



## TECHNICAL PROPOSAL REPORT

<b>Agreement:</b> 121153	<b>Project Specific</b>	<b>Active</b>
<b>Name:</b> Replacement of Masontown Bridge over Monongahela River	<b>Selection Process:</b> Normal	<b>Initiating Org:</b> Engineering District 12-0

<b>Supplement:</b> 12	<b>Normal</b>	<b>Executed</b>
<b>Description:</b> add Services During Construction for the Masontown Bridge project		

<b>Part 3 - Services During Construction</b>		
<b>Description</b>		
Services During Construction for S.R. 0021, Section A10		
<b>Consultant Hierarchy</b>		
<b>Business Partner</b>	<b>DBE Type</b>	<b>Supervising BP</b>
SAI Consulting Engineers, Inc.	No	
<b>Attachments</b>		
<i>No records found.</i>		

<b>Part 4 - Services During Construction</b>		
<b>Description</b>		
Services During Construction		
<b>Task 1 - Shop Drawing Review</b>		
<b>Objective:</b>		
2.11.2 - Shop Drawing Review This task involves the coordination, review and approval of shop drawings submitted by the contractor in accordance with Publication 10/10A, Design Manual 1/1A.		
<b>Scope:</b>		
2.11.2 - Shop Drawing Review Review and approve shop drawings following the procedures in Design Manual Part 1A.		

### **Detail Task 1 - Shop Drawing Review**

#### **Department Details:**

Perform all activities as indicated in the standard scope.

#### **Approach:**

SAI and AWK will perform work under this task as follows:

This task includes the effort to review the required shop drawings for this project to ensure they satisfy the intent of the design and conform to the sizes and dimensions indicated on the design drawings.

SAI will check the fabricator's geometrics for conformance to principal dimensions shown on the contract plans.

SAI anticipates reviewing shop drawings for the steel girders, pot bearings, neoprene bearings, anchor bolts, SIPs, strip seals, tooth dams, scuppers, downspouts, conduit support, pier cap form, soldier piles and lagging (Wall B), T-wall, right-of-way fence, and other items as directed by the Department.

AWK will review shop drawings pertaining to geotechnical aspects of the T-wall.

SAI will consult with the District's Bridge Unit concerning any case where it seems advisable or necessary to make a major change in material or type of detail from that called for in the contract plans.

SAI and AWK will provide a manhour estimate for each submission to the District for approval prior to the start of the review process and will maintain a log of the submissions including estimated and actual work efforts per submission.

### **Task 2 - Construction Consultation**

#### **Objective:**

2.11.3 - Construction Consultation

This task is coordination with the contractor prior to issuance of the notice to proceed.

#### **Scope:**

2.11.3 - Construction Consultation

Upon contract execution, issue a Notice-to-Proceed letter and coordinate the scheduling of a pre-construction meeting.

### **Detail Task 1 - Construction Consultation**

#### **Department Details:**

Delete the tasks found in the Standard Scope and replace with: If a Value Engineering proposal or alternate design is submitted during the construction of the project or should problems arise, the consultant will provide consultation. This will be done by personnel who worked on the project and who are familiar with the plans prior to the construction period. This work will also include the general supervision and coordination effort required for the Construction Services portion of this project.

#### **Approach:**

SAI, AWK, Maguire, and SP&K will perform work under this task as follows:

This task includes the effort to provide consultation during construction to review and solve construction problems, review contractor proposed changes due to unforeseen construction problems, attend the preconstruction meeting, and attend other meetings between the Department and the Contractor at the Department's request. SAI will provide documentation of all requests for information and prepare a written response to the District for modifications to the construction documents if required. SAI will provide engineering services prior to and during construction to evaluate proposals submitted by the Contractor.

SAI anticipates performing design review for Abutment 1 and 2 and East Approach Shoring Plans, Drilled Shaft Installation Plan, Demolition Plans, Under deck shielding, Erection Plans, Deck Overhang Brackets, Cofferdams at Pier 3 and 4, Navigation Fixtures, Slab Placement Sequence, Thermal Control Plan (Mass Concrete), Bidirectional Compression Load Testing Plan and Results (O-Cell), Cross-Hole Sonic Logging Test Results, and other submissions and RFIs as directed by the District.

AWK will provide construction consultation pertaining to geotechnical design issues of the roadway and structures and other items as directed by the Department. Anticipated issues include: Structure Caisson related issues including the review of CSL results and Hazardous Waste or WMP issues.

Maguire will sample four locations representing two separate outfalls, Outfall 009 and 010, located at the First Energy Hatfield Ferry Power Station. The grab samples will be analyzed for total suspended solids, oil and grease, and pH. The oil and grease sample may be chemically fixed. The oil and grease sample would be collected in a 1,000 ml glass jar and the pH and Total Suspended Solids sample would be collected in a 500 ml plastic bottle. The hold time for pH is 15 minutes; therefore, a wide range pH analysis will be performed on the sample at the time of collection.

A pH analysis will be performed at an EPA certified laboratory as well; however, due to time for collection of samples and distance to the lab, analysis will not be able to be performed within the 15 minute hold time and will be marked accordingly in the results.

In accordance with the conditions of the 105 Permit, samples will be collected from the discharge resulting from a storm event greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measureable (greater than 0.1 in rainfall) storm event. Grab samples will be taken during the first 30 minutes of the discharge. In the event that collection of the grab sample within the first 30 minutes proves impractical, then a grab sample will be collected within the first hour of the discharge, and the sampler will describe why a grab sample during the first 30 minutes was impractical. Water samples will be analyzed by H&H Water Controls in Carmichaels.

Sampling will occur for those rain events reaching 0.1 inches or greater occurring during normal business hours (7:00 a.m. to 4:30 p.m.) and will exclude weekends and evenings. Sampling will consist of two separate events to collect one sample from each of the four designated sampling points. Each sampling event will be comprised of four individual samples for a maximum of eight samples per month. In addition, the established window for sampling will allow the samples to be delivered to an EPA certified laboratory prior to close of business. PADEP suggests that Maguire monitor the National Weather Service and/or other local forecasts and make arrangements to be onsite to perform sampling accordingly. In addition, sampling should also occur during the winter months after warm weather leads to snow melt, and the Contractor or Representative identifies discharges occurring from Outfalls 9 and/or 10. Maguire will monitor the National Weather Services' Local Forecast for Masontown (<http://www.weather.gov>) weekly and at times daily to determine the best times to travel to the project in anticipation of rain events. In addition, PADEP indicating that the reporting requirements include submitting the lab results and a cover page to their Southwest Regional Office within 30 days from the end of the month the samples were collected.

Maguire will perform asbestos remediation for unspecified work to be performed during the asbestos removal and disposition process and will assist the Department and contractor as needed during the process.

Maguire will perform unspecified environmental-related work required during construction to assist the Department and Contractor. Services to be provided may include but not limited to items such as: inspection and direction of erosion and sedimentation pollution control measures; any required permit modifications or documentation; attendance at site meetings; environmental consultation or identification of environmental features on site; agency field views.

SP&K will perform consultation associated with the traffic control plan or signing and pavement marking plan as directed by the District. They will also address RFIs associated with these plans.

SP&K will be available to perform supplemental surveys to re-establish baselines for the contractor as directed.

SAI, AWK, Maguire, and SP&K will provide a manhour estimate for each submission to the District for approval prior to the start of the review process and will maintain a log of the submissions including estimated and actual work efforts per submission.

### **Task 3 - Other Post-Design Activities**

#### **Objective:**

##### 2.11.99 - Other Post-Design Activities

This includes any other necessary PennDOT post design activities for the project which are not otherwise covered under the standard post design tasks.

#### **Scope:**

##### 2.11.99 - Other Post-Design Activities

Provide work as detailed by the Department. See Below.

#### **Detail Task 1 - Plans Recordation**

##### **Department Details:**

This work will include the drafting of modifications to the design drawings to depict changes made during construction. These modifications will be obtained from shop drawing records, marked plans by the construction inspector, field reviews and meetings with Department staff.

##### **Approach:**

SAI will prepare "As-Built" plans as per PennDOT Publication 10C Chapter 5.

The Construction Plan and Structure Plans will be revised to reflect as-built conditions, using red-line mark-ups provided by the construction inspection staff. Other Also Plans (TCP, E&S, SPMP) will not be revised.

Structure mylars will be edited in black ink or No. 2 pencil. If the Department requests an electronic copy of the as-builts (for upload to BMS), SAI will have the revised drawings scanned by an outside vendor and placed on CD.

Construction Plans will be revised in CADD, with the exception of the Title Sheet which will follow the same procedure as the structure plans.

**Consultant Hierarchy**

<b>Business Partner</b>	<b>DBE Type</b>	<b>Supervising BP</b>
SAI Consulting Engineers, Inc.	No	
AWK Consulting Engineers, Inc.	Yes	SAI Consulting Engineers, Inc.
Maguire Group Inc.	No	SAI Consulting Engineers, Inc.
Sucevic, Piccolomini, & Kuchar Engineering, Inc.	No	SAI Consulting Engineers, Inc.

**Attachments**

***No records found.***

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