ADDENDUM NO. 2
REQUEST FOR QUALIFICATIONS

PART A: PRE-CONSTRUCTION SERVICES and
PART B: CONSTRUCTION SERVICES  (Construction Manager at Risk)

New Swanson Center for Youth
Office of Juvenile Justice
Monroe, Louisiana
Project No. 08-403-04-02, Part 10 (F.08000079)

December 12, 2019

ITEM NO. 1: EXHIBIT 7 – PRELIMINARY PROGRAM
This Addendum No. 2 includes Exhibit 7 – Preliminary Program (updated Schematic Design submittal dated 12/10/19 - attached).

END OF ADDENDUM
NEW SWANSON CENTER FOR YOUTH OFFICE OF JUVENILE JUSTICE

MONROE, LOUISIANA

SCHEMATIC DESIGN SUBMITTAL | 12.10.2019

PREPARED & SUBMITTED BY:

STATE PROJECT NO. 08-403-04-02, PART 10
STATE ID: NEW
SITE CODE: 8-37-010
# TABLE OF CONTENTS

2 MISSION STATEMENT  
3 PROJECT DIRECTORY  
4 ARCHITECTURAL NARRATIVE  
SCHEMATIC DRAWINGS  
8 Site Plan  
9 Overall Floor Plan  
10 Partial Floor Plan - Gym, Admin, Medical, & Central Control  
11 Partial Floor Plan - Education, Food Service, Maintenance, & Laundry  
12 General Population Housing  
13 Specialized Treatment Unit  
CONSULTANT NARRATIVES  
14 Site Fencing  
14 Site/Civil Narrative  
14 Structural Narrative  
15 Security / Access Control  
16 Mechanical and Plumbing Narrative  
18 Electrical Narrative  
OUTLINE SPECIFICATIONS  
23 Masterformat 2014 Specification Outline  
25 UPDATED PROJECT SCHEDULE
MISSION AND VISION

Mission
The Office of Juvenile Justice protects the public by providing safe and effective individualized services to youth, who will become productive, law-abiding citizens.

Vision
OJJ is a quality system of care which embraces partnerships with families, communities and stakeholders to assist youth in redirecting their lives toward responsible citizenship.

Guiding Principles:
Honesty: To be honest; do everything with integrity.
Achievement: To be outcome-oriented in achieving results consistent with our mission.
Versatility: To value, promote and support diversity and cultural competence.
Ethical: To be ethical; to do the right thing, both legally and morally.
Focused: To be focused on empowering people to succeed.
Accountable: To be accountable for the effective and efficient management of resources.
Informed: To be informed and guided in our decisions by appropriate and valid data.
Team players: To be an effective and efficient team of professionals.
Harmonious: To be inclusive – involve all parties, both external and internal, who need to be part of the process.

HAVE FAITH: Together we help change lives.

Each and every decision made by OJJ is based on our mission and guiding principles. Decisions are made in the best interest for the youth in our care. OJJ is dedicated to consistent provision of services to youth and families, assisting youth in setting goals, making healthy choices, building positive relationships and creating enrichment opportunities for self-growth. OJJ encourages and promotes a positive environment for youth to grow, learn, develop and become self-reliant.
PROJECT DIRECTORY

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ARCHITECTURAL NARRATIVE
Produced by Land 3 Architect and GraceHebert Architects, APAC

PROJECT SCOPE
GraceHebert Architects and Land 3 Architect, Inc. have prepared this narrative to provide a preliminary description of the design concepts and material choices for the Owner and User Agency to better understand the intent and function of the proposed buildings.

Planned location for this new facility is on Formosa Road on a portion of property currently owned by the Office of Juvenile Justice and the site is across an existing railroad track from the current Swanson Campus.

As part of this submittal, two different design layout options are being presented for the entire campus. Both design options incorporate a main facility building which houses the majority of the program components, as well as separate housing unit buildings. Below is a brief description of the building components and various program spaces within those components.

MAIN BUILDING
In this design, the main building of the facility will include the following programmatic spaces: Public Lobby, Administration, Custody Operations, Intake and Release, Healthcare, Programs and Services, Laundry, Food Service and Facility Management.

The exterior of the main building will be constructed to ensure security along the majority of the perimeter, as several exterior walls will be the secure perimeter around the facility. These secure perimeter walls will be constructed with concrete masonry units which will be reinforced and grouted to provide a Level 5 perimeter. The exterior cladding will be a combination of ground face block veneer, composite siding rainscreen system, Portland cement plaster (stucco), and composite metal panels to provide various textures. Exterior openings within the secure perimeter walls will be detention grade glazing systems. Aluminum storefront glazing systems will be used on areas outside of the secure perimeter, such as the public lobby and administration suite. The roof for the building will be a combination of a modified bitumen flat roof system and pitched roof areas.

PUBLIC LOBBY
The public lobby will act as the main entry point into the entire campus for both public and facility employees. The lobby will be a two story volume with lots of natural light from entry curtainwall and clerestory windows to provide a welcoming feel. The lobby will provide adequate seating/waiting area for visitors, as well as lockers for storing personal items while visiting the facility.

Anyone entering the facility will check-in at the Central Control desk prior to entering the secure pedestrian vestibule to the interior portion of the facility.

ADMINISTRATION
The administration suite is adjacent to the public lobby space and is located outside of the secure perimeter of the facility. The administration suite provides private offices for the facility director, deputy director and associated staff, as well as some open work space.

The interior spaces are to be metal stud walls with painted gypsum board finish, aluminum storefront glazing system windows on both the interior and exterior, carpet tile flooring for offices, resilient flooring for high traffic areas, and suspended acoustical tile ceilings.

CUSTODY OPERATIONS
Custody operations area includes the Central Control room and administrative space for shift supervisors of the facility. Central Control is located adjacent to the Public Lobby and will serve as the check-in location for all staff and visitors, as well as observation of the perimeter security cameras, intake and release security and sallyport observation, door controls, CCTV, alarms and other systems.

Interior walls of Central Control will be constructed of concrete masonry units which are reinforced and grouted as required to provide a Level 5 secure perimeter, and detention grade glazing systems.

INTAKE AND RELEASE
The intake and release area will be the facility entry point for new admissions to the facility, as well as any youth being transported to and from other facilities by OJJ probation officers. The intake and release area is adjacent to an enclosed intake carport large enough to fit two large passenger vans. The youth will be escorted from the intake carport, through a secure vestibule directly into the intake open waiting and processing areas.

Intake and Release area is to be constructed with concrete masonry unit walls to provide secure enclosures and detention grade glazing systems.

HEALTHCARE
The medical suite within the main building will serve to provide a full range of medical, mental, dental and optical health care. The services will include clinic services, medical and mental health administrative services and medical and acute mental health observation housing.

The medical suite is separated into three separate zones: clinic patient services, and medical and mental health observation rooms are located on one side with a central nurses station serving both areas. Administration spaces are located on the other side of the medical space and is separated via a closed corridor so that access can be controlled.
ARCHITECTURAL NARRATIVE - Cont.
Produced by Land 3 Architect and GraceHebert Architects, APAC

HEALTHCARE - Cont.

The administration area will be constructed using metal stud walls with painted gypsum board finish, carpet tile flooring and suspended acoustic ceilings. The clinic and observation areas will be constructed with a combination of metal stud walls finished with impact resistant gypsum board and concrete masonry unit walls, where additional security may be required - such as mental health observation rooms.

PROGRAMS AND SERVICES

The programs and services spaces include the gymnasium space, as well as all the educational spaces for the facility. Both design options provide for a high school regulation full basketball court with adjacent recreation/snapk space that can be used by the youth.

Both design options also provide for seven academic classrooms, one multipurpose instructional classroom space, library space, academic administrative suite with workspace for teachers. Separate vocational education space is also provided, which includes two large vechteh rooms, one small vechteh room, shared vechteh classroom and shared storage room.

The interior of the educational classroom areas will be constructed of metal stud walls and finished with impact resistant gypsum board. Flooring will be a combination of resilient flooring in the classrooms and corridors with carpet in the library space and administrative suite. Interior of the vocational spaces will be concrete masonry unit construction with exterior roll up doors at each large vechteh room.

FOOD SERVICE, LAUNDRY AND FACILITY MANAGEMENT

The dining room for youth and staff will be accessible directly from the interior courtyard of the facility with food service area, kitchen and food storage adjacent. Laundry area is to be located behind the food service area and adjacent to the facility management area, which consists of warehouse storage space, maintenance staff areas and a secure Sallyport for deliveries. All deliveries into the facility will come through this secure Sallyport interlock.

Construction of the food service, laundry and facility management areas will be concrete masonry unit walls for security and durability. Flooring in the dining and food service areas will be fluid applied resinous flooring and sealed concrete flooring in the laundry and facility management/storage areas.

HOUSING UNITS

Housing units have been separated into three separate housing unit buildings, each of which consist of two dorm areas connected by a central core space. Each dorm includes twelve sleeping areas, dayroom space, offices for a case manager and group leader, therapy space, laundry room and two ADA/PREA restrooms with showers. Each dorm has access to an open air recreation courtyard space which is enclosed by a partial height concrete masonry wall.

One housing unit has been designed as a specialized treatment unit with twelve individual sleeping rooms, and an open dayroom area.

The exterior construction of each housing unit uses the same materials as the main building, utilizing a combination of ground face block, composite siding rainscreen and composite metal panels. All openings will have detention grade glazing systems and roof construction is a combination of flat roof over the housing areas and a standing seam metal roof over the central core space.

Interior construction will be a mixture of reinforced and grouted concrete masonry units at the perimeter walls, detention grade glazing systems and some interior walls may be metal stud walls with impact resistant gypsum board.

SITE FENCING

Perimeter Fencing

The project will include the installation of a new perimeter secure fence. The perimeter fencing is to be a 16'-0" high arched security fencing located around the campus to create an enclosed quadrangle to prevent passage beyond the secured area of the site. The fencing will be positioned a minimum of 25'-0" from new building roof lines and will encompass approximately 1,400 to 1,600 linear feet of length.

SECURITY/ACCESS CONTROL

Multiple electronic surveillance and intrusion detection systems will be reviewed with the facility to determine the needs of the End-User. Systems to be reviewed include video monitoring cameras, microwave detection and fence detection.
ARCHITECTURAL NARRATIVE - Cont.
Produced by Land 3 Architect and GraceHebert Architects, APAC

SECURITY/ACCESS CONTROL Cont.

Electronic Entry Control

Access Control System
An Access Control system will be provided for pedestrian and vehicular access gates. The system will be provided with security hierarchy, anti-passback and anti-tailgate features. New system software interfaces directly with a workstation computer (PC) which provides operational, trouble and alarm monitoring display. Proximity card access control system may be included as part of the overall access control system, but will only be used in areas not accessible by youth, such as the administration suite.

Closed Circuit Television Surveillance

Stand-Alone System
A video surveillance system will be provided including stationary lens (fixed) and moving lens (pan-tilt-zoom) cameras. The cameras will be monochromatic and provided with exterior weather-proof housings.

The moving lens (PTZ) cameras can pan (move left and right), tilt (move up and down) and zoom in or out, can rotate 360 degrees and are able to view an object directly below them.

A PTZ camera’s motion is remotely controlled with a keyboard and/or joystick and can also be programmed for operation. Preset patterns can be triggered automatically by the use of a perimeter intrusion detection system, motion detectors, magnetic door contacts and duress buttons. When a device is triggered, the camera can move to view a predetermined location.

Cameras can be provided mounted inside of vandal resistant housings.

Network IP System
Network IP cameras connect to a computer network, such as the existing LAN at the campus. Each camera has a specific network address, allowing users the ability to view the video from any computer equipped with a web browser. Network cameras are connected the same as a computer jack is connected to the local network.

Video Recording
Digital Video Recorder equipment will be provided to record video from the surveillance cameras onto a hard disk drive for playback. Consideration will be given to high resolution storage, date/time signature search and a multiplexer for simultaneous recording of multiple security cameras. The amount of digital storage to provide will be dictated by the regulations defining the amount of and length of time that video recordings need to be maintained for use.
**Building Systems Narrative**

**Site Fencing**

**Perimeter Fencing**

The project will include the installation of a new perimeter secure fence and interior secure control fencing. The perimeter fencing is to be a 16'-0" high minimum arched security fence with associated concrete grade beam, extending 12 inches below grade, located along the entire perimeter of the property. The fencing will be positioned a minimum of 25'-0" within the property lines and will encompass approximately 1,400 to 2,000 linear feet of length.

The interior secure control fencing is to be a 10'-0" high secure decorative steel "no-climb" fence located throughout campus to create an enclosed quadrangle to prevent passage to the remainder of the site.

**Vehicular Sally Port**

A new vehicular sally port will be provided for the facility to provide proper secure vehicular entry to the overall facility site. The fencing will be 18'-0" high, with the top 8'-0" of the fence incorporating a heavy gauge 3/8" mini-mesh and the remaining lower portion incorporating standard chain link material. The vehicular sally port will incorporate two sliding gates that will be operated by automatic gate operators with associated controls to provide interlock, as well as security cameras, which will be monitored in Central Control.

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**Site/Civil**

Grading and Storm Drainage – The site generally slopes to the north and south from the approximate center of the existing football field. Runoff is collected into existing swales, which then convey it to the east, into an existing ditch along the western side of Jackson St (US 165). The topographic survey of the site will confirm these conditions. Runoff from the developed site will maintain the existing drainage patterns. However, this may necessitate improvements to the existing swales in order to provide additional capacity for the developed conditions. The developed site will drain towards these swales by way of a new subsurface collection system. Because the existing swales connect to an LADOTD right-of-way, detention ponds will be required to maintain the existing rates of discharge at the site outfall points.

Parking – The new parking area will be situated adjacent to Jackson St, and will include approximately 76 public parking spaces, with the required portion designated for handicapped access. New parking spaces will be 9' in width, with 24' wide, two-way circulation aisles. The parking area will connect to Circle Dr on the northern and southern ends of the new lot.

Water – It is anticipated that new fire and domestic water service will be extended to the project site from an existing water main along Jackson St. A looped system is expected to encompass all of the new buildings. Water meters and backflow preventers will be provided as required by the applicable codes.

Sanitary Sewer – Sanitary sewer service is expected to be provided by the City of Monroe sewer lift station, which is located on Jackson Street just south of the Hospital. A combination of gravity and force main pipe is anticipated. The capacity of the existing lift station is not known, and will require analysis by the City of Monroe. Upgrades to the lift station may be required if it does not have additional capacity to accommodate the sewer effluent from the developed site.

Site access – The current plan provides two new access connections along Jackson St. The southern driveway will accommodate large trucks and deliveries, while the northern driveway will accommodate passenger vehicles. However, LADOTD may limit the sites access to a single connection, based on their current access management policy. Coordination with the local LADOTD district will be required in order to make this determination.

Fuel supplies for vehicles will be provided on the site, in close proximity to the Warehouse and Maintenance areas, for use with C&J vehicles. One gasoline and one diesel tank and associated fuel pump(s) are to be provided.

Off-Site Improvements – Improvements to existing off-site utility or road systems is to be determined, pending further site investigation and analysis.

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**Structural System**

- **Foundation** (Assumptions – Pending Geotechnical Investigation Report)
  - Slab on grade (1/4" thick with #4 reinforcing bars at 12" inches each).
  - Foundation may consist of continuous footings with spread footings located at columns or drilled shafts/grade beam system with shafts located at columns and as required for supporting king grade beams spans. Where columns are not present, then footings/drilled shafts will be spaced about 20'-0" on center under load bearing walls.
  - Continuous footings or grade beams shall be located at building perimeter, all cmu wall locations, connecting all exterior column locations and multiple locations as required providing a stiffened slab is needed.
  - Concrete retaining walls are not anticipated for this project.

- **Security Ceiling**
  - If required at cmu isolation areas – an 8" concrete slab with #5 reinforcing bars at 12" on center.

- **Roof Framing (two options)**
  - Light gauge metal roof trusses that will bear on exterior cmu walls and designated interior load bearing metal stud walls.
  - Steel bar joist at 4'-0" on center with 15" inch, 22 gauge, type B galvanized steel deck. This system will require interior steel column & beam framing lines.
- Gymnasium Framing
  - A standard pre-engineered building system will be used. Wall structure type will need to be determined.

- Bracing
  - Exterior cmu walls will also be designed as shear walls.
  - Building structure without cmu walls:
    - "X" bracing as required located within stud framed walls.

SECURITY/ACCESS CONTROL

Multiple electronic surveillance and intrusion detection systems will be reviewed with the facility to determine the needs of the End-User. Systems to be reviewed include video monitoring cameras, microwave detection and fence detection.

Electronic Entry Control

Access Control System
An Access Control system will be provided for pedestrian and vehicular access gates, and the Director's Residence, with proximity card technology. The system will be provided with security hierarchy, anti-passback and anti-tailgate features. New system software interfaces directly with a workstation computer (PC) which provides operational, trouble and alarm monitoring display.

Closed Circuit Television Surveillance

Stand-Alone System
A video surveillance system will be provided including stationary lens (fixed) and moving lens (pan-tilt-zoom) cameras. The cameras will be monochromatic and provided with exterior weather-proof housings.

The moving lens (PTZ) cameras can pan (move left and right), tilt (move up and down) and zoom in or out, can rotate 360 degrees and are able to view an object directly below them.

A PTZ camera’s motion is remotely controlled with a keyboard and/or joystick and can also be programmed for operation. Preset patterns can be triggered automatically by the use of a perimeter intrusion detection system, motion detectors, magnetic door contacts and dveres buttons. When a device is triggered, the camera can move to view a predetermined location.

Cameras can be provided mounted inside of vandal resistant housings.

Network IP System
Network IP cameras connect to a computer network, such as the existing LAN at the campus. Each camera has a specific network address, allowing users the ability to view the video from any computer equipped with a web browser. Network cameras are connected the same as a computer jack is connected to the local network.

Video Recording
Digital video recorder equipment will be provided to record video from the surveillance cameras onto a hard drive for playback. Consideration will be given to high resolution storage, date/time signature search and a multiplexer for simultaneous recording of multiple security cameras. The amount of digital storage to provide will be dictated by the regulations defining the amount of and length of time that video recordings need to be maintained for use.

Perimeter Intrusion Detection

Perimeter Cable Technology Security System
A cable system is attached to and along a chain link fence. The cable detects vibrations from any cut or climb and can locate the point of intrusion within as little as ten (10) feet. The system sensing is designed to ignore distributed noise, such as from wind, rain or heavy vehicles passing, or natural disturbances, such as small animals.

Transmitters along the fence send alarm data and system status to a control module. The cable provides a pathway for alarm signals and operating power for all installed modules and auxiliary sensors along the perimeter. System software interfaces directly with a workstation computer (PC) which provides a graphic map of the site and alarm monitoring display.

Sensitivity calibration automatically compensates for variations in the fencing. Fence or area zones are set in the software and can be modified at any time to accommodate site growth or changes, or detection trends.

Perimeter Buried Cable Technology Intrusion Detection System
A cable system designed primarily for covert perimeter protection. System cabling is provided in pairs and sensing is volumetric and follows terrain topology, locating movement of walking, running or crawling. The cabling can typically be buried in soil, concrete or asphalt, and provide a uniform detection grid along the perimeter.

This system is cable of closely locating perimeter disturbances using the spatial and time aspects of the target to discriminate intrusions from natural disturbances, such as small animals, or distributed noise, such as from wind, rain or snow.

Area zones are set in the software and can be modified at any time to accommodate site growth or changes, or detection trends.

System software interfaces directly with a workstation computer (PC) which provides a graphic map of the site and alarm monitoring display.

Perimeter Microwave Link Technology Intrusion Detection System
Microwave is a volumetric perimeter detection system for perimeter fence lines, open site areas and access gates. Microwave technology detects human intruders with minimal natural or environmental nuisance alarms. The system provides continuous monitoring of intrusion alarm, operational status, signal strength and detection parameters.

The transmitter and receiver elements are surface mounted on a metal base-plate and covered by a molded case dome, and typically provided with swivel mounts for set-up and adjustment to site conditions.
Intrusion detection is accommodated through the invisible pattern of microwave energy between transmitter and receiver. Changes in signal amplitude at the receiver are directly related to the intruder's size and density, allowing the sensor to discriminate between objects. Adjustments can provide alarm on larger or smaller targets, depending on the specific application, and can be modified at any time to accommodate detection trends.

System software interfaces directly with a workstation computer (PC) which provides a graphic map of the site and alarm monitoring display.

The microwave detection system can be provided as a dual system, with stacked elements, designed for protection in high risk areas. The lower element typically provides a narrow detection pattern, optimized to detect a slow moving, prone, crawling intruder, while the upper element typically provides a medium to wide detection pattern designed to detect an intruder walking, running, or jumping.

Perimeter Passive Infrared Technology Intrusion Detection System

The Passive Infrared (PR) intrusion system uses a sensor specifically designed for outdoor detection applications. A set of sensors includes a transmitter unit, the source of active infrared emissions, and a receiver unit, which receives and analyzes the signals, detecting intruders passing between the two units. The sensors detect intruders by sensing the temperature (heat radiation) difference or contrast between the background scene and that of the intruder. Optical filtering reduces the effect of humidity, fog, rain and snow, and attenuates the unwanted radiation from sunlight and automobile headlights.

System software interfaces directly with a workstation computer (PC) which provides alarm monitoring display.

MECHANICAL/PUMING SYSTEMS

1. Energy Sources

The primary cooling energy sources shall be electric in the form of high efficiency air-cooled chillers utilizing variable air volume boxes with hot water heat for individual room control. Constant volume & variable air volume systems will be used as accordingly throughout the facility. The entire building is to be served with chilled water & hot water. Primary chilled water shall be provided at a constant 45 degrees F in sufficient quantities to handle the building load. Multiple gas-fired boiler(s) shall be provided for heating hot water. Heating and cooling shall be provided at the air handling units except those areas served with fan coil units and variable air volume boxes where the heat shall be located at the boxes and the individual fan coil units.

2. Energy Conservation Measures

Energy conservation shall be accomplished thru an efficient building envelope and components of the heating, ventilating and air conditioning systems.

A. Building envelope: The building walls are of medium weight construction and well insulated. Heat transmission thru exterior wall shall be as follows:

- Outside wall: Masonry/Metal veneer with stud construction, batt type insulation,

Based on the above, the walls section will constitute an average exterior wall "U" value of 0.10 Btu/Hr.Ft.

Exterior windows are steel frame type with insulated/tinted reflective glass with a "U" value of approximately 0.60 Btu/Hr.Ft. and a shading coefficient of 0.50. No interior shading shall be considered with the HVAC load analysis and calculations.

The roof and ceiling system shall consist of an asphalt or metal roof, metal deck with insulation at the roof deck with an approximate "U" value of 0.50 Btu/Hr.Ft.

The interior-exterior design conditions shall be an outdoor design condition of 95 degrees F DB, 80 degrees F WB and an indoor condition of 75 degrees F (50 % Relative Humidity).

All mechanical systems provided for the facility shall be designed to be as energy efficient as possible and as further described in the heating, ventilation and air conditioning sections. An energy management system will be provided as to run the system as efficiently as possible while maintaining space conditions for the end user.

The EMS system will be able to be monitored off site by a third party.

3. Heating, Ventilation and Air Conditioning

Primarily, the proposed building is a correctional facility containing dormitories, gathering spaces, and office spaces. The HVAC system shall consist of the following high efficiency components.

A. Primary Cooling

Primary cooling and heating shall be provided by a local central plant facility. A secondary pumping system shall be provided in the building to distribute chilled water to the air handling units and fan coil units.

B. Pumping Systems

New building chilled water pumps along with new heating hot water pumps shall have high efficiency motors with rpm not to exceed 1760 RPM. The new building pumps shall be provided with modulating speed drives and shall be utilized in conjunction with 2-way modulating valves at the air handling units. A three way valve will be provided at the furthest air handling unit as to maintain minimum flow in the piping system.
C. Air Handling Systems

Air handling units shall be medium pressure, draw thru units with chilled and heating hot water coils (except those units utilizing VAV boxes where heating will be at boxes). The units with VAV boxes will be equipped with 2-way valves and shall be provided with static pressure controlled variable frequency drives to minimize required air flow and use of horsepower. All air handling unit motors shall be high efficiency and motors selected and matched with variable drive systems where applicable. Large air handling units are to be provided with fan matrix assemblies, utilizing multiple fans within the air handling unit providing redundancy for the end user.

D. Terminal V.A.V. Boxes

The terminal VAV boxes shall be pressure independent with direct digital controls. The boxes shall vary total air volume to a minimum set point as based on sensible heat conditions. Minimum set point shall ensure ventilation rates are maintained. Boxes shall be equipped with heating hot water coils. All VAV boxes are to be equipped with leaving air temperature sensors.

E. Fan Coil Units

The fan coil units equipped with chilled and heating hot water coils shall be provided to serve areas that need independent control of the respective room environment.

F. Ventilating Systems

All restrooms, trash/recycle rooms, toilet rooms, shower rooms, janitor’s closets, etc. shall be ducted to the exterior via a dedicated fan system. The building(s) will be positively pressurized.

E. Heating:

Building shall be equipped with multiple energy efficient gas fired heating hot water boiler(s) utilizing high recovery operation and controlled by outdoor sensor controlling hot water temperature based inversely on outdoor temperature.

4. Plumbing

Building shall be equipped with multiple energy efficient gas-fired domestic hot water heaters utilizing high recovery operation and controlled by a solar in the domestic hot water return line. Heater efficiency shall meet all ASHRAE requirements.

Sanitary Sewer: All sanitary waste systems serving the building shall be collected and brought out the facility to existing main utilities. All sanitary waste and vent systems below slab shall be solid wall SCH 160 PVC and be installed in strict accordance with La. State Plumbing Code (2013 Edition). All sanitary sewer above the building slab & within return air plenums to be cast iron, no-hub type with no-hub couplings.

Plumbing Fixtures: Toilet fixtures shall be high quality vitreous china with the required carriers and supports. Sinks in break rooms shall be stainless steel, and lavatories at the main restrooms shall be white vitreous china wall hung type. Water closets and urinals shall be wall mounted flush valve type. All kitchen equipment, as required, to be provided by food service designer. Drinking fountains & water coolers shall be required per LSFC (2013 ed.) to be handicapped accessible as per 4.1.3. If toilet rooms are provided, then each public and common use toilet room shall comply with 4.22.

Security Plumbing Fixtures: Stainless steel detection grade plumbing fixtures will be provided at all areas requiring security plumbing fixtures.

Eyewash Stations: Eyewash fixtures are to be provided in the following locations, as required by the User: One each at the large Volech shops (2 shops), and one in the Maintenance Shop.

Water Supply: Domestic cold water & hot water piping shall be type “L” hard drawn copper.

Pipe Insulation: All drain receiving condensate from air handling units shall be insulated with foil faced duct wrap. All domestic cold & hot water lines are to have fiberglass insulation with pipe labels and directional flow arrows.

Roof Drains: All flat roof areas will be provided with roof drains sized to handle the rain fall for the area. All horizontal roof drain piping to be insulated with foil-faced duct insulation. All roof drains to be cast-iron as to eliminate all noise transmission.

5. Fire Protection

The entire facility is to be protected with a wet pipe type sprinkler system designed in accordance with NFPA 13. The sprinkler systems shall be designed as required for occupancies specified by experienced personnel have competency in the execution of such work. Sprinkler system design shall be performed only by engineers licensed by the State of Louisiana.

Fire dampers (where required by code) shall be installed at all penetrations in rated walls.

Due to the existing water supply pressure/flow a fire pump and fire water storage tank may need to be provided in the design of the fire protection system. The fire pump
system is to be UL Listed & FM Approved. The fire pump system is to come complete with pump, motor, controller, accessories, and complying with all the requirements of NFPA 20. Pump shall deliver not less than 85 percent of rated head at 150 percent of rated capacity. Churn pressure shall not exceed 140 percent of rated design pressure. The flow and pressure of the fire pump is to be determined during the design phase.

6. General Space Requirements

Interstitial space shall accommodate the air handling units, plumbing, ductwork, and VAV boxes.

Electrical Systems Narrative

This narrative is intended to delineate the electrical scope of services for a new detention center campus in Monroe, Louisiana. Electrical systems will be provided for the following facilities, within multiple buildings, and areas (all as identified on the SITE PLAN), conceptually as:

- Dorm Building
- Dorm Building
- STU Dorm Building
- Multi-Purpose Gym Building
- Medical Building
- Admin/Lobby/Control Building
- Education Building
- Food Service Building
- Maintenance/Laundry Building
- Mechanical Building
- Delivery Sally Port
- Outdoor Rec Area
- Parking Area
- Intake Drop Off
- Circle Drive
- Site

Electrical service and distribution systems will be sized to accommodate future expansion to include a new Dorm Building.

Referenced Codes and Standards

The latest adopted editions of the following Codes, Standards, and Requirements will be used as applicable:

- American National Standards Institute, Inc. (ANSI) and ANSI C-2
- American Society for Testing and Materials (ASTM)
- ANSI C-2 National Electrical Safety Code
- Building Industry Consulting Service International (BICSI) Regulations
- Institute of Electrical and Electronics Engineers (IEEE)
- International Building Code
- National Electrical Manufacturers Association (NEMA)
- NFPA 70 National Electrical Code
- NFPA 72 National Fire Alarm and Signaling Code
- NFPA 110 Standard for Emergency and Standby Power Systems
- NFPA 780 Standard for the Installation of Lightning Protection Systems
- NFPA 90A Building Energy Code
- Occupational Safety and Health Administration (OSHA) Regulations
- Underwriter Laboratories, Inc. (UL)
- Entergy Applicable Standards, Recommendations, Requirements, Etc.

Electrical Systems

All electrical systems will be new and, in general, the scope of services includes:

- Underground, Empty Conduits Required for the Entergy-Provided, Transformer-Primary, Electrical Service Cables
- Accommodations Required for Entergy-Provided, Pad-Mounted, Main, Power Transformer
- Secondary Electrical Distribution System to and for all Project Facilities
- Lighting and Lighting Control systems
- Electrical Power Systems
- 277/480-Volt and 120/208-Volt, Branch and Feeder Circuitry for:
  - Power to and for Mechanical Systems
  - Power to and for Plumbing Systems
  - Power to and for Owner-Furnished Equipment
- 120-Volt, Branch Circuitry and/or Raceway Infrastructure for Low-Voltage Systems, Including (but Not Limited to):
  - Telephone and Data
  - CATV
  - Access Control
  - Surveillance
  - Control and Interlock Wiring for Mechanical-Division Work
  - Communications Infrastructure
- Grounding systems, Including (but Not Limited to) Grounding for:
  - Electrical Service
  - Electrical Distribution
  - Lightning Protection Systems
  - Surge Protection Devices
  - Information Technology Systems
- Fire Alarm and Smoke Detection Systems
- Lightning Protection Systems
• Standby, Emergency, Electrical, Power-Generation System

Utility Source Systems

The primary electrical service for the campus will originate from an existing, overhead, utility-distribution (Entergy) system located along Business Highway 165 (Jackson Street). A primary, underground, empty-conduit (with pull wires) ductbank will be provided from the Entergy-designated, power pole of such overhead utility-distribution system to the Entergy-provided, pad-mounted, main, power transformer located near the Mechanical Building.

Such pad-mounted transformer will be equipped with master, secondary, utility-company (Entergy) metering, and will feed the main, electrical service-entrance equipment for incoming power, via an underground, transformer-secondary, service-lateral feeder (raceways and electrical cables), which will be provided. Such main service-entrance equipment will be a free-standing, NEMA 3R (raintight), service-entrance-rated, automatic transfer switch (SE-ATS) which is equipped with a "utility" ("normal-power"), main, circuit breaker and which is located at the exterior wall of the Mechanical Building. The "load" lugs of such SE-ATS will be connected where and as required to feed for incoming power the main switchboard located in the Mechanical Building.

The main switchboard will be free-standing; will have characteristics of 277/480-volts, 3-phase, 4-wire; will be equipped with a NEMA 1 (indoor-type) enclosure; will be equipped with main lugs; will be equipped with customer metering; will be equipped with phase-failure/phase-voltage-imbalance protection; and will be equipped with a surge-protective device (SPD).

The large, 480-volt, electrical loads at and near the Mechanical Building will be fed for power directly from the main switchboard.

Secondary electrical power distribution will originate from the main switchboard and will be will routed (underground where outdoors) to each project building.

Consequently, campus electrical power distribution system will have the characteristics of 277/480 volts, 3 phase, 4 wire, wye connected.

277/480-volt branch-circuit panelboards will be provided, where and as required, at all project buildings.

All project electrical loads, for which such is practicable, will be fed for power either at 277 volts or at 480 volts, so as to be fed for power directly from the site, 277/480-volt, distribution system, and all such loads will be fed for power from such respective, 277/480-volt, branch-circuit panelboards (except, obviously, the large, 480-volt, electrical loads at and near the Mechanical Building, which will be fed for power from the main switchboard).

480-volt to 120/208-volt, 3-phase, step-down transformers will be provided at all project buildings, where and as required to feed project 120-volt and/or 208-volt power for 120-volt and 208-volt electrical loads.

120/208-volt branch-circuit panelboards will be provided, where and as required, at all project buildings, and will be connected so as to be fed for incoming power from such respective step-down transformers. All project 120-volt and 208-volt electrical loads will be fed for power from such respective, 120/208-volt, branch-circuit panelboards.

Service and Distribution Systems shall include capacity and physical space as required to accommodate a future Dorm Building.

Service and Distribution Gear

Incoming utility (Entergy) service will connect to the fee-standing SE-ATS, located at the exterior wall of the Mechanical Building, which will feed for power the main switchboard located in the Mechanical Building.

Distribution boards will be provided with branch breakers to serve lighting and appliance panelboards and transformers.

All panelboards will be of the circuit-breaker type rated for the use respectively intended, and for the capacities required, with copper busling, neutral busses, and separate equipment-ground busses. Panelboard enclosures will be the surface-mounted type where possible and where located in unfinished areas; otherwise panelboard enclosures will be the flush-typess.

Standby, Electrical, Emergency, Power-Generation System

The standby, emergency, electrical, power-generation system (the “system”) will be provided and arranged for full-facility (all buildings, sites, areas, etc.), emergency power backup.

The system will include (but not be limited to) the emergency engine-generator set (the “generator”); the weatherproof housing; the critical-zone exhaust silencer; the double-wall, sub-base, diesel-fuel storage tank, the reinforced-concrete slab, the grounding apparatus, the service-entrance-rated, automatic transfer switch (the “SE-ATS”); the generator-quick-connect, docking station (the “GQC”); the remote, emergency, power-off, pushbutton station (the “EPO”); the remote annunciator panel (equipped with an integral EPO); all other required apparatuses, etc.

The generator will be diesel-fueled and will have output characteristics of 277/480 volts, 3 phase, 4-wire, wye connected. The genset-output power capacity will be as required to accommodate full-facility electrical load.

The genset will be located near the Mechanical Building, the SE-ATS will be located at the exterior wall of the Mechanical Building, the GQC will be located at the exterior wall of the Mechanical Building, the EPO will be located at the exterior wall of the Mechanical Building,
and the remote annunciator panel (with integral EPO) will be located at the exact interior location stipulated by the owner (presumably in the Campus Security Center).

The purpose for the GGC is for connection of a portable genset, for full-facility backup; if and when the permanently-installed genset is out of commission.

The system will be completely automatic for unattended operation for the entire duration of all losses of normal "utility" power. The genset will be provided with a genset control panel/system, which will communicate flawlessly with the remote annunciator panel (with integral EPO).

Central Uninterruptible Power Supply System (the "UPS")

A UPS will be provided as required to feed security electronics equipment, telecommunications systems, and other sensitive electronic equipment which require an uninterruptible power source during the transition from the normal ("utility") power source to the standby "emergency" power source. The UPS will be located in or near the MDF room and will be sized to have a minimum battery run time of twenty (20) minutes.

Branch Systems

Electrical systems, as applicable, will be designed for energy efficiency and in accordance with requirements for LEED certification, such as LED lighting, automatic lighting controls, and general task switching arrangements.

Lighting Systems

Lighting will consist of the following fixture types and designed in compliance with the IESNA recommended lighting level for each interior and exterior space, as contained in the Lighting Handbook, 10th Edition. All project lighting fixtures will be equipped with LED lamps, with an apparent color temperature of approximately 4000 degrees K.

General Illumination – Interior

Lighting fixtures in and for secure areas will be maximum security type fixtures for all areas subject to inmates. Lighting in housing areas will include LED right lighting fixtures.

Administrative areas will be provided with direct/indirect troffers with dual level lighting capabilities.

Corridors and general public areas will be provided with direct/indirect troffers and downlight fixtures.

The kitchen, and general utility and work areas, will be provided with recessed and modular troffers, and channel fixtures, with sensing to coordinate with each specific area requirement.

Gymnasium sports areas will be provided with low bay troffers having protective wire guards and multiple switching arrangements.

Educational areas will be provided with direct/indirect troffers with dimming capabilities.

General Illumination – Exterior

Where practical, building-mounted luminaires will be provided to render illumination in the immediate vicinities of all buildings. Pole-mounted luminaires will be provided where and as required to illuminate the Outdoor Rec Area, Circle Drive, the Parking Area, and the Site. In addition, lighting will be provided for site features, including flagpoles, signage, etc.

Site lighting fixtures will be equipped with full cut-off optics, and will be aimed and oriented so that no direct beam illumination exits the project site, or encroaches on other areas with different illumination needs.

Lighting poles will be mounted on suitable (minimum 2'-0" diameter round) reinforced-concrete bases.

General Illumination – Controls

No automatic lighting controls will be provided in and for areas where there is a concern relative to safety and/or security (as allowed by the Louisiana Energy Code). Manual lighting controls will be provided in and for such areas, and such lighting controls will be located so as to be accessible only by staff personnel.

For areas where safety and/or security is not a concern, interior lighting controls for the common use areas where intermittent occupancy is not anticipated will be rendered via the programmable central lighting control system (which will be provided). Manual override switching will be provided at the guard-station locations, and at other locations stipulated by the owner.

Other indoor areas, particularly where intermittent occupancy is anticipated, lighting will be controlled via automatic occupancy-sensing controls (which will be provided), with accompanying, local, manual, switch controls.

Exterior lighting will be controlled via the programmable central lighting control system, and the associated system input devices (system internal timing function, photocells, manual overrides switches, etc.), for "dusk-to-dawn" operation or for "on-at-dusk/off-at-the-pro-set-time" operation, as respectively stipulated by the owner. All lighting fixtures along the perimeter of the campus will be able to be selectively controlled in separate groups and in total.

Power Systems
Raceway systems shall be provided as dictated by specific use and environment. Surface-mounted raceway systems may be provided for work counters and in the Maintenance/Laundry Building.

Feeder, branch-circuit, and fire-alarm-circuit wiring will be installed in conduit. Conduits in secure areas will be concealed at all locations where concealment is possible. The general guidelines for provision and installation of raceways are as follows:

**Outdoors:**
- Above-Ground Conduit: Rigid Galvanized Steel (RGS) Conduit;
- Underground Conduit: Schedule 40 PVC, direct buried (except PVC Schedule 80 where required by Entergy); and

**Indoors:**
- Exposed, Not Subject to Physical Damage: EMT;
- Exposed and Subject to Severe Physical Damage: Rigid Galvanized Steel (RGS) Conduit;
- Concealed in Ceilings and Interior Walls and Partitions: EMT;
- Where Connected to Vibrating Equipment: Flexible, Galvanized Steel (RGS) Conduit in Dry Locations; PVC-Coated, Flexible, Galvanized Steel (RGS) Conduit in Damp or Wet Locations;
- Other Damp or Wet Locations: Rigid Galvanized Steel (RGS) conduit, and
- Exposed in Secure Areas Below 15'-0" A.F.F.: Rigid Galvanized Steel (RGS) Conduit.

Electrical conductors will be copper, and electrical cables will be equipped with insulation having a temperature rating of 90 degrees C. Insulation will be THHN/THWN or XHHW, 600-volt rated.

General use outlets will be provided throughout the facility in accordance with the requirements and use for each space, and in accordance with respective furniture and equipment layouts.

Convenience outlets will be provided throughout the facility for cleaning purposes, etc., for maintenance use, and in equipment rooms.

GFI-type outlets will be provided where and as necessary, and as required by code.

Outlets in secure areas will be provided as dictated by the requirements for each specific area. Power to all outlets in inmate areas will be controlled from guard stations, or other applicable areas. All devices in areas subject to youth will be tamper resistant, with tamper-resistant covers and hardware.

Circuiting and connections will be provided for all project equipment, including mechanical, plumbing, and kitchen equipment, motorized shades, smartboards, video-conference equipment, computer-lab arrangements, etc., and for all owner-furnished equipment. Provision will be made for at least three (3) large network printers on the campus, to serve the following areas: administration, medical, and classroom/school areas.

Raceway systems, and rough-in for back-boxes, power connections, thieves, etc., required to serve low-voltage systems will be provided, based on the dictates of the respective design consultants, including as required for tele-data systems, audio/visual systems, access-control systems, surveillance systems, irrigation systems, intrusion-detection/tracking systems, and area-of-refuge/rescue-assistance systems.

**Grounding and Bonding Systems**

The entire system of raceways and equipment will be bonded and grounded in accordance with NFPA 70 Article 250 Grounding and Bonding. A triplicated grounding rod system will be provided outside of the building foundations. The AC protective-grounding system will be bonded to the service-entrance equipment, building steel, and domestic water-service piping. A grounding system for the communications racks and equipment, and including Telecommunications Grounding Busses, will be provided per ANSI TIA/EIA-568, and will be connected directly to the service-entrance ground. An exterior, below-grade, ground loop around the facility, with ground rods spaced at appropriate intervals, will be provided. The project lightning protection system will be connected, via lightning-protection-system down conductors, to the exterior, building, grounding loop below grade, in order to achieve a low impedance earth-ground path. Separate, green-insulated, equipment-grounding conductors will be provided in all feeder and branch-circuit raceways, in accordance with NEC Table 250-85. Each telephone room, and each security electronics room, will be provided with a ground bar that is connected to the facility grounding system.

**Fire-Alarm System**

A campus-wide, fire-alarm system will be provided, and will include a main, fire-alarm, control panel located in the Admin/Lobby/Control Building, with remote annunciator panels located in the Security Office, and elsewhere where required by the owner. Each building other than the Admin/Lobby/Control Building will be provided with a fire-alarm-system sub-
panel which is connected to, and interfaced with, the main fire-alarm control panel. The system will be configured so that the loss of any campus feeder or panel will not affect the operation of the remainder of the system.

The system will be PC based, with a system workstation being provided, and the system will include voice notification, dial-up communication for emergency forces notification, and DC source, power backup.

The system will include (but not be limited to) audible and visual notification appliances, manual pull stations, smoke detectors, thermal detectors, and interface modules for mechanical equipment, plumbing equipment, kitchen hood equipment, sprinkler system equipment, access-controlled doors, etc.

The system will be capable of on-site programming as required to accommodate system expansion and changes in facility operation. The system will be capable of recalling alarms and trouble conditions in chronological order, for the purpose of recreating an event history. All devices will be addressable, will be supervised, and will have the capability of being disabled or enabled individually.

The fire-alarm system will be sized as required to accommodate future expansion to include a new Dorm Building.

Lightning Protection System

A lightning protection system (LPS) will be provided. The LPS will be designed and specified as required to meet all applicable UL Master Label requirements. The LPS will comprise air terminals placed on roof structures, bare-copper lightning-protection conductors, and all other apparatuses which are required for a complete system. LPS down conductors will be concealed within the building structure in PVC conduit, and will terminate at ground rods. The LPS will be bonded to the facility, incoming-service, building grounding-electrode system as per NFPA 70 and NFPA 780 requirements.
### SPECIFICATION OUTLINE
**Masterformat 2014**

#### DIVISION 01 – GENERAL REQUIREMENTS
- 01 1000 Summary
- 01 2500 Substitution Procedures
- 01 2600 Contract Modification Procedures
- 01 2900 Payment Procedures
- 01 3100 Project Management and Coordination
- 01 3200 Construction Progress Documentation
- 01 3233 Photographic Documentation
- 01 3300 Submittal Procedures
- 01 4000 Quality Requirements
- 01 5000 Temporary Facilities and Controls
- 01 5723 Temporary Erosion Control
- 01 6000 Product Requirements
- 01 7300 Execution
- 01 7419 Construction Waste Management and Disposal
- 01 7700 Closeout Procedures
- 01 7800 Closeout Submittals
- 01 7900 Demonstration and Training
- 01 8000 Electronic Reporting/Communications

#### DIVISION 02 – EXISTING CONDITIONS
- 02 4100 Demolition

#### DIVISION 03 – CONCRETE
- 03 3000 Cast-in-Place Concrete
- 03 3500 Concrete Finishing

#### DIVISION 04 – MASONRY
- 04 2001 Masonry Veneer
- 04 2200 Concrete Unit Masonry

#### DIVISION 05 – METALS
- 05 0550 Security Fasteners
- 05 1200 Structural Steel Framing
- 05 1213 Architecturally Exposed Structural Steel Framing
- 05 2100 Steel Joist Framing
- 05 3100 Steel Decking
- 05 4000 Cold Formed Metal Framing
- 05 5000 Metal Fabrications
- 05 5213 Pipe and Tube Railings

#### DIVISION 06 – WOOD, PLASTICS AND COMPOSITES
- 06 1000 Rough Carpentry
- 06 1600 Sheathing
- 06 4100 Architectural Wood Casework

#### DIVISION 07 – THERMAL AND MOISTURE PROTECTION
- 07 1300 Self-Adhered Sheet Membrane
- 07 2100 Thermal Insulation
- 07 4113.16 Standing Seam Metal Roof Panels
- 07 4213 Metal Wall and Soffit Panels
- 07 4264 Metal Composite Wall Panels
- 07 4633 Composite Wall and Soffit Panels
- 07 5200 Modified Bituminous Membrane Roofing
- 07 6200 Sheet Metal Flashing and Trim
- 07 7100 Roof Specialties
- 07 7200 Roof Accessories
- 07 8400 Firestopping
- 07 9200 Joint Sealants

#### DIVISION 08 – OPENINGS
- 08 1113 Hollow Metal Doors and Frames
- 08 1416 Flush Wood Doors
- 08 3100 Access Doors and Panels
- 08 3323 Overhead Coiling Doors
- 08 4113 Aluminum-Framed Entrances and Storefronts
- 08 4413 Glazed Aluminum Curtain Walls
- 08 7100 Door Hardware
- 08 8000 Glazing

#### DIVISION 09 – FINISHES
- 09 2116 Gypsum Board Assemblies
- 09 2400 Portland Cement Plaster
- 09 3000 Tiling
- 09 5100 Acoustical Ceilings
- 09 5753 Security Acoustical Ceilings Cementitious Wood Fiber
- 09 6500 Resilient Flooring
- 09 6700 Fluid Applied Resinous Flooring
- 09 6813 Tile Carpeting
- 09 7200 Wall Coverings
- 09 9000 Painting and Coatings
- 09 9600 High-Performance Coatings

#### DIVISION 10 – SPECIALTIES
- 10 1400 Signage
- 10 2113.19 Plastic Toilet Compartments
- 10 2601 Wall and Corner Guards
- 10 2800 Toilet, Bath and Laundry Accessories
- 10 4400 Fire Protection Specialties
- 10 5100 Lockers
- 10 5300 Extruded Aluminum Walkway Covers
- 10 7500 Flagpoles

#### DIVISION 11 – EQUIPMENT
- 11 1000 Commercial Laundry Equipment
- 11 1550 Vehicular Slide Gate Operator
- 11 1900 Detention Equipment
- 11 1910 Detention Furnishings
- 11 1920 Integrated Detention and Security Controls Systems
- 11 1940 Security Glazing
- 11 3100 Residential Appliances
- 11 4000 Food Service Equipment
- 11 4500 Television and Video Monitor Supports
- 11 6623 Gymnasium Equipment

#### DIVISION 12 – FURNISHINGS
- 12 2400 Roller Window Shades
- 12 3600 Simulated Stone Countertops
- 12 4813 Entrance Floor Mats and Frames

#### DIVISION 13 – SPECIAL CONSTRUCTION (NONE)

#### DIVISION 14 – CONVEYING SYSTEMS (NONE)
SPECIFICATION OUTLINE CONTINUED

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DIVISION 20 – COMMON FIRE SUPPRESSION, PLUMBING, AND HVAC REQUIREMENTS

20 0100 General Provisions
20 0111 Environmental Control Services
20 0200 Miscellaneous Mechanical Requirements
20 0213 Basic Piping
20 0529 Hangers and Support Devices
20 0548 Vibration Isolation for Mechanical Systems
20 0553 Identification of Piping Valves and Equipment
20 0700 Pipe Insulation
20 2116 Piping Specialties

DIVISION 21 – FIRE SUPPRESSION

21 0303 Automatic Sprinkler System
21 0516 Fire Protection Piping

DIVISION 22 – PLUMBING

22 0519 Water Distribution Piping
22 0525 Water Supply
22 0534 Backflow Prevention Assembly Enclosure
22 1000 Domestic Water System
22 1300 Sanitary Waste and Vent and Storm Drainage
22 3300 Water Heater and Accessories
22 3400 Fuel-Fired, Domestic Water Heaters
22 4000 Plumbing Fixtures and Trim
22 4600 Security Plumbing Fixtures

DIVISION 23 – HEATING VENTILATING AND AIR CONDITIONING

23 0010 Mechanical General Provisions
23 0020 Basic Mechanical Requirements
23 0519 Meters and Gauges
23 0529 Hangers and Supports
23 0590 Contractor Coordination with Testing, Adjusting, and Balancing
23 0593 Testing Adjusting and Balancing
23 0620.20 Hydronic Specialties
23 0630.19 Air Outlets and Inlets
23 0670.13 AHU’s
23 0713.20 Piping Insulation
23 0900 Building Automation System
23 0910 Motors, Starters, VFD’s, and Electrical Work

DIVISION 23 – HEATING VENTILATING AND AIR CONDITIONING

23 1123 Facility Natural Gas Piping
23 1321 Hydronic Piping
23 2113 Preinsulated Underground Hydronic Water Piping
23 2123 HVAC Pumps
23 3113 Metal Ducts
23 3313 Duct Accessories
23 3400 Air Distribution (Fans)
23 3600 Air Terminals-Variable Volume
23 3700 Air Outlets
23 3723 Roof Hoods, Equipment Rails and Equipment Curbs
23 3813 Commercial Kitchen Hood
23 3823 Air Cooled Chiller
23 7300 Central Station Air Handler
23 8124 Computer Rooms Units
23 8239 Electric Heating Equipment
23 8413 Electrode Evaporative Steam Humidification System

DIVISIONS 24 & 25 – NOT USED

DIVISION 26 – ELECTRICAL

26 0500 Common Work Results for Electrical
26 0519 Low-Voltage Electrical Power Conductors and Cables
26 0526 Grounding and Bonding for Electrical Systems
26 0529 Hangers and Supports for Electrical Systems
26 0533 Raceways and Boxes for Electrical Systems
26 0536 Cable Trays/Pathways for Electrical and Telecommunications Systems
26 0548 Vibration Controls for Electrical Systems
26 0553 Identification for Electrical Systems
26 0573 Overcurrent Protective Device Coordination Study
26 0923 Lighting Control Devices
26 2200 Low-Voltage Transformers
26 2413 Switchboards
26 2416 Panelboards
26 2726 Wiring Devices
26 2813 Fuses
26 2816 Enclosed Switches and Circuit Breakers
26 2819 Enclosed Controllers
26 3610 Service Rated Transfer Switches
26 4113 Lightning Protection for Structures (if required)
26 4313 Surge Protective Devices for Low-Voltage Electrical Power Circuits

DIVISION 26 – ELECTRICAL CONT.

26 5100 Interior/Exterior Lighting

DIVISION 27 – COMMUNICATIONS

27 0500 Common Work Results for Communications

DIVISION 28 – ELECTRONIC SAFETY AND SECURITY

28 3111 Digital, Addressable Fire Alarm System

DIVISION 30 – NOT USED

DIVISION 31 – EARTHWORK

31 1100 Demolition, Clearing and Grubbing
31 2000 Excavation and Embankment
31 3116 Termite Control

DIVISION 32 – EXTERIOR IMPROVEMENTS

32 1000 Aggregate Base Course
32 2000 Portland Cement Concrete Pavement
32 3000 Painted Parking Stripes
32 3113 Chain Link Fences and Gates
32 4000 Miscellaneous Sitework Items
32 9213 Hydro-mulch Seeding
32 9223 Sodding

DIVISION 33 – UTILITIES

33 1000 Water Distribution System
33 3000 Sanitary Sewer System
33 4000 Storm Drainage System
## Project Timeline

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