

**Maumee Watershed Conservancy District
Hancock County Flood Diversion**

***MONTHLY PROGRESS REPORT #3
FOR STANTEC CONSULTING SERVICES INC.***

Period Covered:

5-November-2016 thru 2-December-2016

Submitted by:

**Stantec Consulting Services Inc.
4540 Heatherdowns Boulevard, Suite A
Toledo, Ohio 43614**

**Telephone: (419) 380-8910
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I. Invoice Summary and Project Financial Status

- Invoice Number 1135193 totaling \$266,291.58 for the Phase 2 Proof of Concept efforts is submitted for consideration. To-date 42.79% of the total authorized funds for that effort have been invoiced.
- The above invoice includes seven (7) subconsultant invoices. Invoices from Stormwater Engineering (\$3,519.50), Bockrath & Associates (\$10,685.00 and \$6,875.00), Jack Faucett Associates (\$25,730.00), The Mannik & Smith Group (\$4,000.00), TTL Associates, Inc. (\$28,825.00) and Applied Weather (\$9,018.50) are attached for your records.
- An additional invoice, Invoice Number 1135194 totaling \$10,250.36 for the authorized Supplemental Services related to field investigations for permitting and aerial survey is also submitted for consideration. This invoice reflects the direct time and expense applied to complete the services to-date.

II. Major Issues and Decisions

Data Collection & Analysis

- Soil borings are complete and locations have been surveyed. A draft geotechnical report is under review.
- Conversion of the existing hydraulic model to unsteady-state is completed and continued application of refinements to the model are underway.
- Conducting QA review of the refined hydrologic model and integration of new precipitation model provided by Applied Weather Associates (AWA). AWA has completed a statistical review of 45-50 storm events for inclusion in modeling.
- A draft report has been provided by Jack Faucett (Faucett) for their review of the USACE report to update the BCR. A final report from Faucett is anticipated by 12/31/16.
- A meeting was held with ODOT D1 in Lima on 11/14 to discuss bridge design efforts and Environmental Documentation requirements.
- Survey control points have been defined and a plan for field-location is ready for implementation when required.
- Stantec Gap Analysis memorandum reviewing the USACE data is completed and has been provided to the District for review and consideration.

Concept Refinement

- Completed second internal design charrette on 11/11.
 - Process of refinement of existing alternatives for further analysis on costs/benefits.
- Additional technically feasible alternatives, including potential storage options and hydraulic improvements, have been identified and are being reviewed within the updated models.
- Further analysis and refinements being made for alternatives including:
 - Refined modification of proposed diversion channel to convey larger flows.
 - Extension of diversion channel connection to Lye and Blanchard parallel to SR 15.
 - Removal of low-head dams and riffle structures within the City of Findlay.
 - Stream widening & channel modifications within the City of Findlay.
 - Upstream detention areas.

- Widening of existing RR bridge opening.
- Lye Creek cutoff levee.
- Evaluation of easterly drainage channel entering the Blanchard near the City of Findlay reservoir.
- Cost Curves and Impacts/Benefits table development continuing.
- Continuing development of draft Proof of Concept report.
- Local project update provided to District, City and County on 11/23.

Permitting

- Field activities for Wetland delineation along the proposed diversion channel alignment is completed. Threatened and endangered species and wetland surveys indicate the nominal presence of impacted sites. Draft report is underway.
- Coordination underway with Mannik & Smith Group (MSG) and SHPO for Section 106 assistance.
 - Local meeting for property owner consultation east of I75 was held on 11/22. Field work in that area is completed.
 - Current weather conditions have forced a tentative halt in field work

Aerial Survey

- Ground level targets have been set and verified.
- Low-level flights for aerial mapping are underway and are roughly 30% complete.

III. Schedule

Task	Proposed Timeline	Current Status	Anticipated Timeline
A. Data Collection & Analysis			
A.1 – Update Hydraulic Modeling, H&H Data Collection & Analysis	9/9/2016	Complete	N/A
A.2 – Economics Impact Analysis	9/30/2016	Complete	N/A
A.3 – Geotechnical Borings	10/28/2016	Complete	N/A
A.4 – Surveying	9/23/2016	X-Secs Complete	N/A
A.5 – Pre-Permitting, Mussel Recon, Cultural	10/28/2016	Complete	N/A
A.6 – Transportation	9/30/2016	Met w/ ODOT on 11/14	N/A
A.7 – Precipitation Modeling	10/31/2016	QA/QC Process Underway / Nearly complete	12/22/16
A.8.A – Wetland Delineations & Habitat Assessment (Supplemental Task)	1/31/2017	Fieldwork complete / Report in development	1/31/17
A.8.B – Archaeological Survey	1/31/2017	Fieldwork east of I75 completed / Weather delay	4/15/17
A.9 – Aerial Survey	12/31/2016	Aerial photography underway / Weather delay	2/28/17

Task	Proposed Timeline	Current Status	Anticipated Timeline
B. - Concept Refinement			
B.1 – Project Adjustments & Improvements	10/14/2016	Underway / Exploring alternative solutions	1/31/17
B.2 – Model Refinement	10/14/2016	Nearly complete / Behind schedule	1/31/17
B.3 – Estimating & BCR Analysis	10/14/2016	Underway / Behind Schedule	1/31/17
B.4 – Permitting Coordination	10/31/2016	Underway	1/31/17
B.5 – Report & Presentation	10/31/2016	Under Development	TBD

Respectfully Submitted

STANTEC CONSULTING SERVICES INC.



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APPROVAL OF PAYMENT:

On behalf of the Maumee Watershed Conservancy District and in accordance with the Memorandum of Agreement, I hereby recommend payment in favor of Stantec Consulting Services Inc. by the Hancock County Commissioners in the amount of \$ 276,541.94.

Clark Lynn Army, General Manager

Date