

RESOLUTION R-19-034

A RESOLUTION OF THE BOARD OF COUNTY COMMISSIONERS OF MANATEE COUNTY, FLORIDA, AUTHORIZING THE USE OF THE THIRD EDITION OF THE PREFERRED BUILDING AND GROUNDS EQUIPMENT, MATERIALS AND DESIGN CRITERIA CATALOG (“CATALOG”) FOR THE PURPOSE OF PROMOTING EFFICIENT, QUALITY, AND COST-EFFECTIVE MATERIALS, PRODUCTS, AND DESIGN; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, Manatee County has been recognized by the Florida Green Building Coalition (“FGBC”) as a Platinum County, the highest award given for green and sustainable efforts; and

WHEREAS, Manatee County (“County”) achieved this distinction by following the guidelines and utilizing the products identified in the Catalog; and

WHEREAS, the County’s Property Management Department utilizes the Catalog when selecting and purchasing energy efficient and environmentally friendly products, materials, and designs; and

WHEREAS, the Catalog is a continuously updated compilation of recommended products, materials, and designs that have proven to be reliable by County staff who have daily contact and experience with the construction and maintenance of County facilities and grounds; and

WHEREAS, use of the Catalog standardizes the products, materials, and designs utilized in County facilities and grounds; and

WHEREAS, standardizing products, materials, and designs increases efficiency by limiting the continuing maintenance and repair training required for various installation and maintenance needs; and

WHEREAS, the Board of County Commissioners of Manatee County finds that it is in the County’s best interest and that there is a valid public purpose to adopt the Catalog in order to promote efficiency across County departments.

NOW, THEREFORE, BE IT RESOLVED by the Board of County Commissioners of Manatee County, Florida as follows:

1. The Board of County Commissioners hereby approves the Third Edition of the Preferred Building and Grounds Equipment, Materials and Design Criteria Catalog and supporting documentation to be used by all Manatee County staff when replacing, remodeling, or constructing various grounds and facilities belonging to Manatee County.

2. The Board of County Commissioners hereby designates existing staff within the Property Management Department to review and update the Catalog on a continuous basis, to reflect new technologies and eliminate products, materials, or designs that failed to meet expectations.
3. This Resolution shall be in effect for a period of one year or until such time as an updated edition of the Catalog has been approved by the Board of County Commissioners, whichever occurs first.
4. This Resolution shall take effect immediately upon adoption.

DULY ADOPTED with a quorum present and voting this 23rd day of April, 2019.



**BOARD OF COUNTY COMMISSIONERS
OF MANATEE COUNTY, FLORIDA**

By: Stephea R. Gunnson
Chairperson

ATTEST: ANGELINA COLONNESO
CLERK OF THE CIRCUIT COURT AND COMPTROLLER

By: Angelina Colonneso
Deputy Clerk

APPROVED IN OPEN SESSION 4/2/319
BY RESOLUTION R-19-034



Property Management Department
**Preferred Building and Grounds Equipment,
Materials and Design Criteria Catalog**



Version 3; Revised: Feb 2019

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Summary

This catalog serves as a reference for project managers, building maintenance staff, managers, purchasing agents, architects, engineers, construction managers, and all others who may be selecting products and systems for new building design and/or remodeling and retrofitting of existing Manatee County facilities. When requesting products or services, refer to the County's blanket purchase vendors, and when applicable, ask the vendor to include a return on investment (ROI).

The catalog has been designed to follow the Construction Specifications Institute (CSI). CSI provides structured guidelines for specification writing in the Project Manual. This is the most widely used standard in the construction industry.

All Manatee County Government Facilities

The Americans with Disabilities Act (ADA) ensures access to the built environment for people with disabilities. The ADA Standards establish design requirements for the construction and alteration of facilities subject to the law. These enforceable standards apply to places of public accommodation, commercial facilities, and state and local government facilities. State and local government facilities must follow the requirements of the 2010 Standards, including both the Title II regulations at 28 CFR 35.151; and the 2004 ADAAG at 36 CFR part 1191, appendices B and D.

If the start date for construction is on or after March 15, 2012, all newly constructed or altered State and local government facilities must comply with the 2010 Standards. Before that date, the 1991 Standards (without the elevator exemption), the UFAS, or the 2010 Standards may be used for projects when the start of construction commences on or after September 15, 2010.

The Department has assembled an official online version of the 2010 Standards to bring together the information in one easy-to-access location (https://www.ada.gov/2010ADASTandards_index.htm). It provides the scoping and technical requirements for new construction and alterations resulting from the adoption of revised 2010 Standards in the final rules for Title II (28 CFR part 35) and Title III (28 CFR part 36). All new construction and/or alterations must comply with these Department of Justice enforced standards.

Energy consuming products and devices shall meet or exceed the Energy Star specifications and be a qualified Energy Star product. Procedures, services and standards listed in this catalog should meet or exceed the recommendations. During the construction process, new buildings

are to be built to LEED silver standards. LEED certification is not required. **NOTE: Refer to the Florida Building Code 5th Edition (2014) with special attention to the Energy Code section which became effective July 1, 2015. The Energy Efficient Building Construction in Florida, authored by the University of Florida, IFAS office is also a recommended reference to review during a construction project.**

Florida Power and Light, our main utility provider, offers energy-saving programs and services which include rebates. Whether renovating or new construction, please review or have your consulting firm and or vendor review what is offered. **All new facilities built after January 1, 2018 will be considered for construction for use as safety shelters for employees and/or the public, during blue sky and grey sky events. The standards used for this construction shall consider, but not be limited to, hardening of the structure, expansion of the kitchen area, expansion of the restroom facilities with showers, HVAC upgrades and generator connectivity.**

A table listing programs Manatee County may qualify for are listed in the table on Page 9 (FPL Business Program Services found in the Attachment folder).

Anything listed as “no substitution” must be submitted for review.

Technology

Manatee County continues to embrace mobility, accountability and the **Internet of Things (IoT)** or simply stated "smart technologies" that support projects with the most advanced technology to ensure efficiency and accuracy offered. The **Internet of Things (IoT)** is a proposed development of the Internet in which everyday objects have network connectivity, allowing them to send and receive data. It is the internetworking of physical devices, vehicles (also referred to as "connected devices" and "smart devices"), buildings and other items — embedded with electronics, software, sensors, actuators, and network connectivity that enable these objects to collect and exchange data.

Technology, materials, tools, processes and operations will continue to change and improve. Manatee County is committed to finding and leveraging energy efficient technologies. Thoughtful research for LED lighting upgrades, building automation, energy-efficient HVAC technologies, and a new Bluetooth-enabled features such as automatic water meter reading system are examples of the effort that will be taken for new technology to have a positive impact on both the County, community and the environment.

Networked lighting and connected lighting have begun to blossom as technological advancements continue to increase the viability of the IoT. Innovative Lighting has been on the cutting edge of networked lighting (often referred to as Power over Ethernet lighting). A PoE system both powers and controls the LED lighting, multi-functional sensors and preset dimming wall switches on simple Ethernet cable, and the need for conduit or expensive labor has been eliminated. Up to 86% energy savings when compared to conventional fluorescent lighting is no small feat. Add to that making LED fixtures last at least twice as long as their rated life and you begin to see why many see a PoE system as the destiny of energy efficient LED lighting.

EXAMPLE:



Given a single Power over Ethernet connection (single gray cable looping below), a PoE splitter provides both data (gray cable looping above) and power (black cable also looping above) connections for a wireless access point. The splitter is the silver and black box in the middle, between the wiring box on the left and the access point (with its two antennas) on the right. The PoE connection eliminates the need for a nearby power outlet.

<http://www.ecmag.com/section/systems/power-poe>

<http://www.ledsmagazine.com/articles/print/volume-12/issue-8/features/dc-grid/poe-technology-for-led-lighting-delivers-benefits-beyond-efficiency.html>

Daylight Harvesting: The term used in the building controls industry for a control system that reduces electric light in building interiors when daylight is available, in order to reduce energy consumption. Daylight harvesting is an energy management technique that reduces overhead lighting use by:

- Utilizing the ambient (natural & artificial) light present in a space
- Dimming or switching OFF lighting when sufficient ambient light is present or when the space is unoccupied
- Utilizing zones to stagger the dimming and switching of lighting loads depending on their distance from ambient light sources, such as windows and skylights
- Benefits of daylight harvesting: Save money on electrical; Automated control of lights; Health benefits of correct lighting.

Note: “Daylight Harvesting Made Easy” found in Attachments - Lighting and Electrical folder

WELL Building Standard

It is recommended to follow the WELL Building Standard when during new construction and remodeling. The focus is on people and is performance based. The seven concepts of the WELL Building Standard is air, water, nourishment, light, fitness, comfort and mind. Strategies include air quality testing and monitoring; filtration and treatment; ventilation; moisture control; cleaning protocol; material selection during construction processes and healthy entrance. WELL promotes lighting systems designed to increase alertness, enhance experience and promote sleep. WELL also creates distraction-free, productive and comfortable indoor environments and encourages the integration of fitness and exercise into everyday life is aligned with the goals of Manatee County’s Employee Health Benefits program. <https://www.wellcertified.com/en/our-standard>

County Graphic Standards for County Logo and Logo Colors

Colors for printing in Pantone Matching systems, CMYK and RGB-color systems are addressed in the County Standard and must be matched to these color system codes. Refer to the *Manatee County Graphic Standards Style Guide*. (Located in Other attachment folder).

Facilities Space Programming Standards

Square footage space standards will be followed.

Commissioner / Constitutional Officer.....	300
Other Elected Official or Appointed Staff.....	250
Division Director / Manager.....	180
Manager.....	150

Professional.....	120
Technical Staff.....	100
Para Professional.	100
Administrative Support.....	70

- Standard occupied office space temperature set points will be programmed to 75 degrees (74-76) and relative humidity will be programmed to 52-59%. Unoccupied or night-time settings will be programmed and determined as needed to maintain the facility function.
- The procurement of office furniture shall be coordinated through Property Management and the end users due to the potential benefit from significant economies of scale in purchase volume or the potential of existing surplus supplies that may be re-assigned to the project at little to no additional cost.
- Breast feeding rooms
- Service dog allowances
- Conference rooms are recommended to be outfitted with: Smart monitors may be required, 1 telephone, 1 computer, 1 smart board, and ceiling fans with wall mounted control switch.
- AED's mounted in buildings should be AED PLUS which comes complete with AED Pads and batteries for use. Manufacturer is ZOLL Medical and the mounting for the AED is ZOLL AED Cabinet. Flushed or Recessed mounting. All new and remodeled buildings shall have a ZOLL AED PLUS defibrillator. <http://www.heartsmart.com/ZOLL-AED-Plus-Value-Package-p/bus-pkg-plus.htm> or call 1-800-422-8129. (See AED Plus Brochure in the Attachments folder).



**Florida Power and Light (FPL) REBATES
for Large Business/Commercial/Industrial**

Rebate	Description	How to Qualify	Benefits
Business Lighting	Receive a rebate for installing or upgrading to qualifying high efficiency lamps and systems	Rebates are for interior lighting that is used on a regular basis: <ul style="list-style-type: none"> • From 3 to 6 p.m. • Every day of the work week • From June 1 to Sept. 30 	<ul style="list-style-type: none"> • Better quality lighting at a lower cost • Reduced monthly operating costs • Lower energy usage is environmentally friendly
Business Energy Evaluation	<p>A free on-site analysis of your energy use.</p> <p>An Energy Expert comes to your business to do a complete evaluation of your equipment and energy use to find savings opportunities.</p> <ul style="list-style-type: none"> • Equipment evaluated includes: <ul style="list-style-type: none"> • Heating, Ventilating and Air-Conditioning systems (HVAC) • Building “envelope” where your building is exposed to the elements (areas such as roof, windows and insulation) • Lighting • Water heating • Processing equipment: motors, air compressor systems, elevators, conveyors, food preparation equipment and refrigeration equipment 	Any business may schedule a Business Energy Evaluation (BEE)	<p>Get personalized, detailed recommendations to help you:</p> <ul style="list-style-type: none"> • Identify energy-saving programs that are right for you • Lower energy costs: <ul style="list-style-type: none"> ✓ Understand how your energy usage compares to that of similar businesses ✓ Understand how weather can affect your energy use • Qualify for rebates that may apply to your business • Select equipment if you’re planning improvements, expansions or building new facilities
Thermal Energy Storage (TES)	<p>Install a TES system to reduce on-peak electricity use and to get a rebate on qualifying equipment.</p> <p>TES systems produce and store cold water or ice at night, when power is less expensive, and use it to cool your building efficiently throughout the day.</p>	<ul style="list-style-type: none"> • Purchase a qualifying TES system • TES rebates are based on a minimum kW savings requirement • Cooling load must be removed from the summer (June through Sept.) on-peak period of 3 to 6 p.m. weekdays 	<ul style="list-style-type: none"> • Less expensive time-of-use rate • Use more electricity during off-peak hours and less during peak • Lower demand charge <ul style="list-style-type: none"> – The shift in energy use from peak to off-peak hours reduces your on-peak demand • Potential savings on A/C compressors <ul style="list-style-type: none"> – TES may minimize the need to buy large, expensive compressors to meet your cooling demand
Direct Expansion Air Conditioning (DX AC)	<p>Receive a rebate for installing or upgrading to a qualifying new DX AC system.</p> <p>When your qualifying new DX system is installed, you will receive a rebate based on the size, type and efficiency of the new unit.</p>	<p>Qualifying units include:</p> <ul style="list-style-type: none"> • Air, water and evaporative-cooled air conditioners and heat pumps • Variable refrigerant flow (VRF) air conditioners and heat pumps, and computer room units. • Water-source heat pumps • Package terminal air conditioners or heat pump systems • Units that exceed the Florida Building Code 	<ul style="list-style-type: none"> • Lowers cooling costs • Lowers HVAC maintenance costs
Energy Recovery Ventilation (ERV)	<p>ERV systems keep cool energy in, that you would otherwise lose, and send humidity and pollutants out.</p> <p>An ERV system allows outgoing room air that would normally be wasted to cool</p>	<p>The following types of ERV units qualify for a rebate, if the units are not already required by building code:</p> <ul style="list-style-type: none"> • Enthalpy wheels • Plate-type heat exchangers 	<ul style="list-style-type: none"> • Lower energy costs • Less wear and tear on air-conditioning units • Works with existing heating, ventilation and air-conditioning systems

	incoming warm air. The system reclaims energy from exhaust air flows. The system also transfers heat and moisture from inside to outside to balance humidity levels.		
Business Custom Incentive (BCI)	<p>FPL offers customized incentives to Businesses or other organizations who upgrade their equipment or operations in ways that save significant amounts of energy.</p> <p>Contact your FPL Account Manager to help you develop a unique energy-saving energy-efficient equipment.</p>	<p>You can qualify for a BCI if your plan:</p> <ul style="list-style-type: none"> • Trims at least 25 kilowatts from FPL's summer peak demand (June 1 – Sept. 30, 3-6 p.m. weekdays) • Differs from other FPL conservation programs • Passes the Florida Public Service Commission specified cost-effectiveness tests 	Meets your specific energy requirements
Chillers	<p>Purchase a new high efficiency chiller to replace your existing chiller or install one in new construction and get a rebate.</p> <p>Contact us to help determine your needs for upgrades or for equipment purchased for new construction projects.</p>	<ul style="list-style-type: none"> • Purchase qualifying high-efficiency chiller models, rated at AHRI conditions • Incentive amounts and qualifying conditions vary, depending on the type and size of the equipment you replace or install • Back-up or emergency chillers do not qualify for rebates 	<ul style="list-style-type: none"> • Significantly reduce electrical, operating and maintenance costs • Get ongoing energy savings

Source: FPL; Save with Business Programs and Services (attachment)

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DIVISION 00 PROCUREMENT AND CONTRACTING REQUIREMENTS

PROJECT FORMS

CLOSEOUT PROCEDURES

This section includes administrative and procedural requirements for contract closeout, including, but not limited to the following:

1. Substantial Completion Procedures
2. Final Completion Procedures
3. Warranties
4. Repair of the Work
5. Building Information Modeling (BIM)

Related Requirements:

1. "Photographic Documentation" for submitting final completion construction photographic documentation.
2. "Execution Requirements" for process cleaning of Project site.
3. "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.
4. "Operation and Maintenance Data" for operation and maintenance manual requirements.
5. "Demonstration and Training" for requirements for instructing Owner's personnel.

SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's list of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's Punch list), indicating the value of each item on the list and reasons why the Work is incomplete.
- B. Submittals prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at the time of request.
 1. Submit closeout submittals specified in other Division 01 sections, including project record documents, operation and maintenance manuals, final completion construction photographic documentation, damage or settlement surveys, property surveys and similar final record information.
 2. Submit closeout submittals specified in the individual Sections, including specific warranties, workmanship bonds, maintenance material service agreements, final certifications, and similar documents.
 3. Submit maintenance material submittals specified in individual sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Architect. Label with manufacturer's name and model number, where applicable.
 4. Submit test/adjust/balance records.

- C. Procedures Prior to substantial completion: Complete the following a minimum of 10 days prior to requesting Inspection for determining date of Substantial completion. List items below that are incomplete at the time of the request.
1. Advice Owner of pending insurance changeover requirements
 2. Make final changeover of permanent locks and deliver keys to Owner. Advice Owner's personnel of changeover in security provisions.
 3. Complete startup and testing of systems and equipment.
 4. Perform preventive maintenance on equipment used prior to Substantial Completion.
 5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment and systems. Submit demonstration and training video recordings specified in Section 01820 "Demonstration of Training."
 6. Advice Owner of changeover in all utilities.
 7. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
 8. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 9. Complete final cleaning requirements, including touchup painting.
 10. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
1. Reinspection: Request reinspection when the work identified in previous inspections as incomplete is completed or corrected.
 2. Results of completed inspection will form the basis of requirements for final completion.

FINAL COMPLETION PROCEDURES

- A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete the following:
1. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance. (See Attachment - *Final Reconciliation, Warranty Period Declaration and Contractor affidavit*).
- B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will review a

final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the work identified in previous inspections as incomplete is completed or corrected.

LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Organization of List: Include name and identification of each space and area affected by construction for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding to the interior.
 2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
 3. Include the following information at the top of each page:
 - a. Project name
 - b. Date
 - c. Name of Architect
 - d. Name of Construction Manager
 - e. Page number

REPAIR OF THE WORK

- A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.
- B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specify condition.
1. Remove and replace chipped, scratched and broken glass, reflective surfaces, and other damaged transparent materials.
 2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that already show evidence of repair or restoration.
 - a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.
 3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.

4. Replace burned-out bulbs, bulbs noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures (LED).

BUILDING INFORMATION MODELING (BIM)

Building information modeling (BIM) is the equivalent of digitalization in the construction industry: It is a digitally supported process for planning, constructing and operating buildings that enables a significant productivity to increase in the construction industry.

An overall BIM approach should be used for the design-build process by contracted County architectural, engineering and construction firms. Products, solutions and services reflect the whole building lifecycle, all disciplines in the building, the various user and customer types, the different energy forms and the hardware and software products used in buildings.

Construction projects are faced with numerous challenges and obstacles, lack of coordination on construction sites, unreliable schedules and costs, insufficient quality and planning errors or inaccurate, incomplete plans as well as a lack of cooperation. The BIM process will help eliminate those challenges and obstacles.

The BIM process is built on four principles:

Build twice: Building twice is actually more efficient: first the digital model, then the actual construction process. This leads to better coordination, early or no errors and clash detection between all trades for a faster overall construction process with fewer errors.

Build and plan together: All stakeholders are involved in the planning process, so changes can be made in the model, change orders and time-intensive modifications on the construction site can be avoided.

Create data only once: It is much more efficient to invest more time in a highly accurate plan than to send someone into the building with a folding yardstick to re-measure.

For the entire lifecycle: Today, the focus of BIM is merely on planning. But BIM has benefits for the entire lifecycle of the building. The data model facilitates service, maintenance and disposal.

Source: Siemens website

END OF SECTION

DIVISION 01 00 00 GENERAL REQUIREMENTS

EXECUTION AND CLOSEOUT REQUIREMENTS

CONSTRUCTION CLEANING

Part 1 – General

1.01 Related work

- a. The Drawings and provisions of the General Conditions, Supplementary Conditions and the Sections included under Division 1, General requirements are included as part of this Section as though bound herein.

1.02 Summary

- a. The Contractor shall act on behalf of the Owner pertaining to the clean-up responsibilities that are a part of the Contractor's Work. "Cleaning-Up," included in the General Conditions and the statement concerning cleaning-up which is included in the Scope of Work.

1.03 Daily Cleaning

- a. Contractor shall remove his trash and debris to on site disposal units (Dumpsters) to guard against fire and safety hazards as well as to provide a more efficient construction operation. If this cleaning is not performed to the satisfaction of the Owner and the Architect, it will be performed for the Contractor at his expense.

1.04 Routine cleaning

- a. Each Friday afternoon, or as directed by Owner, Contractor shall perform an overall cleanup of the Project, including a broom cleaning of appropriate surfaces. The trades shall remove their trash and debris from the building site to the trash collection location promptly upon its accumulation and in no event later than the Contractor's regular Friday general cleanup. The Contractor shall provide a suitable location on the site with a sufficient quantity of trash bins and shall be responsible for the removal of trash from the site. If this cleaning is not performed to the satisfaction of the Owner and the Architect, it will be performed for the Contractor at his expense.

1.05 Final Cleaning

- a. Contractor shall perform an overall cleanup of the entire site, including a broom cleaning and dusting of appropriate surfaces. Vacuuming of carpets, three coats of wax to VCT flooring and buffing of rubber flooring. The trades shall remove their trash and debris from the building and site to the legal trash collection location.

- b. **If this cleaning is not performed to the satisfaction of the Owner and the Architect, it will be performed for the Contractor at his expense.**

c. Contractor shall also provide special/institutional cleaning as part of the final cleaning. This work shall be sub-contracted to a professional cleaning service.

1.06 Trash Container(s)

a. The Contractor shall provide dumpster type trash container(s) that are adequately sized for the waste, debris and trash for the life of the Project.

b. The Contractor shall legally dispose of container(s) contents weekly or at more frequent intervals if required by inadequate container capacity.

c. Oily and/or other volatile waste and trash shall not be placed in the standard trash containers but shall be stored in separate approved containers in an exterior location at least 100 feet from the building until legally disposed offsite.

1.07 Cleaning Safety Requirements

a. Comply with authorities having jurisdiction and AGC recommendations. Submit and make available MSDS information on each cleaning product on the project site.

b. Hazards Control:

1. Store volatile wastes in covered metal containers and remove from premises daily.
2. Prevent accumulation of wastes which create hazardous conditions.
3. Provide adequate ventilation during use of volatile or noxious substances.

c. Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.

1. Do not burn or bury trash and waste materials on project site.

2. Do not dispose of volatile wastes such as mineral spirits, oil, or paint thinner in storm or sanitary drains.

3. Do not dispose of wastes into streams or waterways.

Part 2 – Products

2.01 Materials

a. Use only cleaning materials recommended by manufacturer or surface to be cleaned.

b. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

3.01 Daily Cleaning

- a. Contractor shall execute cleaning to ensure that building, grounds, and public properties are maintained free from accumulations of waste materials and trash.
- b. Daily, during progress of work, clean site and public properties and dispose of waste materials, debris and trash in dumpster type trash container provided under this Section.
- c. Schedule cleaning operation so that dust and other contaminants resulting from cleaning process will not fall on wet, newly painted surfaces.
- d. Place no new work on dirty surfaces.
- e. No construction debris shall be buried into walls, partitions or ceilings.

3.02 Routine Cleaning

- a. Weekly or at more frequent intervals if work activities justify same, perform the following cleaning. This includes all dirt, dust, debris not identifiable as part of a Contract. Broom clean floor and paved surfaces; rake clean other surfaces of ground.
- b. Maintain cleaning throughout the life of the Project.
- c. Should the Contractor fail in the performance of this Work, the Owner may perform such Work and back charge the Contractor.

3.03 Final Cleaning

- a. Contractor shall perform his respective final cleanup and shall leave the Work of the complete Project in clean, neat condition.
 - b. Employ experienced cleaning company for final cleaning.
 - c. The following are examples, but not by the way of limitation, of cleaning levels required:
 - 1. Remove labels which are not required as permanent labels.
 - 2. Clean transparent materials, including mirrors and window/door glass to a polished condition, removing substances which are noticeable as vision-obscuring materials. Replace broken new or existing glass materials damaged during construction. Clean both interior and exterior of windows.
 - 3. Clean exposed exterior and interior hard – surfaced finishes to a dirt-free condition, free of dust, stains, films and similar noticeable distracting substances.
 - a. Except as otherwise indicated, avoid disturbance of natural weathering of exterior surfaces. Restore reflective surfaces to original reflective condition.
 - 4. Wipe surfaces of mechanical and electrical equipment clean, including elevator equipment and similar equipment; remove excess lubrication and other substances.

5. Remove debris and surface dust from limited-access spaces including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics and similar spaces.
6. Clean concrete floors in unoccupied spaces broom clean.
7. Vacuum clean carpeted surfaces and similar soft surfaces.
8. Clean plumbing fixtures to sanitary condition, free of stains, including those resulting from water exposure.
9. Clean light fixtures and lamps so as to function with full efficiency.
10. Clean project site (hard and grounds), including landscape development areas of litter and foreign substances. Sweep paved areas to a broom-clean condition, remove stains, Petro-chemical spills and other foreign deposits. Rake grounds which are neither planted nor paved to a smooth, even textured surface.
11. Clean out storm drains and catch basins.
12. Final floor maintenance (sweeping, mopping, sealing, and waxing).
 - a. VCT Flooring to have three coats of wax applied prior to owner acceptance.
 - b. Rubber flooring to be buffed as noted by manufacturer prior to owner acceptance.
13. Cleaning of surfaces with detergent or mild chemical solvent type cleaners as required to remove dirt and stains. Verify compatibility of cleaners and surfaces prior to use.
14. Dusting and waxing of finished surfaces (example casework, countertops, window trim and other equipment and furniture items).
15. Coordinate with Owners maintenance staff for normal cleaning procedures used to assure compatibility.
16. Replace all air filters, clean exposed surfaces of diffusers, registers, and grills.
 - a. Clean HVAC systems in compliance with NADCA standards 1992-01. Provide written report on completion.
 - b. Remove smoke and fire alarm covers.

CLOSEOUT SUBMITTALS

SUBMITTAL OF PROJECT WARRANTIES

- A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the work where commencement of warranties other

than date of Substantial Completion is indicated, or when delay in submittal of warranties might limit Owner's rights under warranty.

- B. Partial Occupancy: Submit properly executed warranties within 15 days of completion of designated portions of the work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor and building official.
- C. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.
 1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose leaf binders, thickness as necessary to accommodate contents, and sized to receive 8 ½ of 11-inch paper.
 2. Provide heavy paper dividers with plastic covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address and telephone number of Installer.
 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
 4. Warranty Electronic File: Scan warranties and bonds and assemble complete warranty and bond submittal package into a single indexed electronic PDF file with links enabling navigation to each item. Provide bookmarked table of contents at beginning of document.
- D. Provide additional copies of each warranty to include in operation and maintenance manuals.

SUBMITTAL OPERATION AND MAINTENANCE DATA

This section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:

1. Operation and maintenance documentation directory
2. Emergency Manuals
3. Operation Manuals for systems, subsystems and equipment
4. Product maintenance manuals
5. Systems and equipment maintenance manuals

OPERATION AND MAINTENANCE DOCUMENTATION DIRECTORY

- A. Directory: Prepare a single, comprehensive directory of emergency, operation, and maintenance data and materials, listing items and their location to facilitate ready access to desired information. Include a section in the directory for each of the following:

1. List of documents.
 2. List of systems.
 3. List of equipment.
- B. Title page: Include the following information:
1. Subject Matter included in manual.
 2. Name and address of Project.
 3. Name and address of Owner.
 4. Date of Submittal.
 5. Name and contact information for Construction Manager.
 6. Cross-reference to related systems in other operation and maintenance manuals.
- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
1. If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.
- D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment and components of one system into a single binder.
- E. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.
1. Electronic Files: Use electronic files prepared by the manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.
 2. File Names and Bookmarks: Enable bookmarking of individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.
- F. Manuals, Paper Copy: Submit manuals in the form of hard copy, bound and labeled volumes.
1. Binders: Heavy-duty, three-ring, vinyl-covered binders, in thickness necessary to accommodate contents, sized to hold 8 ½ by 11-inch paper; with clear plastic

sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversized sheets.

- a. If two or more binders are necessary to accommodate data of a system, organize data in each binder into groupings by subsystem and related components. Cross-reference other binders if necessary to provide essential information for property operation or maintenance of equipment or system.
 - b. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL" Project title or name, and subject matter of contents, and indicate Specification Section number on bottom of spine. Indicate volume number for multiple-volume sets.
2. Dividers: Heavy-paper dividers with plastic covered tabs for each section of the manual. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.
 3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software storage media for computerized electronic equipment.
 4. Supplementary Text: Prepared on 8 ½ X 11-inch white bond paper.
 5. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
 - a. If oversize drawings are necessary, fold and insert into binder.

If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents and drawing locations.

SUSTAINABLE DESIGN CLOSEOUT SUBMITTALS

- A. Manual content: Submit reviewed manual content formatted and organized as required.
 1. Architect will comment on whether content of operations and maintenance submittals are acceptable.
 2. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.
- B. Format: Submit operations and maintenance manuals in the following format:
 1. PDF electronic file. Assemble each manual into a composite electronically indexed file. Submit digital media acceptable to Architect.
 - a. Name each indexed document file in composite electronic index with applicable item name. Include complete electronically linked operations and maintenance directory.

- b. Enable inserted reviewer Comments on draft submittals.
- B. Four paper copies. Include a complete operation and maintenance directory. Enclose title pages and directories in clear plastic sleeves. Architect will return all copies to be forwarded to the owner.
- C. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least 15 days before commencing demonstration and training.

EMERGENCY MANUALS

- A. Organization: Organize manual into separate sections for each of the following:
 - 1. Type of Emergency
 - 2. Emergency Instructions
 - 3. Emergency Procedures
- B. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment and component.
 - 1. Fire.
 - 2. Water leak.
 - 3. Water outage.
 - 4. System, subsystem, or equipment failure.
- C. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier and manufacturer to maintain warranties.
- D. Emergency Procedures: Include the following, as applicable.
 - 1. Instructions on stopping.
 - 2. Shutdown instructions for each type of emergency.
 - 3. Operating instructions for conditions outside normal operating limits
 - 4. Required sequences for electric or electronic systems.
 - 5. Special operating instructions and procedures.

OPERATIONS MANUALS:

- A. In addition to requirements in this Section, include operation data required in individual sections and the following information:

1. System, subsystem, and equipment descriptions. Use designations for systems and equipment indicated on Contract Documents.
 2. Performance and design criteria, if Contractor has delegated design responsibility.
 3. Operating standards,
 4. Operating procedures.
 5. Operating logs.
 6. Wiring diagrams.
 7. Control diagrams.
 8. Piped system diagrams.
 9. Precautions against improper use.
 10. License requirements including inspection and renewal dates.
- B. Descriptions: Include the following:
1. Product name and model number. Use designations for products indicated on Contract Documents.
 2. Manufacturer's name.
 3. Equipment identification with serial number of each component.
 4. Equipment function.
 5. Operating characteristics.
 6. Limiting conditions.
 7. Performance curves.
 8. Engineering data and tests.
 9. Complete nomenclature and number of replacement parts.
- C. Operating Procedures: Include the following as applicable:
1. Startup Procedures.
 2. Equipment or system break-in procedures.
 3. Routine and normal operating instructions.
 4. Regulation and control procedures.
 5. Instructions on stopping.
 6. Normal shutdown instructions.

7. Seasonal and weekend operating instructions.
 8. Required sequences for electric or electronic systems.
 9. Special operating instructions and procedures.
- D. Systems and Equipment controls: Describe the sequence of operation, and diagram controls as installed.
- E. Piped Systems: Diagram piping as installed and identify color-coding where required for identification.

PRODUCT MAINTENANCE MANUALS:

- A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds as described below.
- B. Source information: List each product included in the manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.
- C. Product Information: Include the following as applicable:
1. Product name and model number.
 2. Manufacturer's name.
 3. Color, pattern, and texture.
 4. Material and chemical composition.
 5. Reordering information for specially manufactured products.
- D. Maintenance Procedures: Include Manufacturer's written recommendations and the following:
1. Inspection procedures.
 2. Types of cleaning agents to be used and methods of cleaning.
 3. List of cleaning agents and methods of cleaning detrimental to product.
 4. Schedule for routine cleaning and maintenance.
- E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- F. Warranties and Bonds: Include lists of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
1. Include procedures to follow and required notifications for warranty claims.

SYSTEMS AND EQUIPMENT MAINTENANCE

List each system, subsystem, and piece of equipment included in the manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or scheduled designation or identifier where applicable.

- A. **Manufacturers' maintenance Documentation:** Manufacturer's maintenance documentation including the following information for each component part or piece of equipment.
 - 1. Standard maintenance instructions and bulletins.
 - 2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement and assembly.
 - 3. Identification and nomenclature of parts and components.
 - 4. List of items recommended to be stocked as spare parts.
- B. **Maintenance Procedures:** Include the following information and items that detail essential maintenance procedures:
 - 1. Test and inspection instructions.
 - 2. Troubleshooting guide
 - 3. Precautions against improper maintenance.
 - 4. Disassembly; component removal, repair and replacement and reassembly instructions.
 - 5. Aligning, adjusting and checking instructions.
 - 6. Demonstration and training video recording, if available.
- C. **Maintenance and Service Schedules:** Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
 - 1. **Scheduled maintenance and Service:** Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
 - 2. **Maintenance and Service Record:** Include manufacturers' forms for recording maintenance.
- D. **Spare parts List and Source information:** Include lists of replacement and repair parts, with parts identified and cross-referenced to manufactures' maintenance documentation and local sources of maintenance materials and related services.
- E. **Warranties and Bonds:** Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

1. Include procedures to follow and required notifications for warranty claims.

OTHER GENERAL MANUAL INFORMATION:

- A. Operation and Maintenance Documentation Director: Prepare a separate manual that provides an organized reference to emergency, operation, and maintenance manuals.
- B. Emergency Manual: Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.
- C. Product Maintenance Manual: Assemble complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
- D. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.
 1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
 2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.
- E. Manufacturer's Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data includes more than one items in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
 1. Prepare supplementary text if manufacturers' standard printed data to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record Drawings to ensure correct illustration of completed installation.

PROJECT RECORD DOCUMENTS

This section includes administrative and procedural requirements for project record documents, including the following:

1. Record Drawings.
2. Record Specifications.
3. Record Product Data.
4. Building Information Management (BIM) System

A. Related Requirements:

1. "Closeout Procedures" for general closeout procedures.
2. "Operation and Maintenance Data: for operation and maintenance manual requirements.

CLOSEOUT SUBMITTALS

A. Record Drawings: Comply with the following:

1. Submit 2 set(s) of marked-up record prints.
 2. Submit copies of Record Drawings as follows:
 - a. Initial Submittal:
 - 1) Submit 1 paper copy-set(s) of marked-up record prints.
 - 2) Submit PDF electronic files of scanned record prints and one of file prints.
 - 3) Architect will indicate whether general scope of changes, additional information recorded, and quality of drafting are acceptable.
 - b. Final Submittal:
 - 1) Submit three paper-copy set(s) of marked up record prints.
 - 2) Submit PDF electronic files of scanned record prints and three set(s) of prints.
 - 3) Print each drawing, whether or not changes and additional information were recorded.
- B. Record Specifications: Submit three paper copies and annotated PDF electronic files of Project's Specifications, including addenda and contract modifications.
- C. Record Product Data: Submit three paper copies and annotated PDF electronic files and directories of each submittal.
- *Where record Product Data are required as part of operation and maintenance manuals, submit duplicate marked-up Product Data as a component of manual.
- D. Reports: Submit written report indicating items incorporated into project record documents concurrent with progress of the Work, including revisions, concealed conditions, field changes, product selections, and other notations incorporated.

RECORD DRAWINGS

Record prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued. Note all the

drawings preening to Public Works should be submitted per the “Utility Standards Manual Section 1.14 Record Drawings”. See attached Utility Standards Manual file 52 in the share point.

- A. Preparation: Mark record prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.
 - 1. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - 2. Accurately record information in an acceptable drawing technique.
 - 3. Record data as soon as possible after obtaining it.
 - 4. Record and check the markup before enclosing concealed installations.
 - 5. Cross-reference record prints to corresponding archive photographic documentation.
- B. Content: Types of items requiring marking include, but are not limited to the following:
 - 1. Dimensional changes to Drawings.
 - 2. Revisions to details shown on Drawings.
 - 3. Depths of foundations below first floor.
 - 4. Locations and depths of underground utilities
 - 5. Revisions to routing of piping and conduits.
 - 6. Revisions to electrical circuitry and controls including low voltage
 - 7. Actual equipment locations.
 - 8. Duct size and routing.
 - 9. Locations of concealed internal utilities.
 - 10. Changes made by Change Order or work change Directive.
 - 11. Changes made following Architect’s written orders.
 - 12. Details not on the original Contract Drawings.
 - 13. Field records for variable and concealed conditions.
 - 14. Record information on the Work that is shown only schematically.

Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.

Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.

Mark important additional information that was either shown schematically or omitted from original Drawings.

Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.

- C. Record Digital Data Files: Immediately before inspection for Certificate of Substantial Completion, review marked-up record prints with Architect. When authorized, prepare a full set of corrected digital data files of the Contract Drawings, as follows:
 - 1. Format: Annotated PDF electronic file with comment function enabled.
 - 2. Incorporate changes and additional information previously marked on record prints. Delete, redrawn and add details and notations where applicable.
 - 3. Refer instances of uncertainty to Architect for resolution.
 - 4. Architect will furnish Contractor one set of digital data files of the contract Drawings for use in recording information.
 - a. Architect will provide data file layer information. Record markups in separate layers.
- D. Format: identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
 - 1. Record Prints: Organize record prints and newly prepared record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
 - 2. Format: Annotated PDF electronic file with comment function enabled.
 - 3. Record Digital Data Files: Organize digital data information into separate electronic files that correspond to each sheet of the Contract Drawings. Name each file with the sheet identification.
 - 4. Identification: As follows:
 - a. Project name
 - b. Date
 - c. Designation "PROJECT RECORD DRAWINGS."

- d. Name of Architect
- e. Name of Construction Manager

RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
 - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished including substitutions and product options selected
 - 3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
 - 4. For each principal product, indicate whether record Product Data has been submitted in operation as record Product Data.
 - 5. Note related Change Orders, record Product data, and record Drawings where applicable.
- B. Format: Submit record Specifications as annotated PDF electronic file or scanned PDF electronic file(s) of marked-up paper copy of Specifications.

RECORD PRODUCT DATA

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
 - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
 - 3. Note related Change Orders, record Specifications, and record Drawings where applicable.
- B. Format: Submit record Product Data as annotated PDF electronic file and scanned PDF electronic file(s) of marked-up paper copy of Product Data.
 - 1. Include record Product Data directory organized by Specification Section number and title, electronically linked to each items of record Product Data.

RECORD AND MAINTENANCE

Recording: Maintain one copy of each submittal during the construction period for project record document purposes. Post changes and revisions to project record documents as they occur; do not wait until the end of Project.

Provide access to project record documents for Architect's and owner's reference during normal working hours.



DEMONSTRATION AND TRAINING

Administrative and procedural requirements for instructing Owner's personnel, including the following:

1. Demonstration of operation of systems, subsystems, and equipment
2. Training in operation and maintenance of systems, subsystems, and equipment.
3. Demonstration and training video recordings.

CLOSEOUT SUBMITTALS

- A. Demonstration and Training Video Recordings: Submit two copies within seven days of end of each training module.

1. Identification: On each copy, provide an applied label with the following information:
 - a. Name of Project.
 - b. Name and address of videographer.
 - c. Name of Architect.
 - d. Name of Construction Manager.
 - e. Name of Contractor.
 - f. Date of video recording.
2. Transcript: Prepared and bound in format matching operation and maintenance manuals. Mark appropriate identification of front and spine of each binder. Include a cover sheet with same label information as the corresponding video recording. Include name of Project and date of video recording on each page.
3. Transcript: Prepared in PDF electronic format. Include a cover sheet with the same label information as the corresponding video recording and a table of contents with links to corresponding training components. Include name of Project and date of video recordings on each page.
4. At completion of training, submit complete training manual(s) for Owner's use.
5. Videographer Qualifications: A professional videographer who is experienced photographing demonstration and training events similar to those required.
6. Coordinate instruction schedule with Owner's operations. Adjust schedule as required to minimize disrupting Owner's operations and to ensure availability of Owner's personnel.
7. Coordinate content of training modules with content of approved emergency, operation, and maintenance manuals. Do not submit instruction program until operation and maintenance data has been reviewed and approved by Architect.

INSTRUCTION PROGRAM

Program Structure: Develop an instruction program that includes individual training modules for each system, as required.

1. Basis of System Design, Operational Requirements, and Criteria: Include the following:
 - a. System, subsystem, and equipment descriptions.
 - b. Performance and design criteria if Contractor are delegated design responsibility.
 - c. Operating standards.
 - d. Regulatory requirements.
 - e. Equipment function.
 - f. Operating characteristics.
 - g. Limiting conditions.
 - h. Performance curves.

2. Documentation: Review the following items in detail:
 - a. Emergency manuals.
 - b. Operations manuals.
 - c. Maintenance manuals.
 - d. Project record documents.
 - e. Identification systems.
 - f. Warranties and bonds.
 - g. Maintenance service agreements and similar continuing commitments.

3. Emergencies: Include the following, as applicable:
 - a. Instructions on meaning of warnings, trouble indications, and error messages.
 - b. Instructions on stopping.
 - c. Shutdown instructions for each type of emergency.
 - d. Operating instructions for conditions outside of normal operating limit.
 - e. Sequences for electric or electronic systems.
 - f. Special operating instructions and procedures.

4. Operations: Include the following, as applicable:
 - a. Startup procedures.
 - b. Equipment or system break-in procedures.
 - c. Routine and normal operating instructions.
 - d. Regulation and control procedures.
 - e. Control sequences.
 - f. Safety procedures.

- g. Instructions on stopping.
 - h. Normal shutdown instructions.
 - i. Operating procedures for emergencies.
 - j. Operating procedures for system, subsystem, or equipment failure.
 - k. Seasonal and weekend operating instructions.
 - l. Required sequences for electric or electronic systems.
 - m. Special operating instructions and procedures.
5. Troubleshooting: Include the following:
- a. Diagnostic instructions
 - b. Test and inspection procedures.
6. Maintenance: Include the following:
- a. Inspection procedures.
 - b. Types of cleaning agents to be used and methods of cleaning.
 - c. List of cleaning agents and methods of cleaning detrimental to product.
 - d. Procedures for routine cleaning.
 - e. Procedures for preventive maintenance.
 - f. Procedures for routine maintenance.
 - g. Instruction on use of special tools.

DEMONSTRATION AND TRAINING VIDEO RECORDINGS

General: Engage a qualified commercial videographer to record demonstration and training video recordings. Record each training module separately. Include instructions and demonstrations, board diagrams, and other visual aids, but not student practice.

At beginning of each training module, record each chart containing learning objective and lesson outline.

Video: Provide minimum 640 X 480 video resolution converted to mp4 format file type or a format file type acceptable to Owner, on electronic media.

1. Electronic Media: Read-only format compact disc acceptable to Owner, with commercial-grade graphic label.
2. File Names: Utilize file names based upon name of equipment generally described in video segment, as identified in Project specifications.
3. Contractor and Installer Contact File: Using appropriate software, create a file for inclusion on the Equipment Demonstration and Training DVD that describes the following for each Contractor involved on the Project, arranged according to Project table of contents:
 - a. Name of Contractor/Installer.
 - b. Business address.

- c. Business phone number.
- d. Point of contact.
- e. E-mail address.

Recording: Mount camera on tripod before starting recording, unless otherwise necessary to adequately cover area of demonstration and training. Display continuous running time.

1. Film training session(s) in segments not to exceed 15 minutes.
 - a. Produce segments to present a single significant piece of equipment per segment.
 - b. Organize segments with multiple pieces of equipment to follow order of Project Manual table of contents.
 - c. Where a training session on a particular piece of equipment exceeds 15 minutes, stop filming and pause training session. Begin training session again upon commencement of new filming segment.

Light Levels: Verify light levels are adequate to properly light equipment. Verify equipment markings are clearly visible prior to recording.

1. Furnish additional portable lighting as required.

Preproduced Video Recordings: Provide video recordings used as a component of training modules in same format as recordings of live training.

END OF SECTION

DIVISION 6 – WOOD, PLASTIC and COMPOSITES

Section 06 10 00 Rough Carpentry

General Notes

- All interior wood blocking, nailers and plywood shall be "TYPE A" fire retardant treated.
- Shall be kiln dried after treatment (KDAT) to a maximum moisture content of 19% for lumber and 15% for plywood.
- Fire retardant treatment shall not contain VOC's, UREA formaldehyde or formaldehyde, halogens, sulfates, chlorines or ammonium phosphate.
- All equipment backing panels shall be no less than ¾" in nominal thickness.

• END OF SECTION

DIVISION 8 – OPENINGS AND DOOR HARDWARE

General Notes:

- On all access-controlled door strikes. Cylindrical locks are preferred over mortis locks. Preferred manufacturer Best locks.

Note: For access control systems see section 28 12 01

Section 08 10 00 Doors and Frames

Section 08 11 00 – Metal Doors & Frames

- All **interior metal doors** shall be full flush hollow metal doors with steel sheets each side, of prime quality, cold-rolled, stretcher leveled steel, free from scale, pitting and surface defects. Fabricate galvanized doors from galvanized steel sheets conforming to ASTM A446. Provide 18-gauge metal sheets for interior doors, except where otherwise required. Provide hollow metal doors of sizes, types, and design scheduled or required, 1¾" thick. Door faces, and edges must have no visible seams or joints. Provide openings in bottom closure of exterior doors for escape of entrapped moisture. Top edge of doors closed flush, not recessed. Provide doors that are strong, rigid, neat in appearance, and free from defects, with plane surfaces smooth and free from warp or buckle. Provide bevel on lock stiles so doors operate without binding. Provide reinforcement for all hardware.
- All **interior door frames** shall be hollow metal fabricate steel frames ASTM A366 of commercial quality, cold-rolled steel, free from scale, pitting and surface defects. Provide 16-gauge steel sheets for interior frames, except where otherwise required, 14-gauge galvanized steel sheets for exterior frames. For openings over 4'-0" wide, use material not less than 14-gauge thickness.
 - Provide full welded unit construction frames. Knocked-down frames are not permitted. Fabricate with full mitered corners, including stops, continuously arc welded full depth and width of frame. Grind and dress welds at frame face to form smooth invisible joints. Form stops and moldings integral with frame. Finished work rigid, neat in appearance, and free from warp or buckle. Provide steel spreader temporarily attached to feet of both jambs for frame bracing during shipping and handling. Provide reinforcement for hardware.
 - Fiberglass exterior doors and frames are to be used at beach locations.

END OF SECTION

Section 08 14 00 – Wood Doors

- **interior wood doors** shall be flat slab 3'0" x 7'0" x 1 3/4" solid core with oak veneer, Hallway doors shall be flat slab 3'0" x 7'0" x 1 3/4" solid core with oak veneer and glass insert opening 1' 10" x 4' 10" unless specifically specified differently. Refer to the Door Schedule for other door combinations, sizes, and doors with vision lites.

END OF SECTION

Section 08 70 00 – Hardware

- **Entrance locksets** shall be as manufactured by Marshall Best Security Products, model MBx-x-xx-xx-xxx. MB1 series are BHMA (Builders Hardware Manufacturers Association) certified grade 1 extra heavy duty, MB2 series is BHMA certified heavy duty. See attachment 53 for specs and prices. The County will provide cores and keys for all locksets. Where heavy duty lock sets are required. The County prefers not to entertain substitutions. Contact property management for locks approval before installing.
- **Vendor recommendation.** This vendor provided the door locks and hardware items for the Admin building in 2018. It can match all door locks to single master keys.

MBS Harris Security Solutions, Inc
Marshall Best Security of FL
6278 N Federal Hwy Suite 279
Ft Lauderdale, FL 33308
954-781-8079

- **Hinges** shall be as manufactured by Hager, model BB1168, standard weight, 5 knuckles, ball bearing, standard pin, US10B finish. Adjust weight and pin design as required for special doors. The County will entertain substitutions.
- **Door Closers** shall be as manufactured by LCN, series 4000. Preferred door control to be surface mount, parallel arm, closer to meet ADA reduced opening force, adjustable backcheck, interior mounting. Finish and color shall be as selected by the design team. The County will entertain substitutions.
- **Wall Stops** shall be as manufactured by Rockwood, model 404, concave solid cast wall stops with concealed fasteners. Bumper and trim color and finish as selected by the design team. The County will entertain substitutions.
- **Floor Stops** shall be as manufactured by Rockwood, model 441, Low dome stop. Adjust model type for floor finish and door undercuts. Bumper and trim finish and colors be as selected by the design team. The County will entertain substitutions.

- **Manual Flush Bolts**, pairs of doors requiring flush bolts shall be as manufactured by Ives Corporation, model FB257N for metal doors and model FB358 for wood doors. Two bolts required per door leaf. Finish shall be as selected by the design team.

END OF SECTION

Section 08 80 00 Glazing

- In addition to hurricane-rated windows, certain provided in-place window shutter(s) have protection rated for hurricane protection. Recommend Exeter “Storm Shield” or equal. Side mounted piano hinge with internal safety latches (See Attachments).

END OF SECTION

DIVISION 9 – FINISHES

Section 09 01 00 Maintenance of Finishes

Section 09 01 30.91 Tile Restoration (Newly grouted joint treatment)

Newly grouted tile shall use SaniGlaze Joint treatment according to guide specifications from SaniGlaze International, LLC (See Attachments folder). See attachment 16 for the SaniGlaze full specs sheets.

END OF SECTION

Section 09 28 00 Backing Boards and Underlayment

Section 09 28 13 Cementitious Backing Boards

Cementitious Backer Units: ANSI A 118.9 and ASTM C1288 or 1325, with manufacturer’s standard edges. Thickness: 5/8 inch. Mold Resistance: ASTM D 3273, score of 10 as rated according to ASTM D 3274.

END OF SECTION

Section 09 28 16 Glass Mat Faced Gypsum Backing Boards

Specialty Gypsum Board

Glass-Mat Interior Gypsum Board: ASTM C 1658/C 1658M. With fiberglass mat laminated to both sides. Specifically designed for interior use.

Mold-Resistance: ASTM D 3273, score of 10 as rated according to ASTM D 3274.

Tile Backing Panels

- Glass-Mat, Water-Resistant Backing Board: ASTM C 1178/C 1178M, with manufacturer's standard edges. Core: 5/8-inch, Type X. Mold Resistance: ASTM D 3273, score of 10 as rated according to ASTM D 3274.
- Water-Resistance Gypsum Backing Board: ASTM C 1396/C 1396M, with manufacturer's standard edges. Core: 5/8-inch, Type X.

END OF SECTION

Section 09 29 00 Gypsum Board

General Notes:

- Drywall shall be manufactured by one manufacturer and no mixing of drywall/sheetrock.
- All mechanical rooms and janitor closets to have ½" cement board on the lower 48" of the walls

Trim Accessories

Interior Trim: ASTM C 1047. Material: Galvanized or aluminum-coated steel sheet or rolled zinc and mechanically fastened preferred.

Joint Treatment Materials – General: Comply with ASTM C 475/C 475M.

Joint Tape:

Interior Gypsum Board: Paper

Glass-Mat Gypsum Board: 10 by 10 glass mesh.

Tile Backing Panels: As recommended by panel manufacturer.

Joint Compound for Interior Gypsum Board: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.

Auxiliary Materials:

Steel Drill Screws: ASTM C 1002, unless otherwise indicated.

Sound Attenuation Blankets: ASTM C 665, Type 1 (blankets without membrane facing)

Acoustical Joint sealant: ASTM C 834. Product effectively reduces airborne sound transmission through perimeter joints and openings as demonstrated by testing according to ASTM E 90.

Thermal Insulation: As specified in Section 072100 "Thermal Insulation."

Delivery, Storage and Handling

Deliver materials in original packages, containers or bundles bearing brand name and identification of manufacturer or supplier

Store materials inside or under cover to keep them dry and protected against weather, condensation, direct sunlight, construction traffic, and other potential causes of damage. Stack panels flat and supported on risers on a flat platform to prevent sagging.

Handle gypsum board carefully to prevent damage to edges, ends, or surfaces. Do not bend or otherwise damage metal corner beads and trim.

Field Conditions

Environmental limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written recommendations, whichever are more stringent.

Do not install paper-faced gypsum panels until installation areas are enclosed and conditioned.

Do not install panels that are wet, those that are moisture-damaged, and those that are mold-damaged.

Indications that panels are wet or moisture-damaged include, but are not limited to: discoloration, sagging or irregular shape.

Indications that panels are mold-damaged include but are not limited to: fuzzy or splotchy surface contamination and discoloration.

Provide adequate building ventilation and room temperature levels for drying joint treatment or finishing materials.

Protection

Protect adjacent surfaces from drywall compound and promptly remove from floors and other non-drywall surfaces. Repair surfaces stained, marred, or otherwise damaged during drywall application.

Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.

Remove and replace panels that are wet, moisture damaged include, but are not limited to, discoloration, sagging or irregular shape.

Indications that panels are wet or moisture-damaged include, but are not limited to: discoloration, sagging or irregular shape.

Indications that panels are mold damaged include: but are not limited to fuzzy, or splotchy surface contamination and discoloration.

Requirements

Sound transmission coefficient (STC) ratings

Commissioner's office and conference room – STC 55-65

Director's office – STC 45-55

Manager's office – STC 35-45

Interior Gypsum Board

Gypsum Wallboard: ASTM C 1396/C 1396M.

Thickness 5/8 inch

Long edges: Tapered and featured (rounded or beveled) for prefilling

Gypsum Board, type X: ASTM C 1396/C 1396M.

Thickness 5/8 inch

Long Edges: Tapered and featured (rounded or beveled) for prefilling.

Gypsum Ceiling Board: ASTM C 1396/C 1396M

Thickness 5/8 inch

Long Edges: Tapered

Finishing of Gypsum Board

Gypsum Board Finish Levels: Finish panels to levels indicated below and according to ASTM C 840:

Level 1: Ceiling plenum areas, concealed areas, and where indicated.

Level 2: Panels that are substrate for tile.

Level 3: Where wallcoverings are specified as the finish.

Level 4: At panel surfaces that will be exposed to view unless otherwise indicated.

Level 5: Where indicated on drawings or where gloss or semi-gloss paints are indicated as the final finish.

*Remove and replace panels that are wet, moisture damaged, and mold damaged.

Panel Products: Obtain all gypsum board and other panel products for gypsum board assembly from a single manufacturer.

END OF SECTION

Section 09 50 00 Ceilings

Section 09 51 00 Acoustical Ceilings

Section 09 51 13 Acoustical Panel Ceilings

Acoustical panel ceiling tile shall to be 2 x 2 Armstrong Ultima Beveled Tegular #1911 OR APPROVED EQUAL

Suspension System shall be Prelude XL 15/16" White OR APPROVED EQUAL

END OF SECTION

Section 09 60 00 Flooring

Section 09 65 00 Resilient Flooring

Section 09 65 13 Resilient Base and Accessories

Wall base shall be Rope Corporation, Pinnacle Rubber Base – 4" Standard Toe - Color Black

Adhesive as recommended by manufacturer OR APPROVED EQUAL.

END OF SECTION

Section 09 68 00 Carpeting

Section 09 68 13 Carpet Tile

All carpet shall be manufactured from recycled products

Interface Flooring

Frequency II Style #1467502500 Color #9427 Routine

Geometry II Style #1469502500 Color #9949 Graphic

Gradient II Style #1469602500 Color #9958 Arc

Geometry II Style #1469502500 Color #9950 Optical

Captivate Style #59554 Color #54730

Kinetic Style #59359 Color #58150

Kinetic Style #59359 Color #58530 Interface Floor

Geometry II Style #1469502500 Color #9949 Graphic

Gradient II Style #1469602500 Color #9958 Arc

Geometry II Style #1469502500 Color #9950 Optical

Shaw

Captivate Style #59554 Color #54730

Kinetic Style #59359 Color #58150

Kinetic Style #59359 Color #58530

END OF SECTION

Section 09 90 00 Painting and Coating

Section 09 91 00 Painting

Section 09 91 23 Interior Painting

All paint and paint products shall be low or no VOC (volatile organic compounds) whenever possible. Wall paint shall be from Scott Paint Company – 7839 Fruitville Rd, Sarasota, Florida

OR APPROVED EQUAL

Wall Paint - Shall be Scott Paint Co. Dubai Sand #OW 135 Satin Latex Finish (Unless otherwise approved)

Door Frames - Shall be Scott Paint Co. Kitty Kitty #8253 Semigloss Enamel Finish (Unless otherwise approved)

VCT - Shall be selected by Property Management and Used in Common Areas, Hallways, Break Rooms, Under Machinery and Appliances.

END OF SECTION

DIVISION 10 – SPECIALTIES**Section 10 06 00 Schedule for Specialties****Section 10 06 10 Schedules for information Specialties**

Per the National Fire Protection Association and Other Standards Adopted. A notice signs are required the placement of an identifying symbol on structures constructed with a light-frame truss component in a manner sufficient to warn persons conducting fire control and other emergency operations of the existence of light-frame truss-type construction in the structure.

Approved symbol” means a Maltese Cross measuring 8 inches horizontally and 8 inches vertically, of a bright red reflective color, designed in accordance with image below.

Any commercial, industrial, or any multiunit residential structure of three units or more which uses horizontal or vertical light-frame truss-type construction in any portion shall be marked with an approved symbol. Each approved symbol shall include within the center circle one of the following designations:

1. Structures with light-frame truss roofs shall be marked with the letter “R”.
2. Structures with light-frame truss floor systems shall be marked with the letter “F”.
3. Structures with light-frame truss floor and roof systems shall be marked with the letters “R/F”.

The approved symbol shall be placed within 24 inches to the left of the main entry door and: Be permanently attached to the face of the structure on a contrasting background or Be mounted on a contrasting base material which is then permanently attached to the face of the structure. The distance above the grade, walking surface or the finished floor to the bottom of the symbol shall be not less than 4 feet (48 in). The distance above the grade, walking surface or the finished floor to the top of the symbol shall be not more than 6 feet (72 in).

Section 10 10 00 Information Specialties**Section 10 14 00 Signage****Section 10 14 16 Dedication Plaques**

Manatee County requires dedication plaques to be installed in both new and renovated public buildings.

- Size:
1. Small (for smaller bldgs.) 12” wide by 9” high (Less than 50,000 sf)
 2. Large (for larger bldgs.) 24” wide by 18” high (Greater than 50,000 sf)

Mounting Locations: Generally, in lobby area of main entrance.

Material: Cast Bronze or Plastic

Edges: Single Line (Raised)

Textures: Leatherette

Mounting: Prefer blind mount, but rosette mount can be used depending on mounting surface.

Background Color: Brown, recessed

Lettering: Raised

Supply Companies Used:

Environmental Graphics Inc

11232 Challenger Ave., Suite 1

Odessa FL 33556

800-791-5065 or 727-376-5622

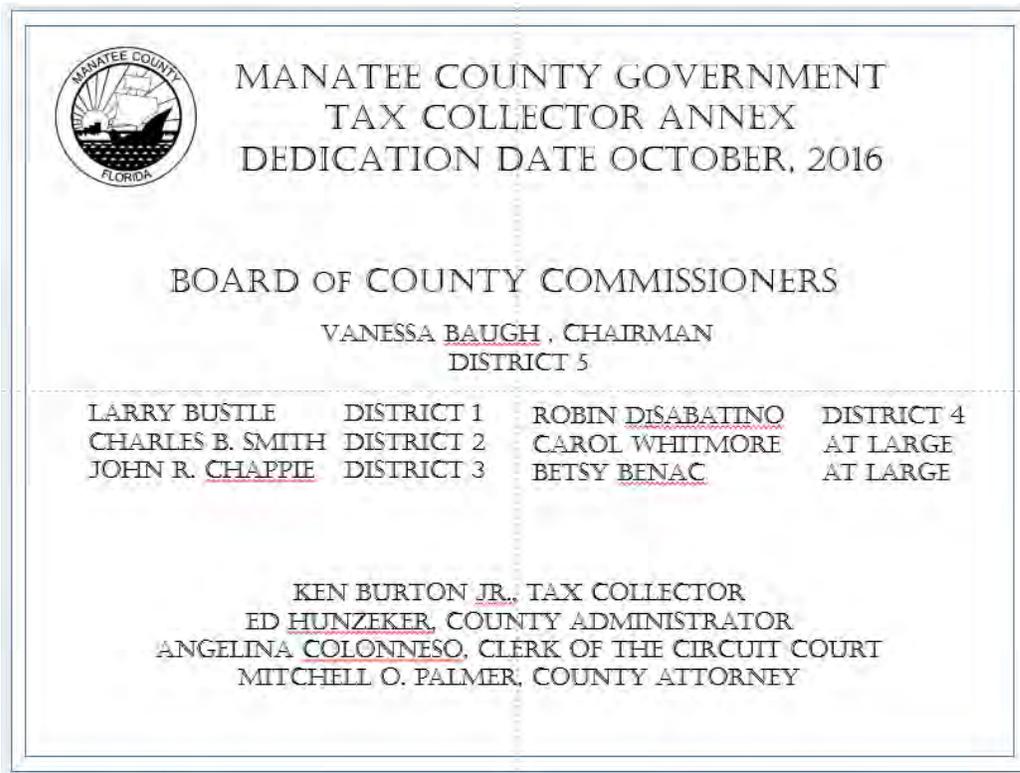
Build signs online, contact: Bob Twinem

2854 Manatee Ave E.

Bradenton, FL 34208

941-748-9400

Example format of Small Dedication Plaque



Example format of Large Dedication Plaque



END OF SECTION

Section 10 14 23 Panel Signage (Board of County Commissioners Photo Gallery)

The Design team shall incorporate an area at or near the main entrance of the building. A blank wall space of at least eight feet, six inches (8', 6") long so that the Board of County Commissioners pictures can be installed as shown in the sketch below. Manatee County will be responsible for installing the pictures and signs.



END OF SECTION

Section 10 20 00 Interior Specialties**Section 10 21 00 Compartments and Cubicles****Section 10 21 13 Toilet Compartments****General Notes:**

- OVERHEAD BRACED OR FLOOR ANCHORED TOILET partitions.
- Toilet Compartments shall be solid phenolic core overhead braced enclosure, wall hung urinal screen. Doors to be minimum ¾" thick panels, pilaster and walls minimum ½" thick with stainless steel hardware.
- Pilaster Shoes: Formed from stainless-steel sheet, not less than 0.031-inch nominal thickness and 3 inches high.

END OF SECTION**Section 10 28 00 Toilet, Bath, and Laundry Accessories****General Notes**

Restroom Accessories and Requirements (specifications in attachments)

- All restrooms floors must be sloped and have floor drains
- No in wall trash or wall mounted trash receptacles
- No built-in counter top soap dispensers
- Urinals will be water flush type only
- Grab Bars shall have concealed mounting with snap flange trim
- Shower Curtin Rods shall have concealed mounting
- Shower Curtains shall be vinyl opaque white matte with antibacterial and flame-retardant agents.
- Internal hose bib required.
- Mirrors and baby changing stations shall be ADA compliant.

Toilet and Bath Accessories (Specifications in Attachments – Restrooms/Plumbing)

- Wall mounted Soap Dispensers shall be Micrell Bag-in-box 800 series item # GOJO9721 OR APPROVED EQUAL
- Wall mounted Multi-Fold Paper Towel Dispensers shall be San Jamar T1790TBK Ultrafold Oceans Large Capacity C-Fold. Color Black OR APPROVED EQUAL
- Wall Mounted Sanitary Napkin Dispenser shall be Rubbermaid RCP 6140WHI - Color: White OR APPROVED EQUAL
- Wall Mounted Toilet Tissue Dispenser twin jumbo roll shall be San Jamar R4000TBK – Color: Black OR APPROVED EQUAL
- Wall Mounted Toilet Seat Cover Dispenser shall be KRYDK100 OR APPROVED EQUAL (check with Carmine on outdoor facilities)
- Coat Hook shall be Bobrick B-212 Clothes Hook and Bumper OR APPROVED EQUAL
- Shower curtain hooks shall be Bobrick B-204-1 OR APPROVED EQUAL
- Folding Shower seat shall be Bobrick B-5181 OR APPROVED EQUAL

Hand / Hair Dryer

- Where applicable, an Xlerator manufactured by Excel Dryer shall be used. The preferred model is an XL-W with preferred operating voltage of either 208/220/240

END OF SECTION

Section 10 80 00 Other Specialties

Section 10 81 00 Pest Control Devices

- Integrated Pest management is the method of pest management in all County activities including those carried out by contractors and vendors.
- Preferred termite treatments, in order of preference, include pre-treat with borate-based products during construction, approved exterior bating systems, or the use of Disodium Octa borate Tetrahydrate (DOT) lumber or a pre-approved baiting system (see Other Attachment folder).
- When borate pre-treat process is used, blue die should be included in the spray mix to verify coverage.
- To better prevent future pest infestations, all cracks, seals and penetrations need to be 100% sealed. Special attention needs to be paid to abandoned roof drains, and other plumbing pipes to ensure that they are sealed and will not allow rodents to enter the building.

- Where a structure has bay doors or a section of the building with outside exposure, the air-conditioned portion need to be 100% sealed to prevent pest invasions.
- Cistern design will take into account the prevention of mold growth, breeding mosquitoes and other pest and structural problems. Cisterns and other water storage devices shall not share a common wall with interior spaces.

END OF SECTION

Section 10 70 00 Exterior Specialties

Section 10 71 00 Exterior Protection

For hurricane shutter system use the Exeter storm shield system guide specification. Refer to the attachment number 6 for the full spec for this product.

END OF SECTION

DIVISION 11 – EQUIPMENT

General Notes:

All exterior equipment that is required to be enclosed with a chain link, fence slat must be installed to secure the equipment. As a sample enclosed air condition system, dumpster, lift station, etc. Must be enclosed and secured.

Section 11 40 00 Foodservice Equipment

Section 11 46 00 Food Dispensing Equipment

Section 11 46 83 Ice Machines

General Notes:

- Commercial-Size Ice Maker(s) Freezers and Refrigerators – Must have an alarm that alerts extreme temperature change.
- All commercial size automatic ice makers shall where applicable have a waste chill recovery chiller/ exchanger installed on the inlet side of the potable water service. *Benefits – reduces potable water consumption, reduces energy cost to produce ice, less compressor runtime, reduces energy cost to remove heat from the air-conditioned area where an ice maker is installed, makes ice faster.*
- Backflow valves or vacuum breakers with shut off cocks and stainless-steel hoses are required. A floor sink or drain shall be provided.

- Preferred manufacturer is the Maximicer, Georgetown, TX for ice maker units of the manufacturer Manitowoa, Hoshizaki and Cornelius.

END OF SECTION

DIVISION 12 - FURNISHINGS

Section 12 20 00 Window Treatments

Section 12 21 00 Window Blinds

Section 12 21 23 Roll Down Blinds

Roller Shades shall be Hunter Douglas – Designer Screen Shades. Chain and clutch operating mechanism, bead chains with limit stops. Fabric shall be 95% light blocking. Fabric and Finish as selected by owner or Architect from full range of colors. Material is to be flame resistance and comply with NFPA 701 Class A OR APPROVED EQUAL.

END OF SECTION

DIVISION 22 – PLUMBING

Section 22 05 00 Common Work Results for Plumbing

Section 22 05 23 General Duty Valves Devices, Systems, Branch Lines

General Notes

- All valves shall be ball-valve, shut-offs only. Larger valves (4 inch and above) for chilled water mains shall be butterfly or gate-type with remote or motorized operators.
- Each plumbing device fixture shall have shut-offs.
- All hot and cold, water mains to a multiple fixture area shall have ball shut off valves installed for isolation. Access panels or ceiling tiles shall be marked with a blue dot sticker on the metal portion of the panel.
- The contractor shall provide a valve list with plastic valve tags on each main shut off valve installed.
- Parks and outdoor public restrooms shall have internal hose bibs on the sink in a lockable water box.
- Parks and outdoor public restrooms shall be equipped with floor drains.

END OF SECTION

Section 22 10 00 Plumbing Piping

General Notes

- Use CPVC Schedule 40 or 80 (if and or when required due to its application).
- Use PVC Schedule 40 or 80 (if and or when required due to its application.)
- May use PVC schedule 40 or 80 for DWV (Drain-Waste-Vent).
- The use of Hard Copper Type K is permitted.
- No galvanized steel is permitted.
- No cast iron is permitted.
- Provide insulation on all interior roof drain-piping vertical and horizontal for sound attenuation. Provide insulation for all domestic and solar hot water supply, return, and chilled water supply and return piping in accordance with the Florida Energy Code and Florida Building Code.

Clean Outs

- Shall be one at the base of each and every stack and in accordance with the Florida Plumbing Code and in accordance with FPC 2014; Section 708.

Trap Primers

- No automatic trap primers shall be installed on County properties.
- Preferred – Trap primer tail piece (waste line fed).

Backflow Prevention – Potable Water Service

- Shall be the type RPZ (reduced flow) backflow preventer.
- On services four (4) inches and larger, a bypass service line with a backflow preventer shall be installed on the same water (main) service. This feature will permit servicing and testing of the main backflow preventer without total interruption of water service to the site.
- Sizing the bypass line - shall be equal to ½ of that of the main water service line.
- Reference Manatee County Utilities standards for requirements.
- Water meters preferred to be used in cooling towers for cost reduction in the sewer bills.

END OF SECTION

Section 22 11 Facility Water Distribution

Section 22 11 23 Domestic Water Pumps

- All domestic water pumps shall be connected to generator power when available.

END OF SECTION

Section 22 40 00 Plumbing Fixtures

Section 22 42 00 Commercial Plumbing Fixtures

Section 22 42 13 Commercial Water Closets, Urinals, and Bidets

- Preferred manufacturer: Sloan.
- All urinals shall use water rated at 0.125 gpf. No waterless urinals shall be used.
- Public outdoor restroom(s) remote flush valves in chase are preferred.
- Preferred water closet with oversized discharge.
- Tank water closets are not preferred.

END OF SECTION

Section 22 42 16.16 Sinks - Bathroom

- All sinks are to be china unless otherwise notes.
- Sinks in office buildings, community centers, libraries, and fire stations may be made of porcelain or stainless.
- Parks and public outdoor restrooms shall be stainless. Staff accessible (locked) restrooms may also use composite material, wall-hung singles, or multiple basin formed with countertops.
- All ADA sinks shall meet insulation and protection requirements in accordance with the Florida Plumbing Code.

END OF SECTION

Section 22 42 23 Shower Head(s)

- Shower heads installed for public areas, gyms, recreation and employee fitness centers shall be ultra-low flow

END OF SECTION

Section 22 42 39 Commercial Faucets, Supplies, and Trim

- Metering (manual) faucets shall be used at all public and private wash sinks intended for hand washing.
- Faucets should have no exposed set screws and replacement parts that are readily available.
- All faucets in public and private wash areas shall have an aerator installed on it that does not exceed 0.05 gpm flow and shall be vandal-resistant. When available a recessed aerator shall be used. Ganged employee wash areas should have an aerator with flow not to exceed 1.0 gpm.
- All exposed components / parts shall be constructed and made of metal.
- All faucets shall meet or exceed current ADA Standards.

- Faucet spacing shall be on 4-inch centers.

END OF SECTION

Section 22 42 43 Flushometers Valves

- Manual flush valves are preferred in place of sensor type in staff areas. 1.6 gpf toilet, and 0.125 gpf urinal
- Where sensor flush detection is used there shall also be a manual mechanical override flush button. Adjustable flow for 0.5 to 3.5 gpf.
- All flush valves shall be manufactured by Sloan as preferred manufacturer and be of solid brass construction.

END OF SECTION

Section 22 33 00 Hot Water Heaters – Electric / Gas

- All water heaters to be installed in the appropriate mechanical room where a floor drain is provided.
- All water heaters shall have a “water heater leak Alarm and shut-off system” provided by RDT Reliance detection technologies. Model RS-094-MK6 kit. Please see attachment 54 for more information.
- Thermal solar hot water heating is encouraged to be a part of all hot water heating applications as a primary source with gas or electric heating as backup and or supplemental.
- Natural gas when available is the fuel source of choice.
- Instant flow tankless hot water heater(s) shall be used if applicable to the usage and demand.
- All 10 to 30-gallon electric hot water heaters dedicated to restrooms or break rooms shall have a timer switch controlling the off/on periods or be connected to the BAS.
- Efficiencies shall meet or exceed the Florida Energy Code.

END OF SECTION

Section 22 35 00 Domestic Water Heat Exchangers

- Where applicable, a timer switch or the BAS shall cycle off/on all circulating pumps dedicated to wash sink or shower hot water delivery.

END OF SECTION

DIVISION 23 – HEATING, VENTILATION, and AIR CONDITION (HVAC)

General Notes

- Not Rooftop units (RTU) are allowed. All HVAC unit to be installed in mechanical rooms or on the ground.

- Major components shall have a 5 Year warranty.
- Separate pricing shall be allowed for extended warranties.
- Building Automation System (BAS) shall be Automated Logic Systems Web Control only and integrated into the counties existing Building Automation Network.
- The BAS shall record, control, monitor and manage temperature, proper humidity and CO2 levels within the facility. **Note: Humidity and CO2 sensors shall be placed in return air duct(s) of each air handler/unit servicing that facility.** The energy code requires CO2 is units over 3000 cfm.
- Generator circuits, when available shall power all HVAC equipment controls.
- Chiller systems are preferred over a DX system. Energy savings must be considered in size of systems.
- DX high efficiency 16 SEER minimum rated with preconditioned outdoor air system sized for the air handler
- Condensate shut down/ alarm switches shall be installed on all condensate line traps.
- Duct-board is not allowed. All supply, return, outdoor air intakes, plenums, and smoke exhaust plenum ducts are to be externally insulated.
- Motorized fans in the Variable Air Volume (VAV) box are not allowed.
- No more than two rooms shall be on a single VAV box.
- HVAC system must maintain positive building pressure except where noted.
- Standards that apply are the Florida Mechanical Code, ASHRAE Healthcare Ventilation Standard. Water and Wastewater design standards also apply to ventilation on specific buildings.
- Outside air (makeup) shall utilize a VAV box for air monitoring to control building pressure and CO2. Airflow measuring stations shall be reviewed as an option.
- Variable Frequency Drives shall be used wherever applicable and be controlled by the BAS.
- Programmable thermostats are required by the Florida Energy Code on small buildings.
- Sound attenuation shall be used to reduce noise transfer. All conference, meeting and study rooms/areas shall be separate with a separate ducted return.
- Insulation shall meet the Florida Energy Code section 403.2.8 and be covered to resist condensation build up.
- Variable speed drives shall be considered on all Air Handling Units.
- Rooms, areas designated or planned for data processing or needing 24-hour cooling, shall be sized accordingly for HVAC chill water AND have DX systems for night time and weekend cooling. Where no chiller is used, dual DX systems are required. Data DX cooling is to be stand alone and controlled by local thermostats and monitored by the BAS.
- Each Air Handling Unit / Fan Coil Unit shall have an isolation valve or valves.
- Each supply air diffuser shall have an air balance damper.
- All Mechanical spaces shall have floor drains and floors with slope that pitch to the drain.
- Data Centers or other areas needing 24/7 cooling services shall have dedicated DX systems connected to emergency generator power for night time cooling and chill water cooling for normal occupancy. If no chilled water is available, two sources of DX cooling will be installed in each space.
- Water sensors shall be installed on all data systems under floor for alarm through the BAS control system and shut down.

- Buildings with chillers shall have chilled water piping and valves installed for a quick connection rental chiller.
- A UL-listed kitchen hood make-up air system and duct work with chemical extinguisher and power/fuel supply shutdown and fire alarm connection shall be installed on commercial kitchen systems as requested and as required for specific cooking appliances in accordance with the Florida Building Code.
- On the ceiling metal frame or access panel, a red dot shall be installed for the location of each variable air volume box and inline exhaust fan installed for maintenance access.
- Small buildings required specific products similar to residential split air handler/ fan coils with separate heat pumps or air -cooled condensers. EER shall be 16 or greater to meet the Florida Energy Code. Rooftop must be approved by Property Management.
- Package terminal units may be considered in small locations such as Emergency response rooms?
- Coil coating is required on evaporator and condenser coils.
- Ductwork type and insulation shall meet SMACNA standards for sheet metal, pressure class, duct sealing is preferred for duct above 2" static pressure. The Florida Energy Code requires insulation and application.
- Building air and water balance testing is required by the Florida Energy Code.

END OF SECTION

DIVISION 26 – ELECTRICAL

General Note: There are .pdf documents for lighting and electrical in the Attachments folder.

- No Incandescent lamps shall be used.
- No U-Tube fluorescent lamps shall be used.
- No Metal Halide, Mercury, or HPS lighting shall be installed indoors.
- Lighting shall be designed using current industry standards and proper foot-candle requirements for the application. General lighting in office, bathrooms, and hallways shall include automatic sensor control.
- Do not mount any lighting hard wire to any shelving or other floor mounted furniture.
- Modular furniture shall be grounded, and UL listed. Power and data connections shall be by wire mold and MC cable.
- In lieu of conduit, MC capable may be used for lighting and is permitted only for control wiring and fixture whips.
- Remote ballast shall be identified on ceiling grid system and as-built drawings.
- Building lighting control systems shall be Leviton and Lutron computerized controls, motion sensors, and daylight harvesting should be incorporated and used. All sites using this system will require the Lutron and Leviton software application program for trouble shooting and program maintenance for 3 years to be included with the system installation and also include operator training.
- Buildings over 5000 square feet require lighting controls per the Florida Energy code.
- All exterior lightning is to be controlled by exterior lighting sensors if no Building Automation System (BAS) is installed. No time clocks are to be used.
- Where dimming ballasts are interfaced with a variable voltage lighting system, be it new or existing, all components shall be approved in writing by each manufacturer as being an approved device cable of interfacing and functioning properly with one another.

- 277-volt lighting fixtures (exception – canister fixtures) shall be first choice where applicable to design and building power system voltages are available.
- All electrical distribution panels shall be completely labeled as to what device or system each breaker services. Normal non-generator power shall be labeled black and white, generator power panels shall be labeled green with white background, and UPS panels shall be labeled blue with white background. All building receptacles, lighting pull boxes, and wall switches shall have circuits noted in marker inside the pull box for each room.
- Every building with an electrical generator (and associated auto transfer switching) shall also have a double throw disconnect designed for easy and quick connection of a rental generator. The switch is to be located on the exterior of the building in an area that allows for the rental generator space. Each double throw disconnect shall also have a control circuit installed for automatic start / stop of the rental generator.
- Buildings without a generator shall also have a double throw disconnect for a rental generator connection, as determined by Property Management.
- Buildings with chillers shall have a disconnect installed and wired for a rental chiller connection. Disconnect is to be sized to support the full load of the chiller system. There shall also be chilled water piping and valves installed to where the portable rented chiller is designed to be parked.
- All buildings shall have the load electrically balanced by the electrical contractor at the project construction completion. The Engineer of record, in writing to Property Management, shall confirm this process.
- The Engineer of Record will confirm as a written observance of the on-site electrical contractor prior to termination of electrical power being applied to the building that all electrical devices and connections are Forward Rotation. No reverse rotation electrical connections are allowed. The contractor shall schedule a time when the Owner and Engineer are available for onsite testing. Each electrical panel shall be verified and documented by the electrician that it is in the forward rotation.
- Communication and Electrical conduits under soft ground, grassy areas, and shell parking areas must be fully encased in 12” of concrete. Soft ground being not under streets and paved parking areas.

Section 26 30 00 Facility Electrical Power Generating and Storing Equipment

Section 26 36 00 Transfer Switches

Section 26 36 23 Automatic Transfer Switches

- All transfer switches must be forward rotation and should tested after installation.
- Provide and install automatic transfer switches for both new and remodel construction (See “Automatic Transfer Switches” in Lighting-Electrical Attachment Folder).
- Automatic transfer and manual transfer switches shall have a manual bypass function.
- Transfer switches shall meet or exceed the fault current rating and shall UL list for the proposed functions.
- The ATS manufacturer shall be certified to ISO 9001 International Quality Standard and the manufacturer shall have third party certification verifying quality assurance in design/development, production, installation and servicing in accordance with ISO 9001.

END OF SECTION

Section 26 50 00 Lighting

- Shall be LED for new or retrofitting. All retrofit kits shall be DLC tested and listed.
- Shall use electronic ballast, Programmed Start, and shall be high efficiency 120 volt .
- Levitron USB Charger devices to be installed for new construction and renovations (see attachment).
- No internal emergency battery backed ballast shall be used.
- Ballast voltage shall be 120 volts.
- Each fixture shall have a sized internal line fuse and holder accessible at the ballast for disconnection of power at the fixture.
- All lamps shall have a minimum K-Value of 4100k.

Hi-Bay Warehouse & Storage / Recreational Lighting

- Shall be LED lighting or induction where there is constant high temperature.
- Ballast, generator voltage shall be 120 volts.
- Each fixture shall have a sized internal line fuse and holder accessible at the ballast.
- All light fixtures installed in a gymnasium atmosphere shall have a wire guard protecting the fixture and or lamps.
- All lamps shall have a minimum K-Value of 4100 k.

Exterior Signage with Lighting / Messaging Boards

- No metered service shall be installed solely dedicated to any signage/messaging board applications.

Recessed Indoor Canister and Exterior Canopy Lighting

- All canister light fixtures shall be LED.
- All installed exterior lighting shall be LED and so designed and labeled for outdoor use.
- All fixtures shall be vandal resistant.

Exit & Emergency Wall-Pak Lights

- Shall be LED lamp(s) only.
- Legend (Word - Exit) shall be the color – Red
- Combination Exit and Emergency Lights may be used where applicable.

Flag Pole Lighting

- Fixture(s) shall be LED lighting. No Timers for this application.

Lightning Protection

- When required and with the approval of Property Management, the building shall be protected against lightning damage with a system equal or that exceed the specs for the following suggested product Preventor™ lightning protection, employing a single air terminal. The Lightning system shall be UL listed and provide an insurance certificate.

The system shall comply with the current National Fire Protection codes and IEEE standards. A master label system shall be provided with the installation.

Parking Lot / Security / Façade Lighting

- Shall Be LED lighting.
- Pole shall have an internal wire chase with hand hole at ground level and pole top where available.

Beach & Specialty Lighting

- All water front lighting, in or near ocean environments, shall meet or exceed Manatee Counties Water Front (Sea Turtle- Amber Lighting) requirements.

END OF SECTION

DIVISION 27 COMMUNICATIONS

Section 27 10 00 Structured Cabling

General Notes

Standard Data/Voice Cabling Requirements - Refer to Attachments Folder

END OF SECTION

DIVISION 28 – ELECTRONIC SAFETY AND SECURITY

Section 28 10 00 Access Control

Section 28 11 00 Access Control Global Applications

Section 28 12 01 General Requirements for Access Control Systems

- All integrated entry access systems shall be GE Facilities Commander integrated into the counties existing network wide system.
- Von Duprin panic hardware with surface mounted rods; use of concealed rods in exit doors.
- “Mag” locks shall be Securitron with a holding force of 1200 lbs. and be battery backed and rated for a hold (energized) time of 24 hours minimum and connected to the generator power, if the facility has a generator.
- One lighted, push button with the legend EXIT shall be installed per manufacturer’s requirements at all egress’s doors with Mag locks.

- Card access swipe card system shall be Facilities Commander system and integrated into the existing Manatee County data base by our authorized vendor.

END OF SECTION

Section 28 20 00 Video Surveillance

Section 28 21 00 Surveillance Cameras

- All camera installations shall follow and be approved through Manatee County Policy and Procedure number 606.003 (See Policy in Attachments folder)

END OF SECTION

Section 28 40 00 Life Safety

Section 28 46 00 Fire Detection and Alarm

Section 28 46 20 Fire Alarm

- Firelite or Silent knight are preferred systems.
- All fire systems and peripheral devices shall be non-proprietary.
- All systems shall be full addressable, voice-evacuation fire alarm systems.
- All applicable and current codes and regulations for the jurisdiction shall be met or exceeded.
- All fire alarm raceway(s) junction box(s) lids and covers shall appear in the color red. Single panels with auto dialer and fire alarm access at the entry?

END OF SECTION

Section 28 46 12.19 Fire Sprinkler

- Shall be a dry pre-action type in data rooms. All others shall be wet type systems.
- Shall have a reduced pressure backflow preventer.

END OF SECTION

DIVISION 31 – EARTHWORK METHODS

General Note: Manatee County Public Works Roadway and Drainage Design Standards shall be utilized.

- All existing trees on the site need to be barricaded with 2" X 2" posts and rope, colored tape, or wood to prevent any vehicular traffic or power equipment (mixers etc.) in that

area during the whole construction process. This barricade should be at the drip line at a minimum and extend out farther wherever possible.

- All rinsing, washing or dumping of construction products or equipment should be in a designated area only. This area should be away from existing trees and future planting locations.
- Before final grade, the contractor needs to totally clean the site of debris, spillage and do a thorough cleanup of rinse areas and dumpster locations
- Preferred final grade material is grey surface sand with a neutral pH (6.0 – 7.5).
- Final grade should ensure proper drainage away from building and into onsite retention/detention mechanisms.

END OF SECTION

DIVISION 32 – Exterior Improvements

General Notes:

Where both communication and electrical conduits are placed under soft ground, grassy areas, and shell parking areas must be fully encased in 12” of concrete. Soft ground being not under streets and paved parking areas.

Section 32 10 00 Bases, Ballasts, and Paving

Section 32 12 00 Flexible Paving

Section 32 12 16 Asphalt Paving

Refer to Attachments Folder-

END OF SECTION

Section 32 12 43 Porous Flexible Paving

General Notes

For vehicle and traffic loads for gravel or grass overflow parking lots, driveways, fire lanes, etc., use “TrueGrid” or APPROVED equal permeable pavers. Made in the U.S.A. and 100% post-consumer recycled material. (See TrueGrid Porous Flexible Paving Specifications in Attachments folder file 22).

END OF SECTION

Section 32 30 00 Site Improvements

Section 32 31 00 Fences and Gates

Section 32 31 13 Chain Link Fencing

Refer to Attachments Folder-

END OF SECTION

Section 32 33 00 Site Furnishings

32 33 23 Site Trash and Littler Receptacle

- Bigbelly High Capacity Compactor. See attachment for the Bigbelly technical specifications (BB5). Please note the vendor no longer sells the units individually. They sell a five year “subscription” or lease. This includes the Clean Management Software license for each unit, hardware parts warranty including batteries and one annual 21-point station inspection and cleaning. The subscription also includes installation of each station.

Big Belly Solar, Inc.
150 A Street
Suite 103
Needham Heights, MA 02494
Mike Phillips – Regional Accounts Manager
mphilips@bigbelly.com
(617) 206-4437

END OF SECTION

Section 32 80 00 Irrigation

All installations regarding water conservation should at a minimum have:

- Functioning rain sensor.
- Separate zones for turf and plant bed areas.
- Timer capable of dual programming.
- Use of low volume emitters or drip tube in plant bed areas.
- Use of reclaimed water whenever possible. Potable urban water is the last choice for a water source.
- Netafim drip irrigation should be used on all new projects and will be installed to manufacturer’s specifications.
- System will be designed for 100% coverage of all bed areas and newly planted trees. NOTE: Identify and “avoid” planting on existing irrigation system.
- Each tree will have its own emitters/bubbler.
- Determination on whether to irrigate turf will be made on a per project basis by **County horticulture staff**.
- If a cistern is to be the main water source, a backup source needs to be provided for times of drought.
- Piping material should be Class 160 or Schedule 40. Depth is 18 to 24 inches.

Controller (Irrigation)

- For new installation, controller (minimum requirement) shall be Rainbird ESP-LXD for 2-wire systems and the ESP-LXME/ESPLXMEF for traditionally wired systems (wire running from each valve to the controller along with a ground wire). Each system will communicate with the Manatee County Rainbird master IQ system.
- Master Valve (electrical) in mainline water source for each area.
- Heads – Replace all heads with the same head and nozzle (or equivalent PR and coverage area, if same head is not available). Hunter for rotors (I-20, I-25, I-40 and I-90) and Toro for spray heads (570s).
- Valves – The standard for Installation or replacement of valves is the Irritrol (P100s) valve on sites with “clean water” and Irritrol (100s-retrofit kit which includes diaphragm assembly with continuous scrubbing mechanism) “scrubber” valves where reclaimed water is in use.

END OF SECTION

DIVISION 33 UTILITIES

Section 33 70 00 Electrical Utilities

Section 33 71 00 Electric Utility Transmission and Distribution

General Notes

- New and modified electrical distribution service(s) 400 amp and larger shall be balanced to an acceptable level per industry standards with lighting and support systems on and functioning. Phasing shall be verified and confirmed to be forward rotation.
- Written documentation of electrical balance is required for each panel.
- Real time current and voltage readings per phase primary and secondary at the main transformer and distribution point shall be noted, and a written report given to Property Management Department showing all readings with time of day, day of week reading were obtained.
- All new panels and disconnects are to match existing equipment manufacturer in remodels.
- New structures – Square D is the preferred manufacturer.
- Surge suppression with visual indicator(s) on all main and branch panels.
- All switches and receptacles are to be spec grade, 20-amp minimum.
- All circuits shall be identified on the faceplate of all devices.
- All panel board circuit breaker panels, disconnects shall be clearly labeled and have a legend
- Typed, not hand-written panel schedules shall be installed in all panels by the electrical contractor. All panels and distribution systems shall be exterior labeled in accordance with the National Electrical Code.
- Phase Loss / Phase Monitoring on all 3 Phase motors, equipment and systems.
- Transient voltage suppressors meeting NEC requirements shall be provided for all incoming services from a utility or portable generator.
- Amperage balance of panels is required to reduce neutral currents and save energy.
- Phase rotation shall be verified and documented by the electrician and contractor after installation.

END OF SECTION

DIVISION 46 00 00 WATER AND WASTEWATER EQUIPMENT**Section 46 20 00 Water and Wastewater Preliminary Treatment Equipment****Section 48 25 00 Oil and Grease Separation and Removal Equipment****Section 46 25 23 Grease Traps**

Per Manatee County Ordinance 16 -12 The Board of County Commissioners finds that regulating the discharge and disposal in the sanitary sewer collection system will prevent blockages, sewer overflows, and provide the proper operation and maintenance of the sanitary sewer collection system. See attached Ordinance doc 51.

Refer to FBC - Plumbing Chapter 10 for the proper design criteria and submittal requirements for permit approval.

END OF SECTION

DIVISION 48 00 00 ELECTRICAL POWER GENERATION**Section 48 10 00 Electrical Power Generation Equipment****Section 48 11 00 Fossil Fuel Plant Electrical Power Generation Equipment****Section 48 11 26 Fossil Fuel Electrical Power Plant Generators****General Notes**

- Preferred manufacturers are Caterpillar, Kohler, and Cummings.
- Preferred engine type – Natural Gas. Install diesel engines if natural gas is not available.
- Fuel Storage requirement, runtime shall be 168 hours (minimum) with onsite fuel loaded to 90% capacity and an electrical load based on a 75% power load.
- Option at facility/site with no installed generator: install one (sized to branch electrical panel) transfer switch that is isolated to that branch panel for powering limited lighting, communications, alarms, and electrical outlets for the purpose of powering this location with a portable generator so sized and rated for the application and load.
- An outdoor accessible plug for a trailer mounted or vehicle mounted generator: Provide and install one generator power female plug, dead-Front, amp size as needed, 3 - wire, 4 - pole switched with one circuit breaker serving as a disconnect switch and or all sized and rated for that locations panel voltage and load. Verify plug assembly is available. A NEMA 3R weatherproof wiretap box (IT pole cabinet) may be required if power requirements exceed the nominal plug size (see Attachment).
- If load control is employed, NESHAP requirements need to be met.
- Generator plugs manufactured by Hubbell are preferred.

END OF SECTION



ATTACHMENTS LIST AND THEIR LOCATION**LOCATED ON THE SHAREPOINT SITE; PROVIDED UPON REQUEST TO THE VENDOR**

File Title	File Type	Location Folder	Description
5	PDF	Attachment to preferred building catalog	Large dedication plaque
13	PDF	Attachment to preferred building catalog	Public Works Standards Part 1 Section 1.14 Record Drawings
11	PDF	Attachment to preferred building catalog	Nema Type 3r Power Vented outdoor Enclosure with built-in fan spec
1	PDF	Attachment to preferred building catalog	Zoll AED Plus value Package price and provider website
23	PDF	Attachment to preferred building catalog	True Grid Permeable Paver Technical Specifications Section 32 1243 Porous Flexible Paving
22	PDF	Attachment to preferred building catalog	True Grid Porous Flexible Paving Section 02795
21	PDF	Attachment to preferred building catalog	True Grid Pro Plus Manufacturer's Product Spec. Sheet
20	PDF	Attachment to preferred building catalog	Termiticides Registered in Florida for preventive treatment of new construction List
18	PDF	Attachment to preferred building catalog	Manatee County Government Standard Data/Voice Cabling Requirements
17	PDF	Attachment to preferred building catalog	Manatee County Procedure # 606.003 Security Camera Installation Procedure 01-14-2016
16	PDF	Attachment to preferred building catalog	SaniGlaze International Newly Grouted Joint Treatment Specifications Guide Section 09 01 30.91
15	PDF	Attachment to preferred building catalog	Roppe Rubber & Vinyl Flooring pinnacle rubber base product brochure
14	PDF	Attachment to preferred building catalog	Roller Shades Hunter Douglas Brochure

10	PDF	Attachment to preferred building catalog	Manatee County logo Graphics Standards Manual
6	PDF	Attachment to preferred building catalog	Exeter Storm Shield Hurricane Shutter System Specification guide
9	PDF	Attachment to preferred building catalog	FPL Business Programs and Services brochure
7	Word	Attachment to preferred building catalog	Final Reconciliation, Warranty Period Declaration and Contractors Affidavit Form
12	PDF	Attachment to preferred building catalog	Flexco Radial Rubber Tile Maintenance manual
8	PDF	Attachment to preferred building catalog	Manatee County Section 088813 Fire Resistant Glazing Rev 10/2017
19	PDF	Attachment to preferred building catalog	Termite Protection in buildings code reference
24	PDF	Attachment to preferred building catalog	Zoll AED Plus value Package Brochure
4	PDF	Attachment to preferred building catalog	Chain link Fences and Gates Section 323113 part 1 10/24/17 spec
3	PDF	Attachment to preferred building catalog	Manatee County Asphalt Paving Section 321216 Part 1 10/2017 spec
Cablespecs 4	JPG	Attachment to preferred building catalog	Photo cable concrete floor termination sample
Cablespecs 3	JPG	Attachment to preferred building catalog	Photo cable concrete floor termination sample
Cablespec 2	JPG	Attachment to preferred building catalog	Photo cable concrete floor termination sample
Cablespec 1	JPG	Attachment to preferred building catalog	Photo cable concrete floor termination sample
Armstrong Acoustical panel	PDF	Attachment to preferred building catalog	Armstrong Acoustical ceiling panel tiles Ultima Tegular fine texture specs
49	PDF	Restrooms	Sloan Wall hung, wall outlet, water free, vitreous china urinal spec
43	PDF	Restrooms	Sloan Royal optima Sensor activated Flushometers model 140-1.28 ES-S TMO SPECS

42	PDF	Restrooms	Sloan Royal optima Sensor activated Flushometers model 152 ES-S TMO SWB SPECS
37	PDF	Restrooms	Xlerator Hand Dryer Model XL Technical data sheet
44	PDF	Restrooms	Micrell 800 Series Soap Dispenser cost and provider website
41	PDF	Restrooms	Bobrick B-5181 reversible folding shower seat cost and provider website
48	PDF	Restrooms	Bobrick B-204-2 Vinyl Shower Curtain cost and provider website
47	PDF	Restrooms	Sloan Act o Matic shower heads website sample
46	PDF	Restrooms	Bobrick B-207x72 Shower curtain rod with concealed mounting prices and provider website
45	PDF	Restrooms	Bobrick B-204-1 Shower curtain hook price and provider website
38	PDF	Restrooms	Bradley Mounted overhead Braced Restroom Partitions Phenolic Series 400 Sentinel specs
40	PDF	Restrooms	Sloan Rear spud floor mount ADA compliant toilet fixture website sample
39	PDF	Restrooms	Sloan rear spud floor mount toilet fixture website sample
36	PDF	Restrooms	Sloan sensor activated electronic hand washing faucet ETF-880 spec
35	PDF	Restrooms	Bobrick B-212 clothes hook and bumper prices and provider website
Pinnacle wall base	PDF	Restrooms	Roppe Rubber & Vinyl Flooring pinnacle rubber base product brochure
Sloan rear spud wall hung	PDF	Restrooms	Sloan Rear spud Wall hung toilet fixture website sample

San Jamar twin roll	PDF	Restrooms	San Jamar Twin roll jumbo vision Bath tissue dispenser price and provider website
Water free wes-1000	PDF	Restrooms	Sloan wall hung, wall outlet, water free, vitreous china urinal WES-1000 spec
San Jamar MULTI FOLD TOWEL	PDF	Restrooms	San Jamar T1790TBK ultrafold oceans large capacity C-fold /multi-fold towel dispenser prices and provider website
Rubbermaid 6140	PDF	Restrooms	Rubbermaid 6140 Sanitary napkin receptacle w/rigid liner, price and provider website
29	PDF	Lighting and electrical	Deco digital De23 LED 23" Area light floodlight spec
30	PDF	Lighting and electrical	Deco digital D402-LED Medium wall pack spec
34a	PDF	Lighting and electrical	Leviton USB charger devices smart outlet brochure
34	PDF	Lighting and electrical	Leviton USB charger devices smart outlet brochure and spec
33	PDF	Lighting and electrical	Manatee county standard data/voice cabling requirements spec
32	PDF	Lighting and electrical	GE lighting Albeo led luminaire linear low bay lighting ALC4 series spec
31	PDF	Lighting and electrical	Nema type 3r Power vented outdoor enclosure with built in fan
28	PDF	Lighting and electrical	RAB Lighting ALED3T78 spec
27	PDF	Lighting and electrical	GE lighting Evolve LED area light scalable are light EASB spec
26	PDF	Lighting and electrical	Leviton Daylight Harvesting Brochure
25	PDF	Lighting and electrical	Manatee county Automatic transfer switches Division26 spec
GE low bay	PDF	Lighting and electrical	Email that shows the cost of low bay lighting
50	PDF	Attachment to preferred building catalog	Bigbelly High Capacity Compactor
51	PDF	Attachment to preferred building catalog	Manatee County ordinance 16- 12 for grease traps

52	PDF	Attachment to preferred building catalog	Manatee County Public Works Utility Standards, 2015 (Record Drawing)
53	PDF	Attachment to preferred building catalog	Marshall Best Security lock product list
54	PDF	Attachment to preferred building catalog	Water heater leak Alarm and shut-off system by RDT reliance detection technologies