



San Jacinto River Authority

REQUEST FOR QUALIFICATIONS RFQ #12-003

Water Transmission System Construction Management and Inspection Consultant
McCaleb / Fish Creek ("T"), Woodlands ("W") and Conroe ("C") Routes and
Associated Water Receiving Facilities
SJRA GRP Program

The Lone Star Groundwater Conservation District (LSGCD) developed and issued a District Regulatory Plan (DRP Phase IIB) in 2010 to limit the total amount of groundwater withdrawn from the aquifers that serve Montgomery County by January 1, 2016. The San Jacinto River Authority (SJRA) is implementing the Groundwater Reduction Program (GRP) Program to assist participants in meeting this regulatory requirement.

The SJRA is implementing a wholesale raw surface water treatment facility and a treated surface water supply system that will include a new raw water intake and pump station, surface water treatment plant, finished water storage and pumping facilities, and an extensive transmission system to deliver potable surface water within portions of Montgomery County.

As such, the SJRA has identified the need for a Water Transmission System Construction Management and Inspection (CM&I) Consultant to provide professional construction management, administration, and inspection services for proposed "W", "T" and "C" Routes and water receiving facility final design review, construction contractor procurement, and construction. The proposed approximately 57.1 mile water transmission system route generally follows the following alignment:

1. The proposed McCaleb / Fish Creek ("T") surface water transmission line route begins at the surface water treatment facility's west boundary line. (See attached Exhibit "B") From this point, the surface water transmission line extends west paralleling the Lake Conroe Dam until intersecting and southwardly crossing SH 105. Continuing south, the surface water transmission line parallels McCaleb Road, Fish Creek Thoroughfare, Sendera Ranch Road, and FM 2978, until terminating at a point near the intersection of FM 2978 and Research Forest Drive. The "T" route includes tying into the Mid South Entergy Water Plant, water receiving facility.

- a. The "T" segment alignment generally includes the following:
 - i. Approximately 64,000 lineal feet of 54-inch and 60-inch transmission lines;
 - ii. Approximately 10,567 lineal feet of 42-inch and 2,300 lineal feet of 16-inch transmission lines;
 - iii. Crossing of the San Jacinto River at the Lake Conroe Dam Gate Structure;
 - iv. Four (4) highway crossings, including SH 105, FM 2854, FM 1488, and FM 2978;
 - v. One (1) railroad crossing;
 - vi. Twenty-seven (27) roadway crossings;
 - vii. Four (4) creek crossings, including Lake Creek;
 - viii. Numerous pipeline crossings; and
 - ix. Surface and subsurface interferences.

2. The proposed Woodlands ("W") route begins at a point near the intersection of FM 2978 and Research Forest Drive ("T" Route termination point). From this point, the proposed "W" route alignment extends southwest, east, and southeast along FM 2978, Research Forest Drive, Gosling Road, Kuykendahl Road, Northline Road, Grogans Mill Road, South Millbend Drive, Panther Creek, Union Pacific Railroad, and Blair Road.
 - a. The "W" route includes tying into the following water receiving facilities:
 - i. SJRA Water Plant No. 1;
 - ii. SJRA Water Plant No. 2;
 - iii. SJRA Water Plant No. 3;
 - iv. SJRA Water Plant No. 4;
 - v. SJRA Water Plant No. 5;
 - vi. Montgomery County WCID #1 Water Plant No. 4;
 - vii. Southern Montgomery County MUD Water Plant No. 2;
 - viii. Southern Montgomery County MUD Water Plant No. 3;
 - ix. City of Oak Ridge North Water Plant No. 1;
 - x. Rayford Road MUD Water Plant No. 1; and
 - xi. Rayford Road MUD Water Plant No. 2.
 - b. The described surface water transmission system "W" route generally includes the following:

- i. Approximately 30,200 lineal feet of 48-inch and 42-inch transmission lines;
 - ii. Approximately 27,000 lineal feet of 24-inch and 20-inch transmission lines;
 - iii. Approximately 35,000 lineal feet of 18-inch and 16-inch transmission lines;
 - iv. Approximately 27,500 lineal feet of 10-inch and 8-inch transmission lines;
 - v. Three (3) Highway crossing, including FM 2978 and Interstate Highway 45-North;
 - vi. Forty-Nine (49) roadway crossings;
 - vii. Four (4) creek crossings, including Panther Creek;
 - viii. Numerous pipeline crossings; and
 - ix. Surface and subsurface interferences.
3. The proposed Conroe ("C") surface water transmission line route begins at the surface water treatment facility's east boundary line. From this point, the surface water transmission line extends east along the temporary-to-permanent SJRA Surface Water Treatment Facilities access roadway, across Longmire Drive to the Entergy power line easement. At this point, the water transmission line tees to the north and south. North, the water transmission line travels along the power line easement to FM 830, turns east paralleling FM 830 to the Union Pacific Railroad, turns south paralleling the railroad tracks to a point north of the Conroe Industrial Park. At this point, the water transmission line turns east and then south through the Industrial Park to FM 3080. South, the water transmission line travels along the power line easement to a point north of SH 105, turns east along property lines to terminate at a point west of IH 45.
 - a. The "C" route includes tying into the following water receiving facilities:
 - i. City of Conroe Water Plant No. 15;
 - ii. City of Conroe Water Plant No. 21;
 - iii. City of Conroe Water Plant No. 22;
 - iv. City of Conroe Water Plant No. 6; and
 - v. City of Conroe Water Plant No. 8.
 - b. The described surface water transmission system "C" route generally includes the following:

- i. Approximately 10,500 lineal feet of 42-inch transmission line;
- ii. Approximately 12,400 lineal feet of 36-inch transmission line;
- iii. Approximately 2,700 lineal feet of 30-inch transmission line;
- iv. Approximately 16,100 lineal feet of 24-inch transmission line;
- v. Approximately 18,400 lineal feet of 20-inch transmission line;
- vi. Approximately 15,500 lineal feet of 16-inch transmission line;
- vii. Approximately 14,600 lineal feet of 12-inch transmission line
- viii. Six (5 + 1 potential) highway crossings, including Interstate Highway 45-North (twice), State Highway 75 North, North FM 3083 West, North Loop 336 West, and FM 830;
- ix. Numerous roadway crossings;
- x. One (1) creek crossings;
- xi. Numerous pipeline crossings; and
- xii. Surface and subsurface interferences.

4. It is also anticipated that a fiber optic network will be installed to facilitate SCADA communication and instrument control between each surface water receiving facility and the surface water treatment facilities, GRP Division administration building.

NOTE: The water transmission line alignment, line sizes, delivery points, crossings and features may be revised. The description provides only a general concept of the possible system features.

The SJRA has retained the services of a Program Management Consultant to support the SJRA's management of the GRP Program. The Program Management Consultant provides assistance to the SJRA for the management of GRP Program level and GRP Project level contracts. During construction, it is anticipated that the Program Management Consultant will provide and/or coordinate the various Engineers of Record's construction phase services during Construction. It is anticipated that some Program Management Consultant staff will be utilized by the CM&I Consultant to support the CM&I Consultant's efforts. (See Scope of Work). In this way, GRP Program and GRP Project related institutional understanding may be integrated and utilized by the Water Transmission System Construction Management and Inspection Consultant's to facilitate the execution of its scope of work.

The SJRA has also retained the services of a Program Management Surveyor Consultant, Program Management Geotechnical Consultant, and Program Management

Corrosion Consultant, to support the SJRA's development of a Design Standards and Criteria Manual, review appropriate design / technical documents, and design specialty items to be incorporated into the designer's documents. These Program Management Consultants will assist the SJRA and the Water Transmission System CM&I Consultant during the design and construction phases of the GRP Program.

GRP PROGRAM DELIVERABLES

The GRP Program has developed a series of standard technical and administration manuals. Manuals (or select portions thereof) to be provided to the Water Transmission System Construction Management and Inspection Consultant by the GRP Program and implemented by the Water Transmission System Construction Management and Inspection Consultant include but is not limited to the following:

1. Program Management Plan (PMP); and
2. Construction Contract Manual (GRP Program standard construction contract documents including technical specifications and standard forms)
3. Other standard GRP Program documents, as necessary.

SCOPE OF CONSULTANT SERVICES

The Water Transmission System Construction Management and Inspection Consultant may provide professional services for general water transmission system preconstruction phase support and construction phase construction management, administration and inspection.

The water transmission system design, alignment, plan and profile and appurtenances will be translated into geographic information system (GIS). Therefore, the Water Transmission System Construction Management and Inspection Consultant will be required to provide global positioning system (GPS) services relative to surface water transmission system valves, manholes, junction boxes, vents, etc.

It shall be the Water Transmission System CM&I Consultant's responsibility to assemble a team of qualified construction management and inspection service professionals as needed to meet resource and discipline/area services requirements. The SJRA has no objection to firms who may wish to consider teaming with sub-consultants so that the prospective firm's team has the ability and the depth of

resources to offer the required level of services within the required schedule and budget. This resource and discipline/area of experience includes but is not limited to:

1. Construction management and administration;
2. Responsible inspection / Inspector oversight;
3. Large diameter water transmission pipeline inspection (60-inch through 30-inch);
4. Small diameter water transmission pipeline inspection (24-inch through 10-inch);
5. Civil inspection;
6. Mechanical inspection (below and above grade);
7. Electrical inspection (limited);
8. Fiber optic inspection;
9. Structural inspection;
10. Pavement inspection (removal and replacement);
11. Landscaping and tree protection inspection;
12. Open trench and trenchless inspection (directional drilling, tunneling);
13. Environmental inspection (SW3P, well pointing, hazardous materials identification, wetlands, etc.);
14. Construction cost estimating;
15. Electronic Critical Path Method (CPM) scheduling;
16. Claims Management;
17. Risk Management;
18. Safety Management;
19. Global positioning system (GPS);
20. Utility conflict resolution;
21. Traffic Control; and
22. Other.

The scope of Water Transmission System Construction Management and Inspection Consultant services may generally include but may not be limited to the following areas of Work:

1. Generally:
 - Provide construction management and inspection support services as an extension of SJRA's GRP Program Team and be responsible for duties as defined by the SJRA. Such responsibilities shall not be limited in any way by any specific tasks identified in this document or subsequent Agreement and the Water Transmission System CM&I Consultant understands that it is providing professional services, the details of which are subject to change

based on the needs of the GRP Program and GRP Projects and direction from the SJRA;

- Monitor, coordinate, observe, and evaluate project activities as identified by the Water Transmission System CM&I Consultant and as directed by the SJRA to ensure optimum scope/configuration control, cost/schedule compliance, and quality assurance/quality control of construction documents, and Construction Contractor performance, with a focus on proactive management, leading to claims avoidance and/or claims mitigation;
- Final design phase bidability and constructability review and recommendation services;
- Construction contractor procurement phase services;
- Construction contract management services for multiple, simultaneous construction projects;
- Construction contract administration services for multiple, simultaneous construction projects; and
- Construction contract inspection services for multiple, simultaneous construction projects.

2. Scope of Work as defined in attached Exhibit "A".

Therefore the SJRA is requesting a Statement of Qualifications from qualified firms to provide similar professional services as a Water Transmission System Construction Management and Inspection Consultant. The respondent firm/team shall include appropriately qualified, experienced and licensed professionals to provide these as well as other services required by the GRP Program.

WATER TRANSMISSION SYSTEM CONSTRUCTION MANAGEMENT AND INSPECTION CONSULTANT SELECTION

1. This RFQ does not commit SJRA to enter into a contract, nor does it obligate it to pay any costs incurred in the preparation and submission of Qualifications and subsequent discussions, interviews and/or presentations in anticipation of a contract.
2. SJRA reserves the right to:
 - Reject any and all Statements of Qualifications received.
 - Cancel the entire RFQ.
 - Remedy technical errors in the RFQ process.

- Negotiate with any, all, or none of the respondents to the RFQ.
 - Waive informalities and irregularities.
 - Modify the selection process.
 - Modify project scope.
3. It is anticipated that a single Water Transmission System Construction Management and Inspection Consultant will be recommended to the SJRA General Manager and SJRA Board of Directors for contract award. *However, the SJRA reserves the right to enter into negotiations with more than one (1) Water Transmission System Construction Management and Inspection Consultant from firms who have responded to this RFQ. The SJRA also reserves the right to select more than one (1) Water Transmission System Construction Management and Inspection Consultant to perform the referenced professional Construction Management and Inspection Consultant services.* Resultant division of the proposed scope of work into separate contract awards, if any, shall be at the sole discretion of the SJRA.
 4. Any firm or company currently providing professional engineering services as a prime consultant (Water Transmission System Engineering Consultant) to the SJRA for the design of a “W”, “T”, or “C” segment of the proposed Water Transmission System is prohibited from performing:
 - As the Water Transmission System CM&I Consultant (prime); and
 - Performing inspection, management, and administration services on that portion of the “W”, “T”, and “C” segment for which it had design responsibility, if a member of the selected Water Transmission System CM&I Consultant Team.
 5. Any firm or company currently providing professional engineering services as a sub-consultant to a prime consultant (Water Transmission System Engineering Consultant) providing professional engineering services to the SJRA for the design of a “W”, “T”, and “C” segment of the proposed Water Transmission System, is prohibited from performing inspection and certain management and administration services on that portion of the “W”, “T”, and “C” segment for which it had design responsibility. Such determination shall be made by and at the sole discretion of the SJRA.
 6. Qualifications Based Selection Criteria: Submitting firm SOQs will be evaluated and ranked based upon the responses provided relative to the content requirements of this RFQ as provided in this section and as further detailed in this following section titled INSTRUCTIONS TO RESPONDING FIRMS.

The evaluations may be performed by a review committee comprised of SJRA and Program Management Consultant technical, management and administrative personnel.

The evaluation criteria and the corresponding maximum point score associated with each evaluation criteria used to identify firms/teams to be short listed for further consideration in the selection process is as follows:

- Responsiveness to Requirements of this RFQ , relevant experience, expertise, and qualifications of the prime consultant firm and proposed subconsultant firms, if any **(10 points)**;
- Relevant experience, expertise, qualifications and commitment of the proposed Construction/Project Manager **(25 points)**;
- Relevant experience, expertise, qualifications and commitment of the proposed Resident Engineer(s) and lead or Senior Inspectors **(20 points)**;
- Proposed management, administrative and technical team depth/support services, experience, expertise, qualifications and commitment **(15 points)**
- Project approach **(20 points)**;
- Formal Presentation and Interview **(10 points)**

TOTAL POSSIBLE POINTS: 100 POINTS

7. The SJRA may select directly from or perform interviews with up to three (3) highest ranked firms. Additional firms may also be asked to interview or may conduct discussions with selected firms. Firms will be notified of their interview dates and times by the SJRA Purchasing Department. Details pertaining to interviews will be provided at the time of Firm notification of having been short listed. Details pertaining to any scheduled interviews will be provided to the respective respondents by the SJRA Purchasing Department.
8. Type and limits of insurance coverage - **Note: SJRA's insurance(s) requirements are stated in Article 11 – INSURANCE of SJRA's Standard Work Order Professional Services Agreement a copy of which is provided in Exhibit "C" of this document. No additional payment will be made by the SJRA for such insurance(s). Firms are hereby further notified that the SJRA**

will not entertain requests (currently / or during contract negotiation) of firms requesting such additional payment. Firms who cannot meet these minimum standards prior to executing an agreement will not be considered. No exception shall be made.

9. A copy of the SJRA Standard Work Order Professional Services Agreement (Contract) to be executed for the Work of this RFQ, is provided for review/reference in Exhibit "C" of this document. **Note: The SJRA will not entertain requests of firms to modify, change, or in any way, alter the above referenced standard work order Agreement, including Article 9 – INDEMNIFICATION language (See also attached Exhibit "C"). Firms who cannot or are unwilling to meet the terms/conditions of Article 9, should not submit an SOQ. No exception shall be made.**
10. Contact with SJRA Board of Directors, SJRA executive staff or SJRA or Program Management Consultant staff concerning this RFQ after the issuance of this RFQ may eliminate that firm from contract award consideration. Exception is made for the pre-submittal meeting as noted below (INSTRUCTIONS TO RESPONDING FIRMS, Item No. B).

INSTRUCTIONS TO RESPONDING FIRMS

A. Points of Contact

Direct all questions regarding this Request for Qualifications (RFQ) to Stephen Gibson, SJRA Purchasing Department at sgibson@sjra.net.

B. Pre-submittal Meeting

A single **mandatory** pre-submittal meeting will be conducted at the San Jacinto River Authority, General and Administration (G&A) Building located at 1577 Dam Site Road, Conroe, TX 77304 (SJRA Lake Conroe Campus), **beginning 2:00 PM (CST) on Tuesday, November 08, 2011.**

C. Statement of Qualifications (SOQ) Requirements

1. SOQs shall not exceed fifteen (15) pages including transmittal letter and attachments; and excluding covers and plain section dividers. SOQs shall be

- printed on single side 8 ½” by 11” pages with not less than 1 inch margins, not less than 1.25 line spacing and not less than 11 point font.
2. Submit ten (8) bound copies and one (1) electronic PDF copy on CD, of Qualifications to Stephen Gibson, GRP Division Buyer, San Jacinto River Authority, G&A Building, 1577 Dam Site Road, Conroe, TX 77304 **no later than 2:00 PM (CST), Tuesday, November 22, 2010. Submittals received after this date and time will be returned unopened.**
 3. Transmittal Letter – Provide a transmittal letter signed by an officer of the respondent firm who has the authority to commit the firm to the Program.
 4. General Information of the respondent firm in the following list format:
 - a. Firm name.
 - b. Corporate address.
 - c. Address, phone number and fax number of Texas office supporting this Program.
 - d. Primary contact name, phone number and email address.
 - e. Website address.
 - f. Federal tax identification number.
 - g. Texas Board of Professional Engineers Firm Registration Number (if applicable).
 - h. Number of year’s firm in business.
 - i. Type of organization(s) (individual, partnership, or corporation).
 - j. Date of organization (month and year).
 - k. Location(s) of principal and supporting offices.
 - l. Name(s) and date(s) of predecessor organization(s).
 - m. Total number of employees located in Texas office(s) supporting this Program.
 - n. Number and type of professionals and corresponding registrations/certifications located in Texas office(s) supporting this Program.
 - o. Type and limits of insurance coverage.
 5. Team Organizational Chart.
 - a. Denote proposed key Individuals;
 - b. Identify proposed key individual firm association; and
 - c. Include a brief description of the roles and responsibility of these key individuals.
 6. Experience of the individual Construction Manager:

Provide the following information to clearly demonstrate the experience and capabilities of the individual:

- a. Name.
 - b. Position/Title within firm.
 - c. Role/responsibility for this GRP Program Project.
 - d. Availability and time commitment to the GRP Program.
 - e. Current location and location during execution of the GRP Program Project
 - f. Education.
 - g. Applicable registration or certification.
 - h. Years of experience directly related to the aspects of this GRP Program Projects.
 - i. Experience relevant to the specific aspects and anticipated services for the transmission system construction management and inspection services of the GRP Program's Projects. Provide summary of experience and qualifications, and detailed descriptions of no more than five (5) recent assignments of similar nature using the following format:
 - 1) Assignment Name/Location/Client.
 - 2) Project description.
 - 3) Work/services performed under direct supervision of the individual.
 - 4) Subconsultants utilized on the project and nature of work of those sub consultants.
 - 5) Involvement required by the Owner.
 - 6) Original project schedule including all key milestones (constraints, compliance deadlines, etc.).
 - 7) Actual completion date of project including all key milestones.
 - 8) Budget and schedule management and adherence.
 - 9) Claims management activities.
 - 10) Client contact name, title/position, current phone number and email address.
 - j. Experience with San Jacinto River Authority.
7. Experience of the individual Resident Engineer and lead or Senior Inspectors:

Provide the following information to clearly demonstrate the experience and capabilities of the individual:

- a. Name.
- b. Position/Title within firm.
- c. Role/responsibility for this GRP Program Project.
- d. Availability and time commitment to the GRP Program.
- e. Current location and location during execution of the GRP Program Project.
- f. Education.
- g. Applicable registration or certification.

- h. Years of experience directly related to the aspects of this GRP Program Projects.
 - i. Experience relevant to the specific aspects and anticipated services for the transmission system construction management and inspection services of the GRP Program's Projects. Provide summary of experience and qualifications, and detailed descriptions of no more than five (5) recent assignments of similar nature using the following format:
 - 1) Assignment Name/Location/Client.
 - 2) Project description.
 - 3) Work/services performed under direct supervision of the individual.
 - 4) Subconsultants utilized on the project and nature of work of those sub consultants.
 - 5) Involvement required by the Owner.
 - 6) Original project schedule including all key milestones (constraints, compliance deadlines, etc.).
 - 7) Actual completion date of project including all key milestones.
 - 8) Budget and schedule management and adherence.
 - 9) Claims management activities.
 - 10) Client contact name, title/position, current phone number and email address.
 - j. Experience with San Jacinto River Authority.
8. Support Resources:
 - a. Name.
 - b. Position/Title.
 - c. Firm name.
 - d. Role/Responsibility for the GRP Program Project(s).
 - e. Education.
 - f. Applicable registration or certification.
 - g. Years of experience directly related to the specific aspects and anticipated services for the GRP Program Project(s).
 - h. Experience relevant to the specific aspects and anticipated services for the GRP Program Project(s).
 - i. Experience with San Jacinto River Authority.
9. Project Understanding and Approach:

Provide a thorough discussion revealing the Respondent firm's approach to planning and the performance of its CM&I services. Approach should demonstrate the Water Transmission System CM&I Consultant's understanding of the indicated scope of work and Project work of the GRP Program.

10. Successful firms shall, as a minimum, demonstrate their proposed team's ability to:
 - a. Implement best management practices and established project controls to achieve GRP Program and SJRA goals;
 - b. Develop and implement an effective staffing management plan;
 - c. Manage construction to achieve quality of work required by the construction contract;
 - d. Effectively manage owner's costs and to meet construction schedule;
 - e. Coordinate construction activities and to minimize construction impacts to the general public;
 - f. Work with the contractor in resolving construction conflicts;
 - g. Demonstrate its understanding of the GRP Program and associated water transmission system Projects;
 - h. Utilize an electronic document management system for the purposes of document control and document transmittal;
 - i. Successfully coordinate the activities of the Engineer of Record (i.e., submittals, RFIs, etc.);
 - j. Coordinate activities of and with the Owner; and
 - k. Successfully manage, administer, and / or inspect similar Projects.

11. Other Information.

Provide other information pertinent to this GRP Program Project regarding respondent firm, sub-consultants and support resources.

12. Potential Conflicts of Interest.

Firms seeking to do business with SJRA are responsible for maintaining compliance with the applicable provisions of Chapter 176, Local Government Code, related to disclosure of conflicts of interest. The Conflict of Interest Questionnaire is available for downloading on the Texas Ethics Commission's website at <http://www.ethics.state.tx.us/forms/CIQ.pdf> and should be submitted to the SJRA under separate cover. The completed Conflict of Interest Questionnaire will be posted on SJRA's website as required by Chapter 176.

- D. A SOQ may be withdrawn by Proposer, provided an authorized individual of the Proposer submits a written request to withdraw the SOQ prior to the time set for receipt of submittals. Withdrawn SOQ's may be resubmitted, with or without modifications, prior to the SOQ submittal date and time.

E. All materials submitted to SJRA and upon receipt by the SJRA become public property and are subject to the Texas Public Information Act, Government Code Chapter 552. If a Proposer does not desire proprietary information in the SOQ to be disclosed, each page must be identified and marked proprietary at the time of submittal. SJRA will, to the extent provided by law, endeavor to protect such information from disclosure. The final decision as to what information must be disclosed, however, lies with the Texas Attorney General. Failure to identify proprietary information will result in all unmarked sections being deemed non-proprietary and available upon public request. Proposers shall not be permitted to mark entire SOQ as proprietary.

F. SOQ's will be reviewed in a manner that avoids disclosure of the contents to competing Proposers and keeps the content confidential during the procurement process and negotiations. According to Texas law disclosure requirements, the SJRA will read into the public record the names of the Proposers which submit an SOQ.

G. Under Texas law, information relating to Requests for Qualifications may be kept confidential until a contract has been awarded. SJRA shall not release information relative to this RFQ during the SOQ evaluation process or prior to Contract award.

H. Equal Employment Opportunity Requirements.

SJRA highly encourages applicants to implement Affirmative Action practices in their employment programs. This means applicants should not discriminate against any employee or applicant for employment because of race, color, national origin, religion, sex, age, handicap, or political belief or affiliation.

**San Jacinto River Authority
GRP PROGRAM
WORK ORDER NO. 1**

EXHIBIT “A”

This scope of work is being provided to Respondents as part of the RFQ for informational purposes only. While the San Jacinto River Authority anticipates that a similar scope of work and Work Order (WO) will be attached to and made a part of any Professional Services Agreement (PSA) with the Water Transmission System Construction Management and Inspection (CM&I) Consultant. The Authority reserves the right to make modifications and clarifications to this document and the document indicated scope of work prior to its execution and incorporation into any PSA for Water Transmission System CM&I Consultant services negotiated between the SJRA and the SJRA Board of Directors approved, Water Transmission System CM&I Consultant.

The SJRA has identified the need for a Water Transmission System Construction Management and Inspection (CM&I) Consultant to provide professional construction management, administration, and inspection services for the proposed “W”, “T” and “C” Routes and water receiving facility construction projects of the GRP Program. The scope of work to be executed by the SJRA Board of Directors approved Water Transmission System CM&I Consultant, shall include but may not be limited to the following:

SCOPE OF WORK

GRPM00001.10XX.2B001 – WATER TRANSMISSION SYSTEM CONSTRUCTION MANAGEMENT AND INSPECTION CONSULTANT; WORK ORDER NO. 1

General

GRPM00001.10XX.2B001.30600.4260 – GENERAL CONSTRUCTION MANAGEMENT (ADMINISTRATION) AND INSPECTION SERVICES

1. The Water Transmission System Construction Management and Inspection (CM&I) Consultant shall work as an extension of the SJRA’s staff during the execution of its duties and responsibilities. Such staff will be subject to oversight, monitoring, and direction of the SJRA.
2. The Water Transmission System CM&I Consultant shall provide the number and the type of qualified professional construction management and inspection staff, as dictated by the number and type of GRP Program Projects being executed and/or as directed by the SJRA. The SJRA retains the right to review the qualifications of Water Transmission System CM&I Consultant proposed staff and retains the right to reject or approve all Water Transmission System CM&I Consultant proposed staff.

The Water Transmission System CM&I Consultant shall work with the SJRA to effectively plan the Water Transmission System CM&I Consultant’s securing and deployment of its staff, including who, where, and when staff may be utilized. The Water Transmission System CM&I Consultant, as part of the GRP Program Team, will work to continuously identify and engage their respective resources for the formation (and maintenance) of its staff, in support of the GRP Program and GRP Program Projects.

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- a. Such staff shall be located at the offices of the SJRA Lake Conroe Campus for the duration of this Work Order;
 - b. The number of staff shall correspond to the needs of Program as mutually determined by the SJRA and the Water Transmission System CM&I Consultant;
 - c. The positions, qualifications, and duration of such staff shall be subject to SJRA review and approval and shall be coordinated with the Water Transmission System CM&I Consultant to ensure compliance with GRP Program objectives and the successful execution of the GRP Program and GRP Program Projects.
3. The Water Transmission System CM&I Consultant staff located at the SJRA Lake Conroe Campus shall report directly to SJRA staff that will provide direction on execution of work tasks listed herein.
4. The Water Transmission System CM&I Consultant will be provided office space by the SJRA, at the SJRA's Lake Conroe Campus. Water Transmission System CM&I Consultant occupancy terms shall be as follows:
- a. The assignment of Water Transmission System CM&I Consultant personnel to each office space shall receive prior SJRA approval;
 - b. The duration of occupancy shall in no instance be longer than the effective term of this Work Order;
 - c. Water Transmission System CM&I Consultant or staff of the Water Transmission System CM&I Consultant may be asked at anytime to relocate or move out of the Water Transmission System CM&I Consultant occupied office. The Water Transmission System CM&I Consultant shall comply with such a request within five (5) calendar days after receiving such written notice by the SJRA;
 - d. The SJRA shall pay all building and utility related costs including those for the connection and utilization of electricity, natural gas, water, wastewater, internet, and telephone. A lunch room (microwave, refrigerator, table, and chairs) and parking area will be provided;
 - e. Office supplies, cables, printers, copiers, scanners, etc. will be provided to the Water Transmission System CM&I Consultant by the SJRA to responsibly and effectively execute its duties under this contract. Water Transmission System CM&I Consultant shall be responsible for providing laptop or work station computers to its staff; and
 - f. Water Transmission System CM&I Consultant provided wireless telephone communication systems to permit immediate and prompt communication, field inspection vehicles, and small tools required to perform construction management, administration, and inspection services shall be provided by the Water Transmission System CM&I Consultant at no additional cost to the SJRA.
5. Water Transmission System CM&I Consultant shall provide professional construction management, administration, and inspection services for the GRP Program's proposed "W", "T" and "C" Routes and downstream terminus water receiving facilities.
- a. Generally, the proposed McCaleb / Fish Creek ("T") surface water transmission line route begins at the surface water treatment facility's west boundary line. (See attached Exhibit "A") The "T"

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route is subdivided into “T1”, “T2”, and “T3”. From this point, the surface water transmission line extends west paralleling the Lake Conroe Dam until intersecting and southwardly crossing SH 105. Continuing south, the surface water transmission line parallels McCaleb Road, Fish Creek Thoroughfare, Sendera Ranch Road, and FM 2978, until terminating at a point near the intersection of FM 2978 and Research Forest Drive. The “T” route includes tying into the Mid South Entergy Water Plant water receiving facility:

- i. The “T” segment alignment generally includes the following:
 - a. Approximately 64,000 lineal feet of 54-inch and 60-inch transmission lines;
 - b. Approximately 10,567 lineal feet of 42-inch and 2,300 lineal feet of 16-inch transmission lines;
 - c. Crossing of the San Jacinto River at the Lake Conroe Dam Gate Structure;
 - d. Four (4) highway crossings, including SH 105, FM 2854, FM 1488, and FM 2978;
 - e. One (1) railroad crossing;
 - f. Twenty-seven (27) roadway crossings;
 - g. Four (4) creek crossings, including Lake Creek;
 - h. Numerous pipeline crossings; and
 - i. Surface and subsurface interferences.

- b. Generally, the proposed Woodlands (“W”) route begins at a point near the intersection of FM 2978 and Research Forest Drive (“T” Route termination point). (See attached Exhibit “A”) The “W” route is subdivided into “W1”, “W2”, “W3” and “W4”. From this point, the proposed “W” route alignment extends southwest, east, and southeast along FM 2978, Research Forest Drive, Gosling Road, Kuykendahl Road, Northline Road, Grogans Mill Road, South Millbend Drive, Panther Creek, Union Pacific railroad, and Blair Road.
 - i. The “W” route includes tying into the following water receiving facilities:
 - a. SJRA Water Plant No. 1;
 - b. SJRA Water Plant No. 2;
 - c. SJRA Water Plant No. 3;
 - d. SJRA Water Plant No. 4;
 - e. SJRA Water Plant No. 5;
 - f. Montgomery County WCID #1 Water Plant No. 4;
 - g. Southern Montgomery County MUD Water Plant No. 2;
 - h. Southern Montgomery County MUD Water Plant No. 3;
 - i. City of Oak Ridge North Water Plant No. 1;
 - j. Rayford Road MUD Water Plant No. 1; and
 - k. Rayford Road MUD Water Plant No. 2.

 - ii. The described surface water transmission system “W” route generally includes the following:
 - a. Approximately 30,200 lineal feet of 48-inch and 42-inch transmission lines;
 - b. Approximately 27,000 lineal feet of 24-inch and 20-inch transmission lines;
 - c. Approximately 35,000 lineal feet of 18-inch and 16-inch transmission lines;

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- d. Approximately 27,500 lineal feet of 10-inch and 8-inch transmission lines;
 - e. Three (3) Highway crossing, including FM 2978 and Interstate Highway 45-North;
 - f. Forty-Nine (49) roadway crossings;
 - g. Four (4) creek crossings, including Panther Creek;
 - h. Numerous pipeline crossings; and
 - i. Surface and subsurface interferences.
- c. Generally, the proposed Conroe (“C”) surface water transmission line route begins at the surface water treatment facility’s east boundary line. (See attached Exhibit “A”) The “C” route is subdivided into “C1”, “C2”, “C3”, and “C4”. From this point, the surface water transmission line extends east along the temporary-to-permanent SJRA Surface Water Treatment Facilities access roadway, across Longmire Drive to the Entergy power line easement. At this point, the water transmission line tees to the north and south. North, the water transmission line travels along the power line easement to FM 830, turns east paralleling FM 830 to the Union Pacific Railroad, turns south paralleling the railroad tracks to a point north of the Conroe Industrial Park. At this point, the water transmission line turns east and then south through the Industrial Park to FM 3080. South, the water transmission line travels along the power line easement to a point north of SH 105, turns east along property lines to terminate at a point west of IH 45.
- i. The “C” route includes tying into the following water receiving facilities:
 - a. City of Conroe Water Plant No. 15;
 - b. City of Conroe Water Plant No. 21;
 - c. City of Conroe Water Plant No. 22;
 - d. City of Conroe Water Plant No. 6; and
 - e. City of Conroe Water Plant No. 8.
 - ii. The described surface water transmission system “C” route generally includes the following:
 - a. Approximately 8,700 lineal feet of 30-inch transmission line;
 - b. Approximately 10,500 lineal feet of 42-inch transmission line;
 - c. Approximately 12,400 lineal feet of 36-transmission line;
 - d. Approximately 2,700 lineal feet of 30-inch transmission line;
 - e. Approximately 16,100 lineal feet of 24-inch transmission line;
 - f. Approximately 18,400 lineal feet of 20-inch transmission line;
 - g. Approximately 15,500 lineal feet of 16-inch transmission line;
 - h. Approximately 14,600 lineal feet of 12-inch transmission line
 - i. Six (5 + 1 potential) highway crossings, including Interstate Highway 45-North (twice), State Highway 75 North, North FM 3083 West, North Loop 336 West, and FM 830;
 - j. Numerous roadway crossings;
 - k. One (1) creek crossings;
 - l. Numerous pipeline crossings; and
 - m. Surface and subsurface interferences.

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NOTE: The water transmission line alignment, line sizes, delivery points, crossings and features may be revised. The description provides only a general concept of the possible system features.

6. It is also anticipated that a fiber optic network will be installed to facilitate SCADA communication and instrument control between each surface water receiving facility and the surface water treatment facilities, administration building.
7. Generally, provided CM&I services shall include but are not limited to:
 - a. GRP Program and GRP Program Project level CM&I activities;
 - b. Construction contract management and administration;
 - c. Construction contract compliance;
 - d. Internal and external stakeholder coordination per SJRA direction;
 - e. Reporting;
 - f. Labor resources management;
 - g. Internal stakeholder and as directed by the SJRA, external stakeholder liaison;
 - h. Resident inspection;
 - i. Claims management and avoidance;
 - j. Cost / budget management;
 - k. Schedule management;
 - l. Issues solving and mitigating;
 - m. Risk assessment and mitigation;
 - n. Quality assurance;
 - o. Safety management;
 - p. Materials testing oversight;
 - q. Records management; and
 - r. Providing all services on multiple and simultaneous GRP Program Projects.
8. Together with the SJRA, the Water Transmission System CM&I Consultant shall lead the construction management, administration and coordination of the policies, procedures, and protocols to be implemented by all GRP Program participants. These policies, procedures, and protocols are contained within the GRP Program's Program Management Plan (PMP).
9. A Program Management Information System (PMIS) has been developed which is centralized around the web-based electronic data management system called SharePoint®. While still under development, the Water Transmission System CM&I Consultant shall utilize SharePoint® to communicate with all internal and external GRP Program and GRP Project stakeholders.
10. Provide CM&I services commensurate with the professional standards and quality consistent with those typically met by nationally known and highly regarded engineering and construction management and inspection firms.
11. The Water Transmission System CM&I Consultant shall work to ensure all assigned GRP Program Projects are timely completed within prescribed budgets and quality standards.

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12. The Water Transmission System CM&I Consultant shall work to ensure the safety of the public and the workers.
13. The Water Transmission System CM&I Consultant shall not control or have charge of, and shall not be responsible for, construction means, methods, techniques, sequences, procedures of construction, health or safety programs or precautions connected with the work and shall not manage, supervise, control or have charge of construction.

Construction Management and Administration Services (Pre-construction Phase)

GRPM00001.10XX.2B001.30600.4300 – CONSTRUCTION MANAGEMENT (PRE-CONSTRUCTION PHASE)

CM&I services shall be limited to SJRA and GRP Program staff assistance prior to the commencement of construction activities of the proposed water transmission system pipelines and receiving facilities. The SJRA has entered into professional services agreements (PSAs) with eleven (11) engineering consultants (Water Transmission System Engineering Consultants) for the design of the proposed Surface Water Transmission System. Each engineering consultant is responsible for the design of a particular 4 to 6 (approximately) mile segment, of the “T”, “W”, and “C” transmission system (Segments: “C1”, “C2”, “C3”, “C4”, “T1”, “T2”, “T3”, “W1”, “W2”, “W3”, and “W4”), totaling approximately 57.1 miles. The SJRA has also entered in a PSA with an engineering consultant (Water Plant Facility Engineering Consultant) for the design of the tie-in work to be performed at each of the eighteen (18) existing surface water receiving facilities along the proposed “T”, “W”, and “C” routes.

Based upon a set of criteria to be established by the GRP Program, the seven (7) transmission system segments may be further subdivided into smaller construction packages. For example, the bonding capacity of a typical Construction Contractor, large diameter vs. small diameter waterline construction, and the difficulty associated with a required type of construction, may all play a role in determining the number of construction packages to be awarded. As few as eleven (11) to thirteen (13), or as many as twenty-five (25) or thirty (30) construction packages may be awarded.

The Water Transmission System CM&I Consultant shall perform the following Pre-construction Phase activities:

1. The SJRA has determined it is in the SJRA’s best interest to *integrally* maintain and put into practice the knowledge and understanding of the GRP Program gained through the design phase into construction phase activities. Accordingly, the Water Transmission System CM&I Consultant shall schedule and interview current GRP Program Management Consultant, design manager staff for the purpose of adsorbing not more than two (2) persons into the Water Transmission System CM&I Consultant’s CM&I Team. Together, the SJRA, GRP Program Management Consultant, and Water Transmission System CM&I Consultant, shall mutually agree on selected staff. Additionally, the roles and responsibilities of the selected staff shall be mutually determined. While executing such duties and responsibilities, the GRP Program Management Consultant staff shall be under the direct supervision of the Water Transmission System CM&I Consultant but, the GRP Program Management

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Consultant shall remain under a direct contract to the SJRA. Such staff shall be represented on the Water Transmission System CM&I Consultant's organizational chart.

2. Perform 60%, 90%, and final (bid document) Construction Contract document (drawings and specifications) bidability and constructability reviews and risk identification, assessment, and analysis. Prepare and submit written review comments and recommendations utilizing GRP Program standard forms / documents. Prepare and submit written review comments and recommendations utilizing GRP Program standard forms / documents where applicable. Prepare constructability review report and warrant (without assuming any architectural or engineering responsibility) that plans and specifications are consistent, practical, feasible, and constructible. In addition, the work that is described in the plans and specifications for the various bid (proposal) packages are constructible within the scheduled construction period.
3. Participate in the GRP Program Team's final design phase evaluation of how the transmission system segments may be further subdivided (if any). Prepare and submit written comments and recommendations.
4. Attend each monthly transmission system design project progress meeting.
5. Visit each proposed GRP Program Project site and become familiar with the natural and man-made characteristics of the areas. Prepare and provide written documentation indicating observed and/or identified constraints to construction progress and/or construction cost. Evaluation to include observed or probable impacts due to required lay down or material and equipment staging and work area requirements; traffic type, frequency, and density during normal working hours; overhead and buried utilities; site access; business or resident access; schools; churches; emergency care centers; billboards; etc.
6. Coordinate all activities with the GRP Program Construction Manager. Coordinate with the respective GRP Program design Project Managers as requested by the GRP Program Construction Manager or Senior SJRA staff.
7. Review and become familiar with all GRP Program Standard documents, including but not limited to:
 - a. GRP Program, Project Management Plan (PMP);
 - b. GRP Program Standard Forms and Letters;
 - c. Master Guide Specifications;
 - d. Standard SJRA traditional and alternative project delivery method (procurement) documents; and
 - e. Electronic Standard Design Details (Water Transmission System)
 - f. Other documents as developed by the GRP Program.
8. It is anticipated that the Competitive Sealed Proposal (CSP), alternative project delivery method (PDM), may be utilized to identify the Construction Contractor(s) to be recommend to the SJRA's General Manager for contract award. At the SJRA's direction, the Water Transmission CM&I Consultant may be asked to participate in this PDM, as a member of the GRP Program's Statement of

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Qualifications (SOQ) Review Committee. It is anticipated that this effort will require no more than 20 hours of one (1) individual's time, per procurement.

9. Perform and provide a written evaluation of received Bid or Proposal Form. Provide a Bid or Proposal tabulation. Evaluations shall include analysis for unbalanced bids, irregularities in bids, or other similar issues.

10. Identify all required construction permits. Assist the GRP Program design Project Manager in obtaining all required construction permits. Prepare a permit guidance memorandum which details the permitting process, including but not limited to:
 - a. Required permit(s);
 - b. Permit name;
 - c. Forms to be completed and submitted;
 - d. Required signatures;
 - e. Submittal documents;
 - f. Individual permit cost;
 - g. Who pays (SJRA, engineering consultant, Construction Contractor);
 - h. When required;
 - i. Who picks up/receives permit;
 - j. Posting requirements (if any); and
 - k. Other.

11. Develop and maintain a photographic record of each proposed construction GRP Program Project site. Record shall document existing site conditions immediately prior to the start of construction activities. Water Transmission System CM&I Consultant shall prepare and submit its proposed methodology for obtaining and maintaining the photographic record. The system employed to maintain the photographic records shall facilitate the immediate retrieval of the photographic images and all data associated with each (individual) photographic image. Selected system shall be SharePoint® compatible.

Construction Management and Administration Services (Construction Phase)

GRPM00001.10XX.2B001.30620.4320 – CONSTRUCTION MANAGEMENT (CONSTRUCTION PHASE)

Upon request by the SJRA the Water Transmission CM&I Consultant shall perform the following construction management and administration services:

1. The Water Transmission System CM&I Consultant shall implement the services of the GRP Program Consultant in accordance with Item 1 of the above section titled, Construction Management And Administration Services (Pre-construction Phase).

2. Coordinate, cooperate with, and provide information, data, documentation and other items as requested by GRP Program Team members including, Project Controls personnel.

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3. Manage and administer the Construction Contract of each assigned GRP Program Project. Work to achieve timely completion of the construction of the GRP Program Project and coordinate activities of the Construction Contractor.
4. Lead and perform GRP Program Project level review and analysis efforts of the Construction Contractor's schedules for compliance to the contract documents. Review, analyze, and comment on the Construction Contractor's baseline, monthly update, recovery, and other required schedules. Coordinate schedule reviews with Construction Contractor and GRP Program Construction Manager as necessary. Provide written schedule review/analysis comments to the GRP Program Project Manager including recommendations as to the acceptability of such schedules. Coordinate and perform construction schedule management activities to assure compliance the requirements of the GRP Program PMP.
5. Lead efforts of the GRP Program and Construction Contractor in the development of a contract compliant and logical GRP Program Project baseline construction schedule. Such efforts shall be performed to ensure all schedules remain the responsibility of the Construction Contractor.
6. Receive, track, coordinate, and record all Construction Contractor Proposals and Claims for contract modification in accordance with the GRP Program's PMP. Review and evaluate received Construction Contractor Proposals and Claims, and perform good faith negotiations regarding the same. Prepare and submit to the GRP Program Construction Manager, the Water Transmission CM&I Consultant's recommendation for acceptance or rejection of the Construction Contractor Proposal or Claim. The Water Transmission CM&I Consultant shall:
 - a. Review, analyze, and comment on Construction Contractor Proposals (Change Orders) and Claims for additional contract time, for compliance and/or conformance to contract requirements, accuracy, and appropriateness. Perform micro schedule (or other) analysis of such claims.
 - b. Lead and perform cost analysis efforts for Proposals of the SJRA (GRP Program) and Construction Contractor. Lead and perform cost analysis efforts for claims of the Construction Contractor. Provide written cost review/analysis comments to the GRP Program Construction Manager including recommendations as to the acceptability of such cost Proposal / claims.
 - c. Assist the GRP Program Construction Manager with the defense of Change Orders and/or Claims.
 - d. Maintain all records to support these efforts.
7. Prepare schedules for use by the SJRA, including a GRP Program level water transmission system master construction schedule. Maintain the master schedule.
8. Prepare and maintain an overall schedule of the efforts of the Water Transmission CM&I Consultant. A Work Order master schedule, (independent from but based on the Construction Contractor's schedule) shall indicate duration, responsibility, and sequencing for major construction activities. Establish overall duration, identify critical activities, and monitor and report the status of key decisions and issues influential to the progress of the Water Transmission CM&I Consultant's work.

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9. Develop and maintain a SJRA historical cost database to include received procurement phase bid/proposal tab data, management and field personnel labor classifications /rates, equipment rates, material costs, etc. Coordinate database development with the SJRA, utilizing SharePoint®.
10. Become familiar with available studies, reports, preliminary engineering, etc., prepared in advance of Construction Contract as assigned to the GRP Program Project.
11. Prepare Requests for Proposals for design revisions and additions that may be required or as directed by the SJRA. Evaluate Proposals by the Construction Contractor in response to such requests and make recommendation to the GRP Program Construction Manager for acceptance or rejection. Such recommendation shall be made only after the Water Transmission CM&I Consultant has exhausted all efforts to negotiate resultant cost and time impacts. Prepare Change Order documents utilizing GRP Program standard forms.
12. Discuss design clarifications and recommendations with the GRP Program Construction Manager and GRP Project Manager to assist in resolving field problems relating to the construction.
13. Utilize established GRP Program document control system in accordance with SJRA direction, inclusive of paper and electronic document control systems. The web-based electronic document management system SharePoint® shall be implemented for the transmittal and retainage of all GRP Program Project correspondence.
14. Review and provide recommendations to the GRP Program Construction Manager regarding the Construction Contractor's use of equipment, tools, manpower, implementation methods, and updates thereof submitted by the Construction Contractor.
15. Conduct the Pre-construction Conference and routine progress and coordination meetings, and record and distribute records of the meetings in accordance with the GRP Program's, PMP. Conduct meetings that include members of the SJRA, GRP Program Team, Engineer of Record, Construction Contractor, and others, and coordinate the above-mentioned party's attendance.
16. Prepare, manage and administer a Water Transmission CM&I Consultant Site Safety Plan/Safety Program.. Comply with SJRA Safety Management requirements as outlined in the GRP Program PMP and as directed in writing by the SJRA.
17. Verify the surveying work and the layout work of the Construction Contractor for the proposed work as it pertains to original control points, right-of-ways, and lines and grades as specified in the Contract Documents.
18. Receive, track, coordinate, record, respond (as appropriate), and transmit all shop drawing submittals required by the Construction Contract. Coordinate all requests that require review and response from the Engineer of Record (EOR) and/or the SJRA. Address contractual implications of received shop

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drawing submittal comments/clarifications in the response to the Construction Contractor's shop drawing submittal.

19. Receive, track, coordinate, record, respond (as appropriate), and transmit all Requests for Information from the Construction Contractor. Coordinate all requests that require technical review and response from the EOR and/or the SJRA. Address contractual implications of such technical clarification in the response to the Construction Contractor.
20. Receive, track, coordinate, record, respond (as appropriate), and transmit all other contract correspondence including but not limited to letters, forms, notices, permits, change orders, field and laboratory test results, schedules of values, and contractor applications for payment.
21. Assist the SJRA or the GRP Program Team by preparing notifications and exhibits for meetings and communications as requested.
22. Coordinate review of laboratory, shop, and mill tests of material and equipment, and all submittals requiring technical review. Report to the GRP Program Construction Manager in writing on such matters.
23. Monitor the Construction Contractor's conduct of required testing to assure, in the Water Transmission CM&I Consultant's professional opinion that required testing is performed in accordance with the Contract Documents. Secure and distribute (or cause to be distributed) information from the testing laboratories to the EOR, Construction Contractor, GRP Program Project Manager, and GRP Program Construction Manager regarding necessary field and laboratory tests. Review the results of the tests with the EOR for compliance with the Contract Documents.
24. Oversee the coordination of the activities of the SJRA's Material Testing Laboratory Consultant, as necessary. Review material testing firm invoices and comment in writing to the GRP Project Manager and/or GRP Program Construction Manager on their acceptability.
25. Verify the quantities contained in the Construction Contractor's Application for Payment and make recommendations to the GRP Program Project Manager and/or GRP Program Construction Manager regarding payment of periodic and final requests for payment.
26. Prepare and distribute as required, monthly status reports to include budget information, current estimates of construction cost and schedule, obligations and action items required, status of change orders, anticipated change orders, expenditures and estimated cost at completion, Construction Contractor payment reports, cash flow projections, and other information necessary to define the current GRP Program Project status.
27. Assist the GRP Program Project Manager, GRP Program Construction Manager and/or Construction Contractor by coordinating as required with utility corporations and governmental agencies regarding easement and right-of-way access including work to be performed adjacent-to, within or across such

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easements and rights-of-way, including closings and relocations. Coordinate activities as indicated on the Construction Contract documents and when the Construction Contract work does not provide for actual field conditions and adjustments are deemed necessary to proceed with the GRP Program construction Project. Entities shall include but not be limited to public and private power companies, telephone companies, communication companies, railroads, transit lines, water supply, sewerage, and drainage districts / companies / municipalities and other public entities.

28. Coordinate and monitor compliance of Construction Contractor regarding required permits and relevant laws.
29. Provide advice, reviews, and assistance to the GRP Program Construction Manager in connection with all queries, actions, or communications that the Construction Contract and the Construction Contractor's performance would pose for construction of the GRP Program Project.
30. Collect all records, certificates, guarantees, warranties and releases required from the Construction Contractor(s) and transmit to the GRP Program Construction Manager as required. Maintain a record file for transmittal to the GRP Program Construction Manager at the completion of a Work Order.
31. Perform observations of the construction site to determine the dates of substantial and final completion of the work. Water Transmission CM&I Consultant shall make a recommendation to the SJRA as to the work meeting the criteria for substantial and final completion.
32. Observe the construction site, together with the SJRA no less than 30 days and no more than 45 days before the expiration of the correction period established by the Construction Documents. Further, the Water Transmission CM&I Consultant shall within 14 days after such observation, furnish the GRP Program Construction Manager with a written report enumerating items that require repair or replacement as provided under the correction period provisions of the Construction Documents.
33. Prepare and process the closeout documents within a time period as established during Work Order negotiations with the SJRA after approval of the final estimate by Construction Contractor.
34. Oversee the performance, completion, and acceptance procedures and tests required for the GRP Program Project including but not limited to equipment, material, pipeline, electrical, fiber optic, component and system testing,
35. Coordinate and monitor compliance of Construction Contractor regarding required commissioning of mechanical, electrical, instrumentation and control components and systems.
36. Review and approve training program developed by Construction Contractor for compliance to contract document requirements. Oversee training of Owner staff in operation and maintenance of completed work.

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37. Ensure Construction Contractor compliance with contract requirements for Operation and Manual preparation and submittal. Ensure contract required spare parts are transmitted to the Owner.
38. Maintain detailed and accurate records that are compiled throughout the course of construction, so as to assure adequately detailed Record Drawing documentation of completed construction activities at the completion of the Project(s). Monthly review and approve Construction Contractor as-built (record) drawing preparation for completeness and accuracy. Coordinate required updates and/or corrections to record drawings. Coordinate transmittal of record drawings with the EOR and GRP Program Construction Manager.
39. Provide management and administration manpower for performance of the above defined tasks to accomplish the goal of coordinating and expediting the completion of the GRP Program Project.

Construction Inspection Services

GRPM00001.10XX.2B001.30620.4340 – CONSTRUCTION INSPECTION (CONSTRUCTION PHASE)

Perform professional construction inspection services for construction Projects of the GRP Program. Such services shall consist of technical on-site inspection of the materials, structures, equipment, workmanship and methods used by the Construction Contractor to verify that GRP Program construction Projects are constructed in compliance with the Contract Documents and according to good construction practices. The construction inspection services shall include the following:

1. The Water Transmission CM&I Consultant shall observe and report to the GRP Program Construction Manager and the Construction Contractor if in the Water Transmission CM&I Consultant Inspection Staff's professional opinion the Construction Contractor is using or professing to use construction methods that may adversely affect the finished work. However, conduct of Construction Contractor's safety program as well as selection of Construction Contractor's means and methods shall remain the exclusive responsibility of the Construction Contractor.
2. Provide on-site observation of the progress and quality of work for the Construction Contract. Advise the Construction Contractor of any observed deviations from the contract documents in a timely manner so as to minimize delay in the progress of the work.
3. Inspect and observe the Construction Contractor's activities to verify that the work complies with the contract documents. Notify the Construction Contractor if the Construction Contractor's work is not in compliance with contract documents including all addenda, Change Directives, and Change Orders and notify the GRP Program Construction Manager of any failure of the Construction Contractor to take measures to place such work in compliance.
4. Inspect and observe the materials and equipment being incorporated into the work to verify that in the Water Transmission System CM&I Consultant's professional opinion that they are handled, stored, and installed properly and adequately, and are in compliance with the Contract Documents. Report regarding these activities to the GRP Program Construction Manager.

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5. Review and evaluate received Construction Contractor Proposals and Claims. Prepare and submit to the GRP Program Project Manager and/or GRP Program Construction Manager, the Water Transmission CM&I Consultant's recommendation for acceptance or rejection of the Construction Contractor Proposal or Claim.
6. Observe and report on the performance, completion, and acceptance procedures and tests required for GRP Program Projects including but not limited to equipment, material, pipeline, electrical, fiber optic, component and system testing, etc.
7. Verify the quantities contained in the Construction Contractor's Application for Payment and make recommendations to the GRP Program Project Manager and/or GRP Program Construction Manager regarding payment of periodic and final requests for payment.
8. Identify problems encountered in accomplishing the work and recommend the appropriate action for resolution of problems to minimize impact on timely completion of the work to the GRP Program Project and/or Construction Manager.
9. Attend and participate with the Construction Contractor(s) in all routine meetings and inspections as set forth in the Contract Documents and special meetings when requested by GRP Program Project and/or Construction Manager. Assist the GRP Program's personnel in responding to impacts and concerns of construction on the local community.
10. Prepare a report of daily construction activities utilizing SJRA's electronic document control system SharePoint®. Such Daily Progress Reports shall be prepared and made available not later than 12-hours following each day's activities.
11. Maintain a daily progress diary to factually record work performed and significant job events and conversations held on site and Project meetings.
12. Assemble and maintain notes, comments, sketches, photographs, and supportive data relative to the GRP Project in order to facilitate the revisions of the Contract Drawings to conform to the construction records.
13. Make readily available the Inspector's Daily Progress Reports within SharePoint® or provide a copy of the Inspector's Daily Progress Reports to the GRP Program Construction Manager.
14. Coordinate the development of and verify the quantities contained in the Construction Contractor's monthly application for payment request and make recommendations to the GRP Program Construction Manager regarding payment of monthly application, Partial Substantial Completion, Substantial Completion, and Final Completion requests for payment.
15. Utilize and maintain the GRP Program and GRP Project document control system in accordance with GRP Program direction, inclusive of paper and electronic document control systems. Utilize and maintain all record documents on the GRP Program's prescribed SharePoint® electronic document

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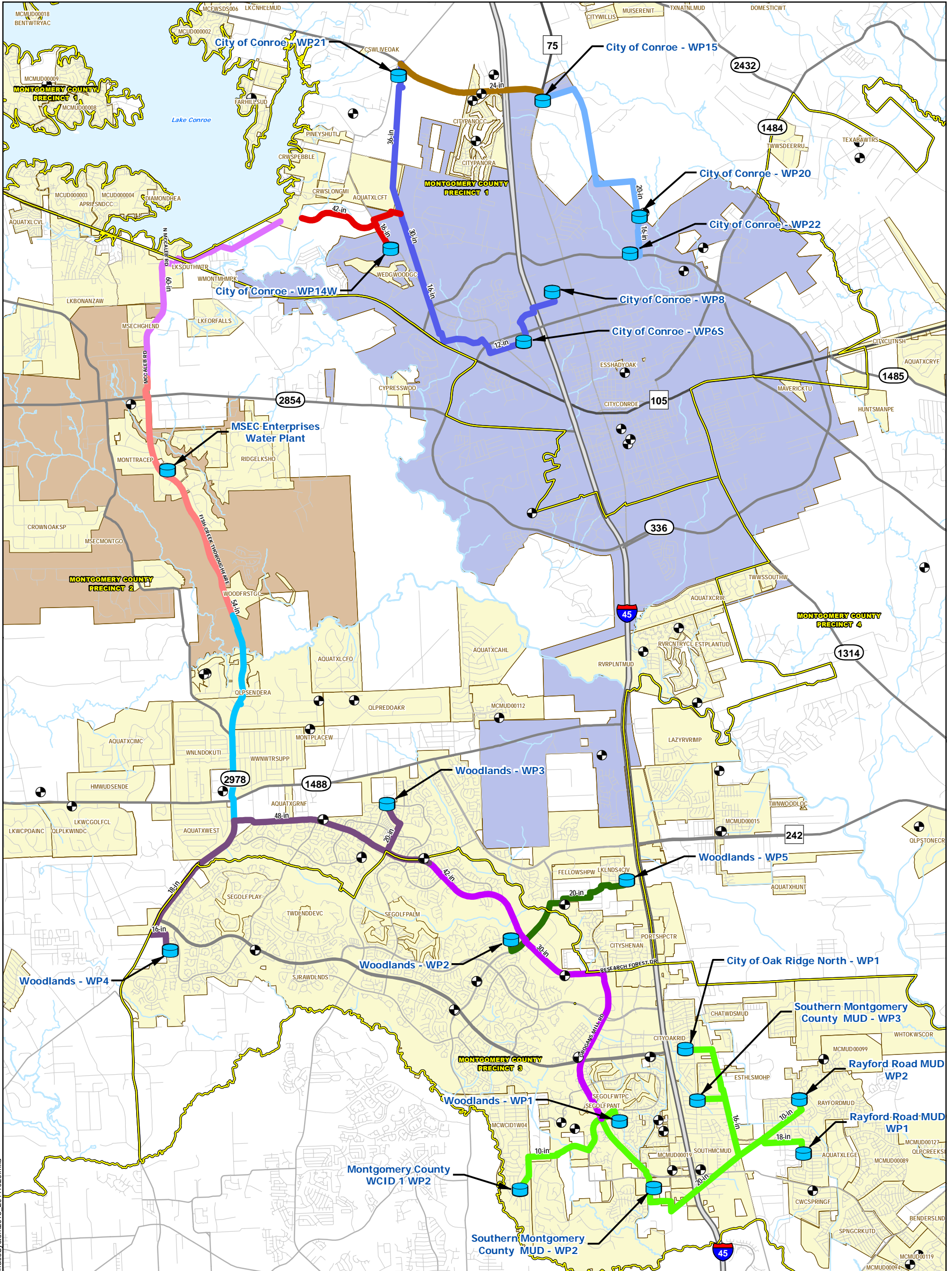
control system. Utilize the SharePoint® prescribed / GRP Program approved document control numbering / coding system. Attend and participate in all required SharePoint® training sessions.

16. Record names, addresses, and telephone numbers of all contractors, subcontractors, sub-consultants, and major suppliers of materials and equipment.
17. Consult with the Construction Contractor's Project Manager, Resident Engineer, and Superintendents on the Construction Contractor's work progress and advise the GRP Program Project and Construction Manager of such activities.
18. Consult with the Construction Contractor's Project Manager, Resident Engineer, and Superintendents in advance of scheduled major tests, inspections or the start of an important phase of the work.
19. Immediately report to the GRP Program Project and/or Construction Manager the occurrence of any accident. Prepare and submit to the Project and/or GRP Program Construction Manager a detailed incident report.
20. Read, understand and implement the GRP Program's PMP Guidance Document and all GRP Program standard forms in the execution of all above items.
21. Coordinate with SJRA Inspectors for the purpose of ensuring compliance with GRP Program PMP and SJRA standards as well progress of the work. Assist SJRA Inspector's with Quality Audits performed by the GRP Program.
22. Coordinate the activities of the Owner's Material Testing Laboratory Consultant, as necessary. Review and comment on invoices of the Material Testing Laboratory Consultant and make recommendations for payment to the GRP Program Construction Manager.
23. Coordinate activities of the Construction Contractor and SJRA Operation staff for training program developed by Construction Contractor. Ensure compliance with approved training program.
24. Monthly review and comment on Construction Contractor Record Drawing preparation for completeness and accuracy. Coordinate required updates and/or corrections to record drawings. Coordinate transmittal of record drawings with the EOR and GRP Program Project and/or Construction Manager.
25. Perform observations of the construction site to determine the dates of substantial and final completion of the work. Water Transmission CM&I Consultant shall make a recommendation to the SJRA as to the work meeting the criteria for substantial and final completion.
26. Coordinate and assist with the activities of the Engineer of Record, as necessary.
27. Coordinate and work to ensure contract required spare parts are transmitted to the SJRA.

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28. Provide inspection manpower for performance of the above defined tasks to accomplish the goal of coordinating and expediting the completion of the GRP Program Project.

EXHIBIT "B"



BROWN & GAY
ENGINEERS, INC.

- Water Plant
- Water Well
- Stream
- Route C1
- Route C2
- Route C3
- Route C4
- Route T1
- Route T2
- Route T3
- Route W1
- Route W2
- Route W3
- Route W4
- SJRA Participant
- Commissioner Precinct
- Lake Conroe

Disclaimer:
Every effort has been made to ensure the accuracy of the basemap data. Brown & Gay Engineers, Inc. assumes no liability or damages due to errors or omissions.

N

0 4,000 8,000
Feet

Date: Oct 2011 Job No: SJRA

GRP 2016 Surface Water System

Brown & Gay Engineers, Inc.
Tel: 281-558-8700 Fax: 281-558-9701
- Civil engineers and surveyors -

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EXHIBIT "C"

PROFESSIONAL SERVICES AGREEMENT

This Agreement is made and entered into effective as of the _____ day of _____, 2010, by and between the San Jacinto River Authority, a conservation and reclamation district of the State of Texas, ("SJRA") with general and administration offices located at 1577 Dam Site Road, Conroe, Texas 77305

and

_____, a corporation organized under the laws of the State of _____, ("CONSULTANT") with principal offices located at _____.

SJRA and CONSULTANT are sometimes referred to herein collectively as the "Parties" or individually as a "Party."

The Parties hereby agree as follows:

ARTICLE 1 – SCOPE OF SERVICES

1.1 CONSULTANT agrees to perform consulting, professional engineering and such other services (the "Services") related to _____ in Montgomery County, Texas as are requested from time to time by SJRA, which Services shall be set forth more particularly in Work Orders, the form of which is attached hereto as Attachment B, issued from time to time by SJRA and accepted by CONSULTANT.

1.2 Work Orders shall contain the schedule, price, and payment terms applicable to the Services within the scope of such orders. Work Orders will refer to and be governed by and subject to the terms, conditions, and other provisions of this Agreement and Work Orders shall become effective when an acknowledged copy thereof is signed by a duly authorized officer of CONSULTANT and returned to SJRA. Services covered by any Work Order may not be modified unless such modifications are first agreed to in writing by SJRA and CONSULTANT.

1.3 Terms, conditions, or other provisions contained in any Work Order that conflict with any terms, conditions, or other provisions of this Agreement shall have no effect and shall be deemed stricken and severed from such Work Orders, and the balance of the terms, conditions, and other provisions contained in such Work Orders shall remain in full force and effect.

1.4 Nothing herein shall obligate SJRA to issue, or CONSULTANT to accept, any Work Orders. Further, the Parties agree that nothing in this Agreement shall prohibit the Parties, or either of them, from entering into agreements other than this Agreement for services or work.

ARTICLE 2 – TERM OF AGREEMENT

2.1 This Agreement shall be effective for a term of one (1) year from the date first set forth above and shall be automatically renewed without action by either Party for subsequent terms of one year unless terminated earlier in writing in accordance with Article 12.

2.2 Notwithstanding the foregoing, this Agreement shall remain in effect for Work Orders issued and accepted during the term of this Agreement until such time as the Services under the Work Orders have been completed; provided however, that, pursuant to Article 12, either Party shall have the right to terminate any Work Order for cause and SJRA shall have the right to terminate any Work Order for convenience.

ARTICLE 3 – COMPENSATION AND PAYMENT

3.1 SJRA agrees to pay CONSULTANT, and CONSULTANT agrees to accept, as full and complete compensation for services properly performed by CONSULTANT in accordance with this Agreement and applicable Work Order, the rates and charges agreed upon for a specific Work Order. Paragraphs A.1 or A.2 of Attachment A, which is attached hereto and incorporated herein by reference, shall be used to negotiate the compensation payable for each Work Order issued hereunder.

3.2 On or before the tenth day of each calendar month, CONSULTANT shall submit an invoice to SJRA, together with appropriate backup documentation, releases and waivers of lien in forms acceptable to SJRA, covering all Services performed hereunder by CONSULTANT and its subconsultants, subcontractors and suppliers during the preceding calendar month. CONSULTANT shall separately itemize on each invoice: (i) each Work Order for which payment is sought, (ii) the amount budgeted for each such Work Order, (iii) the amount of payment requested for each such Work Order, (iv) the amount previously paid for each such Work Order, (v) descriptions of Services performed during the prior month for each such Work Order, and (vi) the total payment requested by such invoice. SJRA shall pay the amount it agrees to be due within thirty (30) days after receipt of such complete invoice and backup documentation.

3.3 SJRA shall have the right but not the obligation to withhold all or any part of payment requested in any invoice to protect SJRA from loss or expected loss because of:

- (a) Services that are not in compliance with this Agreement or the applicable Work Order or any failure of CONSULTANT to perform Services in accordance with the provisions of this Agreement or the applicable Work Order;
- (b) third party suits, stop notices, claims or liens arising out of services performed for which CONSULTANT is responsible pursuant to this Agreement and asserted or filed against SJRA or any of their respective property or portion thereof or improvements thereon;
- (c) uninsured damage to any Indemnitee which results from CONSULTANT's failure to obtain or maintain the insurance required by this Agreement or from any action or inaction by CONSULTANT or any of its subcontractors, subconsultants, or suppliers which excuses any insurer from liability for any loss or claim which would, but for such action or inaction, be covered by insurance; or
- (d) any failure of CONSULTANT to pay any subcontractor, subconsultant, or supplier of CONSULTANT the correct, undisputed, and contractually obligated amount for acceptable services received and for acceptable supplies received. CONSULTANT will not include in its billings to SJRA any amount in a subcontractor or supplier invoice which it has not paid or does not intend to pay within the terms and conditions of the applicable subcontract agreement or supplier purchase order.

3.4 CONSULTANT agrees to pay in full (less any applicable retainage) as soon as reasonably practicable, but in no event later than thirty days following payment from SJRA, all subcontractors, subconsultants, and any other persons or entities supplying labor, supplies, materials, or equipment in connection with Services that are owed payment by CONSULTANT out of such payment made to CONSULTANT by SJRA. Further, provided that SJRA has made such payments to CONSULTANT, CONSULTANT shall defend and indemnify SJRA against any liens or claims of lien asserted or filed by any such person or entity against SJRA or CONSULTANT or its project or property.

ARTICLE 4 – STANDARD OF CARE; COORDINATION OF SERVICES; SAFETY; COST ESTIMATES; EQUAL EMPLOYMENT OPPORTUNITY; THIRD PARTY REVIEW

4.1 CONSULTANT shall perform, supervise and direct the Services, using reasonable skill and attention, in a good and workmanlike manner and in the best reasonable and expeditious and economical manner consistent with the interests of SJRA, shall exercise the degree of care, skill, and diligence in the performance of the Services in accordance with and consistent with industry standards for similar circumstances, shall utilize reasonable skill, efforts, and judgment in furthering the interests of SJRA, and shall furnish efficient administration and supervision in connection with Services and this Agreement (CONSULTANT's "Standard of Care").

4.2 Consistent with its Standard of Care, CONSULTANT shall keep SJRA apprised of the status of Services, will coordinate its activities with SJRA, and accommodate other activities of SJRA at sites that Services impact. CONSULTANT shall designate an authorized representative to be available for consultation, assistance, and coordination of activities.

4.3 CONSULTANT shall be responsible for its own activities at sites including the safety of its employees, and that of its subconsultants, subcontractors and suppliers but shall not assume control of or responsibility for the site. Construction contractors of SJRA shall have sole responsibility for providing materials, means, and methods of construction, for controlling their individual work areas and safety of said areas for all parties, and for taking all appropriate steps to ensure the quality of their work and the safety of their employees and of the public in connection with their performance of work or services provided under contracts with SJRA. CONSULTANT shall comply with the site safety program and rules established by the construction contractors.

4.4 To the extent that CONSULTANT provides to SJRA any estimate of costs associated with construction, it is recognized by the Parties that neither CONSULTANT nor SJRA has control over the cost of the labor, materials, or equipment, over a construction contractor's methods of determining bid prices, or over competitive bidding, market, or negotiating conditions. Accordingly, CONSULTANT cannot and does not warrant or represent that bids or negotiated prices will not vary from SJRA's budget for the project or from any estimate of the cost of work or evaluation prepared or agreed to by CONSULTANT.

4.5 With respect to providing Services hereunder, CONSULTANT agrees to meet at the time applicable (i) Equal Employment Opportunity ordinances, rules and regulations, and (ii) Affirmative Action ordinances, rules and regulations.

4.6 CONSULTANT acknowledges and agrees that projects of SJRA may be subject to review and approval by other third parties. Accordingly, as and when requested by SJRA, CONSULTANT shall submit such information and cooperate with the other third parties to the extent necessary to undergo any such review or obtain any such approval.

4.7 CONSULTANT does not represent Work Product to be suitable for reuse on any other project or for any other purpose(s). If SJRA reuses any Work Product without CONSULTANT's specific written verification or adaptation, such reuse will be at the risk of SJRA, without liability to CONSULTANT.

ARTICLE 5 – COST RECORDS

5.1 CONSULTANT shall maintain records and books in accordance with generally accepted accounting principles and practices. For Services provided by CONSULTANT under cost reimbursable, time and material or unit price Work Orders, during the period of this Agreement and for five (5) years thereafter, CONSULTANT shall maintain records of direct costs for which SJRA is charged. SJRA shall at all reasonable times have access to such records for the purpose of inspecting, auditing, verifying, or copying the same, or making extracts therefrom. SJRA's audit rights for fixed unit rate or time and materials Work Orders shall extend to review of records for the purpose of substantiating manhours worked, units employed, and third party charges only. Except to the extent audit rights are granted to SJRA by applicable law, SJRA shall have no audit rights with respect to the portion of Work Orders compensated on a lump sum basis.

ARTICLE 6 – OWNERSHIP OF WORK PRODUCT AND TECHNOLOGY

6.1 All studies, plans, reports, drawings, specifications, cost estimates, software, computations, and other information and documents prepared by CONSULTANT, its subconsultants, subcontractors, and/or suppliers, in connection with Services or any project of SJRA are and shall remain SJRA's property upon creation (collectively, "Work Product") provided, however, that Work Product shall not include pre-existing proprietary information of CONSULTANT, its subconsultants, subcontractors, and/or suppliers ("CONSULTANT Proprietary Information"). To this end, CONSULTANT agrees and does hereby assign, grant, transfer, and convey to SJRA, its successors and assigns, CONSULTANT's entire right, title, interest and ownership in and to such Work Product, including, without limitation, the right to secure copyright registration. CONSULTANT confirms that SJRA and its successors and assigns shall own CONSULTANT's right, title, interest in and to, including without limitation the right to use, reproduce, distribute (whether by sale, rental, lease or lending, or by other transfer of ownership), to perform publicly, and to display, all such Work Product, whether or not such Work Product constitutes a "work made for hire" as defined in 17 U.S.C. Section 201(b). In addition, CONSULTANT hereby grants SJRA a fully paid-up, royalty free, perpetual, assignable, non-exclusive license to use, copy, modify, create derivative works from and distribute to third parties CONSULTANT Proprietary Information in connection with SJRA's exercise of its rights in the Work Product, operation, maintenance, repair, renovation, expansion, replacement, and modification of projects of SJRA or otherwise in connection with property or projects in which SJRA has an interest (whether by SJRA or a third party). CONSULTANT shall obtain other assignments, confirmations, and licenses substantially similar to the provisions of this paragraph from all of its subconsultants, subcontractors, and suppliers. Work Product is to be used by CONSULTANT only with respect to the project in connection with which such Work Product was created and is not to be used on any other project. CONSULTANT and its subconsultants, subcontractors, and suppliers are granted a limited, nonexclusive, non-transferable, revocable license during the term of their respective agreements under which each is obligated to perform Services to use and reproduce applicable portions of the Work Product appropriate to and for use in the execution of Services. Submission or distribution to comply with official regulatory requirements for other purposes in connection with Services is not to be construed as publication in derogation of SJRA's copyright or other reserved rights. CONSULTANT shall deliver all copies of the Work Product to SJRA upon the earliest to occur of SJRA's request, completion of Services in connection with which Work Product was created, or termination of this Agreement.

6.2 CONSULTANT agrees that all information provided by SJRA in connection with Services shall be considered and kept confidential ("Confidential Information"), and shall not be reproduced, transmitted, used, or disclosed by CONSULTANT without the prior written consent of SJRA, except as may be necessary for CONSULTANT to fulfill its obligations hereunder; provided, however, that such obligation to keep confidential such Confidential Information shall not apply to any information, or portion thereof, that:

- (a) was at the time of receipt by CONSULTANT otherwise known by CONSULTANT by proper means;
- (b) has been published or is otherwise within the public domain, or is generally known to the public at the time of its disclosure to CONSULTANT;
- (c) subsequently is developed independently by CONSULTANT, by a person having nothing to do with the performance of this Agreement and who did not learn about any such information as a result of CONSULTANT's being a party to this Agreement;
- (d) becomes known or available to CONSULTANT from a source other than SJRA and without breach of this Agreement by CONSULTANT or any other impropriety of CONSULTANT;
- (e) enters the public domain without breach of the Agreement by or other impropriety of CONSULTANT;
- (f) becomes available to CONSULTANT by inspection or analysis of products available in the market;

- (g) is disclosed with the prior written approval of SJRA;
- (h) was exchanged between SJRA and CONSULTANT and ten (10) years have subsequently elapsed since such exchange; or
- (i) is disclosed to comply with the Texas Open Records Act or in response to a court order to comply with the requirement of a government agency.

6.3 CONSULTANT shall not be liable for the inadvertent or accidental disclosure of Confidential Information, if such disclosure occurs despite the exercise of at least the same degree of care as CONSULTANT normally takes to preserve and safeguard its own proprietary or confidential information.

6.4 CONSULTANT will advise SJRA of any patents or proprietary rights and any royalties, licenses, or other charges which CONSULTANT knows or should know in the exercise of its Standard of Care impacts any design provided by CONSULTANT in connection with any Services, and obtain SJRA's prior written approval before proceeding with such Services. CONSULTANT shall not perform patent searches or evaluation of claims, but will assist SJRA in this regard if requested, on the basis set forth herein. There will be no charge for CONSULTANT's existing patents.

ARTICLE 7 – INDEPENDENT CONTRACTOR RELATIONSHIP

7.1 In the performance of Services hereunder, CONSULTANT shall be an independent contractor with the authority to control and direct the performance of the details of Services and its own means and methods. CONSULTANT shall not be considered a partner, affiliate, agent, or employee of SJRA and shall in no way have any authority to bind SJRA to any obligation.

ARTICLE 8 – WARRANTY PERIOD; GUARANTEES

8.1 If within a period of one (1) year following completion of Services under a Work Order, it is discovered that such Services were not performed in accordance with CONSULTANT's Standard of Care, CONSULTANT shall be obligated to re-perform such Services at its own expense. If CONSULTANT is unable to re-perform such Services as expediently or in the manner required for SJRA's needs, CONSULTANT agrees to pay SJRA's reasonable costs associated with having another consultant perform such corrective services. The obligations of CONSULTANT under this Paragraph 8.1 are in addition to other rights and remedies of SJRA available to it pursuant to this Agreement or applicable law.

8.2 CONSULTANT agrees to assign SJRA the warranty or guarantee of any supplier or manufacturer of items of services, supplies, machinery, equipment, materials, or products provided by CONSULTANT hereunder and cooperate and assist SJRA in SJRA's enforcement thereof. CONSULTANT's responsibility with respect thereto is limited to such assignment, cooperation, and alliance.

8.3 The representations and warranties of CONSULTANT under this Agreement and Work Orders are made in lieu of any other warranties or guarantees and CONSULTANT makes no other warranties whether expressed or implied, including any warranty of merchantability or fitness for a particular purpose, and CONSULTANT shall have no liability to SJRA based upon any theory of liability that any such other warranty was made or breached.

ARTICLE 9 – INDEMNIFICATION

9.1 To the fullest extent permitted by law, CONSULTANT shall defend, indemnify, and hold harmless SJRA and its board, directors, officers, and employees, (collectively, the "Indemnitees"), from and against claims, losses, damages, demands, suits, causes of action, settlements, liabilities, costs, fines, judgments, and expenses (including, without limitation, reasonable and necessary court costs, experts' fees and attorney's fees) (collectively, "Losses"), arising in favor of or brought by any third party, based upon, in connection with, relating to, or arising out of CONSULTANT's willful or negligent acts, errors or

omissions (or those of any of its subcontractors, subconsultants, or suppliers or any of its or their respective employees or any party for whom any may be legally liable), under or in connection with this Agreement or any Work Order.

9.2 To the fullest extent permitted by law, SJRA shall defend, indemnify, and hold harmless CONSULTANT and its directors, officers, and employees, from and against claims, losses, damages, demands, suits, causes of action, settlements, liabilities, costs, fines, judgments, and expenses (including, without limitation, reasonable and necessary court costs, experts' fees and attorney's fees) (collectively, "Losses"), arising in favor of or brought by any third party, based upon, in connection with, relating to, or arising out of SJRA's instructions, directions and orders (or those of any of its directors, officers, and agents) under or in connection with this Agreement or any Work Order.

ARTICLE 10 – LIMITATION OF LIABILITY

10.1 Neither Party hereto shall be liable to the other Party or its affiliates for any loss of profit, loss of revenue, loss of use or any other indirect, consequential or special damages excluding fines and penalties levied by a regulatory agency, even if caused by the sole or concurrent negligence of a party, whether active or passive, and even if advised of the possibility thereof.

10.2 Nothing herein shall be construed as creating any personal liability on the part of any board member, any officer, employee, or agent of the SJRA.

ARTICLE 11 – INSURANCE

11.1 **General Requirements.** CONSULTANT shall, at all times during the performance of Services pursuant to Work Orders issued under this Agreement and through one year beyond the expiration of the latest warranty period for any Work Order required by Paragraph 8.1 of this Agreement, provide and require all subconsultants and subcontractors to provide insurance coverage with companies lawfully authorized to do business in Texas and acceptable to SJRA, which coverage will protect CONSULTANT from claims set forth below which may arise out of or result from CONSULTANT's operations under this Agreement and for which CONSULTANT may be legally liable, whether such operations are by CONSULTANT or a subconsultant or subcontractor of CONSULTANT or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable, and meeting not less than the minimum requirements set forth in this Article 11. Such insurance is to be provided at the sole cost of CONSULTANT and all subconsultants and subcontractors. The terms "subconsultant" and "subcontractor" for the purposes of this Article 11 shall include subconsultants and subcontractors of any tier.

(a) **Kinds of Claims**

- (1) claims under workers' and workmen's compensation, disability benefit and other similar employee benefit acts which are applicable to CONSULTANT's Services to be performed;
- (2) claims for damages because of bodily injury, occupational sickness or disease, or death of CONSULTANT's employees;
- (3) claims for damages because of bodily injury, sickness or disease, or death of any person other than CONSULTANT's employees;
- (4) claims for damages insured by usual personal injury liability coverage which are sustained (i) by a person as a result of an offense directly or indirectly related to employment of such person by CONSULTANT, or (ii) by another person;
- (5) claims for damages other than to CONSULTANT's work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;

(6) claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;

(7) claims involving contractual liability insurance applicable to CONSULTANT's indemnification obligations under this Agreement; and

(8) claims for errors and omissions in the provision of professional consulting services of the kind rendered by CONSULTANT pursuant to this Agreement.

(b) **Policies and Minimum Limits of Liability**

Kinds of Insurance:	Limits of Liability*:
A. Workers' Compensation Texas Operations Employer's Liability	Statutory Bodily Injury by Accident \$500,000 Each Accident Bodily Injury by Disease \$500,000 Each Employee Bodily Injury by Disease \$500,000 Policy Limit
B. Commercial General Liability Including but not limited to: 1. premises/operations 2. independent contractors' protective products and completed operations 3. personal injury liability with employment exclusion deleted 4. contractual, owned, non-owned, and hired vehicles or mobile equipment	\$2,000,000 General Aggregate \$2,000,000 Products/Completed Operations Aggregate \$1,000,000 Each Occurrence \$2,000,000 Personal and Advertising Injury \$300,000 Fire Damage Liability
C. Professional Liability	\$2,000,000 per claim \$4,000,000 Aggregate
D. Business Automobile Liability Including all Owned, Hired, and Non-owned Automobiles	\$1,000,000 Combined Single Limit Per Occurrence
E. Umbrella Liability	\$10,000,000 Per Occurrence \$10,000,000 Aggregate Bodily Injury and Property Damage

* Aggregate limits are per 12-month policy period unless otherwise indicated; defense costs shall be excluded from limits of liability of each policy.

(c) All required insurance shall be maintained with responsible insurance carriers acceptable to SJRA and lawfully authorized to issue insurance of the types and amounts set forth in this Article 11 and having a Best's Financial Strength Rating of at least "A-" and a Best's Financial Size Category of Class VI or better, according to the most current edition of *Best's Key Rating Guide, Property-Casualty United States*.

(d) All certificates shall be in a form reasonably acceptable to SJRA and each certificate must state that the policy may not expire or be cancelled, materially modified, or nonrenewed unless the carrier and/or CONSULTANT therefore gives SJRA thirty (30) days advance written notice. When any required insurance, due to the attainment of a normal expiration date or renewal date, shall expire, CONSULTANT shall, prior to such expiration, supply SJRA with certificates of insurance and amendatory riders or endorsements that clearly evidence the continuation of all coverage in the same manner, limits of protection, and scope of coverage as is required by this Agreement. Any renewal or replacement policies shall be in form and substance satisfactory to SJRA and written by carriers acceptable to SJRA and meeting the requirements of this Article 11. CONSULTANT shall or shall cause the applicable carrier or carriers to give written

notice to SJRA within thirty (30) days of the date on which total claims by any party against insurance provided pursuant to this Article 11 reduce the aggregate amount of coverage below the amounts required by this Article 11

(e) With respect to all policies required in this Article 11, as soon as practicable prior to execution of this Agreement, CONSULTANT shall deposit with SJRA true and correct original certificates thereof, bearing notations or accompanied by other evidence satisfactory to SJRA that the requirements of this Article 11 are being met. If requested to do so by SJRA, CONSULTANT shall also furnish the originals or certified copies of the insurance policies for inspection.

(f) All policies of insurance and certificates issued for this Article 11, with the exception of Professional Liability and Workers' Compensation Insurance, shall name the Indemnitees (as currently known and as later identified by mutual agreement when additional Participating Third Parties, if any are so identified) as additional insureds for and to the extent of liabilities assumed under this Agreement.

(g) All insurance required pursuant to this Article 11, with the exception of Professional Liability Insurance, shall provide for waivers of all subrogation rights against the Indemnitees.

(h) All insurance required pursuant to this Article 11 shall be primary for and to the extent of liabilities assumed under this Agreement in respect of any insurance maintained by SJRA.

(i) If any policy required to be purchased pursuant to this Article 11 is subject to a deductible, self-insured retention or similar self-insurance mechanism which limits or otherwise reduces coverage, the deductible, self-insured retention, or similar self-insurance mechanism shall be the sole responsibility of CONSULTANT in the event of any loss and CONSULTANT hereby waives any claim therefore against the Indemnitees except to the extent caused by an Indemnitee pursuant to Article 9.

(j) CONSULTANT hereby waives all claims it may have against the Indemnitees to the extent any of such claims are covered by insurance required to be furnished by CONSULTANT or its subconsultants and subcontractors under this Agreement, and even if such claims arise out of, relate to, or are based upon any Indemnitee's own negligence, breach of contract, violation of statute or other fault.

(k) CONSULTANT shall require and cause its subconsultants and subcontractors to purchase and maintain the insurance policies set forth in Paragraph 11.1(a) above with limits of liability commensurate with the amount of each subcontract agreement, but in no case less than \$500,000 per occurrence. CONSULTANT shall provide copies of insurance certificates for all such insurance to SJRA.

(l) If CONSULTANT fails to procure or to maintain in force the insurance required by this Article 11, SJRA may secure such insurance and the costs thereof shall be borne by CONSULTANT. CONSULTANT shall reimburse SJRA the cost of such insurance plus ten percent (10%) administrative charge within ten (10) days after billing by SJRA. Any sum remaining unpaid fifteen (15) days after billing by SJRA shall bear interest at the rate of twelve percent (12%) per annum until paid by CONSULTANT. CONSULTANT shall defend, indemnify, and hold harmless the Indemnitees from and against any and all losses, claims, damages, and expenses (including, without limitations, court costs, costs of defense, and attorney fees), that any Indemnitee may incur as a result of CONSULTANT's failure to obtain or cause to be obtained the specific endorsements or insurance required pursuant to this Agreement. Failure of any Indemnitee to identify any deficiency in the insurance forms provided shall not be construed as a waiver of CONSULTANT's obligation to maintain such insurance and to cause such insurance to be maintained.

(m) CONSULTANT's compliance with the provisions of this Article 11 shall not be deemed to constitute a limitation of CONSULTANT's liability with respect to claims covered by insurance provided pursuant to this Article 11 or in any way limit, modify, or otherwise affect CONSULTANT's obligation under this Agreement or otherwise. The insolvency, bankruptcy, or failure of any insurance company carrying insurance for CONSULTANT or any subcontractor, or the failure of any insurance company to pay claims accruing shall not be held to waive any of the provisions of this Agreement.

(n) If requested by SJRA, CONSULTANT shall furnish or shall cause to be furnished any such other insurance or limits as SJRA may reasonably deem necessary for any Work Order or Orders and the cost thereof shall be charged to SJRA by appropriate modification of any such Order(s).

ARTICLE 12 – CHANGES; TERMINATION FOR CONVENIENCE; TERMINATION FOR CAUSE

12.1 SJRA may, at any time and from time to time, make written changes to Work Orders in the form of modifications, additions, or omissions. In the event that any such change, through no fault of CONSULTANT, shall impact CONSULTANT's compensation or schedule, then (a) such changes shall be authorized by written change order issued by SJRA and accepted by CONSULTANT, and (b) an equitable adjustment shall be made to the Work Order in writing duly executed by both Parties, to reflect the change in compensation and schedule.

12.2 SJRA may for convenience terminate this Agreement, any Work Order issued under this Agreement, or CONSULTANT's right to perform Services under this Agreement or any Work Order by at any time giving seven (7) days written notice of such termination. In such event, SJRA shall have the right but not the obligation to assume all obligations, commitments, and claims that CONSULTANT may have in good faith undertaken or incurred in connection with the Services terminated, and SJRA shall pay CONSULTANT for Services properly performed to date of termination and for reasonable costs of closing out such Services. Upon termination, CONSULTANT shall invoice SJRA for all services performed by CONSULTANT prior to the time of termination which have not previously been compensated. Payment of the final invoice shall be due and payable within thirty (30) days after receipt by SJRA.

12.3 This Agreement or any Work Order may be terminated by either Party in the event that the other Party fails to perform in accordance with its requirements and such Party does not cure such failure within ten (10) days after receipt of written notice describing such failure. In the event that SJRA terminates this Agreement or any Work Order for cause, CONSULTANT shall not be entitled to any compensation until final completion of the then ongoing Services and any such entitlement shall be subject to SJRA's right to offset all damages and costs associated with finally completing such Services.

ARTICLE 13 – FORCE MAJEURE

13.1 Any delay in performance or non-performance of any obligation of CONSULTANT contained herein shall be excused to the extent such failure of non-performance is caused by Force Majeure. "Force Majeure" includes fire, flood, act of God, earthquakes, extreme weather conditions, epidemic, war, riot, civil disturbance or unrest, imposition of martial law, restrictions imposed by civil authority, loss of control of civil authority, illegal activity, extreme unreliability or failure of the utility infrastructure, failure of the US banking system, loss of access to communication systems, sabotage, terrorism, or judicial restraint, but only to the extent that such event (i) is beyond the control of and cannot be reasonably anticipated by or the effects alleviated by CONSULTANT and (ii) prevents the performance of Services.

13.2 If CONSULTANT is affected by Force Majeure, CONSULTANT shall promptly provide notice to SJRA, explaining in detail the full particulars and the expected duration thereof. Notice will be considered prompt if delivered within three days after the end of the Force Majeure on performance and the end of the restrictions on CONSULTANT's ability to communicate with SJRA. CONSULTANT shall use its commercially reasonable efforts to remedy the interruption or delay if it is reasonably capable of being remedied.

ARTICLE 14 – SUCCESSORS, ASSIGNMENT AND SUBCONTRACTING

14.1 The SJRA and CONSULTANT bind themselves and their successors, executors, administrators and assigns to the other party of this Agreement and to the successors, executors, administrators and assigns of such other party, in respect to all covenants of this Agreement.

14.2 No right or interest in this Agreement or any Work Order shall be assigned by CONSULTANT or SJRA without the prior written consent of the other Party.

14.3 Prior to commencement of any major part of the work or services to be provided under any Work Order with respect to which CONSULTANT has elected to subcontract, CONSULTANT will inform SJRA of the identity of the particular subcontractor, subconsultant or supplier CONSULTANT intends to employ for the performance of such major part of the work or services. SJRA shall have the right to disallow CONSULTANT's employment of any particular subcontractor, subconsultant or supplier, provided that any reasonable additional costs incurred by CONSULTANT as a result of such disallowance shall be borne by SJRA and provided that SJRA gives written notice of its disallowance of the subcontractor or subconsultant.

ARTICLE 15 - SEVERABILITY

15.1 If any provision of this Agreement or any Work Order or any portion of this Agreement or any Work Order is deemed unenforceable or void, then such provision or portion thereof shall be deemed severed from the Agreement or such Work Order and the balance of the Agreement or Work Order shall remain in full force and effect.

ARTICLE 16 – LICENSE REQUIREMENTS

16.1 The CONSULTANT shall have and maintain any licenses and certifications required by the State of Texas or recognized professional organizations governing the services performed under this Agreement.

ARTICLE 17 – ENTIRE AGREEMENT

17.1 This Agreement and Work Orders issued under it contain the full and complete understanding of the Parties pertaining to their subject matter and supersede any and all prior and contemporaneous representations, negotiations, agreements or understandings between the Parties, whether written or oral. The Agreement and Work Orders may be modified only in writing, signed by both Parties.

ARTICLE 18 – GOVERNING LAW

18.1 This Agreement and Work Orders, and its and their construction and any disputes arising out of, connected with, or relating to this Agreement or Work Orders shall be governed by the laws of the State of Texas, without regard to its conflicts of law principles.

ARTICLE 19 – DISPUTE RESOLUTION

19.1 In the event of any dispute arising out of or relating to the implementation of or performance of this Agreement or any Work Order which SJRA and CONSULTANT have been unable to resolve within thirty (30) days after such dispute arises, a senior representative of CONSULTANT shall meet with the General Manager of SJRA at a mutually agreed upon time a place not later than forty-five (45) days after such dispute arises to attempt to resolve such dispute. In the event such representatives are unable to resolve any such dispute within fifteen (15) days after such meeting, either Party may, by written notice to the other, submit such dispute to non-binding mediation before a mutually agreeable mediator. If the Parties are unable to agree upon a mediator within twenty (20) days after such written notice of submission to mediation, the American Arbitration Association shall be empowered to appoint a qualified

mediator. If the dispute is technical in nature, the mediator appointed by the American Arbitration Association shall be qualified by at least ten (10) years experience in construction, engineering, and/or public works operations. The mediation shall be conducted within thirty (30) days of the selection or appointment of the mediator, as applicable. The mediation shall be held at a mutually agreeable location in Montgomery County, Texas. If the Parties are unable to agree on a location, the mediation shall be held at the offices of the American Arbitration Association closest to Conroe, Texas.

IN WITNESS WHEREOF, the parties have entered into this Agreement as of the day and year herein above first written.

CONSULTANT:

SJRA:

San Jacinto River Authority

By: _____

By: _____

Reed Eichelberger, P.E.
General Manager

Date

Date

ATTEST:

ATTEST:

Secretary

ATTACHMENT A

Compensation terms for cost reimbursable and lump sum Services:

A.1. COMPENSATION BASED ON COST WITH MULTIPLIER

For professional and non-professional staff, SJRA will compensate CONSULTANT on the basis of a multiplier added to the Raw Salary Cost as shown in the table below for the Scope of Work specified in the Work Order. Professional is defined as a manager, supervisor, engineer, scientist or other recognized profession. Typically, professional employees are salaried exempt employees. Typically, non-professional employees are hourly non-exempt employees. The Raw Salary Cost for salaried employees is defined as the annual base salary excluding bonuses, burdens, and benefits divided by 2080. For hourly personnel, the Raw Salary Cost is defined as the hourly wage paid to the employee exclusive of burdens and benefits. Any shift premiums or premiums paid for hours worked in excess of 40 per week will be added to the base hourly wage and will be considered a part of the Raw Salary Cost.

(a) RAW SALARY MULTIPLIERS

X.XX for professional and non-professional staff working at CONSULTANT or its subcontractor, subconsultant, or vendor offices

X.XX for professional and non-professional staff working in the field during construction or at SJRA offices for a minimum period of six (6) consecutive months

X.XX for construction inspectors working in the field

(b) EXPENSES

"Billable Expenses" include all costs and expenses directly attributable to performance of the services, which are in good accounting practice direct costs of the Services and not covered by the allowance for payroll burden and general office overhead and profit. Costs of outside services will be charged at actual invoice cost plus ten percent (10%). "Billable Expenses" include: subconsultants; travel expenses to and from locations outside Harris and Montgomery Counties; and copies of all deliverables submitted to SJRA. All Local vehicle use outside Harris and Montgomery Counties will be reimbursed at the current IRS allowable rate with no markup. All other expenses are considered to be covered by the allowance for payroll burden and general office overhead and profit and are non-billable expenses.

A.2. LUMP SUM COMPENSATION

SJRA will compensate CONSULTANT on the basis of a mutually agreed upon lump sum price for the scope of work specified in the Work Order. SJRA may ask CONSULTANT for a cost estimate for the scope of work prior to issuing the Work Order. The cost estimate will include a summary breakdown showing the labor hours and cost, subconsultant costs, and other direct costs included in the estimate. Labor rates to be used in preparing the estimate will be the actual salary or wage of the employee times the appropriate multiplier specified in A.1 (a) above. CONSULTANT will submit and SJRA will pay monthly invoices based on the mutually agreed upon percentage of the project completed.

ATTACHMENT B

WORK ORDER NO. _____

This Work Order is issued subject to and is governed by that certain Program Management Services Agreement between SJRA and CONSULTANT effective _____, 2010.

Work Order Date: _____

CONSULTANT: _____

Type of Compensation: Lump Sum, Cost Plus -Time and Materials with a Not-To-Exceed Maximum

Compensation: _____

Location of Services: _____

Description of Services: _____

Deliverables: _____

Schedule Requirements: Commence Services: _____

Completion of Services: _____

Submittal Dates for Each Deliverable: _____

Agreed to by:

SJRA

By: _____

Name: _____

Title: _____

and

CONSULTANT

By: _____

Name: _____

Title: _____