#### TASK ORDER NO. 11281.E

#### Pursuant to the

## MASTER AGREEMENT FOR PROFESSIONAL SERVICES BETWEEN

# CITY OF MERIDIAN (OWNER) AND STANTEC CONSULTING SERVICES, INC. (ENGINEER)

This Task Order is made this 23<sup>rd</sup> day of May, 2023 and entered into by and between the City of Meridian, a municipal corporation organized under the laws of the State of Idaho, hereinafter referred to as "Owner", and accepted by <u>STANTEC CONSULTING SERVICES INC.</u>, hereinafter referred to as "Engineer" pursuant to the mutual promises, covenant and conditions contained in the Master Agreement (Category 2a) between the above-mentioned parties dated October 1, 2020. The Project Name for this Task Order is as follows:

## TERTIARY FILTRATION UPGRADE – FINAL DESIGN

### **GENERAL INFORMATION**

The City of Meridian (City) Water Resource Recovery Facility (WRRF) is in year six of a tenyear NPDES compliance schedule to reduce phosphorus effluent loadings to Fivemile Creek as required in the 2017 EPA administered NPDES permit. The City has previously completed a Wastewater Resource Recovery Facility Plan (WRRFP) in December 2018 per the facility planning process identified in the Idaho Administrative Procedures Act (IDAPA), section 58.01.16. As part of that effort, a comprehensive Capital Improvement Plan was identified to address the various treatment challenges and regulatory updates. In order to address more stringent total phosphorus removal requirements, the need for additional tertiary filtration was identified as part of that effort.

This Task Order consists of engineering services to implement tertiary filtration improvements. These services are for progressing the preliminary design, which was completed as part of a previous task order, through contractor bidding and award including design progression to 90% (permitting set), 100% (bid) documents, and issued for construction documents. To streamline the project schedule, an intermediate 60% design submittal milestone is not included. Stantec will also provide bidding services to assist the City in awarding the construction contract.

### PROJECT UNDERSTANDING

### **Specific Project Requirements**

Stantec has identified several requirements for this project that will be used as a framework for establishing the preliminary and final design guidelines and expectations for the work. These project requirements include schedule, criteria, and facility design elements.

Preliminary schedule requirements are listed below, while Attachment A provides an initial schedule assumed as part of this scope of work:

- Final Design start by June 1, 2023
- Bid award by August 2024
- Substantial completion by March 2026
- Startup and commissioning complete by June 30, 2026
- NPDES compliance date of June 30, 2027 (expected to be administered by State of Idaho)

The 2040 flows will be the design basis of this project. However, the membrane capacity to be installed as part of this project will be 12.5 MGD. This design flow corresponds to a 2032 design year (12.4 MGD peak month flow in 2032). This reduced design flow to meet 2032 conditions is per City decisions that occurred during Task Order 11281.D as part of the Capacity Phasing Evaluation. Design criteria requirements are as follows:

- Total Phosphorus 8.5 lbs/day (May-Sep monthly average)
- Total Phosphorus 29.8 lbs/day (Oct-Apr monthly average
- Membrane Equipping Design Flow (2032) 12.4 MGD (peak month)
- Membrane Equipping Design Flow (2032) 17.8 MGD (peak hour)
- Overall System Design Flow (2040) 14.2 MGD (peak month)
- Overall System Design Flow (2040) 22.3 MGD (peak hour)

The following project elements in Table 1 are anticipated to be designed and constructed under this project. These serve as the basis for scoping and engineering services fee (fee). The outcome of the preliminary design (TO1) has determined the final project approach assumptions as noted below.

**Table 1. Project Design Elements.** 

Element / Process / Facility	Description	Assumptions
Sitework	Civil sitework	High groundwater General grading and paving
	Utilities and Yard Piping	Includes bypass of membrane facility, tie-in to offline equalization
	Electrical sitework	New switchboard with feeds to sectionalizing cabinets, MCCs, and power panels in three buildings via buried duct banks
		Primary power designed upgrades
	Landscape architecture	Gravel to match existing
Coagulant Chemical Storage and Feed Bldg.	Coagulant Pretreatment System	New Chemical Building No. 3 to house bulk chemical storage and feed equipment. Coagulant to be added to Secondary Clarifier Splitter Box, use existing coarse bubble aeration and diffusion wall for mixing.
Tertiary Pretreatment	Strainers	Automatic backwashing strainers, nominal size of 200-300 micron anticipated
Secondary Effluent Equalization	Repurpose Reclaimed Water System	Use existing two 500kgal reclaimed water tanks, associated piping and pumps
Membrane Feed Pumping Station	Wet Well	Wet well to be co-located with equalization tank with isolation gates
	Membrane Feed Pumps	Vertical turbine
Tertiary Membrane Filtration Building	Membrane based treatment and ancillary equipment	Micro or ultrafiltration membranes, with pressure vessel configuration
		Ancillary systems may include backwash/reverse flow pumps, air scour blowers, clean-in-place system, neutralization system
		Sample and analysis benchtop
	Electrical	MCCs and ancillary power system components, PLC/HMI. No dedicated operations room or workstations
	Residuals Handling	Building plumbing and strainer wastes discharged to existing Plant Drain Pump Station
		Membrane backwash and CIP wastes discharge independently back to Headworks
Membrane Chemical Storage and Feed Building	Bulk and tote storage, feed pumps and piping	Retrofit of existing facility (Chemical Building No. 1)

### **General Project Approach**

The following describes assumptions and conventions that were used in developing this scope of services.

### Codes, Regulations, and Design Standards

Plans and specifications will be prepared in accordance with the standard of care for professional engineering. City design standards, as applicable, will be used. The facilities will be designed in accordance with standards, codes and regulations in effect as of March 2023, and as described in the Preliminary Engineering Report (PER) developed under TO1 and any subsequent revisions to the PER.

Changes in codes and regulations which occur after the project start will be considered a change in scope. Stantec will be using specifications suited specifically for the design-bid-build delivery method based on its standard documents. The City will be responsible to provide front-end equipment and construction procurement documents (Division 00 and 01) for the final design construction bid. Stantec will be responsible to provide all technical specification sections and to review and collaborate with the City on the procurement documents and specifications.

### **Design Approach**

The design will be performed using Stantec's internal design standards and approaches, including digital delivery methodologies: 3D design, building information models (BIM), and intelligent P&IDs. BIM models will be produced to an approximate level of development (LOD) 300. This LOD provides an accurate model where elements are defined with specific assemblies, precise quantity, size, shape, location and orientation are detailed. Drawings will be produced from these models for City review.

#### CAD and BIM software:

Physical models for facilities: Revit family of products

Civil: Civil 3D (The Revit model is fixed in space in this platform)

Instrumentation and Control: AutoCAD Plant 3D

Drawings will be prepared in ANSI D format (22 by 34 inches).

### **Opinions of Probable Construction Cost**

Stantec will prepare opinions of probable construction cost (OPCC) using the appropriate estimate classes, standard of care, and employing pertinent guidelines as established by the Association for the Advancement of Cost Estimating (AACE).

OPCCs will be prepared midway between the 30% and 90% design and upon completion of the 90% design documents (Classes 3 and 2, respectively).

City acknowledges that Stantec has no control over costs of labor, materials, competitive bidding environments and procedures, unidentified field conditions, financial and/or market conditions, or other factors likely to affect the OPCC of this project, all of which are and will unavoidably remain in a state of change, especially considering the high volatility of the market attributable to Acts of God and other market events beyond the control of the parties. City further acknowledges that this is a "snapshot in time" and that the reliability of this OPCC will

inherently degrade over time. City agrees that Stantec cannot and does not make any warranty, promise, guarantee, or representation, either express or implied that proposals, bids, project construction costs, cost of operating, or cost of maintenance will not vary substantially from Stantec's good faith OPCC.

### "Design to Cost" Methodology

This project to date has incorporated both "best value" and "affordability" decision making to strike a balance between long term reliability and operability and cost in a volatile material supply and labor market. Value engineering efforts have been executed as noted above to confirm these approaches and overall project scope.

However, it is not anticipated that this project is now "design to cost" with the associated potential rework and schedule delays implicit in that project delivery framework. It is anticipated that the current approach has sufficient scope and cost consideration and that this task order is oriented on design progression to meet schedule needs.

Any additional VE, or design changes to address revised cost goals shall be addressed as scope amendments.

### **Land Acquisition**

It is anticipated this project does not include any form of land acquisition.

### **Project Delivery Model**

This scope of services is structured for a conventional design-bid-build project delivery model.

### **Project Staging and Sequencing**

The staging and sequencing will be developed in a continuation of the concepts developed in the Preliminary Engineering Report (PER) submitted as part of TO1.

### Assumptions:

Stantec's standard drawing symbols and abbreviations will be used, with the exception of the City's new electrical standards. The City's new standards will be incorporated into the project.

Standards specifications and formats will be used, with the exception of the City's new electrical standards. The City's new standards will be incorporated into the project.

Stantec will adhere to City standards for equipment/asset tagging.

Unless they are required for permitting, Stantec will not submit design calculations for the project, although they will be stored on internal Stantec servers.

No LEED or ENVISION requirements are anticipated for the facility.

It is assumed that deep foundation systems will not be required.

Buildings will be premanufactured metal buildings as needed to match existing site architectural standards.

Site Drainage Study results will be shown on a Grading and Drainage Plan Notes sheet. No report will be submitted.

No restrooms or finished office spaces are anticipated.

Existing structural facilities will be decommissioned, but not demolished.

Electrical conduit routing will not be shown on plan sheets.

### **Drawing List**

An update drawing list for Task Order 11281.E has been included to show the expected drawings that will be developed under this Task Order. This list was used as the basis to confirm final design approach and establish level of effort; refer to Attachment B

### **SCOPE OF WORK**

## TASK 1- Final Design

Stantec will prepare final plans and technical specifications based on the design concepts and criteria developed during Preliminary Design (TO1) and as further revised in Task Orders 11281.B and 11281.D. The Final Design will be a progressive development of concepts and decisions implemented during the previous task orders. This Task Order 11281.E includes design efforts to progress the design from previous preliminary design concepts through 100% design, including permitting and bidding.

The Final Design will be documented in two formal design deliverables (90% and 100% design) but will be progressed with additional interim package checks as noted in the 90% design details herein. The design packages will be submitted to the City for review after each design deliverable is complete. Interim review workshop sessions will be held for general review of the design to confirm design progress direction and incorporation of the design improvements and alterations. Design documents will be signed and sealed by licensed engineers and submitted for the planning and permit applications. Formal workshops will be conducted to review each of the two design deliverables with the City.

The City review period is assumed to be two weeks for each deliverable. Stantec may elect to continued work in parallel to the City review to reduce overall schedule as needed. Stantec will maintain an up-to-date comment log in electronic format to track City review comments on each design submittal and review session and the associated Stantec responses. City comments will be incorporated into the next submittal, as appropriate.

Stantec will assist the City in providing clarification and/or responses for comments and questions that arise during the planning and permit application processes.

### **General Task Order Assumptions and Exclusions**

- Closed Circuit Television It is not anticipated that closed circuit television will be required for any existing utilities on the site, or at the points of interconnection. If during Final Design, a need for these services arises, these services can be authorized as supplemental services.
- Water Quality Sampling and Analysis It is not anticipated that additional sampling and water quality analysis will be required. Separate pilot testing activity will not be performed.
- Dewatering Investigation It is not anticipated that a site-specific dewatering investigation will be required, however, the geotechnical report as performed in Task

Order 11281.B, will include groundwater levels, soil characteristics and general recommendations for dewatering based upon the field investigations and site conditions identified and reported on by the geotechnical subcontractor. Dewatering systems will not be designed by Stantec and will be left up to the contractor to adequately dewater the subgrade based upon general dewatering specifications and specific site requirements.

- Survey The City will perform the site survey and coordinate with Stantec on the scope
  of work to incorporate the needs for Stantec's design team for a comprehensive site
  survey. It is assumed that the City will be able to perform the survey and the survey
  information is available prior to the start of this work.
- Current design does not include any pH control or stabilization downstream of the new tertiary filtration process.
- Electrical design will assume that chemical building areas will be considered noncorrosive spaces per City direction.

### 1.1 Project Management and Coordination

The project management and coordination work for this task order will include:

### 1.1.1 Project Management Plan Update

Stantec will revise the project management plan (PMP) developed during preliminary design to define the delivery approach, staffing, responsibilities, schedule, risks and project deliverables. The PMP will be reviewed and updated on a quarterly basis.

### 1.1.2 Progress Reporting Meetings

Stantec will keep the City advised of the status of the design progress. This coordination will include monthly project management meetings with the City with an average of three Stantec staff to communicate and document identified project risks, action items, change of conditions, schedule updates, financial status, and general project status. The meetings are expected to average 90 minutes in duration, and Stantec will coordinate and submit agenda before and meeting notes within two working days of the meeting. Separate technical workshops will be scheduled outside of these monthly progress meetings.

#### 1.1.3 Internal Team Coordination

Stantec will meet with design team leads on a bi-weekly basis to coordinate discipline status, identify risks, and provide a forum for issues or questions that need to be communicated or coordinated with the City or that need further attention within the design team.

### 1.1.4 Design Progress Review Meetings

Stantec will coordinate, prepare an agenda, and distribute notes from bi-weekly design meetings with the City through the 90% design. The agenda will generally be established as a result of items and questions identified during internal design meeting that need review, input or decisions made by the City. It is assumed that the City will provide decision makers from the WRRF and City including plant management, engineering, operations, maintenance, and electrical/controls staff. Stantec will provide at least three team staff at each meeting but will

also include specific discipline leads as design conditions warrant. A portion of these meetings will include the ongoing design reviews in lieu of the 60% design submittal reviews where Stantec will walk the City through the latest 3D models and design issues and challenges to get ongoing input into the design as it progresses to 90% level.

### 1.1.5 Progress Tracking and Reporting

Stantec will prepare and maintain tracking tools for monthly reporting and invoicing to the City. The invoicing will include monthly status updates on a task-by-task basis, physical percent complete status and any changes or new risks identified in the billing period.

#### Assumptions:

Invoicing will be performed monthly unless otherwise coordinated with the City due to inactivity.

Progress reporting meetings are assumed to generally be virtual or with local Stantec staff travelling to Meridian unless otherwise requested or coordinated for external staff to attend

Change logs and other documentation requested by the City will be kept and maintained on a Stantec Microsoft Teams SharePoint site. The SharePoint site will be available for the City and Stantec staff and be used for shared and transfer documents.

Notes will be taken by Stantec and distributed to the City for review and documentation of meeting decisions and topics.

### 1.2 Permitting

The following site investigations and support will be completed in parallel to the final design effort.

### 1.2.1 Permitting Support

Stantec will work with the City to identify necessary design phase permits for activities related to the project and detail the requirements for application for the permits, permit deadlines, contact persons, and processing time. Stantec will evaluate the need for new permits, modifications to existing City permits, and requirements for permit issuance.

For each applicable permit, Stantec will determine the permit application requirements and deadline(s). Stantec will also determine associated costs and requirements for construction, operating, and the schedule to obtain the permit.

Findings from this task will be documented in a Technical Memorandum (TM). The TM will summarize the evaluation process and serve as a reference guide for the authority and jurisdiction of the issuing agency, likely permit requirements, costs, application needs, and schedule impacts anticipated to construct the project.

Stantec will review and respond to the agency design review comments formally as part of this task. The incorporation of agency review comments into the design will be part of the Issued for Construction task herein.

Assumptions and Deliverables:

The City will pay all permit fees.

- A revised/amended PER will be submitted as previously contracted. Review comments to the revised PER will be incorporated into the final design. No additional submittal is anticipated under this Task Order 11281.E.
- The City will coordinate and meet with permitting agencies, as required. No meeting support from Stantec is anticipated. Any additional meetings with the Idaho Department of Environmental Quality to discuss membrane equipment adherence to IDAPA requirements can be included as Supplemental Services.
- The permitting to be reviewed is assumed to be limited to NPDES, Reuse Permit, and City building permit.
- Stantec will not lead the permitting as part of Task Order 11281.E but will support the
  City with information in the permit applications including documentation necessary for
  City building permitting.
- This effort assumes agency design review comments will be incorporated into the final design in separate task and Stantec will provide formal responses to the agency regarding their review comments. It is assumed that the agencies will be limited to the City of Meridian and Idaho DEQ.
- It is not expected that additional permitting and approval negotiations are needed.
- Draft and permitting memorandum with a table of the permits, technical deliverables required, contact person from the permitting authority, estimated schedule, and permit fees. The memorandum will be finalized upon City review.
- Agency meeting notes

### 1.2.2 Idaho Power Energy Efficiency Support

Stantec will assist in the preparation of the preliminary grant applications for Building Efficiency and Custom Wastewater Process Efficiency incentive programs. This task generally includes documenting energy efficient design measures included in the Project that qualify for grant incentives as follows:

- Building Efficiency (lighting, HVAC, building envelope, controls)
- Custom Wastewater Process Efficiency (motor systems, controls, pumps)

#### Assumptions and Deliverables:

- The City will Provide coordination assistance to the Consultant in support of the grant application preparation.
- Electronic copies of the draft preliminary grant applications and of the final preliminary grant applications (Excel spreadsheets).
- Custom wastewater process efficiency grant application backup including calculations and support documents (Excel spreadsheets).
- Stantec reserves the right to subcontract an energy efficiency expert to assist with the application and associated information.

### 1.3 Membrane Equipment Pre-procurement Support

Membrane equipment pre-procurement will be selected and procured as part of Task Order 11281.B. However, Stantec will continue to track, answer questions, review submittals and provide support to the City after the membrane vendor bidding and selection process has been completed. This includes design progress meetings and workshops. Stantec will coordinate with the selected membrane supplier to obtain design feedback and certification of compliance per the membrane procurement specification documents.

#### Assumptions and Deliverables:

- Four 8-hour in-person design progression workshops are required with the membrane supplier, City, and up to four Stantec staff in attendance.
- A maximum of 26 bi-weekly 1-hour design progress meetings are required with the supplier, City, and up to three Stantec staff in attendance. The purpose of these meetings is to coordinate with the membrane supplier on detailed design progression.
- Procurement method will be owner pre-purchase of equipment to furnish to the contractor.
- Three submittal reviews are expected be needed for the selected vendor's equipment (one initial and two revised submittals). It is expected that each submittal will be reviewed by mechanical, electrical, instrumentation and controls, structural, and building mechanical discipline leads, as well as other support engineering staff. A cross-discipline review will also be included to ensure conformity to all design components.
- Submittal review will include a review of existing design documents in development by Stantec. Stantec will either provide feedback to the membrane supplier based on Stantec's design efforts or will adapt design documents to be consistent with the membrane package. Effort is included as part of this Task 1.3, as well as Task 1.4 for this effort.
- Stantec will work with manufacturer to adapt manufacturer standards to City and standards relevant to this project.
- Stantec will track progress of the procurement and delivery process monthly.
- Stantec will prepare a meeting agenda and minutes for all external meetings with the membrane supplier, including the bi-weekly progress meetings and design progression workshops. Internal coordination by Stantec to prepare any support materials for meetings is also included in this Task 1.3.

• Stantec will lead all meetings where the City and/or membrane supplier is present.

### 1.4 90% Design Documents

The 90% Design phase will include major progression from the 30% design with direction from the interim check set sessions. The 90% Design submittal will progress the design to be substantially complete. This submittal will include the complete set of plans and specifications expected for the project; an updated drawing list has been included as Attachment B. No new drawings and/or specification sections by Stantec will be expected after this stage. City comments on the previous submittal and interim checks will have been resolved, addressed and/or incorporated in this submittal.

The project is essentially finished except for City and regulatory final review and associated comment incorporation. The following are general descriptions of the design items for each discipline assumed for the design. The list of items included in the design may vary slightly as the design progresses and is adjusted.

#### 1.4.1 General

- Update drawings (from previous Preliminary Design (TO1) submittal)
- Progress and finalize additional detail drawings
- Update list of remaining drawings
- Update list of specifications
- Draft and finalize major equipment specifications
- Update equipment list (major equipment)
- Progress and finalize BIM models
- Progress and finalize drawings
- Progress and finalize specifications
- Progress and finalize equipment list

#### 1.4.2 Process Mechanical

- Finalize process design calculations
- Finalize major equipment sizing and pipe sizing calculations
- Finalize major equipment selection (type, size, weight, arrangement)
- Update hydraulic profile
- Finalize mechanical portion of P&IDs, including tag numbers
- Select and size control valves and all other valves
- Finalize pump and blower selection (e.g., type, size, weight, arrangement)
- Revise piping materials
- Update process mechanical drawings

- Draft and finalize equipment specifications and schedules. Coordinate with coating, package control systems, and electric motor specifications.
- Define process startup requirements.

#### 1.4.3 Civil

- Road Design
  - Determine parking requirements.
  - Develop road layout for access to all buildings and structures.
  - Determine locations of driveways, curb cuts, dumpsters, etc.
  - Finalize roadway geometrics and horizontal and vertical alignments.

#### Site Grading

- Prepare site grading drawings.
- Establish finish floor elevations and road profiles.
- Develop terrain model and calculate earthwork quantities.

#### Site Drainage

- Show stormwater control concepts (e.g., detention, swales, curb, and gutter).
- Develop storm sewer system and coordinate with site utilities and with building services for roof drains.
- Develop manhole and inlet concepts.
- Size stormwater features ponds, basins, ditches.

#### Site/Civil Plans

- Update and finalize site layout and set up overall survey control. Delineate the boundaries of the site constraints based on legal, environmental, and regulatory restrictions, including road layout, building locations, and overall grading.
- Establish horizontal locations of major structures and buildings. Set up coordinate table and identify control points of facilities.
- Locate contractor staging areas and haul routes.
- Obtain traffic generation, paving, and parking requirements from City.
- Coordinate with Building Services to obtain fire access and hydrant requirements from Fire Marshall.
- Identify access control, fencing, and security arrangements.
- Landscaping will be limited to crushed gravel groundcover to match the existing facility and will be incorporated into civil design documents.

- Provide coordinates or layout dimensions for new facilities. Locate buildings and facilities by structural grid line intersection, if applicable
- Finalize fencing, gates, security, and access control.
- Finalize roadway pavement design, sections, and details.
- Locate sidewalks, door, and equipment pads.
- Finalize grading and add spot elevations. Coordinate with architectural and structural disciplines for grades at building entrances, equipment pads, and stair landings.

#### Site Utility Plans

- Size storm sewer capacity/size and hydraulic grade line (HGL) profile.
- Lay out process piping, storm drain system, and building services (water, fire protection, natural gas, sewer)
- Lay out electrical power and communications duct banks, in coordination with electrical and I&C disciplines.
- Determine connection points and lay out major piping and utilities.
- o Develop coordinate table to be completed in 90% Design.
- o Develop and finalize horizontal and vertical alignment of utility systems.
- Develop and finalize storm drainage system based on final grading plan and complete manhole and inlet schedule.
- Develop and finalize pipe profile drawings.
- Develop and finalize piping sections.
- Site Demolition Plans
  - Prepare site demolition plans
- Site/Civil Details
  - Prepare project-specific and standard details.
- Develop and finalize specifications

#### 1.4.4 Instrumentation & Control

- Finalize control narratives and initiate control strategy specifications.
- Draft and finalize control system specifications, including instrument component specifications or instrument data sheets.
- Size and select instruments.
- Develop and finalize preliminary instrument list.
- Develop and finalize preliminary I/O List.

- Develop equipment and package control systems guidance that defines controls, operator interfaces, instrument, and I/O requirements.
- Finalize P&ID drawings, including loop numbers, instrumentation, and I/O.
- Updated control system block diagram.
- Progress and finalize P&IDs.
- Final control system block diagram.
- Prepare installation details.
- Prepare any other miscellaneous I&C drawings.
- Review and provide input on actuator, adjustable speed drive, equipment, electrical, and package control system specifications.
- Incorporate telephone, data, access control, intrusion detection, CCTV, and paging design (if any).
- Finalize loop descriptions in Commissioning Database.
- Finalize Design Calculations.

#### 1.4.5 Architectural

- Finalize code analysis for each building on drawing sheets.
- Finalize all life safety requirements including egress, fire suppression, and smoke control, as applicable.
- Develop and finalize interior design concepts.
- Finalize floor plans and building elevations.
- Develop and finalize major building and/or wall sections to define the vertical relationship of all building elements.
- Finalize specifications, specification schedules, and coordinate with drawings:
  - Doors Assemblies
  - Window Assemblies
  - Louvers
  - Signage
  - o Finishes: interior and exterior
  - Details included and properly coordinated into drawings
  - o Floor, ceiling and roof plans
  - Fire extinguishers located and scheduled
  - Other architectural sections, appurtenances and details

### 1.4.6 Building Mechanical Services

- Finalize minimum air change rates based on governing codes, agency, local requirements, and design guides.
- Finalize room pressurization scheme.
- Finalize existing systems and capacities.
- Finalize air flow schematics; these will indicate major equipment and show the air flow balance to meet ventilation and pressurization requirements.
- Finalize type of ventilation system to be used in process buildings (e.g., inlet air tempered with both inlet and outlet fans, simple exhaust fan system).
- Confirm contaminants of exhaust stream and ensure segregation of streams as required.
- Based on the exhaust systems identified and the air discharge requirements, finalize the requirements for safe discharge.
- Finalize HVAC control system approach and level of communication/control by the WRRF SCADA system.
- Finalize fuel (e.g., gas, oil, or other fuel) for heating buildings; identify local fuel storage requirements.
- Finalize utility requirements for all process, mechanical, and HVAC equipment
- Finalize the design criteria for the utility systems including temperature, pressure, and filtration, for all systems.
- Finalize the major equipment identified on P&ID drawings with respect to energy code requirements. Prepare HVAC data sheets for selected equipment.
- Finalize the location of the major equipment identified on general arrangement drawings. Size of equipment rooms will be coordinated with Architect.
- Finalize schematics for all identified systems. Include final control valve sizing, alarms, shutdown and control setpoints, drain valves added as a result of actual pipe routing, final sizes for relief valves, identification of hard-wired interlocks, and modification of the vendor supplied packages.
- Plans, Sections and Details
  - Develop and finalize HVAC Floor plans suitable for bidding and construction.
     Include plan drawings indicating the duct routings, dimensions, sections, details and schedules.
  - Develop and finalize piping drawings suitable for bidding and construction (amount of detail will vary with the project). Show pipe routings, dimensions, sections, details, and schedules.
  - Develop and finalize HVAC standard details. Cross reference details to plans.
  - Develop and finalize HVAC equipment schedules.

- Develop and finalize louver sizing.
- Develop and finalize pressure drop calculations. Incorporate any changes to pressure drop calculations and motor sizing for each of the systems identified.
- Develop and finalize heat tracing loads.
- Develop and finalize Specifications:
  - o for all utility systems including piping, insulation, etc.
  - o for HVAC-related components including ductwork, insulation, etc.
- Develop and finalize schedules.
- Complete standard details.

#### 1.4.7 Structural

- Prepare and finalize foundation plan(s) and sections for buildings, equipment, and pipe racks.
- Prepare and finalize framing plans, details and building sections of all floor levels and roof.
- Prepare and finalize exterior and interior elevation drawings to show brace locations.
- Prepare and finalize selected connection detail drawings.
- Indicate slab depression(s) and/or slope(s) required for sumps, trenches, etc.
- Prepare and finalize framing plans and details for equipment and pipe racks.
- Show construction phasing and existing items to remain or be demolished on drawings.
- Prepare and finalize structural specifications.
- Develop and finalize design calculations for:
  - structural design calculations of all gravity load resisting structural systems, members, and details.
  - lateral lad resisting systems calculations including those for all details. Describe flow of forces and/or systems in final calculation narrative.
  - structural design calculations for all mechanical, electrical, I & C, architectural, process, and related supports and systems that will not have calculations provided by deferred submittals.

#### 1.4.8 Electrical

Development and finalization of primary power site electrical and associated connections to facility transformers and other equipment. Stantec will coordinate with DC Engineering regarding ongoing WRRF electrical improvements.

Power Supply and Distribution: update load calculations.

Determine if existing centralized standby power generation system which serves the entire facility has sufficient capacity to operate the membrane facility at full load or if it will

need to be operated at reduced load. Modifications to the standby power generation system are not in the scope of this project.

### Single-line Diagrams

- Finalize overall Single-line diagram.
- Update and finalize preliminary Single-line diagrams for each proposed facility.

#### Equipment Elevations

o Further evaluate accuracy of elevations to confirm allocated space is sufficient.

#### Site Electrical

- Develop and finalize location of outdoor electrical equipment, such as transformers and sectional cabinets.
- Lay out duct bank system, including major runs, manholes, and handholes.

#### Plans

- Develop and finalize size of electrical rooms and update layout of the major electrical equipment located in each electrical room.
- Identify routing methods for electrical conduit and trays.
- Determine equipment, if any, requiring uninterruptible power supplies (UPS) and locations of UPS equipment.

#### Lighting Design

- Develop and finalize detailed lighting concepts; select luminary types in conjunction with architect.
- Develop and finalize lighting layouts and initial lighting calculations.
- Develop and finalize preliminary site lighting layout.
- Develop and finalize electrical specifications
- Finalize short circuit calculations.
- Finalize heat load calculations for duct banks.
- Finalize power supply and distribution
- Develop and finalize electrical drawings
  - Electrical Legend and Abbreviations
  - Site Plan(s)
  - Single-line Diagram(s)
  - Elevations
  - Control Diagrams
  - Demolition Plans
  - Power Plans

- o Lighting Plans
- o Grounding Plans
- Hazardous Area Definition Plans and Sections (where needed for clarity)
- Riser Diagrams (for telephone, data, fire alarms, security, paging)
- Electrical Schedules
- Standard Details

### 1.5 100% Design (Bid) and Issued for Construction Documents

Following receipt of City and regulatory review comments on the 90% Design submittal, Stantec will prepare and submit 100% Design documents. It is not anticipated that additional design elements will be identified or incorporated between 90% and 100% Design, rather this deliverable is intended to include final review comments and minor annotative clarification for bidding and construction clarity and accuracy. As part of this Task 1.5, Stantec will provide a final Issued for Construction set for the contractor that includes addenda at the completion of bidding services (see Task 1.9). No additional design effort is expected after this submittal before construction begins.

### 1.6 Quality Control

Stantec will perform internal technical review prior to submittal to the City, per its Quality Management Plan and Stantec's corporate standards. Stantec's Engineers of Record will review and all deliverables and critical calculations prior to sending for internal independent reviews by a qualified senior engineer or technician. In addition, all documents requiring multiple disciplines will be reviewed for interdisciplinary coordination. All Stantec reviews will have documented review comment and responses. Only upon the completion of this level of quality control will deliverables be sent to the City or permitting agencies for review. City and other review comments will be addressed, formally responded to, and documented.

#### Deliverables:

- Responses to City comments
- City comment response log

### 1.7 Capital and O&M Cost Updates

### 1.7.1 Interim Cost Opinion

The 30% design submittal and associated OPCC will be used as a baseline for the City's use. Cost estimate adjustment will be made as the design progresses toward 90%. Stantec will not perform an OPCC update between 30% and 90% but will rely on the cost trending revisions as changes are made to the design. In addition, the O&M cost estimates will be updated accordingly if assumptions and design direction is altered.

### **1.7.2 90% Cost Opinion**

The 90% Design submittal to the City will be the basis of the final updated bottom-up OPCC for City review. This cost opinion will address design development to-date and any cost trend

items since the previous OPCC developed during the Interim Cost Opinion. This OPCC will be the engineer's estimate for comparison to project construction bids. In addition, the O&M cost estimates will be updated accordingly if assumptions and design direction is altered.

### 1.7.3 Construction Cost Model Trending

Stantec will establish the construction cost model trending form the Class 3 OPCC that was performed in the preliminary design. Changes in cost expectation will be tracked and shared with the City, to allow for efficient design and cost management. The focus will be to avoid cost over-run and achieve budgeted project goals. The information will be tracked in the change/decision log and shared at each monthly meeting with the appropriate adjustments to the cost trend model.

Assumptions and Deliverables:

- Cost trend log at each monthly update and OPCC deliverable.
- OPCC, final Class 2
- Updated O&M estimates

### 1.8 Interim Checks and 90% Review Workshops

Stantec will coordinate an interim design check session between the 30% design completion and the 90% design submittal in lieu of a 60% design deliverable review. The intent of this session is to review the progress of the design, provide a forum for City staff to provide feedback on design progress and changed items since 30% and previous design review checks along with a forum for collaboration and design change/decision documentation. However, this will not include a formal design submittal but will rather be a comprehensive digital walkthrough of the design.

Stantec will also hold a review workshop with City Staff at the end of the City's review of the 90% Design submittal. This workshop will be held to discuss staff review comments, clarify elements in the submittal as needed, and confirm approach to allow the report to be finalized.

In addition, Stantec may review the design progression at each regular meeting with the City including walkthrough of 3D and design models as they progress, design issues that have risen since previous discussions, clarifications and other design challenges and decisions. This effort is in lieu of the 60% design deliverable review.

Assumptions and Deliverables:

- Three Stantec staff will be in-person for the interim review session and 90% review workshop for the entire meeting plus discipline leads involved as needed virtually.
- The interim review session and 90% workshop are assumed to take approximately 3-hours per session (not including the regular design progression reviews)
- The City will provide sufficient staff for the various discipline areas to provide adequate review of the design progression.
- These sessions will be attended both virtually and in-person at the City conference room.

- Response and documentation of interim check review comments and decisions
- Response to 90% review comments
- Workshop notes will be provided

### 1.9 Bidding Services

The intent of the bid period services is to provide engineering support to the City to issue and review contractor bids. Stantec will assist the City in technical aspects of bidding. Specific services to be provided are as follows:

### 1.9.1 Technical Specifications and Plans

Stantec will make technical plans and specifications available to the City in the form of electronic PDF files to be used in the solicitation.

#### 1.9.2 Pre-bid Conference

Stantec will attend a pre-bid conference and prepare a concise summary presentation of project work elements. The City will prepare and distribute a Pre-Bid Agenda and minutes of the meetings.

#### 1.9.3 Bidder Questions / Addenda

Stantec will provide answers / clarifications to the City Procurement Division to incorporate un addenda. All answers / clarifications will be documented in writing on a standard Project Information Request Form and submitted to the Procurement Manager with a copy to the City's Project Manager. The number of questions is not expected to exceed 15 and level of effort per question is assumed to be approximately two hours per bidder question.

#### 1.9.4 Bid Review

Stantec will attend the package bid openings conducted by the City. Stantec will perform a general conformance review of the two apparent low bidders and provide a bid review letter for City use in determining bid responsiveness and recommendation for award.

Additional Bidding Assumptions and Exclusions:

- Levels of effort and associated budget beyond these assumptions shall be authorized in writing as Supplemental Services.
- Conformed Documents It is not anticipated that conformed documents will be prepared.
- City to manage bid documents and bid opening.
- City to coordinate and lead Pre-bid Conference.

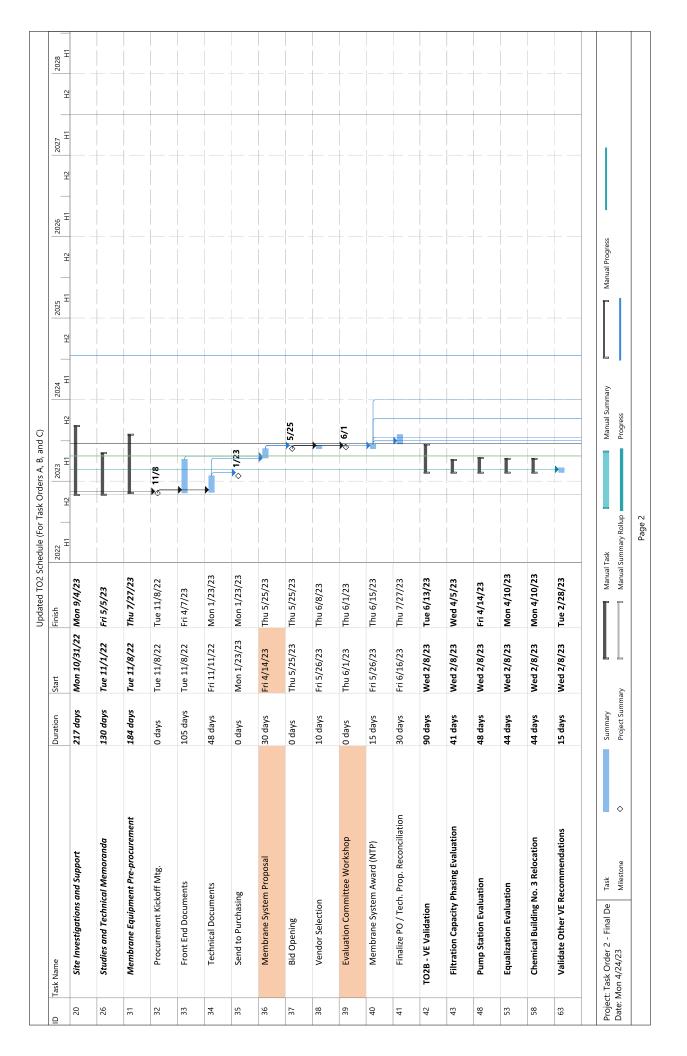
### TIME OF COMPLETION and COMPENSATION SCHEDULE

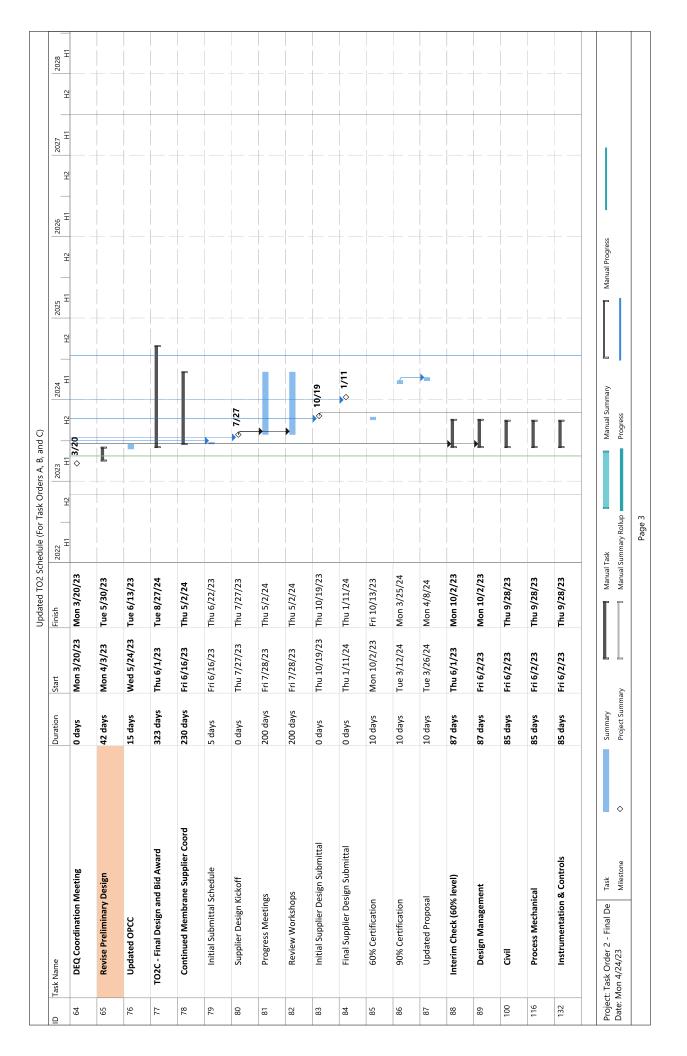
COMPENSATION AND COMPLETION SCHEDULE						
Task	Description Estimated Completion Date		Compensation			
1	Final Design	•				
1.1	Project Management & Coordination	<ul><li>August 27, 2024</li></ul>	\$201,172			
1.2	Permitting	•				
1.2.1	Permitting Support	<ul> <li>April 30, 2024</li> </ul>	\$45,275			
1.2.2	Idaho Power Energy Efficiency Support	• April 30, 2024	\$11,571			
	SUB TOTAL	•	\$56,846			
1.3	Membrane Equipment Pre- Procurement Support	■ May 2, 2024	\$110,024			
1.4	90% Design Documents	<ul> <li>April 23, 2024</li> </ul>	\$1,399,848			
1.5	100 % Design (Bid) & Issued for Construction Documents	■ May 7, 2024	\$280,061			
1.6	Quality Control	May 7, 2024	\$112,657			
1.7	Capital & O&M Cost Updates	<ul><li>March 8, 2024</li></ul>				
1.7.1	Interim Cost Opinion	<ul><li>March 8, 2024</li></ul>	\$35,055			
1.7.2	90 % Cost Opinion	<ul><li>March 8, 2024</li></ul>	\$12,056			
1.7.3	Construction Cost Model Trending	<ul><li>March 8, 2024</li></ul>	\$7,275			
	SUB TOTAL	•	\$54,386			
1.8	Interim Checks and 90% Review Workshops	■ March 1, 2024	\$22,692			
		•				
1.9	Bidding Services	<ul><li>August 27, 2024</li></ul>	\$19,241			
TASK ORDER TOTAL: \$2,256,927						

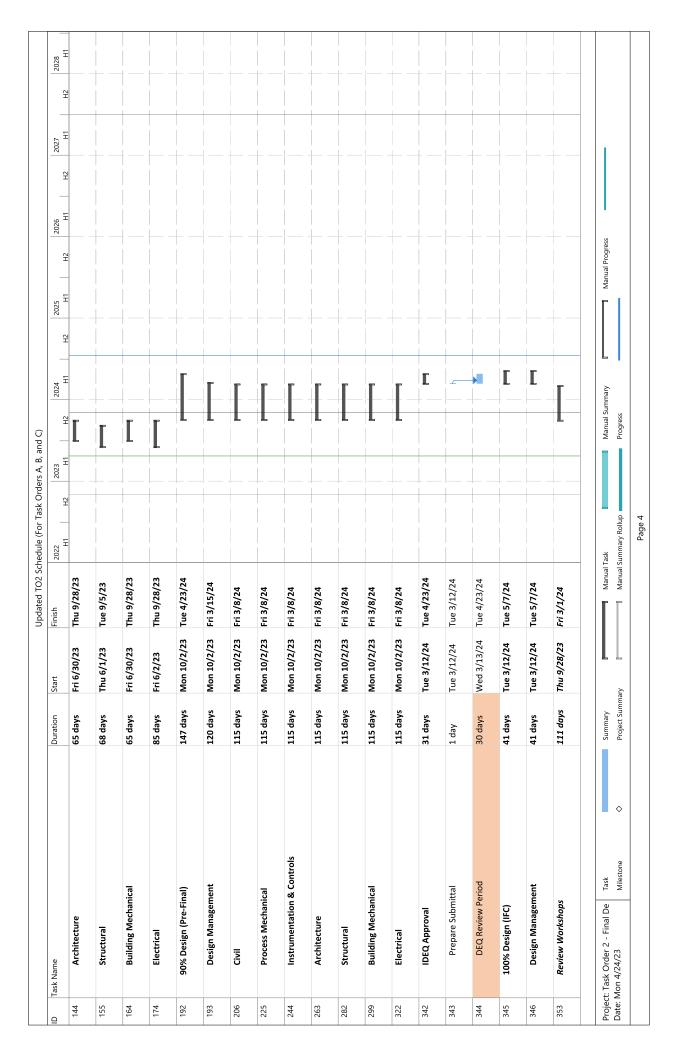
The Time & Materials Not-To-Exceed amount to complete all services listed above for this Task Order is Two Million, Two Hundred Fifty-Six Thousand, Nine Hundred Twenty-Seven Dollars (\$2,256,927). No compensation will be paid over the Not-to-Exceed amount without prior written approval by the Owner in the form of a Change Order. No travel or expenses will be reimbursed through this agreement. All costs must be incorporated in the individual tasks within the Compensation and Completion Schedule above.

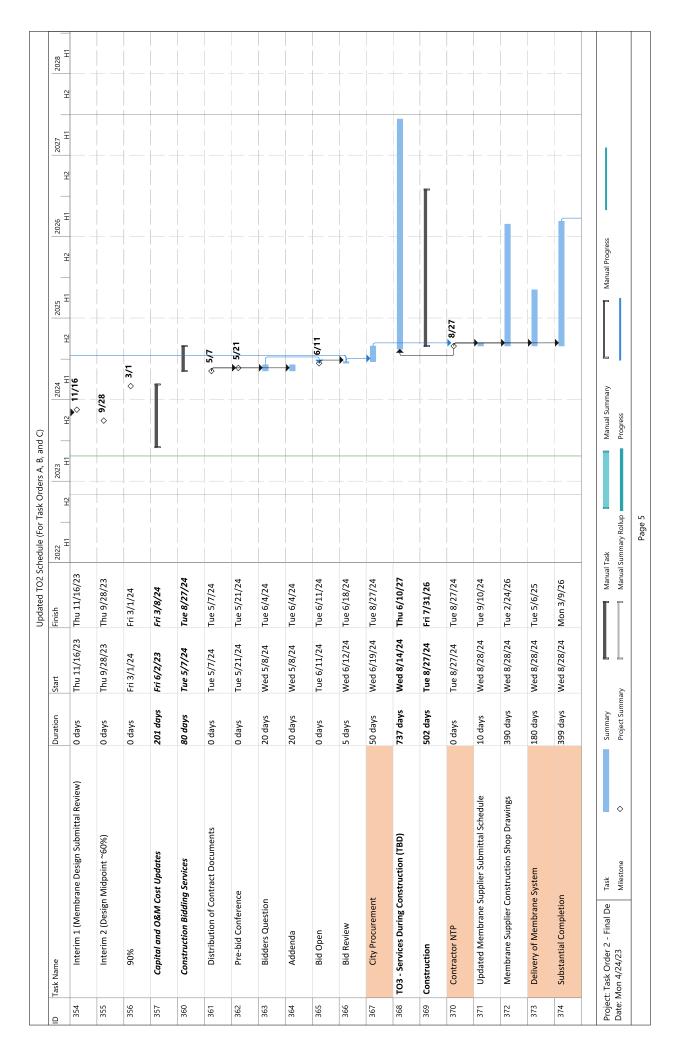
CITY OF MERIDIAN	CONSULTANT
BY:	Michael  BY:  Michael Digitally signed by Michael Fuss Date: 2023.05.16 08:14:38 -06'00'
KEITH WATTS, Purchasing Manager	MICHAEL FUSS, P.E., Inland NW Practice Lead
Dated:	Dated:
City Project Manager: David Briggs, P.E.	

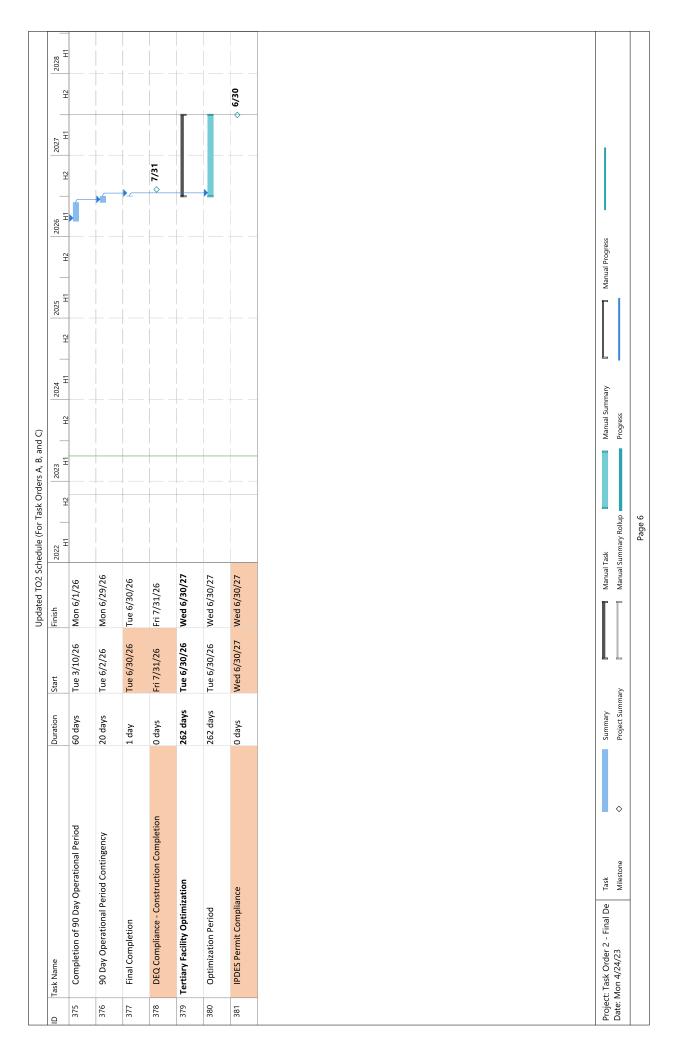
#### 2028 H1 Н2 Ξ 2027 Н2 | 2026 | H1 Manual Progress Z 2025 H1 Z Ξ 2024 Manual Summary ATTACHMENT A - FINAL DESIGN SCHEDULE Progress ZH 2/30 5/23 €/1 1/9 Updated TO2 Schedule (For Task Orders A, B, and C) 4/24 2/8 2023 H1 17 0 HZ Page 1 Manual Summary Rollup | 2022 | H1 Manual Task Mon 11/21/22 Mon 4/24/23 Mon 10/31/22 Tue 8/27/24 Mon 10/31/22 Tue 6/18/24 Tue 6/18/24 Wed 2/8/23 Tue 5/30/23 Tue 5/23/23 Thu 10/5/23 Tue 11/1/22 Tue 5/16/23 Tue 5/30/23 Tue 6/18/24 Tue 6/18/24 Tue 6/18/24 Tue 6/18/24 Thu 6/1/23 Thu 6/8/23 Thu 6/1/23 Finish Mon 4/24/23 Mon 4/24/23 Tue 11/1/22 Wed 2/8/23 Wed 6/7/23 Tue 5/16/23 Tue 5/23/23 Tue 5/30/23 Tue 11/1/22 Tue 11/1/22 Wed 6/7/23 Wed 6/7/23 Wed 6/7/23 Thu 6/1/23 Thu 6/1/23 Fri 6/2/23 Fri 6/2/23 Start Project Summary 422 days 423 days 270 days 270 days 270 days 473 days 270 days 90 days Summary 27 days 15 days Duration 0 days 5 days 0 days $\Diamond$ Project Management and Coordination Design Progress Review Meetings **Project Tracking and Reporting** Internal Team Coordination Milestone Kick Off Meeting with City Progress Report Meetings Permitting Coordination Task Submit TO2C Proposal Confirm Project Setup Project: Task Order 2 - Final De Date: Mon 4/24/23 Finalize TO2C PMP Update City Council City Council City Council Final Design (TO2) TO2C NTP TO2A NTP TO2B NTP Task Name T02A 7 2 4 2 9 œ 6 10 = 12 13 14 15 16 17 18 19











### **ATTACHMENT B - FINAL DESIGN DRAWING LIST**

		ATTACHMENT B - FINAL DESIGN DRAWING LIST	S	UBMITT	AL.
#		. DRAWING NAME	30%	90%	<u>Final</u>
GENERAL DR	000-G-001	COVER SHEET	Х	Х	Х
2	000-G-002	SHEET INDEX - I	X	X	X
3	000-G-003	SHEET INDEX - II	Х	Χ	Х
4	000-G-004	COMMON SYMBOLS	X	X	X
5 6	000-G-005 100-G-001	COMMON ABBREVIATIONS DESIGN CRITERIA - I	X	X	X
7	100-G-001	DESIGN CRITERIA - II	^	X	X
8	100-G-101	OVERALL SITE PLAN		X	X
9	100-G-601	PIPE SCHEDULE	Х	Х	Х
10	100-G-602	PROCESS FLOW DIAGRAM	X	X	X
11 12	100-G-603 100-G-604	LIQUID STREAM HYDRAULIC PROFILE  BYPASS LIQUID STREAM HYDRAULIC PROFILE	X	X	X
13	100-G-605	EMERGENCY OVERFLOW LIQUID STREAM HYDRAULIC PROFILE	X	X	X
14	100-G-606	EQUALIZATION STREAM HYDRAULIC PROFILE	X	X	X
CIVIL DRAWIN					
15 16	000-C-001 000-C-501	CIVIL NOTES, ABBREVIATIONS AND SYMBOLS CIVIL STANDARD DETAILS - I	X	X	X
17	000-C-502	CIVIL STANDARD DETAILS - II		X	X
18	000-C-503	CIVIL STANDARD DETAILS - III		X	X
19	000-C-504	CIVIL STANDARD DETAILS - IV		Х	Х
20	000-C-505	CIVIL STANDARD DETAILS - V		X	X
21	100-CD-101 100-CD-102	DEMOLITION PLAN	X	X	X
22 23	100-CD-102	SITE DEMOLITION PLAN - AREA I SITE DEMOLITION PLAN - AREA II	X	X	X
24		SITE DEMOLITION PLAN - AREA III	X	X	X
25	100-CD-105	SITE DEMOLITION PLAN - AREA IV	Х	Х	Х
26	100-C-101	OVERALL SITE PLAN AND KEY SHEET	Χ	Χ	Χ
27	100-C-102	HORIZONTAL CONTROL AND PAVING - AREA I	X	X	X
28 29	100-C-103 100-C-104	HORIZONTAL CONTROL AND PAVING - AREA II HORIZONTAL CONTROL AND PAVING - AREA III	X	X	X
30	100-C-104	HORIZONTAL CONTROL AND PAVING - AREA IV	X	X	X
31	100-C-106	GRADING AND DRAINAGE PLAN - AREA I	,	X	X
32	100-C-107	GRADING AND DRAINAGE PLAN - AREA II		Χ	Χ
33	100-C-108	GRADING AND DRAINAGE PLAN - AREA III		X	X
34 35	100-C-109 100-C-110	GRADING AND DRAINAGE PLAN - AREA IV YARD PIPING PLAN - AREA I	х	X	X
36	100-C-111	YARD PIPING PLAN - AREA II	X	X	X
37	100-C-112	YARD PIPING PLAN - AREA III	X	X	X
38	100-C-113	YARD PIPING PLAN - AREA IV	Χ	Χ	Χ
39	100-C-201	YARD PIPING PROFILES - I		X	X
40 41	100-C-202 100-C-203	YARD PIPING PROFILES - II YARD PIPING PROFILES - III		X	X
42	100-C-203	YARD PIPING PROFILES - IV		X	X
43	100-C-205	YARD PIPING PROFILES - V		X	X
44	100-C-206	YARD PIPING PROFILES - VI		Χ	Χ
45	100-C-207	YARD PIPING PROFILES - VII		X	X
46 47	100-C-301 100-C-302	SITE SECTIONS - I SITE SECTIONS - II		X	X
48	100-C-302	SITE SECTIONS - III		X	X
49	100-C-304	SITE SECTIONS - IV		X	X
50	100-C-501	DETAILS - I		Χ	Χ
51	100-C-502	DETAILS - II		X	X
52 53	100-C-503 100-C-504	DETAILS - IV		X	X
54	100-C-505	DETAILS - IV		X	X
55	100-C-601	YARD PIPING POINT TABLE - I		X	X
56	100-C-602	YARD PIPING POINT TABLE - II		Х	X
57	100-C-603	YARD PIPING POINT TABLE - III		Χ	Χ
STRUCTURAL 58	000-S-001	STRUCTURAL GENERAL NOTES	X	Х	Х
59	000-S-001	STRUCTURAL INSPECTION SHEET - I	X	X	X
60	000-S-003	STRUCTURAL INSPECTION SHEET - II	Х	Х	Х
61	000-S-004	STRUCTURAL INSPECTION SHEET - III	Χ	X	X
62	000-S-501	STANDARD DETAILS II		X	X
63 64	000-S-502 000-S-503	STANDARD DETAILS - II STANDARD DETAILS - III		X	X
65	000-S-504	STANDARD DETAILS - IV		X	X
66	000-S-505	STANDARD DETAILS - V		X	X
67	000-S-506	STANDARD DETAILS - VI		X	X
68	000-S-507	STANDARD DETAILS - VII		X	X
60					X.
69 70	000-S-508	STANDARD DETAILS - VIII STANDARD DETAILS - IX			
69 70 71		STANDARD DETAILS - VIII STANDARD DETAILS - IX STANDARD DETAILS - X		X	X
70	000-S-508 000-S-509	STANDARD DETAILS - IX		Х	Χ
70 71 72 73	000-S-508 000-S-509 000-S-510 000-S-511 000-S-512	STANDARD DETAILS - IX STANDARD DETAILS - X STANDARD DETAILS - XI STANDARD DETAILS - XII		X X X	X X X
70 71 72 73 74	000-S-508 000-S-509 000-S-510 000-S-511 000-S-512 500-S-101	STANDARD DETAILS - IX STANDARD DETAILS - X STANDARD DETAILS - XI STANDARD DETAILS - XII OVERALL FOUNDATION PLAN	X	X X X X	X X X X
70 71 72 73 74 75	000-S-508 000-S-509 000-S-510 000-S-511 000-S-512 500-S-101 500-S-102	STANDARD DETAILS - IX STANDARD DETAILS - X STANDARD DETAILS - XI STANDARD DETAILS - XII OVERALL FOUNDATION PLAN PARTIAL FOUNDATION PLAN - I	Χ	X X X X X	X X X X X
70 71 72 73 74	000-S-508 000-S-509 000-S-510 000-S-511 000-S-512 500-S-101	STANDARD DETAILS - IX STANDARD DETAILS - X STANDARD DETAILS - XI STANDARD DETAILS - XII OVERALL FOUNDATION PLAN		X X X X	X X X X



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<u>#</u>		DRAWING NAME	30%	90%	<u>Final</u>
79		PARTIAL LEVEL 1 FLOOR PLAN -II	X	X	X
80 81	500-S-107 500-S-108	OVERALL MEZZANINE PLAN PARTIAL MEZZANINE PLAN - I		X	X
82		PARTIAL MEZZANINE PLAN - II		X	X
83		OVERALL ROOF PLAN		X	X
84		PARTIAL ROOF PLAN - I		X	X
85	500-S-112	PARTIAL ROOF PLAN -II		Χ	Χ
86	500-S-301	SECTIONS - I	Χ	Χ	Χ
87		SECTIONS - II		X	X
88		SECTIONS - III		X	X
89 90		SECTIONS - IV SECTIONS - V		X	X
91		SECTIONS - V		X	X
92	500-S-307	SECTIONS - VII		X	X
93		ENLARGED PLANS - I		X	X
94		ENLARGED PLANS - II		Х	Х
95		ENLARGED PLANS - III		Χ	Χ
96		ENLARGED PLANS - IV		X	Х
97		DETAILS - I		X	X
98		DETAILS - II		X	X
99 100		DETAILS - IV		X	X
100		DETAILS - V		X	X
102		DETAILS - VI		X	X
103	500-S-507	DETAILS - VII		X	X
104		DETAILS - VIII		X	X
105	500-S-509	DETAILS - IX		Χ	Х
106		DETAILS - X		Χ	Х
107		FOUNDATION PLAN	X	X	X
108		ROOF PLAN		X	X
109 110	510-S-301 510-S-302	SECTIONS - I		X	X
111	510-S-302	SECTIONS - III		X	X
112		DETAILS - I		X	X
113		DETAILS - II		X	X
114	510-S-503	DETAILS - III		Х	Х
115		FOUNDATION PLAN	Χ	Χ	Χ
116		FLOOR PLAN	X	X	Х
117		ROOF PLAN		X	X
118 119	530-S-301 530-S-302	SECTIONS - I SECTIONS - II	X	X	X
120		SECTIONS - III		X	X
121		DETAILS - I		X	X
122	530-S-502	DETAILS - II		X	X
123	530-S-503	DETAILS - III		Х	Х
ARCHITECTU	JRAL DRAWINGS				
124		ABBREVIATIONS AND SYMBOLS, GENERAL NOTES		X	Х
125		STANDARD DETAILS - I		X	X
126		STANDARD DETAILS - II		X	X
127 128		STANDARD DETAILS - III STANDARD DETAILS - IV		X	X
129	000-A-505	STANDARD DETAILS - IV		X	X
130		STANDARD DETAILS - VI		X	X
131		DOOR, WINDOW, LOUVER & INTERIOR FINISH SCHEDULES AND TYPES		X	X
132	500-A-001	CODE SUMMARY AND LIFE SAFETY PLAN	Х	Χ	Х
133		FLOOR PLAN	Χ	Χ	Χ
134		ROOF PLAN	X	X	X
135		REFLECTED CEILING PLAN	V	X	X
136 137		EXTERIOR ELEVATIONS - I  EXTERIOR ELEVATIONS - II	Х	X	X
138		BUILDING SECTIONS		X	X
139		WALL SECTIONS & DETAILS		X	X
140		ISOMETRIC VIEWS - I	Х	X	X
141	500-A-902	ISOMETRIC VIEWS - II	X	X	X
142		CODE SUMMARY AND LIFE SAFETY PLAN	Χ	Χ	Х
143		FLOOR PLAN	Х	Χ	Х
144		SECTIONS AND DETAILS		X	X
145		ISOMETRIC VIEWS - I	X	X	X
146 147		ISOMETRIC VIEWS - II CODE SUMMARY AND LIFE SAFETY PLAN	X	X	X
147		FLOOR PLAN	X	X	X
149		ROOF PLAN	X	X	X
150		EXTERIOR ELEVATIONS	X	X	X
151		BUILDING SECTIONS		X	X
152	530-A-301	WALL SECTIONS AND DETAILS		Χ	Χ
153		ISOMETRIC VIEWS - I	Х	Χ	Χ
154		ISOMETRIC VIEWS - II	Χ	Χ	Χ
		ITROLS DRAWINGS	V	.,	
155 156	000-I-001 000-I-002	INSTRUMENTATION AND CONTROLS SYMBOLS AND NOMENCLATURE - I INSTRUMENTATION AND CONTROLS SYMBOLS AND NOMENCLATURE - II	X	X	X
157	000-1-002	INSTRUMENTATION AND CONTROLS SYMBOLS AND NOMENCLATURE - III	X	X	X
101	000-1-000	THE THE METERS AND CONTINUES OF MIDDLE AND MODIFIED CONTINUES.	^		^



			_	JBMITT.	
<u>#</u>		DRAWING NAME  INCEPTION AND CONTROL C CYMPOL C AND NOMENCL ATURE. IN	<u>30%</u>	90%	<u>Final</u>
158 159	000-I-004 000-I-005	INSTRUMENTATION AND CONTROLS SYMBOLS AND NOMENCLATURE - IV INSTRUMENTATION AND CONTROLS SYMBOLS AND NOMENCLATURE - V	X	X	X
160		PLC PANEL CONTROLLOGIX - I		X	X
161		PLC PANEL CONTROLLOGIX - II		Х	Х
162	000-I-203	PLC PANEL CONTROLLOGIX - III		X	X
163		PLC PANEL CONTROLLOGIX - IV		X	X
164 165	000-I-205 000-I-206	PLC PANEL COMPACTLOGIX - I PLC PANEL COMPACTLOGIX - II		X	X
166	000-I-200 000-I-207	PLC PANEL COMPACTLOGIX - III		X	X
167		PLC PANEL COMPACTLOGIX - IV		X	X
168	000-I-207	FIBER NETWORK SWITCH PANEL - I		Χ	Χ
169		INSTALLATION DETAILS - I		X	X
170 171	000-I-502 000-I-503	INSTALLATION DETAILS - II INSTALLATION DETAILS - III		X	X
172		INSTALLATION DETAILS - III		X	X
173	000-I-505	INSTALLATION DETAILS - V		X	X
174	000-I-506	INSTALLATION DETAILS - VI		Х	Χ
175	000-I-507	INSTALLATION DETAILS - VII		Х	Χ
176		ANALYZER RACK DETAILS - I		X	X
177 178	000-I-521 000-I-601	ANALYZER RACK DETAILS - II SAMPLE WIRING DIAGRAMS - I		X	X
179	000-1-602	SAMPLE WIRING DIAGRAMS - II		X	X
180	000-I-603	CONTROL NETWORK ARCHITECTURE - I	Х	X	X
181	000-I-604	CONTROL NETWORK ARCHITECTURE - II	Χ	Χ	Х
182	000-1-605	CONTROL NETWORK ARCHITECTURE - III	X	X	X
183 184	000-I-606 420-I-601	CONTROL NETWORK ARCHITECTURE - IV SPLITTER BOX P&ID	X	X	X
184	420-1-601 475-1-601	COLLECTION BOX P&ID	X	X	X
186		MF FEED WETWELL P&ID - I	X	X	X
187	500-I-602	MF FEED WETWELL P&ID - II	Х	Χ	Х
188	500-I-603	MF INFLUENT STRAINERS P&ID - I	X	X	Х
189	500-I-604	MF INFLUENT STRAINERS P&ID - II	X	X	X
190 191	500-I-605 500-I-606	MF SYSTEM P&ID MF TRAIN 1 P&ID	X	X	X
192	500-I-607	MF TRAIN 2 P&ID		X	X
193	500-I-608	MF TRAIN 3 P&ID		Х	Х
194		MF TRAIN 4 P&ID		Х	X
195 196		MF TRAIN 5 P&ID		X	X
196	500-I-611 500-I-612	MF COMPRESSED AIR DISTRIBUTION P&ID MF SOLENOID MANIFOLDS P&ID		X	X
198	500-I-613	MF NEUTRALIZATION TANK P&ID	Х	X	X
199	500-I-614	MF BACKPULSE P&ID	Х	Х	Х
200		MF CLEAN-IN-PLACE TANK P&ID	Χ	Χ	Χ
201	500-I-616	MF COMPRESSED AIR P&ID	X	X	X
202		MF AIR SCOUR SYSTEM P&ID TERTIARY DRAIN PUMP STATION P&ID	X	X	X
204		HVAC P&ID		X	X
205		SODIUM HYDROXIDE STORAGE AND FEED SYSTEM P&ID	Х	X	X
206	510-I-602	SODIUM HYPHOCHLORITE STORAGE AND FEED SYSTEM P&ID	Χ	Χ	Χ
207	510-I-603	SODIUM BISULFITE STORAGE AND FEED SYSTEM P&ID	X	X	X
208	510-I-604 510-I-605	SULFURIC ACID STORAGE AND FEED SYSTEM P&ID CITRIC ACID STORAGE AND FEED SYSTEM P&ID	X	X	X
210		HVAC P&ID	^	X	X
211		COAGULANT SYSTEM STORAGE P&ID	Х	X	X
212	530-I-602	COAGULANT FEED P&ID	Х	Х	Х
213		HVAC P&ID		X	X
214		EQUALIZATION PUMP STATION EQUALIZATION TANKS	X	X	X
215 216		EQUALIZATION TANKS EQUALIZATION DISCHARGE PUMP STATION	X	X	X
	CHANICAL DRA	***			
217	000-D-001	MECHANICAL GENERAL NOTES, SYMBOLS, LEGEND AND ABBREVIATIONS	Χ	Χ	Χ
218		STANDARD DETAILS - I		X	X
219 220		STANDARD DETAILS - II STANDARD DETAILS - III		X	X
220		STANDARD DETAILS - IV		X	X
222		STANDARD DETAILS - V		X	X
223	000-D-007	STANDARD DETAILS - VI		Х	Х
224		FLOOR PLAN	X	X	X
225		TYPICAL MEMBRANE ENLARGED PLAN - I	X	X	X
226 227		PUMP STATION ENLARGED PLAN - II PUMP STATION AND TANK ENLARGED PLAN - III	X	X	X
228		TANKS ENLARGED PLAN - IV	X	X	X
229		BLOWERS/COMPRESSORS ENLARGED PLAN - V	X	X	X
230		MEMBRANE RACKS SECTION - I	Χ	Χ	Χ
231		PUMP STATION SECTION - II	X	X	X
232	500-D-303 500-D-304	PUMP STATION AND TANKS SECTION - III SECTION - IV	X	X	X
233		TANKS SECTIONS - V	X	X	X
235		SECTION - VI	X	X	X
236	500-D-307	SECTION -VII	Х	Х	Х
237	500-D-501	DETAILS - I		Х	Χ



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#	DRAWING NO.	DRAWING NAME	30%	90%	Final
238		DETAILS - II		X	X
239		DETAILS - III		Χ	Χ
240		DETAILS - IV		X	X
241 242		DETAILS - VI		X	X
243		DETAILS - VII		X	X
244	500-D-508	TERTIARY DRAIN PUMP STATION DETAILS		X	X
245	500-D-901	ISOMETRIC - I	Х	Х	Х
246		ISOMETRIC - II	Χ	Χ	Χ
247		ISOMETRIC - III	X	X	Х
248 249		DEMOLITION FLOOR PLAN	Х	X	X
250		DEMOLITION DETAILS FLOOR PLAN	Х	X	X
251		EXTERIOR TANKS ENLARGED PLAN - I	X	X	X
252		CHEMICAL FEED ROOM 1 ENLARGED PLAN - II	X	X	X
253	510-D-104	CHEMICAL FEED ROOM 2 ENLARGED PLAN - III	Χ	Х	Χ
254	510-D-301	CHEMICAL FEED ROOM 1 SECTION - I	Х	Х	Χ
255		CHEMICAL FEED ROOM 2 SECTION - II	X	X	X
256 257	510-D-303 510-D-304	SECTION - IV	X	X	X
258		SULFURIC ROOM SECTION - V	X	X	X
259		DETAILS - I		X	X
260		DETAILS - II		Х	Х
261		DETAILS - I		Χ	Χ
262		ISOMETRIC VIEW	Х	X	Х
263		FLOOR PLAN	X	X	X
264 265		ENLARGED PLAN - I  ENLARGED PLAN - II	X	X	X
266		ELEVATION	X	X	X
267	530-D-301	SECTION - I	X	X	X
268	530-D-302	SECTION - II	Х	Х	Х
269		SECTION - III	Χ	Χ	Χ
270		DETAILS - I		X	Х
271 272		DETAILS - II		X	X
273	530-D-901 530-D-902	ISOMETRIC VIEW - I ISOMETRIC VIEW - II	X	X	X
274		DEMOLITION FLOOR PLAN	X	X	X
275		PUMPING FACILITIES - FLOOR PLAN	X	X	X
276		TANKS - PLAN	Χ	Χ	Χ
277		PUMPING FACILITIES - SECTION I	Х	Х	Χ
278		PUMPING FACILITIES - SECTION II		X	X
279 280		TANKS - SECTION I TANKS - SECTION II	X	X	X
281	XXX-D-501	RECLAIMED WATER FACILITY - DETAILS I		X	X
282	XXX-D-502	RECLAIMED WATER FACILITY - DETAILS II		X	X
283	XXX-D-503	RECLAIMED WATER FACILITY - DETAILS III		Х	Χ
HVAC DRAW					
284		HVAC SYMBOLS, NOTES, AND ABBREVIATIONS	X	X	X
285 286		HVAC CODE REVIEW HVAC STANDARD DETAILS - I	X	X	X
287		HVAC STANDARD DETAILS - II	X	X	X
288	000-M-503	HVAC STANDARD DETAILS - III		X	X
289		HVAC STANDARD DETAILS - IV		X	X
290		HVAC EQUIPMENT SCHEDULES - I	Χ	Χ	Χ
291		HVAC EQUIPMENT SCHEDULES - II	Χ	X	X
292 293		CONTROLS - I		X	X
293		CONTROLS - II		X	X
295		CONTROLS - IV		X	X
296	500-M-101	OVERALL FLOOR PLAN	Х	X	X
297	500-M-102	OVERALL ROOF PLAN	Χ	Χ	Χ
298		SECTIONS - I		X	Х
299		SECTIONS - II		X	X
300 301	500-M-401 500-M-402	WEST FLOOR PLAN EAST FLOOR PLAN		X	X
301	510-MD-101	OVERALL DEMOLITION PLAN	X	X	X
303	510-MD-101	OVERALL FLOOR & ROOF PLAN	X	X	X
304		SECTIONS		X	X
305	530-M-101	OVERALL FLOOR & ROOF PLAN	Χ	Χ	Χ
306	530-M-301	SECTIONS - I		X	X
307	530-M-302	SECTIONS - II		Χ	Χ
PLUMBING D 308		PLUMBING SYMBOLS, NOTES AND ABBREVIATIONS	Χ	X	Χ
309		PLUMBING STANDARD DETAILS - I	X	X	X
310		PLUMBING STANDARD DETAILS - II		X	X
311		PLUMBING STANDARD DETAILS - III	Χ	Χ	Х
312		PLUMBING SCHEDULES		Χ	Χ
313		SANITARY DRAINAGE OVERALL PLAN		X	X
314		POTABLE WATER OVERALL PLAN		X	X
315 316	500-P-901 500-P-902	ISOMETRICS POTABLE WATER ISOMETRICS SANITARY DRAIN		X	X
310	JUU-F-9UZ	IOUNE TRICO GAINTAIN DIVAIN		^	^



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<u>#</u>	DRAWING NO	<u>DRAWING NAME</u>	30%	90%	Final
317	510-P-101	POTABLE WATER OVERALL PLAN		Χ	Χ
318	510-P-901	ISOMETRICS POTABLE WATER		X	Χ
319	510-P-102	DRAINAGE OVERALL PLAN		X	X
320	510-P-903	ISOMETRICS DRAINAGE		X	X
321 322	530-P-101 530-P-102	POTABLE WATER OVERALL PLAN DRAINAGE OVERALL PLAN		X	X
323	530-P-102 530-P-901	ISOMETRICS POTABLE WATER		X	X
323	530-P-902	ISOMETRICS POTABLE WATER ISOMETRICS DRAINAGE		X	X
	CTION DRAWING				_^
325	000-F-001	OVERALL PLANT GENERAL SHEET	X	Х	Х
326	000-F-501	OVERALL PLANT STANDARD DETAILS	X	X	X
327	500-F-401	MEMBRANE BUILDING FLOOR PLAN - WEST		Х	Х
328	500-F-402	MEMBRANE BUILDING FLOOR PLAN - EAST		Х	Х
329	510-F-101	CHEMICAL FEED BUILDING 1 FLOOR PLAN		Х	Χ
330	530-F-101	CHEMICAL FEED BUILDING 3 FLOOR PLAN		Χ	Χ
	L DRAWINGS				
331	000-E-001	ELECTRICAL SYMBOLS - I	X	X	X
332	000-E-002	ELECTRICAL SYMBOLS - II	X	X	X
333 334	000-E-003 000-E-501	ELECTRICAL NOTES AND ABBREVIATIONS STANDARD DETAILS - I	Х	X	X
335	000-E-501	STANDARD DETAILS - II		X	X
336	000-E-502	STANDARD DETAILS - III		X	X
337	000-E-504	STANDARD DETAILS - IV		X	X
338	000-E-505	STANDARD DETAILS - V		X	X
339	000-E-601	SITE CONDUIT SCHEDULE - I		X	X
340	000-E-602	SITE CONDUIT SCHEDULE - II		Х	Х
341	000-E-603	SITE CONDUIT SCHEDULE - III		Х	Х
342	100-ED-101	SITE PLAN DEMOLITION	Х	Χ	Χ
343	100-E-101	OVERALL SITE PLAN	X	Χ	Χ
344	100-E-102	SITE PLAN - AREA I	X	Х	Χ
345	100-E-103	SITE PLAN - AREA II	X	X	X
346	100-E-104	SITE PLAN - AREA III	X	X	X
347 348	500-E-102 500-E-103	OVERALL PLAN POWER PLAN - AREA I	X X	X	X
349	500-E-103	POWER PLAN - AREA II	X	X	X
350	500-E-105	POWER PLAN - AREA III	X	X	X
351	500-E-106	POWER PLAN - AREA IV	X	X	X
352	500-E-107	ROOF POWER PLAN	X	X	X
353	500-E-108	LIGHTING PLAN	Х	Х	Х
354	500-E-109	GROUNDING PLAN	Х	Χ	Χ
355	500-E-601	SINGLE-LINE DIAGRAM - I	Х	Χ	Χ
356	500-E-602	SINGLE-LINE DIAGRAM - II	X	Χ	Χ
357	500-E-603	SINGLE-LINE DIAGRAM - III	X	Х	Χ
358	500-E-604	SINGLE-LINE DIAGRAM - IV	X	X	Х
359	500-E-605	CONDUIT AND CONDUCTOR SCHEDULE - I		X	X
360	500-E-606	CONDUIT AND CONDUCTOR SCHEDULE - II  CONDUIT AND CONDUCTOR SCHEDULE - III		X	X
361 362	500-E-607 500-E-608	CONDUIT AND CONDUCTOR SCHEDULE - III  CONDUIT AND CONDUCTOR SCHEDULE - IV		X	X
363	500-E-609	CONDUIT AND CONDUCTOR SCHEDULE - V		X	X
364	500-E-610	CONDUIT AND CONDUCTOR SCHEDULE - VI		X	X
365	500-E-611	EQUIPMENT ELEVATION - I	Х	X	X
366	500-E-612	EQUIPMENT ELEVATION - II	X	Χ	Х
367	500-E-613	EQUIPMENT ELEVATION - III	X	Х	Χ
368	500-E-614	EQUIPMENT ELEVATION - IV	X	Х	Х
369	500-E-615	LUMINAIRE SCHEDULE		X	Х
370	510-E-101	POWER PLAN	X	X	X
371	510-E-601	SINGLE-LINE DIAGRAM	X	X	X
372 373	510-E-602 510-E-603	CONDUIT AND CONDUCTOR SCHEDULE PANELBOARD SCHEDULES		X	X
373	510-E-603 510-E-604	CONTROL SCHEMATICS		X	X
374	530-E-101	POWER PLAN	X	X	X
376	530-E-101	LIGHTING PLAN	X	X	X
377	530-E-103	GROUNDING PLAN		X	X
378	530-E-601	SINGLE-LINE DIAGRAM	X	X	X
379	530-E-602	CONDUIT AND CONDUCTOR SCHEDULE		X	X
380	530-E-603	PANELBOARD SCHEDULES - I		Χ	Χ
381	530-E-604	CONDUIT AND CONDUCTOR SCHEDULE - II		Х	Χ
382	530-E-605	CONTROL SCHEMATICS		Х	X
383	XXX-E-101	POWER PLAN	X	Х	Χ

