

September 12th, 2024

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Re: DECC Seawall (Duluth Seawall, Baywalk & Harbor Dive) – Change Order Request (Rev #1)

Mr. Birkeland:

The following document has been prepared at the request of the City of Duluth (City) for the DECC Seawall Project. AMI Consulting Engineers, PA (AMI) is currently under contract with the City to provide construction management services during the construction of a new sheet pile dock wall & rehabilitation of the pedestrian area along Harbor Drive behind the Duluth Entertainment Convention Center (DECC) in Duluth, MN.

AMI's contract for the construction management services began in October 2023 and since that time AMI and their subconsultant (Aryes & Associates) have completed several items, at the request of the City, which were outside of the original scope of work. The additional items have exhausted AMI's budget to complete the project and is requesting a change order to provide construction management services through the remaining duration of the project. The items which were not part of AMI's scope of work include the following:

- Sheet Pile Tolerances – At the beginning of dock wall installation, a pair of sheet pile became de-clutched from each other. AMI coordinated with the steel supplier to obtain fabrication tolerances of the sheet pile. AMI then measured each sheet pile pair that was received from the steel supplier to determine if it fell within the stated fabrication tolerances. Several of the sheets were fabricated outside of the tolerance provided by the steel supplier, so each sheet had to be sorted based on which were within or not within tolerances. In addition to the additional inspections, AMI attended several meetings with the Steel Fabricator & the attorneys for the City of Duluth.

The steel supplier also agreed to replace several of the sheet piles which were well outside of the fabrication tolerances. These additional sheets were shipped from the steel fabricator to a coating contractor so a two-part epoxy coating could be applied to the sheet pile. AMI utilized a third-party coating inspector to complete the necessary inspections on these additional sheets. The third-party coating inspector was already under contract to perform coating inspections, but the duration of the inspections was increased due to the replacement sheet pile.

Several sheet piles, which were fabricated out of tolerance, were already installed for the new dock wall. Due to concerns on interlock strength during installation, AMI performed additional dive inspections to verify that the interlocks did not declutch during installation.

- *Design for Unknown Underground Obstructions* – Various items had to be redesigned due to unforeseen obstructions encountered during pile driving operations.
 - Bollard Foundations 16 and 17: Bollard Foundations 16 and 17 had to be redesigned since the existing crib wall was larger than what was documented in historical documents. The location and size of the crib wall could not be verified prior to construction without excessive demolition and excavation. Piling supports for bollard foundations 16 and 17 had to be adjusted to not interfere with the existing crib wall and the concrete foundations had to be redesigned to account for the shift in pile locations.
 - Refusal on Vertical H Pile: During pile driving operations behind the Great Lakes Aquarium (GLA) an obstruction was hit on the last two vertical H pile supports on the transfer beam and hit refusal. Corner bracing supports at the return wall was redesigned by AMI to account for the refusal on the last two vertical H pile supports.
 - Helical Refusal: During helical driving operations, helical #2 near station 2+36 hit refusal. AMI redesigned a solution to add an additional helical on either side of the obstruction to achieve the required tieback capacity.
 - GLA Piling: After demolition and excavations of the GLA retaining wall were completed, the utilities in the area were discovered to be in different locations than described in the as-built plans. AMI redesigned the piling and concrete footing reinforcement in the to account for the shift in the piling supports.
 - Transfer Beam Helical Obstructions: During installation of the helical anchor supports for the transfer beam behind the GLA, several obstructions were encountered and were determined to hit refusal. AMI performed several inspections and evaluated the site to determine a new layout for the tie-rods and designed a new tie-back system to utilize existing infrastructure behind the GLA.
 - Storm Wall Footing: During the installation of the storm wall, several obstructions were documented which were either not shown or were not adequately detailed on as-built drawings. AMI redesign to the footing to either step up over the obstruction or bridge over the top of the obstruction.

- *Redesign due to Contractor's Equipment Restrictions* – During pile driving operations, the Prime Contractor could not install the three H-pile supports for the bollard tieback clusters as specified in the project plans due to limitations on equipment availability. AMI redesigned the bollard clusters to accommodate the equipment the Contractor had onsite.

- Redesign due to Contractor's scheduling – The Contractor did not receive the helical anchors in adequate time to install them in the proper sequence. As a result, AMI redesigned the helical connection so it could be installed after the rest of the tie-back system was installed.
- Contaminated Soils – During the excavation of the site for the installation of utilities, contaminated soil was documented. The contaminated soils were documented in an area where a large outfall would be penetrating the new dock wall and invert of the new storm pipe would be below the waterline. As a result, the ground water in the vicinity of the contaminated soil also became contaminated. The contaminated water and soil required AMI to revise an old Response Action Plan (RAP) and perform additional coordination with the Minnesota Pollution Control Agency (MPCA) & Western Lake Superior Sanitary District (WLSSD) on the disposal of the contaminated soil & water. The documented contaminations onsite will also require AMI to develop Project Closeout reports with the MPCA at the completion of the project.
- Closure of Harbor Drive – During the preliminary design phase of the project, the City of Duluth was evaluating whether to close Harbor Drive to traffic. The City Mayor at the time decided to keep Harbor Drive open due to budget constraints. However, the City elected a new Mayor during construction who wanted to pursue the option to close Harbor Drive. AMI attended additional meetings with the City and provided input of future designs to close Harbor Drive in a future phase.
- DECC Loading Dock – During the design phase of the project, the DECC & City of Duluth agreed to install a temporary loading dock adjacent to the existing loading dock at the DECC. The temporary loading dock would allow the DECC to unload trucks perpendicular to their traditional operations. However, during the construction phase of the project, the DECC requested a more permanent loading dock be installed. AMI performed additional engineering and drafting to develop a preliminary plan for a permanent concrete loading dock. The plan for a permanent loading dock was abandoned since the entire site would be re-designed due to the closure of Harbor Drive during a future phase of the project.
- Construction Schedule – AMI originally budgeted for a total of (40) weeks of active construction management services. However, based on conversation with the Contractor, Construction will likely extend until June of 2025. Construction will likely cease at the site this winter and begin again in the Spring of 2025, but this is highly dependent on weather conditions. Excluding the winter and early spring months (January, February & March), AMI estimated that construction will extend an additional (30) weeks beyond the original estimate of (40) weeks. The extended construction schedule also affects AMI subconsultants, Ayres, who are providing construction management services for the electrical scope of work.

Throughout the course of the project, AMI has informed the City about the out-of-scope items and was asked to track them as the project progresses. Due to the items described above, AMI has exhausted its budget for Construction Management and will need additional funds if the City wishes to continue WITH AMI's current scope of work. AMI has also fully billed its current contract and is still providing construction management services, which has resulted in AMI being unable to bill for work completed.

Based on AMI's current scope of work, the following additional tasks remain and will need to be completed prior close out of the project. These additional tasks include the following:

- Full-Time Construction Management Services (2024) – AMI will continue to provide properly trained onsite personnel 100% of the time during the duration of 2024 construction season (Until December 31st, 2024). AMI will perform daily onsite inspections, attend, and run weekly construction meetings, and develop progress reports and meeting minutes after each construction meeting. AMI will also coordinate with other design consultants and function as the City of Duluth's onsite representative. Based on conversations with the Contactor, most of the heavy construction will be completed this year. As a result, AMI will scale back Construction Management Services for the 2025 construction season.
- Part-Time Construction Management Services (2025) – Based on conversations with the prime Contractor, construction is expected to be completed by June 30th, 2025. The construction activities which will be completed in 2025 include, but are not limited, to the following:
 - Concrete flatwork
 - Concrete Curb & Gutter
 - Sidewalks
 - Electrical amenities
 - Site Lighting
 - Site Plantings
 - Site Furnishing.

The items to be completed in 2025 can more than likely be properly managed without having an AMI representative onsite 100% of the time. The construction activities to be completed in 2025 are also design features that have been completed by design firms. So AMI's involvement in these construction items will be decreased. AMI will still perform daily onsite inspections, attend, and run weekly construction meetings, and develop progress reports and meeting minutes after each construction meeting. AMI will also coordinate with other design consultants and function as the City of Duluth's onsite representative. Since construction activities will likely cease onsite during the winter, AMI is proposing to provide Part-Time Construction Management Services from April 1st to June 30th, 2025.

- Dive Inspections – AMI plans to complete a total of three dive inspections on the newly installed dock wall. The Contractor has hired a subcontractor to install several structural elements below the waterline. AMI is proposing to one dive inspection to verify that these structural elements have been installed according to the project plans and specifications. AMI is proposing to perform a second dive inspection prior to substantial completion to verify that items identified in the initial dive inspection have been completed.

AMI is also proposing to complete a third and final dive inspection after dredging operations along the new dock wall have been completed. The City of Duluth is proposing to dredge the area in-front of the new dock wall to allow deeper draft cruise ships to berth at the wall. The dredging will be completed as part of a separate construction project. Due to the sheet pile fabrication tolerances issues, there are concerns that the some of the sheet pile became declutched during installation. AMI has already performed some dive inspections to verify the condition of the interlocks, but the dredging operations will expose additional sections of the sheet pile. AMI is proposing to perform a third dive inspection in the areas where dredging operations are to be completed to verify the condition of the sheet pile interlocks.

- Permitting – AMI acquired several permits through the US Army Corp of Engineers (USACE) & the Minnesota Department of Natural Resources (MnDNR) for the construction of the dock wall. AMI is also currently working with the MPCA on contaminated soil and water. Each of these permitting agencies requires additional documentation and/or close-out reports. AMI is proposing to complete these items on behalf of the City of Duluth.
- As-Built Drawings - The City of Duluth and some of the regulatory agencies require as-built drawings be developed and submitted at the completion of the projects. AMI has been collecting as-built conditions throughout the duration of the project and is proposing to incorporate these items into a final plan set. AMI is proposing to submit these as-built drawings to required entities on behalf of the City of Duluth.
- Electrical Subconsultant – AMI currently has Ayres under contract as a subconsultant for the electrical scope of work. Construction for the electrical scope of work has recently begun onsite and will likely continue until the end of construction. Since the construction schedule has been extended, Ayres will be required to perform site inspections this fall and next spring/summer.
- Customs Cameras – AMI is proposing to include Summit Fire Protection (Summit) on our current contract for the additional security cameras required by Customs and Border (CBP). Summit has already worked closely with the DECC & CBP on the new security system for CBP office in the DECC. Additional exterior security cameras, specifically installed for CBP, will be required on the new light along Harbor Dive. The cameras will be positioned so the entire cruise ship and the disembarkation and embarkment of passengers can be monitored. Summit has already completed the preliminary design of the exterior security system and is proposing to include the following scope of work:
 - Final Design
 - Construction Oversight
 - Project Coordination
 - Equipment
 - Field Commissioning and Labor

Below is a breakdown of what AMI is estimating would be required to close out the project.

ITEM	QUANTITY	UNIT	UNIT PRICE	COSTS
Work-in-Progress (Unbilled Work)	1	Each	\$ 70,400.00	\$ 70,400.00
100% CM Services - Weekly Costs & Expenses	18	Weeks	\$ 6,800.00	\$ 122,400.00
50% CM Services - Weekly Costs & Expenses	12	Weeks	\$ 3,600.00	\$ 43,200.00
Dive Inspections	3	Each	\$ 6,400.00	\$ 19,200.00
Permitting	1	Each	\$ 22,680.00	\$ 22,680.00
As-Built Drawings	1	Each	\$ 5,600.00	\$ 5,600.00
Sub-Consultant - Electrical	1	Each	\$ 37,000.00	\$ 37,000.00
Subconsultant - Summit	1	Each	\$ 50,000.00	\$ 50,000.00
			TOTAL	\$ 370,480.00

Please note that a significant portion of the fees presented above are based on the duration of construction activities onsite. AMI is proposing to complete the project on a Time & Material basis since the actual time to complete the project may be less than what the Contractor informed AMI.

Due to the out-of-scope items and the remaining tasks to be completed, AMI is requesting a change order of ***Three Hundred Seventy Thousand Four Hundred Eighty Dollars (\$370,480.00)*** to increase its current contract of ***\$1,090,440.25 to \$1,460,920.25.***

If you have any questions or comments, please contact me at (715) 718-2193 Ext. 17. We look forward to continuing working with the City of Duluth on this infrastructure improvement project.

Sincerely,



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 Marine Civil Engineering Manager
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