM/GC pursuant to the provisions of the Contract Documents, nor shall such extension of time relieve or release the sureties on the bonds executed pursuant to said provision.
2. The sureties in executing such bonds shall be deemed to have expressly agreed to any such extension of time.
3. The length of any extension of time shall be limited to the extent that the commencement, prosecution, and completion of the Work are delayed by the event as determined by the TJPA in accordance with section 6.22(H)(2)(d) of the San Francisco Administrative Code.
4. Extensions of time that cumulatively extend the Contract Time in excess of 10 percent of the time allowed for Substantial Completion as specified in Section 00 05 20 shall be subject to approval of the TJPA Board.
5. In no event shall such extensions of time be granted subsequent to the date of Final Completion.
6. Granting of an extension of time because of Unavoidable Delays shall in no way operate as a waiver on the part of the TJPA of the right to collect liquidated damages for other delays or to collect other damages or to pursue other rights and interests which the TJPA is entitled.
7. Should CM/GC, any subcontractor of any tier or any supplier of any tier seek an extension of time for the completion of the Work under the provisions of this Paragraph 7.02, CM/GC and its subcontractor or supplier shall submit justification for the extension of the time requested and otherwise comply with all provisions of these Contract Documents with respect to requests for extensions of time. All requests for time shall use actual progress data, methodology and analysis with reference to the original approved baseline schedule, as provided in the Division 1 Schedule Specification in these Contract Documents.
8. Neither this provision, nor any other provision of the Contract Documents, is intended by the parties to be contrary to any express provision of law. The parties specifically agree, acknowledge and warrant that neither this provision nor any other provision of the Contract Documents has for its object, directly or indirectly, the exemption of the TJPA, the TJPA Representative, the TJPA's consultants, and their respective directors, officers, members, employees, and authorized representatives from responsibility of their own sole negligence, violation of law or other willful injury to the person or property of another.

7.03 LIQUIDATED DAMAGES

A. Determination of Damages:

1. The actual fact of the occurrence of damages and the actual amount of the damages which the TJPA would suffer if the Work were not completed within the specified limits of Contract Time are dependent upon many circumstances and conditions which could prevail in various combinations and, from the nature of the case, it is impracticable and extremely difficult to fix the actual damages.
2. Damages which the TJPA would suffer in the event of delay include, but are not limited to, costs of renting equivalent space, expenses of prolonged employment of an architectural, engineering and construction management staff comprised of both TJPA Representatives and consultants; costs of administration, inspection and supervision; and the loss suffered by the public within the TJPA and

County of San Francisco by reasons of the delay in the construction of the Project to serve the public at the earliest possible time.

- B. Agreed Amount of Damages: It is understood and agreed by CM/GC and TJPA that if all the Work specified or indicated in the Contract Documents is not completed within the specified limits of Contract Time, or within such time limits as extended in accordance with Paragraph 7.02, actual damages will be sustained by the TJPA in the event of and by reason of such delay.
1. CM/GC and TJPA agree that the amount of liquidated damages set forth in Section 00 05 20 represents the Parties' reasonable estimate of the approximate damages which the TJPA will sustain for each and every day of delay beyond the number of days specified in Section 00 05 20 for Substantial Completion (as such date may be modified in accordance with the Contract Documents).
 2. CM/GC and TJPA agree that the amount of liquidated damages set forth in Section 00 05 20 represents the Parties' reasonable estimate of the approximate damages which the TJPA will sustain for each and every day of delay beyond the number of days specified in Section 00 05 20 for completing the punch list of remedial Work and achieving Final Completion (as such date may be modified in accordance with the Contract Documents).
 3. It is therefore agreed that CM/GC shall pay such amount of liquidated damages as specified in Section 00 05 20, and in case such amount is not paid, CM/GC agrees that the TJPA may deduct the amount therefor from any money due or that may become due CM/GC under the Contract.
- C. Payment of Damages:
1. Should CM/GC become liable for liquidated damages, the TJPA, in addition to all other remedies provided by law, shall have the right to withhold any and all retained percentages of payments as provided in Paragraph 9.05 which would otherwise be due or become due CM/GC until the liability of CM/GC has finally been determined.
 2. The TJPA shall have the right to use and apply such retained percentages, in whole or in part, to reimburse the TJPA for all liquidated damages due or to become due to the TJPA. Any remaining balance of such retained percentages shall be paid to CM/GC only after discharge in full of all liability incurred by CM/GC.
 3. If the retained percentage is not sufficient to discharge all such liabilities of CM/GC, CM/GC and its sureties shall continue to remain liable to the TJPA until all such liabilities are satisfied in full.
 4. Should the retention of moneys due or to become due to CM/GC be insufficient to cover such damages, CM/GC shall pay forthwith the remainder to the TJPA.

ARTICLE 8 - INSPECTION AND CORRECTION OF WORK

8.01 UNCOVERING OF WORK

- A. No Work shall be covered until inspected by the TJPA or other public authorities having jurisdiction.
- B. If any part of the Work is covered prior to inspection by the TJPA or other public authorities having jurisdiction, CM/GC shall, upon written request by the TJPA, uncover it for inspection by the TJPA or other public authorities having jurisdiction and subsequently replace it at no additional cost to the TJPA and without change in the Contract Times.
- C. Should the TJPA or other public authorities having jurisdiction wish to re-inspect a portion of the Work that has been covered, CM/GC shall uncover it upon written request. If the Work conforms to the requirements of the Contract Documents, the TJPA will pay the costs of uncovering and replacement; if the Work does not conform to the requirements of the Contract Documents, CM/GC shall pay said costs, including related disruptions and delays.

8.02 TESTS AND INSPECTIONS

- A. All testing and specialty inspection of the Work required by the Contract Documents shall be arranged and paid for by CM/GC through an independent testing laboratory, unless specifically indicated in the Contract Documents to be the responsibility of the TJPA or other authority having jurisdiction.

- B. Special inspections to be performed by the TJPA as specified in the Contract Documents or as required to comply with the Code or other agency having jurisdiction shall be performed at the TJPA's expense. CM/GC shall give the TJPA Representative, the TJPA's independent testing laboratory, special inspectors, and representatives from other authorities having jurisdiction a minimum of 2 working days notice, excluding weekends and TJPA holidays, of when and where such special inspections are required so the TJPA may arrange for the appropriate TJPA representatives and inspectors, and representatives from public other authorities having jurisdiction, to be present to perform the necessary inspections or tests.
1. The TJPA reserves the right to modify the scope of, or to reassign, any of the testing and inspection services specified in the various sections of the Contract Documents to be performed by a testing agency or consultant retained by the TJPA in connection with the Work.
- C. If the TJPA or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included in subparagraph 8.02A, the TJPA will order the performance of such services by qualified independent testing agencies, or consultants as may reasonably be required. The TJPA shall bear such costs except as otherwise provided in subparagraph 8.02D.
- D. If such procedures for testing, inspection or approval reveal failure of the portion of the Work to comply with requirements of the Contract Documents, CM/GC shall bear all costs made necessary by such failure including costs of repeated procedures and compensation for the TJPA's additional testing and inspection services and expenses.
1. If the TJPA'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 TJPA 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. CM/GC shall bear all costs thereof, including reimbursement to the TJPA for the TJPA's additional testing and inspection services if any are required, made necessary thereby. However, neither the TJPA's authority to act under Paragraph 8.02 nor any decision made by the TJPA Representative in good faith either to exercise or not to exercise such authority, shall give rise to any duty or responsibility of the TJPA to CM/GC, any subcontractor, or any of their agents or employees, or any other person performing any of the Work.
- E. Neither observation by the TJPA nor inspections, tests, or approvals by the TJPA's inspectors or testing agencies and consultants, or by other public authorities having jurisdiction, shall relieve CM/GC from CM/GC's obligation to perform and provide quality control services to assure that the Work conforms to the requirements of the Contract Documents.
- F. Unless otherwise required by the Contract Documents, required certificates of testing, inspection or approval shall be secured by CM/GC and furnished to the TJPA in accordance with the Specifications.
- G. If observation or testing is required outside the nine Bay Area counties, and does not take place at the Site, CM/GC shall reimburse the travel-related costs, including transportation, lodging, meals, long-distance telephone calls and facsimile transmittals, and associated expenses of the TJPA without adjustment to the Contract Sum.
- H. CM/GC shall provide promptly all facilities, labor, and material reasonably needed for performing such safe and convenient inspection and test as may be required by the TJPA. Tests or inspections conducted pursuant to the Contract Documents will be made promptly to avoid unreasonable delay in the Work.
1. The TJPA reserves the right to charge to CM/GC any additional cost of inspection or test when the Work, material or workmanship is not ready for testing or inspection at the specified time.

8.03 CORRECTION OF NON-CONFORMING WORK

- A. The TJPA shall have the sole and unfettered authority to disapprove or reject Non-conforming Work. Upon receipt of written notification thereof from the TJPA, Non-conforming Work shall be removed from the Site and replaced promptly by CM/GC with Work that conforms to the Contract Documents, regardless of when the Non-conformance is determined. CM/GC shall pay all claims, costs, losses, and damages, including the TJPA's expenses at the labor rates included in the contracts between the TJPA and the TJPA's testing and inspection services, of removal and replacement including but not limited to all costs of repair or replacement of work of others.
- B. Failure or neglect on the part of the TJPA 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 TJPA at any subsequent time from the recovery of money needed to build anew all portions of such Non-conforming Work; or
 - 3. to relieve CM/GC from the responsibility of correcting Non-conforming Work or materials.
- C. If CM/GC fails to correct Non-conforming Work or proceed with corrections within 5 days of the date of written notification from the TJPA, the TJPA may correct the Non-conforming Work in accordance with Paragraph 2.04 or may remove it and store the salvageable materials or equipment at CM/GC's expense. If CM/GC does not pay the costs of such removal and storage within 7 days after written notice, the TJPA may sell, auction, or discard such materials and equipment. The TJPA will credit CM/GC's account for the excess proceeds of such sale, if any. The TJPA will deduct from CM/GC's account the costs of damages to the Work, rectifying the Non-conforming Work, removing and storing such salvageable materials and equipment, and discarding the materials and equipment, if any. If the proceeds fail to cover said costs and damages, the Contract Sum shall be reduced by the deficit. If the current Contract unpaid balance and retention is insufficient to cover such amount, CM/GC shall reimburse the TJPA.

8.04 CORRECTION PERIOD

- A. CM/GC shall repair or replace Non-conforming Work or damage resulting from such Non-conforming Work promptly at no additional cost to the TJPA, whether due to: (i) faulty materials or workmanship; or (ii) defective installation by CM/GC of materials or equipment manufactured by others; or (iii) disturbance of, or damage to, TJPA improvements by CM/GC's operations contrary to the Specifications; or (iv) other failure to conform to the requirements of the Contract Documents. Such repair or replacement shall commence within 5 days of the date of the TJPA's written notification of occurrence of such Non-conforming Work and shall forthwith be diligently prosecuted to completion during the following correction periods, or such longer period of time as may be prescribed by laws and regulations or by the terms of any applicable guarantees required elsewhere in the Contract Documents, as applicable:
 - 1. any time during construction of the Work; or
 - 2. one year following the date of the Notice of Substantial Completion for Non-conforming Work or damage resulting therefrom in any part of the surface Work or in surface improvements of the TJPA such as building superstructures, pavements, curbs, walks, tracks, walls, stairways, poles, mechanical and electrical equipment, materials, appurtenances and accessories, or other surface structures; or
 - 3. two years following the date of the Notice of Substantial Completion for Non-conforming Work or damage resulting therefrom in any part of subsurface Work or in subsurface improvements of the TJPA not included in the Work, such as building foundations, sewers, side sewers, culverts, other drainage structures, pipes, valves, conduits, conductors, or other subsurface structures.
- B. This requirement to correct Non-conforming Work shall continue until one year after the date of correction of repaired or replaced Items.
- C. This requirement to correct Non-conforming Work and all similar requirements applicable to equipment of subcontractors of any tier or suppliers used in or as a part of the Work (whether on equipment of the

nature above specified or otherwise) shall inure to the benefit of the TJPA without necessity of separate transfer or assignment thereof.

- D. The remedies provided for in this Paragraph 8.04 shall not be restrictive but shall be cumulative and shall be in addition to all other legal remedies the TJPA may possess with respect to latent defects or frauds.

8.05 ACCEPTANCE OF NON-CONFORMING WORK

- A. If, in the sole and unfettered judgment of the TJPA, it is undesirable or impractical to replace any defective or Non-conforming Work, the Contract Sum shall be reduced by such amount as the TJPA or its authorized representatives deem equitable, or CM/GC shall rebate moneys previously paid by the TJPA.

ARTICLE 9 - PAYMENTS AND COMPLETION

9.01 CONTRACT SUM

- A. Payment to CM/GC at the Contract Sum (see Agreement (Section 00 05 20), at Article3) 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 CM/GC for any purpose incidental to performing and completing the Work.
- B. Whenever the Contract Documents specify that CM/GC is to perform Work or furnish materials of any class for which no price is fixed in the Contract, it shall be understood that such Work is to be performed or such materials furnished without extra charge, allowance or direct payment of any sort, and that the cost of performing such Work or furnishing such materials is included in CM/GC's Total Bid Price.

9.02 SCHEDULE OF VALUES FOR LUMP SUM WORK

- A. Within 30 days after award of each Trade Work Subcontract, or as otherwise specified in Division 1, CM/GC shall submit a detailed cost breakdown of its Subcontractor's Bid covering the lump sum Items, including Alternate Bid Items selected by the TJPA, by classification in accordance with the Construction Specifications Institute's 48-division MasterFormat 2004 edition and coordinated with the progress schedule. This breakdown shall be referred to as the schedule of values and shall serve as the basis for progress payments for lump sum Items. No progress payments will be made on account of lump sum Items until the TJPA has reviewed and accepted CM/GC's schedule of values.
 - 1. The specific format, detail and submittal requirements for the schedule of values shall be as specified in Division 1 or as directed by the TJPA to facilitate and clarify progress payments to CM/GC for completed Work.
 - 2. The sum of the individual costs listed in the schedule of values for each lump sum Item shall equal the lump sum price Bid or negotiated therefor by the Trade Package Subcontractor.
- B. The total cost of performing each lump sum Item, including all labor, material, equipment, fixed cost elements, incidental expenses, and overhead and profit, shall be shown on CM/GC's schedule of values. All budgeted costs and manpower shown on the progress schedule shall be allocated to direct cost Bid Items.
 - 1. Unless otherwise provided in the Contract Documents, CM/GC's overhead, profit, insurance, bonds, and other similar costs, shall be prorated through all Items so that the sum of the cost for all Items shall equal CM/GC's Total Bid Price.
- C. The TJPA will review and return CM/GC's schedule of values with comments. CM/GC shall make all corrections requested by the TJPA and resubmit for approval.
 - 1. The TJPA shall be the sole judge of the sufficiency in detail and proper proportioning of CM/GC's schedule of values.

2. CM/GC's schedule of values will be acceptable to the TJPA as to form and substance if it provides a reasonable allocation of CM/GC's Bid amount to component parts of the Work.
- D. Upon concurrence by the TJPA, a written formal approval of CM/GC's schedule of values will be issued. If the TJPA later determines that the schedule of values is insufficient or incorrect, an adjustment shall be made as specified in subparagraph 9.02C.

9.03 PROGRESS PAYMENTS

- A. Subject to the conditions set forth in these General Conditions, and to the authorization of the TJPA or the authorized representatives of the TJPA, payment shall be made upon demand of CM/GC and pursuant to the Contract Documents as follows.
- B. On the 25th day of each month during periods of construction, CM/GC shall submit to the TJPA for review a draft Application for Payment for the Work completed as of the end of the current calendar month. On the first day of the following month, the CM/GC shall incorporate any comments by the TJPA as to the draft and submit a formal Application for Payment, on a form approved by the TJPA and signed by CM/GC, covering the Work completed by CM/GC in the previous month and accompanied by such supporting documentation as specified in Division 1. For example, for work completed during the month of June, CM/GC shall submit a draft Application for Payment on June 25 (if the 25th falls on a Saturday, Sunday, or Holiday, then on the last business day before the 25th), with a final Application for Payment due on July 1 (if the first day of the month falls on a Saturday, Sunday, or Holiday, then on the next business day after the first day of the following month).
 1. The monthly value of lump sum Work shall be estimated by CM/GC pursuant to the schedule of values prepared in accordance with Paragraph 9.02. CM/GC's estimates need not be based on strict measurements but shall consist of good-faith approximations and shall be proportional to the total amount, considering payments previously made, that becomes due for such Work satisfactorily completed in accordance with the requirements of the Contract Documents.
 2. Progress payments on account of Unit Price Work shall be based on the number of units of Work satisfactorily completed as determined by the TJPA and the unit prices Bid by CM/GC, adjusted as specified in Paragraph 6.08 for the actual quantities of Work performed.
 3. Progress payments on account of allowances shall be made for such sums as may be acceptable to the TJPA and including costs as specified in Division 1. Prior to final payment, an appropriate Change Order will be issued as directed by the TJPA Representative to reflect actual amounts due CM/GC on account of Work covered by allowances, and the Contract Sum will be adjusted accordingly.
 4. Except as provided in subparagraph 9.03I, no allowance will be made for materials or equipment not incorporated into the Work.
- C. The Application for Payment shall identify the amount of CM/GC's total earnings to date.
- D. Monthly progress payment amounts to CM/GC shall be based upon completed Work or percentages of Work completed prior to the end of the payment period, *i.e.*, the previous calendar month. A detailed payment application procedure will be transmitted to CM/GC by the TJPA following the formal approval of the schedule of values.
- E. Monthly Applications for Payment shall be based on information developed at monthly progress meetings and shall be prepared by CM/GC. Submission of acceptable monthly progress schedule updates for same period as the Application for Payment shall be a condition precedent to making progress payment Applications. No partial progress payment shall be made to CM/GC until all cost information requested by the TJPA is submitted and reviewed.
- F. As soon as practical after estimating the progress of the Work, the TJPA will pay to CM/GC 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 last day of the previous month, less the appropriate retention and the aggregate of the amount of previous payments. Payments, however, may be withheld at any time that the

Work, in the TJPA's estimation, is not proceeding in accordance with the Contract, or as otherwise provided in Paragraph 9.05.

1. The TJPA shall endeavor to make progress payments for undisputed amounts within 15 business days, but no later than 45 business days, of receiving a final Application for Payment for the previous month and the required documentation including, without limitation, certified payrolls. In no event shall the TJPA become liable for interest or other charges for late payment except as set forth in San Francisco Administrative Code section 6.22(J)(7).
- G. No inaccuracy or error in said monthly estimates shall operate to release CM/GC or its sureties from damages arising from such Work or from the enforcement of each and every provision of the Contract Documents, and the TJPA shall have the right to correct any error made in any estimate for payment.
- H. In accordance with the provisions of section 22300 of the California Public Contract Code, CM/GC will be permitted to substitute securities for any moneys withheld by the TJPA to ensure performance under the Contract under the following conditions:
1. At the request and expense of CM/GC, securities listed in section 16430 of the California Government Code, bank or savings and loan certificate of deposits, interest bearing demand deposit accounts, standby letters of credit, or any other security mutually agreed to by the TJPA and CM/GC which are equivalent to the amount withheld under the retention provisions of the Contract Documents shall be deposited with the TJPA Controller who shall then pay such moneys to CM/GC. Upon satisfactory completion of the Project and all Work under the Contract, the securities shall be returned to CM/GC.
 2. CM/GC shall be the beneficial owner of the securities substituted for moneys withheld and shall receive any interest thereon.
 3. CM/GC shall enter into an escrow agreement with the TJPA Controller according to Section 00 06 30 ("Escrow Agreement for Security Deposits in Lieu of Retention"), specifying the amount of securities to be deposited, terms and conditions of conversion to cash in case of default of CM/GC, and termination of escrow upon completion of the Contract.
- I. Pursuant to section 6.22J of the San Francisco Administrative Code, payment for material or equipment procured by CM/GC but stored on or off the Site and not incorporated in the Project will not be allowed, subject to the following exception:
1. The TJPA will make payment for material or equipment procured by CM/GC and not incorporated in the Project if the material or equipment is (i) unique to the Project; and (ii) either stored on the Site or at an off-Site location approved in advance and in writing by the TJPA. Should the TJPA agree to make payment for such material or equipment, all of the following shall apply:
 - a. CM/GC shall submit to the TJPA proof of off-Site material purchases, including bills of sale, invoices, or other documentation warranting that CM/GC has received the materials free and clear of all liens, charges, security interests, and encumbrances.
 - b. Title to stored material shall be vested in the TJPA at time of delivery to the Site or off-Site warehouse.
 - c. CM/GC shall obtain a negotiable warehouse receipt, endorsed over to the TJPA, for material stored in an off-Site warehouse. No payment will be made until endorsed receipts are delivered to the TJPA.
 - d. CM/GC, at no additional cost to the TJPA, shall insure stored material against theft, fire, loss, vandalism, and malicious mischief, and shall deliver the policy or certificate of such insurance to the TJPA Representative naming the TJPA as additional insured. Insurance shall not be cancelable for at least 30 days and cancellation shall not be effective until certificate thereof is given to the TJPA.
 - e. CM/GC shall furnish to the TJPA written consent from CM/GC's sureties approving the advanced payment for materials stored off Site.
 - f. The maximum prepayment allowed by the TJPA shall be 75 percent of the fair market value of the item being considered. The TJPA shall be the sole judge of fair market value.
 - g. CM/GC shall protect stored materials from damage. Damaged materials, even though paid for, shall not be incorporated into the Work.
 - h. Stored materials shall be available for inspection by the TJPA.

- i. CM/GC shall deliver stored materials to the Site.
 - j. After delivery of stored materials to the Site, if any inherent or acquired defects are discovered therein, such defective material shall be removed and replaced with suitable materials at no additional cost to the TJPA.
 - k. In the event of loss of or damage to paid materials, CM/GC shall be responsible for replacing the lost or damaged materials at its own cost and shall be responsible for all delays incurred on the Project as a result of such loss or damage.
 - l. Nothing in this subparagraph 9.03I shall relieve CM/GC of its responsibility for incorporating materials in the Work that conform to the requirements of the Contract Documents.
- 2. The TJPA will make payment for the Temporary Bracing steel, the Access Trestle steel, and the Temporary Traffic Bridge steel procured by the CM/GC for the Buttress/Shoring/Excavation Work only, as material which is necessary for the construction of the temporary bracing system, access trestles and temporary traffic bridges (the "Temporary Steel"), under the following terms and conditions:
 - a. The total material cost of the Temporary Steel as bid shall equal the raw material and fabrication costs, plus a credit for re-sale, scrap, or re-use. The total material cost shall not include any other costs such as labor, general conditions, or profit.
 - b. Upon proof that the CM/GC or its subcontractor has incurred costs to order the Temporary Steel, the TJPA will pay as part of a regular progress payment the actual material cost incurred, up to 35% of the total material cost of the Temporary Steel.
 - c. Upon proof that the fabricated Temporary Steel is on-site, inspected, and ready for installation, the TJPA will pay as part of a regular progress payment the actual material cost incurred, up to 40% of the total material cost of the Temporary Steel.
 - d. Upon confirmation from the CM/GC that the Temporary Steel is fully installed and inspected, the TJPA will pay as part of a regular progress payment the actual material cost incurred, up to 25% of the total material cost of the Temporary Steel.
 - e. Any amount paid under this subparagraph 9.03(I)(2) will be credited against the approved Direct Costs under the Contract. Early payment shall not imply acceptance of the Work in general or of the temporary bracing system in particular. Early payment of certain Direct Costs under this subparagraph 9.03(I)(2) shall not affect the total amount of the CM/GC Fixed Fee as provided under Article 5 of the Agreement (Section 00 05 20).
 - f. The Temporary Steel shall not become part of the permanent structure or TJPA property and title shall not ever vest in the TJPA, except possibly in the event of termination under Article 14 of these General Conditions.
 - g. The Temporary Steel shall not include the Shoring Wall Soldier Piles, which material may be subject to paragraph 9.03(I)(1), above.
- J. The granting of any progress payment, or the receipt thereof by CM/GC, shall not constitute acceptance of the Work or any portion thereof and shall in no way lessen the liability of CM/GC 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.
- K. It is mutually understood and agreed that the TJPA may withhold from any payment otherwise due CM/GC such amounts as may be necessary to protect the TJPA to ensure completion of the Project pursuant to the requirements of this Contract. The failure or refusal of the TJPA to withhold any moneys from CM/GC shall in no way impair the obligations of any surety or sureties under any bonds furnished under this Contract.
 - 1. If any payment or portion of payment is withheld by the TJPA, CM/GC will be notified in writing of the cause(s) of such action.
- L. Only Change Orders and undisputed portions of Unilateral Change Orders completely approved and executed by the TJPA shall be included on the payment authorization, and only that portion of the Change Order Work actually performed shall be submitted for payment. CM/GC shall submit a breakdown for each Change Order by Change Order number on its Application for Payment.

- M. Submission of Electronic Certified Payrolls. No monthly progress payments will be processed until CM/GC has submitted weekly certified payrolls to the TJPA 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.
1. CM/GC shall submit certified payrolls to the TJPA electronically via the TJPA-selected Project Reporting System ("PRS"), an Internet-based system accessible on the World Wide Web through a web browser. The CM/GC and each Subcontractor and Supplier will be assigned a log-on identification and password to access the PRS.
 2. Use of the PRS may require CM/GC, Subcontractors and Suppliers to enter data relating to weekly payroll information including, but not limited to, employee identification, labor classification, total hours worked and hours worked on this project, and wage and benefit rates paid. CM/GC's payroll and accounting software may be capable of generating a "comma delimited file" that will interface with the PRS software.
 3. The TJPA will provide basic training in the use of the PRS at a scheduled training session. CM/GC and all Subcontractors and Suppliers and/or their designated representatives must attend the PRS training session.
 4. CM/GC shall comply with the requirements of this subparagraph 9.03M at no additional cost to the TJPA.
 5. The TJPA will not be liable for interest, charges or costs arising out of or relating to any delay in making progress payments due to CM/GC's failure to make a timely and accurate submittal of certified payrolls.

9.04 RETENTION

- A. The TJPA shall hold 10 percent in retention from each progress payment. The TJPA shall administer retention in conformance with Administrative Code section 6.22J.
- B. When the TJPA determines that the Work is 50 percent or more complete, that CM/GC is making satisfactory progress, and that there is no specific cause for greater withholding, the TJPA, at its sole option and discretion and upon the written request of CM/GC, may (a) release part of the retention to the CM/GC so that the amount held in retention by the TJPA, after release to CM/GC, is reduced to not less than 5 percent of the total value of the labor and materials furnished, and the TJPA shall proceed to retain 5 percent of any subsequent progress payment under the contract or (b) continue to hold the already withheld retention amount, up to 5 percent of the total contract price, and shall not deduct further retention from progress payments.
- C. When the TJPA determines that the Work is 98 percent or more complete, the TJPA may reduce retention funds to an amount equal to 200 percent of the estimated value of work yet to be completed, provided that the contract is free of offsets by the TJPA and is free of stop notices, forfeitures, and other charges.
- D. The TJPA shall release the balance of retention only upon the following conditions: (i) the CM/GC has reached Final Completion as provided in paragraph 9.09, below, and (ii) the Contract is free of offsets by the TJPA for liquidated damages and defective work and is free of stop notices, forfeitures, and other charges.
- E. The CM/GC may apply for early release of retention for Work performed by subcontractors. The CM/GC shall make such application in writing and shall certify the following:
 1. That the Work by the subcontractor is completed and satisfactory;
 2. The total final contract amount paid to the subcontractor (excluding retention); and

3. The amount of retention associated with the Work performed by the subcontractor. CM/GC acknowledges and agrees that the release of retention under this subparagraph shall not reduce the responsibilities or liabilities of the CM/GC or its surety(ies) under the Contract or applicable law.

9.05 PAYMENT AUTHORIZATION

- A. The TJPA will, after receipt of CM/GC's Application for Payment, approve such amount as the TJPA determines is properly due.
- B. Payment will be issued by the TJPA based on the TJPA'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 TJPA 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 CM/GC's means, methods, techniques, sequences or procedures of construction; or
 3. ascertained how or for what purpose CM/GC has used money paid, or determined that title to any of the Work, materials, or equipment has passed to the TJPA free and clear of any liens.

9.06 WITHHOLDING PAYMENT; DELAYED PAYMENT AND CM/GC SUSPENSION OF WORK

- A. The TJPA may decide not to authorize payment, in whole or in part, to the extent reasonably necessary to protect itself if, in the TJPA's judgment, the determination required by subparagraph 9.04B cannot be made. If the TJPA does not authorize payment in the amount of the application, the TJPA will notify CM/GC of the reasons for withholding payment. The TJPA may also decline to authorize payment based on subsequently discovered evidence, and the TJPA may nullify the whole or a part of a payment previously issued, for one or more of the following reasons:
 1. The TJPA determines the existence of Non-conforming Work or completed Work that has been damaged, requiring correction or replacement.
 2. Third party claims have been filed, or there is reasonable evidence indicating probable filing of such claims.
 3. The TJPA determines that the Work cannot be completed for the unpaid balance of the Contract Sum.
 4. The Contract Sum has been reduced by Change Orders.
 5. Damage has occurred to the TJPA or another CM/GC.
 6. The TJPA determines that the Work will not be completed within the Contract Time and that the current unpaid balance and retention will not be adequate to cover liquidated damages for the anticipated delay.
 7. The TJPA determines that CM/GC persistently fails to perform the Work in accordance with the Contract Documents (including, but not limited to, any of the causes enumerated under subparagraph 14.01A).
 8. The TJPA determines that CM/GC fails to submit timely PCO cost proposal breakdowns in accordance with the Contract Documents.
 9. The TJPA determines that CM/GC fails to submit timely progress schedules, revised schedules, schedule updates and reports in accordance with the Contract Documents.
 10. The TJPA determines that CM/GC fails to maintain timely updated Contract Documents or record documents.
 11. The TJPA determines that CM/GC fails to submit certified payroll records in accordance with the Contract Documents.
 12. The TJPA determines that CM/GC fails to comply with any other requirements of the Contract Documents.
- B. In the event that, due to no fault of the CM/GC, the TJPA fails to issue an undisputed progress payment within the time provided in the Agreement (Section 00 05 20, Article 5), the CM/GC may upon 15 days' written notice to the TJPA suspend Work until TJPA issues the undisputed progress payment. The CM/GC may submit a Change Order Request under Article 6 of these General Conditions for actual, documented costs associated with the suspension. The CM/GC may also submit a Notice of Delay and

seek an Extension of Time for the suspension period as provided under Article 7 of these General Conditions.

9.07 PARTIAL UTILIZATION

- A. Whenever the Work, or any part thereof, is in a condition suitable for use in the opinion of the TJPA, and the best interest of the TJPA requires such use, the TJPA may make a written request for CM/GC to permit the TJPA to take possession of and use the Work, or a part thereof, at no additional cost to the TJPA. When so used, maintenance and repair due to ordinary wear and tear caused by the TJPA will be made at the TJPA's expense. The use by the TJPA of the Work or part thereof shall in no case be construed as constituting completion or acceptance of Non-conforming Work. Unless otherwise provided elsewhere in the Contract Documents, such use shall neither relieve CM/GC of any of its responsibilities under the Contract, nor act as a waiver by the TJPA of any of the conditions thereof.
- B. Such partial utilization may commence at any time as determined by the TJPA, except that the insurers providing property insurance shall have acknowledged notice thereof and in writing effected any changes in insurance coverage necessitated thereby.
- C. If CM/GC agrees that such part of the Work is Substantially Complete, CM/GC shall notify the TJPA in writing and request a joint inspection of that part of the Work. Within 7 days from receipt of CM/GC's written notification, CM/GC and the TJPA shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record its status of completion.
- D. Partial utilization of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.
- E. CM/GC shall perform final cleaning of such partially utilized Work as specified in the Division 1 when directed to do so by the TJPA.

9.08 SUBSTANTIAL COMPLETION

- A. CM/GC shall notify the TJPA in writing when CM/GC considers that the Work is Substantially Complete and request that the TJPA inspect the Work and prepare a Notice of Substantial Completion. Completion of start-up services and submittal of warranties, guarantees, and record documents shall be a condition precedent to requesting an inspection for Substantial Completion. Attached to CM/GC's request for a Substantial Completion inspection shall be a preliminary list of items to be completed or corrected before Final Completion.
- B. Within 2 working days from receipt of CM/GC's written notification, the TJPA will make an inspection to determine whether the Work is Substantially Complete. If the TJPA determines that the Work is not Substantially Complete, the TJPA will provide CM/GC with a Deficiency List that lists all Items that shall be corrected or completed before the TJPA considers the Work Substantially Complete.
- C. Once CM/GC has completed all items on the Deficiency List, CM/GC shall request a second inspection by the TJPA to verify that the Work is Substantially Complete. If the TJPA determines that the Work is not Substantially Complete, the TJPA will follow the same procedure as for the first inspection as described in subparagraph 9.07B. CM/GC shall reimburse the TJPA for costs incurred by the TJPA and its consultants related to all additional inspections necessary to achieve Substantial Completion.
- D. As a condition precedent to Substantial Completion, CM/GC shall obtain a temporary certificate of occupancy from the TJPA's Department of Building Inspection or other equivalent agency having jurisdiction over the Work in the event that such temporary occupancy permit or equivalent permit is necessary for the TJPA to utilize the Work for the purposes for which it is intended.
- E. When the TJPA determines that the Work is Substantially Complete, the TJPA will issue a Notice of Substantial Completion, which shall establish the Substantial Completion date.

- F. At the time of delivery of the Notice of Substantial Completion, the TJPA will deliver to CM/GC (i) a Completion List identifying deficient items to be corrected by CM/GC 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 CM/GC considers all Work complete, including all items of Work on the punch list and all closeout requirements, CM/GC shall notify the TJPA in writing and request that the TJPA issue a certificate of acceptance.
- B. Within 5 working days of receipt of CM/GC's written notice, the TJPA will verify whether all Completion List items are completed. If the TJPA finds that any of the Completion List items are not complete, the TJPA will notify CM/GC in writing. CM/GC shall promptly take actions necessary to complete such Completion List items.
- C. Once CM/GC considers complete all items on the Completion List, CM/GC shall notify the TJPA in writing and request a second inspection. If the TJPA finds the Completion List items are still not complete, CM/GC shall be responsible for all costs for conducting such additional inspections incurred by the TJPA 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 the CM/GC's failure to achieve Final Completion within the time prescribed in Section 00 05 20, as may be modified by change order under the terms and conditions of the Contract Documents. All such costs of the TJPA and its consultants shall be deducted from amounts which are due or become due to CM/GC.
- D. While Completion List work is outstanding, the TJPA may, at its option, pay CM/GC any earned Contract funds, including retention, subject to offset for the following: (i) funds subject to forfeiture or withholding for prevailing wage violations 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 CM/GC has completed to the satisfaction of the TJPA all Completion List items and close-out requirements in accordance with the Contract Documents, the TJPA 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 CM/GC may submit the final application for payment. TJPA shall endeavor to issue the final payment within 35 days after approval of the final application.
- F. CM/GC and each assignee under any assignment in effect at the time of final payment shall, if required by the TJPA, execute and deliver at the time of final payment, as a condition precedent to final payment, a release in form and substance satisfactory to, and containing such exemptions as may be found appropriate by the TJPA, discharging the TJPA and the TJPA'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. CM/GC shall purchase and maintain in force throughout the Contract Time such liability and other insurance as provided in Section 00 08 05.

10.02 PERFORMANCE BOND AND PAYMENT BOND

- A. CM/GC shall purchase and maintain corporate surety Performance and Payment Bonds, each in a sum not less than \$600,000,000, in a form acceptable to the TJPA (Contract Document Section 00 06 10), as provided in the Agreement (Section 00 05 20), Article 9.
- B. Said Performance Bond shall cover all corrective Work required during the correction period pursuant to Paragraph 8.04, all warranty and maintenance Work required by the Contract Documents, and any and all Work required to correct latent defects.
- C. Corporate sureties issuing these bonds and Bid bonds shall be legally authorized to engage in the business of furnishing surety bonds in the State of California. All sureties shall have a current A.M. Best Rating not less than "A-, VIII" and shall be satisfactory to the TJPA.

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 6.22E and 6.22F of the San Francisco Administrative Code are incorporated as provisions of the Contract Documents including, but not limited to, the following:
 - 1. CM/GC shall pay to all persons performing labor in and about the Work not less than the highest general prevailing rate of wages determined as set forth herein for the respective crafts and employments, including such wages for holiday and overtime work.
 - 2. CM/GC shall insert in every subcontract or other arrangement, which it may make for the performance of any Work or labor on the Work, a provision that said Subcontractor shall pay to all persons performing labor or rendering service under said subcontract or other arrangement the highest general prevailing rate of wages determined as set forth herein for the respective crafts and employments, including such wages for holiday and overtime work.
 - 3. CM/GC shall keep or cause to be kept an accurate record showing the name, place or residence, occupation, and per diem pay, of each person engaged in the execution of the Work, and every subcontractor who shall undertake the performance of any part of the Work herein required shall keep a like record of each person engaged in the execution of the subcontract. All such records shall at all times be available for inspection of and examination by the TJPA and its authorized representatives.
 - 4. Should CM/GC, or any Subcontractor who shall undertake the performance of any part of the Work herein required, fail or neglect to pay to the persons who shall perform labor under this Contract, subcontract or other arrangement for the Work, the highest general prevailing rate of wages as herein specified, CM/GC shall forfeit, and in the case of any Subcontractor so failing or neglecting to pay said wage, CM/GC and the Subcontractor shall jointly and severally forfeit, to the TJPA back wages due plus the penal sum of \$50 per day for each laborer, worker or mechanic employed for each calendar day or portion thereof, while they shall be so employed and not paid the highest general prevailing rate of wages. The TJPA, when certifying any payment which may become due under the terms of the Contract, shall deduct from the amount that would otherwise be due on such payment the amount of said forfeiture or forfeitures as so certified.
 - 5. No person performing labor or rendering service in the performance of the Contract or a subcontract for the Work herein required shall perform labor for a longer period than five days (Monday-Friday) per calendar week of eight hours each (with two 10-minute breaks per eight-hour day), except in those crafts in which a different work day or week now prevails by agreement in private employment. Any person working hours in addition to the above shall be compensated in accordance with the prevailing overtime standard and rates. CM/GC or any Subcontractor who violates this provision shall forfeit to the TJPA back wages due plus the penal sum of \$50 per day for each laborer, mechanic or artisan employed for each calendar day or portion thereof whereon such

laborer, mechanic or artisan is compelled or permitted to work more than the days and hours specified herein.

- C. A copy of the most current highest general prevailing wage rates will be posted at the Site by the TJPA, and such highest prevailing wage rate determinations made at the time of the advertisement for Bids are hereby incorporated as part of the Contract Documents. No adjustments in the Contract Sum will be allowed for increases or decreases in prevailing wage rates that may occur during the Contract Time.
1. Copies of the prevailing wage rates are available from the contracting department, and are also available on the Internet at <http://www.dir.ca.gov/DLSR/PWD>.
 2. Payments to a craft or classification not shown on the prevailing rate determinations shall comply with the rate of the craft or classification most closely related to it. Contact the California Division of Labor Statistics and Research, Prevailing Wage Unit at telephone (415) 972-8628 for job classifications not listed in the General Prevailing Wage Determinations of the Director of Industrial Relations.

11.02 PAYROLLS

- A. Certification of Payroll Records: CM/GC shall comply with the requirements of section 1776 of the California Labor Code, or as amended from time to time, regarding the keeping, filing and furnishing of certified copies of payroll records of wages paid to its employees and to the employees of its Subcontractors of all tiers.
1. The payroll records shall be certified and shall be submitted electronically to the TJPA as set forth in Paragraph 9.03M. In addition, CM/GC shall make the payroll records available for inspection at all reasonable hours at the job site office of CM/GC 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 TJPA 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 the TJPA, 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 CM/GC.
 - d. CM/GC 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. Any copy of payroll records made available for inspection as copies and furnished upon request to the public or any public agency by the TJPA, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement shall be marked or obliterated in such a manner as to prevent disclosure of an individual's name, address and social security number. The name and address of CM/GC shall not be marked or obliterated.
 3. CM/GC shall inform the TJPA 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 CM/GC receives a written notification of noncompliance with section 1776, CM/GC shall have 10 days from receipt of such written notice to comply. Should noncompliance still be evident after such 10-day period, CM/GC shall, as a penalty to the TJPA, forfeit \$25 for each day, or a portion thereof, of non-compliance, for each worker, until strict compliance is effected. 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. CM/GC is solely responsible for compliance with section 1776. The TJPA shall not be liable for CM/GC's failure to make timely or accurate submittals of certified payrolls.

11.03 APPRENTICES

- A. CM/GC and its Subcontractors of every tier shall, as a material term of the Contract, comply with the requirements of the State Apprenticeship Program (as set forth in the California Labor Code, division 3, chapter 4 [commencing at section 3070], and section 1777.5) and San Francisco Administrative Code, section 6.21(O). CM/GC shall be solely responsible for securing compliance with section 1777.5 for all apprenticeable occupations.
 - 1. CM/GC shall comply with all requests by the TJPA to provide proof that CM/GC and all of its Subcontractors at every tier are in compliance with the State Apprenticeship Program.
 - 2. CM/GC shall include in all of its subcontracts the obligation for Subcontractors to comply with the requirements of the State Apprenticeship Program.
 - 3. Section 1777.5 shall not apply to contracts of general CM/GCs involving less than thirty thousand dollars (\$30,000) and less than twenty working days, or to contracts of specialty CM/GCs not bidding for work through a general or prime CM/GC, involving less than two thousand dollars (\$2,000) or fewer than five working days.
- B. Should CM/GC fail to comply with the apprenticeship requirements of section 1777.5, CM/GC shall be subject to the penalties prescribed in section 1777.7 of the California Labor Code. The interpretation and enforcement of section 1777.5 shall be in accordance with rules and procedures prescribed by the California Apprenticeship Council.
- C. CM/GC, if not signatory to a recognized apprenticeship training program under chapter 4 of the California Labor Code, shall provide to the TJPA with all progress payment requests, starting with the second such request, satisfactory evidence that it has contributed to the appropriate apprenticeship fund(s). CM/GC shall require its Subcontractors who are not signatories to provide such evidence to the TJPA as a condition precedent for qualifying for payment from the TJPA. The TJPA reserves the right to demand such evidence upon request.
- D. Under California Public Contract Code section 6109, CM/GC 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 CM/GC 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. CM/GC shall return to the TJPA any public money that may have been paid to a debarred subcontractor by CM/GC.
 - 3. CM/GC shall be responsible for the payment of wages to workers of a debarred subcontractor that has been allowed to work on the Project.

11.04 LABOR STANDARDS ENFORCEMENT

- A. In accordance with Administrative Code section 6.22(E)(7) and section 6.24, CM/GC further acknowledges and agrees as follows:
 - 1. CM/GC will cooperate fully with the Labor Standards Enforcement Officer and other TJPA employees and agents authorized to assist in the administration and enforcement of the prevailing wage requirements and other labor standards imposed on public works CM/GCs by the Charter and Chapter 6 of the San Francisco Administrative Code.
 - 2. CM/GC agrees that 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 CM/GC, employee time sheets, inspection logs, payroll records and employee paychecks.
 - 3. CM/GC shall maintain a sign-in and sign-out sheet showing which employees are present on the job site.
 - 4. CM/GC shall prominently post at each job-site a sign informing employees that the project is subject to the TJPA's prevailing wage requirements and that these requirements are enforced by the Labor Standards Enforcement Officer.

5. The Labor Standards Enforcement Officer may audit such records of CM/GC as he or she reasonably deems necessary to determine compliance with the prevailing wage and other labor standards imposed by the Charter and this Chapter on public works CM/GCs.

ARTICLE 12 - SAFETY

12.01 PRECAUTIONS AND PROGRAMS

- A. CM/GC shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. CM/GC shall be solely responsible for any and all fines, penalties or damages which result from CM/GC's failure to comply with applicable health and safety laws and regulations during performance of the Work.
- B. CM/GC shall designate in writing a responsible competent person of CM/GC'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 report directly to the CM/GC's Project Executive and shall be available 24 hours a day, 7 days a week by telephone or other approved means.
- C. In the event CM/GC encounters on the Site material not indicated on the plans or specifications to be hazardous and not part of a specified hazardous materials scope of Work, but which CM/GC believes to be hazardous (hazmat) that may present a substantial danger to persons or property exposed thereto in connection with the Work, CM/GC shall promptly stop Work in the area affected and, before disturbing the conditions believed to be hazardous, notify the TJPA in writing in accordance with the requirements of Paragraph 3.05. The TJPA shall, in consultation with the CM/GC, and through the use of appropriately licensed and/or certified professionals, confirm the existence of hazardous materials and mitigate the hazardous condition. The TJPA may perform such measures either through agreement with the CM/GC or by separate contract. The Work in the affected area shall not be resumed thereafter except by written notification of the TJPA or as mutually agreed between the TJPA and the CM/GC.
- D. CM/GC shall perform all Work relating to hazardous materials as required by the Contract Documents.
 1. Should hazardous materials be encountered that were not indicated in the Contract Documents and not contemplated to be part of the Work at the time that Bids were received, CM/GC shall be given an adjustment in the Contract Sum and Contract Time as specified in Paragraph 3.05.

12.02 PERSONS AND PROPERTY

- A. CM/GC 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. CM/GC 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. CM/GC 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 CM/GC'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, CM/GC shall maintain them as long as necessary for the proper conduct of the Work.

- D. CM/GC shall not hinder or interfere with an owner or agency having underground facilities and utilities when removing, relocating, or otherwise protecting such facilities.
- E. CM/GC 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 CM/GC's operations.
- F. CM/GC 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. CM/GC 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 CM/GC, its Subcontractors or Lower-Tier Subcontractors, CM/GC shall promptly remedy such damage or loss, except such damage or loss attributable to the sole negligent acts or omissions of the TJPA. The foregoing obligations of CM/GC are in addition to CM/GC's obligations under Paragraph 3.21 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 CM/GC has received acceptance from the TJPA of CM/GC's detailed plan for worker protection from the hazards of caving ground during excavation of such trenches. CM/GC'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 CM/GC'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 CM/GC who is registered as a civil or structural engineer in the State of California. The TJPA's acceptance of CM/GC's shoring plan shall not be construed to relieve CM/GC of its sole responsibility for damage or injuries related to the excavation resulting from unsafe shoring.
- J. CM/GC 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 TJPA or separate CM/GCs 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 CM/GC and damage or defects result, CM/GC shall make the whole Work affected good to the satisfaction of the TJPA and without expense to the TJPA.

12.03 SAFETY PERMITS

- A. A California industrial safety permit shall be obtained and paid for by CM/GC as a reimbursable expense 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. CM/GC shall obtain and pay for all other required safety permits as a reimbursable expense.

12.04 EMERGENCIES

- A. In emergencies affecting the safety or protection of persons or property at the Site, CM/GC shall act promptly to prevent threatened damage, injury or loss. CM/GC shall give prompt written notice to the TJPA if CM/GC 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 TJPA determines that a change in the Contract Documents is required because of action taken by CM/GC in response to such an emergency, a Change Order or Unilateral Change Order will be issued as provided in Article 6.

ARTICLE 13 - PARTNERING AND CLAIMS

13.01 PARTNERING

- A. The TJPA intends to encourage the foundation of a cooperative and cohesive partnership with CM/GC, its subcontractors and suppliers, and the TJPA's representatives and consultants. This cooperative partnership, if accepted by CM/GC and the TJPA as described in subparagraph 13.01B, will be structured to draw on the strengths of each participant to identify and achieve mutual and reciprocal goals, including resolution of disputes in a timely, equitable, professional and non-adversarial manner, the establishment of an integrated, high-performance project team, and project metrics for all participants. The objective of the partnership shall be the successful completion of the Project
- B. The partnership will be voluntary, subject to mutual acceptance of CM/GC, its Subcontractors and Suppliers and the TJPA and its consultants. CM/GC and the TJPA shall meet within 30 days after the date of the Notice to Proceed to decide whether to enter into partnering on the Project, and if agreeable to all parties, to determine how the participants will share the responsibilities and obligations for the partnership. Fees and expenses associated with the partnership arrangement shall be shared equally by the TJPA and CM/GC.
- C. CM/GC is not obligated to enter into partnering. There will be no penalties of any kind imposed should CM/GC not agree to use partnering.
- D. Partnering shall not alter the legal rights and obligations of CM/GC or the TJPA under the Contract.

13.02 CLAIMS

- A. Notice of Potential Claim: If, during the course of the Project, the CM/GC disputes any directive, determination (including determination of delay), Proposed Change Order, Unilateral Change Order, payment, or other act by the TJPA impacting or potentially impacting the performance of the Work (collectively, "potential claim events"), the CM/GC shall submit to the TJPA a Notice of Potential Claim. The CM/GC shall submit such Notice within 10 days of the potential claim event. The Notice shall describe the potential claim event, provide a good faith estimate of any impact, and reference any relevant provisions of the Contract Documents and any schedules with sufficient specificity for the TJPA to review the matter. Failure to submit a timely, properly documented Notice of Potential Claim shall constitute a waiver of any claim arising out of such potential claim event.
 - 1. The requirements of subparagraph 13.02A, above, apply regardless of whether or not the disputed item underlying a potential claim event has been or will be submitted to a Dispute Review Board or Dispute Resolution Advisor for resolution.
- B. Contract Claim: No later than 45 days after submitting a timely Notice of Potential Claim to the TJPA in accordance with subparagraph 13.02A, CM/GC may submit a Contract Claim for additional compensation or time based on any disputed item (i) respecting the true value of any Work performed or any changes in the Work which CM/GC may be required to perform; and/or (ii) regarding time extensions; and/or (iii) respecting the amount of payment to CM/GC during the performance of the Contract; and/or (iv) regarding the performance of obligations by any party. The Contract Claim shall be the CM/GC'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 CM/GC as to any claim relating to its performance of the Work under the Contract and a failure to exhaust its administrative remedies.

C. Certification Requirement:

1. CM/GC, under penalty of perjury, shall submit with the Contract Claim certification by CM/GC 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 CM/GC's and/or Subcontractor's knowledge and belief; and
 - c. the amount requested accurately reflects the Contract adjustment for which CM/GC believes the TJPA is liable.
2. An individual or officer who is authorized to act on CM/GC's behalf shall execute the certification.
3. In regard to a Claim or portion of a Claim by a Subcontractor, CM/GC 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 CM/GC would certify its own claim under the foregoing subparagraph (1). The TJPA will not consider a direct claim by any Subcontractor. Subcontractors at any tier are not third-party beneficiaries of this Contract.
4. CM/GC hereby agrees that failure to furnish certification as required in this Article shall constitute a waiver by the CM/GC as to the subject Claim.
5. CM/GC further acknowledges and agrees that if it submits a false claim, on behalf of itself or a Subcontractor, CM/GC may be subject to civil penalties, damages, debarment, and criminal prosecution in accordance with local, state, and federal statutes.

D. Format of a Contract Claim:

1. The CM/GC 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 and BIM data
 - 3) Clarifications/RFIs
 - 4) Correspondence
 - 4) Schedules
 - 5) 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 and BIM data
 - 3) Clarifications/RFIs
 - 4) Correspondence
 - 5) Schedules
 - 6) Other

E. Additional Requirements for Contract Claims Regarding Time Extensions:

1. All Contract Claims regarding time extensions shall include, in addition to all other applicable requirements of this Paragraph 13.02, 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 CM/GC's baseline or "as-planned" CPM schedule (as approved by the TJPA) with the actual dates for the same activities, and then (2) determining the longest path through the as-built schedule using the CM/GC'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). See also Division 1 Schedule Specification.

2. The TJPA 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.

F. Procedure For Review of a Contract Claim:

1. The TJPA shall review only a timely, certified, and properly documented Contract Claim.
2. The TJPA shall respond to a Contract Claim in writing, within 45 days of receipt of such Claim. In its response, the TJPA shall either grant or deny the Claim in whole or in part. If the TJPA 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 TJPA's response or expiration of the 45-day period, whichever is earlier, the CM/GC may request review of the Contract Claim and the TJPA's response by the Executive Director. The request must be in writing, directed to the Executive Director and copied to the Resident Engineer. Failure by the CM/GC to make a timely request to the Executive Director, copied to the Resident Engineer, shall constitute acceptance by the CM/GC of the TJPA's original response.
4. Upon a timely and proper request, the Executive Director, or his/her designee (other than personnel assigned to the Project), shall review the relevant documents, meet with the CM/GC and TJPA personnel assigned to the Project, and confirm or revise the TJPA's response to the Contract Claim. The Executive Director, or his/her designee, shall issue such determination within 60 days of the date of the request for review. The determination by the Executive Director, or his/her designee, shall constitute the final administrative determination of the TJPA. If the Executive Director takes no action on a request for review within the 60-day period, the TJPA's original response shall constitute the final administrative determination by the TJPA.

- G. Government Code Claim: The administrative procedure under this Article shall not operate to toll, waive, or excuse CM/GC's compliance with the Government Code Claim requirements under California Government Code section 900, *et seq.*, and San Francisco Administrative Code Chapter 10. For the purposes of this Contract, the TJPA and the CM/GC hereby agree that any action at law against the TJPA arising out of or relating to CM/GC's performance of the Work shall accrue on the date of Substantial Completion.

ARTICLE 14 - TERMINATION OR SUSPENSION OF THE CONTRACT

14.01 NOTICE OF DEFAULT; TERMINATION BY THE TJPA FOR CAUSE

A. Grounds for Default. CM/GC is in Default of the Contract if CM/GC:

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 TJPA 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 TJPA may, without prejudice to any other rights or remedies that the TJPA may have, issue a written Notice of Default to the CM/GC. The TJPA shall provide a copy of any Notice of Default to the CM/GC's surety.

1. The Notice of Default shall identify the ground(s) for Default and provide the CM/GC 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 CM/GC or its subcontractors/suppliers, CM/GC shall, within the 14-day cure period, (i) provide the TJPA with a schedule, acceptable to the TJPA, for completing the corrective Work and/or actions; and (ii) commence diligently the corrective Work and/or actions. The TJPA, after accepting CM/GC's proposed schedule, will amend the Notice of Default in writing to set forth the agreed-upon cure period. The TJPA will provide a copy of the amended Notice of Default to the CM/GC's surety.
- C. Termination for Cause. If CM/GC 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 TJPA may, without prejudice to any other rights or remedies that the TJPA may have, immediately terminate employment of CM/GC 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 CM/GC to complete the Project;
 2. accept assignment of subcontracts and agreements pursuant to Paragraph 4.03; and
 3. finish the Work by whatever reasonable method the TJPA may deem expedient.
- D. When the TJPA terminates the Contract for one of the grounds set forth in subparagraph 14.01A, CM/GC 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 CM/GC. If such costs exceed the unpaid balance, CM/GC shall pay the difference to the TJPA. The amount to be paid to CM/GC or TJPA, 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, CM/GC 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 CM/GC shall have no claim on account of usual and ordinary depreciation, loss, wear and tear.
- E. If the TJPA terminates the Contract for cause, and it is later determined that none of the grounds set forth in Paragraph 14.01A exist, then such termination shall be deemed a termination for convenience pursuant to Paragraph 14.03.

14.02 SUSPENSION BY THE TJPA FOR CONVENIENCE

- A. The TJPA may, without cause, order CM/GC in writing to suspend, delay or interrupt the Work in whole or in part for such period of time as the TJPA may determine.
- B. An adjustment shall be made as specified in subparagraph 7.02A for increases in the cost of performance of the Contract caused by suspension, delay or interruption. No adjustment shall be made to the extent:
 1. that performance is, was or would have been so suspended, delayed or interrupted by another cause for which CM/GC is responsible; or
 2. that an equitable adjustment is denied under another provision of this Contract.
- C. In the event that a suspension of the Work exceeds a period of six months from the date the TJPA ordered such suspension, the CM/GC may, upon ten days' notice to the TJPA, treat the suspension as a Termination For Convenience by the TJPA under this Article 14. In such event, the effective date for the Termination For Convenience shall be the date of the CM/GC's notice under this subparagraph.

14.03 TERMINATION BY THE TJPA FOR CONVENIENCE

- A. Pursuant to section 6.22L of the San Francisco Administrative Code the TJPA may terminate the performance of Work under this Contract in accordance with this Paragraph 14.03 in whole or, from time to time, in part, whenever the TJPA shall determine that such termination is in the best interest of the TJPA. Any such termination shall be effected by delivery to CM/GC 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, and except as otherwise directed by the TJPA, CM/GC shall comply with all of the following requirements.
1. Stop Work under the Contract on the date and to the extent specified in the notice of termination.
 2. Place no further orders or subcontracts for materials, services, or facilities except as necessary to complete the portion of the Work under the Contract that is not terminated.
 3. Terminate all orders and subcontracts to the extent that they relate to the performance of Work terminated by the notice of termination.
 4. At the TJPA's sole discretion, option, and direction, the CM/GC shall assign to the TJPA or to any third-party designated by the TJPA, any or all subcontracts for any aspect of the Project (whether related to Pre-Construction or Construction Services) and turn over all records, documents, or work product developed or prepared under the Contract Documents, in all existing formats (electronic and paper), regardless of whether such record, document, or work product had been previously submitted to the TJPA or its consultants.
 5. Assign to the TJPA, in the manner, at the times, and to the extent directed by the TJPA, all of the right, title, and interest of CM/GC under the orders and subcontracts so terminated. The TJPA shall have the right, at its discretion, to settle or pay any or all Claims arising out of the termination of such orders and subcontracts.
 6. Settle all outstanding liabilities and all Claims arising out of such termination of orders and subcontracts with the approval or ratification of the TJPA, in writing, to the extent it may require. The TJPA's approval or ratification shall be final for all the purposes of this Paragraph 14.03.
 7. Transfer title to the TJPA, and deliver in the manner, at the times, and to the extent, if any, directed by the TJPA, (i) the fabricated or unfabricated parts, Work in process, completed Work, supplies, and other material produced as a part of, or acquired in connection with the performance of, the Work terminated by the notice of termination, and (ii) the completed or partially completed drawings, information, and other property which, if the Contract had been completed, would have been required to be furnished to the TJPA.
 8. Use its best efforts to sell, in the manner, at the times, to the extent, and at the price or prices that the TJPA directs or authorizes, any property of the types previously referred to herein, but CM/GC (i) shall not be required to extend credit to any purchaser, and (ii) may acquire any such property under the conditions prescribed and at a price or prices approved by the TJPA. The proceeds of any such transfer or disposition shall be applied in reduction of any payments to be made by the TJPA to CM/GC under this Contract or shall otherwise be credited to the price or cost of the Work covered by this Contract or paid in such other manner as the TJPA may direct.
 9. Complete performance of such part of the Work as shall not have been terminated by the notice of termination.
 10. Take such action as may be necessary, or as the TJPA may direct, for the protection and preservation of the property related to this Contract which is in the possession of CM/GC and in which the TJPA has or may acquire an interest.
- C. After receipt of a notice of termination, CM/GC shall submit to the TJPA its termination claim, in the form and with the certification the TJPA 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 TJPA upon written request of CM/GC within such 3-month period or an authorized extension period. However, if the TJPA 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 CM/GC fails to submit its termination Claim within the time allowed, the TJPA may determine, on the basis of information available to the TJPA, the amount, if any, due to CM/GC because of the termination. The TJPA shall then pay to CM/GC the amount so determined.
- D. Subject to the previous provisions of this Paragraph 14.03, CM/GC and the TJPA may agree upon the whole or any part of the amount or amounts to be paid to CM/GC 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 CM/GC shall be paid the agreed amount. Nothing following, prescribing the amount to be paid to CM/GC in the event of failure of CM/GC and the TJPA to agree upon the whole amount to be paid to CM/GC because of the termination of Work under this Paragraph 14.03, shall be deemed to limit, restrict, or otherwise determine or affect the amount or amounts which may be agreed upon to be paid to CM/GC pursuant to this subparagraph 14.03D.

- E. If CM/GC and the TJPA fail to agree, as subparagraph 14.03D provides, on the whole amount to be paid to CM/GC because of the termination of Work under Paragraph 14.03, the TJPA shall determine, on the basis of information available to the TJPA, the amount, if any, due to CM/GC by reason of the termination and shall pay to CM/GC 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 CM/GC 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 14.03D, that the TJPA determines to be fair and reasonable. But, if it appears that CM/GC 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 CM/GC 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 TJPA shall have otherwise expressly assumed the risk of loss, there shall be excluded from the amounts payable to CM/GC the fair value, as determined by the TJPA, of property which is destroyed, lost, stolen, or damaged, to the extent that it is undeliverable to the TJPA, or to a buyer as previously provided.
- F. CM/GC shall have the right to dispute in a court of competent jurisdiction within the State of California any determination the TJPA makes under subparagraph 14.03E. But, if CM/GC 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 TJPA's determination. In any case where the TJPA has determined the amount owed, the TJPA shall pay to CM/GC 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 TJPA; 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.
- G. In arriving at the amount due CM/GC under this clause there shall be deducted:
1. all unliquidated advance or other payments on account theretofore made to CM/GC, applicable to the terminated portion of this Contract;
 2. any Claim which the TJPA may have against CM/GC 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 CM/GC or sold, under the provisions of this Paragraph 14.03, and not otherwise recovered by or credited to the TJPA.
- H. If the termination hereunder be partial, before the settlement of the terminated portion of this Contract, CM/GC may file with the TJPA 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 TJPA and CM/GC 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.

- I. CM/GC 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.

END OF SECTION

SPECIFICATION ISSUE LOG

Revision	Issue	Date
0	Issued for Bid: TG03, TG4.5.1, TG19.1 08-04-CMGC-000 Conformed Volume One	July 30, 2010
1	TG03 Addendum 6	October 29, 2010
2	Field Order: 08-04-CMGC-000-WO-001	December 13, 2010

SECTION 00 08 05 – INSURANCE REQUIREMENTS

1.1 SUMMARY

This section includes insurance requirements, which supplement Article 11 of the General Conditions.

The CM/GC or “Contractor” shall maintain the insurance coverages as required in this Section 00 08 05. The TJPA will not participate in or fund any OCIP or CCIP coverage plan.

1.2 CONTRACTOR’S LIABILITY INSURANCE

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:

- A. Workers’ Compensation in the statutory amount, including Employers’ Liability coverage with limits not less than \$1,000,000 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.
- B. Commercial General Liability insurance with limits not less than \$25,000,000 each occurrence combined single limit for bodily injury and property damage, including coverage for Contractual Liability, independent contractors, Explosion, Collapse (XCU), and Underground, Personal Injury, Broadform Property Damages, and completed operations.
- C. Commercial Automobile Liability insurance with limits not less than \$1,000,000 each occurrence combined single limit for bodily injury and property damage, including owned, hired or non-owned vehicles, as applicable.

1.3 ADDITIONAL COVERAGES

Contractor shall also maintain in full force and effect, for the period covered by the Contract, the following minimum specified coverages:

- A. Builder’s Risk Insurance: Contractor shall purchase and maintain in force, throughout the term of this Contract, Builder’s Risk insurance on an all-risk form, excluding earthquake and flood, for 100% of the completed value of the Work with any deductible not to exceed \$25,000, which deductible shall be the responsibility of Contractor including coverage of at least \$50,000 for debris removal. Such policy shall include as named insureds and be made payable to Contractor, to its subcontractors and suppliers of all tiers, and to the City and to the TJPA and other parties listed in paragraph 1.4 below, as their interest may appear. In the event of damage, except by earthquake and flood, it shall be Contractor’s responsibility to perform at its expense all required repair and replacement at no cost to the TJPA. Contractor shall provide Builder’s Risk Insurance for earthquake and flood in conformance with Public Contract Code section 7105, in the amount of 5 percent of the total Contract Sum, such coverage shall be the limit of the Contractor's liability for damage caused by earthquake or flood.
- B. Professional Liability Insurance: In the event that Contractor employs professional engineer(s) or land surveyor(s) for performing preconstruction services or field engineering, or ~~for~~ preparing design calculations, plans and specifications, Contractor shall carry or shall require its retained engineers and land surveyors to carry professional liability insurance with limits not less than \$2,000,000 each claim with respect to negligent acts, errors, or omissions in connection with professional services to be provided under this Contract, with any deductible not to exceed \$50,000 each claim. Depending on the scope of work necessitating design professional services, the TJPA and the CM/GC shall confer to determine higher limits or deductible as appropriate to the nature of the services to be provided.

- C. Environmental Pollution Liability Insurance: Contractor, or its subcontractors, who perform abatement of hazardous or contaminated materials removal shall maintain in force, through the term of this Contract, contractor's pollution liability insurance with limits not less than \$5,000,000 each occurrence combined single limit (true occurrence form), including coverages for onsite or offsite third-party claims for bodily injury and property damage.

1.4 INSURANCE FOR OTHERS

For general liability, environmental pollution liability, automobile liability, and builder's risk insurance, Contractor shall include as additional insured the TJPA, its board members and commissions, and all authorized agents and representatives, and members, directors, officers, trustees, agents, and employees of any of them.

1.5 FORMS OF POLICIES AND OTHER INSURANCE REQUIREMENTS

- A. Workers' Compensation Insurance shall be submitted to the TJPA before the commencement of any of the Work on the Site.
- B. Before commencement of the Work of this Contract, certificates of insurance in form and with insurers acceptable to the TJPA, evidencing all required insurance and with proper endorsements from Contractor's insurance carrier identifying as additional insureds the parties indicated under paragraph 1.4 above, shall be furnished to the TJPA, with complete copies of policies to be furnished to the TJPA promptly upon request. Contractor will be allowed a maximum of 10 working days, after the date on which the Contract is awarded, in which to deliver appropriate bond and insurance certificates and endorsements.
- C. Approval of the insurance by the TJPA 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 TJPA.
- D. Contractor and its subcontractors shall comply with the provisions of California Labor Code section 3700. Prior to commencing the performance of work, 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.
- E. Liability insurance, except 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.
- F. 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.
- G. 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 of 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.

- H. Each such policy shall provide that no cancellation or non-renewal shall occur without the carrier giving to the TJPA at least 30 days' written notice prior thereto. All notices shall be made to

Transbay Joint Powers Authority
201 Mission St., Suite 2100
San Francisco, CA 94105

- I. Contractor, upon notification of receipt by the TJPA of any such notice, shall file with the TJPA 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 new or renewed policy.
- J. 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 TJPA's sole option, be discontinued immediately, and all Contract payments due or that become due will be withheld until notice is received by the TJPA as provided in the preceding paragraph 1.5G 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 TJPA.
- K. Any failure to maintain any item of the required insurance may, at TJPA's sole option, be sufficient cause for termination for default of this Contract.

1.6 QUALIFICATIONS

Contractor must provide coverage from insurance companies who 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 TJPA.

END OF SECTION 00 08 05

SPECIFICATION ISSUE LOG

Revision	Date
0	July 30, 2010
1	August 25, 2010

SECTION 00 08 07 – CADD DOCUMENT LIABILITY WAIVER AND RELEASE

1.1 SUMMARY

The TJPA may issue to Contractor computer-aided design document (CADD) files, prepared for the TJPA for the Work of the Project, in electronic format for the limited purpose of facilitating the Contractor's Work. In some cases, these may be 3D digital data files, as specified. The 3D computer database is the digital three-dimensional computer model portion of the Contract Documents, showing the design and location and dimensional position of Work points and control lines and surfaces of the Work.

1.2 PROJECT CONDITIONS

- A. The TJPA's issuance of Project CADD files to Contractor is not a representation of the completeness or accuracy of the information contained in the files.
- B. Because Contractor is required to perform all Work in accordance with the requirements of only the printed versions of the Bid Documents for the Project as originally issued or modified in accordance with the Contract Documents, Contractor shall receive the CADD files for information only.
- C. Contractor agrees not to transmit to third parties or otherwise reuse Project CADD files without prior written consent of the TJPA. Unauthorized use of Project CADD files shall be at the sole liability of the user.
- D. Contractor hereby agrees to release the TJPA from inaccuracies, incompleteness, or discrepancies between Project CADD files and said printed versions of the Contract Documents.
- E. Contractor shall be responsible for all damages resulting in whole or in part from inaccuracies, incompleteness, or discrepancies between said Project CADD files and said printed versions of the Contract Documents.

END OF SECTION 00 08 07

SPECIFICATION ISSUES LOG

Revision	Date
0	July 30, 2010
1	August 10, 2010

SECTION 00 08 10 – 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 Owners,” which may be encountered by Contractor performing the Work.
- B. Utility facilities in public streets that are within the jurisdiction of the City shall be governed by the applicable provisions of the San Francisco Public Works Code (refer to Appendix A). The Utility Crossings Specifications are based on agreements with non-governmental agencies for removal, support, and relocation of privately owned utility facilities (refer to Appendix B).

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 to the TJPA by the Utility Owners.
 - 1. Contractor is entitled to rely in good faith on the information provided by the TJPA; however, based on the Contractor's expertise and experience, should the Contractor know or have known that the information provided is inaccurate, Contractor shall notify the TJPA of the inaccuracy.
- B. Except as otherwise provided in paragraph 1.3, the cost of all of the following with respect to existing pipes, wires, conduits, and other utility facilities shall be included in the Contract Sum, and Contractor shall assume full responsibility for the following:
 - 1. Reviewing and checking all such reference drawings or information.
 - 2. Locating all underground facilities indicated in the Contract Documents in advance of performing work, reference drawings or other information available to Contractor.
 - 3. Coordinating the Work with the Utility Owners including the City.
 - 4. The safety and protection of all such known utility facilities as provided in Article 12 of Section 00 07 00 and repairing damage thereto, which may result from the Work.
 - 5. Removing and adjusting known utility facilities located in, over, or around the location of the Work as necessary to allow the prosecution of the Work.
- C. In the event, the information provided to the Contractor substantively differs from the actual field conditions following the review of all reference drawings and location of all underground facilities, any additional cost or time impact will be handled as a changed condition in accordance with 00 07 00, Article 3.05.

1.3 EXISTING UTILITIES NOT INDICATED

- A. Consistent with the provisions of Section 4215 of the California Government Code, the TJPA will assume the responsibility for the cost of 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 or reference drawings reasonably available to Contractor.
- B. Contractor shall promptly notify the TJPA and the public utility in writing, and before further disturbing conditions affected thereby, of such utility facilities it discovers while performing the Work which are not indicated in the Contract Documents, reference drawings, or other information available to Contractor.
 - 1. The TJPA Representative shall negotiate with the Utility Owner, which 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.

- C. Contractor will be granted a noncompensable 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 or reference drawings.
- D. Contractor will be compensated under the provisions of Article 6 of Section 00 07 00 for its direct costs associated with the extra work involving existing City-owned utilities not indicated on the Contract Documents or reference drawings but in direct physical conflict with the Work.
 - 1. This extra work shall be limited to the following:
 - a. Removing and relocating as directed by the TJPA existing main or trunk line utility facilities located on site but not indicated on the Contract Documents or reference drawings with reasonable accuracy.
 - b. Equipment on the project necessarily idled during such work.
- E. Contractor shall not be entitled to any adjustment in the Contract Sum or Contract Time if the existence of such condition
 - 1. Could have been reasonably discovered or revealed as a result of; investigation of the site and contiguous areas required by the Contract Documents to be conducted by or for Contractor prior to bidding the Work; or
 - 2. Could have reasonably been inferred from the presence of other visible facilities, such as buildings or meter and junction boxes, on or adjacent to the Site.

1.4 GOVERNMENTAL FACILITIES

- A. Contractor shall satisfactorily support, work around, and protect, as approved by the TJPA, 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; low pressure hydrant leads, pipes and facilities of the Auxiliary Water Supply System for Fire Protection; and the Municipal Railway and Hetch Hetchy Water and Power overhead lines and power feeder systems serving the Municipal Railway.
 - 1. Municipal Railway facilities and Hetch Hetchy Water and Power facilities serving the Municipal Railway, if encountered, shall be supported in a manner satisfactory to the General Manager of the San Francisco Public Utilities Commission.
 - 2. Auxiliary Water Supply System 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 TJPA 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 450 psi pressure in accordance with Section 908.22 of the DPW Standard Specifications (refer to Division 01 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, stormwater and sewage.
 - 4. 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 shall be considered incidental work, and no direct or additional payment will be made therefor.

- C. Governmental facilities not shown on the Contract Documents 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 Article 6 of Section 00 07 00; or
 3. Be removed or adjusted by other suitable procedure at the TJPA's expense.

1.5 NON-GOVERNMENTAL FACILITIES

- A. The procedure to be followed with respect to utility facilities owned or controlled by any person, company, firm or corporation, or by City departments such as the San Francisco Public Utilities Commission, 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), which sections are appended to this Section 00 08 10 (refer to Appendix A).
- 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 TJPA will, if requested by the Utility Owner, waive the requirement that the facility be removed or adjusted and allow it to remain in place, provided that (1) the Utility Owner obtains the consent of Contractor to such waiver in return for such compensation, if any, by the Utility Owner as may be just and equitable and no expense is occasioned either directly or indirectly to the TJPA by such waiver, (2) the TJPA determines that it is economically and technically feasible to change the Project design without affecting its performance, and (3) the Utility Owner agrees to compensate the TJPA for the expense, if any, of revising the Drawings and Specifications as necessary to accomplish the appropriate modification of the Work. Should a Utility Owner, 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 Owner a quotation covering the entire cost of supporting, working around or protecting, as necessary, such facility. In the event a Utility Owner and Contractor cannot agree upon the amount of the compensation, if any, to be paid by the Utility Owner to Contractor, then the TJPA Representative, 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 Owner promises in writing to pay to the TJPA the amount of the expense incurred by the TJPA 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 Section 00 07 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 1.5B1, agreements have been executed between various utility companies and agencies, and the TJPA, enabling such companies and agencies to have included in TJPA contracts the work of supporting, working around, and protecting their facilities. The work of supporting, working around, and protecting such facilities may or may not be included in a contract. Such work, if included in a contract, will be paid for by the various utility companies and agencies directly to Contractor in conformance with the provisions of the Utility Crossing Specifications appended to this Section (refer to Appendix B). Requirements for performance of this work are also contained in the Utility Crossing Specifications. Such work, if not included in a contract, but encountered in the field, shall be subject to the provisions of this paragraph 1.5, excluding this subparagraph 1.5B2.
- C. Pursuant to the provisions of subparagraphs 1.5B1 and 1.5B2, Bidders shall not include in their Bids expenses related to 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. 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 Owners or by the TJPA, 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 Article 6 of Section 00 07 00.
- E. If during the course of the Work an unexpected interference by a nongovernmental utility facility is discovered, Contractor shall immediately notify the TJPA and the Utility Owner (if known) of the interfering facility so that the required procedure outlined in subparagraph 1.5B1 or 1.5B2, as applicable, may be followed in a manner to cause no delay in the Work.

1.6 USE OF PAVEMENT BREAKER ADJACENT TO UTILITY FACILITIES LIMITED

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 for Fire Protection facilities pipe, communications duct, or any other utility facility.

Such prohibition, however, shall not be construed as barring the use of hand tools or manually operated air tools such as jackhammers.

1.7 LOW PRESSURE FIRE HYDRANT RELOCATIONS TO BE DONE BY SAN FRANCISCO PUBLIC UTILITIES COMMISSION

- A. If low pressure fire hydrants and related piping and concrete works are shown on the Drawings to be relocated, such relocation, including related piping and concrete works, shall be done by the San Francisco Public Utilities Commission at no cost to Contractor.
- B. It shall be the responsibility of Contractor to notify the San Francisco Public Utilities Commission 7 days in advance of the time it intends to begin work where low pressure hydrant relocation work is to be done.
- C. All pavement, gutter, curb, and sidewalk construction required at new and old locations of relocated hydrants, whether or not within the limits designated for pavement construction, shall be done by Contractor under the appropriate Contract Bid Items, or in the absence thereof shall be done as incidental work.
- D. Contractor, at all times, shall maintain access to all gate valves by personnel of the San Francisco Public Utilities Commission.

END OF SECTION 00 08 10

SPECIFICATION ISSUES LOG

Revision	Date
0	July 30, 2010
1	August 10, 2010

SECTION 00 08 10/APA – SAN FRANCISCO PUBLIC WORKS CODE SECTION 906 ET SEQ.
(Part II, Chapter X of the San Francisco Municipal Code)

SEC. 906. NOTICE TO REMOVE OR RELOCATE UTILITY FACILITIES.

(a) Whenever any public work is authorized by the Board to be done under the supervision of the Director upon, in, over or under any of the streets, the Director, before the commencement of the work, shall notify in writing any owner or operator having utility facilities of any nature upon, in, over or under the streets to remove or adjust so much of his or their facilities as will allow the prosecution of the public work. The Notice shall be accompanied by a copy of the plans and specifications for the authorized public work showing the location of the work in the streets and describing the same. The Notice shall specify a time within which all affected utility facilities must be removed or adjusted.

(b) The evolution of urban rail, trolley coach and motor bus passenger systems from private operations under franchise operating without tax subsidies to publicly owned and operated systems under federal, state and local policies mandating intra-City passenger service at revenue levels which require a substantial measure of tax support, the paramount right of the people as a whole to use the public streets, and the level of service provided being essential to the circulation, health, safety, comfort and welfare of people in an urban setting, and the need for improved transportation systems to meet increasing demand for development and maintenance of an adequate, safe and efficient transportation system requires that this service be recognized and defined as a governmental activity within the City's policy powers. Accordingly, whenever any public work relating to the Municipal Railway is authorized by the Public Utilities Commission to be done under the supervision of the General Manager upon, in, over or under any of the streets, the General Manager, before the commencement of the work, shall notify in writing any owner or operator having utility facilities of any nature upon, in, over or under the streets to remove or adjust so much of his or their facilities as will allow the prosecution of the public work. The Notice shall be accompanied by a copy of the plans and specifications for the authorized public work showing the location of the work in the streets and describing the same. The Notice shall specify a time within which all affected utility facilities must be removed or adjusted.

SEC. 907. OWNERS MUST REMOVE IN REQUIRED TIME. Any owner or operator having utility facilities upon, in, over or under the streets upon, in, over or under which any public work is authorized to be done, shall, upon receipt of a Notice pursuant to Section 906, and at his expense, cause to be removed or to be adjusted within the time specified in the Notice, so much of the affected utility facilities belonging to or under the control of such owner or operator as will allow the authorized work to be prosecuted according to the plans and specifications therefor.

SEC. 908. FAILURE - WORK MAY BE DONE BY DIRECTOR OR GENERAL MANAGER.

(a) If any owner or operator except the Municipal Railway shall fail, neglect or refuse to comply with the requirements set forth in a Notice issued pursuant to Sec. 906 (a) then, and in that event, the Director shall cause to be removed or be adjusted so much of the utility facilities as may be required for the prosecution of the said authorized public work according to the plans and specifications therefor; and the incidental expenses incurred in the removal or adjustment shall be chargeable to the owner or operator failing, neglecting or refusing to comply with the requirements of the Notice, and may be recovered in an action at law brought in the name of the City against such owner or operator.

(b) If any owner or operator shall fail, neglect or refuse to comply with the requirements set forth in a Notice issued pursuant to Sec. 906 (b) then, and in that event, the General Manager shall cause to be removed or adjusted so much of the utility facilities as may be required for the prosecution of the said authorized public work according to the plans and specifications therefor; and the incidental expenses incurred in the removal or adjustment shall be chargeable to the owner or operator failing, neglecting or refusing to comply with the requirements of the Notice, and may be recovered in an action at law brought in the name of the City against such owner or operator.

SEC. 909. AGREEMENT WITH OWNER OR OPERATOR.

(a) The Director, with the approval of the Chief Administrative Officer, may enter into an agreement with the owner or operator of any utility facility which may require support, protection and working around in order to successfully prosecute the construction of public work, to have any such support, protection and working around included as a part of a contract for public work. The cost of any such support, protection, and working around a utility facility shall be borne by the owner or operator thereof.

(b) The General Manager, with the approval of the Public Utilities Commission, may enter into an agreement with the owner or operator of any utility facility which may require support, protection and working around in order to successfully prosecute the construction of public work, to have any such support, protection and working around included as a part of a contract for public work. The cost of any such support, protection and working around a utility facility shall be borne by the owner or operator thereof.

SEC. 910. PROVISION FOR ADMINISTRATION, ETC. - COST.

(a) Pursuant to Sec. 909 (a) the Department will provide administration and other necessary services during the progress of the construction. The estimated cost of administration, preparation and supervision of the contract attributable to the work, shall be included in the agreement.

(b) Pursuant to Sec. 909 (b) the Public Utilities Commission for the Municipal Railway will provide administration and other necessary services during the progress of the construction. The estimated cost of administration, preparation and supervision of the contract attributable to the work, shall be included in the agreement.

END OF SECTION 00 08 10/APA

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 00 08 10/APB – UTILITY CROSSINGS SPECIFICATIONS

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

General

Contractor shall support, work around, and protect San Francisco Public Utilities Commission (SFPUC), Pacific Gas and Electric Company (PG&E), AT&T, Comcast Corp. (Comcast), and Hetch Hetchy Water & Power (HHWP) facilities that do not serve the Municipal Railway, 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.

Such utility crossings are defined as occurring where the length of a utility main, duct structure, or service (measured along the centerline) is in the excavation area of the TJPA structure not more than three times the width of the excavation for excavation widths less than 18 feet. Excavation width will be the outside diameter or width of the TJPA structure plus 3 feet.

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.

Work at crossings of other non-governmental utility company facilities in public streets shall be in accordance with the provisions of Section 00 08 10, paragraph 1.5, unless otherwise specified.

Any SFPUC, PG&E, AT&T, Comcast Corp., and HHWP facilities that do not serve the Municipal Railway, 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 Article 1.5 of Section 00 08 10 or treated as otherwise allowed therein. Contractor shall measure the outside diameter or width of utility facilities to the nearest inch and length of crossings to the nearest foot to determine the actual cost of each utility crossing according to Cost of Utility Crossing Schedule hereinafter set forth.

Contractor shall keep an itemized record of the utility crossing work done, noting any variations from the utility Contract Drawings and estimates. Contractor shall notify TJPA and the utility company immediately of any such variations and any disagreement between Contractor and the utility companies regarding utility crossings will be arbitrated prior to backfilling by the Director of Public Works or his or her designated representative. The decision of the Director of Public Works will be final. Progress payments shall be made by the applicable utility company upon receipt of Contractor's invoice for work done in the amount of \$500.00 or more, but not more often than once every 30 days.

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

In the event that utility drawings from SFPUC, PG&E, AT&T, Comcast and HHWP 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 Utility Crossing Schedule hereinafter set forth.

Abandoned and other facilities which the Department of Public Works (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 Utility Crossing Schedule hereinafter set forth plus an additional ten percent surcharge for Trade Subcontractor'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.

Unexpected or Unidentified Facilities, Ownership Not Known

If, during the course of the work, an unexpected or unidentified interference is discovered, Contractor shall immediately call this fact to the attention of the SFPUC, PG&E, AT&T, Comcast, and HHWP. A period of 24 hours, including at least 8 working hours, beginning with the time of receipt of such notice, will be allowed said utility companies to determine whether ownership is by one of said utility companies. Disposition shall be in accordance with the applicable requirements of Article 1.5 of Section 00 08 10 if such facilities are owned by others than the hereinbefore referred to utility companies. If ownership is by one or more of the hereinbefore referred to utility companies, 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."

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 4 inches or less in outside diameter or width which 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 Utility Crossing Schedule reduced by $33\frac{1}{3}$ percent.

Abandoned Facilities

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

Third Party Insurance

Contractor shall provide third party insurance naming the affected utility company or utility companies in addition to the TJPA as an insured against claims for property damage and personal liability arising directly or indirectly from utility work performed by Contractor.

Cost of Utility Crossing Schedules (Effective January 2004)

Cost of utility crossing shall be equal to fixed cost plus ("+" support cost, scheduled by length of crossing (Groups I, II, and II) as follows. 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.

Group I (length of crossing less than 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	\$371	0
4 inches to 20 inches	\$371 + \$62 per inch over 4 inches	0
Over 20 inches	\$1,359 + \$103 per inch over 20 inches	0

Group II (length of crossing 6 to 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	\$474	\$62
4 inches to 20 inches	\$474 + \$66 per inch over 4 inches	\$62
Over 20 inches	\$1,528 + \$111 per inch over 20 inches	\$62

Group III (length of crossing greater than 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 Twelve Feet
4 inches or less	\$844	\$82
4 inches to 20 inches	\$844 + \$74 per inch over 4 inches	\$82
Over 20 inches	\$2,031 + \$124 per inch over 20 inches	\$103

SECTION U2. SUPPORT, WORK AROUND, AND PROTECT EXISTING SAN FRANCISCO WATER DEPARTMENT UNDERGROUND FACILITIES - STANDARD TECHNICAL SPECIFICATIONS

The requirements for supporting, working around, and protecting existing San Francisco Public Utilities Commission (SFPUC) underground facilities are as follows:

In general, pipes may be unsupported for spans of 6 feet or less. Pipes 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 pipe joints.

Adequate bracing shall be provided at all fittings and bends.

Should Contractor damage or displace any SFPUC facility, the Contractor shall notify the SFPUC immediately by calling the City Distribution Division at 415-550-4911. Repairs or replacements will be made by the SFPUC. However, all expenses in connection therewith shall be borne solely by Contractor.

The work of supporting, working around, and protecting hydrant leads, which are governmental facilities, shall be done as incidental work as specified in Article 1.4 of Section 00 08 10.

SECTION U3. SUPPORT, WORK AROUND, AND PROTECT EXISTING PACIFIC GAS AND ELECTRIC COMPANY 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 TJPA or by PG&E inspector through the TJPA 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 TJPA or PG&E inspector through the TJPA 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 TJPA or PG&E inspector through the TJPA 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 ensure 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 ensure that no deflection will occur.

For multi-way conduits, spacers shall be placed to maintain conduit separation at point of support. Two-inch by 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. Should Contractor damage or displace any PG&E facility, Contractor shall notify the PG&E. Repairs or replacements will be made by the PG&E. However, all expenses in connection therewith shall be borne solely by Contractor. Contractor shall notify the PG&E one week prior to excavating so that all crossings can be verified.

SECTION U4. SUPPORT, WORK AROUND, AND PROTECT EXISTING AT&T CORPORATION
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 TJPA or by the AT&T inspector through the TJPA 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 two or more single ducts not encased in concrete and spanning more than 4 feet, shall be banded with at least two 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 two 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 TJPA or by the AT&T inspector through the TJPA Representative.

Duct structures having top and bottom wood planking or encased in concrete will not require additional protection unless otherwise directed by the TJPA or by the AT&T inspector through the TJPA 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 ½ 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, AT&T shall be notified immediately. Repairs or replacements will be made by AT&T. However, all expenses in connection therewith shall be borne solely by Contractor.

SECTION U5. SUPPORT, WORK AROUND, AND PROTECT EXISTING COMCAST CORP.
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 Ducts

A single duct spanning less than 6 feet shall be considered self-supporting, unless otherwise directed by the Comcast engineering coordinator or the Comcast inspector, through the TJPA 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 two or more single ducts 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 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 inspector, through the TJPA 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 inspector through the TJPA Representative.

All other multiple duct structures shall be protected by the placement of wood planking or sheeting no less than ½ 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 415-863-8500 Ext. 390. Repairs or replacements will be made by Comcast. However, all expenses in connection therewith shall be borne solely by Contractor.

SECTION U6. SUPPORT, WORK AROUND, AND PROTECT EXISTING MUNI TRANSIT POWER
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 6 feet shall be considered self-supporting unless otherwise directed by the TJPA or by the MTP inspector through the TJPA Representative.

Steel conduit spanning 6 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 6 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 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 for the complete width of the excavation.

Beams, cables and turnbuckles for supporting concrete-encased duct lines shall be adequately sized and spaced to ensure 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 TJPA or by the MTP inspector through the TJPA Representative.

Duct structures having top and/or bottom wood planking or encased in concrete will not require additional protection unless otherwise directed by the TJPA or by the MTP inspector through the TJPA 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 ½ 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, the General Superintendent of Facilities Maintenance shall be notified immediately. Repairs or replacements will be made by MTP. However, all expenses in connection therewith 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 00 08 10/APB

SPECIFICATION ISSUE LOG

Revision	Date
0	July 30, 2010
1	August 10, 2010

SECTION 00 08 12 – ARCHAEOLOGICAL CONDITIONS

1.1 SUMMARY

- A. This section specifies procedures to provide for the protection, removal, and/or investigation of archaeological findings, and to provide Contractor such compensation or relief as may be appropriate for unforeseen work or for work suspension directed by the TJPA under the provisions of the Contract Documents.
- B. Pursuant to the National Historic Preservation Act of 1966, (16 U.S.C. 470) and PRM 75-27, the TJPA intends to provide for the preservation and protection of such material of an archaeological nature as may be of scientific or historical value.
- C. Documents referenced in this section are available on the TJPA FTP site at [ftp.tjpa.org](ftp:tjpa.org) (username: WebcorBid; password (case sensitive): WebcorBid!).

1.2 DISCOVERY OF ARCHAEOLOGICAL FINDS

Archaeological monitoring will occur in the designated areas and depths. The areas to be monitored are those within which excavation will be conducted in the controlled manner described in paragraph 1.3, Excavation Conditions, and in the *Archaeological Research Design and Treatment Plan for the Existing Transbay Transit Terminal and Ramp Demolition, Utility Relocation, and New Transit Center Foundation Excavation*, April 2010. An archaeological monitor will be present during all excavations within these areas. Monitoring will occur in these areas only, and an archaeological monitor will not be on site during excavations conducted elsewhere.

- A. If potential historical, architectural, archaeological, or cultural resources are discovered at the Site, the following procedures are to be instituted:
 - 1. In the event that no archaeological monitor is present, Contractor is to promptly report subsurface archaeological finds to the TJPA Representative. A subsurface archaeological find includes both prehistoric and historic resources. Prehistoric resources include items such as “black-colored soil, concentrations of shell, charcoal, ash, flaked stone, groundstone, faunal bone, fire-affected rock, shell beads, bone tools and human remains.” Historic resources include items such as “structural elements (e.g., brickwork or concrete footings) or concentrations of associated artifacts such as whole and fragmentary glass containers, plate glass, ceramic containers and dinnerware, toys, metal tools or building materials, wood, brick, concrete, and occasionally leather and other perishable materials.”
 - 2. If an archaeological find is discovered, the TJPA Representative will instruct work to be suspended in the immediate area and will issue a written order to suspend Work in accordance with Article 14.02 of Section 00 07 00, directing Contractor to cease all construction operations only at the location of such a potential cultural resources find.
 - 3. When an archaeological monitor is present, Contractor is to promptly report all subsurface archaeological finds to TJPA’s archaeologist.
 - 4. Archaeologist will assess the significance of the find and immediately report to the City Environmental Review Officer, who will recommend specific additional mitigation measures as necessary to minimize potential effects on cultural resources. Such mitigation measures may include additional site security; on-site investigations by an archaeologist; and documentation, preservation, and recovery of cultural materials.

5. In the event of such archaeological finds, Contractor shall immediately secure the area of the find in such a manner as to prohibit destruction or contamination of the find. Contractor shall only be responsible for the costs to secure the site for the first day, the TJPA will be responsible to define the appropriate security thereafter, and the cost will be handled as a changed condition. The manner of security of the find after the first day shall be determined by the archaeological consultant in conjunction with TJPA and may include but may not be limited to separate security personnel assigned to the find or placing steel plating. Contractor's security of the find shall remain in place until the Contractor is notified by the TJPA to remove such security.
- B. Cost or time impacts as a result of a suspension under this section shall be resolved as provided in Section 00 07 00. Refer to Article 6 for Change Order requests and Article 13 for Claims.
- C. For Work suspensions in the immediate affected areas, there shall be no compensation to Contractor up to a maximum of 20 working days due to the TJPA's order to suspend Work.
- D. Full-time security personnel for the first day must be provided by the Contractor at its cost to ensure no unauthorized disturbance of soil at any time. Thereafter, security as directed by the TJPA will be at TJPA's cost. Once construction-related ground-disturbing activities commence, Contractor shall cooperate with the TJPA and TJPA archaeological consultants and will implement security procedures to ensure that all exposed ground surfaces are protected from trespassing, vandalism, theft, illegal excavation, and unintended damage. Prior to commencement of ground-disturbing activities, a security fence will be erected around the Project parcel. Once the asphalt has been removed, a security guard will be employed to provide security during those periods when the Site is otherwise unoccupied. It will be the security guard's responsibility to ensure that no unauthorized excavations occur and no cultural material is removed from the Site.

1.3 EXCAVATION CONDITIONS

Refer to archaeological drawings for areas and depths of excavation that will be conducted in a controlled manner such that an excavation bucket digs no deeper than 6- to 12-inch lifts at each pass, allowing the archaeologist to observe both the scraped surface and the material removed by the bucket. Archaeological monitors may require up to 15 minutes to evaluate each lift. If clear, work may proceed. If the TJPA's lead archaeologist determines that the find is potentially significant and requires further investigation, work can proceed in another area until the archaeological find has been documented.

1.4 REQUIRED TRAINING

Prior to the beginning of construction, the archaeological consultant will provide all work crews who will be involved in ground-disturbing activities with training on the proper procedures to follow in the event that archaeological resources are uncovered during this phase of work.

END OF SECTION 00 08 12

SPECIFICATION ISSUES LOG

Revision	Date
0	July 30, 2010
1	August 10, 2010

SECTION 00 08 13 – SPECIFIC PROJECT REQUIREMENTS

1.1 SUMMARY

This section specifies special project conditions 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 applicable federal, state, and local regulations affecting construction work at the Site.

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. Contractor shall comply with the United States Department of Transportation requirements appended to this section as Appendix A.
- C. If Contractor does not observe said regulations or the requirements specified herein or promptly take all required remedial actions to the TJPA's satisfaction, the TJPA will withhold progress payments to Contractor until satisfactory compliance has been accomplished.
- D. The TJPA 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 TJPA for performing such monitoring.
 - 3. Contractor shall provide air quality control measures during construction in accordance with the requirements of the Contract Documents.
- E. As a requirement of the project's American Recovery and Reinvestment Act of 2009 (ARRA) grant, the TJPA is required to provide prescribed job information. The data will be compiled by the CM/GC using the ARRA Jobs Report Form appended to this section as Appendix F. This form is due monthly by the 10th of the month.
- F. Contractor will be informed about, coordinate, schedule, and perform Work in consideration of adjacent property owners and other activities and construction work in the area. Contractor will be granted an equitable time extension for Unavoidable Delays caused by the TJPA subject to the provisions of Article 7 of Section 00 07 00.

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), a portion of which is appended to this section as Appendix B.
 - 1. Be responsible for fines or violations pertaining to these ordinances, at no cost to the TJPA.
 - 2. Provide advance notice to TJPA Representative to coordinate 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.

- B. The Contractor may rely on performing the following Work activities outside of the noise requirements:
 - 1. Butress drilling operation
 - 2. Mass excavation
 - 3. Welding of internal bracing
 - 4. Welding of superstructure
- C. Contractor shall be responsible to use reasonable means to mitigate noise impacts during the performance of the aforementioned Work if those activities do not fall within the permissible limits.
- D. Contractor shall 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.
- E. Contractor shall submit to the TJPA Representative within 30 calendar days following the date of the Notice to Proceed plans 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 if necessary.
- F. Construction noise will be monitored by the TJPA 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 place restrictions on construction operations to further limit the noise as directed by the TJPA.

1.4 NIGHT AND WEEKEND NOISE REQUIREMENTS

- A. Except as specifically set forth in this section, 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. Contractor shall apply for City noise permits through the TJPA 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 TJPA Representative to perform any part of the Work between the hours of 8:00 p.m. and 7:00 a.m. or on weekends or holidays, then such notice shall constitute the noise permit from the TJPA based on San Francisco Police Code section 2908.
 - 3. Refer to Section 00 07 00 for definition of Regular Working Hours.
- B. The Contractor may rely on performing the following Work activities outside of the noise requirements:
 - 1. Butress drilling operation
 - 2. Mass excavation
 - 3. Welding of internal bracing
 - 4. Welding of superstructure

Contractor shall be responsible to use reasonable means to mitigate noise impacts during the performance of the aforementioned Work if those activities do not fall within the permissible limits.

1.5 REQUIREMENTS FOR PLACEMENT OF BARRICADES

- A. Comply with the requirements of San Francisco City Guidelines for the Placement of Barricades at Construction Sites (DPW Order No. 167,840), appended to this section as Appendix C.
- 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 by the TJPA in the amount of \$1,000 per 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 Ordinance #175-91, Article 21, sections 1100 to 1107 of the San Francisco Municipal Code (Public Works Code), restricting the use of potable water for soil compaction and dust control activities, to the extent not directly in conflict with any applicable federal, state, and local law.
- B. Secondary effluent is available at no cost to Contractor from the Southeast Water Pollution Control Plant at 750 Phelps Street, San Francisco, from 8:00 a.m. to 5:00 p.m. on weekdays and Saturdays. Contractor shall be responsible for the handling and trucking of secondary effluent at no cost to the TJPA.
- C. Should Contractor require use of potable water for soil compaction or dust control activities, Contractor shall apply for and obtain an exemption pursuant to Ordinance #175-91, Article 21, prior to its use.
 - 1. Applications shall be sent to:

San Francisco Department of Public Health
Environmental Health
1390 Market Street, Room 210
San Francisco, CA 94102
Telephone (415) 252-3800
 - 2. Pursuant to Ordinance #175-91 permission for said use of potable water may be granted by the General Manager of the San Francisco Public Utilities Commission.

1.7 AIR QUALITY REQUIREMENTS

- A. Prior to starting Work at the Site, Contractor shall submit to the TJPA for acceptance an air quality plan to minimize potential public health impacts associated with visible dust emissions and air quality pollutants. Said air quality plan 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. Said air quality plan shall comply with the air quality criteria specified in this Section and as set forth sections 01 35 65, Mitigation Measures and Monitoring, and 01 15 00, Construction Facilities and Temporary Controls.
- B. Contractor shall comply with the following requirements in accordance with City 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 excavation area with a water spray to prevent airborne dust particles. Perform continuous water spraying during dust-generating activities. Mist or spray in

- such a way as to prevent puddling or generation of runoff, which could potentially reach storm drains or catchbasins.
 3. Minimize the amount of excavated material or demolished debris stored at the Site. Remove excavated material and demolished debris, with the exception of hazardous materials or suspected hazardous materials, from the Site no later than the end of each workday. If hazardous materials or suspected hazardous materials are stored on site, store such materials in accordance with all applicable California Environmental Protection Agency 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.
 4. Wet all exposed soil surfaces at least 3 times daily during dry weather or more frequently if dust is blowing or if required by the TJPA. Immediately wet sweep serpentine residuals from the street.
 5. Keep the Site and adjacent areas clean and perform wet sweeping at the end of each shift.
 6. Load haul trucks carrying excavated material 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.
 7. Clean up spillage on City streets, whether directly or indirectly caused by Contractor's operations.
- 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 BAAQMD randomly inspects removal operations and will respond to any complaints received. Contractor shall cooperate with and facilitate all BAAQMD-authorized inspections.

1.8 EXCAVATION REQUIREMENTS

- A. 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 the City 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 the TJPA, no excavation shall be performed in the public right-of-way under the jurisdiction of the City without a valid excavation permit issued by the San Francisco Department of Public Works, Bureau of Street-use and Mapping.
1. Refer to Article 3.06 of Section 00 07 00 for permit procurement responsibilities.
 2. Keep copies of the excavation permit available at the Site for inspection by the TJPA 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 the Department of Public Works, Bureau of Street-use and Mapping, and apply for an emergency permit within 4 hours after the Department offices first open.

5. Refer to the manual "Regulations for Excavating and Restoring Streets in San Francisco," Bureau of Street-use and Mapping, January 1999, for complete information about excavation code requirements. Copies of the manual may be purchased at the Department of Public Works, Bureau of Street-use and Mapping.
 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.
- B. Contractor shall provide, via the TJPA Representative, 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 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.
- C. 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 TJPA.
1. Secure permit extension prior to expiration date in the event of delays in excavation work.
 2. Should such delays be caused by the TJPA, Contractor will be granted an extension of Contract Time or adjustment of Contract Sum as provided in Article 7 of Section 00 07 00.
- D. Contractor shall 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 the TJPA.
 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).
 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 the handling, removal and disposal of hazardous materials.
- E. 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 01 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 feet.
 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 TJPA within 24 hours of notification by the TJPA.

6. Should Contractor fail to timely restore, correct or repair deficiencies, the TJPA will complete or cause to be completed such restoration, correction or repair deficiencies, and the completion costs will be deducted from monies due Contractor.

1.9 REQUIREMENTS FOR HANDLING OF WASTEWATER

- A. Wastewater which is pumped from the Site during this Project shall meet the pretreatment standards of the San Francisco Municipal Code, Section 123, Industrial Waste Ordinance #19-92 and Industrial Waste Discharge Limits into City's Sewerage System prior to discharge into the City's sewage system. The text of these regulations are appended to this Section as Appendix D and Appendix E, respectively.
- B. Should wastewater become contaminated as a result of the Contractor's operations, all costs of satisfactory remediation and disposal shall be at no cost to the TJPA. 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 Industrial Waste Discharge Limits into City's Sewerage System.
- C. Should the existing wastewater be contaminated, or should it be uncontaminated but subsequently become contaminated as a result of conditions other than Contractor's operations, a Change Order will be issued, as provided in Article 6 of Section 00 07 00, for additional costs or a time extension will be granted, as provided in Article 7 of Section 00 07 00, to pretreat the contaminated water prior to routing the flow into the sewer system or other approved disposal at the direction of the TJPA.
- 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 TJPA's sewerage system by Contractor's operations. The application for such wastewater discharge permit shall be sent to the San Francisco Public Utilities Commission, Bureau of Environmental Management.
 1. Discharge permits, discharge water fees, sewer services charges, and incidental fees are reimbursable.
 2. Contractor shall meter the quantity of discharged water.

END OF SECTION 00 08 13

SPECIFICATIONS ISSUES LOG

Revision	Date
0	July 30, 2010
1	August 10, 2010
2	September 23, 2010

SECTION 00 08 13/APA
USDOT REQUIREMENTS FOR AGREEMENTS WITH THE TJPA

The USDOT's requirements for agreements between the TJPA and a third party are summarized below. Certain USDOT provisions described below may not be applicable to all agreements with the TJPA. The italicized text is intended to assist the Contractor in understanding which federal requirements may be applicable to an agreement. The USDOT and the TJPA have sole discretion to apply any particular provision described below.

These provisions supplement the provisions in the Agreement, and shall be interpreted in the broadest possible manner to avoid any conflicts. If there is an unavoidable conflict between the USDOT requirements and any other terms and conditions of the Agreement, in the TJPA's sole determination, the USDOT requirements shall take precedence.

The following provisions (1-12) apply to all Agreements (excluding micropurchases).

1. DEFINITIONS

****** *The Definitions apply to all Agreements.*

- (a) **Approved Project Budget** means the most recent statement, approved by the FTA, of the costs of the Project, the maximum amount of Federal assistance for which the TJPA is currently eligible, the specific tasks (including specified contingencies) covered, and the estimated cost of each task.
- (b) **Contractor** means the individual or entity awarded an Agreement financed in whole or in part with Federal assistance originally derived from FTA.
- (c) **Federal Cooperative Agreement** means the instrument by which FTA awards Federal assistance to the TJPA to support a particular Project, and in which FTA takes an active role or retains substantial control.
- (d) **FTA** is the acronym for the Federal Transit Administration, one of the operating administrations of the U.S. DOT.
- (e) **FRA** is the acronym for the Federal Railroad Administration, one of the operating administrations of the U.S. DOT.
- (f) **FRA Directive** includes any FRA regulation, policy, procedure, directive, circular, notice, order or guidance providing information about FRA's programs, application processing procedures, and Project management guidelines, including the Master Agreement between FRA and the TJPA. In addition to FRA Directives, certain U.S. DOT directives also apply to the Project.
- (g) **FTA Directive** includes any FTA regulation, policy, procedure, directive, circular, notice, order or guidance providing information about FTA's programs, application processing procedures, and Project management guidelines, including the Master Agreement between FTA and the TJPA. In addition to FTA Directives, certain U.S. DOT directives also apply to the Project.
- (h) **Grant Agreement** means the instrument by which FTA or FRA awards Federal assistance to the TJPA to support a particular Project, and in which FTA or FRA does not take an active role or retain substantial control, in accordance with 31 U.S.C. Section 6304.
- (i) **Government** means the United States of America and any executive department thereof.
- (j) **Project** means the task or set of tasks listed in the Approved Project Budget that is the subject of

this Agreement, as well as any modifications stated in the Conditions to the Grant Agreement or Federal Cooperative Agreement applicable to the Project. In the case of the formula assistance programs for urbanized areas, for elderly and persons with disabilities, and non-urbanized areas, 49 U.S.C. sections 5307, 5310, and 5311, respectively, the term "Project" encompasses both a program and each project within a program, as the context may require, to effectuate the requirements of the Grant Agreement or Federal Cooperative Agreement.

- (k) **Recipient** means the TJPA.
- (l) **Secretary** means the U.S. DOT Secretary, including his or her duly authorized designee.
- (m) **Agreement** means a contract, purchase order, memorandum of understanding or other agreement awarded by the TJPA to a Contractor, financed in whole or in part with Federal assistance awarded by FTA or FRA.
- (n) **Subcontract** means a subcontract at any tier entered into by Contractor or its subcontractor relating to the Agreement, financed in whole or in part with Federal assistance originally derived from FTA or FRA. Unless otherwise specified, the Contractor must include each of these Federal provisions in any Subcontract related to this Agreement.
- (o) **U.S. DOT** is the acronym for the U.S. Department of Transportation, including its operating administrations.

2. NO GOVERNMENT OBLIGATION TO THIRD PARTIES

****** *This requirement applies to all Agreements.*

The TJPA and Contractor acknowledge and agree that, notwithstanding any concurrence by the Federal Government in or approval of the solicitation or award of the Agreement, absent the express written consent by the Federal Government, the Federal Government is not a party to this Agreement and shall not be subject to any obligations or liabilities to the TJPA, Contractor, or any other party (whether or not a party to that Agreement) pertaining to any matter resulting from the Agreement.

3. PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS AND RELATED ACTS

****** *This provision applies to all Agreements.*

- (a) The Contractor acknowledges that the provisions of the Program Fraud Civil Remedies Act of 1986, as amended, 31 U.S.C. Section 3801 et seq., and U.S. DOT regulations, "Program Fraud Civil Remedies," 49 CFR Part 31, apply to its actions under the Agreement. Upon execution of the Agreement, the Contractor certifies or affirms the truthfulness and accuracy of any statement it has made, it makes, it may make, or causes to be made, pertaining to the Agreement or the FTA- or FRA-assisted Project for which this Agreement work is being performed. In addition to other penalties that may be applicable, the Contractor further acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification, the Federal Government reserves the right to impose the penalties of the Program Fraud Civil Remedies Act of 1986 on the Contractor to the extent the Federal Government deems appropriate.
- (b) The Contractor also acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government under an Agreement connected with a project that is financed in whole or in part with Federal assistance originally awarded by FTA or FRA under the authority of 49 U.S.C. Section 5307, the Government reserves the right to impose the penalties of 18 U.S.C. Section 1001 and 49 U.S.C. Section 5307(n)(1) on the Contractor, to the extent the Federal Government deems appropriate.

4. ACCESS TO DOCUMENTS

****** *This requirement applies to all Agreements. FRA requires the inclusion of these requirements in Subcontracts over \$100,000.*

****** *Please be aware that the requirements in the Agreement regarding audit and inspection of records may require the Contractor to maintain files relating to this Agreement for a longer period of time than described in the requirement below. Please also be aware that, as described in the Agreement, the TJPA follows the provisions of the City and County of San Francisco Sunshine Ordinance regarding responses to public requests for certain bid documents. The Contractor must comply with the requirements described below and in the Agreement.*

- (a) Where the TJPA is considered a "local government" and is a Recipient or a subgrantee of a Recipient, in accordance with 49 CFR Section 18.36(i), the Contractor agrees to provide the TJPA, the FTA or FRA Administrator, the Comptroller General of the United States and/or any of their authorized representatives access to any books, documents, accounts papers and records of the Contractor which are directly pertinent to this Agreement ("Documents") for the purposes of making audits, examinations, excerpts and transcriptions. Contractor also agrees, pursuant to 49 CFR Section 633.17, to provide the FTA or FRA Administrator or its authorized representatives, including any project management oversight Contractor, access to Contractor's Documents and construction sites pertaining to a major capital project, defined at 49 U.S.C. Section 5302(a)1, which is receiving Federal financial assistance through the programs described at 49 U.S.C. sections 5307, 5309 or 5311.
- (b) Where the TJPA is a Recipient or a subgrantee of a Recipient, in accordance with 49 U.S.C. Section 5325(a), and enters into a contract for a capital project or improvement (defined at 49 U.S.C. Section 5302[a]1) through other than competitive bidding, the Contractor agrees to provide the TJPA, the Secretary and the Comptroller General, or any authorized officer or employee of any of them, access to any Documents for the purposes of conducting an audit and inspection.
- (c) The Contractor agrees to permit any of the foregoing parties to reproduce, by any means whatsoever, or to copy excerpts and transcriptions, as reasonably needed, of any Documents.
- (d) The Contractor agrees to maintain all Documents required under this Agreement for a period of not less than three years after the date of termination or expiration of this Agreement, except in the event of litigation or settlement of claims arising from the performance of this Agreement, in which case Contractor agrees to maintain same until the TJPA, the FTA or FRA Administrator, the Comptroller General, or any of their duly authorized representatives, have disposed of all such litigation, appeals, claims or exceptions related thereto. (See 49 CFR Section 18.39[i][11]).

5. FEDERAL CHANGES

****** *This requirement applies to all Agreements.*

Contractor shall at all times comply with all applicable federal laws and regulations, and all FTA Directives, FRA Directives and U.S. DOT Directives applicable to the Project, as they may be amended or promulgated from time to time during the term of this Agreement. It is Contractor's responsibility to be aware of any amendments or changes to such federal requirements and directives. Contractor's failure to so comply shall constitute a material breach of this Agreement.

6. CIVIL RIGHTS REQUIREMENT

****** *This requirement applies to all Agreements.*

****** *Please be aware that the requirements in the Agreement regarding nondiscrimination are broader than the USDOT Requirements described below. The Contractor must comply with the requirements described below and in the Agreement.*

- (a) **Nondiscrimination** - In accordance with Title VI of the Civil Rights Act, as amended, 42 U.S.C. Section 2000d, Section 303 of the Age Discrimination Act of 1975, as amended, 42 U.S.C. Section 6102, Section 202 of the Americans with Disabilities Act of 1990, 42 U.S.C. Section 12132, and Federal transit law at 49 U.S.C. Section 5332, the Contractor agrees that it will not discriminate against any employee or applicant for employment because of race, color, creed, national origin, sex, age, or disability. In addition, the Contractor agrees to comply with applicable Federal implementing regulations and other implementing requirements FTA or FRA may issue.
- (b) **Equal Employment Opportunity** - The following equal employment opportunity requirements apply to the Agreement:
- (1) **Race, Color, Creed, National Origin, Sex** - In accordance with Title VII of the Civil Rights Act, as amended, 42 U.S.C. Section 2000e, and Federal transit laws at 49 U.S.C. Section 5332, the Contractor agrees to comply with all applicable equal employment opportunity requirements of U.S. Department of Labor (U.S. DOL) regulations, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor," 41 CFR Parts 60, (which implement Executive Order No. 11246, "Equal Employment Opportunity," as amended by Executive Order No. 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," 42 U.S.C. Section 2000e note), and with any applicable Federal statutes, executive orders, regulations, and Federal policies that may in the future affect construction activities undertaken in the course of the Project. The Contractor agrees to take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, creed, national origin, sex, or age. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. In addition, the Contractor agrees to comply with any implementing requirements FTA or FRA may issue.
- (2) **Age** - In accordance with Section 4 of the Age Discrimination in Employment Act of 1967, as amended, 29 U.S.C. Section 623, and Federal transit law at 49 U.S.C. Section 5332, the Contractor agrees to refrain from discrimination against present and prospective employees for reason of age. In addition, the Contractor agrees to comply with any implementing requirements FTA or FRA may issue.
- (3) **Disabilities** - In accordance with Section 102 of the Americans with Disabilities Act, as amended, 42 U.S.C. Section 12112, the Contractor agrees that it will comply with the requirements of U.S. Equal Employment Opportunity Commission, "Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act," 29 CFR Part 1630, pertaining to employment of persons with disabilities. In addition, the Contractor agrees to comply with any implementing requirements FTA or FRA may issue.

7. DISADVANTAGED BUSINESS ENTERPRISE (DBE)

**

The specific provisions checked below apply to this Agreement.

- (a) This Agreement is subject to the requirements of 49 CFR Part 26, *Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs*. The national goal for participation of Disadvantaged Business Enterprises (DBEs) is 10 percent. The TJPA's Anticipated DBE Participation Level for each Federal Fiscal Year is published on the TJPA website by August 1 of each year.

☐ A separate Agreement goal of _____ percent DBE participation has been established for this Agreement.

☒ A separate Agreement goal **has not** been established for this Agreement.

- (b) The Contractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Agreement. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of this DOT-assisted Agreement. Failure by the Contractor to carry out these requirements is a material breach of this Agreement, which may result in the termination of this Agreement or such other remedy as the TJPA deems appropriate. Each Subcontract the Contractor signs with a subcontractor must include the assurance in this paragraph (see 49 CFR Section 26.13[b]).

- (c) *(Checked box is applicable to this Agreement.)*

☐ *(If a separate Agreement goal has been established, use the following)*

The Contractor was required to document sufficient DBE participation to meet the separate Agreement goal established for this Agreement or, alternatively, document adequate good faith efforts to do so, as provided for in 49 CFR Section 26.53.

☒ *(If no separate Agreement goal has been established, use the following)*

The Contractor is required to report its DBE participation obtained through race-neutral means throughout the period of performance.

- (d) The Contractor is required to pay its subcontractors performing work related to this Agreement for satisfactory performance of that work no later than ten (10) days after the Contractor's receipt of payment for that work from the TJPA. In addition, the Contractor is required to return any retainage payments to those subcontractors within thirty (30) days after incremental acceptance of the subcontractor's work by the TJPA and Contractor's receipt of the partial retainage payment related to the subcontractor's work.
- (e) The Contractor must promptly notify the TJPA whenever a DBE subcontractor performing work related to this Agreement is terminated or fails to complete its work, and must make good faith efforts to engage another DBE subcontractor to perform at least the same amount of work. The Contractor may not terminate any DBE subcontractor and perform that work through its own forces or those of an affiliate without prior written consent of the TJPA.

8. INCORPORATION OF U.S. DEPARTMENT OF TRANSPORTATION TERMS

****** *This requirement applies to all Agreements.*

The preceding provisions include, in part, certain standard terms and conditions required by U.S. DOT of the TJPA's agreements, whether or not expressly set forth in the preceding Agreement provisions. All contractual provisions required by U.S. DOT, as set forth in FTA Circular 4220.1F and any replacement or revision thereof, and any provisions set forth by FRA, are hereby incorporated by reference. Anything to the contrary herein notwithstanding, all USDOT-mandated terms shall be deemed to control in the event of a conflict with other provisions contained in this Agreement. The Contractor shall not perform any act, fail to perform any act, or refuse to comply with any TJPA requests which would cause the TJPA to be in violation of the USDOT terms and conditions.

9. FLY AMERICA REQUIREMENTS

****** *This provision applies to all Agreements that involve the transportation of persons or property, by air, between a place in the U.S. and a place outside the U.S., or between places outside the U.S.*

- (a) The Contractor agrees to comply with 49 U.S.C. Section 40118 (the "Fly America Act") in accordance with the General Services Administration's regulations at 41 CFR Part 301-10, which provide that recipients and subrecipients of Federal funds and their contractors are required to use U.S. flag air carriers for U.S. Government-financed international air travel and transportation of their personal effects or property, to the extent such service is available, unless travel by foreign air carrier is a matter of necessity, as defined by the Fly America Act.

- (b) The Contractor shall submit the "Fly America Certification" if the regulation is applicable to the particular Agreement.
- (c) The Contractor shall submit, if a foreign air carrier was used, an appropriate certification or memorandum adequately explaining why service by a U.S. flag air carrier was not available or why it was necessary to use a foreign air carrier.
- (d) Notwithstanding the foregoing, transportation on a foreign air carrier is permissible when provided by a foreign air carrier under a code share agreement when the ticket identifies the U.S. air carrier's designator code and flight number. Transportation by a foreign air carrier is also permissible if there is a bilateral or multilateral air transportation agreement to which the U.S. Government and a foreign government are parties and which the U.S. DOT has determined meets the requirements of the Fly America Act.

10. CARGO PREFERENCE REQUIREMENTS

****** *This provision applies to all Agreements involving equipment, materials, or commodities which may be transported by ocean vessels.*

The Contractor agrees to:

- (a) use privately owned United States flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to the Agreement to the extent such vessels are available at fair and reasonable rates for United States flag commercial vessels;
- (b) furnish within twenty (20) working days following the date of loading for shipments originating within the United States or within thirty (30) working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, "on-board" commercial ocean bill-of-landing in English for each shipment of cargo described in the preceding paragraph to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590 and to the TJPA (through the Contractor in the case of a subcontractor's bill-of-landing).

11. ENERGY CONSERVATION REQUIREMENTS

****** *This provision applies to all Agreements.*

The Contractor agrees to comply with mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act, 42 U.S.C. Section 6201 et seq.

12. BUY AMERICA REQUIREMENTS

****** *This provision applies only to the following types of Agreements: (a) construction agreements of any value; (b) agreements for the acquisition of goods or rolling stock of any value if funded by FRA, and valued at more than \$100,000 if funded by FTA.*

- (a) The Contractor agrees to comply with 49 U.S.C. Section 5323(j), 49 CFR Part 661, and 49 U.S.C. 24405, which provide that Federal funds may not be obligated unless steel, iron, and manufactured products used in FTA- and FRA-funded projects, such as the Transbay Transit Center Program that is the subject of this Agreement, are produced in the United States, unless a waiver has been granted by FTA, FRA, or the product is subject to a general waiver. General waivers, when FTA funds are used, are listed in 49 CFR Section 661.7. Separate requirements for rolling stock are set out at 49 U.S.C. Section 5323(j)(2)(C) and 49 CFR Section 661.11 when FTA funds are used, and 49 CFR 24405(a) when FRA funds are used.

(b) The Contractor shall submit the "Buy America Certification" at the time of bid/offer if the regulation is applicable to the particular agreement. The Prime Contractor is responsible for ensuring that lower tier subcontractors are in compliance.

The following provisions (13-14) apply to Agreements exceeding \$10,000.

13. TERMINATION

*** This requirement applies to all Agreements in excess of \$10,000, except when the Contractor is a nonprofit organization or institution of higher education. When the Contractor is a nonprofit organization or institution of higher education, this requirement applies to all Agreements greater than \$100,000.*

*** Please be aware that the requirements in the Agreement regarding termination for convenience are more broadly applicable than the USDOT Requirements described below. Both the requirements described below and the provisions in the Agreement are applicable to the Agreement.*

- (a) **Termination for Convenience (General Provision)** - The TJPA may terminate this Agreement, in whole or in part, at any time by written notice to the Contractor when it is in the Government's best interest. The Contractor shall be paid its costs, including Agreement close-out costs, and profit on work performed up to the time of termination. The Contractor shall promptly submit its termination claim to the TJPA. If the Contractor has any property in its possession belonging to the TJPA, the Contractor will account for the same, and dispose of it in the manner the TJPA directs.
- (b) **Termination for Default [Breach or Cause] (General Provision)** - If the Contractor (1) does not deliver supplies in accordance with the Agreement delivery schedule, or (2) if the Agreement is for services the Contractor fails to perform in the manner called for in the Agreement, or (3) if the Contractor fails to comply with any other provisions of the Agreement, the TJPA may terminate this Agreement for default. Termination shall be effected by serving a notice of termination on the Contractor setting forth the manner in which the Contractor is in default. The Contractor will only be paid the Agreement price for supplies delivered and accepted, or services performed in accordance with the manner of performance set forth in the Agreement.

If it is later determined by the TJPA that the Contractor had an excusable reason for not performing, such as a strike, fire, or flood, events which are not the fault of or are beyond the control of the Contractor, the TJPA, after setting up a new delivery of performance schedule, may allow the Contractor to continue work, or treat the termination as a termination for convenience.

- (c) **Opportunity to Cure (General Provision)** - The TJPA in its sole discretion may, in the case of a termination for breach or default, allow the Contractor a period of time in which to cure the defect. In such case, the notice of termination will state the time period in which cure is permitted and other appropriate conditions.

If Contractor fails to remedy to the TJPA's satisfaction the breach or default of any of the terms, covenants, or conditions of this within ten (10) days after receipt by Contractor of written notice from the TJPA setting forth the nature of said breach or default, the TJPA shall have the right to terminate the Agreement without any further obligation to Contractor. Any such termination for default shall not in any way operate to preclude the TJPA from also pursuing all available remedies against Contractor and its sureties for said breach or default.

- (d) **Waiver of Remedies for any Breach** - In the event that TJPA elects to waive its remedies for any breach by Contractor of any covenant, term or condition of this Agreement, such waiver by the TJPA shall not limit the TJPA's remedies for any succeeding breach of that or of any other term, covenant, or condition of this Agreement.

(e) **Termination for Convenience (Professional or Transit Service Agreements)** - The TJPA, by written notice, may terminate this Agreement, in whole or in part, when it is in the Government's interest. If this Agreement is terminated, the TJPA shall be liable only for payment under the payment provisions of this Agreement for services rendered before the effective date of termination.

(f) **Termination for Default (Supplies and Service)** - If the Contractor fails to deliver supplies or to perform the services within the time specified in this Agreement or any extension or if the Contractor fails to comply with any other provisions of this Agreement, the TJPA may terminate this Agreement for default. The TJPA shall terminate by delivering to the Contractor a Notice of Termination specifying the nature of the default. The Contractor will only be paid the Agreement price for supplies delivered and accepted, or services performed in accordance with the manner or performance set forth in this Agreement.

If, after termination for failure to fulfill Agreement obligations, it is determined that the Contractor was not in default, the rights and obligations of the parties shall be the same as if the termination had been issued for the convenience of the TJPA.

(g) **Termination for Default (Transportation Services)** - If the Contractor fails to pick up the commodities or to perform the services, including delivery services, within the time specified in this Agreement or any extension or if the Contractor fails to comply with any other provisions of this Agreement, the TJPA may terminate this Agreement for default. The TJPA shall terminate by delivering to the Contractor a Notice of Termination specifying the nature of default. The Contractor will only be paid the Agreement price for services performed in accordance with the manner of performance set forth in this Agreement.

If this Agreement is terminated while the Contractor has possession of TJPA goods, the Contractor shall, upon direction of the TJPA, protect and preserve the goods until surrendered to the TJPA or its agent. The Contractor and the TJPA shall agree on payment for the preservation and protection of goods. Failure to agree on an amount will be resolved under the Dispute clause.

If, after termination for failure to fulfill Agreement obligations, it is determined that the Contractor was not in default, the rights and obligations of the parties shall be the same as if the termination had been issued for the convenience of the TJPA.

(h) **Termination for Default (Construction)** - If the Contractor refuses or fails to prosecute the work or any separable part, with the diligence that will ensure its completion within the time specified in this Agreement or any extension or fails to complete the work within this time, or if the Contractor fails to comply with any other provisions of this Agreement, the TJPA may terminate this Agreement for default. The TJPA shall terminate by delivering to the Contractor a Notice of Termination specifying the nature of the default. In this event, the TJPA may take over the work and compete it by contract or otherwise, and may take possession of and use any materials, appliances, and plant on the work site necessary for completing the work. The Contractor and its sureties shall be liable for any damage to the TJPA resulting from the Contractor's refusal or failure to complete the work within specified time, whether or not the Contractor's right to proceed with the work is terminated. This liability includes any increased costs incurred by the TJPA in completing the work.

The Contractor's right to proceed shall not be terminated nor the Contractor charged with damages under this clause if:

- (1) The delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such causes include acts of God, acts of the TJPA, acts of another Contractor in the performance of a Agreement with the TJPA, epidemics, quarantine restrictions, strikes, freight embargoes; and

- (2) The Contractor, within ten (10) days from the beginning of any delay, notifies the TJPA in writing of the causes of delay. If in the judgment of the TJPA, the delay is excusable, the time for completing the work shall be extended. The judgment of the TJPA shall be final and conclusive on the parties, but subject to appeal under the Disputes clauses.

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 will be the same as if the termination had been issued for the convenience of the TJPA.

- (i) **Termination for Convenience or Default (Architect and Engineering)** - The TJPA may terminate this Agreement in whole or in part, for the TJPA's convenience or because of the failure of the Contractor to fulfill the Agreement obligations. The TJPA shall terminate by delivering to the Contractor a Notice of Termination specifying the nature, extent, and effective date of the termination. Upon receipt of the notice, the Contractor shall (1) immediately discontinue all services affected (unless the notice directs otherwise), and (2) deliver to the contracting officer all data, drawings, specifications, reports, estimates, summaries, and other information and materials accumulated in performing this Agreement, whether completed or in process.

If the termination is for the convenience of the TJPA, the contracting officer shall make an equitable adjustment in the Agreement price but shall allow no anticipated profit on unperformed services.

If the termination is for failure of the Contractor to fulfill the Agreement obligations, the TJPA may complete the work by contract or otherwise and the Contractor shall be liable for any additional cost incurred by the TJPA.

If, after termination for failure to fulfill Agreement obligations, it is determined that the Contractor was not in default, the rights and obligations of the parties shall be the same as if the termination had been issued for the convenience of the TJPA.

- (j) **Termination for Convenience or Default (Cost-Type Agreements)** - The TJPA may terminate this Agreement, or any portion of it, by serving a notice of termination on the Contractor. The notice shall state whether the termination is for convenience of the TJPA or for the default of the Contractor. If the termination is for default, the notice shall state the manner in which the Contractor has failed to perform the requirements of the Agreement. The Contractor shall account for any property in its possession paid for from funds received from the TJPA, or property supplied to the Contractor by the TJPA. If the termination is for default, the TJPA may fix the fee, if the Agreement provides for a fee, to be paid the Contractor in proportion to the value, if any, of work performed up to the time of termination. The Contractor shall promptly submit its termination claim to the TJPA and the parties shall negotiate the termination settlement to be paid the Contractor.

If the termination is for the convenience of the TJPA, the Contractor shall be paid its Agreement close-out costs, and a fee, if the Agreement provided for payment of a fee, in proportion to the work performed up to the time of termination.

If, after serving a notice of termination for default, the TJPA determines that the Contractor has an excusable reason for not performing, such as strike, fire, flood, events which are not the fault of and are beyond the control of the Contractor, the TJPA, after setting up a new work schedule, may allow the Contractor to continue work, or treat the termination as a termination for convenience.

14. RECYCLED PRODUCTS

****** *This provision applies to all Agreements to procure \$10,000 or more of any one item designated by the EPA under 40 CFR Part 247, Subpart B in a single fiscal year, and to all Agreements to procure any items designated in 40 CFR Part 247, Subpart B where the TJPA or the Contractor has used Federal funds to procure \$10,000 or more of any one item in the previous fiscal year.*

****** *Please be aware that the requirements in the Agreement regarding resource conservation may be more restrictive than the USDOT Requirements described below. The Contractor must comply with the requirements described below and in the Agreement.*

The Contractor agrees to comply with the requirements of Section 6002 of the Resource Conservation and Recovery Act (RCRA), as amended (42 U.S.C. Section 6962 et seq.), including but not limited to the regulatory provisions of 40 CFR Part 247, and Executive Order 12873, as they apply to the procurement of the items designated in 40 CFR Part 247, Subpart B.

The following provision (15) applies to Agreements exceeding \$25,000.

15. GOVERNMENT-WIDE DEBARMENT AND SUSPENSION (NON-PROCUREMENT)

****** *This requirement applies to all Agreements and Subcontracts greater than or equal to \$25,000, and to any Agreement for auditing services at any dollar value.*

- (a) This Agreement is a "covered transaction" for purposes of 49 CFR Part 29, and the Contractor is required to comply with 49 CFR Section 29, Subpart C. In particular, the Contractor is required to verify that the Contractor, its "principals," as defined at 49 CFR Section 29.995, and its "affiliates," as defined at 49 CFR Section 29.905, are not "excluded" or "disqualified," as defined at 49 CFR sections 29.940 and 29.945.
- (b) The Contractor shall submit the "Certification Regarding Debarment, Suspension, and Other Responsibility Matters."

The following provisions (16-17) apply to Agreements exceeding \$50,000.

16. CLEAN AIR

****** *This provision applies to all Agreements greater than \$50,000 and to subcontracts greater than \$50,000.*

- (a) The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. Section 7401 et seq. The Contractor agrees to report each violation to the TJPA and understands and agrees that the TJPA will, in turn, report each violation as required to assure notification to FTA and FRA and the appropriate EPA Regional Office.
- (b) The Contractor also agrees to include these requirements in each subcontract exceeding \$50,000.

17. CLEAN WATER REQUIREMENTS

****** *This provision applies to all Agreements greater than \$50,000.*

- (a) The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. Section 1251 et seq. The Contractor agrees to report each violation to the TJPA and understands and agrees that the TJPA will, in turn, report each violation as required to assure notification to FTA and FRA and the appropriate EPA Regional Office.

- (b) The Contractor also agrees to include these requirements in each Subcontract exceeding \$50,000 financed in whole or in part with Federal assistance provided by FTA and FRA.

The following provisions (18-20) apply to Agreements exceeding \$100,000.

18. BREACHES AND DISPUTE RESOLUTION

****** *This requirement applies to all Agreements in excess of \$100,000.*

- (a) **Disputes** - Disputes arising in the performance of this Agreement which are not resolved by agreement of the parties shall be decided in writing by the authorized representative of TJPA's Executive Director. This decision shall be final and conclusive unless within ten (10) days from the date of receipt of its copy, the Contractor mails or otherwise furnishes a written appeal to the Executive Director. In connection with any such appeal, the Contractor shall be afforded an opportunity to be heard and to offer evidence in support of its position. The decision of the Executive Director shall be binding upon the Contractor and the Contractor shall abide by the decision.
- (b) **Performance During Dispute** - Unless otherwise directed by the TJPA, Contractor shall continue performance under this Agreement while matters in dispute are being resolved.
- (c) **Claims for Damages** - Should either party to the Agreement suffer injury or damage to person or property because of any act or omission of the party or of any of the party's employees, agents or others for whose acts the party is legally liable, a claim for damages therefore shall be made in writing to such other party within a reasonable time after the first observance of such injury or damage.
- (d) **Remedies** - Unless this Agreement provides otherwise, all claims, counterclaims, disputes and other matters in question between the TJPA and the Contractor arising out of or relating to this Agreement or its breach will be decided by arbitration if the parties mutually agree, or in a court of competent jurisdiction within the state in which the TJPA is located.
- (e) **Rights and Remedies** - The duties and obligations imposed by the Agreement Documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law. No action or failure to act by the TJPA or Contractor shall constitute a waiver of any right or duty afforded any of them under the Agreement, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.

19. LOBBYING

****** *This provision applies to the following types of Agreements, if the Agreement is equal to or greater than \$100,000: construction, architectural and engineering; acquisition of rolling stock; professional services; operational services; and Turnkey.*

****** *Please be aware that the requirements in the Agreement regarding limitations on contributions may be more restrictive than the USDOT Requirements described below. The Contractor must comply with the requirements described below and in the Agreement.*

- (a) The contractor shall submit the "New Restrictions on Lobbying Certification" if the regulation is applicable to the particular agreement.
- (b) The Contractor and each subcontractor shall certify to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any federal agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. Section 1352. The Contractor and each subcontractor shall also disclose the name of any registrant under the

Lobbying Disclosure Act of 1995 who has made lobbying contacts on its behalf with non-Federal funds with respect to a Federal contract, grant or award covered by 31 U.S.C. Section 1352. Such disclosures are forwarded from tier to tier up to the TJPA.

20. AGREEMENT WORK HOURS AND SAFETY STANDARDS ACT

****** *This requirement applies to Agreements and Subcontracts for construction over \$100,000, and to non-construction Agreements valued at more than \$100,000 that employ "laborers or mechanics on a public work," as defined by 42 U.S.C. Section 3701.*

- (a) **Overtime requirements** - No Contractor or subcontractor contracting for any part of the Agreement work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
- (b) **Violation; liability for unpaid wages; liquidated damages** - In the event of any violation of the clause set forth in paragraph (a) of this section the Contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (a) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this section.
- (c) **Withholding for unpaid wages and liquidated damages** - The TJPA shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the Contractor or subcontractor under any such Agreement or any other Federal contract with the same Contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same Contractor, such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b) of this section.

The following provisions (21-23) apply to Construction Agreements.

21. SEISMIC SAFETY REQUIREMENTS

****** *This provision applies only to Agreements for the construction of new buildings or additions to existing buildings.*

The Contractor agrees that any new building or addition to an existing building that is the subject of this Agreement will be designed and constructed in accordance with the standards for Seismic Safety required in U.S. DOT Seismic Safety Regulations 49 CFR Part 41 and will certify to compliance with such regulations to the extent required by the regulations. The Contractor also agrees to ensure that all work performed under this Agreement, including work performed by a subcontractor, is in compliance with the standards required by the Seismic Safety Regulations and the certification of compliance issued on the project.

22. BONDING REQUIREMENTS

****** *This provision applies to Agreements for construction or facility improvements. For those Agreements or Subcontracts exceeding \$100,000, however, USDOT may accept the bonding policy and requirements of the TJPA, provided that the TJPA's bonding policy and requirements meet the minimum requirements as follows:*

- (a) *A bid guarantee from each bidder equivalent to 5 percent of the bid price. The "bid guarantees" shall consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of his bid, execute such contractual documents as may be required within the time specified.*
- (b) *A performance bond on the part of the Contractor for 100 percent of the Agreement price. A "performance bond" is one executed in connection with a contract to secure fulfillment of all the Contractor's obligations under such contract.*
- (c) *A cash deposit, certified check or other negotiable instrument may be accepted by the TJPA in lieu of performance and payment bonds, provided the TJPA has established a procedure to assure that the interest of USDOT is adequately protected. An irrevocable letter of credit would also satisfy the requirement for a bond.*

TJPA requirements regarding payment bonds are more stringent than USDOT amounts stated below. The TJPA requires a payment bond on the part of the Contractor for 100 percent of the Agreement price.

(1) Bid Bond Requirements (Construction)

- (a) **Bid Security**
A Bid Bond must be issued by a fully qualified surety company acceptable to TJPA and listed as a company currently authorized under 31 CFR Part 223 as possessing a Certificate of Authority.
- (b) **Rights Reserved**
In submitting a bid, it is understood and agreed by bidder that the right is reserved by TJPA to reject any and all bids, or part of any bid, and it is agreed that a bid may not be withdrawn for a period of ninety (90) days subsequent to the opening of bids, without the written consent of the TJPA.

It is also understood and agreed that if a bidder should withdraw any part or all of its bid within ninety (90) days after the bid opening without the written consent of the TJPA, shall refuse or be unable to enter into this Agreement, or refuse or be unable to furnish adequate and acceptable Performance Bonds and Labor and Material Payments Bonds, or refuse or be unable to furnish adequate and acceptable insurance, it shall forfeit its bid security to the extent of TJPA's damages occasioned by such withdrawal, or refusal, or inability to enter into an agreement, or provide adequate security therefor.

It is further understood and agreed that to the extent the defaulting bidder's Bid Bond, Certified Check, Cashier's Check, Treasurer's Check, and/or Official Bank Check (excluding any income generated thereby which has been retained by the TJPA) shall prove inadequate to fully recompense the TJPA for the damages occasioned by default, then a bidder agrees to indemnify the TJPA and pay over to the TJPA the difference between the bid security and the TJPA's total damages, so as to make the TJPA whole.

A bidder understands that any material alteration of any of the above or any of the material contained on this form, other than that requested, will render the bid unresponsive.

(2) Performance and Payment Bonding Requirements (Construction)

The Contractor shall be required to obtain performance and payment bonds as follows:

- (a) **Performance Bonds**
 - 1. The penal amount of performance bonds shall be 100 percent of the original Agreement price, unless the TJPA determines that a lesser amount would be adequate for the protection of the TJPA.

2. The TJPA may require additional performance bond protection when an Agreement price is increased. The increase in protection shall generally equal 100 percent of the increase in Agreement price. The TJPA may secure additional protection by directing the Contractor to increase the penal amount of the existing bond or to obtain an additional bond.

(b) **Payment Bonds**

1. The penal amount of the payment bonds shall equal:
 - (i) 50 percent of the Agreement price if the Agreement price is not more than \$1 Million;
 - (ii) 40 percent of the Agreement price if the Agreement price is more than \$1 Million but not more than \$5 Million; or
 - (iii) \$2.5 Million if the Agreement price is more than \$5 Million.
2. If the original Agreement price is \$5 Million or less, the TJPA may require additional protection, as required by subparagraph 1, if the Agreement price is increased.

(3) **Performance and Payment Bonding Requirements (Non-Construction)**

The Contractor also may be required to obtain performance and payment bonds when necessary to protect the TJPA's interest.

(a) The following situations may warrant a performance bond:

1. TJPA property or funds are to be provided to the Contractor for use in performing the Agreement or as partial compensation (as in retention of salvaged material).
2. A Contractor sells assets to or merges with another concern, and the TJPA, after recognizing the latter concern as the successor in interest, desires assurance that it is financially capable.
3. Substantial progress payments are made before delivery of end items starts.
4. Agreements are for dismantling, demolition, or removal of improvements.

(b) When it is determined that a performance bond is required, the Contractor shall be required to obtain performance bonds as follows:

1. The penal amount of performance bonds shall be 100 percent of the original Agreement price, unless the TJPA determines that a lesser amount would be adequate for the protection of the TJPA.
2. The TJPA may require additional performance bond protection when an Agreement price is increased. The increase in protection shall generally equal 100 percent of the increase in Agreement price. The TJPA may secure additional protection by directing the Contractor to increase the penal amount of the existing bond or to obtain an additional bond.

(c) A payment bond is required only when a performance bond is required, and if the use of payment bond is in the TJPA's interest.

(d) When it is determined that a payment bond is required, the Contractor shall be required to obtain payment bonds as follows:

1. The penal amount of payment bonds shall equal:
 - (i) 50 percent of the Agreement price if the Agreement price is not more than \$1 Million;
 - (ii) 40 percent of the Agreement price if the Agreement price is more than \$1 Million but not more than \$5 Million; or
 - (iii) \$2.5 Million if the Agreement price is increased.

(4) **Advance Payment Bonding Requirements**

The Contractor may be required to obtain an advance payment bond if the Agreement contains an advance payment provision and a performance bond is not furnished. The TJPA shall determine the amount of the advance payment bond necessary to protect the TJPA.

(5) **Patent Infringement Bonding Requirements (Patent Indemnity)**

The Contractor may be required to obtain a patent indemnity bond if a performance bond is not furnished and the financial responsibility of the Contractor is unknown or doubtful. The TJPA shall determine the amount of the patent indemnity to protect the TJPA.

(6) **Warranty of the Work and Maintenance Bonds**

- (a) The Contractor warrants to the TJPA, the architect and/or engineer that all materials and equipment furnished under this Agreement will be of highest quality and new unless otherwise specified by the TJPA, free from faults and defects and in conformance with the Agreement documents. All work not so conforming to these standards shall be considered defective. If required by the Executive Director, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.
- (b) The work furnished under the Agreement must be of first quality and the workmanship must be the best obtainable in the various trades. The work must be of safe, substantial and durable construction in all respects. The Contractor hereby guarantees the work against defective materials or faulty workmanship for a minimum period of one (1) year after Final Payment by the TJPA and shall replace or repair any defective materials or equipment or faulty workmanship during the period of the guarantee at no cost to the TJPA. As additional security for these guarantees, the Contractor shall, prior to the release of final payment, furnish separate Maintenance (or Guarantee) Bonds in form acceptable to the TJPA written by the same corporate surety that provides the Performance Bond and Labor and Material Payment Bond for this Agreement. These bonds shall secure the Contractor's obligation to replace or repair defective materials and faulty workmanship for a minimum period of one (1) year after final payment and shall be written in an amount equal to 100 percent of the Agreement sum, as adjusted (if at all).

23. DAVIS-BACON AND COPELAND ANTI-KICKBACK ACTS

****** *This requirement applies to any Agreement for construction greater than \$2,000. "Construction," for purposes of this requirement, includes "actual construction, alteration and/or repair, including painting and decorating." (29 CFR Section 5.5[a]).*

(a) **Minimum Wages**

- (1) All laborers and mechanics employed or working upon the site of the work that is the subject of this Agreement (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the Project), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act [29 CFR Part 3]), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such

weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph (1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the Contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

- (2) (A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the Agreement shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:
- (i) Except with respect to helpers as defined as 29 CFR Section 5.2(n)(4), the work to be performed by the classification requested is not performed by a classification in the wage determination; and
 - (ii) The classification is utilized in the area by the construction industry; and
 - (iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and
 - (iv) With respect to helpers as defined in 29 CFR Section 5.2(n)(4), such a classification prevails in the area in which the work is performed.
- (B) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within thirty (30) days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- (C) In the event the Contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within thirty (30) days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- (D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this Agreement from the first day on which work is performed in the classification.
- (3) Whenever the minimum wage rate prescribed in the Agreement for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the Contractor shall either pay the benefit as stated in the wage determination or shall pay

another bona fide fringe benefit or an hourly cash equivalent thereof.

- (4) If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided that the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.
- (5) (A) The contracting officer shall require that any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the Agreement shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:
- (i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
 - (ii) The classification is utilized in the area by the construction industry; and
 - (iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- (B) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within thirty (30) days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- (C) In the event the Contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination with thirty (30) days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- (D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(v) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this Agreement from the first day on which work is performed in the classification.
- (b) **Withholding** - The TJPA shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the Contractor under this Agreement or any other Federal contract with the same Contractor, or any other federally assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same Contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the Agreement. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work (or under the United States Housing Act of 1937 or

under the Housing Act of 1949 in the construction or development of the project), all or part of the wages required by the Agreement, the TJPA may, after written notice to the Contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(c) **Payrolls and Basic Records**

- (1) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of three (3) years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR Section 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.
- (2)
 - (A) The Contractor shall submit weekly for each week in which any Agreement work is performed a copy of all payrolls to the TJPA for transmission to the USDOT. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under Section 5.5(a)(3)(i) of Regulations, 29 CFR Part 5. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal Stock Number 029-005-00014-1), U.S. Government Printing Office, Washington, DC 20402. The Contractor is responsible for the submission of copies of payrolls by all subcontractors.
 - (B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the Agreement and shall certify the following:
 - (i) That the payroll for the payroll period contains the information required to be maintained under Section 5.5(a)(3)(i) of Regulations, 29 CFR Part 5 and that such information is correct and complete;
 - (ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the Agreement during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR Part 3;
 - (iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the Agreement.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the Contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

- (3) The Contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the USDOT or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the Contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR Section 5.12.

(d) **Apprentices and Trainees**

- (1) **Apprentices** - Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first ninety (90) days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the Contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a Contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator of the Wage and Hour Division of the U.S. Department of Labor determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

- (2) Trainees - Except as provided in 29 CFR Section 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
- (3) Equal employment opportunity - The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.
- (e) **Compliance with Copeland Act Requirements** - The Contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this Agreement.
- (f) **Subcontracts** - The Contractor or subcontractor shall insert in any Subcontracts the clauses contained in 29 CFR Section 5.5(a)(1) through (10) and such other clauses as the USDOT may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier Subcontracts. The Contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR Section 5.5.
- (g) **Agreement Termination: Debarment** - A breach of the contract clauses in 29 CFR Section 5.5 may be grounds for termination of the Agreement, and for debarment as a contractor and a subcontractor as provided in 29 CFR Section 5.12.
- (h) **Compliance with Davis-Bacon and Related Act Requirements** - All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this Agreement.
- (i) **Disputes Concerning Labor Standards** - Disputes arising out of the labor standards provisions of this Agreement shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

(j) **Certification of Eligibility**

- (1) By entering into this Agreement, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR Section 5.12(a)(1).
- (2) No part of this Agreement shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR Section 5.12(a)(1).
- (3) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. Section 1001.

FLY AMERICA CERTIFICATION

49 U.S.C. Section 40118
41 CFR Part 301-10

The bidder or offeror hereby certifies that it will meet the requirements of 49 U.S.C. 40118 (the "Fly America" Act) in accordance with the General Services Administration's regulations at 41 CFR Part 301-10.

Date _____

Signature _____

Company Name _____

Title _____

BUY AMERICA CERTIFICATION

Certification requirement relating to procurement of steel, iron, or manufactured products.

Certificate of Compliance

The Contractor hereby certifies that it will comply with the requirements of 49 U.S.C. 5323(j) the applicable regulations in 49 CFR Part 661, and 49 U.S.C. 24405(a).

Date _____

Contractor Name _____

Authorized Representative Name _____

Signature _____

Title _____

OR

Certificate of Non-Compliance

The Contractor hereby certifies that it cannot comply with the requirements of 49 U.S.C. 5323(j), the applicable regulations in 49 CFR Part 661, and 49 U.S.C. 24405(a), but it may qualify for an exception pursuant to 49 U.S.C. 5323(j)(2), or regulations in 49 CFR 661.7, or 49 U.S.C. 24405(a)(2).

Date _____

Contractor Name _____

Authorized Representative Name _____

Signature _____

Title _____

NEW RESTRICTIONS ON LOBBYING CERTIFICATION

The Contractor certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for making lobbying contacts to an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The Contractor shall require that the language of this certification be included in all Subcontracts, and that all subcontractors shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. Section 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The Contractor certifies and affirms the truthfulness and accuracy of each statement of this certification and disclosure. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Section 3801 et seq., apply to this certification and disclosure.

Date _____

Contractor Name _____

Authorized Representative Name _____

Signature _____

Title _____

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS

By signing and submitting its bid or proposal, the bidder or proposer certifies as follows:

- (1) The prospective participant certifies to the best of its knowledge and belief that it and its principals:
 - a. Are not presently debarred, suspended, proposed for disbarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
 - b. Have not within a three-year period preceding this application been convicted of or had a civil judgment rendered against them for 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; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
 - c. 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 paragraph (1) b. of this certification; and
 - d. Have not within a three-year period preceding this application had one or more public transactions (Federal, State, or local) terminated for cause or default.
- (2) Where the prospective participant is unable to certify to any of the statements in this certification, such prospective primary participant shall attach an explanation to this proposal.

The certification in this clause is a material representation of fact relied upon by the TJPA. If it is later determined that the bidder or proposer knowingly rendered an erroneous certification, in addition to remedies available to the TJPA, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment. The bidder or proposer agrees to comply with the requirements of 49 CFR 29, Subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

Bidder/Offeror Name: _____

Authorized Representative Name: _____

Authorized Representative Title: _____

Authorized Representative Signature: _____

Date: _____

END OF SECTION 00 08 13/APA

SPECIFICATION ISSUE LOG

Revision	Date
0	July 30, 2010
1	August 25, 2010
2	September 23, 2010

SECTION 00 08 13/APB – NOISE CONTROL ORDINANCE

Police Code Section 2907(b) - It shall be unlawful for any person to operate any powered construction equipment, regardless of age or date of acquisition, if such equipment emits noise at a level in excess of 80 dBA when measured at a distance of one hundred feet from such equipment, or equivalent sound level at some other convenient distance;

Police Code Section 2907(c) - Requirements of Section 2907(b) need not be applied to impact tools and equipment, provided that such impact tools and equipment shall have intake and exhaust mufflers recommended by the manufacturers thereof and approved by the Director of Public Works as best accomplishing maximum noise attenuation, 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 Director of Public Works as best accomplishing maximum noise attenuation. In the absence of manufacturer's recommendation, the Director of Public Works may prescribe such means of accomplishing maximum noise attenuation as he deems to be in the public interest.

Police Code Section 2901.12 - Powered construction equipment includes any tools, machinery, or equipment used in connection with construction operations which can be driven by energy in any form other than manpower, including all types of motor vehicles when used in the construction process on any construction site, regardless of whether such construction site be located on-highway or off-highway, and further including all helicopters or other aircraft when used in the construction process except as may be pre-empted for regulation by State or Federal law.

Police Code Section 2908 - It shall be unlawful for any person, including employees and agents of the City and County of San Francisco, between the hours of 8:00 p.m. any day and 7:00 a.m. of the following day to erect, construct, demolish, excavate, alter or repair any building or structure, if the noise level created thereby is in excess of the ambient background noise level by 5 dBA at the nearest property line, unless a special permit therefor has been applied for and granted by the Director of Public Works. In granting such special permit the Director of Public Works shall consider if construction noise in the vicinity of the proposed work site would be less objectionable at night than during daytime because of different population levels or different neighboring activities, if obstruction and interferences with traffic particularly on streets of major importance, would be less objectionable at night than during daytime, if the kind of work to be performed emits noises at such a low level as to not cause significant disturbance in the vicinity of the work site, if the neighborhood of the proposed work site is primarily residential in character wherein sleep could be disturbed, if great economic hardship would occur if the work were spread over a longer time, if the work will abate or prevent hazard to life or property, if the proposed night work is in the general public interest; and he shall prescribe such conditions, working times, types of construction equipment to be used, and permissible noise emissions, as he deems to be required in the public interest.

END OF SECTION 00 08 13/APB

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 00 08 13/APC – DEPARTMENT OF PUBLIC WORKS GUIDELINES FOR PLACEMENT OF
BARRICADES AT CONSTRUCTION SITES

ORDER NO. 167,840

GUIDELINES

It is the policy of the Department of Public Works that a safe and accessible path of travel be provided for all pedestrians, including those with disabilities, around and/or through construction sites.

When erecting barricades, the Contractor shall be conscious of the special needs of pedestrians with physical disabilities. Discretion is given to the Contractor to provide protection for pedestrians consistent with all local, state, and federal codes, including the Americans with Disabilities Act and the California Building Code, Title 24.

It is recognized that there are various types of construction activities, including both short-term and long-term projects. Some barricading systems are more appropriate for certain types of construction than others.

The following barricading systems described in the attached document are examples of systems which can be used to provide a safe and accessible path of travel around and through a construction site. They are not intended to be all-inclusive. Any barricading system meeting accessibility standards may be considered.

BARRICADING METHODS AND MATERIALS

A-Frames

When using A-frames for defining a path-of-travel, not barricading trenches from vehicular travel, A-frames shall be placed end to end (no spacing between barricade allowed). This will help a person who is blind negotiate a safe path-of-travel. Openings between A-frames will give confusing signals to a person who is blind and using a "walking cane" or "white cane". If using A-frames, all must be connected in a way to ensure that individual A-frames do not move out of place or separate. As an example of an acceptable connection, A-frames may be connected by 2 x 4's that are attached to the base of the barricade system.

Barrier Caution Tape

Caution tape does not provide an adequate barricade and cannot be used to delineate path-of-travel (but can be used in other areas to highlight danger. It can be used in conjunction with barricades such as A-frames).

Fencing Material

When using fencing material (i.e., chain link, plastic, etc.) the bottom 3 inches minimum should be solid. This base will act as a guide to blind pedestrians using canes. Walking canes used by blind pedestrians could get caught in fencing. A safe design can be achieved by attaching a solid material (i.e., wood, header bender board, sheet metal, solid rod or rail, etc.) to the bottom portion of the fence. Chosen material should have a high visual contrast to the street/sidewalk surface.

Closed Crosswalks

If a crosswalk is closed due to construction, then curb ramps leading into that crosswalk should also be appropriately barricaded. Temporary curb ramps must be installed in the direction of the crosswalk to replace barricaded ramps. It should be noted that curb ramps are not used solely by persons in wheelchairs. They are also indicators to persons who are blind that a crosswalk exists and that there is a safe path-of-travel to cross the street. Temporary curb ramps should direct blind pedestrians to and through the temporary path-of-travel.

Open Crosswalks

If crosswalks are to remain open during the project then curb ramp areas should be kept free of debris, staging material, equipment, etc.

Path-Of-Travel

Any change of level in a path-of-travel which is over 1/4" in. (1/2" maximum) height must be beveled at 45 degree to provide a smooth, non-tripping transition.

NOTE: With the unique nature of each project, certain issues may arise which have not been covered in the above guidelines. Each project will have to be reviewed on a case by case basis, to ensure that complete, safe, usable and accessible paths-of-travel are maintained during construction.

EXAMPLES OF CORRECT AND INCORRECT BARRICADING METHODS

Photographs A through F depict several examples of correct and incorrect barricading methods.

A. Incorrect Barricading Method

- "A-Frame" spacing is too wide
- Caution tape does not provide an adequate barricade or detectable path-of-travel
- Curb cut access has been blocked



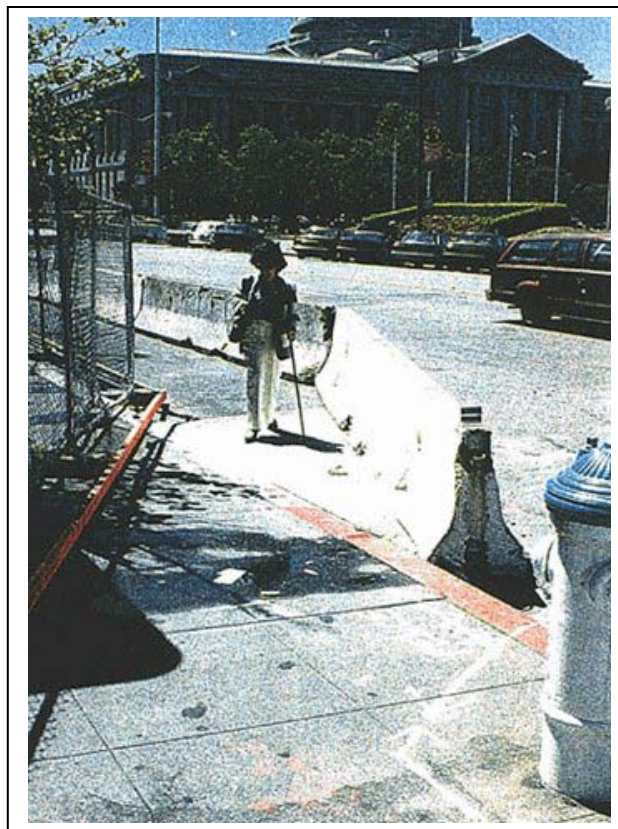
B. Correct Barricading Method

- Orange plastic fencing with baseboard provides an easily detectable path-of-travel for persons who are blind/low visioned and using a "white mobility cane". Baseboard will also help eliminate the potential for a person using a "white cane" from getting the cane caught in the fencing mesh.
- Temporary bridging system (wooden decks/steel plates) provides an accessible path-of-travel for persons using a wheelchair. (Note: the cold patch (asphalt) at the ends of the bridge provides a beveled 1:2 lip of no more than 1/2 inch for a smooth transition).



C. Correct Barricading Method

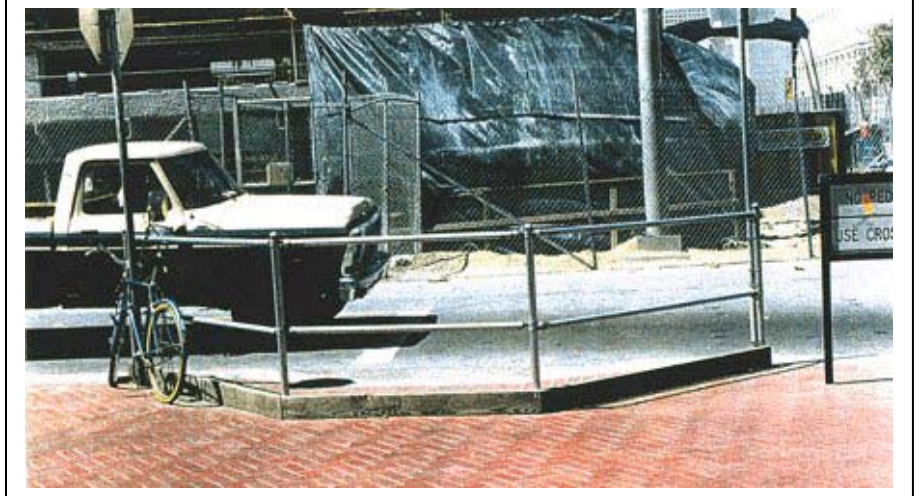
- Baseboard at perimeter of fence supports provides for a well defined path-of-travel edge for persons who are low visioned/blind and using a "white mobility cane". Baseboard also prevents cane from getting caught in fencing mesh. The baseboard is to have a high contrast to the sidewalk/street surface
- K-Rail further defines the path-of-travel and protects pedestrians from vehicular traffic.
- Concrete float (temporary ramp) provides for a smooth transition from street to sidewalk for all pedestrians as well as those persons using a wheelchair. (Note: asphalt or other material that will remain in place and support the weight of a person in a wheelchair is acceptable as temporary ramping material)



D. Correct Barricading Method (Curb ramp leading into a closed crosswalk)

- Entire perimeter of curb ramp is barricaded.
- Galvanized steel pipe railing provides an effective barricade (other materials providing the same level of barrier are acceptable).

- Bottom rail is within 12" - 20" above ground surface (this allows for detection by a person who is blind and using a "white mobility cane").
- Baseboard around perimeter of railing is a minimum 4" above ground surface (this allows for detection by a person who is blind and using a "white mobility cane").



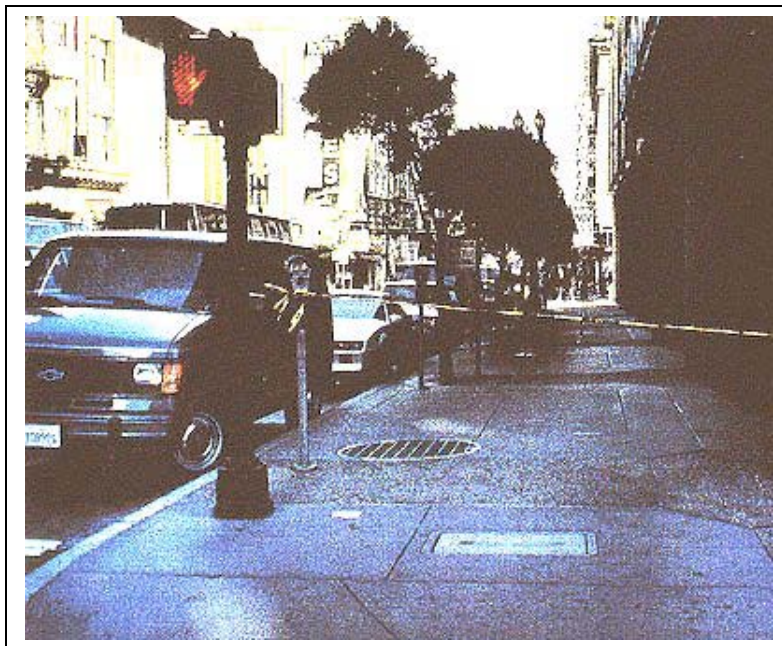
E. Incorrect Barricading Method

- This is an open trench/pit, for a new light pole. An opening in the path-of-travel poses a severe hazard to able bodied pedestrians as well as disabled pedestrians.
- The perimeter should be completely blocked off with upright barricades and no spacing should exist between the barricades.



F. Incorrect Barricading Method

- Caution tape being used to block off entire sidewalk
- No defined alternative path-of-travel (sending pedestrians into traffic)
- No solid base for detection by a person who is Low visioned/blind and using a "white mobility cane"
- No temporary crosswalk was provided for pedestrians using wheelchairs
- Overall this is an unsafe condition for all pedestrians; able bodied as well as persons with disabilities, and especially persons who are low visioned or blind.



END OF SECTION 00 08 13/APC

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 00 08 13/APD – INDUSTRIAL WASTE ORDINANCE No.19-92

(Refer to City and County of San Francisco Ordinance No. 19-92, San Francisco Municipal Code (Public Works), Part II, Chapter X, Article 4.1 (amended), January 13, 1992.

Sec. 123. Limitations and Prohibitions.

- (a) Any grab sample of the Discharger's Wastewater shall not at any time exceed any of the following numerical limitations:

<u>Pollutant Parameter</u>	<u>Limits</u>
(1) pH	6.0 min.; 9.5 max.
(2) Dissolved Sulfides	0.5 mg/l
(3) Temperature (except where higher temperatures are required by law)	125°F (52°C)
(4) Hydrocarbon Oil and Grease	100 mg/l

- (b) Any composite sample representative of the total Discharge of the Wastewater Discharge generated over a production week shall not exceed the following numerical limitation:

<u>Pollutant Parameter</u>	<u>Limits</u>
(1) Total Recoverable Oil and Grease	300 mg/l

Representative composite Total Recoverable Oil and Grease samples shall be composited by grab sampling, as required in federal regulations at 40 CFR Part 403 (1990), which are incorporated by reference in this Article.

- (c) In addition to the provisions of this Article, all Dischargers must comply with all requirements set forth in federal Categorical Pretreatment Standards and other applicable federal regulatory standards, applicable state orders and water quality control regulations, sewage discharge permits and orders issued to the City by federal and state agencies, federal and state pretreatment program approval conditions, local discharge limitations and regulations promulgated by the Director of Public Works and the City, and any other applicable requirement regulating the Discharge of Wastewater into the Sewerage System. The Director of Public Works is authorized to develop and enforce such local limitations as he or she deems necessary for the City's compliance with state and federal laws and requirements and the enforcement of this Article.
- (d) Discharge of Wastewater containing radioactive materials is permitted only if the following conditions are satisfied:
- (1) The Discharger obtains a Permit from the Director of Public Works for the discharge of radioactive materials.
 - (2) The Discharger is authorized to use radioactive materials by the Nuclear Regulatory Commission or other governmental agency empowered to regulate the use of radioactive materials; and
 - (3) The radioactive material is Discharged in strict conformity with all Nuclear Regulatory Commission or other governmental agency requirements.
- (e) No person shall discharge, deposit, or throw, or cause, allow or permit to be discharged, deposited or thrown into the City's sewage system any substance of any kind whatever, including oxygen demanding Pollutants, that may or will in any manner cause Interference or Pass Through, obstruct or damage the Sewerage System, cause a nuisance, interfere with the proper operation, repair or maintenance of the sewerage system, interfere with the proper operation, repair or maintenance of a reclaimed water production or distribution facility, create difficulty for any workers to repair or maintain any part of the Sewerage System, or directly or indirectly cause a violation of City, federal or state sewage discharge permits or any other requirement applicable to the City. Such substances include but are not limited to the following:

- (1) Ashes, cinders, sand, gravel, dirt, bark, leaves, grass cuttings and straw, metals, glass, ceramics and plastics, or any other solid or viscous substance capable of causing obstruction to the flow in sewers, or that will not be carried freely under the flow conditions normally prevailing in the City's Sewerage System.
 - (2) Any flammable or explosive substances.
 - (3) Garbage, excepting properly ground garbage discharged in accordance with this Article, from dwellings and restaurants or other establishments engaged in the preparation of foods and beverages.
 - (4) Any toxic or noxious or malodorous substance which either singly or by interaction with other wastes may or will prevent maintenance of Sewerage System or create a nuisance or hazard to the safety of the public or City employees.
 - (5) Any Bioaccumulative Toxic Substance that exceeds the Soluble Threshold Limit Concentration (STLC).
 - (6) Any Wastewater, in temperature or quantity, which will cause the temperature of influent to exceed 104° (40°C) at the point of introduction to any City Wastewater treatment plant.
 - (7) Any liquids, solids or gases or any Discharge that may cause damage or harm to any reclaimed water facility, or that may limit or prevent any use of reclaimed water authorized by Title 22 of the CCR.
- (f) No person shall discharge, without a Permit, any Pollutants, except stormwater, directly or indirectly into a manhole, catch basin, or other opening in the sewerage system other than through an approved side sewer.
- (g) No discharger shall increase the use of process water, in any other way, attempt to dilute a discharge as a partial or complete substitute for adequate treatment to achieve compliance with the requirements of this Article.
- (h) No person shall discharge groundwater or water from sumps or dewatering facilities into the sewerage system without a permit. An application for a permit pursuant to this subsection shall be submitted to the Director of Public Works no later than forty-five (45) days prior to the proposed commencement of the discharge. Each permit for groundwater discharge shall contain appropriate discharge standards and any other appropriate requirements that must be achieved before discharge into the sewerage system may commence. Such discharges shall be subject to payment of sewer service charges in accordance with the provisions of applicable City laws. The Director of Public Works may require the discharger to install and maintain meters at the discharger's expense to measure the volume of the discharge.
- (i) No person shall discharge wastewater associated with groundwater cleanup or remediation plans without first obtaining a permit. An application for a permit pursuant to this subsection shall be submitted to the Director of Public Works no later than forty-five (45) days prior to the proposed commencement of the discharge. A permit may be issued only if an effective pretreatment system on the process stream is maintained and operated. Each permit for such discharge shall contain appropriate discharge standards based on this Article and reports or data provided by the discharger, as well as any other appropriate requirements that must be achieved at the time the discharge commences. Such discharges shall be subject to payment of sewer service charges in accordance with the provisions of applicable City laws. The Director of Public Works may require the discharger to install and maintain meters at the discharger's expense to measure the volume of the discharge. The Director of Public Works may require that such dischargers shall indemnify and hold harmless the City from any and all costs, claims, damages, fines, remediation costs, losses and other expenses arising from the discharge into the sewerage system.
- (j) The discharge of wastewater associated with asbestos abatement operations is authorized without a permit, provided that the wastewater has been pretreated through a system that provides for removal of waterborne asbestos. (Added by Ord. 19-92, App. 1/23/92.)

END OF SECTION 00 08 13/APD

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 00 08 13/APE – INDUSTRIAL WASTE DISCHARGE LIMITS INTO CITY’S SEWERAGE SYSTEM

- A. This order is being adopted in compliance with the requirements of the Federal Clean Water Act, as amended, and attendant Environmental Protection Agency regulations. Industrial waste discharge limits on wastewater discharges into the City’s sewerage system have been proposed for adoption pursuant on this Order.
- B. Pursuant to City and County of San Francisco Ordinance No. 19-92, San Francisco Municipal Code (Public Works), Part II, Chapter X, Article 4.1 (amended), January 13, 1992, the Director of Public Works hereby adopts the following provisions:
1. The characteristics of any 24-hour composite sample representative of a wastewater discharge generated over that period of time shall not exceed the following concentration-based numerical limits:

<u>Pollutant/Pollutant Parameter</u>	<u>Limit (mg/l)</u>
Arsenic (As) (as Total)	4.0
Cadmium (Cd) (as Total)	0.5
Chromium (Cr) (as Total)	5.0
Copper (Cu) (as Total)	4.0
Lead (Pb) (as Total)	1.5
Mercury (Hg) (as Total)	0.05
Nickel (Ni) (as Total)	2.0
Silver (Ag) (as Total)	0.6
Zinc (Zn) (as Total)	7.0
Phenol	23.0
Cyanide (CN) (as Total)	1.0

2. These numerical limits shall apply at the point of wastewater discharge into the sewerage system of the City and County of San Francisco with the proviso that no discharger shall increase the use of process water or, in any other way attempt to dilute a discharge as a partial or complete substitute for adequate wastewater management to achieve compliance with the requirements of this Order.
3. On an individual discharger basis, the Director of Public Works may consider inclusion of local limits greater than those specified in this Order provided that the two following conditions are met:
 - a. The discharger's inability to meet concentration-based limits specified in this Order is caused solely by implementation of a significant water reclamation or water reuse program at the discharger facility, and
 - b. The amended concentration-based limit does not result in an increase in the mass emission of that pollutant from the discharger facility.
4. In addition to any other provision of this Order, all dischargers must comply with all the requirements of City and County of San Francisco Ordinance No. 19-92, San Francisco Municipal Code (Public Works), Part II, Chapter X, Article 4.1 (amended), January 13, 1992.
5. All of the pollutants/pollutant parameters specified above are defined in the Federal regulations at 40 CFR Part 136 (1991).
6. This Order rescinds City and County of San Francisco City Order No. 104,407, adopted March 3, 1976.
7. The provisions of this Order are effective immediately.

END OF SECTION 00 08 13/APE

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

00 08 13/APF – ARRA JOBS REPORT FORM

SPECIFICATION ISSUE LOG

Revision	Date
0	September 23, 2010

ARRA Jobs Report Form

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Hours this Month

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TJPA ARRA JOBS REPORT INSTRUCTIONS

NOTE: These instructions apply to the ARRA Jobs Report form, the latest version of which is available at: <http://transbaycenter.org/tjpa/doing-business-with-the-tjpa>

Purpose of this form: To collect information required under the American Recovery and Reinvestment Act of 2009 (ARRA), Section 1512. Jobs information will be compiled by the TJPA and reported to the Federal government each quarter. This information will be publicly posted, in accordance with ARRA.

Who is required to submit this form? TJPA consultants, contractors, and vendors whose contracts or purchase orders are funded with an ARRA grant. TJPA staff will contact those consultants, contractors and vendors that are required to complete this form.

When is this form to be submitted? This form must be completed and submitted within 10 calendar days after the end of every month until notified by the TJPA that the form is no longer required.

What happens if the form is not timely submitted? The TJPA may be found in non-compliance with Section 1512 of ARRA. Non-compliance may result in the loss of funds to the project.

Where this form should be submitted. This form is to be submitted to Sara Gigliotti, TJPA Contracts Compliance Manager at sgigliotti@transbaycenter.org, with a copy to the TJPA's designated Project Manager.

Will electronic versions of this form be accepted? Yes.

Questions regarding proper completion of this form? Contact Sara Gigliotti at (415) 597-4620 or sgigliotti@transbaycenter.org.

Instructions for Completion of Form

BOX 1. Report Month: The month and year covered by the report.

BOX 2. Contract or Purchase Order Number: The number assigned by the TJPA to the consultant's contract or purchase order under which the reported work was performed. If a consultant has more than one contract with the TJPA funded by ARRA, a separate Jobs Report Form should be completed for each contract.

BOX 3. Corresponding Invoice Number: Provide the invoice number that corresponds to the work covered in this report. Please contact sgigliotti@transbaycenter.org if an invoice number is not available by the 10th calendar day following the reporting period.

BOX 4. Contractor name and address: The name and address of the prime contracting or consulting firm.

BOX 5. Contractor DUNS number: The unique nine-digit number issued by Dun & Bradstreet. Followed by the optional 4 digit DUNS Plus number.

BOX 6. Employment data: The prime contractor or consultant will report the direct, on-the-project hours worked for their workforce and the workforce of their sub-contractors active during the reporting month. All direct labor associated with the ARRA project such as design, construction, and inspection should be included. These jobs include employees actively engaged

in projects who work on the jobsite, in the project office, in the home office or telework from a home or other alternative office location. This also includes any engineering personnel, inspectors, sampling and testing technicians, and lab technicians performing work directly in support of the ARRA funded project. This does not include commercial material suppliers such as steel, culverts, guardrail, and tool suppliers. Indirect support staff (such as accountants or human resources personnel) captured in a firm's overhead rate should not be included on this form.

The report should not include estimated indirect labor, such as material production or estimated macro-economic impacts. The Federal agencies will be estimating all indirect labor based on the information provided in this form along with other data.

The form requests specifically:

- a. **Subcontractor name:** The name of each subcontractor or sub-consultant that was active on the project for the reporting month.
- b. **Hours:** The total hours worked on the TJPA project for all subcontractor's or subconsultant's employees for the reporting month, and the total hours worked on the TJPA project for all active subcontractors' employees that month. Total field at bottom will be automatically calculated and reported as a whole number.

BOX 7. Prepared by:

- a. **Name:** Indicate the person responsible for preparation of the form. By completing the form the person certifies that they are knowledgeable of the hours worked and employment status for all the employees. Contractors, consultants, and their subs are responsible to maintain data to support the employment form and make it available to the TJPA should they request supporting materials.
- b. **Title:** Job title of person who prepared the form.
- c. **Date:** The date that the contractor completed the employment form.

Additional Q & A

How will indirect jobs be estimated?

The Federal agencies will estimate indirect jobs. Project job information should not estimate indirect jobs.

How should overtime be reported?

Do not report overtime any differently than other hours of work.

How should employment on split funded jobs be reported?

Report **all** jobs on any project receiving ARRA funds for the full duration of the project. Any adjustments to jobs required due to split-funding will be made by the TJPA to accurately and consistently report those jobs associated with the ARRA funds.

Are non-construction jobs also reported?

Report **all** jobs paid by ARRA funds. This includes consulting, surveyors, etc.

SECTION 00 08 14 – HEALTH AND SAFETY CRITERIA

1.1 SUMMARY

Contractor shall be solely and fully responsible for compliance with laws, rules, and regulations applicable to the health and safety of persons during the performance of the Work, and shall fully assume the defense of, indemnify and hold harmless those entities and persons stipulated in Section 00 07 00 as supplemented by Section 00 08 05. See sections 00 03 35, 01 13 50, and 01 15 45 for related requirements.

1.2 REGULATORY REQUIREMENTS

- A. Lead Hazards: OSHA's recently adopted Lead in Construction Standard (29 C.F.R. part 1926.62 and title 8 CCR section 1532.1) requires certain actions 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.
 - 1. The level of engineering control and medical monitoring which may be required shall be based on the governing regulations of the California Occupational Safety and Health Administration (Cal/OSHA) which are effective for the Project duration for the level and extent of lead exposure at the Site.
 - 2. Provide competent supervision by a designated hazardous materials supervisor who shall identify potential lead hazards at the Site and oversee implementation of appropriate protective measures to comply with all Cal/OSHA requirements applicable for lead-based paints.
- B. Trench Safety: Comply with all requirements of federal OSHA, Cal/OSHA, the California Labor Code, Contractor safety requirements, and these Contract Documents. The more stringent requirements shall apply.
- C. Confined Space Entry: Provide all equipment and assistance to make confined space entry by Contractor's employees, the TJPA Representative, and the TJPA's consultants in accordance with title 8 CCR, General Industrial Safety Orders, "Confined Spaces."

1.3 HAZARDOUS MATERIALS

- 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.
- B. Ensure that all Project personnel, including subcontractors' personnel and TJPA's Representatives, receive appropriate and required awareness training and orientation that will prevent inadvertent or unauthorized disturbance of hazardous materials that are present at the Site.
- C. Comply with the applicable requirements of California Code of Regulations, title 8, section 1532.1, Lead in Construction.
- D. Take necessary precautions to prevent the release of lead in the form of dust, fumes, or mists from lead-containing building materials into the air or onto surrounding environments.
- E. Inform all workers, supervisory personnel and authorized visitors on the Site of the potential hazards of lead and of necessary precautions and housekeeping procedures to reduce the potential for exposure in areas where lead is known to be present.
- F. Contractor shall only be responsible for those hazardous materials conditions specifically quantified and defined in the Contract Documents.

1.4 REMEDIAL ACTION

Should Contractor or its Trade Subcontractors be notified by the TJPA of any unsafe or unhealthy condition associated with the performance of the Work and be required to take remedial action to correct such conditions, Contractor shall take action immediately, if so directed, or within 48 hours after receipt of a notice of violation.

1.5 HEALTH AND SAFETY PLAN

- A. Contractor shall comply with all applicable requirements of federal OSHA, Cal/OSHA, the California Labor Code, and these Contract Documents for a site-specific health and safety plan.
- B. The health and safety plan shall be certified by Contractor's competent hazardous materials supervisor and submitted to the TJPA for review and comment prior to implementation.
- C. No Work at the Site shall begin until the health and safety plan is prepared and certified by Contractor's competent hazardous materials supervisor.
- D. All Work at the Site shall be conducted in compliance with the health and safety plan as well as all applicable laws and regulations.

1.6 HAZARDOUS MATERIALS IN THE WORK

- A. Materials that contain hazardous substances or mixtures may be required on the Work. Material usage shall be in strict adherence to Cal/OSHA safety requirements and all manufacturer's warnings and application instructions listed on the material safety data sheets provided by the product manufacturer and on the product container label.
 - 1. 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 subcontractors at the Site.
 - 2. Notify the TJPA if Contractor considers a specified product or equipment, or their intended usage, to be unsafe prior to ordering the product or equipment or prior to the product or equipment being incorporated in the Work.

END OF SECTION 00 08 14

SPECIFICATION ISSUES LOG

Revision	Date
0	July 30 2010
1	August 10, 2010

SECTION 00 08 15 –WASTE MANAGEMENT REQUIREMENTS

1.1 SUMMARY

This section specifies the following:

- A. Requirements for the recovery, reuse, and recycling of demolition and salvage material. The work of this contract shall provide for a minimum of 75% of the materials generated in the Work to be diverted from landfill disposal through a combination of deconstruction, salvage for reuse and recycling. Refer to Section 01 74 00 for related requirements.
- B. Requirements for ensuring compliance with San Francisco Environment Code, Chapter 7, Resource Efficiency Requirements and Green Building Standards.
- C. Requirements for ensuring compliance with San Francisco Environment Code, Chapter 5, The Resource Conservation Ordinance for City Departments.
- D. Requirements for ensuring the most environmentally conscious work feasible within the limits of the Contract Time, Contract Sum, and available materials, equipment, and products.
- E. Requirements for the Contractor to fulfill the City's and State's goal to achieve a minimum of 50% diversion, enacted by Assembly Bill AB 939.
- F. Stipulation that there will not be a separate payment for work covered by this section of the Specifications. All costs shall be incidental to other work and be included in the overall Contract Sum.

1.2 REFERENCES

- A. San Francisco Environment Code, Chapter 5, The Resource Conservation Ordinance for City Departments.
- B. San Francisco Environment Code, Chapter 7, Resource Efficiency Requirements and Green Building Standards for City-owned Facilities and City Leaseholds.
- C. California Solid Waste Management Act (Assembly Bill 939).
- D. Directories of Construction and Demolition Recycling Companies published by SF Environment.
- E. Leadership in Energy and Environmental Design (LEED) Green Building Rating System, Version 2.0, March 2000. US Green Building Council.

1.3 DEFINITIONS

- A. Class 3 Landfill: A landfill that accepts non-hazardous waste such as household, commercial, and industrial waste resulting from construction, remodeling, repair, and demolition operations. A Class 3 Landfill must have a solid waste facilities permit from the California Integrated Waste Management Board (CIWMB), and be regulated by the Local Enforcement Agency (LEA).
- B. Construction and Demolition Waste: Non-hazardous solid resources resulting from Contractor's construction, remodeling, repair, and demolition operations for the Project. This term includes, but is not limited to, asphalt, concrete, Portland cement concrete, brick, lumber, gypsum wallboard, cardboard and other associated packaging, roofing material, ceramic tile, carpeting, plastic pipe, and steel. The debris may be commingled with rock, soil, tree stumps and other vegetative matter resulting from land clearing and landscaping or land development projects.

- C. C&D Recycling Facility: A facility that receives only C&D (construction and demolition) material that has been separated for reuse or recycling prior to receipt, in which the residual (disposed) amount of waste in the material is less than 10% of the amount separated for reuse or recycling by weight.
- D. Disposal: Acceptance of solid waste at a legally operating facility for the purpose of land filling. This includes Class 3 Landfills and Inert Fills. State regulations do not consider the disposal of inert materials at Inert Fill Facilities or Inert Backfill Sites, as recycling.
- E. Environmental Pollution and Damage: The presence of chemical and biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to humanity; or degrade the utility of the environment for aesthetic, cultural or historical purposes.
- F. Inert Fill Facility: A facility that can legally accept inert waste such as asphalt and concrete exclusively for the purpose of disposal.
- G. Inert Solids/Inert Waste: Non-liquid solid resources including, but not limited to, soil and concrete that do not contain hazardous waste or soluble pollutants at concentrations in excess of water-quality objectives, and does not contain significant quantities of decomposable solid resources. The water-quality objectives are those established by the Regional Water Quality Control Board pursuant to Division 7 (Section 13000 et seq.) of the California Water Code.
- H. Inert Backfill Site: A location, other than inert fill or other disposal facility, to which inert materials are taken for the purpose of legally filling an excavation, shoring, erosion control, land filling for future development, or other soils engineering operation.
- I. Mixed Debris: Commingled recyclable and non-recyclable materials generated at the site.
- J. Mixed Debris Recycling Facility: A solid resources processing facility that accepts commingled construction and demolition waste for the purpose of recovering reusable and recyclable materials and disposing of the nonrecyclable residual materials. Depending on the types of materials accepted and operating procedures, a mixed debris recycling facility may or may not be required to have a Solid Waste Facilities permit from the CIWMB, or be regulated by the LEA.
- K. Recycling: The process of sorting, cleansing, treating, and reconstituting materials for the purpose of using the altered form in the manufacture of a new product. Recycling does not include burning, incinerating, or thermally destroying solid waste.
- L. Recycling Facility: An operation that can legally accept materials for processing materials into an altered form for the manufacture of a new product. Depending on the types of materials accepted and operating procedures, a recycling facility may or may not be required to have a Solid Waste Facilities permit from the CIWMB, or be regulated by the LEA.
- M. Reuse: Making new use of a material without altering its form.
- N. Salvage: Recovering materials for onsite reuse or for sale or donation to a third party.
- O. Source-separated Materials: Materials that are sorted at the site of generation by individual material type for the purpose of reuse or recycling, e.g., demolished concrete that is separated at the Site for delivery to a base course recycling facility.
- P. Solid Waste: Materials designated as non-recyclable and discarded for the purposes of disposal.
- Q. Transfer Station: A facility that can legally accept Solid Wastes for temporarily storing the materials for reloading onto other trucks and transporting to a landfill for disposal, or recovering some of the

materials for reuse or recycling. Transfer stations have to be permitted by the CIWMB and be regulated by the LEA.

1.4 WASTE MANAGEMENT GOALS

- A. Contractor shall generate the least amount of waste possible and employ processes that ensure generation of the least waste possible due to error, poor planning, breakage, mishandling, contamination, and other factors. Contractor shall also be mindful of the City's goal to achieve a minimum of 75% diversion. The following waste categories, at a minimum, shall be diverted from landfill:
 - 1. Asphalt
 - 2. Concrete
 - 3. Stone, brick, soils and other inerts
 - 4. Wood—lumber and other wood products
 - 5. Paper and paper products
 - 6. Roofing, siding and ceiling materials
 - 7. Metals, ferrous and non-ferrous
 - 8. Beverage containers
- B. Of the inevitable waste generated, Contractor shall reuse, salvage, or recycle as many of the waste materials as economically feasible. Contractor shall
 - 1. Minimize waste disposal in landfills.
 - 2. Maximize use of Salvage Source-Separated and Mixed Debris Recycling Facilities.
 - 3. When practical, use onsite recycling.
 - 4. Protect the environment, both onsite and offsite, during demolition and construction operations.
 - 5. Prevent environmental pollution and damage.
 - 6. Effect optimum control of solid waste and recoverable resources generated in the Work.

1.5 SUBMITTALS

- A. Pursuant to the provisions of Section 01 74 00, Construction Demolition Debris Recovery Plan, and Section 01 13 00, Submittals, Contractor shall submit the following:
- B. Solid Waste Management Plan (SWMP):
 - 1. After Award of Contract and before commencement of the Work at the site, Contractor shall conduct a Reuse/Recycle Assessment. This assessment shall estimate the types and quantities of materials for the Project that are anticipated to be feasible for source separation for recycling or reuse, either onsite or offsite, and note the procedures intended for a recycling, reuse, and salvage program. The Contractor shall refer to SF Environment's listings of construction and demolition recycling companies, available on SF Environment's website at www.sfenvironment.org/our_programs/interests.html?ssi=3&ti=5&ii=125, for a list of facilities that accept these materials for recycling, reuse or salvage.
 - 2. After award of Contract and before commencement of the Work, the TJPA Representative will schedule and attend a meeting with Contractor and representatives of the City's Solid Waste Management and Recycling programs. At the meeting, the Contractor shall discuss the proposed solid waste management plan for construction and demolition to develop a mutual understanding regarding the City's recycling and reuse policies and goals and their potential application to the project.
 - 3. Not more than 20 working days after the meeting, Contractor shall prepare and submit a written solid waste management plan for construction and/or demolition in a format prescribed by the City. The Solid Waste Management Plan shall include, but not be limited to, the following:
 - a. Contractor's information and Project identification.
 - b. The names, locations, and permit or license, as applicable, of recycling and reuse facilities and solid waste disposal areas, that the Contractor plans to use for this project

- c. Procedures for the management of construction and/or demolition waste.
 - d. List of the materials and estimated quantities to be recycled reused or disposed at a landfill.
 - e. Description of the procedures for source separation for the materials listed in paragraph 1.6.
 - f. Source reduction: Describe any project practices for this Project that will reduce waste at the source, such as requiring vendors to deliver materials in reusable packaging.
 - g. Onsite processing: Describe procedures in which materials are recycled and/or reused on-site, such as grinding materials for use on-site, or reuse of lumber for concrete frames, etc.
 - h. Results of the reuse/recycle assessment.
 - i. Other requirements listed in this section.
 - j. Tonnage calculations that demonstrate Contractor will recycle, reuse, or salvage 90% of the demolition materials generated. (See the separate engineering report on the total weight of the building structure and its contents.)
- 4. Contractor shall revise and resubmit the solid waste management plan for construction and demolition, as required by the TJPA Representative.
 - 5. Review of the Contractor's construction and demolition solid waste 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.

C. Monthly Disposal and Recycling Summary Report:

- 1. Contractor shall submit a Disposal and Recycling Summary Report, quantifying the construction and demolition waste generated and recycled, reused or disposed of at Class 3 Landfill, on a monthly basis. This diversion and disposal summary report shall be in the format of Appendix A: Solid Waste Management Plan Monthly Report (of this section). Contractor shall include manifests, weight tickets, receipts, and invoices specifically identifying the Project and waste material from/to
 - a. Source-separated Recycling Facilities
 - b. Mixed Debris Recycling Facilities
 - c. Class 3 Landfills
 - d. Inert materials accepted at Class 3 Landfills as daily cover
 - e. Inert Fill Facilities
 - f. Inert Backfill sites other than Inert Fill Facilities
- 2. This report is a condition of progress payment and failure to submit this information shall render the Applications for Payment incomplete.

Contractor shall submit the monthly report and the SWMP to the TJPA Representative. Contractor shall also send a copy of this report and the SWMP to the City Government Recycling Coordinator, City and County of San Francisco, SF Environment, telephone (415) 355-3700.

1.6 RECYCLING REQUIREMENTS

- A. Source-separated Materials: Contractor shall develop and implement procedures for source-separation, to the greatest extent feasible, of the following types of recyclable or reusable materials (see engineering study of the weight of all building components):
 - 1. Asphalt
 - 2. Concrete, concrete block, slump stone (decorative concrete block), and rock
 - 3. Soil
 - 4. Bricks, stone(s), granite, and other finished stone-type materials
 - 5. Wall board (gypsum sheetrock)
 - 6. Dimensional lumber, beam(s), and plywood
 - 7. Fixtures, hardware, doors, and windows
 - 8. Ferrous and non-ferrous metal

9. Corrugated cardboard
 10. Trees, cleared vegetation and cut-off or other wood scraps
(A tree removal permit must be obtained from the Department of Public Works, Bureau of Urban Forestry, before any tree can be removed or relocated.)
 11. Carpet
- B. Mixed Debris: Contractor shall develop and implement procedures for transporting commingled construction and demolition waste that cannot be feasibly source-separated for acceptance by a Mixed Debris Recycling Facility, which can meet the recycling and reporting requirements requested by the City.
 - C. Salvage and Reuse Practices: Contractor shall conduct a Reuse/Recycle Assessment to
 1. Identify materials that are feasible for salvage.
 2. Provide sufficient time in the schedule for implementation of the salvage component.
 3. Determine the requirements for handling and transporting to a salvage facility.
 - D. Source Reduction:
Describe in the SWMP any project practices for this project that will reduce waste at the source, such as requiring vendors to deliver materials in reusable packaging.
 - E. On-site Processing:
Describe in the SWMP procedures in which materials are recycled and/or reused onsite, such as grinding materials for use onsite, or reuse of lumber for concrete frames, etc.
 - F. Handling:
 1. Contractor shall assure that materials shall be free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process. Contractor shall clean materials that are contaminated before placing it in collection containers.
 2. Contractor shall arrange for collection by or delivery to the appropriate recycling center or mixed construction and demolition debris processing facility that accepts construction and demolition waste for purpose of recycling.
 - G. Hauling:
Contractor shall provide collection and trucking to dispose of materials by a permitted waste transporter.
 - H. Disposal:
 1. Contractor shall legally transport and dispose of materials at a Transfer Station or Disposal facility that cannot be delivered to a Source-Separated or Mixed Debris Recycling Facility.
 2. Contractor shall not burn, bury, or otherwise dispose of solid waste on or off Site.
 - I. Contractor shall participate in reuse programs:
For such reuse programs, Contractor shall refer to the City's construction and demolition recycling program described at the San Francisco Environment Department's website at www.sfenvironment.org/our_programs/interests.html?ssi=3&ti=5&ii=125.

1.7 JOB SITE ADMINISTRATION

- A. Contractor shall review the environmental goals of this Project with all Subcontractors and their subcontractors. Contractor shall make a proactive effort to increase awareness of these goals among the Contractor's job site workers.
- B. Contractor shall review materials safety data sheets with workers on the job site. Contractor shall discuss alternatives to minimize exposure to potentially harmful substances.

1.8 PAYMENT

There will not be a separate payment for work within this section of the Specifications. All costs shall be incidental to other work and be included in the overall Contract Sum.

END OF SECTION 00 08 15

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 00 08 15/APA – SOLID WASTE MANAGEMENT PLAN MONTHLY REPORT
(Please print all information on both pages of this document.)

Project/Job # _____

Project Street Address _____

Reporting Period (month and year) _____

Corresponding Progress Payment Number _____

Contractor Name _____

Street Address _____

City, State, Zip _____

Phone (____) _____ Fax (____) _____

E-Mail _____

Preparer's Name _____ Date Submitted _____

Preparer's Signature _____

Preparer's direct phone _____ Email address _____

INSTRUCTIONS: Using the form on page two, document all disposal and diversion activities at the job site for the work conducted during this reporting period. The form is designed to provide information about a wide variety of mixed and source separated materials and eight different disposal or recycling activities. All weights must be provided in tons, the name of the disposal or recycling facility must be listed in the last column, and weigh tickets/receipts that specifically identify the project generating the material must be attached to this report.

If the facility used does not have scales, please note the quantity in cubic yards and then convert the information to tons using standard conversion rates. The most common facilities without scales are facilities accepting inert materials only. The conversion rate for dirt, concrete, brick, or asphalt is one cubic yard equals one ton.

At the bottom of the form space is provided for you to calculate the monthly diversion rate for this Project, after totaling the tonnage in each of three columns (Recycled Tons, Disposal Tons, Generated Tons).

The form on the back of this page may be filled out by hand, or you may use an Excel spreadsheet format provided by the San Francisco Recycling Program. To receive the Excel document, make inquiries regarding this reporting form, or receive a table showing volume-to-weight conversion factors for other materials, please contact the City Government Recycling Coordinator, SF Environment, at 415-355-3700.

Project Information									
Project Name:				Project/Job number			Reporting Period:		
Project Street Address:									
Activity Codes: 1. Recycling of source separated materials at a recycling facility. 5. Reuse of salvageable items. 2. On-Site concrete & asphalt crushing for use on-site (counts as recycling). 6. Delivery of dirt or mixed inerts to an inert landfill or other fill 3. Recycling of mixed debris. 7. Disposal at a landfill or transfer station. 4. Recycling of material as landfill alternative daily cover. 8. Other (please describe)									
REPORT FORM									
Type of Material	Activity Code	Total Truckloads	Quantity (tons)	Quantity (Cu.Yds) <i>R</i>	Recycled (Tons) <i>D</i>	Disposed (Tons) <i>(R+D)</i>	Total Generated (Tons)	Material Diversion Rate (%)	Disposal or Recycling Facility Used
Mixed C&D Materials									
Mixed C&D									
Mixed Inerts									
Source Separated Materials									
Asphalt									
Brick									
Concrete									
Dirt/Fill									
Lumber									
Roofing									
Metals									
Greenwaste									
Sheet Rock									
Salvage									
Other Materials: such as Carpet, etc.									
Waste Generation/Diversion Summary									
Recycled Tons Total							Sum of Tons in Recycled column <i>[R]</i>		
Disposal Tons Total							Sum of Tons in Disposed column <i>[D]</i>		
Generation Tons Total							Sum of Tons in Generation column <i>[R + D]</i>		
Overall Diversion Rate (%)							Divide Total Recycling Tons by Total Generation Tons <i>[R/(R+D)]</i>		
Preparer's Name:				Phone:			Fax:		Date Submitted:
Preparer's Title:				Preparer's Signature:					e-mail:

END OF SECTION 00 08 15/APA

SPECIFICATION LOG

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SECTION 00 08 20 – CITYBUILD/FIRST SOURCE PROGRAM REQUIREMENTS

1.1 SUMMARY

- A. This Section 00 08 20 incorporates applicable requirements of the City’s First Source Hiring Program (San Francisco Administrative Code Chapter 83), which generally requires contractors, when hiring, to provide hiring opportunities to economically disadvantaged persons as defined in Chapter 83.
- B. The CITYBUILD Referral Program promotes employment opportunities for economically disadvantaged individuals of all ethnic backgrounds and genders in the construction work force. The City’s Office of Economic and Workforce Development (OEWD) administers the CITYBUILD Referral Program by working with education programs to train construction workers and by working with construction contractors to identify hiring opportunities. The goal of the CITYBUILD Referral Program is to fill every hiring opportunity with a CITYBUILD Referral who is trained and prepared to enter the construction industry workforce.
- C. Contractor agrees to participate in the CITYBUILD Referral Program.
- D. The CITYBUILD workforce goals, and the program requirements for achieving such goals, are set forth below.
- E. As part of its participation, Contractor shall incorporate the provisions of this Section 00 08 20 into any subcontract on this Project (regardless of tier) in excess of \$250,000, and shall require its Subcontractors to do the same.
- F. For any Contract subject to a Project Labor Agreement (PLA), this Section 00 08 20 shall remain in effect. In the event of a conflict between this Section 00 08 20 and a PLA, the terms and conditions of the PLA shall control.

1.2 DEFINITIONS

For the purposes of this Section 00 08 20 only, the following definitions shall apply:

- A. “Core” or “Existing” workforce. Contractor’s core or existing workforce shall consist of any worker who appears on the Contractor’s active payroll for at least 60 days of the 100 working days prior to the award of this Contract.
- B. “Economically Disadvantaged Individual.” An individual who is either (a) eligible for services under the Workforce Investment Act of 1998 (29 U.S.C.A. 2801, et seq.), as may be amended from time to time, or (b) designated as “economically disadvantaged” by the OEWD/First Source Hiring Administration as an individual who is at risk of relying upon, or returning to, public assistance.
- C. “Hiring opportunity.” When a Contractor adds workers to its existing workforce for the purpose of performing the Work under this Contract, a hiring opportunity is created. For example, if the carpentry Subcontractor has an existing crew of five carpenters and needs seven carpenters to perform the work, then there are two hiring opportunities for carpentry on the Project.
- D. “Job notification.” Written notice of job request from Contractor to CITYBUILD for any hiring opportunities. Contract shall provide job notifications to CITYBUILD with a minimum of 3 working days’ notice.
- E. “New hire.” A new hire is any worker who is not a member of Contractor’s core or existing workforce.

- F. “Referral.” A referral is an individual member of the CITYBUILD Referral Program who has received training appropriate to entering the construction industry workforce.
- G. “Workforce participation goal.” The workforce participation goal is expressed as a percentage of the Contractor’s and its Subcontractors’ new hires for the Project.

1.3 CITYBUILD WORKFORCE GOAL

- A. The workforce participation goal for this Contract is 50% of the new hires for the Work in each trade.
- B. Contractor and Subcontractors may achieve the goal in any of the following ways:
 - 1. Onsite credit: Employment of CITYBUILD referrals to perform work on this Project.
 - 2. Offsite credit: Employment of a CITYBUILD referral on a construction project other than this Project, during the course of or contemporaneously with this Project, so long as for such individual, the Contractor complies with the prevailing wage and payroll documentation requirements of San Francisco Administrative Code Chapter 6, section 6.22(E). Contractor or Subcontractor must have prior written approval from CITYBUILD to claim offsite credit.

1.4 CITYBUILD REFERRAL PROGRAM REQUIREMENTS

- A. Contractor shall make good faith efforts to achieve the CITYBUILD workforce participation goal, as follows:
 - 1. Within 30 days of award of the Contract, provide written notification to CITYBUILD staff as to the number of hiring opportunities the Contractor and its Subcontractors have available for new hires, by completing Form 1, CityBuild Workforce Projection Form (Section 00 08 20/AT1).
 - 2. Upon receiving a completed Form 1, CITYBUILD representatives will work with Contractor and its Subcontractor(s) to complete Form 2, Workforce Hiring Plan (Section 00 08 20/AT2).
 - 3. Instruct all foremen, superintendents, and other onsite supervisory personnel as to the CITYBUILD program and the program requirements.
 - 4. Attend and notify all Subcontractors as to the mandatory preconstruction meeting as described in paragraph 1.5.
 - 5. Ensure that all CITYBUILD referrals engage in meaningful work that will provide advancement in the person’s specific trade.
 - 6. Designate a responsible official to monitor all employment-related activity, and to work with CITYBUILD staff.
 - 7. Comply with the documentation requirements as set forth in paragraph 1.6.
 - 8. In the event of the termination of any CITYBUILD referral, Contractor must submit notice to CITYBUILD and reserve the position for another referral through the CITYBUILD system.
- B. The final decision to hire a CITYBUILD referral shall be made by the hiring Contractor or Subcontractor.
- C. If the Contractor or a Subcontractor is signatory to a collective bargaining agreement with a trade union, the Contractor and/or Subcontractor shall notify the appropriate union(s) of the Contractor’s or Subcontractor’s good faith obligations under this Section 00 08 20 and shall request assistance from the union(s) in providing hiring opportunities for qualified CITYBUILD referrals. If a collective bargaining agreement allows for “name call” opportunities, then the Contractor or Subcontractor should reserve a requisite number of its name call opportunities to meet its good faith efforts obligations for participation in the CITYBUILD Referral Program. This Section 00 08 20 is not intended to interfere or conflict with any collective bargaining agreement or union membership, but rather to promote hiring opportunities to the extent such goals may be met consistent with the requirements of such agreements.

- D. Contractor or its Subcontractors may decline to hire a referral if the Contractor or Subcontractor considers the referral in good faith but deems the referral not qualified. Once a referral is hired, Contractor or Subcontractor may refer-back a referral to the CITYBUILD program within 8 working days of the date of employment. Contractor or Subcontractor may decline or refer-back a referral only upon a written statement as to why the referral was unsuitable to Contractor. CITYBUILD will endeavor to replace the referral as soon as possible.
- E. In the employment of CITYBUILD referrals who are or who become registered apprentices, Contractor must maintain the proper ratio of apprentices to journeymen for each trade on the job site. In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, the Contractor must employ such apprentices and trainees during the training period, and the Contractor must commit to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Unless otherwise permitted by law, trainees must be trained pursuant to training programs approved by the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or the California Department of Industrial Relations, Division of Apprenticeship Standards. Courses offered by City College of San Francisco and other community college districts or comparable institutions will also be considered.
- F. Contractor shall comply with its obligations under this program, and shall make a good faith effort to achieve each goal in each trade in which it has employees performing work for the Project. The overall good faith performance by other contractors or subcontractors toward the goal does not excuse any covered contractor's failure to make good faith efforts to achieve the goals.

1.5 PRECONSTRUCTION MEETING

- A. Prior to commencement of construction, Contractor shall attend a preconstruction meeting convened by the TJPA. Representatives from the Contractor or Subcontractor(s) must have hiring authority.
- B. Any subcontractor at any tier whose contract is subject to CITYBUILD participation, which does not attend such a meeting, shall not be permitted on the job site, and any resulting delay to the Work under this Contract shall be considered the Contractor's avoidable delay. CITYBUILD staff shall convene additional preconstruction meetings within 24 hours of the Contractor's request. Contractor shall endeavor to include as many prospective subcontractors as possible at these meetings in order not to protract unduly the number of meetings.
- C. Failure to comply with this preconstruction meeting provision may result in the TJPA's ordering a suspension of work by the Contractor until the breach has been cured; any delay resulting from such suspension shall be considered the fault of the Contractor and an avoidable delay.

1.6 DOCUMENTATION AND RECORDS

- A. Upon request by TJPA or CITYBUILD staff, Contractor shall promptly make available all payroll documentation and records required under San Francisco Administrative Code Chapter 6.
- B. Contractor shall permit representatives of CITYBUILD staff to interview employees during Regular Working Hours on the Project site.
- C. Upon request by CITYBUILD program staff, Contractor shall provide documentation of its good faith efforts as required under this Section 00 08 20. To facilitate review by CITYBUILD staff, Contractor shall maintain on the project site a CITYBUILD compliance binder, which shall include copies of the Contractor's and Subcontractors' forms 1 and 2, referrals received, and any other relevant information supporting good faith efforts under this Section 00 08 20.

1.7 PROGRESS PAYMENTS

Failure to demonstrate good faith efforts in conformance with the provisions of this Section 00 08 20 may result in the withholding of progress payments under this Contract.

1.8 LIQUIDATED DAMAGES

- A. Contractor and its Subcontractors acknowledge and agree that their commitment to comply with the CITYBUILD Referral Program is a material element of the TJPA's consideration for this Contract; that the failure of the Contractor or its Subcontractors to comply with the terms and conditions of this Section 00 08 20 will cause harm to the TJPA and the public which is significant and substantial but extremely difficult to quantify; that the harm to the City includes not only the financial cost of funding public assistance programs but also the insidious but impossible-to-quantify harm that this community and its families suffer as a result of unemployment; and that the assessment of liquidated damages of up to \$5,000 for every notice of a new hire for an entry-level position improperly withheld by the Contractor or its Subcontractors from the CITYBUILD referral process, as determined by the CITYBUILD Director during his or her first investigation of the Contractor or any Subcontractor, does not exceed a fair estimate of the financial and other damages that the TJPA suffers as a result of the failure by the Contractor or any Subcontractor subject to this Section 00 08 20 to comply with its CITYBUILD referral contractual obligations.
- B. Contractor and its Subcontractors further acknowledge and agree that the continued failure to comply with its CITYBUILD referral obligations will cause further significant and substantial harm to the TJPA and the public, and that a second assessment of liquidated damages of up to \$10,000 for each entry level position improperly withheld from the CITYBUILD Referral Program, from the time of the conclusion of the first investigation forward, does not exceed the financial and other damages that the TJPA suffers as a result of the Contractor's or its Subcontractor's continued failure to comply with the CITYBUILD Referral Program.

1.9 TERM

The obligations of the Contractor and its Subcontractors with respect to their construction work forces, as set forth in this Section 00 08 20, shall remain in effect until Substantial Completion of all work to be performed by the Contractor under the terms and conditions of this Contract.

END OF SECTION 00 08 20

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

00 08 20/AT1 – FORM 1: CITYBUILD Workforce Projection Form

00 08 20/AT2 – FORM 2: CITYBUILD Workforce Hiring Plan

SPECIFICATION LOG

Revision	Date
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FORM 1: CITYBUILD WORKFORCE PROJECTION FORM

All Prime Contractors and Subcontractors with contracts in excess of \$250,000 must complete the CityBuild Workforce Projection (Form 1) within thirty (30) days of award of contract. It is the Prime Contractor's responsibility to ensure CityBuild receives completed Form 1's from all subcontractors in the specified time and keep a record of these Forms in a compliance binder for evaluation.

Once all Form 1's have been submitted, all contractors, subject to Document 00820, are required to attend a preconstruction meeting convened by CityBuild staff to negotiate a CityBuild Workforce Hiring Plan (Form 2) for this project.

- Contractor's "Core" or "Existing" workforce shall consist of any worker who appears on the Contractor's active payroll for at least 60 days of the 100 working days prior to the award of this Contract.
- For Construction Contracts: Use this form to indicate the TOTAL estimated number of Journey Level Positions and Entry Level/Apprentice Position that will be needed to perform the work.
- For Non-Construction Contracts: Use this form to indicate all entry-level positions that will be needed to perform the work.
- If company is on multiple projects, please submit one Workforce Projection per project.

Contract No: _____ City DPT: _____ Contractor Name: _____

Project Name: _____ Main Contact: _____

City PM: _____ Contact Number: _____

Labor Trade, Position, or Title	Journey or Apprentice / Entry-Level (J/A)	Number of Core Employees	Estimated Number of Position (s) at Peak of Work	Est. Start Date	Est. End Date	Est. Total Number of Hours To Complete Work	Union?
	J <input type="checkbox"/> A <input type="checkbox"/>						Yes <input type="checkbox"/> No <input type="checkbox"/>
	J <input type="checkbox"/> A <input type="checkbox"/>						Yes <input type="checkbox"/> No <input type="checkbox"/>
	J <input type="checkbox"/> A <input type="checkbox"/>						Yes <input type="checkbox"/> No <input type="checkbox"/>
	J <input type="checkbox"/> A <input type="checkbox"/>						Yes <input type="checkbox"/> No <input type="checkbox"/>
	J <input type="checkbox"/> A <input type="checkbox"/>						Yes <input type="checkbox"/> No <input type="checkbox"/>

**Continue on separate sheet, if necessary. For assistance or questions in completing this form, contact the CityBuild Program of the Department of Economic and Workforce Development, (415) 581-2303.*

Successful Bidder/Company Name _____ Street Address _____

Name of Signer _____ Title _____ City _____ Zip _____ Email _____

Signature of Authorized Representative _____ Date _____ Office Telephone _____ Cell Phone _____ Fax _____

PLEASE FAX COMPLETED FORM ATTN: CITYBUILD AT (415)581-2368 OR

EMAIL: KEN.NIM@SFGOV.ORG OR IAN.FERNANDO@SFGOV.ORG

WEBSITE: [HTTP://WWW.OEWD.ORG/CITYBUILD.ASPX](http://www.oewd.org/CITYBUILD.ASPX)

MAIN LINE: (415)581-2335



FORM 2: CITYBUILD WORKFORCE HIRING PLAN

Contract No: _____ City DPT: _____ Contractor Name: _____
 Project Name: _____ Main Contact: _____
 City PM: _____ Contact Number: _____

Based on your completed CityBuild Workforce Projection (Form 1), the following is a Workforce Hiring Plan for your company to meet your Good Faith Efforts in complying with the City and County of San Francisco's Administrative Code Chapter 83 First Source Hiring Program.

Labor Trade, Position, or Title	Journey or Apprentice / Entry-Level (J/A)	Number of Core Employees	Est # Worker(s) at Peak	Est. Start Date	Est. End Date	First Source Referral Goal	% of First Source Referral
	J <input type="checkbox"/> A <input type="checkbox"/>						
	J <input type="checkbox"/> A <input type="checkbox"/>						
	J <input type="checkbox"/> A <input type="checkbox"/>						
	J <input type="checkbox"/> A <input type="checkbox"/>						
	J <input type="checkbox"/> A <input type="checkbox"/>						
	J <input type="checkbox"/> A <input type="checkbox"/>						
	J <input type="checkbox"/> A <input type="checkbox"/>						
	J <input type="checkbox"/> A <input type="checkbox"/>						

**Continue on separate sheet, if necessary. For assistance or questions in completing this form, contact the CityBuild Program of the Department of Economic and Workforce Development, (415) 581-2303.*

Contractor _____ Street Address _____

Name of Signer _____ Title _____ City _____ Zip _____ Email _____

Signature of Authorized Representative _____ Date _____ Office Telephone _____ Cell Phone _____ Fax _____

Workforce Compliance Officer _____ Signature of Approval _____ Date _____ Office Telephone _____

PLEASE FAX COMPLETED FORM ATTN: CITYBUILD AT (415)581-2368 OR
 EMAIL: KEN.NIM@SFGOV.ORG OR IAN.FERNANDO@SFGOV.ORG
 WEBSITE: [HTTP://WWW.OEWD.ORG/CITYBUILD.ASPX](http://WWW.OEWD.ORG/CITYBUILD.ASPX)
 MAIN LINE: (415)581-2335

SECTION 00 08 21

DISADVANTAGED & SMALL BUSINESS ENTERPRISE AND EQUAL EMPLOYMENT OPPORTUNITY/EMPLOYMENT NONDISCRIMINATION REQUIREMENTS

1.1 SUMMARY

- A. This section includes the TJPA's Disadvantaged Business Enterprise, Small Business Enterprise, and Equal Employment Opportunity/Employment Nondiscrimination compliance provisions.
- B. Comply with all provisions to the extent necessary to fulfill their intent except where prohibited by state or federal law or regulation.

1.2 DISADVANTAGED BUSINESS ENTERPRISE (DBE) REQUIREMENTS

- A. It is the policy of the TJPA to ensure nondiscrimination on the basis of race, color, sex or national origin in the award and administration of U.S. Department of Transportation (DOT)-assisted contracts. It is the intention of the TJPA to create a level playing field on which DBEs can compete fairly for contracts and subcontracts relating to the TJPA's construction, procurement, and professional services activities.

Pursuant to 49 CFR Section 26.13, the TJPA is required to make the following assurance in every DOT-assisted contract and subcontract:

The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the TJPA deems appropriate.

The Contractor is responsible for reviewing the policies outlined in Caltrans Exhibits 10-I, Notice to Bidders/Proposers DBE Information (Section 00 08 21/AT1), and 10-J, Standard Agreement for Subcontractor/DBE Participation (Section 00 08 21/AT2), in addition to the TJPA's DBE Program. The TJPA DBE Program is available on the TJPA website: [www.transbaycenter.org>TJPA>Doing Business with the TJPA>Disadvantaged Business Enterprise \(DBE\) Program](http://www.transbaycenter.org>TJPA>Doing Business with the TJPA>Disadvantaged Business Enterprise (DBE) Program).

- B. The TJPA has established a DBE Availability Advisory Percentage of 17% for this Contract. The DBE Availability Advisory Percentage is not an enforceable goal under the Caltrans-mandated changes to the DBE Program, and compliance with the advisory is not a condition of contract award; however, Contractor is referred to paragraph 1.3, Small Business Enterprise Program Requirements.
- C. Only DBEs currently certified in the California United Certification Program (CUCP) may participate as DBEs in the TJPA's DBE Program. The CUCP Directory is available on the Caltrans website at www.dot.ca.gov/hq/bep/find_certified.htm.

Pursuant to the monitoring requirements outlined in Section XIII of the TJPA's DBE Program and 49 CFR 26.37, Contractor will be required to read the instructions in attachment 00 08 21/AT3 and complete and submit the Bidders/Proposers Information Request Form whenever subcontractor information is updated, regardless of DBE participation. The Contractor will be required to submit the TJPA's Progress Payment Report with every invoice request, the Subcontractor Payment Declaration as proof of payment to DBE and non-DBE subcontractors, and the Final Expenditure Report with the completion of the Contract. These forms are attached hereto as 00 08 21/AT3 and are available on the TJPA website: www.transbaycenter.org>TJPA>Doing Business with the TJPA>DBE/SBE Forms.

1.3 SMALL BUSINESS ENTERPRISE (SBE) PROGRAM REQUIREMENTS

- A. It is the policy of the TJPA to encourage participation by small business firms in TJPA contracting. It is the intention of the TJPA to create a level playing field on which SBEs can compete fairly for contracts and subcontracts relating to the TJPA's construction, procurement, and professional services activities.

The Contractor is responsible for reviewing the policies outlined in the TJPA's SBE Program. The TJPA SBE Program is available on the TJPA website: [www.transbaycenter.org>TJPA>Doing Business with the TJPA>Small Business Enterprise \(SBE\) Program](http://www.transbaycenter.org>TJPA>Doing Business with the TJPA>Small Business Enterprise (SBE) Program).

- B. The TJPA has established an SBE Utilization Goal of 17% overall for this Contract. The SBE Utilization Goal is an enforceable goal under the SBE Program, and compliance with the SBE Program is mandatory.
- C. If the Contractor is unable to meet the SBE Utilization Goal, the Contractor is required to submit sufficient evidence of good faith efforts to meet the goal, in compliance with the TJPA SBE Program. The SBE Participation Good Faith Efforts form is included in 00 08 21/AT3.
- D. DBEs currently certified in the California United Certification Program (CUCP) may participate as SBEs in the TJPA's SBE Program, as well as SBEs certified by the City and County of San Francisco Human Rights Commission, and the California Department of General Services Office of Small Business and Disabled Veteran Business Enterprise Services (OSDS). The CUCP Directory is available on the Caltrans website at www.dot.ca.gov/hq/bep/find_certified.htm. The San Francisco Local Business Enterprise Directory is available on the City's website at www.sf-hrc.org/index.aspx?page=74. The California OSDS directory is available online at www.eprocure.dgs.ca.gov/default.htm.
- E. Pursuant to the monitoring requirements outlined in Section IX of the TJPA's SBE Program, Contractor will be required to complete and submit the Bidders/Proposers Information Request Form whenever subcontractor information is updated, regardless of SBE participation. The Contractor will be required to submit the TJPA's Progress Payment Report with every invoice request, the Subcontractor Payment Declaration as proof of payment to SBE and non-SBE subcontractors, and the Final Expenditure Report with the completion of the contract. These forms are included in 00 08 21/AT3 and are available on the TJPA website: www.transbaycenter.org>TJPA>Doing Business with the TJPA>DBE/SBE Forms.

1.4 EMPLOYMENT NON-DISCRIMINATION REQUIREMENTS

- A. Contractor shall promote and ensure equal employment opportunities for persons of all ethnic backgrounds and genders in the construction workforce. Prior to award of the contract, Contractor shall agree in its proposal that it will abide by Administrative Code Chapter 12B by not discriminating against any employee or applicant for employment because of race, color, religion, ancestry, national origin, age, sex, sexual orientation, gender identity, domestic partner status, marital status, height, weight, disability or AIDS/HIV status, or association with members of classes protected under this chapter or in retaliation for opposition to any practices forbidden under Chapter 12B. This prohibition includes discrimination in employment, upgrading, demotion, transfer, recruitment advertising or recruitment, layoff or termination, rates of pay or other forms of compensation, and selection for training including apprenticeship. Contractors shall place the same requirements in their subcontracts.
- B. Contractor and its Trade Subcontractors shall send to each labor union with which they have a collective bargaining agreement a notice advising the union of this commitment to nondiscrimination and shall post copies of this notice in conspicuous places available to employees and applicants for employment.

- C. Neither the provision of a collective bargaining agreement nor the failure of a union with whom Contractor has a collective bargaining agreement to refer any group of persons for employment shall excuse Contractor's or its Trade Subcontractors' obligations not to discriminate under these provisions.
- D. Contractor and its Trade Subcontractors shall ensure that all forepersons, superintendents, and other on-site supervisory personnel maintain a working environment free of harassment, intimidation, and coercion.
- E. Contractor and its Trade Subcontractors shall ensure that all facilities and company activities are non-segregated except that separate or single-user toilet and changing facilities shall be provided to accommodate all workers.
- F. Contractor agrees that the ratio of apprentices to journeypersons employed by Contractor on this job will comply with the ratio required on public works projects by California Labor Code section 1777.5.
- G. Upon TJPA request, an authorized representative of the Contractor and its Trade Subcontractors and Suppliers will actively participate in compliance review meetings with a representative of the TJPA to review the implementation of these nondiscrimination requirements. The authorized representative of the company in attendance must have authority to commit the organization. Contractor shall be responsible to notify and to require the attendance of its Trade Subcontractors at such meetings. Contractors and Trade Subcontractors shall abide by any nondiscrimination program imposed by the San Francisco Human Rights Commission (HRC) under San Francisco Administrative Code Chapter 12B.4.
- H. Non-compliance and Sanctions:
 - 1. A complaint of discrimination in employment initiated by any party after contract award will be processed in accordance with the HRC Rules of Procedures, adopted pursuant to Chapter 12B of the San Francisco Administrative Code.
 - 2. A finding of discrimination may result in the imposition of financial penalties and debarment from TJPA contracting.

1.5 SUBMITTALS

- A. With each subcontractor update, submit a completed and signed Bidders/Proposers Information Form (00 08 21/AT3-B).
- B. With each progress payment application, submit a properly completed and executed Progress Payment Report (00 08 21/AT3-D).
- C. Within 5 days of each payment to a subcontractor, submit to the TJPA Contracts Compliance Manager at the address specified above a completed and signed Subcontractor Payment Declaration (00 08 21/AT3-E) .
- D. When processing a contract amendment, modification, or supplemental change order that cumulatively increases the original contract amount by more than 20%, and then for all subsequent modifications, Contractor shall complete and submit to the TJPA Contracts Compliance Manager at the address specified above a Contract Modification Form (Attachment 00 08 21/AT4).
- E. At contract close, submit to the TJPA Contracts Compliance Manager at the address specified above a Final Expenditure Report (00 08 21/AT3-F).

1.6 REGULATORY REQUIREMENTS

- A. The Contractor or Trade Subcontractor shall pay a subcontractor not later than 10 days of receipt of each progress payment in accordance with the provision in Section 7108.5 of the California Business and Professions Code concerning prompt payment to subcontractors. The 10 days is applicable unless a longer period is agreed to in writing. Any violation of Section 7108.5 shall subject the violating

contractor or subcontractor to the penalties, sanction and other remedies of that Section. Federal regulation (49 CFR 26.29) requires that any delay or postponement of payment over 30 days of receipt of each payment may take place only for good cause and with the TJPA's prior written approval. These requirements shall not be construed to limit or impair any contractual, administrative, or judicial remedies otherwise available to the Contractor or Trade Subcontractor in the event of a dispute involving late payment, or nonpayment by the Contractor, deficient Trade Subcontractor performance, or noncompliance by a Trade Subcontractor. This provision applies to both DBE and non-DBE contractors and subcontractors.

- B. If the TJPA requires retainage from the Contractor, and prompt and regular incremental acceptances of portions, as determined by the TJPA, of the Contract work and retainage is paid to the Contractor based on these acceptances, then the Contractor or Trade Subcontractor shall return all monies withheld in retention from all subcontractors within 30 days after receiving payment for work satisfactorily completed and accepted including incremental acceptances of portions of the contract work by the TJPA. Any delay or postponement of payment may take place only for good cause and with the TJPA's prior written approval. Any violation of these provisions shall subject the violating prime contractor to the penalties, sanctions, and other remedies specified in Section 7108.5 of the California Business Professions Code. This requirement shall not be construed to limit or impair any contractual, administrative, or judicial remedies otherwise available to the Contractor or Trade Subcontractor in the event of a dispute involving late payment, or nonpayment by the Contractor, or deficient Trade Subcontractor's performance, or noncompliance by a Trade Subcontractor. This clause applies to both DBE and non-DBE subcontractors.

1.7 QUESTIONS

Written questions concerning DBE/SBE/EEO nondiscrimination requirements should be addressed to:

Ms. Sara Gigliotti
Contracts Compliance Manager
Transbay Joint Powers Authority
201 Mission Street, Suite 2100
San Francisco, CA 94105
(415) 597-4615 fax
Email: sgigliotti@transbaycenter.org

END OF SECTION 00 08 21

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 00 08 21/AT1

DISADVANTAGED BUSINESS ENTERPRISE PROGRAM REQUIREMENTS (CALTRANS EXHIBIT 10-I)

The Transbay Joint Powers Authority ("TJPA") has established a DBE Availability Advisory Percentage for this Agreement. Contractor is encouraged to obtain DBE participation for this Agreement.

1. Terms As Used In This Document

- a) The term "Disadvantaged Business Enterprise" or "DBE" means a for-profit small business concern as defined in Title 49, Part 26.5, Code of Federal Regulations ("CFR").
- b) The term "bidder" also means "proposer" or "offerer."
- c) The term "Agreement" also means "Contract."
- d) Authority also means the local entity entering into this contract with the Contractor or Consultant. The term "Small Business" or "SB" is as defined in 49 CFR 26.65.

2. Authority and Responsibility

- a) DBEs and other small businesses are strongly encouraged to participate in the performance of Agreements financed in whole or in part with federal funds. (See 49 CFR 26, "Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs.") The Contractor should ensure that DBEs and other SBs have the opportunity to participate in the performance of the work that is the subject of this solicitation and should take all necessary and reasonable steps for this assurance. The bidder/proposer shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of subcontracts.
- b) Bidders/Proposers are encouraged to use services offered by financial institutions owned and controlled by DBEs.
- c) Meeting the DBE Availability Advisory Percentage is not a condition for being eligible for award of the Agreement.

3. Submission of DBE Information

The TJPA's "Bidders/Proposers Information Request Form" will be included in the Agreement documents to be executed by the successful bidder. The purpose of the form is to collect data required under 49 CFR 26. Even if no DBE participation will be reported, the successful bidder must execute and return the form.

4. DBE Participation General Information

It is the bidder's responsibility to be fully informed regarding the requirements of 49 CFR 26, and the TJPA's DBE program developed pursuant to the regulations. Particular attention is directed to the following:

- a) A DBE must be a small business firm defined pursuant to 13 CFR 121 and be certified through the California Unified Certification Program (CUCP).
- b) A certified DBE may participate as a prime contractor, subcontractor, joint venture partner, as a vendor of material or supplies, or as a trucking company.
- c) A DBE joint-venture partner must be responsible for specific contract items of work or clearly defined portions thereof. Responsibility means actually performing, managing and supervising the work with its own forces. The DBE joint venture partner must share in the capital contribution, control, management, risks and profits of the joint-venture commensurate with its ownership interest.

- d) A DBE must perform a commercially useful function, pursuant to 49 CFR 26.55, that is, must be responsible for the execution of a distinct element of the work and must carry out its responsibility by actually performing, managing and supervising the work.
- e) The bidder (prime contractor) shall list only one subcontractor for each portion of work as defined in their bid/proposal and all DBE subcontractors should be listed in the bid/cost proposal list of subcontractors.
- f) A prime contractor who is a certified DBE is eligible to claim all of the work in the Agreement toward the DBE participation except that portion of the work to be performed by non-DBE subcontractors.

5. Resources

- a) The CUCP database includes the certified DBEs from all certifying agencies participating in the CUCP. If you believe a firm is certified that cannot be located on the database, please contact the Caltrans Office of Certification's toll free number 1-866-810-6346 for assistance. Bidders/Proposers may call (916) 440-0539 for web or download assistance.
- b) Access the CUCP database from the Department of Transportation, Civil Rights, Business Enterprise Program website at: www.dot.ca.gov/hq/bep/.
- Click on the link in the left menu titled Disadvantaged Business Enterprise.
 - Click on Search for a DBE Firm link.
 - Click on Access to the DBE Query Form located on the first line in the center of the page.
 - Searches can be performed by one or more criteria.
 - Follow instructions on the screen.
- c) If you do not have Internet access, Caltrans also publishes a directory of certified DBE firms extracted from the on-line database. A copy of the directory of certified DBEs may be ordered at: <http://caltrans-opac.ca.gov/publicat.htm>.

6. When Reporting DBE Participation, Material or Supplies Purchased From DBEs May Count As Follows:

- a) If the materials or supplies are obtained from a DBE manufacturer, one hundred percent of the cost of the materials or supplies will count toward the DBE participation. A DBE manufacturer is a firm that operates or maintains a factory, or establishment that produces on the premises, the materials, supplies, articles, or equipment required under the Agreement and of the general character described by the specifications.
- b) If the materials or supplies purchased from a DBE regular dealer, count sixty percent of the cost of the materials or supplies toward DBE participation. A DBE regular dealer is a firm that owns, operates or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment of the general character described by the specifications and required under the Agreement are bought, kept in stock, and regularly sold or leased to the public in the usual course of business. To be a DBE regular dealer, the firm must be an established, regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question. A person may be a DBE regular dealer in such bulk items as petroleum products, steel, cement, gravel, stone or asphalt without owning, operating or maintaining a place of business provided in this section.
- c) If the person both owns and operates distribution equipment for the products, any supplementing of regular dealers' own distribution equipment shall be by a long-term lease agreement and not an ad hoc or Agreement-by-Agreement basis. Packagers, brokers, manufacturers' representatives, or other persons who arrange or expedite transactions are not DBE regular dealers within the meaning of this section.
- d) Materials or supplies purchased from a DBE, which is neither a manufacturer nor a regular dealer, will be limited to the entire amount of fees or commissions charged for assistance in the procurement of the materials and

supplies, or fees or transportation charges for the delivery of materials or supplies required on the job site, provided the fees are reasonable and not excessive as compared with fees charged for similar services.

7. When Reporting DBE Participation, Participation of DBE Trucking Companies May Count As Follows:

- a) The DBE must be responsible for the management and supervision of the entire trucking operation for which it is responsible.
- b) The DBE must itself own and operate at least one fully licensed, insured and operational truck used on the Agreement.
- c) The DBE receives credit for the total value of the transportation services it provides on the Agreement using trucks it owns, insures, and operates using drivers it employs.
- d) The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the Agreement.
- e) The DBE may also lease trucks from a non-DBE firm, including an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit only for the fee or commission it receives as a result of the lease arrangement. The DBE does not receive credit for the total value of the transportation services provided by the lessee, since these services are not provided by the DBE.
- f) For the purposes of this Section D, a lease must indicate that the DBE has exclusive use and control over the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, as long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks must display the name and identification number of the DBE.

END OF ATTACHMENT 00 08 21/AT1

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0	July 30, 2010

SECTION 00 08 21/AT2
DISADVANTAGED BUSINESS ENTERPRISE PROGRAM REQUIREMENTS
STANDARD AGREEMENT FOR SUBCONTRACTOR/DBE PARTICIPATION
(CALTRANS EXHIBIT 10-J)

1. Subcontractors

- a) Nothing contained in this Agreement or otherwise shall create any contractual relation between the TJPA and any subcontractors, and no subcontract shall relieve the Contractor of his/her responsibilities and obligations hereunder. The Contractor agrees to be as fully responsible to the TJPA for the acts and omissions of its subcontractors and of persons either directly or indirectly employed by any of them as it is for the acts and omissions of persons directly employed by the Contractor. The Contractor's obligation to pay its subcontractors is an independent obligation from the TJPA's obligation to make payments to the Contractor.
- b) Any subcontract in excess of \$25,000, entered into as a result of this Agreement, shall contain all the provisions stipulated in this Agreement to be applicable to subcontractors.
- c) Contractor shall pay its subcontractors within ten (10) calendar days from receipt of each payment made to the Contractor by the TJPA.
- d) Any substitution of subcontractors must be approved in writing by the TJPA's Contract Manager in advance of assigning work to a substitute subcontractor.

2. Disadvantaged Business Enterprise (DBE) Participation

- a) The TJPA has established a DBE Availability Advisory Percentage of 17% for this Agreement. This Agreement is subject to Title 49, Part 26 of the Code of Federal Regulations entitled "Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs." Bidders who obtain DBE participation on this contract will assist Caltrans in meeting its federally mandated statewide overall DBE goal.
- b) DBE and other small businesses (SB), as defined in Title 49 CFR, Part 26 are encouraged to participate in the performance of agreements financed in whole or in part with federal funds. The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Agreement. The contractor shall carry out applicable requirements of 49 CFR, Part 26 in the award and administration of US DOT-assisted agreements. Failure by the contractor to carry out these requirements is a material breach of this Agreement, which may result in the termination of this Agreement or such other remedy as the recipient deems appropriate.
- c) Any subcontract entered into as a result of this Agreement shall contain all of the provisions of this section.

3. Performance of DBE Contractors, and other DBE Subcontractors/Suppliers

- a) A DBE performs a commercially useful function when it is responsible for execution of the work of the Agreement and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE must also be responsible with respect to materials and supplies used on the Agreement, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself. To determine whether a DBE is performing a commercially useful function, evaluate the amount of work subcontracted, industry practices; whether the amount the firm is to be paid under the Agreement is commensurate with the work it is actually performing, and other relevant factors.
- b) A DBE does not perform a commercially useful function if its role is limited to that of an extra participant in a transaction, Agreement, or project through which funds are passed in order to obtain the appearance of DBE participation. In determining whether a DBE is such an extra participant, examine similar transactions, particularly those in which DBEs do not participate.
- c) If a DBE does not perform or exercise responsibility for at least thirty percent of the total cost of its Agreement with its own work force, or the DBE subcontracts a greater portion of the work of the Agreement than would be expected on the basis of normal industry practice for the type of work involved, it will be presumed that it is not performing a commercially useful function.

4. Prompt Payment of Funds Withheld to Subcontractors

If the TJPA requires retainage from the prime contractor and prompt and regular incremental acceptances of portions, as determined by the TJPA of the contract work and retainage is paid to the prime contractor based on these acceptances, then the prime contractor or subcontractor shall return all monies withheld in retention from all subcontractors within 30 days after receiving payment for work satisfactorily completed and accepted including incremental acceptances of portions of the contract work by the TJPA. Federal law (49CFR26.29) requires that any delay or postponement of payment over the 30 days may take place only for good cause and with the TJPA's prior written approval. Any violation of this provision shall subject the violating prime contractor or subcontractor to the penalties, sanctions and other remedies specified in Section 7108.5 of the Business and Professions Code. These requirements shall not be construed to limit or impair any contractual, administrative, or judicial remedies otherwise, available to the prime Contractor or subcontractor in the event of a dispute involving late payment or nonpayment by the prime contractor, deficient subcontract performance, or noncompliance by a subcontractor. This provision applies to both DBE and non-DBE prime contractors and subcontractors.

Any subcontract entered into as a result of this Agreement shall contain all of the provisions of this section.

5. DBE Records

- a) The Contractor shall maintain records of materials purchased and/or supplied from all subcontracts entered into with certified DBEs. The records shall show the name and business address of each DBE or vendor and the total dollar amount actually paid each DBE or vendor, regardless of tier. The records shall show the date of payment and the total dollar figure paid to all firms. DBE prime contractors shall also show the date of work performed by their own forces along with the corresponding dollar value of the work. The TJPA will require the Contractor to submit a "Progress Payment Report" with every invoice, summarizing the records as described above.
- b) Upon completion of the Agreement, a summary of these records shall be prepared and submitted on the form "Final Expenditure Report," certified correct by the Contractor or the Contractor's authorized representative and shall be furnished to the Contract Manager with the final invoice. Failure to provide the summary of DBE payments with the final invoice will result in twenty-five percent (25%) of the dollar value of the invoice being withheld from payment until the form is submitted. The amount will be returned to the Contractor when a satisfactory "Final Expenditure Report" is submitted to the Contract Manager.
 - i. Prior to the fifteenth of each month, the Contractor shall submit documentation to the TJPA's Contract Manager showing the amount paid to DBE trucking companies. The Contractor shall also obtain and submit documentation to the TJPA's Contract Manager showing the amount paid by DBE trucking companies to all firms, including owner-operators, for the leasing of trucks. If the DBE leases trucks from a non-DBE, the Contractor may count only the fee or commission the DBE receives as a result of the lease arrangement.
 - ii. The Contractor shall also submit to the TJPA's Contract Manager documentation showing the truck number, name of owner, California Highway Patrol CA number, and if applicable, the DBE certification number of the truck owner for all trucks used during that month. This documentation shall be submitted on the Caltrans "Monthly DBE Trucking Verification," CEM-2404(F) form provided to the Contractor by the TJPA's Contract Manager.

6. DBE Certification and De-Certification Status

If a DBE subcontractor is decertified during the life of the Agreement, the decertified subcontractor shall notify the Contractor in writing with the date of de-certification. If a subcontractor becomes a certified DBE during the life of the Agreement, the subcontractor shall notify the Contractor in writing with the date of certification. Any changes should be reported to the TJPA's Contract Manager within 30 days.

7. When Reporting DBE Participation, Material or Supplies purchased from DBEs may count as follows:

- a) If the materials or supplies are obtained from a DBE manufacturer, 100% of the cost of the materials or supplies will count toward the DBE participation. A DBE manufacturer is a firm that operates or maintains a factory or establishment that produces on the premises, the materials, supplies, articles, or equipment required under the Agreement and of the general character described by the specifications.

b) If the materials or supplies are purchased from a DBE regular dealer, count 60% of the cost of the materials or supplies toward DBE goals. A DBE regular dealer is a firm that owns, operates or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment of the general character described by the specifications and required under the Agreement, are bought, kept in stock, and regularly sold or leased to the public in the usual course of business. To be a DBE regular dealer, the firm must be an established, regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question. A person may be a DBE regular dealer in such bulk items as petroleum products, steel, cement, gravel, stone or asphalt without owning, operating or maintaining a place of business provided in this section.

c) If the person both owns and operates distribution equipment for the products, any supplementing of regular dealers' own distribution equipment shall be by a long-term lease agreement and not an ad hoc or Agreement-by-Agreement basis. Packagers, brokers, manufacturers' representatives, or other persons who arrange or expedite transactions are not DBE regular dealers within the meaning of this section.

d) Materials or supplies purchased from a DBE, which is neither a manufacturer nor a regular dealer, will be limited to the entire amount of fees or commissions charged for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies required on the job site, provided the fees are reasonable and not excessive as compared with fees charged for similar services.

8. When Reporting DBE Participation, Participation of DBE Trucking Companies may count as follows:

a) The DBE must be responsible for the management and supervision of the entire trucking operation for which it is responsible.

b) The DBE must itself own and operate at least one fully licensed, insured, and operational truck used on the Agreement.

c) The DBE receives credit for the total value of the transportation services it provides on the Agreement using trucks it owns, insures, and operates using drivers it employs.

d) The DBE may lease trucks from another DBE firm including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the Agreement.

e) The DBE may also lease trucks from a non-DBE firm, including an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit only for the fee or commission it receives as a result of the lease arrangement. The DBE does not receive credit for the total value of the transportation services provided by the lessee, since these services are not provided by the DBE.

f) For the purposes of this section, a lease must indicate that the DBE has exclusive use and control over the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, as long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks must display the name and identification number of the DBE.

END OF SECTION 00 08 21/AT2

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Revision	Date
0	July 30, 2010

SECTION 00 08 21/AT3 – TJPA DBE/SBE FORMS AND INSTRUCTIONS

- A. TJPA DBE/SBE Instructions
- B. Bidders/Proposers Information Request Form
- C. Good Faith Efforts Form
- D. Progress Payment Report
- E. Subcontractor Payment Declaration
- F. Final Expenditure Report

END OF SECTION 00 08 21/AT3

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Disadvantaged/Small Business Enterprise Forms

All TJPA contracts include the requirement that the Contractor submit the following forms as part of our Disadvantaged Business Enterprise (DBE) and Small Business Enterprise (SBE) Programs:

Bidders/Proposers Information Request Form	To be submitted with a bid or proposal; must also be submitted upon contract award if the information has changed
Progress Payment Report	To be submitted with every invoice
Subcontractor Payment Declaration	To be submitted within five days of each Contractor payment to a subcontractor (and a Contractor is to pay all subcontractors within ten days of receiving payment)
Final Expenditure Report	To be submitted upon contract completion

These forms are necessary to monitor our federally mandated DBE Program and Board-mandated SBE Program.

How to fill out the Bidders/Proposers Information Request Form

1. Name of Project/Proposal – insert name of the TJPA Request for Proposals (RFP) or Invitation for Bids (IFB)
2. Project/Proposal Number – insert TJPA-assigned number of the relevant RFP or IFB
3. Proposer Business Name and Address – insert company name and address of prime contractor. If proposal or bid is being made by a joint venture, contact the TJPA for an alternate form.
4. Name of Person Submitting Bid – insert contact name for the prime contractor
5. Signature of Proposer – signature of person listed in number 4
6. Date – date proposal or bid is being submitted
7. Note the requirements in small print – “IMPORTANT: 1) Identify all DBE/SBE firms being claimed for credit. 2) List names of all DBE/SBE subcontractors and their respective items of work. 3) Attach copy of the proof of DBE/SBE certification for each DBE/SBE subcontractor listed on this form. 4) Attach “Intent to Perform” letter signed by the subcontractor.”

Certification must be attached. The TJPA accepts DBE participation only from firms currently certified in the California Unified Certification Program (CUCP). For SBE participation, certifications are accepted from the CUCP, the San Francisco Human Rights Commission, and/or the State of California Department of General Services. If a proposal or bid includes subcontractors, a letter stating the subcontractor’s intent to perform work on the project must be attached.

8. Sections A and B must be completed, even if there is no DBE/SBE participation planned for the contract. The information in this section is required for TJPA DBE/SBE Program monitoring purposes and for maintaining a federally required bidders list. **Do not write “not applicable” or “n/a”.** If a proposal or bid is being submitted by one firm or individual, with no partners or subcontractors, then that firm or individual is the PRIME Contractor and must complete Section A. Even if the name, address and phone number are the same as provided above on the form, the remaining columns must be completed; do not write “same as above”. **All subcontractors, whether DBE/SBE or non-DBE/SBE, must be listed in Section B.** Use additional sheets if necessary. If there are no subcontractors proposed, Section B will remain blank.

- Age of firm – how many years the firm has been in business
- NAICS Code – North American Industry Classification System Code. Codes can be found at www.census.gov/naics.
- Annual Gross Receipts of Firm – a range may be provided, e.g., less than \$500,000; \$500,000 - \$1,000,000; \$1,000,000 - \$5,000,000; \$5,000,000 - \$10,000,000; etc.
- Certified DBE/SBE – mark yes or no in this column. If “yes”, list the type of certification: CUCP, HRC, DGS.
- DBE/SBE Certifying Agency – if you marked yes as a Certified DBE/SBE, note which agency your certification letter is from—BART, SFMTA, HRC, etc.
- Type of DBE/SBE – if you marked yes as a Certified DBE/SBE, put the number that corresponds to the type of DBE/SBE as follows—
 1. African-American
 2. Hispanic
 3. Native American
 4. Asian-Pacific
 5. Asian-Indian
 6. Female-Woman
 7. Other
- Award Amount – leave this column blank, unless you are submitting an updated form after contract award
- Percentage of Contract Participation – if only one firm or individual is proposing or bidding, with no partners or subcontractors, this is 100% for the prime contractor. Fill in appropriate percentages for each firm if some of the work is being subcontracted. Note that the total at the bottom of the form must be 100% when all percentages are added.

How to fill out the Progress Payment Report

- Contract Award Date – insert date from cover page of your contract
- TJPA Contract No. – this number should be listed on your Notice to Proceed (NTP). If unsure, contact the TJPA Contracts Compliance Manager or the Project Manager you are working with
- Contract Title – this should also be in the subject line of your NTP. If unsure, contact the TJPA Contracts Compliance Manager or the Project Manager you are working with
- Prime Contractor – self explanatory
- Contact Person – self explanatory
- Contact Phone No. – self explanatory
- Contact Email – self explanatory
- Prime Contractor Address – self explanatory
- Signature – self explanatory
- Invoice Date – self explanatory
- Invoice No. – self explanatory
- For the Period – invoice period

1. Award Amount of Prime Contract – insert the total dollar amount of the contract, which can be found in the Compensation clause of the contract. Please note that NTP's may be for less than the total amount of the contract; enter the total amount of the contract, not the total for any one NTP or task order
2. Amount of Change Orders, Amendments and Modifications to Date – enter the total amount of any contract change orders, amendments or modifications
3. Total Contract Amount to Date – add Lines 1 and 2
4. Total Amount for this Invoice – amount of the invoice this report is accompanying. If contract has retention provisions, subtract the retention amount for this invoice from this amount
5. Total Previously Invoiced Awaiting Payment – amount of any previously submitted invoices not yet paid (less retention if the contract has a retention provision)
6. Total Amount Paid to Date – total amount received; this does not include the invoices in Lines 4 or 5
7. Total Invoice Amount Requested to Date – add Lines 4, 5 and 6
8. Total Retention to Date (*for contracts with retention only*) – total amount retained to date. As retention is released, deduct the released amount from this total, and add to the Total Amount Paid to Date
- 8/9. Percent Complete – contract percentage completed; divide Line 7 by Line 3 (*Lines 7 + 8 divided by Line 3 for contracts with retention*)

Part 2: Consultant/Subconsultant Payment Detail Summary

This section is very similar to Part 1, above, but has lines for inputting the same information for each contract participant—prime and subs.

- A. Name of Firm – all firms working on the contract should have a row, even if they are not billing on this particular invoice
- B. DBE/SBE – mark DBE, SBE, or N. If a firm is both a DBE and either a CA SBE or SF HRC SBE, please mark as a DBE.
- C. Portion of Work – percentage of work that each firm is expected to perform on the contract. The sum of this column should be 100%
- D. Contract Amount – the dollar amount that each firm is expected to perform on the contract at the time of award. The sum of this column should equal the contract amount in Line 1 on page 1
- E. Amount of Change Orders to Date – the dollar amount of any change orders, modifications or amendments, broken down by contractor (prime and/or subs). The sum of this column should equal the amount in Line 2 on page 1
- F. Total Contract Amount + Change Orders – the total dollar amount that each firm is expected to perform on the contract. The sum of this column should equal the total contract amount in Line 3 on page 1
- G. Amount Invoiced This Period – the dollar amount invoiced by each contractor, prime and sub, for this invoice. If a particular firm did not bill on this invoice, put \$0.00. The sum of this column should equal the total invoice amount (Line 4 on page 1)
- H. Previously Invoiced Awaiting Payment – broken down by company. The sum of this column should equal Line 5 on page 1
- I. Amount Paid to Date – again, broken down by company. The sum of this column should equal Line 6 on page 1
- J. Total Retention to Date (*for contracts with retention only*) – total amount retained to date broken down by company. The sum of this column should equal Line 8 on page 1
- J/K. Percent Complete to Date – total amount billed divided by contract amount, broken down by company. The percentage total of this column should equal Line 8 (Line 9 for contracts with retention) on page 1

How to fill out the Subcontractor Payment Declaration

The items required on this form are self explanatory. Subconsultants must be paid within ten days of the prime contractor's receipt of payment from the TJPA, and this form must be submitted within five days of payment to the subconsultant. Please contact the TJPA Contracts Compliance Manager or your Project Manager with any questions.

How to fill out the Final Expenditure Report

This report is an update of your Bidders/Proposers Information Request Form, based on actual contract data. The information required on this form should be self explanatory. Please contact the TJPA Contracts Compliance Manager or your Project Manager with any questions.

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**TRANSBAY JOINT POWERS AUTHORITY
BIDDERS/PROPOSERS INFORMATION REQUEST FORM
SECTION 00 08 21/AT3-B**

To be completed by Prime Contractor and submitted as part of bid/proposal.

NAME OF PROJECT/PROPOSAL							PROJECT/PROPOSAL NUMBER				
PROPOSER BUSINESS NAME AND ADDRESS											
NAME OF PERSON SUBMITTING BID				SIGNATURE OF PROPOSER						DATE	
CONTACT PERSON NAME				CONTACT PHONE NUMBER				CONTACT EMAIL			
IMPORTANT: 1) Identify all DBE/SBE firms being claimed for credit. 2) List names of all DBE/SBE subcontractors and their respective items of work. 3) Attach a copy of the proof of DBE/SBE certification for each DBE/SBE subcontractor listed on this form. 4) Attach "Intent to Perform" letter signed by the subcontractor.											
LIST BUSINESS FIRM(s) List Name, Address, and Contact Person (if not the same as above)	Phone Number	Email Address	Age of Firm	Item of Work, Service or Materials Supplied	NAICS Code (if known) *	Annual Gross Receipts of Firm	DBE-SBE Participation		Award Amount	Percentage of Contract Participation	
A. PRIME Contractor							Certified DBE or SBE (Y/N)	Certifying Agency	Type of DBE or SBE **		
B. Subcontractor/Vendor/Joint Venture							Certified DBE or SBE (Y/N)	Certifying Agency	Type of DBE or SBE **		
TOTAL										\$0	0.00%

* NAICS Code: North American Industry Classification System Code. Codes can be found at <http://www.census.gov/naics>.

** Type of DBE/SBE: (1) African-American (2) Hispanic (3) Native American (4) Asian-Pacific (5) Asian-Indian (6) Female-Woman (7) Other (designated as a Small Business)

- DBEs must be certified by Caltrans or an agency participating in the California Unified Certification Program. Visit the Caltrans website at <http://dot.ca.gov/hq/bep/ucp.htm> for a list of participating agencies.

- SBEs must be certified by the San Francisco Human Rights Commission (<http://www.sfgov.org/sfhumanrights>) or the California Department of General Services (<http://www.eprocure.dgs.ca.gov/default.htm>)

- Important: Attach the proof of certification for each DBE/SBE firm used toward meeting the DBE/SBE goal.

- This information will be used to create and maintain a federally required Bidders List, regardless of DBE/SBE participation.

- Use additional sheets as necessary.

TRANSBAY JOINT POWERS AUTHORITY
SBE PARTICIPATION GOOD FAITH EFFORTS FORM
SECTION 00 08 21/AT3-C

This form must be completed and submitted along with compelling documentation detailing the good faith efforts made to meet the SBE participation goal **if the information submitted on the Bidders/Proposers Information Form indicates that the SBE goal has not been met.**

If the SBE participation goal is not met, and if this form, along with compelling documentation detailing the good faith efforts made to meet the goal, is not completed and returned with the bid or proposal, **the bid or proposal shall be deemed non-responsive and rejected.**

Even if the Bidders/Proposers Information Form indicates that the SBE goal has been met, bidders/proposers are still encouraged to submit good faith efforts documentation to protect their eligibility for the contract.

Contract No.: _____ **Contract Name:** _____

Bidder/Proposer: _____

Please supply the following information:

1. Attended any pre-solicitation, pre-proposal, or pre-bid meetings held to inform all bidders about the contract and SBE requirements

Meeting Date: _____
Attendee(s): _____

Meeting Date: _____
Attendee(s): _____

Meeting Date: _____
Attendee(s): _____

Meeting Date: _____
Attendee(s): _____

2. List below and/or on an attached sheet the names and dates of all certified SBEs solicited for this project. List the dates and methods used for initial contact and any follow-up contact. Attach copies of letters, faxes, emails and any other supporting documentation that you would like the Contract Compliance Manager to consider in determining good faith efforts.

3. Summarize below and/or on an attached sheet the items of work for which the Bidder requested subcontractor services of SBEs, the information furnished to interested SBEs regarding work requirements, and any breakdown of tasks into economically feasible units to facilitate SBE participation. Where there are SBEs available for doing portions of the work normally performed by the bidder with its own staff, the bidder will be expected to make portions of such work available for SBEs.

**TRANSBAY JOINT POWERS AUTHORITY
SBE PARTICIPATION GOOD FAITH EFFORTS FORM
SECTION 00 08 21/AT3-C**

4. List below and/or on an attached sheet the names of any SBEs solicited for the work above, and a summary of the discussions or negotiations with them.

a. List solicited SBEs not available to participate on the contract, stating the reason.

b. List solicited SBEs chosen to participate, and the reasons for the choice.

c. List solicited SBEs not chosen to participate, reasons for the choice, and any actions taken by the bidder to assist the rejected SBEs in remedying deficiencies in their proposal.

If insurance or bonding is a reason for rejecting any potential SBE, a complete explanation including contact and discussions with insurance and surety firms must be provided.

Print Name: _____
Signature: Phone: _____
Company: _____
Address: _____
City, State, ZIP: _____

Date: _____
Email: _____

**TRANSBAY JOINT POWERS AUTHORITY
PROGRESS PAYMENT REPORT
SECTION 00 08 21/AT3-D**

To be completed by Prime Contractor and submitted to Project Manager with every monthly invoice.

PART 1: PROJECT SUMMARY

Contract Award Date:	TJPA Contract No.:	Contract Title:	
Prime Contractor:	Contact Person:	Contact Phone No.:	Contact Email:
Prime Contractor Address:		Signature:	
Invoice Date:	Invoice No.:	For the Period:	

1. Award amount of Prime Contract	\$ -
2. Amount of Change Orders, Amendments and Modifications to Date	\$ -
3. Total Contract Amount to Date including Change Orders, Amendments and Modifications (Line 1 + Line 2)	\$ -
4. Total Amount for this Invoice (Less Retention)	\$ -
5. Total Previously Invoiced Awaiting Payment (Less Retention)	\$ -
6. Total Amount Paid to Date (not including Lines 4 and 5)	\$ -
7. Total Invoice Amount Requested to Date (Line 4 + Line 5 + Line 6)	\$ -
8. Total Retention to Date ¹	\$ -
9. Percent Complete ([Line 7 + Line 8] / Line 3)	0%

**TRANSBAY JOINT POWERS AUTHORITY
PROGRESS PAYMENT REPORT
SECTION 00 08 21/AT3-D**

PART 2: CONSULTANT/SUBCONSULTANT PAYMENT DETAIL SUMMARY

A	B	C	D	E	F	G	H	I	J	K
Name of Firm (Including Prime, Subs, Vendors, and Joint Ventures)	DBE or SBE (Y/N)	Portion of Work (%)	Contract Amount (\$)	Amount of Change Orders to Date (\$)	Total = Contract Amount + Change Orders (D+E) (\$)	Amount Invoiced This Period (\$)	Previously Invoiced Awaiting Payment (\$)	Amount Paid to Date (\$)	Total Retention to Date ¹ (\$)	Percent Complete to Date ([G+H+I+J] / F) (%)
TOTAL		0	0	0	0	0	0	0	0	0

**TRANSBAY JOINT POWERS AUTHORITY
SUBCONTRACTOR PAYMENT DECLARATION
SECTION 00 08 21/AT3-E**

This form must be completed and submitted by the Prime Contractor for all subcontractors, vendors, and joint venture partners for every invoice submitted to TJPA within five (5) working days following actual payment to subconsultant. Payments to subconsultant shall be made no later than ten (10) working days following receipt of progress payment from TJPA. Use additional sheets if necessary. Failure to submit all required information may lead to partial withholding of progress payment.

Date: _____ Contract No.: _____

Contract Title: _____

Prime Contractor: _____

Invoice Date: _____ Invoice No.: _____

For the Period: _____

Total Amount of Invoice: _____ TJPA Check No.: _____

Subcontractor/ Vendor/JV	DBE/ SBE (Y/N)	Business Address Payment Sent To	Amount Paid	Payment Date	Check Number

Total Amount Paid to Subconsultants (this Pay Period)	\$0.00
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I/We declare under penalty of perjury under the laws of the State of California that the above information is complete, and that the tabulated amounts paid to date are accurate and correct.

Signature of Contact Person

Date

Print Name

Phone

**TRANSBAY JOINT POWERS AUTHORITY
FINAL EXPENDITURE REPORT
SECTION 00 08 21/AT3-F**

To be completed by Prime Contractor at the end of the contract.

CONTRACT TITLE/NO.					TOTAL CONTRACT AWARD AMOUNT			DATE OF AWARD			
PRIME CONTRACTOR/CONSULTANT NAME AND ADDRESS					TOTAL EXPENDITURES AT END OF CONTRACT			DATE OF CONTRACT COMPLETION			
PROJECT MANAGER NAME					PROJECT MANAGER SIGNATURE						DATE
CONTACT PERSON NAME RE: FINAL EXP. REPORT					CONTACT PHONE NUMBER			CONTACT EMAIL			
IMPORTANT: 1) Identify all DBE/SBE firms being claimed for credit. 2) List names of all DBE/SBE subcontractors and their respective items of work.											
					DBE Participation						
LIST BUSINESS FIRM(s) List Name, Address, and Contact Person (if not the same as above)	Phone Number	Email Address	Item of Work, Service or Materials Supplied	NAICS Code (if known) *	Certified DBE/SBE (Y/N)	Certifying Agency	Type of DBE or SBE**	Date of Work Completed	Date of Final Payment	Total Amount Paid	% of Total Expenditures
A. PRIME Contractor											
B. Subcontractor/Vendor/Joint Venture											
TOTAL										\$ -	0.00%
Comments/Notes: (Explain cost overruns or discrepancies; DBE firm substitutions, etc...)											

* NAICS Code: North American Industry Classification System Code. Codes can be found at <http://www.census.gov/naics>.

** Type of DBE/SBE: (1) African-American (2) Hispanic (3) Native American (4) Asian-Pacific (5) Asian-Indian (6) Female-Woman (7) Other (designated as a Small Business)

- DBEs must be certified by Caltrans or an agency participating in the California Unified Certification Program. Visit the Caltrans website at <http://dot.ca.gov/hq/bep/ucp.htm> for a list of participating agencies.

- SBEs must be certified by the San Francisco Human Rights Commission (<http://www.sfgov.org/sfhumanrights>) or the California Department of General Services (<http://www.eprocure.dgs.ca.gov/default.htm>)

- Important: Attach the proof of certification for each DBE/SBE firm used toward meeting the DBE/SBE goal.

- This information will be used to create and maintain a federally required Bidders List, regardless of DBE/SBE participation.

SECTION 00 08 21/AT4

TJPA CONTRACT MODIFICATION FORM

Contractor must submit this form with the required supporting documentation when processing the first contract amendment, modification, or change order that cumulatively increases the original contract amount by more than 20%, and then for all subsequent requests. (This provision applies only to contracts originally valued at \$50,000 or more).

Name of Project/Contract Title: _____

Original Contract Amount: _____

Contract Amount as Modified to Date: _____

Amount of Current Modification Request: _____

REQUIRED ATTACHMENTS:

1. Revised TJPA Bidders/Proposers Information Request Form, reflecting the new overall contract amounts for the prime contractor, subcontractor, and vendors (refer to Section 00 08 21/AT1b).
2. List of ALL prior contract amendments, modifications, supplements, and/or change orders leading up to this modification.
3. List of contractors, subcontractors, and vendors working on this amendment, modification, or change order with the contract dollars for each individual firm.
4. Brief description of the work to be performed under this amendment, modification, or change order.

Owner/Authorized Representative Signature

Print Name Title

Firm Name

Telephone Date

END OF SECTION 00 08 21/AT4

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 00 08 22 – STATUTORY REQUIREMENTS

1.1 NONDISCRIMINATION IN CONTRACTS AND BENEFITS

- A. In the performance of this Contract, Contractor agrees not to discriminate on the basis of the fact or perception of a person's race, color, creed, religion, national origin, ancestry, age, sex, sexual orientation, gender identity, domestic partner status, marital status, disability or Acquired Immune Deficiency Syndrome or HIV status (AIDS/HIV status) against any employee of, any TJPA employee working with, or applicant for employment with Contractor, in any of Contractor's operations within the United States, or against any person seeking accommodations, advantages, facilities, privileges, services, or membership in all business, social, or other establishments or organizations operated by Contractor.
- B. Contractor shall incorporate by reference in all of its subcontracts under the Contract the provisions of sections 12B.2(a), 12B.2(c)-(k), and 12C.3 of the San Francisco Administrative Code and shall require all such Subcontractors to comply with such provisions. Contractor's failure to comply with the obligations in this subsection shall constitute a material breach of this Contract.
- C. Contractor does not as of the date of award of the Contract and will not during the term of this Contract, in any of its operations in San Francisco or where the work is being performed for the TJPA or elsewhere within the United States, discriminate in the provision of bereavement leave, family medical leave, health benefits, membership or membership discounts, moving expenses, pension and retirement benefits or travel benefits, as well as any benefits other than the benefits specified above, between employees with domestic partners and employees with spouses, and/or between the domestic partners and spouses of such employees, where the domestic partnership has been registered with a governmental entity pursuant to state or local law authorizing such registration, subject to the conditions set forth in section 12B.2(b) of the San Francisco Administrative Code.
- D. The provisions of Chapters 12B and 12C of the San Francisco Administrative Code are incorporated in this section by reference and made a part of this Contract as though fully set forth herein. Contractor shall comply fully with and be bound by all of the provisions that apply to this Contract under said chapters of the Administrative Code, including but not limited to the remedies provided in said chapters. Without limiting the foregoing, Contractor understands that pursuant to Section 12B.2(h) of the San Francisco Administrative Code, a penalty \$50 for each person for each calendar day during which such person was discriminated against in violation of the provisions of this Contract may be assessed against Contractor and deducted from any payments due Contractor.

1.2 APPRENTICES

- A. Attention is directed to the provisions in Sections 1777.5 and 1777.6 of the California Labor Code concerning the employment of apprentices by contractors or Subcontractors.
- B. Section 1777.5 requires in part that Contractor or its Subcontractors shall apply for a certificate approving Contractor or its Subcontractors to employ and to train apprentices, and shall contribute to a fund to administer and conduct the apprenticeship program.

Contractor shall be responsible for securing compliance with Labor Code Section 1777.5 for all apprenticeable occupations.
- C. Section 1777.5 shall not apply to contracts of general contractors involving less than \$30,000 and fewer than 20 working days or to contracts of specialty contractors not bidding for work through a general or prime contractor, involving less than \$2,000 or fewer than 5 working days.
- D. Contractor, if not signatory to a recognized apprenticeship training program under chapter 4 of the California Labor Code, shall provide with all progress payment requests starting with the second such progress payment request satisfactory evidence to the TJPA that it has contributed to the

appropriate apprenticeship fund(s), and Contractor shall require its contractors and Subcontractors who are not such signatories to provide such evidence to the TJPA as a condition precedent for qualifying for payment from the TJPA. The TJPA reserves the right to demand such evidence upon request.

- E. In accordance with California Public Contract Code section 6109, Contractor or its Subcontractors who are ineligible to bid or work on, or be awarded, a public works project pursuant to California Labor Code Section 1777.1 or 1777.7 are prohibited from performing Work on this Contract.
 - 1. A contract on this 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 contract, and Contractor shall return any public money that may have been paid to a debarred Subcontractor by Contractor on this Project to the TJPA.
 - 3. Contractor shall be responsible for the payment of wages to workers of a debarred Subcontractor who has been allowed to work on this Project.

1.3 STATE WAGE DETERMINATIONS

- A. As set forth in Resolution No. 1026-96 of the San Francisco Board of Supervisors, Contractor shall pay not less than the prevailing rate of per diem wages as determined by the Director of the California Department of Industrial Relations pursuant to section 1770 et seq. of the California Labor Code. Copies of such prevailing rate of per diem wages are on file at the TJPA, 201 Mission Street, Suite 2100, San Francisco, CA 94105; copies shall be made available to any interested party on request.
 - 1. Payments to a craft or classification not shown on the prevailing rate determinations shall comply with the rate of the craft or classification most closely related to it. Contact the California Division of Labor Statistics and Research, Prevailing Wage Unit at telephone (415) 703-4774 for job classifications not listed in the General Prevailing Wage Determinations of the Director of Industrial Relations.
 - 2. Contractor shall post a copy of such determination at the job site.
- B. Contractor shall, as a penalty to the TJPA, forfeit \$50 for each calendar day, or portion thereof, for each worker paid less than the prevailing rates as determined by the Director of Industrial Relations for such work or craft in which worker is employed for any public work done under the Contract by Contractor or any of its Subcontractors.
- C. Progress Payments: No progress payments will be processed until Contractor has submitted to the TJPA certified payrolls pursuant to section 1770 et seq. of the California Labor Code for the periods involved for all employees including those of subcontractors, of all tiers, for all labor and materials furnished and incorporated into the Work.
 - 1. Submit electronic copies of the certified payrolls to the TJPA each month as specified in Division 1; transmission of certified payrolls shall be made via Elation Systems or other information technology designated by the TJPA.
 - 2. Such certified payrolls shall be made available at Contractor's job site office and at the TJPA Representative's office.
 - 3. The TJPA will not be liable for Contractor's failure to make a timely or accurate submittal of the certified payroll.

1.4 BUSINESS TAX CERTIFICATE

General: San Francisco Administrative Code section 6.21.A.8 requires that, in order to receive an award, a contractor or vendor must have a current Business Tax Certificate. Contractor shall list current Business Tax Registration Numbers on the Proposal forms. For further information and certificate application forms, contact the tax collector's office at the following address:

Office of Treasurer and Tax Collector
City Hall – Room 140
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4638
(415) 554-4400

1.5 TROPICAL HARDWOOD AND VIRGIN REDWOOD PRODUCTS BAN

- A. Chapter 12I of the San Francisco Administrative Code prohibits the use, requisition, or purchase, directly or indirectly, by any City or County department or agency, of any tropical hardwoods or tropical hardwood products.
1. “Tropical Hardwood” shall mean any and all hardwood, scientifically classed as angiosperm that grows in any Tropical Moist Forest.
 2. “Tropical Wood Products” shall refer to any wood products, wholesale or retail, in any form, including but not limited to veneer, plywood, furniture, cabinets, paneling, moldings, door skins, joinery, or sawn wood, which are composed of tropical hardwood.
 3. “Virgin Redwood” shall mean wood from the species scientifically classed as “sequoia sempervirens” including but limited to wood that is graded “clear heart” or “clear all heart” (or any successor or equivalent terms) under lumber industry grading standards, unless such wood is either
 - a. reclaimed or recycled; or
 - b. certified as sustainable harvested redwood by a certification organization that bases its standards on the principles and criteria of the United States Forestry Stewardship Council.
 4. “Virgin Redwood Wood Products” shall refer to any wood products that are composed, in whole or in part, of virgin redwood.

1.6 MACBRIDE PRINCIPLES - NORTHERN IRELAND

The TJPA urges companies doing business in Northern Ireland to move towards resolving employment inequalities, and encourages such companies to abide by the MacBride Principles. The TJPA urges San Francisco companies to do business with corporations that abide by the MacBride Principles.

1.7 RETAINAGE FROM PROGRESS PAYMENTS

- A. Pursuant to the provisions of Public Contract Code section 22300, substitution of securities for any moneys withheld by the TJPA to ensure performance under the Contract is permitted under the following conditions:
1. At the request and expense of Contractor, securities listed in section 16430 of the California Government Code, bank or savings and loan certificate of deposits, interest-bearing, demand deposit accounts, standby letter of credit, or any other security mutually agreed to by the TJPA and Contractor which are equivalent to the amount withheld under the retention provisions of the Contract Documents shall be deposited with the TJPA Chief Financial Officer (CFO) who shall then pay such moneys to Contractor. Upon satisfactory completion of the Contract, the securities shall be returned to Contractor.
 2. Contractor shall be the beneficial owner of the securities substituted for moneys withheld and shall receive any interest thereon.
 3. Contractor shall enter into escrow agreement with the TJPA according to Section 00 06 30 “Escrow Agreement for Security Deposits in Lieu of Retention,” as authorized under section 22300 of the California Public Contract Code, specifying the amount of securities to be deposited, terms and conditions of conversion to cash in case of default of Contractor, and termination of escrow upon completion of the Contract.

1.8 ASSIGNMENT TO AWARDING BODY

In accordance with Section 7103 of the California Public Contract Code, Contractor and its Subcontractors shall conform to the following requirement:

1. In entering into the Contract or subcontract to supply goods, services, or materials pursuant to the Contract, Contractor or its Subcontractors offer and agree to assign to the TJPA all rights, title, and interest in and to all causes of action it 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 Contract or subcontract.
2. The assignment shall be made and become effective at the time the TJPA tenders final payment to Contractor, without further acknowledgment by the parties.
3. Contractor shall include the provisions of this paragraph 1.8 in its subcontracts and purchase agreements to supply goods, services, or materials pursuant to the Contract.

1.9 EIC FORMS

- A. Contractor shall provide Earned Income Credit (EIC) forms to each Eligible Employee at each of the following times:
 1. Within 30 days following the date on which this Agreement becomes effective (unless Contractor has already provided such EIC forms at least once during the calendar year in which such effective date falls),
 2. Promptly after any Eligible Employee is hired by Contractor, and
 3. Annually between January 1 and January 31 of each calendar year during the Contract Time.
- B. Failure to comply with any requirement contained in paragraph 1.9A above shall constitute a material breach by Contractor of the terms of this Agreement.

If within 30 days after Contractor receives written notice of such a breach, Contractor fails to cure such breach or, if such breach cannot reasonably be cured within such period of 30 days, Contractor fails to commence efforts to cure within such period or thereafter fails to diligently pursue such cure to completion, the TJPA may pursue any rights or remedies available under this Agreement or under applicable law.
- C. Each subcontract entered into by Contractor shall require the Subcontractor to comply, as to the Subcontractor's Eligible Employees, with each of the terms of this paragraph 1.9.
- D. Capitalized terms used in this paragraph 1.9 and not defined in the General Conditions (Section 00 07 00) shall have the meanings assigned to such terms in Section 120 of the San Francisco Administrative Code.

1.10 FALSE CLAIMS

- A. Pursuant to San Francisco Administrative Code Section 6.22M, Contractor, its Subcontractor(s), or its Supplier(s) who violate a provision San Francisco Administrative Code chapter 6 or who submits false claims may be declared irresponsible bidder and debared according to the procedures set forth in San Francisco Administrative Code Section 6.80 et seq.
- B. Additionally, Contractor, its Subcontractor or Supplier who submits a false claim may be subject to monetary penalties, investigation, and prosecution as set forth in said Section 6.80 et seq.
- C. Contractor shall incorporate into each subcontract and purchase order for the Work a clause similar to this paragraph 1.10.

1.11 FUNDS FOR POLITICAL CAMPAIGNS

No funds appropriated by the TJPA for any contract, grant agreement, or loan agreement may be expended for participating in, supporting, or attempting to influence a political campaign for any candidate or measure. Recipients of TJPA funds will cooperate in audits conducted by the CFO to verify that no TJPA funds were used for political purposes.

1.12 TRUCKING PREVAILING WAGES & OTHER TRUCKING REQUIREMENTS

In conformance with San Francisco Administrative Code Section 6.22(E), the Contractor and its Subcontractors are advised that

- A. All on-hauling and off-hauling of materials for this Project are covered by the prevailing wage requirements.
- B. The prevailing wage and certified payroll reporting requirements cover owners, partners, and owner-operators.
- C. All employees and owner-operators who perform trucking on this Project shall be paid not less than the prevailing wage rate for the classification of Teamsters (in Northern California) for the type of equipment operated.
- D. Owner-operators may be required to provide vehicle registration and DMV proof of insurance information for the equipment operated.
- E. Material suppliers that meet the following criteria are exempt from this Specification requirement: (1) the material supplier must be selling material/supplies to the general public, (2) the plant or factory must not be established for the particular project, (3) the plant or factory is not located at the site of the work, and (4) the material is not immediately incorporated into the public work. (O.G. Sansone v Department of Transportation (1976) 55 Cal. App. 3d 434).

1.13 MINIMUM COMPENSATION ORDINANCE.

Contractor agrees to comply fully with and be bound by all of the provisions of the Minimum Compensation Ordinance (MCO) attached hereto as Appendix A (Section 00 08 22/APA).

1.14 HEALTH CARE ACCOUNTABILITY ORDINANCE.

Unless exempt, Contractor agrees to comply fully with and be bound by all of the provisions of the Health Care Accountability Ordinance (HCAO) attached hereto as Appendix B (Section 00 08 22/APB).

END OF SECTION 00 08 22

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 00 08 22/APA– MINIMUM COMPENSATION ORDINANCE

TEXT OF MINIMUM COMPENSATION ORDINANCE (MCO)

Requiring Minimum Compensation for Employees

Contractor agrees to comply fully with and be bound by all of the provisions of the Minimum Compensation Ordinance (MCO), as set forth in San Francisco Administrative Code Chapter 12P (Chapter 12P), including the remedies provided, and implementing guidelines and rules. The provisions of Chapter 12P are incorporated herein by reference and made a part of this Agreement as though fully set forth. The text of the MCO is available on the web at www.sfgov.org/site/olse_index.asp?id=27459. Capitalized terms used in this Section and not defined in this Agreement shall have the meanings assigned to such terms in Chapter 12P. Consistent with the requirements of the MCO, Contractor agrees to all of the following:

- (a) For each hour worked by a Covered Employee during a Pay Period on work funded under the TJPA contract during the term of this Agreement, Contractor shall provide to the Covered Employee no less than the Minimum Compensation, which includes a minimum hourly wage and compensated and uncompensated time off consistent with the requirements of the MCO. Note that the gross hourly compensation for covered employees is \$11.54 as of January 1, 2010. If a Covered Employee of a Nonprofit Corporation works in San Francisco, then that employee is covered by San Francisco's Minimum Wage Ordinance, which is Chapter 12R of the San Francisco Administrative Code. As of January 1, 2009, Chapter 12R's minimum wage is \$9.79 per hour.
- (b) Contractor shall not discharge, reduce in compensation, or otherwise discriminate against any employee for complaining to the TJPA with regard to Contractor's compliance or anticipated compliance with the requirements of the MCO for opposing any practice proscribed by the MCO, for participating in proceedings related to the MCO, or for seeking to assert or enforce any rights under the MCO by any lawful means.
- (c) Contractor understands and agrees that the failure to comply with the requirements of the MCO shall constitute a material breach by Contractor of the terms of this Agreement. The TJPA shall determine whether such a breach has occurred.
- (d) If, within thirty (30) days after receiving written notice of a breach of this Agreement for violating the MCO, Contractor fails to cure such breach or, if such breach cannot reasonably be cured within such period of thirty (30) days, Contractor fails to commence efforts to cure within such period, or thereafter fails diligently to pursue such cure to completion, the TJPA shall have the right to pursue the following rights or remedies and any rights or remedies available under applicable law:
 - (1) The right to charge Contractor an amount equal to the difference between the Minimum Compensation and any compensation actually provided to a Covered Employee, together with interest on such amount from the date payment was due at the maximum rate then permitted by law;
 - (2) The right to set off all or any portion of the amount described in Subsection (d)(1) of this Section against amounts due to Contractor under this Agreement;
 - (3) The right to terminate this Agreement in whole or in part;
 - (4) In the event of a breach by Contractor of the covenant referred to in Subsection (b) of this Section, the right to seek reinstatement of the employee or to obtain other appropriate equitable relief; and
 - (5) The right to bar Contractor from entering into future contracts with the TJPA for three (3) years.

Each of the rights provided in this Subsection (d) shall be exercisable individually or in combination with any other rights or remedies available to the TJPA. Any amounts realized by the TJPA pursuant to this subsection shall be paid to the Covered Employee who failed to receive the required Minimum Compensation.

- (e) Contractor represents and warrants that it is not an entity that was set up, or is being used, for the purpose of evading the intent of the MCO.
- (f) Contractor shall keep itself informed of the current requirements of the MCO, including increases to the hourly gross compensation due Covered Employees under the MCO, and shall provide prompt written notice to all Covered Employees of any increases in compensation, as well as any written communications received by the Contractor from the TJPA, which communications are marked to indicate that they are to be distributed to Covered Employees.
- (g) Contractor shall provide reports to the TJPA in accordance with any reporting standards promulgated by the TJPA under the MCO, including reports on subcontractors.
- (h) The Contractor shall provide the TJPA with access to pertinent records after receiving a written request from the TJPA to do so and being provided at least five (5) business days to respond.
- (i) The TJPA may conduct random audits of Contractor. Random audits shall be (i) noticed in advance in writing; (ii) limited to ascertaining whether Covered Employees are paid at least the minimum compensation required by the MCO; (iii) accomplished through an examination of pertinent records at a mutually agreed upon time and location within ten (10) days of the written notice; and (iv) limited to one audit of Contractor every two years for the duration of this Agreement. Nothing in this Agreement is intended to preclude the TJPA from investigating any report of an alleged violation of the MCO.
- (j) Any subcontract entered into by Contractor shall require the subcontractor to comply with the requirements of the MCO and shall contain contractual obligations substantially the same as those set forth in this Section. A subcontract means an agreement between the Contractor and a third party which requires the third party to perform all or a portion of the services covered by this Agreement. Contractor shall notify the Department of Administrative Services when it enters into such a subcontract and shall certify to the TJPA that it has notified the subcontractor of the obligations under the MCO and has imposed the requirements of the MCO on the subcontractor through the provisions of the subcontract. It is Contractor's obligation to ensure that any subcontractors of any tier under this Agreement comply with the requirements of the MCO. If any subcontractor under this Agreement fails to comply, the TJPA may pursue any of the remedies set forth in this Section against Contractor.
- (k) Each Covered Employee is a third-party beneficiary with respect to the requirements of subsections (a) and (b) of this Section, and may pursue the following remedies in the event of a breach by Contractor of subsections (a) and (b), but only after the Covered Employee has provided the notice, participated in the administrative review hearing, and waited the 21-day period required by the MCO. Contractor understands and agrees that if the Covered Employee prevails in such action, the Covered Employee may be awarded: (1) an amount equal to the difference between the Minimum Compensation and any compensation actually provided to the Covered Employee, together with interest on such amount from the date payment was due at the maximum rate then permitted by law; (2) in the event of a breach by Contractor of subsections (a) or (b), the right to seek reinstatement or to obtain other appropriate equitable relief; and (3) in the event that the Covered Employee is the prevailing party in any legal action or proceeding against Contractor arising from this Agreement, the right to obtain all costs and expenses, including reasonable attorney's fees and disbursements, incurred by the Covered Employee. Contractor also understands that the MCO provides that if Contractor prevails in any such action, Contractor may be awarded costs and expenses, including reasonable attorney's fees and disbursements, from the Covered

Employee if the court determines that the Covered Employee’s action was frivolous, vexatious or otherwise an act of bad faith.

- (l) If Contractor is exempt from the MCO when this Agreement is executed because the cumulative amount of agreements with this department for the fiscal year is less than \$25,000 (\$50,000 for nonprofits), but Contractor later enters into an agreement or agreements that cause contractor to exceed that amount in a fiscal year, Contractor shall thereafter be required to comply with the MCO under this Agreement. This obligation arises on the effective date of the agreement that causes the cumulative amount of agreements between the Contractor and this department to exceed \$25,000 (\$50,000 for nonprofits) in the fiscal year.

END OF SECTION 00 08 22/APA

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 00 08 22/APB – HEALTH CARE ACCOUNTABILITY ORDINANCE

Requiring Health Benefits for Covered Employees

Unless exempt, Contractor agrees to comply fully with and be bound by all of the provisions of the Health Care Accountability Ordinance (HCAO), as set forth in San Francisco Administrative Code Chapter 12Q, including the remedies provided, and implementing regulations, as the same may be amended from time to time. The provisions of Chapter 12Q are incorporated herein by reference and made a part of this Agreement as though fully set forth. The text of the HCAO is available on the web at www.sfgov.org/site/olse_index.asp. Capitalized terms used in this Section and not defined in this Agreement shall have the meanings assigned to such terms in Chapter 12Q.

- (a) For each Covered Employee, Contractor shall provide the appropriate health benefit set forth in Section 12Q.3 of the HCAO. If Contractor chooses to offer the health plan option, such health plan shall meet the minimum standards set forth by the San Francisco Health Commission..
- (b) Notwithstanding the above, if the Contractor is a small business as defined in Section 12Q.3(e) of the HCAO, it shall have no obligation to comply with part (a) above.
- (c) Contractor's failure to comply with the HCAO shall constitute a material breach of this Agreement. The TJPA shall notify Contractor if such a breach has occurred. If, within thirty (30) days after receiving TJPA's written notice of a breach of this Agreement for violating the HCAO, Contractor fails to cure such breach or, if such breach cannot reasonably be cured within such period of thirty (30) days, Contractor fails to commence efforts to cure within such period, or thereafter fails diligently to pursue such cure to completion, the TJPA shall have the right to pursue the remedies set forth in 12Q.5(f)(1-6). Each of these remedies shall be exercisable individually or in combination with any other rights or remedies available to the TJPA.
- (d) Any Subcontract entered into by Contractor shall require the Subcontractor to comply with the requirements of the HCAO and shall contain contractual obligations substantially the same as those set forth in this Section. Contractor shall notify the TJPA when it enters into such a Subcontract and shall certify to the TJPA that it has notified the Subcontractor of the obligations under the HCAO and has imposed the requirements of the HCAO on Subcontractor through the Subcontract. Each Contractor shall be responsible for its Subcontractors' compliance with this Chapter. If a Subcontractor fails to comply, the TJPA may pursue the remedies set forth in this Section against Contractor based on the Subcontractor's failure to comply, provided that the TJPA has first provided Contractor with notice and an opportunity to obtain a cure of the violation.
- (e) Contractor shall not discharge, reduce in compensation, or otherwise discriminate against any employee for notifying the TJPA with regard to Contractor's compliance or anticipated compliance with the requirements of the HCAO, for opposing any practice proscribed by the HCAO, for participating in proceedings related to the HCAO, or for seeking to assert or enforce any rights under the HCAO by any lawful means.
- (f) Contractor represents and warrants that it is not an entity that was set up, or is being used, for the purpose of evading the intent of the HCAO.
- (g) The Contractor shall maintain employee and payroll records in compliance with the California Labor Code and Industrial Welfare Commission orders, including the number of hours each employee has worked on the TJPA agreement.
- (h) Contractor shall keep itself informed of the current requirements of the HCAO.
- (i) Contractor shall provide reports to the TJPA in accordance with any reporting standards promulgated by the TJPA under the HCAO, including reports on Subcontractors and Subtenants, as applicable.

- (j) Contractor shall provide the TJPA with access to records pertaining to compliance with HCAO after receiving a written request from the TJPA to do so and being provided at least five (5) business days to respond.
- (k) The Contractor shall allow the TJPA to inspect the Contractor's job sites and have access to the Contractor's employees in order to monitor and determine compliance with HCAO.
- (l) The TJPA may conduct random audits of Contractor to ascertain its compliance with HCAO. Contractor agrees to cooperate with TJPA when it conducts such audits.
- (m) If Contractor is exempt from the HCAO when this Agreement is executed because its amount is less than \$25,000 (\$50,000 for nonprofits), but Contractor later enters into an agreement or agreements that cause Contractor's aggregate amount of all agreements with the TJPA to reach \$75,000, all the agreements shall be thereafter subject to the HCAO. This obligation arises on the effective date of the agreement that causes the cumulative amount of agreements between Contractor and the TJPA to be equal to or greater than \$75,000 in the fiscal year.

END OF SECTION 00 08 22/APB

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 01 10 10 – SUMMARY OF WORK

PART 1 - GENERAL

1.1 SUMMARY

- A. The Project shall consist of utility relocation, demolition of the existing structure and ramps, and construction of the new Transbay Transit Center Building, the Bus Ramps connecting the Transit Center Building to the Bus Storage Facilities and to the West Approach to the Oakland–San Francisco Bay Bridge, and the interconnection and coordination with the Transbay Tower and the Downtown Rail Extension (DTX).

The new Transit Center Building and Bus Ramps will have six levels: (1) a Train Station Passenger Platform Level (Level B1), (2) a Lower Concourse Train Mezzanine Level (Level B2), (3) a Ground Level, (4) a Second Level Concourse, (5) an Elevated Bus Level, and (6) a Park Level. The Train Station Passenger Platform Level (Level (B1)) and the Lower Concourse Train Mezzanine Level (Level (B2)) are the below grade levels of the Transit Center Building and are together sometimes referred to as the “Train Box.”

1.2 PROJECT DESCRIPTION

- A. The Project involves the construction of the Transbay Transit Center (including the Train Box), in two phases, as more fully described in the CM/GC Contract 08-04-CMGC-000, Section 00 05 20 Agreement.
- B. The Project generally covers over four blocks (from Beale to Second streets) between Minna and Natoma streets in the City and County of San Francisco, as more fully described in the CM/GC Contract 08-04-CMGC-000.
- C. The scope of work for the Trade Subcontract is fully described in the “Trade Subcontractor Bid Package Manual and Forms,” Exhibit A, “Scope of the Package and Bid Item Information.” Exhibit A to the Trade Subcontractor Bid Package Manual and Forms is incorporated here by reference as if set forth here in full.

END OF SECTION 01 10 10

SPECIFICATION ISSUE LOG

Revision	Date
0	July 30, 2010
1	October 6, 2010

SECTION 01 10 20 – UNIT PRICES AND ALLOWANCES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section specifies:
 - a. Unit Prices and procedure for measurement.
 - b. Allowances and procedures for doing allowance work.

1.2 PROJECT CONDITIONS

- A. Unit Prices:
 - 1. The TJPA Representative 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 TJPA Representative of the Work satisfactorily completed within the prescribed limits.
 - 3. Measurement and computations shall be made by methods as the TJPA 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. Allowances:
 - 1. Allowances shall be done only when and as directed in writing by the TJPA Representative.
 - 2. Allowances shall cover the actual direct cost to Contractor of labor, materials and equipment delivered and installed at the Site, and the required taxes and fees less applicable trade discounts.
 - 3. Contractor's costs for required on-site and off-site storage and security, loading and unloading, handling at the Site, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in Contractor's Total Bid Price and not in the allowances unless indicated otherwise.
 - 4. The amount given on Schedule of Bid Prices under each allowance item shall be the amount of funds set aside for each allowance. Said amounts shall be included in Contractor's Total Bid Price on the Schedule of Bid Prices.
 - 5. Whenever costs are more than or less than allowances, the Contract cost will be adjusted by Change Order based on the difference between (a) actual costs and the allowances, and (b) changes in Contractor's costs. Contractor shall identify allowance item under which Work is done on Contractor's progress schedule and application for payment.
 - 6. Contractor's markup for overhead and profit on allowance work shall be as specified in Agreement No. 08-04-CMGC-000, Article 5.01, Paragraph B.2.

PART 2 - SCHEDULE OF UNIT PRICES AND ALLOWANCES

2.1 UNIT PRICES: See appendixes.

2.2 ALLOWANCES: See appendixes.

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 10 20

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 01 10 20/APA – SCHEDULE OF UNIT PRICES AND ALLOWANCES
FOR BUTTRESSES, SHORING AND EXCAVATION WORK (TG03)

A.1 SCHEDULE OF UNIT PRICES

A.1.1 Unit Price 1.1: Shoring Wall by Cement Deep Soil Mixing (CDSM) Method

1. Description: Construct CDSM wall consisting of a homogeneous mixture of grout and in situ soils with steel soldier piles at spacing shown, built to the lines, grades, and cross-section indication on the Drawings and as specified in Section 31 56 13 – Shoring Wall by Cement Deep Soil Mixing (CDSM) Method, with a minimum cover of 4 inches to the steel soldier piles unless otherwise indicated on the Drawings.
2. Unit of measurement:
 - a. Per linear foot of wall depth, per linear foot of wall on plan, with width of wall as specified, and bottom of wall determined by the elevation of competent soil.

A.1.2. Unit Price 1.2: Buttress Drilled Shafts

1. Description: The buttress is a group of concrete drilled shafts constructed as a series of primary and secondary shafts, at diameters as shown and as specified, which overlap and are arranged to act as a unit to resist lateral forces induced by existing adjacent buildings as specified in Section 31 63 29 – Drilled Concrete Piers and Shafts. Some of the secondary shafts are required to have reinforcing steel configured as shown in drawings GT-2201 and GT-5202. The depth of all shafts is as shown or as approved.

Cost of drilled shaft includes excavation, concrete placement, reinforcing steel, and other requirements as shown and as specified.

2. Unit of measurement:
 - a. Per linear foot of shaft depth of primary drilled shaft.
 - b. Per linear foot of shaft depth of secondary drilled shaft with reinforcing steel.
 - c. Per linear foot of shaft depth of secondary drilled shaft without reinforcing steel.

A.1.3. Unit Price 1.3: Class 1 Contaminated Soil and Debris Material Off-Haul and Disposal

1. Description: Removal, off-haul and disposal of Class 1 contaminated soil and debris, including contaminated soil, treated piles, coal tar, and any other material which requires management, handling transport, treatment, or storage of disposal, as specified in Section 01 13 50 – Hazardous Materials Procedures and Section 01 74 00 – Construction and Demolition Debris Recovery Plan.
2. Unit of measurement: Ton of Class 1 contaminated soil and debris.

A.1.4. Unit Price 1.4: Class 2 Contaminated Soil and Debris Material Off-Haul and Disposal

1. Description: Removal, off-haul and disposal of Class 2 contaminated soil and debris, including contaminated soil, treated piles, coal tar, and any other material which requires management, handling transport, treatment, or storage of disposal, as specified in Section 01 13 50, Hazardous Materials Procedures and Section 01 74 00, Construction and Demolition Debris Recovery Plan.
2. Unit of measurement: Ton of Class 2 contaminated soil and debris.

A.1.5 Unit Price 1.5: Added or Deducted Excavation Volume.

1. Description: Excavation to area as shown and as specified shall be provided as a lump sum cost item.

Unit price for excavation in addition to, or reduction from, the volume identified in the bid, including variation of native and existing materials in ground, off-haul and disposal, excluding Class 1 and 2 contaminated soil and debris described in paragraphs A.1.4 and A.1.5.

2. Unit of measurement: Per cubic yard of excavation volume-.

A.1.6 Unit Price 1.6: Added or Deducted Micropiles

1. Description: Supply and Installation of drilled micropiles, as shown and as specified in 31 63 33, including necessary testing and disposal of drill cuttings, for the total number of piles as specified on the contract drawings.

Unit price shall be provided for the supply, installation, and testing of micropiles in variance to the total micropile count specified on the contract drawings.

2. Unit of measurement:
 - a. Per number of 90-foot-deep micropiles.
 - b. Per number of 110-foot-deep micropiles.

A.1.7 Unit Price 1.7: Maintenance of Dewatering System

1. Description: Maintain and operate Dewatering System as shown and as specified in 31 23 19, including full-time continuous supervision and timely repair to the system, to ensure proper and discontinuous dewatering operation at the site.

Unit price shall be provided for the maintenance and operation of the Dewatering System. Design, furnish, install, and transfer of ownership shall be included in the lump sum cost of the Work, and water discharge cost shall be identified in Allowance 1.2 defined in A.2.2.

2. Unit of measurement: Per month of operation and maintenance.

A.2 SCHEDULE OF ALLOWANCES

A.2.1 Allowance 1.1: Muni OCS Work to Support Buttresses, Shoring and Excavation Work

1. Description: Perform relocation, realignment, disconnection and reconnection of Muni overhead catenary system (OCS) as needed and as required to facilitate buttresses, shoring and excavation work, including the temporary bridges at First and Beale Streets, as stipulated and as specified. Work includes engineering, coordination with City agencies, supply of materials, and installation of OCS poles and lines to ensure that the operation of Muni vehicles through the work site is as continuous as possible. All work must be in compliance to SFMTA standards and requirements.
2. Allowance: Provide allowance of \$500,000 for the performance of OCS work to facilitate buttresses, shoring and excavation work.

A.2.2 Allowance 1.2: Water Discharge Fee for Dewatering Operation

1. Description: Pay for wastewater discharge fee to the City and County of San Francisco Public Utilities Commission for dewatering activities as stipulated in 31 23 19.
2. Allowance: Provide allowance of \$2,000,000.00 for the complete duration of discharge.

END OF SECTION 01 10 20/APA

SPECIFICATION ISSUE LOG

Revision	Date
0	July 30, 2010
1	August 25, 2010
2	September 23, 2010

SECTION 01 10 20/APB – SCHEDULE OF UNIT PRICES AND ALLOWANCES
FOR RELOCATION OF UTILITIES (TG04.5.1)

B.1 SCHEDULE OF UNIT PRICES

B.1.1 Unit Price 2.1: Class 1 Contaminated Soil and Debris Material Off-Haul and Disposal

1. Description: Removal, off-haul and disposal of Class 1 contaminated soil and debris, including contaminated soil, treated piles, coal tar, and any other material which requires management, handling transport, treatment, or storage of disposal, as specified in Section 01 13 50 – Hazardous Materials Procedures and Section 01 74 00 – Construction and Demolition Debris Recovery Plan.
2. Unit of measurement: Ton of Class 1 contaminated soil and debris.

B.1.2 Unit Price 2.2: Class 2 Contaminated Soil and Debris Material Off-Haul and Disposal

1. Description: Removal, off-haul and disposal of Class 2 contaminated soil and debris, including contaminated soil, treated piles, coal tar, and any other material which requires management, handling transport, treatment, or storage of disposal, as specified in Section 01 13 50, Hazardous Materials Procedures and Section 01 74 00, Construction and Demolition Debris Recovery Plan.
2. Unit of measurement: Tons of Class 2 contaminated soil and debris.

B.2 SCHEDULE OF ALLOWANCES

B.2.1 Allowance 2.1: Traffic Control by Uniformed Off-Duty San Francisco Police Officers

1. Description: Pay for uniformed off-duty San Francisco police officers to perform traffic control duty relating to this Work as stipulated in 01 15 70, Traffic Routing Work. The cost shall include cost for actual time spent on controlling traffic in accordance with this Specification, plus 5 percent for administrative overhead.
2. Allowance: Provide allowance of \$100,000 for the complete duration of this Work.

END OF SECTION 01 10 20/APB

SPECIFICATION ISSUE LOG

Revision	Date
0	August 6, 2010
1	September 3, 2010

SECTION 01 10 20/APC – SCHEDULE OF UNIT PRICES AND ALLOWANCES
FOR RELOCATION OF UTILITIES (TG04.3)

C.1 SCHEDULE OF UNIT PRICES

C.1.1 Unit Price 2.1: Class 1 Contaminated Soil and Debris Material Off-Haul and Disposal

1. Description: Removal, off-haul and disposal of Class 1 contaminated soil and debris, including contaminated soil, treated piles, coal tar, and any other material which requires management, handling transport, treatment, or storage of disposal, as specified in Section 01 13 50, Hazardous Materials Procedures, and Section 01 74 00, Construction and Demolition Debris Recovery Plan.
2. Unit of measurement: Ton of Class 1 contaminated soil and debris.

C.1.2 Unit Price 2.2: Class 2 Contaminated Soil and Debris Material Off-Haul and Disposal

1. Description: Removal, off-haul and disposal of Class 2 contaminated soil and debris, including contaminated soil, treated piles, coal tar, and any other material which requires management, handling transport, treatment, or storage of disposal, as specified in Section 01 13 50, Hazardous Materials Procedures, and Section 01 74 00, Construction and Demolition Debris Recovery Plan.
2. Unit of measurement: Tons of Class 2 contaminated soil and debris.

C.2 SCHEDULE OF ALLOWANCES

C.2.1 Allowance 2.1: Traffic Control by Uniformed Off-Duty San Francisco Police Officers

1. Description: Pay for uniformed off-duty San Francisco police officers to perform traffic control duty relating to this Work as stipulated in 01 15 70, Traffic Routing Work. The cost shall include cost for actual time spent on controlling traffic in accordance with this Specification, plus 5 percent for administrative overhead.
2. Allowance: Provide allowance of \$100,000 for the complete duration of this Work.

END OF SECTION 01 10 20/APC

SPECIFICATION ISSUE LOG

Revision	Date
0	October 1, 2010

SECTION 01 10 20/APD – SCHEDULE OF UNIT PRICES AND ALLOWANCES
FOR RELOCATION OF UTILITIES (TG04.4)

D.1 SCHEDULE OF UNIT PRICES

D.1.1. Unit Price 2.1: Class 1 Contaminated Soil and Debris Material Off-Haul and Disposal

1. Description: Removal, off-haul and disposal of Class 1 contaminated soil and debris, including contaminated soil, treated piles, coal tar, and any other material which requires management, handling transport, treatment, or storage of disposal, as specified in Section 01 13 50, Hazardous Materials Procedures, and Section 01 74 00, Construction and Demolition Debris Recovery Plan.
2. Unit of measurement: Ton of Class 1 contaminated soil and debris.

D.1.2. Unit Price 2.2: Class 2 Contaminated Soil and Debris Material Off-Haul and Disposal

1. Description: Removal, off-haul and disposal of Class 2 contaminated soil and debris, including contaminated soil, treated piles, coal tar, and any other material which requires management, handling transport, treatment, or storage of disposal, as specified in Section 01 13 50, Hazardous Materials Procedures, and Section 01 74 00, Construction and Demolition Debris Recovery Plan.
2. Unit of measurement: Tons of Class 2 contaminated soil and debris.

D.2 SCHEDULE OF ALLOWANCES

D.2.1 Allowance 2.1: Traffic Control by Uniformed Off-Duty San Francisco Police Officers

1. Description: Pay for uniformed off-duty San Francisco police officers to perform traffic control duty relating to this Work as stipulated in 01 15 70, Traffic Routing Work. The cost shall include cost for actual time spent on controlling traffic in accordance with this Specification, plus 5 percent for administrative overhead.
2. Allowance: Provide allowance of \$100,000 for the complete duration of this Work.

END OF SECTION 01 10 20/APD

SPECIFICATION ISSUE LOG

Revision	Date
0	October 1, 2010

SECTION 01 10 20/APE – SCHEDULE OF UNIT PRICES AND ALLOWANCES
FOR RELOCATION OF UTILITIES (TG04.1)

E.1 SCHEDULE OF UNIT PRICES

E.1.1 Unit Price 2.1: Class 1 Contaminated Soil and Debris Material Off-Haul and Disposal

1. Description: Removal, off-haul and disposal of Class 1 contaminated soil and debris, including contaminated soil, treated piles, coal tar, and any other material which requires management, handling transport, treatment, or storage of disposal, as specified in Section 01 13 50, Hazardous Materials Procedures, and Section 01 74 00, Construction and Demolition Debris Recovery Plan.
2. Unit of measurement: Ton of Class 1 contaminated soil and debris.

E.1.2 Unit Price 2.2: Class 2 Contaminated Soil and Debris Material Off-Haul and Disposal

1. Description: Removal, off-haul and disposal of Class 2 contaminated soil and debris, including contaminated soil, treated piles, coal tar, and any other material which requires management, handling transport, treatment, or storage of disposal, as specified in Section 01 13 50, Hazardous Materials Procedures, and Section 01 74 00, Construction and Demolition Debris Recovery Plan.
2. Unit of measurement: Tons of Class 2 contaminated soil and debris.

E.2 SCHEDULE OF ALLOWANCES

E.2.1 Allowance 2.1: Traffic Control by Uniformed Off-Duty San Francisco Police Officers

1. Description: Pay for uniformed off-duty San Francisco police officers to perform traffic control duty relating to this Work as stipulated in 01 15 70, Traffic Routing Work. The cost shall include cost for actual time spent on controlling traffic in accordance with this Specification, plus 5 percent for administrative overhead.
2. Allowance: Provide allowance of \$100,000 for the complete duration of this Work.

E2.2 Allowance 2.2: Water System Shutdown, Connection, Testing and Reactivation by San Francisco Public Utilities Commission

1. Description: Pay for San Francisco Public Utilities Commission to shut down, connect, test, and reactivate water system as required. The cost shall include cost for actual time spent on shutdown, connection, testing, and reactivation of the water system plus 5 percent for administrative overhead.
2. Allowance: Provide allowance of \$60,000 for the complete duration of this Work.

END OF SECTION 01 10 20/APE

SPECIFICATION ISSUE LOG

Revision	Issued	Date
0	08-04-CMGC-000 Conformed Volume One	October 6, 2010
1	Field Order: 08-04-CMGC-000-WO-001	December 13, 2010

SECTION 01 10 20/APF – SCHEDULE OF UNIT PRICES AND ALLOWANCES
FOR RELOCATION OF UTILITIES (TG04.2)

F.1 SCHEDULE OF UNIT PRICES

F.1.1 Unit Price 2.1: Class 1 Contaminated Soil and Debris Material Off-Haul and Disposal

1. Description: Removal, off-haul and disposal of Class 1 contaminated soil and debris, including contaminated soil, treated piles, coal tar, and any other material which requires management, handling transport, treatment, or storage of disposal, as specified in Section 01 13 50, Hazardous Materials Procedures, and Section 01 74 00, Construction and Demolition Debris Recovery Plan.
2. Unit of measurement: Ton of Class 1 contaminated soil and debris.

F.1.2 Unit Price 2.2: Class 2 Contaminated Soil and Debris Material Off-Haul and Disposal

1. Description: Removal, off-haul and disposal of Class 2 contaminated soil and debris, including contaminated soil, treated piles, coal tar, and any other material which requires management, handling transport, treatment, or storage of disposal, as specified in Section 01 13 50, Hazardous Materials Procedures, and Section 01 74 00, Construction and Demolition Debris Recovery Plan.
2. Unit of measurement: Tons of Class 2 contaminated soil and debris.

F.2 SCHEDULE OF ALLOWANCES

F.2.1 Allowance 2.1: Traffic Control by Uniformed Off-Duty San Francisco Police Officers

1. Description: Pay for uniformed off-duty San Francisco police officers to perform traffic control duty relating to this Work as stipulated in 01 15 70, Traffic Routing Work. The cost shall include cost for actual time spent on controlling traffic in accordance with this Specification, plus 5 percent for administrative overhead.
2. Allowance: Provide allowance of \$100,000 for the complete duration of this Work.

F.2.2 Allowance 2.2: Final Wiring of Motorized Gate Valves by San Francisco Department of Technology

1. Description: Pay for San Francisco Department of Technology to pull wire from the controller to the actuator, make final connections, and set the limit switches on the actuator. The cost shall include cost for actual time spent on final wiring and testing of motorized gate valves and related equipment, plus 5 percent for administrative overhead.
2. Allowance: Provide allowance of \$100,000 for the complete duration of this Work.

F.2.3 Allowance 2.3: System Shutdown, Testing and Reactivation by San Francisco Public Utilities Commission

1. Description: Pay for San Francisco Public Utilities Commission to shut down, test, and reactivate the AWSS system as required. The cost shall include cost for actual time spent on shutdown, testing and reactivation of the AWSS system plus 5 percent for administrative overhead.
2. Allowance: Provide allowance of \$60,000 for the complete duration of this Work.

END OF SECTION 01 10 20/APF

SPECIFICATION ISSUE LOG

Revision	Issued	Date
0	08-04-CMGC-000 Conformed Volume One	October 6, 2010
1	Field Order: 08-04-CMGC-000-WO-001	December 13, 2010

SECTION 01 10 20/APG – SCHEDULE OF UNIT PRICES AND ALLOWANCES
FOR RELOCATION OF UTILITIES (TG04.6)

G.1 SCHEDULE OF UNIT PRICES

G.1.1. Unit Price 2.1: Class 1 Contaminated Soil and Debris Material Off-Haul and Disposal

1. Description: Removal, off-haul and disposal of Class 1 contaminated soil and debris, including contaminated soil, treated piles, coal tar, and any other material which requires management, handling transport, treatment, or storage of disposal, as specified in Section 01 13 50, Hazardous Materials Procedures, and Section 01 74 00, Construction and Demolition Debris Recovery Plan.
2. Unit of measurement: Ton of Class 1 contaminated soil and debris.

G.1.2. Unit Price 2.2: Class 2 Contaminated Soil and Debris Material Off-Haul and Disposal

1. Description: Removal, off-haul and disposal of Class 2 contaminated soil and debris, including contaminated soil, treated piles, coal tar, and any other material which requires management, handling transport, treatment, or storage of disposal, as specified in Section 01 13 50, Hazardous Materials Procedures, and Section 01 74 00, Construction and Demolition Debris Recovery Plan.
2. Unit of measurement: Tons of Class 2 contaminated soil and debris.

G.2 SCHEDULE OF ALLOWANCES

G2.1 Allowance 2.1: Traffic Control by Uniformed Off-Duty San Francisco Police Officers

1. Description: Pay for uniformed off-duty San Francisco police officers to perform traffic control duty relating to this Work as stipulated in 01 15 70, Traffic Routing Work. The cost shall include cost for actual time spent on controlling traffic in accordance with this Specification, plus 5 percent for administrative overhead.
2. Allowance: Provide allowance of \$100,000 for the complete duration of this Work.

END OF SECTION 01 10 20/APG

SPECIFICATION ISSUE LOG

Revision	Date
0	October 6, 2010

SECTION 01 10 26 – SCHEDULE OF VALUES

PART 1 - GENERAL

1.1 SUMMARY

- A. This section specifies requirements for submittal, coordination, review, and acceptance of the schedule of values for evaluating progress payment applications.

1.2 SUBMITTAL REQUIREMENTS

- A. Contractor shall submit within 30 days after the Notice to Proceed date for each Trade Bid Package a schedule of values covering the lump sum and allowance items.
- B. The schedule of values shall consist of a detailed cost breakdown of bids covering the lump sum Work and lump sum items of Work by classification as packages are bid, in accordance with the Construction Specifications Institute (CSI) MasterFormat (2004) Edition for Divisions 02 through 048, as represented by the Specifications table of contents. The schedule of values shall be consistent with the breakdown submitted at the time of Bid.
- C. The specific format and detail for estimating and evaluating progress payments shall be acceptable to the TJPA Representative, 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 Bidding Manual's Schedule G, for the Work activity.
 3. Breakdown shall be in sufficient detail to facilitate continued evaluation of progress payment applications.
 4. The total cost of each item of work, including all labor, material, equipment, fixed cost elements, incidental expenses, and overhead and profit, shall be shown.
 5. Overhead and profit shall not be listed as separate items.
 6. Separate line items shall be identified for temporary items, mobilization, final cleaning, operations and maintenance manuals, and startup, adjusting and testing.
- D. The schedule of values shall be generated using Contractor's payment application software and uploaded to Constructware.

1.3 REVIEW AND ACCEPTANCE

- A. The TJPA Representative will review and return Contractor's schedule of values with comments within 7 working days of its receipt. Contractor shall make corrections requested by the TJPA Representative and resubmit for approval within 7 working days.
- B. Final acceptance by TJPA 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 01 10 26

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 01 10 40 – COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

- A. This section specifies the provisions for coordinating the Work of the Contract and requesting clarifications and interpretations of the Contract Documents.

1.2 GENERAL COORDINATION

- A. Contractor shall be responsible for all construction coordination.
- B. Contractor shall coordinate scheduling, submittals, and the work of various sections to assure the efficient and orderly sequence of installation of interdependent construction elements.
- C. Contractor shall coordinate the requirements for operation and maintenance data with Suppliers and manufacturers of equipment and systems and the TJPA to ensure timely delivery of required submittals in accordance with Section 01 13 00, Submittals.

1.3 INTERNAL COORDINATION

- A. As part of coordination, Contractor shall anticipate the interrelationship of all components of the Work.
- B. Contractor shall resolve internal differences or disputes concerning coordination, interference, or extent of work between sections of the Specifications including assigned Contract work.

1.4 TRAFFIC COORDINATION

- A. Contractor shall coordinate Contractor's proposed traffic control plans, truck routes, and storage and parking plans with the Traffic Engineering Division of the San Francisco Department of Parking and Traffic, as specified in Section 01 15 70, Traffic Routing Work.

1.5 ADMINISTRATION

- A. Coordination Meetings: Contractor shall conduct project coordination meetings with Trade Subcontractors on a regular cycle needed to assure proper coordination. These meetings are in addition to meetings identified in Section 01 12 00, Project Meetings, or specific meetings held for other purposes. Contractor shall request representation at each meeting by every party currently involved in coordination or planning for the Work of the entire Project. Contractor shall keep the TJPA informed about coordination meetings. Contractor shall conduct meetings in a manner that will resolve coordination problems. Contractor shall record results and minutes of each meeting in the Program Management Information System (PMIS), identified in Section 01 31 25, Project Management Software, and distribute copies of meeting minutes to everyone in attendance and to the TJPA.

1.6 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 timely submit any Requests for Information (RFIs) to allow the TJPA sufficient time to respond to RFIs, as specified in Section 00 07 00, General Conditions, Article 6.02.B. However, Contractor is not precluded from submitting an RFI during the course of performing the Work.

- B. Form:
1. When an interpretation or clarification of the Contract Documents is required from the TJPA, Contractor shall make the request using the PMIS (Constructware), specified in Section 01 31 25, Project Management Software.
 - a. Fill in all applicable information in the Contractor RFI module of Constructware.
 - b. Create one RFI record for each request; limit the subject to one issue.
 - c. Attach supplementary information in electronic form where necessary.
 2. The TJPA will reply or give a summary of its reply via Constructware and include supplementary information where necessary.
 3. The completed Constructware record shall be the written record of each RFI.
 4. TJPA will provide Trade Subcontractors with the necessary training and access to Constructware.
- C. Uses:
1. RFIs shall be used for interpretation or clarification of the Contract Documents.
 2. RFIs shall not be used for the following; the TJPA 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 the Contractor's responsibilities exclusively.)
 - c. Questions relating to construction schedule, coordination between trades, or division of work among Trade Subcontractors. (These are also the Contractor's responsibilities exclusively.)
 - d. Questions on contract administration procedural matters, unless they require interpretation or clarification of the Contract Documents.
 - e. Confirmation of interpretations or clarifications previously provided by the TJPA.
 - f. The TJPA 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 TJPA will reply to all RFIs in accordance with Section 00 07 00, General Conditions, Article 6.02.
 2. The reply shall be a clarification or an interpretation of the Contract Documents; the reply is not an authorization of any change in the Contract Sum or Contract Time.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 10 40

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Revision	Date
0	July 30, 2010
1	August 10, 2010

SECTION 01 10 42 – METHOD OF PROCEDURE

PART 1 - GENERAL

1.1 SUMMARY

- A. This section specifies requirements for Contractor's method of procedure (MOP). An MOP is a written plan that describes the activities and procedures to safeguard the adjacent existing buildings' occupants, equipment, utilities, access, and contents and to interface with the buildings' management, operations, and security.

1.2 REQUIREMENTS

- A. An MOP is required when a construction activity may affect the safety of the occupants, equipment, access, or valuable contents of adjacent facilities or when construction activity essentially affects existing building operations or security.
- B. An MOP is required when requested by the TJPA Representative or deemed necessary by the Contractor and as a minimum will include
 1. Work near and around adjacent properties or access to existing loading docks, driveways, or utility tunnels or vaults.
 2. Live utility shutdowns.
 3. Temporary street closures.

1.3 DEVELOPMENT

- A. Form: Contractor shall develop routine MOPs in narrative, descriptive, or outline form supplemented with drawings, diagrams, and implementation schedules, as necessary. The detailed format shall be as approved by the TJPA consistent with Attachment 1 (Section 01 10 42/AT1). The MOP will reference the CPM activity it affects.
- B. Review and Approval:
 1. Contractor shall submit each MOP to the TJPA Representative for review and approval no later than 5 days prior to the start of the described work.
 2. The TJPA Representative will circulate MOPs for internal review and sign-off and shall return fully executed MOPs within 5 days.
 3. Contractor shall schedule additional time if required for the development and approval of specific major MOPs.
- C. Implementation: Contractor shall not implement the MOP prior to receiving a fully executed copy. Construction may proceed after approval has been obtained and in accordance with the approval schedule. If the Work is delayed, the approved MOP shall be amended to reflect the revised schedule.
- D. Compliance: Contractor shall comply with the approved MOP. The TJPA Representative reserves the right to stop the Work for non-compliance with the MOP. Any cost or time delay resulting from such a work stoppage shall be borne by Contractor.

- E. Utility Outages: Contractor shall prepare and execute a Utility Shutdown Request (01 10 42/AT2) for each utility to be taken out of service. Utility Shutdown Requests shall be consistent with the activities described in the associated MOP. No utility shutdowns will be allowed until all the authorization signatures have been obtained. After the construction activity is completed, restoration of each utility must be verified on the Utility Shutdown Request.

1.4 CONSIDERATIONS

- A. General: The following are some considerations in the preparation of an MOP:
1. Construction area and its boundaries.
 2. Access of trades and materials to location.
 3. Sequence of work and the impact on adjoining properties.
 4. Utilities that may be shut down during the Work and period of shutdown (including reference to applicable standards).
 5. The protection and separation required for access to the Work and work areas including the need for and location of temporary signage.
 6. Amount of materials required and availability at time of work.
 7. Duration of the work and any unusual working hours.
 8. Schedule of required inspections.
 9. Notification of occupants by the TJPA Representative in pre-established timeframe.
 10. Requirements for the presence of technical personnel for specialized work in sensitive areas.
 11. Names of persons, companies, and telephone numbers for contact in case of emergency.
- B. Specific Construction Activity: The following are some considerations in preparing the schedule fragnet for the proposed work:
1. Desired start date of the activity.
 2. Activity description.
 3. Length of the activity.
 4. Step-by-step procedure for the activity.
 5. Contingency plan to retreat from the activity and place equipment back in normal operating configuration.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 10 42

SPECIFICATION ISSUE LOG

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0	July 30, 2010
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SECTION 01 10 42 ATTACHMENT 1 – MOP TEMPLATE

(PROJECT NAME)

(CONTRACTOR'S NAME)

MOP NUMBER _____

Description of Work:

Originator:

Scheduled Start Date:

Scheduled Finish Date:

Required

Signatures of Authorizing Personnel:

Date:

☐

Contractor

☐

Construction Manager

☐

Outreach Consultant

☐

Program Management/Program Controls Consultant

☐

TJPA Representative

☐

Other (Specify)

☐

Other (Specify)

CONTRACTOR & MOP NUMBER: _____	
Working Hours: (Include hoisting & hauling)	
Protection:	
Safety: (Including signage)	
Set-up and Removal:	
Tests:	
Emergency Contacts:	
Other:	
List of Attachments: (Including plans, details, standards, etc.)	

CONTRACTOR & MOP NUMBER: _____

Step-by-Step
Activities:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.

Contingency Plans:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

SPECIFICATION LOG

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SECTION 01 10 42 ATTACHMENT 2 – UTILITY SHUTDOWN REQUEST TEMPLATE

(PROJECT NAME)

(CONTRACTOR’S NAME)

Date of Request: System to be Shutdown: Area/Equipment Affected by the Shutdown (be specific): Reason for Requested Shutdown: Subcontractor Performing Shutdown: Starting Time (Estimated): Special Comments:	MOP Referenced: Actual Dates of Shutdown: Completion Time (Estimated):
BEFORE STARTING: Authorization (Signatures and dates)	WHEN WORK IS COMPLETE: Verification that system is back on line (Signatures and dates)
<div style="border-bottom: 1px solid black; margin-bottom: 5px;">Utility Company/Agency</div> <div style="border-bottom: 1px solid black; margin-bottom: 5px;">Construction Manager</div> <div style="border-bottom: 1px solid black; margin-bottom: 5px;">Contractor</div> <div style="border-bottom: 1px solid black; margin-bottom: 5px;">Trade Subcontractor</div> <div style="border-bottom: 1px solid black; margin-bottom: 5px;">Other (Specify)</div> <div style="border-bottom: 1px solid black;">TJPA Representative</div>	<div style="border-bottom: 1px solid black; margin-bottom: 5px;">Utility Company/Agency</div> <div style="border-bottom: 1px solid black; margin-bottom: 5px;">Construction Manager</div> <div style="border-bottom: 1px solid black; margin-bottom: 5px;">Contractor</div> <div style="border-bottom: 1px solid black; margin-bottom: 5px;">Trade Subcontractor</div> <div style="border-bottom: 1px solid black; margin-bottom: 5px;">Other (Specify)</div> <div style="border-bottom: 1px solid black;">TJPA Representative</div>

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 01 10 50 – SURVEY AND CONTROL

PART 1 - GENERAL

1.1 SUMMARY

- A. This section specifies Contractor's requirements and procedures for survey services to establish, maintain, and confirm project control including elevations and slopes required to lay out the proposed design.

1.2 QUALITY CONTROL

- A. Contractor shall employ a civil engineer or land surveyor registered in the State of California and acceptable to the TJPA Representative to perform site surveying under the Contract Documents.
- B. Contractor shall submit evidence of Surveyors' errors and omissions insurance coverage in the form of an insurance certificate.

1.3 SUBMITTALS

- A. Contractor shall submit name, address, telephone number, and state registration number of the Surveyor before survey work begins.
- B. Contractor shall 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.

1.4 PROJECT RECORD DOCUMENTS

- A. Contractor shall maintain a complete and accurate log of control and survey work as it progresses.
- B. Contractor shall submit all documentation in accordance with the following Specification sections: 01 13 00, Submittals; 01 17 00, Contract Closeout; 01 17 20, Project As-Built Drawings; and 01 31 25, Project Management Software.

1.5 EXAMINATION

- A. Contractor shall verify the locations of survey control points prior to starting work.
- B. Contractor shall promptly notify the TJPA Representative in writing of any discrepancies discovered.

1.6 SURVEY REFERENCE POINTS

- A. The control datum for surveys is that established by the TJPA-provided survey. Contractor shall use the City of San Francisco benchmarks. Benchmark information is available at the City and County of San Francisco Department of Public Works Bureau of Street-Use and Mapping, 875 Stevenson, Room 460, San Francisco, CA 94103.
- B. Contractor shall locate and protect survey control points prior to starting sitework, and preserve permanent reference points during construction.
- C. Contractor shall promptly report to TJPA Representative the loss or destruction of any reference point or the required relocation of any reference point because of changes in grades or other reasons.

- D. Contractor shall replace dislocated survey control points based on original survey control. No changes shall be made without prior written notice to the TJPA Representative.

1.7 SURVEY REQUIREMENTS

- A. Contractor shall provide survey and control services, using recognized engineering survey practices, including three dimensional (x, y, z) coordinate files in electronic format.
- B. Contractor shall establish a minimum of 1 permanent benchmark on site, referenced to established control points. Record locations, with horizontal and vertical data, on Record Documents.
- C. Contractor shall 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. Contractor shall periodically verify layouts by same means.

1.8 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 Contractor at its own expense and shall be submitted to the TJPA Representative for information prior to the start of any construction.

1.9 ELEVATION CONTROL

- A. Contractor shall comply with the Americans with Disabilities Act (ADA) Accessibility Guidelines for grade requirements for landscape work and pathways. Acting in the capacity of an experienced contractor, Contractor shall identify conditions that do not comply with or that exceed ADA guidelines.

1.10 LINE AND GRADE FOR THE WORK

- A. The TJPA will furnish 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 Contractor and shall be obtained by Contractor as incidental work. The TJPA reserves the right to make minor line and grade changes of uncompleted work at any time before or after start of construction.
- B. Contractor shall submit Contractor's survey notes in accordance with Section 01 13 00, Submittals, with an additional hardcopy given weekly to the TJPA Representative.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 10 50

SPECIFICATION ISSUE LOG

Revision	Date
0	July 30, 2010
1	August 10, 2010

SECTION 01 10 90 – REFERENCES

PART 1 - GENERAL

1.1 SUMMARY

- A. This section specifies the requirements for the Contractor's use of reference publications, definitions of abbreviations and Contract-specific terms, and sources for obtaining reference documents.

1.2 APPLICABLE PUBLICATIONS

- A. See referenced codes in Section 01 14 10, Regulatory Requirements. Whenever published specifications, codes, standards, or other requirements are referenced within these Specifications and no date is specified, it shall be understood that only the latest specifications, codes, standards, or requirements of the respective issuing agency in effect on the date of the Contract Documents shall be used, 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, the term "Specifications" shall be as defined in Section 00 07 00, General Conditions, Article 1.
- B. Unless otherwise specified, reference to "DPW Specifications" or "DPW Standard Plans" shall mean the Standard Plans of the Department of Public Works Bureau of Engineering, revised April 2007.
- C. DPW Specifications and DPW Standard Plans may be obtained from DPW's Standard Specifications and Plans website at www.sfgov.org/site/sfdpw_page.asp?id=61365 or from Contract Administration, Room 420, 875 Stevenson Street, San Francisco, CA 94103, upon payment of the prescribed purchase price, if applicable.
- 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 TJPA 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. Notwithstanding the foregoing, the TJPA acknowledges that Contractor is not a designer but will, acting in the capacity of an experienced contractor, identify conditions that do not comply with applicable codes.
- C. The standard referred to, except as modified in the Contract Documents, shall have full force and effect as though printed in these Specifications. Contractor is not a designer, but will, acting in the capacity of an experienced contractor, identify conditions that do not comply with governing standards.
- D. Maintain copies of codes and reference standards with the Contract Documents at the job site at all times.

1.5 ABBREVIATIONS

- A. Abbreviations: Whenever used in these Contract Documents the following abbreviations are used, the intent and meaning shall be interpreted as follows:

AA	Aluminum Association, Inc.
AABC	Associated Air Balance Council
AAMA	Architectural Aluminum Manufacturers' Association
AAN	American Association of Nurserymen, Inc.
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ACM	Asbestos Containing Material
AC Transit	Alameda–Contra Costa Transit District
ACWS	Asphalt Concrete Wearing Surface
ADA	Americans with Disabilities Act
ADAAG	Americans with Disabilities Act Accessibility Guidelines
AFBMA	Anti-Friction Bearing Manufacturers Association
AGA	American Gas Association
AGMA	American Gear Manufacturers' Association
AHERA	Asbestos Hazard Emergency Response
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
ASLA	American Society of Landscape Architects
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
ATSSA	American Traffic Safety Services Association
AT&T	American Telephone and Telegraph
AWG	American Wire Gauge
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
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
BLHP	Bureau of Light, Heat and Power
BHMA	Builders Hardware Manufacturers Association
BIM	building information modeling
BMP	best management practice
BOA	Bureau of Architecture, Department of Public Works
BOE	Bureau of Engineering, Department of Public Works

BSM	Bureau of Street-use and Mapping
BTEX	Benzene, Toluene, Ethylbenzene and Xylene
BWPC	Bureau of Water Pollution Control, Department of Public Works
CAD	computer aided design
CADD	computer aided design and drafting
Caltrans	California Department of Transportation
CalEPA	California Environmental Protection Agency
Cal/OSHA	California Occupational Safety and Health Administration
CARB	California Air Resources Board
CBMA	Certified Ballast Manufacturers Association
CCR	California Code of Regulations
CD	compact disc
CDA	The Copper Development Association, Inc.
CFLMI	Chain Link Fence Manufacturers Institute
CFR	Code of Federal Regulations
CHSTP	California High-Speed Train Project
CHSRA	California High-Speed Rail Authority
CIH	certified industrial hygienist
CISPI	Cast Iron Soil Pipe Institute
City	City and County of San Francisco
CIWMB	California Integrated Waste Management Board
CMAA	Crane Manufacturers Association of America
CMS	changeable message sign
CPM	Critical Path Method
CPUC	California Public Utilities Commission
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
DBI	Department of Building Inspection
DDRP	demolition debris recovery plan
DOP	dioctylphthalate
DOT	United States Department of Transportation
DPT	San Francisco Department of Parking and Traffic
DPW	San Francisco Department of Public Works
DTIS	Department of Telecommunications and Information Services
DTSC	Department of Toxic Substances Control
EIA	Electronic Industries Association
EPA	Environmental Protection Agency
FGNA	Flat Glass Marketing Association
FHWA	Federal Highway Administration
FM	factory mutual
FOD	foreign objects debris
FS	federal specification
ft-lb	foot-pound
FTA	Federal Transit Administration
FTP	file transfer protocol
GGT	Golden Gate Transit
GO	CPUC General Order
GRS	Galvanized Rigid Steel
GVWR	gross vehicle weight rating
HASP	health and safety plan
HHWP	Hetch Hetchy Water and Power
HI	Hydraulic Institute
HMI	Hoist Manufacturer's Institute

HMMP	hazardous materials management plan
HMUPA	Hazardous Materials Unified Program Agency
IAMPO	International Association of Mechanical and Plumbing Officials
ICC	International Code Council
ICEA	Insulated Cable Engineers Association
IEEE	Institute of Electrical and Electronic Engineers
IES	Illuminating Engineering Society
IIPP	Injury and Illness Prevention Program
ISEA	International Safety Equipment Association
ISA	Instrument Society of America
ITE	Institute of Traffic Engineers
JIC	Joint Industry Conferences of Hydraulic Manufacturers
LEED	Leadership in Energy and Environmental Design, U.S. Green Building Council
MCAA	Mechanical Contractors Association of America, Inc.
MLMA	Metal Lath Manufacturers Association
MMA	Monorail Manufacturers Association
MMRP	Mitigation Monitoring and Reporting Program
MOA	Memorandum of Agreement
MSDS	material safety data sheet
MTD	Metro Transit District
Muni	Municipal Railway
MUTCD	Manual on Uniform Traffic Control Devices
NAAM	National Association of Architectural Metal Manufacturers
NAS	Network Analysis
NBFU	National Board of Fire Underwriters
NBHA	National Builders' Hardware Association
NEBB	National Environmental Balancing Bureau
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
NIOSH	National Institute for Occupational Safety and Health
NLMA	National Lumber Manufacturers Association
NPDES	National Pollutant Discharge Elimination System
NTMA	National Terrazzo and Mosaic Association, Inc.
NTP	Notice to Proceed
NWMA	National Woodwork Manufacturers Association
OC	on center
OCS	overhead contact system
OECI	Overhead Electrical Crane Institute
OSHA	Occupational Safety and Health Administration - U.S. Department of Labor
PCB	polychlorinated biphenyl
PCMCA	Personal Computer Memory Card International Association
PEI	Porcelain Enamel Institute
PEL	permissible exposure limit
PG&E	Pacific Gas and Electric Company
PMPC	Program Management/Program Controls
PPE	personal protective equipment
PRC	Public Resources Code
PS	Product Standards Section - U.S. Department of Commerce
QA	quality assurance
QC	quality control
RCM	Registered Construction Management
RCP	reinforced concrete pipe

RLM	RLM Standards Institute, Inc.
RMA	Rubber Manufacturers Association, Inc.
SAE	Society of Automotive Engineers
SanTrans	San Mateo County Transit District
SCCC	Street Construction Coordination Center
SCPI	Structural Clay Products Institute
SDI	Steel Door Institute
SEWPCP	Southeast Water Pollution Control Plant
SFDPH	San Francisco Department of Public Health
SFE	San Francisco Department of Environment
SFMTA	San Francisco Municipal Transportation Agency
SFPUC	San Francisco Public Utilities Commission
SMACNA	Sheet Metal and Air Conditioning Contractors National Association, Inc.
SJI	Steel Joist Institute
SSDPWSF	Standard Specifications, San Francisco Department of Public Works
SSPC	Steel Structures Painting Council
SSR	Site Safety Representative
STLC	Soluble Threshold Limit Concentration
SWPPP	stormwater pollution prevention plan
TCA	Tile Council of America
TEMA	Tubular Exchanger Manufacturers' Association
THW	T-wave aptitude
THWN	thermoplastic high water-resistant nylon-coated
TMA	Tile Manufacturers Association
TJPA	Transbay Joint Powers Authority
TTLC	total threshold limit concentration
TWW	treated wood waste
UBC	Uniform Building Code
UF	underground feeder
UL	Underwriters Laboratories Inc.
ULSF	ultra-low sulfur fuel
UMC	Uniform Mechanical Code
UPC	Uniform Plumbing Code
USB	Universal Serial Bus
USGBC	U.S. Green Building Council
VCP	vitified clay pipe
VOC	volatile organic compounds
WCLIB	West Coast Lumber Inspection Bureau
WestCAT	Western Contra Costa Transit Authority
WIC	Woodwork Institute of California
WPCP	Water Pollution Control Plant
WWPA	Western Wood Products Association
XRF	X-ray fluorescence

1.6 DEFINITIONS

- A. 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 TJPA 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 TJPA 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 TJPA 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. Existing to Remain: Protect against damage and soiling construction indicated to remain during selective demolition. When permitted by the TJPA Representative, items may be removed to a suitable, protected storage location during selective demolition and then cleaned and reinstalled in their original locations.
- C. Noted: As specified or written on the Drawings or in the Specifications.
- D. Remove and Dispose: Remove and legally dispose of items except those indicated to be reinstalled, salvaged, or to remain the TJPA'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 TJPA's property. Remove, clean, and pack or crate items to protect against damage. Identify contents of containers and deliver to TJPA'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.

1.7 REFERENCE DOCUMENTS

- A. Environmental: Refer to Section 00 03 35 for a list of reference documents related to existing hazardous materials conditions.
- B. Geotechnical: Refer to Section 00 03 20 for a list of reference documents related to geotechnical investigations of the Project site.
- C. Buildings and improvements: Refer to Section 00 03 31 for a list of reference documents on existing buildings in the Project area.
- D. Permits: For permits prepared by the San Francisco Department of Building Inspection, refer to website www.sfgov.org/site/dbi_page.asp?id=18634.
- E. Traffic Routing: Refer to Section 01 15 70 for applicable references and standards.
- F. Construction Demolition and Debris: Refer to Section 01 74 00 for applicable references and standards.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 10 90

SPECIFICATION ISSUE LOG

Revision	Date
0	July 30, 2010
1	August 10, 2010

SECTION 01 12 00 – PROJECT MEETINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. This section specifies the requirements and procedures for project meetings, including pre-construction and progress meetings, to ensure quality of work.

1.2 GENERAL

- A. The TJPA Representative will arrange project meetings after consultation with Contractor and will inform Contractor of the meeting time and location.
- B. Contractor's attendance is required at all meetings.
- C. The TJPA Representative will be responsible for taking the meeting minutes and providing Contractor with a copy. Contractor shall duplicate them and distribute the meeting minutes to the other participants of the meeting. There will be a 15-day limit for protesting items recorded in the minutes.

1.3 PRECONSTRUCTION CONFERENCE

- A. Prior to commencement of Work, the TJPA 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 TJPA Representative. The meeting will consist of the following:
 - 1. Attendees:
 - a. TJPA Representative
 - b. CM/GC
 - d. Trade Subcontractors
 - e. Major equipment Suppliers, as appropriate
 - f. Others as appropriate
 - 2. Required Agenda Items:
 - a. List of major Trade Subcontractors and Suppliers
 - b. Construction progress schedule (including critical work sequencing)
 - c. Submittal schedule and long-term delivery items
 - d. Insurance certificates
 - e. Schedule of values
 - f. Designation of responsible personnel
 - g. Building permit status
 - h. Procedures for maintaining and submittal of Record Documents
 - i. Project access and logistics
 - j. Environmental mitigation
 - k. Temporary utilities
 - l. Safety and first-aid procedures
 - m. Security procedures
 - n. Housekeeping procedures
 - o. LEED requirements and LEED submittal procedures
 - p. Lines of communication
 - q. Invoicing
 - r. SBE/DBE and payroll reporting requirements

- C. Following the preconstruction conference, there will be a quality control coordination meeting. See Section 01 14 00, paragraph 1.7.

1.4 PROGRESS MEETINGS

- A. The TJPA Representative will schedule, prepare agendas, and administer meetings throughout progress of the Work at weekly intervals or more frequently, if required by the TJPA Representative. All open items will identify a responsible individual and target date for resolution.
- B. Attendance Required: Job superintendent and major Trade Subcontractors and Suppliers, as appropriate to agenda topics for each meeting.
- C. Location: Project field office, unless otherwise notified.
- D. Meeting Agenda:
 - 1. Review of work progress since previous meeting
 - 2. Safety
 - 3. Outreach/Community Issues
 - 4. Schedules:
 - a. Contractor's 3-week look-ahead schedule
 - b. Issues which impede construction progress schedule
 - c. Review of off-site fabrication and delivery schedules
 - d. Review of submittals schedules
 - e. Review of mock-up and Sample installation requirements and schedules
 - f. Corrective measures and procedures to regain projected schedules
 - 5. Submittals and RFIs:
 - a. Submittal status log
 - b. RFI status log
 - c. Hot list
 - 6. Quality Control:
 - a. Field observation reports
 - b. Non-compliance
 - c. Reworks
 - d. LEED
 - 7. Cost
 - 8. Old Business: Review, approval or correction of minutes of previous meeting
 - 9. Other business

1.5 PRE-INSTALLATION CONFERENCES

- A. When required by individual Specification sections, Contractor shall convene a pre-installation conference at the work site prior to commencing work of the Specification section.
- B. Contractor shall require attendance of parties directly affecting, or affected by, work of the specific Specification section.
- C. Contractor shall notify TJPA Representative 4 days in advance of meeting date.
- D. TJPA Representative will prepare the agenda, preside at the conference, record minutes, and distribute copies of the minutes, with 2 copies to Contractor, within 2 days after conference to participants.
- E. Contractor shall review conditions of installation, preparation, and installation procedures, and their coordination with related work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 12 00

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 01 13 00 – SUBMITTALS

PART 1 - GENERAL

1.1 SUMMARY

- A. This section specifies the general procedures and requirements for the submission of shop drawings, product data, and samples by Contractor to the TJPA for review. See Technical Specification Division 2 through Division 48 for specific submittals.

1.2 DEFINITIONS

- A. Shop drawings: Drawings, diagrams, schedules and other data specially prepared for the Work by Contractor or a subcontractor of any tier, manufacturer, Supplier, or distributor to illustrate some portion of the Work. Shop drawings shall not be reformatted Contract Documents.
- B. Product data: 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: Physical examples that 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 the 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: Refers to 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: Detailed description of the means, methods, tools, equipment, materials, sequence, and any other pertinent information about performance of work.
- H. Subcontractor qualifications: 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 of experience, and references complete with telephone numbers and contact persons.
- I. Field sample: Sample at the job site to demonstrate the final technique, finish, and construction quality by which the Work will be judged.
- J. Submittal: Any drawing, calculation, specification, product data, sample, manual, request for substitution, spare part, photograph, survey data, demolition plan, record drawing, bond, or similar item required to be submitted to the TJPA Representative under the terms of the Contract.
- K. Electronic format: Native files and Portable Document Format (PDF) or Design Web Format (DWF) files.
- L. LEED submittal: Refer to Section 01 81 13, General LEED Requirements.

1.3 REQUIREMENTS

- A. Contractor shall be responsible for distributing approved submittals as required for construction and for fabricating, furnishing, and constructing work in accordance with approved submittals. Contractor shall keep one copy of reviewed submittals at the Site at all times.
- B. Contractor shall not use unacceptable submittals or submitted materials without the TJPA Representative's review stamp for reference in doing work. Contractor shall not proceed with the Work if submittals covering such work are returned REJECTED or REVISE AND RESUBMIT. Such submittals shall be revised by the Contractor and resubmitted to the TJPA Representative for review and comment.
- C. Submittals returned NO EXCEPTIONS TAKEN or MAKE CORRECTIONS NOTED 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 TJPA Representative in the submittal record in the Program Management Information System (PMIS), Constructware, specified in Section 01 31 25, Project Management Software.
- D. 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 TJPA 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 TJPA through the TJPA Representative for recording and reviewing by the TJPA.
 - 1. Submittals received from sources other than Contractor will be returned to Contractor without the TJPA's review.
- F. Contractor shall schedule submittals in advance of scheduled installation dates to allow time for review or revision in accordance with paragraph 1.4.
 - 1. Contractor shall review and coordinate submittals 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. Contractor shall make submittals in groups containing all associated items as complete packages of information for review. The TJPA will reject partial submittals.
 - 1. Record and upload, if in electronic format, the package to the PMIS, specified in Section 01 31 25, Project Management Software.
 - 2. The TJPA reserves the right to withhold action on submittals requiring coordination with other submittals until related submittals are furnished, unless agreed to in the submittal schedule.
- H. Contractor shall review and stamp submittals prior to forwarding them to the TJPA for review.
 - 1. By reviewing 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 TJPA could rely upon the accuracy and completeness of such calculations and certifications.
 - 3. No change will be made by the TJPA Representative that modifies the scope of work.

- 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 TJPA. 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 TJPA.
- 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 TJPA 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 TJPA's review of Contractor's submittals shall not relieve Contractor of the obligations to comply with the requirements of the Contract Documents. The TJPA's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The TJPA'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 that is not required to be submitted, the TJPA will not review such submittal. Contractor shall execute the Work in accordance with the Contract Documents.

1.4 SUBMITTAL SCHEDULE

- A. The timing of the submission of shop drawings, product data, samples, work descriptions, subcontractor qualifications, and field samples by Contractor and their processing and return by the TJPA 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 each party can plan its workload in an orderly manner. The Contractor shall 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 12 working days for initial review.
 - 2. Follow the same process for intermediate submittals, if necessary.
 - 3. Allow 12 working days for the reprocessing of each submittal.
 - 4. No extension of Contract Time will be authorized because of Contractor's failure to transmit submittals sufficiently in advance of the Work to allow processing by the TJPA Representative.
- B. For Trade Work Packages, Contractor shall prepare the submittal schedule in the PMIS, integrating the submittal schedule with or as a by-product of the construction schedule, and submit it to the TJPA, in accordance with the technical specification, 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 submitted for review to the TJPA.
- C. In preparing the submittal schedule, 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, Contractor shall add the number of days required to process, ship, and fabricate the submittal; deliver operation and maintenance manuals; and similar activities to determine the date of the submittal.
 - 1. Contractor shall allow a minimum of 12 working days for the TJPA's review of the submittal and anticipate that an incomplete, inadequate, or incorrect submittal will require resubmission.
 - 2. Contractor shall include a minimum of 21 days 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 the Contractor. Such costs shall include the TJPA's costs and the TJPA's consultant fees.
- D. Contractors shall every month reconcile the submittal schedule with the construction schedule to produce an orderly, even workload, without peak loads if possible, yet ensure that the submittal schedule is able to meet the needs of the review and construction processes.
- E. Contractor shall be responsible for the 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, if caused by Contractor, 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. The following information will be provided by the Contractor:
 1. Identification of the Project, Contractor, Trade Subcontractor, major Supplier.
 2. Identification of deviations from Contract Documents.
- B. Contractor shall record each submittal in the PMIS. Submittals in electronic form shall be uploaded to the PMIS. Contractor shall deliver any hardcopy submittals to the TJPA Representative at the address to be provided at the preconstruction meeting.
- C. Contractor's submittals shall conform to the following requirements:
 1. Submittals shall include product identification or shop drawing title, number, revision, and date as applicable. Where product data contain more than one product, model, selection, or other information, clearly mark and identify the information intended to be reviewed by the TJPA.
 2. Submittals shall reference the (Contract) Drawing or Specification section as applicable.
 3. Submittals shall bear Contractor's stamp, signature or initials, 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.
 4. Submittals shall contain space for TJPA's review stamp. Space shall be minimum 4 x 6 inches.
 5. Contractor shall revise any resubmittals as required and identify all changes made since previous submittal.
- D. Packaging of Submittals:
 1. Physical submittals shall be wrapped or packaged to prevent damage during delivery.
 2. Electronic files shall be legible. Such files shall be in color as required and consistent with original literature.

1.6 SHOP DRAWINGS

- A. Contractor shall submit electronic files in PDF or DWF in addition to native file types. Submit 3-D files in agreed-upon project format. Refer to Section 01 31 26, Project Database Administration.
- B. Shop drawings shall be submitted by the Contractor only. Submittal of incomplete or unchecked shop drawings will not be acceptable.

- C. When the shop drawings have been reviewed by the TJPA, the review comments will be returned to the Contractor in a similar electronic format.
- D. As required, Contractor shall resubmit shop drawings in the same manner as the original submittal.
- E. Contractor shall clearly identify and provide an explanation of changes made by Contractor on the resubmitted shop drawings.
- F. Catalog sheets meeting the specific requirements may be substituted for the required drawing and shall be submitted in PDF or DWF.

1.7 PRODUCT DATA

- A. Contractor shall submit product data in PDF or DWF. Hardcopy product data will not be accepted.
- B. Contractor shall mark each submittal to identify applicable products, information, models, options and other data. Supplement manufacturer's standard data to provide information unique to this Project.
- C. Contractor shall provide complete product data in an organized manner with a detailed table of contents that is indexed, hyperlinked, and referenced to the applicable project specifications.
- D. Product data and manufacturers' standard drawings submitted for review shall show only the pertinent information.
 - 1. Contractor shall identify the pertinent information by circling it or by crossing out the inapplicable information.
 - 2. Any submittal that contains information not clearly identified for review will be rejected and returned to the Contractor for resubmission.

1.8 SAMPLES

- A. Contractor shall submit samples to illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
- B. Contractor shall submit samples of finishes in custom colors, textures, and patterns for the TJPA's selection.
- C. Contractor shall identify each sample with full project information.
- D. Contractor shall furnish 4 samples in the following sizes, unless otherwise specified; after review, 2 samples 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: Liquids—minimum 1 pint, maximum 1 gallon; solids—minimum 1 pound, maximum 3 pounds, or minimum 1 cubic foot, maximum 1 cubic yard, as applicable.

1.9 MANUFACTURER'S INSTRUCTIONS

- A. Contractor shall submit manufacturers' instructions for delivery, storage, assembly, installation, startup adjusting, field testing, and finishing in PDF or DWF. Hardcopy instructions will not be accepted.
- B. Contractor shall mark each submittal to identify applicable instructions and supplement manufacturer's standard data to provide information unique to this Project.
- C. Contractor shall provide complete instructions in an organized manner with a detailed table of

- contents that is indexed, hyperlinked, and referenced to the applicable project specifications.
- D. Contractor shall attempt to identify conflicts between manufacturers' instructions and Contract Documents.

1.10 MANUFACTURER'S CERTIFICATES

- A. Contractor shall submit certificates in PDF.
- B. The TJPA will retain certificates; no approval reply is intended.
- C. The certificate shall include the following statements:
1. The equipment or system has been:
 - a. Installed in accordance with the manufacturer's recommendations.
 - b. Inspected by a manufacturer's authorized representative.
 - 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 ACTION AND DISTRIBUTION

- A. The TJPA will respond to the submittals in the PMIS indicating one of the following: "NO EXCEPTIONS TAKEN," "MAKE CORRECTIONS NOTED," "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 TJPA's notations and the Contract Documents.
 3. Submittals returned with stamps described in items 1 or 2 above shall be considered as acceptable submittals.
 4. When other notation is indicated, the 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 be responsible for recording work completed in accordance with approved submittals on the record drawings in accordance with the requirements of Section 01 17 20, Project As-Built Drawings.

1.12 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 01 13 00

SPECIFICATION ISSUE LOG

Revision	Date
0	July 30, 2010
1	August 10, 2010

SECTION 01 13 10 – PROGRESS SCHEDULE

PART 1 - GENERAL

1.1 SUMMARY

- A. This section specifies Contractor's requirements for the development, content, format, and submittal of the construction schedule, and requirements for the adjustment of Contract Time, Change Orders, and early completion.

1.2 GENERAL REQUIREMENTS

- A. Development of the construction schedule shall employ computerized Critical Path Method (CPM) scheduling. It may include cost loading, resource loading, and Project status reporting of the schedules, as agreed upon by the TJPA Representative and Contractor.
- B. Within 15 days after each bid package Notice To Proceed (NTP), Contractor shall furnish a construction schedule in electronic format showing the added detail of the effected sequence of activities.
- C. The CPM schedule shall represent Contractor's plan of operation, as adjusted for each Trade Work Package, within the specified Contract completion time and within the Contract bid price. It shall represent a practical plan to complete the Work. A schedule extending beyond the Contract completion date will not be accepted.
- D. Contractor is required to involve its Trade Subcontractors in the development, implementation, and updating process of its schedule.
- E. The CPM schedule shall be submitted to the TJPA Representative for approval. After review and prior to acceptance, the Contractor shall revise the CPM schedule to incorporate the TJPA's comments and shall submit final documents to the TJPA Representative for approval within 10 working days.
- F. Acceptance of the schedule is of general nature only. Failure by Contractor to include any element of work required for the performance of this Contract shall not excuse Contractor from completing all work required within any applicable completion date, notwithstanding the TJPA's acceptance of the progress schedule. Items missing from the schedule are assumed incidental work. Contractor may submit a revised schedule to include these incidental items. The revised schedule is subject to review and acceptance by the TJPA as described in paragraph 1.7. It is Contractor's responsibility to incorporate all necessary activities to cover the work required by the Contract Documents.
- G. The CPM schedule and analysis when incorporated by contract amendment by the TJPA shall constitute the official project work schedule.

1.3 CPM SCHEDULE CONTENT

- A. The progress 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 in Primavera P6 or compatible format.
- B. The network diagram(s) shall show the following activities:
 - 1. Required approvals, permits, notices, and other documents necessary for Contractor's execution of the proposed work consistent with the information provided by the TJPA.
 - 2. Preparation of shop drawing and working drawing submittals.
 - 3. Administrative activities, procedures, and subsidiary actions that will affect the critical path:
 - a. Submittal to and review by the TJPA of shop drawings within the time limits noted in Contract Documents.
 - b. Submittal to and review by the TJPA of substitutions as noted in Contract Documents.
 - c. Submittal to and review by the TJPA of alternative construction methods or alternative designs, including all supporting data relating thereto.
 - d. Submittal to and review by the TJPA and all utility companies involved, a schedule for coordination of all utility relocation work necessitated by Contractor's operations.
 - e. Completion and acceptance activities including, but not limited to the submission of as-built drawings, testing and commissioning, punch list work, and preliminary and final inspections.
 - 4. Procurement of materials and equipment including ordering, fabrication, and delivery.
 - 5. Scheduled completion date shall be as specified within the time allowed.
 - 6. Project interim milestones that define completion of key phases of work or key interfaces with other contractors.
- C. The default CPM activity time duration shall be specified in 5-day work weeks excluding holidays to be identified by Contractor.
- D. A maximum of 20 days' duration shall be given to each CPM construction activity. Any activity in excess of the 20 days shall be broken down in detail so that each detail activity will not exceed the 20-day maximum, unless otherwise agreed upon by the TJPA.
- E. All activities shall have succeeding activities except project completion. Contractor shall demonstrate the necessity of having any dummy activities, constraints, and lags.
- F. Negative float will not be allowed on the CPM schedule on the initial submittal. Initial CPM 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.
- G. The CPM schedule's critical path activities should not exceed 15% of the total number of activities. Critical path activities are those that have no float.

1.4 CPM SCHEDULE FORMAT

- A. The CPM schedule shall be prepared by Contractor using the precedence method of network diagramming.
- B. Tabulated schedule shall include the following information for each activity:
 - 1. Activity beginning and ending event numbers.
 - 2. Estimated duration in working days.

3. Concise description of activity.
 4. Trade code (responsibility code including Contractor, all Trade Subcontractors, and Owner).
 5. Early start date (ES) and early finish date (EF) (calendar dated).
 6. Late start date (LS) and late finish date (LF) (calendar dated).
 7. Actual start date and actual finish date (calendar dated).
 8. Total float.
 9. Percent completed.
- C. Electronic Storage Media: Contractor shall furnish schedule information in an electronic format using the Primavera P6 or compatible software with the following requirements.
1. Sort the activities as required.
 2. Calculate the schedule as required in the updated schedule.
 3. Include resource requirement as required.
 4. Input the actual start and completion dates of completed activities.
 5. Input the actual start dates and percent completion of activities in progress.
 6. Print the total and free float for each activity.
- D. Additional Information: The following computer-generated reports supplied with the project identification, schedule and run date, and type of sort on the first page.
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 10 working days are sorted numerically including ES, LS, EF, and LF.)

1.5 UPDATED SCHEDULE

- A. The CPM schedule shall be updated monthly by Contractor and submitted to the TJPA for review.
- B. Computer calculations of the updated schedule will be made starting from the current data 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, remaining duration, and the percentage completed for each activity.
- C. The CPM network diagram 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 TJPA by reviewing the actual accomplishments since the previous update.
- D. Contractor's monthly written evaluation of the CPM progress update is expected to communicate to the TJPA the Contractor's thorough analysis of the schedule output and its plans to mitigate any problems either current or potential, and should include a narrative of the following as a minimum:
1. The work completed with actual start and finish dates for each activity.
 2. Critical path and gain or loss of time from previous report.
 3. Percentage of each activity completed.
 4. Anticipated completion time of entire work.
 5. Description of problem area.
 6. Current and anticipated delaying factors and their impacts.

- 7. Explanation of corrective action taken or proposed.
- E. Any change in the network logic including additions or deletions or in the duration of activities will be noted. The updated schedule shall be submitted with the monthly progress payment request showing all work completed as of that date.
- F. The schedule will be revised to reflect means and methods adjustments. Such revisions that affect the TJPA's other contractors shall be specifically noted to ensure proper coordination.
- G. The updated schedule shall have the same format and content as the initial CPM schedule and analysis for review and approval.

1.6 ACTIVITY SCHEDULE

- A. Contractor shall prepare and submit at the weekly progress meeting, in sufficient quantities, on a bar chart format showing a three-week window the following:
 - 1. Completed activities for last week.
 - 2. Scheduled activities for the next 2 weeks.
 - 3. Correlation to appropriate CPM schedule node or activity identification.
 - 4. Detailed information including all minor elements, subjectivity, or work phases for the major activity.

1.7 REVISED SCHEDULE

- A. Contractor shall submit to the TJPA a revised critical path schedule with its evaluation 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 to a non-critical activity changes the course of the critical path.
 - 4. Contractor elects to change any sequence of activities affecting the critical path.
- B. All revisions to the schedule shall be submitted in writing to the TJPA Representative for review and acceptance. 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 paragraph 7.02.D, Notice of Delay, of Section 00 07 00, General Conditions.

1.8 SUBMITTALS

- A. The CPM schedule prepared by Contractor shall be used for planning, organizing, directing, controlling, and reporting all work required by the Contract Documents.
- B. Therefore, the timely submission of the following is required:
 - 1. Submit the CPM schedule 15 working days after the official date for NTP.
 - 2. Updated the schedule on a monthly basis within 3 working days after the update date as established by the TJPA.
 - 3. Update activity schedule on a weekly basis at the progress meeting.
 - 4. Revised schedule within 10 working days when requested by the TJPA.
 - 5. Resubmit any rejected CPM schedule, updated schedule, or revised schedule within 10 working days after receipt of the returned schedule marked "RESUBMIT."
- C. Failure to comply with timely submission of any one of the above schedules will be just cause to withhold the progress payment of any portions thereof by the TJPA.

1.9 APPROVED STANDARD AND DEFINITIONS

- 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.

1.10 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 the Contractor requests an adjustment of the Contract Time, Contractor shall furnish such justification, progress schedule data, and supporting evidence, as the TJPA may deem necessary to determine whether the Contractor is entitled to an adjustment of time under the provisions of the Contract.
 - a. Contractor shall submit proof based on revised activity logic, durations, and costs with each request.
 - b. This submission shall include a narrative report that includes (i) a description of the activities along the critical path or paths; (ii) a description of current and anticipated problem areas or delaying factors and their impact; and (iii) an explanation of the corrective action taken or required to be taken. The narrative report is expected to communicate to the TJPA the Contractor’s thorough analysis of the schedule output and its plans to compensate for any problems, either current or potential, which are revealed through that analysis.
 - 2. The progress schedule 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 or benefit of either the TJPA or Contractor, but are 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 TJPA’s determination as to the adjustment of the Contract Time will be based upon the latest version of the progress schedule accepted at the time of the alleged delay, and all other relevant information.
 - 5. Actual delays in activities that according to the progress schedule 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 all available float has been used.
- B. Contractor shall include, as part of each Change Order request 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. Contractor shall incorporate each Change Order into the updated schedule.
- C. The TJPA will, within 10 working days after receipt of such request and supporting evidence, review the facts and advise Contractor in writing therefor.
- D. The new progress schedule, if accepted by the TJPA, shall be in compliance with the requirements under “Revised Schedule” as defined within this section.

- E. Where the TJPA 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 TJPA.

1.11 EARLY COMPLETION SCHEDULE

- A. Contractor may provide a progress schedule which contains a schedule completion date earlier than the time allowed for completion of work as specified in these Specifications.
- B. If Contractor submits an early completion schedule, it 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 or benefit of either the TJPA 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 start date through the official Contract completion date. Specifically, the Contractor has provided through its bid, the overhead cost including field office, home office, other off-site yard, and extended overhead cost for the duration of the absolute float between its early scheduled completion date and the Contract completion date in its bid items on the Schedule of Bid Prices or Bid Proposal as specified.
 4. If the TJPA requires additional work through Change Order and the additional work will be done after the early scheduled completion date and prior to the official Contract completion date, no additional monies will be paid beyond the direct cost related to those Change Orders.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 13 10

SPECIFICATION ISSUE LOG

Revision	Issue	Date
0	Issued for Bid: TG03, TG4.5.1, TG19.1 08-04-CMGC-000 Conformed Volume One	July 30, 2010
1	Field Order: 08-04-CMGC-000-WO-001	December 13, 2010

SECTION 01 13 40 – CONTRACTOR’S ACTIVITIES

PART 1 - GENERAL

1.1 SUMMARY

- A. This section specifies the requirements for subcontracting, daily reports, accident reports, and worker identification.

1.2 REQUIREMENT

- A. Contractor shall submit for record its subcontracting agreements, daily reports, and accident reports to the TJPA Representative.
- B. Contractor and its Trade Subcontractors shall have a definitive visual identification system for their employees.

1.3 SUBCONTRACTING AGREEMENTS

- A. At the time of Notice to Proceed, Contractor shall submit for each bid package copies of all executed agreements.
- B. Contractor’s failure to provide the agreements will result in the TJPA’s withholding the progress payment.

1.4 DAILY REPORTS

- A. Contractor shall submit its official record copy of the daily report to the TJPA Representative through Constructware’s Daily Reports module with the following information:
 - 1. Description and location of work accomplished.
 - 2. Description of the weather.
 - 3. Manpower by company, including number of workers on site and hours on site quantity.
 - 4. Equipment by description and number.
 - 5. Description of significant material deliveries.
 - 6. Description of any significant visits from non-project-related personnel.
 - 7. Description of any significant safety-related activities; refer to paragraph 1.5 for additional accident reporting requirements.
 - 8. Description of QA/QC activities.
- B. Contractor’s failure to submit a copy of the daily report within 3 working days may result in the TJPA’s withholding the progress payment.

1.5 ACCIDENT REPORTS

- A. Contractor shall provide to the TJPA Representative within 3 days of occurrence copies of the public and the Contractor’s accident and near-miss reports. A significant accident includes events where personal injury is sustained, property loss of substance is sustained, or the event posed significant threat or loss or personal injury. The written report shall provide full details and the statements of witnesses. Contractor shall notify the TJPA Representative within 24 hours of the occurrence of any accident or near-miss incident.
- B. Contractor shall provide the TJPA Representative copies of any accident report, laboratory test data, and medical monitoring results for record and evaluation within 3 days of receipt of the above information or upon the request of the TJPA Representative.
- C. The TJPA Representative will in writing inform Contractor of any additional hazardous condition encountered. Contractor shall respond indicating its action or disposition of the matter by

returning an annotated copy of the written communication to the TJPA Representative within 3 days.

1.6 WORKER IDENTIFICATION

- A. All workers will be required to sign in with their respective Trade Subcontractor on a daily basis. All Trade Subcontractors shall submit their sign-in sheets to the CM/GC on a daily basis.
- B. All workers must display their name, trade, and company on their hard hats.

END OF SECTION 01 13 40

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 01 13 50 – HAZARDOUS MATERIALS PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Contractor is alerted to the presence of hazardous waste and/or contaminated material in the soil and groundwater which may be encountered during excavation and dewatering. Investigations of properties within the property boundaries and adjacent to the project area have found fill materials with elevated levels of metals and petroleum hydrocarbons as a result of the 1906 earthquake and fire. This fill material generally ranges in depth of 4 to 19 feet below ground surface. A coal gasification plant once operated (1863-1891) in the vicinity of the northeast section of the Transbay Terminal, and manufactured gas by-product waste has been found in adjacent properties at a depth ranging from 15 to 20 feet below ground surface in this area. Treated timber piles will be encountered during the excavation activities, and proper handling and disposal will be required. Four underground storage tanks were removed from under the parking lot on the western end of the Transbay Terminal in 1986. The groundwater has been impacted and contains elevated levels of petroleum hydrocarbons.
- B. Should unanticipated hazardous materials be encountered during excavation, a TJPA Representative shall determine whether the abatement and removal process requires suspension of all, none or any part of the work under this Contract. Such materials include but are not limited to underground storage tanks and associated lines, distribution piping from the coal gasification plant, asbestos containing piping, former monitoring wells, coal tar waste, and soil with significant petroleum hydrocarbon orders or stains.
- C. Contractor's work shall include the management of existing soils in a manner consistent with the requirements of the Contract Document including the following reports: Site Mitigation Plan, Transbay Transit Center, Treadwell & Rollo, March 24, 2010, appended to this Section as 01 13 50/APA, and Section 00 03 35, Existing Conditions: Hazardous Materials reference document Environmental Site Characterization, Transbay Terminal, Treadwell & Rollo, April 2009 .

1.2 DEFINITIONS

- A. ACM: Asbestos containing material.
- B. Buttress: Drilled concrete shafts to improve the subsurface soils below the base of the planned excavation for the Transbay Transit Center as a means of protecting existing adjacent structures from the potential effects of excavation induced deformation during construction of the Transbay Transit Center.
- C. California Class I Non-RCRA Hazardous Waste: California hazardous waste per California Hazardous Waste Control Law and associated regulations (Health and Safety Code 25000 et seq. and 22 CCR 66260 et seq.).
- D. Coal Gasification: Coal gasification is a process for partially or completely converting coal to combustible gases. A coal gasification plant (former San Francisco Gas and Light) once operated (1863-1891) in the vicinity of the northeast section of the Transbay Terminal.
- E. Coal Tar: Coal tar is a brown or black liquid of high viscosity, which smells of naphthalene and aromatic hydrocarbons. Coal tar is among the by-products when coal is carbonized to make coke or gasified to make coal gas.
- F. Compaction: The process of mechanically placing a material at a controlled density and moisture condition. "Degree of Compaction" or "Relative Compaction" is expressed as a percentage of the

maximum density obtained by the test procedure described in American Society for Testing and Materials (ASTM) D1557 abbreviated in this Specification, for example, as “90 percent ASTM D1557 maximum density.”

- G. Excavation: Removal of concrete/fill material/soil to obtain a specified depth or elevation.
- H. Federal Class I RCRA Hazardous Waste: Federal hazardous waste according to the Resources Conservation and Recovery Act, 42 U.S.C. Section 6901 et seq. and regulations 40 CFR Part 260 et seq.
- I. Fill Material: fill material at the site contains elevated concentrations of heavy metals and other residual petroleum hydrocarbons. These concentrations are likely associated with the presence of 1906 earthquake fill material located below the ground surface. Special soil handling and/or sampling will likely be required during any construction activities.
- J. HASP: Health and Safety Plan.
- K. Hazardous Materials Control: Incidental work procedures for control of releases of project- related hazardous materials, including containment, enclosure, wetting, and removal and disposal.
- L. Hazardous Waste:
 - 1. Waste material, including lead contaminated soil, treated piles, coal tar, and any other material which requires management, handling transport, treatment, storage or disposal according to the requirements of the federal Resource Conservation and Recovery Act and associated regulation 42 U.S.C. 6901 et seq. and 40 CFR Part 260 et seq. or the California Hazardous Waste Control Law and associated regulations (Health and Safety Code 25000 et seq. and 22 CCR 66260 et seq.).
 - 2. References to hazardous material or contaminated material incorporate definitions of hazardous pollutants, hazardous contaminants, hazardous material, hazardous substance, hazardous waste, toxic pollutants, and toxic substance applicable in accordance with federal, state, regional, and local statutes, laws, regulations, and policies.
- M. MSDS: Material Safety Data Sheet is a form containing data regarding the properties of a particular substance.
- N. Non-Friable: Non-friable ACM is not regulated because it contains a binder or hardening agent such as cement, asphalt, or vinyl.
- O. RCRA: Resources Conservation and Recovery Act.
- P. SMP: Site Mitigation Plan.
- Q. Timber Piles: Part of the foundation system for the Transbay Terminal building includes timber piles beneath the basement slab. During the excavation activities, these timber piles will be removed and disposed of.
- R. Shoring: A combination of bracing, plates, walls, boxes, anchors, etc., used to maintain a safe and stable excavation during construction. Typical shoring systems are designed to allow no more than one inch of movement laterally.
- S. Site Safety Representative (SSR): The SSR is a qualified person to be directly responsible under the Contractor’s Superintendent having the necessary training to be knowledgeable in the identification, control, and management of the hazardous materials and conditions on-site.
- T. Utilities: underground pipes, conduits, ducts, and cables, as well as underground services within building lines.

1.3 HAZARDOUS MATERIALS CONDITIONS

- A. The following environmental reports have been prepared for the Site and surrounding properties which document hazardous materials detected in the subsurface. Materials detected may include heavy metals and petroleum hydrocarbon constituents. The subsurface investigations findings are documented in the following reports. Refer to Section 00 03 35, Existing Conditions: Hazardous Materials, for instructions on accessing these documents.
1. *Revised Site Mitigation Plan: 199 Fremont Street Project, San Francisco, California Volume 1*: Geomatrix Consultants, 1998.
 2. *Environmental Site Characterization, The Century, San Francisco, California*: Treadwell & Rollo, Inc., September 1998.
 3. *Additional Site Characterization Results, The Century, San Francisco, California*: Treadwell & Rollo, Inc., May 1999.
 4. *Site Investigation Report, San Francisco-Oakland Bay Bridge, West Approach Project Including Transbay Terminal Loop, San Francisco*: California Department of Transportation and Professional Service Industries, Inc. April 1999.
 5. *Groundwater Monitoring Report, Transbay Terminal, 150 1st Street, San Francisco, California*: California Department of Transportation, 2000.
 6. *Additional Environmental Site Characterization, 535 Mission Street, San Francisco, California*: Treadwell & Rollo, Inc., November 2007.
 7. *Phase I Environmental Site Assessment Transbay Transit Center San Francisco, California*: AMEC, 2008.
 8. *Limited Phase II Investigation Report Planned Transbay Terminal Bus Ramps and Transit Center San Francisco, California*: ERM West, December 2008.
 9. *Soil Investigations of 546 Howard and 75 Natoma*, ERM West, January 2009.
 10. *Environmental Site Characterization, Transbay Terminal Building, San Francisco, California* Treadwell & Rollo, Inc., April 2009.

1.4 SUBMITTALS

- A. Refer to Section 01 13 00, Submittals, for submittal procedures and requirements.
- B. Site Health and Safety Plan (HASP): Describe the HASP and procedures as related to operations associated with excavation and handling of heavy metals and petroleum contaminated soils. The HASP will describe the training requirements, i.e. trained in accordance with Section 1910.120 of 29 Code of Federal Regulations (Hazardous Waste training), specific personal hygiene, and monitoring equipment that will be used during construction to protect and verify the health and safety of the construction workers and the general public from exposure to constituents in the soil.
- C. Excavation and Material Handling Plan: Describe methods, means, equipment, sequence of operations and schedule to be employed in excavation, transport, handling, segregation, and stockpiling of soil during site remediation.
1. Include methods of excavating, a material handling plan for the contaminated material, safety precautions and requirements, and water pumping and collection requirements.
 2. Include detailed description of materials and procedures to be used to amend wet soils (e.g., excavated from beneath the water table) so as to render them suitable for off-site transportation and acceptable to the designated disposal facility.
 - a. Contractor shall be responsible for ensuring that each load transported off-site is accepted without delay by the designated disposal facility.
- D. Spill and Discharge Control Plan: Describe procedures and plan related to potential spills and discharge of contaminated soils and water.
- E. Noise, Dust, and Odor Abatement Plan: Refer to the requirements set forth in Section 01 35 65,

Mitigation and Monitoring for air quality, noise, and vibration mitigation measures and submit the abatement plan describing:

1. Measures that will be taken to avoid generating noise, dust, or odors at levels exceeding applicable state, federal, and local laws, regulations, or ordinances.
2. Measures that will be taken to avoid generating noise, dust, or odors at levels creating a nuisance to adjacent property (office buildings, restaurants, marina, and other businesses) owners, tenants, visitors, and clients, particularly during business hours.
3. "Work around" measures that will be implemented at the direction of the TJPA Representative if regular measures are insufficient.
4. Plan shall be in accordance with all applicable federal, state, and local requirements.

F. Permits:

1. Contractor shall obtain all required permits to perform the work described in this section, including excavation, segregation, temporary stockpiling, transportation, and off-site treatment or disposal of excavated site soils.

1.5 PROJECT REQUIREMENTS

- A. Contractor is responsible for the general supervisory authority over all hazardous materials activities, both incidental and primary, for the excavation and construction work of this Contract. Contractor shall coordinate the activities and trades required to perform the Work of this Contract that may have the potential to directly or indirectly impact hazardous materials. Work in particular that may typically impact hazardous materials includes, as applicable and is not limited to
1. Excavation
 2. Utility Relocation and Excavation
 3. Timber Pile Removal
 4. Buttress Construction
 5. Dewatering
 6. Shoring and Underpinning Work
 7. Archeological Investigations
- B. Contractor shall not create any condition which endangers the safety of TJPA employees and its representatives, other site workers, contractors, and the general public. If the TJPA Representative observes such condition, then the TJPA Representative has the authority to stop work until the Contractor corrects the condition. In such an event, the Contractor shall not be allowed to penalize the TJPA, in any way. The construction schedule shall not be affected by such events.
- C. Contractor is responsible for monitoring its employees and Trade Subcontractors employees for exposure to hazardous materials, either used in construction or otherwise uncovered or intrinsically present at the Site.
- D. 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.
- E. Contractor shall minimize the generation of dust and the migration of hazardous and contaminated materials. Strictly adhere to the dust control measures.
- F. In the event that an unknown hazardous material is disturbed, or an uncontrolled release occurs, Contractor shall notify the TJPA Representative immediately. Refer to the SMP for further procedures to be followed. The TJPA retains the right to clean up the spill or to do the removal of hazardous materials with others. Contractor shall not be allowed to resume work in the contaminated area until clearance is declared. The TJPA will not compensate delays and clean up costs incurred due to the result of Contractor's negligence to notify the TJPA Representative immediately in the event of a hazardous materials release or spills.

- G. Contractor shall prevent the mixing of hazardous and non-hazardous materials, so as to increase the cost and/or volume of materials requiring to be disposed of as hazardous or contaminated waste.
- H. Contractor shall assume, and the TJPA will not indemnify against, any liability 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 of any hazardous material or excavated material, whether on or off site. Therefore, the TJPA will not assume liability, present or future, incurred by Contractor by reason of these activities.
- I. The TJPA is the “generator,” as defined in Section 66260.10 of article 2, Chapter 10, Division 4.5 Title 22 of the California Code of Regulations (CCR) and in Title 40, Code of Federal Regulations, of any hazardous waste, and it will be responsible for such material to the extent required by law. TJPA will not be responsible to any hazardous waste that is generated by the Contractor working at the Site; the Contractor will be the generator of that material.
- J. Packing, labeling, transporting, and disposing of hazardous waste shall comply with California Environmental Protection Agency regulations under 22CFR, including providing and completing the Uniform Hazardous Waste Manifest Form (DTSC 8022A, 7/92, and EPA 8700-22) attached as Attachment 1 (01 13 50/AT1).

1.6 QUALIFICATIONS

- A. Site Safety Representative (SSR): In accordance to the requirements specific to this section listed below the Contractor will assign a qualified person to be directly responsible under the Contractor’s Superintendent having the necessary training to be knowledgeable in the identification, control, and management of the hazardous materials and conditions on-site. The SSR is responsible for the following:
 - 1. Enforcing safe work and hygiene practices in compliance with the site-specific SMP and the Contractor’s prepared HASP.
 - 2. Advising Trade Subcontractors, vendors, and visitors to the site of potential hazards and minimum general requirements of the SMP and HASP.
 - 3. Coordinating Trade Subcontractor’s work regarding hazardous material procedures and controls.
 - 4. Establishing and maintaining restricted work areas.
 - 5. Requiring proper use of personal protective equipment.
 - 6. Communicating approved modified safety requirements to site personnel as well as visitors to the site.
 - 7. Notifying and coordinating with the TJPA for the immediate assessment of and remediation work for unforeseen hazardous materials and/or conditions discovered throughout the duration of this Project.
 - 8. Notifying and coordinating signing of waste manifests with the TJPA in a timely manner.
- B. Hazardous Materials Handlers: Only qualified persons shall engage in hazardous material-related work. Contractor and Trade Subcontractor personnel who come into contact with, are exposed to, disturb, operate equipment to move or haul, or otherwise handle hazardous or contaminated material or debris shall have appropriate hazard communication and required training (trained in accordance with Section 1910.120 of 29 Code of Federal Regulations (HazWoper training)), personal and medical monitoring, and shall be certified to wear appropriate personal protective equipment as required by the applicable laws and regulations.
- C. Hazardous Materials Haulers:
 - 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 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 TJPA's requirements for proper handling and transportation of hazardous waste including mitigation controls and manifesting procedures.
 - e. The legal maximum loads for each vehicle.

1.7 REGULATORY REQUIREMENTS

- A. Contractor shall alert themselves to, shall familiarize themselves with, and shall include in its bid all associated compliance costs for the following laws and regulations regarding the hazards, control measures, management of hazardous materials and characterization and disposal of hazardous waste as applicable.
 1. Environmental Protection Agency (EPA)
 2. Occupational Safety and Health Administration
 3. California Department of Occupational Safety and Health (Cal/OSHA)
 4. California Environmental Protection Agency (CalEPA)
 5. Bay Area Air Quality Management District

Hazardous and contaminated materials and hazardous waste shall be handled according to applicable laws and regulations in effect at the time of disturbance, transport or disposal of said hazardous materials or waste and requirements of the Contract Documents. In the event of conflict, the more stringent requirement shall apply.
- B. Contractor is alerted to and shall familiarize itself to the following laws and regulations regarding the generation, management, characterization, and disposal of hazardous waste.
 1. Resources Conservation and Recovery Act, 42 U.S.C. Section 6901 et seq. and regulations 40 CFR Part 260 et seq.
 2. California Health and Safety Code, Division 20 and regulations, and 22 CCR section 66000 et seq.
- C. Respiratory Protection: Assess potential exposures to hazardous materials and conditions and comply with 29 CFR 1926.62 (f) (formerly 29 CFR 1910.134) and 8 CCR 5144. Provide a hazard analysis. Identify the appropriate respiratory protection to be used for the various tasks. Comply with all requirements associated with proper use of respirators.

1.8 WASTE DISPOSAL AND MANIFESTING PROCEDURES

- A. Contractor shall furnish all labor, materials, equipment, and incidentals required to transport those materials identified as hazardous waste for the purpose of disposal.
- B. 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. Contractor shall haul-off all material classified as hazardous waste (federal Class I RCRA and California Class 1 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-Rev. 3-05, a.k.a. the manifest). During archeology investigations, shallow utility trenches, and/or shallow trenching for exploratory purposes, the soil may remain on-site and be backfilled back into the exploratory trenches. Different layers of materials excavated (i.e., fill material, native

sand, Bay Mud) need to be stockpiled separately. Trenches shall be backfilled with the layer of material excavated.

- D. Contractor shall provide and prepare the waste manifests and landfill profiles for each shipment of hazardous wastes from the Site. Contractor is hereby notified that hazardous waste manifest, waste profiling, and landfill service agreements must be prepared and approved by the landfill in advance of the off-haul. Contractor shall consult with the TJPA Representative for local requirements in filling out the forms.
- E. The manifest shall describe the contents of each truck carrying materials to the waste disposal site, including the weight of the waste materials. Weight, not volume, shall be used to measure waste quantities.
- F. The TJPA Representative will provide a hazardous waste generator identification number for use on the manifest. Contractor shall provide the State Transporter identification (ID) and phone numbers.
- G. 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.
- H. The TJPA Representative only (and not the Contractor) will sign the manifest for the generator of the waste, except for Contractor-generated hazardous waste (see Paragraph 1.5.I of this section).
- I. Preparation and handling of waste manifests: Contractor shall follow the procedures described below.

- 1. Manifest Item 1: The generator's US EPA ID number for this Project will be provided upon request by the TJPA prior to Notice to Proceed.
- 2. Manifest Item 3: Emergency response phone: Edmond Sum 415-597-4040
- 3. Manifest Item 5: Generator's Name and Mailing Address:

Transbay Joint Powers Authority
201 Mission Street, Suite 2100
San Francisco, CA 94105

Generator's Site Address:
Transbay Transit Center
425 Mission Street
San Francisco, CA 94105

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

City and County of San Francisco
Transbay Transit Center Program
Transit Center Shoring and Excavation
Contract #
Project Manager:
Project Manager Phone Number:

_____ Profile # (to be provided)

- 5. Bureau of Engineering, Department of Public Works (BOE) Exemption: BOE Generator fees exempted in accordance with Regulation 3000(e) (2)
Packing, labeling, transporting, and disposing of hazardous waste shall comply with CalEPA regulations under 22 CCR, including providing and completing the Uniform Hazardous Waste Manifest Form (DTSC 8022A, 7/92, and EPA 8700-22). 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 at a landfill-accepting Category I, non-friable ACM.

1.9 BILL OF LADING PROCEDURES FOR CLASS 2 MATERIAL OR LESSER

- A. Contractor shall provide and prepare for the TJPA a bill of lading for all materials classified as California Class 2 or lesser (non-hazardous waste) per vehicle at the end of each day's off-haul activities, for off-site transportation and disposal purposes. Each bill of lading shall be numbered and consist of 4 identical (but colored differently) copies. The first copy will be signed by the driver and the TJPA Representative and will be retained by the TJPA Representative before the truck leaves the site. The next 3 copies will be signed by the receiving facility after the waste excavated soil has been weighed and accepted. Next, Contractor shall give back the second copy to the TJPA Representative after the landfill operator has signed it. The landfill will retain the third copy and Contractor will retain the fourth copy.
- B. 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, and trip number.
 - 3. Weight as recorded at the landfill of waste material.
 - 4. Date of transport.
 - 5. Original location of the material (street location and cross streets).
 - 6. Name, address, and phone number of the receiving facility, i.e., disposal facility. A dated signature from the receiving facility.
 - 7. Name, address, and phone number of the generator, project name, and specification number.
 - 8. A copy of each bill of lading and a certified weight ticket as an indication of the weight of the shipment, which has been received at the disposal facility. Contractor shall furnish such information to the TJPA Representative so payment can be made according to the specification.
 - 9. The transporter shall sign and date the bill of lading indicating that the load described in the bill of lading has been accepted on that particular day for that particular trip.

PART 2 - PRODUCTS

2.1 HAZARDOUS MATERIALS USED IN THE WORK

- A. General: Contractor shall minimize the use of hazardous materials in performing the work. Where materials, which contain hazardous substances or mixtures, are used to perform the work, then material usage shall
 - 1. Be in strict adherence to Cal/OSHA's safety requirements.
 - 2. Have the manufacturer's warnings and application instructions listed on the MSDS provided by the product manufacturer.
 - 3. Have the instructions on the product container label.
- B. Contractor is responsible for coordinating the exchange of MSDS or other hazard communication information between the TJPA Representative, its employees and subcontractors at the Site, following federal, state and local regulations.
- C. Prior to ordering a product or equipment or prior to a product or equipment being incorporated in the Work, Contractor shall notify the TJPA Representative when the specific product or equipment, or its intended usage, may be unsafe.
- D. Should hazardous substances be used, Contractor shall provide the TJPA Representative with its information, clearly indicating
 - 1. Area or areas where the hazardous substances are to be stored and to be used.

2. Contractor's preventative measures, means, and facilities to prevent spillage and contamination of soil, water, and atmosphere by the discharge of noxious substance.
- E. The TJPA is not responsible for any such material brought to the site by the Contractor, Trade Subcontractor, Supplier, or anyone else for whom the Contractor is responsible.

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 13 50

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

01 13 50/APA – SITE MITIGATION PLAN

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

Transbay Transit Center Program

Site Management Plan Transbay Transit Center San Francisco, California

March 2010



Transbay Transit Center

URS

TRANSBAY TRANSIT CENTER PROGRAM

Site Mitigation Plan
Transbay Transit Center
San Francisco, California

March 2010

Prepared for the
Transbay Joint Powers Authority

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24 March 2010
Project 4690.10

Ms. Maria Ayerdi-Kaplan, Executive Director
Transbay Joint Powers Authority
201 Main Street, Suite 2100
San Francisco, California 94105

Subject: Site Mitigation Plan
Transbay Transit Center
San Francisco, California

Dear Ms. Ayerdi-Kaplan:

Treadwell & Rollo is pleased to submit the *Site Mitigation Plan, Transbay Transit Center, San Francisco, California* to the Transbay Joint Powers Authority.

In preparing this Site Mitigation Plan, we have endeavored to observe that degree of care and skill generally exercised by other consultants undertaking similar studies at the same time, under similar circumstances and conditions, and in the same geographical area.

We appreciate the opportunity to assist you with this project. If you have any questions or need any information clarified, please call Mr. Peter J. Cusack at (415) 955-9040.

Sincerely yours,
TREADWELL & ROLLO, INC.

A handwritten signature in black ink, reading "Peter J. Cusack".

Peter J Cusack, REA
Project Manager

A handwritten signature in black ink, reading "Dorinda C. Shipman".

Dorinda C. Shipman, PG, CHG
Principal

46901003.PJC

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REFERENCES

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FIGURES



**SITE MITIGATION PLAN
TRANSBAY TRANSIT CENTER
San Francisco, California**

This site mitigation plan (SMP) was prepared for the construction project at the Transbay Terminal Building ("Site") in San Francisco, California (Figure 1). The existing Transbay Terminal Building is a steel and reinforced concrete structure that spans three city blocks and comprises approximately 400,000 square feet. The Transbay Terminal Building will be demolished and replaced with a multimodal Transit Center that includes an underground rail station. The depth of the excavation will be approximately 65 feet. A soil-cement shoring wall extending approximately 120 feet below ground surface (bgs) will form the perimeter of the Transit Center. A concrete buttress will be placed under the Transit Center adjacent to 301 Mission Street extending down to bedrock, approximately 240 feet.

This SMP presents the measures recommended by Treadwell & Rollo to mitigate potential health and safety (H&S) risks to the environment, workers, and site-user associated with the presence of certain constituents in the soil at the Site.

Part of the Transbay Terminal Building and ramps are bayward of the original historic shoreline and therefore subject to the requirements of the City of San Francisco's Article 22A (Maher) Ordinance. Article 22A states that construction projects in San Francisco, which are located bayward of the historic 1852 high tide line and disturb more than 50 cubic yards of soil, require a Site history and subsurface soil quality assessment. This SMP presents summaries the Site history and subsurface soil quality assessment as required by Article 22A.

1.0 PROJECT DESCRIPTION

The Site is part of the proposed Transbay Joint Powers Authority (TPJA) new Transbay Transit Center. Based on the proposed construction plans, the current Transbay Terminal Building and the associated ramps will be demolished as part of the new Transbay Transit Center development. The new Transbay Transit Center development will centralize the regional transportation network. The Transit Center will consist of below grade levels for the trains, above grade levels for buses and a park on the roof.

The below grade excavation will extend approximately 65 feet below the street grade. Also, different construction activities will be ongoing during the excavation activities which include archeological investigations, shoring wall installation, construction of a buttress for the adjoining 301 Mission Street property, timber pile removal and disposal, utility relocation and the mass excavation for the new Transbay Transit Center.

Previous investigations of properties bayward of the Article 22A boundary have found fill material with elevated levels of metals and petroleum hydrocarbons, likely as a result of the 1906 earthquake and fire. The results of previous environmental investigations at the Site indicate concentrations of elevated soluble lead and petroleum hydrocarbons are present in the subsurface. Site mitigation and health and Safety Plans (HASP) will also be required before construction and off-haul of the fill materials to designated landfills.

2.0 ENVIRONMENTAL REPORTS

We have reviewed the following environmental reports for the Site:

- *Revised Site Mitigation Plan: 199 Fremont Street Project, San Francisco, California Volume 1.*: Geomatrix Consultants, 1998;
- *Environmental Site Characterization, The Century, San Francisco, California*: Treadwell & Rollo, Inc. dated September 1998;
- *Additional Site Characterization Results, The Century, San Francisco, California*: Treadwell & Rollo, Inc. dated May 1999;
- *Site Investigation Report, San Francisco-Oakland Bay Bridge, West Approach Project Including Transbay Terminal Loop, San Francisco*: California Department of Transportation and Professional Service Industries, Inc. April 1999;
- *Groundwater Monitoring Report, Transbay Terminal, 150 1st Street, San Francisco, California*: California Department of Transportation, 2000;
- *Additional Environmental Site Characterization, 535 Mission Street, San Francisco, California*: Treadwell & Rollo, Inc. dated November 2007;

- *Phase I Environmental Site Assessment Transbay Transit Center San Francisco, California:* AMEC, 2008;
- *Limited Phase II Investigation Report Planned Transbay Terminal Bus Ramps and Transit Center San Francisco, California:* ERM West, December 2008; and
- *Environmental Site Characterization, Transbay Terminal Building, San Francisco, California* Treadwell & Rollo, Inc. dated 15 April 2009.

2.1 Phase I Environmental Site Assessment

The eastern portion of the Site is located in an area historically known as the Tar Flat which was a former industrial area developed during the Gold Rush Era of the 1850's. The Site has been occupied by numerous buildings involved in metal work facilities, foundries, and a coal yard. Also, the San Francisco Gas Light Company was located on the south central and south eastern edge Site. Coal tar waste is believed to have been discharged into the surrounding tidelands which include the eastern portion of the Site. The Transbay Terminal Building was constructed between the years of 1936 ad 1938 and was used as a passenger rail station. In 1958, the train tracks were removed and/or paved over and the Site has been used by buses since. In the 1950's, elevated concrete roadways were built on the Site as part of the Transbay Terminal and the Embarcadero Freeway. The Embarcadero Freeway was damaged during the 1989 Loma Prieta earthquake and was subsequently demolished. Since the 1990's, the Site has remained largely unchanged.

Between December 1998 and March 1999, a 1,500-gallon diesel underground storage tank (UST) was removed from the boiler room of the Transbay Terminal Building (425 Mission Street). Approximately 39 tons of petroleum hydrocarbon contaminated soil was removed and disposed from the Site. Case closure was granted by San Francisco Department of Public Health (SFDPH) in regards to the UST in 1999 and no further action was required.

In 1986, four 1,000-gallon USTs were removed from the West section of the Transbay Terminal Building (150 First Street). Petroleum hydrocarbon contamination was noted during the removal activities. Additional investigations were performed and six groundwater monitoring wells were installed near the former USTs. Analytical results of the groundwater samples collected from the monitoring wells indicated the presence of elevated petroleum hydrocarbons and volatile organic compounds (VOCs). At this time,

SFDPH has closed the Site pending the removal of all monitoring wells. One of the monitoring wells has been properly removed and the remaining wells will be removed prior to the excavation of the new Transbay Terminal.

The significant findings identified in the AMEC Phase I Environmental Site Assessment report reviewed included:

- The subsurface fill material at the Site may contain elevated concentrations of heavy metals and other residual petroleum hydrocarbons. These concentrations are likely associated with the presence of 1906 earthquake fill material located below the ground surface. Special soil handling and/or sampling will likely be required during any construction activities.
- Due to the proximity of the former San Francisco Gas and Light Plant (bounded by First, Fremont, Howard, and Natoma Streets) and the presence of manufactured gas by-product waste found on nearby properties, hazardous materials may exist in the subsurface beneath the Site. Special soil handling and/or sampling will likely be required during any construction activity.
- The soil and groundwater near the West section of the Transbay Terminal Building may contain petroleum hydrocarbons and VOCs associated with the former USTs release. Special soil and groundwater handling and/or sampling will likely be required during any construction activities.

2.2 Site Investigations

Limited soil and groundwater sampling has been performed beneath the ramps and near the Transbay Terminal building in 1999 and 2008. Also, we performed an Environmental Site Characterization (ESC) in 2009 at the Transbay Terminal which included collecting soil samples of the fill material and underlying sand from 23 exploratory borings, chemical testing of selected samples, and evaluating the results. We also collected groundwater grab samples from four of the exploratory borings for chemical analysis. The objective of the ESC was to assess the presence of petroleum hydrocarbon and metal contamination in the soil and groundwater beneath the Site that will be removed and disposed during the proposed construction activities. Concentrations of chemical compounds and metals detected in the soil and

groundwater samples were compared to state and federal criteria for hazardous waste and disposal options.

The results of our environmental site characterization and other available subsurface information in the vicinity indicate the Site is generally underlain by approximately 5 to 16 feet of fill material, composed of loose to medium dense silty sand with varying amounts of brick, wood, tar, and glass fragments. The presence of fill material underlying the Site is likely associated with the 1906 earthquake and fire. A sand layer consisting of medium dense to very dense sand with variable amounts of silt approximately 15 to 18 feet thick underlies the fill material. Bay Mud is present beneath the sand layer.

The laboratory analytical results are summarized on Tables 1 through 4. The analytical results are discussed in the following section.

Soil Results

Soil analytical results for parameters other than metals are summarized in Table 1. TPHg was detected above the method reporting limit (0.1 mg/kg) in 3 of the 88 samples analyzed at concentrations ranging from 0.29 mg/kg to 26 mg/kg. TPHd was detected above the method reporting limit (2 mg/kg) in 9 of the 87 samples analyzed at concentrations ranging from 2.01 mg/kg to 54.8 mg/kg. TPHmo was detected above the method reporting limit (4 mg/kg) in 49 of the 88 samples analyzed at concentrations ranging from 4.09 mg/kg to 137 mg/kg. Methylene chloride was detected in 3 of the 14 samples analyzed at concentrations ranging from 0.056 mg/kg to 0.24 mg/kg. No other VOCs were detected at or above methods reporting limits.

Total cyanide was not detected above the method reporting limit (1 mg/kg) in any of the 5 samples analyzed. No SVOCs, Pesticides, PCBs, Sulfide, or Cyanide were detected at or above method reporting limits in the samples analyzed. The pH measured in five samples ranged from 6.70 standard units (S.U.) to 8.66 S.U.

The metal analytical results are summarized in Table 2. Total lead was detected in each of the samples analyzed at concentrations ranging from 1.2 mg/kg to 1,000 mg/kg (Table 2). Total lead was detected at concentrations at or above 50 mg/kg but below 1,000 mg/kg in 33 soil samples. Each of these soil samples was subsequently run for STLC and TCLP lead to determine soluble lead levels. One soil sample (TR-21-5) matched the State of California hazardous waste criteria of 1,000 mg/kg for total lead and

subsequently run for TCLP lead to determine if this soil represents a federal RCRA hazardous waste. The TCLP result was 0.83 milligrams per liter (mg/L) so less than the federal RCRA hazardous waste criteria of 5 mg/L.

STLC lead was detected at or above the method reporting limits in 33 of the 34 samples analyzed at concentrations ranging from 0.13 mg/L to 52.1 mg/L. A total of 19 soil samples exceeded the State of California hazardous waste criteria of 5 mg/L. TCLP lead was detected at or above the method reporting limits in 22 of the 36 samples analyzed at concentrations ranging from 0.13 milligrams per liter (mg/L) to 14.5 mg/L. A total of one soil sample (TR-21-5) exceeded the Federal hazardous waste criteria of 5 mg/L.

The remaining metal concentrations were within normal¹ background ranges found in the western United States with the exception of zinc in sample TR-2-1.5 which was detected at a concentration of 5,600 mg/kg.

Groundwater Results

The groundwater analytical results are presented in Tables 3 and 4. No oil and grease, TRPH, or SVOCs were detected above method reporting limits in any of the four samples. TSS was detected in all the samples with concentrations ranging from 110 mg/L to 160,000 mg/L. COD was detected in TR-19-GW, TR-20-GW, and TR-24-GW with concentrations of 24 mg/L, 20 mg/L, and 64 mg/L, respectively. Phenolics were detected in TR-24-GW at a concentration of 0.074 mg/L. TR-19-GW, TR-20-GW, and TR-24-GW were tested for pH with concentrations of 7.41 S.U., 7.07 S.U., and 7.45 S.U., respectively.

Trichloroethylene was detected in TR-8-GW at a concentration of 1.58 mg/L. 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, benzene, ethylbenzene, isopropyl benzene, n-propylbenzene, styrene, toluene, and total xylenes were detected in TR-19-GW with concentrations of 0.0223 mg/L, 0.00568 mg/L, 0.0251 mg/L, 0.011 mg/L, 0.00561 mg/L, 0.00138 mg/L, 0.00143 mg/L, 0.0171 mg/L, and 0.0591 mg/L, respectively. Methyl tert-butyl ether (MTBE) was detected in TR-20-GW at a concentration of 0.00078 mg/L. Naphthalene was detected in TR-19-GW, TR-20-GW, and TR-24-GW at concentrations of 0.417 mg/L, 0.00371 mg/L, and 0.0548 mg/L, respectively. No other VOCs were detected in any of the samples.

¹ "U.S.G.S. Professional Paper 1270, Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States," 1984.

Antimony was detected in TR-20-GW at a concentration of 0.012 mg/L. Arsenic was detected in TR-24-GW at a concentration of 0.024 mg/L. Barium was detected in TR-8-GW, TR-19-GW, TR-20-GW, and TR-24-GW at concentrations of 0.066 mg/L, 0.052 mg/L, 0.085 mg/L, and 0.022 mg/L, respectively. Chromium was detected in TR-8-GW and TR-20-GW at concentrations of 0.032 mg/L and 0.008 mg/L, respectively. Cobalt was detected in TR-8-GW and TR-20-GW at concentrations of 0.011 mg/L and 0.006 mg/L, respectively. Molybdenum was detected in TR-8-GW, TR-20-GW, and TR-24-GW at concentrations of 0.01 mg/L, 0.024 mg/L, and 0.009 mg/L, respectively. Nickel was detected in TR-8-GW, TR-20-GW, and TR-24-GW at concentrations of 0.054 mg/L, 0.052 mg/L, and 0.013 mg/L, respectively. Vanadium was detected in TR-8-GW, TR-19-GW, TR-20-GW, and TR-24-GW at concentrations of 0.032 mg/L, 0.012 mg/L, 0.012 mg/L, and 0.021 mg/L, respectively. Zinc was detected in TR-8-GW, TR-20-GW, and TR-24-GW at concentrations of 1.1 mg/L, 0.013 mg/L, and 0.011 mg/L, respectively. No other metals were detected in any of the samples.

3.0 SUBSURFACE CONDITIONS

The results of our Site characterization and other available subsurface information in the vicinity indicate the Site is generally underlain by approximately 5 to 16 feet of fill material, composed of loose to medium dense silty sand with varying amounts of brick, wood, tar, and glass fragments. The presence of fill material underlying the Site is likely associated with the 1906 earthquake and fire. A sand layer consisting of medium dense to very dense sand with variable amounts of silt approximately 15 to 18 feet thick underlies the fill material. Bay Mud is present beneath the sand layer.

Groundwater was encountered at the time of the investigation at depths ranging from 13 to 20 feet bgs. Groundwater levels may fluctuate depending on the season. The groundwater flow direction is likely to the northeast towards San Francisco Bay.

4.0 DISCUSSION

Based on the analytical results from the Site subsurface investigation and previous analytical results, some of the fill material contains elevated total and soluble lead levels at concentrations exceeding Federal and State of California hazardous waste criteria. The remaining fill material will most likely be accepted at a regulated Class II and/or Class III landfill. Based on previous environmental investigations at the Site and vicinity, the sand underlying the fill would likely be disposed of as unrestricted waste.

As shown on Figures 3 through 9, the area of fill material containing soluble lead concentrations exceeding the Federal hazardous waste criteria are near boring TR-21 at a depth of 5 feet bgs. The areas of fill material containing total and soluble lead concentrations exceeding the State of California waste criteria are located near borings TR-1 at depths of 1.5 and 5 feet bgs, TR-2 at depths of 1.5, 3 and 5 feet bgs, TR-4 at depths of 3 and 5 feet bgs, TR-8 at depths of 1.5 and 3 feet bgs, TR-14 at a depth of 3 feet bgs, TR-15 at a depth of 3 feet bgs, TR-16 at a depth of 5 feet bgs and 10 bgs, TR-17 at depths of 1.5, 3 and 5 feet bgs, TR-19 at a depth of 7.5 feet bgs, TR-20 at a depth of 7.5 feet bgs, and TR-21 at a depth of 3 feet bgs. The remaining fill material will be disposed as Class II non-hazardous waste.

Groundwater is encountered at depths ranging from approximately 13 to 20 feet bgs across the Site. The proposed construction activities most likely will encounter groundwater in quantities that will require its removal from the subsurface. Prior to discharge into the sanitary sewer system, the dewatering contractor will obtain a batch groundwater discharge permit from the San Francisco Public Utilities Commission (SFPUC). Based on analytical results of the groundwater samples analyzed during this investigation, approval of the groundwater discharge from the dewatering system would be granted by SFPUC.

Because hazardous materials were detected at the Site, a SMP and a HASP will be required prior to construction. This SMP provides recommended measures to mitigate the long-term environmental or health and safety risks caused by the presence of hazardous materials in the soil. The HASP will outline proper soil handling procedures and H&S requirements to minimize worker and public exposure to hazardous materials during construction.

5.0 RECOMMENDATIONS FOR MITIGATIVE ACTIONS

The results of previous environmental investigations at and near the Site indicate the fill material beneath the Site contains elevated concentrations of heavy metals and petroleum hydrocarbons. The presence of these compounds poses soil management and potential H&S issues to be addressed as part of the Site development activities. The soil management objectives for the Site are to minimize exposure to construction workers at the Site, nearby residents and/or pedestrians, and future users of the Site to constituents in the soil.

5.1 Health and Safety Issues

On the basis of our experience on similar sites, there are potential H&S risks associated with the heavy metals and petroleum hydrocarbons detected at the Site. In our opinion, there is a potential for this soil to affect construction workers at the Site, nearby residents and/or pedestrians, and future users of the Site. The routes of potential exposure to the petroleum hydrocarbons and metals could be through three pathways: 1) dermal (skin) contact with the soil, 2) inhalation of dusts, and 3) ingestion of the soil.

The most likely potential for human exposure to the petroleum hydrocarbons and metals in the soil will be during soil excavation operations. Because on-site materials contain concentrations of petroleum hydrocarbons and lead in excess of the Proposition 65 guidelines, we recommend that proper health and safety procedures, as well as warning requirements, be implemented during construction. The contractor should be responsible for establishing and maintaining proper H&S procedures to minimize worker and public exposure to Site contaminants during construction. The potential health risk to on-site construction workers and the public will be minimized by developing and implementing a comprehensive HASP, which should be prepared by a certified industrial hygienist that represents the contractor.

The HASP plan will describe the H&S training requirements, i.e. trained in accordance with Section 1910.120 of 29 Code of Federal Regulations (HazWoper training), specific personal hygiene, and monitoring equipment that will be used during construction to protect and verify the H&S of the construction workers and the general public from exposure to constituents in the soil. It may also be necessary to conduct air monitoring to evaluate the amount of airborne particles during excavation.

A Site health and safety officer (HASO) who represents TJPA will be on Site at all times during excavation activities to ensure that all health and safety measures are maintained. The HASO will have authority to direct and stop (if necessary) all construction activities in order to ensure compliance with the HASP.

The purpose of the HASP is to provide field personnel with an understanding of the potential chemical and physical hazards, protection of any off-site receptors, procedures for entering the project Site, H&S procedures, and emergency response to hazards should they occur. All project personnel shall read and adhere to the procedures established in this HASP. A copy of this plan will be kept on Site during field activities and will be reviewed and updated as necessary.

The general public will be protected through the following measures:

- the Site will be fenced;
- exposed soil at the construction Site will be watered at least twice a day to prevent visible dust from migrating off-site;
- soil stockpiles will be covered;
- water will be misted or sprayed during the loading of soil onto trucks for off haul;
- trucks transporting contaminated soil will be covered with a tarpaulin or other cover;
- the wheels of the trucks exiting the Site will be cleaned prior to entering public streets;
- public streets will be swept daily if soil is visible; and
- Excavation and loading activities will be suspended if winds exceed 20 miles per hour.

5.2 Soil Management

The proposed construction activities will disturb soil during the excavation activities including: soil handling during archeological investigations, shoring wall installation, construction of a buttress for the adjoining 301 Mission Street property, timber pile removal and disposal, utility relocation and the mass excavation for the new Transbay Transit Center. During all excavation activities, dust control measures will be implemented to reduce potential exposure. These measures may include moisture-conditioning the soil using dust suppressants and covering the exposed soil and stockpiles with weighed down plastic sheeting to prevent exposure of the soil.

Since all the contaminated fill material will be excavated and disposed of off-site, there will be no risk of direct contact with the underlying fill material by future Site users.

The Site's HASP (prepared by the contractor) will contain additional dust monitoring, action levels, dust control measures, and work stoppage provisions that will be followed during construction activities.

5.2.1 Soil Segregation and Disposal

Before any excavation activities begin at the Site, TJPA shall be provided documentation from the excavation contractor that the accepting landfill facility for the soil from Transbay Terminal project has

been provided with and has reviewed all analytical data collected from the Site. TJPA shall approve all off-site disposal facilities and soil transportation contractors, including, without limitation, available insurable coverage, and prior to the shipment of any soil or other waste materials.

The results of previous soil analytical testing indicate that some of the soil located at the Site will be disposed off-site at a Class I landfill, however additional chemical testing of the soil may be required by the landfill prior to disposal. The excavation contractor shall be responsible for tracking the disposition of soil removed from the Site. Any excavated soil characterized as a hazardous waste shall be tracked using the Uniform Hazardous Waste Manifest System (USEPA Form 8700-22), as applicable. Soil not characterized as a hazardous waste shall be tracked using non-hazardous bills of lading. All documentation will be provided to TJPA during the excavation activities.

If soil stockpiling of suspected contaminated soil is to be performed, the excavation contractor shall establish appropriate soil stockpile locations on the Site to properly segregate, cover, control dust, profile, and manage the excavated soil. Stockpiled soils are to be placed on top of one layer of 10-mil polyethylene sheeting (or equivalent), such as Visqueen. When stockpiled soil is not actively being handled, top sheeting will be adequately secured so that all surface areas are covered.

5.2.2 Soil Disposition

The contractor will establish appropriate off-site soil disposal locations and direct truck loading scheduling and/or soil stockpile locations on the Site to properly segregate, cover, moisture control, and profile the excavated soil. Soil profiling criteria will ultimately depend on the acceptance criteria of the landfills receiving the soil. These procedures will be established by the excavation contractor and coordinated with the proposed landfills prior to initiating soil excavation. It is not anticipated that soil will be reused at the Site for construction-related activities.

The contractor, on behalf of TJPA, will be responsible for tracking final soil dispositions. Any excavated soil considered hazardous waste will be tracked using the Uniform Hazardous Waste Manifest System (USEPA Form 8700-22), as applicable. Soil not considered hazardous waste will be tracked using non-hazardous bills of lading. These two systems will be used to comply with appropriate state and local requirements.

The contractor will arrange for transportation of all wastes off-site. Hazardous and non-hazardous waste will be transported to the appropriate disposal facility using a permitted, licensed, and insured transportation company. Transporters of hazardous waste must meet the requirements of 40 CFR 263 and 22 CCR 66263. All trucks transporting bulk hazardous waste will be properly lined and covered with compatible materials. Trucks will be decontaminated prior to any use other than hauling contaminated materials unless the contaminated material was already double-contained. The contractor will be responsible for preparing and submitting traffic control plans for trucks entering and leaving the Site. A decontamination pad location plan and decontamination procedures will be prepared. A route plan will also be prepared showing the expected route each truck will use to reach each landfill.

For soil that is to be exported off-site that is characterized as a hazardous waste, an appropriate USEPA Generator Identification Number will be recorded on the hazardous waste manifests used to document transport of hazardous waste off-site. The hazardous waste transporter, disposal facility, and U.S. Department of Transportation (DOT) waste description required for each manifest will be determined on a case-by-case basis. A description of the number of containers being shipped, the type of container, and the total quantity of waste being shipped will also be included on each manifest.

The contractor will be responsible for accurate completion of the hazardous waste manifests and nonhazardous bills of lading. Records of all wastes shipped off-site will be maintained by TJPA and will be made available for inspection on request. The final destination of wastes transported off-site will be documented in the Site Closure Report (Section 5.9).

5.2.3 Soil Sampling

If needed, chemical testing of the stockpiled soil will be performed to profile the soil for disposal. Soil profiling criteria depends on the proposed landfill location or off-site receiving facility. These procedures shall be established by the excavation contractor and coordinated with the proposed landfills prior to initiating soil excavation. Typical soil profiling requirements are one four-point composite sample per 500 to 750 cubic yards to be disposed.

If soil samples are required for analysis, the samples shall be collected by using a hand-driven sampler with an inside diameter of two inches, lined with a clean stainless steel tube, and driven into the soil. The ends of the sample tube shall be covered with Teflon and sealed with plastic end caps, and placed into an ice-chilled cooler until delivery under chain-of-custody protocol to a California-certified analytical

laboratory. The soil samples collected from the stockpile shall be identified by using a progressive numbering sequence with the date of the sample collection and the location. All appropriate regulatory sampling methods, holding times, and detection limits shall be followed.

5.3 Timber Pile Removal and Disposal

Part of the foundation system for the Transbay Terminal building includes timber piles beneath the basement slab. During the excavation activities these timber piles will be removed and disposed of. The timber piles will be extracted from the subsurface and as much as possible removal of all the soil which is attached to the timber pile will need to be performed. The extracted timber piles will be segregated, transported and disposed of as a Treated Wood at a Class II non-hazardous waste with copies of the Bill of Ladings submitted to TJPA.

5.4 Underground Storage Tank Removal and Disposal

If a underground storage tank (UST) and/or and associated product lines are found, arrange for a licensed tank removal contractor to properly remove and dispose of the UST. Proper permits and notifications should be in place prior to removing the UST. If soil staining is observed, place the affected soil into a stockpile onto plastic sheets and cover with plastic sheets. The Environmental Consultant will complete soil sampling and analysis tasks for UST closure in accordance with San Francisco Fire Department (SFFD) and SFDPH.

5.5 Coal Gasification Residual Material

The former San Francisco Gas Light Company was located on the south central and south eastern edge of the Site. Coal tar waste is believed to have been discharged into the surrounding tidelands which include the eastern portion of the Site. Excavation in this area of the Site will most likely encounter residual coal tar waste. Some of the coal gasification residual material encountered may be former piping, coal tar, phenols, heavy metals, and polynuclear aromatic hydrocarbons. If any coal gasification residual material is encountered during the excavation, the material will be stockpiled onto plastic sheeting and covered with plastic sheeting. The Environmental Consultant will collect soil samples and analyzed the material to determine proper disposal of the material.

5.6 Groundwater Management

Groundwater is encountered at depths ranging from approximately 18 to 21 feet bgs across the Site. The proposed construction activities most likely will encounter groundwater in quantities that will require its removal from the subsurface. Prior to discharge into the sanitary sewer system, the dewatering contractor will obtain a batch groundwater discharge permit from the San Francisco Public Utilities Commission (SFPUC). Based on analytical results of the groundwater samples analyzed during previous Site investigations, approval of the groundwater discharge from the dewatering system would be granted by SFPUC.

5.7 Dust Control

Prior to initiating construction activities, a dust control plan (prepared by contractor and specific to this project) will be implemented to reduce potential exposure during excavation and loading operations, and included as an appendix to the Site's HASP (prepared by contractor). This document will contain measures to protect construction workers and the public including: dust monitoring, action levels, dust control measures, and work stoppage provisions that will be followed during construction activities.

Dust control will be accomplished through implementation of engineering controls, including light water spraying or misting of stockpiled soil, truck loading areas and work areas. Misting or spraying will be performed to sufficiently reduce fugitive dust emissions, but limited to prevent water runoff. Efforts will also be made to minimize the soil drop height from an excavator's bucket onto soil piles or into transport trucks. The site-specific dust control plan will as needed, include some or all of the following procedures: site fencing; wetting soil; analysis of wind direction; dust monitors at the work zone and at the Site perimeter and appropriate record keeping, visible inspection; establishing a hotline for community response; limiting excavation area; soil storage regulations (e.g. covering stockpiles); windbreaks; paving; truck loading requirements (e.g. covering vehicles or excavator bucket drop heights); Site vehicle speed limits; wheel washing; street sweeping; termination of excavation if winds exceed 20 mph; and/or addition of soil stabilizers; or other responses as needed.

5.8 Contingency Procedures

Hazardous materials including; sumps and/or vaults, asbestos piping, former monitoring wells, and soil with petroleum hydrocarbon odors and/or stains may be encountered during excavation activities. If unanticipated hazardous materials are encountered, the following procedures should be implemented:

- stop work in the area where the suspect material was encountered and cover it with plastic sheets;
- notify the Site superintendent, TJPA and the Environmental Consultant for Site a inspection and appropriate action in the suspect area; and
- review the existing H&S plan and make revisions, if necessary; and
- have appropriately trained personnel on Site to work with the affected materials, once directed by the contractor.

If a sump and/or vaults are encountered during excavation activities, contact TJPA and the Environmental Consultant for inspection and appropriate action. If no liquid, obvious staining or odors are observed, sump and/or vaults will likely be destroyed and disposed of. If liquid is present within the sump and/or vault and/or obvious staining and odors are observed, the Environmental Consultant will collect samples for analyses to determine how to properly disposal of the material.

If stained soil or odors are observed, plastic sheeting will be placed over the affected area and TJPA and the Environmental Consultant will be contacted for inspection and appropriate action. If the material is to be excavated, the material will be stockpiled onto plastic sheeting and covered with plastic sheeting. Soil samples will be collected and analyzed to determine proper disposal of the material.

5.9 Closure Report

A closure report will be prepared by the Environmental Consultant separate from the contractors upon completion of site mitigation activities. This report will present a chronology of the construction events, a summary of analytical data, and a description of all mitigation activities at the Site. It will also include a certification statement that indicates the mitigation activities have been performed in accordance with this SMP. The Environmental Consultant may prepare Closure Memorandums during the excavation activities to document areas that have completed site mitigation activities.

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TABLES

Table 1
Soil Analytical Results for Petroleum Hydrocarbons
Transbay Terminal
San Francisco, California
Project: 4690.10

Sample ID	Depth (feet)	Sample Date	TPHd	TPHmo	TPHg	Methylene Chloride	All Other VOCs	SVOCs	Pesticides	PCBs	Sulfide	Cyanide	pH
			(mg/kg)										
Exploratory Soil Borings Drilled around Transbay Terminal Building at Street Level													
TR-1-1.5	1.5	12/6/08	4.53	122	< 0.1	--	--	--	--	--	--	--	--
TR-1-3.0	3.0	12/6/08	< 2	124	< 0.1	< 0.05	ND	ND	ND	ND	--	< 1.0	8.66
TR-1-12.5	12.5	12/6/08	< 2	6.98	< 0.1	< 0.05	ND	ND	ND	ND	--	--	--
TR-2-1.5	1.5	12/6/08	< 2	137	< 0.1	--	--	--	--	--	--	--	--
TR-2-3.0	3.0	12/6/08	< 2	68.1	< 0.1	--	--	--	--	--	--	--	--
TR-2-15	15.0	12/6/08	< 2	< 4	< 0.1	--	--	--	--	--	--	--	--
TR-2-20	20.0	12/6/08	< 2	< 4	< 0.1	--	--	--	--	--	--	--	--
TR-8-1.5	1.5	1/27/09	< 2	113	< 0.1	--	--	--	--	--	--	--	--
TR-8-3.0	3.0	1/27/09	< 2	9.63	< 0.1	--	ND	--	--	--	--	--	--
TR-8-5.0	5.0	1/27/09	< 2	< 4	< 0.1	--	--	ND	--	--	--	--	--
TR-8-7.5	7.5	1/28/08	< 2	9.28	< 0.1	--	--	--	ND	ND	--	--	--
TR-8-15	15.0	1/27/08	< 2	4.44	< 0.1	--	--	--	--	--	--	--	--
TR-16-5.0	5.0	12/19/08	< 2	< 4	< 0.1	--	--	--	--	--	--	--	--
TR-16-7.5	7.5	12/19/08	< 2	< 4	< 0.1	--	--	--	ND	ND	--	--	--
TR-16-10.0	10.0	12/19/08	< 2	< 4	< 0.1	--	--	--	--	--	--	--	--
TR-16-15.0	15.0	12/19/08	< 2	< 4	< 0.1	0.056	ND	ND	ND	ND	--	< 1.0	6.99
TR-17-1.5	1.5	12/19/08	< 2	35.9	< 0.1	--	--	--	--	--	--	--	--
TR-17-3.0	3.0	12/19/08	< 2	19.8	< 0.1	--	--	--	--	--	--	--	--
TR-17-5.0	5.0	12/19/08	< 2	< 4	< 0.1	0.06	ND	--	--	--	--	--	--
TR-17-7.5	7.5	12/19/08	< 2	10.6	< 0.1	--	--	--	--	--	--	--	--
TR-18-1.5	1.5	12/19/08	< 2	< 4	< 0.1	--	--	--	--	--	--	--	--
TR-18-5.0	5.0	12/19/08	9.58	< 4	< 0.1	--	--	--	--	--	--	--	--
TR-18-7.5	7.5	12/19/08	< 2	< 4	< 0.1	0.24	ND	ND	ND	ND	--	< 1.0	6.70
TR-18-10.0	10.0	12/19/08	< 2	< 4	< 0.1	--	--	--	--	--	--	--	--
TR-18-20.0	20.0	12/19/08	54.8	41.9	26	< 0.05	ND ¹	ND	--	--	--	--	--
TR-18-24.0	24.0	12/19/08	4.53	< 4	< 0.1	--	--	--	--	--	--	--	--
TR-19-1.5	1.5	12/19/08	< 2	5.61	< 0.1	--	--	--	--	--	--	--	--
TR-19-3.0	3.0	12/19/08	< 2	10.3	< 0.1	--	--	--	--	--	--	--	--
TR-19-7.5	7.5	12/19/08	< 2	6.51	< 0.1	--	--	--	--	--	--	--	--
TR-19-10.0	10.0	12/19/08	< 2	< 4	< 0.1	--	--	--	--	--	--	--	--
TR-19-15.0	15.0	12/19/08	< 2	< 4	< 0.1	--	--	--	--	--	--	--	--
TR-20-1.5	1.5	12/18/08	< 2	< 4	< 0.1	--	--	--	--	--	--	--	--
TR-20-3.0	3.0	12/18/08	< 2	< 4	< 0.1	--	--	--	--	--	--	--	--
TR-20-5.0	5.0	12/18/08	< 2	6.73	< 0.1	--	--	--	--	--	--	--	--
TR-20-7.5	7.5	12/18/08	2.47	< 4	< 0.1	< 0.05	ND	ND	--	--	--	--	--
TR-20-15.0	15.0	12/18/08	< 2	< 4	< 0.1	--	--	--	--	--	--	--	--

Table 1
Soil Analytical Results for Petroleum Hydrocarbons
Transbay Terminal
San Francisco, California
Project: 4690.10

Sample ID	Depth (feet)	Sample Date	TPHd	TPHmo	TPHg	Methylene Chloride	All Other VOCs	SVOCs	Pesticides	PCBs	Sulfide	Cyanide	pH
(mg/kg)													
TR-21-1.5	1.5	12/18/08	< 2	< 4	< 0.1	--	--	--	--	--	--	--	--
TR-21-3.0	3.0	12/18/08	--	9	< 0.1	--	--	--	--	--	--	--	--
TR-21-5.0	5.0	12/18/08	< 2	19.6	< 0.1	--	--	--	--	--	--	--	--
TR-21-10.0	10.0	12/18/08	< 2	6.78	< 0.1	--	--	--	--	--	--	--	--
TR-21-15.0	15.0	12/18/08	< 2	< 4	< 0.1	--	--	--	--	--	--	--	--
TR-21-20.0	20.0	12/18/08	< 2	< 4	< 0.1	--	--	ND	--	--	--	--	--
TR-23-1.5	1.5	12/18/08	< 2	< 4	< 0.1	--	--	--	--	--	--	--	--
TR-23-3.0	3.0	12/18/08	< 2	< 4	< 0.1	--	--	--	--	--	--	--	--
TR-23-5.0	5.0	12/18/08	< 2	< 4	< 0.1	--	--	--	--	--	--	--	--
TR-23-7.5	7.5	12/18/08	< 2	34.8	< 0.1	< 0.05	ND	ND	ND	ND	--	< 1.0	7.88
TR-23-16.0	16.0	12/18/08	< 2	< 4	< 0.1	--	--	ND	--	--	--	--	--
TR-24-1.5	1.5	12/19/08	< 2	< 4	< 0.1	--	--	--	--	--	--	--	--
TR-24-3.0	3.0	12/19/08	< 2	4.43	< 0.1	< 0.05	ND	ND	ND	ND	--	--	--
TR-24-5.0	5.0	12/19/08	< 2	15.5	< 0.1	--	--	--	--	--	--	--	--
TR-24-10.0	10.0	12/19/08	< 2	< 4	< 0.1	--	--	--	--	--	--	--	--
TR-24-15.0	15.0	12/19/08	< 2	< 4	< 0.1	--	--	ND	--	--	--	--	--
TR-24-20.0	20.0	12/19/08	< 2	< 4	< 0.1	--	--	--	--	--	--	--	--
Exploratory Soil Borings Drilled within Transbay Terminal Building Basement (~ 10ft below street grade)													
TR-3-1.5	1.5	12/6/08	< 2	7.87	< 0.1	--	--	--	--	--	--	--	--
TR-3-3.0	3.0	12/6/08	< 2	7.4	< 0.1	< 0.05	ND	--	--	--	--	--	--
TR-3-7.5	7.5	12/6/08	< 2	< 4	< 0.1	--	--	--	--	--	--	--	--
TR-4-1.5	1.5	12/6/08	< 2	28.7	< 0.1	--	--	--	--	--	--	--	--
TR-4-3.0	3.0	12/6/08	--	--	--	--	--	ND	ND	ND	--	--	--
TR-5-1.5	1.5	12/6/08	< 2	18.4	< 0.1	--	--	--	--	--	--	--	--
TR-5-3.0	3.0	12/6/08	< 2	30.1	< 0.1	--	--	--	--	--	--	--	--
TR-5-5.0	5.0	12/6/08	< 2	9.89	< 0.1	--	--	--	--	--	--	--	--
TR-6-1.5	1.5	12/6/08	< 2	< 4	< 0.1	--	--	--	--	--	--	--	--
TR-6-3.0	3.0	12/6/08	< 2	77.3	< 0.1	--	--	--	--	--	--	--	--
TR-6-5.0	5.0	12/6/08	< 2	4.38	< 0.1	< 0.05	ND	--	--	--	--	--	--
TR-7-1.5	1.5	12/6/08	15.0	126	< 0.1	--	--	--	--	--	--	--	--
TR-7-3.0	3.0	12/6/08	4.34	26.9	< 0.1	--	--	--	--	--	--	--	--
TR-7-5.0	5.0	12/6/08	2.01	28.8	< 0.1	--	--	ND	--	--	--	--	--
TR-9-1.5	1.5	12/13/08	< 2	< 4	< 0.1	--	--	--	--	--	--	--	--
TR-9-3.0	3.0	12/13/08	< 2	< 4	< 0.1	--	--	--	--	--	--	--	--
TR-9-5.0	5.0	12/13/08	< 2	4.57	< 0.1	--	--	--	--	--	--	--	--
TR-10-1.5	1.5	12/13/08	< 2	24	< 0.1	--	--	--	--	--	--	--	--
TR-10-3.0	3.0	12/13/08	< 2	7.09	< 0.1	--	--	--	--	--	--	--	--
TR-10-4.5	4.5	12/13/08	< 2	15.2	< 0.1	--	--	--	--	--	--	--	--

Table 1
Soil Analytical Results for Petroleum Hydrocarbons
Transbay Terminal
San Francisco, California
Project: 4690.10

Sample ID	Depth (feet)	Sample Date	TPHd	TPHmo	TPHg	Methylene Chloride	All Other VOCs	SVOCs	Pesticides	PCBs	Sulfide	Cyanide	pH
(mg/kg)													
TR-11-1.5	1.5	12/13/08	< 2	12.8	< 0.1	--	--	--	ND	ND	--	--	--
TR-11-3.0	3.0	12/13/08	< 2	11.7	< 0.1	< 0.05	ND	--	--	--	--	--	--
TR-11-5.5	5.5	12/13/08	< 2	10	< 0.1	--	--	ND	--	--	--	--	--
TR-12-1.5	1.5	12/13/08	< 2	8.57	0.38	--	--	--	--	--	--	--	--
TR-12-3.0	3.0	12/13/08	< 2	8.46	0.29	< 0.05	ND	ND	ND	ND	< 10	< 1.0	8.33
TR-12-6.0	6.0	12/13/08	< 2	< 4	< 0.1	--	--	--	--	--	--	--	--
TR-13-1.5	1.5	12/13/08	< 2	13.5	< 0.1	--	--	--	--	--	--	--	--
TR-13-3.0	3.0	12/13/08	< 2	14.3	< 0.1	--	--	--	--	--	--	--	--
TR-13-6.0	6.0	12/13/08	< 2	< 4	< 0.1	--	--	ND	--	--	--	--	--
TR-14-1.5	1.5	12/24/08	2.93	16.1	< 0.1	--	--	--	ND	ND	--	--	--
TR-14-3.0	3.0	12/24/08	< 2	14.4	< 0.1	--	--	--	--	--	--	--	--
TR-14-6.0	6.0	12/24/08	< 2	< 4	< 0.1	< 0.05	ND	--	--	--	--	--	--
TR-15-1.5	1.5	12/24/08	< 2	20.8	< 0.1	--	--	--	--	--	--	--	--
TR-15-3.0	3.0	12/24/08	< 2	4.09	< 0.1	--	--	--	--	--	--	--	--
TR-15-6.5	6.5	12/24/08	< 2	< 4	< 0.1	--	--	ND	--	--	--	--	--

Notes:

TPHd - Total Petroleum Hydrocarbons as Diesel Range (C10-C23), EPA Method 8015M

TPHmo - Total Petroleum Hydrocarbons as Motor Oil (C10-C23), EPA Method 8015M

TPHg - Total Petroleum Hydrocarbons as Gasoline, EPA Method 8015M

VOCs - Volatile Organic Compounds, EPA 8260B

SVOCs - Semi volatile organic compounds, EPA Method 8270

PCBs - Polychlorinated Biphenyls

All results are reported in milligrams per kilogram (mg/kg)

< 0.1 - Analyte was not detected above the laboratory reporting limit (0.1 mg/kg)

-- Not Analyzed

ND - Not detected at or above the laboratory reporting limit

¹ Additional VOC Detections: 2-methylnaphthalene - 0.915 mg/kg, acenaphthene - 0.452 mg/kg, acenaphthylene - 0.642 mg/kg, anthracene - 0.551 mg/kg,

benz(a)anthracene - 0.371 mg/kg, benzo[a]pyrene - 0.339 mg/kg, dibenzofuran - 0.614 mg/kg, fluoranthene - 0.769 mg/kg, fluorene - 1.06 mg/kg, naphthalene (8260) - 12 mg/kg, naphthalene (8270) - 0.92 mg/kg, phenanthrene - 0.925 mg/kg, pyrene - 0.792 mg/kg

Table 2
Soil Analytical Results for Total Metals
Transbay Terminal
San Francisco, California
Project: 4690.10

Sample ID	Depth (feet)	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead TTLC	Lead STLC	Lead TCLP	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Zinc (TCLP)
			(mg/kg)										(mg/L)		(mg/kg)							
Exploratory Soil Borings Drilled around Transbay Terminal Building at Street Level																						
TR-1-1.5	1.5	12/06/08	--	--	--	--	--	--	--	--	780	45.1	0.680	--	--	--	--	--	--	--	--	--
TR-1-3.0	3.0	12/06/08	< 5.0	3.0	33	< 2.0	< 1.0	22	< 5.0	12	44	--	--	0.32	< 5.0	17	< 5.0	1.2	< 5.0	21	39	--
TR-1-5.0	5.0	12/06/08	--	--	--	--	--	--	--	--	160	7.61	0.130	--	--	--	--	--	--	--	--	--
TR-1-7.5	7.5	12/06/08	--	--	--	--	--	--	--	--	710	< 0.100	< 0.100	--	--	--	--	--	--	--	--	--
TR-1-12.5	12.5	12/06/08	--	--	--	--	--	--	--	--	11	--	--	--	--	--	--	--	--	--	--	--
TR-2-1.5	1.5	12/06/08	--	--	--	--	12	23	--	--	420	42.3	4.97	--	--	19	--	--	--	--	5,600	309
TR-2-3.0	3.0	12/06/08	--	--	--	--	--	--	--	--	460	58.5	3.03	--	--	--	--	--	--	--	--	--
TR-2-5.0	5.0	12/06/08	--	--	--	--	--	--	--	--	280	52.1	0.410	--	--	--	--	--	--	--	--	--
TR-2-15	15	12/06/08	--	--	--	--	--	--	--	--	32	--	--	--	--	--	--	--	--	--	--	--
TR-2-20	20	12/06/08	--	--	--	--	--	--	--	--	2.6	--	--	--	--	--	--	--	--	--	--	--
TR-8-1.5	1.5	01/27/09	< 5.0	3.9	71	< 2.0	< 1.0	19	5.1	41	88	11.0	0.16	0.30	< 5.0	23	< 5.0	1.2	< 5.0	17	62	--
TR-8-3.0	3.0	01/27/09	--	--	--	--	< 1.0	19	--	--	76	10.8	< 0.1	--	--	16	--	--	--	--	22	--
TR-8-5.0	5.0	01/27/09	--	--	--	--	--	--	--	--	16	--	--	--	--	--	--	--	--	--	--	--
TR-8-7.5	7.5	01/28/09	--	--	--	--	--	--	--	--	8.8	--	--	--	--	--	--	--	--	--	--	--
TR-8-15	15.0	01/27/09	--	--	--	--	--	--	--	--	1.6	--	--	--	--	--	--	--	--	--	--	--
TR-16-5.0	5.0	12/19/08	--	--	--	--	--	--	--	--	120	12.3	0.34	--	--	--	--	--	--	--	--	--
TR-16-7.5	7.5	12/19/08	< 5.0	2.8	24	< 2.0	< 1.0	23	< 5.0	13	39	--	--	0.13	< 5.0	18	< 5.0	< 1.0	< 5.0	19	50	--
TR-16-10.0	10.0	12/19/08	--	--	--	--	--	--	--	--	55	7.26	< 0.1	--	--	--	--	--	--	--	--	--
TR-16-15.0	15.0	12/19/08	--	--	--	--	< 1.0	37	--	--	5.4	--	--	--	--	26	--	--	--	--	26	--
TR-17-1.5	1.5	12/19/08	--	--	--	--	--	--	--	--	380	7.76	0.10	--	--	--	--	--	--	--	--	--
TR-17-3.0	3.0	12/19/08	--	--	--	--	--	--	--	--	260	14.5	0.15	--	--	--	--	--	--	--	--	--
TR-17-5.0	5.0	12/19/08	--	--	--	--	--	--	--	--	120	12.3	0.5	--	--	--	--	--	--	--	--	--
TR-17-7.5	7.5	12/19/08	--	--	--	--	< 1.0	24	--	--	20	0.13	< 0.1	--	--	22	--	--	--	--	71	--
TR-18-1.5	1.5	12/19/08	< 5.0	16	270	< 2.0	< 1.0	20	31	28	23	--	--	0.35	< 5.0	51	< 5.0	< 1.0	< 5.0	48	74	--
TR-18-3.0	3.0	12/19/08	--	--	--	--	< 1.0	21	--	--	30	--	--	--	--	20	--	--	--	--	80	--
TR-18-5.0	5.0	12/19/08	--	--	--	--	--	--	--	--	27	--	--	--	--	--	--	--	--	--	--	--
TR-18-7.5	7.5	12/19/08	< 5.0	3.2	48	< 2.0	< 1.0	29	8.0	9.8	13	--	--	0.18	< 5.0	26	< 5.0	< 1.0	< 5.0	33	21	--
TR-18-10.0	10.0	12/19/08	--	--	--	--	--	--	--	--	45	--	--	--	--	--	--	--	--	--	--	--
TR-18-20.0	20.0	12/19/08	--	--	--	--	< 1.0	32	--	--	23	--	--	--	--	32	--	--	--	--	48	--
TR-18-24.0	24.0	12/19/08	--	--	--	--	--	--	--	--	2.8	--	--	--	--	--	--	--	--	--	--	--
TR-19-3.0	3.0	12/19/08	--	--	--	--	--	--	--	--	47	--	--	--	--	--	--	--	--	--	--	--
TR-19-7.5	7.5	12/19/08	--	--	--	--	< 1.0	23	--	--	200	9.18	0.27	--	--	19	--	--	--	--	250	--
TR-19-10.0	10.0	12/19/08	--	--	--	--	--	--	--	--	21	--	--	--	--	--	--	--	--	--	--	--
TR-19-15.0	15.0	12/19/08	--	--	--	--	--	--	--	--	6.6	--	--	--	--	--	--	--	--	--	--	--
TR-20-1.5	1.5	12/18/08	< 5.0	4.2	180	< 2.0	< 1.0	40	16	46	140	1.99	0.18	< 0.1	< 5.0	57	< 5.0	< 1.0	< 5.0	33	80	--
TR-20-3.0	3.0	12/18/08	--	--	--	--	--	--	--	--	53	2.22	< 0.1	--	--	--	--	--	--	--	--	--
TR-20-5.0	5.0	12/18/08	--	--	--	--	--	--	--	--	440	1.66	< 0.1	--	--	--	--	--	--	--	--	--
TR-20-7.5	7.5	12/18/08	--	--	--	--	< 1.0	24	--	--	52	24.4	< 0.1	--	--	18	--	--	--	--	48	--
TR-20-15.0	15.0	12/18/08	--	--	--	--	--	--	--	--	1.4	--	--	--	--	--	--	--	--	--	--	--
TR-21-1.5	1.5	12/18/08	--	--	--	--	--	--	--	--	33	--	--	--	--	--	--	--	--	--	--	--
TR-21-3.0	3.0	12/18/08	--	--	--	--	--	--	--	--	1,000	12.8	0.83	--	--	--	--	--	--	--	--	--
TR-21-5.0	5.0	12/18/08	6.7	3.0	50	< 2.0	< 1.0	20	< 5.0	74	100	--	14.5	0.42	< 5.0	18	< 5.0	< 1.0	< 5.0	17	130	--
TR-21-10.0	15.0	12/18/08	--	--	--	--	--	--	--	--	88	3.15	2.04	--	--	--	--	--	--	--	--	--
TR-21-15.0	15.0	12/18/08	--	--	--	--	--	--	--	--	2.4	--	--	--	--	--	--	--	--	--	--	--
TR-21-20.0	20.0	12/18/08	--	--	--	--	< 1.0	22	--	--	2.2	--	--	--	--	17	--	--	--	--	16	--
Hazardous Waste Criteria																						
TTLC	(mg/kg)		500	500	10,000	75	100	2,500	8,000	2,500	1,000	--	--	2.0	3,500	2,000	100	500	700	2,400	5,000	--
STLC	(mg/L)		15	5.0	100	0.75	1.0	5	80	25	--	5	--	0.2	350	20	1.0	5	7.0	24	250	--
TCLP	(mg/L)		--	5.0	100	--	1.0	5	--	--	--	--	5	0.2	--	--	1.0	5	--	--	--	--

Table 2
Soil Analytical Results for Total Metals
Transbay Terminal
San Francisco, California
Project: 4690.10

Sample ID	Depth (feet)	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead TTLC	Lead STLC	Lead TCLP	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Zinc (TCLP)
			(mg/kg)									(mg/L)		(mg/kg)								
TR-23-1.5	1.5	12/18/08	--	--	--	--	--	--	--	--	45	--	--	--	--	--	--	--	--	--	--	--
TR-23-3.0	3.0	12/18/08	--	--	--	--	< 1.0	23	--	--	21	--	--	--	--	18	--	--	--	--	27	--
TR-23-5.0	5.0	12/18/08	--	--	--	--	--	--	--	--	26	--	--	--	--	--	--	--	--	--	--	--
TR-23-7.5	7.5	12/18/08	< 5.0	3.2	64	< 2.0	< 1.0	21	< 5.0	9.6	46	--	--	0.16	< 5.0	16	< 5.0	< 1.0	< 5.0	20	31	--
TR-23-16.0	16.0	12/18/08	--	--	--	--	--	--	--	--	6.8	--	--	--	--	--	--	--	--	--	--	--
TR-24-1.5	1.5	12/19/08	--	--	--	--	--	--	--	--	15	--	--	--	--	--	--	--	--	--	--	--
TR-24-3.0	3.0	12/19/08	< 5.0	1.9	50	< 2.0	< 1.0	26	6.4	18	55	1.62	< 0.1	0.30	< 5.0	20	< 5.0	< 1.0	< 5.0	24	77	--
TR-24-5.0	5.0	12/19/08	--	--	--	--	< 1.0	20	--	--	47	--	--	--	--	16	--	--	--	--	52	--
TR-24-10.0	10.0	12/19/08	--	--	--	--	--	--	--	--	85	2.76	0.15	--	--	--	--	--	--	--	--	--
TR-24-15.0	15.0	12/19/08	--	--	--	--	--	--	--	--	1.2	--	--	--	--	--	--	--	--	--	--	--
TR-24-20.0	20.0	12/19/08	--	--	--	--	--	--	--	--	2.5	--	--	--	--	--	--	--	--	--	--	--
Exploratory Soil Borings Drilled within Transbay Terminal Building Basement (~10ft below street grade)																						
TR-3-1.5	1.5	12/06/08	--	--	--	--	< 1.0	23	--	--	12	--	--	--	--	17	--	--	--	--	23	--
TR-3-3.0	3.0	12/06/08	--	--	--	--	--	--	--	--	13	--	--	--	--	--	--	--	--	--	--	--
TR-3-5.0	5.0	12/06/08	--	--	--	--	--	--	--	--	13	--	--	--	--	--	--	--	--	--	--	--
TR-3-7.5	7.5	12/06/08	--	--	--	--	--	--	--	--	3.2	--	--	--	--	--	--	--	--	--	--	--
TR-4-3.0	3.0	12/06/08	< 5.0	2.8	66	< 2.0	< 1.0	22	< 5.0	37	140	5.37	< 0.100	0.98	< 5.0	15	< 5.0	< 1.0	< 5.0	20	260	--
TR-4-5.0	5.0	12/06/08	--	--	--	--	--	--	--	--	380	5.16	0.260	--	--	--	--	--	--	--	--	--
TR-5-1.5	1.5	12/06/08	--	--	--	--	--	--	--	--	46	--	--	--	--	--	--	--	--	--	--	--
TR-5-3.0	3.0	12/06/08	--	--	--	--	--	--	--	--	54	2.39	0.17	--	--	--	--	--	--	--	--	--
TR-5-5.0	5.0	12/06/08	--	--	--	--	--	--	--	--	56	2.72	0.15	--	--	--	--	--	--	--	--	--
TR-6-1.5	1.5	12/06/08	--	--	--	--	< 1.0	27	--	--	44	--	--	--	--	18	--	--	--	--	69	--
TR-6-3.0	3.0	12/06/08	--	--	--	--	--	--	--	--	90	0.62	< 0.10	--	--	--	--	--	--	--	--	--
TR-6-5.0	5.0	12/06/08	--	--	--	--	--	--	--	--	31	--	--	--	--	--	--	--	--	--	--	--
TR-7-1.5	1.5	12/06/08	--	--	--	--	--	--	--	--	61	2.71	< 0.10	--	--	--	--	--	--	--	--	--
TR-7-3.0	3.0	12/06/08	--	--	--	--	--	--	--	--	6.8	1.67	< 0.10	--	--	--	--	--	--	--	--	--
TR-7-5.0	5.0	12/06/08	--	--	--	--	< 1.0	32	--	--	13	--	--	--	--	20	--	--	--	--	30	--
TR-9-1.5	1.5	12/13/08	--	--	--	--	--	--	--	--	10	--	--	--	--	--	--	--	--	--	--	--
TR-9-3.0	3.0	12/13/08	--	--	--	--	--	--	--	--	15	--	--	--	--	--	--	--	--	--	--	--
TR-9-5.0	5.0	12/13/08	--	--	--	--	--	--	--	--	12	--	--	--	--	--	--	--	--	--	--	--
TR-10-1.5	1.5	12/13/08	--	--	--	--	< 1.0	25	--	--	3.4	--	--	--	--	16	--	--	--	--	18	--
TR-10-3.0	3.0	12/13/08	--	--	--	--	--	--	--	--	5.7	--	--	--	--	--	--	--	--	--	--	--
TR-10-4.5	4.5	12/13/08	--	--	--	--	--	--	--	--	8.0	--	--	--	--	--	--	--	--	--	--	--
TR-11-1.5	1.5	12/13/08	< 5.0	2.5	34	< 2.0	< 1.0	23	< 5.0	13	14	--	--	< 0.1	< 5.0	18	< 5.0	1.1	< 5.0	22	19	--
TR-11-3.0	3.0	12/13/08	--	--	--	--	< 1.0	22	--	--	130	1.26	< 0.1	--	--	17	--	--	--	--	27	--
TR-11-5.5	5.5	12/13/08	--	--	--	--	--	--	--	--	7.0	--	--	--	--	--	--	--	--	--	--	--
Hazardous Waste Criteria																						
TTLC	(mg/kg)		500	500	10,000	75	100	2,500	8,000	2,500	1,000	--	--	2.0	3,500	2,000	100	500	700	2,400	5,000	--
STLC	(mg/L)		15	5.0	100	0.75	1.0	5	80	25	--	5	--	0.2	350	20	1.0	5	7.0	24	250	--
TCLP	(mg/L)		--	5.0	100	--	1.0	5	--	--	--	--	5	0.2	--	--	1.0	5	--	--	--	--

Table 2
Soil Analytical Results for Total Metals
Transbay Terminal
San Francisco, California
Project: 4690.10

Sample ID	Depth (feet)	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead TTLC	Lead STLC	Lead TCLP	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Zinc (TCLP)
			(mg/kg)									(mg/L)		(mg/kg)								
TR-12-1.5	1.5	12/13/08	--	--	--	--	--	--	--	--	32	--	--	--	--	--	--	--	--	--	--	--
TR-12-3.0	3.0	12/13/08	< 5.0	2.4	15	< 2.0	< 1.0	23	< 5.0	8.0	12	--	--	< 0.1	< 5.0	16	< 5.0	< 1.0	< 5.0	19	22	--
TR-12-6.0	6.0	12/13/08	--	--	--	--	--	--	--	--	7.0	--	--	--	--	--	--	--	--	--	--	--
TR-13-1.5	1.5	12/13/08	< 5.0	< 1.7	25	< 2.0	< 1.0	25	5.0	10	25	--	--	< 0.1	< 5.0	18	< 5.0	1.2	< 5.0	22	42	--
TR-13-3.0	3.0	12/13/08	--	--	--	--	--	--	--	--	50	3.34	0.43	--	--	--	--	--	--	--	--	--
TR-13-6.0	6.0	12/13/08	--	--	--	--	< 1.0	21	--	--	40	--	--	--	--	16	--	--	--	--	54	--
TR-14-1.5	1.5	12/24/08	--	--	--	--	--	--	--	--	18	--	--	--	--	--	--	--	--	--	--	--
TR-14-3.0	3.0	12/24/08	< 5.0	3.6	36	< 2.0	< 1.0	28	< 5.0	14	80	5.75	0.38	0.34	< 5.0	19	< 5.0	1.0	< 5.0	24	74	--
TR-14-6.0	6.0	12/24/08	--	--	--	--	< 1.0	59	--	--	6.5	--	--	--	--	45	--	--	--	--	26	--
TR-15-1.5	1.5	12/24/08	--	--	--	--	--	--	--	--	45	--	--	--	--	--	--	--	--	--	--	--
TR-15-3.0	3.0	12/24/08	--	--	--	--	--	--	--	--	64	6.74	0.3	--	--	--	--	--	--	--	--	--
TR-15-6.5	6.5	12/24/08	--	--	--	--	< 1.0	47	--	--	5.8	--	--	--	--	28	--	--	--	--	25	--
Hazardous Waste Criteria																						
TTLC	(mg/kg)		500	500	10,000	75	100	2,500	8,000	2,500	1,000	--	--	2.0	3,500	2,000	100	500	700	2,400	5,000	--
STLC	(mg/L)		15	5.0	100	0.75	1.0	5	80	25	--	5	--	0.2	350	20	1.0	5	7.0	24	250	--
TCLP	(mg/L)		--	5.0	100	--	1.0	5	--	--	--	--	5	0.2	--	--	1.0	5	--	--	--	--

Notes:
TTLC - California Total Threshold Limit Concentration - State hazardous waste criteria
STLC - California Soluble Threshold Limit Concentration - State hazardous waste criteria
TCLP - Federal Toxicity Characteristic Leaching Potential Analysis - Federal hazardous waste criteria
mg/kg - milligrams per kilograms
mg/L - milligrams per liter
< 5.0 - Analyte was not detected above the laboratory reporting limit (5.0 mg/kg).
-- Not analyzed
Bold - Analytical result exceeded hazardous waste criteria

Table 3
Water Analytical Results for Petroleum Hydrocarbons
Transbay Terminal
San Francisco, California
Project: 4690.10

Sample ID	Sample Date	TRPH	Oil and Grease	Phenolics, Total Recoverable	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	cis - 1,2 Dichloroethene	Benzene	Ethylbenzene	Isopropylbenzene	Naphthalene	n-Propylbenzene	Styrene	Toluene	Trichloroethene	Xylenes, Total	methyl tert-butyl ether (MTBE)	All other VOCs	SVOCs	Cyanide	Chemical Oxygen Demand	Suspended Solids (Residue, non-filterable)	pH
		(mg/L)																					
TR-8-GW	1/23/09	< 5	< 5	< 0.05	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	1.58	< 0.0015	< 0.0005	ND	ND	< 0.03	< 20	680	--
TR-19-GW	12/19/08	< 5	< 5	< 0.05	0.0223	0.00568	< 0.0005	0.0251	0.0110	0.00561	0.4170	0.00138	0.00143	0.0171	< 0.0005	0.0591	< 0.0005	ND	ND	0.068	24	110	7.41
TR-20-GW	12/18/08	< 5	< 5	< 0.05	< 0.0005	< 0.0005	0.00408	< 0.0005	< 0.0005	< 0.001	0.00371	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0015	0.00078	ND	ND	< 0.03	20	15,000	7.07
TR-24-GW	12/19/08	< 5	< 5	0.074	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.0015	0.0548	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00236	< 0.0078	ND	ND	< 0.03	64	160,000	7.45

Notes:
TRPH - Total Recoverable Petroleum Hydrocarbons
VOCs - Volatile Organic Compounds, EPA 8260B
SVOCs - Semi volatile organic compounds, EPA Method 8270
mg/L - milligrams per liter
< 5 - Analyte was not detected above the laboratory reporting limit (5 mg/L)
ND - Not detected at or above the laboratory reporting limit
-- Not Analyzed

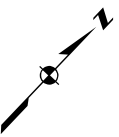
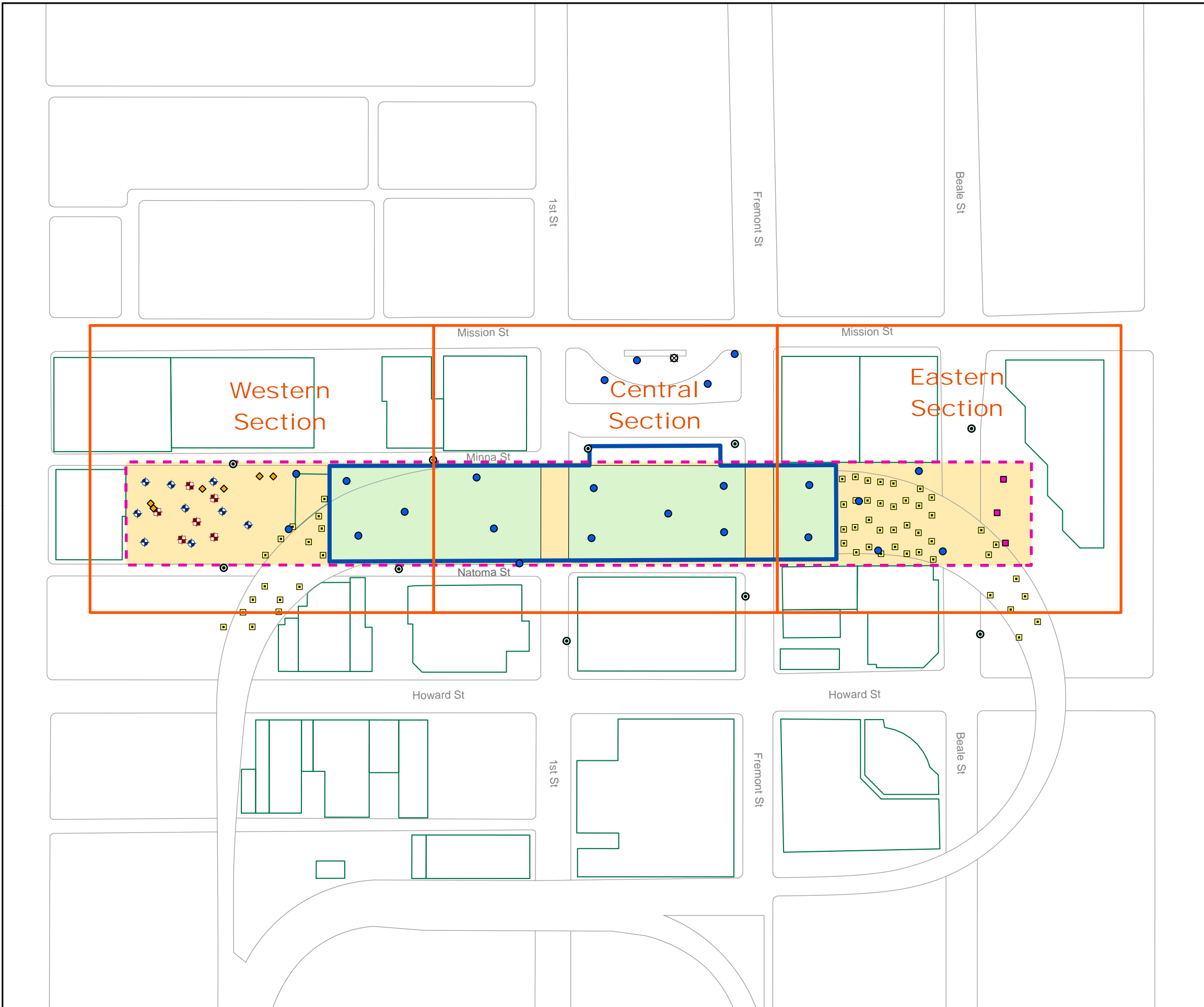
Table 4
Water Analytical Results for Total Metals
Transbay Terminal
San Francisco, California
Project: 4690.10

Sample ID	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
		(mg/L)																
TR-8-GW	1/27/2009	< 0.01	< 0.01	0.066	< 0.005	< 0.005	0.032	0.011	< 0.01	< 0.015	< 0.0002	0.010	0.054	< 0.010	< 0.005	< 0.01	0.032	1.1
TR-19-GW	12/19/2008	< 0.01	< 0.01	0.052	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	< 0.015	< 0.0002	< 0.005	< 0.01	< 0.01	< 0.005	< 0.01	0.012	< 0.005
TR-20-GW	12/18/2008	0.012	< 0.01	0.085	< 0.005	< 0.005	0.008	0.006	< 0.01	< 0.015	< 0.0002	0.024	0.052	< 0.01	< 0.005	< 0.01	0.012	0.013
TR-24-GW	12/19/2008	< 0.01	0.024	0.022	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	< 0.015	< 0.0002	0.009	0.013	< 0.01	< 0.005	< 0.01	0.021	0.011

Notes:
mg/L - milligrams per liter
< 0.01 - Analyte was not detected above the laboratory reporting limit (0.01 mg/L).
-- Not analyzed

FIGURES

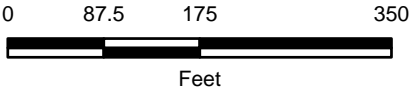
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Legend

Boring Location

- Yellow diamond: Treadwell & Rollo, April and May 2009
- Blue dot: Treadwell & Rollo, December 2008 and January 2009
- Black square with cross: Treadwell & Rollo, December 2008, Obstructed
- Circle with dot: AGS, October 2008
- Pink square: ERM, July 2008
- Red cross: Treadwell & Rollo, April 1999
- Blue diamond: Treadwell & Rollo, July 1998
- Yellow square: PSI for Caltrans, 1999
- Blue outline: Approximate Outline of Current Transbay Terminal Building
- Green fill: Approximate Extent of Transbay Terminal Basement (11 feet deep)
- Green outline: Approximate Outline of Surrounding Building
- Dashed pink line: Approximate Extent of Proposed Underground Train Station
- Orange outline: Map Extent



**TRANSBAY JOINT POWERS AUTHORITY
TRANSBAY TERMINAL**
San Francisco, California

**SITE PLAN WITH BORING LOCATIONS
AND MAP EXTENTS**

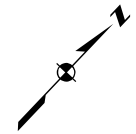
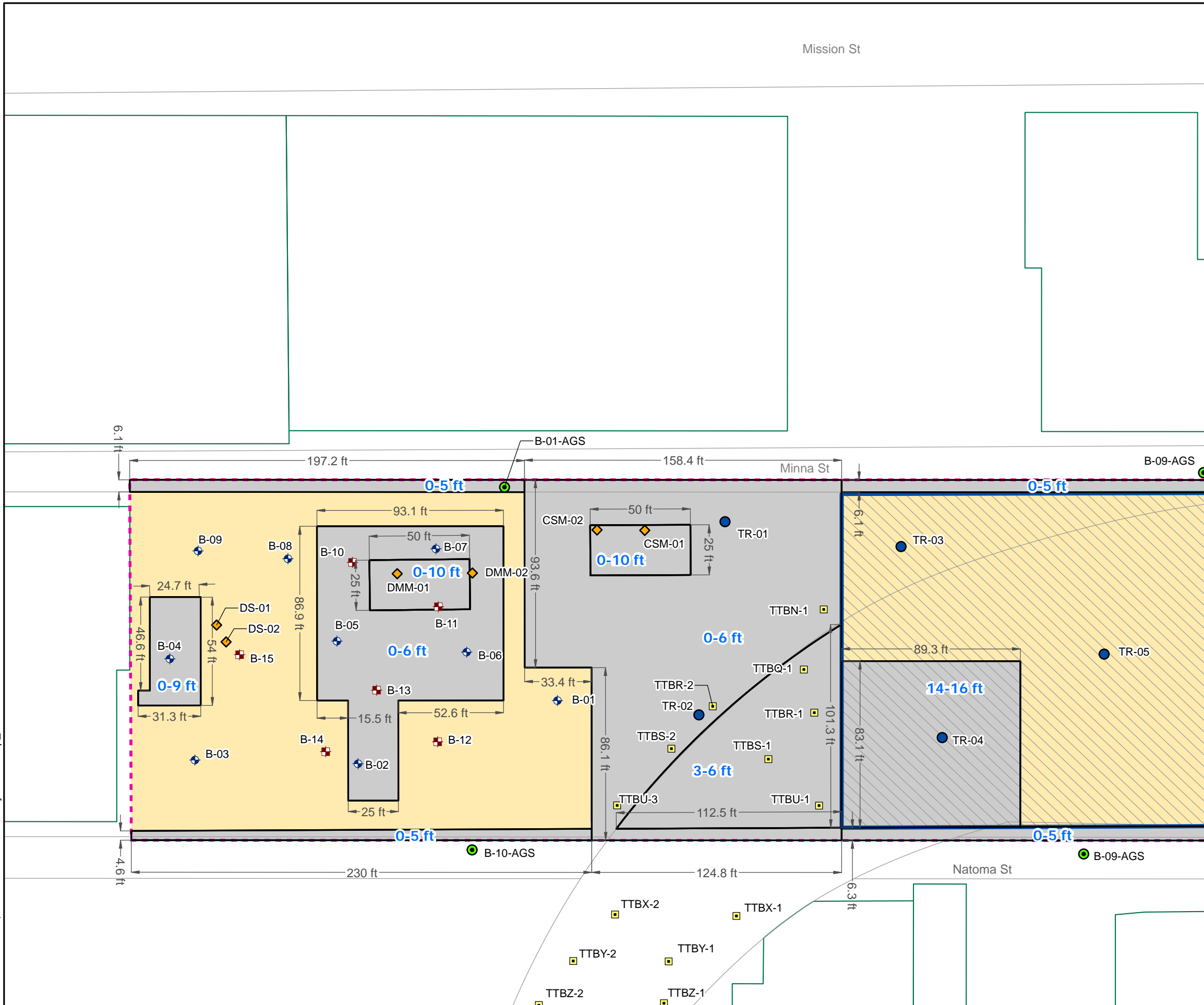
Date 9/15/2009

Project 4690.09

Figure 1

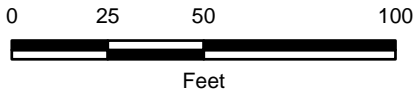
Treadwell&Rollo

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Legend

- Boring Location
- ◆ Treadwell & Rollo, April and May 2009
 - Treadwell & Rollo, December 2008 and January 2009
 - ⊗ Treadwell & Rollo December 2008, Obstructed
 - AGS, October 2008
 - ERM, July 2008
 - Treadwell & Rollo, April 1999
 - ◆ Treadwell & Rollo, July 1998
 - PSI for Caltrans, 1999
- Approximate Outline of Current Transbay Terminal Building
- Class I Fill Material with Excavation Depth Ranges
- Approximate Extent of Proposed Underground Train Station
- Approximate Extent of Transbay Terminal Basement (11 feet deep)



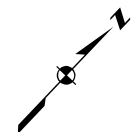
TRANSBAY JOINT POWERS AUTHORITY
TRANSBAY TERMINAL
San Francisco, California

WESTERN SECTION WITH ESTIMATED EXTENT OF CLASS I HAZARDOUS WASTE

Date 9/16/2009 Project 4690.09 Figure 2

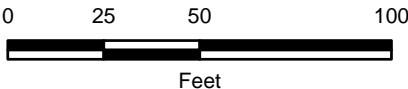
Treadwell&Rollo

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Legend

- Boring Location
- ◆ Treadwell & Rollo, April and May 2009
 - Treadwell & Rollo, December 2008 and January 2009
 - ⊗ Treadwell & Rollo December 2008, Obstructed
 - ERM, July 2008
 - ⊕ Treadwell & Rollo, April 1999
 - ⊕ Treadwell & Rollo, July 1998
 - PSI for Caltrans, 1999
 - Approximate Outline of Current Transbay Terminal Building
 - Class I Fill Material with Excavation Depth Ranges
 - Approximate Extent of Proposed Underground Train Station
 - ▨ Approximate Extent of Transbay Terminal Basement (11 feet deep)



TRANSBAY JOINT POWERS AUTHORITY
TRANSBAY TERMINAL
San Francisco, California

**EASTERN SECTION WITH ESTIMATED
EXTENT OF CLASS I HAZARDOUS WASTE**

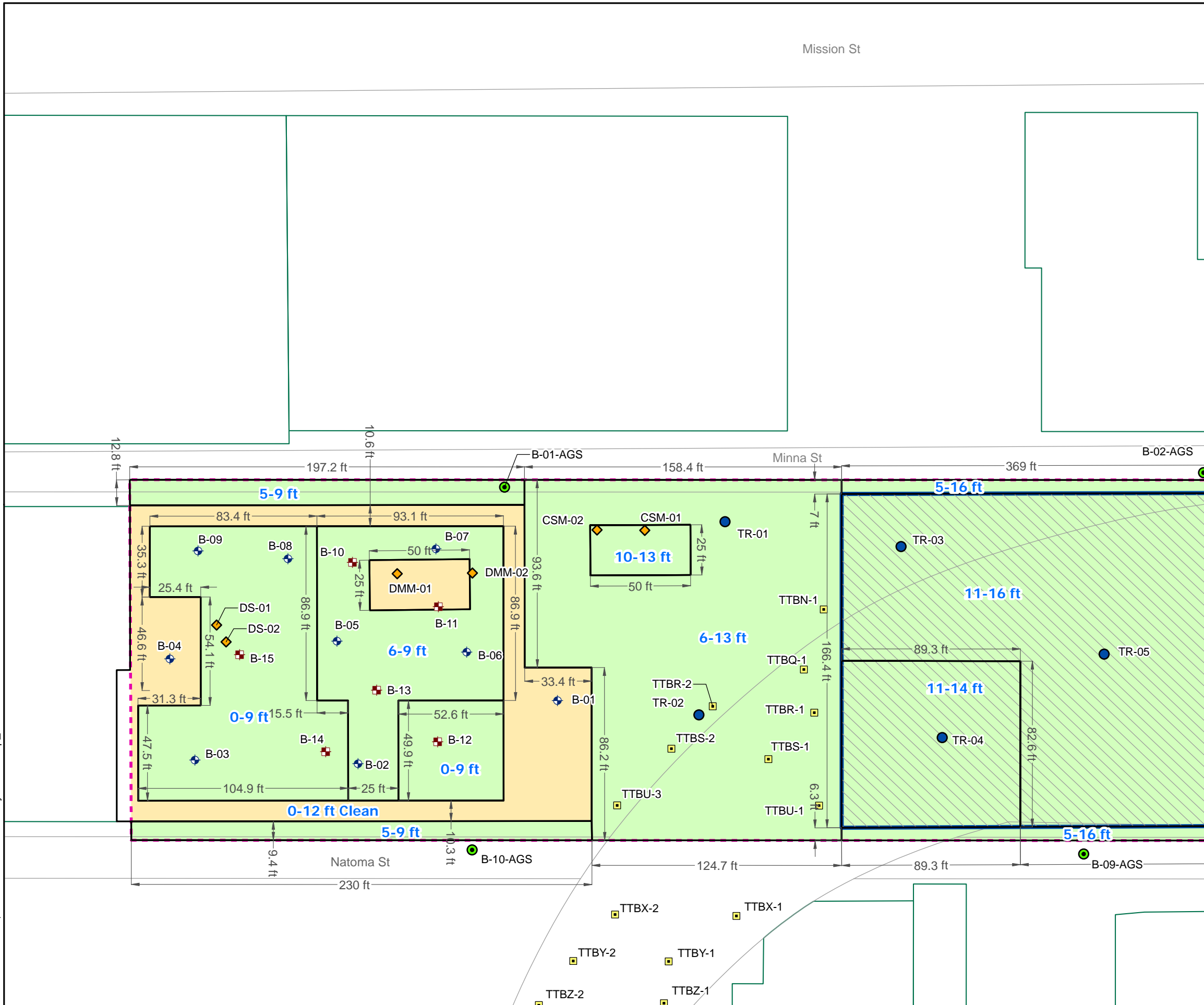
Date 9/16/2009

Project 4690.09

Figure 4

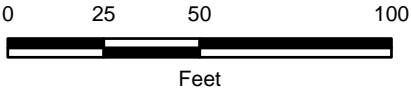
Treadwell&Rollo

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Legend

- Boring Location
- ◆ Treadwell & Rollo, April and May 2009
 - Treadwell & Rollo, December 2008 and January 2009
 - ⊗ Treadwell & Rollo, December 2008, Obstructed
 - AGS, October 2008
 - ERM, July 2008
 - Treadwell & Rollo, April 1999
 - ◆ Treadwell & Rollo, July 1998
 - PSI for Caltrans, 1999
- Approximate Outline of Current Transbay Terminal Building
- Class II Fill Material with Excavation Depth Ranges
- Approximate Extent of Proposed Underground Train Station
- Approximate Extent of Transbay Terminal Basement (11 feet deep)



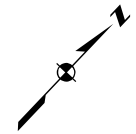
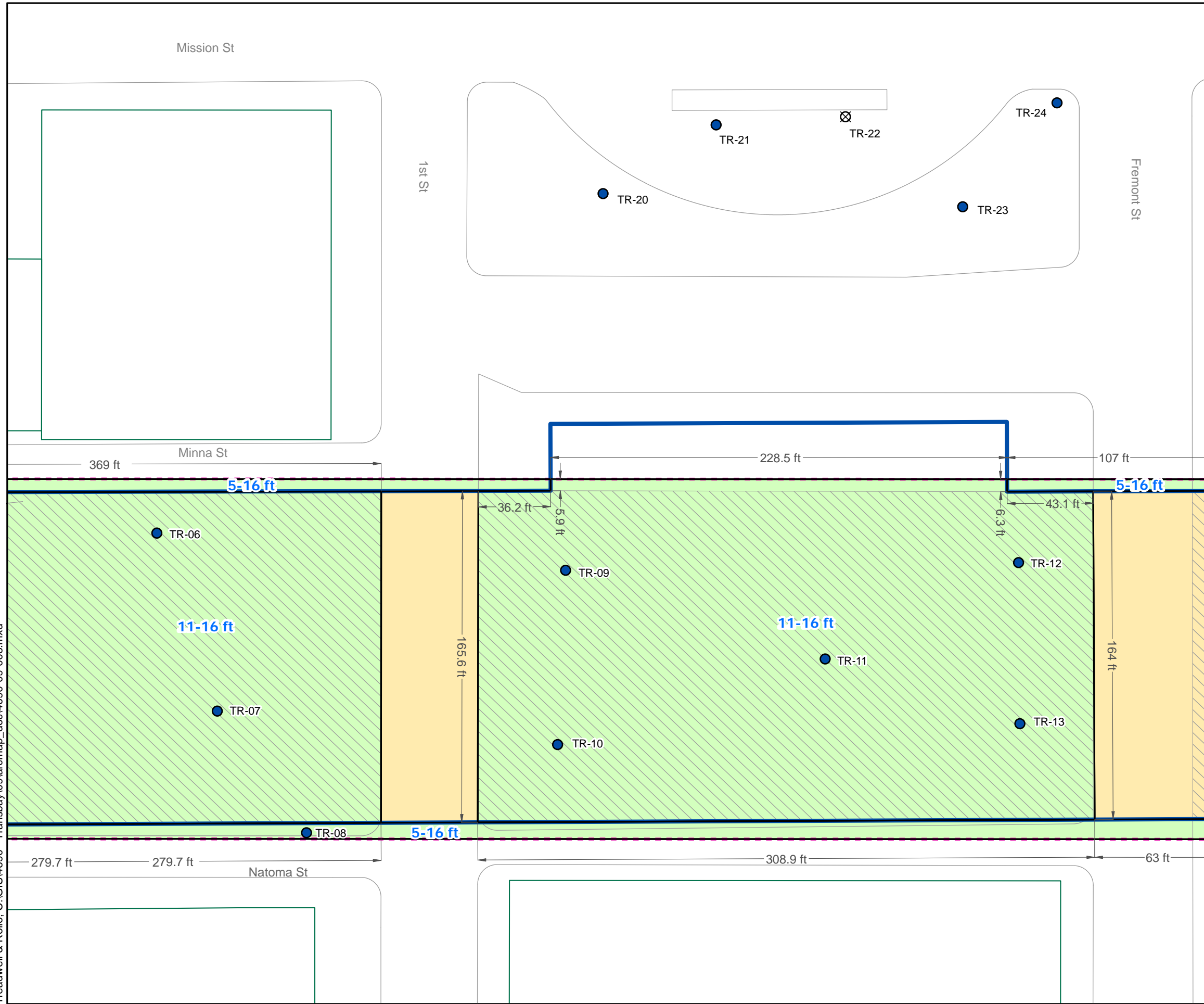
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TRANSBAY TERMINAL
San Francisco, California

**WESTERN SECTION WITH ESTIMATED
EXTENT OF CLASS II HAZARDOUS WASTE**

Date 9/21/2009	Project 4690.09	Figure 5
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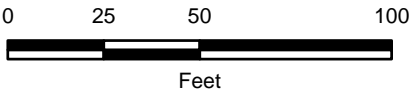
Treadwell&Rollo

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Legend

- Boring Location**
- ◆ Treadwell & Rollo, April and May 2009
 - Treadwell & Rollo, December 2008 and January 2009
 - ⊗ Treadwell & Rollo December 2008, Obstructed
 - ERM, July 2008
 - ⊕ Treadwell & Rollo, April 1999
 - ⊕ Treadwell & Rollo, July 1998
 - Approximate Outline of Current Transbay Terminal Building
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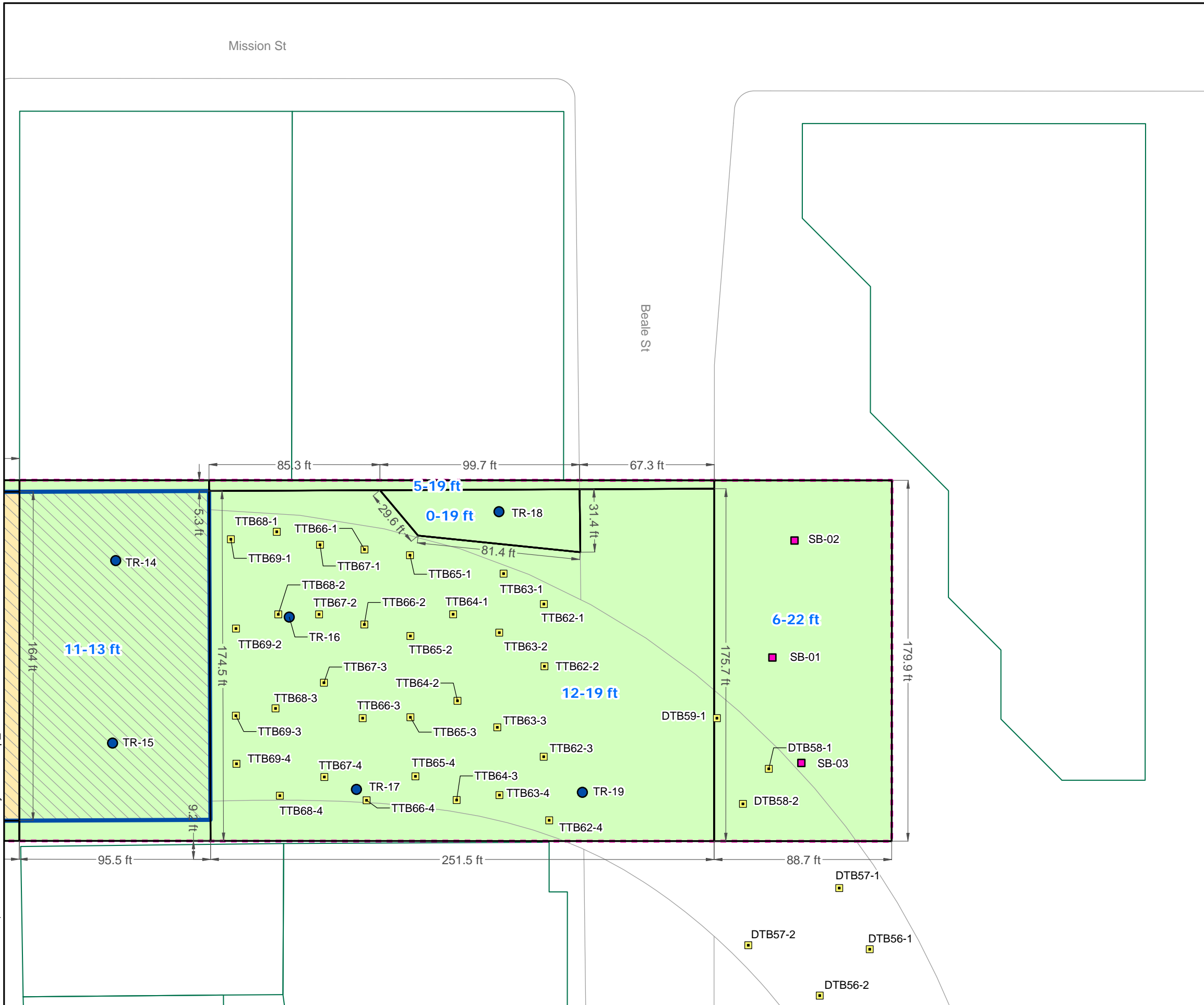
**TRANSBAY JOINT POWERS AUTHORITY
TRANSBAY TERMINAL
San Francisco, California**

CENTRAL SECTION WITH ESTIMATED EXTENT OF CLASS II HAZARDOUS WASTE

Date 9/16/2009 Project 4690.09 Figure 6

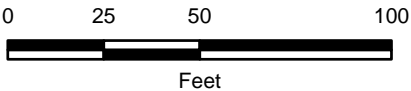
Treadwell&Rollo

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Legend

- Boring Location
- ◆ Treadwell & Rollo, April and May 2009
 - Treadwell & Rollo, December 2008 and January 2009
 - ⊗ Treadwell & Rollo, December 2008, Obstructed
 - ERM, July 2008
 - ⊕ Treadwell & Rollo, April 1999
 - ⊕ Treadwell & Rollo, July 1998
 - PSI for Caltrans, 1999
 - ▭ Approximate Outline of Current Transbay Terminal Building
 - ▭ Class II Fill Material with Excavation Depth Ranges
 - ▭ Approximate Extent of Proposed Underground Train Station
 - ▨ Approximate Extent of Transbay Terminal Basement (11 feet deep)



TRANSBAY JOINT POWERS AUTHORITY
TRANSBAY TERMINAL
San Francisco, California

EASTERN SECTION WITH ESTIMATED EXTENT OF CLASS II HAZARDOUS WASTE

Date 9/21/2009 Project 4690.09 Figure 7

Treadwell&Rollo

01 13 50/AT1 – WASTE MANIFEST FORM

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number		
5. Generator's Name and Mailing Address							
Generator's Site Address (if different than mailing address)							
Generator's Phone:							
6. Transporter 1 Company Name					U.S. EPA ID Number		
7. Transporter 2 Company Name					U.S. EPA ID Number		
8. Designated Facility Name and Site Address					U.S. EPA ID Number		
Facility's Phone:							
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes	
		No.	Type				
	1.						
	2.						
	3.						
	4.						
14. Special Handling Instructions and Additional Information							
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.							
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.							
Generator's/Offeror's Printed/Typed Name		Signature			Month	Day	Year
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____							
Transporter signature (for exports only): _____ Date leaving U.S.: _____							
17. Transporter Acknowledgment of Receipt of Materials							
Transporter 1 Printed/Typed Name		Signature			Month	Day	Year
Transporter 2 Printed/Typed Name		Signature			Month	Day	Year
18. Discrepancy							
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection							
Manifest Reference Number: _____							
18b. Alternate Facility (or Generator)					U.S. EPA ID Number		
Facility's Phone: _____							
18c. Signature of Alternate Facility (or Generator)					Month	Day	Year
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)							
1.	2.	3.	4.				
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a							
Printed/Typed Name		Signature			Month	Day	Year

SECTION 01 14 00 – QUALITY CONTROL

PART 1 - GENERAL

1.1 SUMMARY

- A. This section specifies requirements for the maintenance of quality control over suppliers, manufacturers, products, services, site conditions, and workmanship to produce work of a specified quality.

1.2 CONTRACTOR'S QUALITY CONTROL SERVICES

- A. Contractor shall develop and implement a Contractor's Quality Control (CQC) Plan in accordance with the requirements of paragraph 1.6 and the Transbay Transit Center Program Quality Management System Manual, Revision 0. This will include a three-phase quality control program.
- B. Contractor's Responsibilities:
 - 1. Cooperate with testing agency personnel.
 - 2. Provide access to the Work.
 - 3. Obtain and handle samples of materials and equipment as defined in Section 01 13 00, Submittals.
 - 4. Furnish storage and assistance as requested.
 - 5. Facilitate inspections and tests.
 - 6. Notify the TJPA Representative in writing a minimum of 48 hours, excluding weekends and holidays, but not more than 72 hours prior to expected time for operations requiring as needed testing or inspection services.
 - 7. Schedule work to be tested or inspected to allow tests to be performed within reasonable time period.
 - 8. Where required, deliver samples to testing agency.
 - 9. When a specified test or inspection is not performed due to Contractor's failure to notify the TJPA Representative as specified or when material, or workmanship is not ready at the time specified, the TJPA Representative will establish remedial work, and Contractor shall bear the cost of remedy.
 - 10. Take steps necessary to ensure no portion of the work requiring testing or inspection is covered prior to acceptance by authorized parties.
 - 11. Ensure that no testing or inspection is scheduled until all approvals for the work have been received. This includes welder's certifications, submittals, design/build engineering stamp, and certification.

1.3 SITE INVESTIGATION AND QUALITY CONTROL

- A. Contractor shall verify all dimensions in the field and shall check all field conditions continuously during construction. Contractor shall inspect related and appurtenant work and report in writing to the TJPA Representative any conditions that will prevent proper completion of the Work in accordance with the requirements of the Contract.
- B. Contractor shall be responsible for any Work that is non-conforming. Any required removal, repair, or replacement caused by non-conforming work shall be done by Contractor at no cost to the TJPA. Such non-conforming work will be considered as defective and payments will be withheld in accordance with Section 00 07 00, General Conditions, paragraphs 9.05 and 9.08.
- C. Contractor shall be responsible for recording all changes and modifications to the Contract work as required by site conditions and inspections in accordance with the requirements of Section 01 17 20, Project As-Built Drawings.

1.4 INSPECTION OF THE WORK AND SITE ACCESS

- A. The Work shall be conducted under the general observation of the TJPA Representative and shall be subject to inspection by representatives of the TJPA and other agencies having jurisdiction to assure compliance with all requirements of Section 00 07 00, General Conditions, Paragraph 8.02.
- B. Contractor shall provide access to the work for representatives of the Environmental Protection Agency, the State of California Water Resources Control Board, the Regional Water Quality Control Board, the TJPA Representative and other representatives of the TJPA, and other agencies designated by the TJPA Representative wherever contract work is in preparation or in progress.
- C. During the course of the Work, inspections may be conducted by authorized representatives of the TJPA or independent agencies designated by the TJPA Representative as specified herein. The authorized representatives of the TJPA shall act directly and through various inspectors at the Site. The presence of inspectors or independent agencies, however, shall not relieve the Contractor of the responsibility for the proper execution of the Work in accordance with the requirements of the Contract. Compliance is a duty of the Contractor, and said duty shall not be avoided by any act or omission on the part of the inspectors.
- D. Inspection items include, but are not limited to, work 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.
- E. Where required, fabricated assemblies, including all products, materials, and equipment furnished by the Contractor shall be subject to inspection by the TJPA Representative at the place of manufacture. No product, material, or equipment shall be used in the work until it has been reviewed and accepted by the TJPA Representative.

1.5 INSPECTION AND TESTING LABORATORY SERVICE

- A. Where specified, the TJPA Representative will appoint, employ, and pay for services of an independent firm to perform inspections, testing, and other services specified in individual specification sections and as required by the TJPA Representative, or the TJPA Representative will perform the inspection and testing services.
- B. Where specified, Contractor will appoint, employ, and pay for services of an independent firm to perform inspections, testing, and other services specified in individual specification sections.
- C. When the services of an independent firm are utilized, reports will be submitted promptly by the independent firm in triplicate and distribute one copy each to the TJPA Representative, Contractor, and the code authority having jurisdiction over the Project, indicating observations and results of tests and indicating compliance or noncompliance with the Contract.
- D. Retesting required because of non-conformance to specified requirements shall be performed by the same independent firm on instructions by the TJPA Representative. Contractor shall bear all costs for such retesting at no additional cost to the TJPA.
- E. The TJPA reserves the right to withhold payment on any of the Work that was not inspected by the TJPA Representative or testing lab if the Contractor did not give the notice required in paragraph 1.2.B.6.

1.6 QUALITY CONTROL PLAN

- A. Contractor shall establish and maintain an effective quality control (QC) system in compliance with this Section. QC consists of plans, procedures, and organization necessary to produce an end product that complies with the Contract requirements. Cover all construction operations, both onsite and offsite, and be keyed to the proposed construction sequence. Contractor's authorized representative (CQC System Manager) will be held responsible for the quality of work and is subject to removal by the TJPA Representative for noncompliance with the quality requirements specified in the Contract. In this context the highest level manager responsible for the overall construction activities at the Site, including quality and production, is the CQC System Manager. CQC System Manager must maintain a physical presence at the site at all times and is responsible for all construction and related activities at the Site, except as otherwise acceptable to the TJPA Representative.

Contractor shall submit no later than 30 days after receipt of Notice of Award of the first construction package, the CQC Plan proposed to implement the requirements of this Section. The TJPA will consider an interim plan for the first 90 days of operation. Work will be permitted to begin only after acceptance of the CQC Plan or acceptance of an interim plan applicable to the particular feature of work to be started. Work outside of the accepted interim plan will not be permitted to begin until acceptance of a CQC Plan or another interim plan containing the additional work. The TJPA reserves the right to require the Contractor to make changes in the CQC Plan and operations including removal of personnel, as necessary, to obtain the quality specified.

- B. Content of the CQC Plan: Include, as a minimum, the following to cover all construction operations, both onsite and offsite, including work by Trade Subcontractors and Suppliers.
1. A description of the quality control organization, including a chart showing lines of authority and acknowledgment that the CQC staff will implement the three-phase control system for all aspects of the work specified. Include a CQC System Manager, acceptable to the TJPA Quality Assurance (QA) Manager, who reports to the project manager.
 2. The name, qualifications (in résumé format), duties, responsibilities, and authorities of each person assigned a CQC function.
 3. A copy of the letter to the CQC System Manager signed by an authorized official of the Contractor that describes the responsibilities and delegates sufficient authorities to adequately perform the functions of the CQC System Manager, including authority to stop work that is not in compliance with the Contract. Letters of direction to all other various quality control representatives outlining duties, authorities, and responsibilities will be issued by the CQC System Manager. Copies of these letters must be furnished to the TJPA Representative.
 4. Procedures for scheduling, reviewing, certifying, and managing submittals, including those of Trade Subcontractors, offsite fabricators, Suppliers, and purchasing agents. These procedures must be in accordance with Section 01 13 00, Submittals.
 5. Control, verification, and acceptance testing procedures for each specific test to include the test name, specification paragraph requiring test, feature of work to be tested, test frequency, and person responsible for each test. (Laboratory facilities approved by the TJPA Representative must be used.)
 6. Procedures for tracking preparatory, initial, and follow-up control phases and control, verification, and acceptance tests including documentation.
 7. Procedures for tracking construction deficiencies from identification through acceptable corrective action. Establish verification procedures that identified deficiencies have been corrected.
 8. Reporting procedures, including proposed reporting formats.
 9. A list of the definable features of work. A definable feature of work is a task that is separate and distinct from other tasks, has separate control requirements, and may be identified by different trades or disciplines, or it may be work by the same trade in a

different environment. Although each section of the Specifications may generally be considered as a definable feature of work, there are frequently more than one definable feature under a particular section. This list will be agreed upon during the coordination meeting.

- C. Notification of Changes: After acceptance of the CQC Plan, Contractor shall notify the TJPA Representative in writing of any proposed change. Proposed changes are subject to acceptance by the TJPA Representative.

1.7 COORDINATION MEETING

- A. After the pre-construction conference for each Trade Work Package, before start of construction, Contractor shall meet with the TJPA Representative and TJPA QA Manager and discuss the Contractor's quality control system as it relates to the work of the trade package. Submit the CQC Plan a minimum of 15 days prior to the coordination meeting. During the meeting, a mutual understanding of the system details must be developed, including the forms for recording the CQC operations, control activities, testing, administration of the system for both onsite and offsite work, and the interrelationship of Contractor's management and control with the TJPA Representative's quality assurance. Minutes of the meeting will be prepared by the TJPA Representative, signed by both the Contractor and the TJPA Representative and will become a part of the Contract file. There may be occasions when subsequent conferences will be called by either party to confirm mutual understandings and/or address deficiencies in the CQC system or procedures that may require corrective action by the Contractor.

1.8 QUALITY CONTROL ORGANIZATION

- A. The requirements for the CQC organization are a CQC System Manager and sufficient number of additional qualified personnel to ensure contract compliance. The Safety Manager must receive direction and authority from the CQC System Manager and serve as a member of the CQC staff. Personnel identified in the technical provisions as requiring specialized skills to assure the required work is being performed properly will also be included as part of the CQC organization. Contractor's CQC staff must maintain a presence at the Site at all times during progress of the Work and have complete authority and responsibility to take any action necessary to ensure contract compliance. The CQC staff will be subject to acceptance by the TJPA Representative. Provide adequate office space, filing systems and other resources as necessary to maintain an effective and fully functional CQC organization. Promptly complete and furnish all letters, material submittals, shop drawing submittals, schedules and all other project documentation to the CQC organization. The CQC organization shall be responsible to maintain these documents and records at the Site at all times, except as otherwise acceptable to the TJPA Representative. When it is necessary to make changes to the CQC staff, revise the CQC Plan to reflect the changes and submit the changes to the TJPA Representative for acceptance.
- B. The CQC System Manager must be a graduate engineer, graduate architect, or a graduate of construction management with a professional license as an engineer or architect or a minimum of 7 years' experience in quality control for major public work construction projects. The TJPA will consider as an alternate to a candidate with a qualifying college degree the qualifications of a candidate with a minimum of 15 years of relevant construction experience of which 7 years must be in quality control for major public works projects. The CQC System Manager's primary function on site shall be dedicated to quality control. The CQC System Manager may perform other incidental duties on site, which shall not affect the integrity of the CQC system. Contractor shall identify in the plan an alternate to serve in the event of the CQC System Manager's absence. The requirements for the alternate are the same as those for the CQC System Manager.

- C. In addition to CQC personnel specified elsewhere in the Contract, Contractor shall provide as part of the CQC organization specialized personnel as required to implement the CQC Plan who may be employees of the prime or Trade Subcontractor, be responsible to the CQC System Manager, be physically present at the construction site during work on their areas of responsibility, and have the necessary education or experience. These individuals may perform other duties but must be allowed sufficient time to perform their assigned quality control duties as described in the CQC Plan. A single person may cover more than one area provided that the person is qualified to perform QC activities in each designated and that the workload allows.

1.9 CONTRACTOR QUALITY CONTROL

- A. Contractor quality control is the means by which the Contractor, including Trade Subcontractors and Suppliers, ensures that the construction complies with the requirements of the Contract. At least three phases of control must be conducted by the CQC System Manager for each definable feature of the construction work.
- B. Preparatory Phase: This phase is performed prior to beginning work on each definable feature of work, after all required plans, documents, and materials are approved and accepted, and after copies are at the work site. This phase includes:
1. A review of applicable specifications, reference codes, and standards. CQC System Manager shall make available during the preparatory inspection a copy of those sections of referenced codes and standards applicable to that portion of the Work to be accomplished in the field. Maintain and make available in the field for use by TJPA Representative until final acceptance of the Work.
 2. Review of the Contract drawings.
 3. Check to assure that all materials and/or equipment have been tested, submitted, and approved.
 4. Review of provisions that have been made to provide required control inspection and testing.
 5. Examination of the work area to assure that all required preliminary work has been completed and is in compliance with the Contract.
 6. Examination of required materials, equipment, and sample work to assure that they are on hand, conform to approved shop drawings or submitted data, and are properly stored.
 7. Review of the appropriate activity hazard analysis to assure environmental requirements are met.
 8. Discussion of procedures for controlling quality of the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that feature of work.
 9. Check to ensure that the portion of the CQC Plan for the work to be performed has been accepted by the TJPA Representative.
 10. Discussion of the initial control phase.

The TJPA must be notified at least 48 hours in advance of beginning the preparatory control phase. Include a meeting conducted by the CQC System Manager and attended by the Contractor's authorized representative, other CQC personnel (as applicable), and the foreman responsible for the definable feature. CQC System Manager shall document the results of the preparatory phase actions by separate minutes and attach the minutes to the daily CQC report. CQC System Manager shall instruct applicable workers as to the acceptable level of workmanship required in order to meet Contract requirements.

- C. Initial Phase: This phase is accomplished at the beginning of a definable feature of work. This phase includes:
1. Reviewing the minutes of the preparatory meeting.

2. Verifying the adequacy of controls to ensure full contract compliance, inspection and testing.
- 3 Establishing level of workmanship and verify that it meets minimum acceptable workmanship standards. Compare with required sample panels as appropriate.
- 4 Resolving all differences.

The TJPA must be notified at least 72 hours in advance of beginning the initial phase. The CQC System Manager shall prepare separate minutes of this phase and attach the minutes to the daily CQC report. The initial phase should be repeated for each new definable feature of work.

- D. Follow-up Phase: CQC System Manager shall perform daily checks to assure control activities, including control testing, are providing continued compliance with contract requirements, until completion of the particular feature of work. Record the checks in the CQC documentation. Conduct final follow-up checks and correct all deficiencies prior to the start of additional features of work that may be affected by the deficient work. Do not build upon or conceal non-conforming work.

1.10 TESTS

- A. Contractor shall perform specified or required tests to verify that control measures are adequate to provide a product that conforms to Contract requirements. Upon request, Contractor shall furnish to the TJPA duplicate samples of test specimens for possible testing by the TJPA. Testing includes operation and/or acceptance tests when specified. Procure the services of a certified testing laboratory. Perform the following activities and record and provide the following data.
 1. Verify that testing procedures comply with contract requirements.
 2. Verify that facilities and testing equipment are available and comply with testing standards.
 3. Check test instrument calibration data against certified standards.
 4. Verify that recording forms and test identification control number system, including all of the test documentation requirements, have been prepared.
 5. Record results of all tests taken, both passing and failing on the CQC report for the date taken. Specify paragraph reference, location where tests were taken, and the sequential control number identifying the test. If approved by the TJPA Representative, actual test reports may be submitted later with a reference to the test number and date taken. Provide an information copy of tests performed by an offsite or commercial test facility directly to the TJPA Representative. Failure to submit timely test reports as stated may result in nonpayment for related work performed and disapproval of the test facility for this Contract.

The TJPA Representative reserves the right to check laboratory equipment in the proposed laboratory for compliance with the standards set forth in the Contract Documents and to check the laboratory technician's testing procedures and techniques.

- B. Failure of Materials and Equipment Tested or Inspected: Previous acceptance may be withdrawn, and material may be subject to removal and replacement with material meeting Specification requirements, at no cost to the TJPA.

1.11 COMPLETION INSPECTION

- A. Punch-out Inspection: Conduct an inspection of the Work by the CQC System Manager near the end of the Work, or any increment of the Work established in the baseline schedule or by the Specifications. Prepare and include in the CQC documentation a punch list of items that do not conform to the approved Drawings and Specifications. Include within the list of deficiencies the estimated date by which the deficiencies will be corrected. Make a second inspection the CQC System Manager or staff to ascertain that all deficiencies have been corrected. Once this is accomplished, notify the TJPA Representative that the facility is ready for the TJPA Representative pre-final inspection.

- B. Pre-final Inspection: The TJPA Representative will perform the pre-final inspection to verify that the facility is complete and ready to be occupied. A TJPA Representative pre-final punch list may be developed as a result of this inspection. Ensure that all items on this list have been corrected before notifying the TJPA Representative, so that a final inspection can be scheduled. Correct any items noted on the pre-final inspection in a timely manner. These inspections and any deficiency corrections required by this paragraph must be accomplished within the time slated for completion of the entire work or any particular increment of the Work if the Project is divided into increments by separate completion dates.
- C. Final Acceptance Inspection: The CQC System Manager, plus the Contractor's authorized representative and the TJPA Representative must be in attendance at the final acceptance inspection. Additional personnel from affected third parties may also be in attendance. The final acceptance inspection will be formally scheduled by the TJPA Representative based upon results of the pre-final inspection. Notify the TJPA Representative at least 72 hours prior to the final acceptance inspection and include the Contractor's assurance that all punch list and nonconforming work will be complete and acceptable by the date scheduled for the final acceptance inspection. Failure of the Contractor to have all Contract work acceptably complete for this inspection will be cause for the TJPA Representative to bill the Contractor for the TJPA's additional inspection costs.

1.12 DOCUMENTATION

- A. Maintain current and complete QC reports providing evidence that required quality control activities and tests have been performed. Include in these records the work of Trade Subcontractors and Suppliers on an acceptable form.
- B. Address deficient features and include a statement that equipment and materials incorporated in the Work and workmanship comply with the Contract. Furnish these reports to the TJPA Representative daily within 5 working days after the date covered by the report. Reports must be signed and dated by the CQC System Manager. Include copies of reports prepared by all subordinate quality control personnel within the CQC System Manager's report.

1.13 NOTIFICATION OF NONCOMPLIANCE

- A. The TJPA Representative will notify the Contractor of any detected noncompliance. Take immediate corrective action after receipt of such notice. If the Contractor fails or refuses to comply promptly, the TJPA Representative may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders will be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 14 00

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 01 14 10 – REGULATORY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. All work of the Contract shall conform to or exceed the applicable requirements of the 2007 edition of the San Francisco Building Code and the California Building Standards Code (CCR Title 24). Contractor is not a designer; however, acting in the capacity of an experienced contractor, Contractor will identify conditions that do not comply with applicable codes.
- B. In addition, Contractor shall comply with the applicable laws, ordinances, rules, and regulations, including but not limited to the following:
 - 1. California Code of Regulations (CCR) Title 8, Industrial Relations
 - 2. California Vehicle Code
 - 3. CCR Title 17, Public Health
 - 4. CCR Title 19, Fire Marshal
 - 5. California Public Utilities Commission requirements and General Orders
 - 6. California Department of Transportation requirements
 - 7. California Health and Safety Code, including Cal/OSHA requirements
 - 8. San Francisco Electrical Code
 - 9. San Francisco Plumbing Code
 - 10. San Francisco Fire Code
 - 11. San Francisco Police Code, Article 29, Regulation of Noise
 - 12. San Francisco Department of Public Works, Bureau of Engineering, Standard Specifications. (Refer to Section 01 10 90 for availability of Standard Specifications.)
 - 13. San Francisco Health Code, Article 21, Underground Tank Regulations
 - 14. San Francisco Park Code
 - 15. Americans with Disabilities Act Accessibility Guidelines
 - 16. San Francisco Environment Code
- C. Other Applicable Laws and Regulations: All applicable federal, state, and local laws, and the latest rules and regulations of governing utility districts and the various other authorities having jurisdiction over construction and completion of the Work, including but not limited to the State Fire Marshal, Cal/OSHA and the State Construction Safety Orders, and the California Labor Code shall apply to the Contract throughout, and they shall be deemed to be included in the Contract Documents as though printed herein.
- D. Contractor shall obtain copies of codes and reference standards when required by the Contract Documents.
- E. The referenced codes shall have full force and effect as though printed in these Specifications. Nothing in the Contract Documents shall be construed to permit work not conforming to the governing code requirements. Contractor is not a designer, but will, acting in the capacity of an experienced contractor, identify conditions that do not comply with governing codes.
- F. The latest edition of the codes as approved by the Municipal Code and used by the local agency as of the date that the work is advertised for bids, as adopted by the agency having jurisdiction, shall apply to the work under the Contract Documents.

1.2 PERMITS, INSPECTIONS, AND SERVICE REQUESTS

Application for permits, regulatory permissions, approvals, and request for compliance inspections shall be performed as follows and in accordance with Appendix A of this section (01 14 10/APA) and as stipulated in Section 00 07 00, General Conditions. Where required, Contractor shall obtain and pay for the necessary permits, inspections, and service requests to start and complete the work. Permit costs shall include all associated costs for notifications, walk-through, in-progress inspections, final inspections, oversight, and approvals. Contractor's failure to obtain any required permit and inspection shall not be cause for schedule extension without approval by TJPA Representative.

- A. San Francisco Department of Building Inspection. These approvals include, but are not limited to, the following:
 - 1. Excavation
 - 2. Structural
 - 3. Architectural
 - 4. Mechanical
 - 5. Plumbing
 - 6. Electrical
- B. San Francisco Department of Public Health (SFPDH). These permits, notifications, oversight, and approvals include, but are not limited to, the following:
 - 1. Hazardous Materials Certificate of Registration: Contractor shall obtain and keep current a hazardous materials certificate of registration and implement the hazardous materials plan submitted with the registration application, in accordance with Articles 21, 21A, and 22 of the San Francisco Public Health Code. Contact the SFPDH/Hazardous Materials Unified Program Agency.
 - 2. Well Construction or Soil Borings Permits: A permit is required to construct or operate an environmental or geotechnical well or soil boring. These wells include, but are not limited to, cone penetrometers, inclinometers, piezometers, cathodic wells, exploratory wells, extraction wells, recovery wells, monitoring wells, temporary wells, irrigation wells, industrial wells, dewatering wells, wick drains, hydropunch soil borings, and soil borings drilled for geotechnical or environmental purposes (whether or not groundwater is encountered). This information is not intended as a substitute for familiarity with applicable laws and regulations. Contact the SFPDH, Monitoring Well Section, at least 15 working days in advance of drilling.
- C. San Francisco Department of Public Works Bureau of Street-Use and Mapping permits. These permits include, but are not limited to, the following:
 - 1. Encroachment (minor and major) permits for sidewalks (as required by Section 723.3 of the San Francisco Public Works Code)
 - 2. Street excavation, and utility excavation permits (as required by Article 2.4 of the San Francisco Public Works Code)
 - 3. Street space, debris box, and temporary occupancy permits (as required by Section 724 through 724.3 of the San Francisco Public Works Code)
 - 4. Street improvement permits
 - 5. Side sewer connection, borings/monitoring wells, tanks, and noise-night work permits
- D. San Francisco Municipal Transportation Agency. These permits include, but are not limited to, the following:
 - 1. City transportation permits (overwidth, overlength, overweight, overload)
 - 2. Traffic plan approvals
 - 3. Municipal Railway permits and notifications

- E. San Francisco Public Utilities Commission. These permits include, but are not limited to, the following:
 - 1. Bureau of Environmental Regulation and Management sewer discharge permits and notifications.
 - 2. Bureau of Water Pollution Control use of reclaimed water permit.
 - 3. City Distribution Division permits and service requests for water and meters.
 - 4. Bureau of Light, Heat, and Power permit and notification for removal of temporary lighting.
 - 5. Hetch Hetchy Water and Power (HHWP) application and notification for electrical service connection to Pacific Gas and Electric Company (PG&E). Contact HHWP.
- F. San Francisco Fire Department. These permits include, but are not limited, to the following:
 - 1. The flammable or combustible material storage permit.
 - 2. Permit and notification for auxiliary water supply system relocation.
 - 3. Permit and notification for removal and installation of fuel or chemical storage tanks.
- G. Permits and service requests from PG&E and other utility owners, and underground and overhead facilities. This includes notification to PG&E, and following PG&E's procedures whenever Work occurs near PG&E's high voltage line (115kv). Notification is mandated by PG&E whenever the line is "daylighted," and once again before the "protective work" is covered up.
- H. Cal/OSHA. These permits include, but are not limited to, the following:
 - 1. Construction activity permits
 - 2. Tower crane permits
 - 3. Elevator permits
- I. Bay Area Air Quality Management District (BAAQMD) permits and notifications and the California Air Resources Board (CARB) permits and notifications. Contractor shall obtain all the permits required by the BAAQMD and CARB. For information on the permit requirements and application forms check the web page at www.baaqmd.gov, or call the compliance assistance hotline or the BAAQMD Asbestos Program.

BAAQMD permits forms shall be completed for work involving screening, crushing or grinding, and use of abatement devices, including
 - a. Form P-101B: Application for Authority to Construct/Permit to Operate
 - b. Form G: General Air Pollution Source
- J. The Regional Water Quality Control Board, San Francisco Bay Region, and the California State Water Resource Control Board.

1.3 SUBMITTALS

Contractor shall provide a copy of each applicable permit that it obtains to the TJPA Representative prior to beginning any work covered by such a permit. Refer to Section 01 15 05, Mobilization, for submittal requirements related to drawings for permits.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 14 10

SPECIFICATION ISSUE LOG

Revision	Date
0	July 30, 2010
1	August 10, 2010

SECTION 01 14 10/APA – PERMIT/APPROVAL RESPONSIBILITY MATRIX***

	Project control, permit, or permission application submitted by		Permit/permission fee paid by			Inspection requested by		Inspection fee paid by		
	TJPA	Contractor	TJPA	Contractor	Reimbursed by TJPA	TJPA	Contractor	TJPA	Contractor	Reimbursed by TJPA
TJPA Building Permit/DBI-SFFD Project Control										
Project Control (SFBC)	x		x				x	x		
Architectural (SFBC)	x		x				x	x		
Structural (SFBC)	x		x				x	x		
ADA Compliance (Title 24)	x		x				x	x		
Excavation/Internal Bracing (SFBC)		x	x				x	x		
Paving/Grading/Landscaping/Irrigation (SFBC/CPC)	x		x				x	x		
Crane Safety		x	x				x	x		
Special Inspection	x		x				x	x		
Mechanical (CMC)		x		x	x		x		x	x
Electrical (CEC)		x		x	x		x		x	x
Plumbing/Sewer/Gas (CPC)		x		x	x		x		x	x
Fire Protection (CPC/CFC)		x		x	x		x		x	x
TJPA										
Night Noise – TJPA ROW		x								
Department of Public Health (DPH)										
Backflow Prevention		x		x	x		x		x	x
Construction Waste Diversion		x		x	x					
Site Specific Dust Control		x		x	x				x	x
Hazardous Materials (unit price)	x			x	x		x		x	x

	Project control, permit, or permission application submitted by		Permit/permission fee paid by			Inspection requested by		Inspection fee paid by		
	TJPA	Contractor	TJPA	Contractor	Reimbursed by TJPA	TJPA	Contractor	TJPA	Contractor	Reimbursed by TJPA
Department of Public Works (DPW)										
Street Space		×		×	×		×		×	×
Sidewalk		×		×	×		×		×	×
Minor Sidewalk Encroachment		×		×	×		×		×	×
Excavation in Public ROW		×		×	×		×		×	×
Automobile Runway (Driveway)		×		×	×		×		×	×
Pipe Barrier		×		×	×					×
Utility Facilities		×		×	×		×		×	×
Commemorative Street Plaque		×		×	×					×
Tree Planting/Removal		×		×	×		×		×	×
Night Noise – Public ROW		×		×	×					
Side Sewer		×		×	×		×		×	×
Rock Wheel and Trenchless Technology		×		×			×		×	
San Francisco Municipal Transportation Agency (SFMTA/DPT)										
Contractor Permit (SFMTA Transportation Code 901.a)		×		×			×		×	
Traffic Control Plan		×		×			×			
Storage and Parking Plan		×		×			×			
Special Traffic Permit		×		×			×			
Oversize Vehicle Permit		×		×						
Overhead Cable System (OCS)		×	×				×	×		

	Project control, permit, or permission application submitted by		Permit/permission fee paid by			Inspection requested by		Inspection fee paid by		
	TJPA	Contractor	TJPA	Contractor	Reimbursed by TJPA	TJPA	Contractor	TJPA	Contractor	Reimbursed by TJPA
Mayor's Office on Disability (MOD)										
Disabled Access	×		×				×			
Caltrans										
Encroachment*	×	×	×							
Transportation Permits		×		×						
San Francisco Public Utilities Commission (SFPUC)										
Sewer Discharge		×		×	×		×		×	×
Reclaimed Water		×		×			×		×	
Water Meter Requests		×		×						
Temporary Water Service during Construction		×		×	×		×		×	×
Removal of Temporary Lighting		×		×			×		×	
Electrical Service Connection		×		×	×					
New Street Lighting		×		×	×		×		×	×
San Francisco Fire Department (SFFD)										
Flammable or Combustible Material Storage		×		×			×		×	
Installation and Removal of Fuel or Chemical Storage Tanks		×		×			×		×	
PG&E		×		×	×		×		×	×
Cal/OSHA		×		×	×		×		×	×
Bay Area Air Quality Management District (BAAQMD)		×		×	×		×			
California Public Utilities Commission		×		×	×		×		×	×

	Project control, permit, or permission application submitted by		Permit/permission fee paid by			Inspection requested by		Inspection fee paid by		
	TJPA	Contractor	TJPA	Contractor	Reimbursed by TJPA	TJPA	Contractor	TJPA	Contractor	Reimbursed by TJPA
(CPUC)										
Regional Water Quality Control Board (RWQCB)		×		×	×		×		×	×

* Permit application to be reviewed and approved by the TJPA prior to submission to Authority having Jurisdiction.

** All DBI applications initiated by the Contractor shall be submitted via TJPA.

*** The TJPA will not reimburse the contractor for any permits obtained for reasons of convenience.

END OF SECTION 01 14 10/APA

SPECIFICATION ISSUE LOG

Revision	Date
0	July 30, 2010
1	August 25, 2010

SECTION 01 14 19 – RESTRICTION TO USE OF SITE AREAS

PART 1 - GENERAL

1.1 SUMMARY

- A. Contractor's use of specific Site Areas shall comply with the Contract Documents unless authorized otherwise by the TJPA Representative.

1.2 DEFINITIONS

- A. Site Area: All site and staging areas and locations as indicated on the Contract Drawings available to the Contractor for use to perform construction activities, including but not limited to the construction of structures, staging of operations, and laydown/stockpiling of equipment and materials.

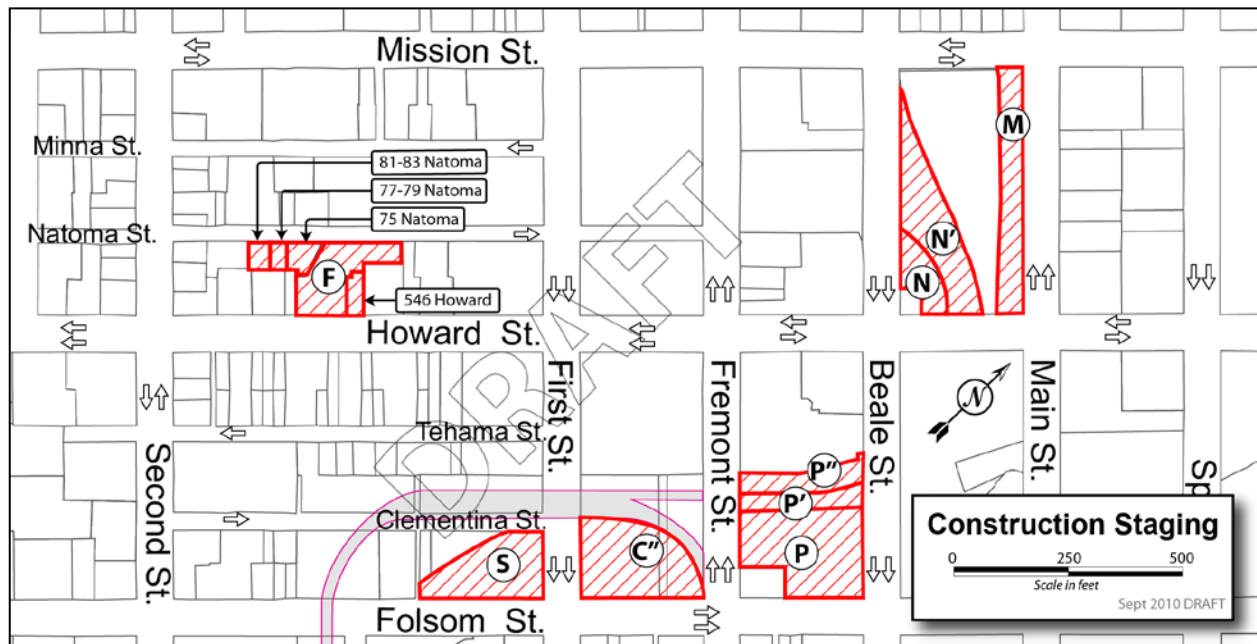
1.3 GENERAL REQUIREMENTS

- A. Contractor shall place rubbish and debris in suitable containers daily to avoid accumulation at the Site Area. All rubbish and debris shall be completely removed and legally disposed of off-site prior to completion of each section of the Site Area.
- B. At no time shall the Contractor place, store, or stockpile construction rubbish, debris, equipment, materials, or the like in such a way as to block an adjacent building's ingress or egress.
- C. Contractor shall completely remove offsite all materials and equipment, except those materials indicated to be incorporated into the construction, prior to vacating a Site Area.
- D. Contractor shall sequence operations to minimize impacts and disruption to the public. Contractor shall conduct its operations in a manner that would minimize the risk of damage in the Site Area.

1.4 CONTRACTOR'S USE OF STAGING SITE AREA

- A. The dates adjacent Site Areas are available for the Contractor's use are specified below.

Staging Area	Beginning	Date Available
Parcel C"	6/1/2011	Limited to an area of 100' x 200' until the end of 2011 Allow SFRA access for pre-construction investigations, such as geotech borings; SFRA developer will assume control of site in the next 3 to 6 years
Parcels F	6/1/2011	Completion of ramp construction
Parcel M	12/1/2010	Completion of ramp construction (may be shared with other TJPA users)
Parcels N, N'	6/1/2011	Completion of Transit Center construction
Parcel P, P', P"	11/1/2010	Allow SFRA access for pre-construction investigations, such as geotech borings; SFRA developer will assume control of site for construction ~mid 2013
Parcel S	6/1/2011	Allow SFRA access for pre-construction investigations, such as geotech borings; SFRA developer will assume control of site in the next 3 to 6 years
546 Howard	6/1/2011	Completion of ramp construction
75 Natoma	6/1/2011	Completion of ramp construction
77-79 Natoma	6/1/2011	Completion of ramp construction
81-83 Natoma	6/1/2011	Completion of ramp construction



END OF SECTION 01 14 19

SPECIFICATION ISSUE LOG

Revision	Date
0	July 30, 2010
1	September 23, 2010

SECTION 01 15 00 – CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

- A. This section specifies Contractor's requirements for construction facilities and temporary controls, construction equipment and staging, hoists, barricades, temporary utilities and services, sanitary facilities, security, and similar facilities and controls as required to perform the Work and to safeguard personnel, property, and the public. Contractor's responsibilities include installation, maintenance, and removal of all such temporary facilities and controls.

1.2 QUALITY ASSURANCE

- A. Codes and Standards: Temporary construction facilities shall conform to the applicable requirements of the following laws and standards:
 - 1. California Occupational Safety and Health Administration (Cal/OSHA), C.C.R. Title 8, Construction Safety Orders
 - 2. Associated General Contractors of America, Manual of Accident Prevention
- B. Regulatory Requirements: All required temporary facilities and equipment shall also be in accordance with applicable federal, state, city, and utility laws, rules, and regulations. Nothing in these Contract Documents shall be construed to permit work which does not conform to the above referenced codes, regulations, and standards.
- C. Permits and Licenses: Obtain all special permits, easements, and licenses and give all notices required for providing temporary construction facilities and controls.

1.3 TEMPORARY UTILITIES AND FACILITIES

- A. Provide, maintain, and pay for electricity, water, telephone, and sanitary facilities, and provide all companies providing services, and pay all bills for services used. Exercise measures to conserve water and electricity.
- B. Temporary Sanitary Facilities: Provide and maintain in accordance with Cal/OSHA standards, temporary toilet facilities at the Site. Locate toilet facilities as specified for offices and trailers in Section 01 15 70, Traffic Routing Work.
- C. Barriers: Provide barriers to deter unauthorized entry to construction areas, to protect the public, existing facilities, and adjacent properties from damage from construction operations and demolition. Protect the public safety by proper barricading of excavations after working hours. Comply with construction site accessibility requirements specified in the Contract Documents, Cal/OSHA and City standards.
- D. Confined Space Entry: Provide assistance to make the confined space safe for entry by the TJPA Representative conforming to California Administration Code, Title 8, General Industry Safety Orders, entitled "Confined Spaces."

1.4 TEMPORARY CONTROLS

- A. Cleaning during Construction: Contractor shall perform the Work in a manner to minimize the generation of dust, dirt, rubbish, and other debris; to prevent dust and debris from interfering with the progress of the Work; and to keep dust and debris from accumulating at the work site or adjacent areas, including road surface of temporary bridge and pedestrian walkways. Maintain the Site in a clean and orderly condition by performing the following tasks on a daily basis:

- a. Comply with applicable regulatory requirements during cleaning and disposal operations. Use cleaning materials that will not create hazards to health or property or cause damage to products or work.
 - b. Use only cleaning materials and methods that are compatible with the surface being cleaned, as recommended by the manufacturer of the products to be cleaned.
 - c. Completely clean the work site including the adjacent sidewalks and street to curb.
 - d. Remove debris and rubbish from the Site.
 - e. Prevent resulting dust and other contaminants from adhering to wet or newly finished surfaces.
- B. Graffiti Control: Contractor shall maintain the Site, equipment, and fences free of graffiti. Remove all graffiti daily using methods that cause no damage to the Work or existing facilities.
- C. Water Control: Contractor shall provide water barriers to control water or other liquids, and should conditions develop, control and suitably dispose of such liquids by means of temporary pumps, troughs, drainage lines, or other methods. (Refer to Section 01 15 61, Stormwater Pollution Prevention, Erosion and Sediment.)
- D. Sewerage Control: Contractor shall take adequate measures to prevent the impairment of the operation of the sewerage system. Prevent all construction material, pavement, concrete, soil, or other debris from entering all sewers, catch basins, or stormwater inlets. Comply with the requirements of the San Francisco Public Works Code, the Industrial Waste Ordinance #19-92 and Department of Public Works Order No. 158170, for any discharge into the sewerage system.
- E. Noise Control: Contractor shall conform to general construction noise control requirements of the San Francisco Noise Control Ordinance, Police Code section 2908, and night and weekend construction permit requirements as specified in the Contract Documents.
- 1. Apply to the TJPA for night noise permits at least 3 working days prior to each event that may exceed noise control requirements. All work requiring such noise permits shall be performed in accordance with the provisions of the approved permits.

1.5 TEMPORARY STORAGE

- A. Contractor shall provide temporary storage as required for the performance of the Work. Conform to the requirements for storage plans as specified in Section 01 15 70, Traffic Routing Work. When onsite space is not adequate, provide additional offsite space for storage.

1.6 REMOVAL

- A. Contractor shall remove temporary facilities, materials, equipment, services, and construction prior to acceptance of the Work by the TJPA.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 15 00

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 01 15 01 – PROJECT ID SIGNS

PART 1 - GENERAL

1.1 SUMMARY

- A. This section specifies Contractor's requirements for Project identification signs.

1.2 REQUIREMENTS

- A. During the course of the Work, Contractor shall provide, erect, and maintain four 4-foot x 8-foot TJPA-approved project signs. Project signs shall not obstruct or interfere with the operation of traffic control devices. Project signs shall be fabricated, placed, and maintained in accordance with the following requirements and as may be directed by the TJPA Representative:
1. The TJPA will provide all Project identification sign artwork to the Contractor for the fabrication of the signs.
 2. Contractor shall fabricate, install, relocate as required, maintain, and remove upon completion of the Work project identification signs.
 3. Signs shall identify Project funding entities, including but not limited to San Francisco County Transportation Authority through a grant of Proposition K local transportation sales tax funds; Metropolitan Transportation Commission through a grant of Regional Measure 2 (RM2) funds; and San Mateo County Transportation Authority through sales tax funds.
 4. The signs shall include logos (artwork for logos will be provided upon request by the TJPA Representative) for the funding entities, TJPA, Muni, Department of Parking and Traffic, and Department of Public Works. Size of logos shall be identical, unless otherwise approved by the TJPA Representative, and no smaller than 8 inches square. Logos shall be reproduced in the colors shown in artwork provided, and clarified by any color numbers provided. San Francisco County Transportation Authority logo shall be placed in the upper right or lower right corner; in no case shall this logo be smaller than the TJPA logo.
 5. Signs shall include names of Board members of San Francisco County Transportation Authority and name of Project.
 6. Signs shall include, upon approval of the TJPA Representative, the name of the Contractor and TJPA's consultants.
 7. Contractor shall provide incidental signage needed for control and safety on any work, storage, or other site controlled by the Contractor.
 8. Contractor shall maintain all signs in a condition satisfactory to the TJPA Representative. Contractor shall promptly clean all graffiti and other defacement from project signs.

1.3 SUBMITTALS

- A. Prior to fabrication, Contractor shall submit the design and a mockup of each sign style for approval allowing 2 weeks for TJPA approval.
- B. Contractors shall submit within 30 days following initiation of sitework photographs (as JPEG or TIFF files) documenting installed signs.

PART 2 - PRODUCTS

2.1 PRODUCTS

- A. Project ID signs shall measure 4 x 8 feet in size and consist of a digital image mounted on ½-inch exterior-grade plywood, good one side, or approved equal material. The signs shall be supported by two 4 x 4-inch posts and braced for temporary mounting so as not to present a hazard of any kind. All exposed wood shall be painted white. Contractor shall place signs in locations directed by the TJPA Representative.
- B. Signs shall be complete and in place prior to starting work at the Site and shall be removed as Contractor's property after completion of work.

PART 3 – EXECUTION

END OF SECTION 01 15 01

SPECIFICATION ISSUE LOG

Revision	Date
0	July 30, 2010
1	August 10, 2010

SECTION 01 15 05 – MOBILIZATION

PART 1 - GENERAL

1.1 SUMMARY

- A. This section specifies requirements for the summary of work and field offices and sheds, and payment procedures for mobilization.

1.2 SUMMARY OF WORK

- A. The work under this 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 all other work and operations which must be performed or costs incurred to begin work on the various Bid items at the work site. Compensation for mobilization may include, but is not limited to, the following principal items:
 - 1. Obtaining permits: Refer to Section 01 14 10, Regulatory Requirements.
 - 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 field offices for the Contractor complete with all furnishings specified by Section 01 15 90, Field Offices and Sheds.
 - 6. Providing all on-site communication facilities, including telephones.
 - 7. Providing on-site sanitary facilities and potable water facilities.
 - 8. Arranging for and erecting Contractor's work and storage yard(s), and installing 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 preconstruction submittals, including construction schedule as specified in Section 01 13 10, Progress Schedule.
 - 13. Fabricating and erecting project signs.
 - 14. Preparing a site-specific Health and Safety Plan required by Section 01 15 45, Health and Safety Criteria.
 - 15. Conducting the pre-construction property survey required by Section 01 15 40, Protection of Property.
 - 16. Preparing a plan and schedule for work affected by operations and events as required by Section 01 10 40, Coordination.
 - 17. Submitting a schedule of values in accordance with Section 01 10 26, Schedule of Values, within 30 days after Notice to Proceed.
 - 18. Documenting with photographs or video existing historic details prior to construction.

1.3 CONTRACTOR'S GENERAL FIELD OFFICE AND FACILITIES REQUIREMENTS

- A. Contractor shall provide and maintain its own field offices, equipment, and services specified herein at the Site during the entire period of construction.
- B. Contractor shall provide sewer and water connections as approved by the TJPA.
- C. Contractor is responsible for paying utilities and services required for the Contractor's own construction facilities in accordance with Section 01 15 00, Construction Facilities and Temporary Controls.
- D. Materials, installation and the maintenance of field offices shall comply with all applicable regulatory requirements.
- E. Contractor shall remove field offices and temporary construction facilities from the Site prior to final payment. The Contractor shall restore the Site occupied by said field offices to its original condition.

1.4 SUBMITTALS

- A. Contractor shall submit drawings to scale indicating materials, details, and calculations for all permits in a format specified by the TJPA.

1.5 PAYMENT PROCEDURES

- A. A Bid item "Mobilization" shall be included in the Trade Subcontractor's schedule of values and will be paid as a lump sum payment over the course of the Project based on a percentage of completion. Certain Trade Subcontractor Bid Packages are exempted by the TJPA.

<u>Percentage Bid Item Mobilization</u>	<u>Percentage Trade Completion</u>
25%	2%
50%	5%
75%	10%
100%	20%

- B. The retention of funds provisions in paragraph 9.05 of Section 00 07 00, General Conditions, applies to the sum of all the Contract work done, including that under the schedule of values Bid item "Mobilization."
- C. Any extension of the Contract Time that may be granted will not in itself constitute grounds for a claim for additional payment.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 15 05

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 01 15 40 – PROTECTION OF PROPERTY

PART 1 – GENERAL

1.1 SUMMARY

- A. This section specifies the requirements for the protection of existing facilities and improvements.

1.2 EXISTING UTILITIES AND IMPROVEMENTS

- A. Contractor shall notify Underground Service Alert (USA) prior to excavating in the public right-of-way areas so that utility companies may be advised of the Work and may field mark or otherwise protect and warn the Contractor of their existing utility lines. Contact USA, 4090 Nelson Avenue, Suite A, Concord, CA 94520, telephone (800) 227-2600, or refer to USA website for more information at www.usanorth.org.
- B.
 - 1. Provide reasonable access and do not hinder or otherwise interfere with any company or agency having underground facilities in removing, relocating, or protecting such facilities.
- C. Contractor shall make reasonable efforts to verify the actual locations and depths of all utilities indicated or field marked, making a sufficient number of exploratory excavations at Contractor's expense of all utilities that may interfere with the Work sufficiently in advance of construction to avoid possible delays to Contractor's work.
- D.
 - 1. Notify the TJPA if such exploratory excavations reveal the utility location as shown or as marked to be in error.
 - 2. When utility lines are encountered within the area of Contractor's operations, notify the TJPA Representative and the owner(s) of the utility lines sufficiently in advance for the necessary protection measures to be taken to prevent interruption of service or delay to Contractor's operations.
- E. Contractor shall protect all existing utilities, facilities, and structures, public or private, and will be held responsible for all damage caused by the Contractor not exercising due care to avoid such damage.
- F. Overhead Contact System: Work on or under the overhead contact system shall be performed with lines and feeders energized unless shutdown of the system is granted. Contractor shall notify the TJPA Representative at least 10 days prior to performing work on energized overhead trolley wires, feeder circuits, or at substations so that the TJPA Representative may arrange for any necessary clearances and inspections.
- G.
 - 1. Contractor is alerted to the condition that overhead trolley wires and feeder cables distribute electrical energy at up to 700 Volts dc. Comply with the "High Voltage" provisions of the California Code of Regulations, Title 8, Division 1, Chapter 4 and Subchapter 5.
 - 2. Take precautions to avoid accidents and damage to the overhead contact wires and riser and feeder cables.
- H. Survey Monuments and Benchmarks: Contractor shall bring to the attention of the TJPA Representative all survey monuments, benchmarks, property line marks, and the like encountered during the Work. Survey monuments, benchmarks, or other survey marks or points shall not be removed or disturbed until referenced or relocated by the TJPA Representative or other agency or party having an interest therein, and then they shall be removed only at the time and in the manner specifically approved by the TJPA Representative. Contractor shall bring all City monument frames within the limits of the Work to grade, with the express provision that any and all work associated with the removal and relocation of such frames, with their covers, shall be under the direct supervision of the TJPA Representative, and all such work shall be considered incidental

work. The cost of reestablishing and resetting survey monuments, benchmarks, or other survey marks or points lost or destroyed through the carelessness or negligence of, or inadvertently by, Contractor or Contractor's employees, shall be at the sole expense of Contractor.

1.3 SAFEGUARDING OF EXISTING FACILITIES

- A. Contractor shall perform all work, including dewatering operations, in such a manner as to avoid damage to existing fire hydrants, power poles, lighting standards, and all other existing utilities, facilities, trees and vegetation, and structures. Contractor will be held responsible for any damage due to its failure to exercise due care.
- B. Broken concrete and debris shall be removed from the property site as the Contractor's property and shall be disposed of in a legal manner.
- C. Contractor shall take adequate measures to prevent the impairment of the sewer system and to prevent construction material, pavement concrete, earth, or other debris from entering a sewer, sewer structures, catch basin, or stormwater inlet. Contractor shall restore damaged utilities and facilities to a condition equal to or better than they were prior to such damage. (Refer to Section 01 15 61, Stormwater Pollution Prevention, Erosion and Sediment.)

1.4 RESTORATION OF PAVEMENT

- A. General: All paved areas cut or damaged during construction shall be replaced with similar materials and of equal thickness to match the existing undisturbed areas, except where specific resurfacing requirements are called for in the Contract Documents or in the permit requirements of the agency issuing the permit. All pavements that are subject to partial removal shall be neatly saw-cut in straight lines.
- B. Temporary Resurfacing: Whenever required by the public authorities having jurisdiction, place temporary surfacing promptly after backfilling and maintain such surfacing in a satisfactory condition for the period of time before proceeding with the final restoration.
- C. Permanent Resurfacing: Damaged edges of pavement along excavations and elsewhere shall be trimmed back by saw-cutting in neat straight lines. All pavement restoration shall be constructed to finished grades compatible with undisturbed adjacent pavement.
- D. Restoration of Sidewalks or Driveways: Wherever sidewalks, curbs and gutters, or driveways have been removed for construction purposes, place suitable temporary sidewalks, curbs and gutters, or driveways promptly after backfilling and maintain them in satisfactory condition for the period of time before the final restoration has been made.

1.5 JOINT SURVEY TO ESTABLISH AUTHENTICITY OF POSSIBLE CLAIMS

- A. Contractor shall use such methods and shall take adequate precautions to prevent damage to existing buildings, structures, and other improvements during the prosecution of the Work.
- B. Contractor shall retain an experienced photographer to perform preconstruction examination and, if necessary, post-construction survey of all nearby structures. The survey shall be made using still photographs. The survey shall be considered incidental work and no separate payment will be made therefor.
- C. Before the commencement of work, the TJPA Representative will arrange for a joint examination of existing buildings, structures, and other improvements in the vicinity of the Work, as applicable, which might be damaged by the Contractor's operations.

- D. The examination of the exterior of existing buildings, structures, and other improvements located within 25 feet of the construction excavation will be made jointly by authorized representatives of Contractor, the TJPA, and property owners under the supervision of the TJPA Representative. The scope of each examination shall include, but is not limited to, the recording of cracks in structures, settlement, leakage, and the like.
- E. The photographer will prepare records in duplicate of all observations, including photographs when deemed necessary or prudent. One copy shall be delivered to the Contractor, and one copy will be kept on file at the office of the TJPA Representative. The photographer may be required to attest to taking the pictures; however, in no case will the photographer determine the cause of cracks, settlement, leakage, or like condition, nor will a photographer be retained for the purpose of engineering evaluation.
- F. The above records and photographs are intended for use as indisputable evidence in ascertaining the extent of any damage which may occur as a result of the Contractor's operations and are for the protection of the adjacent property owners, Contractor, and the TJPA, and will be a means of determining whether and to what extent damage occurred during the Contract Work.

1.6 UNFORESEEN EXISTING UTILITIES

- A. Refer to Section 00 08 10, Existing Utility Facilities.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION 01 15 40

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 01 15 42 – PROTECTION OF TREES

PART 1 - GENERAL

1.1 SUMMARY

- A. This section specifies the requirements for the protection of existing trees and shrubs, including the entire structure of plant material above and below ground, impacted by all demolition and construction work under this Contract.

1.2 GENERAL REQUIREMENTS

- A. Contractor is prohibited from stockpiling any excavation or construction materials within the canopy of trees, on lawn areas, or near shrubs.
- B. Contractor shall immediately clean and remove any construction residue that falls within the canopy of a tree or near shrubs.

1.3 APPROVAL OF TRENCHING AND EXCAVATION

- A. Contractor shall obtain written approval from the TJPA Representative and a certified arborist prior to start of excavation work within the drip line of trees. A certified arborist shall be retained as needed to provide written direction at the Contractor's expense.
- B. Contractor is prohibited from using equipment for trench and excavation work within the tree drip line or where root intrusion exists on asphalt pathways to be reconstructed.
- C. In the event pruning is required for roots greater than 2 inches in diameter, Contractor shall receive written direction from the TJPA Representative in coordination with the certified arborist prior to continuation of work.

1.4 NON-APPROVED TRENCHING

- A. In the event trenching or pole excavation is performed by Contractor without the approval or not as shown on the Contract Drawings, Contractor shall be subject to a fine equal to ½-day liquidated damages for every 50 feet.
- B. The only exception to paragraph 1.4A above is for trenching without approval to a maximum of 3 feet, as measured horizontally, at any particular location for the placement of pipe fittings and quick couplers outside the drip line of any tree.

1.5 DAMAGE TO TREES

- A. If Contractor should cause minor damage as defined by nicked tree trunks, limbs and branches, or broken branches to trees or shrubs during the course of construction, Contractor shall pay the following penalties at the beginning of each billing period:
 - 1. Contractor will be penalized the sum of \$100 for the first incident which causes minor damage to trees or shrubs.
 - 2. Contractor will be penalized the sum of \$200 for the second incident which causes minor damage to trees or shrubs.
 - 3. Contractor will be penalized the sum of \$500 for the third and subsequent incidents which cause minor damage to trees or shrubs.
- B. Contractor shall replace any trees or shrubs that suffer more serious damage, including damage to roots 2 inches in diameter or larger, during construction at no additional cost to the TJPA. The TJPA Representative shall determine the value of such replacement trees or shrubs.

- C. Contractor shall in addition be liable for the cost to the TJPA for removing the damaged tree(s). This cost will cover 1.5 times the hourly wage of all person(s) at the Site for the required hours to remove the tree(s) and haul offsite as directed by the TJPA Representative.

1.6 EXCAVATION WORK UNDER LOW HANGING BRANCHES

- A. In areas where trenching is required under low hanging tree branches (12 to 20 feet off the ground), Contractor shall operate equipment to a maximum height of 11 feet to avoid contact and possible damage to the tree branches.
- B. In bidding the work, Contractor shall include in the Bid items that include piping and conduit trenching work the use of machinery that will not extend above 11 feet vertically for 5% of the linear trenching performed.

1.7 MANUAL EXCAVATION

- A. In areas where tree branches hang below 12 feet over the area to be excavated, adjacent to elderly trees, or as directed by the TJPA Representative, Contractor shall manually excavate the trench. No machinery shall be used in the areas so designated for manual excavation.

1.8 DAMAGE TO LAWNS, PLANTED AREAS AND EXISTING IRRIGATION SYSTEMS

- A. Refer to the DPW Standard Specifications, Section 1009, Restoration of Existing Lawn and Other Planting.

1.9 EXCAVATION FOR CONCRETE PATHWAYS

- A. Contractor's vehicles and equipment shall not be driven off-road except along designated routes as far away as practical from tree root zones.
- B. Vehicles and equipment shall be operated in such a manner as to avoid damage to tree and bush trunks, leaves, and branches.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 15 42

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 01 15 45 – HEALTH AND SAFETY CRITERIA

PART 1 - GENERAL

1.1 SUMMARY

- A. Many of the building materials and items of equipment used to build this facility may be known to the State of California to be either carcinogenic or reproductive toxins.
- B. Contractor and not the TJPA is responsible and liable for the health and safety of its employees and Trade Subcontractors, in accordance with federal, state, and local statutes, laws and regulations; consequently, the Contractor shall be solely responsible for any and all fines, penalties, and damages resulting from its failure to comply.
- C. Nothing contained in this section shall relieve the Contractor or any Trade Subcontractor or Supplier of the obligations assumed under the Contract and as required by law. The requirements contained herein for a Contractor health and safety plan (HASP) are by no means all-inclusive. It shall be the Contractor's sole responsibility to develop a HASP that is comprehensive and specific to the Work of this Contract, and to implement the Plan throughout the life of the Contract. Where any portion of the requirements in this section conflicts with or is less stringent than any federal, state, or local statutory safety regulations, or Contractor's site-specific HASP, the more stringent requirements shall apply.

1.2 SUBMITTALS

- A. Contractor shall submit the following in accordance with this Contract specification:
 - 1. A HASP. Upon approval of the HASP, Contractor shall provide 2 copies on compact disc in Portable Document Format with properly labeled cases.
 - 2. MSDS (Materials Safety Data Sheet) for all chemicals and other hazardous materials to be used. This submittal is only as warranted.

1.3 CONTRACTOR'S SAFETY PROGRAM

- A. The objective of Contractor's safety program is to prevent accidents and injuries, preserve life and property, and ensure safe work practices to maintain a healthy environment for the construction workers, the TJPA, and the public.
 - 1. Contractor shall assume full responsibility and liability for compliance with provisions of the Work Hours and Safety Standards Act (40 U.S.C. 327 et seq.), the Construction Safety Orders (8 CCR, subchapter 4 et seq.), and regulations issued thereunder, including:
 - a. Federal OSHA.
 - b. California Occupational Safety and Health Administration (Cal/OSHA).
 - c. Local regulations pertaining to work practices, protection of workers, and visitors to the Site.
 - d. Contractor's site-specific HASP.The most stringent of such regulations shall apply.
 - 2. Contractor shall also comply with all applicable safety orders and other requirements of
 - a. Code of Federal Regulations (CFR) Title 29 – Labor.
 - b. State of California, California Code of Regulations (CCR), Title 8, Industrial Relations.
 - c. State of California Health and Safety Code.
 - d. State of California, California Code of Regulations (CCR), Title 26 and 22.
 - e. Trade association safety standards.
 - f. Equipment and materials instructions including MSDSs, if any.

3. Contractor shall provide and maintain personnel safety training and medical examinations in accordance with all applicable federal, state, and local regulations.
 4. Contractor shall not create any condition, which endangers the safety of TJPA employees and its representatives. If the TJPA observes such a condition, then the TJPA has the authority to stop work until the Contractor corrects the condition. In such an event, Contractor shall not be allowed to penalize the TJPA, in any form. The construction schedule shall not be affected by such events.
 5. Contractor shall take all precautions necessary to protect all persons and all property from injury or damage, including those special precautions designed to protect against risks, which are inherent in the type of work to be performed, and the particular conditions present.
- B. Contractor shall at all times comply with and ensure that its employees, agents, and subcontractors comply with all applicable federal, state, and local safety and health standards, rules, regulations, and orders, and Contractor's site-specific HASP.
- C. Contractor's non-compliance with the applicable safety and health standards, rules, regulations, and orders shall be considered failure by the Contractor to perform a provision of the Contract, and may be cause for the suspension of work, pursuant to Section 00 07 00, General Conditions.
- D. If the TJPA informs Contractor of a hazardous condition or emergency, Contractor shall be responsible for immediate corrective action, and shall respond in writing to describe the action or remedy within 24 hours.
- E. Contractor shall, at all times, be responsible for providing its employees with the proper level of personal protective equipment (PPE) appropriate to the type of work being performed by the individual employee at any given time. At a minimum, the Contractor's, Trade Subcontractor's, and TJPA Representative's personnel shall wear hardhats, ANSI Z87 approved safety glasses, and high visibility apparel. Hardhats shall show company name. For work in the public right-of-way, high visibility safety apparel shall meet the Performance Class 2 or 3 requirements of ANSI/ISEA 107-2004.
- F. The TJPA will neither assume administration nor direct control and responsibility for maintaining Contractor's health and safety program or the site-specific HASP. The TJPA's review of Contractor's construction safety performance shall not be construed as approval of the adequacy of Contractor's safety supervisor, Contractor's safety program, the HASP, or any safety measures taken in, on, or near the construction site.
- G. Contractor shall provide reasonable measures to protect the public from hazards including surface irregularities, un-ramped grade changes in pedestrian sidewalks or walkways, and trenches or excavations. In addition, Contractor shall take all reasonable precautions to assure safe and proper routing of vehicular and pedestrian traffic as well as compliance with the City DPW standards and the Americans with Disabilities Act.
- H. The performance of all work and all completed construction, particularly with respect to equipment, tools, machinery guards, and the like, shall be in accordance with the applicable Safety Orders issued by the State of California Division of Industrial Safety.
- I. Contractor shall construct or furnish and at all times maintain satisfactory and substantial ramping; guard rails; warning flags and signs at appropriate heights; temporary chain link fencing; solid fencing; railing; barricades; and steel plates or bridging, as applicable at all openings, obstructions, or other hazards in streets, sidewalks, and the like. All such barriers shall have adequate warning lights as necessary or required for public safety. Contractor shall divert traffic by use of traffic cones, flagmen, flags, and signs adequate to the Site conditions and task at hand.

- J. All temporary and permanent safety features shall be installed before beginning startup of any portion of Contractor's work.
- K. If Contractor should fail to provide adequate measures to assure building occupant and public safety, the TJPA reserves the authority to have the necessary work performed by others and deduct from Contractor's progress payment all monies required therefor.
- L. Contractor shall conduct safety meetings periodically and as often as needed.
 - 1. For work in this Contract, the Contractor shall take into account the productivity losses, if any, due to the use of respirators and PPE.
- M. Whenever Contractor determines that its employees' exposure to airborne chemicals and particulate contaminants would exceed regulated limits, Contractor must reduce employee exposure below said limits using the following progressive means, as appropriate:
 - 1. Site controls, which include ventilation, equipment design, and facility management.
 - 2. Administrative controls, which include practices such as work scheduling and procedures.
 - 3. PPE.
- N. Contractor shall take into account the productivity losses, if any, due to the use of these means.

1.4 HEALTH AND SAFETY PLAN

- A. Contractor shall submit a site-specific environmental HASP in accordance with these specifications and 29 CFR 1910.120, 8 CCR 5192. The HASP shall remain in effect throughout the life of the Contract, and a copy of the HASP must be on site at all times.
- B. Contractor's site-specific HASP shall describe the responsibility for employee and public safety of Contractor's representatives who control each phase of the operations and shall set forth in writing the policies and procedures to be followed by all Contractor personnel, including its Trade Subcontractors and the TJPA. The plan shall contain a description on emergency response.
- C. Contractor shall submit 5 copies of the HASP at least 10 working days before any demolition or any building materials-disturbing activity, and no later than 30 days after the Notice to Proceed for each Trade Subcontract package. The TJPA will not review the HASP for its content, nor will the TJPA be liable for Contractor's failure to have an adequate HASP or implement it. Receipt of the HASP by the TJPA neither constitutes the legality of the HASP nor incurs liability with the Contractor. Contractor's site-specific HASP shall include, but not be limited to, the following:
 - 1. Identification and description of the roles and responsibilities of those individuals who control each phase of operations and are responsible for employee and public safety. The HASP shall set forth in writing the policies and procedures to be followed by all personnel. The HASP shall include the designation and résumé of an overall project Site Safety Representative (SSR, or referred to as health/safety officer/supervisor) in compliance with the requirements of paragraph 1.5. The SSR shall have full authority to correct any unsafe conditions, including authority to stop any construction activity or modify work practices if the HASP is being violated, or if such action is necessary to protect workers, property, and the surrounding community during the Contract period. This requirement shall apply continuously and not be limited to normal working hours.
 - 2. Information identifying and delineating all workplace hazards that have been identified or is generally associated with the proposed work phases and how this information is communicated to employees (e.g., tailgate safety meetings, monthly safety meetings, and daily job briefings). Hazardous material communication standards can be found in 29 CFR 1910.120 & 8 CCR 5194. Hazardous waste information can be found in 29 CFR 1910.1200 & 8 CCR 5192. Local hazardous material and waste information can be found in Articles 21, 21A, 22, and 22A of the San Francisco Health Code.

3. Measures to be used to identify, monitor, and control worker, building occupant, and general public exposure to any identified hazard. The monitoring of site personnel for contaminant exposure shall be conducted to maintain the proper level of personal protection, including the action level.
4. Provision of sufficient personnel who are properly trained to handle and dispose of hazardous waste and other contaminated waste that is expected on this Project. The level of training required for all or specified Contractor or Trade Subcontractor personnel includes but is not limited to:
 - a. Asbestos training, and PCB and lead awareness training
 - b. If required, 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training
 - c. HAZWOPER-associated 8 hour refresher training, in accordance with Title 29, CFR 1910.120, and 8 CCR 5192
 - d. Respiratory program in accordance with 29 CFR 1910.134 and 8 CCR 5144
5. This training shall be required for all personnel who will come in contact with or operate equipment that handles surface and subsurface contaminated materials when performing their work. Contractor shall provide these training records to the TJPA. Contractor shall maintain training records in accordance with applicable regulations.
6. Engineering controls, specific work practices, air monitoring for contaminants (e.g., dust, asbestos, lead, volatile organic compounds, and hydrocarbons), and PPE (8 CCR 5144) to protect workers, building occupants, and the general public.
7. Methods to be used to decontaminate equipment and personnel.
8. Sanitation facilities provided for personal hygiene. Portable toilets and discharge of their waste products into sanitary sewers shall comply with local codes.
9. Contingency and emergency response plan for emergencies including fire, spillage of hazardous or toxic wastes and liquids (with special emphasis on clean up of spillage of fuel or oil from Contractor's equipment), traffic accidents, personal accidents, power failure, or any event that may require modification or abridgment of site control and decontamination procedures.
10. Safety action plans: For work requiring Cal/OSHA permits, special training, and/or use of designated competent persons to oversee the work, the Contractor shall prepare the corresponding sub-plans and/or safety action plans to address these work activities.
11. Periodic safety performance reviews.
12. Procedures on safety inspections.
13. Procedures in handling non-compliance/violations of safety requirements, e.g., deficiency correction reports, stop work orders, disciplinary actions.
14. Communication and reporting requirements, including the immediate reporting of injury accidents and submittal of corrective action reports.
15. Requirement, distribution, and maintenance of PPE and safety tools.
16. Provision for all personnel to be properly and continually trained in construction safety and emergency response. The level of training required for all specified Contractor or Trade Subcontractor personnel includes but is not limited to:
 - a. California Department of Industrial Relations Division of Occupational Safety and Health (Cal/OSHA) Construction Safety.
 - b. Valid asbestos handling license issued by the California State Contractors License Board and a valid current Certificate of Registration for Asbestos-Related Work as issued by Cal/OSHA.
 - c. Work shall be completed under the on-site supervision of a "competent person" as defined by OSHA Regulation 29 CFR Part 1926.1101 (8 CCR 1529 in California).
 - d. All abatement workers shall have Asbestos Hazard Emergency Response (AHERA) training with annual 8-hour refresher training, current medical exams for the use of respiratory protection, and current fit tests of appropriate respirators.
 - e. All affected workers shall have lead awareness training, current medical examinations, approvals for the use of respiratory protection, and current fit

- testing of respirators complying with Cal/OSHA regulation 8 CCR 1532.1 when affecting lead paint and lead construction hazards.
- f. Other site-specific or project-specific hazards requiring safety training.
- 17. Policies and programs related to alcohol or controlled substances: the HASP must ensure Contractor's commitment to a drug and alcohol free workplace with enforcement procedures and penalties for violations.
- 18. The HASP shall also explain (in a separate section) how Contractor will comply with all the requirements for construction safety, including but not limited to the following:
 - a. The provisions of the Work Hours and Safety Standards Act (40 U.S.C. 327 et seq.), the Construction Safety Orders (8 CCR, subchapter 4 et seq.), and regulations issued hereunder.
 - b. Federal OSHA.
 - c. Cal/OSHA.
- 19. Site Access Control Plan covering all employees, building occupants and visitors.

The above list is by no means all-inclusive or near complete for an adequate HASP. Contractor shall be solely responsible to produce a complete HASP in full compliance with the corresponding regulatory requirements.

Should Contractor or its Trade Subcontractors be notified by the TJPA of any unsafe or unhealthy conditions associated with the performance of the Work, Contractor will take remedial action to correct such conditions immediately or within 48 hours after receipt of notice of violation. Failure to do so will be subject to regulatory fines pertaining to the violation.

1.5 REQUIREMENTS OF THE CONTRACTOR'S SITE SAFETY REPRESENTATIVE

- A. Contractor shall designate a full time Site Safety Representative (SSR) or health/safety officer/supervisor dedicated to this Contract. The SSR or the SSR's designee shall be physically present at the site during all working hours.
- B. Contractor's SSR shall:
 - 1. Be knowledgeable with the safety provisions of federal OSHA and Cal/OSHA, and the requirements of this section and those listed in paragraph 1.4.C.17 above.
 - 2. Possess qualifications including a minimum of 3 years' recent experience in conducting and supervising safety and health programs on construction projects similar to this Contract.
 - 3. Be capable of performing safety inspections and accident investigations.
 - 4. Be currently certified in first-aid and CPR, and be able to use an automatic external defibrillator.

1.6 TRENCHING

- A. Trench Safety: Contractor shall comply with all requirements of federal OSHA (29 CFR 1926.650-652), Cal/OSHA (Construction Safety Order 1539-1544), the California Labor Code, Contractor's site-specific HASP, and these Contract Documents; the more stringent safety requirements shall apply.
- B. Federal and state safety regulations require
 - 1. Safe exits, when trenches are more than 4 feet deep, and an exit (ladder), which must be within 25 feet from each worker.
 - 2. Shoring for trenches more than 5 feet deep, designed to prevent cave-ins.
- C. Fall protection shall be required for all trenches 5 feet or deeper.

1.7 CONFINED SPACE ENTRY

- A. If needed, Contractor shall provide assistance to make the confined space safe for entry by Contractor's employees, the TJPA, and the TJPA's representatives in accordance with the Code of Federal Regulation 29 CFR, 191 0.146 and the California Code of Regulations, Title 8, General Industry Safety Orders entitled "Confined Spaces." The TJPA Representative will provide proof of its completion of confined space training prior to entering a confined space.

1.8 LOCKOUT/TAG OUT PROCEDURES

- A. If needed, Contractor shall provide training of Contractor's employees in procedures for locking out and tagging out of electrical mechanical, hydraulic, pneumatic, thermal, and energy stored equipment that has been de-energized during the course of construction.
 - 1. The locking-out and tagging-out of electrical energy sources shall occur at the circuit disconnect switch in all cases.
 - 2. Contractor shall furnish locks used for this purpose.
 - 3. Contractor shall furnish the necessary tags and lock boxes compatible with the stored electrical, mechanical, hydraulic, pneumatic, and thermal or energy distribution equipment.
- B. White "DANGER" tags shall be used to indicate that a particular switch shall not be used.
- C. Red "DANGER" tags shall be used to indicate the presence of someone inside or working on the equipment.
 - 1. In the event that a job is incomplete at the end of a shift, the tagger will remove the personal Red DANGER tag and lock, leaving the owner's white DANGER tag for protection of the equipment. When the work is resumed, the employee will again hang the red DANGER tag and lock.

1.9 ACCIDENT DOCUMENTATION AND REPORTING

- A. If death or serious injuries or serious damages occur, the accident shall be reported at once by telephone or messenger to the TJPA as well as to the proper governing authorities. In addition, Contractor shall promptly report in writing to the TJPA all accidents whatsoever arising out of or in connection with the performance of the Work whether on or adjacent to the site, giving full details and statements of witnesses.
- B. Within 3 days of occurrence, Contractor shall provide the TJPA with 2 copies of the Contractor's accident and near-miss reports. A significant accident is defined to include events where personal injury is sustained or tangible property loss is sustained, or where the event posed a significant threat of loss or personal injury.
- C. If a claim is made by anyone against the Contractor or any Trade Subcontractor on account of any accident, Contractor shall promptly report the facts in writing to the TJPA, giving full details of the claim.
- D. Contractor is responsible for all documentation and reporting obligations of any accident and near-miss incidents in accordance with federal, state, and local laws and regulations.

1.10 TRAINING RECORDS

- A. Contractor shall maintain on-site all training records in accordance with federal, state, and local statutes, regulations, and policies, and provide copies of these records to the TJPA upon request.

1.11 CONSTRUCTION EQUIPMENT AND TOOLS

- A. Selection and operation of all construction equipment and tools shall conform to Cal/OSHA and shall be appropriate for their intended uses.
- B. Equipment shall be subject to inspection by the TJPA.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 15 45

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 01 15 61 – STORMWATER POLLUTION PREVENTION,
EROSION AND SEDIMENT CONTROL

PART 1 - GENERAL

1.1 SUMMARY

- A. This section describes all work related to stormwater control. All work described in this section shall be considered as incidental work, incidental to the completion of the work to which it pertains. The cost of this work shall be considered incidental work and shall be accounted for in accordance with the General Conditions.
- B. This section also specifies the general requirements for furnishing all labor, materials, equipment, and operations necessary for stormwater control, erosion control, and best management practices (BMPs) in accordance with the Phase II Storm Water Regulations of the Clean Water Act (CWA).

1.2 REQUIREMENTS

- A. Contractor shall prepare and submit for approval a stormwater pollution prevention plan (SWPPP) including furnishing, installing, and removing silt fence, filter boxes, construction entrances, sediment traps, dust control, and other erosion control measures during construction to prevent contamination of stormwater from construction activities (i.e., temporary fuel storage, fueling operations, equipment maintenance, hazardous material, and waste handling).
- B. Contractor will receive no additional compensation for the preparation of the SWPPP or for the erosion control measures, and no separate measurement or payment will be made for such work which is considered incidental to the Contract.
- C. Construction of flow diversion
 - 1. Contractor may construct open or closed conduits wholly within the excavation for flow diversions at places where sewers cross the excavation. Existing sewer flows shall be maintained at all times.

1.3 NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

The NPDES Storm Water Program requires operation of construction sites 1 acre or larger to obtain authorization to discharge stormwater under an NPDES construction stormwater permit (40CFR 122.26[b][14][x]), known as a “general permit.”

Additionally, the Site must fulfill the requirements of San Francisco Public Utilities Commission’s Bureau of Environmental Regulation and Management (BERM), which includes the development and implementation of a SWPPP.

In addition to BERM requirements, the Contractor shall comply with the following:

- A. Pollution sources: The Contractor shall identify all potential sources of stormwater pollution in addition to land-disturbing activities, including but not limited to:
 - 1. Temporary fuel storage and handling: All fuel storage tanks shall be placed within a secondary containment area of sufficient size and strength to contain 150% of the volume stored. Refueling of equipment within the containment areas shall be addressed in the SWPPP.
 - 2. Material storage and hazardous material storage.
 - 3. Equipment maintenance areas.

- B. Solid waste and hazardous waste disposal activities:
 - 1. Prohibited Discharge: Direct discharge of materials other than stormwater to the combined sewer/storm system is prohibited and must comply with the general permit requirements. Non-stormwater discharge includes groundwater from excavations and truck washing activities.
- C. Spill prevention and response: Contractor is responsible for minimizing the potential for spills of pollutants stored on site. Leaks and spills shall be minimized and, if observed, Contractor shall clean them up immediately and institute preventive measures:
 - 1. Be aware of potential spill areas and drainage routes in work areas.
 - 2. Ensure containers remain closed at all times except when transferring contents.
 - 3. Use funnels, pumps with closed hose systems, or other means to prevent spills when transferring material from large containers to small ones. Pumps in operation shall not be left on unattended.
 - 4. Store hazardous materials in a designated area that is away from vehicle/traffic areas.
 - 5. Immediately notify the supervisor of any spill occurring in the work area. It is the responsibility of the Contractor's designated safety officer to direct cleanup activities and contact necessary regulatory agencies. All necessary emergency telephone numbers shall be posted at the construction Site at a location accessible to all personnel.
 - 6. Know the proper methods to clean up small spills in the work areas and how spent cleanup material shall be managed.
 - 7. Record all steps taken to control spills in the field note daily log.
 - 8. Keep readily available on-site spill cleanup equipment. Emergency response equipment includes absorbent socks, overpack drums, personal protective equipment, shovels, labels, valves, valve charts, and valve wrenches to shut off water supply.

1.4 STORMWATER POLLUTION PREVENTION

In conjunction with the California Stormwater Best Management Practice handbook (www.cabmphandbooks.com), Contractor shall submit and implement a SWPPP for the entire duration of the Project:

- A. Stormwater Pollution Prevention Plan (SWPPP):
 - 1. Contractor shall prepare and submit for approval a SWPPP prior to the start of soil-disturbing activity. The SWPPP must be reviewed and approved by the TJPA Representative and SFPUC/BERM. The SWPPP shall be implemented concurrently with the commencement of soil-disturbing activities.
 - 2. Contractor's SWPPP shall meet the following objectives.
 - a. Identify all sources of sediment and potential causes of erosion that may affect the quality of stormwater discharges associated with construction activity (stormwater discharges) from the construction site.
 - b. Identify non-stormwater discharges.
 - c. Identify, construct, and implement, in accordance with a time schedule and maintaining BMPs, the reduction or elimination of erosion and sediment in stormwater discharges and authorized non-stormwater discharges from the construction Site during construction.
 - d. Develop a maintenance schedule for BMPs implemented during construction designed to reduce or eliminate erosion and sediment after construction is completed (post-construction BMPs)
 - 3. The SWPPP's framework shall contain all the required elements contained in the Regional Water Quality Control Board's Erosion and Sediment Control Field Manual.
 - 4. Contractor is solely responsible for complying with the soil erosion and sediment control requirements of this Contract and for otherwise preventing silt-laden storm runoff from

exiting the construction area. Contractor shall be solely responsible for all fines, penalties, or damages, which result from its failure to so comply.

- B. The SWPPP shall be prepared in accordance with the following outline.
1. Site Description.
 - a. Description of the nature of the construction activity.
 - b. Description of the intended sequence of major activities which disturb soils for major portions of the Site.
 - c. Estimate of the total area of the Site and the total area of the Site that is expected to be disturbed by excavation, grading, or other land disturbing activities.
 - d. Estimate of the runoff coefficient of the Site after construction activities are completed and existing data describing the soil or the quality of any discharge from the Site.
 - e. Site map indicating drainage patterns and approximate slopes anticipated after major grading activities, areas of soil disturbance, location of structural and non-structural controls identified in the SWPPP, location of areas where stabilization practices are expected to occur, and locations of points of discharge to existing storm runoff conveyance systems.
 2. Pollution sources: The SWPPP shall identify all potential sources of stormwater pollution in addition to land disturbing activities, such as:
 - a. Temporary fuel storage and handling: All fuel storage tanks shall be placed within a secondary containment of sufficient size and strength as to contain 150% of the volume stored. Refueling of equipment within the contaminated areas shall be addressed in the SWPPP.
 - b. Material storage and hazardous material storage.
 - c. Equipment maintenance areas.
 - d. Solid waste and hazardous waste disposal activities.
- C. The SWPPP may utilize plans, details, notes, and other information provided in the Contract Documents; however, such information shall not, in itself, be construed to meet the requirements of this section.
- D. Controls: The SWPPP shall include controls and measures that will be implemented for each major activity and for each potential erosion and sediment source identified above.
1. Stabilization Practices: Seeding, mulching, installation of geotextile fabric, etc., on areas where construction activities have temporarily or permanently ceased.
 2. Structural Practices: Construction of silt fences, berms, dikes, sediment basins, covered material, and waste storage areas, and other such devices to limit runoff and minimize the discharge of pollutants. Appropriate practices shall be incorporated for surface drainage.
 3. Operational Practices: Dust control, housekeeping, non-hazardous regular waste collection and disposal, control of equipment fluids, and lubricants, and similar practices to minimize pollutant generation.
 4. Vehicle Washing: All vehicle washing shall occur at a designated equipment decontamination wash pad.
 5. Wheel washing: Wheel washing will occur at areas designated as wheel-washing areas.
 6. Concrete Washout: Concrete washout will neither be allowed on Site nor into the sewerage.
 7. Saw cutting operations: Provide a means to vacuum slurry, generated from saw cutting operations, thereby preventing it from going into the storm drain.
 8. Maintenance: Maintain protective measures in proper operating condition.
 9. Inspection: Inspection procedures and schedules shall include, at a minimum, inspections of all structural and non-structural pollution control measures at least once a week, prior to forecast precipitation events of 13 mm (0.5 in.) or greater, and within 24 hours of precipitation events of 13 mm (0.5 in.) or greater.

- E. SWPPP Implementation:
1. Exercise every reasonable precaution, including temporary and permanent measures throughout the duration of the Project to control erosion and prevent or minimize pollution of receiving waters.
 2. Temporary measures shall be coordinated with Contract work to the extent practical to ensure economical, effective, and continuous erosion and siltation control and pollution prevention. Permanent pollution control measures and facilities as identified in the Contract Documents shall be installed as the Work progresses.
 3. Inspect erosion and siltation control devices and measures for deficiencies during rainfall events, immediately after each rainfall, and at least daily during prolonged rainfall. Deficiencies shall be corrected immediately. If Contractor fails to correct or take appropriate actions to remedy the specified deficiencies, the TJPA Representative will require Contractor to discontinue work in other areas and concentrate efforts toward rectifying the specified deficiencies. The TJPA reserves the right to remedy the specified deficiencies and deduct the entire cost of such work from monies due Contractor.
- F. Best Management Practices (BMP):
1. Contractor's SWPPP will identify BMPs to prevent contamination of stormwater.
 2. Contractor BMPs shall at a minimum include:
 - a. Silt Fence: Silt fence(s) shall be installed. The silt fence(s) shall be relocated as necessary for construction operations. Remove the silt fence(s) at the end of the Project.
 - b. Dust Control: Employ construction methods and means that will keep airborne dust to the minimum. Refer to Section 01 15 00, Construction Facilities and Temporary Controls, for additional specifications.
 - c. Provide for the spraying of water using hoses on the Project, and on roads and other areas immediately adjacent to the project limits, wherever traffic or buildings that are occupied or in use are affected by such dust caused by his hauling or other operations. The materials and methods used for water laying shall be subject to the approval of the TJPA Representative. Provide for prompt and proper removal from existing roadways of all dirt and other materials that have been spilled, washed, tracked, or otherwise deposited thereon by Contractor's hauling and other operations.
- G. Contractor's SWPPP will also include additional BMP requirements as follows:
1. Licensed waste material handlers must service portable sanitary facilities and trash dumpsters regularly.
 2. All hazardous material stored on Site shall be stored in secondary containment to prevent spills and leaks. The containment must be covered with temporary tarps to prevent stormwater contact
 3. A chain-link fence to prevent access by the public must enclose the Site.
 4. Silt dams shall be installed and maintained on public streets to prevent sediments from flowing into storm drain inlets and public streets. Storm drain inlets shall have filter media surrounding the inlets appropriate to type of traffic and as approved by the TJPA Representative.
 5. Minimize dust during demolition, grading, and construction by lightly spraying exposed soil on a regular basis
 6. Minimize wind and water erosion on temporary stockpiles by spraying with water during dry season and covering during the wet season. Cover inactive piles.
 7. Minimize the area and length of time for clearing and grading.
 8. Prevent release of construction pollutants, cement, mortar, paints, solvents, fuel.
 9. Install and maintain sediment traps in local stormwater inlets.
 10. Implement a hazardous material spill prevention, control, and cleanup program for the construction period.
 11. Minimize the contact of construction materials, equipment, and maintenance supplies (e.g., fuels, lubricants, paints, solvents, adhesives) with stormwater.

12. Properly specify designed centralized storage areas that would keep construction materials and maintenance supplies out of the rain. Keep spill cleanup materials (e.g., rags, absorbent materials, appropriate container) at the Work Site when handling chemicals.
 13. Educate onsite personnel and maintain awareness of the importance of protecting stormwater quality. Site supervisors or the Site safety representative shall conduct regular tailgate meetings to discuss pollution prevention. The frequency of the meeting and the required personnel attendance list would be specified in the SWPPP. Contractor shall furnish the TJPA Representative with the attendance list and the subject notes of the meeting.
 14. Additional erosion and sediment control measures for the exposed and stockpiled soil are:
 - a. Erosion control blankets shall be used to control and to stabilize disturbed and exposed soil, if weather warrants such blankets.
 - b. Silt fencing shall be installed at the foot of the slope around the entire perimeter of the stockpiled soil.
 - c. V-ditches and silt trap/sediment traps shall be installed at the perimeter of the stockpile to collect runoff where necessary to allow flow to continue to storm drain inlets.
 - d. Soil stabilization measures, placement of hay bales, and sediment basins shall be constructed to reduce erosion of exposed soils.
 - e. If grading must be conducted during the rainy season, prepare the primary BMPs on erosion control, that is, keeping sediments in place.
 - f. End-of pipe sediment control measures (e.g., basins and traps shall be used only as secondary measures.
 - g. Vehicle and equipment wash-down facilities shall be designed to be accessible and functional during both dry and wet conditions.
 - h. Refer to Section 31 00 00, Earthwork, for additional soil stockpile requirements, and Section 01 15 00, Construction Facilities and Temporary Controls, for additional air pollution and dust control measures.
- H. General inspection procedures: Contractor must inspect the following areas:
1. Disturbed areas
 2. Material storage areas
 3. Locations where vehicles enter and exit the site
 4. Areas where erosion and sediment control measures are used
- I. Reporting and retention of records:
1. SWPPP inspection reports, compliance certification statements, and correspondence must be maintained. Contractor shall retain all reports required by the SWPPP and records of all data including all logs and documentation described in this section for a period of at least 3 years from the date the Site is finally stabilized.
 2. Inspection and monitoring requirements and forms are contained in the California Regional Water Quality Control Board's (RWQCB) Erosion and Sediment Control Field Manual.
 3. Contractor will document with daily logs the SWPPP measures inspected and implemented during the day. These records shall be kept at the job trailer and available during inspections to representatives from the RWQCB, Bay Area Air Quality Management District (BAAQMD), and SFDPH.
 4. The SWPPP, all inspection forms, and all amendments to the SWPPP shall be submitted to the TJPA Representative.

PART 2 - PRODUCTS

2.1 GEOTEXTILE FABRIC (SILT FENCE AND FILTER FABRIC)

- A. The physical properties of the geotextile for silt fence and filter fabric shall be as follows: weight 3 oz/yds, thickness 15 mils, grab tensile strength 100 lb, grab elongation 20%, mullen burst 235 min., trapezoidal tear 50 min., ultraviolet stability >90 % strength retained, permeability-k 0.01 cm/sec, and apparent opening size -50 test value.

2.2 STRAW HAY BALES

- A. The straw hay bales shall be dry and compacted, and tied in a rectangular box shape. They shall be free from any pest and rodent infestation.

PART 3 - EXECUTION

3.1 GENERAL

- A. Contractor shall exercise every reasonable precaution, including temporary and permanent measures, throughout the duration of the Project to control erosion and prevent or minimize pollution of rivers, streams, lakes, ponds, and other receiving waters. Siltation control measures shall be applied to erodible materials exposed by any activity associated with the nonhazardous waste removal construction including, but not limited to local material sources and haul roads.
- B. Temporary measures shall be coordinated with Contract work to the extent practicable to ensure economical, effective, and continuous erosion and siltation control and pollution prevention. Permanent pollution control measures and facilities shall be installed as the work progresses.
- C. Contractor shall inspect erosions and siltation control devices and measures for deficiencies immediately after each rainfall and at least daily during prolonged rainfall. Deficiencies shall be corrected immediately. Failure on the part of the Contractor to maintain erosions and siltation control devices in a functioning condition may result in the TJPA Representative notifying the Contractor in writing of specific deficiencies. If the Contractor fails to correct or take appropriate actions to remedy the specified deficiencies within 25 hours after receipt of such notification, the TJPA Representative may require the Contractor to discontinue work in other areas and concentrate efforts toward rectifying the specified deficiencies, or the TJPA Representative may proceed to remedy specified deficiencies and deduct the entire cost of such work from monies due Contractor.

3.2 SILT FENCE

- A. Silt fence shall be installed at the locations and to the limits shown on the approved SWPPP and as otherwise directed by the TJPA.
- B. Contractor shall maintain the alignment and condition of the silt fence, as necessary, throughout its use on the Project. Upon completion and/or as directed by TJPA, Contractor shall remove the silt fence from the Project.
- C. If required by construction operations and as approved by TJPA, the silt fence shall be relocated as necessary.

3.3 DUST CONTROL

- A. Contractor shall employ construction methods and means that will keep airborne dust to the minimum. Contractor shall provide for the spraying of water using hoses on the Project and on roads and other areas immediately adjacent to the Project limits, wherever traffic or buildings that

are occupied or in use are affected by such dust caused by Contractor's hauling or other operations. The materials and methods used for water laying shall be subject to the approval of the TJPA Representative.

- B. Contractor shall provide for prompt and proper removal from existing aprons and roadways of all dirt and other materials that have been spilled, washed, tracked, or otherwise deposited thereon by Contractor's hauling and other operations.

3.4 CONSTRUCTION ENTRANCE

- A. Contractor shall construct an equipment decontamination pad at each construction entrance. The pad shall be in place prior to any excavation or earthmoving operations. In the event that the pad becomes clogged with soil, it shall be cleaned. At the completion of construction, the pad shall be removed and the area topsoiled and seeded as specified.

3.5 DIVERSION DIKES

- A. Contractor shall install minimum 18-inch-high and 24-inch-wide diversion dikes to exclude stormwater runoff from entering the work areas. Diversion dikes shall also be constructed within each phased work area to capture all rainwater which falls within the contaminated work areas.

3.6 LINED SUMP PITS

- A. Contractor shall construct a polyethylene-lined sump pit for the collection of surface water which may enter hazardous work area. These pits shall be constructed such that the liquids contained may be removed using a vacuum tanker truck. All materials shall be removed in accordance with the applicable sections of these Specifications.

END OF SECTION 01 15 61

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 01 15 70 – TRAFFIC ROUTING WORK

PART I - GENERAL

1.1 SUMMARY

- A. This section sets forth the minimum requirements for traffic routing and traffic control under Contract Documents.
- B. All traffic signs, barricades, delineators, flashing arrow signs, and other traffic control devices shall conform to the requirements of the latest edition of California Department of Transportation's Manual on Uniform Traffic Control Devices (2006) and the requirements of the Caltrans Standard Specifications, except as specified herein.
- C. This section identifies individuals, addresses, and telephone numbers provided by the SFMTA in the preparation of Contract Documents. As these individuals, addresses, and telephone numbers are subject to change without notice, Contractor shall be solely responsible for verifying the correct City department and contact to perform the Work in accordance with this Specification.

1.2 SCOPE OF WORK

- A. Contractor shall prepare traffic control plans and construct, operate, and maintain traffic control in conformance with the requirements in this section. The required traffic control work shall be in place prior to the start of the construction work of the Contractor and/or any of the sub-contractors. The traffic control plans must clearly depict the exact sequence of the construction operation(s), the construction to be performed, and the traveled way that will be utilized by all movement of traffic during each phase of construction. Multiple phases of construction will require a separate traffic control plan for each different construction phase or operation.
- B. Contractor shall provide for the protection of the traveling public, pedestrians, and workers within the area covered by the limits of construction at all times when the area is affected by Contractor's construction facilities or activities.
- C. Contractor shall perform all traffic control and routing work, including providing all material, labor, equipment, and service required for traffic control and furnishing the following:
 - 1. Traffic Control Supervisors
 - a. The traffic control supervisors shall direct the traffic crews and/or perform the traffic control work whenever there is work in the street, sidewalk, path, or any other public right-of-way. When work is being performed at multiple sites, separate supervisors shall be designated for each site. Separate supervisors shall be designated to provide coverage when work is being performed for multiple shifts at a given site.
 - b. The traffic control supervisors shall possess a minimum of five years experience in traffic control supervision. At least one supervisor shall be present at the job site during all traffic control operations and whenever the Contractor's activities impact the public roadway.
 - 2. Traffic Crew
 - a. Provide sufficient traffic crews to implement and maintain the traffic control work. A traffic crew shall be comprised of at least two persons, and each crewmember shall have a minimum of one year of experience in traffic control on similar-scale projects and shall have passed a flagger training course given by the American Traffic Safety Services Association (ATSSA) or another institution acceptable to the TJPA Representative.
 - 3. The Traffic Crew shall
 - a. Assist the Traffic Control Supervisor in re-striping and setting up all traffic signs and other traffic control devices in accordance with the approved traffic control plans and

- traffic detour plans. The required traffic control work shall be in place prior to the start of the construction work for which the traffic control has been implemented.
- b. Be on site especially during nights, weekends, and holidays, as required by the TJPA Representative in setting up and/or correcting the traffic control devices, during the Contractor's actual working hours or as directed by the TJPA Representative.
- D. Contractor, or its traffic control subcontractor, shall possess a valid C-31 license.
- E. Contractor shall conduct its operations as to cause the least possible obstruction and inconvenience to the public and area residents, and shall have under construction no greater length or amount of work than set forth in the Specifications and than it can prosecute properly with due regard to the rights of the public and area residents. Contractor shall ensure all streets and intersections remain open to traffic and maintain access to public and private properties to the greatest extent possible by constructing the Work in stages.
- F. Contractor shall furnish, install, relocate to provide for lane shifting, remove, store, maintain (including covering and uncovering as required), move to new locations, replace when damaged or missing, and dispose of all traffic signs and traffic control devices and features necessary for safety and convenience of the general public and area residents, and for safeguarding the workers and the Work, as required by conditions at the Site of the Work, in addition to the requirements specified herein, including but not limited to the following:
1. Traffic signs and parking prohibition signs
 2. Barricades with flashers
 3. Delineators
 4. High-level warning devices
 5. Solar-powered flashing arrow signs
 6. Pedestrian barricades
 7. Removal of conflicting existing striping and pavement markings in traffic lanes and in parking areas and re-installation of the original striping and pavement markings after construction is completed
 8. Temporary striping and reflective markers, overlay markers, for both construction and interim re-alignments of traffic lanes, and crosswalks prior to final striping
 9. Excavation plating/bridging, including any temporary plating and bridging required by the Contractor's operations
 10. Temporary pavement
 11. Certified flag persons
 12. Responding within 24 hours to requests and complaints from local merchants and residents regarding traffic-related complaints
 13. Changeable message signs
- G. Contractor shall provide traffic lanes and routing of vehicular and pedestrian traffic, as set forth in "Regulations for Working in San Francisco Streets" (Blue Book) by the SFMTA, in a manner that will be safe and will minimize traffic congestion and delays.
- H. Temporary Pavement Markings
1. Temporary traffic delineation and pavement markings (lane lines, STOP bars, etc.) shall be furnished, installed, maintained, and removed by Contractor. Contractor shall furnish and install temporary pavement markings according to striping drawing(s) prior to opening the roadway to public traffic and/or as instructed by the DPT through the TJPA Representative. The location of the temporary pavement lane lines shall be within 3 inches of the lines shown on the existing striping drawings.
 2. Whenever the Work causes obliteration of pavement markings (i.e., after removing the existing markings, grinding, paving), temporary pavement marking delineation shall be in place prior to opening the roadway to public traffic.

3. All work necessary, including any required lines or marks, to establish the alignment of temporary pavement markings shall be performed by the Contractor. When temporary pavement markings are required to be removed, all lines and marks used to establish the alignment of the temporary pavement markings shall be removed.
4. Surfaces to receive temporary pavement markings shall be dry and free of dirt and loose material. Temporary pavement markings shall not be applied over existing pavement markings or other temporary markings.
5. Temporary pavement markings shall be maintained until superseded or replaced with permanent pavement markings. Temporary pavement markings shall be removed when, as determined by DPT, the temporary pavement markings conflicts with the permanent pavement markings or with a new traffic pattern for the area and is no longer required for the direction of public traffic.

1.3 APPLICABLE STANDARDS

- A. In addition to compliance with this specification, the Contractor shall comply with all applicable requirements of the latest editions of the following:
 1. California Vehicle Code
 2. City and County of San Francisco Municipal Transportation Code
 3. Other applicable government regulations
 4. Standard Specifications and Plans, Department of Public Works, City and County of San Francisco
 5. Caltrans Standard Specifications and Plans, Department of Transportation, State of California
 6. California Manual on Uniform Traffic Control Devices (MUTCD), 2006 edition, available online at: www.dot.ca.gov/hq/traffops/signtech/mutcdsupp
 7. Regulations for Working in San Francisco Streets (Blue Book), San Francisco Municipal Transportation Agency (SFMTA), City and County of San Francisco
 8. Regulations for Excavating and Restoring Streets in San Francisco, Department of Public Works, City and County of San Francisco
- B. Work Area Traffic Control Handbook, BNI Books.

1.4 SUBMITTALS

- A. Contractor shall prepare and submit the following to the TJPA Representative for review and approval before any major work is allowed in the streets:
 1. Traffic control plans
 2. Parking and storage plans
 3. Certification of four or more flag persons, as necessary
 4. Material specifications
 5. Schedule of construction
- B. Traffic Control Plans
 1. Contractor shall schedule a meeting with the TJPA Representative and the SFMTA traffic engineer 30 days in advance of submitting a traffic control and detour plan. The purpose of the meeting will be for the contractor to present the traffic control plan to those in attendance for review and comment. Complete traffic control and detour plans shall be submitted to the DPT through the TJPA Representative for approval. No work shall be allowed in or affecting the streets without the approved traffic control plans. Contractor shall allow in its schedule 21 calendar days for the City to review and respond to the traffic control plans. The traffic control plans shall be prepared, signed, and stamped by a civil engineer or a traffic engineer (registered in the State of California) with the assistance and input of the traffic supervisor and the Contractor's superintendent.

2. A submittal shall consist of five copies on white paper or blueprints of each drawing. Contractor shall use the existing striping plan(s), T-1, T-2, . . . , as a base to prepare the traffic control plans. If the existing striping plan is not available, the Contractor shall use the street reconstruction or paving plans as base plans to prepare the traffic control plans. Maximum drawing size shall be 36 inches x 24 inches. The traffic control plans shall be drawn to a scale of 1 inch = 50 feet (1:600).
3. A separate set of traffic control plans shall be required for working and nonworking hours. The plans shall include an affidavit signed by the licensed engineer who prepared them attesting that the engineer has personal knowledge of the traffic conditions in the work areas; understands the impacts the Work will have on vehicular, pedestrian, and other modes of transportation; and that the traffic plans comply fully with all requirements of the Americans with Disabilities Act (ADA) and all City requirements related to providing a path of travel through construction zones.
4. Contractor shall submit updated traffic control plans as set forth in the Blue Book by the SFMTA, every six months. Each traffic control plan shall cover the work to be performed during the applicable six-month interval.
5. Each Traffic Control Plan shall show the following minimum applicable information, as required by the DPT:
 - a. Street and traffic lane layout (width of sidewalk, street and lanes, etc.); outline of the work under construction (i.e., limits of excavation), location of construction barricades, location of trench protection devices, location of major construction equipment, and the ingress and egress routes of trucks hauling materials to and from the construction site
 - b. Sequence of construction and traffic lane transitions
 - c. Crosswalk and sidewalk closures
 - d. Existing striping, pavement markings and traffic signs, and description of what is to be removed prior to installation of temporary striping and signage, and what will be restored after the construction is completed.
 - e. Location and spacing of "Tow-Away, No Stopping" signs
 - f. Location and description of temporary striping, pavement markings, signs, and other traffic control devices necessary to provide and maintain the adequate number and width of traffic lanes specified herein, and to provide and maintain passage and protection for pedestrians
 - g. Location and description of traffic control devices proposed for the protection of the work area, excavation, etc.
 - h. Locations and details of plating/bridging over trenches and excavations and structural calculations for spans more than 4 feet wide
 - i. Other proposed changes and provisions for removal, relocation, or temporary installation of:
 - i. Traffic signs
 - ii. Transit stops
 - iii. Barricades
 - iv. Solar-operated flashing arrow signs
 - v. Traffic signals
 - j. Location of office/trailer(s) or storage trailer(s) for the Contractor. The trailer(s) will be at least 100 feet from any intersection. It shall not block traffic control devices (STOP signs, signals, etc.), hydrants, bus stops, or driveways.
 - k. Location of detour signs for vehicular, truck, and pedestrian traffic.
 - l. Truck Routes: Contractor shall submit truck routes for the approval of the DPT.
6. Sign Inventory Forms are to be submitted by the Contractor as part of the traffic control plan prior to the start of any contract field work. This form is attached as 01 15 70/AT3, Sign Inventory Form. Sign inventory forms are required for each intersection corner or other

location that includes any sign relocation, sign removal, pole or traffic signal work. Sign inventory forms shall accurately reflect all existing traffic control, street name, and other City signs at the required location(s).

C. Parking and Storage Plans

1. Contractor shall submit plans for materials storage and equipment parking for each area of the Work along with the respective traffic control plans. The TJPA has the option to reject the storage and equipment parking plans.
2. No construction equipment and material storage including but not limited to pipes, pipe-fittings, steel bars, shoring, backfill, asphalt mix, etc., shall be allowed on any sidewalk, street, or property, except as shown on the approved traffic control plans for various phases of construction. A maximum of 100 feet may be allowed per block.
3. Office/storage trailers will be at least 100 feet from any intersection. They shall not block traffic control devices (STOP signs, signals, etc.), hydrants, bus stops, or driveways.
4. Contractor is not allowed to store construction equipment or materials outside of the project limits on the sidewalk and roadway of the following streets:
 - a. First Street
 - b. Beale Street
 - c. Fremont Street
 - d. Howard Street
 - e. Minna Street
 - f. Mission Street
 - g. Natoma Street
5. Storage, stockpiling, or placement shall not in any way obstruct any lane or passageway intended for vehicular or pedestrian traffic.
6. If parking meters are to be occupied, the Contractor shall apply for a Special Traffic Permit and pay for all applicable fees. See 3.5, Special Traffic Permit, in this section for more information.
7. If the DPT through the TJPA Representative determines that such storage, stockpiling, or placement causes a violation of the foregoing, of any law, or order of any regulatory body having jurisdiction and/or public complaint, Contractor shall cease or modify the storage, stockpiling, or placement as necessary to comply with the specifications, laws, and orders.
8. The proposed areas for storage of materials or equipment shall be included in the traffic control plans.
9. Contractor shall be responsible for ensuring that only Contractor's vehicles, clearly identified with the name of the Contractor on each side of each vehicle, may be parked in the construction area.
10. Contractor shall provide parking for its employees at a site that will not impact local public parking and transport employees between the parking area and the Work.

D. Certification of Flag Persons

1. The flag persons shall have a minimum experience of one year of manual traffic control on similar construction projects. The flag persons shall have passed the flagger training course offered by the ATSSA. Refer to web page www.atssa.com for training classes for flaggers. The certificates of the flag persons shall show the expiration date and be valid up to the end of the contract. The certificates of the Flag persons shall show the expiration date and be valid up to the end of the contract.

E. Material Specifications

1. Contractor shall submit the manufacturer's specification and data for the specific traffic control devices and materials, e.g., solar-operated flashing arrow boards, temporary traffic

detour tape, Triton barriers (or approved equal), etc., concurrent with traffic control plan submissions.

PART 2 - PRODUCTS

2.1 GENERAL

- A. All traffic signs, barricades, delineators, flashing arrow signs, and other traffic control devices shall conform to the requirements of the California MUTCD, 2006 Edition.
- B. All special construction traffic signs shall be reflectorized with black messages/symbols having 6-inch and/or 8-inch high series D letters on orange colored aluminum plate. The message and size of the letters shall be determined by the TJPA Representative. Any changes on any signs shall be made with appropriate decals.
- C. All barricades shall have flashers as required by California Occupational Safety and Health Administration (Cal/OSHA) or others. The flashers shall be maintained in good operating condition at all times by Contractor.
- D. Any equipment that does not operate properly or any device that is not in good operating condition shall be removed from the job site immediately at Contractor's expense.
- E. Contractor shall use Triton barriers (or approved equal) to separate traffic lanes and pedestrian walkways.

2.2 DELINEATORS

- A. Delineators for lane taper areas for the separation of traffic from other work shall be either reflectorized traffic cones, minimum 28 inches high, or reflectorized portable tubular delineators, minimum 36 inches high, with orange posts and yellow/white reflectors. Reflector units shall be a minimum of 3 x 12 inches.

2.3 PLATING

- A. Metal plating and any metal bridging shall be coated with non-skid and rust-inhibitive product and Intergard 750HS (formerly 7300 Magna-Prime) Epoxy (or equal), manufactured by Courtaulds Coatings (Division of International), 400 South 13th Street, Louisville, KY 40203-1714; telephone: (800) 332-6270; fax: (800) 283-0508. This material shall be applied as directed by the manufacturer. Plating shall be installed and maintained in such a manner as to provide a non-skid surface with no edges or corners sticking up and non-bouncing or shifting. Any non-skid plate shall have a friction factor of 0.35 or greater, as measured by the California Department of Transportation Test 342.

2.4 CHANGEABLE MESSAGE SIGNS

- A. Contractor shall furnish and maintain temporary changeable message signs if required by the DTP through the TJPA Representative. These signs shall be mounted on a hitch of 6,000 lbs GVWR capacity. During the day, the sign uses the fluorescent flip disks. During low-light periods, inclement weather, or at night the sign uses light emitting diodes (LED) mounted to each disc. Message panel size will be approximately 76 inches high x 113 inches wide. Each character shall consist of 35 individual disks in a 7-disk-high and 5-disk-wide matrix. Each disk will have two high-output amber LEDs. A photocell shall control the brightness of the LED display panel. The changeable message signs will have 16 batteries, 6 volts DC, 217 amp-hours, wired to provide 12 volts. ADDCO Model DHI (000 DOT manufactured by ADDCO Manufacturing Co. Inc., St. Paul, MN; telephone (800) 616-4408), meets these requirements. Contractor may supply any other model of any other manufacturer meeting these requirements.

2.5 TRITON BARRIERS

- A. Contractor shall furnish, install, and maintain Triton barriers (or approved equal) to separate pedestrian areas and construction areas, as shown on the approved traffic control plans.
- B. The installation layout of the Triton barriers (or approved equal) shall be in accordance with the manufacturer's specifications.
- C. Contractor shall not substitute K-rails for Triton barriers (or approved equal). The use of Triton barriers (or approved equal) used in conjunction with K-rails is not permitted under any circumstances.

2.6 K-RAILS

- A. Contractor shall furnish, install, and maintain the Caltrans Standard K-rails used in the Project.

2.7 TAPE AND MARKERS FOR TEMPORARY STRIPING

- A. Temporary Retroreflective Painted Pavement Striping

Painted traffic stripes and pavement markings shall be installed after grinding. The materials and application shall comply with Section 84-3 of Caltrans Standard Specifications. The TJPA Representative may request samples of materials. Painted markings are not acceptable after paving.

- B. Temporary Removable Pavement Tape

Contractor shall use temporary removable tape to demarcate traffic lane lines in high traffic volume, commercial, and/or downtown core areas, crosswalks, and STOP lines after paving and/or as instructed by the TJPA Representative. Contractor shall use any one of the following removable tapes (or approved equal) furnished with a foil backing:

- 1. Swarco, Visa-Line
- 2. Brite-Line, Series 100

- C. Temporary Reflective Overlay Pavement Markers

Contractor shall use temporary overlay markers to demarcate traffic lane lines in low traffic volume, non-commercial, and/or non-downtown core areas and/or as instructed by the TJPA Representative through DPT after paving and concrete street work. Contractor shall use any one of the following (or approved equal):

- 1. Davidson Plastic, Model TOM (Standard) with Reflexite PC-1000 or WZ with Reflexite AC-1,000 sheeting
- 2. Stimsonite, Model 300, "Temporary Overlay Markers"
- 3. Hi-Way Safety, Inc., Model 1280/1281 with Reflexite PC 1,000

2.8 REPAIR OF TRAFFIC SIGNAL LOOPS

- A. Performance characteristic, materials, and inductive loop detectors shall conform to Section 86-5, "Detectors," of the Caltrans Standard Specifications and this Project manual.
- B. Detector cables shall be labeled in accordance with the plans and as required by 2.9, Conductors, in this section.

C. For installation details, see paragraph 3.21, Traffic Signal Loops Installation, in this section.

2.9 CONDUCTORS

A. General

1. Conductors for all traffic signals running between the traffic signal controller and the termination point shall be Type UF. The termination point is either a terminal block inside the terminal compartment of a traffic signal assembly or the signal head itself if no terminal compartment is used. Conductors within the traffic signal framework shall be UF or THW and may be either solid or stranded provided that such framework contains a terminal compartment (otherwise Type UF wire shall terminate at the signal head). Conductors for street lighting shall be Type THW. Traffic signal service wire shall be THW; #8 and larger shall be stranded; #10 through #14 shall be solid.
2. Each conduit that contains traffic signal conductors shall include one bare #6 AWG copper stranded conductor that is bonded at each end. Refer to Division 26, Electrical, for more information.
3. The installation of any conductors in conduits shall not take place until the Contractor has demonstrated to the TJPA Representative's satisfaction and approval that Contractor has employed all means necessary or required to clean and prepare the conduits for the installation of conductors therein.
4. If the existing grouping, taping, or lacing of conductors is disturbed in the course of work, Contractor shall regroup, tape, or lace as applicable.
5. All conductors terminating in a metallic enclosure shall terminate on a terminal board equipped with screw-type or box-type terminals fabricated from copper or copper-alloy material.
6. Conductors terminating in screw-type termination shall be equipped with self-insulated self-locking spade-type terminals.
7. Conductors terminating on box-type terminals shall be connected directly without using spade-type pressure terminals attached to the conductor ends.
8. Ends of all unused conductors shall be individually taped prior to intersection turn-on or switchover.

B. Conductor Color Codes, Labels, and Grouping

1. Conductor labeling material shall be Panduit Write-On, Self Laminating Labels (Catalog #PLD-2, or equal). Labeling and grouping requirements apply to all new and all existing conductors to remain at a given intersection. Old nylon tags shall be removed from all existing conductors to remain.
2. Wires shall be sized, color-coded, and labeled in accordance with the schedule in Table 01 15 70-1.
3. In all pull boxes and the controller cabinets, all traffic signal conductors shall be grouped by signal head with electrical tape and labeled by signal head number as designated on plan sheets.
4. In all pull boxes, all conductors running between the same two conduits shall be further grouped and wrapped in at least one location with electrical tape near the center of the slack.
5. In the controller cabinet, all conductors shall be further grouped and labeled by phase in an orderly manner.

Table 01 15 70-1. Wire Sizes, Color-Codes, and Labels.

Circuit	AWG	Phase	Base Color	Stripe	Label
Spare Signal Wire	#14	N/A	Black	None	None
12-Conductor Cable	#14	N/A	Black (jacket)	None	See below*
Detector Cable	#14	all	Black (jacket)	None	Per plans
Service (AC+)	#8	N/A	Black	None	None
Service (AC neutral)	#8	N/A	White	None	None

* Install labels on 12-conductor cable near each conduit end. For example, a single cable in a pull box requires two labels—one label near each conduit end; 12-Conductor Cable labels shall identify where cable is headed, i.e., north, south, east, west, controller, etc.

- C. Splicing (Not Applicable)
- D. 12-Conductor Interconnect (Not Applicable)
- E. Red Light Camera (Not Applicable)

PART 3 - EXECUTION

3.1 VEHICULAR AND PEDESTRIAN TRAFFIC

- A. Traffic Lane and Parking Requirements
 - 1. Contractor shall provide the tabulated lanes to satisfactorily accommodate vehicular traffic as shown in Table 01 15 70-2, Traffic Lane Requirements: Number and Width of Lanes for Through Traffic. Vehicular/pedestrian access to properties along the Site shall be maintained at all times.

3.2 SPECIAL INSTRUCTIONS

- A. General
 - 1. Contractor shall not commence site work prior to receiving the TJPA Representative's approval of the construction schedule. No work shall commence prior to the approval of applicable traffic control plan(s), storage and parking plan(s), and flagger resumes and certificates.
 - 2. Contractor shall use hot 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 $\frac{3}{4}$ inch) by the end of the work shift or before opening the lanes to traffic.

Table 01 15 70-2. Traffic Lane Requirements: Number and Width of Lanes for Through Traffic.

<i>Street</i>	<i>Time</i>	<i>Northbound</i>	<i>Southbound</i>	<i>Eastbound</i>	<i>Westbound</i>
1st Street					
Mission to Folsom Sts *(GG, MC, TC)	9AM – 3PM (M-F) 8AM – 6PM (S/S) At Other Times	- - -	3@11' 3@11' 3@11' Minimum	- - -	- - -
Cross Streets for 1st Street					
Folsom St. ^β				y	
Howard St. ^β *(GG, MC)	9AM – 3PM (M-F) 8AM – 6PM (S/S) At Other Times	- - -	- - -	- - -	3@10' 3@10' Full Rdwy
Mission St. *(GG, MC, SM, TC)	7PM – 7AM (M-F) 8AM – 6PM (S/S) At Other Times	- - -	- - -	2@10' 2@10' Full Rdwy	2@10' 2@10' Full Rdwy
Minna St.	At All Times	-	-	-	1@11'
Beale Street					
Mission St. to Folsom St. (TC, MC)	9AM – 3PM (M-F) 8AM – 6PM (S/S) At Other Times	- - -	- - -	3@11' 3@11' 3@11' Minimum	- - -
Cross Streets for Beale Street					
Folsom St. ^β *(GG, MC)	9AM – 3PM (M-F) 8AM – 6PM (S/S) At Other Times	- - -	- - -	3@10' 3@10' Full Rdwy	- - -
Howard St. ^β *(GG, MC)	9AM – 3PM (M-F) 8AM – 6PM (S/S) At Other Times	- - -	- - -	2@10' 2@10' Full Rdwy	2@10' 2@10' Full Rdwy
Mission St. *(GG, MC, SM, TC)	7PM – 7AM (M-F) 8AM – 6PM (S/S) At Other Times	- - -	- - -	2@10' 2@10' Full Rdwy	2@10' 2@10' Full Rdwy
Clementina Street					
1st to 2nd St. *	9AM – 3PM (M-F) 8AM – 6PM (S/S) At Other Times	- - -	- - -	1@11' 1@11' Full Rdwy	- - -
Cross Streets for Clementina Street					
1st St. *(GG, MC)	9AM – 3PM (M-F) 8AM – 6PM (S/S) At Other Times	- - -	3@11' 3@11' Full Rdwy	- - -	- - -
2nd St. ^β *(MC)	9AM – 3PM (M-F) 8AM – 6PM (S/S) At Other Times	2@10' 1@12' Full Rdwy	2@10' 1@12' Full Rdwy	- - -	- - -
Folsom Street ^β					
1st St. to 2nd St. *(GG, MC)	9AM – 3PM (M-F) 8AM – 6PM (S/S) At Other Times	- - -	- - -	3@10' 3@10' Full Rdwy	- - -
Cross Streets for Folsom Street					
1st St. *(GG, MC)	9AM – 3PM (M-F) 8AM – 6PM (S/S) At Other Times	- - -	3@11' 3@11' Full Rdwy	- - -	- - -
2nd St. ^β *(MC)	9AM – 3PM (M-F) 8AM – 6PM (S/S) At Other Times	2@10' 1@12' Full Rdwy	2@10' 1@12' Full Rdwy	- - -	- - -
Essex Street (AC, MC)	9AM – 3PM (M-F) 8AM – 6PM (S/S) At Other Times	1@12' 1@12' Full Rdwy	3@12' 3@12' Full Rdwy	- - -	- - -
Howard Street ^β					
2nd to Fremont St. ^β *(GG, MC)	9AM – 3PM (M-F) 8AM – 6PM (S/S) At Other Times	- - -	- - -	- - -	3@10' 3@10' Full Rdwy
Fremont to Main St. ^β *(GG, MC)	9AM – 3PM (M-F) 8AM – 6PM (S/S) At Other Times	- - -	- - -	2@10' 2@10' Full Rdwy	2@10' 2@10' Full Rdwy

<i>Street</i>	<i>Time</i>	<i>Northbound</i>	<i>Southbound</i>	<i>Eastbound</i>	<i>Westbound</i>
Cross Streets for Howard Street					
1st St. ^β	9AM – 3PM (M-F)	-	3@11'	-	-
	8AM – 6PM (S/S)	-	3@11'	-	-
	At Other Times	-	3@11' Minimum	-	-
2nd St. ^β	9AM – 3PM (M-F)	2@10'	2@10'	-	-
*(GG, MC)	8AM – 6PM (S/S)	1@12'	1@12'	-	-
	At Other Times	Full Rdwy	Full Rdwy	-	-
Fremont St.	9AM – 3PM (M-F)	3@11'	-	-	-
*(GG, MC, TC)	8AM – 6PM (S/S)	3@11'	-	-	-
	At Other Times	3@11' Minimum	-	-	-
Beale St. ^β	9AM – 3PM (M-F)	-	3@11'	-	-
*(GG, MC, TC)	8AM – 6PM (S/S)	-	3@11'	-	-
	At Other Times	-	3@11' Minimum	-	-
Main St.	9AM – 3PM (M-F)	1@11'	1@11'	-	-
*(GG, MC, TC)	8AM – 6PM (S/S)	1@11'	1@11'	-	-
	At Other Times	Full Rdwy	Full Rdwy	-	-
Harrison Street					
1st St. to 2nd St. * (MC)	9AM – 3PM (M-F)	-	-	2@11'	2@11'
	8AM – 6PM (S/S)	-	-	2@11'	2@11'
	At Other Times	-	-	Full Rdwy	Full Rdwy
Cross Streets for Harrison Street					
Essex St. ^β	9AM – 3PM (M-F)	1@12'	2@12'	-	-
*(MC)	8AM – 6PM (S/S)	1@12'	2@12'	-	-
	At Other Times	Full Rdwy	Full Rdwy	-	-
Minna Street					
1st St. to 2nd St.	At All Times	-	-	-	1@11'
Cross Streets for Minna Street					
1st St. ^β	9AM – 3PM (M-F)	-	3@11'	-	-
*(GG, MC)	8AM – 6PM (S/S)	-	3@11'	-	-
	At Other Times	-	3@11' Minimum	-	-
2nd St. ^β	9AM – 3PM (M-F)	2@10'	2@10'	-	-
*(GG, MC)	8AM – 6PM (S/S)	1@12'	1@12'	-	-
	At Other Times	Full Rdwy	Full Rdwy	-	-
Mission Street					
2nd St. to Main St.	7PM – 7AM (M-F)	-	-	2@10'	2@10'
*(GG, MC, SM, TC)	8AM – 6PM (S/S)	-	-	2@10'	2@10'
	At Other Times	-	-	Full Rdwy	Full Rdwy
Cross Streets for Mission Street					
1st St. ^β	9AM – 3PM (M-F)	-	3@11'	-	-
*(GG, MC)	8AM – 6PM (S/S)	-	3@11'	-	-
	At Other Times	-	3@11' Minimum	-	-
2nd St. ^β	9AM – 3PM (M-F)	2@10'	2@10'	-	-
*(GG, MC)	8AM – 6PM (S/S)	1@12'	1@12'	-	-
	At Other Times	Full Rdwy	Full Rdwy	-	-
Fremont St.	9AM – 3PM (M-F)	3@11'	-	-	-
*(MC, TC)	8AM – 6PM (S/S)	3@11'	-	-	-
	At Other Times	3@11' Minimum	-	-	-
Beale St ^β	9AM – 3PM (M-F)	-	3@11'	-	-
*(MC, TC)	8AM – 6PM (S/S)	-	3@11'	-	-
	At Other Times	-	3@11' Minimum	-	-
Main St.	9AM – 3PM (M-F)	2@11'	-	-	-
*(GG, MC)	8AM – 6PM (S/S)	2@11'	-	-	-
	At Other Times	Full Rdwy	-	-	-
Natoma Street					
1st St. to 200' westerly	At All Times	-	-	-	1@11'
midblock btwn 1st & 2nd	At All Times	-	-	Closed ©	-
sts.	At Other Times	-	-	↑	-
2nd St. to 150' easterly					1@11'
1st St. to Fremont St. *	9AM – 3PM (M-F)	-	-	-	1@11'
(GG, MC)	8AM – 6PM (S/S)	-	-	-	1@11'
	At Other Times	-	-	-	1@11'
Cross Streets for Natoma Street					
1st St. ^β	9AM – 3PM (M-F)	-	3@11'	-	-
*(GG, MC)	8AM – 6PM (S/S)	-	3@11'	-	-
	At Other Times	-	3@11' Minimum	-	-
2nd St. ^β	9AM – 3PM (M-F)	2@10'	2@10'	-	-

Street	Time	Northbound	Southbound	Eastbound	Westbound
*(GG, MC)	8AM – 6PM (S/S) At Other Times	1@12' Full Rdwy	1@12' Full Rdwy	- -	- -
Fremont St.	9AM – 3PM (M-F)	3@11'	-	-	-
*(MC, TC)	8AM – 6PM (S/S) At Other Times	3@11' 3@11' Minimum	- -	- -	- -

* Contractor shall not prevent or delay the operation of mass transit vehicles at any time. TC = Trolley Coach, MC = Motor Coach, MM = Muni Metro, CC = Cable Car, SM = SamTrans, GG = GG Transit, AC = AC Transit. See 3.3, Mass Transit Vehicles, for more information.

β Contractor shall install during construction “Bicyclists Allowed Use of Full Lane” signs (or other approved equal), on streets with bicycle lanes. Contractors should pay special attention to streets that are on the bicycle route network. See Blue Book (page 65) Section 9: Bicycle Routes or at: [www.sfmta.com/cms/vcons/Section 9BicycleRoutes.htm](http://www.sfmta.com/cms/vcons/Section%209BicycleRoutes.htm)

© Contractor may close this road to thru traffic and provide access to local traffic by providing an 11-foot-wide lane. However, no work or street closure shall interfere with the access of emergency vehicles including those of police and fire departments and ambulances. Contractor shall set up detour signs in accordance with the approved traffic detour plans as deemed necessary.

† Contractor shall designate the lane for two-way traffic.

NOTES

- In addition to the above specified lanes for through traffic, the Contractor shall provide an additional left/right turn lane of 11 feet in width at the intersection, when there is already an existing separate right/left turn lane.
- Contractor shall maintain the required travelway for vehicles in any public street and a minimum width of 10 feet of clear sidewalk on one side for pedestrians when the sidewalk is closed on the other side at First, Fremont, and Beale streets.
- Contractor may be allowed to store materials and/or equipment for a limited time in the parking strip and/or portion of the sidewalk with written permission of the TJPA Representative and appropriate permits from SFMTA for use of the public right-of-way. Contractor shall maintain adequate signing, barricades, lights, etc., at all times. Permission to store the materials shall be limited to the unused materials during working hours or materials needed to resume the next day's work.
- No work shall interfere with the access of emergency vehicles including those of Police and Fire Departments and ambulances. Local access shall be maintained at all times, by providing a 12-foot-wide lane on all streets except as noted in Table 01 15 70 - 2.
- All existing traffic movements at the intersections shall be maintained by bridging and/or phasing.
- “Full Roadway” is defined as the street from property line to property line, including sidewalks, parking strip and travel lanes
- Changeable message signs shall be required during road closures at various locations as specified in the traffic control plans.

- Contractor may be allowed to perform manhole castings raising work during the day at the discretion of the TJPA Representative. Contractor shall apply for a special traffic permit to perform this work.
- Contractor shall be responsible for coordinating with SFMTA to keep trolley and coach buses in operation at all times during construction. See paragraph 3.3, Mass Transit Vehicles, in this section, for more information.
- Contractor shall not close any cross streets at any time unless as specified in these Contract Documents or as approved by the DPT.
- Contractor shall plate over trenches after working hours.
- Contractor shall provide flag persons to control the traffic, as directed by the TJPA Representative. The number of flag persons required shall depend on the phase of work, traffic conditions, etc.
- Contractor shall separate the construction area and staging areas from the traffic lanes by barricades, delineators, etc.
- Contractor shall not close more than one cross street at any time. The cross street may be closed only when working in the intersection.
- Contractor shall not have more than 600 feet of open trench in areas used by the public at any time on any one street.
- Contractor is responsible for taking inventory of SFMTA markings in the work area prior to working. These markings include yellow “Coach Stop” bars, yellow circular markings, etc. Contractor shall notify Superintendent of Special Operations of the Municipal Railway, (415) 923-6058, two weeks prior to paving on each block so that Muni can restore the markings immediately after paving.
- Work is restricted during the holiday moratorium (day after Thanksgiving to January 1, inclusive, 24 hours per day, 7 days per week) as set forth in the Blue Book by the SFMTA.

13. Contractor shall coordinate the Work with other Contractors working in the area. The required number of lanes must still be provided, as specified in 3.1, Vehicular and Pedestrian Traffic, in this section.
14. No construction activities are permitted on Mission Street between Second and Fifth streets, including the intersections, 1 hour before, 1 hour after, and during major events at the Moscone Convention Center. For further information regarding the scheduling of events, contact Convention Facilities Management at (415) 974-4000.
15. No construction activities are permitted on Mission Street at the intersections of Second, Third, and Fourth streets, beginning two hours before and lasting until two hours after major events at AT&T Park. For further information regarding the scheduling of events, contact Giants Enterprises at (415) 972-1800.

B. Grinding and Paving Work

1. Contractor shall stage grinding and paving operations so that the following minimum requirements are met:
 - a. Grinding work will be allowed up to two consecutive blocks and two consecutive intersections maximum at a time, and all two consecutive blocks and two consecutive intersections must be paved within 48 hours from the start of grinding work, without exception.
 - i. Cross streets shall not be closed at any time unless as specified in these Contract Documents or as approved by DPT.
 - ii. During intersection grinding and paving work, the cross street may be interrupted for up to a maximum of 10 minutes for residential areas and 5 minutes for commercial areas.
 - b. Contractor shall grind or pave the full width of the roadway within a block by the end of a work shift.
 - c. The parking shall be restored in a particular section as soon as the grinding/paving/concrete reconstruction work is completed.

C. Concrete Street Restoration Work (Not Used)

D. Curb Ramp and Sidewalk Work

1. Contractor shall provide a clear sidewalk of at least 5-foot width while constructing curb ramps or sidewalk work. No crosswalk shall be allowed to be closed during curb ramp work. Contractor shall separate the construction area of the curb ramps and safe path of travel for pedestrians, and safe path of travel for pedestrians and traffic area, with Triton barriers (or approved equal). Contractor shall not be allowed to construct the curb ramps on two adjacent corners of the same street. Contractor may work on curb ramps at diagonally located corners at the same time. Contractor shall provide temporary curb ramps during construction and clearly mark the temporary crosswalks. The pedestrian path shall be clear of any debris and meet all ADA requirements. Refer to drawing STR 7696 Rev. 2 for details.
2. Contractor shall submit a construction schedule showing a proposed sequence of operations, starting date, duration, and work limit for each intersection where curb ramps are to be constructed.
3. Contractor shall be allowed a maximum of 10 working days at any intersection to complete all the required curb ramps at any intersection. The 10-day period shall start from the day the Contractor starts work at any corner.

E. Sewer Work

1. Sewer-related work is allowed in up to one block and one adjacent intersection at any one time. Contractor is allowed to close one crosswalk at any one time during the working hours

of sewer main replacement work and/or sewer lining work as long as one flag person is provided to direct pedestrians to the open crosswalks.

2. Sewer lining and mortaring is allowed in up to one block and the two adjacent intersections at any one time.
3. See paragraph 3.3, Mass Transit Vehicles, in this section, regarding overhead line relocation and de-energization during sewer main replacement work and/or sewer lateral work.
4. If an existing safe path of travel is obstructed by a flexible hose for sewer diversion, the Contractor shall provide temporary pedestrian ramps over the hoses. The pedestrian path shall be clear of any debris and meet all ADA requirements. Refer to drawing STR 7696 Rev. 2 for details.

Furthermore, if the flexible hose is located within a bike path, bike lane, or a street designated as a official bike route, the Contractor shall provide longitudinal and/or transverse transitions with a slope of 1:18 between the hose and existing pavement (whenever the difference in the grade of the pavement and the hose exceeds $\frac{3}{4}$ inch) before opening the lanes to traffic.

F. Water Work

1. Water main related work is limited to one block and one adjacent intersection at any one time. Contractor is allowed to close one crosswalk at any one time during the working hours of water main replacement work as long as one flag person is provided to direct pedestrians to the open crosswalks.

G. Slurry Seal Work (Not Used)

3.3 MASS TRANSIT VEHICLES

A. General

1. The City has a transit-first policy. Contractor shall not impede the operation of mass transit vehicles at any time.
2. Contractor shall familiarize himself with the routes of the coach lines that operate within the limits of the Work.
3. The lanes made available for traffic shall be located so as to include an adequate and allowable travel path for the coach lines. The extreme touring range of the centerline of a trolley coach is 10 feet (3.1 m) from the centerline of the trolley wires. Contractor shall provide a 45-foot (13.7-m) turning radius for Municipal Railway vehicles.
4. Contractor shall notify the SFMTA Superintendent of Special Operations, at (415) 923-6058, through the TJPA Representative, at least 10 days in advance of doing any work in existing passenger loading zones for buses on each street, where such work would interfere with passenger loading and unloading operations. The SFMTA, during this time, may temporarily authorize the relocation of these zones. Contractor shall provide and continuously maintain at least one sign at any bus stop that SFMTA has authorized to be closed or relocated. The SFMTA Inspector will supply the exact wording, size, and location of these signs. Unauthorized bus zone relocations or any other unauthorized use of the temporary bus stop signs will result in fines of up to \$5,000 per incident to the Contractor, levied by SFMTA.
5. Contractor shall provide certified flag personnel as required to assist SFMTA transit lines operating around the construction area.
6. Muni overhead electric wires carry a minimum of 600 volts DC and have a 17-foot +/- vertical clearance from the roadway. Contractor's attention is directed to Article 37 of G.O. Order 95 of the Public Utilities Commission State of California. Cal/OSHA regulations require that any equipment that moves vertically must maintain a 10-foot radial clearance, and any other equipment must maintain a 6-foot clearance from Muni overhead electric wires. Contractor shall observe these regulations.
7. Contractor shall obtain a clearance permit from SFMTA Central Control, at (415) 759-4396, before performing any work within 48 inches of the outside edge of SFMTA track (the

“Safety Envelope”). If workers will be within the Safety Envelope, Contractor shall comply with and train its workers per the SFMTA On Track Safety Program, in addition to obtaining a clearance permit. Contact the SFMTA Health and Safety Manager, at (415) 701-4500, for training requirements.

8. It is the Contractor’s responsibility to verify SFMTA, SamTrans, Golden Gate Transit, Paratransit, WestCAT Lynx, Greyhound, and AC Transit bus routes and to inform the transit agencies at least 10 days in advance if the Work is expected to interfere with their operations.

3.4 TRAFFIC CONTROL BY UNIFORMED OFF-DUTY SAN FRANCISCO POLICE OFFICERS

- A. Contractor shall provide uniformed off-duty San Francisco Police Officers (hereafter referred to as 10B officers) as required by the TJPA Representative to supplement the Contractor’s traffic control work for the intersections listed below. Traffic control duty by 10B officers is not a substitute for the overall traffic control responsibility of the Contractor.
 1. Officers will be required during complete road closures at each end of the road closure and also at various locations for pedestrian and traffic control.
 2. Officers may be required during different phases of work, or as requested by the TJPA Representative. Contractor shall provide 10B officers for the time required by the TJPA Representative and as specified above.
 3. The final locations of the 10B officers will be determined by the TJPA Representative through the TJPA Representative. The TJPA Representative shall make the determination whether any 10B officers are required in addition to the flag persons provided by the Contractor as part of the traffic routing.
 4. The 10B officers may perform the following duties:
 - a. Direct vehicular traffic
 - b. Direct pedestrian traffic
 - c. Cite motorists or pedestrians violating traffic regulations
 - d. Other traffic control duties as directed by the TJPA Representative
 5. Contractor shall prepare Instruction Sheet(s) for use by the 10B officers. These Instruction Sheet(s) will be for specific duties the 10B officers will be required to perform, at specific locations. Contractor shall submit the Instruction Sheet(s) to the TJPA Representative at least five working days in advance of the need for 10B officers. Contractor shall also give a copy of the Instruction Sheet(s) to each officer and the 10B Coordinator of the concerned SFPD. The TJPA Representative shall review and make any required changes and transmit the same to the 10B Coordinator of the concerned SFPD and to the TJPA Representative. The TJPA Representative will furnish a copy of the revised Instruction Sheet(s) to the Contractor. Contractor shall conduct a review of the Instruction Sheet(s) with the 10B officers assigned for traffic control. The format for the instruction sheet is given in Section 01 15 70 – Instruction Sheet for Off-Duty Police Officers.
 6. Contractor should contact the 10B Coordinator of the concerned SFPD to obtain the services of 10B officers. Contractor shall enter into an agreement with the SFPD to provide 10B officers within 30 days of the official Notice to Proceed. Contractor shall make a deposit to the SFPD. The deposit will be a minimum of \$2,000 or equal to the amount required for providing 10B officers for a period of two weeks, whichever is more. Contractor shall pay the SFPD the amount of each invoice within 30 calendar days of the date of the invoice.
 7. Contractor shall notify the 10B Coordinator of the concerned SFPD (see Table 01 15 70-3, 10B Coordinators, and Map 01 15 70-1) regarding the schedule and number of 10B officers required at least four calendar days in advance of the scheduled date. The minimum time to cancel the need of the 10B officers is 24 hours.

Table 01 15 70-3. 10B Coordinators

	Station	Coordinator	Pager	Station Fax
A	Central	Sgt. Mark Hernandez	327-4718	315-2449
B	Southern	Sgt. Peter Thoshinsky	327-4719	553-0722
C	Bayview	Sgt. Michael Andraychak	327-4720	671-2345
D	Mission	Sgt. Mario DelGadillo	327-4713	558-5447
E	Northern	Sgt. Greg Yee	327-4714	614-3453
F	Park	Sgt. Wallace Gin	327-4712	242-3005
G	Richmond	Sgt. Tom Lee	327-4717	666-8060
H	Ingleside	Sgt. Timothy Plyer	327-4715	404-4034
I	Taraval	Sgt. Eric Vintero	327-4716	753-7220
J	Tenderloin	Sgt. Gavin McEachern	327-4711	345-7371



Map 01 15 70-1. 10B Coordinator Jurisdiction. Note: Use the pager numbers provided in Table 01 15 70-3, 10B Construction Coordinators, instead of the ones shown on the map above.

8. The 10B officers shall be paid for a minimum of four hours per day. If the number of work hours exceeds four hours, the 10B officers shall be paid for one additional hour for travel time. For a twelve-hour shift, the 10B officers shall be paid thirteen hours per ordinance.
9. Contractor shall be paid for actual time spent on controlling traffic by San Francisco off-duty Police Officers in accordance with these Contract Documents.

3.5 SPECIAL TRAFFIC PERMIT

- A. Contractor shall apply for a Special Traffic Permit from the SFMTA, if any deviation from the traffic lane requirements (time, width, etc.), as shown in these Specifications, is required. If SFMTA approves the issue of the Special Traffic Permit, the Contractor shall pay the required fee to SFMTA, as specified in the Blue Book, and obtain the necessary permit.
- B. Contractor shall apply for a special traffic permit from SFMTA to occupy metered parking spaces (i.e., for equipment/materials storage or materials loading). If SFMTA approves the issue of the special traffic permit, Contractor shall pay the required fees, as specified in the Blue Book and Municipal Transportation Code Section 902 – General Permit Conditions, to SFMTA and obtain the necessary permit. Two separate checks shall be made payable to the “San Francisco Municipal Transportation Agency,” one for the permit fee and the other for the parking meter fee. SFMTA may deny the request of the Contractor.
 1. Contractor shall maintain the cleanliness of the area surrounding the occupied meters for the duration of the permit. Failure to comply with the cleanliness of the area as determined by the TJPA Representative shall be grounds for revocation of the permit. Fees are nonrefundable.
- C. In case of an emergency, the Contractor shall declare an emergency by contacting the TJPA Representative and other relevant City agencies according to the Blue Book set forth by the Department of Parking and Traffic (DPT).
- D. Violation of the Special Traffic Permit Ordinance shall result in fines as specified in the latest City and County of San Francisco Municipal Code, Transportation Code. Working on City streets beyond the terms set forth in the specifications, without Special Traffic Permit and without emergency declaration, will suffice to consider the Contractor as violator of the Special Traffic Permit Ordinance of the City and County of San Francisco.

3.6 TEMPORARY PAVEMENT MARKINGS

- A. After each day’s work the Contractor shall furnish and install temporary pavement delineation, which shall be maintained by the Contractor until the permanent markings are installed.
- B. Contractor, prior to construction, shall survey each street and inventory all existing pavement markings including marking type and material used. The pavement markings shall include but not be limited to traffic striping, crosswalks, STOP lines, messages, and raised pavement markers.
- C. The temporary pavement markers shall be the same color as the markings they replace.
- D. Surfaces on which temporary pavement delineation is to be applied shall be cleaned of all dirt and loose material and shall be dry when the pavement markers are applied.
- E. Temporary pavement delineation shall be applied in accordance with the manufacturer’s instructions.
- F. Cutting and spacing of the tape for the temporary striping shall be as follows:
 1. Crosswalk and STOP line: One stripe 4 inches wide to mark 12-inch-wide crosswalk or limit lines.
 2. Striping across intersections and lines for left and/or right turn lanes: One stripe 4 inches wide to mark 8-inch-wide guidelines.

3. Double yellow centerline: Two, 4 inches wide, 3 inches apart.
4. Lane lines: 4 x 24-inch segments, spaced 24 feet apart.

3.7 CROSSWALKS AND SIDEWALKS

- A. All crosswalks shall be kept open at all times, unless a substitute temporary crosswalk is provided or otherwise approved by the TJPA Representative.
- B. R9-3A and R9-3B, "NO PED CROSSING, USE CROSSWALK" and "USE CROSSWALK (L/R)" signs shall be placed at each end of a temporarily closed crosswalk.
- C. Whenever a temporary crosswalk is provided outside of the existing crosswalk, such temporary crosswalks shall be clearly defined by signs, striping, pedestrian bridges, or plates. The minimum width of the temporary crosswalk shall be 10 feet measured between the outside edges of the striping tape. Contractor shall provide access to mobility and visually impaired persons at all temporary and/or permanent crosswalks at all times by providing accessible temporary curb ramps.
- D. Contractor shall provide temporary pedestrian signals at temporary crosswalks to be located at 15 feet or more from the existing crosswalk with existing pedestrian signals.
- E. No obstruction or openings of any kind shall be allowed in portions of sidewalks accessible to pedestrians.
- F. Portions of sidewalk closed to pedestrians shall be delineated by a continuous line of pedestrian barriers. Barriers shall not have legs or other parts projecting into pedestrian ways and shall meet the requirements for visually impaired persons.

3.8 PERMANENT THERMOPLASTIC PAVEMENT MARKINGS

- A. The Paint Division of the SFMTA will furnish and install all the permanent thermoplastic stripes and pavement markings (traffic stripes, crosswalk stripes, STOP lines, messages, and raised pavement markers) at the locations shown on the traffic plans and in accordance with details shown on standard plan 46,012 Change 2.
- B. Contractor shall notify the TJPA Representative of the proposed schedule for repaving of each block at least seven calendar days in advance and again once the paving is completed and accepted by DPW, BSM Inspector, so that the Painting Division of SFMTA can install permanent pavement markings.
- C. Contractor shall install temporary pavement markings, as specified below, after base reconstruction, after grinding, after paving, after water main work, and before opening the street to public traffic. Any existing crosswalks and STOP and lane lines that are removed or damaged by the work activity shall be restored with temporary foil-backed tape.
- D. The Paint Division of the SFMTA will install the permanent pavement markings within 30 days of the acceptance of the paving work for the entire street by the San Francisco Public Utilities Commission (SFPUC). Contractor shall maintain all temporary pavement markings until 14 calendar days after the acceptance of the paving of any street. The Painting Division will maintain the temporary pavement markings after 14 calendar days of the acceptance of the paving by the SFPUC.

3.9 PROHIBITION OF STOPPING

- A. Contractor may prohibit stopping in parking lanes where and when necessary to gain access to the Work or to provide the required lanes, unless specified otherwise in this section.
- B. Contractor shall obtain the approval of the SFMTA for the required prohibition of stopping from the Traffic Bureau, (415) 701-2311, at least 72 hours in advance of the effective date and time. Contractor shall post the signs at least 72 hours in advance of the effective date and time.
- C. Contractor shall furnish and place, spaced every 100 feet, where approved by SFMTA Enforcement Division, TJPA Representative, and/or according to the approved traffic control plans, "Tow-Away, No Stopping" signs in accordance with DPW Standard Plan 32,400 Ch. 2, on wood posts at least 7 feet above the sidewalk. The sign shall be a metal sign. A sign shall be placed and attached to the post in such a way that it is easily readable by motorists.
- D. If "Tow-Away, No Stopping" signs are to remain in place for less than five days, such signs may be attached to Type II barricades, placed at 25-foot centers. Contractor shall post the signs only in the area where Contractor will be actually working. Parking shall not be prohibited in areas where there is no construction activity. The name and contact telephone number of the Contractor shall be shown on the signs.
- E. Contractor shall post the following signs at the beginning of the block or at the point from where the parking of the vehicles is to be prohibited and/or at a spacing of 500 feet, or as directed by the TJPA Representative, where the block length is more than 800 feet:
- F. "THIS BLOCK HAS
TOW AWAY NO STOPPING
FROM ---- (TIME) TO ---- (TIME)
FROM ---- (DATE) TO ---- (DATE)"

4-inch SERIES D BLACK LETTERS ON ORANGE PLATE.
- G. These signs shall be placed on Type III barricades. If the street is two-way, these signs shall be placed at the beginning of the block, facing approaching traffic. If the street is one-way, and parking is prohibited on both sides, these signs shall be placed on both sides of the street, facing the direction of traffic.
- H. Contractor shall maintain the signs on a continual basis, shall replace damaged or missing signs daily, and shall remove the signs immediately after they are no longer needed.
- I. When existing posted sign(s) need(s) to be revised (i.e., later start date, duration extension, etc.), the Contractor shall make new sign(s) to reflect the change(s) and replace the existing posted sign(s) at least 72 hours in advance of the proposed change(s).
- J. 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 the required signs, reasonable grounds did not exist for removal, the Contractor shall reimburse the City and County of San Francisco for the cost incurred in storage and towing. The failure of the Contractor to provide reimbursement or to agree to assume all liability for any improper posting shall result in the Parking and Traffic Department's denial of any future requests by that Contractor for removal of vehicles in violation.

3.10 NIGHT TIME WORK

- A. Contractor shall obtain a night noise permit for any work outside of the building footprint between the hours of 8:00 p.m. and 7:00 a.m., as specified in Section 2908 of the Police Code. Contact

Rassendyll Dennis of the Department of Public Works, Room 460, 875 Stevenson Street, (415) 554-5810, for details of the requirements for obtaining the permit. Contractor shall obtain a night noise permit for any work inside the building footprint between the hours of 8:00 p.m. and 7:00 a.m. from the TJPA.

- B. Contractor shall provide suitable temporary lighting to illuminate the construction area, for safety, and security purposes, as required by the TJPA Representative. Contractor will submit the details of the temporary lighting to the TJPA Representative for approval.

3.11 TREE TRIMMING

- A. Contractor shall contact Street Cleaning and Urban Forestry of the Department of Public Works, (415) 695-2020, two weeks prior to start of work in any particular block, to trim the trees that will be in conflict with the construction job itself or construction equipment or with the traveling public during construction. Contractor shall not detour any traffic onto the parking lane until all the tree branches are properly trimmed or the Contractor has made sure that these branches will not interfere with the traveling public.
- B. Contractor will not be allowed to trim any trees without the written approval and supervision from Street Cleaning and Urban Forestry of the DPW. Contractor will do all necessary tree trimming as directed, at no additional cost to the city.
- C. If the trees are maintained by Property Owners, the Contractor shall send notices to the property owners, at least 30 calendar days in advance to trim the trees. If the trees are not trimmed by the private owners, the Contractor shall trim the trees, at no cost to the City. If the trees are maintained by the City, the Contractor shall trim the trees at no cost to the City, following the direction of the Urban Forestry of DPW.

3.12 TEMPORARY CONSTRUCTION AND TRAFFIC SIGNS

- A. The signs and equipment shall conform to the requirements of the latest edition of California Department of Transportation's MUTCD. Unless otherwise shown on the plans or specified in these special provisions, the color of construction area warning and guide signs shall have black legend and border on orange background, except W10-1 or W47 (CA) (Highway-Rail Grade Crossing Advance Warning) sign shall have black legend and border on yellow background.
- B. Contractor shall be familiar with the latest edition of California Department of Transportation's MUTCD. The signs and equipment shall conform to the requirements of the latest edition of the California Manual on Uniform Traffic Control Devices for Streets and Highways and to the City and County of San Francisco's Noise Ordinance
- C. Contractor shall furnish, install, and maintain temporary signs mounted on barricades or other suitable supports as necessary before starting any work which will affect the normal flow of traffic where necessary or directed.
- D. Contractor shall, as a minimum, furnish and make available to the Site the following signs and equipment in sufficient quantities to maintain required traffic control, per the approved traffic control plans and/or as directed by the TJPA Representative:
 - 1. Barricades, as required by Section 21,400 of the State of California Vehicle Code and as specified in the State of California's Department of Transportation's MUTCD, 2006 Edition, in sufficient amount to safeguard the public and the workers.
 - 2. "TOW-AWAY, NO STOPPING" signs as herein specified.
 - 3. Traffic cones and/or delineators and/or temporary reflectorized removable tape to delineate traffic lanes as required to guide and separate traffic movements.
 - 4. High-level warning flag units, in advance of traffic approaching the Work, each displaying three flags mounted at a height of 8 feet.

5. "ROAD WORK AHEAD" signs, Code W20-1, size 48 inches x 48 inches placed in conspicuous locations, in advance of the Work, facing approaching traffic.
6. "ROAD CLOSED" signs, Code R11-2, size 48 inches x 30 inches.
7. "ROAD CLOSED TO THRU TRAFFIC" signs, Code R11-4, 60 inches x 30 inches.
8. "ROAD CLOSED AHEAD" signs, Code W20-3, 48 inches x 48 inches.
9. "RIGHT/LEFT LANE CLOSED AHEAD" signs, Code W20-5 (RT/LT), size 48 inches x 48 inches.
10. "FLAGGER SYMBOL" signs, code C9A (CA), size 48 inches x 48 inches.
11. "Street Name" signs, size 48 inches x 18 inches, placed with items 16 and 17.
12. "TWO WAY TRAFFIC SYMBOL" signs, Code W 44, size standard 48 inches.
13. "ROUGH ROAD" signs, Code W8-8, size 30 inches x 30 inches.
14. "REVERSE CURVE SYMBOL" signs, Code W1-4, size standard 36 inches x 36 inches.
15. "DETOUR AHEAD" signs, Code W20-2, size 48 inches x 48 inches.
16. "DETOUR" signs, Code M4-10 (RT/LT) and/or SC3 (CA), size 48 inches x 18 inches.
17. "USE CROSSWALK (RIGHT OR LEFT ARROW)" signs, R9-3b (RT/LT), size 18 inches x 12 inches.
18. "NO PED CROSSING SYMBOL" signs, Code R9-3a, size 18 inches x 18 inches.
19. Flashing arrow signs, Type II conforming to Section 12-3.03 of Caltrans Standard Specifications dated May 2006, except as modified herein, placed as shown on the approved Traffic Control Plan. Contractor shall use solar-operated flashing arrow signs.
20. "THIS BLOCK HAS
TOW-AWAY, NO STOPPING
FROM --- (TIME) TO ---- (TIME)
FROM --- (DATE) TO ---- (DATE)"

4-inch Series D black letters on orange plate.
21. Miscellaneous signs, size 48 inches x 48 inches or larger, with 6-inch and/or 8-inch series D black letters on orange plate.
22. Changeable message signs, if specified in the bid schedule, shall be portable conforming to Section 12-3.12 of Caltrans' Standard Specifications dated May 2006 and placed as directed by the TJPA Representative. The sign shall be capable of 24-hour operation via solar power to minimize complaints of odor and noise, etc., from local residents and businesses.
23. Bicycle Route Detour Signs, 12 inches x 24 inches or 12 inches x 26 inches.
24. "BICYCLISTS ALLOWED USE OF FULL LANE" signs, 4 inches UC, size 36 inches x 36 inches.
25. Muni Temporary Bus Stop Signs, 12 inches x 24 inches, placed as directed by the Muni Chief Transit Inspector Office. The Muni Inspector will supply the exact wording and location of these signs. Unauthorized bus zone relocations or any other unauthorized use of the temporary bus stop signs will result in fines of up to \$5,000 per incident.

E. All signs installed by the Contractor shall employ the use of Type III graffiti-proof sheeting on aluminum signs and Type IV for roll-up signs. This sheeting can be obtained from the following sources approved by Caltrans:

1. TYPE III 3M High Intensity
 3M Center
 St. Paul, MN 55010
 (612) 733-8937
 (916) 924-9605
2. TYPE IV Reflexite Vinyl Microprism
 Reflexite
 P.O. Box 1200
 315 South Street
 New Britain, CT 06050
 (203) 223-9297

- F. The actual number and type of signs to be placed shall be as shown on the approved traffic routing plans.
- G. All the signs and/or temporary striping shall be reflectorized. All signs shall be installed so that the bottom of the sign is at least 7 feet above the sidewalk or pavement.

3.13 TRAFFIC CONTROL

- A. Traffic Coordination with Others
 - 1. Contractor, in order to maintain a continuous flow of traffic, shall coordinate the traffic routing work with other contractors, working in the same adjacent area. This includes truck traffic hauling materials, equipment, etc.
 - 2. All proposed traffic routing changes shall be subject to approval of the TJPA Representative.
- B. Traffic Control Flag Persons
 - 1. Flaggers, flagging procedures (signaling), flagger stations, and flagger control shall conform to MUTCD, 2006 Edition.
 - 2. Contractor shall ensure that flaggers are trained in the proper fundamentals of flagging traffic before being assigned as flaggers.
 - 3. The flaggers shall be used in each situation when the Contractor's equipment and/or vehicle backs up into a travel lane, occupies a traffic lane intermittently, enters from the work area into a traffic lane, and/or where required for traffic control, as directed by the TJPA Representative.

3.14 MAINTENANCE OF TRAFFIC

- A. Contractor shall cause the least possible interference with traffic. Contractor shall not obstruct nor close any roadway to vehicular or pedestrian traffic, except in the immediate vicinity of the Work, and then only to the extent allowed by Article II, Chapter XI (Traffic Code), Part II of the San Francisco Municipal Code and any Department Orders adopted pursuant thereto by the Director of SFMTA or the Director of Public Works.
- B. Those parts of public streets, ways, and sidewalks that are occupied by the Contractor shall be immediately vacated by him and returned to public use when his use thereof is no longer necessary for the prosecution of the Work.
- C. Contractor, except as hereinafter provided, shall not impede, at any time, free access for vehicles and pedestrians to warehouses, stores, service stations, dwellings, garages, and other properties in the vicinity of the Work and on adjacent streets, including those properties fronting on streets allowed or stipulated by the Specifications to be closed to through vehicular traffic. He shall provide for such local access by phasing his operations, bridging, or employing other procedures approved by the DPT through the TJPA Representative and as set forth in the Blue Book set forth by the SFMTA.
 - 1. Contractor shall obtain written permission of each affected property or business owner, or responsible building or business manager, for any proposed period of prohibition or impediment of such access. Prohibition or impediment of access to any building or property for which the TJPA Representative does not have a copy of the specified signed permission will not be allowed.
- D. Access to fire hydrants, to assure their immediate and unhampered use at all times, shall not be impaired by the Contractor. Clearance of materials from fire hydrants, fire alarm boxes, and valve covers shall be developed by the Contractor and reviewed by the San Francisco Fire Department.

3.15 DIVERTING OF VEHICULAR TRAFFIC

- A. When closing one or more lanes to vehicular traffic or to otherwise divert such traffic from its normal paths, the Contractor shall clearly delineate temporary centerlines separating two-way traffic and dividing lines for other temporary traffic lanes by employing cones, barricades, flags, reflectors, or other approved methods or devices.
- B. Placing of devices shall commence sufficiently in advance of the obstruction or other cause of the diverting of traffic to minimize congestion and shall enable traffic to enter, traverse, and leave the site of the Work without abrupt or unwarranted changes in direction. Unless otherwise specified or approved, each temporary traffic lane shall be not less than 10 feet clear width.
- C. When a detour is necessary for full or partial roadway closure, all detour signs needed for the required traffic routing must be in place before the roadway can be closed for construction. Failure to comply with this requirement shall result in liquidated damages associated with improper lane closure.
- D. High-rise warning flag units, each displaying three flags mounted at the height of 9 feet, to provide advance warning for traffic approaching the Work, will be required in all cases where motorists' visibility of the Work is limited or obscured.

3.16 RELOCATION AND REMOVAL OF EXISTING PERMANENT TRAFFIC CONTROL AND SIGNS

- A. Contractor shall be familiar with all existing permanent traffic signs and other traffic control devices within the project limit. Contractor shall survey the Site thoroughly to get all pertinent information of the signs in the construction area including but not limited to sign type, message, location, orientation, number of faces (double-sided or single-sided), and reflectivity. Contractor shall pay particular attention to the signs that are likely to be damaged, removed, or relocated during construction. Contractor shall submit a Sign Inventory Form for each affected intersection or location. This form is attached as 01 15 70/AT3, Sign Inventory Form.
- B. Contractor shall temporarily relocate all traffic control, street name, and other City signs, as required for the prosecution of the Work and to prevent interference with traffic signal installations, and shall satisfactorily maintain such signs in place at all times. Contractor shall similarly relocate or remove and salvage as City property the standards for such signs. Contractor shall salvage standards in their entirety and shall remove any concrete therefrom.
- C. The temporary relocation of each arterial STOP or other traffic regulatory sign shall be done immediately upon its removal and to a location as close as possible to the original position of such sign or where directed by the TJPA Representative.
- D. Contractor shall remove and salvage as City property existing arterial STOP or other signs superseded by traffic signals installed by him/her immediately upon being notified by the TJPA Representative that such signals will remain in operation.
- E. Contractor shall permanently relocate traffic control and other signs and standards to the locations shown, as directed in the plans. Signs to be removed or salvaged are to be delivered by the Contractor, with a copy of the Sign Inventory Form(s), to SFMTA Sign Shop at 1999 Bryant Street, telephone (415) 554-9785. Each sign shall be tagged and labeled providing such information as location and the direction sign was facing prior to its removal.
- F. At least five working days prior to the time Contractor's work will be done to the point that permanent installation of the signs temporarily relocated by Contractor can be inspected, Contractor shall notify the DPT Sign Shop, telephone (415) 554-9785, through the TJPA Representative. Contractor shall provide a contact name, number, location, type, and number of

signs. The reinstalled signs will be checked by the Sign Shop personnel at no cost to the Contractor.

- G. If new materials (sign, pole, frame, mounting equipment, etc.) and adjustments are needed during the Sign Shop personnel's inspection, the associated cost shall be borne by the Contractor. The Sign Shop shall bill the Contractor to recover all costs incurred.

3.17 WORKING AROUND PARKING METERS

- A. Contractor shall notify Joseph Bonilla of DPT, telephone (415) 701-4585, through the TJPA Representative, at least two working days before starting any work that may impact parking meters so that arrangements may be made by the City to have the meters removed at no cost to the Contractor.
- B. Parking meters and parking meter standards damaged or loosened by the Contractor's operations will be repaired or replaced as necessary by the City; however, all expenses in connection therewith shall be borne by the Contractor.

3.18 WORKING AROUND SFPARK PARKING STALL SENSORS

- A. Contractor shall notify Sarah Fishleder of SFMTA's SFPark Program through the TJPA Representative at least 10 working days before starting any work that may impact SFPark parking stall sensors so that arrangements may be made by the City to have the sensors removed at no cost to the Contractor. If no notice is given, the Contractor will be charged for any work performed by SFMTA.
- B. Parking stall sensors damaged or loosened by the Contractor's operations will be repaired or replaced as necessary by the City; however, all expenses in connection therewith shall be borne by the Contractor.

3.19 WIRELESS DETECTORS OR WIRED LOOP DETECTORS IN THE WORK AREAS

Contractor is responsible for making sure that these facilities are not damaged. If these detectors/loops are within the work area and could be damaged or affected, Contractor should follow the procedure below:

- A. Contractor shall notify the SFMTA Signal Shop through the TJPA Representative 48 hours before starting work.
- B. Contractor shall obtain a copy of the wireless/loop detector plan from the TJPA Representative.
- C. At the Contractor's expense, the SFMTA Signal Shop will remove wireless vehicle detectors prior to the Contractor starting work and re-install the detectors after work is completed.
- D. Contractor shall repair and restore the wired loops, at his expense, within seven days of roadway restoration at the Site as set forth in the Blue Book, prepared by the SFMTA.
- E. Contractor shall notify the SFMTA Signal Shop through the TJPA Representative as soon as the wired loop is re-installed for inspection.

In the event the Contractor removes or damages any loop detectors or associated equipment during construction, the Contractor shall replace or repair the loops as incidental work. The loop detectors shall be replaced in kind within five calendar days after final paving.

3.20 EXISTING TRAFFIC SIGNAL SHUTDOWN AND MAINTENANCE

- A. Where it is necessary to shut down existing traffic signals at any intersection, Contractor shall notify the TJPA Representative; Traffic Engineer, Fax (415) 701-4737; Signal Shop, Fax (415) 550-2930; and SFPD Traffic Bureau 48 hours in advance of the start of each such shutdown so arrangements may be made to have a police officer on duty to control traffic. Notification shall be written and shall also include a contact name and number to be used in case of emergency.
- B. Contractor shall similarly notify the Bureau of Light, Heat, and Power, Fax (415) 554-1854, in advance of any work on existing street light equipment. Disconnection of any existing or temporary streetlights will not be permitted until the new equipment has been tested and properly adjusted.
- C. In the event that the San Francisco Police Department cannot assign an officer to the intersection, the Contractor shall, with the approval of the TJPA Representative, place the signals on flashing operation for the duration of the shutdown. If flashing operation is not possible, the Contractor shall provide a portable flashing unit and shall make all necessary or required connections to effect flashing operation.
- D. The operation and interconnected functioning of such existing traffic signals shall not be disturbed before 9:00 a.m., and the traffic signals shall be returned to normal working conditions before 3:00 p.m. of the same day.
- E. All work and expenses for maintenance of existing traffic signals and streetlights in operation shall be done as work incidental to this contract.
- F. Many traffic signals are interconnected via 12-conductor cable, twisted wire pairs, or fiber optic cable to provide signal coordination. Coordination of the traffic signals shall be maintained every day between the hours of 7:00 to 9:00 a.m. and 3:00 to 7:00 p.m. During all other times, the Contractor shall make every effort to maintain the existing coordination.

3.21 TRAFFIC SIGNAL LOOPS INSTALLATION

- A. Contractor shall lay out the loop installation, with paint, and notify the TJPA Representative at least two working days in advance, before the scheduled date of slot cutting. The slots for the loops shall be cut only after the approval of the TJPA Representative.
- B. Residue material resulting from slot-cutting operations shall not be allowed to flow across the sidewalk or traffic lanes and shall be removed from the pavement surface.
- C. The depth of the cut shall be 4 inches to 4½ inches except when noted otherwise on the contract plans and drawings. The width of the saw cut shall be a minimum of ½-inch. Each corner shall be core drilled. Contractor shall core drill the point where the curb line and road surface meet. Contractor is advised that City streets are generally 2-inch to 4-inch asphalt concrete wearing surface on an 8-inch to 12-inch concrete use.
- D. Contractor shall submit a schedule of installation for all phases of saw cutting for approval. The TJPA Representative shall verify the following:
 - 1. Layout of loops and home runs prior to saw cut
 - 2. Depth and width of the saw cut for the loop
- E. Contractor shall notify the TJPA Representative not less than 24 hours prior to cleaning of pavement cuts, installation of loop wires and installation of loop sealant. Failure to notify the TJPA Representative will result in this work being rejected.

3.22 RED LIGHT CAMERA LOOPS INSTALLATION

- A. This section refers to the reinstallation of red light camera detector loops. Contractor shall notify the TJPA Representative at least two days in advance of excavating in the area of the loops.
1. Loop Detectors shall be Coleman Product #513496 (or approved equal). Detector Lead-In Cables shall be Coleman Product #95253 (or approved equal).
 2. Contractor shall lay out the loop installation with paint and notify the TJPA Representative through the TJPA Representative at least two working days in advance before the scheduled date of slot cutting. The slots for the loops shall be cut only after the approval of the TJPA Representative.
 3. The depth of the cut shall be 3 inches to 4 inches except when noted otherwise on the contract plans and drawings. The width of the saw cut shall be a minimum of 1/4-inch. Each corner shall be core drilled. Contractor shall core drill the point where the curb line and road surface meet.
 4. Residue material resulting from slot cutting operations shall not be allowed to flow across sidewalk or traffic lanes and shall be removed from the pavement surface.
 5. Contractor shall overlap saw cuts at corners and intersection points to ensure uniform saw slot depth.
 6. Contractor shall twist loop wire leads symmetrically from the loop to the pullbox at a rate of not less than five twists per foot.
 7. New loop wires shall be properly connected to existing detector lead-in cables, per State Standard Specifications Section 86-5.01A, "Inductive Loop Detectors."
 8. Contractor shall notify the TJPA Representative not less than 24 hours prior to cleaning of pavement cuts, installation of loop wires, and installation of loop sealant. Failure to notify the TJPA Representative will result in this work being rejected.

3.23 TRUCK ROUTES

- A. Contractor shall ensure that all trucks and equipment associated with the Project travel only on the truck routes approved by the local agencies. Contractor shall not permit any trucks or equipment associated with this Project to be driven on non-truck-route local streets except to use the shortest route to and from the project sites. In the event truck routes are not approved by a local agency, the Contractors shall use the local arterials to the project sites.
- B. Contractor is solely responsible for all permits and fees required to operate extralegal size, weight, or load vehicles associated with this Project.

END OF SECTION 01 15 70

SPECIFICATION ISSUE LOG

REV NO.	DATE
0	July 30, 2010
1	August 25, 2010
2	September 23, 2010

SECTION 01 15 70/AT1 – INSTRUCTION SHEET FOR OFF-DUTY POLICE OFFICERS

PROJECT:

SPEC. NO.

INTERSECTION: _____

OFFICER # 1

A) FACILITATE TRAFFIC FLOW OF VEHICULAR TRAFFIC:

N/B _____ S/B _____ E/B _____ W/B _____

B) FACILITATE PEDESTRIAN TRAFFIC CROSSING:

STREET _____ SIDE _____

OFFICER # 2

A) FACILITATE TRAFFIC FLOW OF VEHICULAR TRAFFIC:

N/B _____ S/B _____ E/B _____ W/B _____

B) FACILITATE PEDESTRIAN TRAFFIC CROSSING:

STREET _____ SIDE _____

ADDITIONAL INSTRUCTIONS:

Signature of Traffic Supervisor _____

Officers shall direct vehicular and pedestrian traffic, cite motorists and pedestrians violating traffic regulations and perform other duties concerning traffic.

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 01 15 70/AT2 – DAILY TRAFFIC INSPECTION REPORT

PROJECT:

SPEC. NO. :

Inspection Checklist

Date: _____

1. Traffic Control Crew: _____

2. Brief Description of Work Being Done: _____

3. Traffic Switch Time: _____

4. Number of Lanes: _____ Direction: _____ Time: _____
5. Lost or Damaged Equipment: _____

6. New Equipment Installed: _____

7. Problems: _____

8. Resolutions: _____

Signature of Traffic Supervisor

Items to check daily: All signs, detour signs, K-rails, flashing arrows, traffic control devices, crosswalks, pedestrian paths, curb ramps. Correct deficiencies observed by City agencies.

SPECIFICATION LOG

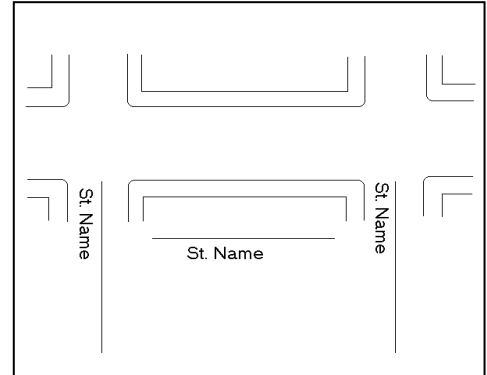
Revision	Date
0	July 30, 2010

SECTION 01 15 70/AT3 – SIGN INVENTORY FORM

Date: _____

Contract: _____

Location: _____



Sign Type	Location x' from property line of Cross Street	Side of Street	Double-sided Single-sided	Sign Description	Comments

Contractor's Signature _____

Sign Type: R-1 (Stop Sign), R-17 (No Left Turn), and etc.
 Location: Sign R-24: Park Parallel is 23' south from the property line of 9th Street.
 Side of Street: ES – east side, WS – west side, NS – north side, SS – south side
 Double sided/Single sided: DS or SS
 Sign Description: No Left Turn, One Way (L or R), Tow Away No Stopping Anytime (TANSAT), etc.
 For street name signs specify name (i.e. Main St) & color (B/W - black /white or G/W - green/white)

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 01 15 90 – FIELD OFFICES AND SHEDS

PART 1 - GENERAL

1.1 SUMMARY

- A. This section specifies the requirements for field offices, temporary facilities, and office services, supplies and equipment.

1.2 CONTRACTOR’S GENERAL FIELD OFFICE AND FACILITIES REQUIREMENTS

- A. Contractor shall provide and maintain its own field offices, equipment, and services specified herein at the Site during the entire period of construction.
- B. Contractor shall provide sewer and water connections as approved by the TJPA.
- C. Contractor is responsible for paying utilities and services required for Contractor's own construction facilities in accordance with Section 01 15 00, Construction Facilities and Temporary Controls.
- D. Materials, installation and the maintenance of field offices shall comply with all applicable regulatory requirements.
- E. Contractor shall remove field offices and temporary construction facilities from the Site prior to final payment. Contractor shall restore the Site occupied by said field offices to its original condition.

1.3 TJPA REPRESENTATIVE’S STORAGE SHED

- A. Contractor shall provide for each block a storage shed that will allow the TJPA Representative to store inspection equipment and access a water hose bibb.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION 01 15 90

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 01 16 00 – MATERIAL AND EQUIPMENT

PART 1 - GENERAL

1.1 SUMMARY

- A. This section specifies procedures and requirements for material and equipment.

1.2 PRODUCTS

- A. Material and equipment incorporated in the permanent Work shall be new, unless otherwise specified or indicated; in a condition acceptable to the TJPA; and suitable for the intended use.
 - 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.
- C. Trademarks and Labels: Do not expose trademarks and labels, including applied labels, in finished Work. Remove visible trademarks and labels except those that are essential to obtain identification of mechanical and electrical equipment for maintenance and replacement purposes and for mandatory fire ratings.

1.3 QUALITY ASSURANCE

- A. Contractor shall include within Contractor's quality assurance program identified in Section 01 14 00, Quality Control, procedures for full protection of Work and materials.

1.4 MANUFACTURER'S SERVICES

- A. Contractor shall require material suppliers and product manufacturers to provide site representation on the request of the TJPA for qualifying and verifying the use of their materials for the project purpose and conditions. Refer to Section 01 13 00, Submittals, for submittal requirements regarding manufacturer's instructions and certificates of satisfactory installation.

1.5 MANUFACTURERS' RECOMMENDATIONS

- A. Except as otherwise approved by the TJPA, Contractor shall determine and comply with manufacturers' recommendations on product handling, storage, and protection.

1.6 DELIVERY

- A. Contractor shall transport and handle products in accordance with manufacturers' instructions.
- B. Contractor shall transport and deliver manufactured products, undamaged, in manufacturers' original, unbroken containers or packaging, clearly identified with manufacturer's name, product name, and instructions.
- C. Contractor shall handle products to avoid soiling and damaging the products and their packaging.
- D. Immediately upon delivery, Contractor shall 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 job site in manufacturers' sealed containers or wrappings with legends and labels intact. Contractor shall maintain packaged materials with seals unbroken and labels intact until time of use.

2. Contractor shall 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 TJPA. Removal costs shall be paid by Contractor.
 4. Contractor shall identify materials and equipment delivered to the Site to permit checking against submittals and shop drawings.
- E. The TJPA may reject as non-complying such material and products that do not bear identification satisfactory to the TJPA as to manufacturer, grade, quality, and other pertinent information.

1.7 STORAGE

Contractor shall

- A. Store materials and equipment at the site at Contractor's own risk. Because of location and visibility, onsite storage shall be limited to materials and equipment currently being utilized or installed.
- B. Provide offsite storage and protection when Site does not permit onsite 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. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation or potential degradation of product.
- G. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- H. 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.
- I. Store products subject to damage from the elements in weather-tight enclosures, maintaining temperature and humidity within the ranges specified by the manufacturers.
- J. 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 that do not soil, stain, or damage materials being protected.

1.8 HANDLING

- A. Contractor shall use means necessary to protect the materials incorporated in the permanent Work 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 TJPA.

- B. Clean exposed materials at the time of acceptance of the installation for Substantial Completion.

1.9 REPAIRS AND REPLACEMENTS

- A. Contractor shall promptly replace lost or damaged materials and equipment with replacements of like kind and quality, or repair them at no additional cost to the TJPA.
- B. Damage to any of the Work and premises prior to acceptance by the TJPA is the responsibility of Contractor. Should any new equipment become damaged, Contractor shall restore it to its original condition, and finish before Final Completion. Contractor shall replace or repair damage to TJPA property and to the work of other contractors caused by the work of Contractor at the expense of Contractor and to the TJPA'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 01 16 00

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 01 16 30 – PRODUCT OPTIONS AND SUBSTITUTIONS

PART 1 - GENERAL

1.1 SUMMARY

- A. This section specifies the administrative and procedural requirements for handling requests for substitutions.

1.2 DEFINITIONS

- A. Substitution: The proposed change by Contractor of a product, equipment, or service required by the Contract Documents is considered a request for substitution. The following are not considered requests for substitution:
 - 1. Substitutions requested during the Bid period, and accepted by Addendum prior to opening of bids, are included in the Contract Documents and are not subject to the requirements specified in this section.
 - 2. Revisions to the Contract Documents requested by the TJPA.
 - 3. Specified options of products and construction methods included in the Contract Documents.

1.3 REQUIREMENTS

- A. Contractor's Total Bid Price for the Work of this Contract shall be based on products, equipment items, or services listed by manufacturer's or Supplier's name in the Specifications.
- B. For a product or manufacturer that is not specifically named, Contractor shall submit a request for substitution. Where the terms "or equal," or "or approved equal," or similar references are used, submit the request for substitution for a product or manufacturer not specifically indicated or named in the Specifications.
- C. Substitutions by Contractor shall not be the basis for any extra charges above the original Total Bid Price for the Work.
- D. Contractor shall bear the cost of making all mechanical, electrical, structural, utility, or other changes required to accommodate the proposed Contractor substitution.
- E. Substitutions described in this section shall not be construed as submittals as described in Section 01 13 00, Submittals.

1.4 SUBSTITUTIONS PROPOSED BY CONTRACTOR

- A. Not later than 10 days after the date of each Trade Subcontractor contract award, Contractor shall submit a complete typewritten list of proposed substitutions including the manufacturer's name, trade name, and model number of the substitution. Use Section 00 04 40, Request for Substitution. During this time period, the TJPA will consider formal requests for proposed substitutions only under the following conditions:
 - 1. The burden of proof as to the type, function, and quality of proposed substitutions shall be upon the Contractor.
 - 2. The TJPA will determine the quality and utility of the Contractor's proposed substitutions. The TJPA's decision shall be final at the sole discretion and determination of the TJPA Representative.
 - 3. The TJPA may require the Contractor to furnish at the Contractor's expense a special performance guarantee or other surety with respect to any substituted product, equipment item, or service.

4. After the 10-day period, requests will be considered only when a product becomes unavailable due to no fault of the Contractor. In such cases, all provisions of this section shall continue to apply.
 5. The TJPA's costs for reviewing substitution requests submitted after the 10-day period shall be deducted from progress payments due the Contractor. This charge will not apply in cases where the product, equipment item, or service has become unavailable due to no fault of the Contractor.
 6. With respect to all cost savings afforded by the Contractor's proposed substitution, if it should be necessary (due to product unavailability or to the benefit of the TJPA) to make a substitution of any product, equipment item, or service after the 10-day limit described in paragraph 1.4A, then 50% of such savings shall revert to the TJPA and 50% shall revert to the Contractor. All such savings shall be shown as a credit upon final negotiation of the actual Contract lump sum price. Contractor shall provide manufacturer's pricing information to document actual costs of the original and the substituted product(s).
 7. Contractor shall comply with Section 01 81 13, General LEED Building Design and Construction Requirements, for additional substitution requirements for LEED certification related products.
- B. Supporting Data: Provide complete data similar to that required for the product originally specified, including drawings, samples, literature, or detailed information sufficient to demonstrate that the proposed substitution is equal in quality and utility to the product or equipment originally specified.
1. Information regarding the effect of the substitution, if any, on the construction schedule
 2. Name and address of similar projects on which the substituted product or equipment has been used, and date of installation.
 3. Complete breakdown of costs, indicating the amount to be deducted from the Contract Sum if the proposed substitution is accepted.
 4. Signed statement that the proposed substitution is in full compliance with the Contract Documents and applicable regulatory requirements.
 5. List of other work, if any, which may be affected by the substitution.
 - a. Contractor shall be responsible for the effect of a substitution upon related work, and pay the additional costs generated thereby, including the TJPA design services associated therewith.
 6. Information on availability of maintenance service and source of replacement materials
 7. Sample of manufacturer's standard form of warranty or guarantee for the proposed substitution.
 8. Where required, itemized comparison of proposed substitution with product or equipment specified and list significant variations.
 9. Data relating to changes in construction schedule.
 10. Accurate cost data comparing proposed substitution with product or equipment indicated or specified and amount of net change in Contract Sum.
 - a. Include costs to other Contractors and costs for revisions to Drawings, Details, or Specifications.
 11. Complete details regarding changes in requirements for power or other support facilities, auxiliary equipment, or structural modifications.
- C. Manufacturer's Product Modifications: Submit a request for substitution in accordance with the above if the specified product or equipment model has been modified or improved by the manufacturer. If approved, the substitution shall be at no additional cost to the TJPA, and all cost savings shall be credited to the TJPA.

- D. Substitutions will not be considered for acceptance under the following circumstances:
 - 1. Substitutions are indicated or implied on submittals without a formal request from Contractor.
 - 2. Substitutions are requested directly by a Trade Subcontractor or Supplier.
 - 3. It is specifically stated: "No Substitutions."
- E. Substitutions required by Contractor's inability to obtain products or equipment specified will not be acceptable grounds for an increase in Contract Sum or Contract Time for completion of the Contract.
- F. Substitute products, equipment, or services shall not be ordered without written acceptance by the TJPA.
- G. Contractor shall notify the TJPA at the time of request for substitution where use of substituted products, equipment, or services indicated or specified would delay completion of the Contract.

1.5 QUALITY ASSURANCE

- A. Certify with each substitution request that Contractor
 - 1. Has investigated the proposed substitution and determined that it is equal to or superior in all respects to the product or equipment indicated or specified.
 - 2. Will furnish the same warranty or guarantee or bond for the proposed substitution as for the product or equipment indicated or specified.
 - 3. Will coordinate the installation of an accepted substitution into the Work and make such other changes as required to complete the work in accordance with the Contract Documents and applicable regulatory requirements.
 - 4. Waives claims for additional costs associated with the substitution which may subsequently become apparent.
 - 5. Will pay costs of changes to Contract Documents required by accepted substitutions.

1.6 PROJECT CONDITIONS

- A. The TJPA will receive and consider Contractor's request for substitutions only under the following conditions as determined by the TJPA. If the following conditions are not satisfied, the TJPA will return the request without action except to record noncompliance with the requirements.
 - 1. The burden of proof as to the type, function, and quality of proposed substitutions shall be upon Contractor.
 - 2. The TJPA will determine the quality and utility of Contractor's proposed substitutions. The TJPA's decision shall be final.
 - 3. The TJPA may require Contractor to furnish at Contractor's expense, a special performance guarantee, or other surety with respect to any substituted product, equipment, or service.
 - 4. Extensive revisions to the Contract Documents are not required.
 - 5. The substitution requested is consistent with the general intent of the Contract Documents.
 - 6. The request is timely, fully documented, and properly submitted.
 - 7. The specified product or equipment cannot be provided within the Contract Time as substantiated by written documentation from the supplier or vendor. The TJPA will not consider the request if the product or equipment cannot be provided as a result of failure to execute the Work promptly or coordinate activities properly.
 - 8. The specified product or equipment cannot receive necessary approval by a governing authority, and the requested substitution can be approved by the governing authority.
 - 9. The specified product or equipment cannot be coordinated with other specified products or materials, and where Contractor certifies that the proposed substitution can be coordinated.

- B. Failure of Contractor to provide substitution requests in a timely manner shall be sufficient cause for rejection by the TJPA of any substitutions proposed.
- C. Contractor's submittal and the TJPA's acceptance of shop drawings, product data, or samples for work not conforming to the requirements of the Contract Documents shall not constitute an acceptable or valid request for substitution, nor do they constitute approval.

1.7 THE TJPA'S ACTION

- A. All substitutions shall require written approval by the TJPA. The TJPA will respond in writing to requests for substitutions within 10 days of receiving the Contractors list of substitutions prepared in accordance with paragraph 1.4.
- B. The TJPA's approval of any substitution shall not relieve Contractor from compliance with all other requirements of the Contract Documents and for adequacy of the substituted items.
- C. It shall be understood that
 - 1. The TJPA will determine whether a product, equipment, or service is equal for the purpose intended in quality and utility to that specified. The TJPA's acceptance of substitutions shall not be construed as relieving Contractor of its responsibility to comply with the requirements of the Contract Documents.
 - 2. The decision of the TJPA on all such questions of equality and acceptability of proposed substitutions shall be final.
 - 3. No claim of any sort shall be made or allowed against the TJPA, its agents or sub-consultants as a result of any final decision to accept or reject any proposed substitute product, equipment, or service.
 - 4. Contractor shall use the specified product or equipment if the proposed substitution is not accepted or if the TJPA's decision is not received within the time specified in paragraph 1.7.A.
- D. If necessary, the TJPA will request additional documentation for evaluation within 1 week of receipt of a substitution request. Promptly provide the additional documentation requested. The TJPA will notify Contractor of acceptance or rejection of proposed substitutions within 2 weeks of receipt of the additional documentation.
- E. Contractor shall be responsible for all resultant changes and all additional costs which the accepted substitution requires in Contractor's work, the work of its subcontractors of all tiers and of other contractors, and shall effect such changes without cost to the TJPA.
- F. If a proposed substitution is not accepted, use the product, equipment, or service originally specified or indicated.

1.8 DESIGN INTENT

- A. In preparing these Specifications, the TJPA has named those products that meet the Specifications and are equivalent in construction, functional efficiency, and durability.
- B. If substitutions are proposed by Contractor and are favorably reviewed by the TJPA, the cost of all modifications to the Project, including utilities and support systems, will be borne entirely by Contractor.

1.9 CONTRACTOR'S REPRESENTATION

- A. Requests for substitution(s) constitute a representation that the Contractor
1. Has investigated the proposed substitution and determined that it is equal to or superior in all respects to the product indicated or specified.
 2. Will furnish the same warranty or guarantee or bond for the proposed substitution as for the product indicated or specified.
 3. Will coordinate the installation of an accepted substitution into the Work and make such other changes as required to complete the Work in accordance with the Contract Documents and applicable regulatory requirements.
 4. Waives claims for additional costs associated with the substitution which may subsequently become apparent.
 5. Will pay costs of changes to Contract Documents required by accepted substitutions.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 16 30

SPECIFICATION ISSUES LOG

Revision	Date
0	July 30, 2010
1	August 10, 2010

SECTION 01 17 00 – COMPLETION AND CONTRACT CLOSEOUT

PART 1 - GENERAL

1.1 SUMMARY

- A. This section specifies the requirements for Substantial and Final Completion and the procedures for Contract Closeout, including the following items:
 - 1. Closeout Meeting
 - 2. Substantial Completion Requirements and Inspection
 - 4. Final Completion Requirements and Inspection
 - 6. Final Payment
 - 7. Final Cleaning
 - 8. Project As-Built Documents
 - 9. Release of Liens or Claims
- B. Related sections include Section 00 07 00, General Conditions.

1.2 CLOSEOUT MEETING

- A. When the Work is 95% complete, Contractor shall notify in writing the TJPA that it has reached 95% completion and is proceeding toward the completion and closeout phase. With its notification, Contractor shall submit a list of outstanding items for TJPA consideration, such as pending CORs, claims, and requests for time extension.
- B. Upon receipt of such notice, the TJPA Representative shall arrange a closeout meeting with the Contractor. The purpose of the closeout meeting is to plan for an orderly and timely completion of the Project.

1.3 SUBSTANTIAL COMPLETION

- A. Prerequisites to Substantial Completion
 - 1. Contractor shall certify in writing that the Work is substantially complete and the Project is ready for use, occupation, and operation by the TJPA for the purposes intended; that Contractor has reviewed the Contract Documents and substantially completed and inspected the Work; and that all Work conforms to the requirements of the Contract Documents including, but not limited to, startup, testing, adjusting, and balancing and commissioning of equipment and systems.
 - 2. Contractor has obtained a Temporary Certificate of Occupancy.
 - 3. Contractor has, at no additional cost to the TJPA, restored and replaced any material and/or finishes damages due to the performance of the Work. Restoration or replacement shall be of equal quality and match the appearance of the existing work.
- B. Substantial Completion Inspection
 - 1. Contractor shall notify the TJPA Representative in writing that the Work is Substantially Complete and ready for inspection.
 - 2. Upon receipt of Contractor's written notice, the TJPA Representative will make an inspection to determine the status of completion.
 - 3. Should the TJPA Representative determine that the Work is not Substantially Complete, the TJPA Representative will so notify Contractor with a Deficiency List of items necessary to meeting the requirements for Substantial Completion. Refer to General Conditions (Section 00 07 00, Article 9).
 - 4. Contractor shall remedy all deficiencies as identified and notify the TJPA Representative, in writing, when the Work is ready for re-inspection.
 - 5. If the Work is not Substantially Complete, the TJPA Representative will follow the same procedure as for the first inspection, and Contractor shall reimburse the TJPA for all

additional re-inspection costs and shall be responsible for any associated delay to Substantial Completion.

6. When the TJPA Representative concurs that the Work is Substantially Complete, the TJPA Representative shall issue a Notice of Substantial Completion, accompanied by a Completion List of remedial work items to be completed or corrected for Final Completion.

- 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 COMPLETION

A. Prerequisites to Final Completion

1. Contractor shall certify completion of all items on the Completion List.
2. Contractor shall arrange for training of TJPA personnel on the use and operation of building system.
3. Contractor shall submit to the TJPA all documentation necessary for the smooth transition from construction to operation of the facility, as follows:
 - a. Complete Project Record (As-Built) Drawings and approved shop drawings, product data, and samples as specified in Section 01 17 20.
 - b. Warranties as specified in Section 01 17 40.
 - c. Keys and keying schedule.
 - d. Spare parts and materials extra stock.
 - e. Operations and maintenance manuals for all internal and external building systems.

B. Final Inspection

1. Inspection for Final Completion shall be performed in accordance with Article 9 of the General Conditions (Section 00 07 00).
2. Contractor's written notice described in Article 9 of the General Conditions shall certify the following:
 - a. All Work in accordance with the Contract Documents has been completed.
 - b. All Completion List items have been completed.
 - c. Demobilization and Final Cleaning of the site (reference 1.5, below) has been completed.
 - d. Contractor has obtained a Certificate of Occupancy for the facility.
 - e. Work is ready for final inspection.
3. Should the TJPA Representative determine that the Work is not Finally Complete, the TJPA Representative will so notify Contractor with a revised Completion List of items necessary to meeting the requirements for Final Completion.
4. Contractor shall remedy all defective/incomplete items as identified and notify the TJPA Representative, in writing, when the Work is ready for re-inspection.
5. If the Work is not Finally Complete, the TJPA Representative will follow the same procedure as for the first inspection, and Contractor shall reimburse the TJPA for all additional re-inspection costs and shall be responsible for any associated delay to Final Completion.
6. When the TJPA Representative concurs that the Work is Finally Complete, the TJPA Representative shall issue a Notice of Final Completion.
7. Upon receipt of the Notice of Final Completion, Contractor may submit a request for Final Payment. Refer to General Conditions (Section 00 07 00), Article 9.

1.5 FINAL CLEANING

- A. Final acceptance of the Work by the TJPA will be withheld and the Contractor subjected to liabilities as provided in the General Conditions until the Contract has satisfactorily complied with the requirements for final cleanup of the Project site.
- B. Should the TJPA elect to partially occupy or use portions of the Work prior to completion, the Contractor shall perform final cleaning for those portions of the Work prior to their being so occupied or used.
- C. "Clean," as used in this section, shall mean the level of cleanliness generally provided by skilled cleaners. For interior areas, this involves using commercial quality building maintenance equipment and materials. For exterior areas this means broom cleaning, removal of temporary construction materials and equipment and disposal of all debris and rubbish.
- D. Contractor shall comply with applicable regulatory requirements during cleaning and disposal operations, and use cleaning materials which will not create hazards to health or property or cause damage to products or Work.
- E. Contractor shall use only cleaning materials and methods which are compatible with the surface being cleaned, as recommended by the manufacturer of such materials.
- F. Contractor shall completely clean structures inside and out and adjacent sidewalks and street to curb. Contractor shall also perform the following cleaning operations as applicable to the Work: Remove dust, dirt, grease, stains, labels, spilled or spattered materials, and other foreign matter from surfaces exposed to view in the completed Work.
- G. Contractor shall schedule final cleaning operations to prevent resulting dust and other contaminants from adhering to wet or newly finished surfaces and to enable the TJPA Representative to accept a completely clean Work.
- H. See additional cleaning requirements specified in Section 01 74 23.

1.6 PROJECT RECORD DOCUMENTS

- A. The Project Record Documents, as required in conformance with Section 01 17 20, shall be signed and dated by Contractor and submitted to the TJPA Representative prior to issuance of a Notice of Final Completion by the TJPA.

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, Contractor shall furnish qualified personnel and coordinate scheduling for onsite instruction of the TJPA's operations and maintenance personnel.

1.8 RELEASE OF LIENS OR CLAIMS

- A. Contractor and each assignee under any assignment in effect at the time of final payment shall, if required by the TJPA, execute and deliver at the time of final payment, as a condition precedent to final payment, a release meeting the requirements of the General Conditions.

END OF SECTION 01 17 00

SPECIFICATION ISSUE LOG

Revision	Date
0	July 30, 2010
1	August 25, 2010

SECTION 01 17 20 – PROJECT AS-BUILT DRAWINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes requirements for maintenance and submittal of Project as-built drawings.

1.2 REQUIREMENTS

- A. Contractor shall keep an accurately marked, up-to-date set of as-built drawings for the work actually installed. Accurately indicate on as-built 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 TJPA Representative. Contractor shall keep the as-built drawings current as the Work is performed.
 - 1. As-built drawings shall be subject to inspection and approval by the TJPA Representative at any time within the duration of the Contract.
 - 2. Such review by the TJPA Representative shall not relieve Contractor of its responsibility for keeping the as-built drawings current and complete.
- B. If the as-built drawings are not kept current, or are not furnished as specified in Section 00 07 00, Article 9, then progress payments, and if necessary, final payment will be withheld. Furnishing of as-built drawings shall be done as incidental work.
- C. Prior to acceptance of the Work, Contractor shall furnish to the TJPA Representative the final as-built drawings, showing all changes in the Contract Drawings neatly in red ink and certified by the TJPA Representative.

1.3 QUALITY ASSURANCE

- A. Delegate responsibility for maintenance, coordination, and accuracy of the as-built drawings to one person on Contractor's staff.
- B. All changes and work progress on the stamped as-built drawings will be inspected monthly by the TJPA Representative.
- C. Accuracy of as-built drawings shall be such that future searches for items shown on the Contract Documents may rely on information obtained from the approved as-built drawings.
- D. The TJPA Representative will, on a monthly basis, check, initial, and date the as-built drawings to verify the accuracy and completeness of the as-built changes.
- E. The TJPA Representative will sign the corrected as-built drawings to indicate that he or she has reviewed the corrections for completeness.

PART 2 - PRODUCTS

2.1 AS-BUILT DOCUMENTS

- A. Following receipt of the Notice to Proceed, Contractor shall secure from the TJPA Representative the number of copies of Contract Documents specified in Section 00 07 00, General Conditions, including a full-size set of the base Contract Drawings to be used as Project as-built drawings.

PART 3 - EXECUTION

3.1 MAINTENANCE OF AS-BUILT DRAWINGS

- A. Contractor shall store as-built drawings apart from documents used for performing the work; keep in a dry, legible condition, and in good order. Label each document "AS-BUILT DRAWINGS—JOB SET" in large, neatly printed letters.
- B. Record neatly on the as-built 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 the Work.
 - 1. Clearly describe changes on as-built 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 as-built drawings, by dimension accurate to within 1 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 TJPA Representative's approval.
 - 1. The TJPA Representative will issue a written waiver of the requirements for conversion of schematic layouts where, in the TJPA Representative's judgment, such conversion serves no useful purpose.
- E. Keep as-built drawings up to date during the entire progress of the Work, and provide access for monthly TJPA review with progress payments as specified in Section 00 07 00 paragraphs 9.03 D and E. Updates shall be accurate and current and be done at the time work is performed.

3.2 CHANGE ORDER DRAWINGS

- A. The TJPA will issue to Contractor one set of drawings, if any, associated with change orders issued. Contractor shall be responsible for reproducing sufficient copies of the drawings for its Trade Subcontractors.
- B. Contractor shall also update and include the revised or newly issued drawings as part of the as-built drawings. The work of reproducing and issuing Change Order drawings and updating of as-built drawings shall be done as incidental work.

3.3 FINAL AS-BUILT DRAWINGS SUBMITTAL

- A. For the life of the job, Contractor shall maintain current as-built drawings and parametric models (3-D). Contractor shall submit the consolidated package of printed final as-built drawings and 2-D and 3-D as-built information in electronic format.
 - 1. Sign and date the completed as-built drawings and submit them to the TJPA Representative for review prior to final payment as specified in Section 01 17 00, Contract Closeout.

2. If the as-built drawings are not approved by the TJPA Representative, Contractor shall make necessary revisions and submit a revised set of as-built drawings to the TJPA Representative.
3. The furnishing of the final approved Project as-built drawings, including required revisions and resubmittal, shall be done as incidental work.
4. If the as-built drawings are not furnished when specified, the final payment will be withheld.
5. Contractor may not achieve Final Completion unless and until complete and compliant as-built drawings are submitted.

END OF SECTION 01 17 20

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 01 17 30 – OPERATION AND MAINTENANCE

PART 1 - GENERAL

1.1 SUMMARY

- A. This section specifies the requirements for the content and format of operation and maintenance (O&M) manuals and the training of TJPA O&M personnel.

1.2 CONTRACTOR'S RESPONSIBILITY

- A. Contractor shall furnish complete instruction manuals for the installation, operation, maintenance, and lubrication requirements for each component of mechanical, electrical, and irrigation equipment, or other systems; Contractor shall furnish 6 hard copies and 2 copies in electronic format. Contractor shall inform all equipment manufacturers of these requirements and ensure that all associated costs are included in the costs for furnishing the equipment or system.
- B. Contractor shall also furnish as-built drawings, the text material of O&M manuals, and all available AutoCAD drawings.
 - 1. Text created for the O&M manual shall be written in the latest version of Microsoft Word.
 - 2. Drawings generated by the Contractor for this Project's O & M manual shall be in the latest version of AutoCAD as defined in CM/GC Agreement Article 3.02.

1.3 FORMAT

- A. Contractor shall prepare data in the form of an instructional manual.
- B. Binders: Binders shall be commercial quality, 8½ x 11-inch three-ring binders with hardback, cleanable, plastic covers and 1-inch maximum ring size. Use reinforced punched binder tabs to separate manual sections. When multiple binders are used, correlate data into related consistent groupings.
- C. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; list title of Project; identify subject matter of contents.
- D. Arrange table of contents in accordance with MasterFormat section numbers.
- E. Provide tabbed fly leaf for each separate product and system, with typed description of product and major component parts of equipment.
- F. Text: Provide manufacturer's printed data, or typewritten data on white bond paper.
- G. Drawings: Include drawings with text; fold larger drawings to size of text pages.

1.4 CONTENTS, EACH VOLUME

- A. Table of Contents: Provide title of Project; names, addresses, and telephone numbers of the TJPA Representative, subconsultants, and Contractor with name of responsible parties; and schedule of products and systems, indexed to content of the volume.
- B. For Each Product or System: List names, addresses, and telephone numbers of Trade Subcontractors and Suppliers, including local source of supplies and replacement parts.
- C. Product Data: Mark each sheet clearly to identify specific products and component parts, and data applicable to installation. Delete inapplicable information.

- D. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.
- E. Type Text: As required to supplement product data.
- F. Warranties: Bind in a copy of each.
- G. Each instruction manual shall include, but not be limited to, the following:
 - 1. Detailed description of the function of each principal component of the system.
 - 2. Performance and nameplate data.
 - 3. Installation instructions.
 - 4. Procedure for startup and break-in.
 - 5. Proper adjustment.
 - 6. Test procedures.
 - 7. Procedure for operating.
 - 8. Shutdown instructions.
 - 9. Emergency operating instructions and troubleshooting guide.
 - 10. Safety precautions.
 - 11. Complete nomenclature and commercial number of replaceable parts.
 - 12. Panel board circuit directories: electrical service characteristics, controls, and communications.
 - 13. Color-coded wiring diagrams as installed.
 - 14. Maintenance Requirements: routine procedures and guide for disassembly, repair, and reassembly instructions; alignment, adjusting, balancing, and checking instructions.
 - 15. Servicing and lubrication schedule, and list of lubricants required.
 - 16. Written sequence of operation by controls manufacturer.
 - 17. Original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
 - 18. Control diagrams by controls manufacturer as installed.
 - 19. Contractor's coordination drawings, with color-coded piping diagrams as installed.
 - 20. Charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
 - 21. Test and balancing reports as specified in Specifications.
 - 22. Additional Requirements: As specified in individual product specification sections.
 - 23. A listing in table of contents for design data, with tabbed fly leaf and space for insertion of data.

1.5 INSTRUCTION OF TJPA PERSONNEL

- A. Before final review, provide detailed instructions to the TJPA's designated personnel in operation, adjustment, and maintenance of products, equipment, and systems at agreed-upon times. Specific training requirements are defined in the Specifications.
- B. Sales representatives shall not conduct the training sessions. Submit a brief description of the qualifications of the manufacturer's representative designated to conduct this training. The manufacturer's representative shall be a factory trained or manufacturer's certified individual with substantial experience in the repair and servicing of the equipment to be covered during the training session.

- C. The TJPA shall receive an \$800-dollar-per-day credit from the Contractor for any training that is not conducted by mutual agreement in accordance with the requirements of paragraph 1.5.B or as required in the individual specification sections. The Contractor and the TJPA Representative will jointly verify that the required training is conducted.
- D. For equipment requiring seasonal operation, perform instructions for other seasons within 6 months.
- E. Use O&M manuals as basis for instruction. Review contents of manual with personnel in detail to explain all aspects of operation and maintenance.
- F. The training shall cover a thorough discussion of the O&M manual. The training shall include but not be limited to operation and maintenance of the specific equipment and systems installed, telltale signs of equipment malfunctions and their solutions, other pertinent topics that relate to optimum system operation and energy conservation.
- G. Prepare and insert additional data in O&M manual when need for such data becomes apparent during instruction.
- H. System familiarization training shall follow the outline below:
 - 1. Show location of catalogs, parts lists, drawings and other pertinent material in the stationary files, and O&M manuals.
 - 2. Monitoring of installation of specific equipment items.
 - 3. Demonstration of the unit and that all parts of the Specifications are met.
 - 4. Answers to commonly asked questions.
- I. Safety training shall cover the following:
 - 1. Safety references.
 - 2. Proper precautions around equipment.
- J. Operational training shall cover the following:
 - 1. Reference literature.
 - 2. All modes of operation, including emergency.
 - 3. Instruction and monitoring of operators in proper use of the equipment.
- K. Preventive maintenance (PM) training shall cover the following items:
 - 1. PM list, including
 - a. Reference material.
 - b. Daily, weekly, monthly, quarterly, semi-annual, and annual maintenance and inspection procedures.
 - 2. Performance of PM jobs.
 - 3. Indicators of equipment problems.
- L. Corrective maintenance training shall cover the following items:
 - 1. Possible problems.
 - 2. Repairs and special problems.
 - 3. Demonstration procedures, including opening-up equipment, where practical.
- M. Parts, outside service and manufacturer's representative training shall cover the following:
 - 1. Use of parts list and ordering parts.
 - 2. Parts suppliers: Name, address, telephone number.
 - 3. Spare parts on hand: Make recommendations for additional spare parts needed and sign-off acceptance of spare parts in the presence of the TJPA Representative.
 - 4. Emergency service help procedures.

1.6 TRAINING SCHEDULES AND PROCEDURE

- A. Contractor shall designate and provide one or more persons to be responsible for coordinating and expediting Contractor's training duties. The person or persons shall be present at all training coordination meetings with the TJPA.
- B. Contractor shall submit to the TJPA a training schedule to be used by the TJPA for scheduling the training of TJPA operating personnel by equipment manufacturers. This schedule shall list the estimated completion dates for the installation of all equipment and systems requiring the services of manufacturers' representatives, as stated in the Specifications.
- C. Contractor shall coordinate the pre-startup training periods with TJPA operating personnel and manufacturers' representatives. All pre-startup training shall be completed 14 days prior to actual startup. Training services shall be at such times as requested by the TJPA.
- D. The TJPA reserves the right to make video recordings of any of the manufacturer's training sessions for use in ongoing training programs.
- E. Where post-startup training is called for in the Specifications, Contractor shall supply and coordinate the specified manufacturer's services and Contractor personnel for post-startup training of the TJPA's operating personnel.

1.7 SUBMITTALS

- A. Contractor shall submit preliminary draft or proposed formats and outlines of contents before start of training.
- B. For equipment, or component parts of equipment put into service during construction and operated by the TJPA, Contractor shall submit documents within 10 days after completion of the Work.
- C. Contractor shall submit 1 copy of completed volumes in final form 15 days prior to final review. Copy will be returned after final review with TJPA Representative's comments. Revise content of documents as required prior to final submittal.
- D. Contractor shall submit 2 copies of revised volumes of data in final form within 10 days after final review.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 17 30

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 01 17 40 – WARRANTIES

PART 1 - GENERAL

1.1 SUMMARY

- A. This section specifies material, workmanship, equipment, and component warranty requirements and documentation.

1.2 REQUIREMENTS

- A. Except as otherwise specified in the individual Specification sections, Contractor shall warrant and guarantee the Work against defects in materials and workmanship for ~~12~~ **24** months from the date of the Substantial Completion certificate issued by the TJPA. (Refer to Section 00 07 00, Article 3.)
 - 1. Upon receipt of written notification by the TJPA Representative, warrant and guarantee the Work, or portions thereof, which are used or occupied by the TJPA before final acceptance from the date of beneficial use or occupancy.
- B. Comply with the warranty and guarantee requirements as specified in the individual Specification sections.
- C. Submit executed warranties and guarantees to the TJPA for review. Deliver them to the TJPA upon Substantial Completion.
- D. These warranties shall be in addition to and not a limitation of other rights the TJPA may have under the Contract and which may be prescribed by law, regardless of the wording of manufacturer's standard warranty.

1.3 SUBMITTAL REQUIREMENTS

- A. For equipment or components of equipment put into service for the TJPA's benefit during the progress of the Work, submit within 10 days before completion of the applicable item or work.
- B. Otherwise, submit within 10 days before the date of the Notice Substantial Completion and prior to requesting final payment.
- C. Submit 3 copies of each guarantee/warranty on Contractor's letterhead in the sample form included at the end of this section, or in other form approved by the TJPA.
- D. Bind in commercial quality, 8½ x 11-inch three-ring side binders with hardback, cleanable, plastic covers.
- E. Label cover of each binder with typed or printed title "WARRANTIES," with title of Project; name, address, and telephone number of Contractor and equipment supplier; and name of responsible principal.
- F. Table of Contents: Neatly typed, in the sequence of the Table of Contents of the Specifications, with each item identified with the number and title of the specification section in which specified, and the name of the product or work item.
- G. Separate each warranty with index tab sheets keyed to the Table of Contents listing. Provide full information, using separate typed sheets as necessary. List Trade Subcontractor, Supplier, and manufacturer, with name, address, and telephone number of responsible principal.

1.4 QUALITY ASSURANCE

- A. Obtain guarantees/warranties, in duplicate, executed by Contractor and Trade 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 Manufacturer's normal warranty period of 2 years.
- C. Co-execute submittals when required. Acceptance of manufacturer's guarantees/warranties by the TJPA shall not be construed to limit the TJPA's recourse to Contractor for correction of defects under the law and in accordance with the General Conditions.

1.5 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, and installation, and design furnished or workmanship furnished by the Contractor or any of its Trade Contractors or Suppliers. SUCH WARRANTY SHALL CONTINUE IN EFFECT FOR 24 MONTHS FROM THE DATE OF APPROVAL OF THE CONTRACTOR'S APPLICATION FOR SUBSTANTIAL COMPLETION BY THE TJPA except where detailed specifications for certain materials, equipment or systems require longer warranty periods.
- B. Warranties are not intended to cover failures which result from the following:
 - 1. Force Majeure events.
 - 2. The TJPA's misuse, maltreatment, or improper maintenance of the Work.
 - 3. Insurrection or acts of aggression including war.
- C. Promptly after receipt of written notice from the TJPA, remove, replace, or correct Work, or portion thereof, which is damaged or found to be defective and not in accordance with the Contract.
 - 1. The TJPA may proceed with the correction work at Contractor's expense if Contractor does not proceed with the corrective work within a reasonable time fixed by written notice from the TJPA.
 - 2. In the event that the Contractor does not cure the defect within a reasonable time, the TJPA 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 10 days thereafter, the TJPA may, upon 10 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 TJPA, including compensation for TJPA Representative's additional services.
 - 4. If the proceeds from the sale are insufficient to cover all amounts chargeable to Contractor, Contractor shall pay the difference to the TJPA.

1.6 FORM OF GUARANTEE/WARRANTY

- A. For equipment or components of equipment put into service for the TJPA'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 the Transbay Joint Powers Authority personnel prior to the approval of Contractor's Application For Substantial Completion.

Owner: Transbay Joint Powers Authority

Location of Equipment: <Address>, San Francisco, California.

This guarantee is effective this _____ day of _____, 20____ until the date of TJPA Approval of Contractor's Application for Final Payment.

Signed: _____ (Name of Contractor)

By: _____

Contractor's Telephone No. _____

- B. For warranty and guarantee of the entire Work against defects in materials and workmanship for the period of warranty after the Notice of Substantial Completion:

<p style="text-align: center;">GUARANTEE/WARRANTY FORM for <PROJECT NAME> <CONTRACT NO.></p> <p>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.</p> <p>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 12 24 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 TJPA, ordinary wear and tear and unusual abuse or neglect excepted.</p> <p>In the event of our failure to comply with the above-mentioned conditions within 10 days after being notified in writing by the TJPA, we collectively or separately do hereby authorize the TJPA 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.</p> <p>Signed _____ Date _____ (Include Contractor's name, address, and license number)</p> <p>Countersigned _____ Date _____ (TJPA Representative)</p> <p>Substantial Completion was granted by the TJPA on _____.</p>
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PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 17 40

SPECIFICATION ISSUES LOG

Revision	Date
0	July 30, 2010
1	August 10, 2010

SECTION 01 31 25 – PROJECT MANAGEMENT SOFTWARE

PART 1 - GENERAL

1.1 SUMMARY

The Transbay Transit Center Program (Program) has adopted Constructware from Autodesk as the Program Management Information System to be used for all Program functions. Such functions are defined in the Construction Management Procedures Manual. Constructware is an Internet-based software that requires the Contractor to have a high-speed Internet connection. License fees for the use of Constructware are the responsibility of the TJPA. Contractor shall restrict use of Constructware to activities related to Program work.

1.2 REQUIREMENTS

- A. Purpose: To facilitate communication among the TJPA, the TJPA's consultants, and the Contractor and its subconsultants and to track Program documentation, the TJPA has deployed Constructware, an Internet-based project management software. Contractor shall use Constructware as directed by the TJPA. Contractor shall participate in all required training as needed to assure the tool is used as intended. Training will be provided by the TJPA as needed. There is no software license fee to the Contractor.
- B. Scope: Constructware is to be used solely for functions related to the Program.
- C. Constructware will be used to log and track Program-related documents that include but are not limited to Contractor requests for information, Architect's supplemental instructions, submittals, Change Orders, project transmittals, Contractor daily reports, meeting agendas and minutes, permits, and payment applications.
- D. Guidelines for Use: Constructware may be used only by individuals who are working on the Program and only for purposes that are consistent with the requirements and objectives of the Program. Use of Constructware is contingent upon compliance with the following rules of usage:
 - 1. Members must protect their login IDs and passwords from unauthorized disclosure.
 - 2. Members may use Constructware only for legitimate purposes related to the Program. Members may not use Constructware for non-Program, commercial, or personal purposes.
 - 3. Members shall abide by the guidelines in this section. Members shall not alter the organization or structure of the site without first consulting the TJPA.
 - 4. Members shall not send harassing, offensive, unlawful, fraudulent, abusive, libelous, or threatening messages in any form to another member or outside party using Constructware. Use of vulgar language and obscenities, and the uploading, viewing, or distributing of pornographic materials through Constructware is strictly prohibited.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 31 25

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 01 31 26 – PROJECT DATABASE ADMINISTRATION

PART 1 - GENERAL

1.1 SUMMARY

- A. This section specifies the administrative provisions for the organization and use of the Project database.
- B. Related Sections:
 - 1. Transbay Transit Center 3-D Standard.
 - 2. Description of other Project coordination responsibilities: Section 01 10 40, Coordination.
 - 3. Procedures of data extractions and translations, transmission and exchange, revision and change tracking: Section 01 31 29, Project Database Management.
 - 4. Description of hardware and software requirements to facilitate database use on site: Section 01 15 00, Construction Facilities and Temporary Controls.

1.2 GENERAL INSTRUCTIONS

- A. Read and conform to Section 00 70 00, General Conditions, for Transbay Transit Center Building CM/GC Contract Documents.
- B. Comply with Division 01 requirements and documents referred to herein.

1.3 REFERENCES

- A. Abbreviations:
 - 1. CAD: Computer aided design.
 - 2. CADD: Computer aided design and drafting.
 - 3. CD: Compact disc.
 - 4. FTP: File transfer protocol.
- B. Definitions:
 - 1. 2-D Database: A set of 2-dimensional CAD files, provided in AutoCad 2008 Release 17.1 system software format in compliance with Project CADD Standards, as well as supplemental text files such as transmittals and notes for the use of data files. 2-D database is for information only. 2-D database is not part of the Contract Documents.
 - 2. 3-D Database: A set of 3-dimensional electronic CAD models, provided in Rhinoceros V4 SR5 software format, and supplemental text files such as transmittals and notes for the use of data files.
 - 3. Computer Distribution Media: FTP data transfer site which may include physical distribution media.
 - 4. Contract Documents: As defined in the TJPA–CM/GC Agreement, which includes the Drawings, Specifications and the 3-D database.
 - 5. Physical Distribution Media: Data files provided by means other than direct FTP transfer, including magnetic tapes, disks or CDs.
 - 6. Project Database: Computer files comprised of 3-D database and 2-D database electronic files and electronic documents including the Specifications.
 - 7. BIM Standards: Consistent with National Building Information Modeling Standard, Version 1 Part 1: Overview, Principles, and Methodologies published by the National Institute of Building Sciences.

1.4 ELECTRONIC PROJECT MANAGEMENT SYSTEM

- A. This Project will be employing an electronic Project management data exchange web site system.
- B. The TJPA's Program Management Information System software is Constructware, which the CM/GC is required to use.

1.5 PROJECT DATA BASE

- A. Ownership of Data: Project database, Drawings, electronic media, electronic forms and other similar terms are subject to terms and conditions for use of TJPA Representative's documents contained in the TJPA-CM/GC Agreement, the General Conditions of the Contract and as listed below.
- B. The Drawings, 3-D database, Specifications and other Contract Documents are complementary and together define the scope, design intent, and other Project requirements.
- C. The Project utilizes the 3-D database as defined in computer notes contained on Drawings.
- D. The 3-D database for the Project is divided into a number of parts or individual models. Each part contains a specific portion of the overall 3-D database such as structure, metal surfaces, glass surfaces and metal & glass patterns.
- E. The 3-D database is not a comprehensive virtual model for the Project. Portions of the Project have been selectively modeled to provide an efficient means to describe the Project and document the geometry for dimensional control. CM/GC must notify TJPA Representative of discrepancies or conflicts between the 3-D database and other portions of the Contract Documents to the extent they are identified.
- F. The 3-D database is of limited completeness, TJPA Representative intends only that portions of the 3-D database to be used by CM/GC as follows:
 - 1. To establish scope of represented elements.
 - 2. As the dimensional control document for represented elements.
 - 3. As a basis for the development of field lay-out, coordination and fabrication drawings of represented elements.
- G. By using any such Project database, CM/GC agrees to following Terms and Conditions for Use of TJPA Representative's documents:
 - 1. Authorized Use of Project database: TJPA Representative grants CM/GC non-exclusive right to use the Project database in accordance with the Terms and Conditions set forth in the Agreement between TJPA and CM/GC and herein. 3-D database shall be used for establishing 3-dimensional geometries of represented surfaces and elements and their relationship to work points established in other Contract Documents. CM/GC, its respective Trade Subcontractors, agents, or representatives are not entitled to rely on the detail or Specifications contained in the Project database for any other purposes. CM/GC acknowledges the limited completeness for the data in the 3-D database and that the data is intended to complement and supplement but not necessarily supersede other Contract Documents, and understands the 3-D database is not complete and is not for erection or fabrication purposes in the form provided. The 2-D database is provided for CM/GC information only and is not a Contract Document.
 - 2. Unauthorized Use of Project Data Base: The Project database shall not be used by CM/GC, or transferred to any other party, for use in other projects, additions to the current Project, or any other purpose for which the material is not strictly intended by the TJPA Representative, without TJPA Representative's express written permission. An unauthorized modification or reuse of material is at CM/GC's sole risk, and CM/GC shall cause its Trade Subcontractors having access to the Project database to agree to defend, indemnify and hold TJPA

Representative harmless from claims, injuries, damages, losses, expenses, and attorney's fees arising out of the unauthorized modification or use of these materials. Project database as prepared by the TJPA Representative is provided solely as an instrument of the TJPA Representative's service and is protected by applicable laws and conventions. By delivering the Project database to the CM/GC, TJPA Representative and CM/GC shall not expand in any manner the scope of services for which each was engaged pursuant to their Agreement, or in any manner alter the division of responsibilities between the TJPA Representative, CM/GC, and TJPA, as defined in their respective Agreements.

- H. CM/GC's Coordination Requirements: Before using the geometry control information contained in 3-D database for development of CM/GC's engineering and Shop Drawings. CM/GC shall
1. Exercise professional skill, care and judgment which can reasonably be expected from other CM/GCs in like circumstances, review and verify existing conditions and dimension; and coordinate with information in the Contract Documents prior to development of shop fabrications which define, control and/or regulate fabrication and erection of any component of the Project.
 2. Read and abide by any provisions contained in electronic files that may be issued with each version of Project database released by TJPA Representative.
 3. Take reasonable measures to prevent unauthorized access to or loss of the Project database.
 4. Maintain an independent record of modifications of this Project database which may be processed by CM/GC, its Trade Subcontractors, and their employees and agents.
 5. Cause its Trade Subcontractors to be solely and exclusively responsible for the accuracy and adequacy of subsequent data, computer models or other electronic media developed by such Trade Subcontractors. TJPA Representative is not party to and has no control over the use of such Trade Subcontractor-generated media and by parties other than Trade Subcontractors.
 6. Take appropriate action, by way of instruction or otherwise, with its Trade Subcontractors, employees and agents who have access to the Project database, to insure compliance with these conditions.
 7. Submit copies of CM/GC or Trade Subcontractor generated data, computer models or other electronic media to TJPA Representative for review prior to beginning fabrication operations. TJPA Representative may review and comment on such media at its option. This information is in addition to required shop drawing submittals.
- I. CM/GC also agrees to following provisions:
1. Verify locations of critical elements during and after installation, such as connection points between different materials and systems. Report items that vary from the Contract Documents. Notify and coordinate other subcontractors that are affected by mislocated elements.
 2. Import data for control points, surfaces and lines of fabricated and installed Work into the 3-D database and place on separate levels designated by TJPA Representative.
 3. Copy data files to TJPA Representative at Substantial Completion of the Work; coordinate with Section 01 17 00, Contract Closeout.
 4. Upon TJPA Representative's request, return original Project database and other papers, documents, materials and other property of TJPA Representative held by CM/GC, Trade Subcontractors, employees and their agents in connection with the Project.
 5. Provide data files to TJPA Representative containing notes, annotations and modeled electronic elements in the 3-D database format periodically during construction and at Substantial Completion of the Work showing as-built information or field conditions for TJPA Representative's use in updating 3-D database for TJPA's future information.
- J. Because information stored in the Project database can be modified by other parties, intentionally or otherwise, without notice or indication of said modification, TJPA Representative reserves the right to remove all indications of its ownership and/or involvement in the Project database from each electronic medium not held in its possession. TJPA Representative does not convey, nor does CM/GC obtain any right, title, or interest in the Project database or any computer programs, Specifications, or data furnished or developed by TJPA Representative.

- K. CM/GC to recognize that designs, plans and data stored on electronic media, such as CD, magnetic tape, electronic hard drives, and project management websites, may be subject to undetectable alterations or uncontrollable or undetectable deterioration. CM/GC therefore agrees that TJPA Representative is not liable for the completeness or accuracy of any materials provided on electronic media as caused by undetectable alterations or uncontrollable or undetectable deterioration. Project database and other Contract Documents are intended to be complementary to each other and do not necessarily supersede information contained elsewhere in the Contract Documents.

1.6 CM/GC RESPONSIBILITIES

- A. CM/GC is the primary user and distributor of information and data contained in the Project database. CM/GC has complete responsibility for determining its needs for and dissemination of information to Trade Subcontractors and their subcontractors and vendors that may not have direct access to Project database. This responsibility may include any of the following non-traditional tasks:
1. Bidding: Providing material take-offs for quantity, dimensions, and geometry of component elements of building for Trade Subcontractors and vendors who do not have 3-D database use capability.
 2. Shop Drawings: Providing extractions and translation from Project database for use by Trade Subcontractors in preparation of shop drawings.
 3. Coordination: Coordinating information from Trade Subcontractors including shop drawings and product data into coordination drawings required in Section 01 13 00, Submittals, and Project database required in Section 01 17 00, Contract Closeout.
- B. FTP: CM/GC shall distribute the Project database electronic data to the TJPA Representative, Trade Subcontractors, and others through CM/GC's FTP site, physical distribution media, or the TJPA FTP site, physical distribution media, or other acceptable means.
- C. Maintaining Data: CM/GC maintains electronic copies of the Project database as required for record Contract Documents.

1.7 3-D DATA BASE ORGANIZATION

- A. Organization of and contents of the 3-D database is noted in Drawings, describe and listed within and in files attached to the 3-D database.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 31 26

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 01 31 29 – PROJECT DATABASE MANAGEMENT

PART 1 - GENERAL

1.1 SUMMARY

- A. This section specifies requirements for Project database exchange, translation, transmission, revisions and change tracking.
- B. Related Sections:
 - 1. Transbay Transit Center 3-D Standards.
 - 2. Description of other Project coordination responsibilities: Section 01 10 40, Coordination.
 - 3. Administrative provisions for organization and use of 3-D Database: Section 01 31 26, Project Database Administration.
 - 4. Description for hardware and software requirements to facilitate database use on site: Section 01 15 00, Construction Facilities and Temporary Controls.

1.2 GENERAL INSTRUCTIONS

- A. Read and conform to Section 00 70 00, General Conditions, for Transbay Transit Center Building and CM/GC Contract Documents.
- B. Comply with Division 01 requirements and documents referred to herein.

1.3 REFERENCES

- A. Abbreviations and Acronyms:
 - 1. CAD: Computer aided design.
 - 2. CADD: Computer aided design and drafting.
 - 3. CD: Compact disc.
 - 4. FTP: File transfer protocol.
- B. Definitions:
 - 1. 2-D Database: A set of 2-dimensional CAD files, provided in AutoCad 2008 Release 17.1 system software format in compliance with Project CADD Standards, as well as supplemental text files such as transmittals and notes for the use of data files. 2-D database is for information only. 2-D database is not part of the Contract Documents.
 - 2. 3-D Database: A set of 3-dimensional electronic CAD models, provided in Rhinoceros V4 SR5 software format, as well as supplemental text files such as transmittals and notes for the use of data files.
 - 3. Computer Distribution Media: FTP data transfer site which may include physical distribution media.
 - 4. Contract Documents: As defined in the TJPA/CM/GC Agreement which includes the Drawings, Specifications and the 3-D database.
 - 5. Physical Distribution Media: Data files provided by means other than direct FTP transfer, including magnetic tapes, disks or CDs.
 - 6. Project Database: Computer files comprised of 3-D database and 2-D database electronic files and electronic documents including the Specification.
 - 7. BIM Standards: Consistent with National Building Information Modeling Standard, Version 1 Part 1: Overview, Principles, and Methodologies published by the National Institute of Building Sciences.

1.4 DATA EXTRACTION

- A. Extractions may not be obtained from TJPA Representative.
- B. Different types of data may be extracted from 3-D database on building elements where it is defined that 3-D database is an integrated part of Contract Documents. Use of these include:
 - 1. To establish scope of represented elements.
 - 2. As dimensional control document for represented elements.
 - 3. As a basis for development of field lay-out, coordination and fabrication Drawings of represented elements.
- C. CM/GC is responsible for determining what data is needed and extracting data accordingly.

1.5 DATA TRANSMISSION AND EXCHANGE

- A. Project database issued to CM/GC to be distributed through TJPA's Project Management Data Exchange Web Site, the TJPA FTP site or by physical distribution media, if appropriate. An Excel spreadsheet titled "3-D Database Distribution Matrix" will be issued with 3-D database file transfers. This document lists current 3-D database file revision labels. CM/GC to distribute Project database and other Contract Documents to Bidders, Trade Subcontractors, and other entities as required through a CM/GC FTP site or other means.
- B. 3-D database information exchanged with TJPA Representative to be delivered to TJPA Representative in Rhinoceros V4 SR5 software format.
- C. 2-D database information exchanged with TJPA Representative to be delivered to TJPA Representative in AutoCad 2008 Release 17.1 system software format in compliance with TJPA CADD Standards.

1.6 REVISION AND CHANGE TRACKING

- A. 3-D database files will be tracked by date and revision numbers contained in the filename. Current revision levels are documented in "3-D Database Distribution Matrix"; if any discrepancies are found please confirm latest revision level(s) with TJPA Representative. Model objects that are new or have been revised since the previous issue will be indicated in electronic files.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 31 29

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 01 35 65 – MITIGATION MEASURES AND MONITORING

PART 1 - GENERAL

1.1 SUMMARY

- A. Mitigation and monitoring requirements for the Project are identified in the report titled “Updated Mitigation Measures Presented and Analyzed in Final EIS/EIR as Adopted,” dated November 29, 2007. Contractor is responsible for those mitigation measures included in this Specification section.
- B. Numbers such as “CH 01” refer to mitigations in the report referenced in 1.1.A above and are included herein for reference.
- C. Contractor shall comply with “Air Quality Controls” and “Vibration and Noise Monitoring and Response Requirements.”
- D. Documents referenced in this section are available on the TJPA FTP site at ftp.tjpa.org (username: WebcorBid; password (case sensitive): WebcorBid!).

1.2 SUBMITTALS

Contractor shall submit to the TJPA Representative the following in accordance with the procedures specified in Section 01 13 00, Submittals:

- A. A plan showing construction-period life-safety measures and emergency access during construction for approval by the San Francisco Fire Department.
- B. Traffic management plans for approval by the Department of Parking and Traffic (DPT) and the California Department of Transportation. Refer to Section 01 15 70, Traffic Routing Work.
- C. Acknowledgement that Contractor will coordinate with the TJPA so that activities involving historic preservation, historic archaeology, and prehistoric archaeology can be supervised by TJPA’s professionals who qualify under 48 FR 44738-9.
- D. An air quality plan for approval by the TJPA.
- E. A vibration and noise monitoring and response plan for approval by the TJPA.

1.3 AIR QUALITY

Comply with the air quality requirements specified in Section 00 08 13, Specific Project Requirements:

- A. AC 2 - Water active construction areas at least twice daily to control dust using non-potable water in accordance with San Francisco Ordinance 175-91 and as specified in Section 00 08 13, Specific Project Requirements, . Obtain reclaimed water from the City’s Clean Water Program or other sources as appropriate.
- B. AC 3 - Cover trucks hauling soil, sand, and other loose materials or require trucks to maintain at least 2 feet of freeboard.
- C. AC 4 - Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites.

- D. AC 5 - Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites.
- E. AC 6 - Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.
- F. AC 7 - Install sandbags or other erosion control measures to prevent silt runoff to public roadways. Refer to Section 01 15 61, Groundwater Dewatering, Stormwater Pollution Prevention, Erosion and Sediment.
- G. AC 8 - Replant vegetation in disturbed areas as quickly as possible.
- H. AC 9 - Minimize use of on-site diesel construction equipment, particularly unnecessary idling.
- I. AC 10 - Shut off construction equipment to reduce idling when not in direct use.
- J. AC 11 - Where feasible, replace diesel equipment with electrically powered machinery.
 - 1. Administrative
 - a. Retain receipts of ultra-low sulphur fuel (ULSF) purchase and equipment tuning and repair and make these available to the TJPA Representative or to the Federal Transit Administration (FTA) designee upon request.
 - b. The TJPA Representative will conduct spot checks for compliance with these measures.
- K. AC 12 - Locate diesel engines, motors, or equipment as far away as possible from existing residential areas.
- L. AC 13 - Properly tune and maintain diesel power equipment. To manufacturer's specification and frequency.
- M. AC 14 - Suspend grading operations during first and second stage smog alerts, and during high winds (i.e., winds greater than 25 miles per hour) as measured by the Contractor on site.
- N. AC 15 - Upon completion of the construction phase, buildings with visible signs of dirt and debris from the construction site shall be power-washed and/or painted (provided that permission is obtained from the property owner to access and wash the property with no fee charged by the owner). Contractor shall make reasonable efforts to contact property owners to request access. If permission from property owners for access is not granted, Contractor is not responsible for power-washing or painting.
- O. The air quality mitigations set forth in this section and in Sections 00 08 13, Specific Project Requirements and 01 15 00, Construction Facilities and Temporary Controls shall constitute the "Air Quality Controls," Contractor shall prepare and submit for TJPA approval an air quality plan which specifies the means and methods to be employed to monitor and control air quality during construction.

1.4 CULTURAL AND HISTORIC RESOURCES

- A. CH 01: Comply with the applicable provisions of the signed Memorandum of Agreement (MOA) between the FTA, the State Historic Preservation Officer, and the TJPA as identified in sections 00 08 12, Specific Project Requirements. As part of these requirements, Contractor shall require relevant Trade Subcontractors to sign a statement agreeing to abide by the identified MOA provisions and construct the Project in accordance with the specifications.

1.5 GENERAL CONSTRUCTION MEASURES

- A. GC 02: Provide Signage: Work with TJPA representative and establishments affected by construction activities to develop appropriate signage for display that directs both pedestrian and vehicular traffic to businesses via alternate routes. As part of these requirements, Contractor will be responsible for installing signage associated with this effort. Refer to Section 01 15 00, Construction Facilities and Temporary Controls, for related requirements.
- B. GC 03: Wherever trenches or other excavations are covered and the covered area is temporarily opened to public vehicular or pedestrian traffic, install plates or decking flush with street or sidewalk surface.
- C. GC 03: Install Level Deck: Install level decking at the cut-and-cover sections to be flush with the existing street or sidewalk levels.
- D. GC 04: Sidewalks during Construction: In addition to the public access requirements specified under Section 01 15 00, Construction Facilities and Temporary Controls, provide for efficient sidewalk design and maintenance. Wherever feasible, maintain sidewalks at the existing width during construction. Where a sidewalk must be temporarily narrowed during construction (e.g., deck installation), restore it to its original width during the majority of construction period. (In some places, this may require placing the temporary sidewalk on the deck.) Temporary design shall be of all-weather surface and approved by the TJPA Representative prior to construction. Maintain handicapped access during construction where feasible.
- E. GC 05: Provide Construction Site Fencing: In addition to the requirements for temporary fencing specified under Section 01 15 00, Construction Facilities and Temporary Controls, fencing shall be capable of supporting the weight of an adult without collapse or major deformation. Where covered walkway or other solid surface fencing is installed, prepare surface and coordinate with the TJPA Representative to allow painting or installation of artwork (e.g., by local students) on the surface.
- F. To facilitate and support effective community outreach programs and on-going dialog with affected communities, Contractor shall advise the TJPA of construction activities, construction impacts, and possible mitigation measures

1.6 SAFETY AND EMERGENCY SERVICES

- A. Saf 01: Provide Project plans to TJPA and the San Francisco Fire Department for their review to ensure that adequate life-safety measures and emergency access are incorporated into the design and construction of Project facilities. Contractor will be required to obtain permits and construct the facilities in accordance with the Contract Documents.

1.7 HAZARDOUS MATERIALS/WASTE – CONSTRUCTION

Comply with the requirements set forth in Section 01 13 50, Hazardous Materials Procedures.

- A. HMC 01: Follow Cal/OSHA and local standards for fire protection and prevention. Handling and storage of fuels and other flammable materials during construction will conform to these requirements, which include appropriate storage of flammable liquids and prohibition of open flames within 50 feet of flammable storage areas.

- B. HMC 02 and HMC 06: The TJPA has performed on-site testing for potential presence of contaminants in soil and groundwater prior to construction, using conventional drilling, sampling, and chemical testing methods. Refer to the findings from this testing and Section 01 13 50/APA Site Mitigation Plan, Transbay Transit Center, San Francisco, California,” prepared by Treadwell & Rollo, 2010 (SMP). Contractor will be required to dispose of contaminated soil and discharge contaminated dewatering effluent in accordance with this plan.
- C. Prior to commence of earthwork activities.
1. Review the, SMP.
 2. Submit for approval a comprehensive and site specific HASP prepared by a certified industrial hygienist as set forth in Section 01 13 50, Hazardous Materials Procedures.
- D. If contaminants are present, comply with the SMP. Mitigation could be one or both of the following management strategies, as appropriate, to address contaminated soil handling and disposal issues.
1. Option 1: Excavate and stockpile contaminated soil at a centralized location and subsequently sample and analyze soil for disposal profiling purposes in accordance with the requirements of the candidate disposal landfill.
 2. Option 2: Perform soil profiling for disposal purposes in situ. Then when soil is excavated, load it directly onto trucks and haul to the appropriate landfill facility for disposal based on the in situ profiling results.
- E. HMC 03: Cover with plastic sheeting soils removed during excavation and grading activities that remain at a centralized location for an extended period of time to prevent the generation of fugitive dust emissions that migrate off site.
- F. HMC 04: Use a licensed waste hauler, applying appropriate manifests or bill of lading procedures, as required to haul soil for disposal at a landfill or recycling facility.
- G. HMC 05a: Groundwater Testing and Treatment: TJPA will use chemical testing of groundwater samples at the Site; Contractor will use results to obtain a Batch Discharge Permit from the San Francisco Public Utilities Commission under Article 4.1 of the San Francisco Department of Public Works as well as to evaluate requirements for pretreatment prior to discharge to the sanitary sewer. Effluent produced during the dewatering of excavations shall be collected in onsite storage tanks by the Contractor and periodically tested by TJPA, as required under discharge permit requirements, for potential contamination to confirm the need for any treatment prior to discharge and to meet the pre-treatment standards specified in Section 00 08 13, Specific Project Requirements.
- H. HMC05b: Treat water as required prior to discharge to sanitary sewer. Treatment may include either or both of the following project requirements:
1. Settling to allow particulate matter (total suspended solids) to settle out of the effluent in order to reduce the sediment load as well as reduce elevated metal and other contaminant concentrations that may be associated with suspended sediments.
 2. Construction of a small-scale batch wastewater treatment system to remove dissolved contaminants (mainly organic constituents such as petroleum hydrocarbons [gas, diesel, and oils], benzene, toluene, ethylbenzene, and xylenes benzene, toluene, ethylbenzene, and xylenes and volatile organic compounds) from the dewatering effluent prior to discharge to the sanitary sewer. Employ as part of the treatment system, as required, filtration to remove suspended solids.
- I. HMC 07: Dewatering Systems: Design dewatering systems to minimize downward migration of contaminants that can result from lowering the water table if necessary based on environmental conditions. As necessary, dewater shallow soils with detected contamination first using wells

screened only in those soils. Then dewater deeper soils using wells screened only in the zone to be dewatered. Install dewatering wells using drilling methods that prohibit shallow contaminated soils from being carried deeper into the boreholes.

- J. HMC 08: Require that workers performing activities on site that may involve contact with contaminated soil or groundwater have appropriate health and safety training in accordance with 29 CFR 1910.120. Incorporate requirements for such training in the HASP.

1.8 NOISE – CONSTRUCTION

- A. NoiC 01: Comply with San Francisco Noise Control Ordinance specified in Section 00 08 13/APB. The noise ordinance includes specific limits on noise from construction. Basic requirements include but are not limited to:
 - 1. Maximum noise level from any piece of powered construction equipment is limited to 80 dBA at 100 feet. This translates to 86 dBA at 50 feet.
 - 2. Impact tools are exempted, although such equipment must be equipped with effective mufflers and shields. The noise control equipment on impact tools shall be as recommended by the manufacturer and approved by the TJPA Representative.
 - 3. Construction activity is prohibited between 8 p.m. and 7 a.m. of the following day if it causes noise that exceeds the ambient noise level plus 5 dBA at the nearest property line.
- B. Contractor may apply for written waivers of some of the noise requirements to expedite the Project or minimize traffic impacts by application to the TJPA in accordance with Section 00 08 13. Specific Project Requirements.
- C. NoiC 03: Conduct noise inspections and noise testing of equipment to ensure that all equipment on the Site is in good condition and effectively muffled per manufacturer's recommendation. Contractor will be required to provide documentation to the TJPA Representative.
- D. NoiC 05: Minimize use of vehicle backup alarms. Contractor shall demonstrate how backup alarms will be minimized by using mitigation measures such as:
 - 1. Design the construction site with a circular flow pattern that minimizes backing up of trucks and other heavy equipment.
 - 2. Require all equipment on the Site to be equipped with ambient sensitive alarms. With this type of alarm, the alarm sound is automatically adjusted based on the ambient noise. During nighttime hours when ambient noise is low, the backup alarm is adjusted down.
- E. NoiC 06: Additional Construction Noise Requirements:
 - 1. Perform construction in a manner to minimize noise. For example, use hydraulic tools instead of pneumatic impact tools.
 - 2. Use equipment fitted with the most effective commercially available mufflers.
 - 3. Perform construction in a manner to maintain noise levels at noise sensitive land uses below specific limits.
 - 4. Perform noise monitoring to demonstrate compliance with the noise limits. For particularly sensitive areas, provide noise monitoring performed by an approved independent noise monitoring entity to demonstrate compliance with the noise limits.
 - 5. Minimize construction activities during evening, nighttime, weekend, and holiday periods. Obtain specific permits before performing construction in noise sensitive areas during these periods.
 - 6. Select haul routes that minimize intrusion to residential areas.
 - 7. Control noise during nighttime hours in accordance with the following:
 - a. Restrict noise-producing activities during nighttime hours.

- b. Lay out the site to keep noise-producing activities as far as possible from residences, minimize the use of backup alarms, and minimize truck activity and truck queuing near the residential areas.
 - c. Use procedures and equipment that produce lower noise levels than normal. For example, some manufacturers of construction equipment can supply special noise control kits with highly effective mufflers and other materials that substantially reduce noise emissions of equipment such as generators, tunnel ventilation equipment, and heavy diesel powered equipment, including mobile cranes and front-end loaders.
 - d. Use temporary barriers near noisy activities. Locate such barriers close enough to the noise source to obtain substantial noise attenuation. Use barriers which are a minimum of 10 feet high.
 - e. Use partial enclosures around noisy activities. As necessary, construct shed-like structures or complete buildings to contain the noise from nighttime activities.
8. Based on the noise requirements and mitigations described in Section, Section 00 08 13, Specific Project Requirements and in the "Vibration and Noise Monitoring and Response Requirements," Contractor shall prepare and submit for TJPA approval a vibration and noise monitoring and response plan which specifies the means and methods to be employed to monitor and control noise and vibration during construction.

1.9 CONSTRUCTION ACTIVITIES

- A. PC 07: Traffic Maintenance during Construction: Develop traffic management plans for each phase and each sequence of each phase, at a minimum. Traffic management plans shall accommodate bus and patron use of the Site as well as pedestrian and vehicular traffic on streets and sidewalks in the vicinity of the Work. Coordinate with the TJPA Representative to obtain DPT approval and approval of others. Maintain access to residences and businesses. Maintain access to driveways to the extent possible. Refer to Section 01 15 70, Traffic Routing Work.
- B. Clean work areas daily for the duration of the construction period.

1.10 VISUAL/AESTHETICS – CONSTRUCTION

- A. VA 01: Ensure that construction crews working at night direct any artificial lighting onto the work site in order to minimize "spill over" light or glare effects on adjacent areas.
- B. VA 02: Minimize specific aesthetic and visual effects of construction identified by neighborhood businesses and residents.

1.11 VIBRATION CONTROL

Vibration limits are based upon the Federal Transit Administration's Planning and Environment Transit Noise and Vibration Impact Assessment guidelines

- A. VibC 01: Limit or prohibit use of construction techniques that create high vibration levels. Do not drive piles.
- B. VibC 06: Do not use explosives (i.e., controlled detonation).
- C. If construction techniques that create high vibration levels are used, comply with the following additional restrictions.
 - 1. VibC 02: Use alternative techniques which do not create high vibration levels in vibration sensitive areas.

2. VibC 03: Provide advance notice to TJPA of any vibration intensive activities. Perform vibration monitoring during vibration intensive activities.
3. VibC 04: Perform vibration intensive activities such as pile driving only on weekdays during daytime hours between 7 a.m. and 8 p.m.
4. VibC 05: Investigate alternative construction methods and practices to reduce the impacts if resident annoyance from vibration becomes a problem. Implement alternative methods and practices as practical.

1.12 SOILS/GEOLOGY

- A. SG 01: Contractor shall be responsible for protection of adjacent structures from damage, deformation or settlement. TJPA will monitor adjacent buildings for movement. If movement is detected, Contractor shall take immediate action to control movement and shall be responsible for the repair of resultant damage.
- B. SG 03: In those instances where Contractor is responsible for the design of structural components, design and construct permanent structural components of the Project to resist strong ground motions approximating the maximum anticipated earthquake (0.5g) and in accordance with the building code.

1.13 UTILITIES

Util 01: The TJPA will coordinate with utility providers to avoid, relocate, and support utilities as necessary during construction, and Contractor will organize and execute work to prevent damage to utility systems and to minimize disruption and degradation of utility service to local customers.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 35 65

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 01 53 13 – TEMPORARY BRIDGES

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes temporary bridges provided to allow continuation of traffic across the construction site excavation at Beale, Fremont, and First Streets for a total of three (3) bridges. Bridges at each crossing shall provide a connection across the construction excavation, providing lanes on bridges to provide a path for vehicles and pedestrians across the construction site. Abutments for bridges shall be supported by the CDSM shoring wall, and the bridge superstructure shall be supported on piles provided along the bridge. The number and arrangement of piles shall be designed to provide required support of the temporary bridge and shall be coordinated with all planned construction operations. Bridges shall include edge barriers rated for truck impact at boundaries of the driving surface. Bridges include gates to allow travel of construction traffic from adjacent trestle across the bridge to the trestle on the other side. Gates at these locations shall be compliant with loading for use as a barrier system, compliant with requirements for protection of pedestrians, and shall be operable to allow frequent construction vehicle traffic. Gates shall be lockable to maintain security. Construction traffic includes crossing bridges by a fully assembled Manitowoc 999 weighing 500,000 lbs, traveling without a hook load. The scope for this section also includes any other items of material or work necessary to provide complete functioning temporary bridges in place, with operable lockable gates, and maintained in fully operable order including ongoing compliance with ADA requirements, and subsequent complete legal removal and disposal of all components of the temporary bridges off TJPA property.

1.3 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Bridges shall be provided meeting design loading criteria compliant with the current American Association of State Highway and Transportation Officials (AASHTO) LRFD Design Specifications, 4th Edition, and Caltrans Amendments.
 - 1. Design Loads, Additional Requirements: The bridge shall be provided as compliant with loading per national AASHTO code live loading on roadways of bridges including loading designated HL-93, consisting of a combination of a design truck or tandem; loading shall include the State of California Caltrans Amendments to the AASHTO LRFD code for a permit load case consisting of a California P15 truck. Design shall include cross bridge travel of construction equipment including typical semi truck traffic and a fully assembled Manitowoc 999 crane weighing 500,000 lbs traveling from trestle to trestle without a hook load. Design loads shall include design for an earthquake corresponding to a ground motion with a 10% probability of exceedence in 50 years (475-year earthquake). Design loads shall also include loading generated by a Manitowoc 999 crane stopping from full travel speed in both the bridge longitudinal and bridge transverse direction on the deck of the bridge. The braking load for stopping the Manitowoc 999 on the bridge shall be calculated for braking applied at full braking power to provide loading corresponding to the minimum stopping distance for the crane.
 - 2. Deflection Requirements: All bridge structural components shall meet deflection limitations of L/1,000 for HS20-44 loading; and shall meet L/750 for overload conditions consisting of a

California P15 truck, and L/750 for travel of construction equipment including the Manitowoc 999 crane. Deflection limitations are applicable for each structural element spanning between their respective supports, with L equal to the actual center-to-center span applicable to each element. Cantilevers are subject to deflection limitations with L equal to two times the cantilever span, measured from the centerline of the cantilever support.

3. Barrier Requirements: Edges of the temporary bridges shall be provided with a barrier system demonstrated by test or by calculation to be crashworthy and compliant with loading corresponding to Test Level 2 of section 13 of AASHTO LRFD Bridge Design Specifications. An 8" barrier curb shall be provided at the edge of the bridge deck immediately adjacent to vehicle travel, and an 8" barrier curb shall be provided at the barrier separating vehicles and pedestrian travel areas. Minimum height of the barrier shall be 27" above the top of the barrier curb. Six inch (6") high toe plates shall be provided at the side boundaries of the pedestrian walking zone.
4. Additional Barrier Requirements: In addition to the barrier requirements related to vehicle impact indicated above, the vehicle barrier system shall not allow passage of a 4"-diameter sphere through the system and any point, and conventional galvanized railing system which does not allow passage of a 4"-diameter sphere shall be provided on top of any vehicle barrier system to result in a minimum total height no less than 42" above the walking surface. Additionally, six inch (6") high toe plates shall be provided at the side boundaries of the pedestrian walking zone. In addition to any other requirements, areas separating vehicles or pedestrians from the construction site shall be provided with an 8'-high solid barrier system. This solid barrier system shall not be less than the equivalent of fully supported 1" plywood, and shall not allow viewing through the barrier, or passage of wind or windborne debris. Use of fabric systems or chain link systems to meet requirements of the solid barrier system is prohibited.
5. Gate Requirements: Gates providing twenty-four feet (24') of clear unobstructed access shall be provided through all barrier systems at the center of the bridge. Gates shall align with trestles provided along the site at approximate roadway elevation for use by construction vehicles and crane. Three (3) gates are required per each bridge, one at each side of the bridge at the trestle, and one at the separation between vehicles and pedestrians. The three gates shall align, providing a straight travel path across the each bridge. Gates shall be provided with fastening and hinging hardware to allow full fixity in a locked configuration preserving load rating for truck impact, and be unlockable and operable to swing open in approximate twelve foot (12') halves to allow passage of construction traffic across the bridge. Gates shall be designed and detailed to allow operation in an efficient manner by two construction laborers without use of motorized vehicles. Operation is to be reliable and efficient, to allow frequent opening and closing in an efficient manner for passage of construction traffic onto or across roadways. The gates are to provide facility for full locking, maintaining closure without protrusions into the traveled way. This is to allow for functioning without generating a hazard for either vehicles on the roadway or for pedestrians on the path for pedestrian travel. Use of K rail moved into and out of position by equipment such as forklifts as meeting requirements for gates is specifically prohibited. Gates shall be additionally designed to be removed and reinstalled by unfastening of high strength bolted connections to allow the full width of the trestle to be used for passage of equipment. Such removal shall be an infrequent event and shall be coordinated with a full road closure to all pedestrians and non construction traffic. Features associated with requirements for full removal of gates to allow full trestle width access across the bridge shall be coordinated between the Trade Contractor and the Contractor. Features incorporated into the design to accommodate this provision are subject to the review and approval of the TJPA Representative.
6. Temporary Bridge Geometry: Bridges at each crossing shall provide a connection across the construction excavation providing lanes on bridges providing the required lane widths for the entire travel path in accordance with 01 15 70, Traffic Routing Work. A continuous

pedestrian path shall provide a minimum 10'-wide unobstructed clear path for foot or wheelchair travel on one side of the roadway. The bridge shall be provided with crown and cross slope matching that provided on the connecting roadway sections, and the bridge shall be additionally provided with slope to provide positive drainage for removal of water off the deck. Slope for crown shall not exceed 2%, slope along the path of travel shall not exceed 1½%. Lighting shall be provided on poles meeting City of San Francisco standards and shall be accommodated into the geometric design to occur without adverse affect on travel of vehicles or pedestrians. Pedestrians and vehicles shall be separated by a barrier system rated for truck impact. Space occupied by barrier systems shall not be included as fulfilling requirements for required width of lanes for vehicles or required width for unobstructed travel by pedestrians. The region of the bridge intersecting with the trestle shall be provided with a 24'-wide two-part gate within the barrier system at each side of the bridge, and with a 24'-wide two-part gate at the barrier providing separation between vehicles and pedestrians per 1.3.A.5.

7. Utilities: A zone below each bridge is provided for placement of utilities. At each bridge, the precise location of this zone, the precise dimensions of this zone, the actual means of support for utilities within this zone, and the arrangement of utilities within this zone shall be coordinated with the Contractor.

B. Other Requirements:

1. Areas subject to vehicle travel shall be surfaces providing a minimum static coefficient of friction equal to 0.65.
2. Areas subject to pedestrian travel shall be surfaces providing a minimum static coefficient of friction equal to 0.65 where slopes are less than or equal to 5%, and 0.80 where slopes exceed 5%.
3. The bridge deck material shall be overlain with a minimum of 4" of asphalt concrete (AC). AC shall be compliant with Caltrans Standard Specifications.
4. All surfaces subject to pedestrian travel shall be compliant with requirements of the Americans with Disabilities Act (ADA). This applies to the entire pedestrian travel path. The pedestrian path shall be maintained such that compliance with ADA is continuous throughout the duration of usage of the temporary bridges, and any disturbance to the pedestrian travel path creating a noncompliance with ADA requirements shall be immediately corrected.
5. The Trade Contractor shall provide additional bracing as may be required to laterally stabilize supporting piles for slenderness and/or for resistance to lateral forces due to wind, earthquake, or construction operations as excavation proceeds to leave exposed within the excavation longer lengths of column, pile, or micro-pile element as may be used for support of the temporary bridges.
6. The complete travel path of the temporary bridges shall be provided with electrical service and lighting standards providing illumination compliant with City of San Francisco requirements for both vehicle and pedestrian areas. All electrical service provided to lighting standards shall be run in weather-tight rigid conduit below the deck of the temporary bridge. Compliance with City of San Francisco requirements shall include providing lighting controlled with automatic switching off during daytime and on during nighttime operation. Lighting shall also be provided with fixtures directing the illumination and control of and minimizing spill of light from fixtures. Control of light spill is to provide functioning that is compatible with neighboring properties, including nearby residential occupancies and nearby commercial uses.

7. A load capacity of 3,000 pounds per linear foot shall be provided as an allowance for hanging utilities from the temporary bridge. Provisions for hanging utilities shall be incorporated into the design of the temporary bridges by providing an 8'-wide (8 foot wide) zone designed to carry a nominal 375 psf loading from utilities in this zone. Features for support of utilities in this zone shall be coordinated by the Trade Contractor and Contractor with the relocation of utilities work for the Project.
 8. Provide Muni Overhead Catenary System (OCS) providing cabling plus power for operation of Muni vehicles on the bridge including complete supporting systems and details to provide a complete system compliant with MUNI standards. All features of the OCS installation shall be coordinated with and approved by MUNI and TJPA.
 9. Provide for four signs per bridge for inclusion of ancillary information such as load rating, clearances, etc. Each sign shall be complete with posts and all mounting hardware for installation in accordance with City of San Francisco requirements. The precise locations and language shall be coordinated with and approved by the Contractor.
 10. Provide for four signs per bridge for posting of speed limits. Each sign shall be complete with posts and all mounting hardware for installation in accordance with City of San Francisco requirements. The precise locations and the actual limit to be posted shall be coordinated with and approved by the Contractor.
 11. Contractor to provide striping on bridge and transitions to roadway. All striping shall comply with City of San Francisco requirements.
 12. Contractor shall inspect bridge pavement following usage for travel by contractor equipment. All damage or surface irregularities resulting from such usage shall be immediately corrected.
 13. Contractor shall on a monthly basis inspect and repair surface irregularities in bridge pavement occurring in vehicle and pedestrian areas.
- C. Design: Complete design shall be provided for temporary bridges, including verification of loading delivered to interior piles and abutments as compliant with geotechnical requirements. Design of and installation of interior piles, piles at the abutment, and connections of piles to the temporary bridge structure shall be included in the scope of the temporary bridges. Design shall include sequencing for installation of additional bracing as may be required to laterally stabilize supporting piles for slenderness or for resistance to lateral forces due to wind, earthquake, or construction operations as excavation proceeds. Design services shall include comprehensive engineering analysis and shall be performed by a qualified Registered Professional Engineer licensed in the State of California, using performance requirements and design criteria indicated.
- D. All aspects of the design including, but not limited to, locations of elements, sizes of elements, placement of catch basins for removal of surface water, clearances of elements to future yet-to-be constructed elements, sequencing of erection, sequencing of shifting the lane geometrics to accommodate construction of the permanent structure as the Project proceeds, and final complete removal of the temporary structure shall be fully coordinated with DPT, TJPA, and the Contractor.

1.4 SUBMITTALS

- A. Product Data: Submit product data for each type of product to be incorporated into the work.
- B. Submission and approval of geometrics:
 1. A submission shall be provided presenting geometry and changes in geometry as planned to occur during the progression of construction operations. Information presented shall include

identification of slope inducement and provisions for handling and discharge of surface water, provisions for Muni, provisions for lighting, and a concept description of barrier systems including geometrics and protection features of gates and other significant features presented with sufficient detail to allow review and approval of the Temporary Bridge Geometrics.

- C. Drawings: For all components of the bridge structure including structure elements, decking, surfacing, railings, gates, gate hardware including locking mechanisms, fences, means of connection to piles, and any other items to be incorporated into the work. Drawings shall be prepared by or under the supervision of a qualified Civil or Structural professional engineer licensed in the State of California. Drawings shall be prepared in conformance with City of San Francisco standards.
 - 1. Indicate all dimensions, cross sections, locations of structural elements, sizes, and connections.
 - 2. Where concrete is utilized, indicate types and quantity of reinforcement, including details for fabricating, bending, and placing. Provide detail of any cast-in-place hardware.
 - 3. Where steel elements are utilized, indicate layout and dimensions and detailing of connections. Where welding is utilized, identify welding by AWS standard symbols.
 - 4. Indicate type of decking and details for connection of decking to structure.
 - 5. Provide complete details of overlayment thickness, including all details of slope inducement (including crown of the roadway section and slope to drain) for handling surface water.
 - 6. Indicate transportation, storage, and lifting points.
- D. Calculations: Submit calculations including structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: Submit data for qualified Trade Contractor, Fabricator, Professional Engineer for Design Services, Professional Engineer for Quality Assurance, and Testing Agency.
- B. Welding Certificates. Submit current AWS certifications corresponding to types of welding to be performed for all personnel performing welding.
- C. Materials:
 - 1. Steel, New Material: Where new materials are to be used, submit manufacturer certifications of mechanical and chemical properties.
 - 2. Steel, Salvage Material: Submit coupon tests for mechanical properties and chemical tests for determination of weldability. For steel materials which are recycled from prior Projects (salvaged materials) and are to be incorporated into temporary works, testing shall be performed on a random sampling basis as follows:
 - a. Where material properties relied upon for design corresponding to minimum yield strength $f_y=30,000$ psi, sampling shall be performed on 5% of each major series of structure element type.
 - b. Where material properties corresponding to minimum yield strength $f_y=36,000$ psi, sampling shall be performed on 10% of each major series of structure element type.

- c. Where material properties corresponding to minimum yield strength $f_y=42,000$ psi or 50,000 psi is used, sampling shall be performed on 20% of each major series of structure element type.
- d. Testing performed per subparagraphs above at sampling rates of 5%, 10%, and 20%, respectively, shall be reported to the Owner's Representative in writing. Testing results must satisfy all samples meeting 100% of materials strength requirements for acceptance of salvage materials. If less than 100% of materials tested meet this requirement, then the sampling rate shall be increased. In this event, the sampling rate for retesting shall be subject to review and approval by the Owner's Representative.

3. Concrete:

- a. Submit mix design prepared by a Professional Engineer registered in the State of California regularly engaged in providing concrete mix design services. Concrete for any use shall be proportioned with a minimum 28-day compressive strength equal to 3,000 psi ($f'_c=3,000$ psi), and shall be proportioned with a maximum water cement ratio $W/C=0.50$. All concrete shall be batched, delivered, and placed in accordance with ACI 301 and ASTM C94.
- b. Submit certificates for cement, all admixtures, and gradations of all aggregates indicated as components of the concrete mix design.

4. Reinforcing steel for use with concrete:

- a. All reinforcement shall be new steel and shall comply with ASTM A615 or ASTM A706 corresponding to the grade and type relied upon in design calculations.
- b. Submit manufacturer certificates for reinforcement.

D. All other items required to provide a complete and functional installation. These items include, but are not limited to signage; lighting; details of conduit for powering lighting; Muni Overhead Catering System (OCS) providing cabling plus power for operation of Muni vehicles on the bridge; and details of the system for support of utilities below the bridge. All coordination necessary for each of these other items shall be provided by the Contractor.

E. Preconstruction Photographs: Photographs or video of existing conditions of adjacent features and adjacent construction. Submit prior to performance of Work. All such photographs or video shall be provided by a subcontractor regularly engaged in providing professional photographic or video services for documentation of construction projects.

1.6 QUALITY ASSURANCE

- A. Engineering Responsibility: Engineering for complete design of the temporary bridge shall be provided and shall include all responsibility to comply with Performance Requirements. Engineering services shall be provided by a qualified Civil or Structural Professional Engineer, and shall include preparation of comprehensive design calculations, complete design drawings, complete Shop Drawings, and development of and providing any other structural data as necessary for completion of the temporary bridges.
- B. Quality Assurance shall be provided by engaging an independent qualified Civil or Structural Professional Engineer to perform complete independent peer review of all calculations, design drawings, shop drawing, and other important features related to carrying loadings or safety related aspects of the temporary bridges.
- C. Review by TJPA's Representatives shall not be considered as providing quality assurance services as required above for the temporary bridges.

- D. Installer Qualifications: Trade Contractor shall have a minimum of 5 years experience in projects of like size and complexity.
- E. Testing Agency Qualifications: An independent testing agency qualified for performance of testing indicated.
- F. Design Practices: Comply with American Association of State Highway and Transportation Officials (AASHTO) LRFD Design Specifications 4th Edition and Caltrans Amendments.
- G. Comply with requirements in ACI 301, "Specifications for Structural Concrete."
- H. Welding Qualifications: Qualify procedures and personnel according to the following:
 - 1. AWS D1.5/D1.5M, "Bridge Welding Code – Steel."
 - 2. AWS D1.4/D1.4M, "Structural Welding Code – Reinforcing Steel."
- I. Pre-Design Conference: Conduct a pre-design conference at a location as directed by TJPA's Representative.
- J. Pre-Installation Conference: Conduct a pre-installation conference at a location as directed by TJPA's Representative.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in such quantities and at such times to ensure continuity of installation and fully coordinated with requirements to minimize disruption of traffic. Handle materials at Project site to prevent, distortion, warping, or other physical damage, and so markings are visible. Storage of materials interfering with traffic is prohibited.
- B. Lift and support structure elements only at designated lifting or supporting points as shown on Shop Drawings.

1.8 PROJECT CONDITIONS

- A. General provisions of the Contract apply. See Division 1.
- B. Protect adjacent structures, underground utilities, and other construction from damage due to construction operations.
- C. Site Information: A geotechnical data report has been prepared for this Project and is available for information.
- D. Pre-Construction Photographs: Inventory and record the condition of adjacent structures, underground utilities, and other construction. Provide photographs of conditions that might be misconstrued as damage caused by construction operations. Comply with related Specifications sections for Photographic Documentation.

PART 2 - PRODUCTS

2.1 STRUCTURAL STEEL

- A. New or Salvage material demonstrated by testing or by manufacturer certification as compliant with strength and weldability requirements of the design.

2.2 STEEL REINFORCEMENT

- A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (Grade 420); deformed.
- B. Low-Alloy-Steel Reinforcing Bars: ASTM A 706/A 706M.
- C. Plain Steel Wire: ASTM A 82/A 82M, as drawn.
- D. Deformed-Steel Wire: ASTM A 496/A 496M.

2.3 CONCRETE MATERIALS

- A. General: Limit water-soluble chloride ions in concrete to the maximum percentage by mass of cementitious material permitted by ACI 318 (ACI 318M), but not more than 0.06%.
- B. Portland Cement: ASTM C 150, Type II, of same type, brand, and source.
 - 1. Fly Ash: ASTM C 618, Class C or F.
 - 2. Silica Fume: ASTM C 1240, amorphous silica.
- C. Normal-Weight Aggregates: ASTM C33. Provide aggregates from single source.
 - 1. Nominal Maximum Size of Aggregate: 3/4 inch (19 mm).
- D. Water: Potable, free of deleterious material that may affect color stability, setting, or strength of concrete.
- E. Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures.
 - 1. Air-Entraining Admixture: ASTM C 260.
 - 2. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
 - 3. Retarding Admixture: ASTM C 494/C 494M, Type B.
 - 4. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.
 - 5. Water-Reducing and Accelerating Admixture: ASTM C 494/C 494M, Type E.
 - 6. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.
 - 7. High-Range, Water-Reducing, and Retarding Admixture: ASTM C 494/C 494M, Type G.
 - 8. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.

2.4 CONCRETE MIXES

- A. Prepare design mixes for each type of concrete required.
 - 1. Limit use of fly ash and silica fume to not exceed, in total, 25% of Portland cement by weight.
- B. Design mixes shall be prepared by a Professional Engineer registered in the State of California regularly engaged in preparation of concrete mix designs.
- C. Proportion mixes by either laboratory trial batch or field test data methods according to ACI 211.1, with materials to be used on Project, to provide normal-weight concrete with the following properties:
 - 1. Compressive Strength (28 Days): Minimum for any use 3,000 psi.
 - 2. Maximum Water-Cementitious Material Ratio: 0.50.

- D. Add air-entraining admixture at manufacturer's prescribed rate to result in normal-weight concrete at point of placement having an air content of 6.0%, plus or minus 1.5%.

2.5 FABRICATION

- A. Molds or Formwork: Accurately construct molds, mortar-tight, of sufficient strength to withstand pressures due to concrete placement.
 - 1. Chamfer edges and corners of concrete placements. Chamfer provided shall be $\frac{3}{4}$ " unless a larger chamfer is recommended by the temporary bridge designer.
- B. Reinforcement: Comply with recommendations in CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement. Clean reinforcement of loose rust and mill scale, earth, and other materials that reduce or destroy bond with concrete.
 - 1. Accurately position, support, and secure reinforcement against displacement by molds, construction, or concrete placement. Locate and support reinforcement by metal chairs, runners, bolsters, spacers, and hangers, as required.
 - 2. Place reinforcement to obtain at least the minimum coverages per ACI 301 for protection of reinforcement. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position while placing concrete. Set wire ties so ends are directed into concrete, not toward exposed concrete surfaces.
 - 3. Thoroughly consolidate placed concrete by internal and external vibration without dislocating or damaging reinforcement and built-in items.
 - 4. Comply with ACI 306.1 procedures for cold-weather concrete placement.
 - 5. Comply with ACI 305R recommendations for hot-weather concrete placement.

2.6 TESTING

- A. Testing Agency: Engage a qualified testing agency to monitor quality of welded or bolted connections, placement of reinforcement, concrete materials, and placement of concrete.
- B. Additional Testing at Option of Owner: Allow TJPA's testing agency access to material storage areas and other facilities. Cooperate with Owner's testing agency and provide samples of materials and concrete mixes as may be requested for additional testing and evaluation.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Site Conditions: Do not start construction operations until shoring soldier piles have been installed, rough earthwork has been completed, photographs of site and adjacent works are complete, and work is authorized by the Owner's Representative at each temporary bridge location.

3.2 FABRICATION AND ERECTION

- A. Fabricate and erect all materials in accordance with applicable related Specifications sections.

- B. Installation of Asphalt Concrete shall be in accordance with City of San Francisco requirements, and with section 39, "Asphalt Concrete" of CALTRANS standard specifications.

3.3 FIELD QUALITY CONTROL

- A. Special Inspections: Engage a qualified special inspector to perform the following special inspections:
1. Steel Connections.
 2. Placement of reinforcing steel and placement of concrete.
- B. Testing Agency: Engage a qualified independent testing agency to perform tests and inspections.

3.4 DISPOSAL

- A. Coordinate sequenced removal of the temporary bridges to be compatible with construction sequencing of the primary building contract. All removed temporary bridge items shall be removed from the site and legally disposed of off TJPA property.

END OF SECTION 01 53 13

SPECIFICATION ISSUE LOG

Revision	Date
0	July 30, 2010
1	September 23, 2010

SECTION 01 74 00 – CONSTRUCTION & DEMOLITION DEBRIS RECOVERY PLAN

PART 1 - GENERAL

1.1 SUMMARY

- A. 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. If a conflict in percentages exists between this section and Section 01 81 13, General LEED Building Design and Construction Requirements, the most stringent section shall govern.
- B. The City and County of San Francisco adopted an ordinance (No. 27-06) that creates a mandatory program to maximize the recycling of all construction and demolition debris.
 - 1. The ordinance requires that mixed construction and demolition debris be transported off site by a registered transporter and taken to a registered facility that can process and divert from landfill a minimum of 65% of the material generated from construction, demolition, or remodeling projects.
 - 2. Material source separated at the job site should be taken to a facility that 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 the trash or sent to a landfill.

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 reports, and construction and demolition debris recovery final report in accordance with the submittal requirement specified below. This requirement applies to construction contracts for City facilities, regardless of location, with a construction cost estimate of \$90,000 or more. This Project falls within the requirements of this ordinance.

- C. 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.
- D. California Integrated Waste Management Act of 1989 (AB 939) established the procedures for the Highest and Best Use practices to reduce, recycle, and reuse construction and demolition debris to the maximum extent feasible in an efficient and cost-effective manner.
- E. 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.
- F. This section describes in further detail the requirements of the above ordinances, regulations, and policies applicable to this Contract.

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 Environment Code, Chapter 5, Resource Conservation Ordinance.

- D. San Francisco Environment Code, Chapter 7, Construction and Demolition Debris Management.
- E. California Integrated Waste Management Act of 1989 (California Public Resources Code 40000 et. seq.) - Assembly Bill 939.
- F. Leadership in Energy and Environmental Design (LEED) for New Construction, Version 2.2, October 2005, U.S. Green Building Council.
- G. Universal waste information from the State of California, website:
www.ciwmb.ca.gov/HHW/Uwaste/
- H. Treated Wood Waste Generators Fact Sheet from the State of California, website:
www.dtsc.ca.gov/PublicationsForms/index.cfm.
- I. San Francisco Board of Supervisors Resolution Nos. 530-04 and 679-02 establishing 75% diversion goal.
- J. Food Service Waste Reduction Ordinance as set forth in San Francisco Environment Code Chapter 16.
- K. Refuse Collection and Disposal Ordinance, adopted November 8, 1932.

1.3 DEFINITIONS

- A. Class III landfill: Landfill sited pursuant to Title 27 (Environmental Protection), Division 2 (Solid Waste), Chapter 3, Subchapter 2, Article 3, Section 20260. SWRCB - Class III: Landfills for Nonhazardous Solid Waste.): this type of landfill that accepts non-hazardous waste such as household, commercial, and industrial waste resulting from construction, remodeling, repair and demolition operations. A Class III Landfill must have a solid waste facilities permit from the California Integrated Waste Management Board (CIWMB), and is regulated by the Local Enforcement Agency (LEA).
- B. Construction and demolition 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; materials from the public right-of-way; or, unless specified in Chapter 14 of the San Francisco Environment Code, materials source-separated for reuse and recycling. Hazardous waste, as defined in California Health and Safety Code section 25100, et seq., as amended, is not construction and demolition debris.
- C. Disposal: Acceptance of solid waste at a legally operating facility for the purpose of land filling. This includes Class III landfills and inert fills. State regulations do not consider the disposal of inert materials at inert fills or inert backfill sites as recycling.
- D. Hazardous waste: Hazardous waste is a waste with properties that make it potentially dangerous or harmful to human health or the environment (see Section 01 13 50 for hazardous wastes applicable to this Project). The universe of hazardous wastes is large and diverse. Hazardous wastes 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 waste is a waste that appears on one of the four RCRA1 hazardous wastes lists (the F-list, K-list, P-list, or U-list) or that exhibits one of the four characteristics of a hazardous waste—ignitability, corrosivity, reactivity, or toxicity.

However, materials can be hazardous wastes even if they are not specifically listed or do not exhibit any characteristic of a hazardous waste. 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 wastes.

- E. Highest and best use: Highest and best use practices require performing both of the following: (i) promote the following waste management practices in order of priority: (a) source reduction, (b) recycling and composting, and (c) environmentally safe transformation and environmentally safe land disposal, at the discretion of the City or County; and (ii) maximize the use of all feasible source reduction, recycling, and composting options in order to reduce the amount of solid waste that must be disposed of by transformation and land disposal. For wastes that cannot feasibly be reduced at their source, recycled, or composted, the local agency may use environmentally safe transformation or environmentally safe land disposal, or both of those practices.
- F. Inert fill facility: A facility that can legally accept inert waste such as asphalt and concrete exclusively for the purpose of disposal.
- G. Recover or recovery: Any activity, including source reduction, deconstruction and salvaging, reuse, recycling, and composting which causes materials to be recovered for use as a resource and diverted from disposal.
- H. Recyclable material: Any material or product separated or capable of being separated at its point of discard or from the solid waste stream for utilization as a raw material in the manufacture of a new product.
- I. Recycled content: The percentage by weight of a material's constituents that have been recovered or otherwise diverted from the solid waste stream, either during the manufacturing process (pre-consumer), or after consumer use (post-consumer).
 - 1. Spills and scraps from the original manufacturing process that are combined with other constituents after a minimal amount of reprocessing for use in further production of the same product are not recycled materials.
 - 2. Discarded materials from one manufacturing process that are used as constituents in another manufacturing process are pre-consumer or post industrial recycled materials.
- J. Recycled content of materials shall be defined in accordance with the International Organization for Standardization document, ISO 14021:1999 – Environmental labels and declarations— self declared environmental claims (Type II environmental labeling), available at www.iso.org.
- K. Recycling: (Public Resources Code section 40180) is defined as the process of collecting, sorting, cleansing, treating, and reconstituting materials that would otherwise become solid waste. Recycling does not include burning, incinerating, or thermally destroying solid waste.
- L. Recycling facility: A recycling facility is an operation that collects and does any one or a combination of the following: sorting, cleaning, treating, reusing, and reconstituting materials that would otherwise become solid waste.
- M. Registered transporter: Anyone who is hired to remove mixed construction and demolition debris from a construction and/or demolition site and uses 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 hauls at least 1 cubic yard of mixed construction and demolition debris must be a registered transporter. The registered transporter must have applied for and received a registration from the San Francisco Department of the Environment. The registered transporter is obligated to take this mixed material only to a registered facility.

- N. Registered facility: Any facility that accepts mixed construction and demolition debris for processing and recycling must be registered with the City and must demonstrate an overall minimum recycling rate of 65% for mixed construction and demolition debris. A registered facility must have applied for and received a registration from the San Francisco Department of the Environment.
- O. Reuse: Making new use of a material without altering its form.
- P. Source-separated materials: Materials that are sorted at the site of generation by individual material type for the purpose of reuse or recycling, e.g., demolished concrete that is separated at the site for delivery to a base course recycling facility.
- Q. Solid waste: Materials designated as non-recyclable and discarded for the purposes of disposal.
- R. Universal waste (CCR Title 22, Division 4.5, Chapter 34): Hazardous wastes that are more common and pose a lower risk to people and the environment than other hazardous wastes. 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.

1.4 GENERAL REQUIREMENTS

- A. Diversion Goal: In order to meet the City's goal of 75% diversion from landfill by 2010, the goal for this contract is to divert 75% of the construction and demolition debris from landfill disposal through waste prevention, reuse, and recycling. If a construction site contains hazardous wastes and/or universal wastes, the 75% diversion requirement should pertain to all non-hazardous or non-universal waste material.
- B. All hazardous and universal wastes shall be documented separately, and a summary of all applicable manifests, including material description and weights, shall be provided to the TJPA Representative.
- C. Requirements only for construction contracts within the legal and geographical boundaries of the City and County of San Francisco:
 - 1. Registered transporters and registered facilities: Only registered transporters can remove mixed construction and demolition debris from the construction site, and they must take this material to a registered facility. Materials source-separated at the job site should be taken to the appropriate recycling facility.
 - a. For a list of registered facilities and registered transporters, refer to the San Francisco Department of the Environment's website: www.SFEnvironment.org/c&d.
- D. EcoFindeRRR: Use the EcoFindeRRR at www.sfenvironment.org/ecofinder/index.php to find out how to recycle, reuse, and safely dispose of construction and demolition debris and other materials.
- E. Universal Wastes: Contractor shall handle and dispose universal wastes in accordance with the requirements of the California Department of Toxic Substances Control (DTSC). Refer to the DTSC website: www.dtsc.ca.gov. In general, universal waste may not be discarded in solid waste landfills. Contractor shall comply with all hazardous waste regulations, including, but not limited to, the following:
 - 1. Universal wastes shall be stored in containers so that they do not spill, leak, or break, and so that they or are not 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 3 years.
- F. 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 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:

<p><i>TREATED WOOD WASTE – Do not burn or scavenge.</i></p> <p><i>TWW Handler</i></p> <p><i>Name:</i> _____</p> <p><i>Address:</i> _____</p> <p><i>Accumulation Date:</i> _____</p>
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4. Take TWW to an authorized TWW facility. See the listings at the end of the fact sheet for information on facilities that are authorized to accept TWW in California.
- G. Waste Reduction: Contractor shall implement waste reduction measures, including, but not limited to, the following:
1. Eliminate 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) unless otherwise noted.
 4. Fully participate in available and required recycling and composting programs.
 5. Purchase products made with recycled content such as paper and recycled aggregate.
- H. LEED Credit: Compliance with the 75% diversion goal meets the requirements of LEED MR Credit 2.2 and earns the Project 2 points.

1.5 SUBMITTALS

- A. Pursuant to the provisions of paragraph 3.10, Shop Drawings, Product Data and Submittals, of the General Conditions and Specifications Section 01 13 00, Submittals, Contractor shall submit:
1. Construction and Demolition Debris Management Plan.
 2. Construction and Demolition Debris Recovery Monthly Summary Report and supporting documentation.
 3. Construction and Demolition Debris Recovery Final Report.
- B. Contractor shall submit the above items in electronic format to the TJPA Representative.

1.6 CONSTRUCTION AND DEMOLITION DEBRIS MANAGEMENT PLAN

- A. The requirements under this paragraph 1.6 apply to all TJPA construction contracts, regardless of location, with a construction cost estimate of \$90,000 or more.

- B. After Award of Contract and before commencement of the Work at the Site, Contractor shall complete a Construction and Demolition Debris Management Plan. This Plan shall identify materials that are anticipated to be feasible and practical for reuse and recycling. Contractor shall schedule a meeting with the TJPA Representative to discuss its proposed construction and Demolition Debris Management Plan to develop a mutual understanding regarding the City's recycling and reuse policies and goals and their application to this Project.
- C. Contractor shall prepare and submit a written Construction and Demolition Debris Management Plan. The plan shall include, but not be limited to, the following:
1. 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, recycled, or transported to a registered facility.
 4. The names, locations, and permit or license, as applicable, of recycling and reuse facilities and Registered Facilities (for mixed debris) that the Contractor plans to use for this Project.
 5. Procedures for source separation for the materials listed in Article "Recycling Requirements" (paragraph 1.7) 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 recycled and/or reused on site, such as grinding materials for use on site, or reuse of lumber for concrete frames.
 8. Procedures to educate and train all employees and subcontractors on recycling and reuse procedures to be used at the job site.
- D. The Construction and Demolition Debris Management Plan is subject to approval by the TJPA Representative. Contractor shall revise and resubmit the plan as required by the TJPA Representative.
- E. 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.
- F. In accordance with the Mayor's Directive 06-05, Contractor shall achieve a diversion rate of 75%.

1.7 RECYCLING REQUIREMENTS

- A. Source-separated Materials: Consistent with the City program, Contractor shall develop and implement procedures for source-separation, to the greatest extent feasible, of the following types of recyclable or reusable materials:
1. Asphalt.
 2. Concrete, concrete block, slump stone (decorative concrete block), and rock.
 3. Soil.
 4. Bricks, stone(s), granite, and other finished stone-type materials.
 5. Wall board (gypsum sheetrock).
 6. Dimensional lumber and beams.
 7. Fixtures, hardware, doors, and windows.
 8. Ferrous and non-ferrous metal.
 9. Corrugated cardboard.
 10. Trees, cleared vegetation and cut-off or other wood scraps.
 11. Carpet and pads.
 12. Rigid plastic.
 13. Acoustical ceiling tiles.
 14. Other: describe.

- B. Mixed Construction and Demolition Debris: All mixed construction and demolition debris shall be handled in accordance with the requirements of the San Francisco Ordinance No. 27-06 and as described in this section.
- C. Handling of Recyclable Materials:
 - 1. Contractor shall assure that recyclable or reusable materials be free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process. The Contractor shall clean materials that are contaminated before placing them in collection containers.
 - 2. Contractor shall arrange for collection of recyclable materials by or delivery to the appropriate recycling center for purposes of recycling.
 - 3. All mixed construction and demolition debris must be taken to a registered facility.

1.8 CONSTRUCTION AND DEMOLITION DEBRIS RECOVERY MONTHLY SUMMARY AND FINAL REPORT

- A. Contractor shall submit a Construction and Demolition Debris Recovery Monthly Summary Report, quantifying the construction and demolition debris generated and recycled, reused, or transported to a registered facility. Refer to Appendix A, Uniform Hazardous Waste Manifest, of this section for the worksheet to be used for this report. Contractor shall include manifests, weight tickets, receipts, and invoices specifically identifying the Project and waste material.
- B. Contractor shall submit this report with each application for progress payment.
- C. Contractor shall be responsible for transporting all mixed construction and demolition debris to a registered facility by using a registered transporter. No construction and demolition debris shall be burned, buried, or otherwise disposed of on the Project site.
- D. As a requirement for Final Completion, Contractor shall submit a Construction and Demolition Debris Final Report to the TJPA Representative.

1.9 JOB SITE ADMINISTRATION

- A. Contractor shall review the environmental goals of this Project with all Trade Subcontractors and their subcontractors. 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. Contractor shall review MSDS (material safety data sheets) with workers on the job site. Contractor shall discuss alternatives to minimize exposure to potentially harmful substances.
- C. Contractor shall provide recycling containers for field office wastes to separate recyclable and compostable materials from normal garbage using the City's blue, green, and black recycling system. Refer to www.sunsetscavenger.com/commercialRecycling.htm for more information.

1.10 PAYMENT

- A. There will not be a separate payment for the work described within this section. All costs shall be incidental to other work and be included in the Total Bid Price.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

- A. General: Implement a Waste Diversion Plan as approved. Provide handling, containers, storage, signage, transportation, and other items as required to implement the Waste Diversion Plan during the entire duration of the Contract.
- B. Training: Train workers, Trade Subcontractors, and Suppliers on proper waste management procedures, as appropriate for the Work occurring at the Project site.
 - 1. Distribute the Waste Diversion Plan to major Trade Subcontractors within 1 week of plan's approval or when subcontract is signed, whichever is earlier.
 - 2. In addition, distribute the Waste Diversion Plan to entities when they first begin work on Site. Review plan procedures and locations established for salvage, recycling, and disposal.

3.2 DISPOSAL OF WASTE NOT DIVERTED FROM LANDFILL

- A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill acceptable to authorities having jurisdiction.
 - 1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on site.
 - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn waste materials.
- C. Disposal: Transport waste materials off site and legally dispose of them.

END OF SECTION 01 74 00

SPECIFICATION LOG

Revision	Date
0	July 30, 2010

SECTION 01 81 13 – GENERAL LEED BUILDING DESIGN & CONSTRUCTION REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This section includes general requirements and procedures for compliance with certain U.S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design LEED prerequisites and credits needed for the Project to obtain a minimum LEED "silver" certification under the USGBC's Green Building Rating System for Building Design & Construction 2009 rating system (BD&C v2009).
1. Certain LEED prerequisites and credit requirements needed to obtain LEED certification are dependent on material selections, documentation and means and methods of the Work. Each item related to LEED may not be specifically identified as LEED requirements in this section. The Contractor should refer to the LEED Green Building Rating System for Building Design & Construction (BD&C) 2009 Edition Reference Guide for complete credit descriptions and submittal requirements. Compliance with requirements needed to obtain LEED prerequisites and credits may be used as one criterion to evaluate substitution requests.
 2. Additional LEED prerequisites and credits needed to obtain the indicated LEED certification are dependent on the Architect's design and other aspects of the Project that are not part of the Work of the Contract. Hence, not all credits required for certification may be described as part of this section.
- B. This section applies to the LEED Project Limit as shown in the following diagram. LEED requirements in accordance with this section for other aspects of Work beyond the area defined by the LEED Project Limit are not applicable for tracking.



- C. Related sections shall be included in all Trade Work Packages including the following:
1. Divisions 1 through 33 sections for LEED requirements specific to the Work of each of those sections.
 - a. These requirements may or may not include reference to LEED or LEED credit submittal requirements.

1.2 DEFINITIONS

- A. Adequate ventilation: Ventilation, including air circulation and air changes, required to cure materials, dissipate humidity, and prevent accumulation of dust, fumes, vapors, and gases.
- B. Chain-of-custody (COC) certificates: Certificates signed by manufacturers certifying that wood used to make products was obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship." Certificates shall include evidence that manufacturer is certified for chain of custody by an FSC-accredited certification body.
- C. Chemical waste: Includes paints, adhesives, sealants, coatings, petroleum products, bituminous materials, salts, acids, alkalis, herbicides, pesticides, organic chemicals, and inorganic wastes.
- D. Construction and demolition waste: Includes solid wastes, such as building materials, packaging, rubbish, debris, and rubble resulting from construction, remodeling, and repair and demolition operations.
- E. Environmental pollution and damage: The presence of chemical, physical, or biological elements or agents that adversely affect human health or welfare; unfavorably alter ecological balances or the environment of neighboring buildings and environmental areas; or degrade the utility of the environment for aesthetic, cultural or historical purposes.
- F. Hazardous materials: Includes pesticides, biocides, carcinogens, and "wet products" as listed by recognized authorities, such as the Environmental Protection Agency (EPA), International Agency for Research on Cancer (IARC), the State of California, and any special local requirements.
- G. Interior final finishes: Materials and products that will be exposed at interior occupied spaces, including flooring, wall covering, finish carpentry, and ceilings.
- H. LEED: Leadership in Energy & Environmental Design: A green building rating system administered by the U.S. Green Building Council. Additional information on LEED, how to purchase copies of the LEED BD&C reference guide, and how to use LEED-Online can be found at www.usgbc.org.
- I. Packaged dry products: Materials and products that are installed in dry form and delivered to the Site in the manufacturer's packaging, including carpets, resilient flooring, ceiling tiles, and insulation.
- J. Post-consumer material: Material generated by households or by commercial, industrial and institutional facilities in their role as end-users of products, which can no longer be used for its intended purpose.
- K. Pre-consumer material: Material diverted from the waste stream during the manufacturing process (can also be considered post-industrial). Excluded is reutilization of materials such as rework, re-grind or scrap generated in a process and capable of being reclaimed within the same process that generated it.
- L. Rapidly renewable materials: Materials made from plants that are typically harvested within a 10-year or shorter cycle. Rapidly renewable materials include products made from bamboo, cotton, flax, jute, straw, sunflower seed hulls, vegetable oils, or wool.
- M. Recycled content: The percentage by weight of a material's constituents that have been recovered or otherwise diverted from the solid waste stream, either during the manufacturing process (pre-consumer), or after consumer use (post-consumer).

1. Spills and scraps from the original manufacturing process that are combined with other constituents after a minimal amount of reprocessing for use in further production of the same product are not recycled materials.
 2. Discarded materials from one manufacturing process that are used as constituents in another manufacturing process are pre-consumer or post industrial recycled materials.
 3. Recycled content of materials shall be defined in accordance with the International Organization for Standardization document, ISO 14021-1999—Environmental labels and declarations—self declared environmental claims (Type II environmental labeling), available at www.iso.org.
- N. Regionally extracted, processed and manufactured materials: Materials that are extracted, harvested, or recovered; processed; and manufactured within a radius of 500 miles (800 km) from the Project location. Manufacturing refers to the final assembly of components into the building product that is installed at the Project site.
- O. Recycled content: The percentage by weight of the constituents of Project materials that have been recovered or otherwise diverted from the solid waste stream either during the manufacturing process (pre-consumer) or after consumer use (post-consumer).
1. Pre-Consumer Material is defined as material diverted from the waste stream during the manufacturing process. Reutilization of materials that are capable of being reintegrated into the manufacturing process from which they were originally generated, such as spills, scrap, reworked or damaged, or broken materials, are not recycled materials.
 - a. Materials discarded from one manufacturing process that are used in a different manufacturing process are considered pre-consumer recycled materials.
 2. Post-consumer material is defined as material generated by residential, commercial, or institutional buildings in their role as end-users of a product, which can no longer be used in its original capacity.
 3. Recycled content of materials shall be defined in accordance with the International Organization for Standardization document, ISO 14021-1999—Environmental labels and declarations—self declared environmental claims (Type II environmental labeling), available at www.iso.org.
- P. Ventilation: the process of supplying air to or removing air from a space for the purpose of controlling air contaminant levels, humidity, or temperature within the space.
- Q. Wet products: Materials and products installed in wet form, including paints, sealants, adhesives, and special coatings.

1.3 LEED MEETINGS

- A. Conduct LEED certification meetings with all applicable Trade Subcontractors, in addition to those meetings outlined in Section 01 12 00, Project Meetings.
1. These meetings shall be held, as required, and at a minimum, quarterly, include, at a minimum:
 - a. Contractor's project manager.
 - b. TJPA Representative.
 - c. Applicable Trade Subcontractor's LEED representative as appropriate to stage of work.
- B. In addition, LEED certification goals, status and issues shall be discussed at the following meetings:
1. Preconstruction meetings.
 2. Progress meetings.
 3. Trade subcontractor meeting.

1.4 LEED CERTIFIED PRODUCTS SUBSTITUTION PROCEDURES

- A. Substitutions that may affect LEED certification must be clearly stated as such.
- B. Notify TJPA when contractor wishes to substitute materials, equipment, or products that meet the aesthetic, functional and programmatic intent of the Contract Documents and offer equivalent or increased environmental sensitivity to materials, equipment, or products specified to meet LEED requirements as indicated in the Contract Documents.
- C. In addition to the requirements of Section 01 16 30, Product Options and Substitutions, requirements described in this section apply to substitution of LEED certification-related materials, equipment, requirements, and procedures.
 - 1. Only 1 request for substitution for each product will be considered. When substitution is not accepted, provide specified product.
 - 2. Prior to submitting detailed information required under Section 01 16 30, submit the following for initial review by TJPA Representative.
 - a. Product data including manufacturer's names, address, and phone number.
 - b. Material safety data sheet (MSDS) if applicable.
 - c. Description of the differences of the proposed substitution from specified product related to LEED requirements. Include description of environmental advantages of proposed substitution over specified product.
 - 3. Submit requests for substitutions only after initial review has been accepted by TJPA Representative.
 - a. Submit a separate request for each LEED related product substitution.
 - b. Identify product by Specification section and LEED credit or credits, if applicable.
 - c. List similar projects using the proposed product, dates of installation, and names of contractor and owner.
 - d. Provide itemized comparison of proposed substitution with specified product, listing variations, and reference Specification section and Article number.
 - e. Include copy of MSDS if applicable.
 - f. Provide cost data comparing proposed substitution with specified product and amount of net change to Contract Sum. The cost data should be based on life cycle analysis for each affected product including annual energy consumption and maintenance costs.
 - g. State effect of substitution on construction schedule and changes required in other work of products.
 - 4. Contractor is responsible for re-submittal of all calculations and documentation of products or material substitutions that affect LEED prerequisites and credits referenced in this section, and any credits previously submitted as part of the Project's LEED Design Application Submittal, and all credits included in the LEED Construction Submittal. Products not meeting these requirements are not acceptable for substitution.
 - 5. Substitution of materials and products specified as part of the Contract documents in the following areas, but not necessarily limited to these items, will require review and potential re-submittal of LEED design application prerequisites and credits:
 - a. Irrigation system.
 - b. Stormwater system.
 - c. Roofing products and materials.
 - d. Plumbing fixtures and controls.
 - e. Interior and exterior lighting systems and controls.
 - f. HVAC equipment, systems and controls.
 - g. CO2 monitoring system.
 - 6. Substituted products shall not be ordered or installed without written acceptance by the TJPA.

1.5 SUBMITTALS

- A. General: LEED submittals are in addition to other submittals requirements specified elsewhere.
 - 1. If submitted item is identical to an item submitted to comply with other requirements, Contractor shall submit a duplicate copy as a separate submittal to verify compliance with indicated LEED requirements.
- B. Project Materials Cost Data:
 - 1. Total Materials Cost: Provide at least one of the following:
 - a. Statement indicating total cost for materials used for Project in Divisions 03-10 and 31-32 excluding labor, overhead, and profit.
 - b. The total project cost for work in Divisions 03-10 plus 31-32, multiplied by 45% (the default materials value allowed by the LEED rating system).
 - 2. Only include materials permanently installed in the Project.
 - 3. Furniture may be included, provided it is consistently included in MR credits 3-7. Consequently, it should be provided as a separate line item to facilitate this review.
 - 4. Consistent numbers must be applied to various LEED credits submittals requiring similar material cost data.
 - 5. Include breakout of costs for the following categories of items:
 - a. Wood-based construction materials.
- C. With final project submittals provide the following:
 - 1. Final summary of solid waste disposal and diversion.
 - 2. All approved Substitution Request Forms related to this section.
- D. LEED Action Plans: Transmit preliminary submittals within 20 days after award of Contract. Indicate how the following requirements will be met:
 - 1. Credit MR 2: Waste management plan complying with 01 74 00, Construction and Demolition Debris Recovery Plan.
 - 2. Credit MR 4: List of proposed materials with recycled content.
 - a. Indicate projected materials cost, projected post-industrial (pre-consumer) recycled content, and projected post-consumer recycled content for each product projected to have recycled content.
 - 3. Credit MR 5: List of proposed regionally extracted, processed, and manufactured materials.
 - a. Identify each projected regionally manufactured material that is also projected to have been extracted, harvested, or recovered within 500 miles of the Project, its projected source and projected materials cost.
 - 4. Credit MR 7: List of proposed certified wood products.
 - a. Indicate each product projected to contain certified wood, its projected source and projected materials cost.
 - b. Include statement indicating total projected materials cost for wood-based materials to be used for the Project.
 - 5. Credit IEQ 3.1: Construction indoor air quality management plan.
- D. LEED Progress Reports: Concurrent with each application for payment, submit reports comparing actual construction and purchasing activities with LEED action plan for the following:
 - 1. Credit MR 2.1 and 2.2: Waste reduction progress reports complying with 01 74 00, Construction and Demolition Debris Recovery Plan.
 - 2. Credit MR 4.1 and 4.2: Recycled content products purchased (product names), their respective post-industrial (pre-consumer) and post-consumer recycled contents. Include manufacturer published information on the recycled content of each product in the form of a specification sheet, affidavit or other written confirmation from the manufacturer.
 - 3. Credit MR 5.1 and 5.2: Regionally manufactured materials and regionally extracted, harvested, or recovered materials. Include manufacturer published information on the location of raw material extraction, harvest, or recovery and on the location of manufacture

of each product in the form of a specification sheet, affidavit, or other written confirmation from the manufacturer.

4. Credit MR 7: FSC certified wood products. Permanently installed new wood products. Include information on COC certificates in the form of a specification sheet, affidavit, or other written confirmation from the manufacturer.

E. Contractor's LEED Documentation Submittals:

1. For all credits and prerequisites: LEED documentation submittals must be prepared and submitted using the LEED-Online credit web-based application at <http://leedonline.usgbc.org/>.
 - a. Contractor is responsible for obtaining project access to LEED-Online and joining the Project to the system using the Project's 15-digit project access code. Additional instructions on how to access the Project can be provided by TJPA's Representative upon request.
 - b. Once Contractor has joined the Project through LEED-Online, TJPA's Representative will assign the LEED credits that the Contractor is responsible for completing.
 - i. Each credit template is an editable Adobe PDF document. Contractor shall complete or update the template as needed at any time prior to the LEED construction submittal. Save the template to LEED-Online upon finalization.
 - c. Additional submittal documentation and back-up requirements should be uploaded to the LEED-Online web site following the "required audit documentation" instructions for each credit.
2. Prerequisite SS 1: Construction Activity Pollution Prevention:
 - a. Photographs after rain events to show erosion control measures are being maintained in accordance with the Project's SWPPP.
3. Credit SS 7.2: Product Data for roofing materials:
 - a. Manufacturer information verifying acceptable Solar Reflectance Index for non-vegetated roof components.
 - b. Product information for vegetated roof system.
4. Credit WE 3: Product Data for plumbing fixtures indicating water consumption and flow rates.
5. Credit EA 4: Product Data for new HVAC equipment indicating type, quantity, cooling capacity (in tons), refrigerant type, and refrigerant required (in lbs).
 - a. Product Data for clean-agent fire-extinguishing systems indicating absence of HCFCs and Halons.
6. Credit MR 2: Comply with 01 74 00, Construction and Demolition Debris Recovery Plan.
 - a. Using the LEED BD&C v 2009 online submittal template:
 - b. Complete the construction waste calculation tables including: General description of each type/category of waste generated; location of receiving agent (recycler/landfill) for waste; quantity of waste diverted (by category) in tons or cubic yards.
 - c. Provide a narrative describing the Project's construction waste management approach. Provide any additional comments or notes to describe special circumstances or considerations regarding the Project's credit approach.
 - d. Required audit documentation:
 - e. Copy of construction waste management plan.
 - f. Significant sampling of the hauling/recycling tags/tickets or receipts from the Project.
 - g. Statement from the recycling facilities indicating how the materials were recycled/processed/used and documentation of the recovery rate (if comingled).

- h. Brief narrative explaining how and to where each waste type was diverted if not already included on the LEED credit template.
7. Credit MR 4: Product Data and certification letter indicating percentages by weight of post-industrial (pre-consumer) and post-consumer recycled content for products having recycled content. Using the LEED BD&C v2009 online submittal template:
- a. Provide total project materials cost in accordance with paragraph 1.5B.
 - b. Provide a tabulation of each material used on the Project that is being tracked for recycled content. The tabulation must include a description of the material, the manufacturer of the material, the product cost, the pre-consumer and/or post-consumer recycled content percentage, and the source of the recycled content data.
 - c. Provide an optional narrative describing any special circumstances or considerations regarding the Project's credit approach.
 - d. Required audit documentation:
 - i. Manufacturer cut sheets, literature, or letters highlighting the overall post-consumer and/or post-industrial recycled content percentages (by weight) of each product listed on the template.
 - ii. Materials invoices (showing costs) for each product listed on the template.
8. Credit MR 5: Product Data indicating location of material extraction, processing, and manufacture for regional materials. Using the LEED BD&C v2009 online submittal template:
- a. Provide total project materials cost in accordance with paragraph 1.5B.
 - b. Provide a tabulation of each material used on the Project that is being tracked for regional content. The tabulation must include a description of the material; the manufacturer of the material; the product cost; the percentage of the product by weight that meets both the extraction and manufacturer location criteria; distance between the Project site and extraction/harvest/recovery site; and distance between the Project site and final manufacturing location.
 - c. Provide an optional narrative describing any special circumstance or considerations regarding the Project's credit approach.
 - d. Required audit documentation:
 - i. Manufacturer cut sheets, literature, or letters highlighting address location of each material's extraction/harvest/recovery and manufacturing/processing sites.
 - ii. Map (Yahoo Maps or equivalent) indicating distances from each location to the Project site.
 - iii. Materials invoices (showing costs) for each product listed on the template.
9. Credit MR 7: Product Data and COC certificates for products containing certified wood.
- a. Provide total wood-based construction materials cost in accordance with paragraph 1.5B.
 - b. A list of items (and/or components of products) claimed as FSC certified, including product type, manufacturer, and the entity's COC certification number. (Each product name can then be cross-referenced with the manufacturer or vendor COC number during the LEED certification review.) Visit www.fscus.org/green_building for more information.
 - c. Provide an optional narrative describing any special circumstance or considerations regarding the Project's credit approach
 - d. Required audit documentation:
 - i. Official FSC chain of custody certificates (from the FSC-licensed third party inspector) for each material listed, with chain of custody number.
 - ii. Materials invoices (showing costs) for each product listed on the template.

10. Credit IEQ 3.1: Construction IAQ Management Plan during Construction, Using the online submittal template:
 - a. Provide a copy of the Project's indoor air quality (IAQ) management plan
 - b. Confirm if the permanently installed air handling equipment was used during construction.
 - c. Provide 6 photographs at each of three different times during the construction period to highlight the implemented construction IAQ practices.
 - d. List all filtration media (manufacturer, model#, MERV rating, location of installed filter) installed during construction and confirm that each unit was replaced prior to occupancy.
 - e. Provide an optional narrative describing any special circumstance or non-standard approach taken by the Project.
 - f. Required audit documentation
 - i. Construction IAQ management plan addressing the SMACNA (Sheet Metal and Air Conditioning Contractors National Association)/LEED requirements.
 - ii. Manufacturer literature, cutsheets, or letters showing the MERV (minimum efficiency reporting value) of filtration media used (during construction and immediately before occupancy).
11. Credit IEQ3.2: Construction IAQ management plan, before occupancy, using the online submittal template:
 - a. Confirm approach taken by Project (pre-occupancy flush-out; flush-out with early occupancy; IAQ testing)
 - b. Report from testing and inspecting agency indicating results of indoor-air-quality testing and documentation showing compliance with indoor-air-quality testing procedures and requirements (if applicable).
 - c. Provide a narrative describing the Project's specific flush-out procedures and/or IAQ testing process and results.
 - d. Required audit documentation
 - i. Product data for filtration media used during flush-out and during occupancy.
12. Credit IEQ 4.1: Product Data and MSDSs for adhesives and sealants used on the interior of the building indicating VOC content of each product used. Using the LEED BD&C v2009 online submittal template:
 - a. Provide a listing of each indoor adhesive, sealant and sealant primer product used on the Project. Include the manufacture's name, product name, specific VOC data (in g/L less water) for each product, and the corresponding allowable VOC from the referenced standard (listed in LEED BD&C v2009).
 - b. Provide a listing of each indoor aerosol adhesive product used on the Project. Include the manufacture's name, product name, specific VOC data (in g/L less water) for each product, and the corresponding allowable VOC from the referenced standard (listed in LEED NC v2.2 reference guide).
 - c. Provide a narrative to describe any special circumstances or non-standard compliance path taken by the Project.
 - d. Required audit documentation:
 - i. Manufacturer cut sheets, literature, letter, or MSDS for each adhesive/sealant used on the interior, with the VOC content (g/L) circled, calculated according to 40 CFR 59, Subpart D (EPA method 24).
13. Credit IEQ 4.2: Product data and MSDSs for paints and coatings used on the interior of the building indicating VOC content of each product used. Using the LEED BD&C v 2009 online submittal template:
 - a. Provide a listing of each indoor paint and coating used on the Project. Include the manufacture's name, product name, specific VOC data (in g/L less water) for each product, and the corresponding allowable VOC from the referenced standard (listed in LEED BD&C v 2009).

- b. Provide a narrative to describe any special circumstances or non-standard compliance path taken by the Project.
 - c. Required audit documentation:
 - i. Manufacturer cut sheets, literature, letter, or MSDS for each interior paint, with the VOC content (g/L) circled, calculated according to 40 CFR 59, Subpart D (EPA method 24).
- 14. Credit IEQ 4.3: Product data for carpet systems indicating CRI Green Label Plus rating for each product used. Using the LEED BD&C v 2009 online template:
 - a. Provide a listing of carpet products installed in the building interior. Confirm that each product complies with CRI Green Label Plus testing program. For more information visit: www.carpet-rug.org.
 - b. Provide a listing of carpet cushion products installed in the building interior. Confirm that each product complies with CRI Green Label testing program. For more information visit: www.carpet-rug.org.
 - c. Provide a narrative to describe any special circumstances or non-standard compliance path taken by the Project.
 - d. Required audit documentation:
 - i. Manufacturer cut sheets, literature, or letters; or CRI Green Label Plus/ literature stating that the carpet(s) meets the CRI Green Label IAQ test program criteria.
- 15. Credit IEQ 4.4: Product data for products containing composite wood or agrifiber products or wood glues indicating that they do not contain urea-formaldehyde resin. Using the LEED BD&C v 2009 online submittal template:
 - a. Provide a listing of each composite wood and agrifiber product installed in the building interior. Confirm that the product does not contain any added urea-formaldehyde.
 - b. Provide a narrative to describe any special circumstances or non-standard compliance path taken by the Project.
 - c. Required audit documentation:
 - i. Cut sheets or manufacturer literature or letters indicating the bonding agents for each composite wood and agrifiber material used in the Project, showing that no added urea-formaldehyde resins were used in these products.

1.6 QUALITY ASSURANCE

- A. Contractor shall provide an on-site person who is an experienced LEED accredited professional to oversee the sustainable construction initiatives on a daily basis. This person shall have responsibility to ensure that the LEED requirements are being met, maintain the LEED logs, prepare the weekly LEED progress reports and manage the LEED paper trail, and ensure that the LEED submittals packages are complete and accurate before they are sent to the TJPA Representative for review and approval. This person shall also be responsible for tracking down any missing information required to complete the LEED submission documentation. It is recommended that the LEED coordinator also serve as the waste management coordinator.
- B. A copy of the LEED BD&C v 2009 reference guide is required to be purchased by the Contractor and available on site at all times to accompany this specification.

PART 2 - PRODUCTS

2.1 RECYCLED CONTENT OF MATERIALS

- A. Credits MR 4.: Provide building materials with recycled content such that post-consumer recycled content plus one-half of pre-consumer recycled content is in accordance with the approved LEED Action Plan.
1. The cost of post-consumer recycled content of an item shall be determined by dividing the weight of post-consumer recycled content in the item by the total weight of the item and multiplying by the cost of the item.
 2. The cost of post consumer recycled content plus one-half of post-industrial recycled content of an item shall be determined by dividing the weight of post-consumer recycled content plus one-half of pre-consumer recycled content in the item by the total weight of the item and multiplying by the cost of the item.
 3. Only products in Divisions 02-10 (updated for new CSI sections) and optionally Division 12 (updated for new CSI sections) apply.
 4. Recycled content of materials shall be defined according to the International Organization for Standardization document, ISO 14021—Environmental labels and declarations—Self-declared environmental claims (Type II environmental labeling).
 5. Each trade shall provide the material cost and above recycled content data for the materials as specified, and provide data optional materials which have a higher recycled content, where applicable.

2.2 REGIONAL MATERIALS

- A. Credit MR 5: Provide percentage of building materials (by cost) in accordance with the approved LEED Action Plan, that are extracted, harvested or recovered, as well as manufactured, regionally within 500 miles of the Project site.
1. Only products in Divisions 02-10 (updated for new CSI sections) and optionally Division 12 (updated for new CSI sections) apply.
 2. Each trade shall provide the material cost and above regional material data for the materials as specified, and provide data on additional or optional materials which are extracted, processed, and manufactured regionally.
 3. A minimum of 10% of the cost of the material must be harvested, extracted, or recovered as well as manufactured within a 500-mile radius of the Project site in order to contribute towards this credit.

2.3 CERTIFIED WOOD

- A. Credit MR 7: Provide all permanently installed wood-based materials (by cost) that are produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC, "Principles and Criteria."
1. Wood-based materials include but are not limited to the following materials when made from wood, engineered wood products, or wood-based panel products:
 - a. Rough carpentry
 - b. Miscellaneous carpentry
 - c. Finish carpentry
 - d. Architectural woodwork
 - e. Wood paneling
 - f. Wood veneer wall covering
 - g. Wood cabinets
 - h. Furniture (if included consistently in total project material cost)
 2. Contractor shall provide an invoice for all certified wood products which includes cost and COC number by line item. (This can be compiled and submitted near the end of the Project.) Requirement as specified in Memo from the USGBC, dated April 7, 2008.

2.4 LOW-EMITTING MATERIALS

- A. Credit IEQ 4.1: For interior applications use adhesives and sealants that comply with the Bay Area Air Quality Management District (BAAQMD), Regulation 8, Rule 51, or the South Coast Air Quality Management District (SCAQMD) rule#1168, effective date July 1, 2005 and rule amendment date of January 7, 2005, whichever is more stringent, limits for VOC (volatile organic compound) content when calculated according to 40 CFR 59, Subpart D (EPA method 24):
1. Carpet adhesives: 50 g/L
 2. Carpet pad adhesives: 50 g/L
 3. Wood flooring adhesives: 100 g/L
 4. Rubber floor adhesives: 60 g/L
 5. Subfloor adhesives: 50 g/L
 6. Ceramic tile adhesives: 65 g/L
 7. VCT and asphalt tile adhesives: 50 g/L
 8. Gypsum board and panel adhesives: 50 g/L
 9. Cove Base adhesives: 50 g/L
 10. Multipurpose construction adhesives: 70 g/L
 11. Structural glazing adhesives: 100 g/L
 12. Metal to metal adhesives: 30 g/L
 13. Plastic foam adhesives: 50 g/L
 14. Adhesives for porous materials (Except Wood): 50 g/L
 15. Wood glues: 30 g/L
 16. Fiberglass adhesives: 80 g/L
 17. PVC welding compounds: 510 g/L
 18. CPVC welding compounds: 490 g/L
 19. ABS welding compounds: 325 g/L
 20. Plastic cement welding compounds: 250 g/L
 21. Adhesive primers for plastic: 550 g/L
 22. Contact adhesives: 80 g/L
 23. Special purpose contact adhesives: 250 g/L
 24. Structural wood member adhesives: 140 g/L
 25. Architectural sealants: 250 g/L
 26. Nonmembrane roof sealants: 300 g/L
 27. Roadway sealants: 250 g/L
 28. Single-ply roof membrane: 450 g/L
 29. Other sealants: 420 g/L
 30. Sealant primers for nonporous substrates: 250 g/L
 31. Sealant primers for porous substrates: 775 g/L
 32. Sealant primers for other substrates: 750 g/L
 33. Reference BAAQMD, Regulation 8, Rule 51, for product definitions and additional product VOC content limits
 34. For interior applications use aerosol adhesives that comply with Green Seal Standard GS-36 (in effect 10/19/2000):
 - a. General purpose mist spray: 65% VOCs by weight
 - b. General purpose web spray: 55% VOCs by weight
 - c. Special purpose aerosol adhesives (all types): 70% VOCs by weight
- B. Credit IEQ 4.2: For interior applications use paints and coatings that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA method 24) and the following chemical restrictions:
1. Paints: Green Seal Standard GS-11 Paints, First Edition (May 20, 1993).
 - a. Interior Flats: 50 g/L
 - b. Interior Non-Flats: 150 g/L
 - c. Interior Primers: 150 g/L

2. Anti-Corrosive and Anti-Rust Paints: Green Seal Standard GS-03, Anti-Corrosive Paints, Second Edition (January 7, 1997).
 - a. Anti-Corrosive and Anti-Rust: 250 g/L.

3. Clear Wood Finishes, Floor Coatings, Stains, Sealers, and Shellacs: BAAQMD, Regulation 8, Rule 3, Architectural Coatings (dated July 1, 2009), or the SCAQMD rule #1168, effective date July 1, 2005, and rule amendment date of January 7, 2005, whichever is more stringent.
 - a. Bond breaker: 350 g/L
 - b. Clear wood finish, varnish: 350 g/L
 - c. Clear wood finish, sanding sealer: 350 g/L
 - d. Clear wood finish, lacquer: 550 g/L
 - e. Clear brushing lacquer: 680 g/L
 - f. Concrete-curing compound: 350 g/L
 - g. Dry-fog: 400 g/L
 - h. Fire-proofing exterior coating: 350 g/L
 - i. Fire-retardant coating, clear: 650 g/L
 - j. Fire-retardant coating, pigmented: 350 g/L
 - k. Flat coating: 100 g/L
 - l. Floor coating: 100 g/L
 - m. Graphic arts (sign) coating: 500 g/L
 - n. Industrial maintenance coating: 250 g/L
 - o. High temperature industrial maintenance coating: 420 g/L
 - p. Zinc-rich industrial maintenance coating: 340 g/L
 - q. Japans/faux finishing coating: 350 g/L
 - r. Magnesite cement coating: 450 g/L
 - s. Mastic coating: 300 g/L
 - t. Metallic pigmented coating: 500 g/L
 - u. Multi-colour coating: 250 g/L
 - v. Pigmented lacquer: 550 g/L
 - w. Pre-treatment wash primers: 420 g/L
 - x. Primer, sealer and undercoating: 200 g/L
 - y. Quick-dry enamel: 250 g/L
 - z. Quick-dry primer, sealer and undercoating: 200 g/L
 - aa. Recycled coating: 250 g/L
 - bb. Roof coating: 250 g/L
 - cc. Roof coating, aluminum: 500 g/L
 - dd. Roof primer, bituminous: 350 g/L
 - ee. Rust preventative coating: 400 g/L
 - ff. Shellac, clear: 730 g/L
 - gg. Shellac, pigmented: 550 g/L
 - hh. Specialty primer: 350 g/L
 - ii. Stains: 250 g/L
 - jj. Stains, interior: 250 g/L
 - kk. Swimming pool coating, repair: 650 g/L
 - ll. Swimming pool coating, other: 340 g/L
 - mm. Traffic coating: 150 g/L
 - nn. Waterproofing sealer: 250 g/L
 - oo. Waterproofing concrete/masonry sealer: 400 g/L
 - pp. Wood preservative, below-ground: 350 g/L
 - qq. Wood preservative, other: 350 g/L

4. Aromatic Compounds: Paints and coatings shall not contain more than 1% by weight total aromatic compounds (hydrocarbon compounds containing one or more benzene rings).

5. Restricted Components: Paints and coatings shall not contain any of the following:
 - a. Acrolein
 - b. Acrylonitrile
 - c. Antimony
 - d. Benzene
 - e. Butyl benzyl phthalate
 - f. Cadmium
 - g. Di (2-ethylhexyl) phthalate
 - h. Di-n-butyl phthalate
 - i. Di-n-octyl phthalate
 - j. 1,2-dichlorobenzene
 - k. Diethyl phthalate
 - l. Dimethyl phthalate
 - m. Ethylbenzene
 - n. Formaldehyde
 - o. Hexavalent chromium
 - p. Isophorone
 - q. Lead
 - r. Mercury
 - s. Methyl ethyl ketone
 - t. Methyl isobutyl ketone
 - u. Methylene chloride
 - v. Naphthalene
 - w. Toluene (methylbenzene)
 - x. 1,1,1-trichloroethane
 - y. Vinyl chloride

- C. Credit IEQ 4.3: Carpet systems must meet or exceed requirements of the Carpet and Rug Institute's (CRI) Green Label Plus Indoor Air Quality Test Program.
 1. Carpet cushion must meet or exceed requirements of the Carpet and Rug Institute's (CRI) Green Label Plus Indoor Air Quality Test Program. www.carpet-rug.org.
 2. Carpet adhesive and carpet cushion adhesive must meet the VOC limits requirement of IEQ Credit 4.1, as listed in this section.

PART 3 - EXECUTION

3.1 FIELD EXECUTION OF LEED REQUIREMENTS

- A. Contractor is responsible for ensuring proper field execution of all LEED prerequisites, credits, and submittal requirements; communication with Trade Subcontractors of all requirements; and submission of all documentation in a timely manner.
- B. Contractor shall notify TJPA representative immediately of failure to meet any stated LEED prerequisite or credit requirement.

3.2 CONSTRUCTION WASTE MANAGEMENT

- A. Credit MR 2: Comply with 01 74 00, Construction and Demolition Debris Recovery Plan.

3.3 CONSTRUCTION VENTILATION AND PRECONDITIONING

- A. Contractor shall execute the approved Construction IAQ Management Plan as specified in this section.
- B. During construction, Contractor shall meet or exceed the minimum requirements of the SMACNA IAQ Guideline for Occupied Buildings under Construction - 1995.

- C. Temporary Construction Ventilation: Contractor shall maintain sufficient temporary ventilation of areas where materials are being used that emit VOC's, and maintain ventilation continuously during installation, and until emissions dissipate after installation. If continuous ventilation is not possible via the building's HVAC system(s) then ventilation shall be supplied via open windows and temporary fans, sufficient to provide no less than three air changes per hour. Prime Trade Contractor shall ensure that:
1. The period after installation shall be sufficient to dissipate odors and elevated concentrations of VOCs. Where no specific period is stated in these Specifications, a time period of 72 hours shall be used.
 2. All areas shall be vented directly to outside. Areas shall not be vented to other enclosed areas.
- D. During dust producing activities (e.g., drywall installation and finishing) ventilation system shall be off, and openings in supply and return HVAC system shall be protected from dust infiltration. Provide temporary ventilation as required.
- E. Preconditioning: Prior to installation, Contractor shall allow products which have odors and VOC emissions to off-gas in dry, well-ventilated space outside of building for 14 calendar days, in order to allow for reasonable dissipation of odors and emissions.

3.4 PROTECTION

- A. Protect stored on-site and installed absorptive materials from moisture damage. Where absorptive materials not intended for wet applications are exposed to moisture, immediately remove from Site and dispose of properly.
- B. Protect installed materials using methods that do not support growth of molds and mildews.
1. Immediately remove from Site and properly dispose of materials showing signs of mold and signs of mildew, including materials with moisture stains.

END OF SECTION 01 81 13

SPECIFICATION ISSUE LOG

Revision	Date
0	July 30, 2010
1	August 10, 2010
2	September 30, 2010