

The Narragansett Bay Commission
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Vincent J. Meselella
Chairman

Raymond J. Marshall, P.E.
Executive Director



OFFICIAL MINUTES OF:

Meeting of:	CEO Committee Meeting
Date:	April 2, 2013
Time:	8:45 a.m.

MEMBERS PRESENT:

Michael Salvatore, Chairman
Robert Andrade
Jonathan Farnum
Vincent Meselella
Al Montanari
Angelo Rotella
Leo Thompson
Richard Worrell

MEMBERS ABSENT:

John Macqueen

STAFF AND GUESTS PRESENT:

Raymond J. Marshall, Executive Director
Joanne Maceroni, NBC
Joe Pratt, Louis Berger Group
Rich Bernier, NBC
Karen Musumeci, NBC
Jennifer Harrington, NBC
Mark Thomas, NBC
Karen Giebink, NBC
Phil Albert, NBC
John Zuba, NBC

Tom Brueckner, NBC
Deborah Samson, NBC
Laurie Horridge, NBC
Cecille Antonelli, NBC
Lori Vernon, NBC
Brenda Smith, NBC

1. Call to Order

Recognizing a quorum, CEO Chairman Salvatore called the April 2, 2013 Construction/Engineering/Operations (CEO) Committee Meeting to order at 9:02 a.m.

2. Approval of Minutes – January 29, 2013 CEO Committee

CEO Chairman Salvadore asked for a motion to approve the January 29, 2013 CEO Committee Meeting minutes as written.

Commissioner Farnum moved to approve the minutes of the January 29, 2013 CEO Committee. Commissioner Montanari seconded the motion. The vote taken by the CEO Committee was unanimous. The motion carries.

3. Items for Action

A. Review and Approval of Resolution 2013:06; Construction Contract 303.07C- Sewer Separation/Flow Modification OF-037 Recommendation for Award

Mr. Marshall stated that eight bids for construction Contract 303.07C – Sewer Separation/Flow Modification OF – 037 South were received by the Commission’s Procurement Section on February 20, 2013. The contractors and their bids are:

John Rocchio Corporation	\$7,766,822.00
Cardi Corporation	\$7,988,500.00
J. H. Lynch & Sons, Inc.	\$8,337,463.15
Parkside Utility Construction	\$8,423,850.00
D’ Ambra Construction Co.	\$8,483,422.00
C.B. Utility Company, Inc.	\$8,578,865.20
DiGregorio, Inc.	\$8,771,579.95
Manafort Bros., Inc.	\$9,602,200.00

This contract is the fourteenth contract to be bid under the DEM mandated Phase II CSO Program. It entails sewer separation east of North Main Street in Providence from Fourth Street to Colonial Rd. It is the installation of approximately 11,400 feet of new drain pipe, 73 drain manholes, 135 catch basins, 10,300 feet of water line relocation and street paving upon completion.

John Rocchio Corporation (JRC) submitted the low bid of \$7,766,822. This bid is 2.8% lower than the second low bid. JRC is presently working on Contracts 303.05C – OF 027, 306.00C – Floatable Controls OF 205, 219 and 220 and 304.55C – Improvements to Interceptors, FY12 and is performing satisfactory.

The Contractor must adhere to the Contract requirements for MBE/WBE compliance, including state approval of his MBE/WBE Plan.

As with all projects of this size and complexity there will be ancillary costs associated with the project including but not limited to: advertising, printing, police details, specialty engineering consultants (maximum contract ceiling of \$20,000), material/soil testing firm and staff time associated with contract inspection and administration.

Louis Berger Group (LBG) has evaluated the qualifications and the bid proposal of the low bidder and has checked references for the purpose of establishing the firm’s capability to successfully complete this construction project. LBG has recommended that the Commission award the Contract for the construction of Contract 303.07C - Sewer Separation/Flow Modification OF – 037 South to John Rocchio

Corporation of Smithfield, RI because LBG has determined that John Rocchio Corporation is the lowest, responsive, responsible bidder.

We respectfully request your approval of the attached Resolution 2013:06 Authority to Award Contract 303.07C - Sewer Separation/Flow Modification OF – 037 South to John Rocchio Corporation for a cost not to exceed \$7,766,822 subject to the approval of the Contractor's MBE/WBE plan and EEO requirements by the Rhode Island Department of Administration.

NBC Chairman Mesolella made a motion to approve Resolution 2013:06; Construction Contract 303.07C-Sewer Separation/Flow Modification OF-037 South Recommendation for Award. Commissioner Montanari seconded the motion and the vote taken by the CEO Committee was unanimous. The motion carries.

B. Review and Approval of Resolution 2013:07; Contract 303.03C-WCSOI Main Recommendation to Increase the Limit of Change Orders

Mr. Marshall advised that this particular Resolution and the problems associated with it are directly linked to and connected to the next Resolution 2013:08. Therefore for discussion purposes I would like to present these two together, but we will ask that you vote separately on each individual Resolution. Resolution 2013:07 and 2013:08 are both associated with the WCSOI Main project. Barletta/Shank are the contractors in the joint venture with a \$60 million dollar bid. Out in the field we are experiencing problems with the soils, the subsurface conditions. It's a fairly complicated situation and while I tried to describe it for you in the two memos associated with the Resolutions it just didn't seem to do the issue justice and I don't think it was clear enough for the Committee members to have a level of comfort to vote on these two matters. So, we have a presentation for you this morning explaining the situation.

On Resolution 2013:07 we are asking for a specific amount of money because we have been able to identify the problems come up with solutions and actually implement them and, we were able to do that within the 5 percent authorization that the Chairman and the Executive Director have.

The second change order Resolution 2013:08 asks for a more open ended approach to approving the change orders which can discuss in great detail but before we do that I have asked Richard Bernier, NBC's Director of Construction Services and Joseph Pratt of the Louis Berger Group to prepare a presentation for you today to better describe in a very graphic way what we are experiencing in the field and I believe it will be much more effective in helping you understand the problem.

Mr. Pratt and Mr. Bernier presented a Power Point presentation with graphics that outlined the below memorandums for Resolution 2013:07 and 2013:08 and are part of the record.

Mr. Marshall referred then referred to the memo provided and described the issue as follows:

Contract 303.03C-Woonasquatucket CSO Interceptor Main (WCSOI) was awarded and a Notice to Proceed issued on March 7, 2012 to Barletta Heavy/Shank/Balfour Beatty (BH/S/BB) at a cost of \$59,995,000 to install approximately 12,500 feet of pipe utilizing micro-tunneling, 1,800 feet of 8 foot diameter tunnel adit approximately 220 feet below ground and ventilation shafts, a gate and screening structure, 5 Diversion Structures, 4 Junction Structures and 33 manholes. This project starts at the Johnston/Providence city line specifically at Sheridan Street and ends at the Farmer's Market on Promenade Street in Providence. The tunnel adit goes from the Farmer's Market to the main tunnel terminal shaft at Calverly Street.

To perform the micro-tunneling operation, launching and receiving shafts are constructed along the route and the pipe is micro-tunneled from shaft to shaft. These shafts are installed using steel sheets for earth support and are generally 25 to 35 feet deep. When the micro-tunneling subcontractor was mobilizing his

equipment into a launching shaft the concrete and mud slab constructed in the bottom of the shaft began to settle. The equipment was removed from the shaft and engineering investigations followed. This circumstance caused the micro-tunnel subcontractor to incur a delay.

The soil along the Woonasquatucket CSO Interceptor alignment has a substantial amount of Glacio lacustrine soils deposited in layers ranging from coarse sands and silts to fine silts and sands. These are often referred to as Providence Varved Silts. (Varved means layers of similar soils deposited at different time frames.) When located beneath the water table as these are, certain layers weaken when subjected to stress and/or vibration and in extreme cases liquefy and completely lose strength. In the JC-046 micro-tunneling shaft on WCSOI the weaker soils compressed irregularly across the shaft, causing the Micro-Tunneling Boring Machine (MTBM) to lose alignment. Similar compressing of soils was encountered during MTBM setup at MH-5.

While the design phase boring logs identified the silty sand layer it is difficult to accurately predict whether those layers will fail or how they will fail. In addition, borings are usually located close to a shaft location, but not always exactly on the shaft location. Offset distances range from 5 feet to 25 feet and differences in subsurface conditions can occur across those short distances.

Shafts are designated as launching or retrieval locations based on function. The base of the launching shafts are more critical than the base of the retrieval shaft because of the forces created by the equipment. A second area of concern is the exit and entry portals for the MTBM. If soils are suspect both the shaft base and portals may need to be addressed in terms of soil stability.

There are generally accepted solutions to address the issue of Providence Varved silts. One of these methods had to be chosen for the construction activity to continue so the contract can be successfully completed.

- A. The first method is to depressurize the base of the shaft by reducing the water content in selected layers of the soil. This is done using draw down wells and pumps. It is not required to remove all the water, but due to the low permeability of many varved silts this can be a time consuming process and may require the use of a jet eductor pumping systems. It can also be difficult to gage if the soil is sufficiently stable.
- B. The second method is to use a technique called jet grouting. In this method, grout, a cement/water/selected chemicals mix is injected (jetted) into the ground creating a solid plug. This approach is a more costly method, but can be designed to insure the desired results.

We have chosen to implement the jet grouting method because it provides the greatest chance of success and it was questionable whether a dewatering system could fit inside the shaft. On the WCSOI we have 11 launching shafts and 13 retrieval shafts. We have approved jet grouting modifications at 7 shafts totaling approximately \$2,056,762 and are reviewing a delay claim by the micro-tunneling subcontractor in the amount of \$369,792.

Mr. Marshall advised that per the NBC's approved COR procedures the Chairman and Executive Director are authorized to approve CORs up to an aggregate amount of 5% of the Contract amount or \$2,999,750 for this contract. Resolution 2013:07 will increase the authorization limit by \$2,426,554.

Based upon the above, it is recommended that the Chairman and Executive Director be authorized to increase the authorization limit for Contract 303.03C-WCSOI Main for an aggregate amount not to exceed the 5% standard authorized limit plus \$2,426,554 and recommend approval of Resolution 2013:07.

Commissioner Montanari made a motion to approve Resolution 2013:07; Contract 303.03C-WCSOI Main Recommendation to Increase the Limit of Change Orders. Commissioners Andrade seconded the motion and the vote taken by the CEO Committee was unanimous. The motion carries.

A. Review and Approval of Resolution 2013:08; Contract 303.03C-WCSOI Main Recommendation to Vest Future Change Order Approvals With the Executive Committee for Contract 303.03C

Contract 303.03C-WCSOI Main was awarded and a Notice to Proceed issued on March 7, 2012 to Barletta Heavy/Shank/Balfour Beatty (BS/S/BB) at a cost of \$59,995,000 to install approximately 12,500 feet of pipe utilizing micro-tunneling, 1,800 feet of 8 foot diameter tunnel adit approximately 220 feet below ground, drop and ventilation shafts, a gate and screening structure, 5 Diversion Structures, 4 Junction Structures and 22 manholes. This project starts at the Johnston/Providence city line specifically at Sheridan Street and ends at the Farmer's Market on Promenade Street in Providence. The tunnel adit goes from the Farmer's Market to the main spine tunnel termination shaft at Calverly Street. To date BH/S/BB has experienced two major construction issues which are outlined below.

1. A soils issue which is addressed under Resolution 2013:07 in the amount of \$2,426,554. In addition to the grouting of the shafts that already have been completed, there are potentially 4 to 6 other shafts which may need grouting for an additional estimated cost of \$1,600,000. These shafts are currently being evaluated on a case by case basis.
2. We have been notified by the Ground Freezing subcontractor that they plan to submit a claim based on differing site condition because of delays in reaching closure with the freeze wall at the drop shaft located in the Farmer's Market site. The drop shaft will convey the combined sewage flow into the adit leading to the main spine tunnel.

The contract requires the contractor to select and design at his option the support of excavation in constructing a deep shaft. The two most popular options are slurry wall or ground freezing. For a slurry wall you excavate the soil replacing it with a slurry (cement/water) and insert reinforcing steel to create a wall. This method is extremely difficult to insure a sound structure at depths to rock of more than 150 feet. The depth to rock at the Farmer's Market site is 175 feet. In ground freezing, a refrigerated brine solution is circulated through a series of freeze pipes that are placed around the circumference of the shaft extending into bedrock. The circulated brine freezes the Ground water and the soil providing the temporary ground support needed for shaft excavation. Ground freezing is usually more expensive, but can be used at great depth and can be extended into rock. A major concern in any freeze wall construction is ground water flow rates disrupting the freeze process resulting in a failure to close the "last" holes in the wall.

The freeze wall contractor found anomalies indicating high ground water flow rates, but the freeze process appeared to be proceeding normally. In early December they indicated freeze closure in 7-10 days, but that did not happen. Since then they have been grouting the suspect areas and in late February it appears they were at closure. We have advised the contractor they need to provide data to document the site conditions are different than expected and that this caused delays in the freeze wall closure as opposed to an insufficient design on their part. As a precaution we are estimating the potential for a claim of up to \$1,500,000 and the potential for delay in project completion.

In addition to the above noted items BH/S/BB has the following work to complete: 8 launching/retrieval shafts, 10,000 feet of micro-tunneling, 3 river crossings, the drop and vent shafts, the 1,800 foot adit which is blasted through rock, the tie in of the adit to the main tunnel, a gate and screening structure and restoration of the project.

This complex work is very dynamic and constantly evolving with the later tasks dependent on previous tasks. Problems that arise now and are not expeditiously addressed may cause the entire project to finish late, which may ultimately result in delay claims. Per the NBC approved Change Order Requests (COR) procedures the Chairman and the Executive Director are authorized to approve COR's up to an aggregate amount of 5% of the Contract amount. To exceed the 5% amount CEO and Board approval is necessary. Five percent (5%) of the contract amount equals \$2,999,750 in this situation. We have approved \$2,904,119 in COR's to date, not including the prior action item 2013:07 in the amount of \$2,426,554.

Due to potential time sensitive nature of the work and associated cost impacts of the aforementioned issues we recommend that the authority to increase the COR limit be vested with the Executive Committee (i.e. – Chairman, Vice Chairman and Treasurer), in lieu of the full Board, for this contract only. The Executive Committee would meet as necessary to evaluate all change orders as necessary to keep the project moving forward. A report to the CEO Committee and full Board at each scheduled Board meeting will be made. The existing internal review process of Gilbane, Louis Berger Group and NBC staff would continue for the Change Order Requests (CORs). The status of all CORs is currently contained as an attachment to every Executive Director's Monthly Report. This process will continue and CORs for this contract will be reported on separately under the Executive Committee subcommittee report.

Based upon the above it is recommended that the authority to increase the COR limit be vested with the Executive Committee (i.e. – Chairman, Vice Chairman and Treasurer), in lieu of the Construction/Engineering/Operations Committee and the full Board, for Contract 303.03C only and recommend approval of Resolution 2013:08.

Commissioner Montanari made a motion to approve Resolution 2013:08 Contract 303.03C-WCSOI Main Recommendation to Vest Future Change Order Approvals With the Executive Committee for Contract 303.03C. Commissioner Andrade seconded the motion and the vote taken by the CEO Committee was unanimous. The motion carries.

A. Review and Approval of Resolution 2013:09; Verizon Construction Costs for Contract 125.00C-Utility Reliability Enhancement for the Field's Point Campus

Mr. Marshall stated that this project will eliminate the existing utility poles along Service Road. Under Resolutions 2012:06 and 2012:33 the Board of Commissioners approved \$22,500 and \$168,360 for National Grid to perform their work in relation to this contract. Verizon also must relocate their lines. We have received an estimate of \$38,727.82 from Verizon.

As with all projects of this size and complexity there will be ancillary costs associated with the project including but not limited to: advertising, printing, police details, specialty engineering consultants (maximum contract ceiling of \$20,000), material/soil testing firm and staff time associated with contract inspection and administration.

We respectfully request your approval of the Resolution 2013:09 for a cost not to exceed \$48,400 (\$38,727.82 plus 25% contingency to cover any overruns) for Verizon to relocate their lines under Contract 125.00C – Utility Reliability Enhancement for the Fields Point Campus.

Commissioner Worrell made a motion to approve Resolution 2013:09; Verizon Construction Costs for Contract 125.00C-Utility Reliability Enhancement for the Fields Point Campus. Commissioners Farnum and Thompson seconded the motion and the vote taken by the CEO Committee was unanimous. The motion carries.

B. Review and Approval of Resolution 2013:10; National Grid Gas Construction Costs for Contract 125.00C-Utility Reliability Enhancement for the Fields Point Campus

Mr. Marshall stated that this project will eliminate the existing utility poles along Service Road. Under Resolutions 2012:06 and 2012:33 the Board of Commissioners approved \$22,500 and \$168,360 for National Grid Electric to perform their work in relation to this contract. Under Resolution 2013:09 we asked for approval for Verizon to relocate their lines for an estimated cost of \$48,400. Resolution 2013:10 is for National Grid Gas to relocate a section of gas main in Service Road for an estimated cost of \$70,500. This work is necessary because there is a conflict with the existing gas main and the proposed electrical duct banks and water line extension. Normally we would include this work under the construction contract however due to the fact that National Grid gas is extremely busy we need to issue a Purchase Order so that we can be placed in their schedule so as not to delay the project.

As with all projects of this size and complexity there will be ancillary costs associated with the project including but not limited to: advertising, printing, police details, specialty engineering consultants (maximum contract ceiling of \$20,000), material/soil testing firm and staff time associated with contract inspection and administration.

We respectfully request your approval of the attached Resolution 2013:10 for a cost not to exceed \$70,500 to National Grid Gas for the relocation of their lines under Contract 125.00C – Utility Reliability Enhancement for the Fields Point Campus.

Commissioner Andrade made a motion to approve Resolution 2013:10; National Grid Gas Construction Costs for Contract 125.00C-Utility Reliability Enhancement for the Fields Point Campus. Commissioners Farnum and Montanari seconded the motion and the vote taken by the CEO Committee was unanimous. The motion carries.

4. Other Business

None.

5. Adjournment

A motion to adjourn was made by NBC Chairman Mesolella seconded by Commissioner Farnum and the CEO Committee meeting adjourned at 10:02 a.m.

Respectfully submitted,



Raymond J. Marshall, P.E.
Executive Director/Secretary

