

Request for Proposal
for
Network Design Services

February 26, 2016

PROPOSALS DUE: March 25, 2016, 3:00 PM Local Time



Network Design Services RFP

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1. GENERAL INFORMATION

1.1 District Overview

Stockton East Water District is a public agricultural and urban wholesale water supplier in the eastern portion of San Joaquin County. The District covers a total of 143,000 acres; (103,000 acres agricultural and 40,000 acres urban), serving a population of 300,000. SEWD provides potable water to the Stockton urban area via three water agencies (collectively referred to as the Urban Contractors) and raw water to agricultural lands east of Stockton. Average water demand in SEWD is approximately 225,000 AF/yr., with about 68% of the water used for agriculture, and about 32% for urban use.

SEWD operates and maintains approximately 125 miles of water conveyance facilities, including a tunnel, canals, stream channels, and buried pipelines, and a water treatment plant (WTP) with a treated water capacity of 62 MGD. The WTP uses conventional treatment processes, including two pump stations, flocculation, sedimentation, filtration, and disinfection.

1.2 Purpose

The Stockton East Water District (SEWD, District) is issuing this Request for Proposal (RFP) to invite firms to submit a proposal for services to design and implement network upgrades for the Stockton East Water District (SEWD). The upgrades will incorporate features to integrate Intranet, Video Security, Voice over IP, and Supervisory Control and Data Acquisition (SCADA) systems. The network designs will provide flexibility, resiliency, and expandability to the District's network infrastructure.

1.3 Coverage & Participation

SEWD reserves the right not to enter into any contract, to add and/or delete elements, or to change any element of the coverage and participation at any time without prior notification and without any liability or obligation of any kind or amount. In any event, SEWD shall not be liable for any pre-contractual expenses incurred by any proposer or selected consultant. Consultants shall not include any such expenses as part of the price proposed in response to this RFP.

SEWD shall be held harmless and free from any and all liability, claims, or expenses whatsoever incurred by, or on behalf of, any person or organization responding to this RFP. SEWD expressly reserves the right to reject any and all RFPs or to waive any irregularity or information in any RFP or in the RFP procedure and to be the sole judge of the responsibility of any proposer and of the suitability of the materials and/or services to be rendered.

SEWD may ask RFP finalists to present oral briefings of their Proposals. All finalists may be required to participate in negotiations and submit such price, technical, or other revisions of their RFPs as may result from negotiations. SEWD also reserves the right to award the contract without discussion, based upon the initial Proposals.



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1.4 Original RFP Document

SEWD shall retain the RFP, and all related terms and conditions, exhibits and other attachments, in original form in an archival copy. Any modification of these, in the Consultant's submission, is grounds for immediate disqualification.

Said proposals will be evaluated and results will be made public after completion of the negotiation process with the selected consultant. SEWD reserves the right to reject any or all proposals and to waive any informalities or irregularities in any proposal or in the proposal process.

1.5 Schedule of Events

The following is a tentative schedule that applies to this RFP, but may change in accordance with the organization's needs or unforeseen circumstances. Changes will be communicated by e-mail to all invited Consultants.

Issuance of RFP	February 26, 2016	
Technical Questions/Inquiries Due	March 11, 2016	3:00 PM local time
Response to Questions	March 18, 2016	
Proposal Due Date	March 25, 2016	3:00 PM local time
Complete Initial Evaluation	April 1, 2016	
Proposed Final Award Notification	April 15, 2016	

1.6 Background Information

The District completed an IT/SCADA Master Plan in December 2013 that established a baseline of current IT/SCADA environments, and describes the District's goals, objectives and vision for IT and SCADA systems. The Network Design Services project follows the Master Plan and will adhere to the evaluation criteria described therein. An electronic copy of the IT/SCADA Master Plan will be provided to the selected Proposer.



PROPOSAL PREPARATION INSTRUCTIONS

1.7 Consultant's Understanding of the RFP

In responding to this RFP, the Consultant accepts full responsibility to understand the RFP in its entirety, and in detail, including making any inquiries to SEWD as necessary to gain such understanding. SEWD reserves the right to disqualify any Consultant who demonstrates less than such understanding. Further, SEWD reserves the right to determine, at its sole discretion, whether the Consultant has demonstrated such understanding. That right extends to cancellation of award, if award has been made. Such disqualification and/or cancellation shall be at no fault, cost, or liability whatsoever to SEWD.

1.8 Good Faith Statement

All information provided by SEWD in this RFP is offered in good faith. Individual items are subject to change at any time. SEWD makes no certification that any item is without error. SEWD is not responsible or liable for any use of the information or for any claims asserted there from.

1.9 Communication

Verbal communication shall not be effective unless formally confirmed in writing by a specified procurement official in charge of managing this RFP process. In no case shall verbal communication govern over written communication.

1.9.1 Consultant Inquiries - Applicable terms and conditions herein shall govern communications and inquiries between SEWD and Consultants as they relate to this RFP. Inquiries, questions, and requests for clarification related to this RFP are to be directed in writing to:

Mr. Michael D. Johnson, P.E.
Assistant General Manager
Stockton East Water District

Mail to: PO Box 5157
Stockton, CA 95205

Deliver to: 6767 East Main Street
Stockton, CA 95215

Phone: (209) 948-0333
Fax: (209) 948-0423
E-mail: mjohnson@sewd.net



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1.9.2 Formal Communications shall include, but are not limited to:

- Questions submitted in writing and received prior to the Technical Questions Due Date. Inquiries for clarifications that will not require addenda may be submitted verbally at any time during this process.
- Errors and omissions in this RFP and enhancements. Consultants shall recommend to SEWD any discrepancies, errors, or omissions that may exist within this RFP. With respect to this RFP, Consultants shall recommend to SEWD any enhancements, which might be in SEWD best interests. These must be submitted in writing and received prior to the Technical Questions Due Date.
- Addenda to this RFP.

1.9.3 Addenda: SEWD will make a good-faith effort to provide a written response to each question or request for clarification that requires addenda within one (1) week of the Technical Questions Due Date. All questions, answers, and addenda will be shared with all recipients via the District website at:

www.sewd.net

SEWD will not respond to any questions or requests for clarification that require addenda, if received after the Technical Questions Due Date.

1.10 Proposal Submission

Proposals must be sealed and delivered to:

Mr. Michael D. Johnson, P.E.
Assistant General Manager
Stockton East Water District

Mail to: PO Box 5157
Stockton, CA 95205

Deliver to: 6767 East Main Street
Stockton, CA 95215

on or prior to March 25, 2016, 3:00 PM local time. SEWD will not accept proposals delivered by fax or e-mail.

NOTE: Please mark the outside of the envelope with the following:

PROPOSAL FOR THE NETWORK DESIGN SERVICES

Consultants are to submit 1 original copy of proposal marked "Original" and 5 copies marked "Copy". Each original and copy must be individually bound. Provide one electronic copy of your proposal in PDF format on CD, flash drive or other electronic media.



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1.11 Proposal Requirements

To maintain uniformity in the evaluation process, proposals shall be limited to a maximum of twenty (20) pages. Paper size shall be limited to 8 ½" x 11" in the proposals except for tables for which 11" x 17" foldouts may be used. The text font shall not be smaller than size 11 except for within tables. The transmittal letter, table of contents, front and back covers, section dividers, and resumes are excluded from the page count. The proposal shall include the following sections in the order below:

1. Transmittal Letter

Include the primary consultant's name and business address, as well as the Project Manager's name, telephone number, and email address. Summarize your understanding of the project and briefly introduce your team. State the firm's acceptance of the provisions in SEWD's Standard Professional Services Agreement including insurance requirements, or any exceptions thereof. Identify the individual authorized to negotiate the contract on behalf of the consulting firm.

2. Relevant Project Experience

Include a list of the most recent projects for which the prime consultant has performed similar services of similar scope, size, and complexity. This list shall include the name, contact person, address, and phone number of each party for whom the service was provided, as well as a brief description of the service performed, the dollar amount of the contract, and the date the project was completed. Discuss whether the project was completed on time and within budget; if it was not, describe the original schedule and original budget and what changed. Likewise, list at least one project experience for each sub consultant on the team.

3. Consultant Team and Sub Consultant Staff

- a. Identify the prime consultant and sub consultants and their respective roles. Show the Project Manager and the key staff proposed for this project, including sub consultant's staff. Identify the project team that will be available until project completion. State the availability of each individual for this project.
- b. Include contact information and a brief summary of the firm's organization and history. Provide a brief profile for each key team member. Provide at least three references (name, title, agency, and telephone number) for the Project Manager and Task Leaders from similar type/size projects.
- c. Include contact information and a brief summary of the sub consultant firms' organization, history, and at least one firm reference for each sub consultant relevant to the staff being proposed for this project.

4. Scope of Work

The Scope of Work section shall include a description of the intended approach to complete the Work Description in Section 3 of this RFP, including a scope of work sufficiently detailed for attachment to a Professional Services Agreement. The



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Consultant should specify data needs and the expected level of support from SEWD staff and a description of the project deliverables.

5. Project Schedule

The Consultant shall provide a proposed schedule for all services necessary to complete the project specifying the major tasks, the expected time to complete each task, and the interdependency of the tasks and your expectation of how SEWD guidance/comments will impact the schedule. Indicate your team's ability to perform the services in a timely manner. Indicate the methods and tools used to develop the schedule and the plans to update it throughout the life of the project.

6. Estimated Level of Effort

The Consultant shall provide an estimate of staff time, by task, by key person presented in the project schedule. This section will not include any estimate of costs.

7. Staff Resumes

The Consultant shall present the project members' experience and qualifications. Provide a brief resume of each key team member. Resumes are not included in the proposal page count.

8. Fee Proposal

The Consultant shall provide, in a separately sealed and clearly marked envelope, the estimated cost by task and a total proposed project cost to complete the Scope of Work in the Proposal. The fee proposal shall include a cover letter stating the "not-to-exceed" fee. The fee proposal shall reflect all anticipated fee increases within the duration of the contract. The cost proposal shall identify the billing rates of the individuals anticipated to be used on the project and the estimated expenses including travel and high-end computer use.



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1.12 Proposal Evaluation Criteria

The evaluation of each response to this RFP will be based on its demonstrated competence, compliance, format, and organization. The purpose of this evaluation is to identify Consultants that have the interest, capability, and experience to fulfill the Scope of Work. The evaluation will be made according to the following factors:

CRITERIA	DESCRIPTION	PTS
Project Understanding	Project understanding and completeness in Consultant's proposed Scope of Work and reasonableness in Consultant's proposed schedule to accomplish its proposed services.	25
Project Experience	Nature, quality, and relevance of recently completed projects, credentials, and experience of both the firm and key personnel assigned to the Scope of Work.	25
Staff Qualifications	References from previous clients for which similar services were performed by the project team will be evaluated. References shall be provided with agencies of similar size and purpose as SEWD	25
Schedule	Ability to commence work directly after execution of the contract and complete the required work within the proposed amount of time.	15
Cost or Best Value	Reasonableness, completeness, and realism of proposed fees in Consultants proposed budget to accomplish its proposed services	10
TOTAL		100

1.13 Selection and Notification

SEWD's selection procedure is designed to provide each competing Consultant a fair and objective assessment of the information submitted in its proposal. The procedure is intended to allow each Consultant equal opportunity to have access to the same information on the Project and procurement process. Information submitted in the proposal will be judged on how well it meets SEWD's objectives. No firm has an advantage in this procurement from previous work or communications with SEWD, nor does SEWD intend during the selection process to confer an advantage on any Consultant.

As determined by SEWD, Consultants who possess the capacity to compete for this contract will be selected to move into the negotiation phase of this process. SEWD reserves the right to interview selected Consultants. Written notification will be sent to these Consultants via mail. Requests for references of individuals will be made only to Consultants selected for the negotiation phase. Consultants shall bear all costs associated with preparing their proposal and potential Board presentation.



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WORK DESCRIPTION

Summary of Work:

Task 1 includes Discovery of the existing environment and Direction for the needs of the SEWD. Information included within this RFP will assist in the scope preparation for this task. The goal of Task 1 is to determine physical plant readiness, broadcast domain needs, firewall and security needs, CCTV/Video over IP needs, Voice over IP needs, and fiber optic network needs.

Task 2 includes the Network Design to meet the identified needs from Task 1.

Task 3 includes the infrastructure hardware Procurement Assistance and implementation. Implementation shall conform to industry best practices. Additional work may be required in order to meet all of the Direction requirements from Task 1. Therefore, Task 3 should include typical equipment, training, and services costs as the basis for a preliminary estimated budget.

Exhibits to RFP: Network diagrams indicate cable colors per SEWD standards, which are adapted from ANSI/TIA/EIA-606. See **Exhibit A**. Block diagrams of current network configurations are shown in **Exhibit B**, which includes Figures 1 through 8. **Exhibit C** identifies all IT network components and known port assignments.

1.14 Task Descriptions

Task 1: Discovery and Direction

1.14.1 Review Current Network (Discovery)

Presently, three buildings at the WTP are interconnected via fiber optic cables as shown in **Figure 1** and **Figure 8**. Business systems share this infrastructure. SCADA computers, which are only workstations at present, are interconnected to each other and not to the business infrastructure (see **Figure 2**). **Figure 3** shows the existing Demarcation network connecting the District to the Internet. **Figure 4** shows the existing Data Center network for business computing. **Figure 5** shows the existing Distribution network for business data. **Figure 6** shows the existing Video Security network. **Figure 7** shows the existing Phone System network. New SCADA workstations and virtualized servers are in the planning stage and may utilize the existing VMware hosts or reside on new hosts. All figures are included in **Exhibit B**.

Considerations to review in the Discovery phase include:

- Physical Copper and Fiber Optic cable plant
 - Network readiness for VoIP services
 - Network readiness for Security Camera Services over IP
 - Network Equipment firmware versions and resolved issues
- Network Capacity to support SCADA communications including:
- Network security in the Water Treatment Plant
 - Remote security for Ethernet attached controllers and IO systems



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- Network resiliency for Virtual infrastructure supporting SCADA information systems

1.14.2 Describe Current Needs

Current areas of concern to be addressed or resolved within the scope of proposed services are:

- Several single points of failure exist due to the organic growth of the current network infrastructure.
- Network and Security firmware is in need of updates.
- Network Segmentation to isolate secure components is needed.

1.14.3 Develop Design Objectives (Direction)

Based on the current network configuration and equipment and the needs identified in Task 3.1.2, this task will develop and define design objectives for the business network design. The objectives must be defined sufficiently to direct network designs for 10 to 15 years, and will include such objectives as integration of SCADA data with business systems, increased reliability of business computing functions and data storage, increased protection against cyber security threats, and increased accessibility, flexibility, and expansion.

Deliverables (PDF and source files)

- Summaries of meetings
- Summary of findings and recommendations
- Cloud-based index of all discovered information.

1.15 Task 2: Network Design

1.15.1 Develop Network Design

Prepare and present formal design documentation, including drawings, plans, spreadsheets, specifications, Bill of Materials, and estimated construction costs that address the current needs and support the approved design objectives. Provide draft copies for review and comment. Incorporate comments from SEWD staff and provide final copies of network design documents. SCADA network design is not included in this RFP.

Deliverables (PDF and source files)

For this task, the following documents are required:

- Drawing - Proposed Logical Network Topology (6 networks).
- Drawing – Proposed Physical Network Topology (6 networks) including recommendations for spares
- Drawings – Signal Plans showing all existing and proposed fiber optic equipment locations and conduit routing. (Fiber Optic Network)
- Drawing – Proposed Security architecture showing logical firewall boundaries, proposed Intrusion Prevention systems, and proposed endpoint protection methods to protect SCADA infrastructure. (Demarcation Network)



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- VLAN segmentation plan
- Spreadsheet – Proposed Bill of Materials
- Electronic Vendor Datasheet for each piece of equipment proposed
- Outline Specifications covering products and installation
- Estimate of probable construction cost
- Cloud-based storage of draft and final deliverables

1.16 Task 3: Procurement Assistance

1.16.1 Cost Estimating

This task covers the equipment procurement along with the implementation costs for the recommended equipment and infrastructure. Notice to proceed may be given for this task only after the Task 2 Network Design deliverable has been approved and associated costs have been agreed upon.

Feature Guidelines

Switch Features Required:

- DHCP Snooping
- ARP Protection/Inspection
- PoE+ (30W per port)
- Stacking Capability
- GUI Management tool

Wireless Features Required:

- 802.1x Authentication
- Automatic Roaming
- Guest Wireless internet access with temporary passwords
- GUI Management tool

Firewall Features Required:

- High Availability
- Intrusion Prevention including botnet prevention features and command & control prevention features.
- Application awareness and bandwidth shaping for cloud based applications.

Quoting Guidelines

Since the actual equipment procurement will be based on previous tasks, for this task, prepare a quotation for the following equipment along with a per-device implementation cost that includes implementation of the features described in section 3.2:

- 1 x 24-Port PoE+ 10/100/1000 Layer 2 Switch with 10 Gb Uplinks
- 1 x 48-Port PoE+ 10/100/1000 Layer 2 Switch with 10 Gb Uplinks
- 1 x 12-Port 10 Gb core Layer 3 Switch
- 1 x Firewall with 500mb/s throughput with full Intrusion prevention features enabled
- 1 x 2 stream 802.11ac access point
- 1 x 3 stream 802.11ac access point



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1.16.2 Training

Provide the cost for the following onsite training time:

- 4 Hours training on switching infrastructure management (5 students)
- 4 Hours training on firewall administration (5 students)
- 4 Hours on monitoring tools (5 students)

1.16.3 Documentation

Provide the following documents:

- Spreadsheet of all usernames, passwords, IP addresses, serial numbers, and location of installed equipment.
- Drawings – As Built Logical Network Topology
- Drawings – As Built Physical Network Topology and Signal Plans
- Drawings – As Built Security architecture showing logical firewall boundaries, proposed Intrusion Prevention systems, and proposed endpoint protection methods to protect SCADA infrastructure.
- Drawings – As Built equipment rack elevations

Provide cloud-based storage of drafts and finals for all drawings, training syllabi, equipment manuals, and all other printed material developed for this task.



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BUDGET & SCHEDULE

All Consultants must fill out the following cost breakdown for their proposal for SEWD’s project as described in this RFP. The Consultant must agree to keep these prices valid for 90 days as of the Proposal Due Date.

1.17 Fee Proposal

All Consultants must provide an estimated cost summary in the fee proposal that includes all items shown below:

Fee Proposal Summary					
Task Description	Hours	Rate	Subtotal	Expenses	Sub-Total
1 – Discovery and Direction					
2 – Network Design					
3 – Procurement Assistance					
Project Cost Totals:					

1.18 Schedule

All Consultants must provide a project schedule in a GANNT chart form for all tasks.

1.19 Invoicing

The Consultant will be paid monthly for services completed during the previous month. The monthly invoice will include a progress report and a billing report showing hours billed by individual, hourly rates, labor subtotal and other expenses. These expenses will be summarized per task and must support the budget summary in the progress report. A sample monthly progress report is shown below.



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SAMPLE MONTHLY PROGRESS REPORT

PROJECT NUMBER

REPORT NUMBER: 1

REPORT PERIOD April 2016

DISTRIBUTE TO Michael Johnson

Planned Work for Period

Actual Progress and Status

1. Review Scope of Work (SOW) for Network Design Services
2. Schedule interviews for Task 1 – Discovery and Direction.

Complete. Notice to Proceed issued _____, 2016.

Started. Initial interviews scheduled for _____, 2016

Additional Unplanned Work

1. None.

Planned Work for Next Period

1. Conduct Discovery interviews.
2. Collect and review existing documentation.
3. Develop draft Network Design Technical Memo.

Problems/Needs

1. None.

Overall Schedule and Budget

1. On schedule.

<u>Task</u>	<u>Budget</u>	<u>This Month</u>	<u>To Date</u>	<u>Remaining</u>
Task 1 – Discovery and Direction				
Task 2 – Network Design				
Task 3 – Procurement Assistance				
TOTAL				

Prepared By Consultant Project Manager

Date May 8, 2016



ADDITIONAL INFORMATION

1.20 Personal Information

1.20.1 General

Depending on the circumstances, SEWD may require information related to the qualifications, experience and availability of Consultants who are proposed to provide services. This may include, but is not limited to, the Consultant's income statement and balance sheet for each of the two most recently completed fiscal years certified by a public accountant, resumes, documentation of accreditation, and/or letters of reference.

1.20.2 Requested Personal Information

Any personal information that is requested from this RFP by SEWD shall only be used to *consider* the qualified individuals to undertake the project/services and to confirm that the work performed is consistent with these qualifications. It is the responsibility of each Consultant to obtain the consent of such individuals prior to providing the information to SEWD. SEWD will assume that the appropriate consents have been obtained for the disclosure to and use by SEWD of the requested information for the purposes described.

1.21 Non-Disclosure Agreement

SEWD reserves the right to require any Consultant to enter into a non-disclosure agreement.

1.22 Costs

The RFP does not obligate SEWD to pay for any costs, of any kind whatsoever, which may be incurred as result of this RFP process or any third parties, in connection with this RFP.

1.23 Intellectual Property

Proposals shall not include any intellectual property of SEWD including, but not limited to, all logos, registered trademarks, or trade names, at any time without the prior written approval of SEWD, as appropriate.

1.24 Respondent's Responses

All materials submitted, including but not limited to proposals, attachments, and supporting documents shall become the property of SEWD and will not be returned.

1.25 Governing Law

This RFP and the response shall be governed by the laws of the State of California.

1.26 No Liability

SEWD shall not be liable to any, person, or entity for any losses, expenses, costs, claims, or damages of any kind:

- Arising out of, by reason of, or attributable to, the Consultants responding to this RFP; or



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- As a result of the use of any information, error, or omission contained in this RFP document or provided during the RFP process.

1.27 Entire RFP

This RFP, any addenda to it, and any attached schedules, constitute the entire RFP.



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ATTACHMENT A – STANDARD PROFESSIONAL SERVICES AGREEMENT

PROJECT: NETWORK DESIGN SERVICES

THIS AGREEMENT is made and entered into this ____ day of _____, 20__, by and between the Stockton East Water District, a California public agency (“District”), and [INSERT NAME OF COMPANY], a [INSERT TYPE OF BUSINESS; CORPORATION; LIMITED LIABILITY COMPANY; ETC.] (“Consultant”).

	District	Consultant
	Stockton East Water District	(Consultant Firm)
Mail to:	P. O. Box 5157 Stockton, CA 95205	(Contact Person) (Title)
Deliver to:	6767 East Main Street Stockton, CA 95215	(Mailing Address) (City, State, ZIP)
Telephone:	(209) 948-0333	(Telephone)
FAX:	(209) 948-0423	(FAX)

1. SERVICES.

Consultant shall perform, at the direction of District, the Scope of Work as described in EXHIBIT "A," attached hereto and incorporated herein by this reference.

2. COMPENSATION.

Consultant shall receive compensation, including authorized reimbursements, for all Services rendered under this Agreement at the rates set forth in EXHIBIT “A.” The total compensation shall not exceed the Contract Price without District’s prior written approval.

Contract Price: **\$XXX,XXX.XX**

Consultant shall submit one monthly invoice for its services. Such invoices shall be delineated by task, the person performing the services, and the hourly rate, which shall be stated in time increments of no less than one quarter (1/4) hours. District shall pay invoices within thirty (30) calendar days after receipt, if the services specified in the invoice have been satisfactorily completed.

Reimbursable Expenses shall be limited to actual expenditures of Consultant for expenses that are necessary for the proper completion of the Services and shall only be payable if specifically authorized in advance by District. Items shall be separated into Services and Reimbursable Expenses.

Billings that do not conform to the format outlined above shall be returned to Consultant for correction. District shall not be responsible for delays in payment to Consultant resulting from Consultant's failure to comply with the invoice format described above.



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3. GENERAL CONDITIONS.

The General Conditions set forth in “ATTACHMENT “B”, which include indemnity and insurance requirements, are part of this Agreement. In the event of any conflict between the General Conditions and any terms or conditions of any document prepared or provided by Consultant and made a part of this Agreement, including without limitation any document relating to the scope of services or payment therefor, the General Conditions shall control over said terms or conditions.

4. AUTHORITY.

The person signing this Agreement for Consultant hereby represents and warrants that he/she is fully authorized to sign this Agreement on behalf of Consultant and to bind Consultant to the performance of its obligations hereunder.

5. NOTICES.

Any notices to parties required by this Agreement shall be delivered personally or mailed, U.S. first class postage prepaid, addressed as shown above. Either party may amend its address for notice by giving notice to the other party in writing.

6. ATTACHMENTS.

All ATTACHMENTS referred to herein are attached hereto and are by this reference incorporated as if set forth fully herein.

- ATTACHMENT B – GENERAL CONDITIONS
- Exhibit A – Scope of Work (to be provided by Consultant)

7. ACCEPTANCE, the parties hereto execute this Agreement

Accepted by:

Stockton East Water District

(Consultant Firm)

 Scot A. Moody
 General Manager

_____ Date

 (Name)
 (Title)

_____ Date

Other authorized representatives:
Michael D. Johnson, Assistant General Manager

8. INSTRUCTIONS

Sign Agreement, provide Certificates of Insurance and return original. Upon acceptance by the Stockton East Water District, a copy will be signed by its authorized representative and promptly returned to you.



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ATTACHMENT B – GENERAL CONDITIONS

GENERAL CONDITIONS

Laws, Regulations and Permits - The Consultant shall give all notices required by law and comply with all laws, ordinances, rules, and regulations pertaining to the conduct of the work. The Consultant shall be liable for all violations of the law in connection with work furnished by the Consultant. If the Consultant performs any work knowing it to be contrary to such laws, ordinances, rules and regulations, the Consultant shall bear all costs arising there from.

Safety - The Consultant shall execute and maintain their work so as to avoid injury or damage to any person or property.

In carrying out their work, the Consultant shall at all times exercise all necessary precautions for the safety of employees appropriate to the nature of the work and the conditions under which the work is to be performed, and be in compliance with all applicable federal, state and local statutory and regulatory requirements including but not limited to State of California, Department of Industrial Relations (Cal/OSHA) regulations, and the U.S. Department of Transportation Omnibus Transportation Employee Testing Act. Safety precautions, as applicable, shall include but shall not be limited to: adequate life protection and lifesaving equipment; adequate illumination; instructions in accident prevention for all employees, such as the use of machinery guards, safe walkways, scaffolds, ladders, bridges, gang planks, confined space procedures, trenching and shoring, fall protection, and other safety devices; equipment and wearing apparel as are necessary or lawfully required to prevent accidents, injuries, or illnesses; and adequate facilities for the proper inspection and maintenance of all safety measures.

Indemnification - To the fullest extent permitted by law, Consultant will immediately defend, indemnify and hold harmless and defend Stockton East Water District, its directors, officers, employees, and authorized volunteers and each of them from and against:

- a. When the law establishes a professional standard of care for Consultant's services, all claims and demands of all persons that arise out of, pertain to, or relate to the Consultant's negligence, recklessness, or willful misconduct in the performance (or actual or alleged non-performance) of the work under this agreement. Consultant shall defend itself against any and all liabilities, claims, losses, damages, and costs arising out of or alleged to arise out of Consultant's performance or non-performance of the work hereunder, and shall not tender such claims to Stockton East Water District nor to its directors, officers, employees, or authorized volunteers, for defense or indemnity.
- b. Other than in the performance of professional services, all claims and demands of all persons arising out of the performance of the work or the furnishing of materials; including but not limited to, claims by the Consultant or Consultant's employees for damages to persons or property except for the sole negligence or willful



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misconduct or, with respect to construction, the active negligence of Stockton East Water District, its directors, officers, employees, or authorized volunteers.

- c. Any and all actions, proceedings, damages, costs, expenses, penalties or liabilities, in law or equity, of every kind or nature whatsoever, arising out of, resulting from, or on account of the violation of any governmental law or regulation, compliance with which is the responsibility of Consultant.
- d. Any and all losses, expenses, damages (including damages to the work itself), attorneys' fees, and other costs, including all costs of defense, which any of them may incur with respect to the failure, neglect, or refusal of Consultant to faithfully perform the work and all of the Consultant's obligations under the agreement. Such costs, expenses, and damages shall include all costs, including attorneys' fees, incurred by the indemnified parties in any lawsuit to which they are a party.

Consultant shall immediately defend, at Consultant's own cost, expense and risk, any and all such aforesaid suits, actions or other legal proceedings of every kind that may be brought or instituted against Stockton East Water District or any of its directors, officers, employees, or authorized volunteers.

Consultant shall pay and satisfy any judgment, award or decree that may be rendered against Stockton East Water District or any of its directors, officers, employees, or authorized volunteers, in any and all such aforesaid suits, actions, or other legal proceedings.

Consultant shall reimburse Stockton East Water District or its directors, officers, employees, and authorized volunteers, for any and all legal expenses and costs incurred by each of them in connection therewith or in enforcing the indemnity herein provided.

Consultant's obligation to indemnify shall not be restricted to insurance proceeds, if any, received by Stockton East Water District or its directors, officers, employees, or authorized volunteers.

INSURANCE REQUIREMENTS

Workers' Compensation and Employer's Liability Insurance - The Consultant and all sub-consultants shall cover or insure under the applicable laws relating to workers' compensation insurance, all of their employees employed directly by them or through sub-consultants in carrying out the work contemplated under this contract, all in accordance with the "Workers' Compensation and Insurance Act", Division IV of the Labor Code of the State of California and any Acts amendatory thereof. The Consultant shall provide employer's liability insurance with limits of no less than \$1,000,000 each accident, \$1,000,000 disease policy limit, and \$1,000,000 disease each employee. The Workers' Compensation Policy shall be endorsed with a waiver of subrogation in the favor of the Stockton East Water District for all work performed by the Consultant, its employees, agents and sub-Consultants.

Workers' Compensation Insurance - By their signature hereunder, Consultant certifies that they is aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for workers' compensation or to



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undertake self-insurance in accordance with the provisions of that Code, and they will comply with such provisions before commencing the performance of the work of this agreement.

Liability Insurance - The Consultant shall provide and maintain at all times during the performance of the work under this agreement, the following commercial general liability, professional liability and automobile liability insurance:

Coverage - Coverage shall be at least as broad as the following:

1. Coverage for Professional Liability appropriate to the Consultant's profession covering Consultant's wrongful acts, negligent actions, errors or omissions. The retroactive date (if any) is to be no later than the effective date of this agreement. Consultant shall maintain such coverage continuously for a period of at least five years after the completion of the contract work. Consultant shall purchase a five-year extended reporting period i) if the retroactive date is advanced past the effective date of this Agreement; ii) if the policy is canceled or not renewed; or iii) if the policy is replaced by another claims-made policy with a retroactive date subsequent to the effective date of this Agreement.
2. Insurance Services Office (ISO) Commercial General Liability Coverage (Occurrence Form CG 0001)
3. Insurance Services Office (ISO) Business Auto Coverage (Form CA 0001), covering Symbol 1 (any auto)

Limits - The Consultant shall maintain limits no less than the following:

4. Professional Liability - Two million dollars (\$2,000,000) per claim and annual aggregate.
5. General Liability - Two million dollars (\$2,000,000) per occurrence or the full per occurrence limits of the policies available, whichever is greater for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit or products-completed operations aggregate limit is used, either the general aggregate limit shall apply separately to the project/location (with the ISO CG 2503, or ISO CG 2504, or insurer's equivalent endorsement provided to Stockton East Water District) or the general aggregate limit and products-completed operations aggregate limit shall be twice the required occurrence limit.
6. Automobile Liability - One million dollars (\$1,000,000) for bodily injury and property damage each accident limit.
7. Excess Liability (if necessary) - The limits of Insurance required in this agreement may be satisfied by a combination of primary and umbrella or excess Insurance. Any umbrella or excess Insurance shall contain or be endorsed to contain a provision that such coverage shall also apply on a primary and non-contributory basis for the benefit of the District (if agreed to in a written contract or agreement) before the District's own primary or self-Insurance shall be called upon to protect it as a named insured.

Required Provisions - The general liability and automobile liability policies are to contain, or be endorsed to contain, the following provisions:



Network Design Services RFP

8. Stockton East Water District, its directors, officers, employees, and authorized volunteers are to be given insured status at least as broad as ISO endorsement CG 2010 11 85; or both CG 20 10 10 01 and CG 20 37 04 13 (or the CG 20 10 04 13 (or earlier edition date) specifically naming all of the District parties required in this agreement, or using language that states “as required by contract”). All Sub-Consultants hired by Consultant must also have the same forms or coverage at least as broad; as respects (via CG 20 38 04 13): liability arising out of activities performed by or on behalf of the Consultant; and premises owned, occupied or used by the Consultant. The coverage shall contain no special limitations on the scope of protection afforded to Stockton East Water District, its directors, officers, employees, or authorized volunteers.
9. For any claims related to this project, the Consultant's insurance shall be primary insurance as respects Stockton East Water District, its directors, officers, employees, or authorized volunteers. Any insurance, self-insurance, or other coverage maintained by Stockton East Water District, its directors, officers, employees, or authorized volunteers shall not contribute to it using the ISO endorsement CG 20 01 04 13 or coverage at least as broad.
10. Any failure to comply with the reporting or other provisions of the policies including breaches and warranties shall not affect coverage provided to Stockton East Water District, its directors, officers, employees, or authorized volunteers.
11. The Consultant'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.

Such liability insurance shall indemnify the Consultant and their sub-consultants against loss from liability imposed by law upon, or assumed under contract by, the Consultant or their sub-consultants for damages on account of such bodily injury (including death), property damage, personal injury, completed operations, and products liability.

The general liability policy shall cover bodily injury and property damage liability, owned and non-owned equipment, blanket contractual liability, and completed operations liability. The automobile liability policy shall cover all owned, non-owned, and hired automobiles.

Each insurance policy required above shall provide that coverage shall not be canceled, except with notice to the Stockton East Water District. All of the insurance shall be provided on policy forms and through companies satisfactory to Stockton East Water District.

Deductibles and Self-Insured Retentions - Insurance deductibles or self-insured retentions must be declared by the Consultant, and such deductibles and retentions shall have the prior written consent from Stockton East Water District. At the election of Stockton East Water District the Consultant shall either 1) reduce or eliminate such deductibles or self-insured retentions, or 2) procure a bond which guarantees payment of losses and related investigations, claims administration, and defense costs and expenses. Policies containing any self-insured retention (SIR) provision shall provide or be endorsed to provide that the SIR may be satisfied by either the named or additional insureds, co-insurers, and/or insureds other than the First Named Insured.



Network Design Services RFP

Acceptability of Insurers - Insurance is to be placed with insurers having a current A.M. Best rating of no less than A-:VII or equivalent or as otherwise approved by Stockton East Water District.

Evidences of Insurance - Prior to execution of the agreement, the Consultant shall file with Stockton East Water District a certificate of insurance (Acord Form 25 or equivalent) signed by the insurer's representative evidencing the coverage required by this agreement. Such evidence shall include an additional insured endorsement signed by the insurer's representative and evidence of waiver of rights of subrogation against Stockton East Water District (if builder's risk insurance is applicable). Such evidence shall also include (1) attached additional insured endorsements with primary & non-contributory wording, (2) Workers' Compensation waiver of subrogation, and (3) a copy of the CGL declarations or endorsement page listing all policy endorsements, and confirmation that coverage includes or has been modified to include Required Provisions above. The District reserves the right to obtain complete, certified copies of all required insurance policies, at any time. Failure to continually satisfy the Insurance requirements is a material breach of contract.

The Consultant shall, upon demand of Stockton East Water District, deliver to Stockton East Water District such policy or policies of insurance and the receipts for payment of premiums thereon.

Continuation of Coverage - If any of the required coverages expire during the term of this agreement, the Consultant shall deliver the renewal certificate(s) including the general liability additional insured endorsement to Stockton East Water District at least ten (10) days prior to the expiration date.

Sub-consultants - In the event that the Consultant employs other consultants (sub-consultants) as part of the services covered by this agreement, it shall be the Consultant's responsibility to require and confirm that each sub-consultant meets the minimum insurance requirements specified above.

Stockton East Water District reserves the right to modify these insurance requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage or other circumstances.

OTHER CONDITIONS

Assignment or Transfer - Consultant is employed to perform unique personal services. Consultant shall not assign this Agreement without the prior written consent of District. Consultant shall not employ or otherwise incur any obligation to pay other specialists or experts for services in connection with this Agreement, without prior written consent of District.

Independent Contractor - Consultant shall act as an independent contractor and covenants and agrees that it will conduct itself consistent with such status, that it will neither hold itself out as, nor claim to be, an officer or employee of District by reason of this Agreement.

Attorney's Fees, Venue, Governing Law - If either party commences any legal action against the other party arising out of this Agreement or the performance hereof, the prevailing party in such action shall be entitled to recover its reasonable litigation



Network Design Services RFP

expenses, including but not limited to, court costs, expert witness fees, discovery expenses, and attorney's fees. Any action arising out of this Agreement shall be brought in San Joaquin County, California, regardless of where other venues may lie. This Agreement shall be governed by and construed in accordance with the laws of the State of California.

Termination of Agreement - District may terminate this Agreement without cause by giving Consultant ten (10) calendar days advance written notice from the General Manager. Consultant may terminate this Agreement without cause by giving District thirty (30) calendar days advance written notice. In the event of termination through no fault of Consultant, District shall compensate Consultant for services performed as of the date of termination, upon the release to District of all Material hereunder, in any and all media or formats in which such materials have been created or are maintained. District retains the right to receive and use any Material, notwithstanding any termination or any dispute regarding the amount to be paid.

Copyright, Ownership and Use of Materials - All tangible material ("Material") created or delivered pursuant to this Agreement is considered a work made for hire under the Copyright Act. To the extent such Material does not qualify as a work made for hire, Consultant hereby assigns to District all right, title, and interest, including but not limited to all copyrights, in all Material created by Consultant in its performance under this Agreement. Material constitutes the Scope of Work outlined in "Exhibit A" and attached hereto, and all written and other tangible expressions, including but not limited to, drawings (including computer aided drawings), papers, documents, reports, surveys, renderings, exhibits, sketches, maps, models, prints, paintings or photographs, in any and all media or formats in which such materials have been created or are maintained. All Material furnished by Consultant is, and shall remain, the property of District.



Network Design Services RFP

EXHIBIT A - SEWD STANDARD CABLE COLOR CODES



Network Design Services RFP

ANSI/TIA/EIA-606 CABLE COLOR CODES COLOR SPECIFICATIONS

Colors are specified using Pantone numbers. These colors or their equivalent are to be used.

Color Pantone	Indication	Description	SEWD Use
Orange 150C	Demarcation point	Demarcation point (central office termination), Internet connection	Internet (MPOE)
White	First-level backbone	First-level backbone media termination between servers and SANs	Data Center (Servers, SANs)
Gray 422C	Second-level backbone	Second-level backbone media termination between buildings	Distribution (MDF, IDFs)
Green 353C	Network Connection	Termination of network connections on the customer side of the demarcation point	SCADA (WTP)
Brown 465C	Interbuilding Backbone	Interbuilding backbone cable terminations (main cross-connect to remote cross-connects)	SCADA (WS)
Black	Support Equipment	Termination of cables between Data Center and support equipment (UPS, Backup Storage, etc.)	Support (UPS, Backup)
Purple 264C	Common Equipment	Termination of cables originating from common equipment (PBXs, computers, and LANs)	Intranet (Access Layer)
Blue 291C	Horizontal Cabling	Termination of station media; between the Mitel controller and telephone outlets	Telephones (Mitel)
Yellow 101C	Auxiliary Circuits	Termination of auxiliary circuits, i.e., alarms, maintenance, and security circuits	Video Security
Red 184C	TBD	Termination of key telephone systems	

ANSI = American National Standards Institute

TIA = Telecommunications Industry Association

EIA = Electronic Industries Alliance

MPOE = Main Point of Entry

SAN = Storage Area Network

MDF = Main Distribution Frame

IDF = Intermediate Distribution Frame

SCADA = Supervisory Control and Data Acquisition

WTP = Water Treatment Plant

WS = Water Supply

UPS = Uninterruptible Power Supply

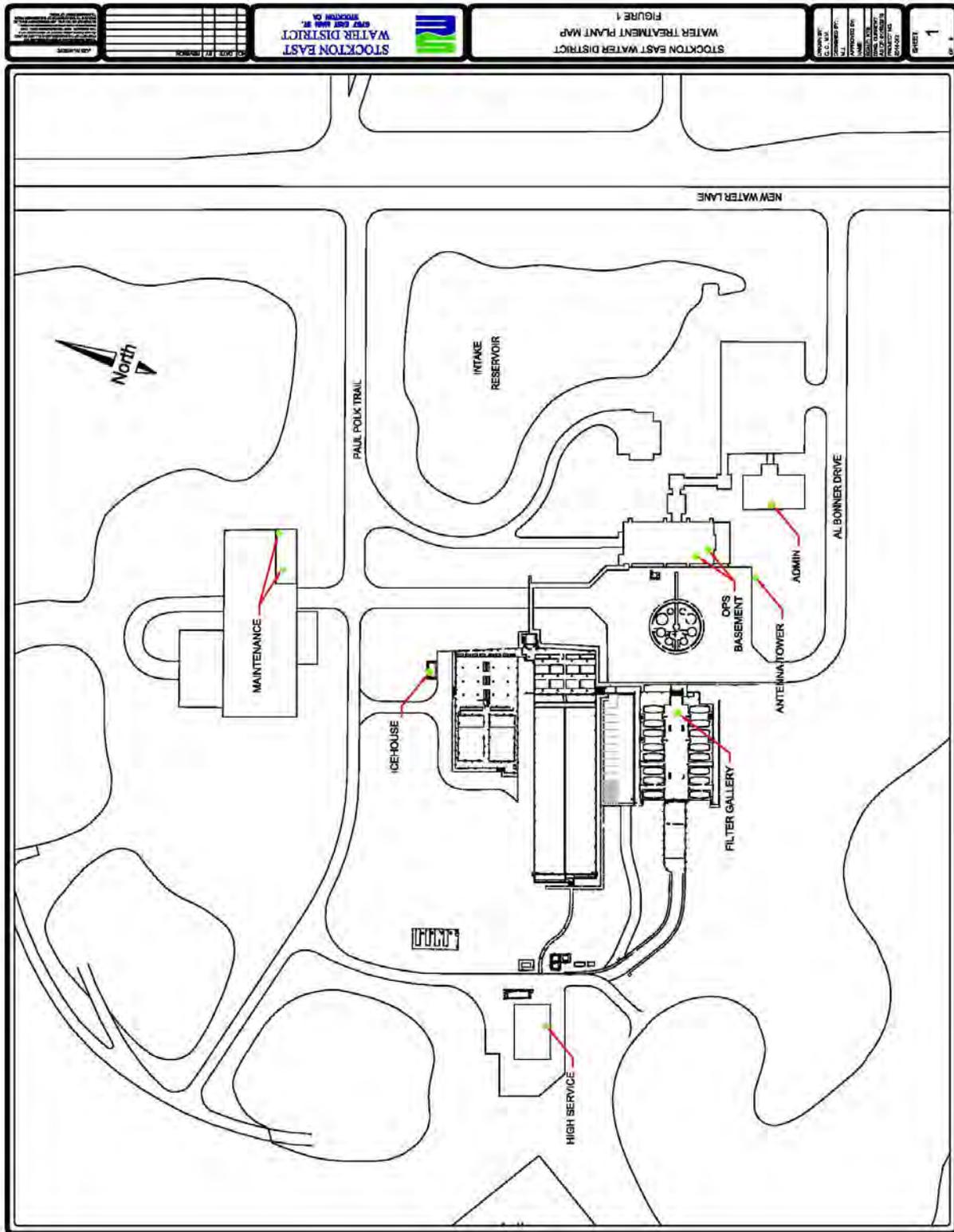
LAN = Local Area Network

PBX = Private Branch Exchange



Network Design Services RFP

EXHIBIT B – NETWORK DIAGRAMS



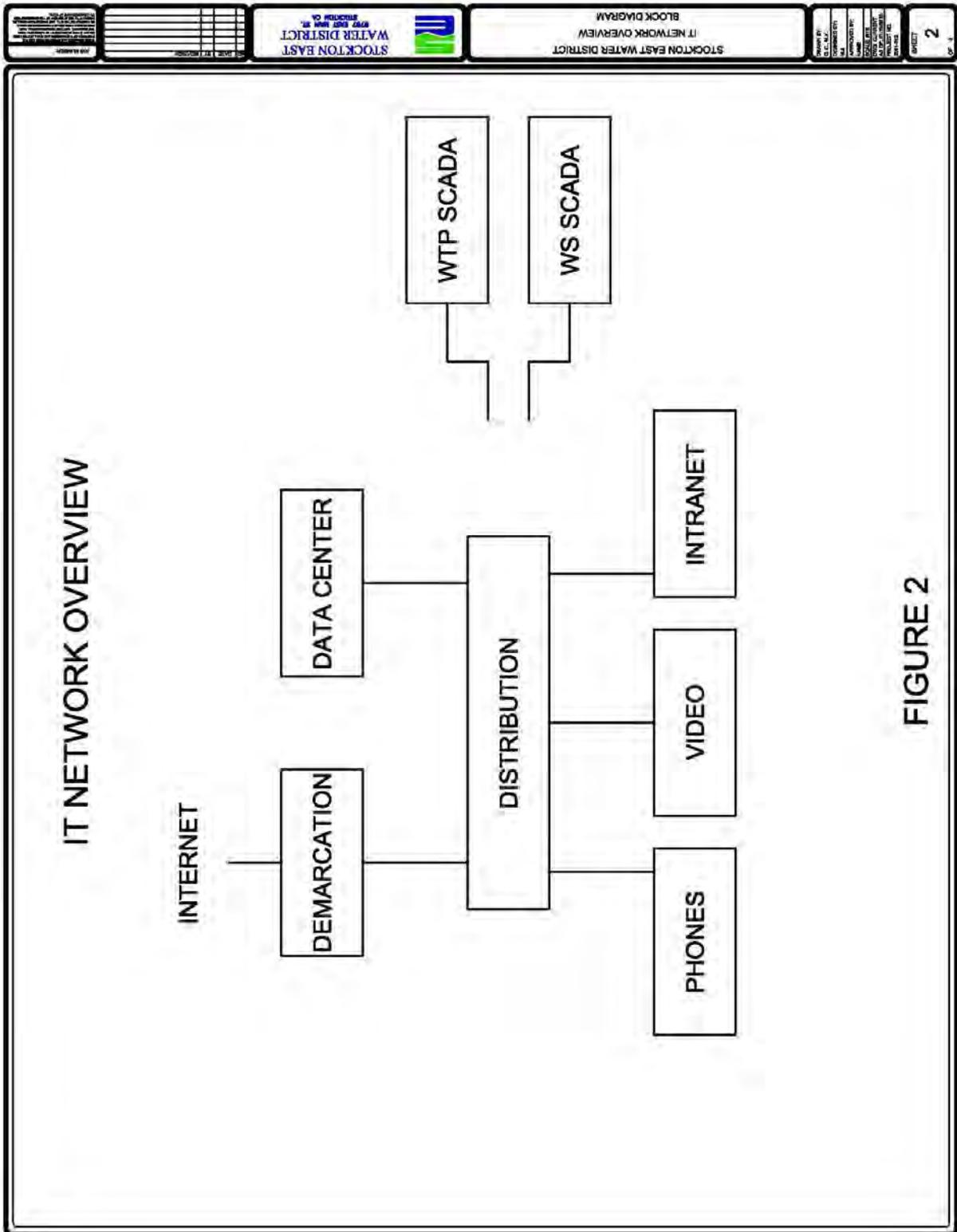
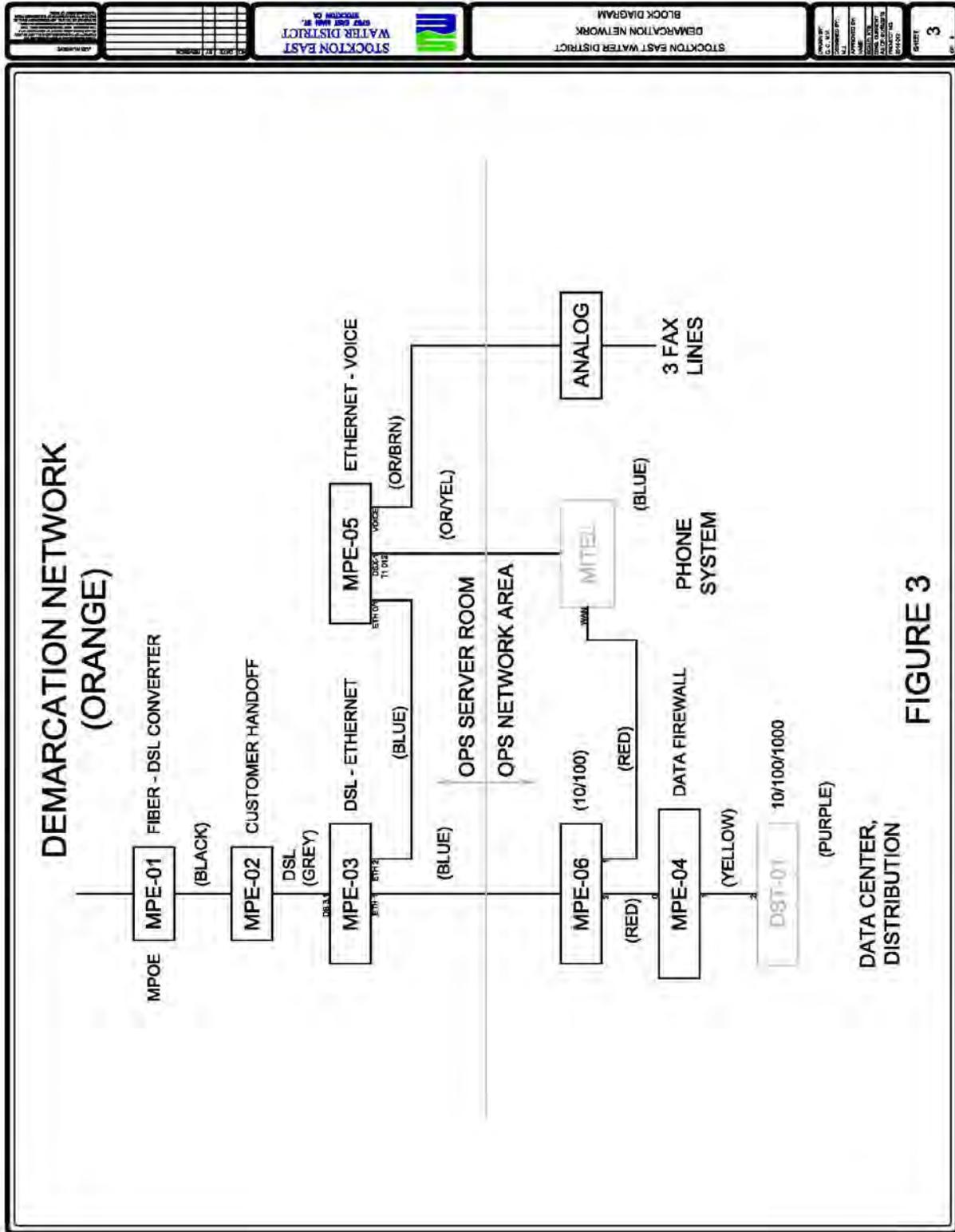
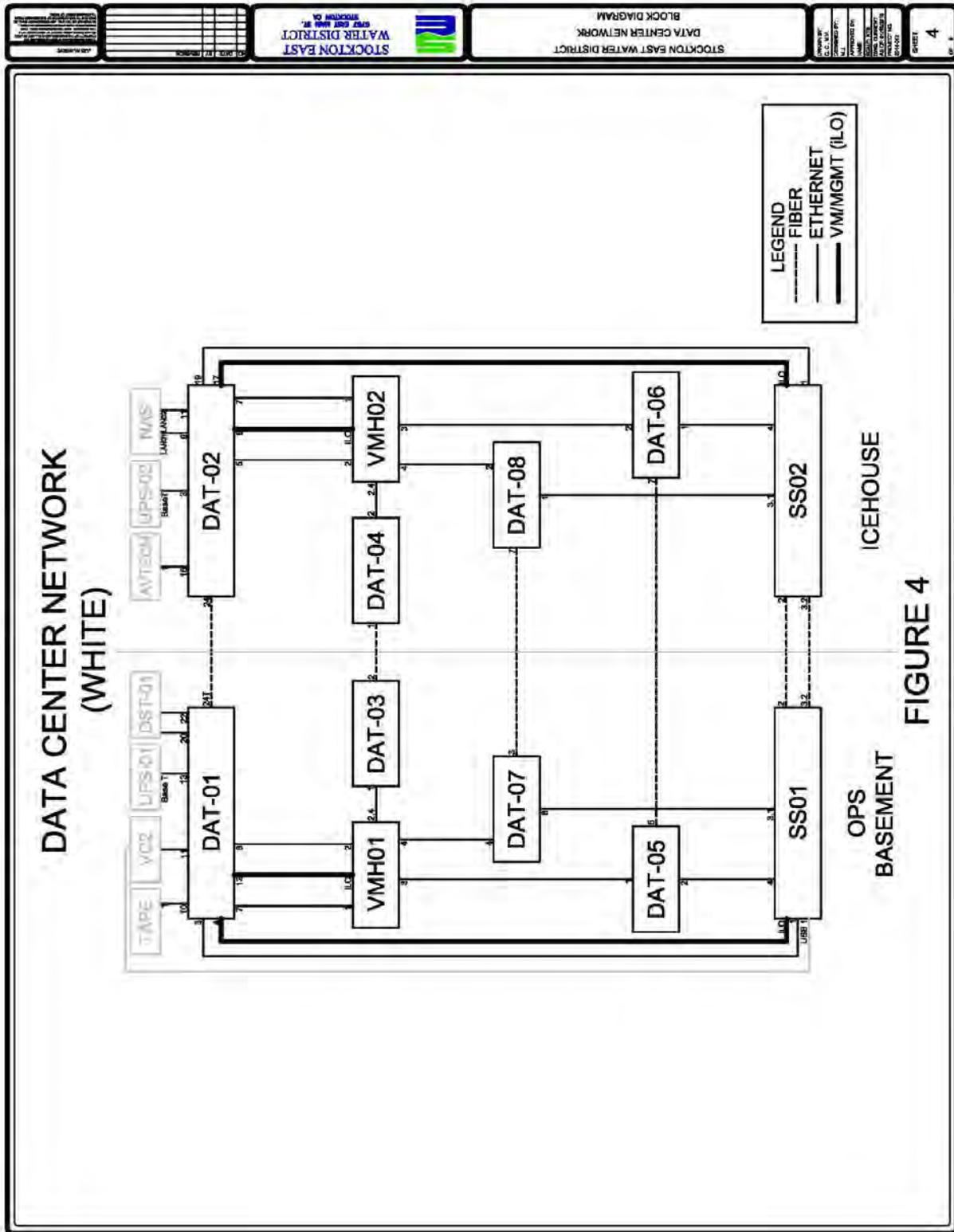


FIGURE 2





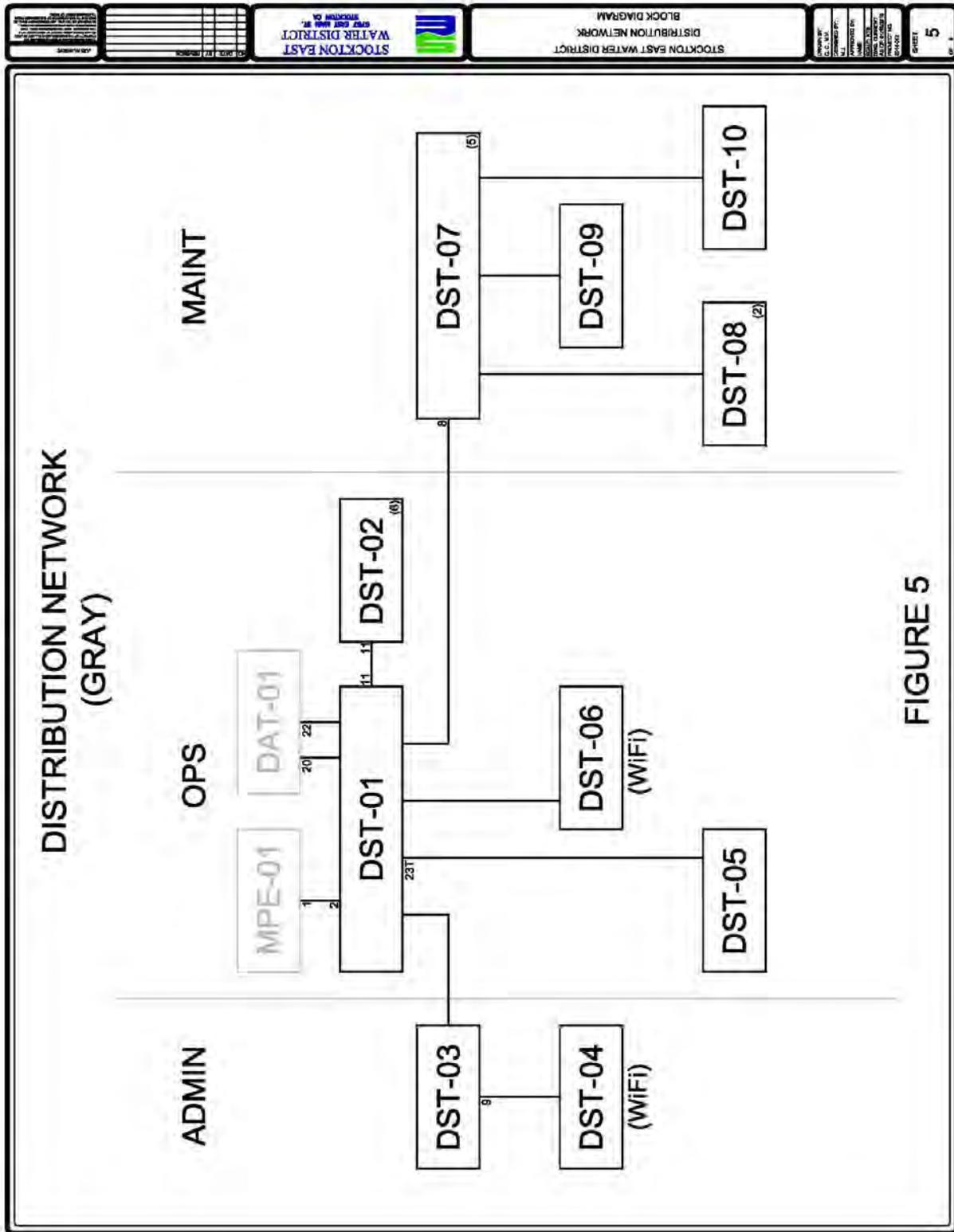


FIGURE 5

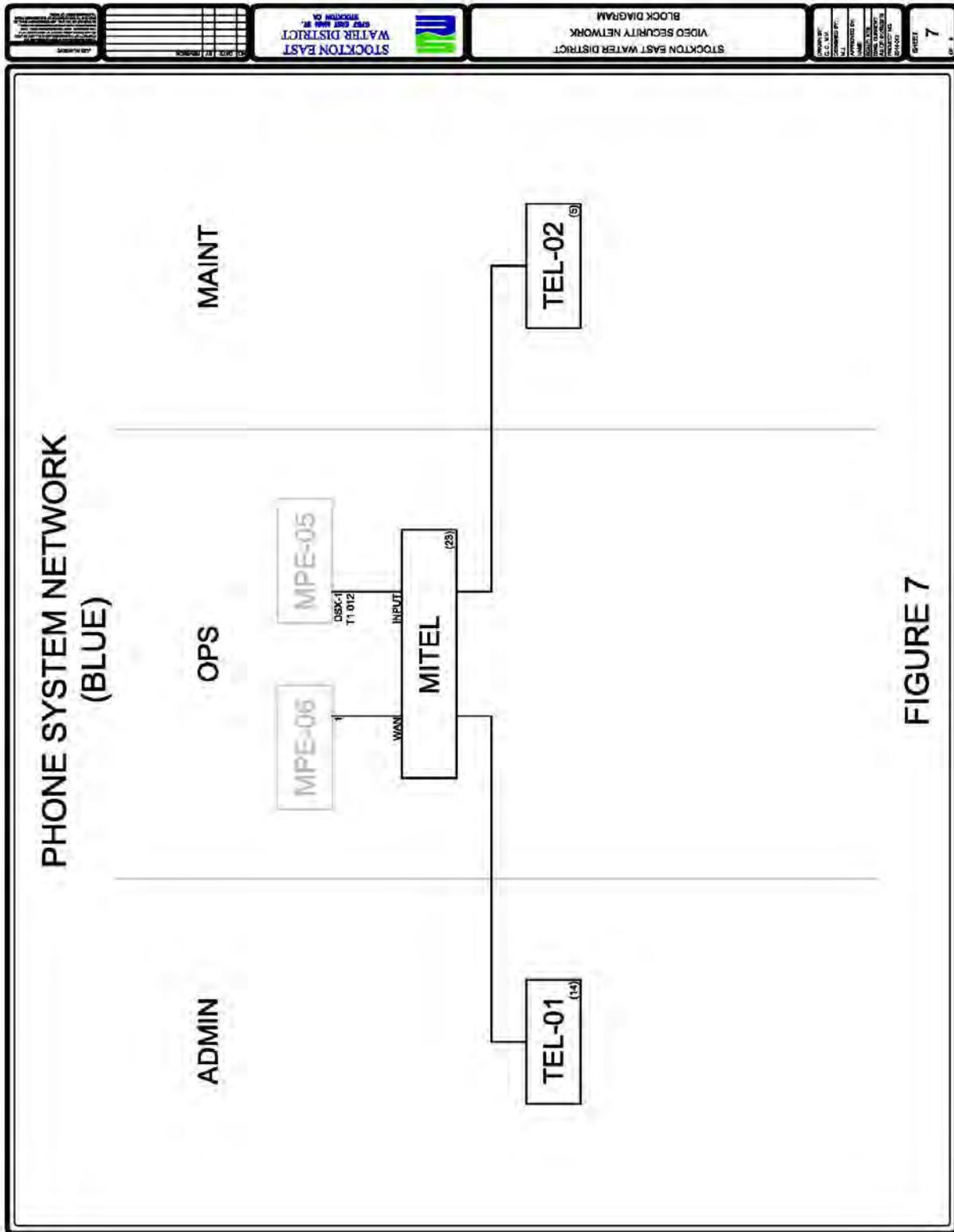


FIGURE 7



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EXHIBIT C - COMPONENT PORT ASSIGNMENTS



Network Design Services RFP

COMPONENT ACRONYMS

1/22/2016

Component	Description	Alias	Make	Model	Number
ICR	Icehouse Communications Rack				
ISR	Icehouse Server Rack				
OCR	Operations Communications Rack				
OSR	Operations Server Rack				
MPE	Main Point of Entry				
DAT	Data Center Network				
DST	Distribution Network				
INT	Intranet Network				
TEL	Telephone Network				
VID	Video Security Network				

FIBER OPTIC NETWORK

FTB-01	Fiber Termination Block 01				
FTB-02	Fiber Termination Block 02 (ICE)				
FTB-03	Fiber Termination Block 03 (MTS)				
FTR-01	Fiber Transceiver 01	10122	SigmaMax		
FTR-02	Fiber Transceiver 02 (MTS)	10131	SigmaMax		
FTR-03	Fiber Transceiver 03	10118, Icehouse 1	Perle		
FTR-04	Fiber Transceiver 04	10119, Icehouse 2	Perle		
FTR-05	Fiber Transceiver 05	10120, Icehouse 3	Perle		
FTR-06	Fiber Transceiver 06	10121, Icehouse 4	Perle		
FTR-07	Fiber Transceiver 07	OPS Icehouse 5	Perle		
FTR-08	Fiber Transceiver 08	OPS Icehouse 6	Perle		
FTR-09	Fiber Transceiver 09	Icehouse 1	Perle		
FTR-10	Fiber Transceiver 10	Icehouse 2	Perle		
FTR-11	Fiber Transceiver 11	Icehouse 3	Perle		
FTR-12	Fiber Transceiver 12	Icehouse 4	Perle		
FTR-13	Fiber Transceiver 13	Icehouse 5	Perle		
FTR-14	Fiber Transceiver 14	Icehouse 6	Perle		

DEMARCATON NETWORK

MPE-01	Fiber to DSL Converter		AT&T		
MPE-02	Customer Handoff		AT&T		
MPE-03	DSL to Ethernet		TelePacific		
MPE-04	Data Firewall		Watchguard		
MPE-05	Ethernet to Voice Handoff		TelePacific		
MPE-06	Mitel Remote Access	10126	NetGear	FS105	

TELEPHONE NETWORK

Mitel	Mitel Telephone System		Mitel	Cxi Contr	SX200
TEL-01	Telephone Switch 1 (Admin)	10143	DLink		DES1228P
TEL-02	Telephone Switch 2 (MTS)		Zyxel		ES1100-16P



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COMPONENT ACRONYMS

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Component	Description	Alias	Make	Model	Number
VIDEO SYSTEM NETWORK					
CCTV-1	Video Security System		exacqVision	IPS-3000-R2	
VSC-01	Twisted Pair Converter		Pelco		
VSC-02	Video System Converter		Axis		
VID-01	Video System Switch 1		Linksys	SR2016	
VID-02	Video System Switch 2		HP	2520-8G	
VID-03	Video System Switch 3 (MTS)		Linksys	SE1500	
VID-04	Video System Switch 4 (MTS)		Linksys	EZXS55W	
DATA CENTER NETWORK					
VMH01	Virtual Machine Host 01	ESX01	HP	Proliant	
VMH02	Virtual Machine Host 02	ESX02	HP	Proliant	
SS01	Storage Server 01		HP	Proliant	DL380P-G9
SS02	Storage Server 02		HP	Proliant	DL380P-G9
NAS	Network Attached Storage				
Tape	Tape Backup System	10116	HP		
UPS-01	Uninterruptible Power Supply	10117			
UPS-02	Uninterruptible Power Supply	10139			
DAT-01	Data Center Switch 1	10124	HP	Procurve	1800-24G
DAT-02	Data Center Switch 2	10140	HP	Procurve	1800-24G
DAT-03	Data Center Switch 3	Core SW3	HP	Procurve	1920-8G
DAT-04	Data Center Switch 4	Core SW4	HP	Procurve	1920-8G
DAT-05	Data Center Switch 5	10123	HP	Procurve	1800-8G
DAT-06	Data Center Switch 6	iSCSI 1	HP	Procurve	1910-8G
DAT-07	Data Center Switch 7	10141	HP	Procurve	1800-8G
DAT-08	Data Center Switch 8	iSCSI 2	HP	Procurve	1910-8G
DISTRIBUTION NETWORK					
DST-01	Distribution Switch 1	10129	HP	Procurve	1800-24G
DST-02	Distribution Switch 2	10128	Linksys		DSSX12
DST-03	Distribution Switch 3 (Admin)	10142	HP	Procurve	1800-24G
DST-04	Distribution Switch 4 (Admin WiFi)	10144	Linksys		WAP2000
DST-05	Distribution Switch 5 (Engineering)				
DST-06	Distribution Switch 6 (OPS WiFi)		Netgear		R6200
DST-07	Distribution Switch 7 (MTS Data)		Netgear		G5608
DST-08	Distribution Switch 8 (MTS Office)		HP	Procurve	1800-8G
DST-09	Distribution Switch 9 (Elec. Shop)		GigaFast		EZ800-S
DST-10	Distribution Switch 10 (WS Office)		GigaFast		EZ800-S
DTB-01	Distribution Terminal Block 1		Panduit		DPSe
DTB-02	Distribution Terminal Block 2		Panduit		DP6 Plus
DTB-03	Distribution Terminal Block 3		Belkin		Cat 5e
DTB-04	Distribution Terminal Block 4		Ortronics		Cat 5
DTB-05	Distribution Terminal Block 5		Panduit		DP6 Plus



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COMPONENT ACRONYMS

1/22/2016

<u>Component</u>	<u>Description</u>	<u>Alias</u>	<u>Make</u>	<u>Model</u>	<u>Number</u>
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<u>Location</u>	<u>Description</u>	<u>Alias</u>
OPS	Tape Backup System	10116
OPS	Uninterruptible Power Supply	10117
OPS	Fiber Transceiver 03	10118
OPS	Fiber Transceiver 04	10119
OPS	Fiber Transceiver 05	10120
OPS	Fiber Transceiver 06	10121
OPS	Fiber Transceiver 01	10122
OPS	Data Center Switch 5	10123
OPS	Data Center Switch 1	10124
OPS	Mitel Remote Access	10126
OPS	Distribution Switch 2	10128
OPS	Distribution Switch 1	10129
MTS	Fiber Transceiver 02 (MTS)	10131
ICE	Uninterruptible Power Supply	10139
ICE	Data Center Switch 2	10140
OPS	Data Center Switch 7	10141
ADM	Distribution Switch 3 (Admin)	10142
ADM	Telephone Switch 1 (Admin)	10143
ADM	Distribution Switch 4 (Admin WiFi)	10144



Network Design Services RFP

VIDEO SYSTEM CAMERAS

1/22/2016

Number	Camera Name (View)	Camera Location	Asset ID
1	Video Camera Control	Master Control Board	CCTV-1
2	Main Gate	New Water Lane South Gate	CCTV-2
3	Al Bonner East	Al Bonner East Gate	CCTV-3
4	Al Bonner West	Al Bonner West Gate	CCTV-4
5	Tank Farm	Main Radio Tower	CCTV-5
6	Paul Polk Gate	Paul Polk West Gate	CCTV-6
7	Maintenance	NW Corner of Maintenance Shop	CCTV-7
8	HSPS Exterior	SW Corner of HSPS	CCTV-8
9	HSPS Switchgear	SW Corner of HSPS	CCTV-9
10	HSPS Interior	East Interior of HSPS	CCTV-10
11	Filter Gallery	East Interior of Filter Gallery	CCTV-11
12	OPS Front	East Entrance to Operations Building	CCTV-12
13	Well 7401		
14	Well 7402		
15	North Well		
16	South Well		
17	Extraction Well		
	<i>OPS Basement (Future)</i>		
	<i>Low Lift Pump Station</i>		
	<i>Vehicle Storage</i>		
	<i>Admin Building</i>		



Network Design Services RFP

OPERATIONS NETWORK RACK

1/22/2016

MPE-04 (WATCHGUARD)

Port	Cable Color	Destination	Purpose
CONSOLE			
USB 1			
USB 2			
0	RED	MPE-06, P2	
1	YELLOW	DST-01, P2	
2			
3			
4			
5			
6			

MPE-06 (10126 NETGEAR)

Port	Cable Color	Destination	Purpose
1	RED	MITEL, 10/100 WAN	
2	RED	MPE-04, 0	SEWD WAN
3			
4	BLUE	MPE-03	DSL-ETHERNET

DAT-03 (HP 1920-8G)

Port	Cable Color	Destination	Purpose
1	WHITE	VMH01, 2.4	DATA CENTER
2	WHITE	DAT-04, P1	DATA CENTER
3			
4			
5			
6			
7			
8			
9			
10			
CONSOLE			



Network Design Services RFP

OPERATIONS NETWORK RACK

1/22/2016

DST-01 (10129)

Port	Cable Color	Destination	Purpose
1	PURPLE		
2	YELLOW	MPE-04, P1	DEMARICATION
3	GREY		
4	BLACK		
5	GREY		
6	GREY		
7	BLUE		
8			
9	GREY		
10	RED		
11	RED	DST-02, P11	DISTRIBUTION
12	GREY		
13			
14	GREY		
15			
16	BLACK		
17	BLUE		
18	GREY		
19	YELLOW	ADMIN	DISTRIBUTION
20	BLACK		
21	YELLOW	ADMIN	DISTRIBUTION
22	BLACK		
23T	WHITE		ENGR RM
24T	GREEN	FTR-01, BAY 2	MTS DISTRIBUTION
23M			
24M			

DST-02 (10128, Aux Data Hub)

Port	Cable Color	Destination	Purpose
1			
2			
3			
4			
5	BLACK		
6	BLUE		
7	RED		
8	YELLOW	CCTV-1	Video Remote Access
9	BLUE		
10			
11	RED	DST-01, P11	DISTRIBUTION
12	BLACK	DTB-03, P12	
UPLINK			



Network Design Services RFP

OPERATIONS NETWORK RACK

1/22/2016

MITEL

Port	Cable Color	Destination	Purpose
Input	ORG/YEL	MPE-05	
WAN	RED	MPE-06, P1	Remote Access
LAN	GREEN	DTB-02,P10	ADM PH
1			
2			
3			
4			
5			
6			
7			
8			
9			
10	BLUE		ENGR RM
11			
12			
13			
14			
15			
16	RED	FTR-01, BAY 1	MTS PH
ONS1			
ONS2			
ONS3			
ONS4			
ONSp1			
ONSp2			
ONS3			
ONS4			



Network Design Services RFP

OPERATIONS NETWORK RACK

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VID-01 (Video Security System, LinkSys SR2016)

Port	Cable Color	Destination	Purpose
1	YELLOW	CCTV-1	Video Controller
2			
3			
4	YELLOW	VID-02, P8	
5			
6			
7			
8	ORANGE		
9			
10			
11			
12	BLACK	VSC-01	
13	YELLOW	FTR-01, BAY 10	6 PAUL POLK GATE
14	YELLOW	FTR-01, BAY 7	7 MAINTENANCE
15			
16	YELLOW	FTR-01, BAY 3	HSPS Wifi

VID-02 (HP 2520G-8)

Port	Cable Color	Destination	Purpose
1	YELLOW	FTR-01, BAY 8	3 AL BONNER EAST
2	YELLOW	DTB-01, P1	5 TANK FARM
3	YELLOW	FTR-01, BAY 4	8 HSPS INTERIOR
4	YELLOW	DTB-01, P2	4 AL BONNER WEST
5	YELLOW	FTR-01, BAY 5	11 FILTER GALLERY
6	YELLOW	DTB-01, P3	12 OPS FRONT
7			
8	YELLOW	VID-01, P4	
9T			
10T			
9S			
10S			



Network Design Services RFP

OPERATIONS NETWORK RACK

1/22/2016

DTB-01 (PANDUIT DPSe PATCH PANEL)

Port	Cable Color	Destination	Purpose
1	YELLOW	VID-02, P2	5 TANK FARM
2	YELLOW	VID-02, P4	4 AL BONNER WEST
3	YELLOW	VID-02, P6	12 OPS FRONT
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			

DTB-02 (PANDUIT DP6 Plus PATCH PANEL)

Port	Cable Color	Destination	Purpose
1			
2			
3			
4			
5			
6			
7			
8	BLUE		
9	YELLOW		
10	GREEN	Mitel, LAN	
11	YELLOW		
12	GRAY	DST-01, P3	



Network Design Services RFP

OPERATIONS NETWORK RACK

1/22/2016

DTB-03 (BELKIN CAT5e PATCH PANEL)

Port	Cable Color	Destination	Purpose
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11	BLUE		
12	RED		
13	RED		
14			
15			
16	GRAY		
17			
18	GRAY		
19	BLUE		
20			
21	GRAY		
22	BLACK	DST-02, P12	
23	GRAY		
24			



Network Design Services RFP

OPERATIONS FIBER RACK

1/22/2016

FTB-01 (OPERATIONS FIBER TERMINATIONS)

Name	Pair	Pair Color	Cable Color	Destination	Purpose
ICEHOUSE	1	WHITE		FTR-03	DATA CENTER
	2	BLACK		FTR-04	
	3	BLACK		FTR-05	
	4	BLACK		FTR-06	
MAINTENANCE 1	5	WHITE		FTR-01, BAY 1	PHONE
	6	WHITE		FTR-01, BAY 2	DISTRIBUTION
	7	BLACK		FTR-01, BAY 7	VIDEO
	8	RED/BLACK		FTR-01, BAY 10	VIDEO
MAINT	9	RED/BLACK		FTR-01, BAY 11	WTP SCADA
	10				
ALBON	11	BLACK		FTR-01, BAY 8	VIDEO
	12				
HIGH SERVICE	13	BLACK		FTR-01, BAY 3	Well SCADA/VIDEO
	14	WHITE		FTR-01, BAY 9	WTP SCADA
	15	WHITE		FTR-01, BAY 4	VIDEO
	16				
FILTER GALLERY	17	RED/BLACK		FTR-01, BAY 5	VIDEO
	18				
	19	RED/BLACK		FTR-01, BAY 12	WTP SCADA
	20				
ANTENNA TOWER	21	RED/BLACK		FTR-01, BAY 6	VIDEO
	22				
ICEHOUSE	23	WHITE		FTR-07	DATA CENTER
	24	RED/BLACK		FTR-08	



Network Design Services RFP

OPERATIONS FIBER RACK

1/22/2016

FTR-01 (10122)

Name	Port	Pair Color	Cable Color	Destination	Purpose
MTSP PH	BAY 1	-	RED	MITEL, P16	PHONE
	TX/RX	WHITE			
MTS DAT	BAY 2	-	GREEN	DST-01, P24T	DISTRIBUTION
	TX/RX	BLACK			
HSPS WIFI	BAY 3	-	YELLOW	VID-01, P16	
	TX/RX	BLACK			
10 HSPS INTERIOR	BAY 4	-	YELLOW	VID-02, P3	VIDEO
	TX/RX	BLACK			
11 FILTER GALLERY	BAY 5	-	YELLOW	VID-02, P5	VIDEO
	TX/RX	RED/BLACK			
5 TANK FARM	BAY 6	-	BLUE		VIDEO
	TX/RX	WHITE			
7 MAINTENANCE	BAY 7	-	YELLOW	VID-01, P14	VIDEO
	TX/RX	WHITE			
3 AL BONNER EAST	BAY 8	-	YELLOW	VID-02, P1	VIDEO
	TX/RX	BLACK			
9 HSPS SWITCHGEAR	BAY 9	-	GREEN		VIDEO
	TX/RX	BLACK			
6 PAUL POLK GATE	BAY 10	-	YELLOW	VID-01, P13	VIDEO
	TX/RX	BLACK			
DH + TO BSMT	BAY 11	-	BLUE		SCADA
	TX/RX	RED/BLACK			
FILTER GALLERY	BAY 12	-	GREEN		SCADA
	TX/RX	WHITE			

PERLE TRANSCEIVERS

Name	Port	Pair Color	Cable Color	Destination	Purpose
FTR-03	1	-	BLACK	DAT-01, P24T	DATA CENTER
	TX/RX	WHITE			
FTR-04	1	-	BLACK	SS01, P3.2	DATA CENTER
	TX/RX	BLACK			
FTR-05	1	-	BLACK	SS01, P3	DATA CENTER
	TX/RX	BLACK			
FTR-06	1	-	BLACK	DAT-07, P3	DATA CENTER
	TX/RX	BLACK			
FTR-07	1	-	BLUE	DAT-05, P6	DATA CENTER
	TX/RX	RED/BLACK			
FTR-08	1	-	WHITE	VHM01, P2.1	DATA CENTER
	TX/RX	WHITE			
FTR-09	1	-			NOT CONNECTED
	TX/RX				



Network Design Services RFP

ICEHOUSE & MTS FIBER RACKS

1/22/2016

FTB-02 (ICEHOUSE FIBER TERMINATIONS)

Name	Pair	Pair Color	Cable Color	Destination	Purpose
	1	WHITE		FTR-09	DATA CENTER
	2	WHITE		FTR-10	
	3	BLACK		FTR-11	
	4	BLACK		FTR-12	
	5	RED/BLACK		FTR-13	
	6	WHITE		FTR-14	

PERLE TRANSCEIVERS

Name	Port	Pair Color	Cable Color	Destination	Purpose
FTR-09	1	-	BLUE	DAT-02, P24	DATA CENTER
	TX/RX	WHITE			
FTR-10	1	-	BLUE	SS02, 3.2	DATA CENTER
	TX/RX	WHITE			
FTR-11	1	-	BLUE	SS02, 2	DATA CENTER
	TX/RX	BLACK			
FTR-12	1	-	BLUE	DAT-08, P7	DATA CENTER
	TX/RX	BLACK			
FTR-13	1	-	BLUE	DAT-06, P7	DATA CENTER
	TX/RX	RED			
FTR-14	1	-	WHITE	DAT-04, P1	DATA CENTER
	TX/RX	WHITE			



Network Design Services RFP

ICEHOUSE & MTS FIBER RACKS

1/22/2016

FTB-03 (MAINTENANCE FIBER TERMINATIONS)

Name	Pair	Pair Color	Cable Color	Destination	Purpose
	1	WHITE		FTR-02, 1	TELEPHONE
	2	WHITE		FTR-02, 2	GENERAL DATA
	3	BLACK		FTR-02, 7	MAINT CAM
	4	RED/BLACK		FTR-02, 12	TO BSMT (PPG)
	5	RED/BLACK		FTR-02, 5	DH+ TO BSMT
	6	RED/BLACK		FTR-02, 6	TO PAUL POLK GATE

FTR-02 (10131)

Name	Port	Pair Color	Cable Color	Destination	Purpose
TELEPHONE	1	-	ORANGE	TEL-02, P1	PHONE
	TX/RX	WHITE			
GENERAL DATA	2	-	BLACK	DST-07	DISTRIBUTION
	TX/RX	WHITE			
DH+ TO BSMT	5	-	BLUE	SE 1500, P1	WTP SCADA
	TX/RX	RED/BLACK			
TO PAUL POLK GATE	6	-	BLUE	VID-04, P1	VIDEO
	TX/RX	RED/BLACK			
MAINT CAM	7			MISSING	VIDEO
	TX/RX	BLACK			
TO BSMT (PPG)	12	-	GREEN	VID-04, P4	VIDEO
	TX/RX	RED/BLACK			



Network Design Services RFP

OPERATIONS SERVER RACK

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VMH01

Port	Cable Color	Destination	Purpose
1	BLACK	DAT-01, P7	
2	BLACK	DAT-01, P8	
3	BLACK	DAT-05, P1	
4	BLACK	DAT-07, P4	
iLO	BLACK	DAT-01, P12	
2.1			
2.2			
2.3			
2.4	WHITE	DAT-03, P1	HP 1920-8G, P1

SS01

Port	Cable Color	Destination	Purpose
iLO	GREY/BROWN/ WHITE	DAT-01, P4	
1	BLACK	DAT-01, P3	
2	BLACK	FTR-05	SS02, 2
3			
4	WHITE	DAT-05, P2	
USB 1	BLACK	SEWD-VC 2	KEYBOARD
USB 2			
3.1	WHITE	DAT-07, P6	
3.2	BLACK	FTR-04	SS02, 3.2
3.3			
3.4			

TAPE (10116)

Port	Cable Color	Destination	Purpose
1	SKYBLUE	DAT-01, P10	
2			
3	BLACK	SEWD - VC2	
4			
USB 1			



Network Design Services RFP

OPERATIONS SERVER RACK

1/22/2016

DAT-01 (10124)

Port	Cable Color	Destination	Purpose
1			
2			
3	BLACK	SS01, P1	
4	GREY/BROWN/ WHITE	SS01, iLO	
5			
6			
7	BLACK	VMH01, P1	
8	BLACK	VMH01, P2	
9			
10	SKYBLUE	TAPE, P1	
11	BLUE	SEWD-VC2	
12	BLACK	VMH01, iLO	
13	BLACK	UPS, 10/100BaseT	UPS
14			
15			
16			
17			
18			
19			
20	ORANGE	DST-01, P20	TO NETWORK RACK
21			
22	GREEN	DST-01, P22	TO NETWORK RACK
23T			
24T	BLACK	FTR-03	
23M			
24M			

DAT-05 (10123)

Port	Cable Color	Destination	Purpose
1	BLACK	VMH01, P3	
2	WHITE	SS01, P4	
3			
4			
5			
6	BLUE	FTR-07	DAT-06, P7
7			
8			



Network Design Services RFP

OPERATIONS SERVER RACK

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DAT-07 (10141)

Port	Cable Color	Destination	Purpose
1			
2			
3	BLACK	FTR-06	DAT-08, P7
4	BLACK	VMH01, P4	
5			
6	WHITE	SS01, P3.1	
7			
8			



Network Design Services RFP

ICEHOUSE SERVER RACK

1/22/2016

VMH02

Port	Cable Color	Destination	Purpose
1	BLACK	DAT-02, P7	
2	BLACK	DAT-02, P5	
3	BLACK	DAT-06, P2	
4	BLACK	DAT-08, P2	
iLO	BLACK	DAT-02, P8	
2.1			
2.2			
2.3			
2.4	WHITE	DAT-04, P6	
USB 1			
USB 2			
USB 3			
USB 4			

SS02

Port	Cable Color	Destination	Purpose
iLO	BLACK	DAT-02, P17	
1	BLACK	DAT-02, P19	
2	BLUE	FTR-11	SS01, P3
3			
4	WHITE	DAT-06, P1	
3.1	WHITE	DAT-08, P1	
3.2	BLUE	FTR-10	SS01, P3.2
3.3			
3.4			

NAS

Port	Cable Color	Destination	Purpose
COM			
LAN 1	BLACK	DAT-02, P9	
LAN 2	BLACK	DAT-02, P11	
USB 1			
USB 2			
USB 3			
USB 4			
EXPANSION			



Network Design Services RFP

ICEHOUSE SERVER RACK

1/22/2016

DAT-02 (10140)

Port	Cable Color	Destination	Purpose
1			
2			
3	BLACK	UPS, 10/100 BaseT	UPS
4			
5	BLACK	VMH02, P2	
6			
7	BLACK	VMH02, P1	
8	BLACK	VMH02, iLO	
9	BLACK	NAS, LAN01	
10			
11	BLACK	NAS, LAN02	
12			
13			
14			
15			
16	WHITE	AVTECH, P1	HUM. MONITOR
17	BLACK	SS02, iLo	
18			
19	BLACK	SS02, P1	
20			
21			
22			
23			
24	BLUE	FTR-09	DAT-01, P24T

DAT-06 (iSCSI 1)

Port	Cable Color	Destination	Purpose
1	WHITE	SS02, P4	
2	BLACK	VMH02, P3	
3			
4			
5			
6			
7	BLUE	FTR-13	DAT-05, P6
8			
9			
CONSOLE			



Network Design Services RFP

ICEHOUSE SERVER RACK

1/22/2016

DAT-08 (iSCSI 2)

Port	Cable Color	Destination	Purpose
1	WHITE	SS02, P3.1	
2	BLACK	VMH02, P4	
3			
4			
5			
6			
7	BLUE	FTR-12	DAT-07, P6
8			
9			
CONSOLE			

DAT-04 (HP 1920-8G)

Port	Cable Color	Destination	Purpose
1	WHITE	FTR-14	DAT-03, P2
2	WHITE	VMH02, P2.4	
3			
4			
5			
6			
7			
8			
9			
10			
Console			



Network Design Services RFP

ADMIN CLOSET

1/22/2016

DTB-04 (ORTRONICS Cat5 PATCH PANEL)

Port	Cable Color	Destination	Purpose
1			GEN MGR
2	BLUE	DST-03, P5	GEN MGR
3	WHITE	TEL-01, P21	GEN MGR
4	BLUE	DST-03, P11	GEN MGR
5	BLUE	TEL-01, P20	GEN MGR
6			GEN MGR
7	WHITE	DST-03, P3	ASST GEN MGR
8	WHITE	TEL-01, P17	ASST GEN MGR
9			ASST GEN MGR
10	RED	DST-03, P2	ASST GEN MGR
11			ASST GEN MGR
12			ASST GEN MGR
13			ACCOUNTING
14			ACCOUNTING
15			ACCOUNTING
16	BLUE	DST-03, P7	ACCOUNTING
17	GREEN	TEL-01, P24	ACCOUNTING
18	WHITE	DST-03, P15	ACCOUNTING
19	GREY		COPY RM/FIBER
20			COPY RM
21	BLUE	DST-03, P13	COPY RM
22	WHITE	TEL-01, P15	COPY RM
23	BLACK		COPY RM RADIO
24	GREEN	DST-03, P8	COPY RM
25	PURPLE	TEL-01, P13	BOARD RM
26	WHITE	AT&T 505A PROTECTOR	BOARD RM
27	ORANGE	DST-03, P17	VIDEO
28			BOARD RM
29			BOARD RM
30			BOARD RM
31	PURPLE	DST-03, P12	BOARD RM
32	BLUE	TEL-01, P14	RECEPTION AREA
33			RECEPTION AREA
34			RECEPTION AREA
35			RECEPTION AREA
36	BLACK	TEL-01, P1	RECEPTION AREA
37			RECEPTION AREA
38	RED	TEL-01, P23	RECEPTION AREA
39			INCOMING
40			INCOMING
41			INCOMING
42			INCOMING
43			INCOMING
44			INCOMING
45			INCOMING



Network Design Services RFP

ADMIN CLOSET

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46			INCOMING
47			INCOMING
48			INCOMING

DTB-05 (PANDUIT DP6 Plus PATCH PANEL)

Port	Cable Color	Destination	Purpose
1	WHITE	DST-03, P4	
2	GREEN	DST-03, P6	
3	WHITE	TEL-01, P18	
4	WHITE	TEL-01, P19	
5	RED	DST-03, P21	R
6			
7	RED	DST-03, P19	
8			
9	YELLOW	DST-03, P20	
10	RED	TEL-01, P28	PHONE
11	YELLOW	DST-03, P22	
12			VIDEO

DST-03 (10142)

Port	Cable Color	Destination	Purpose
1	RED		
2	RED	DTB-04, P10	ASST GEN MGR.
3	WHITE	DTB-04, P7	ASST GEN MGR
4	WHITE	DTB-05, P1	
5	BLUE	DTB-04, P2	GEN MGR
6	GREEN	DTB-05, P2	
7	BLUE	DTB-04, P16	
8	GREEN	DTB-04, P24	
9	BLUE	DST-04	ROUTER (WIFI)
10	BLUE		INTO CEILING
11	BLUE	DTB-04, P4	GEN MGR
12	PURPLE	DTB-04, P31	BOARD RM
13	BLUE	DTB-04, P21	COPY RM
14			
15	WHITE	DTB-04, P18	ACCOUNTING
16			
17	ORANGE	DTB-04, P27	VIDEO
18	BLUE		INTO CEILING
19	RED	DTB-05, P7	
20	YELLOW	DTB-05, P9	
21	RED	DTB-05, P5	R
22	YELLOW	DTB-05, P11	VIDEO
23T			
24T			
23M			
24M			



Network Design Services RFP

ADMIN CLOSET

1/22/2016

TEL-01 (10143)

Port	Cable Color	Destination	Purpose
1	BLACK	DTB-04, P36	RECEPTION AREA
2			
3			
4			
5			
6			
7			
8	BLUE		INTO CEILING
9			
10	BLUE		INTO CEILING
11			
12			
13	PURPLE	DTB-04, P25	BOARD RM
14	BLUE	DTB-04, P32	RECEPTION AREA
15	WHITE	DTB-04, P22	COPY RM
16			
17	WHITE	DTB-04, P8	ASST GEN MGR
18	WHITE	DTB-05, P3	
19	WHITE	DTB-05, P4	
20	BLUE	DTB-04, P5	GEN MGR
21	WHITE	DTB-04, P3	GEN MGR
22	YELLOW		
23	RED	DTB-04, P38	RECEPTION AREA
24	GREEN	DTB-04, P17	ACCOUNTING
25F			
26F			
25T			
26T			
27			
28	RED	DTB-05, P10	PHONE



Network Design Services RFP

MAINTENANCE SHOP

1/22/2016

DST-07 (NETGEAR GS608 V3)

Port	Cable Color	Destination	Purpose
1			
2	BLUE		MAINT OFC
3	RED		D-5, RANDY
4	BLUE		
5	RED		V-STORE
6	PINK		JOHN M
7	PINK		D-1, BUZZ
8	BLACK	FTR-02, P2	FEED

TEL-02 (ZyXEL ES1-100)

Port	Cable Color	Destination	Purpose
1	ORANGE	FTR-02, P1	
2	GREY	DST-08, P6	CLEAR LABEL
3	BLUE		SEVEN
4	RED		TO BLACK TELE CABLE
5	BLUE		P2
6	RED		P1
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			

CISCO SE 1500 (INDUSTRIAL ETHERNET)

Port	Cable Color	Destination	Purpose
1	BLUE	FTR-02, P5	
2	GREEN		TO BLUE CABLE
3	GREEN		
4			
5			

VID-04 (LINKSYS EZXS55W)

Port	Cable Color	Destination	Purpose
1	BLUE	FTR-02, P6	
2			
3	BLACK		
4	GREEN	FTR-02, P12	
5	BLUE		
6			



Network Design Services RFP

MAINTENANCE SHOP

1/22/2016

MAINTENANCE OFFICE

DST-08 (PROCURVE1)

Port	Cable Color	Destination	Purpose
1	GREY		BLACK LABEL
2	BLUE		
3	AQUA		
4	ORANGE		
5	RED		CLEAR LABEL
6	GREY	TEL-02, P2	CLEAR LABEL
7			
8	GREEN		