ITEM 4A
Budget Forecast
(CO/COS Forecast FY 15/16)
East Span CO & COS Cash flow
Expenditures thru March 2015

Notes: 1) CO & COS Forecast are based on draft 1st. Quarter Data.
      2) We project that the Current Approved Budget of $130.5.5M will be exhausted by the end of March 2016.
<table>
<thead>
<tr>
<th></th>
<th>Dollars (K)</th>
<th>PY &amp; PYE</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>$18,800</td>
<td>74.4</td>
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<tr>
<td>A&amp;E</td>
<td>$19,200</td>
<td>69.3</td>
</tr>
<tr>
<td>Total</td>
<td>$38,000</td>
<td>143.7</td>
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</table>

State, 51%  
A&E, 49%

State, 54%  
A&E, 46%
FY 15-16 Planned dollars – by Contract

<table>
<thead>
<tr>
<th></th>
<th>State ($ in k)</th>
<th>A&amp;E ($ in k)</th>
<th>Total</th>
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<tbody>
<tr>
<td>YBITS2 0120T</td>
<td>$6,273</td>
<td>$4,975</td>
<td>$11,248</td>
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<tr>
<td>01352</td>
<td>$5,858</td>
<td>$4,565</td>
<td>$10,423</td>
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<tr>
<td>0120F</td>
<td>$897</td>
<td>$5,640</td>
<td>$6,537</td>
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<td>Marine Demo</td>
<td>$2,943</td>
<td>$2,780</td>
<td>$5,723</td>
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<tr>
<td>01353</td>
<td>$1,903</td>
<td>$800</td>
<td>$2,703</td>
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<tr>
<td>E3 Demo</td>
<td>$387</td>
<td>$240</td>
<td>$627</td>
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<td>01354</td>
<td>$1,903</td>
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<td>$742</td>
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<tr>
<td>OTD2 0120M</td>
<td>$602</td>
<td>$140</td>
<td>$742</td>
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<tr>
<td>Other</td>
<td></td>
<td></td>
<td>$38,000</td>
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</table>

“Other” includes: YBITS1, Dumbarton Public Access, YBI Landscape, West Approach.
FY 15-16 Planned PY/ PYES – by Contract

<table>
<thead>
<tr>
<th></th>
<th>State PY</th>
<th>A&amp;E PYE</th>
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<tr>
<td>YBITS2 0120T</td>
<td>24.7</td>
<td>18.0</td>
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<tr>
<td>504/288 Demo</td>
<td>23.1</td>
<td>16.5</td>
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<tr>
<td>SAS 0120F</td>
<td>3.5</td>
<td>20.4</td>
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<tr>
<td>Marine Demo</td>
<td>11.6</td>
<td>10.1</td>
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<tr>
<td>E3 Demo</td>
<td>7.5</td>
<td>2.9</td>
</tr>
<tr>
<td>OTD2 01354</td>
<td>1.5</td>
<td>0.9</td>
</tr>
<tr>
<td>Other 0120M</td>
<td>2.4</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>74.4</td>
<td>69.3</td>
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</table>

“Other” includes: YBITS1, Dumbarton Public Access, YBI Landscape, West Approach.
Marine Demo Contract -- FY 15/16 Workplan Detail

21.7 FTE
$ 5.8 M

A & E
10.1 PYE
$ 2.8M

Kiewit/Manson
2.8 PYE
$ 0.8M

ENV
5.8 PYE
$ 1.6M

Others*
1.5PYE
$ 0.4M

Field Const
3.8 PY
$ 1.0M

Design
5.0 PY
$ 1.3 M

State
11.6 PY
$ 3.0M

Other Div
2.8 PY
$ 0.7M

• Environmental Support
• Mitigation Support
• Tech support & Analysis for Dismantling activities
• Permit Applications & Amendments
• Hydroacoustic Monitoring
• Biological Monitoring

• Field Const. Support
• Management
• Scheduling
• Risk Management
• Design Support

• Submittals
• Remove Fndn.
• CCO Work

• Work with CMGC contractor to prepare design plans
• PM Coord. to split remaining contracts
• Prepare PCRs, cost estimates & specification
• PS&E packages for all remaining contracts
• Support construction during construction activities

* Others include Caltrop, EMI.
<table>
<thead>
<tr>
<th>Project</th>
<th>FY15/16* (1/15)</th>
<th>Proposed</th>
<th>Recommend</th>
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<td>YBITS2</td>
<td>24</td>
<td>14</td>
<td>43</td>
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<tr>
<td>OTD2</td>
<td>2</td>
<td>0</td>
<td>2</td>
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<tr>
<td>SAS</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>504/288</td>
<td>0</td>
<td>6</td>
<td>6</td>
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<tr>
<td>Marine Demo</td>
<td>22</td>
<td>2</td>
<td>22</td>
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<tr>
<td>YBITS1</td>
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<td>12</td>
<td>12</td>
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<td>E3/Misc</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>Rod Program</td>
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<td>Total</td>
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<td>52</td>
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<tr>
<td>Cost Estimate</td>
<td>144</td>
<td>7</td>
<td>151</td>
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ITEM 5a
YBITS 2 Contract Update
TBPOC Briefing
Yerba Buena Island Phase II
Contract Update

TOLL BRIDGE PROGRAM
OVERSIGHT COMMITTEE

TBPOC -5A
Yerba Buena Island Phase II

Cantilever Truss Dismantling
Yerba Buena Island Phase II

East Anchor Arm Dismantling
Yerba Buena Island Phase II

Pier E1
Yerba Buena Island Phase II

EB On-Ramp / Bike Path
Yerba Buena Island Phase II

YBI EB On-Ramp Structure
Yerba Buena Island Phase II

Abutment W11
Yerba Buena Island Phase II

United States Coast Guard Base

Embankment Confinement System (ECS)
Questions
ITEM 5b

Pier E3 Demo Contract Update
TBPOC Briefing
E3 Foundation Removal
Contract Update

TOLL BRIDGE PROGRAM
OVERSIGHT COMMITTEE

TBPOC -5B
E3 Foundation Removal
Questions
ITEM 5c

504/288 Demolition Update
TBPOC Briefing
504/288 Spans - Demolition Contract Update
504/ 288 Spans - Demolition
Contract Update

• Contract Approved on April 8, 2015

• Bid Items $69,470,000
• SFM, SW, Contingency $11,893,000
• Total Authorization $81,363,000

• Risk above 10% contingency $30,000,000
504/288 Spans - Demolition
Contract Update

Phase 1
Phase 2
Phase 3
Phase 4
Phase 5
Phase 6
Phase 7

BRIDGE REMOVAL SEQUENCE

PHASE ONE REMOVAL SEQUENCE

PART ELEVATION

504 FT AND 288 FT SPANS DEMOLITION
PHASE ONE BRIDGE REMOVAL PLAN
GENERAL INFORMATION NO. 5

NOTES

1. ALL OPEN SPANS REMOVED.
2. ALL OPEN SPANS REMOVED AND 288 SPANS REMOVED.
3. REMOVAL OF BRIDGE SPANS TO BE CONSIDERED.
4. ALL OPEN SPANS REMOVED AND 288 SPANS REMOVED.
5. REMOVAL OF BRIDGE SPANS TO BE CONSIDERED.
6. ALL OPEN SPANS REMOVED AND 288 SPANS REMOVED.

3/1/2016
30/09/2016
10
• Current operations:
  1. Phase One of Seven started on 6/9/2015
     a. Upper deck marker button removal began
     b. Mobilizing equipment for upper deck asphalt grinding
  2. Coordination with Museum for salvage material
     a. Fact sheet created for artist outreach
     b. Material should become available Aug, 2016

• Active submittal work prior to start of work in June 2015
  1. Contract submittals for Phase One adequate to begin.
  2. SWPPP (revision required before Phase Two start)
  3. USCG (required before Phase Two start)
  4. Demolition work plan (rev. required before Phase Two start)
  5. Material handling plan (rev. required before Phase Two start)
504/288 Spans - Demolition
Contract Update
Option B: Entire Truss Lowered By Strand Lifters

Strand lifter carrier structure B

End posts, upper deck, end-floor beams, and end stringers removed at each end

Cut and remove after lifters are connected

55-strand strand lifters
Total — 2x2

Strand lifter carrier structure A

Approximate equipment weights:
Carrier Structure A = 280 tons
Carrier Structure B = 160 tons

504' Span Removal Using Strand Lifters
Lowered weight = 4100 kips, approx.

A:
- Concrete in upper and lower deck removed
- Utilities removed
- Upper deck joists and stringers removed. Floor beams remain.
- Lower deck 50% of stringers removed. Bottom bracing and floor beams remain.
Option B: Entire Truss Lowered By Strand Lifters

C: Lower truss to barge and support as shown. Transport to dismantling location at dockside.
Method 5: Entire Truss Floated Out for Demolition at High Level at Dockside

Upper and lower deck joists, stringers, and concrete already removed. Floor beams and bracing remain.

- Use ballasting and rising tide to engage and lift span
- No retrofit of the spans is anticipated
- Dismantling of steel work takes place at dockside using large crane on dock

Floating Out 288' Spans for Subsequent Demolition at Dockside (Highest span shown)
Carried weight = 2000 kips, approx.
Questions
ITEM 5d1

SAS Project Update
TBPOC Briefing
SAS
Contract Update

Toll Bridge Program Oversight Committee

CALTRANS, BAY AREA TOLL AUTHORITY, CALIFORNIA TRANSPORTATION COMMISSION
SAS T1 Tower
Contractor has demobilized barges & equipment
SAS
Contract Update

Exterior paint repair punchlist work
SAS
Contract Update

Interior paint repair punchlist work
Contractor mostly de-mobilized from Pier 7
Questions
ITEM 5d2

SAS Tower Anchor Rod Investigation Update
San Francisco-Oakland Bay Bridge
Self Anchored Suspension Span
Tower Seismic Anchor Rod Status Update: June 23, 2015
TBPOC Assignments

- SAS T1 Seismic Anchor Rod Expert Group ($550,000)
  - Group Established
  - Successful First Meeting and Schedule Developed

- Water Chemistry and Water Level Monitoring ($440,000)
  - Assignment Complete

- Initial Rod Testing ($1,000,000)
  - Continue Progress on variety of tests (near $750,000 expended)

- Rod 3 (155-1-1) Failure Analysis ($200,000)
  - Rod Arrived at Laboratory
  - Stripped Threads and Fractured Surface through first reviews

- Lift-off and Proof Load Testing
  - Remove/Extract Rod 3 (155-1-1) and Rod 4 (162-2-12)
    (CO NTE $1,000,000)
SAS T1 Seismic Anchor Rod Expert Group

- Alan Pense, Ph.D., M.NAE
- Louis Raymond, Ph.D., P.E.
- Jeffrey A. Gorman, Ph.D., P.E.
- John Kulicki, Ph.D., P.E., M.NAE
- Robert H. Heidersbach, Ph.D., P.E.
- John Fisher, Ph.D., P.E.
- Frieder Seible, Ph.D., P.E.
- Herbert E. Townsend, Ph.D., P.E.
- Karl H. Frank, Ph.D., P.E.
- Robert Bittner, P.E.
- Sheldon W. Dean Jr., Sc.D., P.E.
- Thomas J. Langill, Ph.D.
- Douglas E. Williams, P.E.
- Greg Kolle et al., P.E., FHWA
- Brian Kozy, Ph.D., P.E., FHWA
SAS T1 Seismic Anchor Rod Expert Group Schedule

June
- 6/19: Mission Statement & Status Update
- 6/19: Comments
- 6/26: Team Comments Due
- 7/3: 2nd Teleconf. Meeting
- 7/10: Incorporation of Comments

July
- 7/3: Incorporation of Comments
- 7/10: 2nd Teleconf. Meeting
- 7/17: 3 Days Workshop
- 7/17: Produce Draft Scope of Tests and Analysis
- 7/31: Verification on Workshop Comments & Recommendations

August
- 7/31: Scope, Schedule & Cost for Sep. TBPOC Approval
<table>
<thead>
<tr>
<th>No.</th>
<th>Task Name</th>
<th>Initial Observation</th>
<th>Test Photos</th>
<th>Test Details</th>
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<tr>
<td>1</td>
<td>Test 1</td>
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<td></td>
<td></td>
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<tr>
<td>2</td>
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<td>3</td>
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<td>9</td>
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<td>10</td>
<td>Test 10</td>
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</table>

*Note: Initial Observation, Test Photos, and Test Details are placeholders.*
# Test Plan Continued

## Tower Seismic Anchor Rod Supplemental Testing Program Summary Sheet

**Tower Seismic Anchor Rod Supplemental Test Plan (In-Progress - Updated as of: 06/15/2015)**

<table>
<thead>
<tr>
<th>Task ID</th>
<th>Test Name</th>
<th>Test Purpose</th>
<th>Test Pathology</th>
<th>Test Time Required</th>
<th>Apprx. Testing Start Date</th>
<th>Ut Test Completion Date</th>
<th>Overall Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-1</td>
<td>Pull Test 1</td>
<td>Test anchoring and load capacity performance by TSS Ahern Team</td>
<td>100%</td>
<td>6/03/2015</td>
<td>6/20/2015</td>
<td></td>
<td></td>
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<tr>
<td>1SA</td>
<td>Additional Testing of Test 1 (200% - 300%)</td>
<td>Additional testing as recommended by TSS Ahern Team</td>
<td>26%</td>
<td>7/15/15</td>
<td>7/15/15</td>
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<tr>
<td>1MB</td>
<td>Pull Test 2</td>
<td>Test anchoring and load capacity performance by TSS Ahern Team</td>
<td>100%</td>
<td>6/03/2015</td>
<td>6/20/2015</td>
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<tr>
<td>1A8</td>
<td>Pull Test 3</td>
<td>Test anchoring and load capacity performance by TSS Ahern Team</td>
<td>100%</td>
<td>6/03/2015</td>
<td>6/20/2015</td>
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<td></td>
</tr>
</tbody>
</table>

**Notes:**
- All tests to be performed by TSS Ahern.
- Test data will be reviewed and analyzed by TSS Ahern for feedback.

<table>
<thead>
<tr>
<th>Task ID</th>
<th>Test Name</th>
<th>Test Purpose</th>
<th>Test Pathology</th>
<th>Test Time Required</th>
<th>Apprx. Testing Start Date</th>
<th>Ut Test Completion Date</th>
<th>Overall Completion</th>
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<tbody>
<tr>
<td>T-1A</td>
<td>UTS Testing (w/ Inhibitor)</td>
<td>UTS Testing (w/ Inhibitor)</td>
<td></td>
<td>100%</td>
<td>6/03/2015</td>
<td>6/20/2015</td>
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<tr>
<td>T-1B</td>
<td>Impact Testing (w/ Inhibitor)</td>
<td>Impact Testing (w/ Inhibitor)</td>
<td></td>
<td>100%</td>
<td>6/03/2015</td>
<td>6/20/2015</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
- All tests to be performed by TSS Ahern.
- Test data will be reviewed and analyzed by TSS Ahern for feedback.

---

**Additional Information:**
- Testing to be performed by TSS Ahern (dates not finalized).
- Test data will be reviewed and analyzed by TSS Ahern for feedback.

---

**Table:**
- Test Plan Summary Report
- Test Plan for Tower Seismic Anchor Rod Supplemental Testing Program
- Test Plan Update - 06/15/2015

---

**Figure:**
- Test Plan Flowchart
- Test Plan Summary Report
- Test Plan for Tower Seismic Anchor Rod Supplemental Testing Program
- Test Plan Update - 06/15/2015
Water Level Monitoring

Water Level Change
(1.5 Months, 4/27 - 6/16/15)

- 76% of Total Rods: 263 rods
- 24% of Total Rods: 58 rods (2-6 inches), 35 rods (7-12 inches), 68 rods (>12 inches)

*Approximately 10 of these rods may have been affected from the water jetting operation for Rod 3 and 4 removal.
# May 2015 Water Test Results

## Average Results from May 2015 Sampling

<table>
<thead>
<tr>
<th>Location</th>
<th>Cl⁻ (mg/L)</th>
<th>Br⁻ (mg/L)</th>
<th>Cl⁻/Br⁻</th>
</tr>
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<tbody>
<tr>
<td>East Exterior</td>
<td>778</td>
<td>2.9</td>
<td>266</td>
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<tr>
<td>North Exterior</td>
<td>no test results</td>
<td></td>
<td></td>
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<tr>
<td>South Exterior</td>
<td>4,120</td>
<td>14.5</td>
<td>284</td>
</tr>
<tr>
<td>West Exterior</td>
<td>2,703</td>
<td>10.2</td>
<td>265</td>
</tr>
<tr>
<td>East Shaft</td>
<td>no test results</td>
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<td></td>
</tr>
<tr>
<td>North Shaft</td>
<td>7,250</td>
<td>25.8</td>
<td>282</td>
</tr>
<tr>
<td>South Shaft</td>
<td>7,465</td>
<td>27.9</td>
<td>266</td>
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<tr>
<td>West Shaft</td>
<td>6,510</td>
<td>27.8</td>
<td>241</td>
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<tr>
<td>NE Cell #1</td>
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<td></td>
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<tr>
<td>NE Cell #2</td>
<td>no test results</td>
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<tr>
<td>SW Cell #1</td>
<td>469</td>
<td>2.51</td>
<td>187</td>
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<td>SW Cell #2</td>
<td>no test results</td>
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<tr>
<td>Bay Water</td>
<td>17,590</td>
<td>64.0</td>
<td>276</td>
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</table>

Blue Highlight = Within 10% of Bay Water

- **87 Different Locations Sampled**
- **19 Locations Tested**
- **Conclusion**
  - Cl⁻/Br⁻ (Chloride to Bromide) ratios indicate the presence of bay water
Extracted Rod Locations

- Rod 1 (150-1-2)
- Rod 2 (136-2-3)
- Rod 3 (155-1-1)
- Rod 4 (162-2-12)
**Rod 1 (150-1-2)**

- Extracted in May 2013
- Portions used for Test III and IV of A354BD Program
- Stripped threads, no fracture

<table>
<thead>
<tr>
<th>Tests Performed</th>
<th>Results/Conclusions</th>
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<tbody>
<tr>
<td>Microscopic Examination for Cracks</td>
<td>Some micro-cracks were observed</td>
</tr>
<tr>
<td>Diameter Measurements</td>
<td>Undersized in some locations</td>
</tr>
<tr>
<td>Incremental Step Load Test</td>
<td>Awaiting approval to proceed</td>
</tr>
</tbody>
</table>

Extracted in May 2013
- Portions used for Test III and IV of A354BD Program
- Stripped threads, no fracture
Rod 2 (136-2-3)

- Extracted in December 2014
- Rod and threads intact (did not fail)

<table>
<thead>
<tr>
<th>Tests Performed</th>
<th>Rod and threads intact (did not fail)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wet Fluorescent MT</td>
<td>Tensile and Hardness Testing</td>
</tr>
<tr>
<td>Galvanizing Thickness</td>
<td>Charpy Impact Test</td>
</tr>
<tr>
<td>Microscopic Examination for Cracks</td>
<td>Diameter Measurements</td>
</tr>
<tr>
<td>Spectrochemical Analysis of Steel</td>
<td>Incremental Step Load Test (awaiting approval)</td>
</tr>
</tbody>
</table>
Micro-Crack Investigation

Rod 1 (150-1-2)
- Stripped prior to removal in 2013
- Fully Grouted

Above Top Nut
• No water
• Temporary loading

Below Top Nut
• No water
• Temporary loading

Above Bottom Nut
• Temporary loading

Below Bottom Nut
• No loading

Rod 2 (136-2-3)
- Extracted 2014
- Fully Ungrouted
- Standing Water

Above Top Nut
• No water
• Temporary loading

Below Top Nut
• No water
• Sustained loading

Above Bottom Nut
• Sustained loading

Below Bottom Nut
• No loading
• Additional testing in progress. (Prioritized behind Rod 3 analysis)

Areas Examined to Date
- Micro-cracks found
- No micro-cracks found

- Microscopic examination using optical microscope and SEM
- High magnification
- Detailed investigation ongoing

Galvanizing
12.34 µm
Steel Substrate
Rod 3 (155-1-1)

- Extracted in May 2015
- Stripped threads and fracture surface
- Initial SEM of fracture surface completed on 6/17/2015
Rod 3 (155-1-1) SEM Analysis

- Scanning Electron Microscope
  - Identify fracture mechanisms
- Observations
  - Brittle fracture
  - No evidence of pitting corrosion or cement paste on fracture surface
- Next Steps
  - Provide SEM data to SAS T1 Seismic Anchor Rod Expert Group for further analysis
Rod 4 (162-2-12)

- Extracted in June 2015
- Stripped threads, no fracture
- No tests have been performed on this rod
Remnant Pieces Testing

- 9 Rods Total
  - Six 3-inch rods
  - Three 4-inch rods
- Remnants from 2013 A354BD Test Program
  - 6 of 9 remnant tops examined for micro-cracks, some discovered
    - High magnification
    - SEM and Optical Microscope
- Diameter measurements, some undersized
Lift-off and Proof Load Testing
Initial Scope – test 3 rods – determined Rod #3 (155-1-1) needed to be extracted