



# TERREBONNE PARISH CONSOLIDATED GOVERNMENT

## UTILITIES SUBSTATION MONITORING SUPERVISORY CONTROL AND DATA ACQUISITION SYSTEM

### REQUEST FOR PROPOSAL

#22-SCADA/UTL-55

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# SCADA System Request for Proposal

## 1. Introduction

### 1.1 Request For Proposals

Terrebonne Parish Consolidated Government (TPCG) Utilities is soliciting Request for Proposals (RFP) for bidding of a Supervisory Control and Data Acquisition (SCADA) system. The RFP shall be for monitoring and control of eleven (11) existing electric substations.

TPCG Utilities supplies electric service to approximately 14,000 residential and commercial customers within the corporate limits of Houma and in immediate urban areas

### 1.2 Services To Be Provided

TPCG Utilities requires technical Design, Integration, and Consultant support services. These Consultant services are for design and system implementation of a SCADA System for remotely located Utilities systems.

The SCADA system will interface to existing Electrical Transmission and Distribution Stations. The Transmission and Distribution Stations utilize SEL RTAC 3530 controllers to gather all transformer, circuit breaker, and switchgear information, which is transmitted via fiber optic and high-speed point-to-point communications through an existing network to the Houma Generation Plant server.

The SCADA System will replace and/or interface to existing servers at multiple locations. The project shall include design, configuration, testing, installation, documentation, and commissioning of the SCADA system, including consoles for system monitoring.

Consultant as defined in this proposal is a Contractor/Company that provides equipment and qualified personnel to perform the services described herein. Consultant and Vendor are used interchangeably in this document. The successful bidder shall ensure that they can provide the expertise needed to perform all requirements of this proposal. Subcontractors used on this project need to be identified in the RFP, along with their expertise and personnel experience level.

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### 1.3 RFP Submittal Requirements

Terrebonne Parish Consolidated Government - Utilities issues this RFP. Any questions concerning this RFP shall be submitted in writing and addressed to Sharon Ellis, Purchasing Manager, by mail to the address below or email [sellis@tpcg.org](mailto:sellis@tpcg.org),

Sharon Ellis Purchasing Manager 301 Plant Road Houma, LA 70363 985 873 6821 ext. 2521
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The deadline for questions is 4:30 pm, October 19, 2022. All questions shall be answered by Addenda.

### 1.4 Submittals

Submit six original, bound hardcopies and one digital copy on thumb drive, of the RFP response, to TPCG no later than 2:00 PM, November 9, 2022, to the attention of the contact at the physical address above. Use a widely available binding method (combs, VeloBind, etc.) suitable for official business reports for the submittal. Using front and back of pages, fold out pages, pocket pages, and other widely used methods for business reports are acceptable; however, the report shall be capable of closing up neatly into approximately an 8.5" by 11" rectangular shape with a uniform thickness. Use a widely available, easily read font such as Arial or Times New Roman of no smaller than size 12 font. Font size requirement does not apply to graphics, reduction of example inserts, reduced example drawings, and similar items used for illustration only.

### 1.5 RFP Organization

To facilitate TPCG's objective review of the RFPs from different Consultants, organize the submittal using a standardized format. Each copy of the submittal should contain the following:

- a. **Cover:** Use a proper, protective, stiff cover on the front and back of the bound submittal. Label the cover with the title of the RFP, the date, the firm name/logo, the contact information for the firm, and other pertinent information as fitting. Label cover with TPCGP logo and department in same size and color as the top of page this document as supplied in the accompanying digital file.
- b. **Transmittal Letter:** A transmittal letter prepared on the firm's business stationery must accompany the RFP submittal. The purpose of this letter is to transmit the

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Proposal; therefore, it should be brief, but shall list all items contained within the proposal. **An individual, authorized to bind the firm to all statements, including services and financials contained in the Proposal, must sign the letter.** The transmittal letter must include a statement certifying that Consultant/Vendor will accept TPCG General Conditions as provided in "Attachment B" of this RFP, or the letter shall state acceptable liability language for review. Evidence of signature authority shall be included in Proposer's submission. Evidence of signature authority includes:

1. The signer of the proposal is either a corporate officer who is listed on the most current annual report on file with the Secretary of State or a member of a partnership or partnership in commendam as reflected in the most current partnership records on file with the Secretary of State. **If this applies, a copy of the annual report or partnership record must be included with the RFP submission.**
  2. The signer of the proposal is a representative of the Proposer authorized to submit the proposal as evidenced by documents such as, corporate resolution, certification as to corporate principal, etc. **If this applies, a copy of the resolution, certification must be included with the RFP submission.**
  3. The Proposer has filed with the Secretary of State an affidavit or resolution or other acknowledged/authentic document indicating that the signer is authorized to submit proposals for public contracts. **If this applies, a copy of the applicable document must be included with the RFP submission.**
- c. **Index or Table of Contents:** Provide an index page listing the sections of the RFP submittal. Provide tab page inserts for each section throughout the submittal. Label these tabs by key information types within the proposal.
- d. **Consultant's Description of Scope of Services:** The Proposal shall include a description in clear and precise terms of the firm's understanding of the scope of the RFP.
- e. **Statement of Qualifications:** Identify and describe the qualifications of the firm and proposed key personnel, including summaries of past projects performed by team members for utility providers and team member resumes. Provide three (3) references with current contact information/feedback of references.
- f. **Terms and Conditions of the Contract:** TPCG Utilities proposes to use a standard TPCG contract for professional consulting services. TPCG sample professional services contract is enclosed as Attachment A. Should the Consultant have any special or unusual contract conditions or limitations, TPCG should be advised of these in this section of the RFP.
- g. **Financial Information:** To prove adequate financial fitness for this project, provide financial statements from Certified Accounting Firms for the most recent quarter. Financial information is received as confidential and will not be shared nor

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disclosed outside of selection team and department/division managers. All financial information submitted is destroyed upon award of the SCADA System project.

- h. **Insurance Information.** The selected firm will be required to submit Certificates of Insurance which specifically name TPCG as additional insured via an additional insured endorsement. Reference Appendix B - General Conditions section 5 for insurance limits.

## 1.6 RFP Submittal Evaluation

**Proposal Evaluation:** Submitted proposals will be rated based on responsiveness, technical merits and the ability of firm(s) to provide the required scope of services. This information will be used to determine a final rating for each proposal. A Selection Committee is utilized to rate each Technical Proposal based on the following criteria:

1. Understanding of the project/scope of services
2. Key personnel and experience level of Firm and qualifications of personnel/staff working on the project.
3. Past performance of the firm(s) to complete similar project work acceptably on time and under budget.
4. Experience of the firm in the major areas of Utilities SCADA systems:
  - a. Supervisory Control
  - b. Data Acquisition
  - c. Alarm Processing
  - d. SCADA User Interface
  - e. Database management
  - f. System Implementation and Testing
5. Completeness with the requirements of the RFP
6. Contract terms and conditions acceptance
7. Reference contacts

TPCG will choose the proposal(s) that best serve the interests of the Department and TPCG. TPCG reserves the right to make an award with or without negotiations or interviews. Minor irregularities in proposals, deemed immaterial or inconsequential in nature, may be waived wherever it is determined to be in the best interest of TPCG.

**Rating and Selection Team:** Staff professionals will comprise the team responsible for reviewing and rating submitted RFP's.



Scorecard

Firm Name: \_\_\_\_\_

SCORECARD FACTORS	Weight	Max Total
<p><b>Firm/Team Qualifications and Experience</b></p> <ul style="list-style-type: none"> <li>Firm/Team shall be evaluated based on project specific experience and resources</li> <li>Primary focus should be on Prime Consultants Experience; however, the other team members must be considered.</li> </ul>	0-25pts	
<p><b>Key Personnel Qualifications and Experience</b></p> <ul style="list-style-type: none"> <li>Specific Personnel Experience with Similar Projects must be considered</li> <li>While Firm Principals are listed, they traditionally have little involvement in the design; Emphasis should be placed on the Project Managers and project team.</li> </ul>	0-25 pts	
<p><b>Project Experience</b></p> <ul style="list-style-type: none"> <li>Consideration must be given to Firms/Teams that can show experience with State/Federal regulations, codes, policies, procedures, and standards to successfully facilitate project completion and familiarity with government operations in general at parish/county or municipal levels. Letters or other documentation of successfully implementing projects or programs are acceptable.</li> </ul>	0-10 pts	
<p><b>Proposal/Understanding</b></p> <ul style="list-style-type: none"> <li>Firm/Teams RFQ should identify understanding of project scope, the past work experience for both the firm and personnel should properly reflect project scope and user agency specifications.</li> </ul>	0-10 pts	
<p><b>Compatibility (firm size versus project size)</b></p> <ul style="list-style-type: none"> <li>Consideration for the size of the firm and available key personnel must be considered relative to the size of the project. This must be evaluated concurrently with the firm's current workload.</li> </ul>	0-10pts	
<p><b>Current Workload</b></p> <ul style="list-style-type: none"> <li>Number and size of projects currently under contract must be considered in relation to available staff.</li> </ul>	0-10 pts	
<p><b>Past Performance</b></p> <ul style="list-style-type: none"> <li>Points will be awarded based on letters or other documentation of successfully implementing projects or programs are acceptable; special capabilities to accomplish this scope of work; ability to meet deadlines and budgets; and quality of work.</li> </ul>	0-10 pts	
<b>100pts TOTAL</b>		

\_\_\_\_\_  
Committee Member

\_\_\_\_\_  
Date

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## 1.7 Schedule for the Selection Process

<u>Item</u>	<u>Date</u>
TPCG issues RFP	October 5, 2022
Deadline for Questions	October 19, 2022
Completed Proposals due to TPCG	November 9, 2022
TPCG review of Proposals/MWBE and Selection of Vendor / Consultant	TBD
Potential Interviews with Consultants	TBD
TPCG selects Most Qualified Consultant(s)	TBD
Complete contract negotiations with selected Contractor	TBD
Submittal of complete and signed Contract documents by the selected Consultant to TPCG	TBD
TPCG formal approval and signature of Contract	TBD
Written Notice to Proceed (NTP)	TBD

## 2. Bidder Requirements

### 2.1 Requirements

The SCADA system Vendor must meet the following qualification requirements:

- a. Vendor must have a minimum of fifteen (15) years of experience in the design and manufacture of systems of the type specified.
- b. Vendor shall utilize standard off-the-shelf hardware and operating system software which is available from at least two different commercial sources.
- c. Vendor shall provide five (5) customer references with a similar configuration and functionality to the system proposed. The list of reference projects shall include the following information:
  - i. Customer name and address

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- ii. Contact name, telephone number, and email address
  - iii. Brief description of system
  - d. Availability of Vendor's identified staff for this project, and capability of Vendor's organization to provide project management and customer support. Provide resumes for staff directly working on the project, including start-up/commissioning personnel.
  - e. Vendor shall have a dedicated, in-house customer support department to provide support services for the hardware and software supplied with system. Available support must include the following:
    - i. Secure online portal for viewing and managing support cases
    - ii. Dedicated in-house training facilities and a regularly scheduled training curriculum
    - iii. On-site training courses
    - iv. Monthly diagnostic services for troubleshooting and system health

Bidder proposals shall explicitly address every item of listed qualifications. TPCG Utilities reserves the right to reject any or all bids or select the bid that is deemed to be in the best interest of the TPCG Utilities.

## **2.2 Vendor Responsibilities**

The Vendor shall be responsible for, and the Vendor's bid shall address, the following:

- a. Design, manufacture, assemble, factory test, deliver, setup, and commission a complete new SCADA system according to the requirements contained in this RFP.
- b. The Vendor shall perform a Factory Acceptance Test (FAT). The FAT shall be scheduled to accommodate TPCG Utilities availability to witness the test. The FAT shall have all supplied equipment staged into an integrated functioning system.
- c. The Vendor shall provide training for the new SCADA System at the Vendor's or TPCG Utilities facilities, depending on the preference of TPCG Utilities.
- d. The Vendor shall provide on-site supervision of installation and commissioning of the system.
- e. The Vendor shall install and connect all supplied equipment within appropriate TPCG Utilities equipment racking. The Vendor shall identify the subcontractor to be used for installation as required.

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- f. The Vendor shall provide a project schedule with anticipated milestone and go-live dates.
  - g. The Vendor shall supply all required documentation; drawings, operation manuals, equipment specifications, and any other documents required for the complete system, to provide for installation and maintainability of the SCADA System. Drawings will be as-built per final SCADA System installation.
  - h. The Vendor shall minimize the disruption to the existing SCADA system while new implementation is in progress.
  - i. Performance of onsite SAT with assistance from TPCG Utilities as required.

### **2.3 Purchaser Responsibilities**

TPCG Utilities will be responsible for the following:

- a. Provide space, environmental controls, and power and communication circuits sufficient to accommodate the Master Station equipment supplied by the Vendor.
- b. Provide the necessary assistance to the Vendor in order to construct the Master Station database and displays.
- c. Provide all required substation field wiring and equipment external to any RTUs or data concentrator.

### **2.4 Standards and Open Architecture**

The nature of an “open” Supervisory Control and Data Acquisition (SCADA) system is that it will continue to expand over time, adding new functionality while not being restricted to the original system manufacturer.

Since SCADA is considered a "mission critical" system function, the proposed architecture must encompass open system architecture. In part, an open architecture system is measured by:

- Adherence to widely accepted and applicable industry standards – both hardware and software
- The degree and ease of integration with third-party applications independent from the system Vendor
- The degree of scalability and expansion: adding new devices over time

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The Vendor shall apply the following standards, as applicable, in the system and equipment to be supplied:

1. IEEE Std C37.1-1994, IEEE Standard Definition, Specification, and Analysis of Systems Used for Supervisory Control, Data Acquisition, and Automatic Control
2. North American Electric Reliability Corporation (NERC), Critical Infrastructure Protection (CIP)
3. MultiSpeak Version 5
4. The Vendor shall be ISO 9001:2015 certified, and a copy of certification shall be provided with the proposal.

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### 3. System Hardware & Software

The system equipment shall consist of standard Server and PC architecture machines utilizing Intel processors.

#### 3.1 Master Station Equipment

The Redundant Master system shall consist of two servers in a redundant configuration comprising an active and standby host (SCADA masters). One master server will be located at the Houma Generation Plant building and the other server will be located at the Terrebonne Parish Utilities Maintenance building. The Terrebonne Parish Utilities Maintenance building will be designated as the “disaster recovery site”.

The system shall support a secure TCP/IP protocol which will be used for all data exchanges between the various nodes on the network. There shall be no single point of failure in the system beyond the communication channels.

As a minimum, the SCADA system server shall incorporate the following minimum design features:

- Both Master Stations shall have consoles consisting of four (4) monitors and has the capability to be expanded
- Demonstrated 24x7 hardware and software reliability and high availability, disaster tolerance and performance scalability when running real-time applications.
- Redundant 10/100/1000 baseT Ethernet LAN/WAN interface with TCP/IP communication using SSL or SSH encryption security.
- A SCADA Master Station with the future capability of being configured with up to four (4) fully synchronized SCADA system servers, supporting automatic, prioritized, fail-over to standby servers of all gateway/RTU communication, printer drivers and operator console services with no manual assistance or intervention.

The redundant system shall support a distributed architecture, encompassing both distributed data processing and a distributed database. The active host computer shall maintain the standby host computer in a fully synchronized state via the network. In the event of a failure of the active machine, the standby host computer shall automatically assume control of all peripherals and communication lines with no action required from the system operator.

The redundant system must have the capability to be remotely located and be used as a “disaster recovery site”. The Vendor is to describe the communications requirement

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between the on-line system and “disaster recovery site” to maintain a hot standby system with auto failover as if the backup system were located next to the on-line system.

### **3.2 Operator Workstations**

The Vendor shall provide and load 2 Windows 10 operator workstations dedicated to the SCADA system. TPCG Utilities will provide specifications for the operator workstations as required. Vendor shall provide any resource prerequisites as part of the submittal.

### **3.3 System Sizing & Performance**

The Vendor supplied SCADA system hardware shall be sized for the parameters as defined in this RFP, including database points, displays, interfaces and users. The system software shall be capable of accommodating in its database a 100% expansion of the quantity of analog, status and control points.

These capacities may only be limited by the resources of the host servers. There shall be no additional licenses required to add additional database points to the system following installation, nor should the SCADA software be licensed based on the quantity of points. The system should be able to support up to 100,000 user-defined dynamic displays, 100,000 RTU/IED stations and 100,000 points per RTU/IED per category of point. Point categories include: Status (real-time & pseudo), SOE, Calculated Status & Diagnostic, Telemetry (real-time & pseudo), Calculated Telemetry & Diagnostic & control (real-time & pseudo).

The system shall be able to fully process a continuous alarm throughput of 450 alarms per second for at least 60 seconds. The displays on all workstations shall be updated and responsive to controls throughout the alarm burst. The system shall be able to process 50,000 changes, both binary and analog, per second continuously.

### **3.4 System Maintainability**

The system shall be designed such that the TPCG Utilities will be able to maintain the SCADA system with minimum reliance on Vendor’s services.

The system shall include all the necessary software for configuration of the system and maintenance of the database. The database editor shall interact with TPCG Utilities in an intuitive manner by means of dialog boxes and other familiar controls.

The Vendor shall provide with the system a maintenance router with two-factor security authentication to provide access for system troubleshooting and software updates. The Vendor shall have the ability to provide same day diagnostic troubleshooting and database assistance from the Vendor’s software facilities during normal working hours, and customer

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support personnel that meet NERC CIP-004 compliance standards. All of the Vendor's personnel shall have undergone a security course prior to accessing the system remotely.

The Vendor shall have a formal software version release plan and shall be able to offer upgrades to newer versions of the proposed system software. There will be no software license fees for the core SCADA software and third-party software for upgrades while the system is under a maintenance contract. The Vendor shall include the cost of a 5-year Maintenance Contract as a separate line item in this RFP.



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## **4. System Software**

### **4.1 System Operating Software**

Due to the mission-critical nature of the system, the SCADA servers shall run the latest 64-bit version of a commercially supported enterprise-level Linux operating system (OS). All core SCADA functions and applications must run natively on a Linux operating system. Microsoft Windows OS will not be considered for the SCADA host servers or any application servers required for the system.

The system platform shall be scalable including the capability for a distributed architecture with multiple distributed peer workstations, performing concurrent task processing, supporting engineering, management and development activities.

The Vendor shall provide OS patch management in accordance with NERC CIP standards. All OS patches shall be evaluated by the Vendor and the results provided to the end user within 30 days of patch release. OS patch management is to be priced optionally alongside the 5-year Maintenance Contract.

### **4.2 Workspace Manager**

The system should include a “workspace manager” allowing the operator to have multiple applications open and running each in its own workspace, reducing the clutter associated with multiple applications open on the same display at the same time.

Using the workspace manager will allow the operator to go from the SCADA environment to any SCADA or other application with a single mouse click and return from any application to SCADA with a single mouse click. A minimum of 16 workspaces should be available and each operator should have the ability to configure their own workspaces.

### **4.3 System Database Structure**

The database structure shall be specifically designed for high performance real-time operation. A proprietary real-time database will be acceptable for reasons of providing high performance and fast response times. Relational database technologies will not be considered for the real-time operational system database.

On-line database editing capability for adding, replacing, or deleting points in the database, RTUs, communication lines, etc., shall be possible without any interference to the system operation.

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A user-friendly graphic editor shall be provided for building of new displays and for editing existing ones through interactive and intuitive methods.

Access to capabilities of editing both the database and displays shall be available at all operator and engineering workstation consoles; however, it shall be restricted only to users with appropriate rights and privileges.

The system database size shall be able to be expanded to handle additional points without any need to perform any software change.

#### **4.4 Scalability and Modularity of System Database**

The system software architecture shall provide the optimum in scalability, modularity and interoperability. The database size shall be limited only by the memory, disc capacity and resources of the machine. Applications access data from the real-time database (RTDB) via a set of library calls that comprise the database manager.

All aspects of the proposed system shall have the ability to be expanded in a modular fashion. Since the same base system and software shall be used from substation automation to the corporate enterprise interface, the customer shall be able to minimize and protect its investment through common software maintenance, training, spares and engineering.

#### **4.5 Distributed Database**

The system shall support both client architecture and client/server architecture with a distributed database for larger multi-node configuration.

The primary copy of the real-time database shall be maintained on the host processors—both prime and backup copies. Each of the host copies shall be updated simultaneously across the LAN as tele-metered changes are reported from the Communication Processor. Once the host copy is updated, changes shall be broadcast across the LAN to each distributed database node. The major advantage of this architecture is that it off-loads the host by moving the client function to the local node with the database.

#### **4.6 System Historical Database**

The historical database shall be able to store any data from the real-time database on a periodic or change driven basis definable by TPCG Utilities. The historical information subsystem shall be able to provide storage of unlimited quantities of historical data depending only on the limitation of hardware resources (disk storage, etc.). The stored historical data shall be accessible to other applications for data review and analysis and to trending displays.

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## 5. SCADA Functionality

### 5.1 Supervisory Control

The proposed system shall be able to provide the following supervisory control functions to users with appropriate rights and privileges:

- a. Allow the system operator at the Master Station to issue controls to trip and close breakers through a select-before-operate sequence and automatically monitor breaker auxiliary contacts to ensure operation,
- b. Allow the operator to manually control load tap changers and monitor the tap position,
- c. Allow the operator to manually control the circuit breakers and other selected equipment.
- d. Allow the operator to provide output pulses to generator units. The system shall be able to download both a variable number of pulses and a variable length pulse.
- e. Allow the operator to update 'manually updated' points for devices that are not remotely controllable.

### 5.2 Data Acquisition

The proposed system shall be able to provide the following data acquisition functions:

- a. Monitor analog values such as Volts, Amps, Watts and VARs at each substation. Convert these values to a digital format. Transmit changed values back to the Master Station. Convert these values into engineering units. Display these values on single line diagrams and provide alarm limit checking. Provide historical storage at user definable interval and retention periods.
- b. Monitor the status changes of various switch contacts and other equipment in the field. Provide an audible and visual alarm when the switches have changed status without being commanded.
- c. Accumulate kilowatt-hour pulses from pulse initiators at each substation. Provide a freeze of counts by RTU on a user definable interval. Transmit the counts back to the Master Station. Convert the counts into interval and hourly deltas. Provide historical storage at a user definable interval and retention period.

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### 5.3 RTU Communication

The system database shall define the RTU and/or IED configurations, physical RTU-IED/system interfaces and all RTU/IED communication parameters. The system database shall support the following definitions and attributes for each communications port:

- Number of RTUs/IEDs connected to each communications port
- Baud rate assigned to each communications port
- CTS delay and Pre-transmission delay for analog or radio communications
- Scan timer (fast scan/slow scan timers)

The subsystem for the proposed protocols shall implement the features of the RTUs and IEDs that are required by TPCG Utilities. As a minimum, the following functions shall be included:

- a. Rapid polling of RTUs for exceptions
- b. Select-before-operate control execution
- c. Variable control durations for momentary controls
- d. Detect and report multiple changes of state between poll cycles, if the RTU does not buffer changes but instead reports a “multiple change detect” bit
- e. Automatic interleaving of multiple priority messages, e.g. automatic “fast scan” after a control and “error scan” after a communication error
- f. Scheduled accumulator freezes and polls
- g. Scheduled integrity (general interrogation) polls
- h. Time synchronization of the RTUs
- i. Sequence-of-Events (SOE) data uploading and processing

For each RTU, the system shall maintain communication statistics in the form of analog points that may be viewed on displays, printed in reports, or stored in historical data files. Such statistics shall include:

- RTU good replies
- RTU negative replies
- RTU replies having bad data or communication errors

When a user-definable error retry count expires for an RTU, the system shall declare the RTU failed by means of a status point and an accompanying alarm. On RTU failure, the system shall mark all points that are tele-metered by the RTU as “telemetry failed”. For each point,

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this telemetry failed quality code shall not clear until a value is subsequently received from the point.

After an RTU has been declared failed, the system shall continue to poll it but at a reduced rate, for example: poll only one failed RTU on each round-robin poll cycle. If all RTUs are failed on a communication line, the system shall declare the entire communication line as failed.

### **5.3.1 Status Data Processing**

The system shall be able to acquire, process and display status points. Each status point may have a control point associated with it. A control command shall initiate a timer to check if the “report back” indication is received within a certain time period from the initiation of the control command and if not, an alarm shall be generated. If a change of status is detected which is not the result of a control command, an alarm shall be generated.

The system shall be able to process the following types of status changes:

- a. 2-state status. This type of input shall be used to indicate the status of a device that may be in one of two possible states. TPCG Utilities shall be able to define the names of each state, e.g. On and Off, Open and Closed. In addition, a color shall be associated with each state such that a normal state could be green while abnormal could be red.
- b. 3-state status. These inputs are similar to the 2-state status points except that the device may take on any of three possible states. TPCG Utilities shall be able to define the names and colors associated with each state, e.g. Open, Closed and In-transit, or Illegal.
- c. Multiple State Change. This feature shall provide support for multiple status changes that result from control commands. For each control point, it shall be possible to specify a list of up to 10 status points that may change as a result of a command. If not all the expected transitions occur within the control point response time-out, the system shall generate an alarm for the control point as well as an additional alarm for each associated point that did not undergo the expected transitions.

### **5.3.2 Analog Data Processing**

The system shall scan and store every analog input in the RTUs at predefined scanning intervals. Any failure to complete a scan shall be marked with a data quality flag. Also, the system shall scan each analog input every second and compare that input to the previously reported input. When the difference between these values exceeds its reporting band, the analog value shall be reported (report-by-exception).

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The system shall be capable of checking the analog values for at least three sets of limits: warning, emergency and reasonability. Each of these three sets of limits shall be provided with an upper limit, a lower limit and a deadband. The deadband associated with each limit is used to prevent multiple alarms from being generated when the value hovers near a limit value. Each limit violation should be shown on the display in a different user defined color.

To allow for noise readings around the zero mark of the engineering scale, a range of engineering values inside the point value range shall be specified which shall effectively clamp the input value to zero. For example, if the zero clamp deadband is 3.0, any input value which is converted to between +3.0 and -3.0 engineering units shall be stored, but will be displayed as zero.

### **5.3.3 Pulse Accumulator Data Processing**

The system shall be able to process accumulators received from the RTUs. The system shall send a command to freeze the accumulators either to all RTUs or to selected RTUs. However, this freeze command shall not reset the accumulators in the individual RTUs. Upon receiving the accumulator readings at the master station, the system shall automatically calculate the difference from the last reading.

The system shall retrieve the accumulator data at user-definable intervals from 15 to 30 minute intervals and at every hour from the RTUs and shall convert them to engineering units.

### **5.3.4 Sequence of Events Data Processing**

The system shall be capable of processing digital indications from the RTUs which are tagged with the time of event occurrence (SOEs) provided that the RTU protocol supports this feature. The Master Station shall perform a time synchronization of all the RTUs which are equipped with SOEs. The software shall retrieve SOE events and store them for future analysis. Time tagging is done in the RTU and sent with point updates.

### **5.3.5 Control Output Requirements**

The system shall perform all control operations to field devices in a safe secure manner. The operator shall be promptly informed if any anomalies occur during the control sequence.

There shall be the following types of controls available in the system: control & indication, raise/lower control, analog output control, pulse output control.

The control & indication type shall be used for controlling the status of breakers, re-closer circuits, ground circuits, line switches and similar devices. This type of control shall be able to accommodate either a single sensing contact (two-state control & indication) or two sensing

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contacts (three- or four-state control & indication) per point. The raise/lower controls shall be used for controlling tap changes, control valves and similar devices. The analog output control shall be used for providing set points to local controllers (generation controllers, pressure controllers, flow controllers, etc). The pulse output controls shall be used for generator control and shall be provided with either variable duration pulse or a train of pulses.

Where supported by the RTU protocol, the system shall utilize a Select-Checkback-Execute technique that requires secure handshaking with the RTU before any controls are executed. In such cases, control of a point requires the following exchange of messages:

- Master to RTU - control point selection
- RTU to Master - point address check-back
- Master to RTU - control execution
- RTU to Master - execute acknowledgement

If the Master Station does not receive proper acknowledgement of either the select request or the execute command, a check-back failure alarm shall be generated by the system. If the acknowledgements are correct, but the expected status change does not occur within the point's control response timeout, a control failure alarm shall be generated. An optional multiple status change validation feature shall be available to handle cases where a control causes multiple status changes to occur.

It shall be possible to link up to 4 status points (real or pseudo) to a control point such that the system will check the status of these point and either suppress or allow control depending on the state of these points. If control is suppressed due to one or more of the points being in an incorrect state, an alarm message should be displayed to the operator as to the reason that the control action cannot be performed.

#### **5.4 Event and Alarm Processing**

Event and Alarm Processing shall be standard features included with the system to provide interactive information on system events, and be used to access and sort logged events into meaningful summaries. The event log shall include all system actions, including alarms, changes in device state (including operator-commanded changes), and operator-entered device tags. The system should also capture when an operator acknowledges and deletes alarms so as to evaluate the time between and alarm and a subsequent action. The events processor shall create interactive event summaries that can be viewed in a display, saved to a disk file, or sent to a printer.

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### **5.4.1 Event Data Recording**

The SCADA system shall maintain an event file that records all status changes, operator controls and SOE data. The file size shall only be limited to the size of the disk so that a history of events and actions may be available for previous years.

Non-SOE events shall be time-stamped to the nearest second. SOE data shall be stamped to the nearest 1 millisecond, subject to the capabilities of the RTU protocol. The operator shall have the ability to request event data reports with time range and point search capabilities.

### **5.4.2 Event Report Summaries**

The event processor may be called up from any window by selecting a Reports option from the menu bar with the mouse. Available options must include:

- Current Tag Summary
- Status Point Summary
- Telemetry Point Summary
- Abnormal Point Summary
- Event Summary

Event summaries should also be available from the one-line system itself by selecting the appropriate device and selecting the desired report interval such as: last hour, last day, last month, last year, etc.

It should be possible to sort the event file by type of device. The operator should be able to easily generate a report over any time period by device type (i.e., 12KV breaker operations only caused by a fault, all non-reclose operations performed by the operator over any time period, any 12KV limit violation over any time period, etc.) Any report should have the capability to be sorted by time as well as database station name or number.

## **5.5 Alarm Processing**

The SCADA system shall employ a knowledge-based Alarm Processor that can adapt to the requirements of each user with great flexibility in defining how an alarm is generated, filtered, routed and displayed to the user.

The system shall alert the operator when abnormal conditions or certain events that are designated as being important occur such as:

- a. any uncommented change in a status for any device;
- b. any analog input or calculated value that crosses over any defined alarm limits;



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- c. any commanded change of a control & indication point that does not result in a “report back” indication within some specified period;
  - d. any failure of the Master Station to communicate with any RTU;
  - e. any failure of a given RTU to respond correctly to a previously specified number of interrogations;
  - f. any failure of a major component of the SCADA system.

Alarms and operational events shall be continuously synchronized in real-time to the standby host server, in the case of a dual-redundant system configuration.

The proposed system shall be able to handle a minimum of 450 alarms or events per second per operator consoles regardless of the other workload.

#### **5.5.1 Alarm Acknowledgment/Delete**

The system shall provide ~~two~~ different classes of alarms. Each point may be assigned a different class, thereby allowing specific operator actions to be mandated, depending on the alarm class:

- Alarms are deleted automatically upon acknowledgment
- Alarms must be acknowledged and deleted in two separate steps

The system shall provide three methods for acknowledging an alarm:

- Acknowledge an individual alarm message.
- Acknowledge a page of alarm messages. A page may contain one or more alarms.
- Acknowledge all alarm messages. This removes all the alarms in the queue—those displayed as well as those not shown in the window.

In addition, the operator should be able to acknowledge all the alarms on a display or one-line diagram with a single operation regardless whether the alarms are all grouped together or intermixed within the alarm list.

Alarm summaries shall be available for all Acknowledged alarms, Unacknowledged alarms and both Acknowledged and Unacknowledged alarms together.

#### **5.5.2 Alarm Priorities**

The delivered system shall support at least twelve (12) alarm priority levels in the database that will each support a unique appearance and sound. Lowest priority alarms shall neither sound any audio alarm signals nor cause points to flash on the display. Higher priority alarms

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shall require acknowledgement and shall sound user defined audio alarm signals unique to the alarm class or priority. All alarms shall be logged regardless of priority to at least three destinations: alarm summary displays, event printers and operator log files.

For each status point, it shall be possible to define which state (0 or 1) is abnormal.

For each analog point, the user shall be able to define three sets of nested upper and lower alarm limits, with a separate deadband for each limit. In addition, analog points shall be able to generate an alarm when a rate of change is exceeded, either in the increasing or decreasing direction, or both. Each alarm limit violation should be displayed in a user defined color. Therefore, the analog value may be displayed with up to 8 colors depending in its state.

### **5.5.3 Alarm Formatting**

The user shall have control over the format of alarm messages. As a minimum, the alarm message format shall include the following in any desired sequence:

- a. strings of fixed text
- b. name of the point in alarm
- c. point description
- d. station name of the point in alarm
- e. station description
- f. alarm priority level
- g. point value or status
- h. alarm limit that was violated (for analog limit violation)
- i. calculated rate-of-change that violated the rate-of-change limit
- j. point engineering units

The system shall provide summary lists for all unacknowledged as well as acknowledged but not yet deleted alarms. TPCG Utilities shall be able to perform alarm filtering based on certain parameters or filters. The filtering of alarm summary lists shall be performed from a dropdown menu where the operator can enter the filtering parameters including Areas of Assignment as well as Alarm Priority and obtain the filtered lists.

### **5.5.4 Alarm Suppression**

The system shall provide an Alarm Suppression capability that allows the user to define a hierarchy of alarm point relationships. This feature shall allow the user to focus on the

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conditions that are the real cause of a disturbance by filtering an avalanche of alarms and presenting to the operator only those that are really important.

If the alarm suppression capability is defined for a particular alarm relationship, then as long as the 'master' point is in the alarm state, alarms on its slave points will be suppressed and only the primary event will be alarmed. The suppressed alarms however must be recorded in the database and be viewable on any of the event reports.

Additionally, the operator should have the capability of enabling a 'time filter' mode allowing the alarms to be suppressed on a time basis. In this manner it should be possible to filter multiple alarms on a point within a specific user defined time interval. As an example, during a storm with the 'time filter' enabled, only the lockout alarm on an overhead feeder breaker will be alarmed and all the momentary breaker alarms will be suppressed. As before, all alarms should be recorded in the history file for later review. Also, the 'trip counter' on the breaker should be updated for all operations regardless whether the alarm is suppressed or not. The time filters should also work on telemetry points allowing a limit violation to be suppressed if the point returns to normal within the user defined time interval. Time intervals should be definable on a per point basis in 1 second increments up to 8 hours.

### **5.5.5 Alarm Reporting**

Alarms for each point may be assigned to an area of responsibility, a class and a priority to define the alarm message reporting. Every operator alarm window shall have the facility to assign alarm priority level from Level 1 to Level 32. Priority levels are defined when creating the database. Typically, Level 1 alarms are the least critical, and Level 32 alarms are the highest level of importance. Each point—status, telemetry and pulse accumulator—can have its own priority level.

When an alarm occurs, the operator shall be alerted in several ways:

- A user defined audible alarm (defined by alarm class or priority) will sound and the alarm message will be printed by the alarm and event logger.
- The changed point, on the tabular and/or one-line diagram, will change color to identify the new state. The changed point will flash when viewed by the operator.
- The changed point appears in the alarm reporting zone of the screen that has been assigned to annunciate the alarm.

If the current screen alarm reporting zone is filled, the total number of alarms in the queue shall be displayed. Alarms in the queue will be displayed when those in the display are

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removed. Alternatively, the alarm list may be scrolled without deleting any alarms. The alphanumeric alarm message appearing both in the screen alarm reporting zone and on the alarm and event printer shall be identical. The alarm processor shall support Area of Responsibility assignments for each console.

Alarms in the alarm reporting zone should have the capability of being sorted by any column. In this manner, the operator could sort the alarms by station name, inverse time order, priority or any other column. The operator should also be able to move the columns in any order desired and have the system remember the settings by operator log in.

Additionally, it should be possible to navigate to the appropriate display for an alarmed point in the alarm zone. For example, this may be accomplished by simply right clicking the alarm and the display would be changed to the one showing the point in alarm such as a one-line diagram for a breaker operation.

#### **5.5.6 Remote Alarm Annunciation**

The proposed system shall have the ability to remotely transmit any pre-defined alarm condition to any commercial paging system, e-mail or SMS (short-message-service). There shall be no limit in the number of alarm conditions that are required to be remotely annunciated. This function shall be fully integrated into the SCADA system and no third-party software shall be required to achieve the functionality. The communication between the remote alarm annunciation system and the annunciation providers shall be available over serial connections, as well as over TCP/IP wide area networks.

The system shall have the capability to send e-mails for alarm messages. TPCG Utilities shall be able to define which points are annunciated in this fashion, and for each point, which alarms, e.g., which states for a status point and which limits for analog points.

The system shall also have the capability to call a central paging computer service to forward alarm messages to digital pagers. TPCG Utilities shall be able to define which points are annunciated in this fashion, and for each point, which alarms, e.g., which states for a status point and which limits for analog points. TPCG Utilities shall be able to define a schedule for remote alarm annunciation so that it starts automatically after hours and turns off automatically in the morning.

### **5.6 Real-Time Calculations**

The system shall support calculated data points. Each calculation may reference one to six database points as inputs. Calculated points may reference other calculated points in order to cascade results, if more than six inputs are needed. Both status and analog calculated point

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types shall be supported. Calculated points execute the computation whenever referenced to ensure the correct value, but shall not add to unnecessary overhead.

Calculated points shall maintain any attributes that were attached to the calculation's input points. A calculated point may not be manually entered; although input points may be overridden to form a manually overridden value for the calculated point.

The following built-in functions shall be available:

- Three-phase current and voltage calculation
- Phase voltage calculation, from VA and line voltage
- Line voltage calculation, from VA and phase voltage
- Volt/amp calculation, from line voltage and three-phase current, watts and VARs, watts and power factor, from VARs and power factor
- Power calculation from VA and VARs, from VA and power factor, from VARs and power factor
- VAR calculation, from Q and watts, from VA and watts, from VA and power factor, from watts and power factor
- Power factor calculation from watts and VA, from watts and VARs, from Q and watts, from VA and VARs
- Unbalanced current calculation from three-phase amps
- Tap position calculation for 16- and 32-step taps

TPCG Utilities shall be able to create custom formulas using any standard algebraic symbols and have both user-defined and system defined values on the same screen.

TPCG Utilities shall be able to create custom complex functions using expressions and a high-level language similar to or identical to that offered in the Command Sequencing option described below.

### **5.6.1 Command Sequencing**

The proposed system shall provide a programming development environment to allow the user to develop custom calculations and control programs. A non-programmer may develop control and computational algorithms without having to be familiar with programming, the system database, or the operating system. The command processor shall permit access to

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any data in the database, including status or data quantities, or data computations, and record the results to the database or, based upon the results, generate system outputs.

It shall permit users to define their own variable names, assign constants to variables, and perform system functions.

The environment shall support comments and all of the functions described below:

- Math/logic functions, with the following expressions:
  - Algebraic operations (\*, /, +, -)
  - logical operators (AND, OR, NOT, XOR)
  - magnitude comparison (>, <, =)
  - absolute value
  - integer truncation
  - square root
  - circular functions (SIN, COS, TAN, ASIN, ACOS, ATAN)
  - exponential & logarithm
  - maximum and minimum in list
  - time/date
- Read and write status and analog points. Full alarm processing on calculated results.
- Issue controls and setpoints.
- Issue hard copy report requests.
- Call other command sequences as subroutines.
- Conditional (IF-THEN-ELSE) branching and DO WHILE loops.

The system shall provide the capability to build customized template functions which become part of the library of functions available for use in command sequences and calculations.

## **5.7 Device Tagging**

When a controlled device or a line fed by a controlled device requires maintenance, it is required that the system provide a facility for limiting control of that device. The system shall allow operators to inhibit control of devices by means of a secure, multi-level tagging feature. Any electrical network component or any point in the SCADA database shall be subject to tagging. The system shall provide three levels of standard device tagging logic:

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- Caution Order (CO) tags—if a device with a Caution Order tag is selected, a warning message will appear in the control dialog box. However, a control command may still be issued.
  - Multiple Control Inhibit (CI) tags—completely blocks control action until all tags are removed. Blocking of either or both states should be supported.
  - Multiple Control Authority (CA) tags—prohibits control by an external Terrebonne Parish Consolidated Government Utilities operator or by application software. Like the Control Inhibit tag, control is blocked until all the Control Authority tag(s) are removed.

For each type of tag, a visual indicator may be designed and located anywhere on the display, typically near the control device symbol. A text string message may be added to describe the reason for the tag. These messages are password-protected and may be viewed, summarized, removed or added any time only by an authorized user. More than one tag of the same or multiple tags of different types may be applied to the same point. The application and removal of tags shall be subject to the same area control authority assigned to the operator display windows. Additionally, there should be a ‘user defined’ library of tag reasons eliminating the requirement for the operator to have to retype the same tag reason over and over. The tag library should be available for any tag type. Tag types should include as a minimum:

#### **5.7.1 Alarm Inhibit Tag**

The system shall define an alarm inhibit tag that may be applied when alarms from a point are to be suppressed. This may be as a result of a chattering relay, for example. The point shall still be scanned from the RTU, but status changes shall no longer generate alarm messages.

#### **5.7.2 Scan Inhibit Tag**

The system shall define a scan inhibit tag that shall prohibit a reported value from being updated in the real-time database. For example, a switch may be undergoing maintenance operations. During this operation it may be opened or closed, which may or may not reflect the actual status of the device. Application of the Scan Inhibit tag shall prevent operation of the switch from being updated in the database.

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### **5.7.3 Information Tag**

The system shall define an information tag that shall alert the user to certain information prior to device operation. For example, should the lead operator wish to be notified prior to the disabling of a recloser, he should apply an Information Tag to the point and enter the appropriate text message. When another operator attempts to control the point, a dialog box is displayed containing the message. The operator may continue the control sequence (after closing the dialog box), or cancel the control sequence.

### **5.7.4 Special Condition Tag**

The system shall define a special condition tag that shall inform the user of special conditions that may exist before proceeding with a control action. For example, if a breaker is scheduled for maintenance, a Special Condition tag may be applied, stating the date and time that maintenance will commence. When an operator attempts to control the point, a dialog box shall be displayed containing the message previously entered. The operator may continue with the control sequence (after closing the dialog box), or cancel the control sequence.

### **5.7.5 Clearance Tag**

The system shall define a clearance tag that shall prevent operation of a device when it is applied. For example, if a line is being serviced, a breaker shall be opened and shall remain open until service is completed. If an operator selects the device which has a Clearance tag applied, a dialog box shall inform the operator of the Clearance tag. The reason for the tag is also displayed on the dialog box. The control sequence cannot be completed, and the operator must cancel it. Blocking of the 'trip' or 'close' or 'both' functions should be supported.

A graphic 'tag editor' should be supplied allowing the user to configure the number and types of tags desired for the system. The tag editor should allow the user to define the tag names and functions required so that if the user wanted a tag named 'RED TAG', the user should be able to create this tag while the system is on-line and in real time.



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## **6. SCADA User Interface**

The SCADA system user interface shall utilize the graphical interface environment, making extensive use of mouse point-click-drag functions, pull-down menus and interactive dialog boxes. The user interface should support the display of multiple windows that can be re-sized, moved, tiled fashion, maximized/minimized.

### **6.1 SCADA Browser-based User Interface**

The proposed SCADA system shall provide both a traditional thick client user interface that runs natively in the SCADA system Linux OS, as well as a thin client web browser-based user interface that is platform independent and is supported in major web browsers including Google Chrome, Mozilla Firefox and Microsoft Edge.

The browser-based user interface shall not utilize a remote desktop client application to render the same thick client interface in a browser. It must be a dedicated thin client user interface that supports all of the same SCADA system displays created by the user for the thick client interface, without need for user conversion or modification.

The thin client browser interface must support user-configurable workspaces using modular display “panels” that provide different types of information including geographical maps displays, trends, alarm/event lists, images/camera feeds, etc.

Configurable key performance indicator (KPI) panels must also be supported so that the user has easy one-click access to critical system.

### **6.2 Operator Displays**

The system shall include a library of system displays, Help displays, Tutorial displays and typical substation one–line diagrams.

Operator display windows should be sized and configured using standard windows techniques. Each operator display will be unrestricted, so each may be unique and may have attributes or parameters assigned to it that are different from other displays. The system shall permit the development of up to 100,000 unique user defined displays.

#### **6.2.1 SCADA System Status Display**

The system shall include a system status display that shows the physical hardware installed in the delivered system. From this display, a system dispatcher can manage system failover, peripheral device switching, area dispatch allocation, and the addition or removal of equipment from service.

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### **6.2.2 Substation One–line Diagrams**

Substation one–line diagram displays constitute a major part of the user interface; they are frequently used by the system operator. Data from any part of the system can appear on any substation one–line diagram display.

### **6.2.3 Station Status Displays**

Station status displays shall be automatically generated by the system. These tabular displays present the current status of all monitored devices in the station and are real time with the refresh rate determined by the operator.

### **6.2.4 Alarm and Abnormal Summary Displays**

The alarm summary display shall present all the alarms that have not been acknowledged by the operator. When the operator acknowledges any alarm, it is automatically removed from the alarm summary display.

The abnormal summary is a list of all devices in an abnormal state, including operator–entered point deactivation and/or inhibits. Points are selected, and abnormal states defined, using the system’s visual editor. Separate alarm and abnormal summaries shall be available by area of responsibility. The abnormal should be real time with the refresh rate determined by the operator.

### **6.2.5 Communications Statistics Displays**

The communications statistics display shall show actual communications error rates determined by the communications processor and passed to the host computer. This display identifies maintenance problems associated with communications channels and RTUs.

## **6.3 Drawing File Import**

The proposed system shall provide the capability to import graphics from other drawing packages (e.g. AutoCAD and GIS systems) via a direct DXF file import. The layers contained in the DXF file shall be preserved as layers in the SCADA display. The symbols, colors and text styles contained in the DXF file shall be imported into the libraries, where they may be edited or used as is in dynamic map elements.

The system shall allow the import of multiple DXF files into the same SCADA display. It shall be possible to subsequently re-import an updated DXF file and have its layers replace the corresponding layers in the existing display without disturbing the graphics contained in the other layers of the SCADA map.

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## 6.4 Operator Notes

The displays shall support a system of “post-it” notes that allows operators to add and remove note icons on any display. Clicking on a note icon shall cause a pop-up window to appear to show free-form notes on any topic. The notes can be entered and modified in this window. Simply placing the cursor over the note should also display the note contents.

## 6.5 Alarm Display of Origin

When an alarm message is displayed in the window, it may be important for the operator to quickly change displays and view conditions of the associated substation. Clicking on the alarm message shall immediately call up the system display associated to the alarmed condition.

## 6.6 Graphical Operator Display Security

Display accessibility shall be assigned to users at login time. This accessibility shall define the user's area of responsibility in three mutually exclusive categories: Display Authority, Control Authority, and Alarm Responsibility. It shall be possible for an operator to have:

- View Only access—no operational control or alarm responsibility
- Limited access—some operational control authority/alarm responsibility over specific points
- Full Operation access—operational control and alarm responsibility over all displays.

The system shall define alarm routing on a per point basis. An alarm from one point may be routed to one display page while another point from the same RTU may be routed to another. Important alarms may also be routed to more than one display page.

The system administrator shall be responsible for assigning default authorities and responsibilities. The system shall provide special display pages that are password-protected. Only authorized personnel can make modifications while the system is on-line.

## 6.7 Data Trending

The proposed system shall provide the ability to store and view any data value from the database in a trend graphical format. The system shall bring up pixel-resolution trend graphs of real-time or historical data. Trend graphs shall be displayed in separate windows that can be moved, re-sized and minimized to an icon. The trend graph window shall include tools that allow the TPCG Utilities to configure and customize the graph display.

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A trend graph window shall have the ability to select any point in the real-time or historical database for tracing at selected intervals via a dialog box and pop-up. Each trend plot may contain at least ten points from the database. In cases where there are more samples in the dataset than can be displayed in the graph window, it shall be possible to scroll back in time. It shall be possible to see the numeric values and time-stamp of the traces at any time position in the graph by manipulating a time cursor inside the trend graph.

Different types of charts may be selected, including horizontal or vertical line charts, horizontal or vertical bar charts, horizontal or vertical filled area charts. Sixteen different line styles may be used with different width and fill patterns. Foreground color for the traces and background color of the charts may be assigned individually to each chart.

The trend axis should be automatically scaled in time and engineering units based on the data point under trend. Database data point limits may also be presented on each trend. Color presentation indicates trend points that have exceeded assigned limits.

The system should support as a minimum 1000 charts, with up to 10 traces/chart and up to 40,000 samples/trace. It should be possible to mix real-time and historical data on the same chart.

The operator should be able to generate an 'ad hoc' trend of any point on any display simply by clicking on the point and requesting a trend chart for that point. Any number of 'ad hoc' points should be able to be trended in addition to any trend charts previously defined.

It should be possible to call or open a chart from a target on any display. In this manner, each feeder could have a target that would open a chart with all the telemetry data for that feeder for the last 40,000 samples. The sample rate should be user configurable from 1 second to 1 hour in 1 second increments.

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## 7. Database & Display Editors

The system shall be delivered with database and display editors. These database tools are password-protected and may only be activated by an authorized user to perform on-line interactive editing.

### 7.1 Real-time Database Editor

The system shall provide a real-time database editor for generation and modification of database files necessary for system configuration and system definition. Information maintained in these files include:

- RTU information (communication characteristics, sizes, etc.)
- Status point attributes (point description, abnormal state, etc.)
- Analog definition (scale factor, limits, etc.)
- System parameters (station name, I/O devices, etc.)

The system database shall be defined and maintained with the help of an interactive database editor. The database editor shall be of standard dialog style and shall be supported by a detailed on-line database manual that explains the format, purpose and interrelationships of all database fields. The system shall execute a database initialization program when the system is cold-started and use the information in these files to generate a real-time database. This part of the database shall be used by real-time functions to perform data acquisition, alarm detection, supervisory control, display update, report generation and other SCADA functions.

The database editor shall include features to easily create and modify the database such as:

1. using the Station copy feature to create an entire new station and all its points, based on an existing station;
2. copying, cutting and pasting in the real-time environment;
3. using a model feature to create points and other database items that are based on previously created ones;
4. using a Station Rename feature to copy a portion of an existing display, and to reassign all those dynamic points to points in a different station, all in one operation;
5. editing or modifying the database on an MS Excel spreadsheet and importing it into the system real-time database;

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6. deleting existing database points;
  7. providing a consistent “look and feel” to the system.

All changes and updates of the database shall be completed and validated while the system is in online operation. Under no circumstances shall the real-time system operation be interrupted or disturbed by the database editing and maintenance process.

It shall be possible to save a ‘snapshot’ of the entire database before restarting the SCADA system so that on a restart, the system can start from either a ‘cold’ start or a ‘snapshot’ of the system taken prior to shut down.

## **7.2 System Graphical Display Generator/Editor**

A full graphics display editor shall be provided as an integral part of the database and display building tools. Access to the editing capabilities shall be available at all local and remote consoles; however, it shall be password-protected.

The display editor shall allow the TPCG Utilities to create multi-layer displays utilizing any data in the database in a graphical or tabular format. The editor shall allow the user to assign zoom levels to each layer for automatic de-cluttering. The editor shall allow the user to specify an image file for any display that is to be used as a background for the display. The image file formats that can be used for this shall include JPG, GIF and BMP.

The full graphics editor shall contain easy-to-use tools for re-layering, re-coloring and re-styling (text) as well as duplication (copy/cut and paste), stretch and re-size.

The display editor shall support a tabbed and floating multi-window environment, enabling the user to open multiple displays at one time and easily copy and paste drawing elements and dynamic objects between them.

### **7.2.1 Drawing Tools**

The proposed system shall include drawing tools as part of a full graphics editor to allow the user to add to and/or modify user displays. The drawing tools that are provided in edit mode shall include the following capabilities at a minimum:

- a. Draw Line
- b. Draw Arc
- c. Draw Polyline
- d. Draw Curve

- 
- e. Draw Rectangle (open/filled)
  - f. Draw Rounded Box (open/filled)
  - g. Draw Circle/Ellipse (open/filled)
  - h. Draw Polygon (open/filled)
  - i. Draw Irregular Polygon (open/filled)
  - j. Draw Pie (open/filled)
  - k. Insert Symbols
  - l. Insert Text
  - m. Insert dynamic element (e.g. point or poke point)

The following editing/layout functions shall also be provided:

- n. Align (Left/Right, Top/Bottom, Middle H/V)
- o. Distribute Horizontally/Vertically
- p. Group/Ungroup objects
- q. Drawing Order (Front/Back)
- r. Snap to Grid/Object/Line

The system should include an initial ready-to-use set of symbol libraries that contain symbols commonly found in electrical drawings. In addition to the delivered libraries, the system should support a duplicate set of libraries defined as User Libraries. On any given display, points may be added from either library. User Libraries should exist for Symbols, Colors, Scale Factors, Status Pairs, etc.

The system shall provide a graphic editing function for grouping the graphic elements or assigning symbols for all the dynamic (real-time dependent) variables on the screen. The system shall create a dynamic record for each variable to describe the color, symbol/element, and coordinates for real-time presentation. Presentation attributes for data quality (alarm, limit exceeded, etc.) and data security (tags) shall also be included in the dynamic record. The display editors shall allow the user to define displays of dynamic data fields as follows:

- analog values
- status values
- station alarm status

- 
- remote station status
  - dynamic line segment coloring
  - historical data trend graphs
  - text strings

The proposed system shall provide the capability to display a tele-metered or calculated analog value in the form of a numeric string, horizontal or vertical bar graph (the length of a bar graph reflects the value of the analog point), or in an analog gauge. Both numeric strings and bar graphs shall be color-coded to reflect any violation of alarm limits. The color-coding shall be user-definable. It shall be possible to create multiple color-coding schemes. Analog gauges shall have the capability to represent a meter or dial type gauge.

### **7.2.2 Automatic Display Generation**

A tool should be provided that allows the user to create one or multiple templates and have the system automatically build screens using data from multiple stations and applying this data to the appropriate template. In this manner, a display table could be created and the system would automatically build all the displays for control points, telemetry points, status points, etc.

### **7.3 Data Quality**

The system shall deliver a consistent scheme for display of data. Display elements may be selected to show or not to show the attribute data. Quality type attributes and security type attributes may be shown distinctly with the actual display element. The positioning of the attribute data shall be selectable for each type and color and symbol/text used for each quality mode and/or security mode shall be user-definable. Even though each point may have all these options, the system shall support device type entries held in a library of points so that the designer may build some standard elements to represent particular elements of the system. Each analog element may default to the system-wide choice of limit colors (states) or be individually set for specific needs.

The proposed system shall provide the capability to display data quality indications adjacent to each analog value or status point indication.

These shall include the following as a minimum:

- a. telemetry failed
- b. manually set



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- c. calculated from manually set data
  - d. alarm blocked
  - e. out-of-range
  - f. tagged

The system shall support layering of display information and declutter levels on page-based displays, so that data may be shown based on the layers requested to present the necessary information.

#### **7.4 Report Editor**

A standard report editor shall be included to allow TPCG Utilities to define reports by specifying a database table, a set of desired data fields and the selection criteria for retrieving records from the database table. In a report definition, TPCG Utilities shall be able to specify:

- a. Choice of database table to access (e.g. status points, alarm file)
- b. Choice of the data fields available in the chosen table
- c. Filtering by the value of any data field in the selected table
- d. Ordering data by value of any data field
- e. Grouping of displayed data according to any data field

The system shall include a scheduling facility that will allow the operator to define the schedules and destinations for all reports. It shall be possible to direct a scheduled report to multiple printers, one or more of which can be directories on disk.

The reporting tools shall also include direct spreadsheet report capabilities that supports import and export of data in any standard file format including xls, html, xml, pdf etc. It should be possible to put the spreadsheet in a 'real time mode' allowing it to automatically be refreshed at a user definable rate with data from the SCADA real-time database. Not only should the user be able to import real-time or historical data into the spreadsheet for report purposes, but it should also be possible to import station names and point descriptions from the real-time database, thereby making it extremely easy to create any reports required.

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## 8. Real-time Database

The real-time database shall be a performance-oriented SCADA database. All tele-metered data will be stored in the real time database and used to display one-line data. An API will be provided for customer developed application access. Standard access of the real time database shall be accomplished through a transfer of the relevant data to the optional relational database management system (RDBMS) and subsequent queries. As standard, C and shell script calls as well as Libre Office, Python calls, Multi-Speak and ICCP should be available to read or write data to the SCADA database.

### 8.1 Real-time Data Attributes

Data quality attributes are used in one-line displays and real-time tabular displays. All real-time data shall be stored in the database with a data quality attribute. There are two methods of displaying these indications:

- A set of user-defined colors to represent different values of telemetry and accumulator points.
- A user-defined description of up to six characters in user-defined colors.

### 8.2 Real-time Point Deactivation and Inhibits

Any point in the system database can be deactivated using a control sequence. Once a point has been deactivated, the state of the device as recorded in the system database shall no longer be updated by the communications software. The deactivated point shall remain in the state last reported prior to deactivation, unless the state is changed.

Once a data point has been deactivated, the state of the device may be changed in the database. Manual replacement allows the actual current state of a failed field device to be maintained by the system operator even though it is not reported by the RTU.

A data point may be alarm-inhibited with a control sequence issued by an operator. Once an alarm has been inhibited, its status in memory shall be updated by the communications software. However, changes of state shall not generate alarms on the system. Therefore, operator display that show an alarm-inhibited point are required to show the point's current state plus an inhibit flag.

Any point that has been control-inhibited shall be blocked from further control until the control-inhibit is removed.

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Multiple control inhibits, each with their own reason, maybe placed on the same device in the event that multiple crews are working on the same line or feeder.

### **8.3 Pseudo Points**

The system shall support operator–entered data points as if they were regular status or telemetry points assigned to the system, even though there is no corresponding data point being reported from the RTU in the field.

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## 9. Historical Database

The system will provide a historical data collection facility that allows TPCG Utilities to define the points that are to be sampled, the sample frequency and how long to retain the sample data. The historic data shall be archived on disk into daily data files for later analysis and to generate reports with a Report Writer.

Historic Data Collection shall be capable of capturing real-time data scanned from the RTUs, calculated quantities derived by software, and manually entered data by operator. The collected historical data must be able to be trended, included in reports, exported to MS Excel or transcribed to relational databases.

The historical data software shall allow TPCG Utilities to specify recording of statistics in the sample records. The statistics shall include time averages, summations, maximums and minimums, and times of maximums and minimums and shall be based on TPCG Utilities definable observation intervals.

The product shall be a set of tools that provide data presentation services: reporting, filtering, graphing, export, and advanced analysis.

The system should automatically capture the minimum and maximum value and time of occurrence (to the nearest second or scan interval) for every scanned telemetry point in the system. These values should be stored back to the real-time database so they may be displayed or printed on any reports.

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## **10. System Implementation and Testing**

### **10.1 Project Schedule**

The Vendor shall submit a schedule with the proposal as identified in the Bid Submittal Instructions.

Within two (2) weeks after contract execution, the Vendor will submit a detailed schedule showing each major and minor project task, including critical dates and tasks for the Purchaser. This schedule shall be consistent to the schedule made part of the Bid Proposal, only with added detail.

The schedule shall be subject to review and approval by TPCG Utilities.

### **10.2 Project Coordination**

The Vendor shall assign sufficient and qualified staff to complete the project satisfactorily and in the agreed upon time frame. This will include a project manager, lead software engineer and lead hardware engineer. The Vendor's Project Manager and Lead Engineers shall be subject to approval by the Purchaser.

TPCG Utilities has the right to designate its project manager and team members and select who is to participate in any project phase, meeting, training, document review, approvals, testing, or other activity. This includes those employed by TPCG Utilities directly or others who TPCG Utilities designates as their representative or team member, including but not limited to their consultants for this project or other projects.

### **10.3 Factory Acceptance Test (FAT)**

A Factory Acceptance Test (FAT) shall be performed by the Vendor prior to shipping the SCADA System to demonstrate the operation of the complete integrated system. The purpose of the FAT is to demonstrate that the functional, performance, availability and other requirements in this RFP are met.

The test procedure document shall be prepared by the Vendor and shall follow a consistent format and be submitted to TPCG Utilities for review and approval. The formal factory acceptance test shall not take place until the test procedure document has been reviewed and approved by TPCG Utilities.

Discrepancies found during the testing shall be documented and maintained in a test log. The subsequent correction shall be described and representatives of TPCG Utilities and Vendor shall verify proper operation.

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Faulty and/or incorrect operation of major functions (major discrepancies) may, at the discretion of TPCG Utilities, be cause for the suspension or restarting of the entire test, pending the correction of the problem. Minor discrepancies shall be corrected and re-tested. The SCADA System shall not be shipped until all discrepancies, both major and minor, are corrected to the satisfaction of TPCG Utilities personnel.

#### **10.4 Site Acceptance Test (SAT)**

The Site Acceptance Test (SAT) shall be conducted at TPCG Utilities facilities. The Vendor shall provide personnel that assisted with the FAT for this test. The purpose of the SAT is to confirm operation of the basic system functions such as communication with RTAC 3530 controllers, RTUs/IEDs and other subsystems, data acquisition and processing, operator interface displays, report generation, data archiving and diagnostic routines. Following the successful start-up of the SCADA System equipment, Vendor personnel shall perform the SAT with oversight from TPCG Utilities personnel.

Any problems encountered during SAT will be brought to the attention of the Vendor. The Vendor shall promptly correct all problems encountered with its own field service personnel unless the TPCG Utilities agrees to provide personnel for a particular item.

Successful completion of SAT means TPCG Utilities is satisfied that the system has met all requirements described in this specification, excluding warranty provisions and other items that ~~survive~~ extend beyond the site-testing milestone.

The SAT will include a subset of tests performed during the FAT, mutually agreed upon by the Vendor and TPCG Utilities. It shall also include executing test procedures that could not satisfactorily be demonstrated in a factory setting. Furthermore, the site testing shall include verifying system capabilities to communicate as expected with RTAC's, RTUs and to interface as may be expected with other information systems.

#### **10.5 Shipping and Installation**

All equipment deliveries shall be F.O.B. destination prepaid and allowed to TPCG Utilities facilities. Deliveries shall be sent to the attention of the person that will be designated by the Purchaser.

The Vendor shall provide all plans and procedures necessary for the system installation and integration. This includes all Vendor-supplied equipment, including third party or subcontractor equipment the Vendor is providing or has made part of its system. This also includes hardware recommended by the Vendor for purchase by TPCG Utilities to support the

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system. TPCG Utilities shall have the opportunity to review all installation plans and procedures prior to installation.

TPCG Utilities will prepare all sites for the installation of equipment in accordance with the Vendor-furnished instructions.

The Vendor shall be responsible for starting up the system. The purpose of system startup shall be for the Vendor to verify that all system functions that were demonstrated during FAT now operate properly under actual field conditions. This shall include all application programs. The main purpose of system startup shall be to prepare the system for SAT. The SAT shall include helping establish communications at the master station to all substations included in this project.

TPCG Utilities will provide general service power, lighting, and room/equipment air conditioning. The Vendor shall indicate the general service circuit capacity, environmental, and protection requirements for SCADA System equipment.

#### **10.6 Service and Support**

The Vendor shall offer a range of comprehensive and flexible support programs. These programs shall provide the customer with the level of service required to support system operations and maintenance based upon the customer's individual available resources.

One of the support programs offered shall be the cost of a 5-year Maintenance Contract. These support programs shall be listed as separate line items so it is clear to TPCG Utilities what each option costs.

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## **11. Vendor Support & Maintenance**

The Vendor's support program shall offer the level of service that shall optimize system operation and keep system software current with technological advancements. The Support service shall provide the customer with single point of contact. With this support option, Vendor shall contract directly with the computer manufacturer to service customers' hardware and operating system software. Vendor shall act as liaison between computer manufacturer and the customer, should that need arise.

The Support program shall further ensure that application software remains current. Vendor shall provide upgraded software releases, occurring typically once per year, as part of this agreement at no additional cost other than the annual maintenance contract cost. Installation support services for these upgrades shall be available via the Vendor's Customer Support department. On-site services may be arranged at standard rates. Software upgrades to integrated application software supplied by Vendor's partners shall also be included in the Support Agreement.

### **11.1 Help Desk Support**

The Vendor's Customer Support Department shall operate a telephone support hot-line that shall provide solutions to service requests for customers in the Continental U.S. This shall include requests for assistance on products manufactured by Vendor or applications provided by Vendor.

Telephone assistance consists of requests pertaining to:

- Installation of the Vendor's SCADA system
- Troubleshooting of Vendor's SCADA software
- Operation of the Vendor-supplied hardware and software
- Problem identification in SCADA master, or Vendor manufactured RTUs
- Diagnosis and correction of service requests on the Vendor-supplied Master system and RTUs

Response times within 60 minutes from the call shall be required for critical problems. A response means a qualified person from the Vendor's organization has contacted TPCG Utilities and is working on the problem. The Vendor shall provide remote diagnostics support from Vendor's facilities via a High-speed VPN connection at TPCG Utilities facilities.



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Vendor shall attempt to resolve any support questions posed by the customer during the initial call. If appropriate, Vendor may defer resolution of a support question until more in-depth research is completed.

The Vendor's Customer Support Department shall provide, but not be limited to, the following services:

- Help Desk shall have a toll-free telephone number (Continental U.S.)
- Help Desk shall be in operation from 8:00 A.M. to 8:00 P.M. EST, Monday through Friday (excluding holidays).
- Support e-mail shall be available
- The Help Desk shall be the primary point of contact with Vendor for assistance in resolving service requests.
- Customer Support shall strive to respond to any service requests within four business hours.
- The information provided shall be logged into Vendor's Customer Support Help Desk call management system.
- Vendor's administrative procedures shall ensure an appropriate response or recommended solution as quickly as possible. Vendor shall also initiate random follow up contact after service requests are completed to ensure that customer expectations have been met.
- An online Support Portal shall be provided for TPCG Utilities that includes easy access to all Vendor support material including manuals, tutorials, training videos, firmware updates, etc. This support site must also enable TPCG Utilities to report, view and manage Help Desk cases.

TPCG Utilities shall have the option to accept or decline the support plan prior to the warranty period ending. The Vendor shall properly TPCG Utilities 60 days before expiration of the warranty period that there is a need to address continuation of a support plan.

While under a support agreement, the Vendor will provide monthly diagnostics on the system with access through the VPN provided. Results of the monthly diagnostics will be provided to TPCG Utilities each month after completion.

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## **11.2 Training**

The Vendor shall make available to TPCG Utilities training on the operation, maintenance, failover/startup, recovery, application software, database and display maintenance. The class training shall be conducted at the Vendor's facilities or remotely unless otherwise agreed to by both parties.

Dispatcher/operator training shall be conducted at the TPCG Utilities facilities.

Training course outlines shall be included in the Vendor's bid. Each course outline shall include, in addition to the subject matter, a short review of the prerequisite subjects, how this course fits into the overall training program, and its objective.

Persons with sufficient training experience shall conduct training. These trainers shall have sufficient expertise on the subject of the training.

A suggested training plan and schedule suitable to the needs of TPCG Utilities shall be provided as part of the proposal. The plan and schedule shall include a description of the training classes and prerequisites, proposed order of the classes, length of classes, the minimum and maximum number of attendees per class, and standard cost per attendee.

## **11.3 Documentation**

The documentation requirements shall apply to all items described in this specification. This includes all items provided by subcontractors or suppliers of the Vendor unless specifically noted otherwise.

The Vendor shall provide a complete documentation list/inventory and shall update it periodically during the project to reflect what documentation has been delivered.

The software documentation shall provide, through a set of logically coordinated documents, a comprehensive and detailed description of all software necessary for the operation and maintenance of the proposed system. It shall describe the system's overall functions, subsystems, databases, macros, libraries and procedures. The requirements in this section do not apply to Original Equipment Manufacturer (OEM) provided software, e.g., operating systems). For OEM provided software, the standard OEM manuals shall be provided.

The Vendor shall provide the documentation electronically wherever it is appropriate. At a minimum, two (2) complete printed sets of all documentation - standard and project specific - shall be provided to TPCG Utilities.

All the Vendor generated manuals including but not limited to the Database manual, Operators manual, Applications manuals, etc. should be available on-line on the SCADA

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system. The viewing of any manuals or documentation should have capability for text searches.

Final sets of all documentation shall be as-built documents to reflect final installation, software, and all other system equipment and programs.

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## **12. General Provisions**

### **12.1 Terms and Conditions of Contract**

TPCG Utilities will utilize the professional services contract agreement, subject to minor edits, included herein as "Attachment A."

### **12.2 Modifications and Withdrawals**

Withdrawal of, or modifications to proposals are effective only if written notice thereof is sent to the TPCG Utilities prior to the time proposals are due. A notice of withdrawal or modification to a proposal must be signed by an officer with the authority to commit the company and no withdrawal or modifications will be accepted after the time proposals are due.

### **12.3 Questions and Inquiries**

Direct questions and inquiries in writing to the individual listed on page 5. Electronic submission of questions is acceptable. The deadline for questions is 4:30 pm, October XX, 2022. A written response to submitted questions, in the form of an Addendum, will be provided to all applicants.

### **12.4 Proposal Acceptance**

TPCG Utilities reserves the right to accept or reject any and all proposals, in whole or in part, received as a result of this RFP; to waive minor irregularities; or to negotiate with all responsible proposers, to serve the best interest of TPCG Utilities.

### **12.5 Insurance Requirements**

Selected proposers shall maintain General Liability Insurance, Automobile Liability Insurance, and Workers Compensation Insurance at the levels prescribed in the attached professional services contract for the term of the contractual service agreement.

### **12.6 RFP Cancellation**

TPCG Utilities may cancel this RFP, in whole or in part, at any time before the opening of the proposals.

### **12.7 Services Rendered**

All work performed under this Contract shall be in compliance with all applicable Louisiana State, Parish, and City codes, standards and regulations.

END OF REQUEST FOR PROPOSAL

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## 13.Attachment A – Sample Contract

### STANDARD FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

THIS AGREEMENT is dated as of the \_\_\_\_\_ day of \_\_\_\_\_ in the year 20\_\_ by and between TERREBONNE PARISH CONSOLIDATED GOVERNMENT (hereinafter called OWNER) and \_\_\_\_\_ (hereinafter called CONTRACTOR).

OWNER AND CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

#### **Article 1. WORK**

CONTRACTOR shall complete all work as specified or indicated in the Contract Documents. The Work is generally described as follows:

**Project Name:**

**Parish Project No.**

The work consists of

#### **Article 2. ENGINEER**

The Project has been designed by Parish Engineering, LLC, who is hereinafter called ENGINEER and who will assume all duties and responsibilities and will have rights and authority assigned to ENGINEER in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

#### **Article 3. CONTRACT TIME**

3.1 The work will be substantially completed within One Hundred and Eighty days after the date when the Contract Time commences to run as provided in paragraph 2.3 of the General Conditions and completed and ready for final payment in accordance with paragraph 14.14 of the General Conditions within 45 days after the date of Substantial Completion.

3.2 LIQUIDATED DAMAGES. OWNER and CONTRACTOR recognize that time is of the essence in this Agreement and that OWNER will suffer financial loss if the Work is not

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substantially complete within the time specified in paragraph 3.1, above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. They also recognize the delays, expense and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by OWNER if the Work is not substantially complete on time. Accordingly, instead of requiring any such proof or notice of default, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty) CONTRACTOR shall pay OWNER for each day that expires after the time specified in paragraph 3.1 for substantial completion until the work is substantially complete in an amount of One Thousand dollars (\$1,000.00) per day, and Contractor shall pay Owner for each day that expires after the time specified in paragraph 3.1 for final completion until the entire Work is finally complete and ready for final payment an amount of One Thousand dollars (\$1,000.00) per day. Contractor agrees to allow Owner to deduct liquidated damages from progress payments and retention.

#### **Article 4. CONTRACT PRICE**

4.1 OWNER shall pay CONTRACTOR for performance of the Work in accordance with the Contract Documents and Specifications in current funds as follows: **SEE ATTACHED BID FORM.**

#### **Article 5. PAYMENT PROCEDURE**

Contractor shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by ENGINEER as provided for in the General Conditions.

5.1 Progress Payments. OWNER shall make progress payments on the Contract Price on the basis of CONTRACTOR'S Applications for Payment as recommended by ENGINEER, on or about the 25th day of each month during construction as provided below. All progress payments will be on the basis of the work measured by the schedule of values provided for in paragraph 14.1 of the General Conditions.

5.1.1 Prior to Substantial Completion of any work order, progress payments will be in an amount equal to 90% of the Work completed, and 90% of materials and equipment not incorporated in the Work but delivered and suitably stored, less in each case the aggregate of payments previously made. On contracts of \$500,000 or more the payments will be in an amount equal to 95% of the work completed and 95% of materials and equipment not incorporated in the work, but delivered and suitably stored.

5.1.2 Upon Substantial Completion of any work order, OWNER shall pay an amount sufficient to increase total payments to CONTRACTOR to 90% of the Contract Price on contracts under \$500,000 and 95% of the Contract Price on contracts \$500,000 or more, less such amount as ENGINEER shall determine in accordance with paragraph 14.7 of the General Conditions.

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5.2 Final Payment. Upon final completion and acceptance of the Work in accordance with paragraph 14.14 of the General Conditions, OWNER shall pay the remainder of the Contract Price as recommended by ENGINEER as provided in said paragraph 14.14.

5.3 OWNER may deduct from each progress payment and final payment any liquidated damages then due or that would become due based on OWNER's estimate of late completion of the Work, provided that CONTRACTOR fails to submit and implement a written schedule recovery plan describing the cause of schedule slippage or delayed progress and the actions proposed and taken to recover schedule.

## **Article 6. CONTRACTOR'S REPRESENTATIONS**

In order to induce OWNER to enter into this Agreement CONTRACTOR makes the following representations:

6.1 CONTRACTOR has familiarized himself with the nature and extent of the Contract Documents, Work, Locality, and with all local conditions and federal, state and local laws, ordinances, rules and regulations that in any manner may affect cost, progress or performance of the Work.

6.2 CONTRACTOR has studied carefully all reports or investigations and tests of subsurface and latent physical conditions at the site or otherwise, affecting cost, progress or performance of the Work which were relied upon by ENGINEER in the preparation of the Drawings and Specifications and which have been identified in the Special Conditions.

6.3 CONTRACTOR has made or caused to be made examinations, investigations and tests and studies of such reports and related data in addition to those referred to in paragraph 7.2 as he deems necessary for the performance of the work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents; and no additional examinations, investigations, tests, reports and similar data are or will be required by CONTRACTOR for such purposes.

6.4 CONTRACTOR has correlated the results of all such observations, examinations, investigations, tests, reports and data within the terms and conditions of the Contract Documents.

6.5 CONTRACTOR has given ENGINEER written notice of all conflicts, errors and discrepancies that he has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to CONTRACTOR.

## **Article 7. MISCELLANEOUS**

7.1 Terms used in this Agreement which are defined in Article 1 of the General Conditions shall have the meanings indicated in the General Conditions.

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7.2 No assignment by a party hereto for any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation, money that may become due and monies that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge to assignor from any duty or responsibility under the Contract Documents.

7.3 OWNER and CONTRACTOR each binds himself, his partners, successors, assigns and legal representatives to the other party hereto, his partners, successors, assigns and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

7.4 If any provision of the Contract Documents is invalid, illegal or unenforceable, all other provisions of the Contract Documents shall nevertheless remain in full force and effect. If any provision of the Contract Documents is inapplicable to any person or circumstance, that provision shall nevertheless remain applicable to all other persons and circumstances.

## **Article 8. CONTRACT DOCUMENTS**

This Agreement, Addenda (which pertain to the Contract Documents), CONTRACTOR's Bid (including documentation accompanying the Bid and any post-bid documentation submitted), the bonds, the General Conditions, the Technical Provisions, the Drawings as the same are more specifically identified in this Agreement, together with all Modifications issued after the execution of this Agreement, and all documents contained in the booklet entitled "Project Manual" shall be part of the Contract Documents.

END OF ATTACHMENT A



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## 14.Attachment B – General Conditions

### GENERAL CONDITIONS

#### ARTICLE 1 - Definitions

Wherever used in these General Conditions or in the other Contract Documents, the following terms have the meanings indicated which are applicable to both the singular and plural thereof:

Acceptance, Final Acceptance - The formal action by ENGINEER accepting the Work, or a specified part of the work thereof, as being complete in all respects, or the action by ENGINEER to place the equipment/facilities in operation for continuous utilization for their intended purposes.

Agreement - Refers to the written document signed by the OWNER and CONTRACTOR that is the legal instrument binding the parties to the work. The terms "Agreement" and "Contract" are synonymous.

Application for Payment - The form furnished by CONTRACTOR and approved by ENGINEER for requesting progress payments and an affidavit of CONTRACTOR and its Subcontractors that progress payments theretofore received from OWNER on account of the work have been applied by CONTRACTOR and its Subcontractors to discharge in full all of CONTRACTOR'S and its Subcontractors' obligations stated in the prior Application for Payment, and that the accuracy of the progress reported in the Application for Payment to have been completed by CONTRACTOR or its Subcontractors has been verified by CONTRACTOR. The application for Payment should include all supporting documentation as required by the Contract Documents.

Bid - Refer to definition of Proposal Document in Instructions to Bidders.

Bonds - Bid, performance and payment bonds and other instruments of security.

Change Order - A written order to CONTRACTOR in accordance with the Louisiana Bid Law and approved by OWNER authorizing an alteration, deviation, addition, deletion, and/or revision in the Work, or an adjustment in the Contract Price and/or the Contract Time.

Contract Documents - Those documents itemized or designated in Article 8 of the Agreement as may be further itemized in the Supplementary Conditions

Contract Price - The moneys payable by OWNER to CONTRACTOR under the Contract Documents as stated in the Agreement (subject to the provisions of paragraph 11.9.1 in the case of Unit Price Work).

Contract Time - The number of days (computed as provided in paragraph 17.2) or the date stated in the Agreement for the completion of the Work.

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CONTRACTOR - A person, firm or corporation with whom OWNER has entered into the Agreement for the Work designated under the Contract Documents. The term "CONTRACTOR" shall also mean CONTRACTOR or its authorized representative.

Correction Period - The time during which CONTRACTOR must repair defective work or remove defective work from the site and replace it with non-defective work, all at no cost to the OWNER, pursuant to Paragraph 13.12 of the General Conditions.

Day - A calendar day of twenty-four hours measured from midnight to the next midnight.

Defective - An adjective which when modifying the word Work refers to Work that is unsatisfactory, faulty or deficient, or does not conform to the Contract Documents or does not meet the requirements of any inspection, test, referenced standard or approval referred to in the Contract Documents, or has been damaged prior to ENGINEER'S recommendation of final payment (unless responsibility for the protection thereof has been assumed by OWNER at Substantial Completion in accordance with paragraph 14.8 or 14.10).

Drawings - The drawings which show the character and scope of the Work to be performed and which have been prepared or approved by ENGINEER and are referred to in the Contract Documents. The terms "Drawing" and "Plan" are synonymous, and wherever used in the Contract Documents it should be interpreted according to the definition of "Drawings".

Effective date of the Agreement - The date indicated in the Agreement on which it becomes effective, but if no such date is indicated it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

ENGINEER - The individual, firm or corporation named as ENGINEER in the Supplementary Conditions, who will have the rights and authority assigned to the ENGINEER in the Contract Documents. The term "ENGINEER" means the ENGINEER or its authorized representative. The terms "ENGINEER", "DESIGN ENGINEER", "ARCHITECT" and "ENGINEER/ARCHITECT" are synonymous, and wherever used in the Contract Documents they should be interpreted according to the definition of "ENGINEER".

Field Order - A written order issued by ENGINEER to CONTRACTOR on or after the effective date of the agreement requiring a minor change in work not requiring an adjustment in the Contract Price or Contract Time.

General Requirements - Division H of the Specifications.

Laws and Regulations; Laws or Regulations - Laws, rules, regulations, ordinances, codes and/or orders.

Notice of a Proposed Change - A written document issued on or after the effective date of the agreement initiated by a) OWNER requesting that CONTRACTOR figure the potential effect on Contract Price or time of the proposed change described in the Notice, if the proposed change is to be ordered, or b) CONTRACTOR to notify OWNER that in the CONTRACTOR'S

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opinion a change has been requested in a Field Order, or pursuant to ENGINEER'S approval of a shop drawings, or a written interpretation or clarification (pursuant to paragraph 9.4). A Notice of a Proposed Change shall not constitute an order to change the work, as no change shall be considered ordered until an appropriate change order, or Work Directive Change is executed by OWNER.

Notice of Award - The written notice by OWNER to the apparent successful Bidder stating that upon compliance by the apparent successful Bidder with the conditions precedent enumerated therein, within the time specified, OWNER will sign and deliver the Agreement.

Notice to Proceed - A written notice given by OWNER to CONTRACTOR (with a copy to ENGINEER) fixing the date on which the Contract Time will commence to run and on which CONTRACTOR shall start to perform CONTRACTOR'S obligation under the Contract Documents.

OWNER - Terrebonne Parish Consolidated Government (TPCG) which includes all Parish Departments, its elected and appointed officials, Agencies, Councils, Boards and Commissions, Districts, their officers, agents, servants and employees, including volunteers.

Operation, Initiation of - A point in time when OWNER initiates use of the entire work under the project for the purposes that it was planned, designed and built, setting forth commencement of the correction period.

Partial Utilization - Placing a portion of the Work in service for the purpose for which it is intended (or a related purpose) before reaching Substantial Completion for all the Work.

Project - The total construction of which the Work to be provided under the Contract Documents may be the whole, or a part as indicated elsewhere in the Contract Documents.

Resident Project Representative - The authorized representative of ENGINEER who is assigned to the site or any part thereof.

Shop Drawings - All drawings, diagrams, illustrations, schedules and other data which are specifically prepared by or for CONTRACTOR to illustrate some portion of the Work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a Supplier and submitted to CONTRACTOR to illustrate material or equipment for some portion of the Work.

Specifications - Those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to the Work and certain administrative details applicable thereto.

Subcontractor - An individual, partnership, corporation, joint venture, or other combination thereof who has a contract with Contractor to perform any part of the work at the site. The term "Subcontractor" shall also mean any individual, partnership, corporation, joint venture, or other combination thereof who has a contract with another Subcontractor to perform any part of the

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work at the site.

Substantial Completion - The finishing of the Work, or a specified part of the Work, in accordance with the Contract Documents, to the extent that Owner can use or occupy all or the specified part of the Work for the use for which it is intended without any concurrent Work at the site except as required to complete Punch List items with cumulative value under one percent (1%) of the Contract Price. Prerequisites for Substantial Completion include: (a) all systems have been successfully tested and demonstrated by the CONTRACTOR for their intended use, and (b) the Owner receiving all occupancy certifications and approvals from those State and local Public Entities with jurisdiction.

Supplementary Conditions - Section within Division I which amends or supplements the General Conditions and is a part of the Contract Documents and is located in the Book of Contract Documents.

Supplier - A manufacturer, fabricator, supplier, distributor, material man or vendor.

Testing, Pre-operational - All field inspections, installation checks, water tests, performance tests, and necessary corrections required of CONTRACTOR to demonstrate that individual components of the work have been properly erected and found to operate in accordance with the Contract Documents, so that they can be utilized continuously for their intended purposes.

Testing, Start-up - A pre-defined trial period required for achieving Substantial Completion during which CONTRACTOR is to operate the work, or a part specified thereof, under actual and simulated operating conditions and performing as defined in the Contract Documents, for the purposes of a) making such minor adjustments and changes as may be found necessary to comply with the requirements of the Contract Documents, and b) to comply with the final test requirements outlined in the Contract Documents.

Underground Facilities - All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following services or materials; electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems or water.

Unit Price Work - Work to be paid for on the basis of unit prices.

Work - Any and all obligations, duties, responsibilities, labor, materials, equipment, temporary facilities, and incidentals, and the furnishing thereof necessary to complete the construction assigned to, or undertaken by CONTRACTOR, pursuant to the Contract Documents. Also, the completed construction or parts thereof required to be provided under the Contract Documents, including all materials, equipment, and supplies incorporated or to be incorporated in the construction.

Work Directive Change - A written directive to CONTRACTOR, issued on or after the Effective Date of the Agreement and signed by OWNER and recommended by ENGINEER,

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ordering an addition, deletion or revision in the Work, or responding to differing or unforeseen physical conditions under which the Work is to be performed as provided in paragraph 4.2 or 4.3 or to emergencies under paragraph 6.20. A Work Directive Change may not change the Contract Price or the Contract Time, but is evidence that the parties expect that the change directed or documented by a Work Directive Change will be incorporated in a subsequently issued Change Order following successful negotiations by the parties as to its effect, if any, on the Contract Price or Contract Time as provided in paragraph 10.2.

## **ARTICLE 2 - Preliminary Matters**

**2.1 DELIVERY OF BONDS:** When CONTRACTOR delivers the executed Agreements to OWNER, CONTRACTOR shall also deliver to OWNER such Bonds as CONTRACTOR may be required to furnish in accordance with paragraph 5.1.

**2.2 COPIES OF DOCUMENTS:** OWNER shall furnish to CONTRACTOR up to five copies (unless otherwise provided in the Supplementary Conditions) of the Contract Documents as are reasonably necessary for the execution of the Work. Additional copies will be furnished, upon request, at the cost of reproduction.

**2.3 COMMENCEMENT OF CONTRACT TIME; NOTICE TO PROCEED:** A Notice to Proceed may be given at any time within thirty days after the effective date of the agreement. However, upon mutual written consent by both parties, the notice to proceed may be extended. The Contract Time will commence at the time specified in such notice to proceed or, if no notice is given, thirty days following the Effective Date of the Agreement.

**2.4 STARTING THE PROJECT:** CONTRACTOR shall start to perform the Work on the date when the Contract Time commences to run, but no Work shall be done at the site prior to the date on which the Contract Time commences to run, except with the written consent of OWNER.

**2.5 BEFORE STARTING CONSTRUCTION:** Before undertaking each part of the Work, CONTRACTOR shall (a) study and compare the Contract Documents with each other and against manufacturers, representations, (b) verify dimensions and field measurements, (c) coordinate requirements of dependent Work (location, dimensions, access, fit, completeness, class, codes, etc.), and (d) notify ENGINEER in writing of any conflict, error, omission or deviation from manufacturers' recommendations discovered. CONTRACTOR shall be responsible for any delay and all costs resulting from performing any Work before obtaining a written clarification or interpretation from ENGINEER, if CONTRACTOR had actual knowledge, or should have reasonably known that any such Work (a) involves a conflict, error or omission, or (b) is subject to specific method of installation, performance or test procedure or result which is contrary to the recommendation of the corresponding manufacturer. **Contractor shall also be responsible for locating all property lines and right-of-way lines prior to beginning construction.**

**2.6 SCHEDULE SUBMITTALS:** Within ten days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), CONTRACTOR shall submit four

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copies of the following schedules to ENGINEER for review:

2.6.1 An estimated progress schedule indicating the starting and completion dates of the various stages of the Work in accordance with the Contract Documents.

2.6.2 A preliminary schedule of Shop Drawing submissions.

2.6.3 A preliminary schedule of values for all of the Work which will include quantities and prices of items aggregating the Contract Price and will subdivide the Work into component parts in sufficient detail to serve as the basis for progress payments during construction. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work which will be confirmed in writing by CONTRACTOR at the time of submission. The Schedule of Values will be organized along the Divisions, and sub-divisions, of Section K, the Technical Specifications.

**2.7 INSURANCE CERTIFICATES:** Before any Work at the site is started, CONTRACTOR shall deliver to OWNER, with a copy of ENGINEER, certificates (and other evidence of insurance requested by OWNER) which CONTRACTOR is required to purchase and maintain in accordance with paragraphs 5.4, 5.5, and 5.6. Certificates of Insurance must be accompanied by a letter from the Contractor's Insurance Agent certifying that the insurance being provided meets the limits and requirements of the specifications. An explanation of any abbreviations used on the certificates must also be provided.

**2.8 PRE-CONSTRUCTION CONFERENCE:** Within twenty days after the effective date of the Agreement, but before CONTRACTOR starts the Work at the site, a conference attended by CONTRACTOR, ENGINEER and others as appropriate will be held to discuss the schedules referred to in paragraph 2.6, to discuss procedures for handling Shop Drawings and other submittals and for processing Applications for Payment, and to establish a working understanding among the parties as to the Work.

**2.9 FINALIZING SCHEDULES:** At least ten days before submission of the first Application for Payment a conference attended by CONTRACTOR, ENGINEER and others as appropriate will be held to finalize the schedules submitted in accordance with paragraph 2.6. The finalized progress schedule will be acceptable to ENGINEER as providing an orderly progression of the Work to completion within the Contract Time, but such acceptance will neither impose on ENGINEER responsibility for the progress or scheduling of the Work nor relieve CONTRACTOR from full responsibility therefore. The finalized schedule of Shop Drawing submissions will be acceptable to ENGINEER as providing a workable arrangement for processing the submissions. The finalized schedule of values will be acceptable to ENGINEER as to form and substance.

### **ARTICLE 3 - Contract Documents; Intent, Amending, Re-use**

**3.1 INTENT:** The Contract Documents comprise the entire Agreement between OWNER and CONTRACTOR concerning the Work. The Contract Documents are complementary; what is called for by one is binding as if called for by all. The Contract Documents will be construed

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in accordance with the law of the place of the Project.

**3.2 FUNCTIONALLY COMPLETE PROJECT:** It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any Work, materials or equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result will be supplied whether or not specifically called for. When words which have a well known technical or trade meaning are used to describe Work, materials or equipment such words shall be interpreted in accordance with such meaning. Reference to standard specifications, manuals or codes of any technical society, organization or association, or to the Laws or Regulations of any governmental authority, whether such reference be specific or be implication, shall mean the latest standard specifications, manual, code or Laws or Regulations in effect at the time of opening of Bids (or, on the effective date of the Agreement if there were no Bids), even though reference may be specifically made to an earlier standard. However, no provision of any referenced standard specifications, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of OWNER, CONTRACTOR or ENGINEER, or any of their consultants, agents or employees from those set forth in the Contract Documents, nor shall it be effective to assign to ENGINEER, or any of ENGINEER'S consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of subparagraph 9.13.3 or 9.13.4. Clarifications and interpretations of the Contract Documents shall be issued by ENGINEER as provided for in paragraph 9.4. In the event of any conflict between any of these standard specifications, manuals, or codes and any Divisions of the Book of Technical Specifications, the latter requirements shall be binding on Contractor. In the event that two or more standard specifications, manuals, or codes conflict with one another, the requirement ultimately enforced shall be binding on CONTRACTOR. In this event it will be considered that the higher cost requirement has been considered in the CONTRACTOR'S Bid Proposal and the CONTRACTOR further agrees and acknowledges that compliance with this condition shall not warrant an increase in Contract Price nor Contract Time.

**3.3 CONFLICT IN CONTRACT DOCUMENTS:** If, during the performance of the Work, CONTRACTOR finds a conflict, error or discrepancy in the Contract Documents, CONTRACTOR shall so report to ENGINEER in writing at once and before proceeding with the Work affected thereby shall obtain a written interpretation or clarification from ENGINEER; however, CONTRACTOR shall not be liable to OWNER or ENGINEER for failure to report any conflict, error or discrepancy in the Contract Documents unless CONTRACTOR had actual knowledge thereof or should reasonably have known thereof. Until interpretation, clarification or instruction is obtained from ENGINEER, any work done by CONTRACTOR (or Subcontractors) after the discovery of such a conflict, error, or discrepancy, which is directly or indirectly affected by same, will be at his own risk and he shall bear all cost arising therefrom.

**3.4 AMENDING AND SUPPLEMENTING CONTRACT DOCUMENTS:** The Contract Documents may be amended to provide for additions, deletions and revisions in the Work or to modify the terms and conditions thereof in one or more of the following ways:

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3.4.1 A Change Order (pursuant to paragraph 10.4), or

As indicated in paragraphs 11.2 and 12.1, Contract Price and Contract Time may only be changed by a Change Order.

**3.5 WORK DIRECTIVE CHANGE:** In addition, the requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by a Work Directive Change required by one or more of the following actions:

3.5.1 A Field Order (pursuant to paragraph 9.5 and 10.7)

3.5.2 ENGINEER'S approval of a Shop Drawing or sample (pursuant to paragraphs 6.24), or

3.5.3 ENGINEER'S written interpretation or clarifications (pursuant to paragraph 9.4)

**3.6 RE-USE OF DOCUMENTS:** Neither CONTRACTOR nor any Subcontractor or Supplier or other person or organization performing or furnishing any of the Work under a direct or indirect contract with OWNER shall have or acquire any title to or ownership rights in any of the Drawings, Specifications or other documents (or copies of any thereof) prepared by or bearing the seal of ENGINEER; and they shall not re-use any of them on extensions of the Project or any other project without written consent of OWNER and ENGINEER and specific written verification or adaptation by ENGINEER.

**3.7 INTERPRETATION OF DRAWINGS AND SPECIFICATIONS:**

3.7.1 All figures and dimensions on the drawings and specifications shall be carefully checked by CONTRACTOR, who shall note all conflicts, errors, or discrepancies. CONTRACTOR will be held responsible for any conflict, error, or discrepancy not discovered before the work is executed, unless contractor could not have reasonably known about the conflict, error, or discrepancy. CONTRACTOR shall promptly notify ENGINEER in writing of any discrepancies, errors, or omissions discovered in review of the Contract Documents. ENGINEER will promptly investigate the matter and respond to CONTRACTOR.

3.7.2 In all cases, figured dimensions shall govern over scaled dimensions, but work not dimensioned shall be as directed, and work not particularly shown, identified, sized, or located shall be the same as similar parts that are shown or specified. Further, detail drawings shall govern over general drawings, larger scale details take precedence over smaller scale drawings, change order drawings govern over contract drawings, and contract drawings over shop drawings. Specifications shall govern as to products, execution and workmanship, and drawings shall govern as to locations, dimensions, or quantities to be furnished. Further, in all cases where specifications, notes or details in two drawings conflict, the more restrictive requirement as to quantities, product, execution, workmanship, or performance shall be binding on CONTRACTOR, unless otherwise directed by OWNER.



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3.7.3 After the Agreement date, CONTRACTOR shall be furnished with a maximum number of five (5) sets of Plans, Specifications and Addenda in addition to those CONTRACTORS purchased during the bid period. Additional Specifications or Drawings requested by CONTRACTOR will be provided in complete sets and at the expense of CONTRACTOR.

#### **ARTICLE 4 - Availability of Lands; Physical Conditions Reference Points**

##### **4.1 AVAILABILITY OF LANDS:**

4.1.1 OWNER shall furnish, as indicated in the Contract Documents, the lands upon which the Work is to be done, rights-of-way and easements for access thereto, and such other lands which are designated for the use of CONTRACTOR. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by OWNER, unless otherwise provided in the Contract Documents. If CONTRACTOR believes that any delay in OWNER'S furnishing these lands, right-of-way, or easements entitles CONTRACTOR to an extension of the Contract Time, but without an increase in cost due to the extension, CONTRACTOR may make a claim therefore as provided in Article 12.

4.1.2 Any land and access thereto not furnished by OWNER that CONTRACTOR deems necessary for the Contract work, for temporary construction facilities, access and egress, or for storage of materials shall be provided by CONTRACTOR at no cost to OWNER. CONTRACTOR shall confine its apparatus and storage to such additional areas as may be provided at its expense. CONTRACTOR shall obtain permits and written approvals from the appropriate jurisdictional agency and property owner(s) for use of premises not furnished by OWNER as described above, and of all off-site areas which include off-site borrow pits, waste and disposal areas, such permits and approvals must specify treatment of said areas during and at the completion of construction. Copies of all permits and approvals shall be filed with the ENGINEER before utilization of the areas.

##### **4.2 PHYSICAL CONDITIONS-INVESTIGATIONS AND REPORTS:**

4.2.1 Explorations and Reports: Reference is made to the Instructions to Bidders, paragraph 4.2, for identification of those reports of investigations and tests of subsurface conditions at the site that have been utilized by ENGINEER in preparation of the Contract Documents. CONTRACTOR may rely upon the accuracy of the technical data contained in such reports, but not upon nontechnical data, interpretations or opinions contained therein or for the completeness thereof for the CONTRACTOR'S purposes. Except as indicated in the immediately preceding sentence, CONTRACTOR shall have full responsibility with respect to subsurface conditions at the site.

4.2.2 Existing Structures: Reference is made to the drawings for identification of physical conditions in or relating to existing surface and subsurface structures (except Underground Facilities referred to in paragraph 4.3) which are at or contiguous to the site that have been utilized by ENGINEER in preparation of the Contract Documents. CONTRACTOR may rely upon the accuracy of the technical data contained in such drawings, but not for the completeness thereof for CONTRACTOR'S purposes. Except as indicated in the immediately

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preceding sentence, CONTRACTOR shall have full responsibility with respect to physical conditions in or relating to such structures.

4.2.3 Report of Differing Conditions: If CONTRACTOR believes that:

4.2.3.1 any technical data on which CONTRACTOR is entitled to rely as provided in paragraph 4.2.1 and 4.2.2 is inaccurate, or

4.2.3.2 any physical conditions uncovered or revealed at the site differs materially from that indicated, reflected or referred to in the Contract Documents, or not in conformity with soil reports and surveys.

CONTRACTOR shall promptly, and before such conditions are disturbed, notify ENGINEER in writing of any subsurface or latent physical conditions at the site or in an existing structure differing materially from those indicated or referred to in the contract documents. ENGINEER will promptly review those conditions and advise CONTRACTOR in writing if further investigation or tests are necessary. Promptly thereafter, ENGINEER shall obtain the necessary additional investigations and tests and furnish copies to CONTRACTOR. If ENGINEER finds that the results of such investigations or tests indicate that there are subsurface or latent physical conditions which differ materially from those intended in the Contract Documents, and which could not reasonably have been anticipated by CONTRACTOR, a Change Order shall be issued incorporating the necessary revisions, provided OWNER has not exercised its right to terminate under Paragraph 15.4.

4.2.4 Possible Price and Time Adjustments: In each such case, an increase or decrease in Contract Price will be allowable to the extent that it is attributable to any such inaccuracy or difference. Further, in each such case, a) an extension of the Contract Time and the associated increase in Contract Price, will be allowed only to the extent that the interval of time required to proceed with the part of the Work plus the increase in the time required to perform the part of the Work affected, whether or not changed by the Change Order or the Work Directive Change, exceed the time allowance set forth in the Contract, plus the float time available in the Official Schedule, provided that CONTRACTOR takes all reasonable steps to mitigate the schedule impact of the delays; b) A shortening of the Contract Time and the associated decrease in Contract Price, will be enforced only to the extent that the critical path of the Official Schedule is affected and the decrease in Contract Time will not result in a disproportionate reduction in float time in other portions of the Official Schedule. If OWNER and CONTRACTOR are unable to agree as to the amount or lengthening/reduction thereof, a claim may be made therefore as provided in Articles 11 and 12.

**4.3 PHYSICAL CONDITIONS - UNDERGROUND FACILITIES:**

4.3.1 Shown, Indicated or Located: The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the site is based on information and data furnished to OWNER or ENGINEER by the owners of such Underground Facilities or by others. Unless it is otherwise expressly provided in these General Conditions:

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4.3.1.1 OWNER and ENGINEER shall not be responsible for the accuracy or completeness of any such information or data; and,

4.3.1.2 CONTRACTOR shall have full responsibility a) for reviewing and checking all such information and data, b) for locating all water services, gas services, water mains, gas mains, cross drains, culverts, sewers, sewer laterals, electric conduits, etc., shown or indicated in the contract documents as to depth and alignment in advance of laying, c) for coordination of the work with the owner of such existing underground facilities during construction, d) for the safety and protection thereof, and for repairing any damage done thereto resulting from the work. The cost of and the time required to perform the responsibilities outlined in this paragraph will be considered as having been included in the Contract Price and in CONTRACTOR'S schedule for the performance of the Work within the prescribed time.

4.3.1.3 CONTRACTOR shall excavate and uncover all Underground Facilities to be crossed or paralleled by the proposed Work a sufficient time in advance of construction to permit change in line and grade of the existing Underground Facility or the proposed work if the location of the existing Underground Facility should interfere with the proposed Work.

4.3.1.4 Where it is necessary to install pipelines proposed under the Work close to or between other existing pipelines for short distances, CONTRACTOR shall shore, block, and protect the other lines to the satisfaction of the Utility Agency or Municipality having ownership or jurisdiction over said pipelines.

4.3.1.5 Whenever existing Underground Facilities are encountered which obstruct the line or grade of a proposed part of the work, CONTRACTOR shall promptly notify OWNER and ENGINEER in writing about the inaccuracy or difference. ENGINEER will promptly review the Underground Facility to determine the extent to which the Contract Documents should be modified to reflect and document the consequences of the situation, and the Contract Documents will be amended or supplemented to the extent necessary. In each such a case, a Change Order (or Work Directive Change) will be issued in accordance with the Federal Contract Provisions, as amended, and/or Article 10 to reflect and document the consequences of the inaccuracy or difference, and an increase or decrease in the Contract Price will be allowed only to the extent that it is solely attributable to any such inaccuracy or difference.

4.3.1.6 In each such case, an extension in Contract Time, but without any increase in costs due to the extension, will be allowed only to the extent that the interval of time required to proceed with the part of the Work plus the increase in the time required to perform the part of the Work affected, whether or not changed by the Change Order or Work Directive Change, exceed the time allowance set forth in paragraph 4.3.1.7 plus the float time available in the Official Schedule, provided that CONTRACTOR takes all reasonable steps to mitigate the schedule impact of delays.

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4.3.1.7 CONTRACTOR shall schedule excavation and uncovering work to begin in sufficient time in advance of construction to allow ENGINEER'S Review as described in paragraph 4.3.1.5, and OWNER'S issuance of a Work Directive Change or a Change Order as described in paragraph 4.3.1.5 and 4.3.1.6 in connection with a Report of obstructing existing Underground Facilities Shown or Indicated. Further, a reasonable interval of time, but not less than thirty days, will be allowed to ENGINEER and OWNER for those functions required to resolve the inaccuracy or difference.

4.3.1.8 Access to various municipal structures shall not be obstructed by CONTRACTOR to prohibit use of hydrants, valves, manholes, fire alarms, etc. CONTRACTOR is to make no connections to existing water mains or operate valves on existing mains or otherwise interfere with the operation of the existing water distribution system, without first given twenty-four (24) hours notice to the owners of such municipal structures and securing their approval of the proposed action.

4.3.2 Not Shown, Indicated or Located: If an Underground Facility is uncovered or revealed at or contiguous to the site which was not shown or indicated in the Contract Documents or which was not located by a notified utility owner and which CONTRACTOR could not reasonably have been expected to be aware of, CONTRACTOR shall, promptly after becoming aware thereof and before performing any work affected thereby (except in an emergency as permitted by paragraph 6.20), identify the owner of such Underground Facility and give written notice thereof to that owner and to OWNER and ENGINEER. ENGINEER will promptly review the Underground Facility to determine the extent to which the Contract Documents should be modified to reflect and document the consequences of the existence of the Underground Facility, and the Contract Documents will be amended or supplemented to the extent necessary. During such time CONTRACTOR shall be responsible for the safety and protection of such Underground Facility as provided in paragraph 6.18.

4.3.2.1 Possible Document Change: If ENGINEER concludes that because of the newly discovered conditions a change in the Contract Documents is required, a Work Directive Change or a Change Order will be issued in accordance with Article 10 to reflect and document the consequences of the inaccuracy or difference and provided that Owner has not exercised his right to terminate under paragraph 15.4.

4.3.2.2 Possible Price and Time Adjustments: In each such case, an increase or decrease in Contract Price will be allowed to the extent that it is attributable to any such inaccuracy or difference. Further, in each such case, a) an extension of the Contract Time and the associated increase in Contract Price, will be allowed only to the extent that the interval of time required to proceed with the part of the Work plus the increase in the time required to perform the part of the Work affected, whether or not changed by the Change Order or the Work Directive Change, exceed the time allowance set forth in paragraph 4.3.2.3, plus the float time available in the Official Schedule, provided that CONTRACTOR takes all reasonable steps to mitigate the schedule impact of the delays. b) A shortening of the Contract Time and the associated decrease in Contract Price, will be enforced only to the extent that the critical path of the Official Schedule is affected and the decrease in Contract Time will not result in a

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disproportionate reduction in float in other portions of the Official Schedule. If OWNER and CONTRACTOR are unable to agree as to the amount or lengthening/reduction thereof, a claim may be made therefore as provided in Articles 11 and 12.

4.3.2.3 CONTRACTOR shall schedule excavation and uncovering work to begin in sufficient time in advance of construction to allow ENGINEER'S Review as described in paragraph 4.3.2, and OWNER'S issuance of a Work Directive Change or a Change Order as described in paragraph 4.3.2.2 in connection with a Report of an existing Underground Facility Not Shown or Indicated. Further, a reasonable interval of time, but not less than thirty days, will be allowed to ENGINEER and OWNER for those functions required to resolve the inaccuracy or difference.

**4.4 REFERENCE POINTS:** CONTRACTOR shall provide engineering surveys to establish reference points for construction which in CONTRACTOR'S judgment are necessary to enable CONTRACTOR to proceed with the Work. CONTRACTOR shall be responsible for laying out the Work, shall protect and preserve the established reference points and shall make no changes or relocations without the prior written approval of OWNER. CONTRACTOR shall report to ENGINEER whenever any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for accurate replacement or relocation of such reference points by professionally qualified personnel.

## **ARTICLE 5 - Bonds and Insurance**

### **5.0 TERREBONNE PARISH CONSOLIDATED GOVERNMENT, DEFINED**

For the purposes of this Article, the terms “Terrebonne Parish Consolidated Government,” “TPCG,” and “OWNER” shall include, but may not be limited to, all of the following entities and persons: the Terrebonne Parish Consolidated Government (a political subdivision of the State of Louisiana); the Terrebonne Parish Council (the governing body of Terrebonne Parish); their elected and appointed officials, all parish departments, districts, agencies, councils, boards, and commissions, officers, agents, servants, employees and volunteers; and the elected and appointed officials, departments, officers, agents, servants, employees and volunteers of those departments, districts, agencies, councils, boards, and commissions.

### **5.1 PERFORMANCE AND OTHER BONDS**

5.1.1 Unless otherwise provided for in the Louisiana Public Bid Law, CONTRACTOR shall furnish performance and payment Bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all CONTRACTOR'S obligations under the Contract Documents. These Bonds shall remain in effect at least until one year after the date of final payment, except as otherwise provided by Law or Regulation or by the Contract Documents. CONTRACTOR shall also furnish such other Bonds when required by the Supplementary Conditions. All Bonds shall be in the forms prescribed by Law or Regulation or by the Contract Documents and be executed by such Sureties as are named in the current list of “Companies Holding Certificates of Authority as Acceptable Sureties on

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Federal Bonds and as Acceptable Reinsuring Companies” as published in Circular 570 (amended) by the Audit Staff Bureau of Accounts, U.S. Treasury Department. All Bonds signed by an agent must be accompanied by a certified copy of such agent’s authority.

Any bond prescribed by the contract documents shall be written by a surety or insurance company currently on the U.S. Department of the Treasury Financial Management Service list of approved bonding companies which is published annually in the federal Register, or by a Louisiana domiciled insurance company currently possessing a rating of no less than A- in the latest printing of the A.M. Best’s Key Rating Guide, to write individual bonds up to the percent of policyholders’ surplus as shown in the A.M. Best’s Key Rating Guide.

In addition, any surety bond written for a public works project shall be written by a surety or insurance company that is currently licensed and approved to do business in the state of Louisiana.

For any public works project, no surety or insurance company shall write a bond which is in excess of the amount indicated as approved by the U.S. Department of the Treasury Financial Management Service list or by a Louisiana domiciled insurance company with an A- rating by A.M. Best up to a limit of ten percent of policyholders’ surplus as shown by A.M. Best; companies authorized by this Paragraph who are not on the treasury list shall not write a bond when the penalty exceeds fifteen percent of its capital and surplus, such capital and surplus in the amount by which the company’s assets exceed its liabilities as reflected by the most recent financial statements filed by the company with the Department of Insurance.

5.1.2 If the Surety on any Bond or any insurance company providing any insurance overages furnished by CONTRACTOR is declared bankrupt, becomes insolvent, or its right to do business is terminated in any state where any part of the Project is located, or it ceases to meet the requirements of this Article, CONTRACTOR shall within five (5) days thereafter, substitute another Bond and Surety and/or insurance company, both of which shall be acceptable to OWNER. The OWNER reserves the right to mandate the cessation of all work on the Project until the receipt of evidence of acceptable replacement Bonds and/or insurance.

5.1.3 If, at any time during the Contract Period, the CONTRACTOR fails to provide satisfactory evidence of all Bond and insurance requirements or fails to take all corrective action required by the OWNER, the OWNER reserves the right to mandate the cessation of all work on the Project until receipt of acceptable evidence of Bonds and insurance and/or corrective action undertaken.

## **5.2 INDEMNIFICATION AGREEMENT**

To the fullest extent permitted by law, the CONTRACTOR shall protect, defend, indemnify, save and hold harmless the OWNER from and against any and all claims, demands, expense, losses, suits, costs, actions, fines, penalties, and liability, whether actual or alleged, arising out of or resulting from injury, sickness, disease or death to any person or the damage, loss, expense or destruction of any property, including loss of use resulting there from, which may occur, be caused by, or in any way result from any actual or alleged act, omission, negligence,

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misconduct, or strict liability of CONTRACTOR, its agents, its sub-contractors, partners, servants, officers, employees, volunteers, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, related to the performance or non-performance of the contract herein entered into, including any and all costs, fines, penalties, expense and/or attorney fees, including but not limited to expert witness fees, incurred by the OWNER as a result of any such claims, demands, losses and/or causes of action including any costs associated with the enforcement of this indemnity provision except those arising out of the sole negligence of OWNER. This indemnification does not apply to any strict liability of the Terrebonne Parish Consolidated Government. The CONTRACTOR shall investigate, adjust, settle, contest to resolution, resist claims, handle, respond to, provide defense for and defend any such claims, demands, proceedings, judgments, or suits at its sole expense related thereto, even if such claim, proceeding, judgment, demand or suit is groundless, false or fraudulent.

### **5.3 POLICIES AND CERTIFICATES**

All policies and certificates of insurance of the Contractor/Subcontractor shall contain the following clauses:

5.3.1 The Contractor/ Subcontractor's insurer will have no right of recovery or subrogation against the OWNER, Terrebonne Parish Consolidated Government (TPCG), it being the intention of the parties that the insurance policies so affected shall protect both parties and shall be primary coverage for any and all losses covered by the below described insurance. Contractor's insurers shall waive all rights against Terrebonne Parish Consolidated Government.

5.3.2 The OWNER, Terrebonne Parish Consolidated Government, shall be named as a additional insured as respects to liability arising out of activities performed by or on behalf of the Contractor: products and completed operations of the Contractor, premises owned, occupied or used by Contractor. The Commercial General Liability Policy shall include ISO Forms CG 20 10 or its equivalent.

5.3.3 The insurance companies issuing the policy or policies shall have no recourse against the OWNER, TPCG, for payment of any premiums or for assessments under any form of policy.

5.3.4 Any and all deductibles and/or self insured retentions in the below described insurance policies shall be assumed and be for the account of, and shall be borne solely by the Contractor/Subcontractor and at his sole expense without any right of reimbursement from the OWNER, and shall not exceed \$10,000 per policy.

### **5.4 INSURANCE**

The Contractor/Subcontractor, prior to commencing work, shall provide at his own expense, proof to the OWNER of the following insurance coverages required by the contract. Insurance

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is to be placed with insurance companies authorized to do business and approved in the State of Louisiana with an A.M. Best's rating of no less than A-:VI. This requirement will be waived for workers' compensation coverage only for those contractors whose workers' compensation coverage is placed with companies who participate in the State of Louisiana Workers' Compensation Assigned Risk Pool or the Louisiana Workers' Compensation Corporation. Policies are to be on an Occurrence basis, Claims Made policies are not acceptable. Contractor shall provide an "All-Risk" Builder's Risk Insurance Policy covering all perils typically found and which shall include coverage for wind damage and flood.

5.4.1 All notices will name the Contractor/Subcontractor and identify the contract number. Insurance coverage specified in the GENERAL CONDITIONS (*AIA Document A 201, 1987 Edition*) is to be provided by the Contractor with the following minimum limits:

5.4.1.1 Workers' Compensation-Statutory in compliance with the Compensation Law of the State of Louisiana. Employer's liability to be \$1,000,000. Alternate Employer Endorsement in favor of OWNER; Waiver of Subrogation in favor of OWNER; and Thirty (30) days prior written notice of cancellation, non-renewal, and adverse material change to OWNER. Terrebonne Parish Consolidated Government and the Contractor mutually agree that it is their intention to recognize Terrebonne Parish Consolidated Government as the statutory employer of the contractor's employees (whether direct employees or statutory employees of the contractor) when any of the contractor's employees are doing work and/or providing service under this agreement.

5.4.1.2 Commercial General Liability Insurance with a combined single limit of \$1,000,000 per occurrence and \$2,000,000 general aggregate for bodily injury and property damage. This insurance shall include products/completed operations, contractual liability, personal injury, and without written prior approval of the OWNER, the Commercial General Liability coverages shall not exclude any standardized coverage included in the basic form or limit any coverages for this project in any way that would prohibit or limit the reporting of any claim, suit and the subsequent defense and indemnity that would normally be provided by the policy. The Certificate of Insurance shall indicate which of the seven (7) coverage requirements below are not included in the policy, if any:

1. Premises - Operations;
2. Broad Form Contractual Liability;
3. Products and Completed Operations;
4. Use of Contractors and Subcontractors;
5. Personal Injury;
6. Broad Form Property Damage;
7. Explosion, Collapse, and Underground (XCU) Coverage

Note: On the certification of insurance, under the description of operations, the following wording is required: **THE AGGREGATE LOSS LIMIT APPLIES TO EACH PROJECT**, or a copy of ISO form CG2503 (Ed. 11-85) shall be submitted.



5.4.1.2 (a) Waiver of Subrogation to cover both oral and written contracts in favor of the OWNER and Thirty (30) days notice of cancellation, non-renewal or material change. If unable to provide and grant 30 days notice of cancellation, this should be brought to the attention of the Risk Management Department for approval.

USL&H Coverage -If the project or any work involves wharves, piers, docks, decking, floodwalls, levees, battures, other structures or construction near, over, contiguous to or alongside any body of water the policy shall also include USL&H coverage with minimum limits of \$1,000,000; and Maritime Employers' Liability insurance with minimum limits of \$1 ,000,000. The policy shall provide:

- a. Waiver of Subrogation to include any contract in favor of Terrebonne Parish Consolidated Government; and
- b. Thirty (30) days prior written notice of cancellation, non-renewal or adverse material changes to Terrebonne Parish Consolidated Government by specific endorsement to the applicable policy.

**COMBINED SINGLE LIMIT (CSL)-AMOUNT OF INSURANCE REQUIRED**

Type of Construction	Projects Up To \$1,000,000	Projects Over \$1,000,000
<b>NEW BUILDING:</b>		
Each Occurrence/Minimum Limit of	\$ 500,000	\$1,000,000
Aggregate (Applicable to this Contract ONLY)	\$500,000	\$1,000,000
<b>RENOVATION:</b>		
Each Occurrence/Minimum Limit of Value)	\$ 500,000*** (Depends on Bldg. Value)	\$1,000,000*** (Depends on Bldg. Value)
Aggregate (Applicable to this Contract ONLY)	\$500,000*** (Depends on Bldg. Value)	\$1,000,000*** (Depends on Bldg. Value)

\*\*\*While the minimum combined single limit of \$500,000 is required for all renovations, the value of a building shall be multiplied by 10% and insurance requirements will be increased at \$1,000,000 intervals and rounded to the nearest

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\$1,000,000. Example: Renovation on \$33,000,000 building would require \$3,000,000 minimum combined single limit of coverage.

The Contractor shall continue to maintain in its name Commercial General Liability and, if necessary, Commercial Umbrella Liability insurance that shall be written on ISO Occurrence Form CG 00 01 or an approved alternative, with a limit of not less than \$1,000,000 each occurrence/\$2,000,000 general aggregate and shall, at minimum, cover liability arising from products/completed operations and liability assumed under an insured contract, for at least three (3) years following substantial completion of Work.

5.4.1.3 Business Automobile Liability Insurance with a combined single limit of \$500,000 per occurrence for bodily injury and property damage. This insurance shall include for bodily injury and property damage the following coverages:

1. Any automobiles;
2. Owned automobiles;
3. Hired automobiles;
4. Non-owned automobiles.

5.4.1.4 An Umbrella Policy may be used to meet minimum requirements.

5.4.1.5 All property losses shall be made payable to and adjusted with OWNER, TPCG.

5.4.1.6 All policies of insurance shall be approved by contracting OWNER, TPCG prior to the inception of any work.

5.4.1.7 Other insurance required is as follows:

5.4.1.7.1 Owner's and Contractor's Protective Liability Insurance shall be furnished by the Contractor and shall name OWNER, Terrebonne Parish Consolidated Government and the Architect or ENGINEER as Named Insured.

	Project Up To	Project
Over	<u>\$1,000,000</u>	<u>\$1,000,000</u>
CSL - Each Occurrence	\$ 500,000	\$1,000,000
General Aggregate	\$1,000,000	\$2,000,000

Designated Project or Premises Form CG 25 11 or equivalent shall be a part of the Policy. This coverage shall be primary and non-contributory from any other insurance available to TPCG, unless

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that insurance is provided by a different Contractor than the one on the declarations for the same operation and project location.

5.4.1.7.2 Except for those insurance policies which require a “per project” aggregate, all certificates of insurance for policies that contain an aggregate limit must be accompanied by a statement that the aggregate limit is not impaired, or, if the aggregate limit is impaired, to what extent. OWNER may require that any impaired aggregate(s) be replenished in its favor prior to commencement of work and/or during the progress of the work.

- 5.4.1.8 If, at any time any of the said policies shall be or become unsatisfactory to OWNER, as to form or substance, or if a company issuing any such policy shall be or become unsatisfactory to OWNER, the Contractor/Subcontractor shall promptly obtain a new policy, submit the same to OWNER for approval and submit a certificate thereof as herein above provided. Upon failure of the Contractor/Subcontractor to furnish, deliver and maintain such insurance as above provided, this contract, at the election of OWNER, may be forthwith declared suspended, discontinued or terminated. Failure of the Contractor/Subcontractor to take out and/or to maintain any required insurance shall not relieve the Contractor/Subcontractor from any liability under the contract, nor shall the insurance requirements be construed to conflict with obligations of the Contractor/Subcontractor concerning indemnification.

5.4.2 Thirty (30) days prior notice of cancellation shall be given to OWNER by registered mail, return receipt requested, on all of the required coverage provided to OWNER in the event of cancellation, non-renewal and/or any changes by insurers with regard to limits, terms or conditions (material changes). All notices will name the Contractor/Subcontractor and identify the contract number.

## **5.5 INFORMATION TO BIDDERS**

**RISKS AND INDEMNIFICATIONS ASSUMED BY THE CONTRACTOR.** Neither the acceptance the completed work nor payment therefore shall release the Contractor/Subcontractor from his obligations from the insurance requirements or indemnification agreement.

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5.5.1 Additional insurance may be required on an individual basis for extra hazardous contracts and specific service agreements. If such additional insurance is required for a specific contract, that requirement will be described in the "Special Conditions" section of the contract specifications.

5.5.1.1 The contractor will acquire builders risk coverage for the full value of the project, or in the case of a renovation, for the full value of the renovation which provides all risk coverage for direct physical loss or damage to buildings/contents or structures during the course of construction. This coverage shall not have a deductible higher than a \$5,000 per occurrence. The deductible is the responsibility of the contractor, and should be taken into consideration when determining contract price.

5.5.2 If any of the insurance requirements are not complied with at their renewal dates, payments to the Contractor/Subcontractor will be withheld until those requirements have been met, or at the option of OWNER, OWNER may pay the Renewal Premium and withhold such payments from any monies due the Contractor/Subcontractor. However, under no circumstances shall OWNER be responsible for the payment or provision of fees to any Broker, Wholesaler, Agent or Producer involved in the placement or renewal of the policy(ies) in question.

5.5.2.1 The contractor shall purchase and maintain boiler and machinery insurance or additional property insurance as may be required by Laws and Regulations which will include the interest of OWNER, Contractor, Subcontractor, Architect and Architect's Consultants (or ENGINEER and Engineer's Consultants) in the work all of whom shall be listed as insured or additional insured parties.

5.5.3 All policies and certificates of insurance SHALL BE APPROVED BY OWNER PRIOR TO THE INITIATION OF ANY WORK. If OWNER has any objection to the coverage afforded by or any other provisions of the insurance required to be purchased and maintained by the Contractor in accordance with the insurance requirements for the work on the basis of non-conformance with the Contract Documents, OWNER shall notify the Contractor in writing within fifteen (15) days after receipt of the certificates. The Contractor shall provide a written response to OWNER with objections within ten (10) days from the date of the letter request.

5.5.4 Other coverage may be required by OWNER based on specific needs. If such other coverage is required for this contract, that coverage will be described in the "Special Conditions" of the contract specifications.

5.5.6 Contractors Pollution coverage with minimum limits of \$1,000,000.00 naming TPCG as an Additional Insured due to the nature of work being performed.

5.5.7 SUBCONTRACTORS - Contractor shall include all subcontractors as insureds under its policies or shall furnish separate certificates for each subcontractor. All coverage for subcontractors shall be subject to all of the requirements stated herein for the Contractor.

**5.5.8 CERTIFICATE OF INSURANCE AND INDEMNIFICATION AGREEMENT -**

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Contractor shall furnish OWNER with certificates of insurance effecting coverage required. The certificates for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. THESE CERTIFICATES ARE TO BE RECEIVED AND APPROVED BY OWNER BEFORE WORK COMMENCES, AND THEREAFTER UPON RENEWAL OR REPLACEMENT OF EACH REQUIRED COVERAGE. OWNER reserves the right to require complete, certified copies of all required insurance policies at any time and upon request.

5.5.9 INSURANCE REQUIREMENTS FOR CONTRACTORS - Contractors shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Contractor, his agents, representatives, employees or subcontractors. The cost of such insurance shall be included in the bid.

## 5.6 MINIMUM SCOPE OF INSURANCE

Coverage shall be at least as broad as:

### 5.6.1 COVERAGE:

5.6.1.1 Insurance Services Office Commercial General Liability coverage ("occurrence form CG 00 01"). "Claims Made" form is unacceptable. The "occurrence form" shall not have "sunset clause".

5.6.1.2 Insurance Services Office form number CA0001 covering Automobile Liability. The policy shall provide coverage for any auto or owned, hired, and non-owned coverage. If an automobile is to be utilized in the execution of this contract, and the vendor/contractor does not own a vehicle, then proof of hired and non-owned coverage is sufficient.

5.6.1.3 Workers' Compensation insurance as required by the Labor Code of the State of Louisiana, including Employers Liability insurance.

### 5.6.2 MINIMUM LIMITS OF INSURANCE: Contractor shall maintain limits no less than:

5.6.2.1 Commercial General Liability: Minimum \$500,000 combined single limit per occurrence for bodily injury, personal injury and property damage (or higher limits depending on size of contract).

5.6.2.2 Automobile Liability: \$500,000 combined single limit per accident, for bodily injury and property damage.

5.6.2.3 Workers' Compensation and Employers Liability: Workers' Compensation limits as required by the Labor Code of the State of Louisiana (Statutory Benefits). Employers Liability limit is to be \$1,000,000.

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5.6.3 DEDUCTIBLES AND SELF-INSURED RETENTIONS - Any deductibles or self-insured retentions must be declared to and approved by OWNER, TERREBONNE PARISH CONSOLIDATED GOVERNMENT. At the option of the OWNER, Terrebonne Parish Consolidated Government, either: The insurer shall reduce or eliminate such deductibles or self-insured retentions as respects OWNER; or the Contractor shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.

5.6.4 OTHER INSURANCE PROVISIONS: The policies are to contain, or be endorsed to contain, the following provisions:

5.6.4.1 General Liability and Automobile Liability Coverages

a) OWNER is to be added as "additional insured" as respects liability arising out of activities performed by or on behalf of the Contractor; products and completed operations of the Contractor, premises owned, occupied or used by the Contractor. The coverage shall contain no special limitations on the scope of protection afforded to OWNER. It is understood that the business auto policy under "Who is an insured" automatically provides liability coverage in favor of OWNER.

b) Any failure to comply with reporting provisions of the policy shall not affect coverage provided to OWNER.

c) The Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

5.6.4.2 Workers' compensation and Employer's Liability Coverage - The insurer shall agree to waive all rights of subrogation against OWNER for losses arising from work performed by the Contractor for OWNER.

5.6.4.3 All Coverages - Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, non-renewed, voided, canceled thirty (30) days prior written notice by certified mail, return receipt requested to OWNER.

5.6.5 ACCEPTABILITY OF INSURERS - Insurance is to be placed with insurers with A.M. BEST'S RATING OF NO LESS THAN A-:VI. This requirement will be waived for workers' compensation coverage only for those contractors whose workers' compensation coverage is placed with companies who participate in the State of Louisiana Workers' Compensation Corporation Assigned Risk Pool or Louisiana Workers' Compensation Corporation.

**5.7 PARTIAL UTILIZATION - PROPERTY INSURANCE**

If OWNER finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, such use or occupancy may be accomplished in

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accordance with paragraph 14.10; provided that no such use or occupancy shall commence before the insurers providing the property insurance have acknowledged notice thereof and in writing effected the changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or allowed to lapse on account of any such partial use of occupancy.

## **5.8 PRIMARY COVERAGE**

OWNER and CONTRACTOR intend that any policies provided in response to paragraphs 5.4.1.2, 5.5.1.1, and 5.5.2.1 shall protect all of the parties insured and provide primary coverage for all losses and damages caused by the perils covered thereby. Accordingly, all such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurer shall have no rights of recovery against any of the parties named as insured or additional insured, and if the insurers require separate waiver forms to be signed by ENGINEER, engineer's consultant or subcontractor, CONTRACTOR will obtain the same.

## **ARTICLE 6 - Contractor's Responsibilities**

**6.1 SUPERVISION:** CONTRACTOR shall supervise and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences and procedures of construction, but CONTRACTOR shall not be responsible for the negligence of others in the design of construction which is indicated in and required by the Contract Documents. CONTRACTOR shall be responsible to see that the finished Work complies accurately with the Contract Documents.

### **6.2 CONTRACTOR'S SUPERINTENDENT:**

6.2.1 CONTRACTOR shall keep on the Work at all times during its progress a competent resident superintendent, who shall not be replaced without written notice to OWNER and ENGINEER except under extraordinary circumstances. The superintendent will be CONTRACTOR'S representative at the site and shall have authority to act on behalf of CONTRACTOR. All communications given to the superintendent shall be as binding as if given to CONTRACTOR. If OWNER, at any time objects to the superintendent, CONTRACTOR shall provide a replacement superintendent at no increase in Contract Price or Contract Time.

6.2.2 The Superintendent shall, as a minimum, be required to be present at a monthly meeting of the Owner in order to address any applicable questions which may arise during construction of the project and to submit request for consideration and approval of any and all applications for payment. It shall be the Contractor's responsibility to ascertain and verify the time, date and location of said meeting. In the event the Superintendent fails to attend the said meeting, Owner may at his option refrain from approving any outstanding applications for payment until the requirements of this provision are fully complied with.

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**6.3 WORK HOURS:** CONTRACTOR shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. CONTRACTOR shall at all times maintain good discipline and order at the site.

6.3.1 Except in connection with the safety or protection of persons or the work or property at the site or adjacent thereto, and except as otherwise indicated in the Contract Documents, all Work under the project site shall be performed during normal working hours, and CONTRACTOR will not permit overtime Work or the performance of Work on Saturday, Sunday, legal holidays observed by the OWNER, or December 25th through January 1st of each year, without OWNER'S written consent given after prior written notice to ENGINEER.

6.3.2 Normal working hours shall be defined as CONTRACTOR'S normal eight-hour working period occurring between the hours set forth at the pre-construction conference, or if none are set forth, beginning at 7:00 a.m. and ending at 5:00 p.m., exclusive of Saturdays, Sundays, or legal holidays. Work during other than normal working hours may be scheduled as a regular procedure by CONTRACTOR if he first obtains written permission from OWNER. OWNER shall be entitled to recover costs for overtime inspection related to work done during other than normal working hours.

6.3.3 If CONTRACTOR, after reviewing the Contract Documents, and for his convenience and at no increase in Contract Price, feels that scheduled work during other than normal work hours will be required to complete the work within the Contract Time, CONTRACTOR shall submit a proposed schedule for said work with the construction schedule as described in Paragraph 2.6 of the General Conditions. This schedule will be reviewed for acceptance by OWNER and discussed at the pre-construction conference as described in Paragraph 2.8 of the General Conditions. If the schedule is accepted by OWNER, OWNER will not seek to recover costs for overtime inspection. OWNER'S approval of CONTRACTOR'S schedule will not be considered a basis for a change in the Contract Price. Changes in Contract Price will be resolved in accordance with Article 11 of the General Conditions.

6.3.4 If at any time subsequent to the submission of the construction schedule, an event within the control of CONTRACTOR occurs which, in the opinion of CONTRACTOR, requires him to request approval to schedule Work during other than normal working hours, for his convenience and at no increase in Contract Price, he shall submit at least three (3) working days in advance of overtime period proposed a revised schedule to ENGINEER. If OWNER accepts the schedule, CONTRACTOR will be notified in writing.

6.3.5 If the work performed during other than normal working hours is not scheduled in accordance with the procedures described above, or if CONTRACTOR'S schedule is not accepted by OWNER, OWNER will invoice CONTRACTOR for the costs of overtime inspection which will include but may not be limited to costs for engineering, resident project representatives, administrative expenses and other related costs. In the event CONTRACTOR fails to pay such costs within 30 days after receipt of an invoice from OWNER, the unpaid amount will be deducted from CONTRACTOR'S pay estimates and charged to the Contract.



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6.3.6 CONTRACTOR shall light the parts of the work performed during other than normal working hours as required to comply with the Municipality or Agency with jurisdiction.

**6.4 MATERIALS, EQUIPMENT AND LABOR:** CONTRACTOR shall furnish and assume full responsibility for all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water and sanitary facilities, temporary facilities and all other facilities and incidentals necessary for the furnishing, performance, testing, start-up and completion of the Work.

**6.5 MATERIALS AND EQUIPMENT:**

6.5.1 All materials and equipment shall be of good quality and new, except as otherwise provided in the Contract Documents. CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment. All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable Supplier except as otherwise provided in the Contract Documents; but no provision of any such instructions will be effective to assign to ENGINEER, or any of engineer's consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of subparagraphs 9.13.3 or 9.13.4.

6.5.1.1 Manufacturer's warranty for all material, products and equipment to be furnished by the CONTRACTOR and to be incorporated into the completed work shall be furnished to the OWNER through the CONTRACTOR.

6.5.1.2 The manufacturer of all materials, products and equipment shall furnish complete information as to any special conditions, or restriction to be applied in the use of these items. Should the manner or method of installation, specified performance or test results as set forth in these specifications be contrary to the manufacturer's recommendations for use of the product, the manufacturer shall at once notify the CONTRACTOR who shall forward same to the ENGINEER for appropriate action. Lack of such notification shall be certification by the CONTRACTOR that specification requirements will be met by the material, products and equipment under project conditions.

6.5.1.3 Data submitted on all equipment shall include complete maintenance instructions and parts lists in sufficient detail to facilitate ordering replacements.

*6.5.2 Any equipment proposed for installation by the CONTRACTOR shall meet the intent and provisions of the specifications. All equipment shall be equal in performance to that specified. Performance shall mean equal in quality of construction and materials, efficiency, ease of maintenance, reliability and ability to meet the design parameters on which the specifications are based. Service over the life of the equipment is another factor on which the specification is based and the CONTRACTOR shall provide a written assurance that local service and a manufacturers' representative are currently available to provide service.*

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6.5.3 It shall be the responsibility of the CONTRACTOR to make certain that any equipment included in his bid meets the above- listed requirements. The CONTRACTOR shall submit to the ENGINEER a list of similar installations by the manufacturer of all major items of equipment to enable ENGINEER to determine their compliance with these drawings and specifications in regard to performance, design, arrangement and capacity. ENGINEER's out-of- pocket expenses to investigate and inspect similar installations of major items of equipment shall be paid by the CONTRACTOR.

**6.6 ADJUSTING PROGRESS SCHEDULE:** CONTRACTOR shall submit to ENGINEER for acceptance (to the extent indicated in paragraph 2.6.1) adjustments in the progress schedule to reflect the impact thereon of new developments; these will conform generally to the progress schedule then in effect and additionally will comply with any provisions of the General Requirements applicable thereto.

**6.7 SUBSTITUTES OR "OR-EQUAL" ITEMS:**

6.7.1 CONTRACTOR is to furnish only material and equipment named or specified in the Contract Documents except where the Contract specifically allows for substitutions after the Contract award. Provisions to submit proposals for substitute and "Or Equal" materials and equipment before Bid opening are included in the Instructions to Bidders.

6.7.2 If an item of material or equipment named or specified in the Contract Documents is unavailable after Contract award, CONTRACTOR shall provide prompt written notice to the ENGINEER, and with such notice propose a substitute item with sufficient data to allow ENGINEER's review to determine if the proposed substitute has the essential characteristics of the item named or specified and desired. Any such request for substitution shall be made in sufficient time (including time for ENGINEER's review of the request, OWNER's issuance of a Change Order or Work Directive Change, shop drawing submittal and review, fabrication and delivery of the item, etc.) in advance of the scheduled time for installation of the item to avoid delay to the work. Any cost savings resulting from such substitution shall be credited to the OWNER in a Change Order. Any increased costs resulting from the substitution shall be borne by the CONTRACTOR and the unavailability of the item shall not entitle the CONTRACTOR to an extension of Contract time, unless CONTRACTOR can establish that due to no fault of CONTRACTOR, CONTRACTOR's subcontractors or Suppliers, it was not possible to determine availability of the item before the Contract was awarded.

6.7.3 If a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents, CONTRACTOR may furnish or utilize a substitute means, method, sequence, technique or procedure of construction acceptable to ENGINEER, if CONTRACTOR submits sufficient information to allow ENGINEER to determine that the substitute proposed is equivalent to that indicated or required by the Contract Documents. The procedure for review by ENGINEER will be similar to that provided in paragraph 6.7.1 as applied by ENGINEER.

6.7.4 ENGINEER will be allowed a reasonable time within which to evaluate each proposed substitute. ENGINEER will be the sole judge of acceptability, and no substitute will be

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ordered, installed or utilized without ENGINEER'S prior written acceptance which will be evidenced by either a Change Order or an approved Shop Drawing.

**6.8 CONCERNING SUBCONTRACTORS, SUPPLIERS AND OTHERS:**

6.8.1 CONTRACTOR shall not employ any Subcontractor, Supplier or other person or organization (including those acceptable to OWNER and ENGINEER as indicated in paragraph 6.8.2), whether initially or as a substitute, against whom OWNER or ENGINEER may have reasonable objection as to their responsibility. CONTRACTOR shall not be required to employ any Subcontractor, Supplier or other person or organization to furnish or perform any of the Work against whom CONTRACTOR has reasonable objection.

6.8.2 A Subcontractor or other person or organization identified in CONTRACTOR'S Bid and not objected to in writing by OWNER prior to the execution of the Agreement will be deemed acceptable to OWNER. All other Subcontractors shall be deemed to have been accepted if OWNER does not deliver a written objection thereto within 45 days after CONTRACTOR'S written identification of such Subcontractors. However, if, in accordance with the Louisiana Public Bid Law, OWNER has reasonable objection as to the responsibility of any Subcontractor whether identified in the Bid or subsequently, CONTRACTOR shall submit an acceptable substitute without entitlement to any change in the Contract Price. After acceptance by OWNER of any particular Subcontractor, CONTRACTOR shall make no substitution without written approval of OWNER. No acceptance by OWNER of any such Subcontractor, supplier, or other person or organization shall constitute a waiver of any right of OWNER to reject defective work.

**6.9 RESPONSIBILITY OF CONTRACTOR FOR SUBCONTRACTORS AND SUPPLIERS:**

6.9.1 CONTRACTOR shall be fully responsible to OWNER and ENGINEER for all acts and omissions of the Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with CONTRACTOR just as CONTRACTOR is responsible for CONTRACTOR'S own acts and omissions. Nothing in the Contract Documents shall create any contractual relationship between OWNER or ENGINEER and any such Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of OWNER or ENGINEER to pay or to see to the payment of any moneys due any Subcontractor, Supplier or other person or organization except as may otherwise be required by Laws and Regulations.

6.9.2 The CONTRACTOR shall coordinate the Work of Subcontractors to avoid conflicts and to assure clearances. Shop drawings of various trades shall be compared by CONTRACTOR before submittal to the ENGINEER for approval, to ascertain that the installation proposed does not conflict with the structured support or space requirement. The CONTRACTOR shall have full responsibility for satisfactory coordination and completion of all subcontract items.

6.9.3 The divisions and sections of the Specifications and the identifications of any Drawings shall not control CONTRACTOR in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade. The Divisions of the Specifications

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are complementary, and anything mentioned or shown in a Division of the Specifications or in a Specific Trade Drawing shall be of like effect as if shown in all Divisions of the Specifications and in all Drawings.

6.9.4 All Work performed for CONTRACTOR by a Subcontractor will be pursuant to an appropriate agreement between CONTRACTOR and the Subcontractor which specifically binds the Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of OWNER and ENGINEER and contains waiver provisions as required by paragraph 5.8. CONTRACTOR shall pay each Subcontractor a just share of any insurance moneys received by CONTRACTOR on account of losses under policies issued pursuant to paragraphs 5.4.1.2 and 5.5.2.1.

**6.10 PATENT FEES AND ROYALTIES:** CONTRACTOR shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of OWNER or ENGINEER its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by OWNER in the Contract Documents. CONTRACTOR shall indemnify and hold harmless OWNER and ENGINEER and any one directly or indirectly employed by either of them from and against all claims, damages, losses and expenses (including attorneys' fees and court and arbitration costs) arising out of any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product or device not specified in the Contract Documents, and shall defend all such claims in connection with any alleged infringement of such rights.

**6.11 PERMITS:** Unless otherwise provided in the Supplementary Conditions, CONTRACTOR shall obtain and pay for all construction permits and licenses including appropriate NPDES/LPDES permits. OWNER shall assist CONTRACTOR, when necessary, in obtaining such permits and licenses. CONTRACTOR shall pay all governmental charges and inspection fees necessary for the prosecution of the Work, which are applicable at the time of opening of Bids, or if there are no Bids on the Effective Date of the Agreement, CONTRACTOR shall pay all charges of utility owners for connections to the Work, and OWNER shall pay all charges of such utility owners for capital costs related thereto such as plant investment fees.

**6.12 LAWS AND REGULATIONS:**

6.12.1 CONTRACTOR shall give all notices and comply with all Laws and Regulations applicable to furnishing and performance of the Work including appropriate NPDES/LDPES regulations. Except where otherwise expressly required by applicable Laws and Regulations, neither OWNER nor ENGINEER shall be responsible for monitoring CONTRACTOR'S compliance with any Laws or Regulations.

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6.12.2 If CONTRACTOR observes that the Specifications or Drawings are at variance with any Laws or Regulations, CONTRACTOR shall give ENGINEER prompt written notice thereof, and any necessary changes will be authorized by one of the methods indicated in paragraph 3.4. If CONTRACTOR performs any Work knowing or having reason to know that it is contrary to such Laws or Regulations, and without such notice to ENGINEER, CONTRACTOR shall bear all costs arising therefrom; however, it shall not be CONTRACTOR'S primary responsibility to make certain that the Specifications and Drawings are in accordance with such Laws and Regulations.

**6.13 TAXES:** CONTRACTOR shall pay all sales, consumer, use and other similar taxes required to be paid by CONTRACTOR in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

**6.14 USE OF PREMISES:** CONTRACTOR shall confine construction equipment, the storage of materials and equipment and the operations of workers to the Project site and land and areas identified in and permitted by the Contract Documents and other land and areas permitted by Laws and Regulations, rights-of-way, permits and easements, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment. CONTRACTOR shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof or of any land or areas contiguous thereto, resulting from the performance of the Work. Should any claim be made against OWNER or ENGINEER by any such owner or occupant because of the performance of the Work, CONTRACTOR shall promptly attempt to settle with such other party by agreement or otherwise resolve the claim by arbitration or by law. CONTRACTOR shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold OWNER and ENGINEER harmless from and against all claims, damages, losses and expenses (including, but not limited to, fees of engineers, architects, attorneys and other professionals and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any such other party against OWNER or ENGINEER to the extent based on a claim arising out of CONTRACTOR'S performance of the Work.

**6.15 CLEANING PREMISES:** During the progress of the Work, CONTRACTOR shall keep the premises free from accumulations of waste materials, rubbish and other debris resulting from the Work. At the completion of the work CONTRACTOR shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, appliances, construction equipment and machinery, and surplus materials, and shall leave the site clean and ready for occupancy by OWNER. CONTRACTOR shall restore to original condition all property not designated for alteration by the Contract Documents.

**6.16 LOADING STRUCTURES:** CONTRACTOR shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall CONTRACTOR subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

**6.17 RECORD DOCUMENTS:** CONTRACTOR shall maintain in a safe place at the site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Directive Changes, Field Orders and written interpretations and clarifications (issued pursuant to paragraph 9.4) in good order and annotated to show all changes made during the construction.

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These record documents together with all approved samples and a counterpart of all approved Shop Drawings will be available to ENGINEER for reference. Upon completion of the Work, these record documents, samples and Shop Drawings will be delivered to ENGINEER for OWNER.

**6.18 SAFETY AND PROTECTION:** CONTRACTOR shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

6.18.1 All employees on the Work and other persons and organizations who may be affected thereby;

6.18.2 All the Work and materials and equipment to be incorporated whether in storage on or off the site.

6.18.3 Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities and Underground Facilities not designated for removal, relocation or replacement in the course of construction.

CONTRACTOR shall comply with all applicable Laws and Regulations of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection. CONTRACTOR shall notify owners of adjacent property and of Underground Facilities and utility owners when prosecution of the Work may affect them and shall cooperate with them in the protection, removal, relocation and replacement of their property. All damage, injury or loss to any property referred to in paragraph 6.18.2 or 6.18.3 caused, directly or indirectly, in whole or in part, by CONTRACTOR, any Subcontractor, Supplier or any other person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, shall be remedied by CONTRACTOR (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of OWNER or ENGINEER or anyone employed by either of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of CONTRACTOR). CONTRACTOR'S duties and responsibilities for the safety and protection of the Work shall continue until such time as all the Work is completed and ENGINEER has issued a notice to OWNER and CONTRACTOR in accordance with paragraph 14.13 that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

**6.19 SAFETY REPRESENTATIVE:** CONTRACTOR shall designate a responsible representative at the site whose duty shall be the prevention of accidents. This person shall be CONTRACTOR'S superintendent unless otherwise designated in writing by CONTRACTOR to OWNER.

**6.20 EMERGENCIES:** In emergencies affecting the safety or protection of persons, the Work, or property at the site or adjacent thereto, CONTRACTOR, without special instruction or

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authorization from ENGINEER or OWNER, is obligated to act to prevent threatened damage, injury or loss. CONTRACTOR shall give ENGINEER prompt written notice if any significant changes in the Work or variations from the Contract Documents have been caused thereby. If ENGINEER determines that a change in the Contract Documents is required because of the action taken in response to an emergency, a Work Directive Change or Change Order will be issued to document the consequences of the changes or variations.

**6.21 SHOP DRAWINGS:** After checking and verifying all field measurements, CONTRACTOR shall submit to ENGINEER for review and approval in accordance with the accepted schedule of Shop Drawing submissions (see paragraph 2.9), five copies of all Shop Drawings, unless otherwise indicated in the Supplemental Conditions, which will bear a stamp or specific written indication that CONTRACTOR has satisfied CONTRACTOR'S responsibilities under the Contract Documents with respect to the review of the submission. All submissions will be identified as ENGINEER may require. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specific performance and design criteria, materials and similar data to enable ENGINEER to review the information as required.

**6.22 SAMPLES:** CONTRACTOR shall also submit to ENGINEER for review and acceptance with such promptness as to cause no delay in Work, all samples required by the Contract Documents. All samples will have been checked by and accompanied by a specific written indication that CONTRACTOR has satisfied CONTRACTOR'S responsibilities under the Contract Documents with respect to the review of the submission and will be identified clearly as to material, Supplier, pertinent data such as catalog numbers and the use for which intended.

**6.23 SHOP DRAWINGS AND SAMPLES SUBMISSION REQUIREMENTS:**

6.23.1 Before submission of each Shop Drawing or sample, CONTRACTOR shall have determined and verified all quantities, dimensions, specific performance criteria, installation requirements, materials, catalog numbers and similar data with respect thereto and reviewed or coordinated each Shop Drawing or sample with other Shop Drawings and samples and with the requirements of the Work and the Contract Documents.

6.23.2 At the time of each submission, CONTRACTOR shall give ENGINEER specific written notice of each variation that the Shop Drawings or samples may have from the requirements of the Contract Documents, and, in addition, shall cause a specific notation to be made on each Shop Drawing submitted to ENGINEER for review and acceptance of each such variation.

**6.24 ENGINEER'S REVIEW OF SHOP DRAWINGS AND SAMPLES:**

6.24.1 ENGINEER will review and approve with reasonable promptness Shop Drawings and samples, but ENGINEER'S review and approval will be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents and shall not extend to means, methods, sequences, techniques or procedures of construction or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

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CONTRACTOR shall make any corrections required by ENGINEER and shall return the required number of corrected copies of Shop Drawings and submit as required new samples for review and approval. CONTRACTOR shall direct specific attention in writing to revisions other than the corrections called for by ENGINEER on previous submittals.

6.24.2 After his first review and comments on the Shop Drawings and samples the ENGINEER will either give his approval in accordance with the provisions of paragraphs 6.24.1, or request changes and corrections as noted. The CONTRACTOR shall then make changes and corrections noted and return them to the ENGINEER. If the Shop Drawings and samples are then acceptable, the ENGINEER will return them to the CONTRACTOR, as approved. However, if further revisions are required, ENGINEER'S cost and expenses of further review shall be paid by the CONTRACTOR.

6.24.3 ENGINEER's review and approval of Shop Drawings or samples shall not relieve CONTRACTOR from responsibility for any variation from the requirements of the Contract Documents unless CONTRACTOR has in writing called ENGINEER'S attention to such variation at the time of submission as required by paragraph 6.23.2 and ENGINEER has given written approval of each such variation by a specific written notation thereof incorporated in or accompanying the Shop Drawing or sample approval; nor will any approval by ENGINEER relieve CONTRACTOR from responsibility for errors or omissions in the Shop Drawings or from responsibility for having complied with the provisions of paragraph 6.23.1 and 6.23.2.

6.24.4 Where a Shop Drawing or sample is required by the Specifications, any related Work performed prior to ENGINEER'S review and approval of the pertinent submission will be the sole expense and responsibility of CONTRACTOR.

**6.25 CONTINUING THE WORK:** CONTRACTOR shall carry on the work and adhere to the progress schedule during all disputes or disagreements with OWNER. No work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by paragraph 15.5 or as CONTRACTOR and OWNER may otherwise agree in writing.

**6.26 INDEMNIFICATION:**

6.26.1 To the fullest extent permitted by law, the CONTRACTOR shall protect, defend, indemnify, save and hold harmless the OWNER, Terrebonne Parish Consolidated Government, including all Parish Departments, its elected and appointed officials, Agencies, Councils, Boards and Commissions, Districts, their officers, agents, servants and employees, including volunteers, from and against any and all claims, demands, expense, losses, suits, costs, actions, fines, penalties, actions, and liability, whether actual or alleged, arising out of or resulting from injury, sickness, disease or death to any person or the damage, loss, expense or destruction of any property, including loss of use resulting therefrom, which may occur, be caused by, or in any way resulting from any actual or alleged act, omission, negligence, misconduct, or strict liability of CONTRACTOR, its agents, its sub-contractors, partners, servants, officers employees, volunteers, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, related to the performance or non-performance of the contract herein entered into, including any and all costs, fines, penalties, expense and/or



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attorney fees, including but not limited to expert witness fees, incurred by the Terrebonne Parish Consolidated Government, all Parish Departments, its elected and appointed officials, Agencies, Councils, Districts, Boards and Commissions, their officers, agents, servants and employees, including volunteers, as a result of any such claims, demands and/or causes of action except those arising out of the.... sole .....negligence of Terrebonne Parish Consolidated Government, all Parish Departments, its elected and appointed officials, Districts, Agencies, Councils Boards and Commissions, their officers, agents servants and employees, including volunteers. The CONTRACTOR shall investigate, adjust, settle, contest to resolution, resist claims, handle, respond to, provide defense for and defend any such claims, demands, proceedings, judgments, or suits at its sole expense related thereto, even if such claim, proceeding, judgment, demand or suite is groundless, false or fraudulent.

6.26.2 In any and all claims against OWNER or ENGINEER or any of their consultants, agents or employees by any employee of CONTRACTOR, any Subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, the indemnification obligation under this paragraph 6.26 shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for CONTRACTOR or any such Subcontractor or other person or organization under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.

6.26.3 The obligations of CONTRACTOR under this paragraph 6.26 shall not extend to the liability of ENGINEER, his agents or employees arising out of the preparation or approval of maps, drawings, opinions, reports, surveys, Change Orders, designs or Specifications.

**6.27 PROJECT MEETINGS:** CONTRACTOR, along with appropriate Subcontractors, shall attend project meetings requested by OWNER for the purpose of discussing and resolving matters concerning the various elements of the work.

**6.28** CONTRACTOR shall perform all work under this Agreement as an independent contractor and shall not be considered as an agent, employee, or servant of OWNER, nor shall CONTRACTOR'S subcontractors, employee's agents or servants, be considered to be agents, employees, or servants of OWNER.

**6.29 QUALITY CONTROL:**

6.29.1 CONTRACTOR shall establish a quality control system, narrative in style, to perform sufficient supervision, inspection and testing of all items of work including that of his Subcontractors to insure conformance to applicable Specifications and Drawings with respect to the material, workmanship, construction, finish, functional performance and identification. CONTRACTOR'S quality control system will specifically include the surveillance of the tests required in the technical provisions of the Specifications. A person shall be placed in charge of the CONTRACTOR'S quality control system and that person shall be other than the CONTRACTOR'S superintendent.

6.29.2 CONTRACTOR'S quality control will specifically include the checking, approval and

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coordination of all Shop Drawings, the ascertaining of the compliance of all items with specification requirements and the tests required in the technical provisions of the specifications, a procedure for preparing non-conformance reports, and completing a Daily Quality Control Report.

6.29.3 CONTRACTOR has the sole responsibility for compliance of the construction with the requirements of the Drawings and Specifications and the quality control system shall be such that this compliance is assured.

6.29.4 The quality control person shall, in the presence of the OWNER'S or ENGINEER'S Project Representative, check all contractor established elevations, the location of all underground pipelines and electrical conduits before covering begins, all reinforcing steel before pouring concrete, and any other item which cannot be located and inspected when work is complete. Data obtained shall be recorded by the quality control person on the record documents.

6.29.5 Within ten days after the date of the Agreement, CONTRACTOR shall furnish ENGINEER a quality control plan which shall include the name and experience record of the person in charge, procedures, instructions and reports to be used.

6.29.6 The form of Quality Control Daily Report is shown in Exhibit "B". This form shall be completed by the CONTRACTOR and each sub-contractor. This daily report shall include complete information as to personnel and equipment being utilized on the project along with a summary of work activities, (i.e., footage of various pipe laid, piles driven, equipment installed etc.) for each days work. These daily reports shall be included with CONTRACTOR'S monthly application for payment. The application for payment will be considered incomplete and will not be processed without inclusion of the Quality Control Daily Reports.

## **ARTICLE 7 - Other Work**

**7.1 RELATED WORK AT SITE:** OWNER may perform other work related to the Project at the site by OWNER'S own forces, have other work performed by utility owners or let other direct contracts which shall contain General Conditions similar to these. If the fact that such other work is to be performed was not noted in the Contract Documents, written notice thereof will be given to CONTRACTOR prior to starting any such other work.

**7.2 ACCESS TO THE SITE:** CONTRACTOR shall afford each utility owner and other contractor who is a party to such a direct contract (or OWNER, if OWNER is performing the additional work with OWNER'S employees) proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such work, and shall properly connect and coordinate the Work with theirs. CONTRACTOR shall do all cutting, fitting and patching of the Work that may be required to make its several parts come together properly and integrate with such other work. CONTRACTOR shall not endanger any work of others by cutting, excavating or otherwise altering their work and will only cut or alter their work with the written consent of ENGINEER and the others whose work will be affected.

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**7.3 ACCEPTANCE OF THE WORK OF OTHERS:** If any part of CONTRACTOR'S Work depends for proper execution or results upon the work of any such other CONTRACTOR or utility owner (or OWNER), CONTRACTOR shall inspect and promptly report to ENGINEER in writing any delays, defects or deficiencies in such work that render it unsuitable for such proper execution and results. CONTRACTOR'S failure so to report shall constitute an acceptance of the other work as fit and proper for integration with CONTRACTOR'S Work except for latent or non-apparent defects and deficiencies in the other work.

**7.4 COORDINATION:**

7.4.1 Whenever Work to be performed by CONTRACTOR is dependent upon the work of other parties, CONTRACTOR shall coordinate that Work with the dependent work to the same extent that CONTRACTOR is required to coordinate dependent Subcontractor Work. Installation of Work by CONTRACTOR, directly or through a Subcontractor, in any given area, shall constitute acceptance by CONTRACTOR (including the Subcontractor) of all previously placed dependent work.

7.4.2 If OWNER contracts with other parties for other work, ENGINEER will have the authority and responsibility for coordinating activities of CONTRACTOR and those parties, unless another person or organization with specific authority and responsibility for coordination of the CONTRACTOR and those other parties is expressly designated in the Supplementary Conditions or at the pre-construction conference.

7.4.3 If OWNER contracts with other parties for other work, CONTRACTOR shall be responsible for cooperating with ENGINEER fully in the coordination of CONTRACTOR'S Submittals with dependent Submittals of those other parties whose work in any way relates or depends upon the Work, or visa versa. When submitted to ENGINEER any such coordinated Submittal of CONTRACTOR shall identify by specific notation, within or attached to that Submittal, each and every item of interface with the other work.

**7.5 MUTUAL DUTIES AND RESPONSIBILITIES:**

7.5.1 If CONTRACTOR causes damage to the work or property of others, or if a claim arising out of CONTRACTOR's execution of Work is made by another party against CONTRACTOR, OWNER, or ENGINEER, CONTRACTOR shall promptly attempt to settle with that party by agreement or otherwise resolve the claim. CONTRACTOR shall defend, indemnify and hold harmless OWNER, ENGINEER and others as provided in paragraph 5.2, from and against all claims arising out of or resulting from damage by CONTRACTOR to the work or property of others or from CONTRACTOR's execution of the Work.

7.5.2 If another party causes damage to Work or property of CONTRACTOR, or if the performance of other work results in any claim by CONTRACTOR, CONTRACTOR shall promptly attempt to settle with that party by agreement or otherwise resolve the claim. CONTRACTOR shall not begin any action against OWNER or ENGINEER, their consultants, agents or any of their directors, officers, shareholders, agents or employees, or others

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indemnified as provided in paragraph 5.2, or permit any action against them to be maintained in CONTRACTOR's name or for CONTRACTOR's benefit before any court or tribunal, which action seeks to impose any liability or recover any damages from OWNER or ENGINEER for such claim.

7.5.3 Except as excluded in paragraph 7.5.4, if any party performing other work causes suspension of Work resulting in unreasonable delay under the circumstances, and if, upon a request from CONTRACTOR, OWNER concludes that any such delay requires a change in Contract Price or Contract Time, OWNER shall, pursuant to Articles 10 through 12, authorize such a change in Contract Price or Contract Time, or both.

7.5.4 If a party performing other work is granted an extension in a contract time only (based on unreasonable delay under circumstances not caused in whole or in part by acts or omissions of that party, OWNER, ENGINEER or OWNER's representative on that other work), and if, upon a request from CONTRACTOR, OWNER concludes that the extension granted to the other work requires a change in a coterminous Contract Time in the Contract Documents, OWNER shall authorize the necessary change in Contract Time only.

**7.6 CONTRACTOR'S RESPONSIBILITY FOR OWNER COSTS:** If CONTRACTOR becomes involved in settling or otherwise resolving claims with other persons performing other work arising out of events covered under paragraphs 7.5.1 or 7.5.2, or because of any other similar controversy, including damage to the Work or other work or a dispute about responsibility for clean-up or any other issue, neither OWNER, ENGINEER, nor any of their consultants, agents nor any of their directors, officers, stockholders nor employees will be involved in any way in such actions (except if subpoenaed). If OWNER incurs costs contrary to the provisions of this Article, CONTRACTOR shall reimburse those costs to the OWNER.

## **ARTICLE 8 - Owner's Responsibilities**

**8.1** Written communications from OWNER to CONTRACTOR will generally be issued through ENGINEER. If the need arises to issue written communication directly, a copy will be issued concurrently to ENGINEER. Written communications from CONTRACTOR to OWNER shall be issued to ENGINEER (and include two (2) copies for OWNER); from Subcontractor or Suppliers shall be issued through CONTRACTOR.

**8.2** In case of termination of the employment of ENGINEER, OWNER shall appoint another ENGINEER whose status under the Contract Documents shall be that of the former ENGINEER. Any dispute in connection with such appointment shall be subject to the provisions of Article 16.

**8.3** OWNER shall furnish the data required of OWNER under the Contract Documents promptly and shall make payments to CONTRACTOR promptly after they are due as provided in paragraphs 14.4 and 14.13.

**8.4** OWNER'S duties in respect to providing lands and easements and providing engineering surveys to establish reference points are set forth in paragraphs 4.1 and 4.4. Paragraph 4.2

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refers to OWNER'S identifying and making available to CONTRACTOR copies of reports of explorations and tests of subsurface conditions at the site and in existing structures which have been utilized by ENGINEER in preparing the Drawings and Specifications.

**8.5** OWNER is obligated to execute Change Orders, either unilateral or negotiated, in OWNER's sole discretion, covering necessary changes in the work.

**8.6** OWNER'S responsibility in respect to certain inspections, tests and approvals is set forth in paragraph 13.4.

**8.7** In connection with OWNER'S right to stop Work or suspend Work, see paragraphs 13.10 and 15.1. Paragraph 15.2 deals with OWNER'S right to terminate services of CONTRACTOR under certain circumstances.

## **ARTICLE 9 - Engineer's Status during Construction**

**9.1 OWNER'S REPRESENTATIVE:** The OWNER will provide an OWNER'S representative during the construction period. The duties and responsibilities and the limitations of authority of OWNER'S representative during construction are set forth in the Contract Documents and shall not be extended without written consent of OWNER.

**9.2 VISITS TO SITE:** In addition to the OWNER's representative, ENGINEER will make visits to the site at intervals appropriate to the various stages of construction to observe the progress and quality of the executed Work and to determine, in general, if the Work is proceeding in accordance with the Contract Documents. Neither the OWNER's representative nor the ENGINEER will be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. ENGINEER'S efforts will be directed toward providing for OWNER a greater degree of confidence that the completed Work will conform to the Contract Documents. On the basis of such visits and on-site observations as an experienced and qualified design professional, ENGINEER will keep OWNER informed of the progress of the Work and will endeavor to guard OWNER against defects and deficiencies in the Work.

**9.3 PROJECT REPRESENTATION:** OWNER may furnish a Resident Project Representative to assist ENGINEER in observing the performance of the Work.

**9.4 CLARIFICATIONS AND INTERPRETATIONS:** ENGINEER will issue with reasonable promptness such written clarification of interpretations of the requirements of the Contract Documents (in the form of Drawings or otherwise) as ENGINEER may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents. If CONTRACTOR believes that a written clarification or interpretation justifies an increase in the Contract Price or Contract Time, CONTRACTOR may make a claim therefore as provided in Article 11 or Article 12 of the General Conditions.

## **9.5 AUTHORIZED VARIATIONS IN WORK:**

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9.5.1 ENGINEER may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Time and are consistent with the overall intent of the Contract Documents. These may be accomplished by a Field Order and will be binding on OWNER, and also on CONTRACTOR who shall perform the Work involved promptly. If CONTRACTOR believes that a Field Order justifies an increase in the Contract Price or an extension of the Contract Time and the parties are unable to agree as to the amount or extent thereof, CONTRACTOR may make a claim therefore as provided in Article 11 or 12.

9.5.2 ENGINEER shall prepare change orders at OWNER'S request, and when required by the contract documents, ENGINEER shall set the price and/or time adjustments he deems reasonable.

**9.6 REJECTING DEFECTIVE WORK:** ENGINEER, based on its observations, reports of resident engineer(s) and/or reports of Resident Project Representative(s) will have authority to disapprove or reject Work at any time during the construction of the Work, which does not conform to the Contract Documents. ENGINEER will also have authority to require special inspection or testing of the work as provided in Paragraph 13.9, whether or not the Work is fabricated, installed, or completed. When CONTRACTOR has been notified by ENGINEER of disapproval or rejection of non-conforming Work, CONTRACTOR shall take immediate action to correct same.

**9.7 SHOP DRAWINGS:** In connection with ENGINEER'S responsibility for Shop Drawings and samples, see paragraphs 6.21 through 6.25, inclusive.

**9.8 CHANGE ORDERS:** In connection with ENGINEER'S responsibilities for Change Orders, see Articles 10, 11 and 12.

**9.9 PAYMENTS:** In connection with ENGINEER'S responsibilities in respect of Applications for Payment, etc., see Article 14.

**9.10 DETERMINATIONS FOR UNIT PRICES:** ENGINEER will determine the actual quantities and classifications of unit price work performed by CONTRACTOR. Engineer will review with CONTRACTOR ENGINEER's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application of Payment or otherwise). ENGINEER's written decision will be final and binding on CONTRACTOR, unless within ten days after the date of any such decision, CONTRACTOR delivers to the ENGINEER and OWNER written notice of intention to appeal the ENGINEER's decision.

**9.11 DECISIONS ON DISPUTES:** ENGINEER will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. Claims, disputes and other matters relating to the acceptability of the Work or the interpretation of the requirements of the Contract Documents pertaining to the performance and furnishing of the Work and claims under Articles 11 and 12 in respect of changes in the Contract Price or Contract Time will be referred initially to ENGINEER in writing with a request for a formal decision in accordance with this paragraph, which ENGINEER will render in writing within a

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reasonable time. Written notice of each such claim, dispute and other matter shall be delivered by the claimant to ENGINEER and the other party to the Agreement promptly (but in no event later than thirty days) after the occurrence of the event giving rise thereto, and written supporting data will be submitted to ENGINEER and the other party within sixty days of after such occurrence unless ENGINEER allows an additional period of time to ascertain more accurate data in support of the claim.

**9.12** When functioning as interpreter and judge under paragraphs 9.10 and 9.11, ENGINEER will not show partiality to OWNER or CONTRACTOR and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity. The rendering of a decision by ENGINEER pursuant to paragraph 9.10 and 9.11 with respect to any such claim, dispute or other matter (except any which have been waived by the making or acceptance of final payment as provided in paragraph 14.16) will be a condition precedent to any exercise by OWNER or CONTRACTOR of such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any such claim, dispute or other matter.

**9.13 LIMITATIONS ON ENGINEER'S RESPONSIBILITIES:**

9.13.1 Neither ENGINEER'S authority to act under this Article 9 or elsewhere in the Contract Documents nor any decision made by ENGINEER in good faith either to exercise or not exercise such authority shall give rise to any duty or responsibility of ENGINEER to CONTRACTOR, any Subcontractor, any Supplier, or any other person or organization performing any of the Work, or to any surety for any of them.

9.13.2 Whenever in the Contract Documents the terms "as ordered", "as directed", "as required", "as allowed", "as approved", or terms of like effect or import are used, or the adjectives "reasonable", "suitable", "acceptable", "proper" or "satisfactory" or adjectives of like effect or import are used to describe requirement, direction, review or judgment of ENGINEER as to the Work, it is intended that such requirement, direction, review or judgment will be solely to evaluate the Work for compliance with the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective shall not be effective to assign to ENGINEER any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 9.13.3 or 9.13.4.

9.13.3 ENGINEER will not be responsible for CONTRACTOR'S means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, and ENGINEER will not be responsible for CONTRACTOR'S failure to perform or furnish the Work in accordance with the Contract Documents.

9.13.4 ENGINEER will not be responsible for the acts or omissions of CONTRACTOR or of any Subcontractor, any Supplier, or of any other person or organization performing or furnishing any of the Work.

**ARTICLE 10 - Changes in the Work**

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Without invalidating the Agreement and without notice to any surety, OWNER may, at any time or from time to time, order additions, deletions or revisions in the Work; these will be authorized by a Change Order, Field Order, or a Work Directive Change. Upon receipt of any such document, CONTRACTOR shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

**10.1 CHANGE ORDERS:** Change orders may be issued by OWNER in one of the following manners:

10.1.1 Bilateral change order: Type of order issued to CONTRACTOR when OWNER and CONTRACTOR have agreed on the price and time adjustment made necessary by the particular change order.

10.1.2 Unilateral change order: Type of order issued to CONTRACTOR when OWNER and CONTRACTOR cannot agree on the price and/or time adjustment necessitated by the particular change order, within the scope of the project. The OWNER will issue the unilateral change order setting forth such price and/or time adjustments that ENGINEER shall deem reasonable. Any dispute in connection with the issuance of a unilateral change order shall be subject to the provisions of paragraph 9.11 and Article 16.

**10.2 CHANGE ORDER CLAIM:** If OWNER and CONTRACTOR are unable to agree as to the extent, if any, of an increase or decrease in the Contract Price or an extension or shortening of the Contract Time that should be allowed as a result of a Work Directive Change or Change Order, a claim may be made therefore as provided in Article 11 or Article 12.

**10.3** CONTRACTOR shall not be entitled to an increase in the Contract Price or an extension of the Contract Time with respect to any Work performed that is not required by the Contract Documents as amended, modified and supplemented as provided in paragraphs 3.4 and 3.5, except in the case of an emergency as provided in paragraph 6.20 and except in the case of uncovering Work as provided in paragraph 13.9.

**10.4** OWNER and CONTRACTOR shall execute appropriate Change Orders covering:

10.4.1 Changes in the Work which are ordered by OWNER pursuant to Article 10, are required because of acceptance of defective Work under paragraph 13.13 or correcting defective Work under paragraph 13.14 or are agreed to by the parties;

10.4.2 Changes in the Contract Price or Contract Time which are agreed to by the parties; and

10.4.3 Changes in the Contract Price or Contract Time which embody the substance of any written decision rendered by ENGINEER pursuant to paragraph 9.11; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, CONTRACTOR shall carry on the Work and adhere



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to the progress schedule as provided in paragraph 6.25.

**10.5** If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Time) is required by the provisions of any Bond to be given to a surety, the giving of any such notice will be CONTRACTOR'S responsibility, and the amount of each applicable Bond will be adjusted accordingly.

**10.6 WRITTEN PROPOSALS:** At any time ENGINEER may request a quotation from CONTRACTOR for a proposed change in the Work. Within 15 calendar days after receipt of a Notice of a Proposed Change, unless otherwise indicated in the Notice, CONTRACTOR shall submit a written and detailed proposal for an increase or decrease in the Contract Price or Contract Time corresponding to the proposed change. The proposal shall include an itemized estimate of all costs and time for performance that will result directly or indirectly from the proposed change. Unless otherwise directed, itemized estimates shall be in accordance with the requirements of Articles 11 and 12 and in sufficient detail to reasonably permit an analysis by ENGINEER of all material, labor, equipment, subcontract, and overhead costs and fees and shall cover all aspects of the work involved in the change, whether such was deleted, added, changed, or impacted. Any amount claimed for subcontracts shall be similarly supported. Itemized schedule adjustments shall be in sufficient detail to permit an analysis of impact. Notwithstanding the request for quotation, CONTRACTOR shall carry on the Work and maintain the progress schedule. Delays in the submittal of the written and detailed quotation will not constitute a basis for an increase in contract time.

**10.7 FIELD ORDER:** ENGINEER may authorize minor changes in the Work not involving an adjustment in the Contract Price or the Contract Time, which are consistent with the overall intent of the Contract Documents. These may be accomplished by a Field Order or in the approval of a shop drawing or sample, and shall be binding on CONTRACTOR. CONTRACTOR shall proceed with the performance of the changes in the Work so authorized by ENGINEER unless CONTRACTOR believes that such Field Order or approved shop drawing or sample entitles him to a change in the Contract Price or Time, or both, in which case CONTRACTOR shall give ENGINEER a written Notice of a Proposed Change thereof along with supporting documentation within 3 days of receipt of the Field Order or the approved shop drawing or sample and prior to commencing work. CONTRACTOR shall document the basis for the change in Contract Price or Time in accordance with paragraph 10.6 and the requirements of Article 11 and Article 12. Request for a Change Order to adjust Contract Price or Time arising out of a Field Order or an approved shop drawing will not be considered without the attachment thereto of a copy of the referenced Field Order or approved shop drawing. No claim by CONTRACTOR will be allowed if The Notice of a Proposed Change is submitted after Work on the Field Order or the approved shop drawing or sample has commenced, or after Final Payment under this Agreement.

**10.8 CONTRACTOR'S ACCEPTANCE OF A CHANGE ORDER:** The increase or decrease in Contract Price or Contract Time, or both stated in a Change Order signed by CONTRACTOR shall unequivocally comprise the total price and/or time adjustment due or owed for the Work or changes defined in the Change Order. By executing a Change Order, CONTRACTOR acknowledges and agrees that the stipulated increases or decreases in

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Contract Price and/or time represent full compensation for all increases or decreases in the cost of or the time required to perform the entire Work under the contract arising directly or indirectly from the change, including the costs and delays associated with the interruption of schedules, extended overheads, delay, loss of momentum, acceleration to overcome delays and loss of momentum, and cumulative impacts or ripple effect on all other non-affected work under this contract. Such signing of a Change Order constitutes full and mutual accord and satisfaction for the adjustment in Contract Price or time as a result of increases or decreases in costs and time of performance caused directly and indirectly from the change, subject to the current scope of the Work as set forth in the Contract Documents. Acceptance of this waiver constitutes an agreement between OWNER and CONTRACTOR that the Change Order represents an equitable adjustment to the Contract, and that CONTRACTOR will waive all rights to file a claim on the Change Order after it is properly executed by OWNER and CONTRACTOR

**10.9** If upon the review of any proposal or claim submitted by CONTRACTOR, ENGINEER or OWNER determines that an adjustment or that no adjustment in Contract Price or Contract Time is justified under the Contract documents, that determination shall be final and binding on CONTRACTOR unless CONTRACTOR files a subsequent written notice of claim in the form of a Notice of Proposed Change in accordance with Articles 11 and 12, referencing the disputed determination, and CONTRACTOR furnishes any additional supporting data requested by ENGINEER or OWNER.

## **ARTICLE 11 - Change of Contract Price**

**11.1** The Contract Price constitutes the total compensation (subject to authorized adjustments) payable to CONTRACTOR for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by CONTRACTOR shall be at his expense without change in the Contract Price.

**11.2** The Contract Price may only be changed by a Change Order CONTRACTOR shall notify ENGINEER by means of a Written Notice of a Proposed Change within fifteen days, or earlier if so required elsewhere in the Contract Documents, of the occurrence of an event which CONTRACTOR believes entitles him to a change in the Contact Price. Supporting data shall be delivered within fifteen days of such notice or within thirty days of such occurrence, whichever is later, unless OWNER allows an additional period of time to ascertain accurate cost data. CONTRACTOR must prove that additional costs were necessarily incurred which meet the criteria set forth in Paragraph 10.4, despite CONTRACTOR'S reasonable, prudent, and diligent efforts to prevent such costs. Failure of CONTRACTOR to comply with the time requirements for written Notice of a Proposed Change or for submittal of supporting data shall be considered to be a waiver by CONTRACTOR of any claim for an addition to the Contract Price.

**11.3** The value of any Work covered by a Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the following ways:

### **11.3.1 LUMP SUM PRICES INCLUDED IN THE CONTRACT:** Where the Work involved

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is covered by lump sum prices included in the Proposal Documents, Schedule of Contract Items and Unit Price; the Contract Price shall be adjusted by the lump sum prices.

**11.3.2 UNIT PRICES INCLUDED IN THE CONTRACT:** Where the Work involved is covered by unit prices included in the Proposal Documents, Schedule of Contract Items and Unit Price,

and the actual quantities required differ from that shown on the Proposal Documents, or those indicated in the Contract Documents, the Contract Price shall be adjusted by application of unit prices to the actual quantities of the items involved.

**11.3.3 NEGOTIATED UNIT PRICES:** If the Work involved is not covered by unit prices contained in the Contract Documents, unit prices may be negotiated on the basis of costs estimated in accordance with this Article 11.

**11.3.4 NEGOTIATED LUMP SUM:** If the Contract Price is adjusted on the basis of an agreed to Lump Sum, and the costs are estimated in accordance with this Article 11.

**11.3.5 COST OF THE WORK:** If OWNER and CONTRACTOR cannot agree that any of the methods described in 11.3.1, 11.3.2, 11.3.3 or 11.3.4 above are appropriate for the proposed work, OWNER may direct CONTRACTOR to proceed on the basis of actual costs in accordance with Article 11 and Section 18.6 of the Instructions to Bidders.

**11.3.6 UNILATERAL CHANGE ORDER:** If OWNER and CONTRACTOR cannot agree on the price and/or time adjustment necessitated by the particular proposed change order, the OWNER may issue a unilateral change order setting forth such price and/or time adjustments that ENGINEER shall deem reasonable.

**11.4 COST OF THE WORK:** The term Cost of the Work means the sum of all costs necessarily incurred and paid by the CONTRACTOR in the proper performance of the Work. Except as otherwise may be agreed to in writing by OWNER, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items and shall not include any of the costs itemized in paragraph 11.5:

11.4.1 The Cost of the Work involved includes payroll costs for CONTRACTOR's craft labor, including foremen, assigned to the site and engaged in furnishing and incorporating materials or equipment in the Work involved. Labor work hours shall not exceed current "Means open Shop Building Construction Cost data" applicable to the work involved. Payroll costs shall include wages and may include those labor burdens expressly certified in advance by a duly authorized financial representative of CONTRACTOR and so approved by OWNER, Examples of labor burdens include social security, unemployment taxes, worker's compensation, health and retirement benefits, vacation and holiday pay. When determining actual payroll costs under paragraph 11.3.5: (a) contemporaneously, daily time sheets certified by CONTRACTOR and verified by ENGINEER along with certified payroll records shall be valid records; (b) after-the-fact daily time sheets shall be valid only if they expressly correlate to the Work involved, and if recorded at that time and used for payroll.

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11.4.2 The Cost of the Work involved includes payments by CONTRACTOR to Suppliers for material and equipment used in the Work involved, including transportation, storage and necessary Suppliers' field services. All trade discounts, rebates and refunds and all returns from sale of surplus items shall accrue to OWNER, and CONTRACTOR shall make provisions so that they may be obtained. If required by OWNER, CONTRACTOR shall obtain bids for designated materials or equipment and nominate at least two (2) Suppliers for selection by OWNER. When determining actual Supplier costs, invoices segregating items associated with the Work involved shall be the record upon which to base actual costs.

11.4.3 The Cost of the work involved includes payments made by the CONTRACTOR to Subcontractor for the Work involved performed by the Subcontractor. The methods for calculating Subcontractors' costs shall be the same as for CONTRACTOR costs, except that the term Subcontractor shall replace the term "CONTRACTOR", context permitting. If OWNER requires, CONTRACTOR shall obtain detailed competitive sub-bids and nominate at least two (2) Subcontractors for the performance of any work involved for selection by OWNER.

11.4.3.1 All subcontracts shall be subject to the other provisions of the Contract Documents insofar as applicable.

11.4.4 Construction Equipment Costs: The Cost of the work involved includes costs for individual construction equipment with replacement value in excess of \$1,000,000. Transportation, loading and unloading, installation, dismantling and removal costs shall be allowed only if prior consent is obtained from ENGINEER, and if equipment is, or was, transported to the site solely for the Work involved. Shipping costs will be allowed if the equipment requires the use of a carrier, and provided the travel distance does not exceed that for equipment in Terrebonne Parish. When multiple attachments are used, only the highest cost attachment shall be recoverable. Equipment costs shall cease when the equipment is no longer needed for the Work involved. Payroll costs for labor operating the equipment are as specified in paragraph 11.4.1. Equipment costs shall be computed using the same accounting and estimating rules and prices, whether related to added or deleted Work.

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- 11.4.4.1 When determining actual construction equipment costs under paragraph 11.3.5: (a) contemporaneously, daily logs of the equipment, operators and actual usage, verified by ENGINEER, shall be the valid records; (b) after-the-fact, such daily records shall be valid only if developed when the Work involved was performed and used for accounting purposes.
- 11.4.4.2 Rented or owned equipment at the site, idled solely by actions of OWNER or ENGINEER, shall be paid at the rates for rented equipment, or based on fifty percent (50%) of the rates for owned equipment, respectively, provided that the idle period exceeds that normally experienced for such equipment and occurs during normal working hours.

- 11.4.4.3 Rented or Leased Construction Equipment: Construction equipment rented or leased from third parties shall be priced using either the specific rates negotiated between OWNER and CONTRACTOR (based on the actual rental or lease agreements), or in the event that no agreement is reached, using those rates listed in the Rental Rate "Blue Book" published by Dataquest, Inc. for the region covering the New Orleans metropolitan area and applicable to the equipment (model number and year), but in no event shall the rate exceed those issued by local equipment rental companies within Terrebonne Parish. The equipment rate for second or third shift Work shall not exceed fifty percent (50%) of the base rate. Operating costs shall not exceed the hourly operation rate in the Blue Book. Hourly rates for equipment previously in use on the work for at least a month shall be based on the monthly rate divided by 176 hours. Equipment previously in use for only one week or not previously in use at the site shall not be invoiced to OWNER at rates higher than the following schedule of equipment use and payment category: applicable to equipment listed in the Rental Rate "Blue Book"

Less than 8 hours	Hourly Rate
1 day but less than 7 days	Daily Rate
1 week but less than 30 days	Weekly Rate
30 days or more (when in use)	Monthly Rate

- 11.4.4.4 Owned Construction Equipment: Construction equipment Owned by CONTRACTOR, or rented or leased from lessors associated with or owned by CONTRACTOR, shall be priced using either the specific rates negotiated between OWNER and CONTRACTOR (based on rates consistent with CONTRACTOR's normal accounting practices), or in the event that no agreement is reached, using the rates listed in the "Contractor's Equipment Cost Guide" published by Dataquest, Inc. for the region covering the New Orleans metropolitan area, but in no event shall the equipment ownership costs exceed rental rates of local equipment rental companies within Terrebonne Parish and operating costs shall not exceed the hourly operation rate in the Blue Book. For multiple shifts, rates shall not exceed the shift Work adjustments recommended in the "Contractor's Equipment Cost Guide".

- 11.4.5 Supplemental costs including the following:

11.4.5.1 The proportion of necessary transportation, travel and subsistence expenses of CONTRACTOR'S employees incurred in discharge of duties connected with the Work.

11.4.5.2 Costs of field supplies and purchase costs (less market value if not consumed)

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of tools individually valued at less than \$1,000 that are not owned by the workers, if CONTRACTOR provides an itemized list of the field supplies and tools required for the performance of the Work involved; however, no such costs shall be allowed over 4% of the labor costs under paragraph 11.4.1, excluding burdens, unless CONTRACTOR furnishes detailed data sufficient to allow verification that a higher percentage is appropriate for the work involved.

11.4.5.3 Sales, consumer, use or similar taxes related to the Work, and for which CONTRACTOR is liable, imposed by Laws and Regulations.

11.4.5.4 Deposits lost for causes other than negligence of CONTRACTOR, any Subcontractor or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

11.4.5.5 Losses and damages (and related expenses), not compensated by insurance or otherwise, to the Work or otherwise sustained by CONTRACTOR in connection with the performance and furnishing of the Work, provided they have resulted from causes other than the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of OWNER. No such losses, damages and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's Fee. If, however, any such loss or damage requires reconstruction and CONTRACTOR is placed in charge thereof, CONTRACTOR shall be paid for services a fee proportionate to that stated in paragraph 11.6.2.

11.4.5.6 The costs of utilities, fuel and sanitary facilities at the site.

11.4.5.7 Minor expenses such as telegrams, long distance telephone calls, telephone service at the site, expressage and similar petty cash items in connection with the Work.

11.4.5.8 Cost of premiums for additional Bonds and insurance required because of changes in the Work.

**11.5** The term Cost of the Work shall not include any of the following:

11.5.1 Payroll costs and other compensation of CONTRACTOR'S officers, executives, principals (of partnership and sole proprietorships), general managers, engineers, architects, estimators, lawyers, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks and other personnel employed by CONTRACTOR whether at the site or in his principal or a branch office for general administration of the Work, all of which are to be considered administrative costs covered by the Contractor's Fee.

11.5.2 Expenses of CONTRACTOR'S principal and branch offices other than CONTRACTOR'S office at the site.

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11.5.3 Any part of CONTRACTOR'S capital expenses, including interest on CONTRACTOR'S capital employed for the Work and charges against CONTRACTOR for delinquent payments.

11.5.4 Cost of premiums for all Bonds and for all insurance whether or not CONTRACTOR is required by the Contract Documents to purchase and maintain the same (except for the cost of premiums covered by subparagraph 11.4.4.9 above).

11.5.5 Costs due to the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied and making good any damage to property.

11.5.6 Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraph 11.4.

11.5.7 Attorney's Fees and/or Court Costs.

11.5.8 Costs or fees of consultants retained or utilized by CONTRACTOR, or his agents, for the purpose of making or filing a claim against OWNER, pursuing litigation or defending any claim and/or dispute.

11.5.9 CONTRACTOR shall not be allowed to include as part of the Cost of the Work involved any construction equipment or supplemental costs that cannot be shown to increase on account of, or are not directly attributable to, the performance of the Work involved. Payroll costs for the full time resident superintendent included within the requirements of paragraph 6.2.1 are but one example of such costs.

**11.6 CONTRACTOR'S FEE:** The CONTRACTOR'S fee allowed to CONTRACTOR for overhead and profit shall be determined by negotiations. The objective of negotiations shall be the exercise of sound business judgment including a fair and reasonable profit based on assumptions of risk, exposure to weather, size of the change, percent of subcontracted work, equipment requirements, and time of performance. In no case, however, shall the fee for overhead and profit exceed the following percentages of the various portions of the Cost of the Work:

11.6.1 For costs incurred under paragraphs 11.4.1 and 11.4.2, the CONTRACTOR'S fee shall not exceed 15%;

11.6.2 For costs incurred under paragraph 11.4.3, and for work performed by a CONTRACTOR'S Subcontractor, the CONTRACTOR'S fee shall not exceed 10% and the Subcontractor's fee shall not exceed 15%; for costs incurred under paragraph 11.4.3, and Work performed by a Subcontractor's Subcontractor, the CONTRACTOR'S and the Subcontractor's fee shall not exceed 5% and 5%, and the Subcontractor's Subcontractor's fee shall not exceed 15%.

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11.6.3 No fee shall be payable on the basis of costs itemized under paragraphs 11.4.4 and 11.5.

11.6.4 The amount of credit to be allowed by CONTRACTOR to OWNER for any such a change which results in a net decrease in cost will be the amount of the actual net decrease plus a deduction in CONTRACTOR'S fee in accordance with the following:

11.6.5 When both additions and credits are involved in one change, and the additions exceed the credits, the adjustment in CONTRACTOR'S fee shall be computed on the amount by which the additions exceed the credits, except that no adjustments shall be allowed on the costs developed in accordance with paragraph 11.3.1;

11.6.6 When both additions and credits are involved in one change, and the credits exceed the additions, CONTRACTOR will be allowed to retain fee on the amount by which the credits exceed the additions, except that no adjustment shall be allowed on the costs developed in accordance with paragraph 11.3.1 or 11.3.2.

**11.7** Whenever the cost of any Work is to be determined pursuant to paragraph 11.4 or 11.5, CONTRACTOR will submit in form acceptable to ENGINEER an itemized cost breakdown together with supporting data.

**11.8** RESERVED

**11.9** UNIT PRICE WORK:

11.9.1 Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the established unit prices for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by CONTRACTOR will be made by ENGINEER in accordance with Paragraph 9.10.

11.9.2 Each unit price will be deemed to include an amount considered by CONTRACTOR to be adequate to cover CONTRACTOR'S overhead and profit for each separately identified item.

11.9.3 Unit Prices contained in the initial Contract shall not be changed under any circumstances. (Reference Louisiana Public Bid Law).

11.9.4 If CONTRACTOR believes a variation from estimated quantities of Unit Price Work is such as to require an increase in the Contract Time, CONTRACTOR shall within seven days of knowledge of the variation in quantities, submit a written Notice of a Proposed Change to ENGINEER, and proceed to substantiate his claim within fifteen days of the delivery of the notice with the analysis and documentation required in this Section of the General Requirements.



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## **ARTICLE 12: Change of Contract Time**

**12.1** The Contract Time may only be changed by a Change Order. Any claim or request for an extension in the Contract Time shall be based on a written Notice of a Proposed Change delivered to ENGINEER within seven days, or earlier if so required in the Contract Documents, of the occurrence of the event giving rise to the request or claim. Supporting data as to the extent of the request or claim shall be delivered within fifteen days of such Notice, or within twenty-two days of the event giving rise to the occurrence, whichever is later, unless ENGINEER allows an additional period of time to ascertain more accurate data. CONTRACTOR must prove that extensions to the Contract Time have materialized which meet the combined criteria set forth in paragraph 12.2 below and Official Progress Schedules of the General Requirements, despite CONTRACTOR'S reasonable, prudent, and diligent efforts to prevent or overcome such delays. Failure of CONTRACTOR to comply with the time requirements for written Notice or for submittal of supporting data shall be considered to be a waiver by CONTRACTOR of any claim for an extension in the Contract Time.

**12.2** The Contract Time will be extended in an amount equal to the time lost due to delays beyond the control and without the fault of CONTRACTOR, and which CONTRACTOR could not have guarded against, if a claim is made therefore as provided in Paragraph 12.1 and is substantiated to the satisfaction of OWNER. Such delays may include, but not limited too, unusually severe weather, sink holes, archaeological finds, acts of God, acts of the public enemy, acts of OWNER in either its sovereign or contractual capacity, furnishing of lands, right-of-way or easements by OWNER, acts of another CONTRACTOR in the performance of a Contract with OWNER, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, or delays of Subcontractors of Suppliers at any tier arising from causes other than normal weather beyond the control and without the fault or negligence of both CONTRACTOR and such Subcontractors and Suppliers; and further provided that

12.2.1 The Contract Time is extended only to the extent that the delay is unreasonable under the Contract, which is the extent the delays set forth in paragraph 12.2 above exceed the Total Float Time available in the Official Schedule and extend completion of the Work, or specified part of the work, beyond the corresponding Contract Time.

**12.3** If upon evaluation of CONTRACTOR's analysis, OWNER justifies an extension in Contract Time under paragraph 12.1 through 12.3 for delay not caused in whole or in part by acts or omissions within the control of OWNER or ENGINEER, the OWNER shall authorize the necessary change in Contract Time only.

### **12.4 COMPENSABLE DELAY:**

12.4.1 Unless otherwise excluded in the Contract Documents, an extension in Contract Time may be combined with an increase in Contract Price to the extent the delay was not concurrent with CONTRACTOR delay, was caused in whole or in part by acts or omissions within the control of OWNER or ENGINEER and is due to one of the following: Underground Facilities that are not shown (i.e., previously unknown); an emergency; objection, for OWNER'S

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convince, to a Subcontractor, historic resources, uncovering of work not found to be defective under paragraph 13.9; delay under paragraph 7.5.3 or any other suspension of Work; changes in the Work; differing site conditions; and variation in quantities.

12.4.2 Changes in Contract Price for extensions in Contract Time may include increase in the Cost of the Work, as provided in Article 11, related to the extension in Contract Time, but shall exclude costs that are unaffected or do not relate to the extension in Contract Time, such as: (a) operating costs of construction equipment assigned to the Work on a continuous basis but primarily used in the furnishing and incorporating of materials/equipment into the Work, (b) operating costs and owned/rental costs of construction equipment used solely in the furnishing and incorporating of materials/equipment into the Work (crane used for specific lifts, concrete pump used for specific pours, etc.), and fully paid site facilities, tools, etc.

12.4.3 If a delay meeting the conditions of paragraph 12.4.1 delays Substantial completion of the Work beyond the Contract Time for Substantial Completion, OWNER shall negotiate with CONTRACTOR the reimbursement of an amount to cover administrative costs (under paragraphs 11.5.1 through 11.5.4) that will be or were unabsorbed prior to the expiration date of that contract Time. Reimbursement shall be based on the lesser of (a) five percent (5%) times that portion of the Contract Price remaining un-billed, less retainage, prior to the expiration of that Contract Time, or (b) the product of that un-billed portion of the Contract Price times the (company wide) ratio of CONTRACTOR's administrative costs to billings, or (c) that amount derived by an application of the Eichleay formula.

12.4.4 CONTRACTOR shall not recover from OWNER (a) acceleration costs incurred to overcome delays which warrant extensions in Contract Time but exclude changes in Contract Price, (b) escalation costs for any part of the Work not delayed beyond the Late Dates in the Official Schedule, or (c) delay costs not expressly allowed in this Article.

### **ARTICLE 13 - Warranty and Guarantee; Tests and Inspections: Correction, Removal or Acceptance of Defective Work**

**13.1 WARRANTY AND GUARANTEE:** CONTRACTOR warrants and guarantees to OWNER and ENGINEER that all Work will be in accordance with the Contract Documents and will not be defective. Prompt notice of observed defects shall be given to CONTRACTOR. All defective Work, whether or not in place, may be rejected, corrected or accepted as provided in this Article 13.

13.1.1 The obligations of CONTRACTOR under this Paragraph 13.1 shall be in addition to and not in limitation of any obligation imposed upon him by special guarantees required by the Contract Documents or otherwise prescribed by law.

13.1.2 In special circumstances where a particular item of equipment or part of the Work reaches Substantial Completion upon successful performance of Pre-operational Testing, and notwithstanding anything in the Contract Documents to the contrary, CONTRACTOR shall maintain the particular item of equipment or part of the Work in good order and in proper working condition during the period between Substantial Completion and Initiation of

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Operation, and for such maintenance CONTRACTOR shall receive no adjustment to the Contract Price.

13.1.3 The warranty or guarantee provided by CONTRACTOR under Paragraph 13.1 of the General Conditions shall remain in full effect throughout the period from the date of Initiation of Operation of the entire work to the end of the Correction Period (as that term is defined in these General Conditions).

**13.2 ACCESS TO WORK:** ENGINEER and ENGINEER's representatives, other representatives of OWNER, testing agencies and governmental agencies with jurisdictional interests will have access to the Work at reasonable times for their observation, inspection and testing. CONTRACTOR shall provide proper and safe conditions for such access.

**13.3 NOTICE OF TESTS AND INSPECTIONS:** CONTRACTOR shall give ENGINEER timely notice of readiness of the Work for all required inspections, tests or approvals.

**13.4 TESTS AND INSPECTIONS:** If any laws or regulations of any public body having jurisdiction requires any Work (or part thereof) to specifically be inspected, tested or approved, CONTRACTOR shall assume full responsibility therefore, pay all costs in connection therewith and furnish ENGINEER the required certificates of inspection, testing or approval. CONTRACTOR shall also be responsible for and shall pay all costs in connection with any inspection or testing required in connection with OWNER'S or ENGINEER's acceptance of a Supplier of materials or equipment proposed to be incorporated in the Work, or of materials or equipment submitted for approval to CONTRACTOR'S purchase thereof for incorporation in the work.

13.4.1 All construction testing and certifications required under the Specifications shall be performed by Certified Technicians from an Independent Testing Laboratory. The CONTRACTOR shall propose a private testing laboratory in writing to the ENGINEER, together with a copy of the instruction provisions of his proposed sub-agreement, so that the ENGINEER may determine the proper instructions are included in compliance with the specification. Upon approval by the ENGINEER, the CONTRACTOR shall cooperate the with testing laboratory by furnishing material for testing, space for storage and transportation of the samples as necessary. Compensation for testing and certification shall be included within price bid for associated items of work. No separated measurement or additional compensation shall be allowed.

13.4.2 The Testing Laboratory shall submit to the ENGINEER three (3) typed copies and to the CONTRACTOR one (1) typed copy, of all applicable test data, certifications and reports as required. All required test data and material certifications for each respective item of work must be submitted to the ENGINEER prior to application for payment. Any applications not accompanied by required test data and/or certifications shall be recommended for payment at an amount not to exceed 50% of contract until cost of required test data and certifications are submitted and subsequently approved.

13.4.3 Upon completion of the project and prior to substantial completion, the testing

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laboratory shall address a letter to the OWNER in which the laboratory shall certify that all testing and certification requirements of the specification have been satisfactorily met.

13.4.4 The CONTRACTOR is cautioned to provide termination provisions in its sub-agreement with the testing laboratory. In the event that the testing services prove not up to recognized standards, the ENGINEER reserves the right to withdraw his approval and require another laboratory be furnished by the CONTRACTOR at no increase in Contract Price.

**13.5** All inspections, tests or approvals other than those required by laws or regulations of any public body having jurisdiction shall be performed by organizations acceptable to OWNER and CONTRACTOR (or by ENGINEER if so specified).

**13.6** If any Work (including the work of others) that is to be inspected, tested or approved is covered without written concurrence of ENGINEER, it must, if requested by ENGINEER, be uncovered for observation. Such uncovering shall be at CONTRACTOR'S expense unless CONTRACTOR has given ENGINEER timely notice of CONTRACTOR'S intention to cover the same and ENGINEER has not acted with reasonable promptness in response to such notice.

**13.7** Neither observations by ENGINEER nor inspections, tests or approvals by others shall relieve CONTRACTOR from CONTRACTOR'S obligations to perform the Work in accordance with the Contract Documents.

**13.8 UNCOVERING WORK:** If any Work is covered contrary to the written request of ENGINEER, it must, if requested by ENGINEER, be uncovered for ENGINEER'S observation and replaced at CONTRACTOR'S expense.

**13.9 PAYMENT FOR UNCOVERING WORK:** If ENGINEER considers it necessary or advisable that covered Work be observed by ENGINEER or inspected or tested by others, CONTRACTOR, at ENGINEER'S request, shall uncover, expose or otherwise make available for observation, inspection or testing as ENGINEER may require, that portion of the Work in question, furnishing all necessary labor, material and equipment. If it is found that such work is defective, CONTRACTOR shall bear all direct, indirect and consequential costs of such uncovering, exposure, observation, inspection and testing, and of satisfactory reconstruction, (including but not limited to fees and charges of Engineers, Architects, Attorneys and other professionals), and OWNER shall be entitled to an appropriate decrease in the Contract Price, if the parties are unable to agree as to the amount thereof, may make a claim therefore as provided in Article 11. If, however, such Work is not found to be defective, CONTRACTOR shall be allowed an increase in the Contract Price of an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction; and, if the parties are unable to agree as to the amount or extent thereof, CONTRACTOR may make a claim therefore as provided in Articles 11 and 12.

**13.10 OWNER MAY STOP THE WORK:** If the Work is defective, or CONTRACTOR fails to supply sufficient skilled workmen or suitable materials or equipment, or fails to furnish or perform the Work in such a way that the completed Work will conform to the Contract Documents, OWNER may order CONTRACTOR to stop the Work, or any portion thereof,

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until the cause for such order has been eliminated; however, this right of OWNER to stop the Work shall not give rise to any duty on the part of OWNER to exercise this right for the benefit of CONTRACTOR or any other party. In the event the OWNER stops the work pursuant to this paragraph 13.10, CONTRACTOR shall not be entitled to delay damages, including without limitation, demands for extended job site overhead, home office overhead, cumulative impacts, loss of productivity and efficiency, learning curve impacts, equipment down time and/or interest penalties, occasioned directly or indirectly by the stop work order.

**13.11 CORRECTION OR REMOVAL OF DEFECTIVE WORK:** If required by ENGINEER, CONTRACTOR shall promptly, as directed, either correct all defective Work, whether or not fabricated, installed or completed, or, if the Work has been rejected by ENGINEER, remove it from the site and replace it with non-defective Work. CONTRACTOR shall bear all direct, indirect and consequential costs of such correction or removal (including but not limited to fees and charges of engineers, architects, attorneys and other professionals, and court costs) made necessary thereby. CONTRACTOR shall not be entitled to time extension of the Contract Time for correction or removal of defective work.

**13.12 ONE YEAR CORRECTION PERIOD:** If within the period from the date of Substantial Completion of a particular item of equipment or a designated part of the work to one year after the date of Initiation of Operation for the Project, the particular item of equipment or designated part of the work is found to be defective, CONTRACTOR shall promptly, without an adjustment in Contract Price and in accordance with ENGINEER'S written instructions, either correct such defective Work, or if it has been rejected by ENGINEER, remove it from the site and replace it with non-defective work. If CONTRACTOR does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, OWNER may have the defective Work corrected or the rejected Work removed and replaced, and all direct, indirect and consequential costs of such removal and replacement, (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) will be paid by CONTRACTOR.

13.12.1 Subject to the conditions set forth in paragraphs 13.1.2 and 13.1.3 and the adjustments described in Subparagraphs 13.12.2, below, the Correction Period shall be one year.

13.12.2 Unless another date is indicated in the Contract Documents the date the Work is Substantially Complete shall be the date for Initiation of Operation to occur. However, OWNER may at its sole option advance or delay the date for Initiation of Operation, and CONTRACTOR'S obligations to extend warranties and guarantees in accordance with paragraph 13.1.2 and 13.1.3 or to maintain the Work in accordance with paragraph 13.1.2 until then shall remain absolute. Applicable Change Orders shall be executed by the parties to adjust the Contract Price, as appropriate.

13.12.3 CONTRACTOR'S responsibilities under the paragraph 13.12, including subparagraphs, are in addition to, not in lieu of, all other obligations imposed by these contract documents, or imposed by applicable State laws.

**13.13 ACCEPTANCE OF DEFECTIVE WORK:** If, instead of requiring correction or removal

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and replacement of defective Work, OWNER (and, prior to ENGINEER'S recommendations of final payment, also ENGINEER) prefers to accept it, OWNER may do so. CONTRACTOR shall bear all direct, indirect and consequential costs attributable to OWNER'S evaluation of and determination to accept such defective Work (such costs to be approved by ENGINEER as to reasonableness and to include but not be limited to fees and charges of engineers, architects, attorneys and other professionals). If any such acceptance occurs prior to ENGINEER'S recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and OWNER shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, OWNER may make a claim therefore as provided in Article 11. If the acceptance occurs after such recommendation, an appropriate amount will be paid by CONTRACTOR to OWNER.

**13.14 OWNER MAY CORRECT DEFECTIVE WORK:** If CONTRACTOR fails within a reasonable time after written notice of ENGINEER to proceed to correct and to correct defective Work or to remove and replace rejected Work as required by ENGINEER in accordance with paragraph 13.11, or if CONTRACTOR fails to perform the Work in accordance with the Contract Documents, or if CONTRACTOR fails to comply with any other provision of the Contract Documents, OWNER may, after seven days' written notice to CONTRACTOR, correct and remedy any such deficiency. In exercising the rights and remedies under this paragraph OWNER shall proceed expeditiously. To the extent necessary to complete corrective and remedial action, OWNER may exclude CONTRACTOR from all or part of the site, take possession of all or part of the Work, and suspend CONTRACTOR'S services related thereto, take possession of CONTRACTOR'S tools, appliances, construction equipment and machinery at the site and incorporate in the Work all materials and equipment stored at the site or for which OWNER has paid CONTRACTOR but which are stored elsewhere. CONTRACTOR shall allow OWNER, OWNER'S representatives, agents and employees such access to the site as may be necessary to enable OWNER to exercise the rights and remedies under this paragraph. All direct, indirect and consequential costs of OWNER in exercising such rights and remedies shall be charged against CONTRACTOR in an amount approved as to reasonableness by ENGINEER, and a Change Order shall be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and OWNER shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, OWNER may make a claim therefore as provided in Article 11. Such direct, indirect and consequential costs will include but not be limited to fees and charges of engineers, architects, attorneys and other professionals, all court and arbitration costs and all costs of repair and replacement of work of others destroyed or damaged by correction, removal or replacement of CONTRACTOR'S defective Work. CONTRACTOR shall not be allowed an extension of the Contract Time because of any delay in performance of the Work attributable to the exercise by OWNER of OWNER'S rights and remedies hereunder.

## **ARTICLE 14 - Payments to Contractor and Completion**

**14.1 SCHEDULE OF VALUES:** The schedule of values established as provided in paragraph

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2.9 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to ENGINEER. Progress payments on account of Unit Price Work will be based on the number of units completed.

**14.2 APPLICATION FOR PROGRESS PAYMENT:** At least fifty-five days before each progress payment falls due (but not more often than once a month), CONTRACTOR shall submit to ENGINEER for review an Application for Payment filled out and signed by CONTRACTOR covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents and also as ENGINEER may reasonably require. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the site or at another location agreed to in writing, the Application for Payment shall also be accompanied by such data, satisfactory to OWNER, as will establish OWNER'S title to the material and equipment and protect OWNER'S interest therein, including applicable insurance. Only major items of material and equipment to be incorporated in the project will be eligible for payment. These items must be easily accountable by the ENGINEER. Payment for these materials will be invoice prices for the material, submitted with the request for payment, which price shall not exceed the appropriate portion of the contract items in which such materials are to be incorporated. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

14.2.1 Notwithstanding any other provisions of these contract documents to the contrary, OWNER is under no duty or obligation whatsoever to any Subcontractor, laborer or other party to ensure that payments due and owing by CONTRACTOR to any of them are or will be made. Such parties shall rely only on CONTRACTOR'S surety bonds for remedy of nonpayment by CONTRACTOR.

**14.3 CONTRACTOR'S WARRANTY OF TITLE:** CONTRACTOR warrants and guarantees that title to all Work, materials and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to OWNER no later than the time of payment free and clear of all Liens.

**14.4 REVIEW OF APPLICATIONS FOR PROGRESS PAYMENT:** ENGINEER will, within ten days after receipt of each application for Payment, either indicate in writing a recommendation of payment and present the Application to OWNER, or return the Application to CONTRACTOR indicating in writing ENGINEER'S reasons for refusing to recommend payment. In the latter case, CONTRACTOR may make the necessary corrections and re-submit the Application. Forty-five (45) days after presentation of the Application for Payment with ENGINEER'S recommendation, the amount recommended will (subject to the provisions of the last sentence of paragraph 14.7) become due and when due will be paid by OWNER to CONTRACTOR.

**14.5 ENGINEER'S recommendation of any payment requested in an Application for Payment will constitute a representation by ENGINEER to OWNER, based on ENGINEER'S on-site observations of the Work in progress as an experienced and qualified design professional and on ENGINEER'S review of the Application for Payment and the accompanying data and**

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schedules that the Work has progressed to the point indicated; that, to the best of ENGINEER'S knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under paragraph 9.10, and to any other qualifications stated in the recommendation); and that CONTRACTOR is entitled to payment of the amount recommended. However, by recommending any such payment ENGINEER will not thereby be deemed to have represented that exhaustive or continuous on-site inspections have been made to check the quality or quantity of the Work beyond the responsibilities specifically assigned to ENGINEER in the Contract Documents or that there may not be other matters or issues between the parties that might entitle CONTRACTOR to be paid additionally by OWNER or OWNER to withhold payment to CONTRACTOR.

**14.6** ENGINEER'S recommendation of final payment will constitute an additional representation by ENGINEER to OWNER that the conditions precedent to CONTRACTOR'S being entitled to final payment as set forth in paragraph 14.13 have been fulfilled.

**14.7** ENGINEER may refuse to recommend the whole or any part of any payment if, in ENGINEER'S opinion, it would be incorrect to make such representations to OWNER. ENGINEER may also refuse to recommend any such payment, or, because of subsequently discovered evidence or the results of subsequent inspections or tests, nullify and such payment previously recommended, to such extent as may be necessary in ENGINEER'S opinion to protect OWNER from loss because:

14.7.1 the Work is defective, or completed Work has been damaged requiring correction or replacement,

14.7.2 the Contract Price has been reduced by Change Order,

14.7.3 OWNER has been required to correct defective Work or complete Work in accordance with paragraph 13.14, or

14.7.4 of ENGINEER'S actual knowledge of the occurrence of any of the events enumerated in paragraphs 15.2.1 through 15.2.9 inclusive.

14.7.5 OWNER may refuse to make payment of the full amount recommended by ENGINEER because claims have been made against OWNER, or OWNER has claims against CONTRACTOR including but not limited to liquidated damages for anticipated or actual late completion, on account of CONTRACTOR'S performance or furnishing of the Work, or Liens have been filed in connection with the Work or there are other items entitling OWNER to a set-off against the amount recommended, but OWNER must give CONTRACTOR prompt written notice (with a copy to ENGINEER) stating the reasons for such action.

**14.8** SUBSTANTIAL COMPLETION: When CONTRACTOR considers the entire Work ready for its intended use CONTRACTOR shall notify OWNER and ENGINEER in writing that the entire Work is substantially complete (except for items specifically listed by



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CONTRACTOR as incomplete) and request that ENGINEER issue a certificate of Substantial Completion. Within a reasonable time thereafter, OWNER, CONTRACTOR and ENGINEER shall make an inspection of the Work to determine the status of completion. If ENGINEER does not consider the Work substantially complete, ENGINEER will notify CONTRACTOR in writing giving the reason therefore. If ENGINEER considers the Work substantially complete, ENGINEER will prepare and deliver to OWNER a tentative certificate of Substantial Completion, which shall fix the date of substantial completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. OWNER shall have seven days after receipt of the tentative certificate during which he may make written objection to ENGINEER as to any provisions of the certificate or attached list. If, after considering such objections, ENGINEER concludes that the Work is not substantially complete, ENGINEER will within twenty-eight days after submission of the tentative certificate to OWNER notify CONTRACTOR in writing, stating his reasons e. If after consideration of OWNER'S objections, ENGINEER considers the WORK substantially complete, ENGINEER will within said twenty-eight days execute and deliver to OWNER and CONTRACTOR a definitive certificate of Substantial Completion (with a revised tentative list of items to be complete or corrected) reflecting such changes from the tentative certificate as ENGINEER believes justified after consideration of any objections from OWNER. At the time of delivery of the tentative certificate of Substantial Completion, ENGINEER will deliver to OWNER and CONTRACTOR a written recommendation as to division of responsibilities pending final payment between OWNER and CONTRACTOR with respect to security, operation, safety, maintenance, heat, utilities, insurance and warranties. Unless OWNER and CONTRACTOR agree otherwise in writing and so inform ENGINEER prior to ENGINEER'S issuing the definitive certificate of Substantial Completion ENGINEER'S aforesaid recommendation will be binding on OWNER and CONTRACTOR until final payment.

**14.9 EXCLUSION OF CONTRACTOR FROM SITE:** OWNER shall have the right to exclude CONTRACTOR from the Work after the date of Substantial Completion, but OWNER shall allow CONTRACTOR reasonable access to complete or correct items on the tentative list.

**14.10 PARTIAL UTILIZATION:** Use by OWNER of any finished part of the Work, which has specifically been identified in the Contract Documents, or which OWNER, ENGINEER and CONTRACTOR agree constitutes a separately functioning and usable part of the Work that can be used by OWNER without significant interference with CONTRACTOR'S performance of the remainder of the Work, may be accomplished prior to Substantial Completion of all the Work subject to the following:

14.10.1 OWNER at any time may request CONTRACTOR in writing to permit OWNER to use any such part of the Work which OWNER believes to be ready for its intended use and substantially complete. If CONTRACTOR agrees, CONTRACTOR will certify to OWNER and ENGINEER that said part of the Work is substantially complete and request ENGINEER to issue a certificate of Substantial Completion for that part of the Work. CONTRACTOR at any time may notify OWNER and ENGINEER in writing that CONTRACTOR considers any such part of the Work ready for its intended use and substantially complete and request ENGINEER to issue a certificate of Substantial Completion for that part of the Work. Within a reasonable time after either such request, OWNER, CONTRACTOR and ENGINEER shall

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make an inspection of that part of the Work to determine its status of completion. If ENGINEER does not consider that part of the Work to be substantially complete, ENGINEER will notify OWNER and CONTRACTOR in writing giving the reasons therefore. If ENGINEER considers that part of the Work to be substantially complete, the provisions of paragraphs 14.8 and 14.9 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

14.10.2 OWNER may at any time request CONTRACTOR in writing to permit OWNER to take over operation of any such part of the Work although it is not substantially complete. A copy of such request will be sent to ENGINEER and within a reasonable time thereafter OWNER, CONTRACTOR and ENGINEER shall make an inspection of that part of the Work to determine its status of completion and will prepare a list of the items remaining to be completed or corrected thereon before final payment. If CONTRACTOR does not object in writing to OWNER and ENGINEER that such part of the Work is not ready for separate operation by OWNER, ENGINEER will finalize the list of items to be completed or corrected and will deliver such list to OWNER and CONTRACTOR together with a written recommendation as to the division of responsibilities pending final payment between OWNER and CONTRACTOR with respect to security, operation, safety, maintenance, utilities, insurance, warranties and guarantees for that part of the Work which will become binding upon OWNER and CONTRACTOR at the time when OWNER takes over such operation (unless they shall have otherwise agreed in writing and so informed ENGINEER). During such operation and prior to Substantial Completion of such part of the Work OWNER, shall allow CONTRACTOR reasonable access to complete or correct items on said list and to complete other related Work.

14.10.3 No occupancy or separate operation of part of the Work will be accomplished prior to compliance with the requirements of paragraph 5.7 in respect of property insurance.

**14.11 LIEN PERIOD:** Within twenty-one (21) days of the receipt of the definitive Certificate of Substantial Completion from ENGINEER, OWNER shall adopt and record a Resolution of Acceptance with the Recorder of Mortgages of the Parish in which the Agreement has been recorded. The recording of this Resolution of Acceptance shall commence a lien period of not less than forty-five (45) consecutive calendar days, during which period the retainage stated in the Supplementary Conditions will be withheld by OWNER. After the said lien period, CONTRACTOR shall be responsible for obtaining from the Recorder of Mortgages a Certificate that the Agreement at the end of said forty-five day period, is clear of all liens, privileges, judgments or encumbrances of any nature whatsoever, which certificate he shall submit with his application for final payment to ENGINEER.

**14.12 FINAL INSPECTION:** Upon written notice from CONTRACTOR that the entire Work or an agreed portion thereof is complete, ENGINEER will make a final inspection with OWNER and CONTRACTOR and will notify CONTRACTOR in writing of the particulars in which this inspection reveals that the Work is incomplete or defective. CONTRACTOR shall immediately take such measures as are necessary to remedy such deficiencies.

**14.13 FINAL APPLICATION FOR PAYMENT:** After CONTRACTOR has completed all

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such corrections to the satisfaction of the ENGINEER, and delivered four (4) sets of all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, marked-up record documents (as provided in paragraph 6.17) and other documents, all as required by the Contract Documents, and after ENGINEER has indicated that the Work is acceptable (subject to the provisions of paragraph 14.17), CONTRACTOR may make application for final payment following the procedure for progress payments. The final Application for Payment shall be accompanied by all documentation called for in the Contract Documents, together with complete and legally effective releases or waivers (satisfactory to OWNER) of all Liens arising out of or filed in connection with the Work. In lieu thereof and as approved by OWNER, CONTRACTOR may furnish receipts or releases in full; an affidavit of CONTRACTOR that the releases and receipts include all labor, services, material and equipment for which a Lien could be filed, and that all payrolls, material and equipment bills, and other indebtedness connected with the Work for which OWNER or OWNER'S property might in any way be responsible, have been paid or otherwise satisfied; and consent of the surety, if any, to final payment. If any Subcontractor or Supplier fails to furnish a release or receipt in full, CONTRACTOR may furnish a Bond or other collateral satisfactory to OWNER to indemnify OWNER against any Lien.

14.13.1 Notwithstanding any provision of the Contract Documents to the contrary, OWNER shall not be deemed to have accepted the work or to have waived claims against CONTRACTOR as provided in Paragraph 14.16 until (i) Initiation of Operation and (ii) payment of all remaining amount of the Contract Price.

14.13.2 As a condition to payment of all remaining portions of the Contract Price of the Unit Price Agreement, CONTRACTOR shall perform all Startup Testing and shall notify ENGINEER that the work is ready for final inspection. Such Startup Testing and notice to ENGINEER may be accomplished only after CONTRACTOR delivers written notice of the expected date of Initiation of Operation.

14.13.3 The requirements and provisions of Paragraphs 14.11, 14.12, and 14.13 of the General Conditions shall apply to payment of the remaining Contract Price pursuant to the *Unit Price Agreement, as well to final payment under the Unit Price Agreement.*

**14.14 FINAL PAYMENT AND ACCEPTANCE:** If, on the basis of ENGINEER'S observation of the Work during construction and final inspection, and ENGINEER'S review of the final Application for Payment and accompanying documentation - all as required by the Contract Documents, ENGINEER is satisfied that the Work has been completed and CONTRACTOR'S other obligations under the Contract Documents have been fulfilled, ENGINEER will, within ten days after receipt of the Final Application for Payment, indicate in writing ENGINEER'S recommendation of payment and present the Application to OWNER for payment. Thereupon ENGINEER will give written notice to OWNER and CONTRACTOR that the Work is acceptable subject to the provisions of paragraph 14.17. Otherwise, ENGINEER will return the Application to CONTRACTOR, indicating in writing the reasons for refusing to recommend final payment, in which case CONTRACTOR shall make the necessary corrections and re-submit the Application. Thirty days after presentation to OWNER of the Application and accompanying documentation, in appropriate form and substance, and

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with ENGINEER'S recommendation and notice of acceptability, the amount recommended by ENGINEER will become due and will be paid by OWNER to CONTRACTOR.

**14.15** If, through no fault of CONTRACTOR, final completion of the Work is significantly delayed and if ENGINEER so confirms, OWNER shall, upon receipt of CONTRACTOR'S final Application for Payment and recommendation of ENGINEER, and without terminating the Agreement, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by OWNER for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if Bonds have been furnished as required in paragraph 5.1, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by CONTRACTOR to ENGINEER with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

**14.16 CONTRACTOR'S CONTINUING OBLIGATION:** CONTRACTOR'S obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. Neither recommendation of any progress or final payment by ENGINEER, nor the issuance of a certificate of Substantial Completion, nor any payment by OWNER to CONTRACTOR under the Contract Documents, nor any use or occupancy of the Work or any part thereof by OWNER, nor any act of acceptance by OWNER nor any failure to do so, nor any review and approval of Shop Drawing or sample submission, nor the issuance of a notice of acceptability by ENGINEER pursuant to paragraph 14.14, nor any correction of defective Work by OWNER will constitute an acceptance of Work not in accordance with the Contract Documents or a release of CONTRACTOR'S obligation to perform the Work in accordance with the Contract Documents (except as provided in paragraph 14.17).

**14.17 WAIVER OF CLAIMS:** The making and acceptance of any final payment will constitute:

14.17.1 A waiver of all claims by OWNER against CONTRACTOR, except claims previously made in writing and still unsettled, or claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to paragraph 14.12 or from failure to comply with the Contract Documents or the terms of any special guarantees specified herein; however, it will not constitute a waiver by OWNER of any rights in respect of CONTRACTOR'S continuing obligations under the Contract Documents; and

14.17.2 a waiver of all claims by CONTRACTOR against OWNER other than those previously made in writing and still unsettled.

## **ARTICLE 15 - Suspension of Work and Termination**

**15.1 OWNER MAY SUSPEND WORK:** OWNER may, at any time and without cause, suspend the Work or any portion thereof by notice in writing to CONTRACTOR and ENGINEER which will fix the date on which Work shall be resumed. CONTRACTOR shall resume the Work on the date so fixed. CONTRACTOR shall be allowed an increase in the

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Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension if CONTRACTOR makes an approved claim therefore as provided in Articles 11 and 12. If OWNER stops work under Paragraph 13.10 or suspends CONTRACTOR'S services under paragraph 13.14, or suspends the work or any portion thereof because of CONTRACTOR'S failure to prosecute the Work without endangering persons and property, CONTRACTOR shall be entitled to no extension of Contract Time or increase in Contract Price.

**15.2 OWNER MAY TERMINATE:** OWNER may terminate CONTRACTOR's services for cause upon the occurrence of any one or more of the following events:

15.2.1 If CONTRACTOR commences a voluntary case under any chapter of the Bankruptcy Code (Title 11, United States Code), as now or hereafter in effect, or if CONTRACTOR takes any equivalent or similar action by filing a petition otherwise under any other federal or state law in effect at such time relating to the bankruptcy or insolvency;

15.2.2 If a petition is filed against CONTRACTOR under any chapter of the Bankruptcy Code as now or hereafter in effect at the time of filing, or if a petition is filed seeking any such equivalent or similar relief against CONTRACTOR under any other federal or state law in effect at the time relating to bankruptcy or insolvency;

15.2.3 If CONTRACTOR makes a general assignment for the benefit of creditors;

15.2.4 If a trustee, receiver, custodian or agent of CONTRACTOR is appointed under applicable law or under contract, whose appointment or authority to take charge of property of CONTRACTOR is for the purpose of enforcing a Lien against such property or for the purpose of general administration of such property for the benefit of CONTRACTOR'S creditors;

15.2.5 If CONTRACTOR admits in writing an inability to pay its debts generally as they become due;

15.2.6 If CONTRACTOR persistently fails to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule established under paragraph 2.9 as revised from time to time);

15.2.7 If CONTRACTOR disregards Laws or Regulations of any public body having jurisdiction;

15.2.8 If CONTRACTOR disregards the authority of ENGINEER; or

15.2.9 If CONTRACTOR otherwise violates in any substantial way any provisions of the Contract Documents;

In such case, CONTRACTOR shall not be entitled to receive any further payment beyond an amount equal to the value of the Work actually completed and the value of materials and equipment not incorporated in the Work but delivered and suitably stored, less the aggregate

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of payments previously made. If the direct and indirect costs of completing the Work exceed the unpaid balance of the Contract Price, CONTRACTOR shall pay the difference to OWNER. Such costs incurred by OWNER shall be incorporated in a Change Order, but in finishing the Work, OWNER shall not be required to obtain the lowest figure for the work performed. CONTRACTOR'S obligations to pay the difference between such costs and such unpaid balance shall survive termination of the Agreement.

**15.3** Where CONTRACTOR'S services have been so terminated by OWNER, the termination will not affect any rights or remedies of OWNER against CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of moneys due CONTRACTOR by OWNER will not release CONTRACTOR from liability.

**15.4** TERMINATION FOR CONVENIENCE: Upon seven days' written notice to CONTRACTOR and ENGINEER, OWNER may, without cause and without prejudice to any other right or remedy, elect to abandon the Work and terminate the Agreement.

15.4.1 In any termination for convenience, CONTRACTOR shall be paid for (a) Work completed, in accordance with the Contract Documents, before receipt of the notice of termination, and (b) reasonable termination settlement costs for commitments that have become firm before the termination. CONTRACTOR shall not be paid any anticipated and unrealized supplemental costs, administrative expenses and profit for uncompleted Work. If no agreement can be reached as to reasonable termination costs, OWNER and CONTRACTOR shall follow the provisions in federal regulation FAR 52.249-2, found in 48 CFR Part 52.

15.4.2 Upon termination for convenience, OWNER shall have full power and authority to take possession of the Work, assume any sub-agreements with Subcontractors and Suppliers that OWNER selects, and prosecute the Work to completion by contract or as OWNER may deem expedient.

15.4.3 If after notice of termination of the services of CONTRACTOR for cause, it is determined that CONTRACTOR was not in default, the termination shall be deemed to have been for the convenience of OWNER. In such event, CONTRACTOR may recover from OWNER payment for Work completed and reasonable termination costs as provided in paragraph 15.4.1.

**15.5** CONTRACTOR MAY STOP WORK OR TERMINATE: If, through no act or fault of CONTRACTOR, the Work is suspended for a period of more than ninety days by OWNER or ENGINEER fails to act on any Application for Payment within sixty days after it is submitted, or OWNER fails for sixty days to pay CONTRACTOR any sum finally determined to be due, then CONTRACTOR may, upon seven days' written notice to OWNER and ENGINEER, terminate the Agreement and recover from OWNER payment for all Work executed and any expense sustained plus reasonable termination expenses. In addition and in lieu of terminating the Agreement, if ENGINEER has failed to act on an Application for Payment or OWNER has failed to make any payment as aforesaid, CONTRACTOR may upon seven days' written notice to OWNER and ENGINEER stop the Work until payment of all amounts then due. The provisions of this paragraph shall not relieve CONTRACTOR of his obligations under

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paragraph 6.29 to carry on the Work in accordance with the progress schedule and without delay during disputes and disagreements with OWNER.

## **ARTICLE 16 - DISPUTE RESOLUTION**

**16.1** Subject to the conditions set forth in subparagraphs 16.2, 16.2.1 and 16.2.2 hereof, all claims, disputes and other matters and questions arising out of or relating to the Contract Documents or the breach thereof, except claims waived by the making and accepting of final payment as provided in Section 14.17, shall be decided by arbitration between the parties. This agreement to arbitrate shall be specifically enforceable under the Louisiana Arbitration Act and the award rendered by the arbitrators shall be final and a judgment may be entered thereon in the State District Court for the Parish of Terrebonne, State of Louisiana.

**16.2** Any arbitration provided for hereunder will be conducted in accordance with the Construction Arbitration Rules of the American Arbitration Association (AAA), subject to the following:

16.2.1 OWNER shall not be compelled to arbitrate any dispute without its express consent given in writing after demand is made for arbitration.

16.2.2 Arbitration shall be conducted in Terrebonne Parish, Louisiana and the laws of the State of Louisiana shall be controlling as to matters of law.

**16.3** Subject to any recognized privilege, discovery shall be available to each party to the arbitration as it would be available in the District Court for the Parish of Terrebonne under the provisions of the LA Code of Civil Procedure in effect at the time of demand for arbitration. Notices, time periods and other procedural matters shall be governed by the rules that apply in Louisiana District Courts which shall be enforced by the AAA in the same manner as in the Louisiana District Court.

**16.4** A pre-hearing conference shall be held not sooner than sixty (60) days after the filing of the answer, at which time a pre-hearing summary shall be filed by each party, setting forth all claims and counterclaims with specificity, all witnesses expected to be called at the hearing, all documents proposed to be introduced, and all items of claimed damages including dollar amounts therefore.

**16.5** All discovery and amendments to the pre-hearing summary shall be concluded thirty (30) days prior to the arbitration date. Failure on the part of the CONTRACTOR to provide the foregoing discovery and disclosure shall render any claim supported by witnesses or documents not so disclosed null, void and waived.

**16.6** In the event of any arbitration demanded and agreed to by the OWNER, each party shall select an arbitrator and the two so selected shall select a third from a panel proposed by the AAA. In the event that the two cannot agree upon an neutral arbitrator from the AAA list within thirty (30) days, then the third arbitrator shall be designated by the AAA.

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**16.7** In the event OWNER so elects, CONTRACTOR shall be required to participate in a consolidated arbitration to include the ENGINEER.

**16.8** The arbitrators shall render a written decision, with conclusions of law and findings of fact, breaking down the items of any award on the claim or counterclaim in sufficient detail to enable OWNER to seek any grant reimbursement as may be available.

**16.9** Notwithstanding anything else in the Contract Documents to the contrary, the CONTRACTOR shall carry on the work and maintain its progress during litigation or any arbitration proceedings, and OWNER shall continue to perform and pay as otherwise required by the Contract Documents.

**16.10** In the event OWNER elects not to arbitrate one or more disputes, the dispute or disputes which the OWNER elects not to arbitrate shall be decided under the laws of the State of Louisiana in the 32nd Judicial District Court in and for the Parish of Terrebonne, State of Louisiana.

**16.11** In the event OWNER is required to defend itself against any claim for delay, the OWNER shall be entitled to recover costs, including without limitation, administrative costs, attorneys' fees and court costs, from the party causing the delay.

## **ARTICLE 17 - Miscellaneous**

**17.1 GIVING NOTICE:** Whenever any provisions of the Contract Documents requires the giving of written notice, it shall be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

### **17.2 COMPUTATION OF TIME:**

17.2.1 When any period of time is referred to in the Contract Documents by days, it shall be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.2.2 A calendar day of twenty-four hours measured from midnight to the next midnight shall constitute a day.

**17.3 UTILIZATION OF LOCAL LABOR (STATE RESIDENTS):** Contractor shall make every effort to use local labor to the fullest extent possible.

**17.4 GENERAL:** Should OWNER or CONTRACTOR suffer injury or damage to person or property because of any error, omission or act of the other party or of any of the other party's employees or agents or others for whose acts the other party is legally liable, claim will be made in writing to the other party within a reasonable time of the first observance of such



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injury or damage. The provisions of this paragraph 17.3 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitations or repose.

**17.5 DUTIES AND OBLIGATIONS:** The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto, and, in particular but without limitation, the warranties, guarantees and obligations imposed upon CONTRACTOR by paragraphs 6.26, 13.1, 13.12, 13.14, 14.3 and 15.2 and all of the rights and remedies available to OWNER and ENGINEER thereunder, are in addition to, and shall not be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee or by other provisions of the Contract Documents, and the provisions of this paragraph shall be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right and remedy to which they apply. All representations, warranties and guarantees made in the Contract Documents will survive final payment and termination or completion of this Agreement. Also, the obligation of CONTRACTOR to maintain the Work until Initiation of Operation shall survive final payment and termination and completion of this Agreement.

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IN WITNESS WHEREOF, the parties hereto have signed this agreement in triplicate. One counterpart each has been delivered to OWNER, CONTRACTOR and ENGINEER. All portions of the Contract Documents have been signed or identified by OWNER and CONTRACTOR or by ENGINEER on their behalf.

This agreement will be effective on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

TERREBONNE PARISH  
CONSOLIDATED GOVERNMENT

CONTRACTOR:

\_\_\_\_\_  
Parish President

\_\_\_\_\_  
BY:

\_\_\_\_\_  
(Corporate Seal)

WITNESS:

\_\_\_\_\_  
WITNESS:

\_\_\_\_\_  
WITNESS:

\_\_\_\_\_  
WITNESS:

Address for giving notices:  
Post Office Box 2768  
Houma, Louisiana 70361

ADDRESS for giving notices:  
\_\_\_\_\_  
\_\_\_\_\_

License Number: \_\_\_\_\_  
Agent for service of Process:

END OF ATTACHMENT B

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Since this contract may be eligible for FEMA reimbursement, the following provisions may be applicable to this RFP solicitation and subsequent contract. This attachment shall be considered a part of the RFP documents.

**Contractual Certifications and Assurances**

2 CFR Part 200 UNIFORM ADMINISTRATIVE REQUIREMENTS, COST PRINCIPLES,  
AND AUDIT REQUIREMENTS FOR FEDERAL AWARDS

1. **Remedies for Breach:** Proposer acknowledges that contracts in excess of the simplified purchase threshold (\$150,000.00) shall contain provisions allowing for administrative, contractual, or legal remedies for contractor breaches of the contract terms, and shall provide for such remedial actions as appropriate.
2. **Termination and Settlement:** Proposer acknowledges that contracts in excess \$10,000.00 shall contain termination provisions including the manner in which termination shall be effected and the basis for settlement. In addition, such provisions shall describe conditions for termination due to fault and for termination due to circumstances outside of the contractor's control.
3. **Access to Records:** Proposer acknowledges that all contracts (except those for less than the small purchase threshold) shall include provisions authoring the recipient, U S Funding Agency, the Comptroller General, or any of their duly authorized representatives access to all books, documents, papers and records of the contractor which are directly pertinent to a specific program for the purpose of making audits, examinations, excerpts, and transcriptions.
4. **Equal Employment Opportunity:** Proposer acknowledges that all contracts shall contain provisions requiring compliance with E. O. 11246, "Equal Employment Opportunity," and as supplemented by regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor".
5. **Copeland "Anti-Kickback" Act:** Proposer acknowledges that all construction/repair contracts and sub-grants in excess of \$2,000 shall include provisions requiring compliance with the Copeland "Anti-kickback" Act (18 U.S.C. §3141-3148), which provides that each contractor or sub-recipient shall be prohibited from inducing any person employed in the construction, completion, or repair of public work, to give up any part of the entitled.
6. **Davis-Bacon Act:** Proposer acknowledges that all construction contracts in excess of \$2,000 shall include a provision for compliance with the Davis-Bacon Act, which requires contractors to pay laborers and mechanics wages at a rate not less than the minimum wages specified in a wage determination made by Secretary of Labor. Additionally, contractors shall be required to pay wages not less than once a week.
7. **Contract Work Hours and Safety Standards Act:** Proposer acknowledges that all construction contracts in excess of \$2,000, and all other contracts involving the employment of mechanics or laborers in excess of \$2,500 shall include provisions for compliance with sections 102 and 107 of the Contract Work Hours and Safety Standards Act, which requires each contractor to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and one-half times the basic rate of pay for all hours worked in excess of 40 hours. Section 107 is applicable to construction work and provides that no laborer or mechanic shall be required to work in surroundings or under working conditions that are unsanitary, hazardous, or dangerous.
8. **Rights to Inventions Made Under a Contract or Agreement:** Proposer acknowledges that contracts for the performance of experimental, developmental, or research work shall include

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provisions providing for the rights of the Federal Government and the recipient in any resulting invention in accordance with 37 CFR part 401, "Rights to Inventions Made by Nonprofit Organizations and the Small Business Firms Under Government Grants, Contracts, and Cooperative Agreements".

9. **Clean Air Act:** Proposer acknowledges that the Clean Air Act (CAA) is the comprehensive federal law regulating air emissions from stationary and mobile sources. Among other things, this law authorizes EPA to establish National Ambient Air Quality Standards (NAAQS) to protect public health and public welfare and to regulate emissions of hazardous air pollutants.
10. **Federal Water Pollution Control Act:** Proposer acknowledges that the Federal Water Pollution Control Act, popularly known as the Clean Water Act, is a comprehensive law aimed at restoring and maintaining the chemical, physical and biological integrity of the nation's waters. The Act authorizes water quality programs, requires federal effluent limitations and state water quality standards, requires permits for the discharge of pollutants into navigable waters, provides enforcement mechanisms, and authorizes funding for wastewater treatment construction grants and state revolving loan programs, as well as funding to states and tribes for their water quality programs.
11. **Byrd-Anti-Lobbying Amendment:** Proposer acknowledges that Subrecipients applying or bidding for an award of \$100,000 or more shall certify that they have not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or any employee of a member of Congress in connections with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. §1352.
12. **Debarment and Suspension:** Proposer that contract shall be made to parties listed on the General Services Administration's List of Parties. Excluded from Federal Procurement or Non-Procurement Programs in accordance with E.O.'s 12549 and 12689. This list contains the names of parties debarred, suspended, or otherwise excluded by agencies and contractors declared ineligible under statutory or regulatory authority other than E.O. 12549.
13. **Energy Efficiency:** Bidder acknowledges the mandatory standards and policies relating to Energy Efficiency which are contained in the State Energy Conservation Plan issued in compliance with the Energy Policy and Conservation Act (P.L. 94-163).
14. **Record Retention:** The Bidder acknowledges that contracts shall include a provision for the retention of records pursuant to CFR 200.333.

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**Attachment D**

**CERTIFICATION REGARDING LOBBYING**

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The Contractor, \_\_\_\_\_, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

\_\_\_\_\_  
Signature of Contractor's Authorized Official

\_\_\_\_\_  
Name and Title of Contractor's Authorized Official

\_\_\_\_\_  
Date

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**Attachment E**

**PROPOSAL PAGE**

Request for Proposal #22-SCADA/UTL-55  
Utilities Substation Monitoring Supervisory Control and Data Acquisition System

I have read and understand the requirements of this Request for Proposal (RFP) and agree to provide the required in accordance with this proposal and all attachments. The proposed fee shall include all labor, material, and equipment to provide the **requested service** as outlined including any travel or per diem expenses and any other miscellaneous expenses involved.

I HEREBY acknowledge receipt of the following Addenda: (Enter the number assigned to each of the addenda that the Proposer is acknowledging):

\_\_\_\_\_

LUMP SUM AMOUNT:

\_\_\_\_\_

NAME OF PROPOSER:

\_\_\_\_\_

NAME OF AUTHORIZED SIGNATORY PROPOSER: *(Printed or Typed)*

\_\_\_\_\_

SIGNATURE OF AUTHORIZED SIGNATORY PROPOSER

\_\_\_\_\_

TITLE OF AUTHORIZED SIGNATORY PROPOSER:

\_\_\_\_\_

**Evidence of signature authority shall be included in Proposer's submission.**

EMAIL ADDRESS OF PROPOSER: \_\_\_\_\_

DATE: \_\_\_\_\_