Agenda Item: 8.

MEMORANDUM

To: Programs, Projects and Operations Subcommittee

From: Amanda Grint, Water Resources Engineer

Date: April 9, 2018

Re: Review and Recommendation on Amendment 3 to Professional Services Contract

with FYRA Engineering for WP6 and WP7

In April 2015, the Board approved the selection of FYRA Engineering for professional services for the planning, permitting, design and construction of West Papillion Regional Basins Number 6 and 7 (WP6 and WP7). The work was planned to be completed in three phases. The original contract in the amount of \$265,245, included the feasibility study and preliminary design of WP6 and WP7. Amendment 1 included a scope change to the original contract and the scope and fees for final design bringing the total contract to \$1,483,564.00. Amendment 2 included an additional \$38,291 for Water Sustainability Fund application requirements. Amendment 3, attached, includes bidding and construction administration services.

A summary of the tasks in Amendment 3 is as follows:

- Preparation of bid documents and coordination with contractors through the bid letting
- Project Management tasks including weekly construction meetings and invoicing
- Full time construction administration to include shop drawing review, quality control and verification testing, observation of construction activities and review and processing of all construction requests for information and change orders
- Completion of Operation and Maintenance Manual
- Completion of As Built documents

FYRA Engineering would provide the professional services noted above as Amendment 3 of the WP6 and WP7 professional services contract on an hourly basis not to exceed the amount of \$1,155,504.00.

Management recommends that the Subcommittee recommend to the Board that the General Manager be authorized to execute the proposed Amendment 3 to the Professional Services Agreement between the District and FYRA Engineering for construction administration services for the WP6 and WP7 projects in an amount of \$1,155,504, bringing the total maximum not to exceed contract amount to \$2,677,359, subject to changes deemed necessary by the General Manager and approval as to form by District Legal Counsel.



Dam Sites WP 6&7 Construction Observation Task List and Fee Estimate Papio-Missouri River Natural Resources District Sarpy County, NE FYRA Project No. 001-14-03

	FYRA Engineering					E&A Consulting Group				Vireo				
Tasks		Project Engineer Mechtenberg \$130	Asst Engineer Varies \$95	Intern Varies \$60	Expenses	Sr. Proj Engineer \$215		Construction Observer II \$111	Expenses	Project LA Bentley \$115	Asst LA Fordyce \$80	Financial Manager \$55	Expenses	Total
Bid Phase Services														
Preparation of Bid Documents	24	8			\$200						6			
Pre-Bid Meeting	6	6				8		2	\$33	4	6	1		
Contractor Coordination	40	40								4				
Attend Bid Letting	4	4												
Review Bids/Make Recommendation	4	4												
Contract Execution	8													
Bid Phase Services Task Total	\$16,770	\$8,060	\$0	\$0	\$200	\$1,720	\$0	\$222	\$33	\$920	\$960	\$55	\$0	\$28,940
Construction Phase Services														
Construction Kickoff Meeting	6	6				8		2		4				
Weekly Construction Administrative Services (104 weeks)	1040	4160	1040	208	\$37,800	271	92	987	\$2,518	216	24	12	\$894	
Preparation of As-Builts	8	40	60	20	\$750									
Construction Phase Services Task Total	\$205,530	\$546,780	\$104,500	\$13,680	\$38,550	\$59,985	\$16,468	\$109,779	\$2,518	\$25,300	\$1,920	\$660	\$894	\$1,126,564
Subtotal Hours	1140	4268	1100	228	***	287	92	991		228	36	13		
Subtotal Costs	\$222,300	\$554,840	\$104,500	\$13,680	\$38,750	\$61,705	\$16,468	\$110,001	\$2,551	\$26,220	\$2,880	\$715	\$894	\$1,155,504
		\$934,070				<u>\$190,725</u>				\$30,709				

Construction Expenses

Mileage \$3,000
Meals \$0
Mi-Fi \$0
Survey \$6,000
Field Supplies \$8,000

Troxler Testing \$20,800 \$50/test - max \$300/week assume 2/3 of weeks have testing

As-Built Expenses

Mileage \$0 Meals \$0 Survey \$750

P-MRNRD

Dam Sites WP 6&7

Task Descriptions - Bid Phase and Construction Observation Phase Services

Bid Phase Services

<u>Preparation of Bid Documents</u> – Prepare necessary bid documents, coordinate the bid announcement, distribute information to contractors about the advertised bid package. Two printed sets of bid documents including plans and specifications and geotechnical report will be provided to the P-MRNRD. All information to contractors will be transmitted electronically along with information about which printers have the plans available to print hard copies.

<u>Pre-Bid Meeting</u> – Preparation for and attendance of one pre-bid meeting with interested contractors and other project stakeholders. Meeting will visit both project sites and include review of the plans and addressing any inquiries about the project. FYRA will prepare meeting minutes and responses to questions asked during the meeting to be distributed to all interested parties.

<u>Contractor Coordination</u> – Answer questions and provide any additional design information requested by contractors interested in bidding the project. Issue addendums to the original bid package as needed.

<u>Attend Bid Letting</u> – Attendance of the bid opening and collection of bids. Perform verification of bids and bonds, and develop summary of bids.

<u>Review Bids/Make Recommendations</u> – Review bids and gather background/references on contractors to make engineer's recommendation of award. Provide formal written recommendation to the P-MRNRD.

<u>Contract Execution</u> – Upon award of the project by the P-MRNRD board, a Notice of Award will be prepared by FYRA Engineering and followed by a Notice to Proceed once all applicable information from contractor is received.

Construction Phase Services

<u>Construction Kickoff Meeting</u> – Preparation for and attendance of a pre-construction meeting with the selected contractor, the P-MRNRD and other stakeholders to discuss all pertinent construction-related project issues. This include preparation and distribution of meeting minutes.

<u>Weekly Construction Administrative Services</u> – Includes full-time staff on site for observation of construction activities and to perform inspections to ensure the project is constructed as designed. Activities include:

Develop construction reports with detailed descriptions and photos of construction activities,
 and submit to the P-MRNRD on a weekly basis

- Review material submittals and shop drawings
- Contractor/subcontractor/client coordination and on-site meetings
- Review and submit pay requests and change orders
- Quality control and verification of test/survey results provided by contractor to be coordinated by Field Engineer. Testing/survey will either be performed by Field Engineer or subcontracted by FYRA Engineering for specialized services.
- Prepare an Operation and Maintenance Manual for the dam.
- Final walkthrough with contractor and P-MRNRD upon substantial completion to generate final 'punch list' for the contractor to address prior to final payment.

<u>Preparation of As-Builts</u> – Data collection of final site conditions upon completion of construction required for the as-built drawings. Prepare as-built drawings to document the projects as constructed and provide one hard copy and an electronic copy of each site to the P-MRNRD.

SUGGESTED FORMAT (for use with E-500, 2002 Edition)

This is **EXHIBIT** K, consisting of <u>2</u> pages, referred to in and part of the **Agreement between Owner and Engineer** for **Professional Services** dated <u>1 June</u>, <u>2015</u>.

AMENDMENT TO OWNER-ENGINEER AGREEMENT

Alvi	ENDINENT TO OWNER-ENGINEER AGREEMENT
1. Backgroun	d Data:
a. Effec	ctive Date of Owner-Engineer Agreement: 2 June 2015
b. Own	er: Papio-Missouri River Natural Resources District
c. Engi	neer: FYRA Engineering, LLC
d. Proje	ect: P-MRNRD WP 6&7 Preliminary Design
Nature of inapplicable	Amendment [Check those that are applicable and delete those that are le.]
	X Additional Services to be performed by Engineer
	Modifications to Services of Engineer
	Modifications to Responsibilities of Owner
	Modifications to Payment to Engineer
	Modifications to Time(s) for rendering Services
·	Modifications to other terms and conditions of the Agreement
3. Description	n of Modifications
Construction	t 1, "Modifications", Exhibit A "Task Descriptions – Bid Phase and on Observation Phase Services" and Exhibit B "Task List and Fee Estimate – Bid Construction Observation Phase Services"
observation phases for the	ions" includes additional services related to the bidding and construction project. Exhibits A and B to Attachment 1 detail the additional services to be d the fee estimate for those tasks.
	Page 1 of 2 Pages

WNER:	ENGINEER:						
v: John Winkler	By: Michael K. Sotak, P.E.						
tle: General Manager	Title: Owner/Principal Engineer						
ate Signed:	Date Signed:						

	This is Attachment 1 , consisting of pages, to Amendment No3_, dated,2018.
Mo	difications
1.	Engineer shall perform the following Additional Services:
	Exhibit A of Amendment 3, attached hereto and incorporated herein, entitled "Task scriptions – Bid Phase and Construction Observation Phase Services" details the Additional vices to be performed by Engineer.
Ser	Exhibit B of Amendment 3, attached hereto and incorporated herein, entitled "Task List and Estimate – Bid Phase and Construction Observation Phase Services" details the Additional vices to be performed by Engineer and the estimated fees associated with those Additional vices.
2.	The Scope of Services currently authorized to be performed by Engineer in accordance with the Agreement and previous amendments, if any, is modified as follows:
	Exhibit A and Exhibit B of Amendment 2, referred to above, details the additional services to be performed by the Engineer
3.	The responsibilities of Owner are modified as follows:
	N/A
4.	For the Additional Services or the modifications to services set forth above, Owner shall pay Engineer the following additional or modified compensation:
	A maximum not to exceed total fee of \$1,134,504 representing time actually expended and invoiced by Engineer as estimated on Exhibit B of Amendment 3, the "Task List and Fee Estimate."
5.	The schedule for rendering services is modified as follows:
	The services will be performed in conjuction with the construction of the project and will follow the construction timeline. The construction contract dates will be set upon bid and award of the project to the selected contractor. For scoping purposes, it was assumed the sites would take 104 weeks to construct.

6. Other portions of the Agreement (including previous amendments, if any) are modified as follows:

Add the following to Article 5 – Opinion of Cost:

- 5.03 Opinions of Total Project Costs
 - A. The services, if any, of Engineer with respect to Total Project Costs shall be limited to assisting the Owner in collating the various cost categories which comprise Total Project Costs. Engineer assumes no responsibility for the accuracy of any opinions of Total Project Costs.

Add the following to Article 8 – Exhibits and Special Provisions:

- 8.01 Exhibits Included
 - D. Exhibit D, "Duties, Responsibilities and Limitations of Authority of Resident Project Representative," consisting of <u>5</u> pages.

Add the following to Exhibit A, Part 1 – Basic Services:

A.1.04 Bidding or Negotiating Phase

- A. After acceptance by Owner of the Bidding Documents and the most recent opinion of probable Construction Cost as determined in the Final Design Phase, and upon written authorization by Owner to proceed, Engineer shall:
 - 1. Assist Owner in advertising for and obtaining bids or proposals for the Work and, where applicable, maintain a record of prospective bidders to whom Bidding Documents have been issued, attend pre-Bid conferences, if any, and receive and process contractor deposits or charges for the Bidding Documents.
 - 2. Issue Addenda as appropriate to clarify, correct, or change the Bidding Documents.
 - 3. Provide information or assistance needed by Owner in the course of any negotiations with prospective contractors.
 - 4. Consult with Owner as to the acceptability of subcontractors, suppliers, and other individuals and entities proposed by prospective contractors for those portions of the Work as to which such acceptability is required by the Bidding Documents.
 - 5. Perform or provide the following additional Bidding or Negotiating Phase tasks or deliverables: As defined in Attachment 1 to this Appendix.
 - 6. Attend the Bid opening, prepare Bid tabulation sheets, and assist Owner in evaluating Bids or proposals and in assembling and awarding contracts for the Work.
- B. The Bidding or Negotiating Phase will be considered complete upon commencement of the Construction Phase or upon cessation of negotiations with prospective contractors.

A.1.05 Construction Phase

- A. Upon successful completion of the Bidding and Negotiating Phase, and upon written authorization from Owner, Engineer shall:
 - 1. General Administration of Construction Contract. Consult with Owner and act as Owner's representative as provided in the General Conditions. The extent and limitations of the duties, responsibilities, and authority of Engineer as assigned in the General Conditions shall not be modified, except as Engineer may otherwise agree in writing. All of Owner's instructions to Contractor will be issued through Engineer, which shall have authority to act on behalf of Owner in dealings with Contractor to the extent provided in this Agreement and the General Conditions except as otherwise provided in writing.
 - 2. Resident Project Representative (RPR). Provide the services of an RPR at the Site to assist the Engineer and to provide more extensive observation of Contractor's work. Duties, responsibilities, and authority of the RPR are as set forth in Exhibit D. The furnishing of such RPR's services will not limit, extend, or modify Engineer's responsibilities or authority except as expressly set forth in Exhibit D. Selecting Independent Testing Laboratory. Assist Owner in the selection of an independent testing laboratory to perform the services identified in Exhibit B, Paragraph B2.01.0.
 - 3. Pre-Construction Conference. Participate in a Pre-Construction Conference prior to commencement of Work at the Site.
 - 4. Schedules. Receive, review, and determine the acceptability of any and all schedules that Contractor is required to submit to Engineer, including the Progress Schedule, Schedule of Submittals, and Schedule of Values.
 - 5. Baselines and Benchmarks. As appropriate, establish baselines and benchmarks for locating the Work which in Engineer's judgment are necessary to enable Contractor to proceed.
 - 6. Visits to Site and Observation of Construction. In connection with observations of Contractor's Work while it is in progress:
 - Make visits to the Site at intervals appropriate to the various stages of construction, as Engineer deems necessary and/or as reasonably requested by Owner, to observe as an experienced and qualified design professional the progress and quality of Contractor's executed Work. Such visits and observations by Engineer, and the Resident Project Representative, if any, are not intended to be exhaustive or to extend to every aspect of Contractor's Work in progress or to involve detailed inspections of Contractor's Work in progress beyond the responsibilities specifically assigned to Engineer in this Agreement and the Contract Documents, but rather are to be limited to spot checking, selective sampling, and similar methods of general observation of the Work based on Engineer's exercise of professional judgment as assisted by the Resident Project Representative, if any. Based on information obtained during such visits and observations, Engineer will determine in general if the Work is proceeding in

- accordance with the Contract Documents, and Engineer shall keep Owner informed of the progress of the Work.
- b. The purpose of Engineer's visits to, and representation by the Resident Project Representative, if any, at the Site, will be to enable Engineer to better carry out the duties and responsibilities assigned to and undertaken by Engineer during the Construction Phase, and, in addition, by the exercise of Engineer's efforts as an experienced and qualified design professional, to provide for Owner a greater degree of confidence that the completed Work will conform in general to the Contract Documents and that Contractor has implemented and maintained the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents. Engineer shall not, during such visits or as a result of such observations of Contractor's Work in progress, supervise, direct, or have control over Contractor's Work, nor shall Engineer have authority over or responsibility for the means, methods, techniques, sequences, or procedures of construction selected or used by Contractor, for security or safety on the Site, for safety precautions and programs incident to Contractor's Work, nor for any failure of Contractor to comply with Laws and Regulations applicable to Contractor's furnishing and performing the Work. Accordingly, Engineer neither guarantees the performance of any Contractor nor assumes responsibility for any Contractor's failure to furnish and perform the Work in accordance with the Contract Documents, unless such failure arises out of or relates to Engineer's conduct or other action or inaction.
- 7. Defective Work. Recommend to Owner that Contractor's Work be rejected while it is in progress if Engineer believes that such Work will not produce a completed Project that conforms generally to the Contract Documents or that it will threaten the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents.
- 8. Clarifications and Interpretations; Field Orders. Issue necessary clarifications and interpretations of the Contract Documents as appropriate to the orderly completion of Contractor's work. Such clarifications and interpretations must be consistent with the intent of and reasonably inferable from the Contract Documents. Engineer may issue Field Orders authorizing minor variations in the Work from the requirements of the Contract Documents. Engineer shall promptly notify Owner of any issued Field Order.
- 9. Change Orders and Work Change Directives. Recommend Change Orders and Work Change Directives to Owner, as appropriate, and prepare Change Orders and Work Change Directives as required.
- 10. Shop Drawings and Samples. Review and approve or take other appropriate action in respect to Shop Drawings and Samples and other data which Contractor is required to submit, but only for conformance with the information given in the Contract Documents and compatibility with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such reviews and approvals or other action will not extend to means, methods, techniques, sequences, or procedures of construction or to

- safety precautions and programs incident thereto. Engineer shall meet any Contractor's submittal schedule that Engineer has accepted.
- 11. Substitutes and "or-equal." Evaluate and determine the acceptability of substitute or "orequal" materials and equipment proposed by Contractor, but subject to the provisions of Paragraph A2.02.A.2 of this Exhibit A.
- 12. Inspections and Tests. Require such special inspections or tests of Contractor's work as deemed reasonably necessary, and receive and review all certificates of inspections, tests, and approvals required by Laws and Regulations or the Contract Documents. Engineer's review of such certificates will be for the purpose of determining that the results certified indicate compliance with the Contract Documents and will not constitute an independent evaluation that the content or procedures of such inspections, tests, or approvals comply with the requirements of the Contract Documents. Engineer shall be entitled to rely on the results of such tests.
- 13. Disagreements between Owner and Contractor. Render formal written decisions on all duly submitted issues relating to the acceptability of Contractor's work or the interpretation of the requirements of the Contract Documents pertaining to the execution, performance, or progress of Contractor's Work; review each duly submitted Claim by Owner or Contractor, and in writing either deny such Claim in whole or in part, approve such Claim, or decline to resolve such Claim if Engineer reasonably concludes that to do so would be inappropriate. In rendering such decisions, Engineer shall be fair and not show partiality to Owner or Contractor and shall not be liable in connection with any decision rendered in good faith in such capacity.
- 14. Applications for Payment. Based on Engineer's observations as an experienced and qualified design professional and on review of Applications for Payment and accompanying supporting documentation:
 - a. Determine the amounts that Engineer recommends Contractor be paid. Such recommendations of payment will be in writing and will constitute Engineer's representation to Owner, based on such observations and review, that, to the best of Engineer's knowledge, information and belief, Contractor's Work has progressed to the point indicated, the quality of such Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, and to any other qualifications stated in the recommendation), and the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe Contractor's Work. In the case of unit price work, Engineer's recommendations of payment will include final determinations of quantities and classifications of Contractor's Work (subject to any subsequent adjustments allowed by the Contract Documents).
 - b. By recommending any payment, Engineer shall not thereby be deemed to have represented that observations made by Engineer to check the quality or quantity of Contractor's Work as it is performed and furnished have been exhaustive, extended to

every aspect of Contractor's Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in this Agreement and the Contract Documents. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment including final payment will impose on Engineer responsibility to supervise, direct, or control Contractor's Work in progress or for the means, methods, techniques, sequences, or procedures of construction or safety precautions or programs incident thereto, or Contractor's compliance with Laws and Regulations applicable to Contractor's furnishing and performing the Work. It will also not impose responsibility on Engineer to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or to determine that title to any portion of the Work in progress, materials, or equipment has passed to Owner free and clear of any liens, claims, security interests, or encumbrances, or that there may not be other matters at issue between Owner and Contractor that might affect the amount that should be paid.

- 15. Contractor's Completion Documents. Receive, review, and transmit to Owner maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance required by the Contract Documents, certificates of inspection, tests and approvals, Shop Drawings, Samples and other data approved as provided under Paragraph A1.05.A.11, and the annotated record documents which are to be assembled by Contractor in accordance with the Contract Documents to obtain final payment. The extent of such review by Engineer will be limited as provided in Paragraph A1.05.A.11.
- 16. Substantial Completion. Promptly after notice from Contractor that Contractor considers the entire Work ready for its intended use, in company with Owner and Contractor, conduct an inspection to determine if the Work is substantially complete. If after considering any objections of Owner, Engineer considers the Work substantially complete, Engineer shall deliver a certificate of Substantial Completion to Owner and Contractor.
- 17. *Additional Tasks*. Perform or provide the following additional Construction Phase tasks or deliverables:
- 18. Final Notice of Acceptability of the Work. Conduct a final inspection to determine if the completed Work of Contractor is acceptable so that Engineer may recommend, in writing, final payment to Contractor. Accompanying the recommendation for final payment, Engineer shall also provide a notice in the form attached hereto as Exhibit E (the "Notice of Acceptability of Work") that the Work is acceptable (subject to the provisions of Paragraph A1.05.A.15.b) to the best of Engineer's knowledge, information, and belief and based on the extent of the services provided by Engineer under this Agreement.
- B. Duration of Construction Phase. The Construction Phase will commence with the execution of the first construction Contract for the Project or any part thereof and will terminate upon written recommendation by Engineer for final payment to Contractors. If the Project involves more than one prime contract as indicated in Paragraph A1.03.C, Construction Phase services may be rendered at different times in respect to the separate contracts. Subject to the provisions of Article 3, Engineer shall be entitled to an equitable increase in compensation if Construction-

Phase services are required after the original date for final completion of the Work as set forth in the construction Contract.

C. Limitation of Responsibilities. Engineer shall not be responsible for the acts or omissions of any Contractor, or of any subcontractors, suppliers, or other individuals or entities performing or furnishing any of the Work unless such acts or omissions were solely due to Engineer. Engineer shall not be responsible for the failure of any Contractor to perform or furnish the Work in accordance with the Contract Documents unless such failure arises out of or relates to Engineer's conduct or other action or inaction.

A.1.06 Post-Construction Phase (not authorized at this time)

- A. Upon written authorization from Owner, Engineer, during the Post-Construction Phase, shall:
 - 1. Provide assistance in connection with the adjusting of Project equipment and systems.
 - 2. Assist Owner in training Owner's staff to operate and maintain Project equipment and systems.
 - 3. Assist Owner in developing procedures for control of the operation and maintenance of, and record keeping for Project equipment and systems.
 - 4. Together with Owner, visit the Project to observe any apparent defects in the Work, assist Owner in consultations and discussions with Contractor concerning correction of any such defects, and make recommendations as to replacement or correction of Defective Work, if present.
 - 5. Perform or provide the following additional Post-Construction Phase tasks or deliverables: None listed at this time.
 - 6. In company with Owner or Owner's representative, provide an inspection of the Project within one month before the end of the Correction Period to ascertain whether any portion of the Work is subject to correction.
- B. The Post-Construction Phase services may commence during the Construction Phase and, if not otherwise modified in this Exhibit A, will terminate at the end of the Construction Contract's correction period.

Add the following to Exhibit A, Part 2 – Additional Services:

A2.01 Additional Services Requiring Owner's Written Authorization

- 9. Services attributable to more prime construction contracts than specified in Paragraph A1.03.C.
- 10. Services during out-of-town travel required of Engineer other than for visits to the Site or Owner's office.

- 12. Preparing additional Bidding Documents or Contract Documents for alternate bids or prices requested by Owner for the Work or a portion thereof.
- 13. Determining the acceptability of substitute materials and equipment proposed during the Bidding or Negotiating Phase when substitution prior to the award of contracts is allowed by the Bidding Documents.
- 14. Assistance in connection with Bid protests, rebidding, or renegotiating contracts for construction, materials, equipment, or services, except when such assistance is required.
- 15. Providing construction surveys and staking to enable Contractor to perform its work other than as required under Paragraph A1.05.A.6, and any type of property surveys or related engineering services needed for the transfer of interests in real property; and providing other special field surveys.
- 16. Providing Construction Phase services beyond the original date for final completion of the Work.
- 18. Preparing and furnishing to Owner Record Drawings showing appropriate record information based on Project annotated record documents received from Contractor.

Add Exhibit A of Amendment 3 to Exhibit A

Replace Section C2.01.3 of Exhibit C – Article 2 – Owner's Responsibilities with the following:

3. The total compensation for services under Paragraph C2.01 is estimated to be \$1,134,504 based on the following assumed distribution of compensation and as detailed in Attachment 1 to Exhibit C, Exhibit B of Amendment 1, and Exhibit B of Amendment 3:

a. Bid Phase Services

\$28,740

b. Construction Phase Services

\$1,105,764

Add Exhibit B of Amendment 3 to Attachment 1 of Exhibit C

Exhibit D shall be added as follows:

Paragraph 1.01.A of the Agreement is supplemented to include the following agreement of the parties:

D1.01 Resident Project Representative

A. Engineer shall furnish a Resident Project Representative ("RPR"), assistants, and other field staff to assist Engineer in observing progress and quality of the Work. The RPR, assistants, and other field staff under this Exhibit D may provide full time representation or may provide representation to a lesser degree.

- B. Through such additional observations of Contractor's work in progress and field checks of materials and equipment by the RPR and assistants, Engineer shall endeavor to provide further protection for Owner against defects and deficiencies in the Work. However, Engineer shall not, during such visits or as a result of such observations of Contractor's work in progress, supervise, direct, or have control over the Contractor's Work nor shall Engineer have authority over or responsibility for the means, methods, techniques, sequences, or procedures of construction selected or used by Contractor, for security or safety at the Site, for safety precautions and programs incident to the Contractor's work in progress, for any failure of Contractor to comply with Laws and Regulations applicable to Contractor's performing and furnishing the Work, or responsibility for Contractor's failure to furnish and perform the Work in accordance with the Contract Documents. In addition, the specific terms set forth in section A.1.05 of Exhibit A of the Agreement are applicable.
- C. The duties and responsibilities of the RPR are as follows:
 - 1. General: RPR is Engineer's agent at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR's actions. RPR's dealings in matters pertaining to the Contractor's work in progress shall in general be with Engineer and Contractor, keeping Owner advised as necessary. RPR's dealings with subcontractors shall only be through or with the full knowledge and approval of Contractor. RPR shall generally communicate with Owner with the knowledge of and under the direction of Engineer.
 - 2. Schedules: Review the progress schedule, schedule of Shop Drawing and Sample submittals, and schedule of values prepared by Contractor and consult with Engineer concerning acceptability.
 - 3. Conferences and Meetings: Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences and other project-related meetings, and prepare and circulate copies of minutes thereof.

4. Liaison:

- a. Serve as Engineer's liaison with Contractor, working principally through Contractor's superintendent, assist in providing information regarding the intent of the Contract Documents.
- b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.
- c. Assist in obtaining from Owner additional details or information, when required for proper execution of the Work.
- 5. Interpretation of Contract Documents: Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.

- 6. Shop Drawings and Samples:
 - a. Record date of receipt of Samples and approved Shop Drawings.
 - b. Receive Samples which are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.
 - c. Advise Engineer and Contractor of the commencement of any portion of the Work requiring a Shop Drawing or Sample submittal for which RPR believes that the submittal has not been approved by Engineer.
- 7. Modifications: Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with RPR's recommendations, to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.
- 8. Review of Work and Rejection of Defective Work:
 - a. Conduct on-Site observations of Contractor's work in progress to assist Engineer in determining if the Work is in general proceeding in accordance with the Contract Documents.
 - b. Report to Engineer whenever RPR believes that any part of Contractor's work in progress will not produce a completed Project that conforms generally to the Contract Documents or will imperil the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise Engineer of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.
- 9. Inspections, Tests, and System Startups:
 - a. Consult with Engineer in advance of scheduled major inspections, tests, and systems startups of important phases of the Work.
 - b. Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.
 - c. Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.
 - d. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Project, record the results of these inspections, and report to Engineer.

10. Records:

- a. Maintain at the Site orderly files for correspondence, reports of job conferences, reproductions of original Contract Documents including all Change Orders, Field Orders, Work Change Directives, Addenda, additional Drawings issued subsequent to the execution of the Contract, Engineer's clarifications and interpretations of the Contract Documents, progress reports, Shop Drawing and Sample submittals received from and delivered to Contractor, and other Project-related documents.
- b. Prepare a daily report or keep a diary or log book, recording Contractor's hours on the Site, weather conditions, data relative to questions of Change Orders, Field Orders, Work Change Directives, or changed conditions, Site visitors, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to Engineer.
- c. Record names, addresses, fax numbers, e-mail addresses, web site locations, and telephone numbers of all Contractors, subcontractors, and major suppliers of materials and equipment.
- d. Maintain records for use in preparing Project documentation.
- e. Upon completion of the Work, furnish original set of all RPR Project documentation to Engineer.

11. Reports:

- a. Furnish to Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the progress schedule and schedule of Shop Drawing and Sample submittals.
- b. Draft and recommend to Engineer proposed Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.
- c. Furnish to Engineer and Owner copies of all inspection, test, and system start-up reports.
- d. Immediately notify Engineer of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, damage to property by fire or other causes, or the discovery of any Constituent of Concern.
- 12. Payment Requests: Review Applications for Payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the schedule of values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.
- 13. Certificates, Operation and Maintenance Manuals: During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Specifications to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents,

and have these documents delivered to Engineer for review and forwarding to Owner prior to payment for that part of the Work.

14. Completion:

- a. Participate in a Substantial Completion inspection, assist in the determination of Substantial Completion and the preparation of lists of items to be completed or corrected.
- b. Participate in a final inspection in the company of Engineer, Owner, and Contractor and prepare a final list of items to be completed and deficiencies to be remedied.
- c. Observe whether all items on the final list have been completed or corrected and make recommendations to Engineer concerning acceptance and issuance of the Notice of Acceptability of the Work.

D. Resident Project Representative shall not:

- 1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).
- 2. Exceed limitations of Engineer's authority as set forth in the Agreement or the Contract Documents.
- 3. Undertake any of the responsibilities of Contractor, subcontractors, suppliers, or Contractor's superintendent.
- 4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of Contractor's work unless such advice or directions are specifically required by the Contract Documents.
- 5. Advise on, issue directions regarding, or assume control over safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
- 6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
- 7. Accept Shop Drawing or Sample submittals from anyone other than Contractor.
- 8. Authorize Owner to occupy the Project in whole or in part.