AMENDMENT NO. 2 TO PROFESSIONAL SERVICES AGREEMENT FOR MACK HATCHER EXTENSION PROJECT [SR-397 MACK HATCHER PARKWAY WEST, FROM SOUTH OF SR-96, WEST FRANKLIN TO EAST OF SR-106 (US431) NORTH OF FRANKLIN WILLIAMSON COUNTY COF Contract No. 2013-0034

THIS AMENDMENT is made and entered into on this the ____ day of _____, 2016, by and between the **City of Franklin**, **Tennessee** ("City") and **CDMSMITH**, **INC** ("Consultant").

WITNESSETH:

WHEREAS, City and Consultant entered into a Professional Services Agreement ("Agreement") entitled Mack Hatcher Extension Project (SR-397 Mack Hatcher Parkway West, From South of SR-96, West Franklin to East of SR-106 (US431) North of Franklin Williamson County](COF Contract No. 2013-0034), dated the 23rd day of April 2013; and

WHEREAS, said Agreement stipulated that the Consultant would be paid a not to exceed fee of TWO HUNDRED SEVENTY-SEVEN THOUSAND FIVE HUNDRED AND NO/100 DOLLARS (\$277,500.00), and

WHEREAS, the City and the Consultant amended this agreement through Amendment No. 1 to the Professional Services Agreemeement for Mack Hatcher Extension Project (SR-397 Mack Hatcher Parkway West, From South of SR-96, West Franklin to East of SR-106 (US431) North of Franklin Williamson County], dated the 25th day of November 2014;

WHEREAS, said Amendment No. 1 stipulated that the Consultant would be paid a not to exceed fee of \$355,056.00 as authorized by the City Engineer and as detailed in the fee Schedule; and

WHEREAS, the City and Consultant realize the need for additional design work for the Project due to circumstances beyond the control of the Consultant; and

WHEREAS, the Consultant has provided a Proposal for an increase in engineering services, as described in Attachment A dated November 17, 2015, in the amount of EIGHTY ONE THOUSAND SIX HUNDRED SEVEN AND NO/100 DOLLARS (\$81,607.00); and **WHEREAS,** the City has reviewed the Proposal and desires to enter into an agreement for the Project as proposed.

NOW, THEREFORE, in consideration of these premises and the mutual promises contained herein, it is agreed by and between the parties as follows:

1. The foregoing recitals are incorporated by reference as if fully stated herein.

2. <u>Consultant's Responsibilities and Duties</u>. Consultant agrees to perform the work as proposed in their November 17, 2015, letter of proposal (**Attachment A**) which includes the Scope of Services for this Amendment, all of which shall be considered as an integral part hereof.

3. <u>City's Responsibilities and Duties</u>. City shall pay Consultant for the cost of the work as described in **Attachment A** an amount not to exceed **EIGHTY ONE THOUSAND SIX HUNDRED SEVEN AND NO/100 DOLLARS** (\$81,607.00).

The City reserves the right to issue any payments jointly to the Consultant and Sub-Consultant when the City receives information that the Consultant has not paid its Sub-Consultant.

4. <u>Waiver</u>. Neither party's failure nor delay to exercise any of its rights or powers under this Amendment will constitute or be deemed a waiver or forfeiture of those rights or powers. For a waiver of a right or power to be effective, it must be in writing signed by the waiving party. An effective waiver of a right or power shall not be construed as either (a) a future or continuing waiver of that same right or power, or (b) the waiver of any other right or power.

5. <u>Severability</u>. If any term or provision of the Amendment is held to be illegal or unenforceable, the validity or enforceability of the remainder of the Amendment will not be affected.

6. <u>Precedence</u>. In the event of conflict between this Amendment and the provisions of the previous Agreement(s), or any other contract, agreement or other document to which this Amendment may accompany or incorporate by reference, the provisions of this Amendment will, to the extent of such conflict (or to the extent the Agreement is silent), take precedence unless such document expressly states that it is amending this Amendment.

7. <u>Entire Agreement</u>. The Amendment between the parties supersedes any prior or contemporaneous communications, representations or agreements between the parties, whether oral or written, regarding the subject matter of the entire Amendment. The terms and conditions of this Amendment may not be changed except by an amendment expressly referencing this Amendment by section number and signed by an authorized representative of each party. 8. <u>Additions/Modifications.</u> If seeking any addition or modification to the Amendment, the parties agree to reference the specific paragraph number sought to be changed on any future document or purchase order issued in furtherance of the Amendment, however, an omission of the reference to same shall not affect its applicability. In no event shall either party be bound by any terms contained in any purchase order, acknowledgement, or other writings unless: (a) such purchase order, acknowledgement, or other writings specifically refer to the Amendment or to the specific clause they are intended to modify; (b) clearly indicate the intention of both parties to override and modify the Amendment; and (c) such purchase order, acknowledgement, or other writings are signed, with specific material clauses separately initialed, by authorized representatives of both parties.

9. <u>Breach</u>. Upon deliberate breach of the Amendment by either party, the non-breaching party shall be entitled to terminate the Amendment without notice, with all of the remedies it would have in the event of termination, and may also have such other remedies as it may be entitled to in law or in equity.

10. <u>Survival</u>. This Amendment shall survive the completion of or any termination of the original contract, revised contract, or agreement or other document to which it may accompany or incorporate by reference.

All other provisions of the Agreement dated April 23, 2013 and Amendment No. 1 dated November 25, 2013 are unchanged and remain in full force and effect.

IN WITNESS WHEREOF, the parties have executed this Amendment.

The CITY OF FRANKLIN, TENNESSEE CDMSmith, Inc.

By:

Dr. Ken Moore	
Mayor	
Date:	_

By:	
Print:	
Title: _	
Date:	

Attest:

Eric S. Stuckey City Administrator Date: _____

Approved as to form:

Shauna R. Billingsley, City Attorney



210 25th Avenue North, Suite 1102 Nashville, Tennessee 37203 tel: 615-320-3161 fax: 615-320-6560

November 17, 2015

Mr. Paul Holzen City of Franklin 109 3rd Ave. S. Nashville, TN 37064

RE: STP-HPP-397(10), PIN 101454.01 SR-397 (Mack Hatcher Parkway) From West of SR-96 to East of SR-106 Franklin, Williamson County

Dear Mr. Holzen:

We are pleased to submit this scope and estimate of work on the above referenced project. This additional work results from requests by TDOT and the City of Franklin to revise the project plans and environmental permit drawings in a manner that was not included in any previous scope of work.

This work includes six (6) revisions to the environmental permit drawings and right-of-way plans after the existing permit drawings had been updated, and submitted, for the current two-lane project design. A permanent access easement was added to the right-of-way plans and they were revised to show more controlled access right-of-way. A Public Information Meeting was held requiring the preparation of project displays and attendance by CDM Smith personnel. The intersection at State Route 106 was revised to include more raised medians. The structural design plans will be revised to eliminate the micropile design alternate for the Harpeth River Bridge pier footings and to show the portable barrier rail attached to the bridge deck. The geotechnical plans will be revised to eliminate the micropile design alternate for the Harpeth River Bridge pier footing walls on the project.

A more detailed description of the additional work can be found in the Project Scope (Exhibit A), the Structural Engineering Scope of Services (Exhibit C) and the Geotechnical Scope of Services (Exhibit D).

The total work order request is for **\$81,606.74**. In summary, the requested estimate is distributed as follows:

Tasks	Fees
Roadway Design	\$ 49,358.47
Structural Design	\$ 14,748.27
Geotechnical Design Plans and Report	\$ 17,500.00
Total	\$ 81,606.74



This estimate includes our contracted overhead rate of 175.81% for Federally Funded projects with a fee of 12.5% calculated on a multiplier of 2.35. If you have any questions or comments please let us know.

Sincerely,

G. / Sa

Zack Daniel, PE Associate/Client Service Leader CDM Smith Inc.

cc: John Hunter – CDM Smith Patrick Murray – CDM Smith

Attachments: Exhibit A – Project Scope Exhibit B – Roadway Design Estimate Exhibit C – Structural Design Scope and Estimate Exhibit D – Geotechnical Design Scope and Estimate

Exhibit A Project Scope

STP-HPP-397(10), PIN 101454.01 SR-397 (Mack Hatcher Parkway) From West of SR-96 to East of SR-106 Williamson County

November 17, 2015

CDM Smith is pleased to submit this scope of services for additional work on the above referenced project. This additional work results from requests by TDOT and the City of Franklin to revise the project plans and environmental permit drawings in a manner that was not included in any previous scope of work.

This proposal includes all required out-of-scope work to update the project plans to TDOT standards for a future construction letting for the proposed two-lane roadway including:

- The right-of-way plans and permit drawings have been/will be revised six (6) times as requested by TDOT Environmental Division after the environmental permit drawings had been updated to reflect the current twolane project design and submitted to TDOT on January 8, 2015
- The right-of-way plans were revised to include a permanent access easement for right-of-way Tract 9.
- The right-of-way plans were revised to show controlled access right-of-way through most of the project.
- Project displays were developed for the Public Information Meeting originally scheduled for March 5, 2015. The displays were updated, prior to the rescheduled April 16 Public Information Meeting, to show the revised controlled access along the project.
- The project plans were revised to include a raised median on State Route 106 as requested by the City of Franklin.
- The geotechnical plan sheets will be updated and re-formatted according to current TDOT standards.
- The bridge design plans will be revised to remove the micropile foundation design for the Harpeth River Bridge pier footings and show the portable barrier rail attached to the bridge deck per requests from TDOT Structures Division.
- The micropile foundation design for the Harpeth River Bridge pier footings will be removed from the geotechnical plan sheets per the April 16, 2015 request by the TDOT Geotechnical Office. Additional information regarding the retaining walls on the project will be provided per comments received from the TDOT Geotechnical Office.

CDM Smith appreciates the opportunity to continue to support the design and future construction of the Mack Hatcher extension and provide these design services to the City of Franklin and TDOT. If you have any questions about this proposal, please do not hesitate to contact us.

EXHIBIT B ROADWAY DESIGN FEE ESTIMATE

REGION 3 WILLIAMSON COUNY STP-HPP-397(10), PIN 101454.01 SR-397 (MACK HATCHER PKY) From SR-96 to SR-106

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ROADWAY DESIGN	HOURS PER PERSONNEL CLASS						
KOADWAT DESIGN	PM	Proj Eng	Engineer	CAD Tech	CAD Drafter		
Environmental Permits and Associated Plans Revisions (6 Revisions)	10		77	81	34		
Access Road Plans Revision	4		22	10	6		
Controlled Access ROW Plans Revision	6		20	10	4		
Nepa Hearing Displays and Attendance to Meetings	14		52	50	22		
SR-106 Intersection Redesign			14	10			
Geotechnical Plans Update and Formatting				4	10		
HOURS PER CLASSIFICATION	34		185	165	76		
MANDAYS	4.3		23.1	20.6	9.5		
TOTAL HOURS	460						
TOTAL DAYS	57.5						

DIRECT (LABOR)	F	RATE		HOURS		LABOR
Project Manager	\$	58.40	х	34	=	\$ 1,985.60
Project Engineer	\$	47.00	х		=	\$ -
Engineer	\$	40.00	х	185	=	\$ 7,400.00
CAD Tech	\$	30.00	х	165	=	\$ 4,950.00
CAD Drafter	\$	22.00	х	76	=	\$ 1,672.00
					LABOR =	\$ 16,007.60

OVERHEAD (DL x 1.7581)				
	\$ 16,007.60	Х	175.81%	\$ 28,142.96

FEE (DL x 2.35 x 12.5%)						
\$	16,007.60 X	2.35	Х	12.5%	6 \$	4,702.23
DIRECT EXPENSES	184		Х	0.47	¢	86.48
Local Mileage (4 Trips X 46 Miles Per Trip) Non-Local Mileage (1 Trips X 360 Miles Per Trip)	360		×	0.47	¢	169.20
Printing/Reproduction (2 Final Roll Plots Plots)	2		×	75.00	\$ \$	150.00
Printing/Reproduction (2 Draft Roll Plots Plots)	2		X	50.00	\$	100.00

		٠	505.00
Х	50.00	\$	100.00

DIRECT EXPENSES = \$ 505.68

PROJECT DESIGN = \$ 49,358.47



CDM Smith S.R. 397 (MACK HATCHER PARKWAY) WILLIAMSON COUNTY

STRUCTURAL ENGINEERING SCOPE OF SERVICES

PROJECT DECRIPTION

This scope of services consists of engineering and drawing revisions related to finalization of the construction documents for the East Bound Structure over the Harpeth River for the S.R. 397 (Mack Hatcher Parkway) Project.

PROJECT SPECIFICS

The project includes the following:

- Deleting all elements for the micropile foundation option
- Revising Retaining Wall No. 1 based on new geotechnical recommendations

SCOPE OF WORK

The proposed construction documents were previously revised to reflect elimination of the West Bound Bridge over the Harpeth River and construction of the East Bound Bridge to allow twoway traffic. The proposed construction documents included a micropile foundation option and a drawing for Retaining Wall No. 1. Direction to remove the micropile foundation option has now been received and a geotechnical report providing recommendations for Retaining Wall No. 1 will now be developed. The proposed work activities to accomplish this effort include:

- Revising all drawings related to eliminating the micropile foundation option
- Revising the Retaining Wall No. 1 drawing to reflect the new geotechnical recommendations
- One additional combined review by the City of Franklin and TDOT Structures Division

Not Included in this Scope:

- Shop drawing review
- Construction assistance

CDM SMITH STRUCTURES DESIGN STANDARD COST/FEE ESTIMATE

<u>Tennessee Department of Transportation</u> <u>Mack Hatcher Parkway</u> <u>Fee Proposal for Engineering and Drawing Revision Services</u>

Project Component		Fee	<u>MD's</u>
Engineering and Drawing Revisions		\$14,748.27	16.0
	Total Final Fee=	\$14,748.27	16.0

Tennessee Department of Transportation: S.R. 397 (Mack Hatcher Parkway) Structural Engineering and Drawing Revisions

CDM SMITH

STRUCTURES DESIGN

STANDARD COST/FEE ESTIMATE

Project: Mack Hatcher Parkway Engineering and Drawing Revisions

COF 2013-0034 Amendment 2 Attachment A PG 7 of 13

I. DIRECT PAYROLL COSTS

||. |||. |V.

			c		<u>2015 rates</u>	
PHASE A - FIELD INSPECTION, Associate Engineer		DATION		Man Days @	541.60 =	\$0.0
Design Engineer				Man Days @	0.00 =	\$0.0 \$0.0
Senior Technician				Man Days @	180.00 =	\$0.0 \$0.0
Technical Typist				Man Days @	0.00 =	\$0.0 \$0.0
	Subtotal	=	0.0	Wall Days @	0.00 -	\$0.0 \$0.0
PHASE B - PRELIMINARY PLAN	S DEVELOPMENT SUB	ΜΙΤΤΛΙ ς				
Project Director	5 DEVELOPIVIENT, SOB	WITTALS		Man Days @	0.00 =	\$0.0
Associate Engineer				Man Days @	541.60 =	\$0. \$1,354.0
Senior Engineer				Man Days @	0.00 =	\$1,554. \$0.
Design Engineer				Man Days @	315.44 =	\$2,365.
Designer				Man Days @ Man Days @	0.00 =	\$2,505. \$0.
Senior Technician				Man Days @	180.00 =	\$0. \$1,080.
Technician				Man Days @	0.00 =	\$1,080. \$0.
Technical Typist				Man Days @	0.00 =	\$0. \$0.
recinical rypist	Subtotal	=	16.0	Mail Days @	0.00 -	\$0. \$4,799.
	Subtotal	-	10.0			φ 4 ,733.
PHASE C - FINAL CONSTRUCTIO	ON PLANS					1
Project Director				Man Days @	0.00 =	\$0
Associate Engineer				Man Days @	541.60 =	\$0
Senior Engineer				Man Days @	0.00 =	\$0
Design Engineer				Man Days @	315.44 =	\$0
Designer				Man Days @	0.00 =	\$0
Senior Technician				Man Days @	180.00 =	\$0.
Technician				Man Days @	0.00 =	\$0.
Technical Typist				Man Days @	0.00 =	\$0.
	Subtotal	=	0.0			\$0.
PHASE D - CHECKING SHOP PL	ANS					
Associate Engineer			0.0	Man Days @	541.60 =	\$0.
Senior Engineer			0.0	Man Days @	0.00 =	\$0
Design Engineer			0.0	Man Days @	315.44 =	\$0
Technical Typist			0.0	Man Days @	0.00 =	\$0.
	Subtotal	=	0.0			\$0.
PHASE E - LOAD RATINGS						
Associate Engineer			0.0	Man Days @	541.60 =	\$0
Senior Engineer			0.0	Man Days @	0.00 =	\$0
Design Engineer			0.0	Man Days @	315.44 =	\$0.
Technical Typist			0.0	Man Days @	0.00 =	\$0.
	Subtotal	=	0.0			\$0.
	Total Direc	t Payroll (Costs		=	\$4,799.
DIRECT COSTS: COMPUTER, PF	RINTING, TRAVEL & ET	с.				\$100.
OVERHEAD COST - 175.81% OI						\$8,438.
IET FEE - 235.00% OF DIRECT PAYROLL COSTS X 12.5%						

TOTAL FEE

\$14,748.27

CDM SMITH

STRUCTURES DESIGN ESTIMATED DIRECT COSTS

Project: Mack Hatcher Parkway Engineering and Drawing Revisions

A: Travel & Subsistence

Ground travel at \$0.47 per mile Air travel at \$.50 per mile for Daily subsistence @ \$150. Inspection boat rental		0 miles 0 miles 0 days 0 days		\$0.00 \$0.00 \$0.00 \$0.00
B: Computer and Plotter				
CADD - \$15 per hour for		0 hours		\$0.00
C: Prints/Reproductions		0 sheets assumed		
	0 Plan Sets	0 sheets at	0.5 per sheet	\$0.00
D: Materials & Supplies				
1 Plan set(s):		0 sheets at	\$4.50 (Mylar)	\$0.00
Estimated project supplies at				\$50.00
E: Communication, Telephone & Postage Estimated at				\$50.00
F: Outside Data Services				
Data service, concrete girder design		0 spans BDS runs at	\$35.00	\$0.00
G: Outside Sub-Contractor Services				
Access, rigging and/or traffic control (see Prop Equipment rental, hazardous materials (see Pr				\$0.00 \$0.00
Geotechnical Engineering (see Proposal)	σροзαι			\$0.00 \$0.00
		TOTAL OF ESTIMATED D (ITEM II PRECEDING SHE		\$100.00



COF 2013-0034 Amendment 2 Attachment A PG 9 of 13

April 24, 2015

Mr. Patrick Murray, P.E. CDM Smith 210 25th Avenue North, Suite 1102 Nashville, Tennessee 3203

RE: Scope of Services and Estimated Cost Proposal for Additional Geotechnical Engineering Services Proposed Extension to Mack Hatcher Parkway Franklin, Tennessee Amec Foster Wheeler Proposal No. 2015-001, Revision 1

Mr. Murray:

Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler) is pleased to present this revised proposed scope of work for the requested services. The purpose of our services is to prepare recommendations for the proposed retaining wall associated with the project and to review the final construction drawings.

Project Description

We are familiar with the project from the geotechnical studies we performed for the new roadway alignment. We originally completed a geotechnical study for the proposed Mack Hatcher Parkway extension from State Route 106 to State Route 96 (report dated January 28, 2010). We later revised our geotechnical reports (i.e., alignment and bridge) and drawings because the proposed route was extended to include the proposed roadway from State Route 96 to Townsend Boulevard. We provided our revised draft reports and draft drawings in March 2011.

We understand that the proposed roadway now includes two retaining walls that were not included in our original studies. You have requested us to provide this proposal for providing geotechnical recommendations for design and retaining wall types. Retaining Wall 1 will be located along the south side of Mack Hatcher Parkway between Stations 954+50 and 955+00. Wall 1 will be constructed along the approach embankment for the proposed bridge over the Harpeth River. Retaining Wall 2 will be located along the south side of State Route 96 between Stations 24+69 and 28+00 and will tie into the box bridge at Station 24+40.

Our geotechnical report for the planned bridge over the Harpeth River provided two foundation type options, one for drilled piers and one for micropiles. You informed us in an e-mail on April 18, 2015 that TDOT has decided to only use drilled piers for the bridge foundations. TDOT

Amec Foster Wheeler Environment & Infrastructure, Inc. 3800 Ezell Road, Suite 100 Nashville, Tennessee 37211 TEL (615) 333-0630 www.amecfw.com requested that any references to the micropile option be removed from the geotechnical drawings and reports.

Proposed Scope of Services

Task 1 - Wall Concept Sheets

As requested, we propose to provide a wall concept drawing for each of the new retaining walls planned for the project. As noted in our e-mail to you on January 21, 2015, TDOT's practice for geotechnical studies related to retaining walls includes advancing borings every 100 feet along the proposed wall alignment. Currently, there is only one boring near the new wall alignment along State Route 96. We understand that the project schedule will inhibit the ability to collect additional subsurface information to satisfy TDOT's normal practice. Therefore, we will use only the data from our previous exploration to develop geotechnical parameters that will be included on the wall concept sheets.

Our engineer will review the available date and make recommendations for site conditions and allowable parameters. We assume CDM Smith will provide us with an electronic version of the base sheets (alignment, elevation view, cross sections, etc.). We will use our CAD personnel to add geotechnical data and geotechnical recommendations to these base sheets.

Task 2 - Finalize Drawings and Reports

As noted in our January 21, 2015 e-mail, we submitted a stamped/signed copy of the drawings and reports, which were dated January 2010. After submitting these deliverables, we were asked by TDOT and CDM Smith to provide modifications to the original drawings, making the January 2010 version null and void. We made the necessary revisions to our drawings and reports and provided these documents on March 4, 2011 to CDM Smith for their review. The March 4, 2011 set of drawings contains 99 geotechnical sheets and is marked as DRAFT.

As TDOT requested, we propose to revise the March 2011 drawings and reports by removing any references to the micropile foundation option. Based on our discussions with you, we have assumed that additional changes or notes are not required to address the drilled pier recommendations on the drawings.

We will also review the most recent CDM Smith drawings to check for consistency with our previous drawings. We will need for you to provide us an electronic copy of the latest drawings for this review. If we do not encounter discrepancies or required changes in our review, we will provide a PDF copy of the stamped/signed drawings to you along with the new wall concept sheets previously mentioned. If we encounter discrepancies or there are changes needed, we will notify you to seek direction in moving forward (for example, we can provide red-line markups for CDM to incorporate in the drawings or you can provide us with the relevant Microstation files for Amec Foster Wheeler to revise). At this time, we assume we will not encounter discrepancies and therefore, will not need to expend cost to correct them.

As requested by TDOT, we will also prepare a geotechnical report for the proposed retaining walls. The report will include:

- A general description of the site and subsurface conditions along the proposed wall alignments;
- Recommendations for site preparation, subgrade improvement and placement / compaction of engineered fill; and
- Recommendations for design and construction of proposed retaining walls.

Cost Estimate

We propose to provide the services describe in accordance with Amec Foster Wheeler's standard Labor Rate Schedule (attached). The estimated cost associated with the scope of work defined herein is summarized below.

Task	Cost
Task 1 – Wall Concept Sheet	\$8,000
Task 2 – Finalize Drawings/Reports	\$9,500
Tota	al \$17,500.00

Any additional services above and beyond the scope noted above will be provided on an hourly basis in accordance with Amec Foster Wheeler's standard Labor Rate Schedule.

Completion Schedule

Based on our current workload, we can complete the above tasks within 15 working days of written notice to proceed and receipt of the base drawings.

<u>Closure</u>

If this proposal is acceptable, please indicate your approval by executing and returning the attached Services Agreement, which contains the Terms and Conditions under which the work will be performed. Once we receive the signed Agreement, we will sign it and return a fully executed copy to you for your file. The preceding scopes of work and the Terms and Conditions in our Agreement constitute our proposal and contract with you.

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Once you have had an opportunity to consider the preceding, we will be happy to discuss any questions that you may have. Amec Foster Wheeler appreciates this opportunity to be of service to CDM Smith.

Yours truly, **Amec Foster Wheeler**

Nathan Long, P.E., P.G. Geotechnical Engineer

Enclosed: Services Agreement Standard Labor Rate Schedule Reviewed By:

Mario Glorioso, P.E. Geotechnical Branch Manager

Section III

Standard Cost Estimate For Geotechnical Services

3.00 Manpower Requirements

County: Franklin, Tennessee Route: Proposed Extension to Mack Hatcher Parkway Description: Proposal No. 2015-001, Revision 1 Project No.: Geotechnical Office No.: Consultant: Amec Foster Wheeler Environment & Infrastructure, Inc. Prepared By: N. Long Date Prepared: 8/26/2015 Contract Number:

		PRINCIPAL	PROJECT MANAGER	SENIOR ENGINEER	STAFF ENGINEER	SENIOR GEOLOGIST	ADMMIN		DRAFTSMAN
Item No.	ACTIVITY	MAN-HOUR	MAN-HOUR	MAN-HOUR	MAN-HOUR	MAN-HOUR	MAN-HOUR	MAN-HOUR	MAN-HOUR
3.10	Project Planning and Coordination		5.0						
3.20	Develop Wall Concept Sheet		4.0	32.0			2.0		32.0
3.30	Finalize Geotechnical Drawings and Reports		19.0	22.0		15.0	2.0		16.0
3.40									
3.50									
3.60									
3.70									
Total Estimated Hours			28.0	54.0		15.0	4.0		48.0
Hourly Rate			\$140.00	\$140.00		\$110.00	\$65.00		\$85.00
Subtotal of Estimated Man-hour Costs		\$0.00	\$3,920.00	\$7,560.00	\$0.00	\$1,650.00	\$260.00	\$0.00	\$4,080.00

Total Estimate of Man-hour Requirements:

\$17,470.00