


Memorandum

CS Memorandum No. 1444

To: Distribution

From: Beverly Ward, CMB/Risk Management Assistant 

Date: May 14, 2013

Reference: Project No. M544.1, Contract No. CS-149
Task No. 1-8.02, Change Control

Subject: Configuration Management Board Meeting No. 125

Attached please find minutes for Configuration Management Board Meeting No. 125 held on May 08, 2013.

Attachments: CMB Meeting No. 125 Rev. 0 Minutes with attachments

Cc: David Kuehn, STV (w/attachments) david.kuehn@stvinc.com
Shahnam Farhangi, SFMTA (w/attachments)
Arthur Wong, SFMTA (w/attachments)
Roger Nguyen, SFMTA (w/attachments)
Albert Hoe, SFMTA (w/attachments)
Jane Wang, SFMTA (w/attachments)
Aileen Read, CSDG (w/attachments)
Vivian Chow, SFMTA (w/attachments)
CS File No. M544.1.5.0890

Distribution:

Luis Zurinaga, SFCTA luis.zurinaga@sfcta.org
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John Funghi, SFMTA
Mark Latch, CSP
Richard Redmond, CSP
Joon Park, SFMTA
Eric Stassevitch, CSP
Mark Benson, CSP
Ross Edwards, CSP
Brian Kelleher, SFMTA
Sarah Wilson, CSP
Mun Leong, CSP
Beverly Ward, CSP

CMB Meeting Minutes #125

DATE: May 08, 2012

MEETING DATE: **May 09, 2013**

LOCATION: 821 Howard St, Main Conference Room

TIME: 3:00 PM

ATTENDEES: J Funghi (JF), A. Hoe (AH), R Edwards (RE), M. Benson (MB), J. Park (JP), M. Latch (ML), R. Redmond, (RR), B. Kelleher (BK), E. Stassevitch (ES), S. Wilson (SW), M. Leong (ML), B. Ward (BW), L. Zurinaga (LZ), B. Lebovitz (BL)

COPIES TO: Attendees: S. Farhangi (SF), V. Chow (VC), R. Nguyen (RN), A. Wong (AW), J. Wang (JW), A. Read (AR), D. Kuehn (DK)
File No. M544.1.5.0890

REFERENCE Project No. M544.1, Contract No. 149 Task 1-8.02
Final Design

SUBJECT: Configuration Management Board Meeting # 125 – Rev. No. 0

RECORD OF MEETING *(Italicized text indicates status update of open items)*

ITEM #	DISCUSSION	ACTION BY DUE DATE
7- 04/03/13	1252 – R. Edwards presented PCC 012 - Revised Tunnel Alignment for approval of the Re-profile of tunnel to avoid the micropile installed under CN1251. In response to RFI 179 this PCC directs the Contractor to use the revised micropile northbound and southbound profile to avoid conflict with existing micropile. The change is required so that TBM and Tunnel structure is below previously installed micro-piles (see attached). The CMB recommend a request be made to the Contractor to segregate all changes so the information may be included in the documentation regarding the Designers E&O issue. Also the CMB need evidence that the design change has been routed and is signed off by the various disciplines as backup documentation for the files. Notification of the profile change will be submitted to BART and the IRP. Status: <i>05/08 This item was not discussed at this week's meeting.</i>	RE 05/15/13
8- 04/03/13	1252 – Design Services During Construction - M. Benson presented for a later discussion in more detail a summary of CS155-2 (DP2) Task16 Design Services expended for subtask 16.30 and 16.40. Demonstrating actual cost to date of design services expended during the construction phase. The CMB recommend the chart be expanded showing the total budget for the each individual task in column format, also a breakout of the submittal description and detailing the RFI category type reviewed under the headwalls. In addition information regarding hours spent on activities not included in 16.30 and 16.40. The CMB also requested the same level of effort be presented for review for Design Contract CS155-1 (DP1). This item will be brought back to the next CMB meeting. 04/10 M. Benson reported a modification to the DP2 Design Services chart was updated expanding the summary to demonstrate the burnout of the individual task/categories. Further investigation still needs to take place to resolve some issues with a conflicting burn rate between the actual progress payment invoice submitted and documentation submitted by the Designer	MB 05/15/13

ITEM #	DISCUSSION	ACTION BY DUE DATE
	<p>prior to being forward to the Deputy Program Manager for review. A detail presentation will be given at next week's meeting of DP2 and DP1 cost breakdown by category. 04/17: An expanded summary spreadsheet was presented showing the break out of the categories for work under subtask 16.30 and 16.40 for - work completed to date, remaining work and reasons for overruns to support the reason for request for additional \$10K in funds. The CMB suggested the CM team put the Contractor on notice that any submittal regarding design substitution for review will be at the Contractor's expense. In addition the CMB requested a presentation of the DP1 Task 16 Design Services hours and cost detail summary also be brought to the CMB for review when finalize. This item will be brought back to next week's CMB. <i>Status: 05/08 This item was not discussed at this week's meeting.</i></p>	
1-	<p>1252- Submittal 31 74 17-025 Segments Spalls Repair Procedure, Rev 2 was presented for approval of response comments to SFMTA's review of Rev1 for the proposed Spalling Repair Procedure for stress relief portions of the tunnel segments (yellow and superficial) spalling. The Contractor submitted a revised submittal to address SFMTA's seven points of concerns (see attached). The CMB took exception to the revised submittals deficiency in demonstrating the repair procedure and missing information recommending the proposed design mix for the repairs. In addition a second Submittal 31 74 17-026 Segment Liner Alternate Repair Method data sheet proposing a new repair product <i>CTS Rapid Set Mortar Mix</i> as a possible alternate patching material for minor segment chips/spalls to the previously proposed <i>Speedcrete Red Liner Morta</i> was submitted. The CMB recommend that the CM Team request revised submittals demonstrating a clear line of responsibility for the design liability and a comprehensive and cohesive approach to repairs that specifically respond to the original comments. This item will be brought back to the CMB at a later date.</p>	ML 05/15/13
2-	<p>1252 – M. Benson requested approval for negotiation position for COR79 Compensation Grout – Old Navy additional cost associated with inefficiencies of installing the compensation grout tubes. Justification was based on the premise that the larger piece of equipment could have performed the work if the in place utilities had been found as shown in the Bid documents. Because of the actual configuration of underground utilities was much different than that shown on the Bid documents, payment is warranted for the inefficiencies caused by utilizing the smaller piece of equipment. The CMB raised several questions about the graphical depiction of the As Bid condition and requested that the graphical representation be properly updated to show the As Bid condition. Similarly, the actual condition graphic could be improved to better show actual conditions found. Detailed information demonstrating the cost of the inefficiency appear in order, however the requested NTE amount was not properly justified compared to the computed cost by the Engineer. The CMB was unable to provide approval due to the still open question that the utility obstructions potentially indicate the Contractor should have brought in a smaller rig to begin with. CMB suggested improved graphics and supporting information be developed to justify the requested negotiating position. This item will be brought back to the CMB next week.</p>	MB 05/15/13
3-	<p>1252 – S. Wilson requested negotiation position for COR 073 – Force Account Reconciliation cost comparison (see attached) for cost associated with 16" pipe removal at north east headwall. Merit for the work was agreed to by the CMB at meeting #117. AGREE – CMB 0118 – Not To Exceed value of \$989.00.</p>	
4-	<p>1252 – S. Wilson requested negotiation position for COR 076 – Force Account Reconciliation cost comparison (see attached) for cost associated with 16" pipe removal at south east headwall. Merit for the work was agreed to by the CMB at meeting #118. AGREE – CMB 0119 – Not To Exceed value of \$1,116.00.</p>	
5-	<p>1252 – M. Benson requested negotiation position for PCC 06 cost comparison of Additional BART Tunnel Instrumentation (see attached). The CMB expressed concerned that the \$624K price to perform the work was too high and requested Jane Wang to contact the IRP in writing to find out if the additional instrumentation monitoring was still warranted given the</p>	JW 05/22/13


ITEM #	DISCUSSION	ACTION BY DUE DATE
	new lowered tunnel alignment and the cost to implement the work. The RE will confirm the date for which a final decision by SFMTA is to be made to forward to the Contractor. This item will be brought back to the CMB at a later date.	
6-	The Program Trend/Change Control Log dated 05/08 viewed at this week's meeting. A review of Contract 1252 newly added COR #088 was done – SFWD Impacts at MOS South Change Proposal. The CM Teams has found the COR without merit due to the work not being on the Critical path. The log is attached for distribution with these meeting minutes.	

ACTION ITEMS

ITEM #	MTG DATE	MTG ACTION DATE	DESCRIPTION	BIC	DUE DATE	STATUS
1	11/07/12	11/07/12	1300 – 1254 SF Planning Request - Cost	RE	0515/13	Open
7	04/03/13	04/03/13	1252 – PCC 12 -- Advise BART and IRP	RE	05/15/13	Open
8	04/03/13	04/03/13	1252 -- DP2/DP1 – Design Services hours and cost during construction – DP1 Review	MB	05/15/13	Open
1	05/09/13	05/09/13	1252 - Spalls Repair Procedure - Revision	ML	05/15/13	Open
2	05/09/13	05/09/13	1252 -- COR 079 – Revised Ref dwgs	MB	05/15/13	Open
5	05/09/13	05/09/13	1252 PCC 06 – Contact IRP – Revisit Monitoring Instrumentation plan	JW	05/22/13	Open

Meeting adjourned at 5:25pm

These meeting minutes have been prepared by B. Ward and reviewed by, E. Stassevitch and are the preparer's interpretation of discussions that took place. If the reader's interpretation differs, please contact the author in writing within four (4) days of receipt of these minutes.

Signed:  [initials of preparer & reviewer] Date: 14 May 13 [Date review completed]

Meeting Agenda

Project No. M544.1, Contract No. CS-149
Program/Construction Management
Configuration Management Board (CMB) Meeting No. 125
May 08, 2013
3:00pm – 5:00pm
 Central Subway Project Office
 821 Howard St. 2nd Floor
 Main Conference Room

Attendees:

Mark Benson	John Haley	Mark Latch	Eric Stassevitch
Vivian Chow	Albert Hoe	Brad Lebovitz	Beverly Ward
Ross Edwards	Brian Kelleher	Roger Nguyen	Sarah Wilson
Shahnam Farhangi	Jim Kelly	Joon Park	Arthur Wong
John Funghi	David Kuehn	Richard Redmond	Luis Zurinaga

1. **1252** – COR 079 – Compensation Grouting – Old Navy - *Recommend Approval*
 - COR 073 – MOS - 16" Pipe removal @ NE Headwall - *Recommend Approval*
 - COR 076 –MOS - 16" Pipe removal @ SE Headwall - *Cost NTE*
 - PCC 06 – Additional BART Instrumentation - *Cost NTE / Force Account Change Order*
 - Submittal 31 74 17-025 Segment Spalls Repair Procedure - *Recommend Approval*
 - Submittal 31 74 17-026 Segment Liner Alternate Repair Method - *Recommend Approval*

2. **Trend/Change Log** – 05/08/13

3. **Other Business** –

Meeting Attendance Sheet

Project No. M544.1, Contract No. 149
Program/Construction Management
Configuration Management Board Meeting No. 125
May 08, 2013
3:00 p.m. – 5:00 p.m.
 Central Subway Project Office
 821 Howard, 2nd Floor
 Main Conference Room

Deliver Meeting Attendance Sheet with original signatures/initials to Document Control.

NAME	AFFILIATION	PHONE	E-MAIL (for minutes)	INITIALS
Please enter initials if your name is listed below. Please enter name, affiliation, phone number and email address if your name is not listed below.				
Benson, Mark	CSP	(415) 701-4295	Mark.Benson@sfmta.com	MCB
Chow, Vivian	SFMTA	(415) 701-5264	Vivian.chow@sfmta.com	
Edwards, Ross	CSP	(415) 701-5296	Ross.Edwards@sfmta.com	
Farhangi, Shahnam	SFMTA	(415) 554-0721	Shahnam.Farhangi@sfmta.com	
Funghi, John	SFMTA	(415) 701-4299	John.Funghi@sfmta.com	
Haley, John	SFMTA		John.Haley@sfmta.com	
Hoe, Albert	SFMTA	(415) 701-4289	Albert.Hoe@sfmta.com	
Kelleher, Brian	SFMTA	(415) 701-5289	Brian.Kelleher@sfmta.com	
Kelly, Jim	SFMTA		Jim.Kelly@sfmta.com	
Kuehn, David	STV/PMOC	(510) 464-8053	David.kuehn@stvinc.com	
Latch, Mark	CSP	(415) 701-5294	Mark.Latch@sfmta.com	ML
Lebovitz, Brad	STV/PMOC	(510) 464-8052	Bradley.lebovitz@stvinc.com	

central **T** subway

NAME	AFFILIATION	PHONE	E-MAIL (for minutes)	INITIALS
Nguyen, Roger	SFMTA	(415) 701-4312	Roger.Nguyen@sfmta.com	
Park, Joon	SFMTA	(415) 701-4742	Joon.Park@sfmta.com	<i>JP</i>
Redmond, Richard	CSP	(415) 701-4288	Richard.Redmond@sfmta.com	<i>RR</i>
Stassevitch, Eric	CSP	(415) 701-4426	Eric.Stassevitch@sfmta.com	<i>ES</i>
Ward, Beverly	CSP	(415) 701-5291	Beverly.Ward@sfmta.com	<i>BW</i>
Wilson, Sarah	CSP	(415) 243-0950	Sarah.Wilson@sfmta.com	<i>SW</i>
Wong, Arthur	SFMTA	(415) 701-4305	Arthur.Wong@sfmta.com	
Zurinaga, Luis	SFCTA	(415) 716-6956	Luis.zurinaga@sfcta.org	<i>LZ</i>
LEONG, MUN	SFMTA CSP	(415) 531 9476	MUN.LEONG@SFMTA.COM	<i>LM</i>
		Ross EDWARDS was in attendance but did not sign in		<i>REW</i>

San Francisco MTA

821 Howard St.
2nd Floor
San Francisco, CA 94103

Phone: 415-701-5276
Fax: 415-701-5222

TRANSMITTAL
No. 00142

PROJECT: 1252 TBM, Launch Box and Tunnel

DATE: 3/13/2013

TO: Barnard Impregilo Healy J.V.
420 4th Street
San Francisco, CA 94107

REF: Proposed Contract Change 06 rev
2
Additional BART Tunnel
Instrumentation

ATTN: Ben Campbell

WE ARE SENDING:	SUBMITTED FOR:	ACTION TAKEN:
<input type="checkbox"/> Shop Drawings	<input type="checkbox"/> Approval	<input type="checkbox"/> Approved as Submitted
<input type="checkbox"/> Letter	<input checked="" type="checkbox"/> Your Use	<input type="checkbox"/> Approved as Noted
<input type="checkbox"/> Prints	<input type="checkbox"/> As Requested	<input type="checkbox"/> Returned After Loan
<input checked="" type="checkbox"/> Change Order	<input type="checkbox"/> Review and Comment	<input type="checkbox"/> Resubmit
<input type="checkbox"/> Plans		<input type="checkbox"/> Submit
<input type="checkbox"/> Samples	SENT VIA:	<input type="checkbox"/> Returned
<input type="checkbox"/> Specifications	<input checked="" type="checkbox"/> Attached	<input type="checkbox"/> Returned for Corrections
<input type="checkbox"/> Other: PCC 06 rev 2	<input type="checkbox"/> Separate Cover Via:	<input type="checkbox"/> Due Date:

Remarks: Find attached Revision 2 of PCC 6. As discussed, please prioritize providing this cost quote so that there is no delay to the work.

CC:

Signed: 
Sarah Wilson

PROPOSED CONTRACT CHANGE

Form 1102-1

Contract No. 1252 - Tunnels

Date 3/13/13

PCC No. 1252-06 Rev. 2

PCC Title Additional BART Tunnel Instrumentation

Description of PCC

1. Implement additional instrumentation of BART tunnel lining:
 - A. Existing bolt preload force – Determine the actual load in 6 bolts identified as "Tension Test Location" in Figure 2A in each tunnel (M1 and M2) for a total of 12 bolts. If the bolt is replaced with a new bolt that will be used for monitoring bolt force, the bolts removed for testing shall be replaced with the longer bolt and load washer configuration shown in Figure 3.

BIHWANG shall coordinate bolt load testing with bolt force sensor installation.

The method of measurement shall be as demonstrated in report by Marvin Manufacturing.
 - B. Bolt force sensor – Install 17 bolt force sensors at bolts identified as "Load Cell Location" in Figure 2A in each tunnel (M1 and M2) for a total of 34 bolts. Bolt force sensors shall be added using new A325 bolts, nuts, flat washers. (See Figures 3 and 4 for layout of instrumented bolt and sensor data.) Bolt force sensors shall remain and not be later removed. Wiring from sensors to datalogger shall be affixed securely to tunnel and removed at completion of tunneling for Contract No. 1252 to the limits requested by BART. Monitor the forces in bolts per contract requirements.
 - C. Rail movement under dynamic train loading – Install dynamic strain gauges (2 per rail, 8 per tunnel) at locations shown in Figure 2 in each tunnel (M1 and M2). Trigger for polling strain gauges on rapid cycle shall be automatic and based on detection of passing train. Utilize the same motion sensor required under Section 31 09 13, Article 1.05.E.4.d (page 31 09 13-14). Monitoring shall occur in each of the BART tunnels at one location above each of the two CS tunnels (4 locations total) with monitoring only over the Central Subway tunnel being bored (one datalogger used for two applications).

Spec Ref Specification 31 09 15, 31 09 13

Drawing Nos. Figure 1 (BP-313, BP-316), Figures 2, Figure 2A and 3

The Contractor's proposal in price and time is required on the this proposed contract change to the subject contract in accordance with the General Provisions Section 6.02 B, within 14 days after receipt of a PCC.

Recommended by:

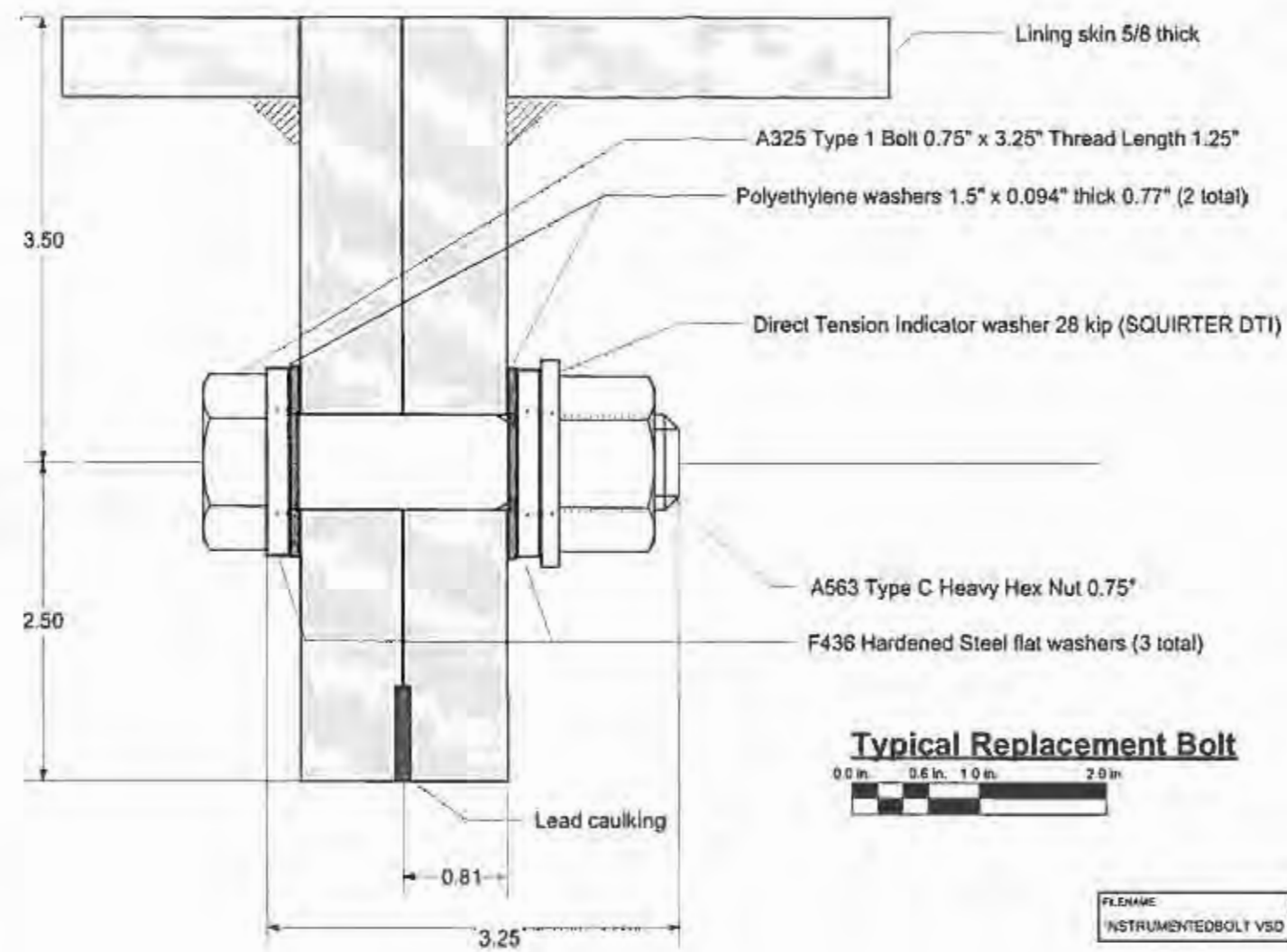
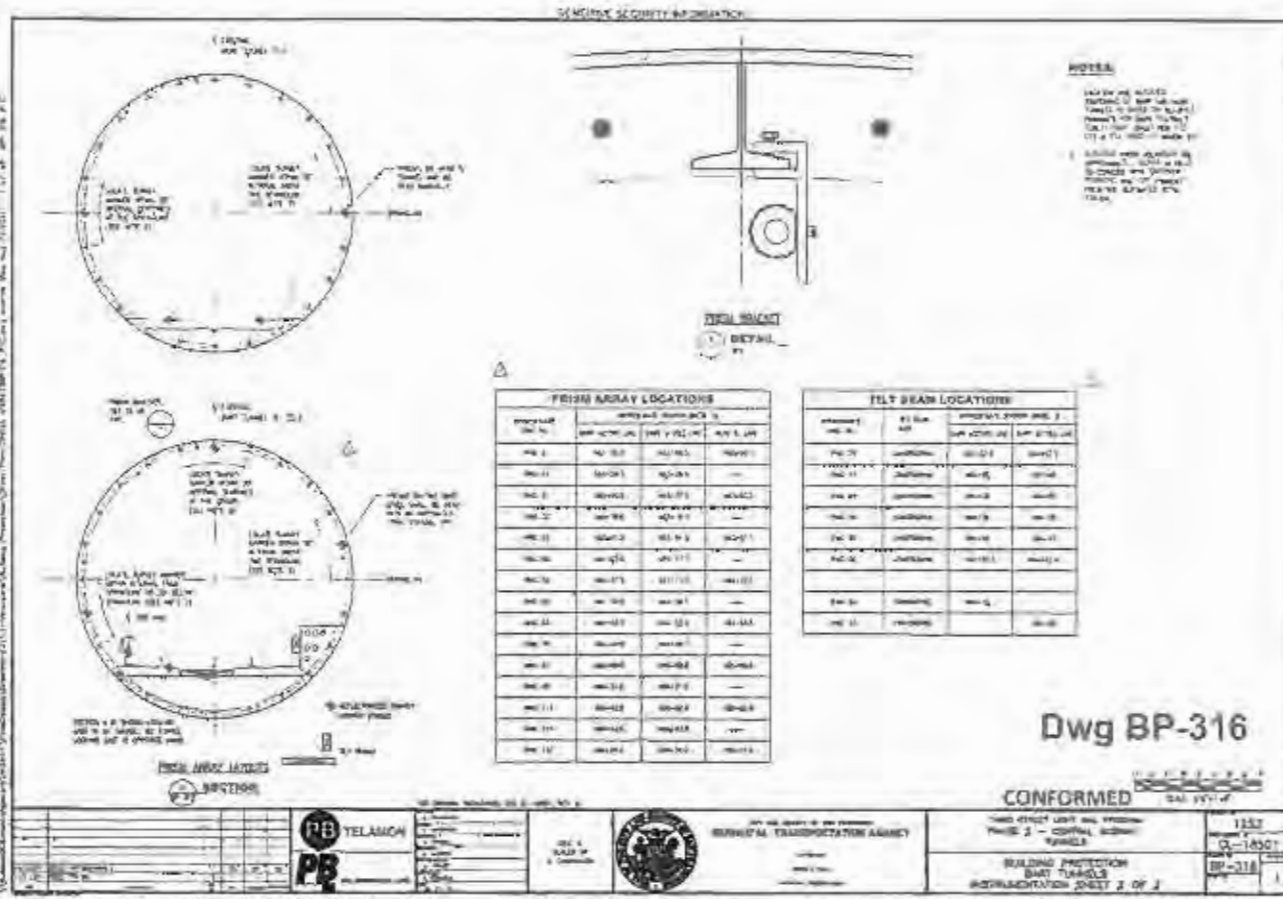
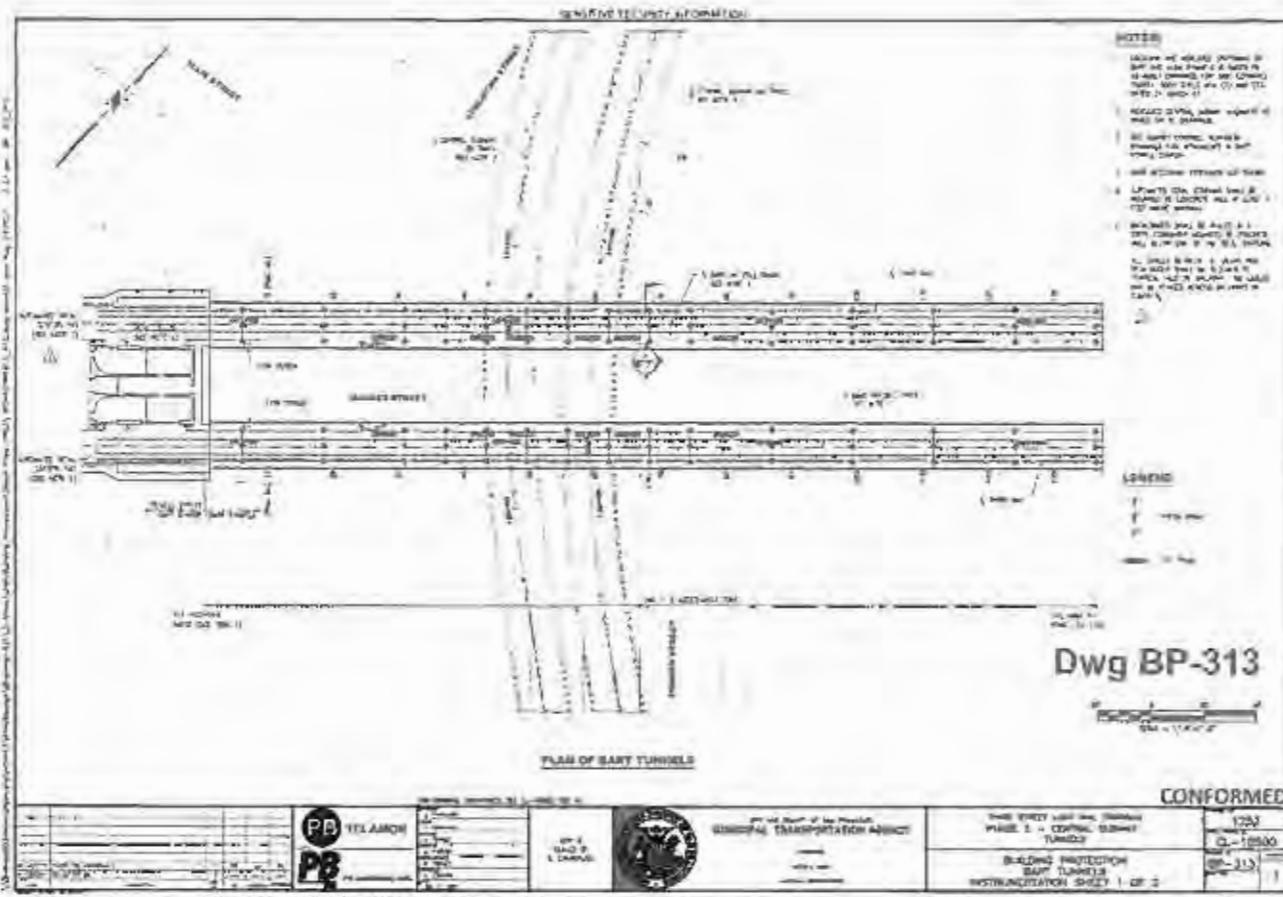

Sarah Wilson, (SFMTA Representative)
SFMTA Representative

3/13/13
Date

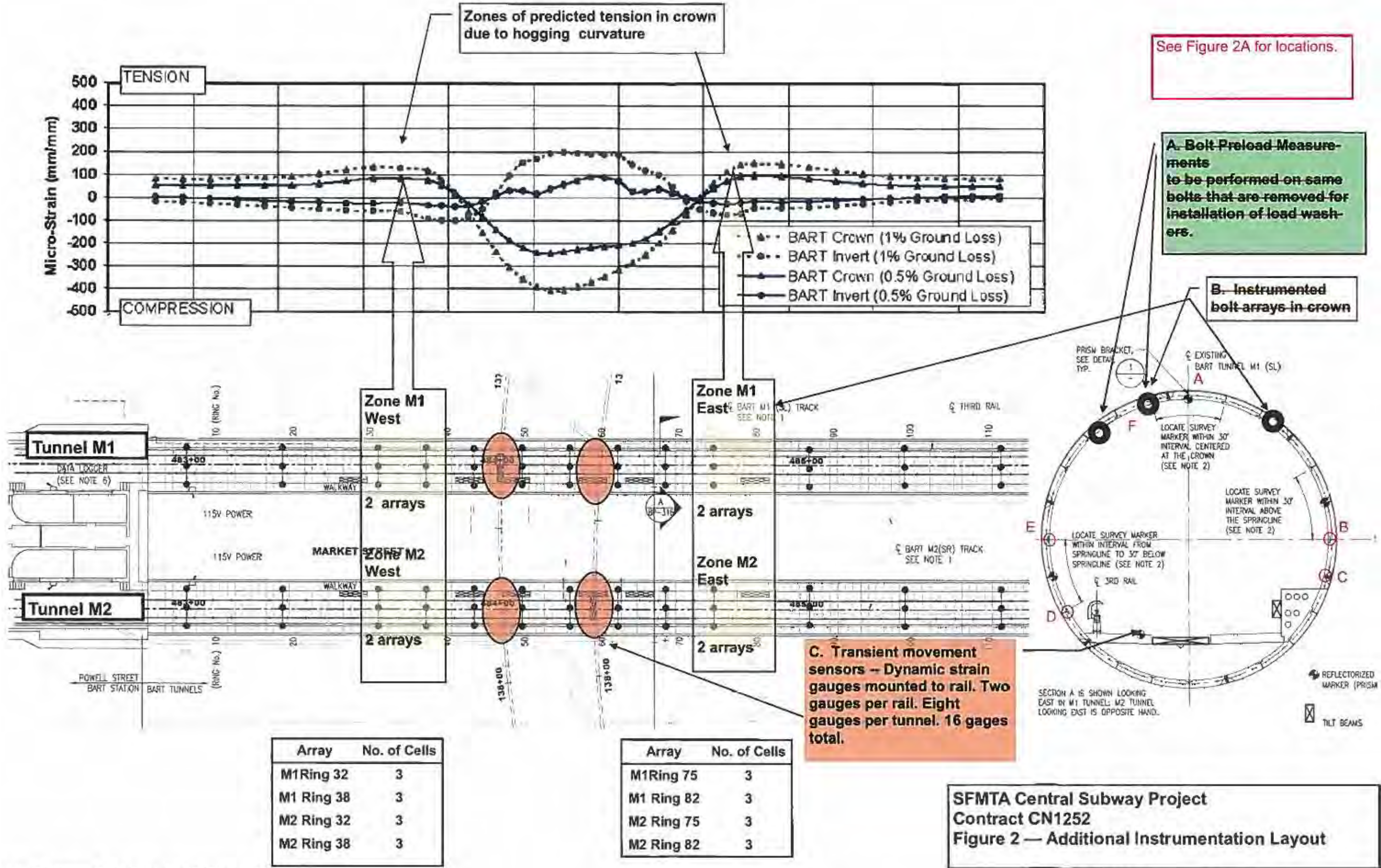
Concur in Principle:


Mark Benson, Construction Manager (SFMTA Representative)

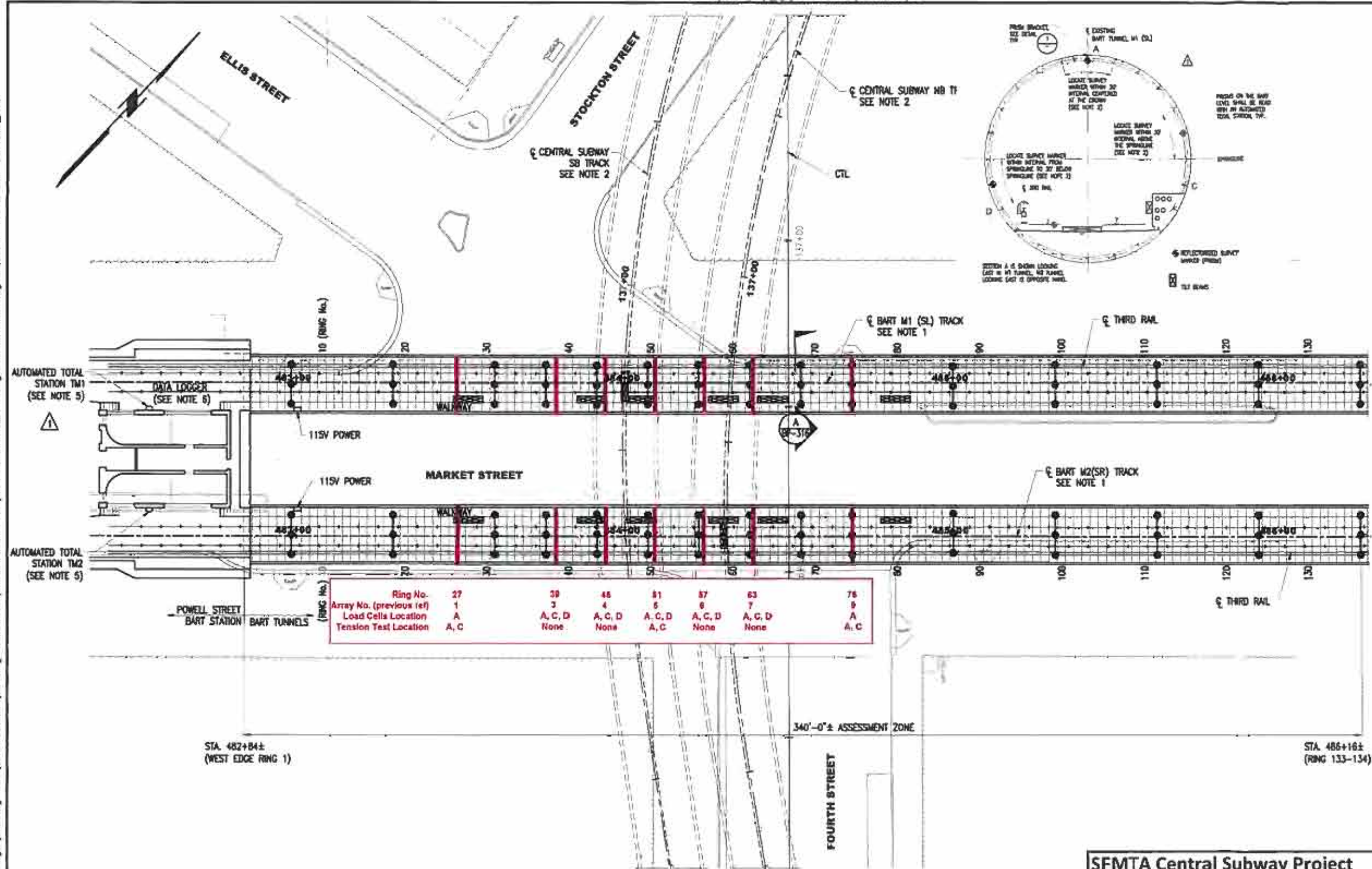
3/13/13
Date



SFMTA Central Subway Project
 Contract CN1252
 Figure 1 BART Instrumentation — Contract Drawings



S:\s\003\muni\le.gov.org\m544.1\FinalDesign\Drawing-821\3-Structural\Building Protection\Sheet Files CP03\MS4423BP313_R1C.dwg econtill Wed Aug 24, 2011 - 7:42 am BP-313_R1C



Ring No.	27	39	46	51	57	63	76
Array No. (previous ref)	1	3	4	5	6	7	9
Load Cells Location	A	A, C, D	A, C, D	A, C, D	A, C, D	A, C, D	A
Tension Test Location	A, C	None	None	A, C	None	None	A, C

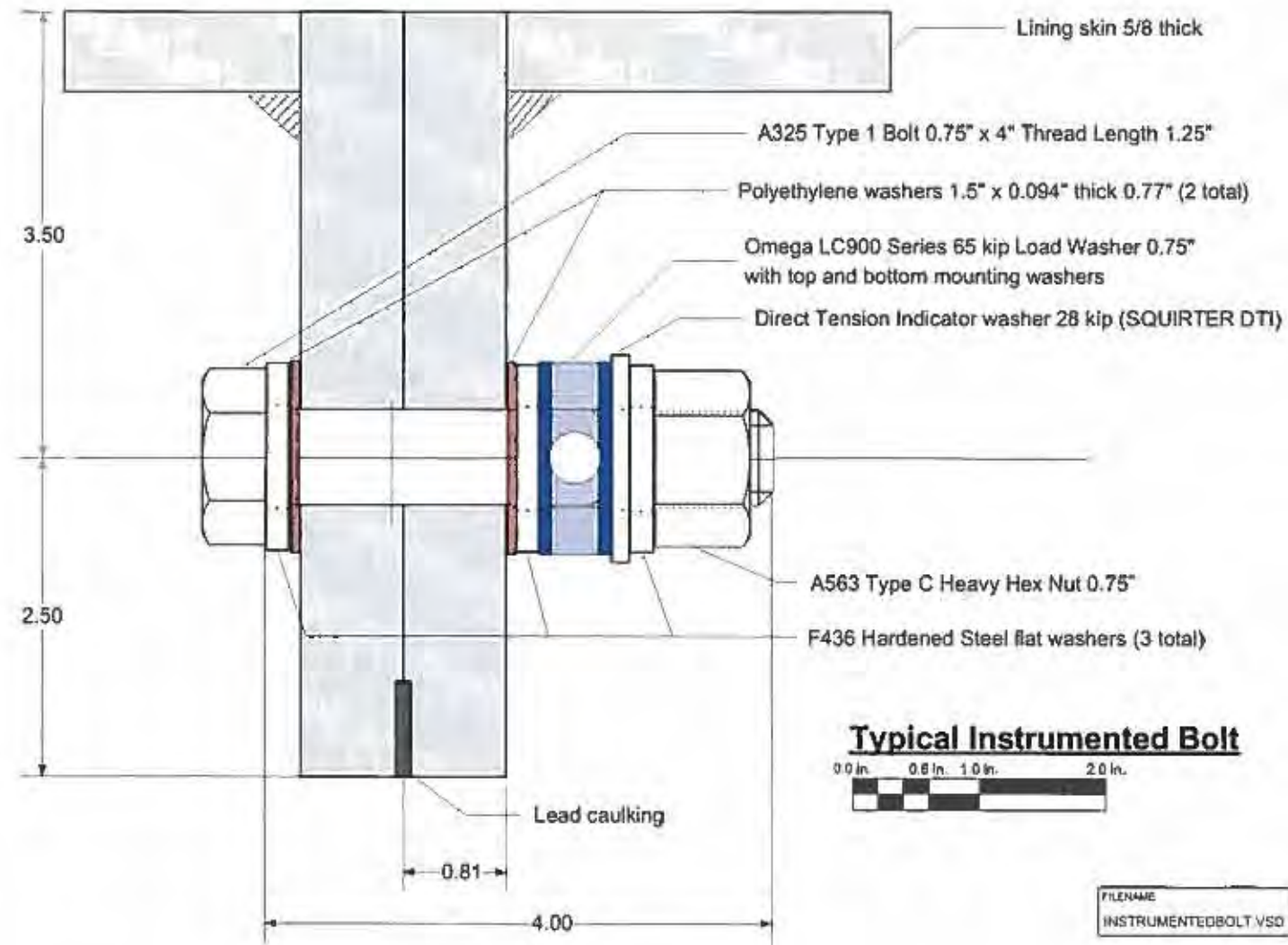


PLAN OF BART TUNNELS

SFMTA Central Subway Project
 Contract CN1252
 Figure 2A - Additional Instrumentation Layout

CONFORMED

FOR ORIGINAL SIGNATURES, SEE CL-18500, REV. 0.		CITY AND COUNTY OF SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY		THIRD STREET LIGHT RAIL PROGRAM PHASE 2 - CENTRAL SUBWAY TUNNELS		1252 CL-18500	
PB TELAMON PB AMERICAS, INC.		REV. 0 SEALED BY S. CAVANAUGH		APPROVED GREGG R. ROHN EXECUTIVE DIRECTOR/CEO		BUILDING PROTECTION BART TUNNELS INSTRUMENTATION SHEET 1 OF 2	
04/25/2011 ISSUED FOR ADDENDUM 4 01/21/2011 ISSUED FOR 980		S. CAVANAUGH M. MARASIGAN M. FOWLER M. HANSON M. FOWLER R. EDWARDS JUN 21, 2011		THE CITY AND COUNTY OF SAN FRANCISCO OFFICE OF THE CLERK 100 MARKET STREET, SUITE 400 SAN FRANCISCO, CA 94102		BP-313 1	



Notes:

1. Load washers to remain after completion of tunneling.
2. All wiring for load washers to be run to datalogger during tunneling and be removed (cut off at sensor or designated location) or preserved for future use, as directed by BART.

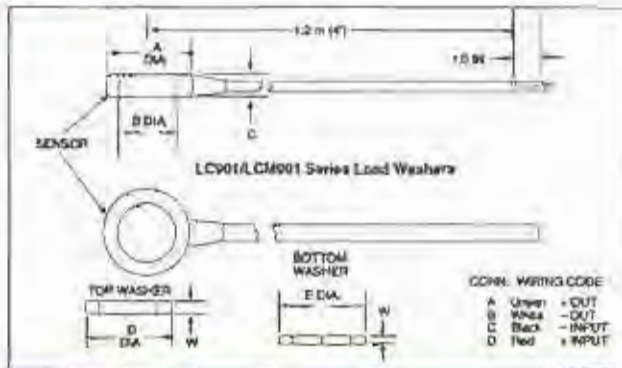
SFMTA Central Subway Project
 Contract CN1252
 Figure 3 — Instrumented Bolt Layout

BOLT SENSORS WITH MOUNTING WASHERS

STANDARD AND METRIC MODELS

LC900/LCM900 Series

Compression
 0-2000 lb to 0-100,000 lb
 0-10,000 N to 0-500,000 N
 1 Newton = 0.2248 lb
 1 daNewton = 10 Newtons
 1 lb = 454 g
 1 t = 1000 kg = 2204 lb



Dimensions: mm (in)

SIZE	CAPACITY	BOLT SENSOR			WASHERS		
		A	B	C	D	E	W
STANDARD MODELS							
1/2"	2000 lb	25.4 (1.000)	8.76 (0.288)	4.75 (0.187)	19.1 (0.750)	25.4 (1.000)	1.57 (0.062)
1/2"	5000 lb	25.4 (1.000)	8.76 (0.288)	4.75 (0.187)	19.1 (0.750)	25.4 (1.000)	1.57 (0.062)
3/4"	10,000 lb	19.1 (0.750)	10.1 (0.398)	4.75 (0.187)	16.7 (0.658)	19.1 (0.750)	1.57 (0.062)
1"	30,000 lb	25.4 (1.000)	13.1 (0.517)	6.35 (0.250)	21.4 (0.843)	25.4 (1.000)	1.98 (0.078)
1 1/4"	50,000 lb	28.8 (1.129)	15.4 (0.604)	8.35 (0.250)	24.8 (0.980)	28.8 (1.129)	1.98 (0.078)
1 1/2"	65,000 lb	36.1 (1.418)	19.4 (0.770)	8.53 (0.335)	30.8 (1.213)	36.1 (1.418)	2.36 (0.093)
1 3/4"	100,000 lb	68.7 (2.625)	38.9 (1.530)	22.2 (0.875)	63.5 (2.500)	68.7 (2.625)	3.18 (0.125)
METRIC MODELS							

BOLT SENSORS WITH MOUNTING WASHERS

STANDARD AND METRIC MODELS

MOST POPULAR MODELS HIGHLIGHTED!

BOLT SIZE	CAPACITY	MODEL NO.	MODEL NO.	MODEL NO.	MODEL NO.	MODEL NO.	MODEL NO.
lb	N	STRIPPED ENDS	PRICE	CONNECTOR END	PRICE	COMPATIBLE METERS**	
STANDARD MODELS							
1/2"	2000	9897	LC901-1/4-2K	\$290	-	-	DP41-S, DP25B-S, DPIS
1/2"	5000	22,242	LC901-1/4-5K	290	-	-	DP41-S, DP25B-S, DPIS
3/4"	10,000	44,484	LC901-3/4-10K	290	-	-	DP41-S, DP25B-S, DPIS*
1"	30,000	133,452	LC901-1-20K	310	LC911-1-20K	\$235	DP41-S, DP25B-S, DPIS*
1 1/4"	50,000	222,420	LC901-1 1/4-50K	340	LC911-1 1/4-50K	365	DP41-S, DP25B-S, DPIS*
1 1/2"	65,000	289,146	LC901-1 1/2-65K	390	LC911-1 1/2-65K	415	DP41-S, DP25B-S, DPIS*
1 3/4"	100,000	444,840	LC901-1 3/4-100K	425	-	-	DP41-S, DP25B-S, DPIS*
METRIC MODELS							
8 mm	2248	10,000	LCM901-6-10KN	\$290	-	-	DPIS, DP41-S, DP25B-S
8 mm	4496	20,000	LCM901-6-20KN	290	-	-	DPIS, DP41-S, DP25B-S
10 mm	11,240	50,000	LCM901-10-50KN	290	-	-	DPIS, DP41-S, DP25B-S
13 mm	29,225	130,000	LCM901-13-130KN	310	LCM911-13-130KN	\$235	DPIS, DP41-S, DP25B-S
16 mm	44,962	200,000	LCM901-16-200KN	340	LCM911-16-200KN	365	DPIS, DP41-S, DP25B-S
19 mm	67,443	300,000	LCM901-19-300KN	390	LCM911-19-300KN	415	DPIS, DP41-S, DP25B-S*
24 mm	112,405	500,000	LCM901-24-500KN	425	-	-	DPIS, DP41-S, DP25B-S*

ACCESSORY

MODEL NO.	PRICE	DESCRIPTION
PT01F10-6P	\$24.50	Mating connector for LC911/LCM911 series load cells

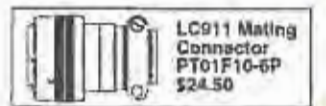
Comes complete with 2-point NIST traceable calibration and SP411 chart data. * 4-digit meter. ** See meter D for compatible meters.
 Ordering Examples: LC901-3/4-10K, 10,000 lb capacity bolt sensor for a 3/4" Dia. bolt with stripped ends on the leads, \$290.
 LCM901-10-50KN, 50 kN capacity bolt sensor for 10 mm bolt with stripped ends on the leads, \$290.
 LC911-1-20K, 30,000 lb capacity bolt sensor for a 1" Dia. bolt with a connector installed on the cable, \$310. PT01F10-6P, mating connector (sold separately), \$24.50.
 LCM911-13-130KN, 130 kN capacity bolt sensor for 13 mm bolt with a connector installed on the cable, \$235. PT01F10-6P, mating connector (sold separately), \$24.50.

Starts at
\$290



OMEGA's LC900/LCM900 Series bolt force sensors are compression load cells designed to measure the clamping force of a bolt. With excellent long-term stability and all stainless steel construction, the LC900/LCM900 Series delivers high reliability in severe industrial environments. These units are designed to operate by mounting on a flat surface between 2 mounting washers (included).

SPECIFICATIONS
 Excitation: 5 Vdc (10V max)
 Output: 2 mV/V nominal
 Accuracy: ±3.5% FSO linearity, hysteresis and repeatability combined
 Zero Balance: ±4% FSD
 Operating Temp Range: -54 to 93°C (-65 to 200°F)
 Compensated Temp Range: 15 to 71°C (60 to 160°F)
 Thermal Effects:
 Zero: ±0.018% FSO/°C
 Span: ±0.036% rdg/°C
 Safe Overload: 130% of capacity
 Ultimate Overload: 180% of capacity
 Bridge Resistance: 120 Ω nominal
 Construction: Stainless steel
 Electrical Connection: 1.2 m (4') insulated shielded cable



US & Canada 1.800.552.1999
 International 1.802.460.3100
 Facebook

Squitter® DTIs



SQUIRTER® DTIs are DTI's with a flexible silicone embedded in the depressions under the bumps. To use them, simply ... Tighten the bolt until the calibrated amount of orange silicone appears from under the DTI's squirt locations, then stop tightening. That's all there is to it.

Now you can see when you're done.

SQUIRTER® DTI FEATURES:

Easier & Better than Turn-of Nut
 You don't have to remember to stop turning at 1/3rd, 1/2, or 2/3rds turn. No match marking necessary.
Better than a Twist-Off Bolt
 Tension control rather than torque control.

- No splined end to twist off and become a safety hazard
- No problems caused by the splined end shearing off in torsion before the plies are together.
- Easier & Better than Calibrated Wrench**
 - You don't have to establish and then check the torque resistance of bolts daily and for each lot and when your wrench condition changes.
- Works with All Bolt Lengths**
 - Even when the bolts are extremely short or long, SQUIRTER® DTIs show you when the correct tension has been achieved.
- Saves Erector Time**
 - Enables correct tensioning as fast as the wrench can be moved to the next bolt, because the operator can see when to stop.
- Establishes A Good Snug Point**
 - With SQUIRTER® DTIs, snug is partial bolt tightness without any or much silicone showing. The snug criteria becomes no squirt. The tight criteria becomes squirt.
- Visual Low Tech Tension Indicator**
 - The orange silicone is easy for erectors to see. No feeler gage except during calibration.
- Safe for Inspectors**
 - Once calibrated, because inspectors can easily see the orange squirts, they don't have to climb out to all the connections or lug around a torque wrench to know the connection has been completed. And instead of sampling only some of the DTI's with a feeler gage, Squitter® DTIs allow virtually 100% inspection.
- Squitter® DTI's Approved**
 - SQUIRTER® DTIs are still made and certified to ASTM F959. FHWA pre-installation verification procedures, Research Council tests, and State DOT Quality Assurance procedures are unaffected.
- Extremely High Bolt Tension Avoided**
 - Erectors know when to stop tightening. Some applications prefer bolts tightened over a minimum, but not too far over. SQUIRTER® DTIs enable previously unavailable control.

SFMTA Central Subway Project
Contract CN1252
Figure 4— Bolt Load Sensor Data Sheets



Report: Study of Bolt Test Specimen, Lab Procedures and Results

Central Subway Project.

Attn: Jenny Vodvarka, Finance Manager, CSP

References:

P. O. NO. : 2012.04.030

Specification for Feasibility Study of Bolt Test Specimen
Preparation Rev 1

Summary

The study proved that the machining and tension testing procedure can predict the tension force in existing high-strength bolt installations. Outlined below are background, test procedures and results, and recommendations for the execution of bolt pretension measurement.

Background

Special tools and procedures were developed to machine the bolt faces. Preparation of the mock up assembly, machining of bolt surfaces and measurement of bolt length was performed at Marvin Manufacturing in Concord, CA on 6/29/2012. Additional bolt testing was performed at the ISI materials lab in Berkeley, CA on 7/18/12.

Reference:

Report: List of machinery, tools and equipment and procedures used to prepare the bolt test specimen.

Test Procedures

Marvin Manufacturing, Concord, CA

1) The mock up assembly was prepared in accordance with the Specification. A 3/4" X 3 3/4" A325 bolt, flat washers and 2H nut were installed at 3 locations under 28,000 lbs tension using a calibrated torque wrench. The bolt lengths were measured after machining at loaded and static conditions. **See Figures 1 and 2.**



Figure 1. Mock up assembly with installed bolt and machining fixture



Figure 2. Bolt length measured under load

See Table 1 for the summary of testing performed at Marvin Manufacturing.

Test Procedures

ISI, Berkeley, CA

1) Prior to the test, ISI discovered that the standard tensile test machine could not be used, even with modified tooling to hold the bolt assembly. The issue was that the extensometer, while having 50 millionths resolution, could not be reliably attached to the specimen. Under load, it became clear that some elongation was lost due to flex at the attachment points.

2) After deliberating on the subject, the team decided that the best approach was to use the Skidmore to measure the load, and tension the bolt with a wrench as done previously. A special caliper was constructed to fit around the body of the Skidmore to measure Delta L, the change in length of the bolt between loaded and static conditions. See Figures 3 and 4.

See Table 2 for the summary of testing performed at ISI.



Figure 3. Bolt tensioning using wrench, tension read by technician



Figure 4. Measuring bolt length under load using special caliper

3) The testing was successful. The specimens behaved predictably under load. Increased tension resulted in increased elongation approximately along a straight line plot.

Test Results

Table 1 Results of Testing at Marvin Manufacturing

Bolt ID	Bolt Load, P	Length, L1 (Loaded)	Length, L2 (Static)	Elongation, ΔL	Time when L2 at Measure
A	28 kips	4.1567 inch	4.1501 inch	0.0066 inch	12:00 pm
B	28 kips	4.1310 inch	4.1235 inch	0.0075 inch	11:00 am
C	28 kips	4.1498 inch	4.1424 inch	0.0074 inch	10:00 am

Note: All test specimens were installed in the mockup assembly at 9:00 AM

Table 2 Results of Testing at ISI

Bolt ID	Length, L1 (Static)	Length, L2 (Loaded)	Elongation, ΔL	Bolt Load, P
A	4.1484 inch	4.1550 inch	0.0066 inch	25.0 kips
B	4.1229 inch	4.1303 inch	0.0074 inch	27.0 kips
C	4.1203 inch	4.1278 inch	0.0075 inch	28.0 kips

Analysis

The initial data from the mockup test performed on 6/29/12 showed a deviation in Delta L from the mathematical model. Delta L decreased from bolt "B" to bolt "A" as the work commenced. During the course of testing, the ambient temperature increased from approximately 65 to 85 degrees F. ISI advised that any changes in environmental conditions can change the load on the bolts. While the exact mechanism involved is unclear, the consensus is that the deviations are primarily the result of a rise in temperature.

Fortunately, the issue has been addressed indirectly by developing tooling and procedures that will allow all mechanical testing to be done on site. Since the tunnel temperature does not vary more than a few degrees over a work shift, these thermally induced deviations will be a minimum.

Recommendations

The procedures and tooling developed for this project were sufficient to demonstrate proof of concept and meet the Specification; however, some further development is advised prior to deployment in the field.

Refine means and methods

1) The current methods work, but estimates indicate that only 3 bolts can be machined, removed, measured and replaced per shift (assuming 5 work hours per shift). Further development of means and methods of machining the bolt ends will expedite field bolt preparations. While a portion of the work is mobilization, it is possible to process more bolts per shift using improved tooling, or perhaps machining a different feature like a precision dimple instead of a flat.

Refine tooling

1) The prototype caliper for measuring bolt length was sufficient in a lab environment. The tools and methods of determining Delta L in the Skidmore need further development for field use because the mass and bulk of the caliper make measurements and calibration painstaking and consequently slow. The field tools should be light, stiff, and ergonomic, easily calibrated, and provide consistent, repeatable measurements,

2) A mobile work station is necessary to perform the mechanical testing functions on site. Development and construction of the station would be required prior to field deployment.

Marvin MANUFACTURING

Report: List of machinery, tools and equipment and procedures used to prepare the bolt test specimen.

Central Subway Project.

Attn: Jenny Vodvarka, Finance Manager, CSP

References:

P. O. NO.: 2012.04.030

Specification for Feasibility Study of Bolt Test
Specimen Preparation Rev 1

Mockup Preparation

The mockup was fabricated according to the specifications, utilizing steel plate to create the features and simulated obstructions. Brackets were attached to allow positioning at points "A", "B", and "C".



Simulated shell plate, structural Tees and floor at location "C"

The bolts used were $\frac{3}{4}$ " X $3\frac{3}{4}$ " A325, black finish with standard washers and 2H nuts (Note: The bolt shown in the photos is not an actual test specimen. It is used solely for illustrative purposes.)

Prior to installation, a new bolt was installed in a Skidmore calibrator. The Skidmore is a precision hydraulic device which directly converts applied torque into lbs force tension on a direct-reading dial.



Skidmore calibrator

Follow these links for more information on the Skidmore.

[product manual](#)

[instruction manual](#)

A new unused test specimen was installed in the Skidmore. Using a precision click-type torque wrench, the bolt was tightened until 28KIPs was recorded on the dial. The expected torque required was approximately 350ft lbs. The torque wrench was incrementally adjusted over several attempts so that the "click" feature occurred on average at 28KIPS.

Note that while the torque wrench itself is calibrated, the actual torque required is not important, only the repeatability of the tool. Once the wrench is calibrated to the Skidmore at 28KIPS, the operator locks the wrench at that setting. Bolts are tightened until the wrench "clicks", indicating that the wrench is applying the predetermined torque.

The bolts, washers and nuts were subsequently installed without lubrication at locations "A", "B" and "C" using the calibrated wrench. The bolt heads were engraved prior to installation to aid in identification later.

Machining

Starting at position "C", a precision bearing block was installed on the flange, aligned and secured using an array of set screws.

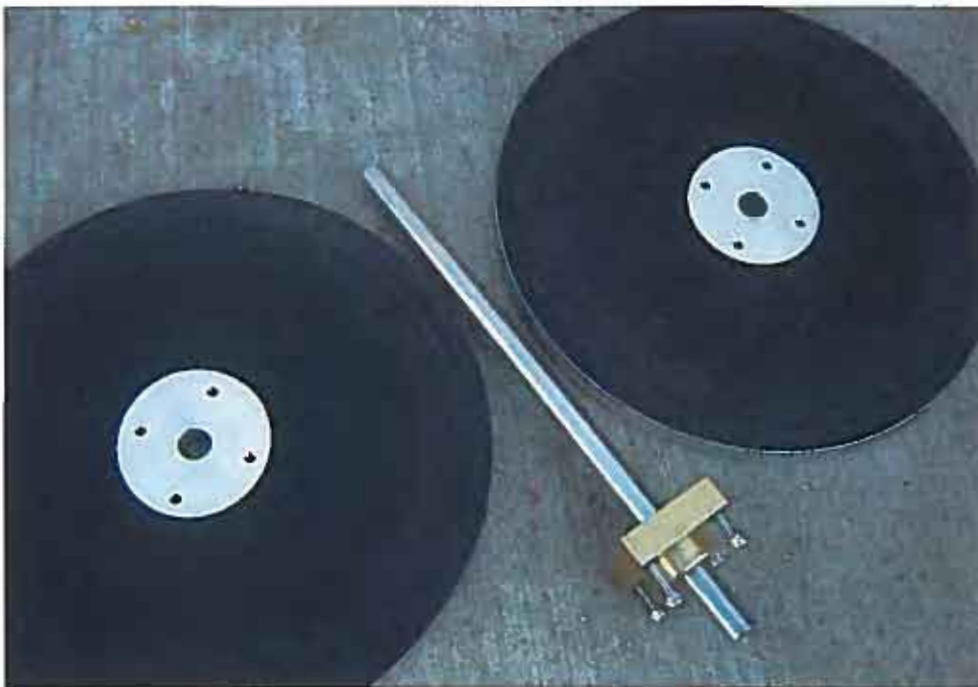


The bolts were initially prepared by flat filing by hand both the bolt head and threaded end to remove excess material.



Files, hones and wrenches

A precision arbor assembly with grinding disc was then installed.



Precision arbor assembly and discs



The disc was rotated by hand, removing material from the bolt head. Progress was monitored by periodically removing the arbor assembly for inspection. High spots were removed by flat filing to speed progress of the work.



High area indicated by metallic surface. Low spots are black

Once the high spots were eliminated, the grinding disc was reversed or exchanged for a finer grit to improve the surface finish.

The arbor was then removed and installed on the opposite side



Bolt end, mid process

The machining process is repeated, filing and exchanging discs until the surface meets the specification for finish. After passing a visual inspection, the arbor and bearing block were removed. Final dressing was done by hand using a diamond hone.

Gaging

A precision micrometer was used to measure the overall length of each bolt before and after removal.



The bolt length was recorded in place. The bolt was then removed and the length again gaged and recorded.



Micrometer being used to measure bolt length prior to removal

The procedure was then repeated at locations "B" and "A" to simulate work done in semi-overhead and overhead positions.



Bolt location "B"



Bolt location "A"

Conclusion

The machining fixtures, tooling, and machinist procedures produced results that met the test specifications for surface size, finish, and parallelism. Accurate measurements were achieved using the precision gages.

The time require to prepare a bolt (not including mobilization or gaging) is approximately 30-60 minutes. Additional equipment such as power drives and additional tooling and machinists could be used to speed work in a field environment.

Preliminary calculations indicate the measured change in length (approximately .007") is within range of mathematical models for elongation for a $\frac{3}{4}$ " A325 bolt under a load of 28KIPs. No compensation was made for thermal expansion due to changes in ambient conditions.

Exact data and additional lab work is the subject of a future report.

COR (PCC 06)

No.	Activity Name	Days (C)	Days (EE)	Contractor (C)	Engineer's Estimate (EE)	Delta (EE-C)	Summary of Delta	Negotiation Position
Labor	1 Mobilization		1	\$ 9,986.40	\$ 4,993.20	\$ (4,993.20)		
	2 Dynamic Stain Gauge		14	\$ 67,303.08	\$ 67,233.60	\$ (69.48)		
	3 Bolt Force Sensors		12	\$ -	\$ -	\$ -		
	4 Bolt Force Sensors		22	\$ 115,403.04	\$ 115,419.96	\$ 16.92		
	5 Continuous Monitoring		28	\$ 43,855.20	\$ 33,517.91	\$ (10,337.29)		
	6 Remote Monitoring		260	\$ 47,934.72	\$ 47,930.73	\$ (3.99)		
	7 BART Monitors		16	\$ 38,720.00	\$ 30,976.00	\$ (7,744.00)		
	8 Prime Contractor Assistance		16	\$ 9,936.00	\$ 6,362.00	\$ (3,574.00)		
	9		0	\$ -	\$ -	\$ -		
	10							
	11							
	12							
Equipment	1 Mobilization		1	\$ -	\$ 529.92	\$ 529.92		
	2 Dynamic Stain Gauge		14	\$ -	\$ -	\$ -		
	3 Bolt Force Sensors		12	\$ -	\$ -	\$ -		
	4 Bolt Force Sensors		22	\$ -	\$ -	\$ -		
	5 Continuous Monitoring		28	\$ -	\$ -	\$ -		
	6 Remote Monitoring		260	\$ -	\$ -	\$ -		
	7 BART Monitors		16	\$ -	\$ -	\$ -		
	8 Prime Contractor Assistance		16	\$ 3,020.80	\$ 2,416.64	\$ (604.16)		
	9		0	\$ -	\$ -	\$ -		
	10							
	11							
	12							
				Material	\$ 108,399.52	\$ 76,786.99	\$ (31,612.53)	
				Markup LM&E - 15%	\$ 58,640.77	\$ 53,278.64		
				2nd Tier Subs	\$ 101,380.00	\$ 81,100.00		
				Markup - 5%	\$ 5,069.00	\$ 4,055.00		
				Sub. Bond/Insurance 0.75%	\$ -	\$ 3,934.50		
				Prime Markup - 5%	\$ 29,737.41	\$ 26,426.75		
				Prime Bond/Insurance 1.68%	\$ 10,741.68	\$ 9,323.36		
				Total	\$ 650,127.62	\$ 564,285.21	\$ (85,842.41)	

RE Recommended NTE Amount:	\$ 620,000.00	\$564,285.21+ \$15k ISI delta due to \$6,900/bolt vs. \$5,500/bolt unit cost + \$20k Wang Material + \$7k Markup differences due to cost differences + \$8k BART Staff - Contractor counts them for 10 hour days vs. EE of 8 hour days + \$5k Continuous Monitoring - EE believes Contractor has incorrect distribution of hours between straight time and OT for monitoring
----------------------------	---------------	--

Estimate Summary

Scope/Background:

Implement additional instrumentation of BART tunnel lining:

- A) Existing bolt preload force – Determine the preload forces in 12 bolts. The selected bolts removed for testing shall be replaced with the longer bolt and load washer configuration shown in Figure 3.
- B) Bolt load cell – Install 17 additional load washers on bolts identified in Figure 2 in each tunnel (M1 and M2 for a total of 34 bolts. Load washers shall be added using new A325 bolts, nuts, flat washers. (See Figures 3 and 4 for layout of instrumented bolt and sensor data.) Bolt load washers shall remain and not be later removed. Wiring from load washers to datalogger shall be affixed securely to tunnel and removed at completion of tunneling for Contract No. 1252 to the limits requested by BART. Monitor the forces in bolts per contract requirements.
- C) Rail movement under train load – Install dynamic strain gauges (2 per rail, 8 per tunnel) at locations shown in Figure 2 in each tunnel (M1 and M2). Trigger for polling strain gauges on rapid cycle shall be automatic and based on detection of passing train. Monitoring shall occur in each of the BART tunnels at one location above each of the two CS tunnels (4 locations total) with monitoring only over the Central Subway tunnel being bored (one datalogger used for two applications).

Date of occurrence: 5/8/13

List of attached documents:

- Detailed Estimate
- Materials List

Material	Qty.	Unit	Unit Price	Extension
Dynamic Strain Gauge	16	ea.	\$ 188.00	\$ 3,008.00
Telemetry - Verizon Raven Cellular Modem	2	ea.	\$ 471.95	\$ 943.90
Telemetry - High gain Antenna	2	ea.	\$ 76.07	\$ 152.14
Bolt Load Cell				
A325 Bolt 0.75" x 4"	34	ea.	\$ 2.54	\$ 86.36
Polyethylene washers 1.5" x 0.094" thick	68	ea.	\$ 0.17	\$ 11.56
F436 Hardened steel flat washers	102	ea.	\$ 0.50	\$ 51.00
Direct tension indicator washer 28 kip	34	ea.	\$ 6.92	\$ 235.28
A563 Type C heavy hex nut 0.75"	34	ea.	\$ 1.60	\$ 54.40
Load washer with mounting washers	34	ea.	\$ 390.00	\$ 13,260.00
Mating connector	34	ea.	\$ 24.50	\$ 833.00
DAQ System + Ancillary/Comm. Hardware				
Campbell Scientific CR5000 incl. rechargeable base, calibration cert, power cable and common accessories	4	ea.	\$ 6,242.00	\$ 24,968.00
Terminal Input Modules & Signal Conditioners	50	ea.	\$ 225.00	\$ 11,250.00
NEMA 4X - Corrosion Resistant Fiberglass Enclosure	16	ea.	\$ 155.90	\$ 2,494.40
Power Conditioner & UPS	2	ea.	\$ 263.85	\$ 527.70
300' of 4 conductor 22 AWG Cable	2	ea.	\$ 379.00	\$ 758.00
Second Tier Sub - Material Mobilization	1	LS	\$ 13,022.80	\$ 13,022.80
			Sales Tax 8.75%	\$ 5,130.45
Total				\$ 76,786.99

2nd Tier Sub Quote

\$ 16,000.00

GENERAL

Proposed Change Sponsor: S. Wilson Received by CMB: 05/08/2013
(Date)

Affected Disciplines: Excavation and Ground Support

Impacts of Change MOS – 16" Pipe removal at SE Headwall

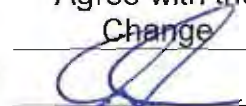




Change Order Request (COR 076) Amount Not To Exceed
\$1,116.00

Contract(s) Directly Affected by this Proposed Change:

1250	1251	1252	1253	1254	1255	1256
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input checked="" type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>
(CP01)	(CP02)	(CP03)	(CP04)	(CP05)	(CP06)	(CP07)

CONFIGURATION MANAGEMENT BOARD APPROVALS

Signatures

	Agree with the Change	Disagree with the Change	Date
Senior Program Manager:			5-8-13
Deputy Program Manager:			
PM Project Services:			08 May 13
PM Project Development/Delivery:			5/8/13
SFMTA O & M Manager:			
SFMTA Safety and Security			
SFCTA PMO			8 May 13

Comments

Estimate Summary

General Scope: This Engineer's Estimate contains the additional costs associated with the inefficiencies of installing compensation grout tubes due to the change of drilling equipment at the Old Navy compensation grouting location. The new piece of equipment has been identified as a "Comacchio MC 602". Demobilization of the Klemm drill was necessary as a differing site condition created clearance issues with the surrounding buildings.

Detailed Scope: The inefficiencies for performing this contract work are the result of the using single drive (Comacchio) vs. dual drive (Klemm) drilling equipment which have the following impacts to the drilling operation: 1) Sequential vs. concurrent drilling and casing operations; 2) Ability to maintain accuracy of hole alignment; 3) Drill rate speeds; 4) Ability to clear casing obstructions and 5) Stability of drilling platform.

1. Klemm 803-2
2. Comacchio MC 602

Cost Summary:	Labor	Equipment	Mob/Demob	Mark Ups	Total
	\$ 44,772.86	\$ 60,888.38	\$ -	\$ 24,742.75	\$ 130,403.99

List of attached documents:

- Detailed Estimate
- Production Rate Calculation Sheet

Estimate Prepared:
 5/8/2013


No.	Activity	Hourly rates:								Labor totals	Equipment Rates								Equipment Totals
		Days	Pile Driver \$ 81.95	OE G3 \$ 70.59	Laborer G3 \$ 52.48	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00		Drill - Klemm 803-2 \$ 129.64	Drill - Comacchio \$ 103.83	Grout Plant \$ 154.19	Skytrak 10042 Forklift \$ 56.63	246 Cat Skidsteer \$ 27.93	Truck \$ 19.98	Compressor Sullair 1150XH \$ 101.60	150kw Generator \$ 52.37	
1	Klemm 803-2	-14.12	1	1	4					\$ (40,950.12)	1		1	1	1	1	1		\$ (61,272.65)
2	Comacchio MC 602	29.56	1	1	4					\$ 85,722.98		1	1	1	1	1	1		\$ 122,161.04
3										\$ -									\$ -
4	Total									\$ 44,772.86									\$ 60,888.38

Labor	\$	44,772.86
Mob/Demob	\$	-
Equipment	\$	60,888.38
2nd Tier Sub	\$	-
Markup on 2nd Tier Sub - 5%	\$	-
1st Tier Sub OH&P - 15%	\$	15,849.19
1st Tier Sub Bond/Insurance - 0.52%	\$	631.85
Prime - Markup - 5%	\$	6,107.11
Prime - Bond/Insurance - 1.68%	\$	2,154.59
Total Amount	\$	130,403.99

Assumptions:
 - Includes approved CJA-NCC labor rates
 - Includes rates from CJA-NCC equipment rates REV 003

Grout Plant:
 \$3.59 - 7542 Supersax 1500 Silo LO
 \$34.68 - 7557 Trailer King Drop Neck
 \$5.71 - 6094 Soilmecc SGA-45 Agitator Tanks (2 ea)
 \$32.98 - 6057 Highshear 7/14 Grout Plant
 \$35.76 - 21134.AQ pumps (8 ea)

Shift Duration: 8hrs

Estimated By:  Kenneth Barnhart 5/8/2013

Checked By:  Charles Dombrowski 5/8/2013

Compensation Grouting Hole Production Rates

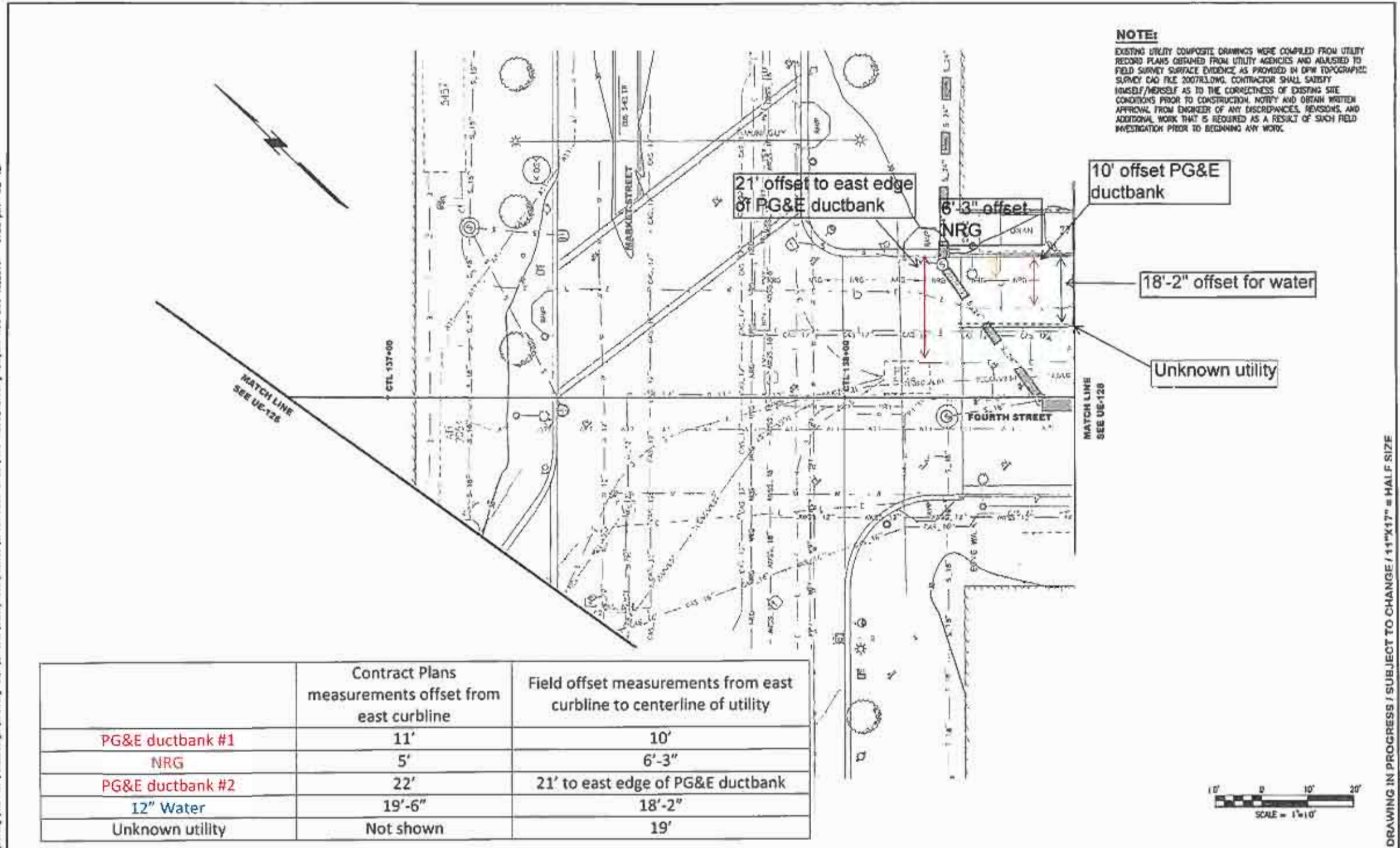
Sample Size: 28 Compensation Grout Holes

	COMACCHIO	KLEMM
Locations (ea)	28	28
Drill Length / Location (ft)	111	111
Production (ft/hr)	16.8	33.6
Set Up Time (hr/location)	0.33	0.33
Casing vs. Drill Bit Switch (hr/location)	1.11	
Shift Start / Stop	11.20	11.20

Total Time (hrs) 236.50 112.98

Production Loss 52.2%

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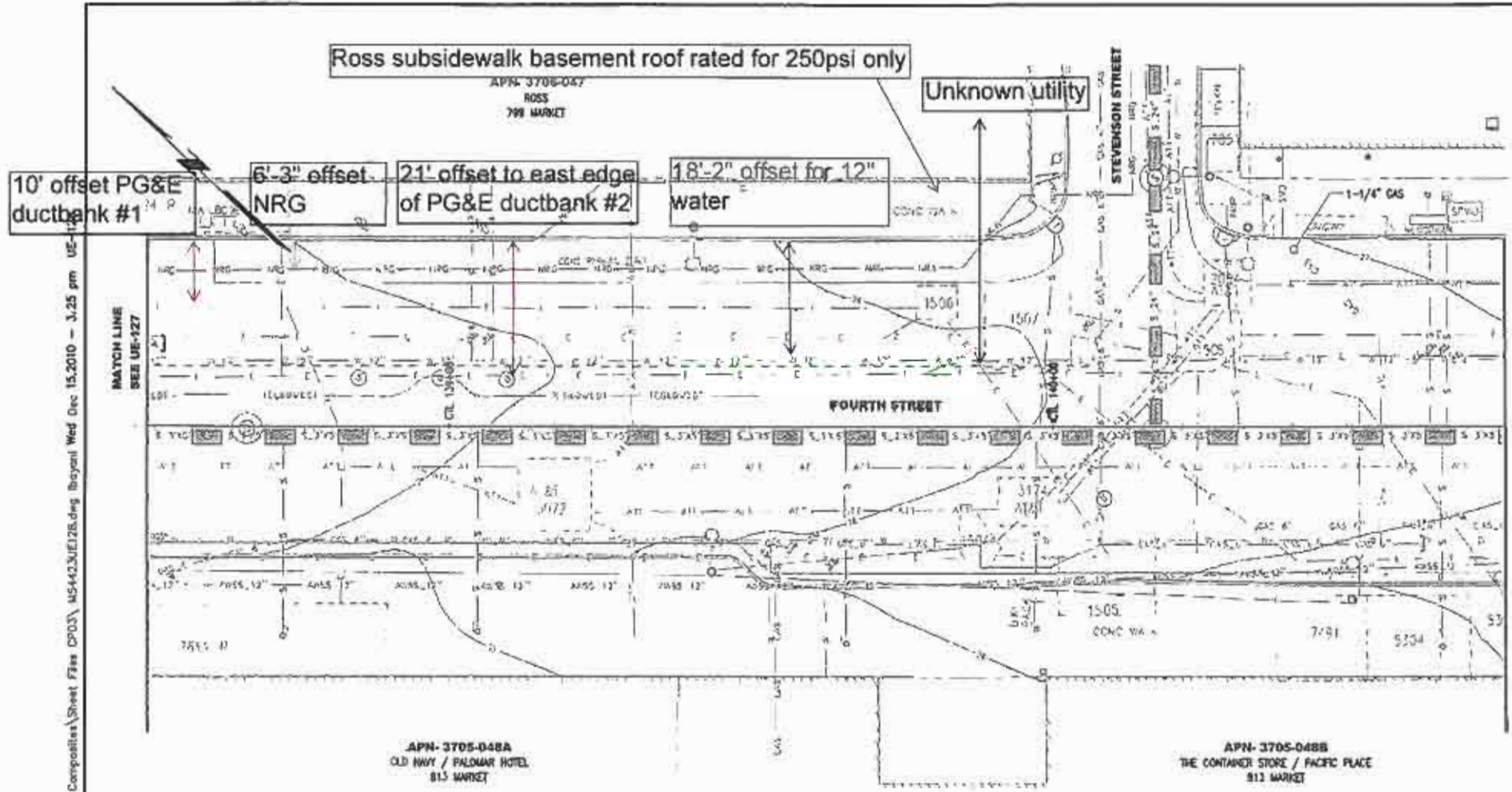
NOTE:
 EXISTING UTILITY COMPOSITE DRAWINGS WERE COMPILED FROM UTILITY RECORD PLANS OBTAINED FROM UTILITY AGENCIES AND ANALYZED TO FIELD SURVEY SURFACE EVIDENCE AS PROVIDED IN OPEN TOPOGRAPHIC SURVEY CAD FILE 2007R3.DWG. CONTRACTOR SHALL VERIFY HIMSELF/HERSELF AS TO THE CORRECTNESS OF EXISTING SITE CONDITIONS PRIOR TO CONSTRUCTION. NOTIFY AND OBTAIN WRITTEN APPROVAL FROM ENGINEER OF ANY DISCREPANCIES, REVISIONS, AND ADDITIONAL WORK THAT IS REQUIRED AS A RESULT OF SUCH FIELD INVESTIGATION PRIOR TO BEGINNING ANY WORK.

	Contract Plans measurements offset from east curbline	Field offset measurements from east curbline to centerline of utility
PG&E ductbank #1	11'	10'
NRG	5'	6'-3"
PG&E ductbank #2	22'	21' to east edge of PG&E ductbank
12" Water	19'-6"	18'-2"
Unknown utility	Not shown	19'



DRAWING IN PROGRESS / SUBJECT TO CHANGE / 11"x17" = HALF SIZE

	SFMTA		 CITY AND COUNTY OF SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY	THIRD STREET LIGHT RAIL PROGRAM PHASE 2 - CENTRAL SUBWAY TUNNELS	1252 SHEET NO. UE-127
DATE	DESIGNER	CHECKED	APPROVED	EXISTING UTILITIES	SCALE



NOTE:
 EXISTING UTILITY COMPOSITE DRAWINGS WERE COMPILED FROM UTILITY RECORD PLANS OBTAINED FROM UTILITY AGENCIES AND ADJUSTED TO FIELD SURVEY SURFACE EVIDENCE AS PROVIDED IN DPM TOPOGRAPHIC SURVEY CAD FILE 2007R1.DWG. CONTRACTOR SHALL SATISFY HIMSELF/HERSELF AS TO THE CORRECTNESS OF EXISTING SITE CONDITIONS PRIOR TO CONSTRUCTION. NOTIFY AND OBTAIN WRITTEN APPROVAL FROM ENGINEER OF ANY DISCREPANCIES, REVISIONS, AND ADDITIONAL WORK THAT IS REQUIRED AS A RESULT OF SUCH FIELD INVESTIGATION PRIOR TO BEGINNING ANY WORK.

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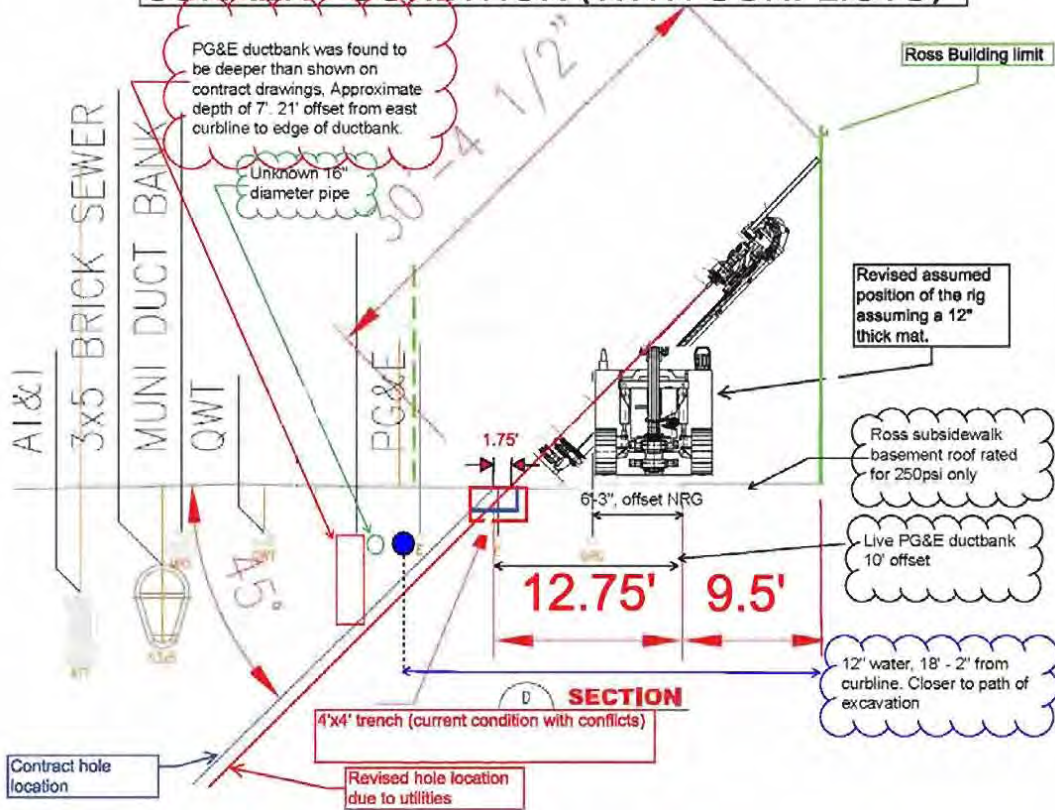
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PG&E ductbank #1	11'	10'
NRG	5'	6'-3"
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12" Water	19'-6"	18'-2"
Unknown utility	Not shown	19'

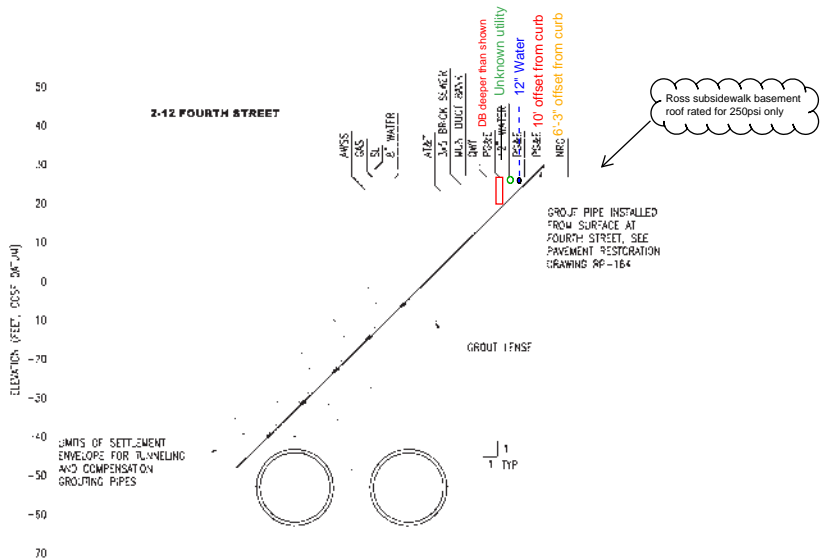


DRAWING IN PROGRESS / SUBJECT TO CHANGE / 11"X17" = HALF SIZE

	SFMTA		CITY AND COUNTY OF SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY	THIRD STREET LIGHT RAIL PROGRAM PHASE 2 - CENTRAL SUBWAY TUNNELS	SHEET NO. 1252 TOTAL SHEETS 12
			APPROVED: _____ DATE: _____	EXISTING UTILITY COMPOSITE CT, 138+50 TO 140+75	SHEET NO. UE-128 TOTAL SHEETS 12

CURRENT CONDITION (WITH CONFLICTS)





2-12 FOURTH STREET

Ross subsidewalk basement
roof rated for 250psi only

GROUF PIPE INSTALLED
FROM SURFACE AT
FOURTH STREET. SEE
PAVEMENT RESTORATION
DRAWING RP-164

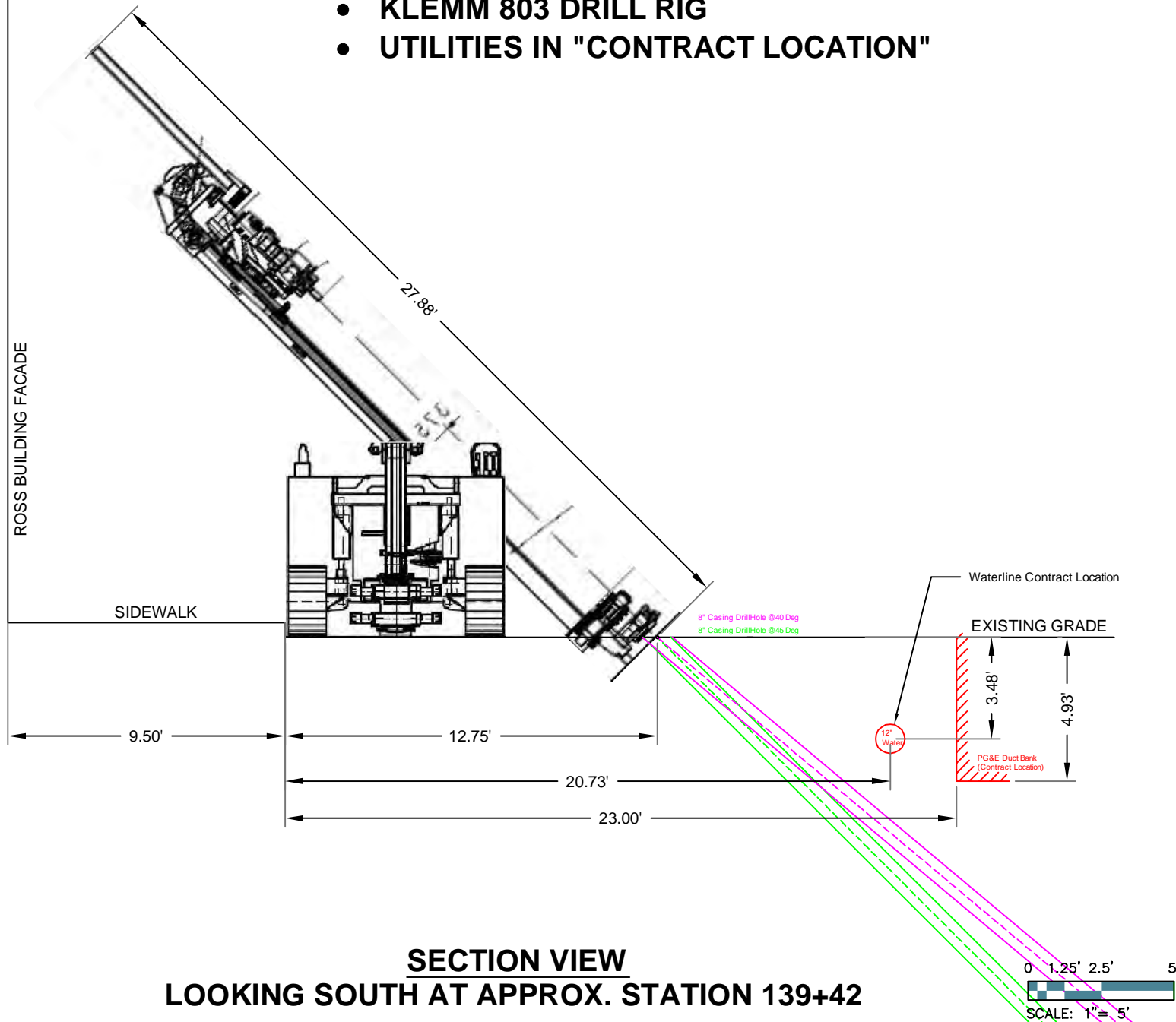
LIMITS OF SETTLEMENT
ENVELOPE FOR TUNNELING
AND COMPENSATION
GROUFING PIPES

1
1 TYP

SECTION
BP-122

AS-BID CONFIGURATION

- KLEMM 803 DRILL RIG
- UTILITIES IN "CONTRACT LOCATION"



SECTION VIEW
LOOKING SOUTH AT APPROX. STATION 139+42

REVISION:					
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CENTRAL SUBWAY

"OLD NAVY"
COMP GROUT TRENCH
AS-BID

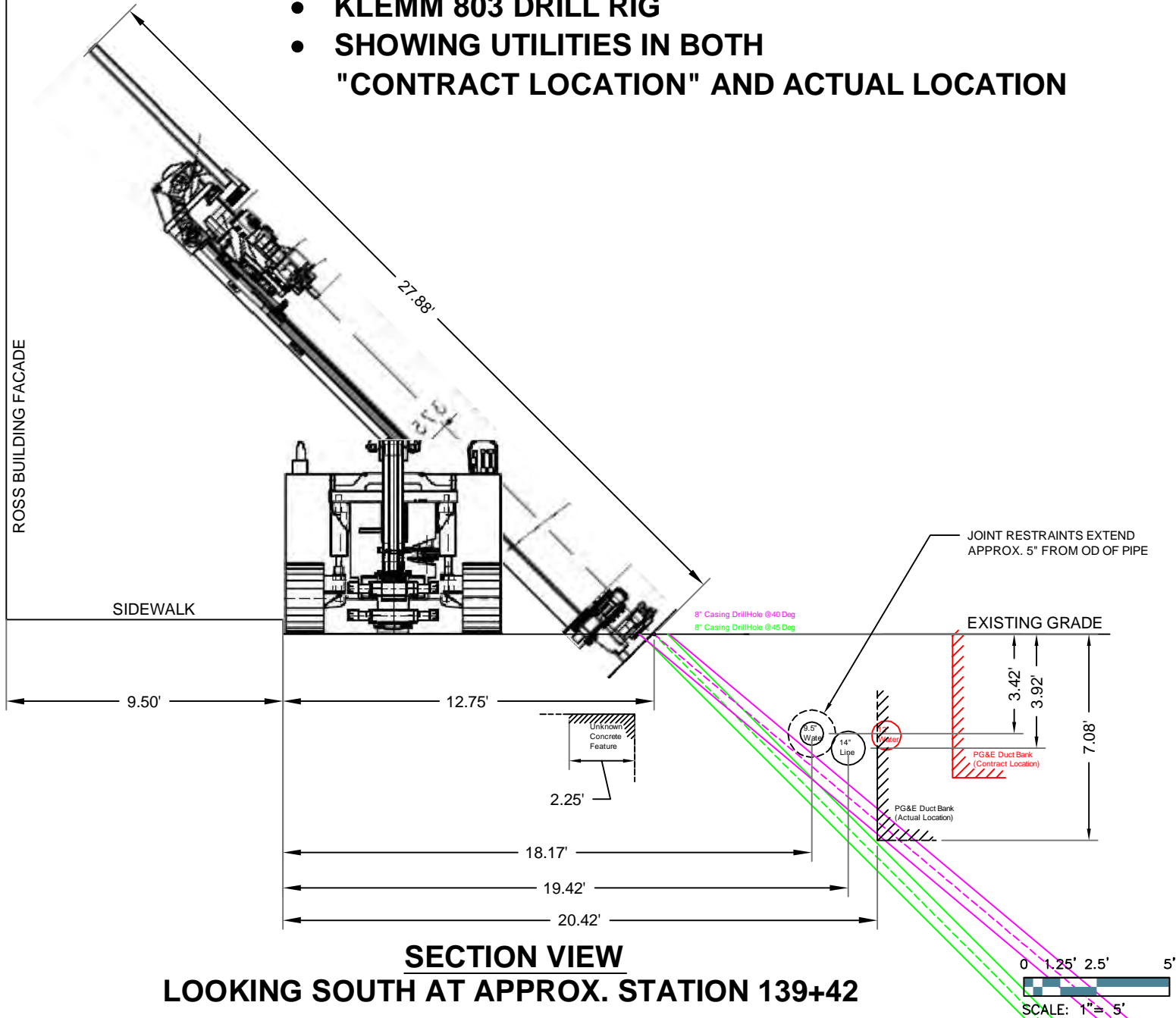
BARNARD CONSTRUCTION COMPANY, INC.
 701 GOLD AVE.
 BOZEMAN, MT 59715
 PHONE: (406) 586-1995
 www.barnard-inc.com

PLAN SHEET TITLE

SHEET
H-1

AS-BID CONFIGURATION SHOWING DSC'S

- KLEMM 803 DRILL RIG
- SHOWING UTILITIES IN BOTH "CONTRACT LOCATION" AND ACTUAL LOCATION



REVISION:

CENTRAL SUBWAY

"OLD NAVY"
COMP GROUT TRENCH
AS-BID SHOWING DSC'S

BARNARD CONSTRUCTION
COMPANY, INC.
 701 GOLD AVE.
 BOZEMAN, MT 59715
 PHONE: (406) 586-1995
 www.barnard-inc.com



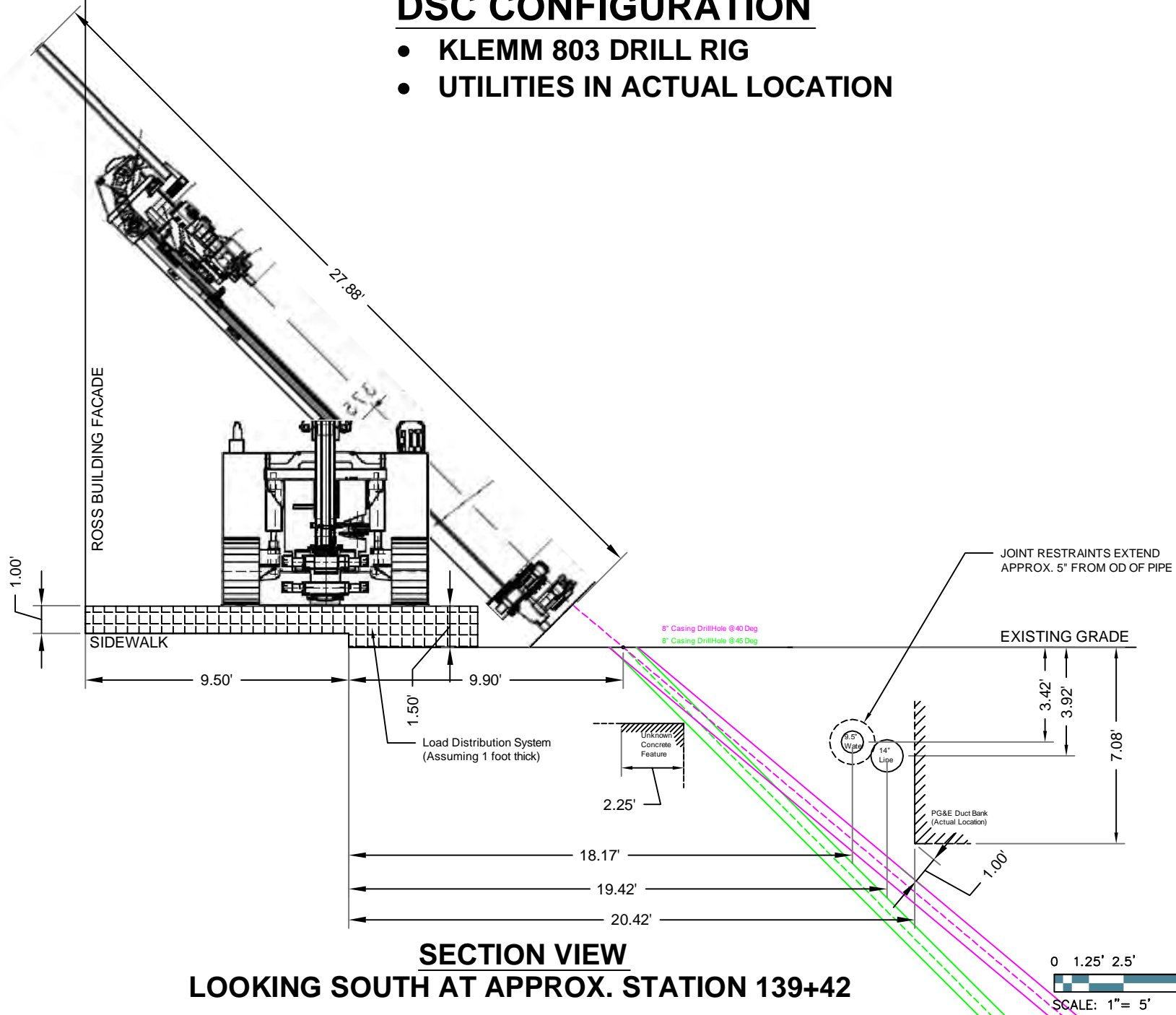
PLAN SHEET TITLE

SHEET

H-1A

DSC CONFIGURATION

- KLEMM 803 DRILL RIG
- UTILITIES IN ACTUAL LOCATION



REVISION:

CENTRAL SUBWAY

"OLD NAVY"
COMP GROUT TRENCH
DSC CONFIGURATION

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PLAN SHEET TITLE

SHEET

H-2

SFMTA Contract No. 1252

Contractor: Barnard Impregilo Healy JV (BIH)

EVALUATION OF MERIT

COR 079

Recommendation: Accept justification of Merit for COR 079 – (Comp Grout – Old Navy) - DSC / Design Modifications. There is no time extension recommended for this work.

Facts: The Contractor performed potholing activities in advance of compensation grout hole drilling at the Old Navy location (between Market St. and Stevenson St. on 4th Street) and encountered numerous buried obstructions. The obstructions were first encountered on March 5th, 2013.

After further field investigation with PG&E and additional potholing efforts, it was determined that there was not sufficient room between existing utilities (known and unknown) to drill the compensation grout holes as designed. The Contractor was able to remove many of these obstructions in an effort to identify a clear window of space in which to locate the proximal points of the compensation grout pipe array. However, one of the obstructions consisted of what was originally believed to be a live 12" waterline which would have caused the proximal points to shift to the east to avoid the live utility. On 4/4/13, it was discovered that this utility was not actually the 12" live waterline and on 4/5/13, PG&E confirmed that the utility was actually a 12" abandoned gas line.

The 12" abandoned gas line needs to be removed to allow drilling of the compensation grout holes at the originally foreseen proximal points in accordance with the Compensation Grout Design. However, further investigation showed that even with the removal of the 12" gas line, there was still insufficient room between utilities to install the grout tubes with the current equipment. The Contractor has been directed to demobilize the current equipment and mobilize a small drill rig which would allow the proximal points to be installed at the designed hole inclinations while passing beneath the PG&E electrical duct bank.

Justification: The buried obstructions constitute a differing and unforeseen site conditions as they were not shown or accurately depicted in the Contract Drawings. The following numerous issues that lead to the differing site condition are described herein:

1. There is not sufficient clearance between the existing PG&E lines per the original contract design to drill the compensation grout holes as designed.
2. Numerous unknown buried obstructions were encountered including, but not limited to tile duct banks, concrete of unknown contents, and steel pipes.
3. An abandoned 12" PG&E gas line was found to be approximately 16 feet from face of curb, approximately 4 feet below grade and running the entire length of the trench. The Contract Documents do indicate the presence of a 12" gas line at this location (Contract dwg. BP-124 Rev. 0 & Reference dwg. UE-127). See Field

SFMTA Contract No. 1252

Contractor: Barnard Impregilo Healy JV (BIH)

- Sketches 045 through 047. However, the Contract Documents, specifically the Utility Demolition and Utility Composite drawings, do not show whether the 12" gas line is live or needs to be removed.
4. The PGE electrical duct bank was deeper and further east than originally anticipated.
 5. The waterline shown on the drawings was further east than shown on the Contract drawings. See Field Sketches 045 through 046.
 6. A sub-sidewalk basement within the Ross Dress for Less building was discovered to have an unknown roof load capacity. This resulted in the need to bring in a smaller drill rig that could install the compensation grout tubes from the roadway and avoid installation on top of the basement.

As a result of mitigation efforts for the DSCs the following additional costs will be incurred:

Standby costs:

- The Contractor claims the standby costs for the Pipe installation crew began accruing on March 14, 2013 and will continue to accrue until the array of grout holes are available to be drilled. Standby costs for the Pre-conditioning crew will begin accruing upon completion of the Wholefoods /AT&T Pre-conditioning work. At this time, standby costs for the Preconditioning crew are anticipated to start accruing on 4/8/2013. At this time, the RE disagrees with the standby period for these two operations and is working with the Contractor to resolve the differences.

Additional Costs:

- Additional potholing/investigative efforts
- Further engineering to the compensation grout design
- Excavation of a larger access trench
- Removal & disposal of abandoned/un-used DSC utilities
- Increased street restoration
- Demobilization of the existing Klemm drill rig being used for installation of the compensation grout tubes at the "Old Navy" site.
- Mobilization for the smaller drill rig and the additional cost associated with using the small drill rig.

Actual costs related to this additional work have yet to be determined.

Change Type – (2) Unforeseen Condition

SFMTA Contract No. 1252

Contractor:

Barnard Impregilo Healy JV (BIH)

By:



Sarah Wilson
Resident Engineer

4/24/13
Date



Configuration Management Board
Approval

4-24-13
Date

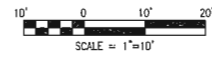
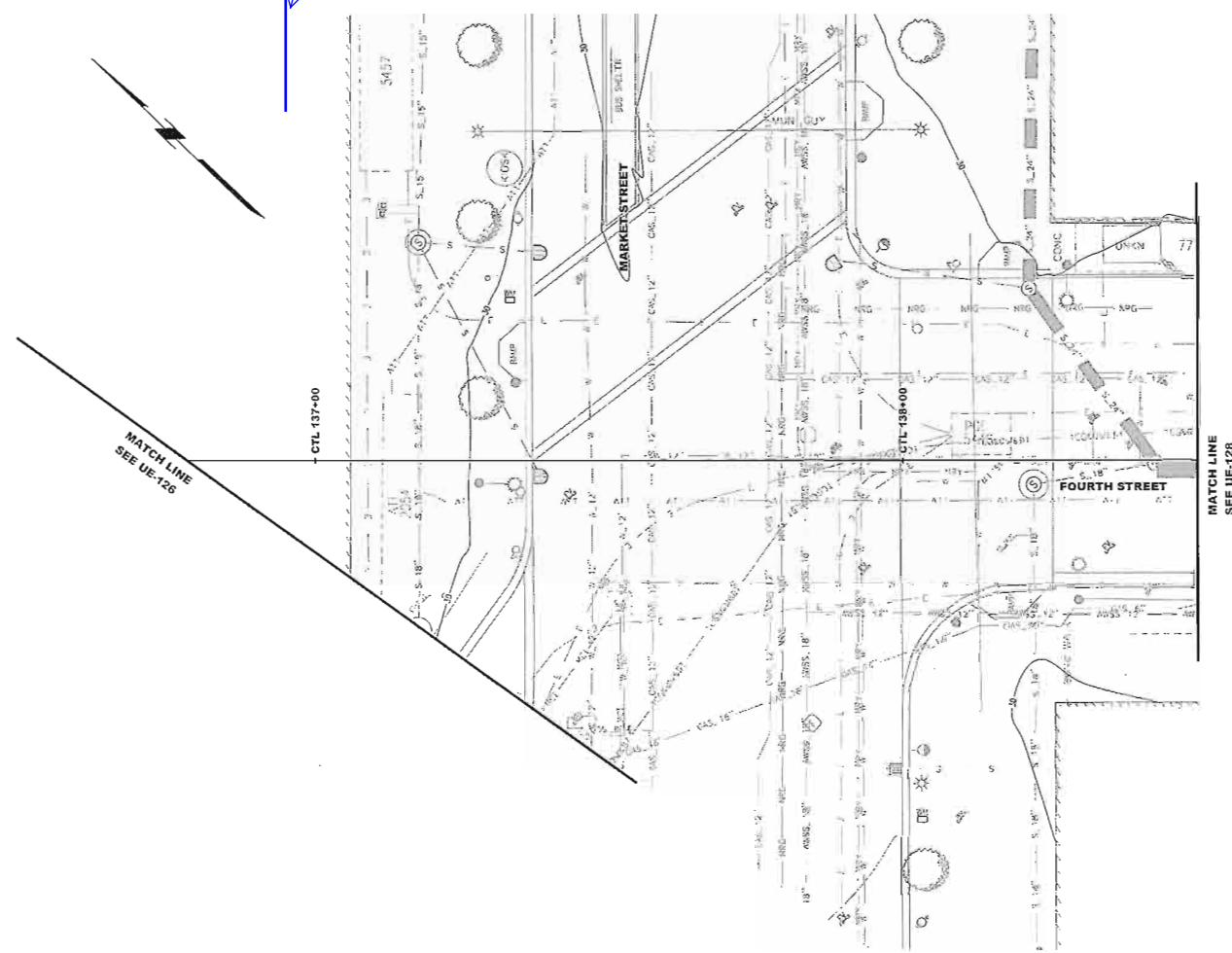
RE/cm to provide notice to PG&E of these Form B costs.

PLACING PG&E ON NOTICE

\\svfnas003.mni.sfgov.org\m544\1\FinalDesign\Drawing--821\2--Civil\Utility Composites\Sheet Files CP03\M54423UE127.dwg fboyani Wed Dec 15, 2010 -- 3:22 pm UE-127

Field sketch No. 12
COR 079

NOTE:
EXISTING UTILITY COMPOSITE DRAWINGS WERE COMPILED FROM UTILITY RECORD PLANS OBTAINED FROM UTILITY AGENCIES AND ADJUSTED TO FIELD SURVEY SURFACE EVIDENCE AS PROVIDED IN DWG TOPOGRAPHIC SURVEY CAD FILE 2007R3.DWG. CONTRACTOR SHALL SATISFY HIMSELF/HERSELF AS TO THE CORRECTNESS OF EXISTING SITE CONDITIONS PRIOR TO CONSTRUCTION. NOTIFY AND OBTAIN WRITTEN APPROVAL FROM ENGINEER OF ANY DISCREPANCIES, REVISIONS, AND ADDITIONAL WORK THAT IS REQUIRED AS A RESULT OF SUCH FIELD INVESTIGATION PRIOR TO BEGINNING ANY WORK.



DRAWING IN PROGRESS / SUBJECT TO CHANGE / 11"X17" = HALF SIZE

DATE	DESIGNER	DR	BY	CHECKED	APPROVED

SFMTA

DESIGNED	
DRAWN	
CHECKED	
PERMITTED	
RECORDED	
DATE	



CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY

APPROVED
EXECUTIVE DIRECTOR/CED

THIRD STREET LIGHT RAIL PROGRAM
PHASE 2 — CENTRAL SUBWAY
TUNNELS

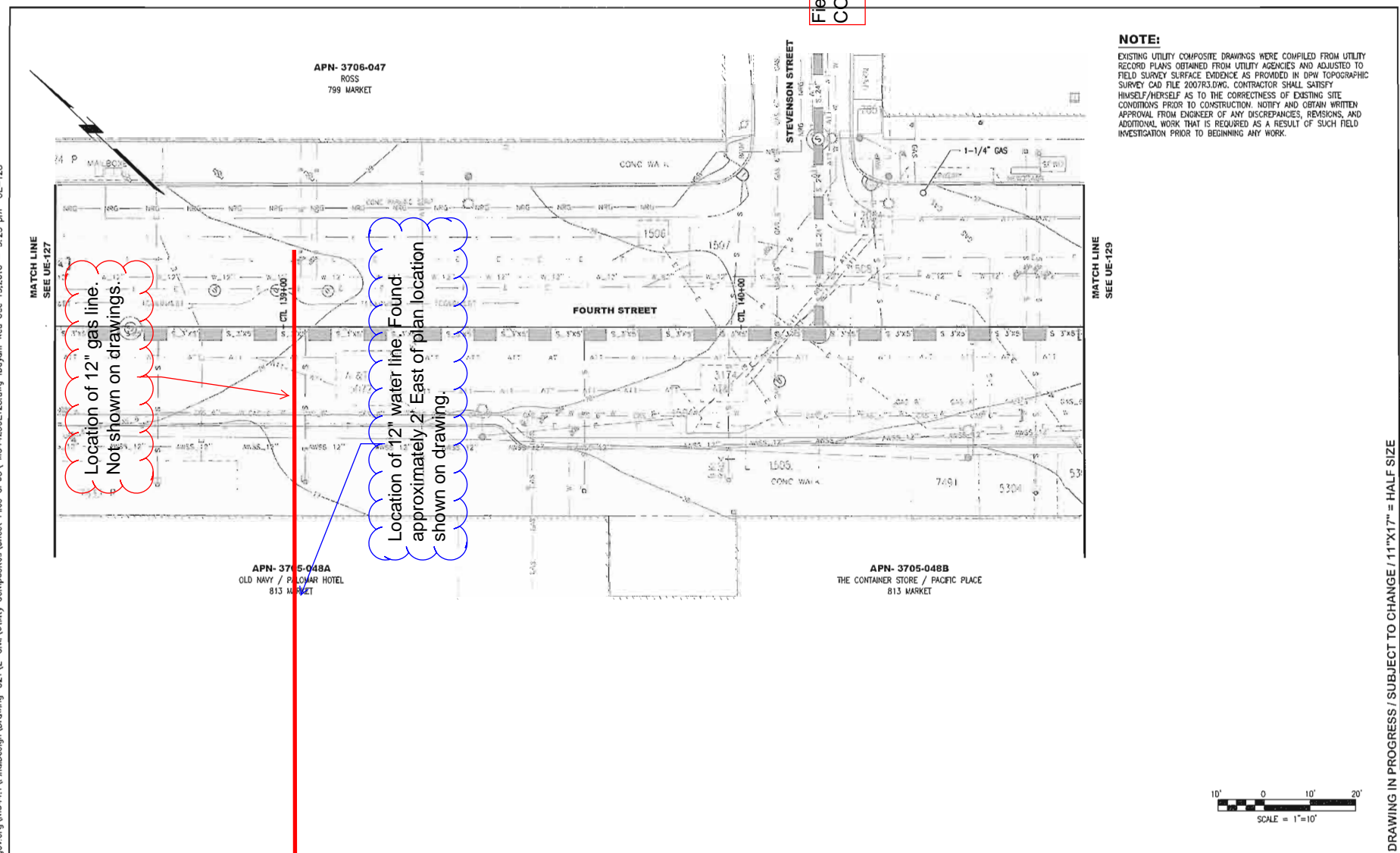
EXISTING UTILITY COMPOSITE
CTL 136+80 TO 138+50

CONTRACT NO.	1252
DRAWN BY	UE-127
CHECKED BY	
DATE	

REVISIONS REVISED 05/18/2009

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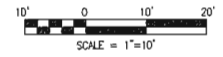
Field sketch No. 125
COR 079



Location of 12" gas line.
Not shown on drawings.

Location of 12" water line. Found
approximately 2' East of plan location
shown on drawing.

NOTE:
EXISTING UTILITY COMPOSITE DRAWINGS WERE COMPILED FROM UTILITY RECORD PLANS OBTAINED FROM UTILITY AGENCIES AND ADJUSTED TO FIELD SURVEY SURFACE EVIDENCE AS PROVIDED IN DWP TOPOGRAPHIC SURVEY CAD FILE 2007R3.DWG. CONTRACTOR SHALL SATISFY HIMSELF/HERSELF AS TO THE CORRECTNESS OF EXISTING SITE CONDITIONS PRIOR TO CONSTRUCTION. NOTIFY AND OBTAIN WRITTEN APPROVAL FROM ENGINEER OF ANY DISCREPANCIES, REVISIONS, AND ADDITIONAL WORK THAT IS REQUIRED AS A RESULT OF SUCH FIELD INVESTIGATION PRIOR TO BEGINNING ANY WORK.



DRAWING IN PROGRESS / SUBJECT TO CHANGE / 11"X17" = HALF SIZE

DATE	DESIGNED	DRAWN	CHECKED	APPROVED

SFMTA

DESIGNED
DRAWN
CHECKED
RECOMMENDED
APPROVED
SUIT



CITY AND COUNTY OF SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY

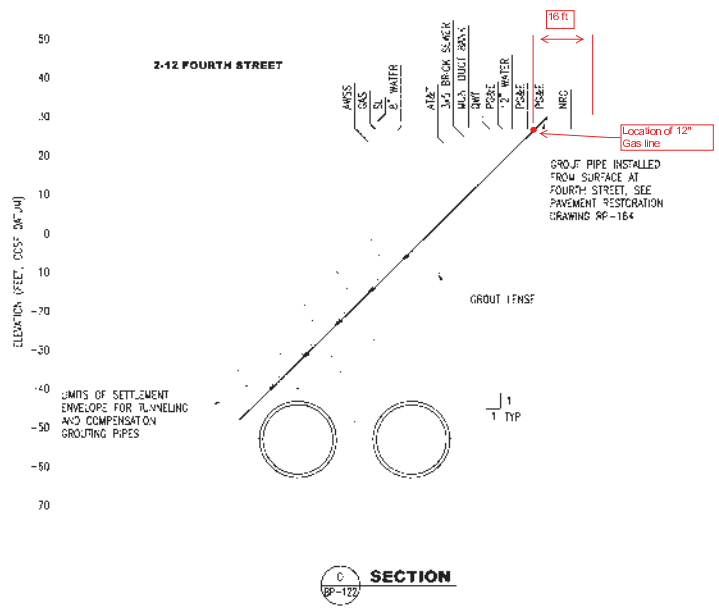
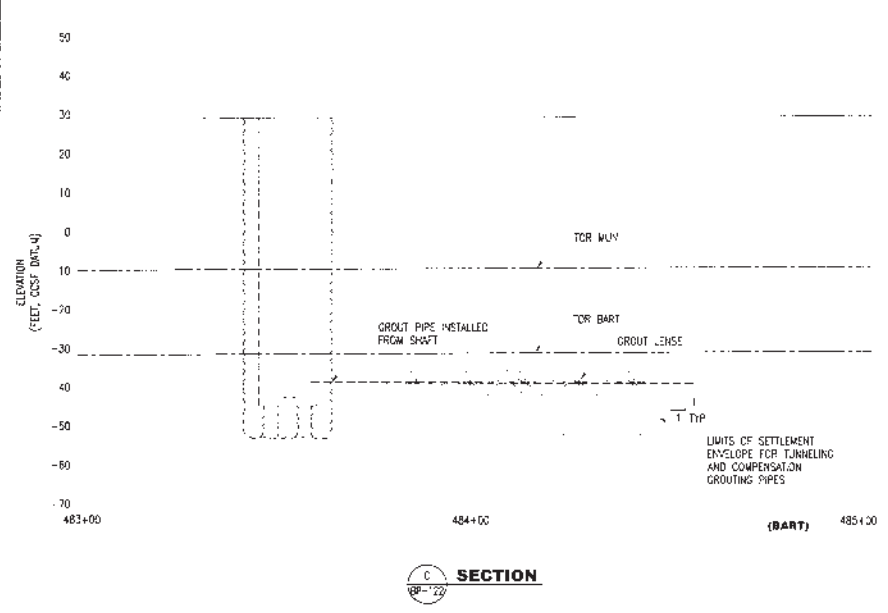
APPROVED

EXECUTIVE DIRECTOR/CEO

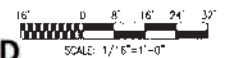
THIRD STREET LIGHT RAIL PROGRAM PHASE 2 - CENTRAL SUBWAY TUNNELS	CONTRACT NO. 1252
EXISTING UTILITY COMPOSITE CTL 138+50 TO 140+75	STATION CONTROL NO. DRAWING NO. UE-128

\\s:\sfrs003\muni\slr\proj\1252\1252-047\structure\building_protection\sheet_files\6053\154423BP-24.dwg Internaly Thu Jun 27 2011 3:40 pm BP-124

- NOTES:**
- INDICATED GROUT LEVEL SHAPE AND EXTENT ARE FOR ILLUSTRATION PURPOSES ONLY. CONTRACTOR SHALL DETERMINE PRESSURES AND FLOW RATES TO ACHIEVE REQ. RED VOID FILLING AND SETTLEMENT CONTROL.
 - INDICATED PIPE DEPTH FOR EXISTING AT 2-12 FOURTH STREET IS TAKEN FROM THE REPORT "GEO-TECHNICAL INVESTIGATION RENOVATION & SEISMIC UPGRADE OF PACIFIC CENTER, 821 MARKET STREET, SC-1054-001"

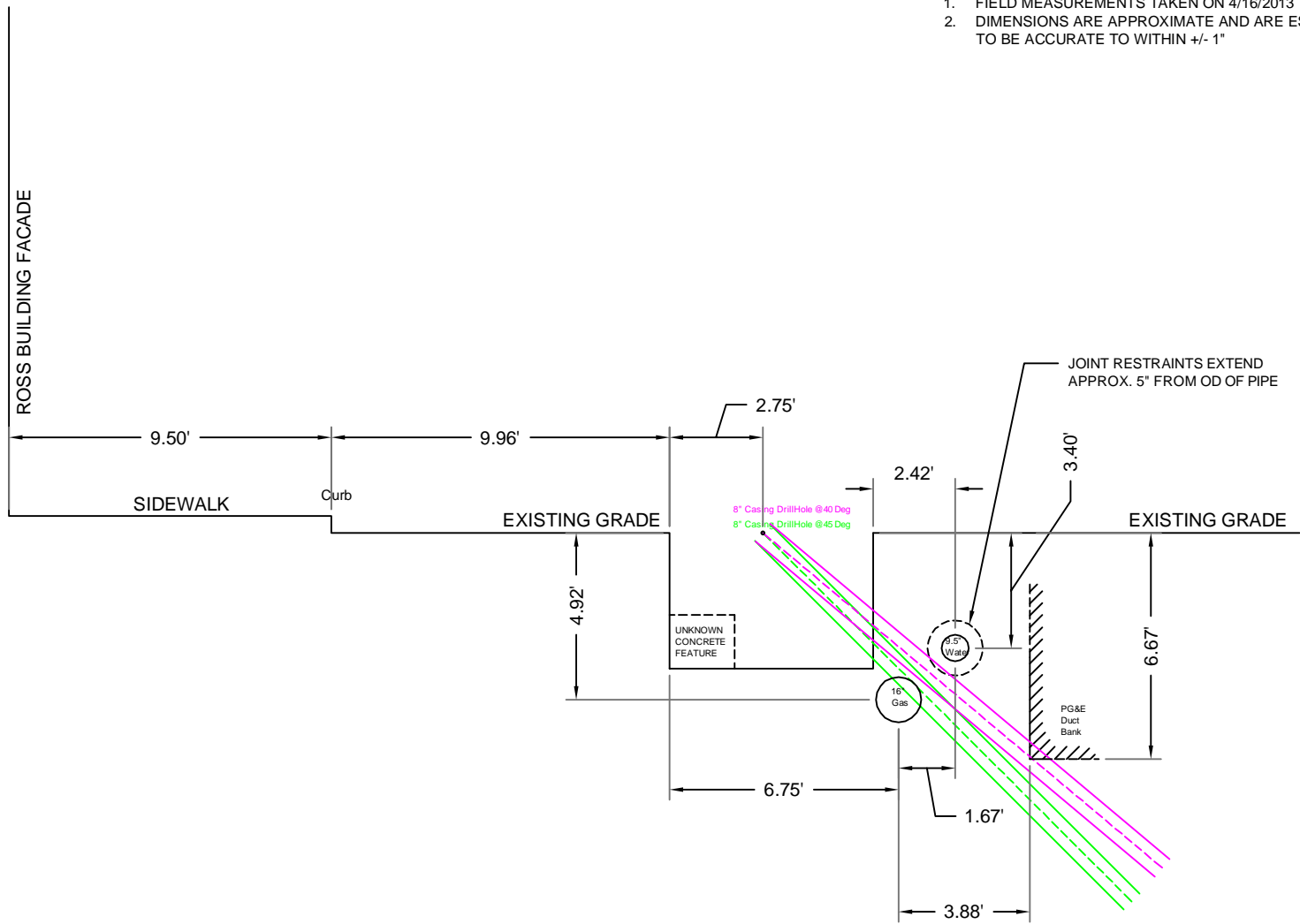


Field Sketch No. 1252 - 047
COR 079



CONFORMED

 PB AMERICAS, INC.	12/2/11 [Signature] [Signature] [Signature] [Signature]	 CITY AND COUNTY OF SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY APPROVED: [Signature] EXECUTIVE DIRECTOR/CEO	THIRD STREET LIGHT RAIL PROGRAM PHASE 2 - CENTRAL SUBWAY TUNNELS	1252 CL-18489
			BUILDING PROTECTION COMPENSATION GROUTING MARKET STREET AREA, SHEET 3 OF 3	BP-124 498
				0



GENERAL NOTES:

1. FIELD MEASUREMENTS TAKEN ON 4/16/2013
2. DIMENSIONS ARE APPROXIMATE AND ARE ESTIMATED TO BE ACCURATE TO WITHIN +/- 1"

REVISION:

CENTRAL SUBWAY

**"OLD NAVY"
COMP GROUT TRENCH
POTHOLE NO. 1**

**BARNARD CONSTRUCTION
COMPANY, INC.**
701 GOLD AVE.
BOZEMAN, MT 59715
PHONE: (406) 586-1995
www.barnard-inc.com

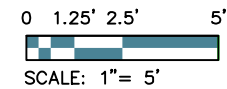


PLAN
SHEET
TITLE

SHEET

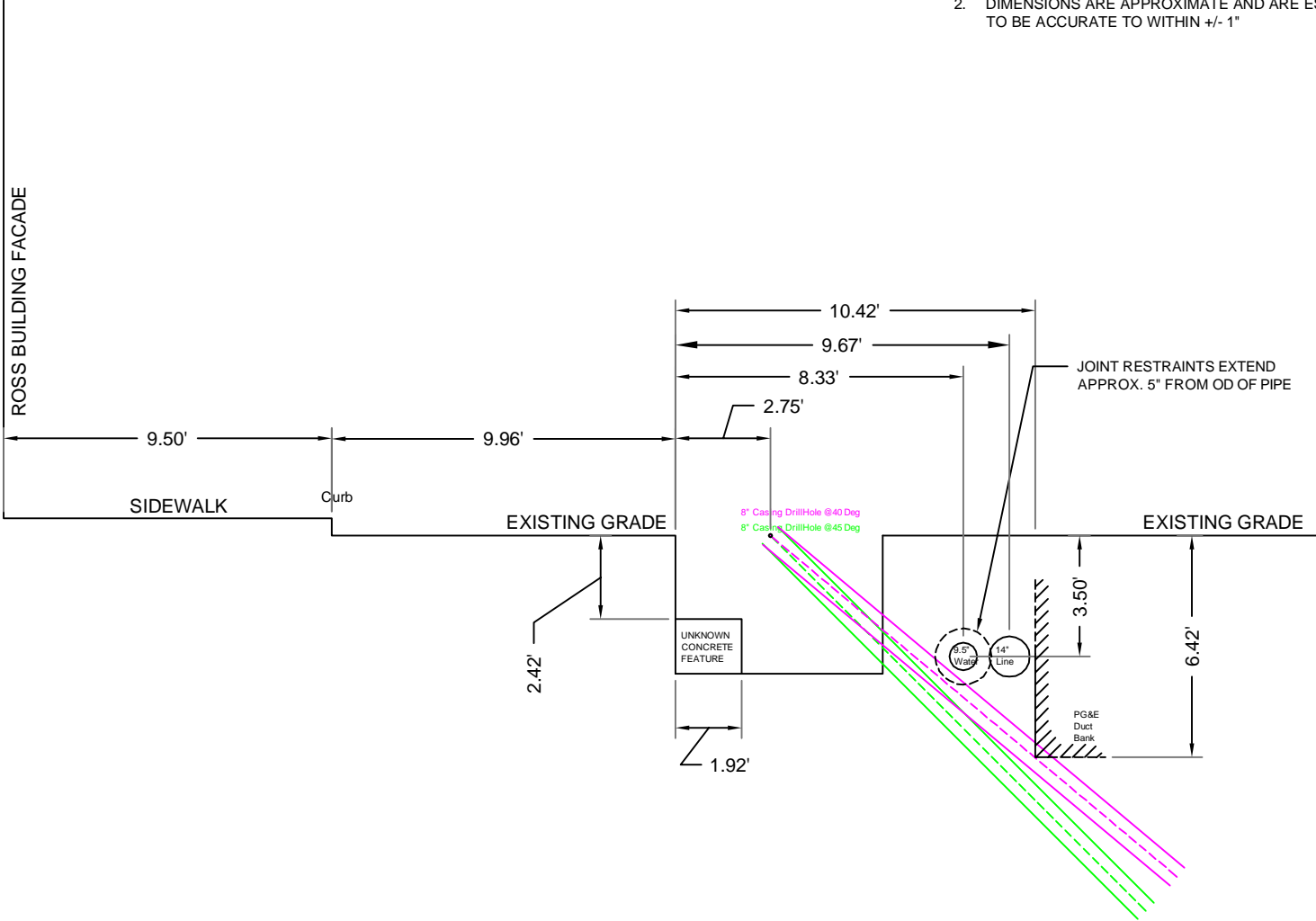
PH-1

**SECTION VIEW
POTHOLE NO. 1 (PH-1)
LOOKING SOUTH AT APPROX. STATION 138+38**

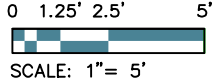


GENERAL NOTES:

1. FIELD MEASUREMENTS TAKEN ON 4/17/2013
2. DIMENSIONS ARE APPROXIMATE AND ARE ESTIMATED TO BE ACCURATE TO WITHIN +/- 1"



**SECTION VIEW
POTHOLE NO. 2 (PH-2)
LOOKING SOUTH AT APPROX. STATION 138+72**



REVISION:

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CENTRAL SUBWAY

**"OLD NAVY"
COMP GROUT TRENCH
POTHOLE NO. 2**

**BARNARD CONSTRUCTION
COMPANY, INC.**
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BOZEMAN, MT 59715
PHONE: (406) 586-1995
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PLAN SHEET TITLE

SHEET
PH-2

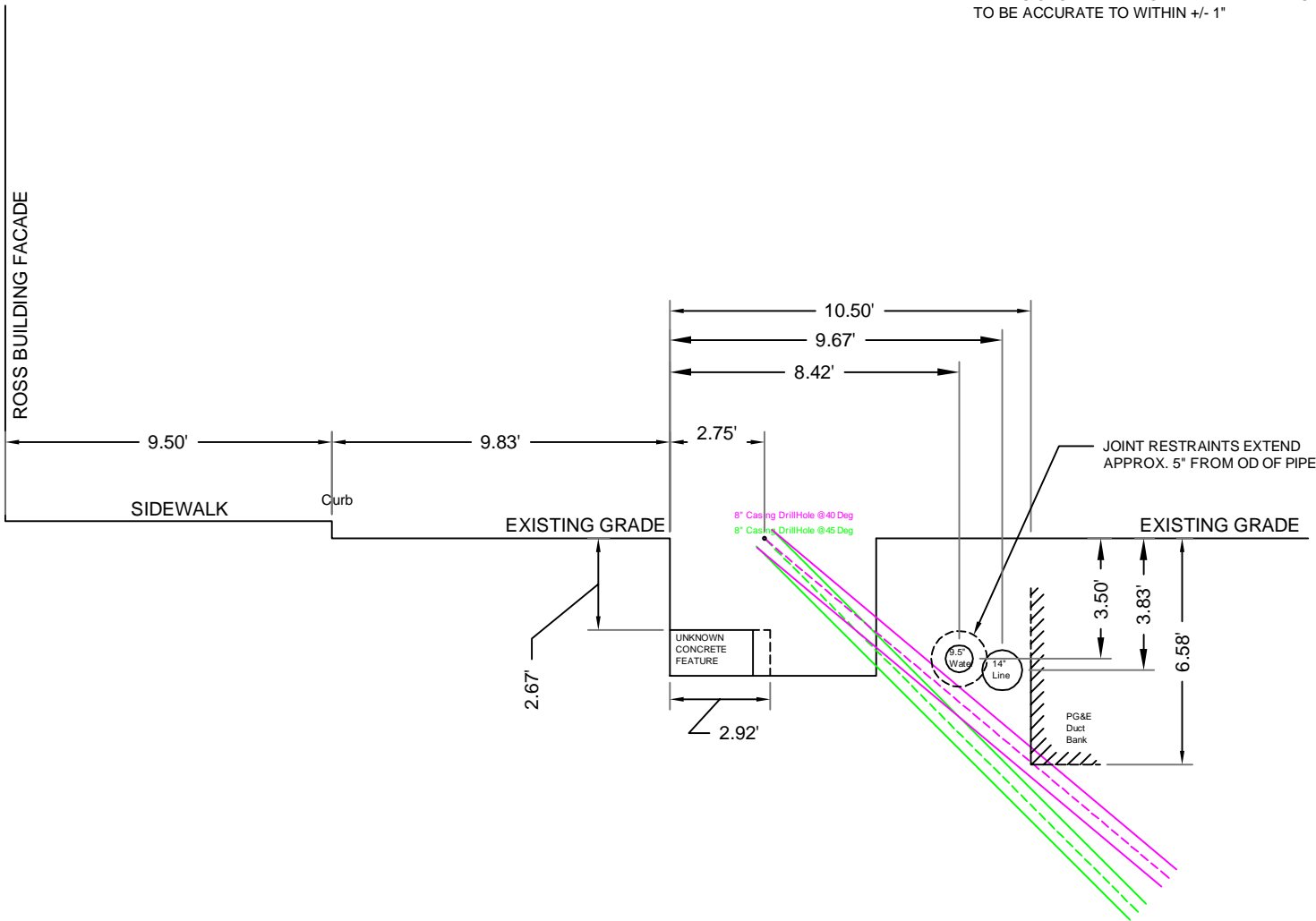
GENERAL NOTES:

1. FIELD MEASUREMENTS TAKEN ON 4/17/2013
2. DIMENSIONS ARE APPROXIMATE AND ARE ESTIMATED TO BE ACCURATE TO WITHIN +/- 1"

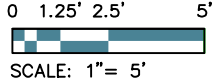
REVISION:				

CENTRAL SUBWAY

**"OLD NAVY"
COMP GROUT TRENCH
POTHOLE NO. 3**



**SECTION VIEW
POTHOLE NO. 3 (PH-3)
LOOKING SOUTH AT APPROX. STATION 139+07**



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www.barnard-inc.com

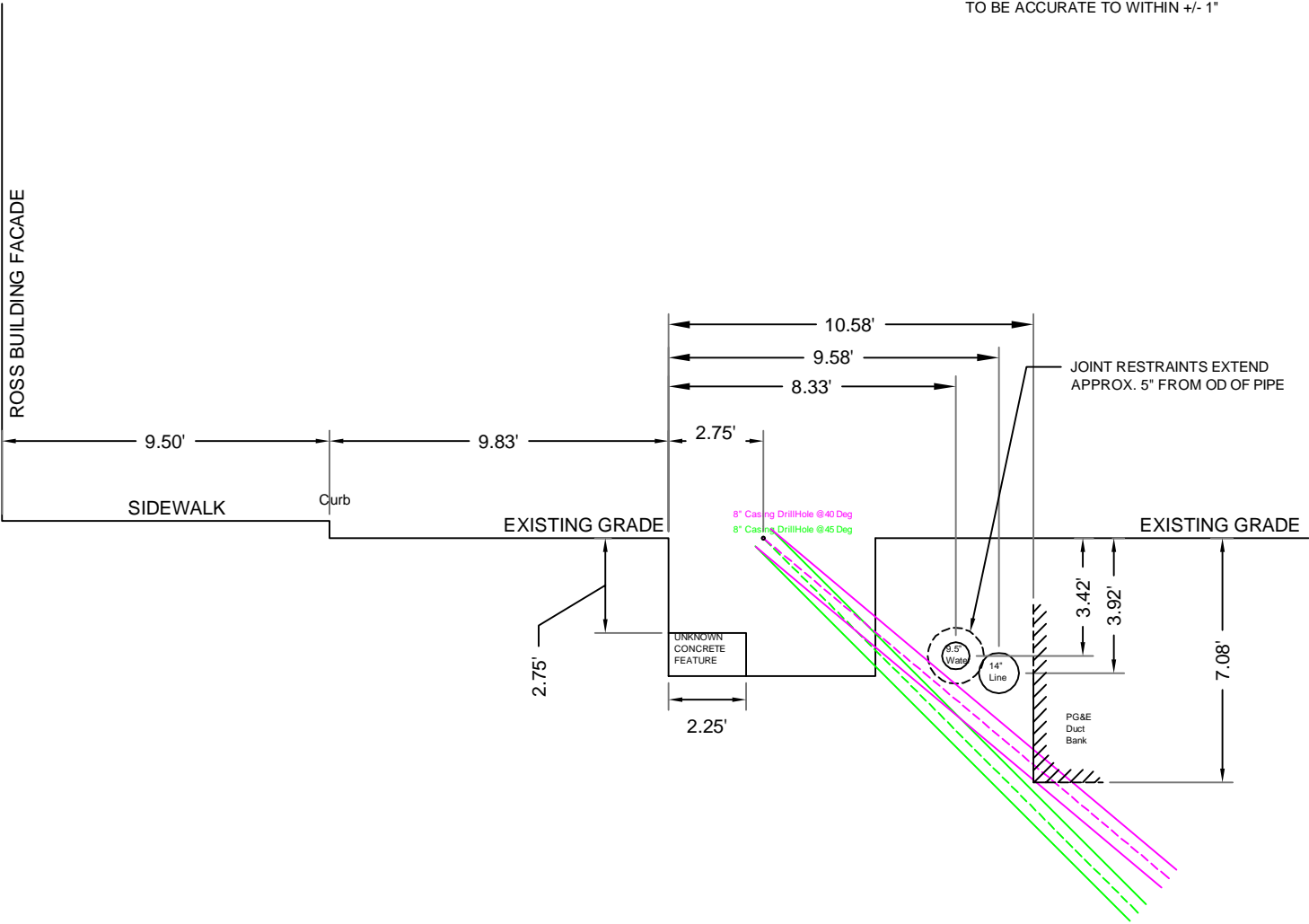


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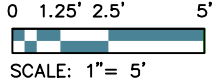
SHEET
PH-3

GENERAL NOTES:

1. FIELD MEASUREMENTS TAKEN ON 4/17/2013
2. DIMENSIONS ARE APPROXIMATE AND ARE ESTIMATED TO BE ACCURATE TO WITHIN +/- 1"



**SECTION VIEW
POTHOLE NO. 4 (PH-4)
LOOKING SOUTH AT APPROX. STATION 139+42**



REVISION:

CENTRAL SUBWAY

**"OLD NAVY"
COMP GROUT TRENCH
POTHOLE NO. 4**

**BARNARD CONSTRUCTION
COMPANY, INC.**
701 GOLD AVE.
BOZEMAN, MT 59715
PHONE: (406) 586-1995
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PLAN SHEET TITLE

SHEET
PH-4



04 03 2013 14:32



04.03.2013 14:32



04.03.2013 14:32



04.03.2013 14:33



04.16.2013 08:21





04.16.2013 09:22

2" conduit empty

4-4" abandoned PG&E conduits
with wire and tar still inside,
Verified by Tom Riemier(PG&E)

03/08/2013



03/08/2013



03/11/2013



03/12/2013



03/12/2013



03/12/2013



Duct bank under PG&E lines removed

03/12/2013



248-04-0071

03/13/2013



03/14/2013

COR 076								
No.	Activity Name	Days (C)	Days (EE)	Contractor (C)	Engineer's Estimate (EE)**	Delta (EE-C)	Comparison*	Negotiation Position*
Labor	1							
	FA4396 - 3/7/13 - Remove 16" steel pipe	0.25	0.25	\$ 333.28	\$ 333.09	\$ (0.19)	BIHJV used slightly higher (incorrect) labor rates.	
	2							
	FA4397 - 3/8/13 - Complete removal of 16"	0.13	0.125	\$ 166.64	\$ 166.55	\$ (0.09)	BIHJV used slightly higher (incorrect) labor rates.	
	NET	0.38	0.375	\$ 499.92	\$ 499.64	\$ (0.28)		
Equipment	1							
	FA4396 - 3/7/13 - Remove 16" steel pipe	0.25	0.25	\$ 260.07	\$ 260.06	\$ (0.01)		
	2							
	FA4397 - 3/8/13 - Complete removal of 16"	0.13	0.125	\$ 130.03	\$ 130.03	\$ -		
	NET	0.38	0.375	\$ 390.10	\$ 390.09	\$ (0.01)		
	Material			\$ -	\$ -	\$ -		
	Markup LM&E - 15%			\$ 133.50	\$ 133.46	\$ (0.04)		
	2nd Tier Subs			\$ -	\$ -	\$ -		
	Markup - 5%			\$ -	\$ -	\$ -		
	Sub. Bond/Insurance 2.14%			\$ 21.90	\$ 21.90	\$ (0.01)		
	Prime Markup - 5%			\$ 52.27	\$ 52.25	\$ (0.02)		
	Prime Bond/Insurance 1.68%			\$ 18.44	\$ 18.44	\$ (0.01)		
	Total			\$ 1,116.13	\$ 1,115.78	\$ (0.35)		
RE Recommended NTE Amount:				\$	1,116.00			
*The amounts shown in the "Comparison" and "Negotiation Position" columns are fully marked up for easy addition or subtraction from the bottom line.								
**The Engineer's Estimate is a Lump Sum estimate which uses SFMTA verified labor and equipment hours documented on Force Account Report No. 4396 & 4397.								

Estimate Summary

General Scope: The work captured in this lump sum estimate occurred from 3/7/13 to 3/8/13. Synergy Project Management performed the removal of an abandoned 16" pipe located in the trench of the proposed 12" low pressure waterline at the Moscone southeast headwall.

Detailed Scope:

1. FA4396 - 3/7/13 - Remove 16" steel pipe
2. FA4397 - 3/8/13 - Complete removal of 16" pipe

	Labor	Equipment	Material / Sub	Mark Ups	Total
Cost Summary:	\$ 499.64	\$ 390.09	\$ -	\$ 226.05	\$ 1,115.78

List of attached documents:

- Detailed Estimate
- Photographs
- FA Tags 4396, 4397

Estimate Prepared:
 5/3/2013

No.	Activity	Days	Hourly rates:								Labor totals	Work Truck	Mini Excavator (Kubota U45)	Equipment								Equipment Totals
			Operating Engineer (OE) (G3)	Laborer (G3)	Laborer (G3)	Labor Resource	Labor Resource	Labor Resource	Labor Resource													
			\$ 67.03	\$ 49.76	\$ 49.76	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00		\$ 33.12	\$ 63.79	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00			
1	FA4396 - 3/7/13 - Remove 16" steel pipe	0.25	1	1	1					\$ 333.09	2	1								\$ 260.06		
2	FA4397 - 3/8/13 - Complete removal of 16" pipe	0.125	1	1	1					\$ 166.55	2	1								\$ 130.03		
Total										\$ 499.64										\$ 390.09		

Labor	\$	499.64
Material	\$	-
Equipment	\$	390.09
2nd Tier Sub	\$	-
Markup on 2nd Tier Sub - 5%	\$	-
1st Tier Sub OH&P - 15%	\$	133.46
1st Tier Sub Bond/Insurance - 2.14%	\$	21.90
Prime - Markup - 5%	\$	52.25
Prime - Bond/Insurance - 1.68%	\$	18.44
Total Amount	\$	1,115.78

Assumptions:
 Labor Burdens: FICA SS 6.2% - FICA Medicare 1.45% - FUTA .22% - SUTA 1.13% - SF Pay 1.5% - WC 4.61%

Shift Duration: 8hrs

Estimated By:  Kenneth Barnhart 5/3/2013

Checked By:  Charles Dombrowski 5/3/2013

SFMTA - Third Street Light Rail Phase 2 Central Subway

Daily Force Account Field Report

PROJECT NO. CN 1251
 PROJECT NAME: Central Subway Tunnels
 CONTRACTOR: Synergy Project Management, Inc.

REPORT NO. **4396**
 DATE PERFORMED **3/7/13**
 DATE OF REPORT **3/7/13**

COR#716

The following work was performed on this date requiring the use of the Labor Force, Materials, Equipment, Special Forces and Services listed herein:

Work Description: *Removal of 16" steel pipe not shown on plans @ MOS south @ 12" north tie in.*

NAME (FIRST, LAST)	HOURS	
<i>Francisco (Foreman)</i>	ST	<i>2</i>
	OT	
<i>Jerry C. (operator)</i>	ST	<i>2</i>
	OT	
<i>Herman A. (laborer)</i>	ST	<i>2</i>
	OT	
	ST	
	OT	
	ST	
	OT	
	ST	
	OT	

Material	Q/U	Comments

Services/Subcontractor	Quantity	Units	Comments

EQUIPMENT DESCRIPTION	Quantity	Active	Standby
Backhoe w/Breaker			
Mini Excavator	<i>1</i>	<i>2</i>	
Dump Truck			
End Dump			
Foreman's Truck	<i>1</i>	<i>2</i>	
Tool/Fuel Truck	<i>1</i>	<i>2</i>	
Triton Barriers			
Sawcutter w/ Truck			
Traffic Control Stockton			
Traffic Control Geary, Ellis, O'Farrell			
Steel Plates			
Shoring			

EQUIPMENT DESCRIPTION	Quantity	Active	Standby
Mini Komatsu w/Breaker			
Mini Komatsu w/Breaker			
40 K Komatsu w/Breaker			
New Holland Excavator			
Generator			
Chipping Gun			
Air Compressor			

SFMTA Notes:

SFMTA Inspector was called before work commenced? YES NO
 Daily Force Account Report was filled out at the end of the day the work was performed? YES NO
 SFMTA signature below acknowledges verification of labor, equipment, material, and service/subcontractor quantities only. Costs and contract allowability are subject to review and certification for compliance with contract terms and scope of work. Any costs determined not to be allowable for payment shall be deducted from the report prior to final resolution.

Prepared by: *Shannon Azino* Date: *3/7/13*
 SFMTA Engineer/Inspector: *Gabriel Hernandez* Date: *3/11/13*

PROJECT NO. CN 1251
 PROJECT NAME: Central Subway Tunnels
 CONTRACTOR: Synergy Project Management, Inc.

REPORT NO. **4397**
 DATE PERFORMED **3/8/13**
 DATE OF REPORT **3/8/13**

COR #712

The following work was performed this date requiring the use of the Labor Force, Materials, Equipment, Special Forces and Services listed herein:

Work Description: *Complete removal of 16" steel pipe not shown on plans @ mos south @ 12" north-tu in.*

NAME (FIRST, LAST)	HOURS	
<i>Francisco (Foreman)</i>	ST	<i>1</i>
	OT	
<i>Jerry C (operator)</i>	ST	<i>1</i>
	OT	
<i>Herman A (laborer)</i>	ST	<i>1</i>
	OT	
	ST	
	OT	
	ST	
	OT	
	ST	
	OT	

Material	Q/U	Comments

Services/Subcontractor	Quantity	Units	Comments

EQUIPMENT DESCRIPTION	Quantity	Active	Standby
Backhoe w/Breaker			
Mini Excavator	<i>1</i>	<i>2</i>	
Dump Truck			
End Dump			
Foreman's Truck	<i>1</i>	<i>1</i>	
Tool/Fuel Truck	<i>1</i>	<i>1</i>	
Triton Barriers			
Sawcutter w/ Truck			
Traffic Control Stockton			
Traffic Control Geary, Ellis, O'Farrell			
Steel Plates			
Shoring			

EQUIPMENT DESCRIPTION	Quantity	Active	Standby
Mini Komatsu w/Breaker			
Mini Komatsu w/Breaker			
40 K Komatsu w/Breaker			
New Holland Excavator			
Generator			
Chipping Gun			
Air Compressor			

SFMTA Notes:

SFMTA Inspector was called before work commenced? YES NO
 Daily Force Account Report was filled out at the end of the day the work was performed? YES NO
 SFMTA signature below acknowledges verification of labor, equipment, material, and service/subcontractor quantities only. Costs and contract price liability are subject to review and confirmation for compliance with contract terms and scope of work. Any costs determined not to be allowable for payment shall be deducted from the report prior to final submission.

Shannon Cayano 3/8/13
 For *Com Kelly*

Galbraith
 SFMTA Engineer/Inspector
 3/11/13

16" Steel Pipe To be removed.



2013/03/07 08:43:35A



03/08/2013 11:31

SFMTA Contract No. 1252

Contractor: Barnard Impregilo Healy JV (BIH)

EVALUATION OF MERIT

COR 076

Recommendation: Accept justification of Merit for COR 076 – Moscone South - 16" Unmarked Steel Pipe. There is no time extension requested or recommended for this work.


Facts: The Contractor encountered an abandoned 16" pipe located in the trench of the proposed 12" low pressure waterline. The 12" waterline could not be installed until the abandoned 16" pipe was removed. The 16" steel pipe was removed at the 12" water tie-in location at the north side of the Moscone southeast headwall. See attached Drawing CS 1252 - 31.

Justification: The contract drawings, specifically WD-403 rev.0 and UD-403 rev.0, did not show the abandoned 16" pipe which constitutes a differing and unforeseen site condition. The 16" pipe was at the same elevation as the proposed 12" waterline and therefore needed to be removed. SFTMA inspectors have verified that additional labor and equipment resources were required to facilitate removal of the 16" abandoned pipe.

Change Type – (2) Unforeseen Condition

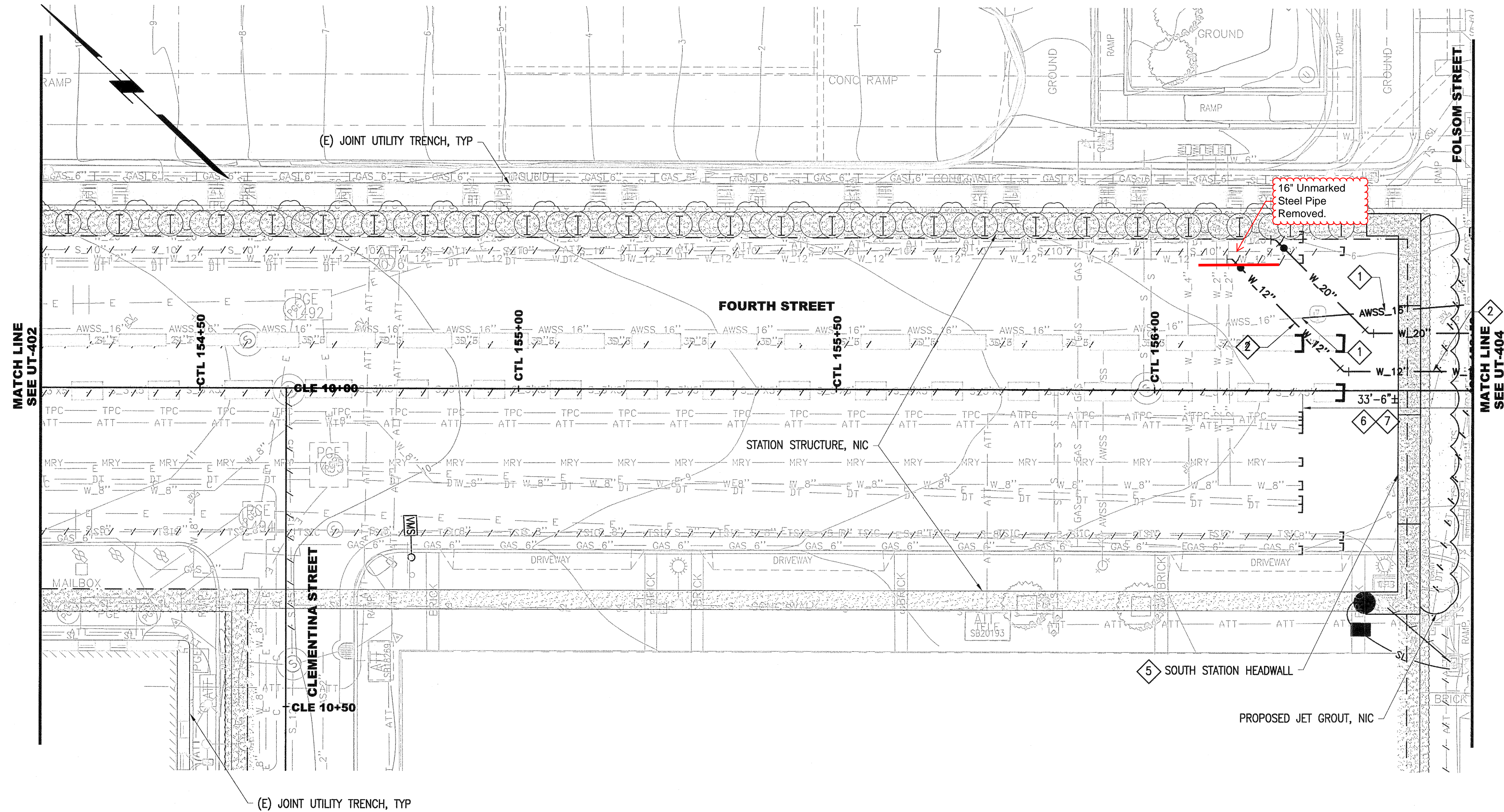
By: 
Sarah Wilson
Resident Engineer

3/20/13
Date


Configuration Management Board
Approval

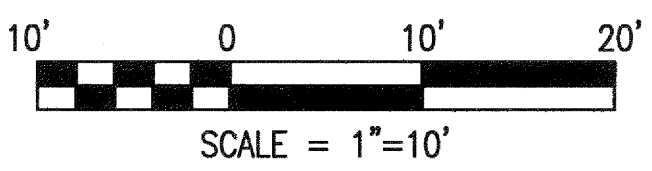
3-20-13
Date

S:\6nos003\m544.1\FinalDesign\Drawing-821\2-Civil\Utility Composites\Sheet Files CP03\Utility Composite\M54423UT403.dwg fbayani Thu Jan 27, 2011 10:14 am UT-403



- NOTES:**
1. SEE AWSS (AW) DRAWINGS FOR DESIGN.
 2. SEE WATER DISTRIBUTION (WD) DRAWINGS FOR DESIGN.
 3. SEE JOINT TRENCH (JT) DRAWINGS FOR DESIGN.
 4. SEE SEWER (SW) DRAWINGS FOR DESIGN.
 5. SEE (ES) DRAWINGS.
 6. REMOVE (E) 3' X 5' BRICK SEWER AND TEMPORARILY REMOVE (E) 18" PEP SEWER (INSIDE 3' X 5' SEWER) FOR STATION HEADWALL CONSTRUCTION. CONTRACTOR SHALL REPLACE ANY REMOVED OR DAMAGED PIPE AND MAKE CONNECTIONS IN ACCORDANCE WITH SFDPW STANDARD SPECIFICATION 322.03 "JOINTS FOR PEP SEWER" (SEE REFERENCE DRAWING 69412 FOR EXISTING CONDITION).
 7. BYPASSING OF MAIN SEWER FLOW SHALL BE PER SEWER SPECIFICATIONS SECTION 33 31 00.

DRAWING NO. CS 1252 - 031
COR 076

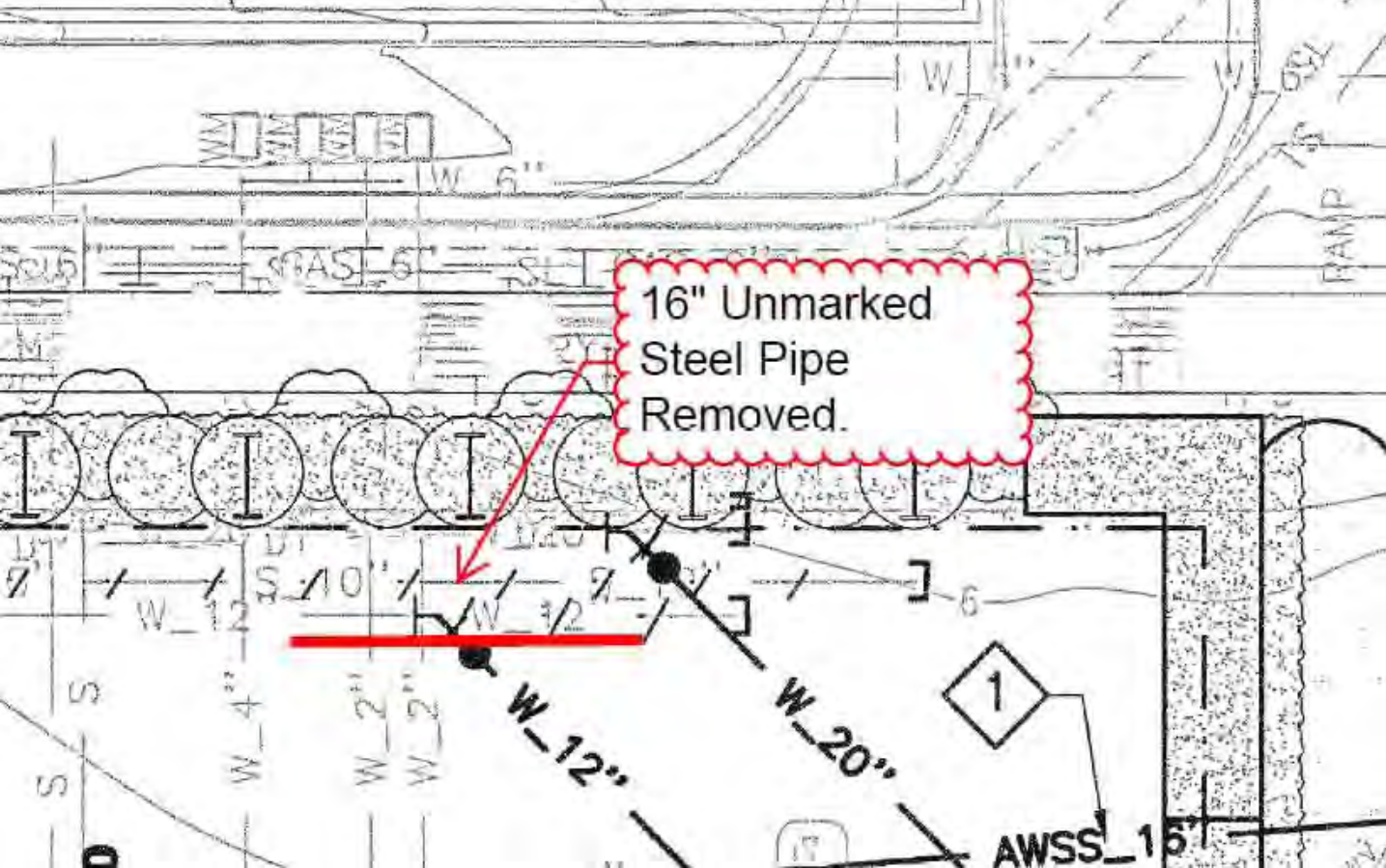


CONFORMED

				<p>CITY AND COUNTY OF SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY</p>		<p>THIRD STREET LIGHT RAIL PROGRAM PHASE 2 - CENTRAL SUBWAY TUNNELS</p>		<p>CONTRACT NO. 1252</p>	
				<p>APPROVED <i>[Signature]</i> EXECUTIVE DIRECTOR/CEO</p>		<p>UTILITY COMPOSITE MOSCONE STATION CTL 154+25 TO 156+50</p>		<p>SFMTA CONTROL NO. CL-17990</p>	
<p>DESIGNED: M. DEFORGE <i>[Signature]</i> DRAWN: F. BAYANI <i>[Signature]</i> CHECKED: P. WILSON <i>[Signature]</i> REVIEWED: M. CHAN <i>[Signature]</i> RECOMMENDED: M. FOWLER <i>[Signature]</i> APPROVED: R. EDWARDS <i>[Signature]</i> DATE: JAN 21 2011</p>		<p>DATE: 01/21/2011 ISSUED FOR BID</p>		<p>DATE: 01/21/2011 ISSUED FOR BID</p>		<p>DRAWING NO. UT-403</p>		<p>REVISION 0</p>	

BORDER REVISED 05/18/2009

16" Unmarked
Steel Pipe
Removed.



16" Steel Pipe
Removed



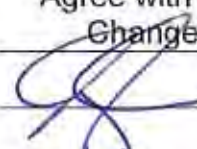
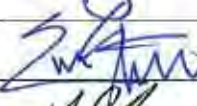
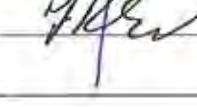

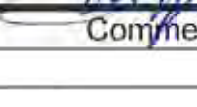
2018/03/07 08:43:35.45



03/08/2013 11:31



03/08/2013 11:23

GENERAL						
Proposed Change Sponsor: <u>S. Wilson</u>		Received by CMB: <u>05/08/2013</u>		(Date)		
Affected Disciplines: <u>Excavation and Ground Support</u>						
Impacts of Change <u>MOS – 16" Pipe removal at NE Headwall</u>						
Change Order Request (COR 073) Amount Not To Exceed \$989.00						
<u>Contract(s) Directly Affected by this Proposed Change:</u>						
1250	1251	1252	1253	1254	1255	1256
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input checked="" type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>
(CP01)	(CP02)	(CP03)	(CP04)	(CP05)	(CP06)	(CP07)
CONFIGURATION MANAGEMENT BOARD APPROVALS						
<i>Signatures</i>						
	Agree with the Change	Disagree with the Change	Date			
Senior Program Manager:			5-8-13			
Deputy Program Manager:						
PM Project Services:			08 MAY 13			
PM Project Development/Delivery:			5/8/13			
SFMTA O & M Manager:						
SFMTA Safety and Security						
SFCTA PMO			8 May 13			
Comments						

COR 073									
No.	Activity Name	Days (C)	Days (EE)	Contractor (C)	Engineer's Estimate (EE)**	Delta (EE-C)	Comparison*	Negotiation Position*	
Labor	1								
		FA4385 - 2/14/13 Remove 10lf of 16" steel p	0.31	0.3125	\$ 362.70	\$ 357.96	\$ (4.74)	BIHJV rounded down to the hundredth decimal on the duration (days).	
		NET	0.31	0.3125	\$ 362.70	\$ 357.96	\$ (4.74)		
Equipment	1								
		FA4385 - 2/14/13 Remove 10lf of 16" steel p	.31	0.3125	\$ 491.16	\$ 391.51	\$ (99.66)	Dump Truck was used only for one hour as shown on FA tag. BIHJV billed for 2.5 hours.	
		NET	.31	0.3125	\$ 491.16	\$ 391.51	\$ (99.66)		
				Material	\$ -	\$ -	\$ -		
				Markup LM&E - 15%	\$ 128.08	\$ 112.42	\$ (15.66)		
				2nd Tier Subs	\$ -	\$ -	\$ -		
				Markup - 5%	\$ -	\$ -	\$ -		
				Sub. Bond/Insurance 2.14%	\$ 21.01	\$ 18.44	\$ (2.57)		
				Prime Markup - 5%	\$ 50.15	\$ 44.02	\$ (6.13)		
				Prime Bond/Insurance 1.68%	\$ 17.69	\$ 15.53	\$ (2.16)		
				Total	\$ 1,070.79	\$ 939.87	\$ (130.92)		
RE Recommended NTE Amount:					\$ 989.00	\$939.87 + \$49.13 (Jason Gilliland is being shown in the Contractor's Proposal and EE as a Driver but Certified Payroll shows him as an Apprentice Laborer which has a higher rate. Correct rate to be confirmed.)			
*The amounts shown in the "Comparison" and "Negotiation Position" columns are fully marked up for easy addition or subtraction from the bottom line.									
**The Engineer's Estimate is a Lump Sum estimate which uses SFMTA verified labor and equipment hours documented on Force Account Report No. 4385.									

Estimate Summary

General Scope: The work captured in this lump sum estimate occurred on 2/14/13. Synergy Project Management performed the removal of an abandoned 16" pipe located in the trench of the proposed 12" low pressure waterline at the Moscone northeast headwall.

Detailed Scope:

1. FA4385 - 2/14/13 Remove 10lf of 16" steel pipe

	Labor	Equipment	Material / Sub	Mark Ups	Total
Cost Summary:	\$ 357.96	\$ 391.51	\$ -	\$ 190.41	\$ 939.87

List of attached documents:

- Detailed Estimate
- Photographs
- FA Tags 4385

Estimate Prepared:
5/3/2013

PROJECT NO. CN 1251
 PROJECT NAME: Central Subway Tunnels
 CONTRACTOR: Synergy Project Management, Inc.

REPORT NO. 4385

DATE PERFORMED 2/14/13

DATE OF REPORT 2/14/13

COR #73

The following work was performed this date requiring the use of the Labor Force, Materials, Equipment, Special Forces and Services listed herein:

Work Description:

Remove 10 1/2" steel pipe not shown on drawings @ most SE for SFWD tie in. per Ben Han

NAME (FIRST, LAST)	HOURS
Juan Ochoa	ST 2 1/2
	OT
Rafael M	ST 2 1/2
	OT
Jason G.	ST 2 1/2
	OT
	ST
	OT
	ST
	OT
	ST
	OT

Material	Q/U	Comments

Services/Subcontractor	Quantity	Units	Comments

EQUIPMENT DESCRIPTION	Quantity	Active	Standby
Backhoe w/Breaker			
Mini Excavator	1	2 1/2	
Dump Truck	1	1	
End Dump			
Foreman's Truck	1	2 1/2	
Tool/Fuel Truck	1	2 1/2	
Triton Barriers			
Sawcutter w/ Truck			
Traffic Control Stockton			
Traffic Control Geary, Ellis, O'Farrell			
Steel Plates			
Shoring			

EQUIPMENT DESCRIPTION	Quantity	Active	Standby
Mini Komatsu w/Breaker			
Mini Komatsu w/Breaker			
40 K Komatsu w/Breaker			
New Holland Excavator			
Generator			
Chipping Gun			
Air Compressor			

SFMTA Notes: PIPE NEEDED REMOVED PER SFWD FOR MORE ROOM AT TIE-IN POINT ON SOUTH-SIDE OF NORTH HEADWALL ON 12" PIPE

SFMTA Inspector was called before work commenced? YES NO
 Daily Force Account Report was filled out at the end of the day the work was performed? YES NO
 SFMTA signature below acknowledges verification of labor, equipment, material, and service/subcontractor hours and quantities only. Costs and contract allowability are subject to review and confirmation for compliance with contract terms and scope of work. Any costs determined not to be allowable for payment shall be deducted from the report prior to final resolution.
 Prepared by: UPK Date: 2-15-13 SFMTA Engineer/Inspector: Paul Hawk Date: 2/18/13

SFMTA Contract No. 1252

Contractor:

Barnard Impregilo Healy JV (BIH)

EVALUATION OF MERIT

COR 073

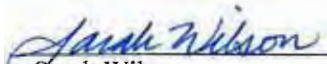
Recommendation: Accept justification of Merit for COR 073 – Moscone Unknown 16" Pipe Removal @ North Headwall. There is no time extension requested or recommended for this work.

Facts: On February 14th, 2013 the Contractor encountered an abandoned 16" pipe located in the trench of the proposed 12" low pressure waterline. The 12" waterline could not be installed until the abandoned 16" pipe was removed. The 16" steel pipe was removed at the 12" water tie-in locations at the north and south side of the Moscone northeast headwall. See attached Drawing CS 1252 - 21.


Justification: The contract drawings, specifically WD-402 rev.0 and UD-402 rev.0, did not show the abandoned 16" pipe which constitutes a differing and unforeseen site condition. The 16" pipe was at the same elevation as the proposed 12" waterline and therefore needed to be removed. SFTMA inspectors have verified that additional labor and equipment resources were required to facilitate removal of the 16" abandoned pipe.

Change Type – (2) Unforeseen Condition

By:



Sarah Wilson
Resident Engineer

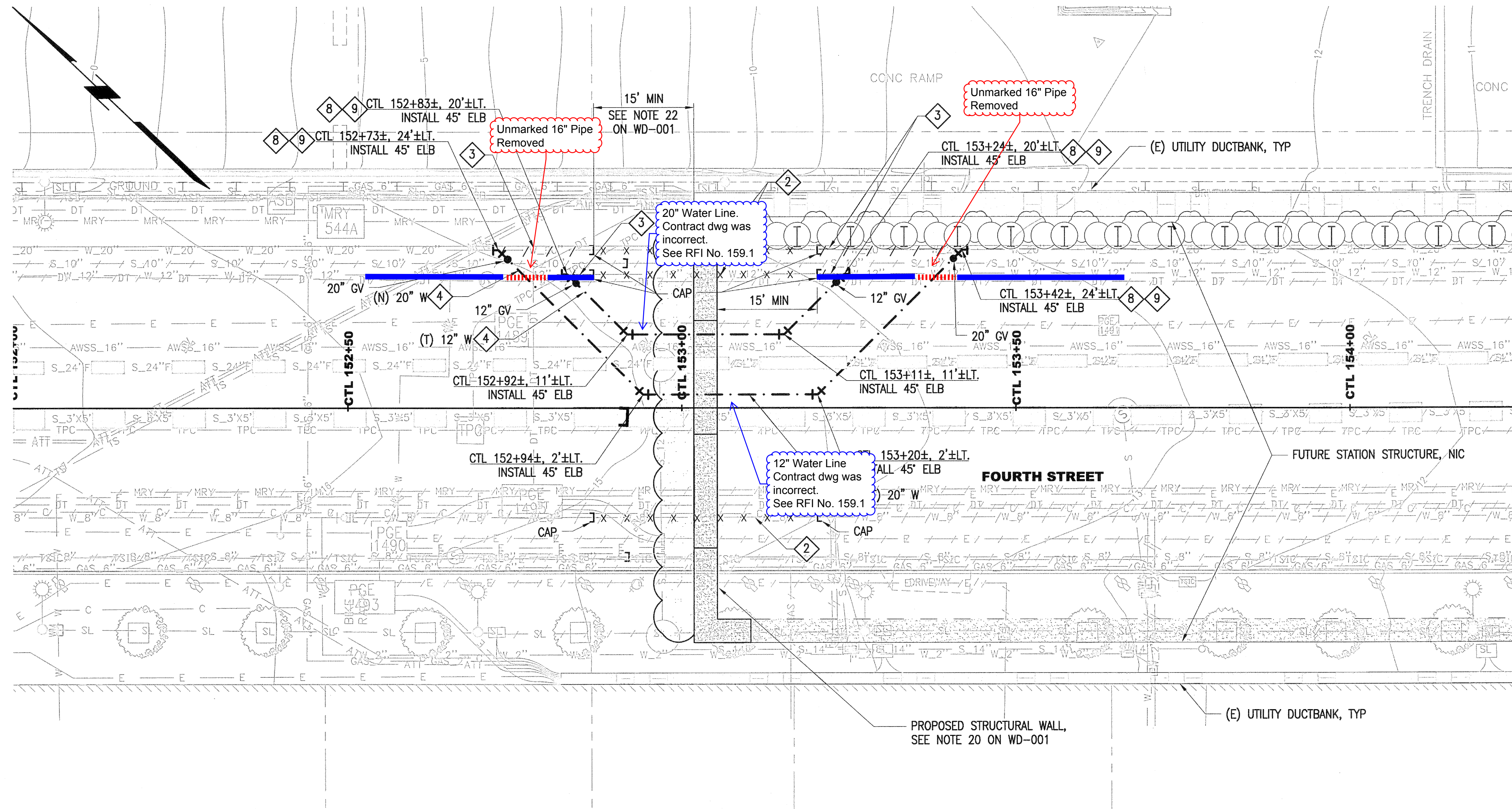


Configuration Management Board
Approval

3/13/13
Date

3-13-13
Date

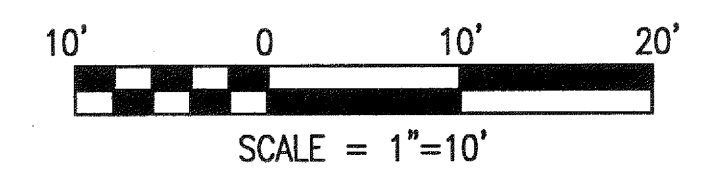
S:\6nas003\m544.1\FinalDesign\Drawing-821\2-Civil\Water Distribution\Sheet Files CP03\M54423WD402.dwg FBayani Wed Jan 26,2011 - 4:22 pm WD-402



- NOTES:**
1. R/S (E) LPFH. CONTRACTOR SHALL COORDINATE AND EXCAVATE SIDEWALK AT THE HYDRANT TO THE EXTENT NECESSARY FOR SFFD TO REMOVE THE FIRE HYDRANT AND BREAKAWAY RISER, SEE WD-001 GENERAL NOTE 16.
 2. R/C (E) WATER PIPE, SEE DRAWING NO. WD-001 GENERAL NOTE 22.
 3. ABANDON (E) WATER PIPE, SEE DRAWING NO. WD-001 GENERAL NOTE 15.
 4. (N) OR (T) WATER MAIN, SEE DRAWING NO. WD-001 GENERAL NOTE 22.
 5. (N) BUILDING SERVICE, SEE DRAWING NO. WD-001 GENERAL NOTE 8A.
 6. (N) 6" LPFH ASSEMBLY, SEE DRAWING NO. WD-001 GENERAL NOTE 8B.
 7. RECONNECT TO (E) WATER LATERAL BY SFWD.
 8. CONNECT TO (E) WATER MAIN BY SFWD.
 9. DISCONNECT AND TERMINATION OF (E) WATER LINE BY SFWD.

MATCH LINE
SEE WD-403

**DRAWING NO. CS 1252 - 021
COR 073**



CONFORMED

								CITY AND COUNTY OF SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY		THIRD STREET LIGHT RAIL PROGRAM PHASE 2 - CENTRAL SUBWAY TUNNELS		CONTRACT NO. 1252	
DESIGNED: D. ZUURING DRAWN: E. MATIAS CHECKED: M. DEFORGE REVIEWED: M. CHAN RECOMMENDED: M. FOWLER APPROVED: R. EDWARDS DATE: JAN 21 2011				APPROVED EXECUTIVE DIRECTOR/CEO		WATER DISTRIBUTION MOSCONE STATION CTL 152+00 TO 154+25		DRAWING NO. WD-402		SFMTA CONTROL NO. CL-18059		SHEET NO. 140	
01/21/2011 ISSUED FOR BID				DATE		0		REVISION		0		140	



Pipe in conflict/Removed

02/14/2013



02/12/2013



02/11/2013



02/11/2013

CS CN 1252 Letter No. 156

April 26, 2013

PG&E
P.O. Box 604
Moss Landing, CA
95039

Attn: Michael Lightstone

Reference: Contract 1252 Central Subway
Tunnels

Subject: Reimbursement Request for Additional Work Activities

Dear Mr. Lightstone,

The intent of this letter is to notify/update PG&E of additional costs related to field changes issued during the execution of SFMTA Contract Number 1252 work.

1. *COR 006 PG&E live electrical delays*

Please see attached Change Order Request (COR) from the contractor Barnard Impreglio Healy JV (BIH/JV) dated 01/10/2013. In order for the completion of the TBM Launch box guide walls to take place PG&E Vault #2975 and the utilities connected to it were required to be abandoned prior to excavation. The contract documents indicated that these utilities were abandoned; however SFMTA was informed on April 5, 2012 that PG&E Inspector Tom Reimer found live electrical and fiber optic lines when performing an inspection inside PGE Vault #2975. The de-energization of the PG&E line and the SFDT cutover were not completed until May 22, 2012; see attached email from M. Lightstone to D. Greenaway dated May 23, 2012. As a result of the PG&E utilities not being abandoned BIH/JV experienced inefficiencies beginning on May 17th and ending on May 24th, 2012.

SFMTA and BIH/JV held negotiations on 01/14/2013 to arrive at a final cost of \$7,402.36 for this change. The SFMTA is requesting PG&E's written confirmation that the total additional cost of \$7,402.36 is deemed legitimate for the scope of work described herein. Additionally, this letter should document a commitment to reimburse the SFMTA for these additional costs.

2. *COR 010 MOS - Demo PGE duct bank / SF City 911 fiber optic line*

Please see attached COR dated 08/05/2012 from BIH/JV. PG&E approved of this change in an email from M. Lightstone to T. Reimer on 06/26/2012; see attached. SFMTA and the BIH/JV held negotiations on 08/23/2012 to arrive at a final cost of \$4,915.54 for this change. The SFMTA is requesting PG&E's written confirmation that the total additional cost of \$4,915.54 is deemed legitimate for the scope of work described herein. Additionally, this letter should document a commitment to reimburse the SFMTA for these additional costs.

3. *PCC 13 - Moscone - Street light conduit from PG&E vault @ north headwall*

Please see attached Proposed Contract Change (PCC) and Finding of Facts Form related to this change. SFMTA believes it is PG&E's responsibility to provide permanent power to the street lights in question. SFMTA also requests written confirmation that the attached design and costs are approved by PG&E.

4. *COR 039, 044, 073 and 076 - Moscone - 16" Steel Pipe removal*

While performing excavation for the sewer and AWSS trench at the intersection of Fourth and Harrison streets, BIH/JV encountered what was identified to be a 16" depressurized gas main. During removal it was determined this gas main contained a 2" gas line which was shown on contract drawing UD-502 to be abandoned / removed. See attached photo dated 04/17/2012.

BIH/JV encountered the same 16" pipe located at the north and south headwall locations at Moscone. The 16" steel pipe was removed in order for headwall construction and utility installation to continue. See attached drawings and photos (09/18/2012 & 10/09/2012) of the locations where the pipe was removed. Please confirm that the pipe in question belongs to PG&E. SFMTA is requesting PG&E's written confirmation to reimburse the SFMTA for these additional costs. Currently the SFMTA has negotiated final costs of \$2,951.99 (COR 039) and \$1,600.00 (COR 044) related to this change. COR 073 and 076 will be forth coming.

5. *COR 041 - Launch Box - Impacts due to live PG&E electrical lines (Synergy)*

Please see attached COR dated 01/08/2013 from BIH/JV. On May 21st 2012, based on direction from the SFMTA, BIH/JV provided a full time flagger for one night shift of work @ the intersection of the I-80 off-ramp near 4th/Bryant streets. PG&E needed flagging assistance in the intersection of the I-80 off-ramp in order to finish the abandoning of the live power feed to the Launch Box area. The utilities leading from the vault were shown in the contract drawings to be abandoned. See COR 006 above related to this change.

SFMTA and BIHJV held negotiations on 01/14/2013 to arrive at a final cost of \$1,216.60 for this change. The SFMTA is requesting PG&E's written confirmation that the total additional cost of \$1,216.60 is deemed legitimate for the scope of work described herein. Additionally, this letter should document a commitment to reimburse the SFMTA for these additional costs.

6. *COR 079 - Comp Grout - Old Navy*

Please see attached COR Form dated 04/24/2013 from BIH/JV. The SFMTA and the BIH/JV have met Tom Reimer (Consultant for PG&E) on site and have confirmed the numerous obstructions found are abandoned PG&E utilities. An abandoned PG&E duct bank and an abandoned 12-inch PG&E gas line had to be removed in order to obtain a clear path for the Compensation grout holes at this location. Neither of these facilities was indicated on the contract drawings PG&E reviewed prior to construction. In addition, a PG&E duct bank containing a live 12kV line was discovered to extend further east and deeper than indicated on those same drawings, thereby obstructing the path to drill compensation grout holes.

As a result of these obstructions, we have directed our contractor to being procuring a small drill rig to install the compensation grout tubes to mitigate the presence of the utilities. The use of the smaller drill rig is much more inefficient and as a result the SFMTA will incur additional cost.

SFMTA is requesting PG&E's written confirmation to reimburse the SFMTA for these additional costs. If PG&E would prefer instead to partially mitigate these costs by relocating the 12kV duct bank, please notify the SFMTA immediately. The relocation would need to be complete by May 3, 2013.

Please contact me if you have any questions or require additional information.

Sincerely,



Sarah Wilson
CN 1252 Resident Engineer
SFMTA Central Subway Project

Cc: Shahn timer Farhang i, SFMTA
John Funghi, SFMTA
Arthur Wong, SFMTA
Joon Park, SFMTA
Mark Benson, SFMTA
Richard Redmond, SFMTA

M544.1.3.1252.0030



04/17/2012

CDF encasement on the new 48"
sewer on the East side of 4th St
starting at approx Sta 157+80



09/18/2012

16" utility that was encountered not shown on the UD plans to be abandoned on the Southeast Headwall of MOS



10 09 2012 10:28

PROJECT: Contract 1252 - Tunnels

DATE: 3/15/2013

TO: SF Municipal Transportation Agency
821 Howard Street
San Francisco, CA 94103

REF: Segment Spalls Repair Procedure
31 74 17-025

ATTN: Sarah H. Wilson

WE ARE SENDING:	SUBMITTED FOR:	ACTION TAKEN:
<input type="checkbox"/> Shop Drawings	<input checked="" type="checkbox"/> Approval	<input type="checkbox"/> Approved as Submitted
<input type="checkbox"/> Letter	<input type="checkbox"/> Your Use	<input type="checkbox"/> Approved as Noted
<input type="checkbox"/> Prints	<input type="checkbox"/> As Requested	<input type="checkbox"/> Returned After Loan
<input type="checkbox"/> Change Order	<input type="checkbox"/> Review and Comment	<input type="checkbox"/> Resubmit
<input type="checkbox"/> Plans		<input checked="" type="checkbox"/> Submit
<input type="checkbox"/> Samples	SENT VIA:	<input type="checkbox"/> Returned
<input type="checkbox"/> Specifications	<input checked="" type="checkbox"/> Attached	<input type="checkbox"/> Returned for Corrections
<input checked="" type="checkbox"/> Other: Made from Submittal	<input type="checkbox"/> Separate Cover Via: Mail	<input type="checkbox"/> Due Date:

ITEM NO.	COPIES	DATE	ITEM NUMBER	REV. NO.	DESCRIPTION	STATUS
1	5	3/15/2013	SUT 31 74 17-025	001	Segment Spalls Repair Procedure	NEW

Remarks: In accordance with specification section 31 74 17 see attached Segment Spalls Repair Procedure.

CC:

Signed: 
Alessandro Tricamo

Barnard Impregilo Healy JV

SUBMITTAL

NO. 31 74 17-025

PACKAGE NO: 317417

PO BOX 78270
San Francisco, CA 94107

Phone: 415-546-0799
Fax: 415-546-3822

TITLE: Segment Spalls Repair Procedure

REQUIRED START: 3/15/2013

PROJECT: Contract 1252 - Tunnels

REQUIRED FINISH: 4/12/2013

DRAWING:

DAYS HELD: 0

STATUS: NEW

DAYS ELAPSED: 0

BIC: SFMTA

DAYS OVERDUE: -28

RECEIVED FROM		SENT TO		RETURNED BY		FORWARDED TO	
BIHJV	ATR	SFMTA	SHW	SFMTA	SHW	BIHJV	ATR

Revision						Drawing					
No.	Description / Remarks	Received	Sent	Returned	Forwarded	Status	Sepias	Prints	Date	Held	Elapsed
001	Segment Spalls Repair Procedure	3/15/2013	3/15/2013			NEW	0	0		0	0

Memorandum

ARUP

To	BIHJV	Date	March 1, 2013
Copies	Jon Hurt, Michele Mangione	Reference number	MM/LP
From	Luis Piek (San Francisco)	File reference	
Subject	Cosmetic Defects on Segmental Tunnel Lining		

Introduction

This memorandum clarifies the influence of minor damage due to casting of the segmental tunnel lining to be used for the Third Street Light Rail Program, Phase 2 – Central Subway. Photographs showing minor spalling or chips of the concrete at typical locations have been reviewed including both 4 ft and 5 ft long segments.

Influence of Defects on Segment Performance

The photographs shown below have been reviewed and show non-structural damage that is primarily cosmetic and does not compromise the structural integrity of the segment nor the performance of the gaskets. The damage can be readily repaired using standard procedures for similar precast concrete works.



Photo 1. Spall on the radial joint near the footed gasket

Memorandum



Photo 2. Spall on the radial joint near the footed gasket



Photo 3. Spall on the circumferential joint near the footed gasket

Repair Procedure

The repair procedure attached to this memo has been reviewed and is considered appropriate for repair of these types of minor surface defects.

**Third Street Light Rail Program
Phase 2 – Central Subway Tunneling
Contract No. 1252**

SECTION 13 74 17

**PROPOSED SPALLING REPAIR PROCEDURE FOR STRESS
RELIEF PORTIONS OF THE TUNNEL SEGMENTS**

Rev No.	Issue Date
00	March 1, 2013

Precast Management is requesting to be able to perform patching of minor spalls that occur on the raised stress relief areas on the radial and circumferential sides of the segment with the approved patching material shown in the Method Statement, Speed Crete Red Line fast setting patching material, per the directions provided by the. It is noted that most of these same surfaces will be covered with packing prior to final placement in the tunnel.

Attached are pictures of several segments as an example of areas where PMC would like to perform patching.







The above picture represents an segment patched with the procedures and materials mentioned on page 2 of this request



SPEED CRETE® RED LINE

FAST SETTING PATCHING MATERIAL

DESCRIPTION

SPEED CRETE RED LINE is a fast setting, cement-based concrete and masonry patching compound. SPEED CRETE RED LINE is a proprietary formulation of blended portland cements, finely processed selected aggregates, and specific chemical additives. SPEED CRETE RED LINE, when combined with the correct amount of water, undergoes a chemical "hyper hydration" and produces a stable, low permeability, cementitious matrix.

PRIMARY APPLICATIONS

- Interior and exterior
- Vertical, overhead and horizontal repairs
- Used at no slump consistency
- Outstanding repair material for concrete pipe, curbs, sidewalks, formed and precast concrete

FEATURES/BENEFITS

- Initial set in 8 to 10 minutes
- Final set within 20 minutes
- May be "shaved" to desired shape
- High strength
- Excellent durability
- Compatible with Galvanic Anodes

TECHNICAL INFORMATION

Material Properties at 75°F (24°C)

Compressive Strength , psi (MPa) ASTM C 109	
24 Hour	2,550 (17.6)
7 Day	5,290 (36.5)
28 Day	6,100 (42.1)
Set Time , ASTM C 266	
Initial	8 Min
Final	20 Min
Tensile Strength , psi (MPa) ASTM C 190	
7 Day Ave.	309 (2.1)
28 Day Ave.	395 (2.7)
Flexural Strength , psi (MPa) ASTM C 78	
28 Day Ave.	918 (6.3)

Shear Bond Strength , psi (MPa) ASTM C 1042	
24 Hour Ave.	906 (6.2)
7 Day Ave.	1,084 (7.5)
Freeze Thaw Durability Factor ASTM C 666	
310 Cycles	96.75%
Shrinkage 50% RH ASTM C 157	
28 Day Ave.	-0.143%
Expansion 100% RH ASTM C 157	
28 Day Ave.	0.077%
Scaling Resistance ASTM C 672	
25 Cycles	0% loss
Chloride Permeability ASTM C 1202	
1300 coulombs	low

Values presented are typical and not necessarily referenced to create specifications.

PACKAGING

SPEED CRETE RED LINE is packaged in 50 lb (22.7 kg) poly-lined bags, and 50 lb (22.7 kg) pails.

SHELF LIFE

1 year in original, unopened package.

COVERAGE

One 50 lb (22.7 kg) bag yields approximately 0.5 cu ft (0.014 m³). With the addition of 40 lbs (18.14 kg) of 3/8 inch (0.95 cm) pea rock the yield is approximately 0.7 ft³ (0.02 m³).

DIRECTIONS FOR USE

Surface Preparation: Concrete surfaces must be structurally sound, free of loose or deteriorated concrete and free of dust, dirt, paint, efflorescence, oil and all other contaminants. Mechanically abrade the surface to achieve a surface profile equal to CSP 6 - 7 in accordance with ICRI Guideline 03732. Properly clean profiled area. **Priming:** Clean and prime exposed steel with DURALPREP AC. Concrete should be primed with a spray or brush coat of DURALPREP AC. Alternately, a Saturated Surface Dry (SSD) concrete surface can be primed with a scrub coat of SPEED CRETE RED LINE. The repair must be made before the scrub coat dries out.

SPEED CRETE® RED LINE
Fast Setting Patching Material

Master Format #: 03 0150

Revised: 4.09



The Euclid Chemical Company

19218 Redwood Rd. • Cleveland, OH 44110
Phone: [216] 531-9222 • Toll-free: [800] 321-7628 • Fax: [216] 531-9596
www.euclidchemical.com

An **RPIM** Company



Mixing: SPEED CRETE RED LINE will require approximately 5 to 5.5 qts (4.73 to 5.20 L) of potable water per 50 lb bag (22.7 kg) to achieve the proper mix consistency. Pour the measured amount of water into a clean mixing container, then add the measured amount of SPEED CRETE RED LINE, and thoroughly mix for no more than 60 seconds to a stiff, no slump, putty-like consistency. Mix small quantities of SPEED CRETE RED LINE in a clean pail with a hand trowel. Use a rotary mixer with rubber tip blades for mixing quantities up to 100 lbs. (45.4 kg). To fill patches 2 inches (5.1 cm) deep or greater, add clean, pre-dampened, 3/8 inch (.96 cm) size pea gravel or chip stone to the SPEED CRETE RED LINE. Do not use limestone aggregate. The mix ratio must not exceed 40 pounds (18 kg) of rock to each 50 lb (22.7 kg) bag or pail of SPEED CRETE RED LINE. **Mixing procedure:** Start mixer, load water, load rock, then load the SPEED CRETE RED LINE. Mix for no more than 60 seconds.

Application: To ensure complete bond with the entire surface, force the SPEED CRETE RED LINE firmly into the SSD area by hand or with a trowel. Slightly overfill the patch, and following initial set, shave the material to conform to the contour of the surrounding surface. Always shave SPEED CRETE RED LINE toward the common bonding edge between the patching material and the existing surface. Cure material using standard curing practices. For additional information, contact your local Euclid Chemical representative.

Cold Weather Installation: Application at temperatures below 40°F(4°C) extends the set time. Heating the patch area until warm, using warm water for mixing and tenting or insulating the patch area after application will assist in reaching higher strength development. Do not use direct heat on the patch after its installation.

CLEAN-UP

Clean application tools and mixing equipment with water immediately following use.

PRECAUTIONS/LIMITATIONS

- Store covered storage away from all moisture.
- Mix no more than 60 seconds.
- Use only potable water with SPEED CRETE RED LINE.
- Mix to a stiff, putty-like, no slump consistency.
- Do not re-temper or add sand to SPEED CRETE RED LINE.
- Do not overwork or over-trowel patching material.
- Do not featheredge SPEED CRETE RED LINE.
- Clean mixing equipment between batches.
- In all cases, consult the Material Safety Data Sheet before use.

WARRANTY: The Euclid Chemical Company ("Euclid") solely and expressly warrants that its products shall be free from defects in materials and workmanship for one (1) year from the date of purchase. Unless authorized in writing by an officer of Euclid, no other representations or statements made by Euclid or its representatives, in writing or orally, shall alter this warranty. EUCLID MAKES NO WARRANTIES, IMPLIED OR OTHERWISE, AS TO THE MERCHANTABILITY OR FITNESS FOR ORDINARY OR PARTICULAR PURPOSES OF ITS PRODUCTS AND EXCLUDES THE SAME. If any Euclid product fails to conform with this warranty, Euclid will replace the product at no cost to Buyer. Replacement of any product shall be the sole and exclusive remedy available and buyer shall have no claim for incidental or consequential damages. Any warranty claim must be made within one (1) year from the date of the claimed breach. Euclid does not authorize anyone on its behalf to make any written or oral statements which in any way alter Euclid's installation information or instructions in its product literature or on its packaging labels. Any installation of Euclid products which fails to conform with such installation information or instructions shall void this warranty. Product demonstrations, if any, are done for illustrative purposes only and do not constitute a warranty or warranty alteration of any kind. Buyer shall be solely responsible for determining the suitability of Euclid's products for the Buyer's intended purposes.

Please let Precast Management know if this is acceptable.

Sincerely,
Mark Noah, PE
Quality Control Manager

SUBMITTAL REVIEW COMMENTS



CITY AND COUNTY OF SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY

CONTRACT NAME: Central Subway Tunneling

SUBMITTAL NO: 31 74 17-025

CONTRACT NO: 1252

REVIEW CYCLE NO: 01

SUBMITTAL NAME: Segment Repair Procedure

COMMENTS DATE: April 8, 2013

SPEC SECTION NAME: 31 74 17

DISPOSITION: (please mark with an "X")

Approved

Approved as Noted

Approved as Noted – Resubmittal Required

Disapproved – Resubmit

Rejected

No Action Required

COMMENTED BY: Matt Fowler/Richard Redmond

REVIEW COMMENTS:

The following submittal review comments pertain to the following documents:

1. "Proposed spalling repair procedure for stress relief portions of the tunnel segments," by Precast Management Corp. dated March 1, 2013
2. ARUP Memo from Luis Piek to BIHJV, March 1, 2013 "Cosmetic Defects on Segmental Lining"

The repair procedure prepared by PMC seeks approval to patch "minor spalls that occur on the raised stress relief areas on the radial and circumferential sides of the segment" with Euclid Speed Crete Red Line cement-based patching compound per the manufacturer's "Directions for Use." The proposed Speed Crete product is acceptable.

Before this repair procedure can be approved, provide the following clarifications:

1. Clearly state the limits of the procedure's applicability (i.e., on how deep or extensive of a spall or chip can it be applied).
2. State how deep and wide does the speed crete gets applied.
3. The surface prep and priming procedures. The Red Line spec sheet lists options for priming; indicate which will be used and confirm that the primers, if used, will not harm the gasket.
4. Confirm if sawcut or dove tail chipping of the concrete as a requirement to prevent the spall repair from fall off.
5. Clearly identify Luis Piek as a P.E. and the reviewer of the segment repair procedure.
6. A point of clarification on comments made in the procedure about most of the areas being covered with packing; the raised "stress relief" pads are present only on the radial joint faces of the segments and the plastic packing materials are only used on the circumferential joints.
7. Confirm the repair is only for non-structural, cosmetic chipping and spalling adjacent to the gaskets.

PROJECT: Contract 1252 - Tunnels

DATE: 4/17/2013

TO: SF Municipal Transportation Agency
821 Howard Street
San Francisco, CA 94103

REF: Segment Spalls Repair Procedure
31 74 17-025

ATTN: Sarah H. Wilson

WE ARE SENDING:	SUBMITTED FOR:	ACTION TAKEN:
<input type="checkbox"/> Shop Drawings	<input checked="" type="checkbox"/> Approval	<input type="checkbox"/> Approved as Submitted
<input type="checkbox"/> Letter	<input type="checkbox"/> Your Use	<input type="checkbox"/> Approved as Noted
<input type="checkbox"/> Prints	<input type="checkbox"/> As Requested	<input type="checkbox"/> Returned After Loan
<input type="checkbox"/> Change Order	<input type="checkbox"/> Review and Comment	<input checked="" type="checkbox"/> Resubmit
<input type="checkbox"/> Plans		<input type="checkbox"/> Submit
<input type="checkbox"/> Samples	SENT VIA:	<input type="checkbox"/> Returned
<input type="checkbox"/> Specifications	<input checked="" type="checkbox"/> Attached	<input type="checkbox"/> Returned for Corrections
<input checked="" type="checkbox"/> Other: Made from Submittal	<input type="checkbox"/> Separate Cover Via: Mail	<input type="checkbox"/> Due Date:

ITEM NO.	COPIES	DATE	ITEM	NUMBER	REV. NO.	DESCRIPTION	STATUS
1	5	4/17/2013	SUT	31 74 17-025	002	Segment Spalls Repair Procedure	NEW

Remarks: See attached for review cycle 003 of Segment Spalls Repair Procedure Submittal.

CC:

Signed: 
Alessandro Tricamo

Barnard Impregilo Healy JV

SUBMITTAL

NO. 31 74 17-025

PO BOX 78270
San Francisco, CA 94107

Phone: 415-546-0799
Fax: 415-546-3822

PACKAGE NO: 317417

TITLE: Segment Spalls Repair Procedure

REQUIRED START: 4/17/2013

PROJECT: Contract 1252 - Tunnels

REQUIRED FINISH: 5/15/2013

DRAWING:

DAYS HELD: 0

STATUS: NEW

DAYS ELAPSED: 33

BIC: SFMTA

DAYS OVERDUE: -28

RECEIVED FROM		SENT TO		RETURNED BY		FORWARDED TO	
BIHJV	ATR	SFMTA	SHW	SFMTA	SHW	BIHJV	ATR

Revision							Drawing				
No.	Description / Remarks	Received	Sent	Returned	Forwarded	Status	Sepias	Prints	Date	Held	Elapsed
001	Segment Spalls Repair Procedure	3/15/2013	3/15/2013	4/8/2013	4/8/2013	DIS	0	0		0	24
002	Segment Spalls Repair Procedure	4/17/2013	4/17/2013			NEW	0	0		0	0

To	BIHJV Alessandro Tricamo, Matt Paulisich, Jon Hurt, Ben Campbell	Reference number 219434/MLP
cc		File reference
From	Luis Piek	Date April 12, 2013
Subject	San Francisco Central Subway C1252 Tunnels Contract: Site Visit to Precast Management Segment Yard on April 3, 2013 to address spalling concerns	

This memo is being provided to record the discussions and items noted during my site visit to the Precast Management segment casting yard on April 3, 2013. In attendance at the yard were Dave Wallis, Mark Noah, Luis Piek, Alessandro Tricamo, and Jon Hurt.

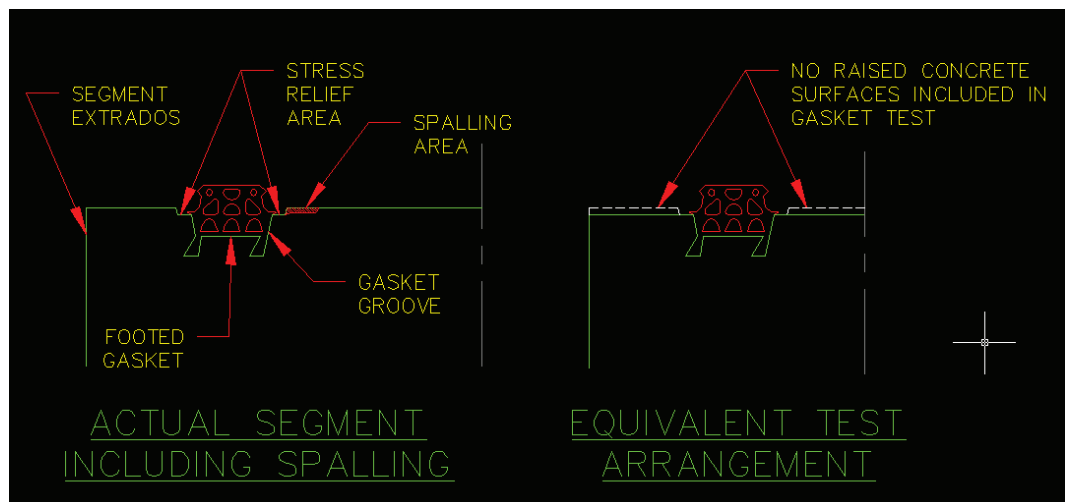
The status of the yard is as follows:

- The first segments cast have been assembled into a 3-high trial ring stack, with dimensional tolerances satisfied per specification section 31 74 17 1.05F.7
- Reinforcement cages are currently being assembled and are being cast into segments.
- Quality control tests for the concrete mix are being performed per design:
 - C1609 Flexural Beam Tests to verify the characteristic flexural strength in initial trial batching have been completed
 - C496 Tensile Splitting Tests at the required frequency for the first 30 days of production per the design drawings are being performed. Based on the results of the testing, the frequency can be reduced as described in the design drawings.
 - C78 Beam Flexural Resistance Tests at the required frequency for the first 30 days of production per the design drawings are being performed. Based on the results of the testing, the frequency can be reduced as described in the design drawings.
 - Fiber Content Testing via washout testing at the required frequency per the design drawings are being performed. Previously all fibers were manually added to the mix in pre-weighed bags; now that an automated system has been incorporated and that the testing of all plastic properties of the concrete mix are performed once per day, it is acceptable to perform the washout test once per day. If testing demonstrates low fiber counts in more than 3 tests in any one calendar month, contractor shall return to the higher testing frequency.
- Arup has been informed that there is some concern by the SFMTA over concrete spalls at and around the bearing pad near the gasket. The extent of damage was witnessed and photographed. Datwyler representative Matthias Klug (no relation to Klug and Associates) was present. Measurements have been taken on several 'characteristic' segments and discussed with both Herrenknecht Formwork and Datwyler. Arup has investigated the potential impacts to the performance of the segments and gaskets and has determined the following:
 - The spalling is on the extrados edge of the bearing pad, adjacent to the stress relief area on the inside of the gasket.
 - The spalling is primarily on the circumferential joint faces. Very few segments were observed that exhibit spalling on the radial faces, and where this is present the extent is generally less than that seen on the circumferential faces.

- The depth of the spalling observed was less than the thickness of the bearing pad which is 0.1 inches (2.6mm). The extent of the spalling of the concrete bearing pad observed varies but was generally less than 0.4 inches (10 mm) wide.

There are two potential areas of concern regarding spalling near to the gasket, the impact on gasket sealing and the impact on segment to segment bearing. These are discussed in the following sections:

- Gasket Sealing Performance:
 - Datwyler has confirmed that their testing does not take into account the concrete bearing pad and all of their sealing tests assume that the stress relief area is continuous. Therefore minor chipping and spalling along the edge of the relief face will not impact gasket sealing performance as this does not affect the gasket groove area and/or the EPDM gasket profile.
 - In terms of gasket capacity, all of the bearing pad could spall to the level of the stress relief groove without impacting gasket performance. This is shown in the sketch below:



- In the segments inspected, the shape and integrity of the gasket groove is being maintained. This is essential to the overall performance of the gasket.
- A 3mm thick packing will be placed on the circumferential face trailing edge of the segment rings. This plastic packing is relatively stiff and based on the manufacturer data will compress very little (0.2mm) under the expected TBM ram forces. This will further reduce any interaction of the gasket with the spalled area.

Based on the above, the spalling is not impacting the sealing capability of the gasket. No repairs of the spalling are required to maintain the sealing performance.

- Segment Bearing:
 - Along the circumferential faces the spalling results in a minor reduction of bearing area used to resist the forward thrust of the TBMs, along the radial faces this spalling will affect the ability of the segments to resist birdsmoothing and bursting. Based on a review of our calculations for the segmental liner, substantially more area would have to be removed from the segments in order for this to be of concern. To provide clarity in repair requirements, the following guidelines are provided for the need to repair spalling in terms of bearing performance:
 - Repairs are not required if:
 - The spall is no deeper than 0.1 inches (2.6mm), that is, the depth of the stress relief;

-
- The area of spalling is less than 1.5" (38mm) wide measured across the joint face; and
 - The combined area of the spall is not greater than 10 square inches along any 12" length measured along the circumferential length; else
 - If any of the above are not met, the area should be patched according to the approved repair procedures.
- Other Issues: Similar minor spalling was observed at the dowel locations. It has been reported that this has greatly improved with recent further polishing of the molds. This minor spalling will have no effect on the pullout performance of the dowel and thus is acceptable.

A list of sketches and photos describing the segment spalling follows.



Photo 1. Spalling along the circumferential face above the gasket area



Photo 2. Close-up of spalling along the circumferential face above the gasket area. Note spalling height $\sim 3/8$ " and spalling length ~ 8 "

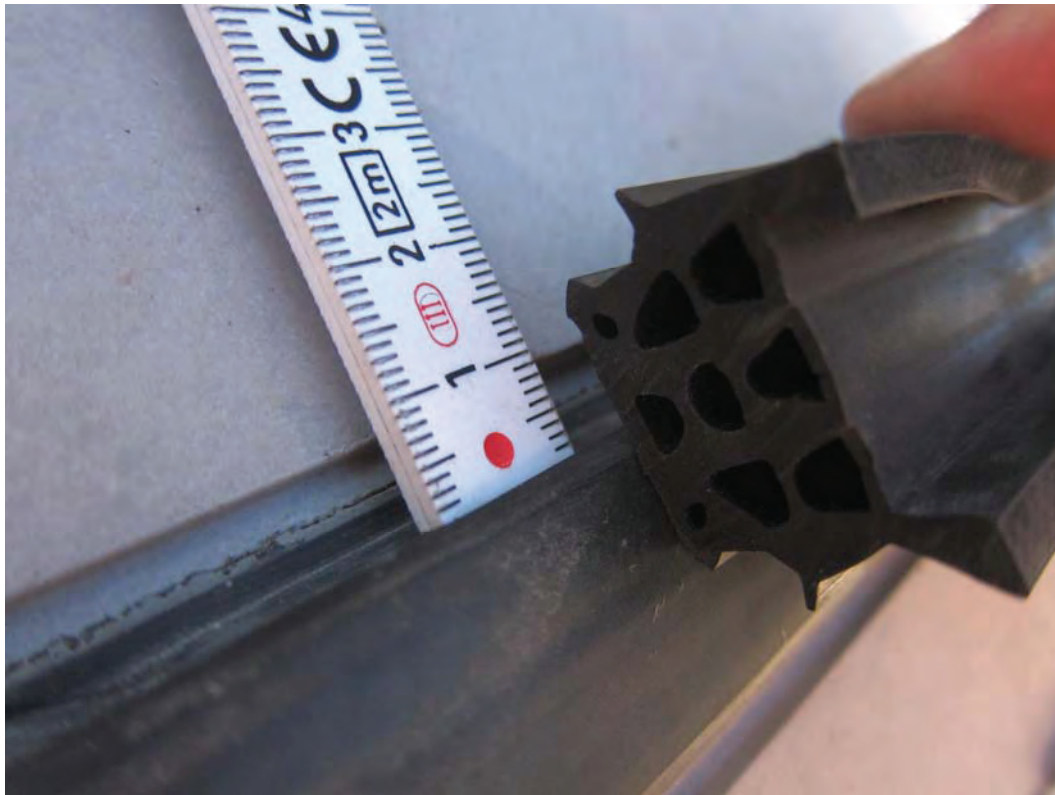


Photo 3. Example of gasket offset of 3/8" (10mm)

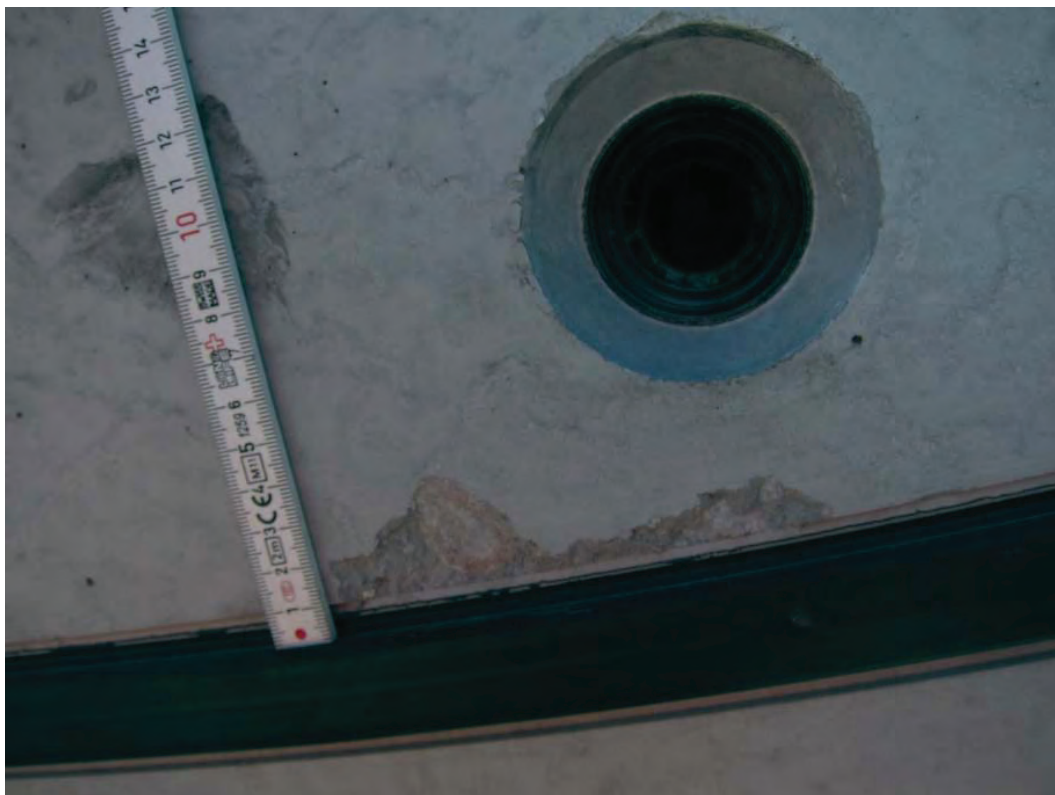
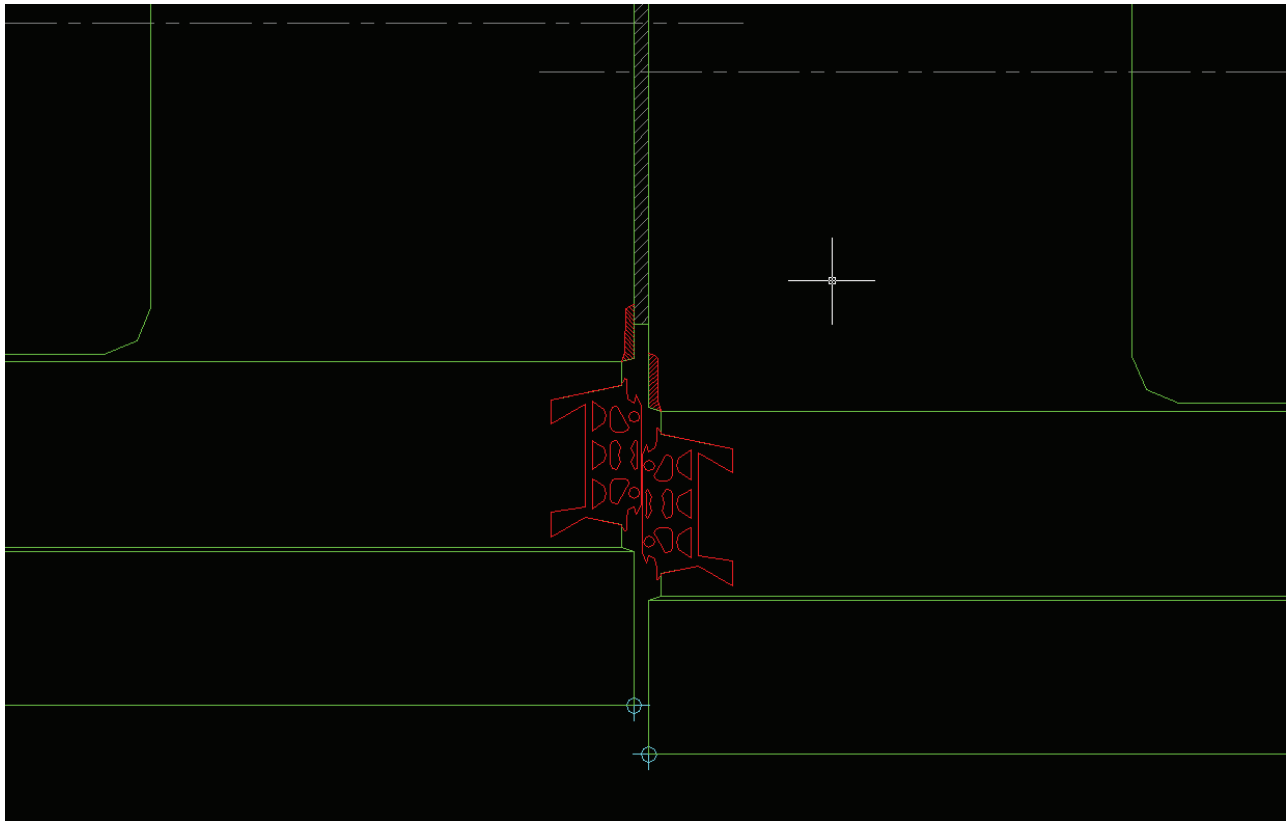


Photo 4. Example of ~1.0" (25mm) high spall



Sketch 1. Cross section showing connection of two segments in adjacent rings with 10mm offset due to lipping. Extrados of segment is to bottom. Compressed gaskets (schematic) are shown in red. Hatched area above gasket is theoretical spall area along circumferential face (into page). Note that gasket bearing surface will not be impacted and the seal provided due to the gasket to gasket interface is maintained.

PROJECT: Contract 1252 - Tunnels

DATE: 3/27/2013

TO: SF Municipal Transportation Agency
821 Howard Street
San Francisco, CA 94103

REF: Segment Liner Alternate Repair Method
31 74 17-026


ATTN: Sarah H. Wilson

WE ARE SENDING:	SUBMITTED FOR:	ACTION TAKEN:
<input type="checkbox"/> Shop Drawings	<input checked="" type="checkbox"/> Approval	<input type="checkbox"/> Approved as Submitted
<input type="checkbox"/> Letter	<input type="checkbox"/> Your Use	<input type="checkbox"/> Approved as Noted
<input type="checkbox"/> Prints	<input type="checkbox"/> As Requested	<input type="checkbox"/> Returned After Loan
<input type="checkbox"/> Change Order	<input type="checkbox"/> Review and Comment	<input type="checkbox"/> Resubmit
<input type="checkbox"/> Plans		<input checked="" type="checkbox"/> Submit
<input type="checkbox"/> Samples	SENT VIA:	<input type="checkbox"/> Returned
<input type="checkbox"/> Specifications	<input checked="" type="checkbox"/> Attached	<input type="checkbox"/> Returned for Corrections
<input checked="" type="checkbox"/> Other: Made from Submittal	<input type="checkbox"/> Separate Cover Via: Mail	<input type="checkbox"/> Due Date:

ITEM NO.	COPIES	DATE	ITEM	NUMBER	REV. NO.	DESCRIPTION	STATUS
1	5	3/27/2013	SUT	31 74 17-026	001	Segment Liner Alternate Repair Method	NEW

Remarks: In accordance with Section 31 74 17 1.04 I, we are submitting herewith Segment Liner patching material information and repair method.

CC:

Signed: 
Antonio Prado

Barnard Impregilo Healy JV

SUBMITTAL

NO. 31 74 17-026

PACKAGE NO: 317417

PO BOX 78270
San Francisco, CA 94107

Phone: 415-546-0799
Fax: 415-546-3822

TITLE: Segment Liner Alt. Repair Method

REQUIRED START: 3/27/2013

PROJECT: Contract 1252 - Tunnels

REQUIRED FINISH: 4/24/2013

DRAWING:

DAYS HELD: 0

STATUS: NEW

DAYS ELAPSED: 0

BIC: SFMTA

DAYS OVERDUE: -28

RECEIVED FROM		SENT TO		RETURNED BY		FORWARDED TO	
BIHJV	AP	SFMTA	SHW	SFMTA	SHW	BIHJV	AP

Revision						Drawing					
No.	Description / Remarks	Received	Sent	Returned	Forwarded	Status	Sepias	Prints	Date	Held	Elapsed
001	Segment Liner Alternate Repair Method	3/27/2013	3/27/2013			NEW	0	0		0	0

Precast Management Corporation
Office: 3664 Susana Street
Las Vegas, Nevada 89121
Ph 702.429.1521 Fax 702.448-3108

document transmittal

To: Antonio Prado
420 Fourth Street
San Francisco, CA 94107
Fax: (415) 546-3822

From: Mark Noah
Date: Wednesday March 27, 2013

Re: Submittal for CTS Rapid Set Mortar Mix
Pages: 3 including this cover sheet

Attached please find the following documentation submitted in regard to authorized batch plants

Document No.	No. Copies	Title	Document Date	Submittal Date
1	1	CTS Rapid Set Mortar Mix	N/A	3/27/13

Precast Management is submitting the above product as a possible alternate patching material for minor segment chips/spalls/etc.

Sincerely
Precast Management
Mark Noah, PE (702-539-1737)

Received by: _____ Date: _____

precast management corporation

3664 susana street, las vegas, nevada 89104
(702) 429.1521 fax (702) 448.3108





Rapid Set® Mortar Mix – DATASHEET

fast setting, High-Strength Mortar

[Rapid Set® Mortar Mix - DATASHEET \[Printable PDF\]](#)

PRODUCT DESCRIPTION:

When mixed with water MORTAR MIX produces a workable, high quality mortar that is ideal where rapid strength gain, high durability and low shrinkage are desired. Apply MORTAR MIX in thicknesses from 1/2 -in to 6-in. Durable in wet environments. SETS IN 15 MINUTES & IS READY FOR TRAFFIC IN 1-HOUR. One 55 lb. bag of Rapid Set® Mortar Mix will yield approximately 0.5 cubic feet.

USES:

MORTAR MIX is a versatile product that can be used for general concrete repair, stucco & plaster repair, one-coat exterior plaster, mortar beds, underlayments, and formed work. MORTAR MIX is suitable for vertical and overhead applications.

COMPOSITION:

Rapid Set® Mortar Mix is a high performance blend of Rapid Set® hydraulic cement and quality sand. MORTAR MIX is non-metallic and no chlorides are added. Rapid Set® Mortar Mix is similar in appearance to portland cement based mortars and may be applied using similar methods.

COLOR:[Light Grey]

The final color of MORTAR MIX may vary due to application techniques and environmental conditions.

LIMITATIONS:

Not intended for applications over 6" deep, for deeper sections use Rapid Set® Concrete Mix. For overlay applications at least one test section should be prepared to evaluate the suitability of the materials and procedures.

TECHNICAL DATA:

- **Set Time**
ASTM C-191(Mod.) at 70°F
Initial Set 15-minutes
Final Set 35-minutes
- **Compressive Strength**
ASTM C-109 Mod.
Age Compressive Strength
1-hour* 2500-psi
3-hour 4000 -psi
1-day 5000 -psi
7-day 6000 -psi
28-day 7000-psi
- **Slant Shear**
ASTM C-882 Mod.
1-day 1000-psi
28-day 2200-psi

* = After final set.

USING MORTAR MIX

SURFACE PREPARATION:

For repairs, adjacent surfaces shall be clean, sound and free from any materials that may inhibit bond such as oil, asphalt, curing compounds, acids, dirt and loose debris. Roughen surface and remove all unsound material. Immediately prior to placement the repair surface shall be thoroughly saturated with no standing water.

MIXING:

The use of a power driven mechanical mixer, such as a mortar mixer or a drill mounted mixer, is

recommended. Organize work so that all personnel and equipment are in place before mixing. Use clean Potable water. Rapid Set® Mortar Mix may be mixed using 3 to 5 quarts of water per 55 lb. bag. Use less water to achieve higher strengths. Do NOT exceed 5 quarts of water per bag. For increased fluidity and workability use Rapid Set® FLOW CONTROL® plasticizing admixture from the Concrete Pharmacy®. Place the desired quantity of mix water into the mixing container. While the mixer is running add Rapid Set® Mortar Mix. Mix for the minimum amount of time required to achieve a lump-free, uniform consistency (usually 1 to 3 minutes). Do NOT re-temper.

PLACEMENT:

Rapid Set® Mortar Mix may be placed using traditional methods. Organize work so that all personnel and equipment are ready before placement. Place, consolidate and screed quickly to allow for maximum finishing time. Do NOT wait for bleed water, apply final finish as soon as possible. Rapid Set® Mortar Mix may be troweled, floated or texture finished. On flat work Do NOT install in layers, install full depth sections and progress horizontally. Do NOT install on frozen surfaces. Use a method of consolidation that eliminates air voids. To extend working time use Rapid Set® SET CONTROL® set retarding admixture.

CURING:

Water cure all Rapid Set® Mortar Mix installations. Begin curing as soon as the surface has lost its moist sheen. Keep exposed surfaces wet for a minimum of 1 hour. When experiencing extended setting times, due to cold temperature or the use of retarder, longer cure times may be required. The objective of water curing shall be to maintain a continuously wet surface until the product has achieved sufficient strength.

TEMPERATURE:

Warm environmental and materials temperatures will reduce the working time of MORTAR MIX. To compensate for warm temperatures, keep material cool and use chilled mix water. Temperatures below 70°F (21°C) will decrease the rate of strength gain and MORTAR MIX should not be applied if surface or ambient temperature is below 45°F (7.2°C).

LIMITED WARRANTY:

CTS Cement Manufacturing Corporation warrants its material to be of good quality, and, at its sole option, within one year from date of sale, will replace defective materials or refund the purchase price thereof and such replacement or refund shall be the limit of CTS's responsibility. Except for the foregoing, all warranties, express or implied including merchantability and fitness for a particular purpose are excluded. CTS shall not be liable for any consequential, incidental, or special damages arising directly or indirectly from the use of the material.

CAUTION:

MORTAR MIX contains cementitious materials and may cause irritation to lungs, eyes and skin. Avoid contact. Use only in adequate ventilation. Do NOT breath dust. Wet mixture may cause burns. Wear suitable gloves, eye protection and protective clothing. In case of skin contact, wash thoroughly with soap and water. In case of eye contact, flush immediately and repeatedly with large quantities of water and get prompt medical attention. In case of difficulty breathing, remove person to fresh air. If difficulty breathing persists, seek medical attention.

Manufacturer:

CTS Cement Manufacturing Corporation
11065 Knott Avenue, Suite A
Cypress, CA 90630
Ph. 800- 929-3030
Fx. 714-379-8270
Web: www.ctscement.com
E-mail: info@rapidsset.com

From: Fowler, Matthew E

Sent: Wednesday, May 01, 2013 11:15 PM

To: Wilson, Sarah H (SFMTA)

Cc: Leong, Kristie; Leong, Mun; Latch, Mark; smirnoff@pbworld.com

Subject: RE: CN1252 SUBI31 74 17-025 Segment Spalls Repair Procedure - Recommend Approval AND SUBI31 74 17-026 Segment Liner Alt Repair Method -- Recommend Approval

DP1.16.30.C3

Sarah,

This revised submittal for segment spall repairs provides an assessment made by Arup for BIH on the effects and significance of localized, shallow spalling adjacent to the segment gaskets on the gasket sealing performance and the effectiveness of the segment bearing surfaces. Compared to the prior version of the submittal that we returned "Approved as Noted, Resubmittal Required," this version provides a more thorough and detailed summary of the issue and assessment of the effects of the spalling including an assessment by the gasket manufacturer, Datwyler.

The expressed judgments about the significance of the spalling on sealing and bearing characteristics are reasonable and in my view, acceptable.

The submittal then defines criteria for depth and area of spalling to be used to decide if repairs (patching) are required, as follows:

Repair not required if:

- Spall no deeper than 0.1 inch (2.6mm) deep, and
- Area of spall is less than 1.5 inches wide, and
- Total area of spall is less than 10 sq. inches over any 12 inch length

These criteria are reasonable and actionable.

Lastly, the prior version of the submittal included a spec sheet for a proposed repair material: Speedcrete Red Line Mortar. The revised submittal makes no mention of the planned repair material or procedures for its application, however, Submittal 31 74 17-026 proposes an new mortar repair product, CTS RapidSet Mortar Mix, as "a possible alternate patching material."

Both products appear suitable for the intended purpose.

Based on the above considerations, I recommend approval of both submittals.

Thanks,

Matt

CENTRAL SUBWAY PROJECT
Project Trend/Change Control Log

Trend Log

Contract Cost Estimate and Allocated Contingencies											
Item #	Date Initiated	CMB No.	Change Description	Change Type	CMB No.	Change Status		Projected Cost Impact +Exposure/(Benefit)	Comments	Contract Modification Number	Utility Reimbursements
						Approval Action	Approval Date				
CONSTRUCTION TRENDS											
Contract 1250 - Utilities Relocation #1 (Portal & MOS)											
1250-0001	04/15/10	081-0001	Delete Option MF-OPT1 "Fire Protection Sprinkler System"	1	N/A			(50,000)	Cleared City Attorney's Office; to Shahnam for execution. [In "Current Forecast" - Sep2010 Cost Report.] COMPLETE, NO FURTHER ACTION; CMOD #1	CMOD #1 Approved	
1250-0002	05/07/10	081-0002	Changes to Sewer on 4th between Howard and Folsom	2	CMB-0001	Agree	07/12/10	+107,174	Differing conditions as AWSS is directly over existing sewer; unable to install sewer manhole per plan. [In "Current Forecast" - Sep2010 Cost Report.] No reimbursement from SFPUC Sewer. COR #2-\$34,135; COR #5-\$73,039 COMPLETE, NO FURTHER ACTION; CMOD #2	CMOD #2 Approved	
1250-0003	05/28/10	081-0003	Quantity Adjustment for JT-6 and JT-7	4	CMB-0002	Agree	08/04/10	+192,420	In April 2010 pay app, JT-6 bid qty exceeded by 344% (230 vs. 1021) and JT-7 bid qty exceeded by 112% (500 vs. 1060) [In "Current Forecast" - Sep2010 Cost Report.] COMPLETE, NO FURTHER ACTION; CMOD #3	CMOD #3 Approved	
1250-0004	07/02/10	081-0004	Demolition of existing brick and concrete footing on 4th between Howard and Folsom	2	CMB-0003	Agree	07/12/10	+170,000	Unforeseen bricks and concrete footing discovered on east side of 4th Street between Folsom and Howard. [In "Current Forecast" - Sep2010 Cost Report.] COR #3-RFI #76 COMPLETE, NO FURTHER ACTION; CMOD #4	CMOD #4 Approved	
1250-0005	04/20/10	081-0005	Modify AWSS at 4th/Bryant and 4th/Harrison	3	CMB-0004	Agree	08/04/10	+586,000	At 4th/Bryant, AWSS conflict with new 48" sewer and AT&T duct bank. At 4th/Harrison, AWSS conflict with 18" sewer. [In "Current Forecast" - Sep2010 Cost Report.] No reimbursement from SFPUC AWSS. PCC #2: RFI #s 34, 49 & 51 COMPLETE, NO FURTHER ACTION; CMOD #5	CMOD #5 Approved	
1250-0006	04/29/10	081-0006	Install four additional piles and reinforce existing foundation at 401 4th Street	2	CMB-0005	Agree	08/25/10	+130,000	Existing foundation was discovered to be part brick and part concrete, which is different from plan. Also, foundation was unstable and required additional reinforcement. Refer to RFIs #85R1, 88.1, 100, 101, 102 COMPLETE, NO FURTHER ACTION; CMOD #6	CMOD #6 Approved	
1250-0007	10/06/10	081-0007	Additional work to install 48" sewer due to various utility conflicts at 4th/Bryant	2	N/A			+32,964	48" RCP sewer in conflict with existing AT&T duct bank that needs to remain in service until new joint trench is installed to enable switchover. This conflict forced contractor into a more expensive means to install sewer. Also, 48" RCP sewer in conflict with existing 30" force main and 24" steel pipes. No reimbursement from SFPUC Sewer. COMPLETE, NO FURTHER ACTION; CMOD #9	CMOD #9 Approved	
1250-0008	10/06/10	081-0008	Relocate TPC vault on 4th Street between Howard and Folsom	6	N/A			+19,500	Contractor uncovered existing TPC conduits on top of AT&T duct bank on 4th near Howard, a differing site condition. An AT&T intercept vault is to be installed, however, TPC conduits can not reside inside AT&T intercept vault. Joint Trench utilities participation cost TBD. Executed on 10/14/2010. Refer to RFI #62 (\$19,500) Expected Reimbursement from TPC. RE has provided documentation of notification to TPC, July-August '10. See final 1250 Form B actual costs COMPLETE, NO FURTHER ACTION; CMOD #8	CMOD #8 Approved	(19,500)
1250-0009	10/06/10	081-0009	Install additional sewer and provide temporary connections at 4th/Stillman	3	N/A			+47,000	Location of existing sewer to be intercepted differs from where it's shown in the plan, hence additional sewer to be installed. Also, due to optional sewer MH not buildable until (E) AT&T DB is removed, additional sewer is necessary to tie into (E) main as interim. New sewer is supposed to tie into optional MH. No reimbursement from SFPUC Sewer. RFI #91 COMPLETE, NO FURTHER ACTION; CMOD #7	CMOD #7 Approved	

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					Approval Action	Approval Date				
1250-0010	10/06/10	081-0010	6	N/A			+48,181	AT&T was supposed to tie-in its own facility. However, AT&T's contractor, who is hired to install vaults, stated it is not in their scope of work. Refer to RFI #82.1. AT&T intercept vault at 4th/Harrison can not be installed at design location due to utility conflicts. AT&T vault to be shifted a few feet instead of vault being on top of existing duct bank. This will cause additional excavation, joint trench and modification to existing duct bank. Joint Trench utilities participation cost TBD. SFMTA and AT&T are negotiating with Contractor. (\$48,181) Expected Reimbursement from AT&T. RE has provided documentation of notification to AT&T, Sept-Oct '10. See final 1250 Form B actual costs. COMPLETE, NO FURTHER ACTION; CMOD #10	CMOD #10 Approved	(48,181)
1250-0011	10/06/10	081-0011	2				-0-	This change order has been incorporated in CMOD #16 (Trend #30) COMPLETE, NO FURTHER ACTION; CMOD #16	CMOD #16 Approved	
1250-0012	10/06/10	081-0012	6	CMB-0047	Agree	08/03/11	-0-	This is the total of all force account work related to AT&T facility. SFMTA to seek reimbursement from AT&T through the Form B process. (\$67,798) Expected Reimbursement from AT&T. Cost captured in Trend #15 COMPLETE, NO FURTHER ACTION; CMOD #20	CMOD #20 Approved	
1250-0013	10/06/10	081-0013	6	CMB-0047	Agree	08/03/11	-0-	This is the total of all force account work related to PG&E facility. SFMTA to seek reimbursement from PG&E through the Form B process. (\$30,547) Expected Reimbursement from AT&T. Cost captured in Trend #15 COMPLETE, NO FURTHER ACTION; CMOD #20	CMOD #20 Approved	
1250-0014	10/06/10	081-0014	2				-0-	This change order has been incorporated in CMOD #16 (Trend #30) COMPLETE, NO FURTHER ACTION; CMOD #16	CMOD #16 Approved	
1250-0015	10/06/10	081-0015	2				+784,771	Midden deposits were discovered on 4th Street between Howard and Folsom. Contractor stopped work. Contractor requesting payment for rental charges of trench plates, barricades, and shoring, and cost of maintenance. Total cost exposure is projected through end of November 2010. The \$290,703.00 is expected to be the final estimate for the rental of trench plates, barriers and shoring. \$597,000 Arch, \$179,000 DIFF, \$8,500 Traffic COMPLETE, NO FURTHER ACTION; CMOD #20	CMOD #20	
1250-0016	10/06/10	081-0016	1	CMB-0016	Agree	11/10/10	+156,418	New alignment is proposed by Design team. No reimbursement from SFPUC AWSS. COR #33 Supplemental COMPLETE, NO FURTHER ACTION; CMOD #12	CMOD #12 Approved	
1250-0017	10/06/10	081-0017	6				-0-	Expected Reimbursement from PG&E or work to be deferred \$6,400. RE has notified PG&E via email dated 10/29/10 that SFMTA expects full reimbursement for this work if implemented. Follow-up pending. Work was not performed and will need to be addressed in a future contract.		
1250-0018	10/06/10	081-0018	6				-0-	Expected Reimbursement from PG&E or work to be deferred \$25,000. RE has notified PG&E via email dated 10/29/10 that SFMTA expects full reimbursement for this work if implemented. Follow-up pending. Work was not performed and will need to be addressed in a future contract.		
1250-0019	10/06/10	081-0019	2					Old Note: Potential delay claim if issue extends project duration. Amount is estimated at \$3,000.00 per day for 60 days (\$180K). New Note: By exercising all option work, additional 84 calendar days is added to the contract time. In addition, midden mitigation will start on 10/7/10. As a result, the potential for extended overhead cost is averted. This trend has been superseded by Trend #37. COMPLETE, NO FURTHER ACTION		
1250-0020	10/06/10	081-0020	3				+39,062	Inverts of existing sewer where new sewer will tie into are found to be different than shown in plan and would create a reverse slope. Additional pipe and manhole are required to fix slope. Refer to RFI Nos. 2S01 and 147. No reimbursement from SFPUC Sewer. COMPLETE, NO FURTHER ACTION; CMOD #11	CMOD #11 Approved	
1250-0021	10/06/10	081-0021	2					Existing AWSS lateral at SW 4th/Harrison is in conflict with new 18" sewer. Instead of modifying the lateral to avoid the sewer, a new lateral at NW corner is a preferred solution. CM awaiting design revision from Design team. Trend No. 21 is combined with Trend No. 22.		
1250-0022	10/06/10	081-0022	2	CMB-0026	Agree	01/12/11	+160,908	AWSS Point of connection on 4th Street was found to be cast iron instead of ductile iron as shown in DPW as-built. Due to this differing condition, additional length of pipe needs to be replaced and lead joint to be installed in order to install a ductile iron tee. Also, existing AWSS hydrant lateral is in conflict with new 18" sewer. The preferred solution was to install a new ductile iron lateral at a different location rather than installing vertical offsets on an existing cast iron lateral. No reimbursement from SFPUC AWSS. COMPLETE, NO FURTHER ACTION; CMOD #15	CMOD #15 Approved	

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1250-0023	10/06/10	081-0023	Steel plates and shoring standby for 2 months due to PG&E delay at Clementina	3				+24,981	Sewer at Clementina was delayed by 2 months due to PG&E vault conflict. PG&E will not pay cost of steel plates and shoring standby because PG&E drawings were sent to MTA during design phase and PG&E was not made aware of the conflict then. COMPLETE, NO FURTHER ACTION; CMOD #13	CMOD #13 Approved	
1250-0024	10/06/10	081-0024	Utility support and work around for AT&T facilities	6	CMB-0048	Agree	08/24/11	+95,311	Contract specs specified AT&T to compensate contractor directly for workaround & support. AT&T refused to pay Synergy. Synergy considers AT&T's refusal as a changed condition to CN 1250 contract. (\$95,311) Reimbursement from AT&T. See Final 1250 Form B actual costs. COMPLETE, NO FURTHER ACTION; CMOD #19	CMOD #19 Approved	(95,311)
1250-0025	10/06/10	081-0025	Utility support and work around for PG&E facilities	6					Contract specs specified PG&E to compensate contractor directly for workaround & support. PG&E negotiated \$100,000 directly with Synergy and will pay synergy directly as well.		
1250-0026	10/06/10	081-0026	Utility support and work around for SFWD facilities	3	CMB-0028	Agree	02/09/11	+66,510	Total cost known to date (10/5/10) of all SFWD support and workaround. See COR #12, 20, 32 and 35. Agreed amount is total of COR #12, 20 and 32. Total exposure is equal to agreed amount plus COR #35. No reimbursement from SFWD. COMPLETE, NO FURTHER ACTION; CMOD #14	CMOD #20 Approved	
1250-0027	10/06/10	081-0027	Trucking and labor support for Archaeological mitigation	2				-0-	Synergy is asked to provide trucking for delivery of midden soil to Sonoma State University lab. Other support work includes traffic control, plating, loading and unloading of midden soil. The amount shown are charges up to end of November 2010 only. Additional charges are expected which will be tracked as Trend No. 28. COMPLETE, NO FURTHER ACTION	CMOD #20 Approved	
1250-0028	12/08/10	081-0028	Trucking and labor support for Archaeological mitigation, Part II	2				-0-	Synergy is asked to provide trucking for delivery of midden soil to Sonoma State University lab. Other support work includes traffic control, plating, loading and unloading of midden soil. The amount shown are expected charges beyond November 2010. COMPLETE, NO FURTHER ACTION	CMOD #14 Approved	
1250-0029	12/08/10	081-0029	Cost overrun for bid item UD-10 "Additional excavation and backfill"	4	CMB-0036	Agree	05/04/11	+112,500	Bid item UD-10 is to pay for excavation of connection hole and kill hole for SFWD line. Contract only included 200 cubic yard for this work. The size of excavations is dictated by field conditions and per the direction of SFWD inspector. RE's estimate of the total volume of dirt to be excavated is 630 cy. Examples of differing conditions encountered are: location of existing water line is different than where it's shown in the plan, existing waterline where shown in the plan to be connected to is inactive, differing condition at 5th/Clementina, connection holes and kill holes need to be expanded due to other utilities in the way. COMPLETE, NO FURTHER ACTION; CMOD #17	CMOD #17 Approved	
1250-0030	12/08/10	081-0030	Supplement bid item GE-4 "Allowance for differing site conditions" related to the installation of publicly owned facilities only (sewer, water, AWSS, Joint trench)	4	CMB-0030	Agree	04/13/11	+235,595	This change order is to supplement GE-4 for cost overrun related to the installation of publicly owned infrastructure only. GE-4 cost overrun for installation of privately owned infrastructure is being tracked separately and a separate change order will be issued. COMPLETE, NO FURTHER ACTION; CMOD #16	CMOD #16 Approved	
1250-0031	12/08/10	081-0031	Unused allowance for bid item GE-8 "Allowance for cast-in-place utility vaults"	4				-0-	Bid item GE-8 is an allowance to pay contractor for designing and constructing cast-in-place manholes as required for installation of new systems. Only one CIP vault was installed. Credit amount included in Trend #43		
1250-0032	12/08/10	081-0032	Unused allowance for bid item UD-5 "Handling and disposal of Class I Hazardous Waste"	4				-0-	Bid item UD-5 is an allowance to pay contractor for handling and disposal of Class I Hazardous Waste. No class I hazardous waste was off hauled away from the job site. Class I soil found under the I-80 freeway was put back in the trench as backfill. This bid item is expected to remain unused. However, contractor is claiming to recover "General Conditions" cost. Credit amount included in Trend #43		
1250-0033	12/08/10	081-0033	Unused allowance for bid item UD-6 "Transportation of Class I Hazardous Waste"	4				-0-	Bid item UD-6 is an allowance to pay contractor for transporting of Class I Hazardous Waste. No class I hazardous waste was off hauled away from the job site. Class I soil found under the I-80 freeway was put back in the trench as backfill. This bid item is expected to remain unused. However, contractor is claiming to recover "General Conditions" cost. Credit amount included in Trend #43		
1250-0034	12/08/10	081-0034	Cost overrun for bid item TR-6 "Allowance for manual traffic control"	4	CMB-0037	Agree	05/04/11	+68,820	Bid item TR-6 is an allowance to pay for off-duty police officers and parking control officers. Contract allowance amount is \$50,000.00. Contract specs calls for police officers at 4 intersections (4th/Howard, 4th/Folsom, 4th/Harrison and 4th/Bryant). The average cost of 1 police officer is about \$800.00 per day (\$100.00 per hour). The \$50,000.00 allowance is only good for 60 days for 1 police officer. Hence, additional money was needed for traffic control support. Final amount paid police officers is \$87,500.00. Additional billings for parking control officers (from AI Herce of DPT) is forthcoming; RE estimated this bill to be about \$60,000.00. COMPLETE, NO FURTHER ACTION; CMOD #18	CMOD #18 Approved	

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1250-0035	12/08/10	081-0035 Premium cost for requesting contractor to accelerate work on 4th Street between Howard and Folsom	2					-0- Due to archaeological discoveries, many trenches remained open and the project would not have enough time to complete installation of underground utilities and restore the roadway before the Holiday season. Without accelerating the work, the project would have had to pay rentals for the barriers, street plates and shoring for the unfinished trenches that would have remained. By accelerating the work and DPT allowing the contractor to work through the beginning of the Holiday Moratorium, the project avoided these rental costs, which is estimated to be greater than the premium cost of accelerating the work. <u>COR Not submitted by Contractor</u> CLOSED COMPLETE, NO FURTHER ACTION		
1250-0036	12/08/10	081-0036 Rental/Maintenance costs for support of Archeological Trenches (Part 1 of 4) \$255,840; Support Work During Archeologist Mitigation Efforts (Part 2 of 4) \$199,741; Mobilization and Equipment Standby Costs (Part 3 of 4) \$67,728; Additional Overhead/Indirect Costs During Archeological Delay Period (Part 4 of 4) \$124,186	2	CMB-0041	Agree	07/13/11 02/15/12 07/25/12 09/12/12		-0- Due to archaeological discoveries, contractor may potentially claim for compensation for his equipment that were idle for the duration of the waiting period. RE's estimate is based on Caltrans rate for equipment standby for 5 months (May to October). RE has not received any change order request related to this item. RE to verify if his equipment were indeed idle during this time period. 2/15: Rental/Maintenance Costs for Support (Part 2 of 4); -0- Addl Work as Result of Archeological Shutdown (3 of 4). 07/25: Revised mod - compensation for 1 of 3) Rental/Maintenance, 2 of 3) Addl Work result of Archeological support, 3 of 3) Addl OH/Indirect cost. RE to add Equipment Standby time to revised mod. 09/12: RE to Prepare Modification 10/29: CMod 20 is being issued as a unilaterally change, by the SFMTA that represents the SFMTA's estimate of a fair and reasonable final compensation amount for the additional work. COMPLETE, NO FURTHER ACTION	CMOD #20 Approved	
1250-0037	12/08/10	081-0037 Compensation for loss of production, inefficiency and disruption of work due to archaeological discovery	2					-0- Due to archaeological discoveries, contractor may potentially claim for compensation for loss of production, inefficiency and disruption of work. RE has not received any change order request related to this item. Amount shown is a ROM cost by the RE. RE expects a COR from the contractor but change justification is very unlikely. Initial draft COR was \$898,453. RE has adjusted to \$661,559 removing the month of October and option work. This was then revised to 800,000. There has been no official submittal from Synergy. SFMTA has directed Synergy to submit anything related to the Architectural delays through the claims process. This will be carried in the Potential Claim Log. COMPLETE, NO FURTHER ACTION		
1250-0038	03/18/11	081-0038 Project Delay due to archaeological discovery and PG&E Issues.	2					-0- Due to archaeological discoveries compounded with PG&E's ability to perform service switchover to Olivet University and de-energize a live duct bank in conflict with 48" sewer. The project will realize an estimated 6 weeks of non-compensable delay to the substantial completion date of 4/6/11. 47 days estimated by RE. Contractor submitted COR 51 in the amount of \$1,144,776.74 on September 1st, 2011. RE responded requesting additional backup on October 19th, 2011. Subsequently, no additional information has been provided by the contractor, therefore, SFMTA has directed Synergy to submit anything related to the Architectural delays through the claims process. This will be carried in the Potential Claim Log.		
1250-0039	05/18/11	081-0039 Remove BP-4 (Waterproofing) from Contract	4					-0- Bid item was not used. Contractor requesting compensation to recover for General Conditions cost. Bid item amount total is \$40,000. NO FURTHER ACTION; Superseded by COR #58. (See 1250-0043 below)	N/A	
1250-0040	05/18/11	081-0040 Delete SW-8 (24" Sewer) from Contract	4					-0- Bid item was not used. Contractor requesting compensation to recover for General Conditions cost. Bid item amount total is \$73,117. NO FURTHER ACTION; Superseded by COR #58. (See 1250-0043 below)	N/A	
1250-0041	05/18/11	081-0041 Delete UD-5 and UD-6 (Class I Off haul and Handling) from Contract	4					-0- Bid items were not used. Contractor requesting compensation to recover for General Conditions cost. Bid items total amount is \$150,000. NO FURTHER ACTION; Superseded by COR #58. (See 1250-0043 below)	N/A	
1250-0042	05/25/11	081-0042 Delete GE-6 (Hazmat) from Contract	4					-0- Bid item was not used. Contractor requesting compensation to recover for General Conditions cost. Bid item amount total is \$100,000. NO FURTHER ACTION; Superseded by COR #58. (See 1250-0043 below)	N/A	
1250-9001	10/06/10	081-9001 Utility Companies refusal to contribute to utility support costs and work around. (Voided. Recorded individually in TR-0059-TR-0061.)	7						VOIDED	
1250-0043	08/03/11	081-0043 Unit Rate Adjustment for Entire 1250 Bid Items	4				(333,904)	Pursuant to General Provision GP-11, COR is to adjust contract value to account for fix overhead costs for bid items not performed or where the bid item performed varied by 25%. COMPLETE, NO FURTHER ACTION; CMOD #20	CMOD #20 Approved	

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Contract 1250 Totals											
							+2,694,211	<p>Total Changes to the Contract in the amount of \$2,694,211, represents a \$740,834 OVER RUN of the original allocated contingency of \$1,953,377.</p> <p>Changes that will be Utility Reimbursement credits through the Form B process in the amount of \$162,992 will offset some of this OVER RUN.</p> <p>Final Contract Closeout Total \$11,968,150 will be reduce by \$2,275,419 Utility Reimbursement credits for a Final Program cost of \$9,692,731 for CN 1250</p>		(162,992)	
Contract 1251 - Utilities Relocation #2 (UMS)											
1251-0001	03/18/11	082-0001	Modify traffic control plan by establishing a single travel lane on Stockton St. in lieu of time-based multiple lane requirements as stipulated in contract plans TR-001 to 004.	7			-0-	<p>After discussions with the Contractor and the Union Square Business Improvement District (BID), the SFMTA determined that modifying the lane requirements along Stockton St. and implementing the alternate pedestrian walkway design would be beneficial to the execution of CN 1251 in the following ways: increased public safety, increase construction production, and create a more pleasing environment to the public and merchant.</p> <p>COR #1</p> <p>COMPLETE, NO FURTHER ACTION; CMOD #4</p>	CMOD #4 Approved		
1251-0002	03/18/11	082-0002	Installation of reinforced concrete slab underneath Joint Trench along Stockton at O'Farrell (East Side). CTL 133+66.37 (27.08 LEFT) to CTL 134+00.87 (27.08 LEFT)	1&3	CMB-0035	Agree	04/20/11	+67,634	<p>Pursuant to a commitment between Barney's and SFMTA, Emergency Stair #4 (to be constructed in CN 1253) must avoid existing subsidewalk basement. It was determined that moving the conflicting stairs would require the Joint Trench to be constructed in a manner that would enable it to span the excavated area. The addition of the invert slab allowed for the needed span thereby allowing for a relocation of Emergency Stair #4.</p> <p>COR #4; PCC #1</p> <p>COMPLETE, NO FURTHER ACTION; CMOD #2</p>	CMOD #2 Approved	
1251-0003	03/18/11	082-0003	Adjust placement of 3EA manholes along Geary Street and O'Farrell Street. The modified manhole locations require the installation of approximately 265LF of additional HDPE pipe inside the existing 3'x5' brick sewer.	1	CMB-0029	Agree	02/23/11	+148,919	<p>During future station construction, the design team anticipates that excavation related settlement may cause damage to the brick sewers along Geary and O'Farrell Streets. This proposed modification will replace the vulnerable brick sewer within the influence zone with HDPE pipe that will not be as susceptible to settlement-induced damage.</p> <p>COR #9, PCC #2</p> <p>COMPLETE, NO FURTHER ACTION; CMOD #1</p>	CMOD #1 Approved	
1251-0004	04/06/11	082-0004	Changes to Neiman Marcus secondary enclosure wall due to various differing site conditions.	2	CMB-0031	Agree	04/13/11	+189,584	<p>Due to various differing site conditions as described in RFIs 15, 37, 38 and 44, changes to the secondary enclosure wall are required. The existing footing were found to be inconsistent, i.e. missing footing in one area, footing sticks out beyond existing wall, overpour on existing footing, existing wall to be 6" into private property. Contract plan SR-302 shows a consistent footing.</p> <p>COR #8</p> <p>COMPLETE, NO FURTHER ACTION; CMOD #3</p>	CMOD #3 Approved	
1251-0005	04/06/11	082-0005	Existing PG&E conduits were found on top and parallel to existing AWSS on Geary Blvd. at 2 locations (east and west of Stockton)	6				+66,084	<p>Contract plans AW-501.1, 501.2, 501.4 and 501.4 show the existing AWSS to be replaced in place. However, existing PG&E conduits were found to be on top and parallel to the existing AWSS resulting in extra work in working around and/or shifting the existing electrical conduits. Contract plans JT-308 and 309 showed the existing electrical and AWSS to be separate. Estimate includes \$77,892.53 (Synergy FA Request) + \$25,000 (first digging west side) + \$10,000 (temp backfill during moratorium) + \$15,000 (plate rental west side at \$5k per month). Estimate does not include Synergy's cost to sequence his work. Updated projected cost impact from \$50,000 to \$127,893 based on compilation of force accounts received.</p> <p>RE negotiating</p> <p>COMPLETE, NO FURTHER ACTION</p>	CMOD #24 Approved	(66,084)
1251-0006	04/20/11	082-0006	Design changes to utilities on Stockton street between Post and Geary	1	CMB-0039	Agree	06/08/11	+398,624	<p>Due to changes to the limits of the UMS Station on Stockton Street between Post and Geary, the original utility design has changed.</p> <p>COR #24, PCC #4</p> <p>COMPLETE, NO FURTHER ACTION; CMOD #5</p>	CMOD #5 Approved	
1251-0007	04/20/11	082-0007	Design changes to utilities on Ellis Street	1	CMB-0049	Agree	08/24/11	(434,957)	<p>Due to changes to the limits of the UMS Station on Ellis street, the original utility design has changed.</p> <p>PCC #5</p> <p>COMPLETE, NO FURTHER ACTION; CMOD #5</p>	CMOD #5 Approved	

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1251-0008	04/20/11	082-0008	1					Based on field verification, it was determined that underpinning is no longer needed. Contract bid item SR-9 is for a total amount of \$116,000 measured by LF. However, CM team does not anticipate to recover the full amount because contractor may be entitled to retain general conditions cost and some excavation cost that was already performed but encumbered in Bid Item SR-9. Agreed credit of (\$58,000) to be included in Trend #60. CLOSED, NO FURTHER ACTION		
1251-0009	04/20/11	082-0009	4	CMB-0038	Agree	06/01/11	+261,584	Contract bid item TR-7 for manual traffic control in the amount of \$120,000 is insufficient to control traffic for the duration of the contract. The \$120,000 allowance only equates to one police officer for a duration of 7.5 months. At a minimum, it is anticipated that one police officer or PCO will be needed at Stockton/Post for the entire contract duration of 16 months. Additionally, one PCO is required for each intersection at Geary/Stockton and O'Farrell/Stockton. COMPLETE, NO FURTHER ACTION; CMOD #4	CMOD #4 Approved	
1251-0010	05/25/11	082-0010	1				+27,409	Contractor needed to rent additional excavators to work concurrently with the other block on Stockton between O'Farrell and Market. Amount: \$27,409; COR #25 COMPLETE, NO FURTHER ACTION; CMOD #3	CMOD #3 Approved	
1251-0011	06/22/11	082-0011	1					Request from MOS utility design team to pothole for the intercept of a 36" force main sewer and 96" sewer. PUC requested that this be done in order to ensure that we have accurate utility information to avoid costly change orders during construction. Per direction from CMB on January 18, 2012, this request is denied. COR #50, PCC #6 CLOSED, NO FURTHER ACTION: Per direction from CMB on January 18, 2012, this request is denied.		
1251-0012	07/06/11	082-0012	2	CMB-0042, CMB-0050	Agree	8/3/2011, 9/21/2011	+278,351	The AWSS is in conflict with AT&T, PG&E and several other utilities and needs to be installed under all these utilities at about 11' deep (instead of 6' depth as noted in Plan AW-501.4, sheet note #5). During negotiations with the Contractor several items of work were found to be missing for the original cost estimates which increase the amount to \$278,351. RFI #76, COR #31 COMPLETE, NO FURTHER ACTION; CMOD #6	CMOD #6 Approved	
1251-0013	07/06/11	082-0013	7				-0-	anticipated. To mitigate this potential delay, contractor requested to start construction in front of Macys West. COR 32 (CMB 0055 approval - see also Trend CN1251 #'s 04 & 10) COMPLETE, NO FURTHER ACTION; CMOD #3 (No Cost Change)	CMOD #3 Approved	
1251-0014	07/21/11	082-0014	3	CMB-0055	Agree	09/14/11	+191,779	This allowance is for the contractor to perform additional excavation, backfilling and restoration associated with the water tie-ins and capping for the distribution piping system. The contractor has performed two water service tie-ins at an average cost of \$14,000 per tie-in. The current number of tie-ins and capping is 35 separate points. This amounts to a total cost of \$490,000. The current contract allowance amount is \$100,000, therefore an additional \$390,000 will be needed to augment bid item. CMB made a partial approve of up to \$200K. The initial Contract Modification to supplement this allowance is in the amount of \$191,778.62. RE's cost analysis of this trend confirms that the initial CMod amount of \$191,778.62 is sufficient to cover for all water tie-in/capping work. COMPLETE, NO FURTHER ACTION; CMOD #9	CMOD #9 Approved	
1251-0015	08/03/11	082-0015	1				+17,530	Modification of the traffic signal at Post/Stockton is required to implement the detour shown in contract plan TR-010. There are no bid item to bill this work. COR #19 COMPLETE, NO FURTHER ACTION; CMOD #8	CMOD #8 Approved	
1251-0016	08/03/11	082-0016	2				+32,054	Existing conduits shown in Plan ET-101 differs from what is actually in the field. City's response to RFI 73 directs contractor to install new conduits and conductors. RFI #73; COR #33 COMPLETE, NO FURTHER ACTION; CMOD #8	CMOD #8 Approved	
1251-0017	08/03/11	082-0017	6	CMB-0051	Agree	09/21/11	+25,000	AT&T was supposed to hire its own subcontractor to furnish and install all AT&T vaults in CN 1251. AT&T requested SFMTA for Synergy to perform this work as change order to CN 1251. AT&T agreed to reimburse SFMTA (\$25,000) through the Form B process. COMPLETE, NO FURTHER ACTION; CMOD #7	CMOD #7 Approved	(25,000)
1251-0018	08/03/11	082-0018	6	CMB-0051	Agree	09/21/11	+31,000	AT&T was supposed to hire its own subcontractor to furnish and install all AT&T vaults in CN 1251. AT&T requested SFMTA for Synergy to perform this work as change order to CN 1251. AT&T agreed to reimburse SFMTA (\$31,000) through the Form B process. COMPLETE, NO FURTHER ACTION; CMOD #7	CMOD #7 Approved	(31,000)

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1251-0019	08/03/11	082-0019	6	CMB-0057	Agree	10/26/11	+31,000	AT&T was supposed to furnish and install AT&T vault #5833 on Ellis Street. The current design was to intercept the existing AT&T conduit in the middle of Ellis Street. It was discovered that the existing AT&T conduit actually run adjacent to the southern curb line along Ellis Street. Therefore, AT&T requested SFMTA for Synergy to extend the joint trench approximately 200 feet to the West and tie into their existing AT&T vault #403. This work will also require Synergy to enlarge vault #403 to accept the additional conduit. This additional work for AT&T will need to be reimbursed to SFMTA through the Form B process. Note: The agreed amount (\$31,000) is for enlargement of vault #403 only; the additional 200 feet of trench to be captured in the JT bid items. (See Trend 60) COR #43 COMPLETE, NO FURTHER ACTION; CMOD #11	CMOD #11 Approved	(31,000)
1251-0020	09/07/11	082-0020	6	CMB-0058	Agree	11/02/11	+19,537	PG&E requested to use GRS material in lieu of PVC in areas where PG&E conduits were expected to be exposed and temporary supported during future UMS station construction. PG&E agreed to reimburse SFMTA (\$19,537) through the Form B process. COMPLETE, NO FURTHER ACTION; CMOD #21	CMOD #21 Approved	(19,537)
1251-0021	09/07/11	082-0021	6					PG&E made changes to the locations of the service points and layout of some of the primary lines. In addition, due to changes to the limits of the UMS Station on Ellis Street, it was determined that Muni Vault 1850A is no longer needed. Cost for this trend is captured in Trend #31 or CMod #12. CLOSED; NO FURTHER ACTION. Cost for this trend is captured in Trend #31/CMod #12		
1251-0022	09/07/11	082-0022	7					During the design phase the representatives of the Hilton Hotel agreed to and signed a license agreement with the SFMTA to allow embedded eyebolt supports. Hilton's Dir of Property Ops now wants to have OCS poles rather than the embedded building eyebolt supports. However, the OCS designer was able to revise the OCS design to eliminate the need for either eyebolts or poles in front of Hilton Hotel, resulting in a \$2,000 credit. CLOSED; NO FURTHER ACTION. Applicable bid items to be adjusted accordingly, See Trend #60.		
1251-0023	09/07/11	082-0023	1	CMB-0065	Agree	1/25/2012, 2/29/12	+405,440	SFMTA Operations has requested a bypass be installed at 4th Street and Folsom Street. \$242,619 in labor costs for OCS installation has not been negotiated yet. 1/25: Condition agreed upon verification material from Contractor to be procured is available. (Verified 02/01/12). 02/29: CMod negotiated cost has been revised to incorporate original three items and the add'l OCS work on Folsom St. COR #52; PCC #7 Updated projected cost impact from \$490,000 to \$405,440. CMod #12 (Formally CMod #15) COMPLETE, NO FURTHER ACTION; CMOD #12	CMOD #12 Approved	
1251-0024	09/07/11	082-0024	6	CMB-0059	Agree	11/16/2011, 05/02/12	+201,411	As a new requirement, PG&E had requested that a 5" slurry wall be installed between the gas line and wet utilities where the separation between the 2 utilities is less than 3 feet. PG&E agreed to reimburse SFMTA (\$201,410) through the Form B process. COR #58 COMPLETE, NO FURTHER ACTION; CMOD #19	CMOD #19 Approved	(201,411)
1251-0025	09/07/11	082-0025	6					PG&E requested to install additional conduits crossing Stockton Street at Geary and O'Farrell to minimize service interruption during future UMS Station construction. PG&E agreed to reimburse SFMTA through the Form B process. This item is captured under applicable JT Bid item, see Trend 60. CLOSED; NO FURTHER ACTION. Item is captured under applicable JT Bid Item, See Trend 60.		
1251-0026	09/14/11	082-0026	2					The sub-basement in the public parking garage at O'Farrell/Mason extends beyond the property line up to the curb line. Therefore, regular foundations as per original design could not be installed. CLOSED; NO FURTHER ACTION. Item is captured under applicable OCS Bid Item, See Trend 60.		
1251-0027	09/20/11	082-0027	1	CMB-0056	Agree	11/30/11	+281,435	Acceleration is necessary to avoid potential delay impacts to Central Subway follow-on contracts. COR #40 COMPLETE, NO FURTHER ACTION; CMOD #10	CMOD #10 Approved	
1251-0028	10/18/11	082-0028	6	CMB-0057	Agree	10/26/11	+157,000	AT&T was supposed to hire its own subcontractor to furnish and install all AT&T vaults in CN 1251. AT&T requested SFMTA for Synergy to perform this work as change order to CN 1251. AT&T agreed to reimburse SFMTA (\$157,000) through the Form B process. COR #43 COMPLETE, NO FURTHER ACTION; CMOD #11	CMOD #11 Approved	(157,000)

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1251-0029	10/26/11	082-0029	Rebuild existing AT&T vault 133 at Post/Stockton and demolish existing AT&T vaults 403 (Ellis) and 113 (O'Farrell)	6				Vault 133 rebuild is superseded by Trend 40. Demolition of existing vaults 403 and 113 is superseded by Trend 43 CLOSED; NO FURTHER ACTION. Demo of exiting vaults 403 and 113 are superseded by Trend 43. (See CMOD #23)			
1251-0030	10/26/11	082-0030	Enlarge existing PG&E vault 873 at SW Geary/Stockton	6	CMB-0058	Agree	11/02/11	+46,366	PG&E asked SFMTA to enlarge vault 873. PG&E agreed to reimburse SFMTA (\$46,366) through the Form B process. CMB approved a NTE amount of \$40K COMPLETE, NO FURTHER ACTION; CMOD #21	CMOD #21 Approved	(46,366)
1251-0031	10/26/11	082-0031	Additional PG&E conduits crossing O'Farrell on east side of Stockton (Task Order #32)	6	CMB-0058	Agree	11/02/11	+17,193	PG&E asked SFMTA to install additional conduits. PG&E agreed to reimburse SFMTA (\$17,193) through the Form B process. COMPLETE, NO FURTHER ACTION; CMOD #21	CMOD #21 Approved	(17,193)
1251-0032	11/08/11	082-0032	Excavation and restoration cost for PG&E gas tie-in and kill holes.	6	CMB-0059	Agree	11/16/2011, 05/02/12	+92,292	PG&E gas drawings were not included in the bid package and there was no bid item to capture this work. Gas drawings was issued by PG&E in June 2011. PG&E agreed to reimburse SFMTA (\$92,292) through the Form B process. Updated projected cost impact from \$202,400 to \$169,087 due to reduction in number of kill holes from 18 to 15. 04/11: Discovery of actual number of Kill/Tie locations being 26 instead of 15 will require confirmation from PG&E of the locations and the new cost of scope of work. COMPLETE, NO FURTHER ACTION; CMOD #19	CMOD #19 Approved	(92,292)
1251-0033	11/23/11	082-0033	Install secondary enclosure wall at One Stockton (Apple Store)	1	CMB-0068	Agree	03/07/12	+408,700	Additional enclosure wall is design initiated change. COR #47, PCC #9 Updated projected cost impact from \$262,484 to \$408,700. 39 Calendar Day Time Extension COMPLETE, NO FURTHER ACTION; CMOD #13 (formally CMOD #14)	CMOD #13 Approved	
1251-0034	01/10/12	082-0034	Install temporary support as required to protect existing live utilities that are encroaching into the City right-of-way in front of 17-25 Stockton Street.	2	CMB-0069	Agree	04/04/12	+337,548	Existing utilities that are in active service were discovered in the City public right-of-way and are obstructing the performance of Contract work. Worst case scenario - "Not to Exceed" value) CM team will report actual amount value at a later date COR #71 CMB agreed to a Not-to-Exceed amount of \$346,456 on 4/4/12. All physical work was scheduled to complete by 4/13/12 COMPLETE, NO FURTHER ACTION; CMOD #17	CMOD #17 Approved	
1251-0035	01/11/12	082-0035	Potholing on Stockton between Post and Geary for UMS Station design	1					UMS Design Team requested 1251 to pothole (6'Wx12'Lx8'D) on Stockton between Post and Geary to locate existing piles and tie-backs at Union Square. Cost for this scope of work from the Contractor is \$19,870.73. Per direction from the CMB on Jan 18th this request is denied and the DP2 designer will cover this potential future obstruction with a note on the drawings. COR #53 CLOSED; NO FURTHER ACTION. Per direction of CMB on 1/18/12, this request is denied and DP2 Designer will cover this potential future obstruction with a note on the drawings.		
1251-0036	01/11/12	082-0036	Install three 6" PG&E conduits from vault 5800 to PG&E "A" pullbox at 4th/Bryant.	6					CN 1252 Contract is requesting 1251 to install PG&E conduits in order to bring power in advance of the tunnel equipment arrival. The scope of work, which involves trenching at the busy 4th/Bryant intersection, was part of the 1252 contract, hence, a credit of same amount (\$54,892.07) to be due back to 1252. Based upon a field meeting and discussions with BIH on Jan 17th this work will be done under CN 1252 as originally planned. COR #55 CLOSED; NO FURTHER ACTION. Based on field meeting with BIH on 1/17/12; this work will be completed under CN 1252 as planned.		
1251-0037	01/17/12	082-0037	Install sewer lateral from the Gucci building (240 Stockton) to the main sewer on Maiden Lane. Work will involve plumbing modification inside building to raise invert.	3	CMB-0078	Agree	09/12/12	+27,428	After field investigation, the existing sewer lateral was found to connect to the Stockton main near Geary. However, the location where the lateral is connected to the main is inside the footprint of the UMS station, in which the main is shown in the contract plan to be slurry filled. The contract plan shows the lateral to be connected to the main on Maiden Lane but is not possible due to invert problem. At the CMB meeting on 1/18/12, Albert Hoe reported that he had instructed the design team during the design phase to investigate this lateral and make the connection to the sewer main at Maiden Lane. RE was asked to investigate if this could be a possible error and omission by the sewer design. (See Trends #44 and 45) COMPLETE, NO FURTHER ACTION; CMOD #18	CMOD #18 Approved	

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1251-0038	01/04/12	082-0038	Reimburse Synergy for JCDecaux work to remove kiosks	1	CMB-0064, CMB 0080	Agree	1/04/2012, 10/24/12	+29,273	JCDecaux refused to remove the remaining (2EA) kiosks without being paid for work already completed. The CMB approved on 1/04/12 Task Order No. 35 (Removal of 3EA sidewalk kiosks) as requested for the work already completed. On 10/24/12 the CMB approved Trend #38 removal of the remaining 2EA kiosks; work already completed and paid for as part of the approved CMB 0064 dated 01/04/12 for a total of 5EA kiosks removed. Total work priced at \$29,268. COMPLETE, NO FURTHER ACTION; CMOD #22	CMod #22 Approved	
1251-0039	01/17/12	082-0039	Furnish and install 2ea benches along 5th Street	1				+4,752	Requested by Muni Operation. COMPLETE, NO FURTHER ACTION; CMOD #22	CMod #22 Approved	
1251-0040	02/15/12	082-0040	Furnish and install AT&T Manholes 133 at Post/Stockton	6	CMB-0070	Agree	04/11/12	+45,000	AT&T requested SFMTA for Synergy to rebuild manhole 133 at Post/Stockton. COR #64 AT&T agreed to reimburse SFMTA (\$45,000) through the Form B process. COMPLETE, NO FURTHER ACTION; CMOD #14	CMOD #14 Approved	(45,000)
1251-0041	02/15/12	082-0041	Install additional 55 LF of AT&T trench to extend conduits from vault 5832 to vault 113 on O'Farrell Street	6	CMB-0070	Agree	04/11/12	+23,704	AT&T requested SFMTA for Synergy to extend their conduit from vault to vault instead of wye-casting into exiting duct bank. COR #63 AT&T agreed to reimburse SFMTA (\$23,704) through the Form B process. COMPLETE, NO FURTHER ACTION; CMOD #14	CMOD #14 Approved	(23,704)
1251-0042	02/15/12	082-0042	Install additional 95 LF of AT&T trench to extend conduits from vault 5831 to vault 129 on Geary Blvd.	6	CMB-0070	Agree	04/11/12	+31,525	AT&T requested SFMTA for Synergy to extend their conduit from vault to vault instead of wye-casting into exiting duct bank. COR #62 AT&T agreed to reimburse SFMTA (\$31,525) through the Form B process. COMPLETE, NO FURTHER ACTION; CMOD #14	CMOD #14 Approved	(31,525)
1251-0043	02/15/12	082-0043	Force account work for demolition of existing AT&T vaults 113 (Post/Stockton) and 403 (Ellis)	6	CMB-0076	Agree Conditionally	10/03/12	+52,607	Agreed cost shown in Trends 29 and 40 is for installing vaults only. Cost to demo existing vaults is tracked on force account (estimated cost at \$15k each vault). AT&T agreed to reimburse SFMTA (\$52,607) through the Form B process. CMB Agreed contingent on receipt of confirmation letter from AT&T for costs associated with these three trends (CMB 0076 approval - see Trend CN1251 #'s 72 & 80) COMPLETE, NO FURTHER ACTION; CMOD #23	CMOD #23 Approved	(52,607)
1251-0044	02/15/12	082-0044	Install new sewer lateral from Macys West on O'Farrell including plumbing modification inside Macy's building.	3	CMB-0078	Agree	09/12/12	+11,438	Contract plan SW-4 shows an existing lateral to be connected to new main. However, the 8" lateral is too big to be connected directly to the new 14" main necessitating a new connection to the manhole. However, numerous existing utilities were in the way and required installation of a new lateral at a higher elevation. Due to the raised lateral invert, modification to the building is also needed. COMPLETE, NO FURTHER ACTION; CMOD #18	CMOD #18 Approved	
1251-0045	02/15/12	082-0045	Install new 2 each sewer laterals on Stockton between Post and Geary	3	CMB-0078	Agree	09/12/12	+30,260	Contract plan SW-3 shows 2 each existing laterals coming from the Union Square garage to be connected to the new main at approximate sta 128+55. However, the laterals were found to be connected to the downstream end of the existing main (toward Geary), which is called for to be abandoned in 1251 to make room for the future station. (See Trends #37 and 44) COMPLETE, NO FURTHER ACTION; CMOD #18	CMOD #18 Approved	
1251-0046	03/06/12	082-0046	Additional cost for enlarging PG&E vault 584 on O'Farrell east of Stockton	6				+80,000	The two (2) existing PG&E duct banks that were supposed to be intercepted by vault 584 were wider than shown on plan. Vault 584 was needed to be enlarged in order to capture the two (2) ductbanks. PG&E agreed to reimburse SFMTA (\$80,000) through the Form B process. COMPLETE, NO FURTHER ACTION; CMOD #24	CMOD #24 Approved	(80,000)
1251-0047	04/10/12	082-0047	Enlarge Muni Vault 900A on Stockton between Post and Geary	2	CMB-0082	Agree	10/31/12	+15,357	Contract plan JT-301 calls for an intercept vault to capture 2 (E) Muni ductbanks (DB). These DBs were found to be farther apart than shown on plan. The intercept vault needs to be widened. (CMB 0082 approval - see Trend CN1251 #'s 47, 58 & 78) COMPLETE, NO FURTHER ACTION; CMOD #26	CMOD #26 Approved	
1251-0048	04/10/12	082-0048	Additional cost and time for stuck auger during micropile drilling	2					Contractor's hollow stem auger got stuck during drilling of micropile #27C in front of 17 Stockton. Contractor claims differing condition as cause for the stuck auger. Contractor is asking for 1 day compensable time extension. SFMTA is reviewing claim for entitlement. COR #67 RE Denied COR (City Letter 26); however Contractor will most likely send rebuttal. CLOSED; NO FURTHER ACTION.		

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1251-0049	04/10/12	082-0049	2	CMB-0083	Agree	11/07/12	+9,058	Existing footing of One Stockton was found to be recessed from property line. City's response to RFI 171 called for additional rebar to compensate for the gap between back of new enclosure wall and existing footing. Also, the Owner's contractor of 17-19 Stockton asked that Synergy clear his work area so he can pour the primary wall and bring in his new switchgear. Synergy is asking 2 days compensable time extension. (CMB 0083 approval - see Trend CN1251 #'s 53, 59, and 64) COMPLETE, NO FURTHER ACTION	CMOD #27 Approved	
1251-0050	04/10/12	082-0050	2	CMB-0074	Agree	08/15/12	+48,898	Type 770 pole foundation at SW 5th/Folsom could not be installed per plan due to a conflict with a cistern. Only solution is to remove an existing pole foundation (recently installed in 1251 as contract work) to make room for the 770 pole foundation. At 5th/Folsom, 2 DPT mast arms (not shown in original plan) need to be installed. At Pole #811, an existing concrete wall is in conflict with pole foundation. (CMB 0074 approval - see Trend CN1251 #'s 67, 74 & 75) COMPLETE, NO FURTHER ACTION; CMOD #20	CMOD #20 Approved	
1251-0051	04/10/12	082-0051	6				+23,633	PG&E requested to reroute existing duct bank running north out of MH 1803 at 4th/Pioneer Place into MH 5464 at Market/Ellis PG&E agreed to reimburse SFMTA (\$23,633) through the Form B process. COMPLETE, NO FURTHER ACTION; CMOD #24	CMOD #24 Approved	(23,633)
1251-0052	04/10/12	082-0052	2	CMB-079	Agree	10/10/12	+27,234	An unforeseen existing waterline was found to be in conflict with PG&E vault 573 and needs to be rerouted per City's response to RFI #182. (CMB 0079 approval - see Trend CN1251 #'s 65 & 70). This is potentially a E&O issue due to unforeseen existing waterline on discovered along Geary Street (east of Stockton Street) not shown in the contract drawings. COMPLETE, NO FURTHER ACTION; CMOD #28	CMOD #28 Approved	
1251-0053	04/10/12	082-0053	1	CMB-083	Agree	11/07/12	+10,591	SFMTA directed Synergy to accelerate work to advance PG&E and AT&T cut-over and allow CN 1252 Contractor to start work at UMS COR #74 PG&E agreed to reimburse SFMTA (\$10,590) through the Form B process. 11/07/12 (CMB 0083 approval - see Trend CN1251#'s 49, 59, and 64) COMPLETE, NO FURTHER ACTION; CMOD #27	CMOD #27 Approved	
1251-0054	04/17/12	082-0054	2				+8,151	Sidewalk in front of FIDM and north end of Crate & Barrel did not have a sub-sidewalk basement, hence the original plan did not call for waterproofing of the primary wall. While excavating for the joint trench, contractor found the existing waterproofing to be spalling and peeling off from the primary wall. COR #72 COMPLETE, NO FURTHER ACTION; CMOD #22	CMOD #22 Approved	
1251-0055	04/17/12	082-0055	6					PG&E requested SFMTA to add this scope to the 1251 contract for safety reason. COR #72 SFMTA decided to defer this work to the 1252 contract. COMPLETE, NO FURTHER ACTION;		
1251-0056	05/31/12	082-0056	2				+45,156	Additional work due to unforeseen and differing conditions during installation of sewer. COMPLETE, NO FURTHER ACTION; CMOD #15	CMOD #15 Approved	
1251-0057	05/31/12	082-0057	2				+39,599	Additional work due to unforeseen and differing conditions during installation of water and demolish existing NRG vaults that are in conflict with utility installation. COMPLETE, NO FURTHER ACTION; CMOD #16	CMOD #16 Approved	
1251-0058	05/31/12	082-0058	2	CMB-0083	Agree	10/31/12	+17,754	The existing streetlight pullboxes new cables were supposed to be connected to per contract plan did not have power. New conduit needs to be install from the power source. COR #75 (CMB 0082 approval - see Trend CN1251 #'s 47, 76 & 78) COMPLETE, NO FURTHER ACTION; CMOD #25	CMOD #25 Approved	
1251-0059	06/26/12	082-0059	1	CMB-0083	Agree	11/07/12	+16,948	As a result of numerous meetings and complaints by Barneys, it was decided to accelerate contract work in order to restore Barneys sidewalk earlier (CMB 0083 approval - see Trend CN1251 #'s 53, 49, and 64) COMPLETE, NO FURTHER ACTION; CMOD #27	CMOD #27 Approved	
1251-0060	06/26/12	082-0060	4				(508,961)	Bid item analysis for entire contract as of 6/12/12.	CMOD #30 Approved	
1251-0061	06/26/12	082-0061	6				+7,424	PG&E requested Synergy to excavate for PG&E cutover at 177 Stillman. Reference document: Email from Michael Lightstone dated 12/9/11 PG&E agreed to reimburse SFMTA (\$7,424) through the Form B process. COMPLETE, NO FURTHER ACTION; CMOD #24	CMOD #24 Approved	(7,424)

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					Approval Action	Approval Date					Actual/Forecast
1251-0062		082-0062	Additional waterproofing at Macys Men's wall	2				+24,774	Contract did not call for waterproofing at Macys Men's wall. However, when contractor dug for the joint trench, it was found that the existing waterproofing has deteriorated and needed to be replaced. COR# 20 COMPLETE, NO FURTHER ACTION; CMOD #22	CMOD #22 Approved	
1251-0063		082-0063	Excavation and restoration cost for PG&E gas tie-in and kill holes. Part II	6				+56,458	After completion of Part I (see trend 32), PG&E had offered to self-perform the excavation and restoration of the gas tie-in/kill holes because PG&E had crews available to perform the work. However, PG&E no longer have available crews, hence Synergy had to continue and finish excavating and restoring the last tie-in/kill holes. PG&E agreed to reimburse SFMTA (\$56,458) through the Form B process. COMPLETE, NO FURTHER ACTION; CMOD #24	CMOD #24 Approved	(56,458)
1251-0064		082-0064	Accelerate finish and detail work of AT&T and PG&E vaults	1	CMB-0083	Agree	11/07/12	+4,704	In order to expedite turn-over of AT&T and PG&E vaults, SFMTA directed Synergy to accelerate the detailing and finish work of these vaults. SFMTA will pay Synergy premium cost for OT hours. 11/07/12 - (CMB 0083 approval - see Trend CN1251 #'s 53, 59, and 49) COMPLETE, NO FURTHER ACTION; CMod #27	CMOD #27 Approved	
1251-0065		082-0065	Additional fittings for AWSS lateral and chipping of pole foundation at Market/Ellis	2	CMB-0079	Agree	10/10/12	+20,412	An existing Muni pole foundation is in the way of the AWSS lateral. Additional fittings are required to complete contract work. (CMB 0079 approval - see Trend CN1251 #'s 52 & 70) This is potentially an E & O issue due to an existing Muni pole foundation is in the way of the AWSS lateral. COMPLETE, NO FURTHER ACTION; CMOD #28	CMOD #28 Approved	
1251-0066		082-0066	Intercept PG&E conduits at Vault 573 at Geary east of Stockton	6				+6,466	During installation of PG&E intercept vault 573, PG&E had incorrectly identified the conduits to be intercepted. This error was discovered during cut-over process by PG&E. PG&E agreed to reimburse SFMTA (\$6,466) through the Form B process. COMPLETE, NO FURTHER ACTION; CMOD #24	CMOD #24 Approved	(6,466)
1251-0067		082-0067	Additional feeder span, no-bo insulator and adjustment of guywire for the Folsom OCS bypass	3	CMB-0074	Agree	08/15/12	+32,149	SFMTA Electrical Designer had pointed out the new Folsom Bypass does not have enough capacity to power the new OCS necessitating installation of feeder spans. Also, adjustments to the guywire are necessary to mitigate conflict with new signal mast arms. COR #76 7/25/12 - RE presented COR to CMB; direction given to develop one CMod with all remaining items to be purchased for the new OCS bypass. (CMB 0074 approval - see Trend CN1251 #'s 50, 74 & 75) COMPLETE, NO FURTHER ACTION; CMOD #20	CMOD #20 Approved	
1251-0068		082-0068	Extended Overhead cost from July 19, 2012 to August 16, 2012	1	CMB-0075	Agree Conditionally	10/03/12	+106,967	Contract is expected to be extended beyond the approved July 18, 2012 completion due to the following reasons: contractor was slowed due to accommodation of AT&T and PG&E cut-over, for example, contractor has to provide windows of time for AT&T to occupy its work space to provide continuity and efficiency for AT&T cut-over, contractor has to advance cleaning and detailing of vaults to turnover to AT&T and PG&E, these work are typically done as punchlist, contractor now has to sequence work and reallocate resources; SFWD cut-over is taking longer than expected; PG&E gas cut-over was delayed due to inability to access Armani building, this delay held up completion of sewer MH, SFWD connection and restoration on O'Farrell east; added change order work, i.e. additional PG&E conduit at vault 573 and additional excavation for AT&T cut-over at 240 Stockton . CMB Agreed contingent on receipt of letter confirming e-mail as presented in the meeting and content viewed related to agreement and remaining actions and release of funds. COMPLETE, NO FURTHER ACTION; CMOD #24	CMOD #29 Approved	
1251-0069		082-0069	Removal of abandoned PG&E gas valve (8each) and install anodes	6				+4,737	PG&E asked Synergy to remove all abandoned gas valves (8each) PG&E agreed to reimburse SFMTA (\$4,737) through the Form B process. COMPLETE, NO FURTHER ACTION; CMOD #24	CMOD #24 Approved	(4,737)
1251-0070		082-0070	Core drill primary wall and install interior plumbing at Armani and Disney for the fire service water cutover	2	CMB-0079	Agree	10/10/12	+14,034	Existing fire service inside the building is a thin-wall steel pipe that extends out to the previously existing sub-sidewalk basement. However, 1251 had backfilled the subsidewalk basement per contract, which now made the steel pipe susceptible to corrosion. SFWD does not want to tie-in to the steel pipe due to corrosion issue plus the fact that the pipe is thin walled, which makes welding almost impossible. A ductile iron pipe needs to be installed from the main and into the building. COR #77 (CMB 0079 approval - see Trend CN1251 #'s 52 & 65) COMPLETE, NO FURTHER ACTION; CMOD #28	CMOD #28 Approved	

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CENTRAL SUBWAY PROJECT
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1251-0071		082-0071 Install a new 8" backflow preventer for the fire service inside Macys Men's building	6					The new water main (installed in the 1251 Contract) is closer to the property line than the existing backflow preventer. State law stipulates that a backflow preventer be installed in between the property's fire suppression system and the water main. The SFWD refuses to make this connection until a proper backflow preventer is installed. SFMTA will insist on Macys to install its own backflow preventer. CLOSED; NO FURTHER ACTION.		
1251-0072	08/08/12	082-0072 Additional AT&T trench from new vault 5829 to existing vault 127 on Geary east of Stockton	6	CMB-0076	Agree	10/03/12	+23,993	AT&T requested new conduits to maintain continuity between the 2 vaults. AT&T agreed to reimburse SFMTA (\$23,993) through the Form B process. RE Tracking work on FAR CMB Agreed contingent on receipt of confirmation letter from AT&T for costs associated with these three trends (CMB 0076 approval - see Trend CN1251 #'s 43 & 80) COMPLETE, NO FURTHER ACTION; CMOD #14	CMOD #14 Approved	(23,993)
1251-0073	08/08/12	082-0073 Additional work to install water and electrical utilities for Flower Stand on Geary west of Stockton	1				+17,966	Contract bid allowance for providing utility services for flower stands (UD-14) had been exhausted during relocation of 2 flower stands. A third and final flower stand is still needed to be relocated. COMPLETE, NO FURTHER ACTION; CMOD #22	CMOD #22 Approved	
1251-0074	08/08/12	082-0074 Traffic Signal modification at 5th/Folsom	1	CMB-0074	Agree	08/15/12	+16,429	Due to installation of OCS bypass on Folsom between 4th and 5th Streets, a left turn signal is required at 5th/Folsom. Additional signal heads and modification to the existing traffic signal is necessary. RE Tracking work on FAR (CMB 0074 approval - see Trend CN1251 #'s 50, 67, & 75 also). COMPLETE, NO FURTHER ACTION; CMOD #20	CMOD #20 Approved	
1251-0075	08/08/12	082-0075 Unforeseen conditions related to pole foundation installation for the Folsom OCS Bypass	2	CMB-0074	Agree	08/15/12	+12,568	Contractor encountered unforeseen concrete and brick substructures and abandoned utility lines. RE Tracking work on FAR (CMB 0082 approval - see Trend CN1251#'s 47, 58 & 78) COMPLETE, NO FURTHER ACTION; CMOD #20	CMOD #20 Approved	
1251-0076	08/08/12	082-0076 Adjustment to OCS on Mason Street	2/3	CMB-0082	Agree	10/31/12	+14,988	Modify bracket arm at existing Pole #511 to alleviate tension load and bending of pole. Realign trolley wire on Mason between Geary and Eddy to smoothen transition when shifting from right lane to left lane. Also, add intermediate guywire to prevent excessive sagging of bracket arms at various locations. RE Tracking work on FAR (CMB 0082 approval - see Trend CN1251#'s 47, 58 & 78) COMPLETE, NO FURTHER ACTION; CMOD #26	CMOD #26 Approved	
1251-0077	09/12/12	082-0077 Additional work related to Qwest, TCG and UCCO facilities	2	CMB-0081	Agree Conditionally	10/31/12	+37,181	Qwest, TCG and UCCO requested Synergy to tie-in their existing conduits into the new vaults that Synergy installed per contract. The utility companies are responsible for connecting existing conduits into new vaults, therefore, this request is considered extra work. Private Utilities companies agreed to reimburse SFMTA (\$37,181) through the Form B process. RE Tracking work on FAR CMB agreement contingent upon CMod package to include evidence from all utilities that cost are reimbursable to SFMTA through the Form B process. COMPLETE, NO FURTHER ACTION; CMOD #25	CMOD #25 Approved	(37,181)
1251-0078	09/12/12	082-0078 Unforeseen conditions encountered during excavation and installation of OCS poles along Mason and 5th Streets.	2	CMB-0082	Agree	10/31/12	+27,645	Several obstructions, i.e. buried concrete, boulders, brick, abandoned utilities were discovered during excavation and installation of OCS poles along Mason and 5th Street. RE Tracking work on FAR (CMB 0082 approval - see Trend CN1251 #'s 47, 58 & 76) COMPLETE, NO FURTHER ACTION; CMOD #26	CMOD #26 Approved	
1251-0079	09/12/12	082-0079 Additional work related to installation of PG&E Vaults 467, 571, 573, 586 and 594 including joint trench leading to these vaults	2				+44,530	Unforeseen conditions were encountered during installation of select PG&E vaults including joint trenches leading to these vaults. PG&E agreed to reimburse SFMTA (\$44,530) through the Form B process. RE Tracking work on FAR COMPLETE, NO FURTHER ACTION; CMOD #24	CMOD #24 Approved	(44,530)

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1251-0080	09/12/12		082-0080	Additional work related to installation of AT&T Vaults 5828, 5829, 5830, 5831, 5832 and 5833 including joint trench leading to these vaults	2	CMB-0076	Agree	10/03/12	+56,806	Unforeseen conditions were encountered during installation of select AT&T vaults including joint trenches leading to these vaults. AT&T agreed to reimburse SFMTA (\$56,805) through the Form B process. CMB Agreed contingent on receipt of confirmation letter from AT&T for costs associated with these three trends (CMB 0076 approval - see Trend CN1251 #'s 43 & 72) COMPLETE, NO FURTHER ACTION; CMOD #23	CMOD #23 Approved	(56,806)
1251-0081	09/13/12		082-0081	PG&E concrete cover versus CDF on electrical duct bank	6	CMB-0107	Agree	02/13/13	+43,882	Contract Plan JT-014 calls for CDF cover on PG&E duct bank. However, PG&E requested to use regular concrete due to heat dissipation problem with CDF. PG&E agreed to reimburse SFMTA (\$43,881) through the Form B process. 12/19/12 - Presented to CMB, direction given to finalize cost and obtain a Form B agreement with PG&E 02/13/13 - Revised CMod presented to CMB. PG&E agreed with negotiated reimbursement amount. COMPLETE, NO FURTHER ACTION	CMOD #24 Approved	(43,882)
Contract 1251 Totals									+3,962,032	Total Changes to the contract in the amount of 3,962,032 represents an UNDERRUN of allocated contingency in the amount of \$1,405,265.32. Changes that will be Utility Reimbursement credits through the Form B process in the amount of \$1,224,828 will increase the UNDERRUN. Final Contract Closeout Total \$20,794,581 will be reduce by \$7,618,112 Utility Reimbursement credits for a Final Program cost of \$13,176,469 for CN 1251		(1,224,828)
Contract 1252		COR No.	PCC No.	1252 Change Description	Change Type	CMB Change No.	Configuration Management Board Agree/Disagree	Decision Date	Actual/Forecast	Comments	Contract Modification No.	
1252-0001	04/23/12	1		AWSS Conflict w/ Low Pressure Water	6	CMB-0091	Agree to Merit Agree to Cost	10/10/12 1/16/13	+16,907	AWSS contract work was made more difficult by the proximity of a water line which was closer than indicated on UT-501. See COR 008 for TIA request. 10/10/12 - Merit info presented to CMB - Agreed 01/16/13 - CMB - NOT TO EXCEED Amount \$16,900		
1252-0002	04/23/12	2		AWSS Add. Tie-Rods 4th-Harrison	6	CMB-0086	Agree to Merit Agree to Cost	10/10/12 12/19/12	+58,000	The AWSS line must be restrained a certain distance beyond the 90 degree elbow we are installing under contract 1252. The 1252 contract work includes excavating on both sides of this 12-foot portion of pipe. Additional work scope (per Michael Smith @ DPW): Station 162+80 to 162+90 - Restrain the existing 12-inch tee to the existing pipe north of the tee. Restrain any other joints that are not restrained on the existing pipe up to the new pipe to be installed. 10/10/12 - Merit info presented to CMB - Agreed 12/19/12 - CMB - NOT TO EXCEED Amount \$58,000		
1252-0003	04/23/12	3		AT&T Vault Conflict-4th & Harrison	6	CMB-0092	Agree to Merit Agree to Cost	10/10/12 1/16/13	+16,015	After excavation of the roadway surface and subgrade at Fourth and Harrison streets an AT&T vault was discovered to be in conflict with the current alignment of the 42" RCP sewer main. Verbal authorization was given by an AT&T representative to make modifications to the vault. COR 003 has been submitted by BIH in response to this issue. Work is to be charged via SFMTA Form B agreement to AT&T. 10/10/12 - Merit info presented to CMB - Agreed 01/16/13 - CMB - NOT TO EXCEED Amount \$21,089 04/01/13 - CM team must obtain in writing from AT&T a utility agreement for cost reimbursement.		(16,015)
1252-0004	05/18/12	6		PG&E live electrical delays	6	CMB-0088	Agree to Merit Agree to Cost	11/28/12 1/9/2013	+7,402	PG&E lines indicated on contract drawing UD-502 thru 504 were to be abandoned yet were not yet abandoned when BIH started work. They were abandoned on 5/21. 11/28/12 - Merit info presented to CMB - Agreed 01/09/13 - CMB - NOT TO EXCEED Amount \$7,600 04/01/13 - CM team must obtain in writing from PG&E a utility agreement or cost reimbursement.	CMOD #10 Approved	(7,402)
1252-0005	06/06/12	7		Oil filled pipe @ Launch Box	2	CMB-0093	Agree to Merit Agree to Cost	1/16/13 1/16/13	+9,980	Synergy Demo Crew exposed an existing 6" steel line which had oil in it on the West side of 4th St between Harrison and Bryant. 01/16/13 - Merit info presented to CMB - Agreed 01/16/13 - CMB - NOT TO EXCEED Amount \$10,000	CMOD #5 Approved	
1252-0006	04/23/12	8		TIA - Associated w/ COR 001, COR 002, and COR 003	6		Agree to Merit	10/10/12	+269,904	10/10/12 - Merit info associated w/COR's 001, 002 & 003 presented to CMB - Agreed. 01/30/13 Elevation Ladder documentation presented for review of unresolved issue of payment of		

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1252-0007	06/12/12	9	MOS - Live Utilities: PGE, AT&T, and SFWD 8" Water Line extra kill hole location	2		Agree to Merit	11/14/12	+49,007	Live PG&E Electrical Lines Conflict: BIH was notified that PG&E had live electrical lines running through each headwall work zone @ Moscone station. 8 inch Low Pressure Water Line Conflict: Contract drawings show this utility to be abandoned and capped prior to work. Synergy struck and damaged the water line. SFWD directed Synergy to excavate a kill hole so they could properly abandon the line. 11/04/12 - COR Evaluation for Merit presented to CMB.		
1252-0008	06/19/12	10	MOS - Demo PGE duct bank / SF City 911 fiber optic line	2	CMB-0094	Agree to Merit Agree to Cost	10/10/12 1/16/13	+4,916	Upon excavation of the MOS north headwall, BIH's subcontractor Synergy Project Management (SPM) uncovered a PG&E duct bank that contained a live San Francisco 911 fiber optic line. 11/14/12 - Presented to CMB. The narrative will be rewritten CMB agrees with partial merit labor work involved in supporting the utility agencies. This item will be brought back to the CMB for approval. 01/09/13 - CMB - NOT TO EXCEED Amount 4,919.54 04/01/13 - CM team must obtain in writing from PG&E a utility agreement for cost reimbursement.	CMOD #3 Approved	(4,916)
1252-0009	07/02/12	11	MOS - Traffic Signal line re-route south headwall	6	CMB-0095	Agree to Merit Agree to Cost	1/16/13	+37,500	After potholing Synergy discovered several traffic lines which were in the proposed location of the south MOS headwall. Traffic Lines re-routed. 01/16/13 - CMB - NOT TO EXCEED Amount \$37,500		
1252-0010	01/00/00	12	MOS - Archaeological Standby North Headwall	2	CMB-0096	Agree to Merit Agree to Cost	12/11/12 1/16/13	+16,892	Upon excavation of the MOS north headwall, BIH's subcontractor Synergy Project Management (SPM) uncovered a layer of "Midden" or Native American debris. 12/11/12 - Merit info presented to CMB - Agreed 01/16/13 - CMB - NOT TO EXCEED Amount \$7,600	CMOD #6 Approved	
1252-0011	07/06/12	13	PCC No. 13 - MOS - SL conduit from PG&E vault @ north headwall	6		Agree to Merit	11/28/12	+10,903	Permanent power is required to supply an existing Street Light box north of the MOS N headwall. 11/28/12 - Merit info presented to CMB - Agreed 04/01/13 - CM team must obtain in writing from PG&E a utility agreement for cost reimbursement.		(10,903)
1252-0012	06/26/12	15	LB - Pre-Excavation for Slurry Walls	2	CMB-0087	Agree to Merit Agree to Cost	11/28/12 12/19/12	+96,000	Pre-excavation of slurry wall panels due to CDF encased sewer line. The concrete encasement was found by the Contractor to extend to a depth of 9'-11' below the top of guide wall or street surface. The 8" VCP sewer main and concrete encasement was incorrectly shown in the contract drawings to be approximately 4'-5' below the street surface. 11/28/12 - Merit info presented to CMB - Agreed 12/19/12 - CMB - NOT TO EXCEED Amount \$96,000		
1252-0013	07/02/12	17	MOS - Standby Time @ south headwall due to live TS lines	6		Agree to Merit	11/21/12	+79,153	Standby delays related to the discovery of traffic lines within the proposed location of the south MOS headwall. 11/14/12 - COR presented to CMB. CMB requested additional revisions to the evaluation. CMB agrees with partial merit. The COR will be brought back to the CMB for approval. 11/21/12 - COR revisited at mtg for clarification the issue is related to CMB action from item 3 -7/25/12 (Mtg #88) specifically acted on 08/01/12 (CMB Mtg. 89) referred originally as Trend #15.		
1252-0014	Closed	19	UMS - Grant street 2 way conversion (e- & striping)	7					In order to implement a full street closure for Stockton Street at the UMS location the DPT recommended that Grant Street be converted from an existing one-way street to a two way street for vehicular traffic. Closed - Work is done. 07/18/12 - This potential change was brought before the CMB. Board's decision to have DPT perform the work. CLOSED; NO FUTHER ACTION		
1252-0015	06/22/12	20	PROJECT WIDE - Utility Demo limit reduction credit	5					BIH's subcontractor Synergy Project Management (SPM) would like to minimize the limits of utility demo at the Launch Box, Moscone station, UMS station and TBM Retrieval Shaft locations. Closed - SFMTA to BIH/SPM "Build per Plan".		
1252-0016	04/02/12	21	UMS - Reduced Duration	5	CMB-0073	Agree Cost (Conditionally)	8/01/12	-0-	No cost change for acceleration of utility relocation, ground improvements (jet grouting), and headwall construction at Union Square/Market Street Station. 08/01/12 - CMB approval condition upon incorporating correctness to backup documentation as required by & documented in CMB mtg. RE to prepare modification.	CMOD #8 Approved	
1252-0017	07/10/12	22	MOS - Asbestos Pipe at north headwall	2	CMB-0090	Agree to Merit Agree to Cost	12/12/12 1/09/13	+5,705	Upon excavation of the MOS north headwall, BIH's subcontractor Synergy Project Management (SPM) uncovered friable asbestos-laden transite pipe. 12/12/12 - Merit info presented to CMB - Agreed 01/09/13 - CMB - NOT TO EXCEED Amount \$6,000	CMOD #5 Approved	
1252-0018	07/10/12	23	MOS - Brick Wall #2 discovered @ north headwall	2		Agree to Merit	12/6/12	+14,997	Upon excavation of the MOS north headwall, BIH's subcontractor Synergy Project Management (SPM) uncovered a buried wall. 11/14/12 COR presented to CMB. Evaluation for merit will be rewritten and brought back to CMB for approval. 11/21/12 - Merit info presented to CMB - Agreed		
1252-0019	08/10/12	26	MOS - Asbestos Pipe at south headwall	2	CMB-0085	Agree to Merit Agree to Cost	12/12/12 1/09/13	+27,630	Transite pipe was discovered during MOS south headwall excavation. 12/12/12 - Merit info presented to CMB - Agreed 01/09/13 CMB - NOT TO EXCEED Amount \$30,000	CMOD #15	
1252-0020	08/10/12	27	MOS - Oil filled pipe at south headwall	2	CMB-0089	Agree to Merit Agree to Cost	12/12/12 1/09/13	+8,226	A pipe containing oil was discovered during MOS south headwall excavation. 12/12/12 - Merit info presented to CMB - Agreed 01/09/13 CMB - NOT TO EXCEED Amount \$8,600	CMOD #5 Approved	

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1252-0021	06/19/12	29	MOS - Todco scaffolding reimbursement	2	CMB-0097	Agree to Merit Agree to Cost	12/12/12 1/16/13	+1,718	1252 contract work requires the removal of scaffolding erected by Fine Line Construction, the contractor performing renovations on the Woolf House. 12/12/12 - Merit info presented to CMB - Agreed 01/09/13 - CMB - NOT TO EXCEED Amount \$1,717	CMOD #3 Approved	
1252-0022	Closed	closed	Disputed Work Items - NTP2 vs. NTP3	7				-0-	BIH interpretation of Special Provisions SP-3 NTP2 description includes activities that SFMTA interprets to be within NTP3. These activities include: Ellis Street and Green Street shafts and associated compensation grouting, MOS headwalls and jet grouting, jet grouting at cross passage 5, UMS head walls and jet grouting, OCS removal along Stockton Street from Geary to Ellis, and the TBM retrieval shaft. On April 13, SFMTA released the MOS headwalls and jet grouting, jet grouting at cross passage 5, UMS jet grouting, OCS removal along Stockton Street from Geary to Ellis, and preparatory and utility work necessary for the construction of the retrieval shaft.		
1252-0023	05/30/12	4	Manhole in east guidewall footprint	2				-0-	While performing excavation for the east side guidewalls at the TBM Launch Box, BIH's subcontractor CJA-NCC encountered a manhole near the bottom of the excavation which was unexpected. BIH has stated that removal of the manhole prior to the installation of the guidewalls was necessary to ensure the successful installation of the slurry walls.		
1252-0024	Closed	closed	2" gas line inside 16" casing	2				-0-	While performing excavation for the Sewer and AWSS trench at the intersection of Fourth and Harrison streets, BIHJV's subcontractor Synergy encountered what was identified to be a 16" depressurized gas main. This gas main contained a 2" gas line which is shown on contract drawing UD-502 to be abandoned/removed.		
1252-0025	04/23/12	5	CDF Encasement on 42" RCP	2				+140,596	While performing excavation for the east side guidewalls at the TBM Launch Box, BIH's subcontractor CJA/NCC encountered a CDF backfill at the existing 42" RCP sewer which reportedly had a significantly higher compressive strength than the 50-150 psi. which was anticipated. BIH claims that the CDF conflicted with the construction of the guidewalls and it could not be excavated by conventional means.		
1252-0026	Closed	closed	Damage to Live LPW main at 4th and Folsom	2				-0-	Synergy Demo Crew hit a blow-off valve on the 8" water line at the Southwest corner of the MOS headwalls. SFWD is to install a permanent cap per contract drawing WD-404.		
1252-0027	Closed	14	MOS - 76 Gas Station fencing	1					SFMTA requested BIH to install fencing around the perimeter of the 76 gas station at 4th and Folsom St. Issue closed, cost of fence paid by BIH in return for use of gas station lot. CMB - Temporary use of 800 Folsom Street site for construction staging. Use of this site would be a tradeoff between SFMTA and BIH. The Contractor would maintain the sites security and up-keep in exchange for not billing.		
1252-0028	Closed	16	LB - SPTC delays due to concrete encased 8" sewer	2					Closed. Combined with COR 015. 07/25/12 - Verbal information presented to CMB as a potential change.		
1252-0029	08/06/12	18	MOS - South Headwall re-design	1				+145,000	Costs related to leave end stops in place and a "T-Section" at the Moscone headwalls return walls. 11/14/12 - Presented to CMB. RE is recommending a possible compensation value of \$135K. CMB agrees with partial merit for labor and material cost of this COR. RE will proceed with scoping the work. 04/17/13 - Elevation Ladder of unresolved issue of End Stops presented to CMB - COR 018		
1252-0030	08/02/12	24	Ellis - Utility demolition	3		Agree to Merit	12/6/12	+38,678	BIH says that no utilities were shown at Ellis; however, Reference Drawing UE-126 shows utilities. 12/06/12 - Merit info presented to CMB - Agreed		
1252-0031	Closed	25	Crack Gauges	4				-0-	BIH disagrees with SFMTA on the total number of crack gauges to be installed on the project. Per the contract drawings a total of 926 crack gauges are to be installed. BIH claims that a total of 50 are to be installed.		
1252-0032	08/07/12	28	Ellis asbestos abatement	2		Agree to Merit	12/6/12	+35,386	A steam line containing asbestos was discovered during potholing at the Ellis Street Shaft. 12/06/12 - Merit info presented to CMB - Agreed		
1252-0033	-	30	LB - Class 1 Hazardous Material Haul off	2				+198,276	BIH trucking costs for Class 1 haul off generated at staging yard. Also see COR 054 regarding Class 1 Haz material haul off for Phase 2.		
1252-0034	-	70	LB - Jet Grout Quantity Overrun	4	CMB-0115	Agree to Merit Agree to Cost	3/20/13 04/03/13	+768,600	The contract drawings call for the contractor to determine the extent of jet grouting at the launch box. Bid Item ES-3 has an estimated quantity of 2,831 CY of in-situ treated ground. The Contractor has currently installed 3,929 CY of Soilcrete (Jet Grout) for ground treatment. This translates to an additional quantity of 1,098 CY of ground treatment beyond the quantity listed for Bid Item ES-3. By subtracting 241 CY for the "scallop" portion of the columns the total is 857 CY. 03/20/13 - Merit info presented to CMB - Agreed 04/03/13 - CMB - NOT TO EXCEED Amount \$599,900		
1252-0035	01/00/00	unsubmitted	Utility Removal UD-304 and UD-503	6				TBD	RFI 00134 asks whether certain utilities indicated on drawings UD-304 (On Stockton inside limits of future UMS Station) and on UD-503 (On Fourth and Stillman Streets outside limits of Launch Box) may be left in place. Answer: "Confirmed, the utilities in question can be abandoned in place and are not required to be removed. The Engineer will seek an adjustment to Bid Item GB-3 for the elimination of this work."		

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1252-0036	05/17/12	35	Additional Road Base on Fourth Street	2			12/6/12	+7,000	BIH's subcontractor Synergy Project Management (SPM) discovered what they believe to be an additional layer of road base under the existing asphalt and road base layer while performing roadway demo work along the west side of Fourth street between Harrison and Bryant St. The additional layer is estimated by BIH/SPM to be approximately 8" - 12" thick. 12/06/12 - Evaluation of merit presented to CMB - Agreed to No Merit for this change.		
1252-0037	01/00/00	unsubmitted	DPW permitting potential impacts	7				TBD	DPW Permitting issue to cause potential impacts. DPW is not issuing BIH permits for excavating the MOS headwalls, jet grouting at the LB, and excavating support at the LB, as they claim to have not been able to conduct a thorough review of the project's design documents and were not included in the design process. BIH may be required to re-sequence and stand many other potential impacts w/o said permits.		
1252-0038	05/30/12	38	Manhole in West Guidewall Footprint	3	CMB-0101	Agree to Merit Agree to Cost	12/05/12 1/23/13	+3,821	While performing excavation for the west side guidewalls at the TBM Launch Box, BIH's subcontractor CJA-NCC unexpectedly encountered a manhole foundation within the excavation at approximate station 165+70. It was necessary to chip away a portion of the existing manhole to gain the necessary clearance to construct the west slurry wall. 12/05/12 - CMB agreed with Evaluation of Merit 01/23/13 - CMB - NOT TO EXCEED Amount \$4,052.17	CMOD #12 Approved	
1252-0039	01/00/00	unsubmitted	Panel W-33 Obstruction	2				TBD	While performing excavation for the slurry walls at the TBM Launch Box, BIH's subcontractor CJA-NCC unexpectedly encountered buried (wood pile?) debris located approximately 12 feet below the guide wall within Launch Box Diaphragm Wall Panel W-33. This trend is being tracked separately from Trend 20 because we believe it may be a different structure. BIH has not provided adequate information substantiating the merging of the two trends.		
1252-0040	08/23/12		PCC No.1 - Revisions to Moscone North Headwall Elevation (Top)	1	CMB-0099	Agree to Cost	1/16/2013	+20,358	SFMTA initiated change to revise headwall elevations to facilitate a change in the roof elevation of MOS station. 01/16/13 CMB - NOT TO EXCEED Amount \$20,500	CMOD #7 Approved	
1252-0041	08/23/12		PCC No. 2 - Revisions to UMS Headwall Concrete and Reinforcement Limits	1				-0-	SFMTA initiated change to revise UMS headwall concrete and reinforcement limits to provide a cost savings. 08/29/12 - Revised PCC presented to CMB		
1252-0042	08/24/12	31	Retrieval Shaft - Unmarked 12" Steel Pipe	2	CMB-0108	Agree to Merit Agree to Cost	1/2/2013 2/27/13	+1,200	While performing excavation for the joint trench at the retrieval shaft BIH's subcontractor Synergy Project Management (SPM) discovered an abandoned 12" dia. steel pipe which appears to run continuously under Columbus Ave. 01/02/13 - Merit info presented to CMB - Agreed 2/27/13 - Cost presented to CMB - agreed to NTE \$1,250 04/01/13 - No reimbursement from SFWD.	CMOD #13 Approved	
1252-0043	08/31/12	32	LB - Panel W29 Wood Pile	2		Agree to Merit	11/28/12	+81,000	While performing excavation for the slurry walls at the TBM Launch Box, BIH's subcontractor CJA-NCC unexpectedly encountered what appeared to be a wood pile within Launch Box Diaphragm Wall Panel W-29. 11/28/12 - Merit info presented to CMB - Agreed		
1252-0044	09/04/12	33	Ret Shaft - 20" Water Line Conflict	2		Agree to Merit	11/14/12	-0-	During excavation for the joint trench at the retrieval shaft SPM discovered that the MRY Duct Bank is directly above an active 20" low pressure waterline. As a result the work at the Retrieval Shaft must reportedly be altered. 11/14/12 - Presented to CMB, the CMB agrees with some merit of this COR, element of change not define clearly. RE will proceed with scoping the work.		
1252-0045	09/11/12	34	LB - Panel W28 Wood Pile	2				+81,000	While performing excavation for the slurry walls at the TBM Launch Box, BIH's subcontractor CJA-NCC unexpectedly encountered what appeared to be a wood pile within Launch Box Diaphragm Wall Panel W-28.		
1252-0046	01/00/00	36	MOS - Catch Basin @ south headwall	3				-0-	A catch basin on the NW corner of 4th and Folsom interfered with the construction of the MOS Headwalls. Removal of the catch basin was needed in order for the headwalls to be built. BIH claims the catch basin was not shown in the contract drawings. Closed due to improper notification.		
1252-0047	01/00/00	37	UMS - 12" steel pipe removal	3				+3,500	A 12" steel pipe at the north UMS headwall location interfered with the demolition of other existing UMS utilities. BIH claims the steel pipe was not shown in the contract drawings. Closed due to improper notification.		
1252-0048	09/07/12	39	MOS - 16" Steel Pipe removal @ northeast headwall	3	CMB-0102	Agree to Cost	1/23/13	+2,952	SPM removed an unmarked 16" steel pipe from the excavation of the NE MOS Headwall. Construction of the MOS headwall could not commence without this utility being removed. BIH claims the 16" steel pipe was not shown in the contract drawings. 01/23/13 - CMB - NOT TO EXCEED Amount \$2,951.99 04/01/13 - CM team must obtain in writing from PG&E a utility agreement for cost reimbursement.	CMOD #14 Approved	(2,952)
1252-0049	01/00/00	40	MOS - Extra Road Base @ northeast headwall	2				-0-	BIH's subcontractor Synergy Project Management (SPM) discovered what they believe to be an additional layer of road base under the existing asphalt at the NE MOS headwall location. The road base in this location was approx. 20" thick on a patch that was roughly 25' x 25'. Closed due to improper notification.		

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1252-0050	05/18/12	41	LB - Impacts due to live PG&E electrical lines (Synergy)	6	CMB-0098	Agree to Merit Agree to Cost	1/16/13	+1,217	Based on direction from the SFMTA, Synergy provided a full time flagger for one night shift of work @ the intersection of I-80 off-ramp near 4th/Bryant streets in order to assist PGE while they performed the abandoning of the existing live PGE electrical at the Launch Box location which was shown to be dead in the contract drawings. 01/13/13 - CMB agreed with Evaluation of Merit 01/16/13 - CMB - NOT TO EXCEED Amount \$1,245 04/01/13 - CM team must obtain in writing from PG&E a utility agreement for cost reimbursement.	CMOD #10 Approved	(\$1,217)
1252-0051	01/00/00	executed	Contract Amendment No. 2	1				(3,040,713)		CMOD #2 Approved	
1252-0052	08/17/12	42	LB - Panel W25 Wood Pile	2		Agree to Merit	11/28/12	+116,785	While performing excavation for the slurry walls at the TBM Launch Box, BIH's subcontractor CJA-NCC unexpectedly encountered an obstruction within Launch Box Diaphragm Wall Panel W-25. 11/28/12 - Evaluation of merit presented - CMB agreed		
1252-0053	08/22/12	43	LB - Panel W30 Wood Pile	2		Agree to Merit	11/28/12	+47,185	While performing excavation for the slurry walls at the TBM Launch Box, BIH's subcontractor CJA-NCC unexpectedly encountered an obstruction within Launch Box Diaphragm Wall Panel W-30. 11/28/12 - CMB agreed with Evaluation of Merit		
1252-0054	09/19/12	44	MOS - 16" steel pipe removal @ southeast headwall	3	CMB-0109	Agree to Merit Agree to Cost	12/06/12 2/27/13	+1,600	SPM removed an unmarked 16" steel pipe from the excavation of the NE MOS Headwall. Construction of the MOS headwall could not commence without this utility being removed. BIH claims the 16" steel pipe was not shown in the contract drawings. 12/06/12 - CMB agreed with Evaluation of Merit 02/27/13 - Cost presented to CMB - agreed to NTE \$1,800 04/01/13 - CM team must obtain in writing from PG&E a utility agreement for cost reimbursement.	CMOD #14 Approved	(1,600)
1252-0055	06/09/12	45	Ret Shaft - Credit for reduced AT&T conduits	6				+331	Credit to install 2 less conduits in the AT&T infrastructure at the Retrieval Shaft Joint Trench. The conduit notes on page JT-701 of the contract documents require 8 EA 4" conduits as laid out on the AT&T line. The reduced materials would result in 6 EA 4" conduits as a result. 04/01/13 - CM team must obtain in writing from AT&T a utility agreement for cost reimbursement.		(331)
1252-0056	09/25/12	46	UMS - Unmarked steel pipes (6", 12", 14") / Duct Bank	6	CMB-0103	Agree to Merit Agree to Cost	12/06/12 1/23/13	+7,475	While performing excavation for the utility demolition at the south UMS headwall BIH/Synergy discovered a 6" dia. steel pipe, 16" dia. steel pipe, 18" dia. steel pipe, and a concrete duct bank. BIH claims the utilities were not shown in the contract drawings. 12/206/12 - CMB agreed with Evaluation of Merit 01/23/13 - CMB - NOT TO EXCEED Amount \$7,461		
1252-0057	09/25/12	47	Ret Shaft - unmarked 10" steel pipe/duct bank	6	CMB-0104	Agree to Merit Agree to Cost	12/06/12 1/23/13	+2,108	Synergy Project Management (SPM), discovered an abandoned duct bank and 10" steel pipe which traveled underneath Columbus Avenue between Powell and Union Streets. Removal of the duct bank was necessary to complete the construction of the 36" RCP sewer main relocation work in this area. The status of the removal of the steel pipe is uncertain and may have not been necessary for the sewer main relocation. 12/06/12 - CMB agreed with Evaluation of Merit 01/23/13 - CMB Not to Exceed \$2,201 04/01/13 - No reimbursement from SFWD	CMOD #13 Approved	
1252-0058	09/28/12	48	UMS - 3'x5' brick sewer at south headwall	6	CMB-0114	Agree to Merit Agree to Cost	12/06/12 03/13/13	+12,475	Synergy Project Management (SPM), discovered a brick sewer within the utility demolition limits at the UMS South headwall. The sewer encountered was larger than the 12" pipe which was shown in the contract drawings. Removal and disposal of the sewer commenced on September 26th and was completed by September 28th. Removal of the sewer was necessary for headwall construction. 12/06/12 - CMB agreed with Evaluation of Merit 03/13/13 - CMB - NOT TO EXCEED Amount \$12,474.65		
1252-0059	01/00/00	49	Ret Shaft - Tree trimming debris haul off	7				-0-	Synergy Project Management (SPM), was requested by the SFMTA to remove and dispose of debris near the Northeast corner of Columbus Avenue and Union Street. The debris resulted from tree trimming activities performed by MUNI operations. CLOSED; NO FURTHER ACTION.		
1252-0060	10/10/12	50	Ret Shaft - 12" steel pipe removal at Union/Columbus	6	CMB-0110	Agree to Merit Agree to Cost	12/12/12 02/27/13	+2,200	On October 4th 2012, the Contractor discovered and removed a 12" Steel pipe at the intersection of Union Street and Columbus Avenue. Removal and disposal of the steel pipe was necessary in order to complete the proposed sewer re-location work near the Retrieval Shaft. Sewer work included the construction of a manhole which had been positioned in the field to avoid an existing MUNI duct bank. 12/12/12 - CMB agreed with Evaluation of Merit 02/27/13 - Cost presented to CMB - Agreed to NTE \$2,600 04/01/13 - No reimbursement from SFWD	CMOD #13 Approved	
1252-0061	10/11/12	51	Ret Shaft - Elevation design conflict (30" low psi water / sewer)	3		Agree to Merit	3/13/13	+24,075	03/13/13 - Merit info presented to CMB - Agreed		
1252-0062	09/07/12	53	Chinatown - Night drilling for instrumentation	7				-0-	Closed.		
1252-0063	-	54	LB Class 2 Hazardous Material Haul Off (Phase 2)	2				+110,967	BIH trucking costs for Class 1 haul off generated at staging yard. Also see COR 030 regarding Class 1 Haz material haul off for Phase 1.		

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1252-0064	10/10/12		PCC 4	PCC No. 4 - Ret shaft sewer pipe material change	1				-0-		
1252-0065	12/18/12	57	PCC 8	PCC No. 8 - UMS - Tree Removal	1				-0-		
1252-0066	10/10/12		PCC 5	PCC No. 5 - Ret Shaft Water Dist. Pipe Material Change	1				-0-		
1252-0067	10/26/12	58		Ret Shaft - Additional 10" steel pipe removal	6	CMB-0111	Agree to Merit Agree to Cost	12/12/12 02/27/13	+700		CMOD #13 Approved
1252-0068	10/10/12		PCC 3	PCC No. 3 - General Detour Signage	1	CMB-0113	Agree to Cost	02/27/13	-0-		
1252-0069	11/08/12		PCC 6	PCC No. 6 - Supplemental instrumentation of BART tunnel lining.	1				+657,884		
1252-0070	01/00/00	unsubmitted		Full Closure of 4th Street	1				TBD		
1252-0071	11/07/12	61		LB - Panel P-17 Buried Obstruction	2		Agree to Merit	1/2/13	+1,473		
1252-0072	11/14/12	62		LB - Panel P-9 Buried Obstruction	2		Agree to Merit	1/23/13	+150,000		
1252-0073	11/08/12	63		UMS - 48" Steel Pipe @ southwest headwall	2		Agree to Merit	1/23/13			
1252-0074	11/16/12	65		LB - Panel P-12 Buried Obstruction	2		Agree to Merit	1/23/13	+150,000		
1252-0075	11/19/12	66		Retrieval Shaft - Unmarked 12" Steel Pipe	2	CMB-0112	Agree to Merit Agree to Cost	1/23/13 02/27/13	+3,700		CMOD #13 Approved

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1252-0076	11/19/12	67	LB - Panel P-10 Buried Obstruction	2		Agree to Merit	1/23/13	+18,000	CJA-NCC discovered a buried obstruction or concrete encased clay sewer pipe, approximately 7" below the top of the guide wall while excavating slurry diaphragm wall panel P-10 at the Launch Box location. 01/02/13 - Presented to CMB for merit, CMB did not agree. CMB suggested inspector's daily tags as backup be attached or reference the tag numbers in the write-up when force account work is involved. 01/23/13 - Merit info presented to CMB - Agreed		
1252-0077	12/21/12		PCC No. 7 - Bart Temporary Annex Wall	1	CMB-0106	Agree to Cost	1/30/13	+15,500	SFMTA is requesting Contractor construct temporary wall for Bart Annex for SFMTA use. 01/30/13 - CMB - NOT TO EXCEED Amount \$15,380	CMOD #11 Approved	
1252-0078	12/28/12		PCC No. 9 - UMS Headwall - Unknown Buried Pipe	1	CMB-0100	Agree to Merit Agree to Cost	1/16/13 1/16/13	+42,000	Related to COR 063. SFMTA instructed BIH to perform investigation into the 48" diameter steel pipe as it is a Differing Site Condition. 01/30/13 01/16/13 - CMB - NOT TO EXCEED Amount \$75,000 04/01/13 - CM team must obtain in writing from AT&T a utility agreement for cost reimbursement.	CMOD #4 Approved	(42,000)
1252-0079	01/09/13		PCC No. 10 - Relocation of TBM Retrieval Shaft	1					Modify Bid Item ST-4 Construction of Base Bid Permanent Retrieval Shaft to relocate the TBM retrieval Shaft to 1731-1741 Powell Street - 01/09/13 - Draft PCC10 presented to CMB for Contractor Design Activity to be paid on Force Account. NTE value \$20K presented to CMB as a draft copy, final copy distributed to the Contractor increased to \$50K. 02/20/13 - COST IS NOT REFLECTED HERE - SCOPE IS FUNDED BY OTHER CPT 690 \$\$\$\$ 03/06/13 - Cost proposal received from BIH. SFMTA will develop a detail estimate of what is believed to be the scope of work. 03/13/13 - PCC 10 presented for CMB change approval of \$50K NTE amount to perform design activities. CMB requested CM team return with a more detailed estimate, Contractor's cost proposal of the bulleted items as listed on the PCC and backup documentation as evidence of work completed by the Contractor.		
1252-0080	12/19/12	0	Segment Measuring Frequency	7				(1,300,000)	RFI 203.1 - In light of gauging frequency, and the difficulties of erecting a ring with cast in gaskets, BIH JV alternately proposes to assemble a ring on the Master ring at an interval of every 500th ring cast. The assembled ring would be comprised of randomly selected segments, or segments chosen by the Engineer.		
1252-0081	09/09/12	0	F21 and Old Navy Instrumentation Proposal	7				-0-	Wang Technology is proposing instrumentation changes to the Liquid Level Sensors and Tilt Beams in the basements of Old Navy and Forever 21.		
1252-0082	01/14/13	68	UMS – AT&T Vault Walkway @ N Headwall	2		Agree to Merit	1/16/13	+2,000	SPM discovered an walkway at the UMS north headwall. This walkway is located at the UMS north headwall and connects the south AT&T vault, located within the utility demolition limits, to an north AT&T, located outside of the utility demolition limits. SPM proposes to construct 3'x5' wall to the extents necessary, inside this walkway. The wall will be constructed of plywood and necessary reinforcement in order to create a bulkhead that will isolate the walkway and north vault from the south vault. 01/16/13 - CMB recommendation Contractor/Sub-contractor proceed on Force Account with a "Not to Exceed Amount" \$2K. 04/01/13 - CM team must obtain in writing from AT&T a utility agreement for cost reimbursement.		(2,000)
1252-0083	11/08/12	69	UMS – Cap and Remove 48" Steel pipe	2					Closed		
1252-0084	01/24/13		PCC No. 11 - UMS – Cap and Remove 48" Steel pipe	1	CMB-0105	Agree to Cost	1/23/13	+150,000	BIH/Synergy encountered a buried 48" Diameter steel pipe during work at the UMS S. Headwall. The pipe is located 6 feet from the south UMS headwall and 5 feet from the face of the curb. This PCC is to complete removal of pipe @ S. Headwall and Investigate and remove pipe if necessary @ the North headwall. 01/30/13 - CMB - NOT TO EXCEED Amount \$150,000 04/01/13 - CM team must obtain in writing from AT&T a utility agreement for cost reimbursement.		(150,000)
1252-0085	01/24/13	71	LB – Ramp Excavation Obstructions	2		Agree to Merit	4/3/13	+10,000	BIHJV encountered numerous groups of wood piles while performing excavation of the Launch Box ramp. The wood piles are approximately 16"+ in diameter and are located along the north and south perimeter walls of the Launch Box ramp excavation area. 01/30/13 - CMB did not agree with merit of change suggestion the RE negotiate w/Contractor for another concession. 04/03/13 - COR merit evaluation presented to CMB again due to a greater number of obstruction encountered. CMB - Agreed to Partial Merit		
1252-0086	02/08/13	72	Ellis Shaft Jet Grout Obstruction	2				+54,000	On February 6th, 2013, CJA/NCC was drilling column R3 of the Ellis Shaft and reported hitting an obstruction 52ft below existing grade. The obstruction reportedly caused the jet grout monitor to shear off. At this time it is not known what the obstruction is or if it caused the monitor to be sheared off.		

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1252-0087	02/14/13	73	MOS - 16" Pipe removal @ NE Headwall	2	CMB-0118	Agree to Merit Agree to Cost	3/13/2013 05/08/13	+1,071	BIH-JV's subcontractor, Synergy, encountered an abandoned 16" pipe while installing the 12" waterline at the north headwall of Moscone. The pipe was at the same elevation as the new 12" waterline and therefore needed to be removed to facilitate the installation of the new 12" waterline. 03/13/13 - Merit info presented to CMB - Agreed 04/01/13 - CM team must obtain in writing from PG&E a utility agreement for cost reimbursement. 05/08/13 - CMB agreed to cost of reconciliation of change on FA - NTE \$989.00		(2,000)
1252-0088	NA	74	Whole Foods - Unknown brick obstruction in Comp Grout Trench	0				-0-	BIH has decided not to submit a COR as production was not significantly impacted.		
1252-0089	03/11/13	75	Hazardous Waste Disposal Denial - Spoils Containment Cost Impacts	7				+326,971	BIH submitted change order request (COR) 030 seeking reimbursement for the demonstrated additional costs of excavating, handling and disposing of excavated material found to contain hazardous material to a permitted landfill over that which can be disposed of at an unregulated dump site. The SFMTA refused reimbursement for such costs under the hazardous waste bid item allowance. As a result of this determination, BIH is modifying its approach to the construction and handling operations of tunnel spoils generated during tunneling operations.		
1252-0090	03/08/13	76	MOS - 16" Pipe removal @ SE Headwall	2	CMB-0119	Agree to Merit Agree to Cost	3/20/2013 05/08/13	+1,116	BIH-JV's subcontractor, Synergy, encountered an abandoned 16" pipe while installing the 12" waterline at the south headwall of Moscone. The pipe was at the same elevation as the new 12" waterline and therefore needed to be removed to facilitate the installation of the new 12" waterline. 03/20/13 - Merit info presented to CMB - Agreed 04/01/13 - CM team must obtain in writing from PG&E a utility agreement for cost reimbursement. 05/08/13 - CMB agreed to cost of reconciliation of change on FA - NTE \$1,116.00		(2,000)
1252-0091	03/06/13	77	Comp Grout - WFB-5 Drilling Obstruction	2		Agree to Merit	4/3/13	+10,000	On March 06,2013, BIHJV encountered a potential Differing Site Condition (DSC) while drilling the compensation grouting hole WFB-5 located at Whole Foods and more precisely at CTL Station 160+38. This potential DSC consists of an obstruction located at a depth of 9' below grade which prevented CJA-NCC from drilling any further. 04/03/13 - Merit info presented to CMB - Agreed		
1252-0092	03/07/13	78	Comp Grout - WF & ATT	2			3/20/13	-0-	BIHJV encountered multiple potential Differing Site Conditions (DSC's) of varying dimensions while excavating the compensation grouting trench for the drill holes located at Whole Foods and AT&T. 03/20/13 - Merit info presented to CMB - Agreed to No Merit for this change.		
1252-0093	03/07/13	79	Comp Grout - Old Navy	2	CMB-116	Agree to Merit Agree to Merit (addl) Agree to Cost	3/20/2013 04/24/13 04/26/13	+269,720	BIHJV encountered a potential Differing Site Condition (DSC) while sawcutting the pavement for the compensation grouting holes located at Old Navy. The original design was to drill the compensation grout holes between two existing PG&E lines. It was discovered in the field that there is not enough clearance between the existing PG&E lines for the original design to be possible and multiple other potential DSCs were also encountered including, but not limited to, tile duct banks, concrete of unknown contents, and steel pipes. 03/20/13 - Merit info presented to CMB - Agreed 04/01/13 - CM team must obtain in writing from PG&E a utility agreement for cost reimbursement. 04/24/13 - Addl info presented for rationale for Contractor to demob and remob drill rig due to insufficient clearance between existing PG&E lines to drill the grout holes - Agreed 04/26/13 - COR brought to special mtg to notify CMB of work need to have Contractor perform work on FA4 for a NTE amt \$70K.		(45,000)
1252-0094	03/12/13	80	MOS – Asbestos Wrapped 20" water line @ Headwalls	2		Agree to Merit	4/3/13	+43,000	BIHJV's subcontractor, Synergy Project Management was performing the installation of low pressure water distribution piping at the Moscone north headwall and discovered an unknown material wrapping around the existing 20" waterline which appeared to contain asbestos material. 04/03/13 - Merit info presented to CMB - Agreed		
1252-0095	03/11/13	81	12" Waterline Tee Connection Location (MOS South)	2		Agree to Merit	4/3/13	+2,999	BIHJV's subcontractor, Synergy Project Management, encountered a potential Differing Site Condition (DSC) upon exposing the tie-in point for the 12" waterline at the south headwall of Moscone. The potential DSC consists of two 45 degree elbows in the existing 12" waterline at the point of the tee connection. SFWD has surveyed the field conditions and indicated that the tee connection will need to be moved to the west. 04/03/13 - Merit info presented to CMB - Agreed		
1252-0096	03/13/13	82	MOS 20" Conflict with 16" AWSS @ South Headwall	2				+50,000	Upon exposing the existing 20" waterline at the south headwall of MOS, in preparation for installing the new 20" waterline shown on WD-403 and amended by RFI 0155, BIHJV's subcontractor Synergy Project Management encountered a potential DSC. The potential DSC consisted of a crossing conflict between the new 16" AWSS, the new 20" waterline, and the existing 6" PE gas. These three utilities cross at multiple locations however the existing depths are roughly the same.		
1252-0097	03/19/13	83	Ellis Shaft Concrete Obstruction	2		Agree to Merit	4/17/13	+4,000	During excavation for the Ellis Street Shaft, BIHJV's subcontractor, CJA-NCC, encountered a concrete obstruction at approximately 10 feet below grade. CJA-NCC spent 4 hours removing the obstruction. 04/17/13 - Merit info presented to CMB - Agreed		
1252-0098	03/16/13	84	Crate & Barrel Water Intrusion	2				+50,000	Water was discovered seeping into the Crate & Barrel basement in concert with secant pile installation at Pile #SRV-A. At the time, pile excavation was approximately 90 feet deep. BIHJV's subcontractor, CJA-NCC, stopped pile installation and placed lean concrete within the pile excavation. This allowed them to continue secant pile construction on other piles until which time SFMTA could provide appropriate mitigation for the water leak.		

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1252-0099	04/05/13		PCC No. 12 - Modifications to Tunnel Alignment at Market Street	1			4/3/13	TBD	IFB Tunnel Profile conflicts with micro-piles installed under Contract 1251. Tunnel Profile needs to be revised (lowered) such that TBM and Tunnel structure is below previously installed micro-piles. Contractor shall revise compensation grouting design to conform to Contract requirements given the revised tunnel alignment. 04/03/13 - CMB agreed to Micropile profile change being forwarded to the Contractor. 04/10/13 - Updated alignment was presented superseding 04/03/10 version - (lowered 4.9%) 04/10/13 - Original Contractor submittal needs to be evaluated to verify the new alignment has been incorporated.		
1252-0100	03/26/13	85	SFWD Impacts at MOS North	2				+345,600	BIHJV's subcontractor CJA-NCC is in the process of constructing the Moscone Station headwalls, the sequence of construction is such that it requires the 12" and 20" waterlines on the eastside of 4th street to be rerouted prior to completing the headwalls. In accordance with the Contract the San Francisco Water Department (SFWD) is responsible for completing the waterline reroutes (chlorination and tie-in) in a specified duration. BIHJV claims the SFWD failed to complete this work in the contractual durations. As a result, BIHJV claims the headwall construction operation has been incurring stand by costs. 04/10/13 - Viewed at CMB during review of Trend/Change Log COR's. CM team contends this is not a valid change and will reject the Contractor's claim of merit.		
1252-0101	01/28/13	87	Cross Passage 5 - Value Engineering Change Proposal	5				(2,674)	As indicated in Contract Drawing No. ES-144, ground treatment for the excavation of CP5 was anticipated to be performed using jet grouting methods. BIHJV proposes to perform ground freezing from within the tunnels as an alternative ground treatment methodology, thereby avoiding the need to disrupt and impact the public by occupying 4th Street for an extended period. 04/24/13 - Viewed at CMB during review of Trend/Change Log COR's. CMB suggested a credit from the Contractor should be received for Bid Item ES-5. In addition suggested a minimal review of the BIH's proposed ground freezing method be done by the PB.		
1252-0102	04/09/13	86	UMS - Secant Pile SRV-J Obstruction DSC	2				-0	BIHJV's subcontractor, CJA-NCC, encountered a potential Differing Site Condition (DSC) while drilling for UMS Secant Pile #SRV-J. The DSC consists of what appears to be an abandoned utility pipe located approximately 10 feet deep. 04/24/13 - Information presented to CMB during review of Trend Log. CM Team states COR merit will be rejected due to notification of change not met in timely manner per the contract docs.		
1252-0103	04/18/13	88	SFWD Impacts at MOS South	2				+383,800	BIHJV's subcontractor CJA-NCC is in the process of constructing the Moscone Station headwalls, the sequence of construction is such that it requires the 12" and 20" waterlines on the eastside of 4th street to be rerouted prior to completing the headwalls. In accordance with the Contract the San Francisco Water Department (SFWD) is responsible for completing the waterline reroutes (chlorination and tie-in) in a specified duration. BIHJV claims the SFWD failed to complete this work in the contractual durations. As a result, BIHJV claims the headwall construction operation has been incurring stand by costs. 05/08/13 - Information presented to CMB during review of Trend Log. CM Team states COR will be rejected due to no merit. This item is not on the critical path.		
Contract 1252 Totals								+967,879	Total Changes and Potential Change (trends) to the contract are currently \$967,879		(288,336)
CONSTRUCTION TRENDS (Based on #1252 Trending Log and CMod) - SUBTOTALS:								+967,879	The \$96,7879 represents an UNDERRUN of allocated contingency.		(288,336)
DESIGN TRENDS											
FD-001	07/31/10	084-0001	Narrowing of Platform at UMS	1	CMB-0006	Agree	08/04/10	(800,000)	[In "Current Forecast" - Sep2010 Cost Report.]		
FD-002	07/12/10	084-0002	Redux of Station Emergency Ventilation Fans (UMS)	1	CMB-0009	Agree (Conditionally)	08/25/10	(2,000,000)	Further actions: Designer required to receive Fire/Life/Safety approval before proceeding with this change. Designer to allocate cost impacts by Station (Current figures are "place-holders.". [In "Current Forecast" - Sep2010 Cost Report.]		

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FD-002	07/12/10	085-0001	Redux of Station Emergency Ventilation Fans (CTS)	1	CMB-0009	Agree (Conditionally)	08/25/10	(500,000)	Further actions: Designer required to receive Fire/Life/Safety approval before proceeding with this change. Designer to allocate cost impacts by Station (Current figures are "place-holders.". [In "Current Forecast" - Sep2010 Cost Report.]		
FD-002	07/12/10	086-0001	Redux of Station Emergency Ventilation Fans (MOS)	1	CMB-0009	Agree (Conditionally)	08/25/10	(500,000)	Further actions: Designer required to receive Fire/Life/Safety approval before proceeding with this change. Designer to allocate cost impacts by Station (Current figures are "place-holders.". [In "Current Forecast" - Sep2010 Cost Report.]		
FD-003	07/31/10	085-0002	Lowering of CTS	1	To be verified	Info Only	08/25/10	+7,000,000	Presented to CMB for information/consideration.		
FD-004	07/29/10	084-0003	UMS Structural Configuration	1	CMB-0007	Agree	08/18/10	(8,000,000)	[In "Current Forecast" - Sep2010 Cost Report.]		
FD-005	08/22/10	084-0004	UMS Alternate Station Access/Vent Shaft @ Union Square	1	CMB-0010	Agree	12/29/10	(22,500,000)	Documentation to be filed.		
FD-006	08/03/10	084-0005	Station Headwalls - UMS	1	CMB-0008	Agree	08/18/10	-0-			
FD-006	08/03/10	086-0002	Station Headwalls - MOS	1	CMB-0008	Agree	08/18/10	-0-			
FD-007	08/03/10		Cross-passages	1	CMB-0018	Agree	09/15/10	-0-			
FD-008	07/30/10		Trolley Re-route @ Columbus & Powell	1	CMB-0017	Agree	09/15/10	+2,000,000			
FD-009	10/06/10	082-0003	ECP to Modify Sidewalk Vault Demolition and Construction Sequence to Facilitate Construction of Joint Utilities Trench and Future UMS Station	1	CMB-0019	Agree	12/15/10	+3,000,000			
FD-010	10/06/10	082-0004	Redesign Stockton Street Sanitary Sewer to conform to SFPUC Sewer Criteria that preclude placement of relocated sanitary sewer under sidewalks	1	CMB-0020	Agree	11/17/10	+2,000,000			
FD-011	10/06/10	082-0005	Reconfigure Routing of Water, Sewer and Gas laterals from buildings on north side of Ellis Street	1	CMB-0021	Agree	11/17/10	+500,000			
FD-012	10/06/10	082-0006	Recognize cost transfers from design allowances allocated to contingency to explicit line items in final design estimates	1	CMB-0022	Disagree	11/17/10	-0-			
FD-013	10/06/10	082-0007	Increase Extent of Sub-sidewalks Vault Secondary Closure Walls and Waterproofing	1	CMB-0023	Agree	11/17/10	+4,100,000			
FD-014	10/06/10	082-0008	Include OCS system for rerouting trolley buses to Fifth Street	1	CMB-0024	Agree	12/15/10	+3,100,000			
FD-015	10/06/10	082-0009	Subsidewalk Vault Secondary Closure Walls for Buildings at 800 Market and 838 Market	1	CMB-0025	Agree	11/17/10	+1,000,000			
FD-016	10/06/10	085-0003	Underpinning of Mandarin Tower	1	CMB-0011	over taken by FD-021	01/19/11	+5,000,000	Additional Information Pending.		
FD-017	10/06/10	085-0004	CTS Ground Improvement	1	CMB-0012	over taken by FD-021	01/19/11	+10,300,000	Additional Information Pending.		
FD-018	10/06/10	084-0006	UMS Apple Store Entrance	1	CMB-0013	Disagree	11/10/10	-0-	Additional Information Pending.		
FD-019	10/06/10	086-0003	MOS TOD Configuration	1	CMB-0014	Agree	11/10/10	TBD			
FD-020	10/06/10	084-0007	UMS Emergency Stair #4 Relocation	1	CMB-0015	Agree	11/10/10	TBD			
FD-021	01/14/11	085-0005	CTS Lowering and Stations Reconfiguration	1	CMB-0027	Agree	01/19/11	(18,000,000.00)	Agreement with changes to project configuration only. Additional Information required related to cost and schedule impacts. No agreement on Design cost impact, Design costs directly related to this change to be tracked separately		
FD-022	02/16/11	084-0008	Sewer Replacement along Geary & O'Farrell	1	CMB-0029	Agree	02/23/11	(134,000)	This trend has both an EPC number as well as a Construction Trend Number. See also Construction Trend No. 1251-0003		
FD-023	11/17/10	087-0001	Emergency walkways through crossover cavern changed from outside the main tracks to between the main tracks.	1	CMB-0032	Agree	07/27/11				
FD-024	11/17/10	087-0002	Diamond crossover on surface segment to a tandem (universal) crossover.	1	CMB-0033	Agree	08/24/11	(350,000)			
FD-025	04/13/11	083-0001	Bid Option for TBM Retrieval Shaft		CMB-0034	Agree	04/13/11	(10,000,000)	Will require changes to Bid Schedule to incorporate Traffic, Utilities and Pavement Demo/Restoration as incidental costs to the Bid Option. Estimated DP1 cost impact is approx. 80-100 hrs. of engineering time.		
FD-026	05/31/11	084,085,086	Air Replenishment System for Stations	1	CMB-0040	Agree	07/13/11	+1,245,000	Install air replenishment system at MOS, CTS and UMS to address the requirements of the SFFD Bulletin 5.07. The air replenishment system will be used to fill firefighter's self-contained breathing apparatus during firefighting operations in the three subway stations.		

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FD-027	07/21/11	082-0010		CMB-0043	Agree	08/03/11	+500,000	1) Add secondary closure wall to supplement recently completed primary closure wall built by owner to isolate the sub-sidewalk basement of 1 Stockton Street (Apple Store). 2) Modify position of joint trench (and all associated conduits, ducts etc.) for secondary closure wall to be constructed.		
FD-028	08/03/11	086-0004		CMB-0052	Agree	09/07/11	+500,000	Changes will extend the date of the 90% (pre-final) submittal by 20 working days and the 100% (final) submittal by 40 working days. CMB did not approve a time extension for 90% or 100% submittal delivery. Project Controls estimated \$321,645.		
FD-029	08/08/11	085-0006		CMB-0053	Agree	09/07/11	+1,000,000	Changes will extend the date of the 90% (pre-final) submittal by 20 working days and the 100% (final) submittal by 40 working days. CMB did not approve a time extension for 90% or 100% submittal delivery. Project Controls estimated \$411,895.		
FD-030	08/08/11	084-0009		CMB-0054	Agree	09/07/11	+1,000,000	Changes will extend the date of the 90% (pre-final) submittal by 20 working days and the 100% (final) submittal by 40 working days. CMB did not approve a time extension for 90% or 100% submittal delivery. Project Controls estimated 733,420.		
FD-031	10/31/11							Accessibility Improvements at the SE corner of Union Square (UMS)		
FD-032	10/31/11							Union Square Entrance Reconfiguration (UMS)		
FD-033	10/31/11						+21,040,000	Additional Compensation Grouting due to Tunnel Settlement Alert and Trigger Levels (All Stations) ECP dated 11/17/11. ECP being routed for approval.		
FD-034	12/09/11			CMB-0062	Agree	12/14/11	+450,000	Operational Performance and Safety Enhancement at 4th and King SFMTA Operations requested that the design of the 4th & King tie-in work be expanded to include a number of improvements at the junction involving the turn-back area extending to the scissors crossover at 6th & King. SFMTA Ops confirmed that the requested changes result in an arrangement that is consistent with standard operation practices and therefore does not involve new or unacceptable risks. CS 1553 Memorandum No. 0081. Conditionally agreed upon verification/resolution of Buy America issue for the switches. 3/14/12: "Buy America" issue no longer applicable. Revised ECP element - remove H&K switch machines and replace with hydraulic/120V switch machines such as Nortrak or equal.		
FD-035	06/26/12			CMB-0071	Agree	07/11/12	+1,215,000	Tunnel Air Replenishment System Design and construct a fire fighter air replenishment system for Central Subway tunnel as described in SF Fire Code 511.2, Bulletin 5.07 except as noted in the Central Subway Request for Approval of Variance for the ARS to SFFD on March 5, 2012, and subsequently approved by SFFD. Design Impact: ROM - \$215K Construction Impact: ROM - \$1M		
FD-036	06/26/12			CMB-0072	Agree	07/18/12	+2,200,000	Surface Segment Sewers - 4th St. Replace current unreinforced brick crown from 1906 as it may not be able to withstand loading for construction of the CS trackway section. Reconstruct manholes between Brannan and King Streets as existing are in conflict with proposed rail. Replace service laterals and provide sleeves for future replacement. Additional potential scope option of \$1.5M-Sewer and \$2.3M-Force Main may be requested. If so, it will be Cost to SFPUC		
FD-037	08/27/12			CMB-0077	Agree (Conditionally)	08/29/12	+500,000	Platform Display System Signs Modify Stations (Contracts 1253, 1254 and 1255) and Surface, Track and Systems (Contract 1256) technical specifications and drawings for the Platform Display System (PDS) to match the changes made to the PDS units being supplied under the Integrated Systems Replacement (ISR) Project, Contract No.1260. 08/29/12: CMB agreement condition upon follow up action to evaluate procurement by CN1260		
FD-038	11/07/12						TBD	Elongated Sidewalk Bulb-out at Chinatown Station CTS Sidewalk Bulb out (Southwest corner Stockton/Washington To bring the Central Subway Project - Chinatown Station in closer conformance with the City's General Plan, SF Planning Department in its May, 2012 GPR Letter (recommends) making design changes specifically the extension of the sidewalk bulb-out at Stockton Street to help create a "station plaza". This elongated bulbout on the southwest corner (SWC) of Stockton and Washington Streets in front of the station headhouse would also include bike racks, benches, trees and other landscape features. Design Impact: ROM - \$TBD Construction Impact: ROM - \$TBD		
FINAL DESIGN TRENDS (Based on All ECPs) - SUBTOTALS								Incorporated budget increases have been absorbed by allocated and unallocated funds and the program budget to date remains \$1,578,300,000.		-0-

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OTHER TRENDS											
X51-001	07/31/10	082-0001	1251 Revised estimate, escalation impact and contingency.	7				+9,532,314	Cost Transfer #0033 (Base \$\$), 0033a (Allocated Contingency), 0036 (Base \$\$ Escalation , 0036a (Allocated Contingency Escalation). [Sep2010 Cost Report]	BT-0033, BT-0033-A, BT0036, BT-0036-A	
X51-002	07/31/10	082-0002	Form B Credit for 1251 Utilities	7				(7,697,949)	Reserve and Contingencies removed as per communications with PG&E. This is consistent with the 1250 utility agreement. [Cost Transfer #0034 - Aug2010 Cost Report].	BT-0034	
X52-001	07/31/10	083-0001	1252-(TUN) Revised estimate, escalation impact and contingency	7				(2,165,462)	Cost Transfer #0035 (Base \$\$), 0035a (Allocated Contingency), 0037 (Base \$\$ Escalation , 0037a (Allocated Contingency Escalation). [Sep2010 Cost Report]	BT-0037, BT-0037-A	
X03-001	08/31/10	003-0001	OEWD's Pilot Training Program	7				+75,000	Workforce training pilot program in conjunction with the City/County's Office of Economic and Workforce Development (OEWD). Provides specialized training to SF residents to perform tunneling work. Central Subway financial responsibility being investigated. Requires further clarification		
X53-001	07/18/11	084-0001	CS 155-2 (DP2) CBP4 - Construction Budget Adjustment YOE	7	CMB-0044	Agree	07/27/11		Adjust construction budget in Section 6 of Contract No. CS 155-2 to Year of Expenditure		
X53-002	10/25/11		Change UMS Advertise Date to April 4th, 2012						DP2 Designer's new proposed dates for Pre-Final and Final Design have pushed out Advertise Dates.		
X53-003	04/11/12	084-0002	CN1253 (UMS) Construction Budget Adjustment 90%					+55,720,600	CMB is currently vetting the 90% estimate of \$221,534,723 which represents a \$XX increase from the 65% base amount in 2010\$. Increase would deplete current YOE dollars and require use of unallocated contingency.		
X53-004	06/26/12	084-0002	Approve/Execute/Certify durations change for UMS Contract						Shortened the duration for Approve/Execute/Certify - UMS Contract from 40 to 24days to reflect an optimistic but doable duration for contractor submittals.		
X54-001	07/13/11	085-0001	CS 155-2 (DP2) CBP5 - Construction Budget Adjustment YOE	7	CMB-0045	Agree	07/27/11		Adjust construction budget in Section 6 of Contract No. CS 155-2 to Year of Expenditure		
X54-002	10/25/11		Change CTS Advertise Date to May 23rd, 2012		CMB-0061	Agree	12/28/11		DP2 Designer's new proposed dates for Pre-Final and Final Design have pushed out Advertise Dates.		
X54-003	11/02/11		Change CTS Advertise Date to February 8th, 2012						Change CTS Advertise Date from May 23, 2012 to February 8, 2012 (-74 working days)		
X54-005	12/06/11		Revisions to CTS Construction Schedule		CMB-0060	Agree	12/28/11				
X54-006	12/07/11	085-0002	CS 155-2 (DP2) CBP4 - Construction Budget Adjustment - allowed	7							
X55-001	07/18/11	086-0001	CS 155-2 (DP2) CBP6 - Construction Budget Adjustment YOE	7	CMB-0046	Agree	07/27/11		Adjust construction budget in Section 6 of Contract No. CS 155-2 to Year of Expenditure		
X55-002	10/25/11		Change MOS Advertise Date to June 25th, 2012						DP2 Designer's new proposed dates for Pre-Final and Final Design have pushed out Advertise Dates.		
X55-003	11/02/11		Change MOS Advertise Date to May 23rd, 2012						Change MOS Advertise Date from June 25, 2012 to May 23, 2012 (-22 working days)		
X55-004	06/26/12		Change MOS Advertise Date to Aug 20, 2012						Change MOS to August 20, 2012		
X56-001	10/25/11		Change STS Advertise Date to July 27th, 2012						DP2 Designer's new proposed dates for Pre-Final and Final Design have pushed out the Station's Advertise Dates. STS Advertise Date is staggered from Station's Advertise Dates.		
X56-002	12/14/11		STS Construction Schedule Revision for Equipment Procurement								
X56-003	06/26/12		Change STS Advertise Date to October 1, 2012						Change STS Advertise Date to October 1, 2012		
X40-001	10/19/11	028-0001	SFPUC CDD Updated Budgets	7		Authorized		+505,127	1250 SFPUC CDD Monthly Service Report Final & 1251 SFPUC CDD Estimate	BT-0172, BT-0177	
X80-001	10/19/11	071-0001	DP1: CS 155-1 Modifications No. 2 & 3	see Prof. Serv		Authorized		+560,585	Modification No. 2: \$395,584.59, Modification No. 3: \$165,000. Individual details listed in Professional Services. See trend 1551-0002,1551-0005 - 1551-0009	BT-0170, BT-0171, BT-0173	
X80-002		071-0002	DP1: CS 155-1 Modification No. 4	7		Authorized		+135,898	Modification No. 4: \$135,898 Individual details listed in Professional Services. See trends 1551-0010 - 1551-0014.	BT-0187	

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X80-003	10/27/11	029-0001	Increase City Auditor Budget	7		Authorized		+50,220	Reduce unallocated Contingency to increase City Auditor budget as authorized in Budget Authorization #51.	BR#51, BT-0181	
X80-004	10/27/11	232-0001	Increase SFCTA Budget	7		Authorized		+20,000	Increase SFCTA budget per per Budget Authorization #51 to conduct travel forecast (TEP CEQA Modeling) to satisfy PMO review and SFMTA Fleet Plan light rail vehicle.	BR #51, BT-0182	
X80-005	7/1/10, 11/2/10,3/24/11	072-0001	DP2: CS 155-2 Modification No. 1	7		Authorized		+1,010,000	Modification No. 1: \$1,010,600 Individual details listed in Professional Services. See trends 1552-0002, 1552-0003 and 1552-0005.	BT-0194, BR#53	
X80-006	5/6/10,7/25/11, 9/22/11	072-0002	DP2: CS 155-2 Exercised Options	see Prof. Serv		Authorized		+366,771	Individual details listed in Professional Services. See trends 1552-0001, 1552-0007 and 1552-0014.	BT-0023, BT-0194	
X80-007	11/08/11	151-0001	Operations SFMTA Transit Services			Authorized		+50,000	CSP request services to support and test OCS for 30/45 trolley reroute. Authorized per Budget Revision #53	BR #53, BT-0189	
X80-008	09/01/11	081-0001	SFMTA Safety, Training, Security & Enforcement Div PCOs	7		Authorized		+60,000	CSP request PCOs to support 1251 and 1252 construction for one year. Authorized \$60,000 per Budget Revision #45.	BR #45, BT-0190	
X80-009	11/30/11	016-0001	SFMTA Sustainable Streets 30 and 45 re-route	7		Authorized		-0-	CSP request services to support 30/45 trolley reroute. \$162,600 was reduced from DPT staffing plan budget.	BT-0188	
X80-010	11/09/11	073-0001	DP3: CS 155-3 Modification No. 1	7		Authorized		+152,882	Modification No. 1: \$152,882 Individual details listed in Professional Services. See trends 1553-0012 and 1553-0013.	BT-0203	
X80-011	8/9/11, 9/22/11, 10/11/11, 11/9/11	073-0002	DP3: CS 155-3 Exercised Options	see Prof. Serv		Authorized		+1,026,398	Individual details listed in Professional Services. See trends 1553-0001 - 1553-0004, 1553-0006, 1553-0009 - 1553-0011, 1553-0014. Updated from \$971,686 to include Trend 1553-0014.	BT-0203	
X80-012		151-0002	OCS materials procured directly for work in reference to CN1251 CMOD#12.		CMB-0065	Agree	1/25/2012, 2/29/12	+126,149	See also Trend 1251-0023		
X80-013	05/30/12	073-0003	DP3: Provide Vibration Impact Analysis and Extend PC Support Technical and CSP Quality Manager	1				+133,906	Amend #2: Vibration Impact Analysis \$38,380 Amend #3: PC Support Tech \$34,483; Quality Manager - \$61,043	TBD	
X80-014	12/17/12		For combining the stations and track and systems into Contract 1300 (SSTS)	7					Combined all the Station ad Track and Systems into one Contract. Removed the buffer float activities from the satin to track and systems and overlapped work that can now be done concurrent.		
X80-015	12/17/12		Changing the Bid Opening date and condensing the Contract Duration for Contract 1300	7		Agree	11/14/12		Change bid opening to March 19, 2013 and reevaluated procurement durations, revised calendars for UMS Gargage, revised productin rates for steel. 11/14/13 CMB Agreed verbally to change @ Mtg #101		
X80-016	02/19/13		Change to Tunnel and CTS interface and buffer float Contract 1300 (SSTS)	7		Agree	01/23/13		Change (MPS) reducing the number of days currently in (from 550 calendar days from NTP to 450 calendar days) for the key interface between CTS and the tunnel completion. Reduced number of days will be issued as part of Add #3 of the 1300 contract. 1/23/13 CMB Agreed verbally to change @ Mtg #111.		
OTHER TRENDS (Based on Various Trends)									Current Forecast reflects a net +3,537,933 unfavorable impact for all Other Trends.		-0-
GRAND TOTALS									Current Forecast reflects an estimated net +66,751,620 unfavorable exposure to the project to date. Incorporated budget increases have been absorbed by allocated and unallocated funds and the program budget to date remains \$1,578,300,000.		(288,336)
PROFESSIONAL SERVICES TRENDS: The following trends are listed for administrative purposes. The dollar amounts are reflected in the "Other Trends" section of this log in the form of cost (budget) transfers - ie CCOP's. The total values indicated for each professional contract are for tracking all potential cost exposures and may or may not be approved.											
Contract CS-155-1											
1551-0001	07/30/10		071-0001	Conform Contract Terms per Negotiations from 10/2/09 to 11/6/09	7			-0-	To be addressed in Amendment 1.	Amendment 1 Pending	-0-
1551-0002	02/18/11		071-0002	Project Office Delay (Adjustments for OH Rate and Team Productivity impact)	7	Authorized	07/29/11	+101,411	Amendment Signed by ED/CEO 7/29/11 COMPLETE, NO FURTHER ACTION; Amendment #2	Amendment 2 Approved	

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CENTRAL SUBWAY PROJECT
Project Trend/Change Control Log

Item #	Date Initiated		Change Description	Change Type	CMB No.	Change Status		Projected Cost Impact +Exposure/(Benefit)	Comments	Contract Modification Number	Utility Reimbursements
						Approval Action	Approval Date				
1551-0003	02/18/11		071-0003	Additional Construction Support for CP-1	7						-0-
1551-0004	02/18/11		071-0004	Redesign Required by Barney's and PUC for CP-2	7						-0-
1551-0005	02/18/11		071-0005	Archeological Monitoring 16.20.C1 (total)	7		Authorized	07/29/11	+197,173	Amendment Signed by ED/CEO 7/29/11 COMPLETE, NO FURTHER ACTION; Amendment #2	Amendment 2 Approved
1551-0006	02/18/11		071-0006	Eyebolts	7		Authorized	07/29/11	+50,000	Amendment Signed by ED/CEO 7/29/11 COMPLETE, NO FURTHER ACTION; Amendment #2	Amendment 2 Approved
1551-0007			071-0007	Secondary Closure Walls 800/838 Market	1		Authorized	07/29/11	+47,400	Amendment Signed by ED/CEO 7/29/11 COMPLETE, NO FURTHER ACTION; Amendment #2	Amendment 2 Approved
1551-0008			071-0008	Delete Optional Tasks - Tasks 1-14	1				-0-	Deleted Options in the amount of (\$529,952) in Amendment has been reversed through Budget Authorization #50. COMPLETE, NO FURTHER ACTION; Amendment #2	Amendment 2 Approved
1551-0009			071-0009	CTS Lowering	1		Authorized	12/08/11	+165,000	Amendment Signed by ED/CEO 12/8/11 COMPLETE, NO FURTHER ACTION; Amendment #3	Amendment 3 Approved
1551-0010			071-0010	Modify Sidewalk Vault Demo ECP-FD009	7		Authorized	12/08/11	+39,311	Amendment Signed by ED/CEO 12/8/11 COMPLETE, NO FURTHER ACTION; Amendment #4	Amendment 4 Approved
1551-0011			071-0011	Modify Stockton St. Sewer ECP-FD010	7		Authorized	12/08/11	+4,112	Amendment Signed by ED/CEO 12/8/11 COMPLETE, NO FURTHER ACTION; Amendment #4	Amendment 4 Approved
1551-0012			071-0012	Reconfigure Utilities N. Side Ellis ECP-FD011	7		Authorized	12/08/11	+2,448	Amendment Signed by ED/CEO 12/8/11 COMPLETE, NO FURTHER ACTION; Amendment #4	Amendment 4 Approved
1551-0013			071-0013	Extend SubSidewalk Closure Wall ECP-FD013	7		Authorized	12/08/11	+85,233	Amendment Signed by ED/CEO 12/8/11 COMPLETE, NO FURTHER ACTION; Amendment #4	Amendment 4 Approved
1551-0014			071-0014	Reroute OCS to Fifth St. ECP-FD014	7		Authorized	12/08/11	+4,794	Amendment Signed by ED/CEO 12/8/11 COMPLETE, NO FURTHER ACTION; Amendment #4	Amendment 4 Approved
1551-0015			071-0015	Retrieval Shaft Redesign - Sewer By Pass	7				+56,000	Awaiting documentation from Designer	
1551-0016			071-0016	Design Measures for Settlement Protection	7				+99,000	Awaiting documentation from Designer	
1551-0017			071-0017	Incorporate Headwalls MOS/UMS	1		Disagree at this time	11/01/11	+42,000	In letter dated November 1, 2011 DPM responded that until concurrence with DP2 on cost transfer or additional documentation, the requested change is denied.	
1551-0018			071-0018	Prepare Utility Composite	-		Disagree	11/01/11	+50,000	DPM responded that Program does not agree in letter dated November 1, 2011.	
1551-0019			071-0019	Incorporate Cross Passages	1		Disagree at this time	11/01/11	+43,000	In letter dated November 1, 2011 DPM responded that until concurrence with DP2 on cost transfer or additional documentation, the requested change is denied.	
Contract CS-155-1 Total									+986,882	Of the total cost exposure shown, Contract Modifications and Authorized Option dollars have been absorbed by DP1 allocated contingency in the amount of \$696,483 of a total budget of \$705,000. Additional potential exposure is +\$391,411. Currently, overall contract value remains unchanged in the amount of \$6,500,000.	-0-
Contract CS-155-2											
1552-0001	05/06/10		072-0001	Optional Task 2.50 and Task 12.07	1		Authorized	05/06/10	+274,775	CS Letter 0473 from ED/CEO Optional Task 2.50 to support art enhancement activities NTE \$164,383 and Optional Task 12.07 to support design structures for Public Art NTE \$110,392.	
1552-0002	07/01/10		072-0002	Expanded Hydraulic Testing at CTS	7		Authorized	07/01/10	+26,100	Estimated cost breakdown is included in the 7/1/10 letter from CSDG and includes signed approval by SFMTA. Amendment No. 1 authorized by ED/CEO on 12/21/11. COMPLETE, NO FURTHER ACTION; Amendment #1	Amendment 1 Approved
1552-0003	10/11/10		072-0003	Additional Soil Borings at UMS Station - Task No. 3.10 Supplemental Investigations	7		Authorized	11/02/10	+34,500	Estimated cost breakdown is included in the 10/11/10 letter from CSDG and includes signed approval by SFMTA. Amendment No. 1 authorized by ED/CEO on 12/21/11. COMPLETE, NO FURTHER ACTION; Amendment #1	Amendment 1 Approved
1552-0004	02/11/11		072-0004	MOS TOD White Paper Proposal	1				+33,847	Conceptual study will assess a potential high rise building at the Moscone station headhouse. Estimated cost breakdown is included in the 2/11/2011 letter from CSDG - On Hold.	
1552-0005	03/24/11		072-0005	CTS - Alternate 5	7		Authorized	03/24/11	+950,000	CS Letter from DED dated 3/24/11 has agreed to a modification of \$950,000 for performing additional work. Amendment No. 1 authorized by ED/CEO on 12/21/11. COMPLETE, NO FURTHER ACTION; Amendment #1	Amendment 1 Approved
1552-0006	06/28/11		072-0006	Audited Overhead Rate Adjustment for Year 2010 - Request for Amendment	7				-0-	Estimated cost of \$406,320 is included in the 6/28/11 letter from CSDG. See 1552-0006 Rev. 1 for most current estimate	
1552-0007	07/25/11		072-0007	REVIT and CAD Support (to City Staff) Option to DP2 Contract (Optional Services Task 12.12)	1		Authorized	07/25/11	+79,200	CS Letter No. 0768 from ED/CEO dated 7/25/11 has authorized Optional Task 12.12 NTE \$79,200.	

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CENTRAL SUBWAY PROJECT
Project Trend/Change Control Log

Item #	Date Initiated	Change Description	Change Type	CMB No.	Change Status		Projected Cost Impact	Comments	Contract Modification Number	Utility Reimbursements	
					Approval Action	Approval Date	+Exposure/(Benefit) Actual/Forecast				
1552-0008	08/03/11	072-0008	MOS Revisions to Emergency Ventilation Requirements	-		Provide further Justification	09/07/11	-0	CMB did not approve a \$60,000 proposed increase. Document References ECP FD028, CSDG letter dated 8/8/11. DPM responded that program does not agree in letter dated 10/17/11.		
1552-0009	08/03/11	072-0009	CTS Revisions to Emergency Ventilation Requirements	-		Provide further Justification	09/07/11	-0	CMB did not approve an \$80,000 proposed increase. Document References ECP FD029, CSDG letter dated 8/8/11. DPM responded that program does not agree in letter dated 10/17/11.		
1552-0010	08/03/11	072-0010	UMS Revisions to Emergency Ventilation Requirements	-		Provide further Justification	09/07/11	-0	CMB did not approve a \$100,000 proposed increase. Document References ECP FD030, CSDG letter dated 8/8/11. DPM responded that program does not agree in letter dated 10/17/11.		
1552-0011	08/17/11	072-0011	Audited Overhead Rate Adjustment for Year 2010 - Request for Amendment - Rev. 1	7				+426,322	Estimated cost breakdown is included in the 8/17/11 letter from CSDG. This is a revision to the 6/28/11 letter and cost breakdown.		
1552-0012	08/23/11	072-0012	Station Air Replenishment System	-		Disagree	10/17/11	+36,240	Estimated cost breakdown is included in the 8/23/11 letter from CSDG. DPM responded that program does not agree in letter dated 10/17/11.		
1552-0013	09/01/11	072-0013	COR for Additional Services Related to MOS Constructability Review and Assessment of Alternatives	-				-0	Cost charged to Task 2.70- part of base work		
1552-0014	09/22/11	072-0014	Proposal for Additional Work to provide Structural Engineering Support (Optional Services)	1		Authorized Optional Task 12.01.C5 only	11/04/11	+35,724	Estimated cost breakdown is included in the 9/22/11 letter from CSDG. Referenced Optional Work Tasks 12.01.C5 and 12.07.C5 - Effort re-evaluated - proposed cost to be resubmitted. CS Letter No. 1232 dated 11/4/11 from Director of Transportation has authorized Optional Task 12.01.C5 for the amount of \$12,796.	Option	
Contract CS-155-2 Total								+1,896,708	Of the total cost exposure shown, Contract Modifications and Authorized Option dollars have been absorbed by DP2 allocated contingency in the amount of \$1,046,324 of a total budget of \$4,890,707. Overall contract value remains unchanged in the amount of \$39,949,959.		-0-
Contract CS-155-3											
1553-0001	08/09/11	073-0001	Authorization to commence optional tasks 9.20J Technical Specifications Item J Facility SCADA	1		Authorized	08/01/11	+259,305	SFMTA letter 0933 from ED/CEO dated 8/9/11 authorizing \$738,787 in optional tasks. COMPLETE, NO FURTHER ACTION; OPTION	Option	
1553-0002	08/09/11	073-0002	Authorization to commence optional tasks 12.05 Architectural Plans	1		Authorized	08/01/11	+257,129	SFMTA letter 0933 from ED/CEO dated 8/9/11 authorizing \$738,787 in optional tasks. COMPLETE, NO FURTHER ACTION; OPTION	Option	
1553-0003	08/09/11	073-0003	Authorization to commence optional tasks 12.13J Facility SCADA Design	1		Authorized	08/01/11	+169,553	SFMTA letter 0933 from ED/CEO dated 8/9/11 authorizing \$738,787 in optional tasks. COMPLETE, NO FURTHER ACTION; OPTION	Option	
1553-0004	08/09/11	073-0004	Authorization to commence optional tasks 12.12E traction power cables for CAD production	1		Authorized	08/01/11	+52,800	SFMTA letter 0933 from ED/CEO dated 8/9/11 authorizing \$738,787 in optional tasks. COMPLETE, NO FURTHER ACTION; OPTION	Option	
1553-0005	09/19/11	073-0005	Proposal to hire Wilson Ihrig to support Acoustics, Noise and Vibration tasks.	7		Authorized	03/08/12	+38,380	Signed by Director of Transportation 3/8/2012. COMPLETE, NO FURTHER ACTION; Amendment 2	Amendment 2 Approved	
1553-0006	09/22/11	073-0006	Proposal to exercise optional task 12.07 Public Art.	1		Authorized	11/04/11	+10,285	Letter dated 9/22/11 to DOM. PMCM response pending. Priced level of Effort assumed for this task. SFMTA Letter 1213 from Director of Transportation dated 11/4/11 authorizing optional task.		
1553-0007	09/27/11	073-0007	Proposal to exercise optional sub-task 12.12 structural design of the OCS attachments.	7				+59,460	Letter dated 9/27/11 to DOM. NOT FOLLOWING CONTRACT REQUIREMENTS FOR PROPER NOTIFICATION OF CHANGE. PMCM has responded to clarify scope in stations and Tunnel Design. Awaiting resubmission of request by DP3		
1553-0008	10/05/11	073-0008	Scope Clarification - Add Emergency and Location Signage.	7		Disagree A.12.08-Signage	11/09/11		Letter dated 10/5/11 to DOM. NOT FOLLOWING CONTRACT REQUIREMENTS FOR PROPER NOTIFICATION OF CHANGE. CS Memo No. 0882 from DOM to DP3 PM considers A.12.08 Signage as part of the work necessary to complete the trackway elements of the scope. The work in question is considered part of the base scope of services.		
1553-0009	10/11/11	073-0009	Proposal to exercise mechanical optional task A 12.11 to design a water line on the FBS station platform.	1		Authorized	11/04/11	+33,000	SFMTA Letter 1213 from Director of Transportation dated 11/4/11 authorizing optional task. COMPLETE, NO FURTHER ACTION; OPTION	Option	
1553-0010		073-0010	Proposal to exercise Task 12.01 Surface Segment site Drainage	1		Authorized	11/04/11	+108,240	SFMTA Letter 1213 from Director of Transportation dated 11/4/11 authorizing optional task. COMPLETE, NO FURTHER ACTION; OPTION	Option	
1553-0011		073-0011	Proposal to exercise Task 12.02 Sewer Relocation and Analysis Report.	1		Authorized	11/04/11	+81,374	SFMTA Letter 1213 from Director of Transportation dated 11/4/11 authorizing optional task. COMPLETE, NO FURTHER ACTION; OPTION	Option	
1553-0012	11/09/11	073-0012	CTS - Alternate 5	7		Authorized	01/18/12	+88,855	Contract Modification No. 1 authorized by ED/CEO on 1/18/12. COMPLETE, NO FURTHER ACTION; Amendment #1	Amendment 1 Approved	
1553-0013	11/09/11	073-0013	Proposal for Geotechnical Services	7		Authorized	01/18/12	+64,027	Letter dated October 7, 2011 to DOM. PM/CM response pending. Contract Modification No. 1 authorized by ED/CEO on 1/18/12. COMPLETE, NO FURTHER ACTION; Amendment #1	Amendment 1 Approved	

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CENTRAL SUBWAY PROJECT
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Item #	Date Initiated	CMB No.	Change Description	Change Type	Change Status		Projected Cost Impact +Exposure/(Benefit)	Comments	Contract Modification Number	Utility Reimbursements
					Approval Action	Approval Date				
1553-0014	02/06/12	073-0014	Authorization to commence optional tasks 12.12E traction power cables for CAD production, Optional task 2.50 Coordination with Art		Authorized	02/06/12	+54,712	SFMTA Letter 1381 from Director of Transportation dated 2/06/12 authorizing optional tasks 12.12e in the amount of \$41,280 and 2.50 for \$13,432 COMPLETE, NO FURTHER ACTION; OPTION	Option	
1553-0015	03/20/12	073-0015	Proposal for additional services in Response to Approved (ECP) FD 034 Operation Performance and Safety Enhancements to 4th and King and 6th and King.	1			+26,026	FD-034 was updated by CMB on 3/14/12. Proposal transmitted via letter CS1553 No. 0012 dated 3/20/12 to DOM. Amendment #4 PENDING	Option	
1553-0016	03/23/12	073-0016	Proposal for additional work - Tunnel Air Replenishment System (Exercise Optional Service)	7	Authorized	04/26/12	+173,119	SFMTA letter 1658 from Director of Transportation dated 4/26/2012 authorizing \$173,119 in optional tasks. Included in FD-035 to be presented to CMB on 6/26/12	Option	
1553-0017	05/14/12	073-0017	Extension of PC Support Technician	1	Authorized	05/04/12	+34,483	Signed by Director of Transportation 5/14/12 COMPLETE, NO FURTHER ACTION; Amendment #3	Amendment 3 Approved	
1553-0018	05/14/12	073-0018	Extension of CSP Quality Manager	1	Authorized	05/04/12	+61,043	Signed by Director of Transportation 5/14/12 COMPLETE, NO FURTHER ACTION; Amendment #3	Amendment 3 Approved	
1553-0019	04/09/12	073-0019	Authorization to commence optional task 12.02 Utility Plans for design of repositioned and reconstructed manholes for the 78 inch diameter sewer on 4th St.	1	Authorized	04/09/12	+52,712	SFMTA Letter 1630 from the Director of Transportation dated 4/9/2012 authorizing optional task 12.02 in the amount of \$52,712 COMPLETE, NO FURTHER ACTION; OPTION	Option	
1553-0020	04/09/12	073-0020	Authorization to commence optional task 12.12 civil and structural support for traction power duct banks	1	Authorized	04/09/12	+109,000	SFMTA Letter 1630 from the Director of Transportation dated 4/9/2012 authorizing optional task 12.12 in the amount of \$109,000 COMPLETE, NO FURTHER ACTION; OPTION	Option	
1553-0021	04/26/12	073-0021	Authorization to commence optional task 12.11 design of the tunnel based Air Replenishment System including fill panels, feeder pipes, gauges, valves, fire proofing, anchors, supports, low level alarms, wiring, signage, connections to SCADA and monitoring devices, equipment placement, and impact protection	1	Authorized	04/26/12	+173,119	SFMTA Letter 1658 from the Director of Transportation dated 4/26/2012 authorizing optional task 12.11 in the amount of \$173,119 COMPLETE, NO FURTHER ACTION; OPTION	Option	
1553-0022	04/26/12	073-0022	Increased authorization for optional task 12.12.e CAD production support	1	Authorized	04/26/12	+30,000	SFMTA Letter 1658 from the Director of Transportation dated 4/26/2012 authorizing the increase in optional task 12.12e in the amount of \$30,000 COMPLETE, NO FURTHER ACTION; OPTION	Option	
1553-0023	05/21/12	073-0023	Authorization to commence option task 12.11 structural design support for Fire Protection and Plumbing designs	1	Authorized	05/21/12	+39,204	SFMTA Letter 1688 from the Director of Transportation dated 5/21/2012 authorizing the increase in optional task 12.11 in the amount of \$39,204 COMPLETE, NO FURTHER ACTION; OPTION	Option	
1553-0024	05/21/12	073-0024	Authorization to commence optional task 12.12 structural design support for Traction Power and Power/Lighting designs	1	Authorized	05/21/12	+43,638	SFMTA Letter 1688 from the Director of Transportation dated 5/21/2012 authorizing the increase in optional task 12.12 in the amount of \$43,638 COMPLETE, NO FURTHER ACTION; OPTION	Option	
1553-0025	05/21/12	073-0025	Authorization to commence optional task 12.13 structural design support for Telephone and CCTV designs	1	Authorized	05/21/12	+24,328	SFMTA Letter 1688 from the Director of Transportation dated 5/21/2012 authorizing the increase in optional task 12.13 in the amount of \$24,328 COMPLETE, NO FURTHER ACTION; OPTION	Option	
1553-0026	05/21/12	073-0026	Authorization to commence optional task 9.20 Technical Specifications for structural design support for above designs	1	Authorized	05/21/12	+3,039	SFMTA Letter 1688 from the Director of Transportation dated 5/21/2012 authorizing the increase in optional task 9.20 in the amount of \$3,039 COMPLETE, NO FURTHER ACTION; OPTION	Option	
Contract CS-155-3 Total							+2,046,831	Of the total cost exposure shown, Contract Modifications and Authorized Option dollars have been absorbed by DP3 allocated contingency in the amount of \$1,168,995 of a total budget of \$4,598,725. Overall contract value remains unchanged in the amount of \$19,919,526.		-0-

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CMB LOG

CENTRAL SUBWAY PROJECT - Configuration Management Board Change Control Log

**Dollar value listed for Cost Impact amount reflects the CMB agreed amount, the actual Cost Impact amount may differ as shown on the Project Trend Log to reflect actual final agreed to value. Amount on Trend log will not be greater than agreed CMB amount without prior additional action by CMB.*

Initial Implementing Procedure				CMB		
Change Form No.	Title of Change	Schedule Impact	*Cost Impact (X,000)	CMB No.	Agree / Disagree	Final Decision Record Date
1250-0002	Chgs to Sewer on 4th between Howard and Folsom		\$ 107	CMB-0001	Agree	07/12/10
1250-0003	Quantity Adjustment for JT-6 and JT-7		\$ 192	CMB-0002	Agree	08/04/10
1250-0004	Demolition of existing brick and concrete footing on 4th between Howard and Folsom		\$ 170	CMB-0003	Agree	07/12/10
1250-0005	Modify AWSS at 4th/Bryant and 4th/Harrison		\$ 586	CMB-0004	Agree	08/04/10
1250-0006	Install four additional piles and reinforce existing foundation at 401 4th Street		\$ 130	CMB-0005	Agree	08/25/10
FD-001	Narrowing of Platform at UMS		\$ (800)	CMB-0006	Agree	08/04/10
FD-004	UMS Structural Configuration		\$ (8,000)	CMB-0007	Agree	08/18/10
FD-006	Station Headwalls - UMS/MOS		\$ -	CMB-0008	Agree	08/18/10
FD-002	Redux of Station Emergency Ventilation Fans - UMS/CTS/MOS		\$ (3,000)	CMB-0009	Agree (Conditionally)	08/25/10
FD-005	UMS Alternate Station Access/Vent Shaft @ Union Square		\$ (22,500)	CMB-0010	Agree	12/29/10
FD-016	Underpinning of Mandarin Tower		\$ 5,000	CMB-0011	Over Taken by FD-021	01/19/11
FD-017	CTS Ground Improvement		\$ 10,300	CMB-0012	Over Taken by FD-021	01/19/11
FD-018	UMS Apple Store Entrance		\$ -	CMB-0013	Disagree	11/10/10
FD-019	MOS TOD Configuration		TBD	CMB-0014	Agree	11/10/10
FD-020	UMS Emergency Stair #4 Relocation		TBD	CMB-0015	Agree	11/10/10
1250-0016	Additional AWSS modification at 4th/Harrison		\$ 156	CMB-0016	Agree	11/10/10
FD-008	Trolley Re-route @ Columbus & Powell		\$ 2,000	CMB-0017	Agree	09/15/10
FD-007	Cross-passages		\$ -	CMB-0018	Agree	09/15/10
FD-009	ECP to Modify Sidewalk Vault Demolition and Construction Sequence to Facilitate Construction of Joint Utilities Trench and Future UMS Station		\$ 3,000	CMB-0019	Agree	12/15/10
FD-010	Redesign Stockton Street Sanitary Sewer to conform to SFPUC Sewer Criteria that preclude placement of relocated sanitary sewer under sidewalks		\$ 2,000	CMB-0020	Agree	11/17/10
FD-011	Reconfigure Routing of Water, Sewer and Gas laterals from buildings on north side of Ellis Street		\$ 500	CMB-0021	Agree	11/17/10
FD-012	Recognize cost transfers from design allowances allocated to contingency to explicit line items in final design estimates		\$ -	CMB-0022	Disagree	11/17/10
FD-013	Increase Extent of Sub-sidewalks Vault Secondary Closure Walls and Waterproofing		\$ 4,100	CMB-0023	Agree	11/17/10
FD-014	Include OCS system for rerouting trolley buses to Fifth Street		\$ 3,100	CMB-0024	Agree	12/15/10
FD-015	Subsidewalk Vault Secondary Closure Walls for Buildings at 800 Market and 838 Market		\$ 1,000	CMB-0025	Agree	11/17/10
1250-0022	Install additional 30 feet of DIP and new AWSS at 4th/Harrison		\$ 160	CMB-0026	Agree	01/12/11
FD-021	CTS Lowering and Stations Reconfiguration		\$ (18,000)	CMB-0027	Agree	01/19/11
1250-0026	Supporting working around and protecting SFWD existing facilities		\$ 66	CMB -0028	Agree	02/09/11
1251-003	Extending Sewer lines on O'Farrell and Geary - CMod 001		\$ 149	CMB-0029	Agree	02/23/11

CMB LOG

CENTRAL SUBWAY PROJECT - Configuration Management Board Change Control Log

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Initial Implementing Procedure				CMB		
Change Form No.	Title of Change	Schedule Impact	*Cost Impact (X,000)	CMB No.	Agree / Disagree	Final Decision Record Date
1250-0030	Differing site conditions during utility installations - CMod #16 - Public only		\$ 238	CMB-0030	Agree	04/13/11
1251-0004	Additional work related to secondary basement closure wall, 150 Stockton Street		\$ 190	CMB-0031	Agree	04/13/11
FD-023	Change to the emergency walkway configuration in the cross cavern at CTS		\$ -	CMB-0032	Agree	07/27/11
FD-024	Change No. 5 diamond X-over on surface segment to tandem (universal) crossover		\$ (350)	CMB-0033	Agree	08/24/11
FD-025	Bid Option for TBM Retrieval Shaft		\$ (10,000)	CMB-0034	Agree	04/13/11
1251-0002	Installation of concrete slab under joint trench at Stockton and O'Farrell CMod #02 <i>(Not to Exceed Total)</i>		\$ 71	CMB-0035	Agree	04/20/11
1250-0029	Adjustment to Additional Excavation and Backfill Bid Item CMod #17		\$ 112	CMB-0036	Agree	05/04/11
1250-0034	Supplement Bid Item TR -6 DPT Traffic Control Allowance CMod #18		\$ 69	CMB-0037	Agree	05/04/11
1251-0009	Supplement Bid Item TR-07- Allowance for Manual Traffic Control with Add'l funds		\$ 263	CMB-0038	Agree	06/01/11
1251-0006	Revising layouts of utilities, northern portion of Stockton Street		\$ 399	CMB-0039	Agree	06/08/11
FD-026	Air Replenishment Systems in the three underground stations		\$ 1,245	CMB-0040	Agree	07/13/11
1250-0036	<i>Rental/Maintenance costs for support of Archeological Trenches - 05/30: SFMTA Board approval due to contract value exceeding the 25% threshold remaining item will be handled through the claims process. CM will provide and update at a later date. 09/12/12: Rental/Maintenance costs for support of Archeological Trenches (Part 1 of 4), (Part 2 of 4), (Part 3 of 4), (Part 4 of 4)</i>		\$ 597	CMB-0041	Agree	09/12/12
1251-0012	Compensate Contractor for additional expenses to modified installation of AWSS on O'Farrell East on Stockton St CMod #07 representing change, now CMod #06 (Refer to Approve CMB-0050, which notes the contract modification amount for this work)		-	CMB-0042	Agree	08/03/11
FD-027	1 Stockton Street (Apple Store) Secondary Closure Wall		\$ 500	CMB-0043	Agree	08/03/11
X53-001	CS 155-2 (DP2) CBP4 (UMS) - Construction Budget Adjustment YOY		-	CMB-0044	Agree	07/27/11
X54-001	CS 155-2 (DP2) CBP5 (CTS) - Construction Budget Adjustment YOY		-	CMB-0045	Agree	07/27/11
X55-001	CS 155-2 (DP2) CBP6 (MOS) - Construction Budget Adjustment YOY		-	CMB-0046	Agree	07/27/11
1250-0012 & 0013	Differing site conditions during utility installations - CMod #21 - Private only		\$ 98	CMB-0047	Agree	08/03/11
1250-0024	Costs associated with support, workaround and protection of existing AT&T utilities - CMod #19		\$ 95	CMB-0048	Agree	08/24/11
1251-0007	Costs associated with design changes to utility layouts along Ellis Street - CMod #05		\$ (435)	CMB-0049	Agree	08/24/11
1251-0012	Additional expenses related to modified installation of the AWSS on O'Farrell East of Stockton St - CMod #06 (Ref. CMB-0042 for original CMod presented for this work)		\$ 278	CMB-0050	Agree	09/21/11
1251-0017 & 0018	Installation of AT&T manholes 5829 and 5830 located on Geary at Stockton - CMod #07		\$ 56	CMB-0051	Agree	09/21/11
FD-028	MOS Revisions to Emergency Ventilation Requirements		\$ 500	CMB-0052	Agree	09/07/11

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CENTRAL SUBWAY PROJECT - Configuration Management Board Change Control Log

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Change Form No.	Title of Change	Schedule Impact	*Cost Impact (X,000)	CMB No.	Agree / Disagree	Final Decision Record Date
FD-029	CTS Revisions to Emergency Ventilation Requirements		\$ 1,000	CMB-0053	Agree	09/07/11
FD-030	UMS Revisions to Emergency Ventilation Requirements		\$ 1,000	CMB-0054	Agree	09/07/11
1251-0014	Increase Bid Item WD-10 Allowance for Add'l Excavation and Backfill - CMod #09		\$ 200	CMB-0055	Agree	09/14/11
1251-0027	AT&T installation additional cost to accelerate work - CMod #10		\$ 281	CMB-0056	Agree	11/30/11
1251-0019 & 0028	Installation of AT&T manholes 5828, 5831, 113, 5832 and 403 - CMod #11		\$ 188	CMB-0057	Agree	10/26/11
1251-0020, 0030 & 0031	PG&E Field Changes - Cost will be part of the Form B calculations and be included in the reimbursement from PG&E. (Formally CMod #12 New CMod number is pending assignment)		\$ 89	CMB-0058	Agree	11/02/11
1251-0024 & 0032	PG&E Field Changes - (Formally CMod #13 New CMod number is pending assignment) 1/25: Revision to the number of Kill Tie in locations will reduced this CMod to \$315K when conditions are satisfactorily met. 04/11 : Discovery of the actual number of Kill/Tie locations being 26 instead of 15 will require confirmation from PG&E of the locations and the new cost of scope of work . 05/02: Previously approved CMod for \$349K on 11/16/11. Revised CMod approved for 12 Kill hole locations and "not to exceed" value. PGE email concurrence presented 05/23/12		\$ 303	CMB-0059	Agree	11/16/11
X54-005	Revisions to MPS - CTS Construction Schedule		\$ -	CMB-0060	Agree	12/28/11
X55-002	MPS - STS Construction Schedule Revision for Procurement of Equipment		\$ -	CMB-0061	Agree	12/28/11
FD-034	STS 4th and King Operational Performance and Safety Enhancements. 12/14/11: Agree contingent up "Buy America" waiver. 03/14: "Buy America" contingency no longer applicable. Revised ECP change element - Removing H&K switches and replace with hydraulic/120V. Revised CSP Design Criteria to reflect element design change. CMB approval of replacement agreed on 03/14/12. Revision made to the approved ECP at Mtgs. #71 & #72.		\$ 450	CMB-0062	Agree	12/14/11
CS-155-2	CS 155-2 (DP2) CTS Construction Budget Adjustment - (65% Submittal)		\$ 45,261	CMB-0063	Agree	12/21/11
1251 -0038 (TO-035)	CN1251 (3EA) Kiosk Removal; previous work, and Addl (2EA) new work (see CMB 0080 approved on 10/24/12 for \$29,267.83) for all (5EA) Kiosks.		\$ -	CMB-0064	Agree	01/04/12
1251-0023	Overhead Contact System (OCS) Facilities along Folsom St. between 4th & 5th Streets and Installation of Foundations and Poles - CMod #12 (Formally CMod #15) Condition agreed upon verification material from Contractor to be procured is available. (Verified 02/01/12). 02/29: CMod negotiated cost has been revised to incorporate original three items and the add'l OCS work on Folsom St.		\$ 542	CMB-0065	Agree	02/29/12
CS-155-2	CS 155-2 (DP2) UMS Construction Budget Adjustment - (65% Submittal)		\$ 27,986	CMB-0066	Agree	02/01/12
CS-155-2	CS 155-2 (DP2) MOS Construction Budget Adjustment - (65% Submittal)		\$ 22,947	CMB-0067	Agree	02/01/12
1251 - 0033	Installation of Secondary Closure Wall at 1 Stockton St. (Apple Store) - CMod #13 (Formally CMod #14) (Negotiated Direct Cost \$264K, & Negotiated OH Cost \$143K)		\$ 409	CMB-0068	Agree	03/07/12

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1251-0034	Additional work related to discovery of conflicting utilities within the subsidewalk basement at 17-19 Stockton Street. (Worst case scenario - "Not to Exceed" value) <i>CM team will report actual amount value at a later date.</i>		\$ 346	CMB-0069	Agree	04/04/12
1251-0040, 0041, & 0042	Installation of approximately 150LF in additional AT&T trenching (including conduit packages) and the installation of AT&T Vault No.133 (Reimbursement to SFMTA for this compensation value via the Form B process - CMod #14		\$ 100	CMB-0070	Agree	04/11/12
FD-035	Tunnel Air Replenishment System (ARS)		\$ 1,215	CMB-0071	Agree	07/11/12
FD-036	Surface Segment Sewers - 4th St. Base and SFPUC Option		\$ 2,200	CMB-0072	Agree	07/18/12
1252-025	UMS Reduced Duration - <i>08/01/12: Condition upon incorporating correctness to backup documentation as required by & documented in CMB mtg.</i>		\$ -	CMB-0073	Agree (Conditionally)	08/01/12
1251-0050, 0067, 0074 & 0075	Trend #50 - Installation of MUNI 770 Pole at 5th and Folsom Trend #67 - OCS Feeder Work On Folsom Trend #74 - Traffic Signal Modifications At 5th And Folsom Trend #75 - Unforeseen Conditions During Pole Foundation Installation On Folsom		\$ 1,100	CMB-0074	Agree	08/15/12
1251-0068	Additional time related overhead (TRO) costs resulting from the 29EA calendar day Contract extension		\$ 107	CMB-0075	Agree (Conditionally)	10/03/12
1251-0043, 0072 & 0080	Trend #43 FAR for Demolition of existing AT&T Vault #113 and 403 Trend #72 Additional AT&T trench from Vault #5829 and 127 Trend #80 Additional work related to installation of AT&T Vaults #5828, 5829, 5830, 5831, 5832 and 5833.		\$ 129	CMB-0076	Agree (Conditionally)	10/03/12
FD-037	Platform Display System Signs - <i>08/29/12: Condition follow up action to evaluate procumbent by CN1260</i>		\$ 500	CMB-0077	Agree (Conditionally)	08/29/12
1251-0037, 0044 & 0045	Gucci Store, Macy's West and Union Square Garage Sewer Installations		\$ 71	CMB-0078	Agree	09/12/12
1251-0052, 0065 and 0070	Trend #52 - Reroute Unforeseen existing waterline discovered along Geary St (east of Stockton St.) Trend #65 - Additional fittings for AWSS lateral and chipping of pole foundation at Market/Ellis Streets Trend #70 - Core drill primary wall and install interior plumbing at Armani and Disney for the completion of fire service water cutover work.		\$ 65	CMB-0079	Agree	10/10/12

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1251-0038, 0039, 0054, 0062 and 0073	Trend #38 - Reimburse Synergy for JCDecaux's removal of 2EA kiosks and other Central Subway related work (TO #35 for this work approved on 01/04/12 - CMB 0064). Trend #39 - Furnish and install 2EA benches along 5th Street. Trend #54 - Additional waterproofing at FIDM and north end of Crate and Barrel. Trend #62 - Additional waterproofing at Macy's Men's wall . Trend 73 - Additional work to install water and electrical utilities for flower stand on Geary west of Stockton.		\$ 86	CMB-0080	Agree	10/24/12
1251-0077	Additional Work Related to Qwest, TCG and UCCO Infrastructure - Contingent CMod pig to include evidence from all utilities that cost are reimbursable to SFMTA		\$ 41	CMB-0081	Agree (Conditionally)	10/31/12
1251-0047, 0058, 0076, and 0078	Muni Vault 900A, Additional SL Work, Additional OCS Work		\$ 76	CMB-0082	Agree	10/31/12
1251-0049, 0053, 0059 and 0064	Contract Acceleration work and Additional Rebar work at 1 Stockton Street Trend #49 Additional cost related to installation of additional rebar at 1 Stockton Street Trend #53 Additional costs to accelerate Contract work related to AT&T and PG&E vaults Trend #59 Additional costs to accelerate Contract work as required to clear Barneys frontage		\$ 41	CMB-0083	Agree	11/07/12
1252	Retrieval Shaft Options (Board Action) for approval presented to the Directors by J.F.		-	CMB-0084	Agree	12/05/12
1252-COR26	MOS - Asbestos Pipe at south headwall - Not To Exceed \$30K		\$ 30	CMB-0085	Agree	01/09/13
1252-COR02	Pre-excavation to remove concrete encased sewer line. \$13K increase of original \$45K for a total of \$58K Not To Exceed		\$ 58	CMB-0086	Agree	12/19/12
1252-COR15	Additional work to restrain the AWSS line - Not To Exceed \$96K		\$ 96	CMB-0087	Agree	12/19/12
1252-COR06	PG&E live electrical delays - Not To Exceed \$7,600		\$ 8	CMB-0088	Agree	01/09/13
1252-COR27	MOS Oil Filled Pipe at south headwall - Not To Exceed \$8,600		\$ 9	CMB-0089	Agree	01/09/13
1252-COR22	MOS Asbestos Pipe at north headwall - Not To Exceed \$6K		\$ 6	CMB-0090	Agree	01/09/13
1252-COR01	AWSS Conflict with Low Pressure Water - Not To Exceed \$16,900		\$ 17	CMB-0091	Agree	01/16/13
1252-COR03	AT&T Vault Conflict -4th & Harrison - Not To Exceed \$21,089		\$ 21	CMB-0092	Agree	01/16/13
1252-COR07	Oil Filled pipe @ Launch Box - Not To Exceed \$10K		\$ 10	CMB-0093	Agree	01/16/13
1252-COR10	MOS - Demo Pea duct bank / SF City 911 fiber optic line - Not To Exceed \$4,915		\$ 5	CMB-0094	Agree	01/16/13
1252-COR11	MOS - Traffic Signal line re-route south headwall - Not To Exceed \$37,500		\$ 38	CMB-0095	Agree	01/16/13
1252-COR12	MOS - Archaeological Standby North Headwall - Not To Exceed \$16,892		\$ 17	CMB-0096	Agree	01/16/13
1252-COR29	MOS - Todco scaffolding reimbursement - Not To Exceed \$1,717		\$ 2	CMB-0097	Agree	01/16/13

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1252-COR41	LB Impacts due to live PG&E electrical lines (Flagging) Not To Exceed \$1,245		\$ 1	CMB-0098	Agree	01/16/13
1252-PCC01	Revisions to Moscone North Headwall Elevation (Top) <i>Not To Exceed \$20,500</i>		\$ 21	CMB-0099	Agree	01/16/13
1252 PCC09	UMS Headwall - Unknown Buried Pipe - <i>Not To Exceed \$75K</i>		\$ 75	CMB-0100	Agree	01/16/13
1252-COR.38	Manhole in West side Guidewalls Footprint - <i>Not To Exceed \$4,052.17</i>		\$ 4	CMB-0101	Agree	01/23/13
1252-COR39	MOS - 16" Steel Pipe Removal at North east Headwall - <i>Not To Exceed \$2,951.99</i>		\$ 2	CMB-0102	Agree	01/23/13
1252-COR46	UMS - Unmarked Steel Pipes (6", 12" and 14") & Duct Bank - <i>Not To Exceed \$7,461.14</i>		\$ 7	CMB-0103	Agree	01/23/13
1252-COR47	Retrieval Shaft - Unmarked 10" Steel Pipe / Duct Bank Removal - <i>NTE \$2,201.54</i>		\$ 2	CMB-0104	Agree	01/23/13
1252-PCC11	Cap and Removal of 48" Steel Pipe - Not To Exceed \$150,000		\$ 150	CMB-0105	Agree	01/23/13
1252-PCC07	BART Annex Wall - Not To Exceed \$15,380		\$ 15	CMB-0106	Agree	01/30/13
1251-05, 46, 51, 61, 63, 66, 69, 79, 81	CMod #24 PG&E: 1. Trend 05 – Addll wok to work around and shift existing PG&E conduits on Geary Blvd. at 2 locations 2. Trend 46 – Additional cost for enlarging PG&E Vault No. 584 on O'Farrell east of Stockton 3. Trend.51 – Intercept existing PG&E ductbank and terminate into Vault No. 5464 Market/Ellis 4. Trend 61 – Excavate for PG&E service cut-over at 177 Stillman 5. Trend 63 – Excavation and restoration for PG&E gas tie-in and kill holes (Pt.2) 6. Trend 66 – Intercept PG&E conduits at Vault No. 573 at Geary east of Stockton 7. Trend 69 – Removal of abandoned PG&E gas valve (8EA and installation of anodes 8. Trend 79 – Additional work related to the installation of PG&E Vault Nos. 467, 571, 573, 586 and 594 (including joint trench leading to these vaults). 9. Trend 81 – Use of regular concrete as opposed to cover PG&E electrical ductbanks.		\$ 333	CMB-0107	Agree	02/13/13
1252-COR031	Retrieval Shaft Unmarked 12" Steel Pipe - <i>Not To Exceed \$1,250</i>		\$ 1	CMB-0108	Agree	02/27/13
1252COR-044	MOS - 16" Steel pipe removal at headwall - <i>Not To Exceed \$1,800</i>		\$ 2	CMB-0109	Agree	02/27/13
1252-COR050	MOS - 12" Steel pipe removal at Union/Columbus Streets - <i>Not To Exceed \$2,600</i>		\$ 3	CMB-0110	Agree	02/27/13
1252-COR058	10" Steel pipe removal at Union and Columbus Streets - <i>Not To Exceed \$860.86</i>		\$ 1	CMB-0111	Agree	02/27/13
1252-COR066	MOS - 12" Steel pipe removal intersection of Union and Columbus - <i>Not To Exceed \$3,800</i>		\$ 4	CMB-0112	Agree	02/27/13
1252-PCC03	Modified Stockton St. Detour Signage Plan - <i>Not To Exceed \$6,152.60</i>		\$ 6	CMB-0113	Agree	02/27/13
1252-COR048	Removal of 3" x 5" brick sewer at UMS South Headwall - <i>Not To Exceed \$12,474.65</i>		\$ 12	CMB-0114	Agree	03/13/13
1252-COR070	LB Jet Grout Quantity Ovrerrun - Bid Item ES-3- <i>Not To Exceed \$599,900</i>		\$ 600	CMB-0115	Agree	04/03/13
1252-COR079	Compensation Grouting - Old Navy - <i>Not To Exceed \$70,000</i>		\$ 70	CMB-0116	Agree	04/26/13