

Transbay Transit Center San Francisco, CA CM/GC Contract No. 08-04-CMGC-000 Project No. 30100

BID PACKAGE TG12.1 ADDENDUM #3

DATE: 06/11/2015

TO: All Qualified Bidders

FROM: Webcor/Obayashi Joint Venture

BID DUE DATE: June 16, 2015 at 2:00 p.m.

COMMUNICATION WITH WEBCOR/OBAYASHI JOINT VENTURE

At no time during the bid process (defined as the time between issuance of the IFB until award of Subcontract to Trade Subcontractor) shall Bidders contact any person(s) or staff of the TJPA, TJPA Program Management/ Program Controls (PMPC) team, Webcor/Obayashi Joint Venture, CM Oversight (CMO), or other TJPA Consultants regarding the IFB. The only contact is for submission of questions using the contact directions as described in Exhibit A, Section III. "Communication with Webcor Obayashi Joint Venture".

The QBD and Pre-bid Request for Substitution submission time frame expired on **Thursday**, **June 4**, **2015 at 2:00 p.m.**

Bids are due Tuesday June 16, 2015 at 2:00 p.m.

Reference the Project Bidding Manual, Section III.B.1 regarding document availability and how to obtain the documents.

MODIFIED DOCUMENTS PER ADDENDUM #3

The items listed below make up the TG12.1 – Civil/Sitework at Grade Ground Level Landscaping Construction Bid Package Addendum #3. This Addendum shall supersede all previously issued Bidding Documents. All other conditions and requirements remain unchanged.

- a. Exhibit A Trade Subcontractor Bid Package Manual and Forms Subcontracts #301001201, Addendum #3, dated 06/11/2015.
 - 1) Revised Section VII. "Contract Document List"
- b. Exhibit I Schedule, dated 06/09/2015
- c. Exhibit M Q&A Log, dated 06/09/2015
- d. Questions on Bid Documents (QBD) Responses
 - 1) The attached IFB Questions and Answers are incorporated into the Bid Documents by this Addendum.

END OF ADDENDUM #3

TG12.1 – Civil/Sitework at Grade/Ground Level Landscaping

Questions are numbered in the order received. Numbers missing in the sequence will be answered in a future set.

Question No.	Submission Date	Drawing No.	Document/ Spec. No.	Question	Response
TG12.1- 004	5/7/2015		01 15 70	Is the Trade Subcontractor responsible for developing and submitting traffic control plans stamped by a registered engineer, as referenced in 01 15 70 1.4B, or does W-O have sufficient plans that this Trade Subcontractor can use?	The TG12.1 Trade Subcontractor is responsible for the submittal of Traffic Control Plans stamped by a registered engineer.
TG12.1- 005	5/7/2015	L1-2302, L1-2303, L1-2310		Please confirm that the "Grey Concrete over Baserock" shown to be placed in the Ramp area (Zone 10), as referenced on Scoping Drawings L1-2302 & L1-2303, and L1-2310, is NOT part of this project's scope.	Confirmed; Grey Concrete over Baserock as referenced is NOT part of this Trade Subcontractor's scope of work.
TG12.1- 008	5/7/2015			Few thicknesses are provided for the Geosynthetic Fill to be placed between the TOTB and Pedestrian Paving. Please provide guidance.	For landscape pedestrian paving please refer to Specification Section 32 34 10 Geosynthetic Fill.
TG12.1- 010	5/7/2015	L1-0002		Sheet L1-0002 (3rd column, about mid-way down) notes a cross-hatch legend that signifies where steel plate is required in lieu of the protection slab at areas of insufficient depth/thickness. Please confirm that this is to be furnished and installed by others.	Confirmed; steel plates are supplied and installed by others.
TG12.1- 011	5/7/2015	ES-2107 - ES- 2110		Which duct banks do the TG12.1 have to provide Exc/Backfill/Shoring for? The "Scoping Drawings" provided (ES-2107 thru ES-2110) are unclear (red lines don't usually point to specific duct banks).	The electrical duct banks run along Minna, First, and then again on Natoma streets; the TG12.1 Trade Subcontractor will provide all excavation, trench shoring (if necessary), backfill, and compaction.
TG12.1- 015	5/7/2015			Please confirm that the top of the train box will be constructed prior to the time that the TG12.1 Trade Subcontractor begins removal of the CDSM Shoring Wall.	Confirmed; the structural concrete will be installed prior to removal of the CDSM walls.
TG12.1- 016	5/7/2015			Assuming that the train box top is done prior to removal of the CDSM Shoring in the area, will the TG12.1 Trade Subcontractor be allowed to operate equipment on top of the train box during the CDSM Shoring Wall removal? If so, what are the conditions of doing so (i.e. weight limits, locations, mats, protection, etc.)?	The TG12.1 Trade Subcontractor shall provide a list of equipment, including weights along with load distribution, for review and approval to the Structural Engineer. Design strength of the train box can be found on sheet S-1003.

TG12.1- 017	5/7/2015	01 15 70	The Traffic Lane requirements table 01 15 70-2 states that Minna and Natoma streets have to have a WB 11' lane open "At All Times". Please clarify how the road sections are to be constructed when there is insufficient width/room to build the permanent work.	The TG12.1 Trade Subcontractor shall coordinate this work with WOJV and SFMTA; streets are to be constructed with minimal disruption to the public.
TG12.1- 019	5/13/2015	section 1.8 02 41 02	Specification Section 02 41 02, Demolition of Shoring Wall – Below Grade Package, Paragraph 1.8, states that the contractor shall review records of the shoring wall pretrenching from TG0300; we did not find this information in the Contract Documents. Please promptly provide this information.	The TG03.0 Trade Subcontractor was required to perform pretrenching prior to installation of the CDSM shoring wall; this work was limited to a 5'-0" wide by 8'-0" deep trench centered on the CDSM shoring wall.
TG12.1- 020	5/13/2015	Exhibit A Scope of Work	The Package Scope Summary notes that this Trade Package includes the following electrical work: (a) relocation of pull boxes and street lights; (b) street level light poles and lights; and (c) traffic and pedestrian signals. Plan Sheets C1-7001 thru C1-7007 ("Signing and Striping") provides limited information on "variable loops," and Sheets C1-8001 thru C1- 8005 ("Traffic Signal Plans") provide information on the Signals. But we can't find information regarding the street lighting work required. Also, no Div. 26 ("Electrical") sections were included in the "Primary Specifications" listed in Exhibit A. Please provide direction.	Exhibit A is to be used as a guide for narrowing the scope of work that is shown on the construction drawings and specifications and is not intended to be used as an absolute listing of duties. Division 26 is part of the complete set of documents and can be obtained through the TJPA website. Furthermore, additional information for street lights, signals, and controls may be included in additional construction drawings; Electrical, Utilities, Telecom, Architectural, etc. The TG12.1 Trade Subcontractor is responsible for reviewing all construction drawings and specification sections in order to provide a complete bid.

TG12.1 – Civil/Sitework at Grade/Ground Level Landscaping

Questions are numbered in the order received. Numbers missing in the sequence either have been answered in a previous response set or will be answered in a future set.

Question	Submission	Drawing	Document/	ument/ Question Response	Response
No.	Date	No.	Spec. No.		
TG12.1- 001	5/7/2015	C1- 2000s, C1- 4000s, C1- 5000s		Plan Sheets C1-200x, C1-400x, C1-500x (x = various numbers) graphically show curbs without gutter sections. This is consistent with Note 4 on the various C1-500x sheets, which refers to 6" Curb per SFDPW Std #87169. But the Paving Plans (Sheets C1-600x) graphically indicate that the curb adjacent to the typical street buildup sections (C1-6008) is a curb and gutter section, as depicted on SFDPW Std #87170, rather than curb-only. Please clarify.	Curb and gutter to be provided as shown graphically in the Paving Plans (Sheets C1- 600x). Refer to SFDPW Std #87170 for curb and gutter sections.
TG12.1- 006	5/7/2015	C1-6008 & C1- 5001-C1- 5005		Plan Sheet C1-6008 shows that ¼" steel plate is to be used in lieu of 6" of sub-base when 6" isn't available. How do we determine where the steel plate will be required? Plan Sheets C1-5001 thru C1-5005 indicate that much of the street area over the box is very close to this 6" minimum, and the cost differential between steel and sub-base is significant.	For clarification of steel protection plate locations, please refer to attached Civil Sketches QBD006-01 through QBD006-05. Steel plate is not part of TG12.1 scope.
TG12.1- 007	5/7/2015	C1-6008 & C1- 5001-C1- 5005		In areas referenced in drawings that require steel plate, what (if anything) is placed between the steel plate and concrete base?	No additional construction material is required to be placed between the steel plate and the concrete base.
TG12.1- 009	5/7/2015			Is special fill (i.e. lightweight) required for the permanent street fills between the TOTB and pavement sections at First, Fremont, and Beale streets?	There is no special fill/lightweight fill required along First, Fremont, and Beale streets between TOTB and the pavement section; standard fill is acceptable.
TG12.1- 012	5/7/2015	C1-6008, C1-5002		The permanent roadway sections at First, Fremont, and Beale streets (per C1-6008) include 2" of AC over variable thickness concrete base and 6" of sub-base, over an undefined material under the sub-base. Also, Page 10 of 13 (in TG12.1 document) includes a note to "include section of structural concrete per detail C1-5002" There is no structural concrete noted on C1- 5002, or the noted/referenced C1-6008 sections. Should this be "concrete base"? This section does not match the sections placed in the Bridge Removal Plans.	The "TG12.1 First and Fremont St. Removal" document is for reference only. The note to "include section of structural concrete per detail C1-5002" on Pg. 10 is meant to refer to the "concrete base" callout as shown on C1- 6008.

TG12.1- 014	5/7/2015			What base and/or sub-base material is to be placed under the Bus Pad Concrete in the Bus Plaza? Almost all other paved areas that are constructed on the Train Box are built on Geosynthetic material. Is the same required here?	In the Bus Plaza, follow C1-6008, Detail 6, Note 1. "Extend Concrete Pavement to Top of Building Insulation"; therefore, no sub-base is used as concrete extends to top of train box.
TG12.1- 021	5/13/2015		Sections 2.3 and 2.4 03 33 12	Technical Specification Section 03 33 12, Landscape Cast-in-Place Concrete, Paragraphs 2.3.D and 2.4.A.2, cite specifications for Micro-reinforcement in the concrete (as well as reinforcing bars and welded wire fabric). The plans show reinforcing bars but not mesh, nor is micro-reinforcement noted. Is micro- reinforcement required in the paving concrete?	Yes, micro-reinforcement is required in the concrete paving.
TG12.1- 022	5/13/2015	L1-7310 Detail 10, L1- 2302 - L1-2307		Plan Sheet L1-7310 shows a 9" transition slab beneath the Pedestrian or Vehicle Paving at the "On-Building" and "On-Grade" junction. These section cuts are only shown on Sheets L1-2302 and L1-2303 (west end and portion of SW side). There are similar situations elsewhere (i.e. north side and east end), are these transition slabs required here also? If so, please provide limits/dimensions.	No other transition slabs are required except the locations indicated on the drawings.
TG12.1- 023	5/13/2015	L1-2302 thru L1- 2307		The Legend on Plan Sheet L-0002 includes several symbols for "Expansion Joints" (including a "non-doweled expansion joint" and "Doweled Cold Joint." There's only about 20 doweled cold joints shown on Sheets L1- 2302 thru L1-2307, and no non- doweled expansion joints. It appears that all expansion joints are doweled, please confirm.	Non-doweled expansion joints are typically at building edge. Please refer to material plans.
TG12.1- 024	5/13/2015		Section 3.12 03 33 12	Technical Specification Section 03 33 12, Landscape Cast-in-Place Concrete, Paragraph 3.12, notes that Staining is required. (1) The concrete has integral color: please confirm that integral color AND staining is required; (2) If required, Paragraphs 2.3 (Materials) nor 3.12 (Staining) note what material is required, please provide; (3) 3.12 states that 3 coats are to be applied at the coverage rate recommended by the manufacturer. Is each coat to be at that rate, or just the total of the 3 coats?	Staining is not required. Please refer to Specification Section 03 33 12, Schedules 3.16 for concrete colors and finishes.

TG12.1- 025	5/18/2015			The columns/shafts for the temporary bridges to be removed are nominally 48" diameter, but due to required construction methods (drilled shaft) they are typically larger. What is the maximum diameter of the columns to be removed? Will the TG12.1 Trade Subcontractor be required to perform any chipping to allow removal of these columns, as detailed in the Temporary Bridges Removal Narrative? If so, how much?	CIDH drilled piers vary in diameter as they were installed without sleeves; chipping will be necessary if the TG12.1 Trade Subcontractor chooses to cut and remove through the blockout. A jobsite visit is strongly recommended to assess the extent of the chipping as each of the CIDH piers vary in size. See attached submittals for reference.
TG12.1- 026	5/18/2015	L1-2330 - L1- 2332, L1-2302 - L1- 2304		Plan Sheets L1-2330 through L1-2332 show ventilation manholes and ventilation grates within lift out lids, with notes to "SCD" (See Civil Drawings). No details are provided in the Civil or Landscape Drawings. Similarly, there are "Fuel Intakes" (per Legend) shown on Plan Sheets L1-2302 & L1-2304 with the note "SED" (see Electrical Drawings). No details were found. Please provide details for all three of these features as they relate to the work of TG12.1.	The reference notes in drawings have been amended to state "SAD." Refer to architectural details 9/A1-8717 and 1 & 4/A1- 9239 for these elements. See attached sketches SKLA-432.1 through SKLA-432.4 for clarification.
TG12.1- 027	5/18/2015		CDSM Cutoff Procedure	The Supplemental Documents list a "CDSM Cutoff Narrative." This file isn't in the referenced BOX link, but upon our prior request we were sent a 7-page document, titled "CDSM Cutoff Procedure." This document includes a narrative and sketches, and noted that others (not TG12.1) will have prepared the beam for future cutoff by providing a beveled 0" to 6" (at the building- side flange) cutout extending 3" minimum into the flange to facilitate its future cutoff. A recent site visit indicates at least some of these cuts are not prepared as noted, with only a thin (<1") cut made at the flange, not the 6" cutout shown. It is impossible to see most of the cuts as they have been patched over. Please confirm what condition the existing shoring beams will be in prior to TG12.1 starting their removals.	The TG07.2 Trade Subcontractor is responsible for the following (from TG07.2 Exhibit A): Cut entirely through the interior flange and 2" into the web of steel soldier pile beams with a cutting torch around the entire CDSM wall perimeter. Grind smooth the edge of the cut surface as necessary to receive WPM-1 waterproofing system, Grace Preprufe. Assume that the cutting of the pile beams will occur between 2' and 8' below the finish grade surface; the precise elevations for the cutting of the pile beams will be determined by future design requirements. The field conditions may differ from what was shown in the TG07.2 Exhibit A/ CDSM Cutoff Procedure.
TG12.1- 028	5/18/2015		CDSM Shoring Wall Removal, Exhibit A	There is currently dewatering pipe, temporary electrical facilities, and other obstructions within or immediately adjacent to the shoring wall alignment. Will others remove these temporary obstructions (excluding the temporary K-Rail and perimeter fencing) prior to the start of the TG12.1 CDSM Shoring Wall Removal operations?	All electrical, dewatering, and miscellaneous conduit and/or PVC lines will be removed by other contractors prior to the TG12.1 Trade Subcontractor's scheduled activities. The removal will be coordinated by Webcor/Obayashi Joint Venture field superintendent.

TG12.1- 029	5/18/2015		No Information has been provided on the existing Beale Street Temporary Bridge. Please provide information regarding this structure and its required removal phasing, or confirm that the work required is accurately depicted in the documents already available.	The removal of the Beale Street Bridge will follow a similar process as First and Fremont Street. See attached submittal for reference.
TG12.1- 030	5/18/2015	C1-5002 thru C1- 5004	What fill material(s) are required under and outside of the "typical street buildup" section (C1-6008) over the Train Box at First, Fremont and Beale streets? We can't find where this is shown in the plans or an applicable specification. The Temporary Bridge Removal scenarios provided show recycled AB, CDF, "structural fill per specifications" and/or extruded polystyrene, but it's unclear whether these are just temporary sections and have to be replaced when final construction is complete, and if so, with what? Please clarify.	In the permanent condition under the "typical street buildup," there is no special fill/lightweight fill required along First, Fremont, and Beale streets between TOTB and the pavement section. Backfill (standard fill) shall be used.
TG12.1- 032	5/18/2015		Trade Subcontractor requests a two week bid extension to 6/23. Due to the complexity of the project, specifically regarding the temporary bridges removal, and Trade Subcontractor's focus on other recent Transbay Transit Center trade package bids, more time is needed to competently and competitively bid this package. Thank you.	See Addendum 2 for revised Package Timeline.





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Based on Sheet C1-6001



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Based on Sheet C1-6002



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<u>NOTES</u> FOR GENERAL NOTES SEE SHEET C-0005. FOR LEGEND SEE SHEET C-0010. FOR ABBREVIATIONS SEE SHEET C-0015. F C1-5001 FREMONT STREET SECTION (TYPE) CONCRETE PAVING NATHER STEEL PLATE-USED JOINT DETAIL IN TRAIN BOX TRANSITION. PER SECTION 1, C1-6008.









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PLAN SCALE: 1"=10'









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JEGEN	D	LEGEND		LEGEND	LEGEND		
GENERAL ALL SHEETS	GENERAL AL	L SHEETS GROUND LEVEL PLANS	GROUND LEVEL MA	GROUND LEVEL MATERIAL PLANS		GROUND LEVEL GRADING AND DRAINAGE PLANS	
MATCHLINE MATCHLINE		RADIAL PLANTERS - PRECASI CONCRETE - 15 GAL WOODWARDIA FIMBRIATA - REFER TO 1/L1-7302 FOR PLANTING LAYOUT		VEHICULAR CONCRETE PAVING ON—STRUCTURE WITH SAW CUT CONCRETE PAVING JOINTS ————FINISH B ————FINISH A	FS 00.00	PROPOSED FINISHED SURFACE ELEVATION	
section/ detail				PEDESTRIAN CONCRETE PAVING ON-STRUCTURE WITH SAW CUT CONCRETE PAVING JOINTS 	TC 00.00	PROPOSED TOP OF CURB ELEVATION	
el se de se	A	– SAW BOTTOM FLAT – REFER TO SIGNAGE DRAWINGS FOR TEXT ON BOULDER		WITH SAW CUT CONCRETE PAVING JOINTS ————————————————————————————————————	<tc 00.00=""> <fl 00.00=""></fl></tc>	- SCD FLOW LINE - SCD	
REVISION CLOUD AND DELTA		BIKE RACK	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	PEDESTRIAN CONCRETE PAVING ON-GRADE WITH SAW CUT CONCRETE PAVING JOINTS FINISH B FINISH A	(00.00)	EXISTING FINISHED SURFACE ELEVATION	
enlargement	B1	BOLLARD TYPE 1 – STATIONARY		AGGREGATE MULCH	RIM 00.00	PROPOSED RIM ELEVATION	
		BOLLARD TYPE 1A – STATIONARY – SPECIAL FOOTING AT CURB RAMP			TDHP 00.00	TRENCH DRAIN HIGH POINT ELEVATION	
Here Design with outside the second stress in the second stress	B1B	BOLLARD TYPE 1B — STATIONARY — SPECIAL FOOTING AT MUNI OCS POLE		WITH DECORATIVE CONCRETE PAVING JOINTS	TDLP 00.00	TRENCH DRAIN LOW POINT ELEVATION	
* to BREAKLINE	B ₁ C	BOLLARD TYPE 1C – STATIONARY – SPECIAL FOOTING AT CURB RAMP AND MUNI OCS POLE		FINISH B	INV 00.00	INVERT ELEVATION	
sheet is	B2	BOLLARD TYPE 2 – STATIONARY		SPECIALTY CONCRETE PAVING AT SHAW ALLEY	<u>6</u> "	PIPE DIAMETER	
SLOPE RATIO	B2A •	BOLLARD TYPE 2A – STATIONARY – SPECIAL FOOTING AT CURB RAMP				GRADE BREAK	
ALIGN	B2B B2C	BOLLARD TYPE 2B – STATIONARY – SPECIAL FOOTING AT MUNI OCS POLE BOLLARD TYPE 2C		CONCRETE PAVING AT AREAS OF INSUFFICIENT DEPTH TO ACCOMMODATE FULL PAVING PROFILE – OMIT PROTECTION SLAB AND REPLACE WITH STEEL PLATE – REFER TO ARCHITECTURE DRAWINGS FOR TRAIN BOX	1.14%	FLUSH	
CENTERLINE	B3	- STATIONARY - SPECIAL FOOTING AT CURB RAMP AND MUNI OCS POLE BOLLARD TYPE 3 - REMOVABLE		LID, SIMILAR TO 2/A1-8710 CRACK CONTROL JOINT		AREA DRAIN IN PAVING	
	B3A	BOLLARD TYPE 3A – REMOVABLE – SPECIAL FOOTING AT UTILITY VAULTS		EXPANSION JOINT	۲	AREA DRAIN IN PLANTING	
AREA OF ASSISTED RESCUE	B4	BOLLARD TYPE 4 – STATIONARY		KEYED JOINT		CATCH BASIN WITH AREA DRAIN GRATE	
PEDESTRIAN PUSH BUTTON -SAD	BOL -4	BOL-4 - SAD		SAW CUT CRACK CONTROL JOINT		CLEAN-OUT	
FIRE DEPARTMENT CONNECTION - SPD	DN BOL -5	BOL-5 - SAD BOLLARD		SAW CUT EXPANSION JOINT EXPANSION JOINT - NON DOWEL		CATCH BASIN WITH CLEAN OUT	
LIMIT OF WORK LINE		- RETRACTABLE - SAD		DOWELED COLD JOINT		CATCH BASIN WITH SAND FILTER	
CURB RAMP		HOSE BIB		RADIAL PLANTERS WITH PLANTING SOILS		SOLID PIPE	
		RETRACTABLE DISPENSER		AND 2" OF MULCH		PERFORATED PIPE	
		- SED IN-GRADE FLUSH UPLIGHT - SLD SED				SOLID PIPE - SCD	
RFI TG12.1-026 Incorrect		FIRE DEPARTMENT CONNECTION - SPD		ILLUMINATED PAVER AT SHAW ALLEY ———————————————————————————————————		POINT OF CONNECTION - SPD	
e tches \SKLA-432		FRESH AIR INLET -SED		ILLUMINATED BENCH AT SHAW ALLEY ————METAL		POINT OF CONNECTION - SCD	
NCP/801/Field/Field Sk		FUEL INTAKE -SAD		CONCRETE CLOSURE WALL AT STAIR 201 —SAD			
v 2015 - 5:57pm Z ¹	FARA	FIRE ALARM REMOTE ANNUCIATOR —SED					
ystal May 26		STREET SIGNAGE -SCD					

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FIRST, FREMONT AND BEALE STREET TEMPORARY BRIDGE STRUCTURAL DESIGN TRANSBAY TRANSIT CENTER PROGRAM TRANSBAY TRANSIT CENTER, SAN FRANCISCO, CA



GENERAL NOTES	GENERAL NOTES	GENERAL NOTES	GENERAL NOTES	•
PART 1 - GENERAL	C.3. PLACE REINFORCEMENT CASE IN THE HOLE. USE RIGGING TO SECURE REINFORCEMENT CAGE TO CASING DURING CONCRETE PLACEMENT.	E.3. METAL STUD & TRACK: ASTM A653, MIN. G40 COATING		13
1.1 SCOPE OF WORK A. IN ORDER TO ALLOW CONTINUATION OF TRAFFIC ACROSS THE	C.4. PLACE CONCRETE BY TREMIE METHOD FROM TIP ELEVATION TO THE TRANSITION CONSTRUCTION JOINT AS INDICATED ON THE PLANS AS THE	F. PLAIN ELASTOMERIC BEARING		Translaw Transit Control
CONSTRUCTION SITE EXCAVATION AT FIRST, FREMONT, AND BEALE STREETS FOR A TOTAL OF THREE (3) BRIDGES, BRIDGES AT FIGURE DESCRIPTION ADDRESS AT	CONCRETE IS PLACED SLURRY IS TO BE PUMPED BACK INTO SLURRY TANKS.	F.1. THE MATERIAL SPECIFICATIONS SHALL MEET ALL REQUIREMENTS OF AASHTO M251.		TRANSBAY JOINT POWERS AUTHORITY
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.	C.5. THE RIGGING IS TO REMAIN IN PLACE UNTIL THE CONCRETE SETS. C.6. REMOVE RIGGING.	F.2. PLAIN ELASTOMERIC BEARINGS SHALL CONFORM TO SECTION 51-1.12H(1) OF CALTRANS STANDARD SPECIFICATIONS.		Balfour Beatty
B. RELATED WORK NOT INCLUDED IN THIS PACKAGES:	C.7. INSTALL THE CONNECTION ELEMENTS AT THE TOP OF BRIDGE COLUMN PILE	F.3. SHEET PTFE MAY CONTAIN DIMPLES TO ACT AS RESERVOIRS FOR LUBRICANT. THEIR DIAMETER SHALL NOT EXCEED 0.32" AT THE		Infrastructure Inc.
B.1. CONCRETE BASEMENT WALL,	C.8. PREPARE THE CONSTRUCTION JOINT.	SURFACE OF THE PITE AND THEIR DEPTH SHALL BE NOT LESS THAN 0.08" AND NOT MORE THAN HALF THE THICKNESS OF THE PITE. THE RESERVOIRS SHALL BE UNFORMLY DISTRIBUTED OVER THE SUPPACE		IPIRS A inc
B.2. SHORING OR BRACING FOR EXISTING BUILDINGS, B 3. TRESTLES	C.9. POUR CONCRETE TO THE DESIGNED TOP OF PILE ELEVATION.	AREA AND SHALL COVER MORE THAN 20% BUT LESS THAN 30% OF IT. LUBRICANT SHALL BE SILICONE GREASE WHICH SATISFIES MILITARY		STATISTICS AND AND AND A
B.4. STRUT REMOVAL AND REBRACING	2.2 MATERIALS	SPECIFICATION MIL-S-8660.		
B.5. PLANNED CONSTRUCTION, OR EXCAVATION OTHER THAN NOTED ABOVE.	A. CONCRETE AT DRILLED SHAFTS AND ABUTMENTS	G. POLYETHYLENE VAPOR BARRIER: ASIM E1745 CLASSES A, B, & C		Langelana and and and
B.6. BRIDGE TRAFFIC: SIGNAL & SIGNAGE	A.1. PORTLAND CEMENT ASTM C-150 TYPE "I" OR TYPE "IA"	PART 3 - 0/A PROGRAM		
B.7. BRIDGE LIGHTING B.8. BRIDGE MUNLOCS	A.2.NORMAL WEIGHT CONCRETE = 3,500 PSI AT 28 DAYS, PROPORTIONED WITH A MAXIMUM WATER CEMENT RATIO, W/C=0.50. ALL CONCRETE SHALL BE BATCHED DELIVERED AND PLACED IN ACCORDANCE WITH	3.1. SPECIAL INSPECTION, INSPECTION PROCEDURES AND SITE OBSERVATION		
B.9. UTILITY SUPPORT DETAILS	ACI 301 AND ASTM C94.	A. SPECIAL INSPECTIONS		
B.10. TRAFFIC CONTROL PLANS	A.3.SUBMIT MIX DESIGN PREPARED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA FOR ENGINEER'S APPROVAL.	A.1. THE SPECIAL INSPECTORS MUST BE CERTIFIED BY TJPA TO PERFORM		Key Map 🔨 N
C. RELATED DOCUMENT:	B. STRUCTURAL LIGHTWEIGHT CONCRETE AT PEDESTRIAN WALK	THE TYPE OF INSPECTION SPECIFIED.		66666263636
C.1. "FINAL GEOTECHNICAL DATA REPORT" PREPARED BY ARUP, DATED FEBRUARY 2010	B.1.PORTLAND CEMENT ASTM C-150 TYPE "I" OR TYPE "IA	PERMANENT AND TEMPORARY WORK ACCORDING TO THE CALIFORNIA BUILDING CODE (CBC) CHAPTER 17 INCLUDING THE SAN FRANCISCO		7
C.2. CONTRACT 08-04-CMGC-000 DWG'S, REV. 0 DATED 12-10-10.	B.2.AGGREGATE: EXPANDED SHALE, CLAY, OR SLATE (ESCS) LIGHTWEIGHT AGGREGATE PRODUCED BY THE ROTARY KILN METHOD SHALL MEET	AMENDMENTS, AND THE PROJECT SPECIFICATIONS. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK FOR CONFORMANCE WITH THE CONFORMATION OF THE SPECIAL INSPECTOR SHALL SEED.		L L M
C.3. STRUCTURAL COMBINED.DWG - DATED 9/01/10	ASTM C330.	REPORTS TO THE OWNER, ARCHITECT, ENGINEER, BUILDING OFFICIAL AND THE CONTRACTOR IN A TIMELY MANNER. ALL DISCREPANCIES		
C.4. XSURVEY.DWG - DATED $7/27/2010$	B.3.GROUND GRANULATED BLAST-FURNACE SLAG SHALL MEET ASTM C989.	SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION, WHEN WORK IS DONE TO THE SATISFACTION OF THE INSPECTOR THEORY AND THE CONCEAL INSPECTOR CHAIN OF THE		SUBARENT REENT MITICA BEAT
C.6. RESPONSE TO RFI T-0073.1 DATED APR. 14, 2011: BSE - REQUEST FOR	B.4.MATERIALS SHALL BE PROPORTIONED TO PRODUCE CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH = 3,000 PSI IN 28 DAYS.	SIGNED REPORT STATING THAT, TO THE BEST OF THEIR KNOWLEDGE, THE WORK WAS COMPETED IN CONFORMANCE WITH THE PLANS,	Mean Horizontal Equal Hazard Spectra East End of Train Box (475 Return Period)	DNS DNS DNS DNS DID CCON AMED
RESPONSE SPECTRA C.7. RESPONSE TO RELT-0209.3 DATED SEP. 28. 2011: BSE - ABUTMENT	B.5.DENSITY: MATERIALS SHALL BE PROPORTIONED TO PRODUCE CONCRETE WITH A CALCULATED EQUILIBRIUM DENSITY OF 110 PCF ±	SPECIFICATIONS, AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CBC.	FINAL STAGE - TEMPORARY BRIDGE DESIGN	VISIONE NUSE NORE
BEARING ON CDSM WALL - FOLLOW-UP	3 PCF AS DETERMINED BY ASTM C567-00, SECTION 9.2	A.3.ITEMS REQUIRING SPECIAL INSPECTIONS;	3. ^	REVIE STR
C.8. RESPONSE TO RFI T-0219 DATED SEP. 14, 2011: BSE – ABUTMENTS AT TEMPORARY BRIDGES	C. STRUCTURAL STEEL SHALL BE NEW EXCEPT THE W14 GIRDERS AND CAP BEAM FOR THE END SPANS AND IT SHALL MEET OR EXCEEDS THE EQUIDMENT PEOLIDERET	A.3.1. INSPECTION OF MILL CERTIFICATES OR LAB RESULTS FOR ALL COMPONENTS OF THE TEMPORARY BRIDGES.	208	75% 1000 BRI BRI
C.9. RESPONSE TO RFI T-0222 DATED SEP. 01, 2011: BSE - TEMPORARY BRIDGE PIER LOCATIONS	C.1.STEEL SHAPES: ASTM A992, GRADE 50 Fy = 50 KSI	A.3.2. AWS PREQUALIFIED WELDING PROCEDURES, OR		100%
C.10. RESPONSE TO RFI T-0223 DATED SEP. 27, 2011: BSE - TEMPORARY BRIDGE PEDESTRIAN BARRIER HEIGHT	C.2.STEEL REINFORCEMENT: ASTM A615, GRADE 60 Fy = 60 KSI	DOCUMENTATION OF QUALIFICATION PERFORMED FOR PROJECT SPECIFIC WELDING PROCEDURES IN ACCORDANCE WITH AWS D1 5. REQUIREMENTS		2222222222
C.11. RESPONSE TO RFI T-0228 DATED SEP. 27, 2011: BSE - 6-INCH	C.3.STEEL PLATES: ASTM A572, GRADE 50 Fy = 50 KSI	A.3.3. TESTING OF STRUCTURAL WELDS		00/00/00/00/00/00/00/00/00/00/00/00/00/
C.12. PROJECT SPECIFICATION ADDENDUM NO. 3 SECTION 01 53 13 -	C.4.STEEL ANGLES: ASTM A36, GRADE 36 Fy= 36 KSI, U.N.O.	A.3.4. INSTALLATION OF ALL A490-X BOLTS FASTENERS (UNLESS	ğ.	2-NN400N00
TEMPORARY BRIDGES DATED SEPTEMBER 23, 2010	C.5.STEEL PIPE SECTIONS FOR CONNECTION BETWEEN CIDH PILE AND CAP BEAM: ANSI: B36.1/ASTM A53. FY = 35. KSI.	"TENSION CONTROLS" BOLTS ARE USED) INCLUDING INSPECTION AND ACCEPTANCE OF BOLT HOLES PRIOR TO INSTALLATION OF EXCEPTION OF TO VISION OF TO VISION	0 0.5 1 1.5 2 2.5 3 3.5 4	
2011: BSE - REQUEST FOR STRUCTURE SECTION DRAWINGS	C.6.STEEL BOLTS: ASTM A490-X BOLTS, MIN, TENSILE STRENGTH = 150	PROPER PREPARATION OF HOLES, SPECIALLY NO OVERSIZED HOLES OR FLAME CUTTING HAS BEEN USED TO INCREASE	PERIOD (SEC)	R/R
1.2 CODES AND STANDARDS	KSI	TOLERANCES TO ACHIEVE FIELD FIT.		BRII
MEETING DESIGN LOADING CRITERIA COMPULANT WITH THE CURRENT AMERICAN ASSOCIATION OF STATE HIGHWAY AND	C.7.STANDARD MILD STEEL STUDS MANUFACTURED BY NELSON CONFORM TO ASTM A108 SPECIFICATIONS FROM 1010 THROUGH 1020 MILD STEFL	A.3.5. VERIFICATION THAT EXCAVATIONS ARE EXTENDED TO THE PROPER DEPTH.		
TRANSPORTATION OFFICIALS (AASHTO) LRFD DESIGN SPECIFICATIONS, 4TH EDITION, AND CALTRANS AMENDMENTS.	C.8.WELDED WIRE REINFORCEMENT: ASTM A185, GRADE 65	A.3.6. PLACEMENT OF CONCRETE		
A.1. LIMIT STATE DESIGN	C.9.STRUCTURAL METAL DECK: ASTM A653 GR. 50, 4 🦨 DEEP, MAX	A.4. CONTRACTOR SHALL INSPECT BRIDGE PAVEMENT FOLLOWING USAGE FOR TRAVEL BY CONTRACTOR EQUIPMENT. ALL DAMAGE OR SURFACE		
A.1.1. STRENGTH I - DC+DW+HL-93 DESIGN VEHICLE W/ 33% IM	ALLOWABLE CLEAR SPAN BETWEEN GIRDER FLANGES FOR HL-93 & CALIFORNIA PERMIT TRUCK PT5 LOADING OF 57 INCHES AND FOR MANITAWOC 900 SEPIE 2 CRANE OF 26 INCHES DESIGNED IN	CORRECTED.		
A.1.2. STRENGTH II - DC+DW+CALFORNIA PERMIT TRUCK PTS W/ 25% IM A.1.3. SERVICEABILITY AND FATIGUE CHECKS	ACCORDANCE WITH SECTION 1.2 CODES AND STANDARDS. THE MANUFACTURER IS TO PROVIDE THE CERTIFICATION FOR THE	A.5. APPROACH TRANSITIONS FROM ROAD TO BRIDGES SHALL BE INSPECTED FREQUENTLY FOR SETTLEMENT. REPAIR WITH HOT ASPHALT		
A.1.4. CONSTRUCTION LOADS W/ MANITOWOC-999 SERIES 2 CRANE	REFERENCED LOADING.	CONCRETE PAVEMENT AS NECESSARY.		
LOADING WITHOUT ANY HOOK LOAD (WITHIN DESIGNATED AREAS ONLY)	UTIL WELDS SHALL BE MADE USING LOW-HYDROGEN ELECTRODES WITH MINIMUM TENSILE STRENGTH = 70 KSI. SEE SPECIFICATIONS FOR FURTHER REQUIREMENTS.	A.6. CUNITACION SHALL ON A MONITHY BASIS INSPECT AND REPAIR SURFACE IRREGULARITIES IN BRIDGE PAVEMENT OCCURRING IN VEHICLE AND PEDESTRIAN AREAS.		
A.2. SEISMIC DESIGN	C.11.IN COMPLIANCE TO WELDING PROCEDURES AND SPECIFICATIONS' THE	A.7. SPECIAL INSPECTION ITEMS OF METAL DECK	DRAWING INDEX	
A.2.1. BASED ON CALIFORNIA SEISMIC DESIGN CRITERIA (SDC), VERSION 1.6, NOVEMBER 2010	FOLLOWING PROCEDURES AND/OR PREPARATIONS ARE TO BE FOLLOWED:	PERIODIC INSPECTIONS SHALL BE PERFORMED TO CONFIRM THE PERFORMANCE OF THE METAL DECK WELDS WITH FATIGUE LOADING. THE INSPECTION SHALL CONFIRT OF DEPERTMENT MACHETIC	SH-0100 GENERAL NOTES AND DRAWING INDEX	
A.2.2. DISPLACEMENT DEMANDS ARE CALCULATED BASED ON STRUCTURAL FUNDAMENTAL PERIOD AND DESIGN	C.11.1. JOINT PREPARATIONS AND WELDING PROCEDURES INCLUDING BUT NOT LIMITED TO: WELDING PROCEDURES, REQUIRED	PARTICLE OR OTHER NON-DESTRUCTIVE METHOD AS APPROPRIATE FOR THE CONFIGURATION OF THE WELD AND THE DEGREE OF	SH-0101 LEGENDS, SYMBOLS AND ABBREVIATIONS	
ACCELERATION RESPONSE SPECTRA.	ROOT OPENINGS, ROOT FACE DIMENSIONS, GROOVE ANGLES, BACKING BARS, COPES, SURFACE ROUGHNESS VALUES, AND	PREPARATION, TO CONFIRM THAT FATIGUE CRACKS ARE NOT FORMING. ON THE TWO MOST HEAVILY TRAVELED BRIDGES, FIRST STREET AND FREMONT STREFT THEFE INSPECTIONS WITHIN THE RIGHT LANE	SH-1100 CONSTRUCTION SEQUENCE	
THE STRUCTURE AND DETERMINED BY PUSH-OVER ANALYSIS IN BOTH TRANSVERSE AND LONGITUDINAL DIFFETION	C.11.2. SEQUENCING AND PROCEDURES OF WELDING TO MINIMIZE	(ASSUMED TO BE THE MOST HEAVILY TRAVELED BY TRUCKS) SHALL BE IDENTIFIED FOR TESTING. THESE LOCATIONS SHALL BE AS	SH-2100 PARTIAL PLAN FIRST STREET BRIDGE	
B. STANDARD SPECIFICATIONS 2006, CALTRANS	THE EFFECT OF SHRINKAGE, RESIDUAL STRESSES, AND TO MAINTAIN ERECTION TOLERANCES.	1 DIRECTLY OVER & STEEL GIRDER DIRECTLY OVER THE RENT COD	SH-2101 PARTIAL PLAN FIRST STREET BRIDGE	
C. AMERICAN WELDING SOCIETY, AWS D1.5: 2010 BRIDGE WELDING CODE", 6TH	D. ASPHALT CONCRETE	2. DIRECTLY OVER A STEEL GIRDER, DIRECTLY OVER THE BENI CAP	SH-2102 PARTIAL PLAN FREMONT STREET BRIDGE	NC ISI
D. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) STEEL DESIGN MANUAL.	D.1.ASPHALT CONCRETE SHALL BE TYPE A UNLESS OTHERWISE SPECIFIED BY THE PROJECT SPECIFICATIONS.	3. IF THERE IS A LOCALIZED DETERIORATION OF ASPHALT, AT A SITE	SH-2104 PARTIAL PLAN BEALE STREET BRIDGE	
13TH EDITION	D.2. ASPHALT BINDER SHALL BE PERFORMANCE GRADE 64-10 PAVING	OF DETERIORATION. IF NO DETERIORATION, AT A RANDOM LOCATION.	SH-2105 PARTIAL PLAN BEALE STREET BRIDGE	
2.1 CONSTRUCTION PROCEDURE	ASPHALT CONFORMING TO SECTION 92, "ASPHALT", OF THE CALTRANS STANDARD SPECIFICATIONS UNLESS OTHERWISE SPECIFIED ON THE PROJECT SPECIFICATIONS.	AT EACH IDENTIFIED COGATION, AN AREA OF APPROXIMATELY 1-FOOT BY 2-FOOT 6-INCHES OF ASPHALT SHALL BE REMOVED TO EXPOSE AT LEAST THREE WELDS FOR TESTING. IF FATIGUE CRACKS ARE FOUND.	SH-3100 TEMPORARY BRIDGE KEY ELEVATION SH-3101 TRANSVERSE ELEVATION FIRST STREET BRIDGE	
A. CONSTRUCTION PROCEDURE FOR THE CDSM WALLS WILL BE	D.3.THE PERCENTAGE OF AIR VOIDS IN THE MIX DESIGN AT THE TARGET	ADDITIONAL TESTING MAY BE NECESSARY TO VERIFY THE EXTENT OF CRACKING AND POTENTIAL REPAIRS. THE FHA MANDATED TWO YEAR INSPECTION FERDINGLY IS ADDROBUNT FOR THIS CONTINUE	SH-3102 TRANSVERSE ELEVATION FREMONT STREET BRIDGE	0-0
B. CONSTRUCTION PROCEDURE FOR INSTALLATION OF TEMPORARY	ASPHALT BINDER CONTENT SHALL BE BETWEEN 3% AND 5%.	INCREASE INSPECTION FREQUENCY IF ACP DETERIORATION IS OBSERVED. TJPA AND/OR DESIGNATED REPRESENTATIVE CAN REQUEST INSPECTION	SH-3003 TRANSVERSE ELEVATION BEALE STREET BRIDGE	5
BRIDGES. B.1. SEE SHEET SH-1100 FOR THE CONSTRUCTION PROCEDURE FOR THE	D.4. AGGREGATE USED IN ASPHALT CONCRETE SHALL CONFORM TO THE GRADING REQUIREMENTS OF SECTION 39-2.02, "AGGREGATE", OF THE STANDARD SPECIFICATIONS	IF THERE IS EVIDENCE OF POTENTIAL DECK WELDING FAILURE.	SH-3104 BRIDGE DECKING SECTIONS GRID LINES & BENTS SH-3105 BRIDGE DECKING SECTIONS ABUTMENTS ON THE NORTH SIDF	31
SI STALLATION OF THE TEMPORARY BRIDGES.	D.5.AREA SUBJECT TO VEHICLE TRAVEL SHALL BE SURFACES PROVIDING A	B. SHE OBSERVATION B.1. DEDDESENTATIVE OF DB2A SHALL ABOUT THE SITE AT LEAST ONOF A	SH-3106 BRIDGE DECKING SECTIONS ABUTMENTS ON THE SOUTH SIDE	
 U.2. GEINERAL CUMITAGUIA STALL RESOLVE ANT CUMPLICI BEIWEEN BRIDGE COLUMN/PIER/BRACING, STRUTS AND STRUCTURAL COLUMNS/PILE CAPS PRIOR TO START OF CONSTRUCTION. 	MINIMUM STATIC COEFFICIENT OF FRICTION EQUAL TO 0.65.	WEEK DURING TEMPORARY BRIDGE INSTALLATION AND EXCAVATION OPERATIONS TO PROVIDE STRUCTURAL OBSERVATION IN ACCORDANCE	SH-4100 LONGITUDINAL SECTIONS FIRST & FREMONT STREET BRIDGES	PRINCIPAL ENGINEER -P. BARAR
C. PROCEDURE FOR INSTALLATION OF BRIDGE COLUMN PIERS	D.6. AREA SUBJECT TO PEDESTRIAN TRAVEL SHALL BE SURFACES PROVIDING A MINIMUM STATIC COEFFICIENT OF FRICTION EQUAL TO 0.65 WHERE SLOPES ARE LESS THAN OR FOLIAL TO 5% AND 0.80	WITH THE SAN FRANCISCO BUILDING CODE. PB&A SHALL ISSUE A WRITTEN REPORT FOR EACH SITE VISIT.	SH-4101 LONGIUDINAL SECTION BEALE STREET BRIDGE SH-5100 DETAILS	PROJECT MANAGER P. BARAR PROJECT ENGINEER 0. IIII
C.1. DRILL 48"# HOLE FROM GROUND LEVEL TO THE DESIGNED TIP ELEVATION. A 60"# X 20"-0" "STARTER" CASING IS USED IN THE UPPER 20 FT OF	WHERE SLOPES EXCEED 5%.	C. MONITORING	SH-5101 DETAILS	CONSISTED BY: Q. LIU P. BARAR CRAME BY: DATE
LOOSE MATERIAL, HOLE IS SUPPORTED BY DRILLING SLURRY (WATER AND POLYMER).	E. RAILING	C.1.PLACE A SURVEY MONITORING POINT ON THE BRIDGE DECK AT EACH BENT.	SH-5102 DETAILS	ML/ PS/ CP 05/02/2011 SOLD SEE FACUTY NO. REVISION AS NOTED E 140
C.2. VERIFY THE TIP ELEVATION MANUALLY ONCE IT IS REACHED.	E.1. IHRIE BEAM: AASHTU M18U, CLASS A, TYPE II (ZINC) COATING	C.2. OBTAIN THE READINGS WEEKLY DURING ACTIVE EXCAVATION. KEEP	SH-5104 DETAILS	SHEET NUMBER SEQUENCE NUMBER
	E.Z. GARRIAGE DULIS: ASIM ADU/ GRADE A, MIN. TENSILE STRENGTH = 60 KSI	MONITORING UNTIL THE COMPLETION OF THE CONCOURSE LEVEL SLAB.	SH-5105 DETAILS	SH-0100 of

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LEGENDS AND SYMBOLS	LEGENDS AND SYMBOLS	LEGENDS AND SYMBOLS	ABREVIATIONS	•
IGGNO- IGGNO-	LEGEND 70 TO OT CLUB 70 FANX OF WALK 80 FANX OF WALK 90 FREE PT WIREE 11 THEE PT WIREE 12 THEE PT WIREE 13 THEE PT WIREE 14 CONCORTER PANTER BOX, 3' HIGH 14 MONTORING KELL 14 MONTORING KELL 14 MONTORING KELL 14 MONTORING KELL 14 HIGH VOLTACE ELECTRIC MANHOLE 14 HIGH VOLTACE ELECTRIC MANHOLE 14 HIGH VOLTACE ELECTRIC MANHOLE 14 HIGH VOLTACE ELECTRIC MANHOLE	HOH PRESSURE WATER VALVE HOH PRESSURE WATER VALVE INCOMENDATION COVER UNKNOWN KOVER UNKNOWN KOVER UNKNOWN WITH FOUR UNKNOWN WITA VOR UNKNOWN WITA CCF UNKNOWN WITAL COVER UNKNOWN WITAL COVER UNKNOWN WITAL UNKNOWN WITAL COVER UNKNOWN WITAL UNKNOWN WITAL COVER UNKNOWN BOX, 6'1 HICH MIGH PERODON' VALVE BUNKNOWN BOX, 6'1 HICH EDH-131-131-17100 NUMBER CHM ELECTRIC UNANOLE SDAH STORU DANN MANHOLE SDAH STORU DANN MANHOLE SDAH STORU DANN MANHOLE YALLALLED WALCALALLED MOC OMUNICATION PRER UNE	NOTE: FOR TOP AND BOTTOM OF SHORNO WALL SEE DELYNTON ABBELVATION: B.O. BOTTOM OF WALL B.O. BOTTOM OF WALL B.O. BOTTOM OF WALL B.O. BOTTOM OF WALL B.O. BOTTOM OF WALL C. B.O. BOTTOM OF WALL C. B.O. BOTTOM OF WALL C. B.O. BOTTOM OF WALL C. B.O. BOTTOM OF WALL F. F. F. F. F. B.	Market A Landa Control
7 of 30	OFF "LEVEL 5" MANHOLE (COMMUNICATION) OGST "GST" MANHOLE (COMMUNICATION) Imter-connect" Pullbox DTV TELEVISION PULLBOX DTS TRAFFIC SIGNAL PULLBOX DTG TRAFFIC SIGNAL CONTROL BOX, 5'± HIGH OFF LOOP DETECTOR WW WATER METER WW WATER METER STANDPPE, 3± HIGH STANDPPE, 3± HIGH STANDPPE, 3± HIGH "HGH PRESSURE FIRE HYDRANT HIGH PRESSURE WATER COVER			8 IF IF IF MONTOLYNAMER SA. IF IF IF MONTOLYNAMER SA. IF IF IF PRINCIPAL ENGINEER IF IF IF PROJECT MANAGER P. BARAR IF IF PROJECT MANAGER P. BARAR IF IF MIL PS/CP IF IF IF MIL PS/CP IF IF IF IF MIL PS/CP IF IF <t< td=""></t<>

LEGENDS AND SYMBOLS	LEGENDS AND SYMBOLS	LEGENDS AND SYMBOLS	ABREVIATIONS	•
IGGNO- IGGNO-	LEGEND 70 TO OT CLUB 70 FANX OF WALK 80 FANX OF WALK 90 FREE PT WIREE 11 THEE PT WIREE 12 THEE PT WIREE 13 THEE PT WIREE 14 CONCORTER PANTER BOX, 3' HIGH 14 MONTORING KELL 14 MONTORING KELL 14 MONTORING KELL 14 MONTORING KELL 14 HIGH VOLTACE ELECTRIC MANHOLE 14 HIGH VOLTACE ELECTRIC MANHOLE 14 HIGH VOLTACE ELECTRIC MANHOLE 14 HIGH VOLTACE ELECTRIC MANHOLE	HOH PRESSURE WATER VALVE HOH PRESSURE WATER VALVE INCOMENDATION COVER UNKNOWN KOVER UNKNOWN KOVER UNKNOWN WITH FOUR UNKNOWN WITA VOR UNKNOWN WITA CCF UNKNOWN WITAL COV UNKNOWN WITAL COV UNKNOWN WITAL COVER UNKNOWN WITAL VIW V	NOTE: FOR TOP AND BOTTOM OF SHORNO WALL SEE DELYNTON ABBELVATION: B.O. BOTTOM OF WALL B.O. BOTTOM OF WALL B.O. BOTTOM OF WALL B.O. BOTTOM OF WALL B.O. BOTTOM OF WALL C. B.O. BOTTOM OF WALL C. B.O. BOTTOM OF WALL C. B.O. BOTTOM OF WALL C. B.O. BOTTOM OF WALL F. F. F. F. F. B.	Market A Landa Control
7 of 30	OFF "LEVEL 5" MANHOLE (COMMUNICATION) OGST "GST" MANHOLE (COMMUNICATION) Imter-connect" Pullbox DTV TELEVISION PULLBOX DTS TRAFFIC SIGNAL PULLBOX DTG TRAFFIC SIGNAL CONTROL BOX, 5'± HIGH OFF LOOP DETECTOR WW WATER METER WW WATER METER STANDPPE, 3± HIGH STANDPPE, 3± HIGH STANDPPE, 3± HIGH "HGH PRESSURE FIRE HYDRANT HIGH PRESSURE WATER COVER			8 IF IF IF MONTOLYNAMER SA. IF IF IF MONTOLYNAMER SA. IF IF IF PRINCIPAL ENGINEER IF IF IF PROJECT MANAGER P. BARAR IF IF PROJECT MANAGER P. BARAR IF IF MIL PS/CP IF IF IF MIL PS/CP IF IF IF IF MIL PS/CP IF IF <t< td=""></t<>



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FIRST, FREMONT AND BEALE STREET TEMPORARY BRIDGE STRUCTURAL DESIGN TRANSBAY TRANSIT CENTER PROGRAM TRANSBAY TRANSIT CENTER, SAN FRANCISCO, CA



GENERAL NOTES	GENERAL NOTES	GENERAL NOTES	GENERAL NOTES	•
PART 1 - GENERAL	C.3. PLACE REINFORCEMENT CASE IN THE HOLE. USE RIGGING TO SECURE REINFORCEMENT CAGE TO CASING DURING CONCRETE PLACEMENT.	E.3. METAL STUD & TRACK: ASTM A653, MIN. G40 COATING		13
1.1 SCOPE OF WORK A. IN ORDER TO ALLOW CONTINUATION OF TRAFFIC ACROSS THE	C.4. PLACE CONCRETE BY TREMIE METHOD FROM TIP ELEVATION TO THE TRANSITION CONSTRUCTION JOINT AS INDICATED ON THE PLANS AS THE	F. PLAIN ELASTOMERIC BEARING		Translaw Transit Control
CONSTRUCTION SITE EXCAVATION AT FIRST, FREMONT, AND BEALE STREETS FOR A TOTAL OF THREE (3) BRIDGES, BRIDGES AT FIGUR DOCEMENT AND REPORT TO A DOCEST AT	CONCRETE IS PLACED SLURRY IS TO BE PUMPED BACK INTO SLURRY TANKS.	F.1. THE MATERIAL SPECIFICATIONS SHALL MEET ALL REQUIREMENTS OF AASHTO M251.		TRANSBAY JOINT POWERS AUTHORITY
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.	C.5. THE RIGGING IS TO REMAIN IN PLACE UNTIL THE CONCRETE SETS. C.6. REMOVE RIGGING.	F.2. PLAIN ELASTOMERIC BEARINGS SHALL CONFORM TO SECTION 51-1.12H(1) OF CALTRANS STANDARD SPECIFICATIONS.		Balfour Beatty
B. RELATED WORK NOT INCLUDED IN THIS PACKAGES:	C.7. INSTALL THE CONNECTION ELEMENTS AT THE TOP OF BRIDGE COLUMN PILE	F.3. SHEET PTFE MAY CONTAIN DIMPLES TO ACT AS RESERVOIRS FOR LUBRICANT. THEIR DIAMETER SHALL NOT EXCEED 0.32" AT THE		Infrastructure Inc.
B.1. CONCRETE BASEMENT WALL,	C.8. PREPARE THE CONSTRUCTION JOINT.	SURFACE OF THE PITE AND THEIR DEPTH SHALL BE NOT LESS THAN 0.08" AND NOT MORE THAN HALF THE THICKNESS OF THE PITE. THE RESERVOIRS SHALL BE UNFORMLY DISTRIBUTED OVER THE SUPPACE		IPIRS A inc
B.2. SHORING OR BRACING FOR EXISTING BUILDINGS, B 3. TRESTLES	C.9. POUR CONCRETE TO THE DESIGNED TOP OF PILE ELEVATION.	AREA AND SHALL COVER MORE THAN 20% BUT LESS THAN 30% OF IT. LUBRICANT SHALL BE SILICONE GREASE WHICH SATISFIES MILITARY		STATISTICS AND AND AND A
B.4. STRUT REMOVAL AND REBRACING	2.2 MATERIALS	SPECIFICATION MIL-S-8660.		
B.5. PLANNED CONSTRUCTION, OR EXCAVATION OTHER THAN NOTED ABOVE.	A. CONCRETE AT DRILLED SHAFTS AND ABUTMENTS	G. POLYETHYLENE VAPOR BARRIER: ASIM E1745 CLASSES A, B, & C		Langelana and and and
B.6. BRIDGE TRAFFIC: SIGNAL & SIGNAGE	A.1. PORTLAND CEMENT ASTM C-150 TYPE "I" OR TYPE "IA"	PART 3 - 0/A PROGRAM		
B.7. BRIDGE LIGHTING B.8. BRIDGE MUNLOCS	A.2.NORMAL WEIGHT CONCRETE = 3,500 PSI AT 28 DAYS, PROPORTIONED WITH A MAXIMUM WATER CEMENT RATIO, W/C=0.50. ALL CONCRETE SHALL BE BATCHED DELIVERED AND PLACED IN ACCORDANCE WITH	3.1. SPECIAL INSPECTION, INSPECTION PROCEDURES AND SITE OBSERVATION		
B.9. UTILITY SUPPORT DETAILS	ACI 301 AND ASTM C94.	A. SPECIAL INSPECTIONS		
B.10. TRAFFIC CONTROL PLANS	A.3.SUBMIT MIX DESIGN PREPARED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA FOR ENGINEER'S APPROVAL.	A.1. THE SPECIAL INSPECTORS MUST BE CERTIFIED BY TJPA TO PERFORM		Key Map 🔨 N
C. RELATED DOCUMENT:	B. STRUCTURAL LIGHTWEIGHT CONCRETE AT PEDESTRIAN WALK	THE TYPE OF INSPECTION SPECIFIED.		66666263636
C.1. "FINAL GEOTECHNICAL DATA REPORT" PREPARED BY ARUP, DATED FEBRUARY 2010	B.1.PORTLAND CEMENT ASTM C-150 TYPE "I" OR TYPE "IA	PERMANENT AND TEMPORARY WORK ACCORDING TO THE CALIFORNIA BUILDING CODE (CBC) CHAPTER 17 INCLUDING THE SAN FRANCISCO		7
C.2. CONTRACT 08-04-CMGC-000 DWG'S, REV. 0 DATED 12-10-10.	B.2.AGGREGATE: EXPANDED SHALE, CLAY, OR SLATE (ESCS) LIGHTWEIGHT AGGREGATE PRODUCED BY THE ROTARY KILN METHOD SHALL MEET	AMENDMENTS, AND THE PROJECT SPECIFICATIONS. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK FOR CONFORMANCE WITH THE CONFORMATION OF THE SPECIAL INSPECTOR SHALL SEED.		L L M
C.3. STRUCTURAL COMBINED.DWG - DATED 9/01/10	ASTM C330.	REPORTS TO THE OWNER, ARCHITECT, ENGINEER, BUILDING OFFICIAL AND THE CONTRACTOR IN A TIMELY MANNER. ALL DISCREPANCIES		
C.4. XSURVEY.DWG - DATED $7/27/2010$	B.3.GROUND GRANULATED BLAST-FURNACE SLAG SHALL MEET ASTM C989.	SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION, WHEN WORK IS DONE TO THE SATISFACTION OF THE INSPECTOR THEORY AND THE CONCEAL INSPECTOR CHAIN OF THE		SUBARENT REENT MITICA BEAT
C.6. RESPONSE TO RFI T-0073.1 DATED APR. 14, 2011: BSE - REQUEST FOR	B.4.MATERIALS SHALL BE PROPORTIONED TO PRODUCE CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH = 3,000 PSI IN 28 DAYS.	SIGNED REPORT STATING THAT, TO THE BEST OF THEIR KNOWLEDGE, THE WORK WAS COMPETED IN CONFORMANCE WITH THE PLANS,	Mean Horizontal Equal Hazard Spectra East End of Train Box (475 Return Period)	DNS DNS DNS DNS DID CCON AMED
RESPONSE SPECTRA C.7. RESPONSE TO RELT-0209.3 DATED SEP. 28. 2011: BSE - ABUTMENT	B.5.DENSITY: MATERIALS SHALL BE PROPORTIONED TO PRODUCE CONCRETE WITH A CALCULATED EQUILIBRIUM DENSITY OF 110 PCF ±	SPECIFICATIONS, AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CBC.	FINAL STAGE - TEMPORARY BRIDGE DESIGN	VISIONE NUSE NORE
BEARING ON CDSM WALL - FOLLOW-UP	3 PCF AS DETERMINED BY ASTM C567-00, SECTION 9.2	A.3.ITEMS REQUIRING SPECIAL INSPECTIONS;	3	ALE STRUE
C.8. RESPONSE TO RFI T-0219 DATED SEP. 14, 2011: BSE – ABUTMENTS AT TEMPORARY BRIDGES	C. STRUCTURAL STEEL SHALL BE NEW EXCEPT THE W14 GIRDERS AND CAP BEAM FOR THE END SPANS AND IT SHALL MEET OR EXCEEDS THE EQUIDMENT PEOLIDERET	A.3.1. INSPECTION OF MILL CERTIFICATES OR LAB RESULTS FOR ALL COMPONENTS OF THE TEMPORARY BRIDGES.		75% 1000 BRI BRI
C.9. RESPONSE TO RFI T-0222 DATED SEP. 01, 2011: BSE - TEMPORARY BRIDGE PIER LOCATIONS	C.1.STEEL SHAPES: ASTM A992, GRADE 50 Fy = 50 KSI	A.3.2. AWS PREQUALIFIED WELDING PROCEDURES, OR		100%
C.10. RESPONSE TO RFI T-0223 DATED SEP. 27, 2011: BSE - TEMPORARY BRIDGE PEDESTRIAN BARRIER HEIGHT	C.2.STEEL REINFORCEMENT: ASTM A615, GRADE 60 Fy = 60 KSI	DOCUMENTATION OF QUALIFICATION PERFORMED FOR PROJECT SPECIFIC WELDING PROCEDURES IN ACCORDANCE WITH AWS D1 5. REQUIREMENTS		2222222222
C.11. RESPONSE TO RFI T-0228 DATED SEP. 27, 2011: BSE - 6-INCH	C.3.STEEL PLATES: ASTM A572, GRADE 50 Fy = 50 KSI	A.3.3. TESTING OF STRUCTURAL WELDS		00/00/00/00/00/00/00/00/00/00/00/00/00/
C.12. PROJECT SPECIFICATION ADDENDUM NO. 3 SECTION 01 53 13 -	C.4.STEEL ANGLES: ASTM A36, GRADE 36 Fy= 36 KSI, U.N.O.	A.3.4. INSTALLATION OF ALL A490-X BOLTS FASTENERS (UNLESS	ğı ""	2-NN400N00
TEMPORARY BRIDGES DATED SEPTEMBER 23, 2010	C.5.STEEL PIPE SECTIONS FOR CONNECTION BETWEEN CIDH PILE AND CAP BEAM: ANSI: B36.1/ASTM A53. FY = 35. KSI.	"TENSION CONTROLS" BOLTS ARE USED) INCLUDING INSPECTION AND ACCEPTANCE OF BOLT HOLES PRIOR TO INSTALLATION OF EXCEPTION OF TO VISION OF TO VISION	0 0.5 1 1.5 2 2.5 3 3.5 4	
2011: BSE - REQUEST FOR STRUCTURE SECTION DRAWINGS	C.6.STEEL BOLTS: ASTM A490-X BOLTS, MIN, TENSILE STRENGTH = 150	PROPER PREPARATION OF HOLES, SPECIALLY NO OVERSIZED HOLES OR FLAME CUTTING HAS BEEN USED TO INCREASE	PERIOD (SEC)	R/R
1.2 CODES AND STANDARDS	KSI	TOLERANCES TO ACHIEVE FIELD FIT.		BRII
MEETING DESIGN LOADING CRITERIA COMPULANT WITH THE CURRENT AMERICAN ASSOCIATION OF STATE HIGHWAY AND	C.7.STANDARD MILD STEEL STUDS MANUFACTURED BY NELSON CONFORM TO ASTM A108 SPECIFICATIONS FROM 1010 THROUGH 1020 MILD STEFL	A.3.5. VERIFICATION THAT EXCAVATIONS ARE EXTENDED TO THE PROPER DEPTH.		
TRANSPORTATION OFFICIALS (AASHTO) LRFD DESIGN SPECIFICATIONS, 4TH EDITION, AND CALTRANS AMENDMENTS.	C.8.WELDED WIRE REINFORCEMENT: ASTM A185, GRADE 65	A.3.6. PLACEMENT OF CONCRETE		
A.1. LIMIT STATE DESIGN	C.9.STRUCTURAL METAL DECK: ASTM A653 GR. 50, 4 🦨 DEEP, MAX	A.4. CONTRACTOR SHALL INSPECT BRIDGE PAVEMENT FOLLOWING USAGE FOR TRAVEL BY CONTRACTOR EQUIPMENT. ALL DAMAGE OR SURFACE		
A.1.1. STRENGTH I - DC+DW+HL-93 DESIGN VEHICLE W/ 33% IM	ALLOWABLE CLEAR SPAN BETWEEN GIRDER FLANGES FOR HL-93 & CALIFORNIA PERMIT TRUCK PT5 LOADING OF 57 INCHES AND FOR MANITAWOC 900 SEPIE 2 CRANE OF 26 INCHES DESIGNED IN	CORRECTED.		
A.1.2. STRENGTH II - DC+DW+CALFORNIA PERMIT TRUCK PTS W/ 25% IM A.1.3. SERVICEABILITY AND FATIGUE CHECKS	ACCORDANCE WITH SECTION 1.2 CODES AND STANDARDS. THE MANUFACTURER IS TO PROVIDE THE CERTIFICATION FOR THE	A.5. APPROACH TRANSITIONS FROM ROAD TO BRIDGES SHALL BE INSPECTED FREQUENTLY FOR SETTLEMENT. REPAIR WITH HOT ASPHALT		
A.1.4. CONSTRUCTION LOADS W/ MANITOWOC-999 SERIES 2 CRANE	REFERENCED LOADING.	CONCRETE PAVEMENT AS NECESSARY.		
LOADING WITHOUT ANY HOOK LOAD (WITHIN DESIGNATED AREAS ONLY)	UTIL WELDS SHALL BE MADE USING LOW-HYDROGEN ELECTRODES WITH MINIMUM TENSILE STRENGTH = 70 KSI. SEE SPECIFICATIONS FOR FURTHER REQUIREMENTS.	A.6. CUNITACION SHALL ON A MONITHY BASIS INSPECT AND REPAIR SURFACE IRREGULARITIES IN BRIDGE PAVEMENT OCCURRING IN VEHICLE AND PEDESTRIAN AREAS.		
A.2. SEISMIC DESIGN	C.11.IN COMPLIANCE TO WELDING PROCEDURES AND SPECIFICATIONS' THE	A.7.SPECIAL INSPECTION ITEMS OF METAL DECK	DRAWING INDEX	
A.Z.1. BASED ON CALIFORNIA SEISMIC DESIGN CHTERIA (SDC), VERSION 1.6, NOVEMBER 2010	FOLLOWING PROCEDURES AND/OR PREPARATIONS ARE TO BE FOLLOWED:	PERIODIC INSPECTIONS SHALL BE PERFORMED TO CONFIRM THE PERFORMANCE OF THE METAL DECK WELDS WITH FATIGUE LOADING. THE INSPECTION SHALL CONSIST OF DYE PENETRANT MAGNETIC	SH-0100 GENERAL NOTES AND DRAWING INDEX	
A.2.2. DISPLACEMENT DEMANDS ARE CALCULATED BASED ON STRUCTURAL FUNDAMENTAL PERIOD AND DESIGN	C.11.1. JOINT PREPARATIONS AND WELDING PROCEDURES INCLUDING BUT NOT LIMITED TO: WELDING PROCEDURES, REQUIRED	PARTICLE OR OTHER NON-DESTRUCTIVE METHOD AS APPROPRIATE FOR THE CONFIGURATION OF THE WELD AND THE DEGREE OF	SH-0101 LEGENDS, SYMBOLS AND ABBREVIATIONS	
ACCELERATION RESPONSE SPECTRA. A.2.3. DISPLACEMENT CAPACITY IS BASED ON DUCTILITY OF	ROOT OPENINGS, ROOT FACE DIMENSIONS, GROOVE ANGLES, BACKING BARS, COPES, SURFACE ROUGHNESS VALUES, AND WEIDING TAPERS OF LIMEOLIA PARTS	PHEPARATION, TO CONTINUE THAT FATIGUE CRACKS ARE NOT FORMING. ON THE TWO MOST HEAVILY TRAVELED BRIDGES, FIRST STREET AND FREMONT STREET, THREE INSPECTIONS WITHIN THE RIGHT LANF	SH-1100 CONSTRUCTION SEQUENCE SH-1101 CRANE TRAVEL LAYOUT	
THE STRUCTURE AND DETERMINED BY PUSH-OVER ANALYSIS IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.	C.11.2. SEQUENCING AND PROCEDURES OF WELDING TO MINIMIZE	(ASSUMED TO BE THE MOST HEAVILY TRAVELED BY TRUCKS) SHALL BE IDENTIFIED FOR TESTING. THESE LOCATIONS SHALL BE AS	SH-2100 PARTIAL PLAN FIRST STREET BRIDGE	
B. STANDARD SPECIFICATIONS 2006, CALTRANS	THE EFFECT OF SHRINKAGE, RESIDUAL STRESSES, AND TO MAINTAIN ERECTION TOLERANCES.	TULLOWS:	SH-2101 PARTIAL PLAN FIRST STREET BRIDGE	
C. AMERICAN WELDING SOCIETY, AWS D1.5: 2010 BRIDGE WELDING CODE", 6TH	D. ASPHALT CONCRETE	2. DIRECTLY OVER A STEEL GIRDER, CENTERED BETWEEN BENT CAPS	SH-2102 PARTIAL PLAN FREMONT STREET BRIDGE SH-2103 PARTIAL PLAN FREMONT STREET BRIDGE	Z SI
D. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) STEEL DESIGN MANUAL.	D.1.ASPHALT CONCRETE SHALL BE TYPE A UNLESS OTHERWISE SPECIFIED BY THE PROJECT SPECIFICATIONS.	3. IF THERE IS A LOCALIZED DETERIORATION OF ASPHALT, AT A SITE	SH-2104 PARTIAL PLAN BEALE STREET BRIDGE	
13TH EDITION	D.2. ASPHALT BINDER SHALL BE PERFORMANCE GRADE 64-10 PAVING	OF DETERIORATION. IF NO DETERIORATION, AT A RANDOM LOCATION.	SH-2105 PARTIAL PLAN BEALE STREET BRIDGE	
E 2.1 CONSTRUCTION PROCEDURE	ASYMALI CONFORMING 10 SECTION 92, "ASPHALT, OF THE CALTRANS STANDARD SPECIFICATIONS UNLESS OTHERWISE SPECIFIED ON THE PROJECT SPECIFICATIONS.	BY 2-FOOT 6-INCHES OF ASPHALT SHALL BE REMOVED TO EXPOSE AT LEAST THREE WELDS FOR TESTING. IF FATIGUE CRACKS ARE FOUND,	SH-3100 IEMPORARY BRIDGE KEY ELEVATION SH-3101 TRANSVERSE ELEVATION FIRST STREET BRIDGE	
A. CONSTRUCTION PROCEDURE FOR THE CDSM WALLS WILL BE COVERED UNDER OTHER SUBMITTALS.	D.3. THE PERCENTAGE OF AIR VOIDS IN THE MIX DESIGN AT THE TARGET	ADDITIONAL TESTING MAY BE NECESSARY TO VERIFY THE EXTENT OF CRACKING AND POTENTIAL REPAIRS. THE FFA MANDATED TWO YEAR INSPECTION FREQUENCY IS APPROPRIATE FOR THIS STRUCTURE	SH-3102 TRANSVERSE ELEVATION FREMONT STREET BRIDGE	
B. CONSTRUCTION PROCEDURE FOR INSTALLATION OF TEMPORARY	ASPHALT BINDER CONTENT SHALL BE BETWEEN 3% AND 5%.	INCREASE INSPECTION FREQUENCY IF ACP DETERIORATION IS OBSERVED. TJPA AND/OR DESIGNATED REPRESENTATIVE CAN REQUEST INSPECTION	SH-3003 TRANSVERSE ELEVATION BEALE STREET BRIDGE	15
D BRIDGES. B.1. SEE SHEET SH-1100 FOR THE CONSTRUCTION PROCEDURE FOR THE	D.4. AGGREGATE USED IN ASTHALT CONCRETE SHALL CONFORM TO THE GRADING REQUIREMENTS OF SECTION 39-2.02, "AGGREGATE", OF THE STANDARD SPECIFICATIONS.	IF THERE IS EVIDENCE OF POTENTIAL DECK WELDING FAILURE.	SH-3105 BRIDGE DECKING SECTIONS GRID LINES & BEN IS SH-3105 BRIDGE DECKING SECTIONS ABUTMENTS ON THE NORTH SIDE	13
STALLATION OF THE TEMPORARY BRIDGES. W B 2 GENERAL CONTRACTOR SHALL RESOLVE ANY CONFLICT RETURNING CONFLICT RESOLVE ANY CONFLICT RESOLVE RE	D.5.AREA SUBJECT TO VEHICLE TRAVEL SHALL BE SURFACES PROVIDING A	B. SHE UBSERVATION B.1. REPRESENTATIVE OF PRAM SHALL VISIT THE SITE AT LEAST ONCE A	SH-3106 BRIDGE DECKING SECTIONS ABUTMENTS ON THE SOUTH SIDE	AMMOVATC: 22
 D.2. GENERAL CUMITAGING STALL RESOLVE ANT CONFLICT BEIWEEN BRIDGE COLUMN/PIER/BRACING, STRUTS AND STRUCTURAL COLUMNS/PILE CAPS PRIOR TO START OF CONSTRUCTION. 	MINIMUM STATIC COEFFICIENT OF FRICTION EQUAL TO 0.65.	WEEK DURING TEMPORARY BRIDGE INSTALLATION AND EXCAVATION OPERATIONS TO PROVIDE STRUCTURAL OBSERVATION IN ACCORDANCE	SH-4100 LONGITUDINAL SECTIONS FIRST & FREMONT STREET BRIDGES	PRINCIPAL ENGINEER -P. BARAR
C. PROCEDURE FOR INSTALLATION OF BRIDGE COLUMN PIERS	D.6.AREA SUBJECT TO PEDESTRIAN TRAVEL SHALL BE SURFACES PROVIDING A MINIMUM STATIC COEFFICIENT OF FRICTION EQUAL TO 0.65 WHERE SLOPES ARE LESS THAN OR EDUAL TO 5%. AND 0.80	WITH THE SAN FRANCISCO BUILDING CODE. PB&A SHALL ISSUE A WRITTEN REPORT FOR EACH SITE VISIT.	SH-5100 DETAILS	PROJECT MANAGER P. BARAR PROJECT ENGINEER 0. LIU
C.1. DRILL 48"¢ HOLE FROM GROUND LEVEL TO THE DESIGNED TIP ELEVATION. A 60"¢ X 20"-0" "STARTER" CASING IS USED IN THE UPPER 20 FT OF	WHERE SLOPES EXCEED 5%.	C. MONITORING	SH-5101 DETAILS	CONSISTED BY: Q. LIU P. BARAR CRAME BY: CATE
LOOSE MATERIAL, HOLE IS SUPPORTED BY DRILLING SLURRY (WATER AND POLYMER).	E. RAILING	C.1.PLACE A SURVEY MONITORING POINT ON THE BRIDGE DECK AT EACH BENT.	SH-5102 DETAILS	ML/ PS/ CP 05/02/2011 SOLD SEE FACUTY NO. REVISION AS NOTED E 140
C.2. VERIFY THE TIP ELEVATION MANUALLY ONCE IT IS REACHED.	E.1. IHRIE BEAM: AASHTU M18U, CLASS A, TYPE II (ZINC) COATING	C.2. OBTAIN THE READINGS WEEKLY DURING ACTIVE EXCAVATION. KEEP	SH-5104 DETAILS	SHEET NUMBER SEQUENCE NUMBER
	E.Z. GARRIAGE DULIS: ASIM ADU/ GRADE A, MIN. TENSILE STRENGTH = 60 KSI	MONITORING UNTIL THE COMPLETION OF THE CONCOURSE LEVEL SLAB.	SH-5105 DETAILS	SH-0100 of

LEGENDS AND SYMBOLS	LEGENDS AND SYMBOLS	LEGENDS AND SYMBOLS	ABREVIATIONS	•
IGGNO- IGGNO-	LEGEND 70 TO OT CLUB 70 FANX OF WALK 70 FANX OF WALK 70 FANX OF WALK 70 FREE 70 TREE PT WIREE 70 TREE PT WIREE 70 TREE PT WIREE 70 TREE PT WIREE 71 TREE PT WIREE 72 TREE PT WIREE 73 TREE PT WIREE 74 TREE PT WIREE 75 TREE PT WIREE 76 COUCHT RED.S. 3' HIGH 77 MISE 78 MISE 79 COCKRETE PLANTER BOX. 3' HIGH 70 FORT MANDLE (ALECTRIC VAULEOXE 71 FORT MANDLE (ALECTRIC VAULEOXE 71 FORT MANDLE (LECTRIC VAULEOXE 71 FORT MANDLE (LECTRIC VAULEOXE 71 HIGH VOLTAGE ELECTRIC MANHOLE & COVER 72 TREE PLOT OF ELECTRICITY PULBOX 74 FRE ALARM PULBOX <	HOH PRESSURE WATER VALVE HOH PRESSURE WATER VALVE INCOMENDATION COVER UNKNOWN KOVER UNKNOWN KOVER UNKNOWN WITH FOUR UNKNOWN WITA VOR UNKNOWN WITA CCF UNKNOWN WITAL COVER UNKNOWN WITAL COVER UNKNOWN WITAL UNKNOWN WITAL COVER UNKNOWN WITAL UNKNOWN WITAL COVER UNKNOWN BOX, 6'1 HICH MIGH PERODON' VALVE BUNKNOWN BOX, 6'1 HICH EDH-131-131-17100 NUMBER COVER UNKNOWN BOX, 6'1 HICH DH-131-131-17100 NUMBER MIGH PERODON OUCT E. ELECTRIC UNE NOADE MIGH ELECTRIC UNE NOADE	NOTE: FOR TOP AND BOTTOM OF SHORNO WALL SEE DELYNTON ABBELVATION: B.O. BOTTOM OF WALL B.O. BOTTOM OF WALL B.O. BOTTOM OF WALL B.O. BOTTOM OF WALL B.O. BOTTOM OF WALL C. B.O. BOTTOM OF WALL C. B.O. BOTTOM OF WALL C. B.O. BOTTOM OF WALL C. B.O. BOTTOM OF WALL F. F. F. F. F. B.	Market A Landa Control
7 of 30	Off "LEVEL 5" MANHOLE (COMMUNICATION) Off "GST" MANHOLE (COMMUNICATION) Imter-connect" Pullbox DTV TELEVISION PULLBOX DT5 TRAFFIC SIGNAL PULLBOX DT6 TRAFFIC SIGNAL CONTROL BOX, 5'± HIGH 06F7 LOOP DETECTOR WW WATER METER WW WATER METER STANDPPE, 3± HIGH STANDPPE, 3± HIGH STANDPPE, 3± HIGH "HGH PRESSURE FIRE HYDRANT HIGH PRESSURE WATER COVER			8 IF IF IF MONTOLYNAMER SA. IF IF IF MONTOLYNAMER SA. IF IF IF PRINCIPAL ENGINEER IF IF IF PROJECT MANAGER P. BARAR IF IF PROJECT MANAGER P. BARAR IF IF MIL PS/CP IF IF IF MIL PS/CP IF IF IF IF MIL PS/CP IF IF <t< td=""></t<>

LEGENDS AND SYMBOLS	LEGENDS AND SYMBOLS	LEGENDS AND SYMBOLS	ABREVIATIONS	•
IGGNO- IGGNO-	LEGEND 70 TO OT CLUB 70 FANX OF WALK 70 FANX OF WALK 70 FANX OF WALK 70 FREE 70 TREE PT WIREE 70 TREE PT WIREE 70 TREE PT WIREE 70 TREE PT WIREE 71 TREE PT WIREE 72 TREE PT WIREE 73 TREE PT WIREE 74 TREE PT WIREE 75 TREE PT WIREE 76 COUCHT RED.S. 3' HIGH 77 MISE 78 MISE 79 COCKRETE PLANTER BOX. 3' HIGH 70 FORT MANDLE (ALECTRIC VAULEOXE 71 FORT MANDLE (ALECTRIC VAULEOXE 71 FORT S.F. DEPT. OF ELECTRIC MANHOLE & COVER 71 HIGH VOLTAGE ELECTRIC MANHOLE & COVER 72 TREE ALARM CLEBOX 74 FREE ALARM PULBOX 757 TREE PLOT OF ELECTRICITY MANHOLE	HOH PRESSURE WATER VALVE HOH PRESSURE WATER VALVE INCOMENDATION COVER UNKNOWN KOVER UNKNOWN KOVER UNKNOWN WITH FOUR UNKNOWN WITA VOR UNKNOWN WITA CCF UNKNOWN WITAL COV UNKNOWN WITAL COV UNKNOWN WITAL COVER UNKNOWN WITAL VIW V	NOTE: FOR TOP AND BOTTOM OF SHORNO WALL SEE DELYNTON ABBELVATION: B.O. BOTTOM OF WALL B.O. BOTTOM OF WALL B.O. BOTTOM OF WALL B.O. BOTTOM OF WALL B.O. BOTTOM OF WALL C. B.O. BOTTOM OF WALL C. B.O. BOTTOM OF WALL C. B.O. BOTTOM OF WALL C. B.O. BOTTOM OF WALL F. F. F. F. F. B.	Market A Landa Control
7 of 30	Off "LEVEL 5" MANHOLE (COMMUNICATION) Off "GST" MANHOLE (COMMUNICATION) Imter-connect" Pullbox DTV TELEVISION PULLBOX DT5 TRAFFIC SIGNAL PULLBOX DT6 TRAFFIC SIGNAL CONTROL BOX, 5'± HIGH 06F7 LOOP DETECTOR WW WATER METER WW WATER METER STANDPPE, 3± HIGH STANDPPE, 3± HIGH STANDPPE, 3± HIGH "HGH PRESSURE FIRE HYDRANT HIGH PRESSURE WATER COVER			8 IF IF IF MONTOLYNAMER SA. IF IF IF MONTOLYNAMER SA. IF IF IF PRINCIPAL ENGINEER IF IF IF PROJECT MANAGER P. BARAR IF IF PROJECT MANAGER P. BARAR IF IF MIL PS/CP IF IF IF MIL PS/CP IF IF IF IF MIL PS/CP IF IF <t< td=""></t<>







Note: If this sheet is not 44" x 34", it has been revised from its original size. Scales noted on drawings/details are no longer applicable.



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TG12.1 – Civil/Sitework at Grade/Ground Level Landscaping

Questions are numbered in the order received. Numbers missing in the sequence either have been answered in a previous response set or will be answered in a future set.

Question	Submission	Drawing	Document/	Question	Response		
TG12.1- 002	5/7/2015	C1-6005	Spec. No.	Plan Sheet C1-6005 graphically shows a 5' wide strip of concrete pavement (bus pad?), with Sections L, M and N shown. These sections show a 5' wide bike lane, but the pavement section appears to be the same as the adjacent roadway (AC over concrete base). Please clarify.	A 5' wide strip of concrete pavement shall be used, as shown in C1-6005 and per City and County of San Francisco Department of Public Works engineering standard plan 87170 (as referenced in Specification Section 32 16 13 and the Civil drawing general notes), detail "Combined 6" Concrete Curb and Parking Strip." See the attached sketch that has been provided for clarity.		
TG12.1- 003	5/7/2015			Exhibit A, Page 10, Item 12 states: "This Trade Subcontractor shall anticipate installing a single lift, or base coat, of asphalt at Minna, First, Fremont, Beale and Natoma streets that will be used by other trade subcontractors for access during the project. This Trade Subcontractor shall include cost of temporary striping and comeback work to clean, prime, and install final lift of asphalt including striping near the end of the project as directed by W/O Joint Venture." The new pavements on these streets is either the "Typical Street Buildup" as shown on C1- 6008 (2" of asphalt surface over 8" to 15" of concrete base) or concrete Bus Pads. When is this initial single lift of asphalt to be placed, before or after the concrete base? If after, does this initial lift get removed prior to placing the permanent 2" lift of asphalt? 2"? Please clarify.	The intent is to provide a new asphalt surface free of dirt, surface defects, and clean striping at substantial completion; the TG12.1 Trade Subcontractor determines how this final condition is achieved. The TG12.1 Trade Subcontractor is responsible for scheduling the completion of the work, and establishing how Minna and Natoma streets will be utilized by other trades for delivery of materials. A detailed schedule that includes the timing of the single lift on the surrounding streets is not available for bidding purposes. This trade subcontractor shall remove the initial lift of temporary asphalt prior to placing the permanent asphalt pavement.		

TG12.1- 013	5/7/2015		What "permanent asphalt" is to be included in the Item No. 2 (Comeback work at First, Fremont and Beale Streets) pricing? The permanent roadway section has a total of 2" of asphalt pavement, and 2" (minimum) is to be placed for the temporary section. Does the temporary asphalt within the permanent roadway section limits get removed prior to placing the permanent asphalt pavement?	The intent is to provide a new asphalt surface free of dirt, surface defects, and clean striping at substantial completion; the TG12.1 Trade Subcontractor determines how this final condition is achieved. The TG12.1 Trade Subcontractor is responsible for scheduling the completion of the work, and establishing how Minna and Natoma streets will be utilized by other trades for delivery of materials. This trade subcontractor shall remove the initial lift of temporary asphalt prior to placing the permanent asphalt pavement.
TG12.1- 018	5/7/2015	U1-2001- 2003, U1- 3002, U1- 3004, U1- 3005	The Utility Plan sheets (U1-2001 thru U1- 2003, "Scoping Drawings" version) show most of the new pipe and/or utility structures to be constructed crossing other existing utilities (ductbanks, waterlines, etc). But the applicable Profile sheets (U1-3002, -3004 & - 3005) don't show any of these existing utilities crossing the new lines. Please provide information, including elevations, on any utilities that are anticipated to conflict with installation of the new utilities.	Existing utilities were taken into account during design of new utilities. There are no existing utilities that are anticipated to conflict with the installation of the new utilities.
TG12.1- 031	5/18/2015	C1-5002 thru C1- 5004	The areas outside of the permanent roadways shown in the referenced sections are considered landscape vehicle or pedestrian paving "on-structure." These "on-structure" sections are shown as built on geosynthetic fill. Is geosynthetic fill required within the lowered TOTB sections (i.e. at First & Fremont streets, the 85' width between Bents 17 & 19 and 25 & 27), outside of the permanent roadway section? If not, what fill material is required under the landscape pavements in these sections?	For landscape paving on-structure, provide geosynthetic fill. Please refer to Specification Section 32 34 10. For areas of fill over the lowered section of the Train Box Lid (TOTB), use backfill (standard fill).

TG12.1- 035	6/2/2015	C1-6006 (Addendum 1)	Addendum 1 revised Plan Sheet C1-6006 (Bus Plaza Paving), adding Note 5 that "FC-2 Floor Coating shall be applied over concrete paving, per Specification Section 07 18 14. Paragraph 1.8B of this section states that "Ambient and surface temperatures shall be at least 60 degrees F for a minimum period of 48 hours before, during, and after coating system application. The cited specification appears to be written for indoor or limited (controllable) outdoor area environments, and if required here will add considerable cost to this work. Please confirm this requirement for both (a) the base bid and (b) Bid Item 10 (Additive Alternate that adds lamp black to this paving).	The TG13.2 Trade Subcontractor is responsible for installing floor coating FC-2.
TG12.1- 036	6/2/2015		We haven't found detailed plans of the existing temporary bridges to be removed. The bridge removal sketches provided reference sections on various "SH-xxx" sheets. Please provide these and/or other plans showing the details of these bridges, including the steel superstructure and columns/shafts (i.e. reinforcing steel in shafts).	Please refer to the response to QBD TG12.1- 025 in Q&A set no. 2.
TG12.1- 037	6/2/2015		Due to the sheer volume of bid documents, we respectfully ask that you postpone the bid date by 2 weeks until 6/23/15.	Please refer to the response to QBD TG12.1- 032 in Q&A set no. 2.
TG12.1- 038	6/4/2015	L1-7360	Scoping Drawing L1-7360 notes that "Bollard Footing, inserts, sleeves, etc are by others" Please confirm that this work "by others" includes the installation of the inserts/sleeves, etc.	Confirmed; installation of bollard footing, inserts, sleeves, etc. is not by the TG12.1 Trade Subcontractor.









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M BEALE STREET STA 3+60 1:4

N BEALE STREET STA 4+20 / 1:4

<u>NOTES</u>

- 1. FOR GENERAL NOTES SEE SHEET C-0005. FOR LEGEND SEE SHEET C-0010. FOR ABBREVIATIONS SEE SHEET C-0015.
- 2. ROADWAY SECTION PER DETAIL 2 ON SHEET C1-6008
- 3. BUS PAD DETAIL PER SFDPW STD # 96607
- 4. 6" CURB PER SFDPW STD # 87169

SCALE IN FEET



TG12.1 – Civil/Sitework at Grade/Ground Level Landscaping

Questions are numbered in the order received. Numbers missing in the sequence have been answered in a previous response set.

Question No.	Submission Date	Drawing No.	Document/ Spec. No.	Question	Response
TG12.1- 033	6/2/2015	C1-6006 & C1- 6008, as revised by Addendum 1		Addendum 1 revised Plan Sheets C1-6006 and -6008, providing additional details on the Bus Plaza paving. The description of this work was changed from an SFPWD Bus Pad detail to "Concrete Paving", and a joint layout detail was provided which notes "control joints" and "expansion joints", but no details for these joints are referenced except for an added note that control joints are "as shown on Drawings". Please clarify which joint details are to be used for these expansion and control joints.	See attached sketch (SK-C-QBD033) for clarity of joint details.
TG12.1- 034	6/2/2015	C1-5005 thru C1- 5008		Plan Sheet C1-5005 shows several 2" Movement and 4" Movement joints at the Bike and Vehicle Ramp. Sections shown on Plan Sheets C1-5006 thru C1-5008 graphically indicate that these joints consist only of expansion joint filler material, but no specific details are referenced or provided. Please confirm that this "movement joint" consist only of 2" or 4" polystyrene (4" polystyrene is shown at the pylon on Sheet C1-5007 Section 8).	See attached sketches SK-C-QBD034-01 and SK-C-QBD034-02.
TG12.1- 039	6/4/2015	03 33 12		No sealer is mentioned as required in Specification Section 03 33 12 for the Landscape (Vehicular and Pedestrian) Paving, but it does require "protection" (Para. 3.15). Further, Exhibit A Page 14 #11 requires the TG12.1 Trade Subcontractor to "install a layer of non-staining protective material over all finished, colored concrete with 4' x 8' x ¼" sheets of Masonite. Please confirm that no sealer is required for the Landscape Paving.	A "sealer" (water repellent) is required. Refer to Specification Section 07 19 23 Site Repellents for water repellent requirements.



<u>NOTES</u>

1. FOR GENERAL NOTES SEE C-0005. FOR LEGEND SEE C-0010. FOR ABBREVIATIONS SEE C-0015.

2. COORDINATE WORK WITH BUS RAMP CONSTRUCTION (NOT IN CONTRACT).

MOVEMENT JOINTS SHALL BE SEALED AS FOLLOWS:
2" MOVEMENT JOINT: JOINT SEALING SYSTEM TYPE M2
4" MOVEMENT JOINT: JOINT SEALING SYSTEM TYPE M4

LEGEND

<u>/03</u>

(18'-6") INDICATES BOTTOM OF FOUNDATION ELEVATIONS SEE TG18 FOR CONDUIT COMING FROM PYLON

	Arup North America Ltd.			TRANSBAY TRANSIT CENTER PROGRAM BUS RAMPS					
560 MISSION STREET, SEVENTH FLOOR SAN FRANCISCO, CA. 94105 (415) 957–9445, FAX (415) 957–9096				DRAWING TITLE/REFERENCE DRAWING/SUBJECT BIKE AND VEHICLE RAMP DETAIL			REFERENCE DRAWING NO. C1-5005		rev. no. 2
0 REV.	DESCRIPTION	DATE	BY	DESIGNED: DRAWN: DATE: 6/8/15	CONTRACT NO.: SCALE: N.T.S.	<u>sketch no.</u> SK-C- QBD034-01	REV. NO.	document no. RFI-TG12.1	-034

32 16 13 1.3

2....

- F. Joint Sealing Systems
 - 1. Product Data
 - a. Seal profile
 - b. **Adhesive** <u>...2</u>

32 16 13 2.4

2...

I. Joint Sealing Systems

- 1. Joint Sealing System Type M2
 - a. The seals shall be preformed and manufactured from closed cell polychloroprene (neoprene). The material shall have a minimum 2,000 psi tensile strength requirement and 225% elongation at break.
 - b. Elastomeric seal shall be installed utilizing a two component epoxy based adhesive which meet the requirements of the properties listed below
 - 1) Tensile Strength: 3,500 psi minimum
 - 2) Compressive Strength: 8,000 psi minimum
 - c. Products
 - 1) Wabo Inverseal Joint System by Watson Bowman Acme
 - 2) JP Series Sealing System by DS Brown
 - 3) Or Equal
- 2. Joint Sealing System Type M4
 - a. The seals shall be preformed and manufactured from closed cell polychloroprene (neoprene). The material shall have a minimum 125 psi tensile strength requirement and 200% elongation at break.
 - b. Elastomeric seal shall be installed utilizing a two component epoxy based adhesive which meet the requirements of the properties listed below
 - 1) Tensile Strength: 3,500 psi minimum
 - 2) Compressive Strength: 8,000 psi minimum
 - c. Products
 - 1) Jeene FW Series Joint System, Watson Bowman Acme
 - 2) JP Series Sealing System by DS Brown
 - 3) Or Equal ...2

32 16 13

<u>2...</u>

3.13 JOINT SEALING SYSTEMS

- A. Chamfer edge of concrete at joint with ¼" chamfer.
- B. Installation shall conform to the manufacturer's recommendations.
- C. All surfaces to receive bridge deck joint seal shall be free from dirt, water and any other loose foreign debris, which may be detrimental to effective joint sealing. ...2

	Arup North America Ltd.			TRANSBAY TRANSIT CENTER PROGRAM BUS RAMPS					
560 MISSION STREET, SEVENTH FLOOR SAN FRANCISCO, CA. 94105 (415) 957–9445, FAX (415) 957–9096				DRAWING TITLE/REFERENCE DRAWING/SUBJECTREFERENCE DRAWING NO.REV.CAST IN PLACE CONCRETE FOR32 16 131CIVIL WORKS11				rev. no. 1	
				DESIGNED:	CONTRACT NO .:	SKETCH NO.	REV. NO.	DOCUMENT NO.	
0				DRAWN:	SCALE: N.T.S.	SK-C-	0	RELTG121	-034
EV.	DESCRIPTION	DATE	BY	DATE: 6/8/15		QBD034-02			-00-

R