TG03 - Buttress, Shoring, Excavation - Issued for Bid

Questions are numbered in the order received. Question numbers missing in the sequence either have been answered or are still under review and will be published in future responses.

Question No.	Submission Date	Question	Response
TG0300-0096R1	10.6.2010	Reference drawing sheet GT-2101, note 16. Note 16 on GT-2101 requires the internal bracing system to permit removal of wall segment X1-1 PRIOR to the completion of the excavation. When or at what stage of excavation will this wall be removed? Can tiebacks be used to support wall X1-1? BSE QBD# TG0300-0096 in Answer Set #3 posted on 09/8/2010 provided a response to this question. Design team has revised the attached response that supersedes the previously posted response.	The revised shoring wall layout shown in Addendum 3 is too close to the final southwest train box wall. The latter will be placed once the adjacent properties are acquired and demolished. Tiebacks installed at shoring wall segment X1-1 would interfere with the installation of shoring at the final southwest train box wall. Consistent with response TG0300-0272 (posted 10/5/10), tiebacks are not acceptable at wall segment X1-1.
TG0300-0267	9.21.2010	Reference Specification 31 63 29 - Part 3.5 A minimum of 12 ft. clear spacing is required between adjacent shafts unless 48 hrs have elapsed after concrete was placed. Such requirement will result in a work sequence which involved frequent equipment re-positioning. Since the size of available work area restricts the usage of unlimited drilling units, the completion of all shafts in the required time frame would therefore not be possible. Since construction techniques will involve full length temporary casing installed without vibration, we believe that this requirement is not necessary to protect freshly placed concrete and avoid lateral soil deformation. There was also no such requirement during the prototype test program.	Article 3.5.B.2 in Section 31 63 29 will be revised to read in an addendum: "Do not drill holes within 5’-6” clear spacing of any previously constructed shaft until at least 48 hours have elapsed after completion of concreting of previously constructed pier."
TG0300-0268	9.21.2010	Reference Specification 31 63 29 - Part 3.8.i Sonic Integrity testing is required to verify the shaft overlap. The drawings show 4 each test tubes attached to the shaft rebar cage. Is the intent to only test all reinforced shafts? If yes, how many test profiles are required per shaft?	A total of 30 profiles across shaft interfaces are required. The first 10 shaft interfaces, not including the interfaces between shafts C/2 - C/3, C/3 - C/4, C/4 - C/5, and C/5 - C/6, shall be tested. The locations of the remaining 20 shaft interfaces will be as directed by the TJPA Representative. The tubes shown to be installed with the reinforcing cage (detail 12/GT-5202) and the cores specified in article 3.9.D in Section 31 63 29 shall be used for the CSL testing. Additional holes needed for sonic integrity testing shall be provided by the Contractor in accordance with article 3.8 I.2, which will be revised in an addendum to read: "In addition to the tubes shown to be installed on the Drawings, and the cores specified in article 3.9.D, the Contractor has the option to install steel tubes, to drill holes, or to core holes to facilitate sonic integrity testing. Drilling or coring shall be done after the concrete has gained sufficient strength." Response TG0300-0277 (posted 10/5/10) will be revised.
TG0300-0274	9.21.2010	Reference Specification 31 55 00, 1.5-B	A. The "Design Profile" earth pressure was obtained by fitting a trapezoidal diagram to the strut loads obtained by analysis. Therefore, the results obtained using tributary areas from the

		1. According to Section 31 55 00, 1.5-B internal Bracing shall be designed for loads indicated in contract documents. "Apparent Lateral Earth Pressures" diagrams (presented on Drawing GT-1110) contain four different Earth Pressure profiles, marked as "Design Profile", "Total Horizontal stress", "Apparent pressure diagram per Plaxis Analysis", and "Apparent pressure diagram by Terzaghi and Peck". "Summary of Strut Loads" tables presented on GT -1110 indicate prescribed bracing loads for different bracing levels at various stages of excavation. A. Please clarify which of four soil pressure profiles listed above was used to determine bracing loads indicated in the "Summary of Strut loads" tables. B. Please clarify which of four soil pressure profiles listed above shall be used by Trade Subcontractor for bracing system analysis and design, if the Trade Subcontractor elects to adjust the internal bracing elevations as allowed by Note 4 on Drawing GT-1111. C. It is apparent that soil pressure diagrams provided on the drawing GT-1110 were developed for the full depth excavation. Please provide Apparent Soil Pressure Diagrams that were used to determine strut loads listed in the tables on GT-1110 for excavation elevations less than full depth excavation.	"Design Profile" will vary slightly from the strut loads presented in tables 1 thru 4. Tables 1 thru 4 shall be used for loads on the internal bracing system. For seismic increment strut loads, refer to tables 5 thru 8. B. Note 4 on GT-1111 is not intended to give the Contractor the option of designing an internal bracing system which does not satisfy the criteria shown on the Drawings. The number/elevation of shoring wall bracing levels must be provided as shown. The acceptable variation to these elevations is noted in the "Legend" on GT-1111. C. Use tables 1 thru 4 for loads on the internal bracing system instead of the pressure diagrams. These tables provide the loads at various stages of excavation.
TG0300-0277R1	10.6.2010	Per Bid Drawing GT-2201, Installation Sequence Notes 3 & 4, CSL is to be performed in cored holes at 301 Mission Street Buttress Shafts C/4 to C/8. The Buttress Shaft Specifications (Section 31 63 29, Part 3.8.I2) indicates that drilled holes or steel tubes are to be used to perform CSL testing. Per the ARUP Prototype Test Program & Monitoring During Construction of Drilled Shafts Final Report, drilled holes for CSL testing could not be constructed. Please confirm that only cored holes and/or steel tubes are to be used for CSL testing. BSE QBD# TG0300-0277 in Answer Set #7 posted on 10/4/2010 provided a response to this question. Design team has revised the attached response that supersedes the previously posted response.	Despite the difficulties encountered with drilling during the prototype test program, we do not want to preclude the Contractor from using drilling equipment or methods that can create the required holes for CSL testing. The tubes shown to be installed with the reinforcing cage (detail 12/GT-5202) and the cores specified in article 3.9.D in Section 31 63 29 shall be used for the CSL testing. Additional holes needed for sonic integrity testing shall be provided by the Contractor in accordance with article 3.8 I.2, which will be revised in an addendum to read: "In addition to the tubes shown to be installed on the Drawings, and the cores specified in article 3.9.D, the Contractor has the option to install steel tubes, to drill holes, or to core holes to facilitate sonic integrity testing. Drilling or coring shall be done after the concrete has gained sufficient strength." See also response TG0300-0268.
TG0300-0285	9.24.2010	We are becoming concerned by the length of time it takes to receive answers to our questions, and particularly that there is no specific tie to a prescriptive method of assessing damages, much less a cap for the Trade Subcontractor. Since the terms of the long form subcontract were added after the Prequalification process, we feel it necessary to have some type of constructive dialogue, or affirmative confirmation of our previous questions, as we would like to bid this project.	No meetings will be held with the bidders; however, we have received your questions and will post a response as soon as we complete our review.
TG0300-0286	9.27.2010	Reference specification 31 63 33, paragraph 3.7.	A. The proposed system must be capable of achieving the minimum dimensions for the construction cylinder as shown on the drawings

		Section 3.7.A requires drilled hole to be open along full length prior to placing grout and reinforcement, and Section 3.7.B requires temporary casing or other approved method to support the drilled hole in caving or unstable ground. A. Is a hollow stem or similar auger system an approved method to support the drilled hole per section 3.7.B? B. Can a slurry comprising a combination of soil, cement and water, or similar components, be used as an approved method to support the drilled hole per section 3.7.B, or is this prohibited by section 3.1.B? C. If options A and B above are not permitted, what would constitute an "approved method" for the purposes of Section 3.7.B?	and in the performance requirements in the specification, and submitted for approval. B. There is concern that a pile shaft, temporarily stabilized by slurry and then replaced by grouting under pressure, may not be capable of delivering specified performance via available shaft friction, due to softening of surrounding soil, and therefore, is prohibited by the specification. C. An "approved method" would be one that is capable of meeting the specification based on micropile system which has delivered, under performance test loading, the specified performance in ground and groundwater conditions similar to those at this site.
TG0300-0293	9.28.2010	Please post dwg sheet number GT-1100 on the Planwell website, sheet number G-000 included with Addendum #3 includes GT-1100 "Construction Sequence Diagrams" inside the revision bubble, however the sheet is not listed on Addendum #3 page 3-5. Does it exist?	The index incorrectly listed GT-1100 as issued with Addendum 3. The drawing was not issued. The index will be corrected in an addendum.
TG0300-0294	9.28.2010	Reference specification 31 63 33, 1.5. 1. Under 1.5 REFERENCES of the micropile specs, there are 3 references for pipe and tubing (ASTM A106, A252 & A519). API N-80 pipe is commonly used for micropile applications. Please clarify which if any of the three ASTM designations that the micropile casing must conform to.	The micropile casing may conform to any one of the 3 ASTM specification references for pipe/tubing. It will also be acceptable for the micropile casing to conform to API N-80.
TG0300-0295	9.29.2010	Referenche sheet GT-5101/Detail 13. We assumed the 6" dia pipe and angles shown are not applicable since nothing is shown on GT-2201.	Refer to the legend on GT-2201.
TG0300-0296	9.30.2010	1.) Per the Concept Schedule, "Install & Compact Base Rock" is shown for Zones 1-4 but is not shown on the contract drawings or specifications. Please confirm no base rock will be required. 2.) Per the Concept Schedule, "Soil Treatment" is shown for Zones 1-4 but is not shown on the contract drawings or specifications. Please provide the details if any soil treatment is required.	Trade Subcontractor is to provide sub-grade and soil treatment as shown in the plans and specifications and as described in Exhibit A of the Project Bidding Manual.
TG0300-0298	9.30.2010	Drawing D-1065 of the Demo Contract (08-08-DM-000) states "(E) 30"-42" reinforced concrete mat slab, (E) Columns, and (E) grade beams to be removed." Drawing D-5100/Detail 1 of the B/S/E Contract (08-04-CMGC-000)	Drawing D-1065 (Contract 08-08-DM-000) specifies removal of existing 30"- 42" reinforced concrete mat slab, concrete columns and grade beams. In general, vertical extent of removal of concrete columns will coincide with vertical extent of removal of grade beams

		states " Remove (E) 3" dia. concrete column w/ steel jacket." Please confirm that the Demo Contractor will remove the columns and grade beams all the way to the top of the pile caps in this area of Zone 1.	and/or reinforced concrete mat slab. The removal of columns below the vertical extent of existing grade beams and/or existing reinforced concrete mat slab that remain after completion of Contract 08-08-DM-000 shall be by the Contractor (Contract 08-04-CMGC-000). Section B-B on drawing D-1074 (Contract 08-08-DM-000) and Detail 1 on drawing D-5100 (Contract 08-04-CMGC-000) illustrate conditions where column sections within the Zone 1 Area (Exhibit A, SL-004) remain after completion of Contract 08-08-DM-000.
TG0300-0299	9.30.2010	Reference drawing sheet D-2213. Please confirm that the perimeter wall and the columns at the north end of Zone 3 at the MUNI Hump area will be removed by the demo contractor per drawing D-1061.	All columns within the limits of the Muni Hump area will be cut and removed to the top of basement slab. All walls within the Muni Hump area will be removed by the demolition contractor (08-08-DM-000). See D-1061 and D-1073 of the demolition drawings for details.
TG0300-0300	9.30.2010	Will any of the class 2 hazardous material in Zone 4 be removed during the demo of the basement structure and pile caps? If so, to what elevation will the class 2 hazardous be removed?	Scope for the Existing Terminal & Ramps Demolition (08-08-DM-000) project includes the removal of the basement concrete structure and pile caps in Zone 4 (approximately between Fremont and Beale) and does not include any further excavation. It is not anticipated the class 2 hazardous soil identified in the hazardous materials reports referred to in 00 03 35 will be removed by the 08-08-DM-000 work.
TG0300-0301	9.30.2010	Please confirm that "Contractor" in specification 31 55 00, paragraph 1.7D refers to a party other than the Bracing System Trade Subcontractor.	"Contractor" shall be TG03 BSE Trade Subcontractor.
TG0300-0302	9.30.2010	Drawing GT-1110 defines limits of "301 Mission Buttress" and "301 Podium". These loading conditions are applicable to the north CDSM wall. Please confirm that "East" loading condition is applicable to south CDSM wall within column lines 26 and 33.5.	Use "301 Mission Buttress" and "301 Mission Podium" loading conditions for both the north and south CDSM walls. Note: In no case shall the soldier pile size be less than, or the spacing greater than, that shown on the Drawings.
TG0300-0304	9.30.2010	The answer to TG0300-0176 stated that maximum spacing of re-bracing elements is modified in Addendum 3. Where were the new spacing limits shown? (Add. 3 removed note stating maximum re-brace spacing of 21 feet, but no new limiting value was provided.)	The spacing limit has been removed. The Shoring Trade Subcontractor is to determine the re-bracing element system and spacing that meets geotechnical document requirements of strength and stiffness and that does not overstress train box permanent elements.
TG0300-0308	9.30.2010	The answer to question TG0300-0240 is not consistent with 31 63 33 Section 3.2.K.2. Will the letter "T" be changed to "F" in a future addendum?	Confirming that response TG0300-0240 will be incorporated into an addendum.
TG0300-0309	9.30.2010	A significant amount of Class I and Class II Hazardous Material will be generated during performance of Lump Sum bid items 3, 6,7,9, and 10. Is the premium associated with handling, testing, loading, hauling, and disposal of this hazardous material paid under unit price bid items 37 and 38, or is it paid as part of the Lump Sum bid items?	Refer to response TG0300-0106, posted 9/8/10.
TG0300-0310	10.1.2010	Reference specification 02 41 19, paragraph 3.8.A.	In accordance with the Site Mitigation Plan (01 13 50/APA) prepared by Treadwell & Rollo (section 5.3, p. 13, dated 3/24/10),

		What classification should be assumed for the timber piles treated with creosote? A class 1 RCRA or Class 2 Non-RCRA.	extracted timber piles will be segregated, transported and disposed of as a Treated Wood as a Class II non-hazardous waste with copies of the bills of lading submitted to the TJPA.
TG0300-0311	10.1.2010	Reference specification 31 63 29 - Drilled Concrete Piers and Shafts, Item 2.4 Embedded Sleeves. Do steel pipes for inclinometers have to be installed in any of the Buttress shafts? If yes, please specify quantity and location of required pipes.	Inclinometers are not required to be installed in the shafts as part of this work.
TG0300-0316	10.4.2010	Reference specification and 31 63 33 and QBD TG0300-0240. Response to question TG0300-0240 in Q&A #6 confirms that performance test will be subject to meeting specified creep criteria under load "F", i.e. 560 kips. The corresponding specification was updated in Addendum #3, but clause 3.2.K.2 still references load parameter "T" in the acceptance criteria. Will the specification be updated by Addendum to correct this reference?	See response TG0300-0308.
TG0300-0318	10.4.2010	Reference specification 31 63 33, drawing S-3003, and QBD TG0300-0256. S-3003 Detail 1 references minimum pile diameter 10 inches. QBD TG0300-0256 states that Detail 1 is an example but micropile is to be designed by the contractor to meet specified requirements. Please confirm that "10" dia. Minimum" is an example and not a requirement. will this detail be amended by future addendum to confirm this clarification?	Confirmed that the "10 inch diameter minimum" is a requirement.
TG0300-0320	10.5.2010	Reference drawing sheets GT-2102 & GT-2103. Three (3) references to the CDSM cutoff walls include "without soldier piles." Please confirm 1) the walls are to be designed by the contractor 2) reinforcement will be allowed and 3) removal below the excavation is required.	1. These walls are intended to serve as dewatering cut-off walls to facilitate construction sequencing. They are not intended to be structural. 2. The TJPA Representative has no objection to making these walls structural. The design of the reinforcement shall be by the Contractor. 3. The TJPA Representative recommends that any structural elements be removed to 2 feet below final subgrade.
TG0300-0321	10.5.2010	Reference drawing sheet GT-2201. A. Are the 6" Std Pipe & Angle Braces per detail 13/GT-5101 required for PZ104 and/or PZ105? B. Between column lines 29.5 and 33.5, slightly project north column line A there is a space between the o/s face of the CDSM wall and another line that is cross hatched. What	A. That is correct. The 6" Std Pipe & Angle Braces per detail 13/GT-5101 are required for PZ104 and/or PZ105. B. These hatched areas and the dark rectangles are portions of the existing structure at 301 Mission Street.

		is cross hatching? Temporary Screen Wall? Are the dark rectangles existing structural column?	
TG0300-0327	10.7.2010	Regarding response to question TG0300-0122, minimum hoist requirements. The answer to this question stated that information would be included in an upcoming addendum but has not been included in the subsequent addenda. When will this more detailed information be released to the trade subcontractor to facilitate accurate pricing of said hoists?	Please refer to response TG0300-0122 (posted 8/31/10) for hoist requirements. The logistic drawing SL-001 in Exhibit A including hoist location was revised in Addendum 3. Hoist size will be included in an upcoming addendum.