RFP 2016-0009 - ADDENDUM 2

COLIGNY REDEVELOPMENT PROJECT

Town of Hilton Head Island, South Carolina

Date Issued: July 29, 2016

Note. The following items shall take precedence over the plans and specifications for the above named project and shall become part of the contract documents.

Where any item called for in the specifications or indicated on the drawings is supplemented hereby, the original requirements shall remain in effect.

Where any original item is amended, voided or superseded hereby, the provisions of such item no specifically amended, voided or superseded shall remain in effect.

Acknowledge receipt of this Addendum in the space provided on the Project Transmittal. Failure to do so may subject the Offeror to disqualification.

The following changes are to be incorporated into the Construction Documents for RFP 20016-0009. All those receiving this addendum should modify their set of contract documents to show the below described changes.

Item 1. Questions & Answers regarding the proposal

Q.1 I strongly suggest that the Town of HHI handle the Builder's Risk for the Park Project. If the bidders are going to be required to supply this coverage you should put in a separate line item for this cost.

A.1 Per General Conditions 11.3 the Contractor is responsible for Builder's Risk Insurance. The cost for this insurance should be included in the Proposal line item for Insurance and Bonds.

Q.2 Can I please get Exhibit A in Excel?

A.2 Yes, Exhibit A Fee Proposals are being revised and issued in Excel format as an attachment to Addenda 2.

Q.3 As noted before I strongly suggest that you except the lump sum bids from the Bidders on the day of the bid. We need several days to fill out and complete all of the bid schedules. Typically we have been given one week to provide all of this breakdown. If you are not willing to do this I see no way we can complete all of the forms and the final bid tally by bid time. If you are not willing to give us extra time to submit the bid summary sheets you should 9At a minimum) add a line item at the bottom of each project bid summary sheet that will allow us to adjust the total (of the above line items). This would allow us to fill in all of the bid line items ahead of time. When the actual bids start to come in we could then adjust only one line item, and get the bid turned in. I still think the first option is better. The 3rd option is for Tom Fultz to let us use the bid modification sheet I sent to Him. Obviously if we use the single line item adjustment or the bid modification letter, the schedule of values would still need to be corrected.

A.3 The Project Transmittal including the lump sum total of all costs as well as summary costs for each project (A-1: Project A-Nassau, A-2: Project B-Lagoon Road Extension, A-3: Project C-South Forest Beach Dr, A-4: Project D – Lagoon Pope Intersection, A-5: Project E – Coligny Park, and A-6: Lagoon Pope Intersection Night Work Alternate) will be required to be submitted with the proposal due on 8/25/16 at 2:00 pm. The six (6) Fee Proposals with individual unit prices will be accepted on 9/1/16 at 2:00 pm. Fee Proposals must be consistent with the totals submitted in the Project Transmittal and be submitted in a sealed

package hand carried or delivered by traceable means and be marked on the outside with "RFP 2016-0009 Coligny Redevelopment Project."

Q.4 Will all of the resume booklets be due the day of the bid? If so how many copies?

A.4 Yes, proposals are due on 08/25/16 at 2:00 pm to include all items listed on pages 3-8 in the *Instructions for Offerors*. Four (4) hard copies plus one (1) .pdf copy on a USB flash drive shall be submitted.

Q.5 Exhibit A: Fee Proposal, A-1 Project A – Nassau Street have two line items at the top (SC-1) AND (SC-2). These are to be priced for the entire project. Bid Summary Sheet for Project A-5 Coligny Park also has line items 2 and 3 under Administrative startup. Is this an error?

A.5 SC-1 and SC-2 on Fee Proposal A-1: Project A-Nassau Street have been removed. Profit and Overhead should be included in each unit price and Insurance and Bonds for the entire project have been moved to the Project Transmittal (see Addenda 2, Attachment B).

Q.6 Your bid summary sheets for each project, especially the Park Project (A-5) does not have a "General Conditions" line Item. We need this line item so we can insert all of our costs for general conditions (Offices, Temp, Utilities, Trash Disposal, Daily and Final Cleaning, Supervision, Project Engineering, Misc. Surveying, Shipping, Postage, Temp Fencing and Barricades, etc.).

A.6 A "General Conditions" line item has been added to the A-5: Coligny Park fee proposal.

Q.7 It would be best to provide the General Conditions Line Items to all of the bid schedules.

A.7 The Road projects do not have a General Conditions line item. Refer to the SCDOT 2007 Standard Specifications for Highway Construction, Special Condition, or Technical Specification for specifications on the line items for the roadway projects.

Q.8 What is the difference between (Line 9) Misc. Administrative and Start Up and (Line 1) Mobilization Costs on Bid summary sheet A-5?

A.8 Line 9 "Misc. Administrative and Start Up" has been changed to "General Conditions" on fee proposal A-5: Coligny Park.

Q.9 I know the schedule for the various projects is embedded in the bid documents or RFP. Could you breakout these as a pdf or provide what pages this info is on?

A.9 The Construction Phasing Schedule is included in at RFP package as Exhibit D with the corresponding Construction Phasing Plan as Exhibit E.

Q.10 Please provide the name of the Company and contact information for the company providing and installing the Playground Equipment.

A.10 Landscape Structures will be manufacturing and installing the playground equipment. The contact is Ed Gruetzner, Carolina Parks & Play; ed@carolinaparksandplay.com or (843) 697-8589.

Q.11 Does the project require SCDOT Inspections?

A.11 The Town will hire a SCDOT certified inspector for the road projects (for inspections and quantity verification) and contract management in conjunction with Town staff.

Q.12 Does testing required by the contract have to be performed by a SCDOT approved lab?

A.12 Yes.

Q.13 DOT specifications include temperature constraints for pavement operations. Who makes the decision if the temperature is not acceptable?

A.13 The Contractor will be responsible for notifying the Town on that day if the temperature is not acceptable. The Town's project manager will be monitoring the temperature conditions and the inspector will take field measurements to document if the paving or concrete cannot be installed due to the temperature. The Contract time will be extended through a change order if work has to be stopped due to temperature.

Q.14 How will the Town handle unknowns encountered during construction (i.e. underground utilities, etc.)?

A.14 All utilities have been marked and surveyed. If unknown conditions are encountered affecting the work, the Contractor shall notify the Town the day that the conditions are encountered. The contract time and amount can be extended if appropriate. The Town's project manager will have authority to draft a Construction Change Directive to be backed up with a Change Order signed by authorized Town officials. The Contractor will need to include time in the schedule to soft dig for the locations of known utility conflicts.

Q.15 Have the Utility companies given a schedule to the Town regarding timing for utility relocations?

A.15 The Town has issued the construction schedule to the utility companies. The Town is in coordination with the utility companies to receive a scheduled of any known conflicts. Any schedules will be shared to the Contractor for use in project scheduling.

Q.16 Is there a list of all relocates in the proposal?

A.16 No. Relocates/conflicts are shown on each set of plans.

Item 2. Technical Specifications

2.1 SECTION 012200 UNIT PRICES: Do not include Item 2.2 of Addendum 1 – Section 012200 UNIT PRICES. Section 012200 UNIT PRICES is defined as follows:

Part 1- General, Section 1.4 Procedures, A; "Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit."

2.2 SECTION 013310 ELECTRONIC SUBMITTAL PROCEDURES

A. Specification section added.

2.3 SECTION 211313 WET-PIPE SPRINKLER SYSTEMS

A. Delete subparagraph 3.8-A: 'Install wall-type, fire-department connection.'
B. Delete subparagraph 3.10-B-6: 'Coordinate with fire-pump tests. Operate as required.'

2.4 SECTION 211316 DRY-PIPE SPRINKLER SYSTEMS

A. Revise subparagraph 3.3-S to read: 'Install stainless steel escutcheons for piping penetrations of walls, ceilings, and floors.'
B. Add the following subparagraph 3.11-B: 'Galvanized sprinkler piping shall be FM Approved for temperatures over 130°F.'
C. Revise subparagraph 3.12-B-1 to read: 'Upright, Pendent, and Sidewall Sprinklers: Corrosion-resistant electroless nickel PTFE (e.g. Nickel-Teflon) coating.'

2.5 SECTION 221123 DOMESTIC WATER PUMPS

A. Delete this specification section in its entirety.

2.6 SECTION 233401 CEILING FANS

A. Specification section added.

2.7 SECTION 233400 HVAC FANS

A. Revise subparagraph 1.7-A to read:

The Warranty Period for surfaces with enhanced finishes (painted, anodized, etc.) on Essence shall be limited to one year. The manufacturer shall replace any products or components defective in material or workmanship for the customer free of charge (including transportation charges within the USA, FOB Lexington, KY), pursuant to the complete terms and conditions of the Big Ass Fans Non-Prorated Warranty in accordance to the following schedule:

Item	**Period of Coverage**
Hub and airfoils	Lifetime (Parts)†
Motor, drive, and controller	10 years††
Labor	1 year††
Enhanced finishes†††	1 year†††

† "Lifetime" means a period ending seven (7) years after Big Ass Fans discontinues manufacturing the product, as such period is defined by Big Ass Fans, but in no event shall this period be less than 10 years from the date that the Warranty Period commences, as defined above.

†† The 10-Year Warranty Period and 1-Year Labor apply to non-residential installations only, and requires purchased installation by a factory-approved, Big Ass Fans certified installer and the submission of installation documentation by such installer. A 5-Year Warranty Period will apply for proper installations by any other state qualified or licensed electrical contractor. The Warranty is void in its entirety if the product is installed by personnel other than a state qualified or licensed contractor.

††† The 1-year enhanced finishes warranty applies to outdoor installations only.

B. Revise paragraph 2.2 heading to read "HIGH VOLUME, LOW SPEED FANS – BIG ASS FANS ESSENCE".

C. Revise subparagraph 2.2-A-2 sentence three to read "Sound levels from the fan operating at maximum speed measured in a laboratory setting shall not exceed 40 dBA."

D. Revise subparagraph 2.2-B to read:

Airfoil System

1. The fan shall be equipped with eight (8) high volume, low speed airfoils of precision extruded, anodized aluminum alloy. Each airfoil shall be of the high-performance Mini-Elipto design. The airfoils shall be connected to the hub and interlocked with eight (8) stainless steel retainers and two (2) sets of stainless steel bolts and lock washers per airfoil.
2. The fan shall be equipped with eight (8) upswept winglets designed to redirect outward airflow downward, thereby enhancing efficiency. The winglets shall be molded of high strength polymer and shall be attached at the tip of each airfoil with a stainless steel screw. The standard color of the winglets shall be silver or black.
3. As an option, the fan shall be equipped with eight (8) plug-style airfoil tips, molded of high strength polymer, in place of the eight (8) upswept winglets. The airfoil tips shall be attached at the tip of each airfoil with a stainless steel screw. The standard color of the airfoil tips shall be black.

E. Revise subparagraph 2.2-C to read:

Motor

1. The fan motor shall be a permanent magnet brushless motor rated for continuous operation at maximum speed with the capability of modulating the fan speed from 0–

100% without the use of a gearbox or other mechanical means of control. The motor shall operate from any voltage ranging from 100–120 VAC or 200–240 VAC, single phase, and 50/60Hz, without requiring adapters or customer selection. The motor shall be a non-ventilated, heat sink design with the capability of continuous operation in -13°F to 131°F (-25°C to 55°C) ambient condition. The standard color of the motor unit shall be white with silver trim or silver with black trim.

2. The motor shall be rated at one of the following: a. 8-ft fan average power @ max speed = 475 Watts b. 10-ft fan average power @ max speed = 425 Watts c. 12-ft fan average power @ max speed = 350 Watts d. 14-ft fan average power @ max speed = 300 Watts

F. Revise subparagraph 2.2-D to read:

Controls

1. The fan controller shall be incorporated into the fan assembly and housed in an enclosure independent of the motor to prevent overheating or electrical interference. The fan controller shall be factory programmed to minimize starting and braking torques and shall be equipped with a simple diagnostic program and an LED light to identify and relay faults in the system.

G. Delete subparagraph 2.2-J.

H. Revise subparagraph 3.2-B-3 to read:

The structure the fan is attached to shall be capable of supporting a torque load of up to 40 ft·lb (407 N·m) of torque.

I. Add subparagraph 3.2-E:

The fan is suitable for use in wet locations when installed on a GFCI protected branch circuit.

Item 3. Project Drawings – see attachments

3.1 SHEET C2.1

A. Added 1 ½” meter and backflow on 2” water line serving restrooms.
B. Revised 1” water line serving restrooms to 2” water line.
C. Added connection note to exist. 2” water line.

3.2 SHEET C2.2

A. Added water meter w/backflow preventor detail.

3.3 SHEET C3.1

A. Revised SMH #13 invert
B. Labeled pipe label between GI #11 & SMH #12.
C. Labeled SMH #12

3.4 SHEET C3.2

A. Revised YI #21 invert.
B. Revised slope on 8” HDPE between YI #21 & YI #17.
C. Revised YI #17 inverts.
D. Labeled pipe label between Trench Drain & YI #17.
E. Revised slope on 10” HDPE between YI #17 & SMH #13.
F. Revised SMH #13 invert

3.5 SHEET C4.1

A. Added Pavement Marking & Signage Notes 1 & 2.
B. Added 3 handicap parking signs to spaces west of restrooms.

3.6 P0.501 – PLUMBING DETAILS

A. Revised Water Heater Installation Detail 9.

B. Removed backflow preventer in Water Service Riser Installation; Detail 10

3.7 P0.901 – PLUMBING ISOMETRICS

A. Clarified Vent-thru-roof in Museum Sanitary & Vent Isometric.
B. Adjusted floor drain location in Storage room in Restroom Sanitary & Vent Isometric
C. Added floor drain and associated piping changes for relocated water heater WH-2 to Janitor 205 in Restroom Sanitary & Vent Isometric.
D. Added EWC and associated piping changes in Restroom Sanitary & Vent Isometric.

3.8 P1.101 – MUSEUM DOMESTIC HOT & COLD WATER PLAN

A. Added piping to extend rough-in requirements.
B. Clarified requirement for Contractor to coordinate with future fixtures.
C. P1.102 – MUSEUM SANITARY & VENT PLAN
D. Clarified requirement for Contractor to coordinate with future fixtures.

3.9 P2.101 – RESTROOM DOMESTIC WATER PLANS

A. Relocated water heater WH-2 from Storage 203 to Janitor 205, and associated piping changes.
B. Added EWC outside of Family Restroom 206 and associated piping changes.
C. Clarified proposed trap primer locations and piping sizes.

3.10 P2.102 – RESTROOM SANITARY & VENT PLANS

A. Added floor drain and associated piping changes for relocated water heater WH-2 to Janitor 205.
B. Added EWC outside of Family Restroom 206 and associated piping changes.
C. Adjusted floor drain location in Storage 203.

3.11 P3.101 – PAVILION DOMESTIC WATER PLAN

A. Clarified pipe sizes, fixture locations, and detail callouts.

3.12 P3.102 – PAVILION SANITARY & VENT PLAN

A. Adjusted vent piping out of wall.

3.13 FP0.001 – FIRE PROTECTION PAVILION SANITARY & VENT PLAN

A. Updated General Fire Protection Note 20 regarding sprinkler piping options.
B. Clarified location of backflow preventer, and revised Fire Connection Piping Schematic 2.

3.14 E0.001 – ELECTRICAL NOTES & LEGENDS

A. Updated Hand Hole detail.
B. Added site power general note.

3.15 E0.002 – ELECTRICAL SCHEDULES & DETAILS

A. Updated site shoe box fixture part number and pole part number
B. Added light pole mounting detail

3.16 E0.010 – ELECTRICAL ONE-LINE DIAGRAM

A. Adjusted conductor and disconnect details for Children's Museum one-line diagram
B. Adjusted conductors for Pavilion/Restroom one-line diagram.
C. Added surge protection device schedule

3.17 E0.050 – ELECTRICAL PANEL SCHEDULES

A. Panel "R", Panel "L", and Panel "MDP-C" updated loads/circuits.

3.18 E0.060 – ELECTRICAL SITE PLAN PAVILION

A. Bollards moved/added near Restroom/Information Center
B. Sign uplight added East of Restroom/Information Center
C. Added tamper switches for Fire backflow preventer and post indicator valve

3.19 E0.061 – ELECTRICAL SITE PLAN PARK

A. Security light poles added around park area.

3.20 E1.103 – CHILDRENS MUSEUM SYSTEMS PLAN

A. Note added referencing tamper switches added shown on site plan

3.21 E2.101 – PAVILION POWER & TELECOM. PLAN

A. Lighting Control Panel added

3.22 E3.101 – CHILDRENS MUSEUM SYSTEMS PLAN

A. Lighting Control Panel added
B. Janitor receptacle added
C. Storage receptacle changed to GFCI
D. Power added for additional infrared heater

3.23 M0.001 HVAC-NOTES AND LEGENDS

A. Updated Ceiling Fan Schedule and notes.
B. Modified Louvers L-1 and L-2.
C. Added Air Distribution Schedule.
D. Modified IRH-1 and added IRH-8.

3.24 M0.02 – HVAC DETAILS

A. Detail 8/M0.002 Vertical AHU Installation Detail modified to reflect basis of design model.
B. Added support information to Detail 1/M0.002.

3.25 M1.101 – CHILDREN'S MUSEUM HVAC PLAN

A. Moved thermostat for AH-2 and added an isolation base.
B. Added ductwork plenums on resized exterior louvers.

3.26 M2.101 – RESTROOM HVAC PLANS

A. UH-3 and associated thermostat have changed locations to avoid conflict with new location of water heater. Isolation base provided for new thermostat location.
B. Key Notes 8 and 12 modified.

3.27 M3.01 – PAVILION HVAC PLAN AND SECTIONS

A. Key Notes 3, 5, and 8 modified.

3.28 M3.102 – POND PAVILION HVAC PLAN AND SECTION

A. BAF-1 changed to a Haiku fan from an Essence fan. Key Note 1 reflects this change.

Item 4. Special Conditions

4.1 Exhibit C – Special Conditions; Delete SC-1 Profit and Overhead.

Attachments:

Addendum 2 – Attachment A: Pre-Proposal Conference Attendees

Addendum 2 – Attachment B: Exhibit A Fee Proposals (excel)

- A-1: Project A – Nassau Street
- A-2: Project B – Lagoon Rd Extension
- A-3: Project C – South Forest Beach Dr.
- A-4: Project D – Lagoon Pope Intersection
- A-5: Coligny Park
- A-6: Project D – Lagoon Pope Intersection Night Time

Addendum 2 – Attachment C: Exhibit A Fee Proposals (pdf)

- A-1: Project A – Nassau Street
- A-2: Project B – Lagoon Rd Extension
- A-3: Project C – South Forest Beach Dr.
- A-4: Project D – Lagoon Pope Intersection
- A-5: Coligny Park
- A-6: Project D – Lagoon Pope Intersection Night Time

Addendum 2 – Attachment D: Technical Specifications

- Section 013300 – Electronic Submittal Procedures
- Section 233401 – Ceiling Fans

Addendum 2 – Attachment E: Drawing Sheets:

- C2.1
- C2.2
- C3.2
- C4.1
- P0.501
- P0.901
- P1.101
- P2.101
- P2.102
- P3.101
- P3.102
- FP0.001
- E0.001
- E0.002
- E0.010
- E0.050
- E0.060
- E0.061
- E1.103
- E2.101
- E3.101
- M0.001
- M0.02
- M1.101
- M2.101
- M3.01
- M3.102

Reminder: The deadline for questions is Thursday, 08/04/16 at 4:30 pm. All questions must be submitted in writing.

EXHIBIT A: FEE PROPOSAL
A-1: Project A - Nassau Street
RFP 2016-0009 - COLIGNY AREA IMPROVEMENTS
LIST OF ESTIMATED QUANTITIES / UNIT COST BID SCHEDULE

The unit prices given on this document, along with any negotiated changes in quantities, shall become the basis for, and included in, the contract agreement. Offerors are responsible for verifying all quantities and notifying the Owner of any discrepancies greater than 10% of estimate, in writing, prior to the bid opening. 7-digit SCDOT specifcation numbers refer to the 2007 Standard Specifications for Highway Constructionof the South Carolina Department of Transportation. SC refers to the Special Condition. Technical Specification #s 331000SC, 333000, 334000 refers to Project Manual Technical Specification

ITEM	SPEC. NO. SCDOT, TECH. SPEC. OR SPECIAL CON.	DESCRIPTION	QUANTITY NUMBER OF UNITS	QUANTITY UNIT MEASURE	COST PER UNIT	COST TOTAL COST
MISCELLANOUS						
A-M1	1031000	Mobilization	1	ls		$ -
A-M2	1050800	Construction Staking, Lines and Grades	1	ls		$ -
A-M3	SC-3	As-Built Survey	1	ls		$ -
A-M4	1071000	Traffic Control	1	ls		$ -
A-M5	6271005	4" White Broken Lines (Gaps Excl.) Thermoplastic - 90 mil.	500	lf		$ -
A-M6	6271010	4" White Solid Lines Thermoplastic - 90 mil.	700	lf		$ -
A-M7	6271020	12" White Solid Lines - Thermo. - 125 mil.	725	lf		$ -
A-M8	6271025	24" White Solid Lines (Stop/Diag Lines) - Thermo. - 125 mil.	108	lf		$ -
A-M9	6271030	White Single Arrows (LT, STRGHT, RT) Thermo. - 125 mil.	3	ea		$ -
A-M10	6271035	White Word Message "ONLY" - Thermoplastic - 125 mil.	1	ea		$ -
A-M11	6271040	White Combination Arrows (Str&Rt.) Thermo. - 125 mil.	1	ea		$ -
A-M12	6271074	4" Yellow Solid Lines Thermoplastic - 90 mil.	230	lf		$ -
A-M13	675027G	Furnish & Install 4.0" Shecdule 80 PVC Conduit	500	lf		$ -
A-M14	675027O	Furnish & Install 6.0" Schedule 80 PVC Conduit	500	lf		$ -
A-M15	7204900	Detectable Warning Surface (Chocolate Brown)	264	sf		$ -
					MISCELLANOUS SUBTOTAL	**$ -**
DEMOLITION						
Item		**Description**	**Quantity**		**Unit Cost**	**Total Cost**
A-D1	2023000	Remove Existing Pavement, Base, and Paths	4530	sy		$ -
A-D2	2024100	Remove Existing Curb & Gutter	1590	lf		$ -
A-D3	2021000	Remove Existing Utililities	1	ls		$ -
A-D4	2021000	Structure demolition	1	ls		$ -
					DEMOLITION SUBTOTAL	**$ -**
WATER DISTRIBUTION SYSTEM						
Item		**Description**	**Quantity**		**Unit Cost**	**Total Cost**
A-W1	331000SC	Connect to existing watermain	2	ea		$ -
A-W2	331000SC	8" PVC Watermain	715	lf		$ -
A-W3	331000SC	6" PVC Water lateral	50	lf		$ -
A-W4	331000SC	6" DIP Water lateral	35	lf		$ -
A-W5	331000SC	2" PVC Water lateral	120	lf		$ -
A-W6	331000SC	2" Gate Valve & Box	3	ea		$ -
A-W7	331000SC	6" Gate Valve & Box	1	ea		$ -
A-W8	331000SC	8" Gate Valve & Box	2	ea		$ -
A-W9	331000SC	6" Fire Hydrant Assembly w/ V&B	2	ea		$ -
A-W10	331000SC	6" Double Check Backflow Preventer	1	ea		$ -
A-W11	331000SC	1.5" Water Meter with Backflow Preventer	3	ea		$ -
A-W12	331000SC	6" Post Indicator Valve	1	ea		$ -
A-W13	331000SC	8" X 6" Tapping Sleeve	1	ea		$ -
A-W14	331000SC	8" X 2" Tapping Sleeve	1	ea		$ -
A-W15	331000SC	8" X 6" Tee	2	ea		$ -
A-W16	331000SC	8" X 8" Tee	2	ea		$ -
A-W17	331000SC	8" 22.5 Bend	4	ea		$ -
A-W18	331000SC	8" 45 Bend	2	ea		$ -
A-W19	331000SC	8" 11.25 Bend	1	ea		$ -
A-W20	331000SC	6" 11.25 Bend	1	ea		$ -
A-W21	331000SC	6" 45 Bend	1	ea		$ -
					WATER DISTRIBUTION SYSTEM SUBTOTAL	**$ -**
SANITARY SEWER SYSTEM						
Item		**Description**	**Quantity**		**Unit Cost**	**Total Cost**
A-SS1	333000	Connect to Existing Manhole	1	ea		$ -
A-SS2	333000	8" SDR-26 PVC Sewer Main 0-6' Depth	275	lf		$ -
A-SS3	333000	Sewer Manhole 0-6' Depth	3	ea		$ -
A-SS4	333000	Single Service Connection	3	ea		$ -
A-SS5	333000	12" DIP	60	lf		$ -
A-SS6	333000	6" Lateral	70	lf		$ -
A-SS7	333000	8" Lateral	40	lf		$ -
					SANITARY SEWER SYSTEM SUBTOTAL	**$ -**
STORM DRAINAGE						
Item		**Description**	**Quantity**		**Unit Cost**	**Total Cost**
A-SD1	7192105	Storm Manhole	7	ea		$ -
A-SD2	7192012	Grate Inlet	11	ea		$ -
A-SD3	7191005	Curb Inlet	11	ea		$ -
A-SD4	7191005	Curb Inlet (Hooded)	11	ea		$ -
A-SD5	334000 + Detail	Large Junction Box	2	ea		$ -
A-SD6	334000 + Detail	Interference Storm/Sewer Box	2	ea		$ -
A-SD7	7141112	15" RCP Stormwater Pipe	21	lf		$ -
A-SD8	7141113	18" RCP Stormwater Pipe	389	lf		$ -
A-SD9	7141114	24" RCP Stormwater Pipe	379	lf		$ -
A-SD10	7141115	30" RCP Stormwater Pipe	70	lf		$ -
A-SD11	7141116	36" RCP Stormwater Pipe	940	lf		$ -
A-SD12	334000 + Detail	Outfall Control Structure (CS# 110)	1	ea		$ -
A-SD13	334000 + Detail	Outfall Control Structure (CS# 15)	1	ea		$ -
					STORM DRAINAGE SUBTOTAL	**$ -**
EARTHWORK						
Item		**Description**	**Quantity**		**Unit Cost**	**Total Cost**

EXHIBIT A: FEE PROPOSAL
A-1: Project A - Nassau Street
RFP 2016-0009 - COLIGNY AREA IMPROVEMENTS
LIST OF ESTIMATED QUANTITIES / UNIT COST BID SCHEDULE

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A-E1	2011001	Clearing and Grubbing	2.3	ac		$ -
A-E2	9520305	Earthwork and Grading Complete	1	ls		$ -
A-E3	2033030	Select Fill	500	cy		$ -
					EARTHWORK SUBTOTAL	**$ -**
CONCRETE						
Item		**Description**	**Quantity**		**Unit Cost**	**Total Cost**
A-C1	72003110	18" Curb & Gutter (Standard)	846	lf		$ -
A-C2	72003210	24" Curb & Gutter (Standard)	652	lf		$ -
A-C3	72003110	18" Curb & Gutter (Roll)	1174	lf		$ -
A-C4	72003110	24" Concrete Gutter Strip	973	lf		$ -
A-C5	72003110	12" Flush Header Curb	455	lf		$ -
					CONCRETE SUBTOTAL	**$ -**
PAVING						
Item		**Description**	**Quantity**		**Unit Cost**	**Total Cost**
A-P1	3050108	8" Graded Aggregate Base Course (Nassau Rd)	3333	sy		$ -
A-P2	3050108	8" Graded Aggregate Base Course (Pope)	315	sy		$ -
A-P3	3050108	10" Graded Aggregate Base Course (Nassau Rd Pavers)	400	sy		$ -
A-P4	4011004	Liquid Asphalt Binder PG64-22	42	tn		$ -
A-P5	4013990	Mill Existing Asphalt Pavement (Nassau Rd)	1525	sy		$ -
A-P6	4013990	Mill Existing Asphalt Pavement - Variable (Pope)	600	sy		$ -
A-P7	4030310	Hot Mix Asphalt Intermediate Course Type A (Pope)	32	tn		$ -
A-P8	4030320	Hot Mix Asphalt Surface Course Type B (Nassau Full Depth)	334	tn		$ -
A-P9	4030320	Hot Mix Asphalt Surface Course Type B (Nassau Overlay)	153	tn		$ -
A-P10	4030320	Hot Mix Asphalt Surface Course Type B (Pope Full Depth)	32	tn		$ -
A-P11	4030320	Hot Mix Asphalt Surface Course Type B (Pope Overlay)	60	tn		$ -
A-P12	4030320	Hot Mix Asphalt Surface Course Type B (Pope Inlay)	159	tn		$ -
A-P13	4030360	Hot Mix Asphalt Surface Course Type E Leveling (Pope Overlay)	24	tn		$ -
A-P14	321400	Vehicular Pavers	400	sy		$ -
A-P15	321400	Geogrid - Paver Underlayment	400	sy		$ -
A-P16	321316	4" Thick Concrete Sidewalk/Pathway	340	sy		$ -
A-P17	4030320	Asphalt Pedestrian Pathway	311	sy		$ -
A-P18	4039030	Traffic Pattern XD	129	sy		$ -
					PAVING SUBTOTAL	**$ -**
EROSION AND SEDIMENT CONTROLS						
Item		**Description**	**Quantity**		**Unit Cost**	**Total Cost**
A-EC1	8100200	Temporary Cover	0.6	ac		$ -
A-EC2	8152004	Inlet Structure Filter - Type F (Weighted)	1	ea		$ -
A-EC3	8156200	Cleaning Inlet Structure Filters	38	ea		$ -
A-EC4	8156211	Inlet Structure Filter - Type E (Catch Basin Type 1)	24	ea		$ -
A-EC5	8156219	Inlet Structure Filter - Type A	13	ea		$ -
A-EC6	8156490	Stabilized Construction Entrance	270	sy		$ -
					EROSION SUBTOTAL	**$ -**
		TOTAL FEE (PROJECT A ONLY)			**$ -**	

EXHIBIT A: FEE PROPOSAL
A-2: Project B - Lagoon Rd Extension
RFP 2016-0009 - COLIGNY AREA IMPROVEMENTS
LIST OF ESTIMATED QUANTITIES / UNIT COST BID SCHEDULE

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ITEM	SPEC. NO. SCDOT OR SPEC PROV.	DESCRIPTION	QUANTITY NUMBER OF UNITS	QUANTITY UNIT MEASURE	COST PER UNIT	COST TOTAL COST
MISCELLANEOUS						
Item		Description	Quantity		Unit Cost	Total Cost
B-M1	1031000	Mobilization	1	ls		$ -
B-M2	1050800	Construction Staking, Lines and Grades	1	ls		$ -
B-M3	SC-3	As-Built Survey	1	ls		$ -
B-M4	6241020	12" White Solid Lines	304	lf		$ -
B-M5	6271025	24" White Solid Lines - Thermo 125 mil	38	lf		$ -
B-M6	6271040	White Comb. Arrows - Thermo 125 mil	2	ea		$ -
B-M7	6271030	White Single Arrows - Thermo 125 mil	2	ea		$ -
B-M8	6241050	Handicap Symbol - Perm. Pvmt.Marking	3	ea		$ -
B-M9	6271039	White word message "STOP"	6	ea		$ -
B-M10	6271039	White word message "YIELD"	4	ea		$ -
B-M11	6271023	12"x18" White Yield Bar	25	lf		$ -
B-M12	6241074	4" Yellow Solid Line	230	lf		$ -
B-M13	101453	18" STOP Sign	6	ea		$ -
B-M14	101453	24" STOP Sign	5	ea		$ -
B-M15	101453	30" STOP Sign	3	ea		$ -
B-M16	101453	18" YIELD Sign	5	ea		$ -
B-M17	101453	Accessible Space Sign	3	ea		$ -
B-M18	8153000	Silt Fence	3500	lf		$ -
B-M19	8153090	Replace/Repair Silt Fence	1750	lf		$ -
B-M20	8156211	Inlet Structure Filter Type E (Catch Basin)	15	ea		$ -
B-M21	8156490	Gravel Construction Exit	2	ea		$ -
B-M22	8100200	Temporary Cover	4100	sy		$ -
B-M23	675027G	4" Conduit	600	lf		$ -
B-M24	675027O	6" Conduit	300	lf		$ -
B-M25	7204900	Detectable Warning Surface (Chocolate Brown)	158	sf		$ -
					MISCELLANEOUS SUBTOTAL	**$ -**
DEMOLITION						
Item		Description	Quantity		Unit Cost	Total Cost
B-D1	2023000	Remove Existing Pavement, Base, and Paths	4250	sy		$ -
B-D2	2024100	Remove Existing Curb & Gutter	742	lf		$ -
B-D3	2021000	Structure demolition	1	Lump Sum		$ -
					DEMOLITION SUBTOTAL	**$ -**
WATER DISTRIBUTION SYSTEM						
Item		Description	Quantity		Unit Cost	Total Cost
B-W1	331000SC	Connect to existing watermain	2	ea		$ -
B-W2	331000SC	8" Watermain	1135	lf		$ -
B-W3	331000SC	2" Water lateral	40	lf		$ -
B-W4	331000SC	2" Gate Valve & Box	1	ea		$ -
B-W5	331000SC	8" Gate Valve & Box	2	ea		$ -
B-W6	331000SC	6" Fire Hydrant Assembly w/ V&B	4	ea		$ -
					WATER DISTRIBUTION SYSTEM SUBTOTAL	**$ -**
GRADING & DRAINAGE						
Item		Description	Quantity		Unit Cost	Total Cost
B-G1	2011001	Clearing and Grubbing	2	ac		$ -
B-G2	9520305	Earthwork and Grading Complete	1	ls		$ -
B-G3	2033030	Lake Fill	7500	cy		$ -
B-G4	7203110	Curb & Gutter	2975	lf		$ -
B-G5	7203110	Flush Header Curb	800	lf		$ -
B-G6	7192105	Storm Manhole	3	ea		$ -
B-G7	7192012	Grate inlet	1	ea		$ -
B-G8	7191005	Curb Inlet	14	ea		$ -
B-G9	7141113	18" RCP Stormwater Pipe	418	lf		$ -
B-G10	7141114	24" RCP Stormwater Pipe	289	lf		$ -
B-G11	7141115	30" RCP Stormwater Pipe	351	lf		$ -
B-G12	7141116	36" RCP Stormwater Pipe	474	lf		$ -
B-G13	8156490	Gravel Construction Exit	2	ea		$ -
					GRADING & DRAINAGE SUBTOTAL	**$ -**
PAVING						
Item		Description	Quantity		Unit Cost	Total Cost
B-P1	4011004	Liquid Asphalt Binder PG64-22	37.4	ton		$ -

EXHIBIT A: FEE PROPOSAL
A-2: Project B - Lagoon Rd Extension
RFP 2016-0009 - COLIGNY AREA IMPROVEMENTS
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B-P2	4030320	Full Depth Pavement (2" Surface Course, Tack Coat, Prime Coat)	660	ton		$ -
B-P3	3050108	8" Graded Aggregate Base Course	6025	sy		$ -
B-P4	3050104	4" Graded Aggregate Base Course	1590	sy		$ -
B-P5	4030320	1.5 " Asphalt Surface Course	120	ton		$ -
B-P6	321400	Paver Section (Pavers, 10" Rock Base, Geogrid)	1305	sy		$ -
B-P7	4039030	Traffic Pattern XD	220	sy		$ -
B-P8	7201505	Concrete Wheel Stops	70	ea		$ -
					PAVING SUBTOTAL	**$ -**
		TOTAL FEE (PROJECT B ONLY)			**$ -**	

EXHIBIT A: FEE PROPOSAL
A-3: Project C - South Forest Beach Dr.
RFP 2016-0009 - COLIGNY AREA IMPROVEMENTS
LIST OF ESTIMATED QUANTITIES / UNIT COST BID SCHEDULE

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ITEM	SPEC. NO. SCDOT OR SPEC PROV.	DESCRIPTION	QUANTITY NUMBER OF UNITS	QUANTITY UNIT MEASURE	COST PER UNIT	COST TOTAL COST
MISCELLANOUS						
Item		**Description**	**Quantity**		**Unit Cost**	**Total Cost**
C-M1	1031000	Mobilization	1	ls		$ -
C-M2	1050800	Construction Staking, Lines and Grades	1	ls		$ -
C-M2	SC-3	As-Built Survey	1	ls		$ -
C-M3	1071000	Traffic Control	1	ls		$ -
C-M4	6262110	4" Yellow Solid Lines - Epoxy Paint	169	lf		$ -
C-M5	6271023	12" x 18" White Triang. Yield Bar (Gaps Exc)Thermo. - 125 Mil.	20	lf		$ -
C-M6	6271039	White Word Message "Stop" - Thermo. - 125 Mil.	8	ea		$ -
C-M7	7197120	Adjust Manhole	3	ea		$ -
C-M8	7197140	Adjust Utility Box	1	ea		$ -
C-M9	7197141	Adjust Utillity Valve Box with Cover	14	ea		$ -
C-M10	675027G	Furnish & Install 4" Schedule 80 PVC Conduit	400	lf		$ -
C-M11	675027O	Furnish & Instal 6" Schedule 80 PVC Conduit	400	lf		$ -
C-M12	101453	Trail Signage	1	ls		$ -
C-M13	331000	Relocate Hydrant	1	ls		$ -
C-M14	7204900	Detectable Warning Surface (Chocolate Brown)	160	sf		$ -
					MISCELLANOUS SUBTOTAL	**$ -**
DEMOLITION						
Item		**Description**	**Quantity**		**Unit Cost**	**Total Cost**
C-D1	2024100	Remove & Disposal of Existing Curb	43	lf		$ -
C-D2	2016000	Selected Removal of Marked Trees	1	ls		$ -
C-D3	Per Plan	Remove Portion of Flume	1.5	sy		$ -
					DEMOLITION SUBTOTAL	**$ -**
STORM DRAINAGE						
Item		**Description**	**Quantity**		**Unit Cost**	**Total Cost**
C-SD1	7197110	Adjust Catch Basin	1	ea		$ -
C-SD2	7192010	SCDOT Drop Inlet (24" X 24") (With 2'x2' Precast Box)	3	ea		$ -
C-SD3	7143615	15" RCP Stormwater Pipe	122	lf		$ -
C-SD4	7198120	Replace Existing Roof Inlet (Type 9) with Drop Inlet (24"X24")	2	ea		$ -
C-SD5	7198120	Replace Existing Beehive Inlet with Drop Inlet (24"X24")	1	ea		$ -
					STORM DRAINAGE SUBTOTAL	**$ -**
EARTHWORK						
Item		**Description**	**Quantity**		**Unit Cost**	**Total Cost**
C-E1	9520305	Earthwork and Grading Complete	1	ls		$ -
					EARTHWORK SUBTOTAL	**$ -**
CONCRETE						
Item		**Description**	**Quantity**		**Unit Cost**	**Total Cost**
C-C1	7201100	Concrete Curb (Transition)	12	lf		$ -
C-C2	7204100	Concrete Sidewalk(4" Uniform)	69	sy		$ -
C-C3	See Detail	6" Concrete Header Curb Around Grate Inlet	12	lf		$ -
					CONCRETE SUBTOTAL	**$ -**
PAVING						
Item		**Description**	**Quantity**		**Unit Cost**	**Total Cost**
C-P1	3050104	Graded Aggregate Base Course (4" Uniform)	937	sy		$ -
C-P2	4011005	Prime Coat	155	gal		$ -
C-P3	4013990	Mill Existing Asphalt Pavement - Variable	46	sy		$ -
C-P4	4030320	Hot Mix Asphalt Surface Course Type B (1.5" Path Section)	70.3	tn		$ -
C-P5	4030321	Hot Mix Asphalt Surface Course Type B (2" Stamped Crosswalk Section)	4.6	tn		$ -
C-P6	4039000	Asphalt Pavement Texturing - Custom	46	sy		$ -
					PAVING SUBTOTAL	**$ -**

EXHIBIT A: FEE PROPOSAL
A-3: Project C - South Forest Beach Dr.
RFP 2016-0009 - COLIGNY AREA IMPROVEMENTS
LIST OF ESTIMATED QUANTITIES / UNIT COST BID SCHEDULE

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ITEM	SPEC. NO. SCDOT OR SPEC PROV.	DESCRIPTION	QUANTITY NUMBER OF UNITS	QUANTITY UNIT MEASURE	COST PER UNIT	COST TOTAL COST
EROSION AND SEDIMENT CONTROLS						
Item		**Description**	**Quantity**		**Unit Cost**	**Total Cost**
C-EC1	8156219	Inlet Structure Filter - Type A	140	lf		$ -
C-EC2	8156200	Cleaning Inlet Structure Filter	7	ea		$ -
C-EC3	8100200	Temproary Cover	0.35	ac		$ -
					EROSION SUBTOTAL	**$ -**
		TOTAL FEE (PROJECT C ONLY)			**$ -**	

EXHIBIT A: FEE PROPOSAL
A-4: Project D - Lagoon Pope Intersection

DAYTIME (7 AM TO 7 PM WORK HOURS)

RFP 2016-0009 - COLIGNY AREA IMPROVEMENTS

LIST OF ESTIMATED QUANTITIES / UNIT COST BID SCHEDULE

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ITEM	SPEC. NO. SCDOT OR SPEC PROV.	DESCRIPTION	QUANTITY NUMBER OF UNITS	QUANTITY UNIT MEASURE	COST PER UNIT	COST TOTAL COST
MISCELLANOUS						
Item		**Description**	**Quantity**		**Unit Cost**	**Total Cost**
D-M1	1031000	Mobilization	1	ls		$ -
D-M2	1050800	Construction Staking, Lines and Grades	1	ls		$ -
D-M3	SC-3	As-Built Survey	1	ls		$ -
D-M4	1071000	Traffic Control	1	ls		$ -
D-M5	6271010	4" White Solid Lines Thermoplastic - 90 mil.	795	lf		$ -
D-M6	6271020	12" White Solid Lines - Thermo. - 125 mil.	661	lf		$ -
D-M7	6271025	24" White Solid Lines (Stop/Diag Lines) - Thermo. - 125 mil.	114	lf		$ -
D-M8	6271030	White Single Arrows (LT, STRGHT, RT) Thermo. - 125 mil.	12	ea		$ -
D-M9	6271035	White Word Message "ONLY" - Thermoplastic - 125 mil.	2	ea		$ -
D-M10	6271040	White Combination Arrows (Str&Rt.) Thermo. - 125 mil.	2	ea		$ -
D-M11	6271074	4" Yellow Solid Lines Thermoplastic - 90 mil.	600	lf		$ -
D-M12	675027G	Furnish & Install 4.0" Shecdule 80 PVC Conduit	400	lf		$ -
D-M13	675027O	Furnish & Install 6.0" Schedule 80 PVC Conduit	400	lf		$ -
D-M17	101453	18" Stop Sign & Post	3	ea		$ -
D-M18	101453	18" Yield Sign & Post	2	ea		$ -
D-M19	7204900	Detectable Warning Surface (Chocolate Brown)	284	sf		$ -
					MISCELLANOUS SUBTOTAL	**$ -**
DEMOLITION						
Item		**Description**	**Quantity**		**Unit Cost**	**Total Cost**
D-D1	2021000	Removal of Structures & Obstructions	1	ls		$ -
D-D2	2023000	Remove Existing Sidewalks, Pavement and Base	740	sy		$ -
D-D3	2024100	Remove Existing Curb & Gutter	540	lf		$ -
					DEMOLITION SUBTOTAL	**$ -**
STORM DRAINAGE						
Item		**Description**	**Quantity**		**Unit Cost**	**Total Cost**
D-SD1	7143618	18" RCP Stormwater Pipe	266	lf		$ -
D-SD2	7143624	24" RCP Stormwater Pipe	328	lf		$ -
D-SD3	7191005	Curb Inlet (Hooded)	4	ea		$ -
D-SD4	7192105	Storm Manhole	3	ea		$ -
					STORM DRAINAGE SUBTOTAL	**$ -**
EARTHWORK						
Item		**Description**	**Quantity**		**Unit Cost**	**Total Cost**
D-E1	9520305	Earthwork and Grading Complete	1	ls		$ -
					EARTHWORK SUBTOTAL	**$ -**
CONCRETE						
Item		**Description**	**Quantity**		**Unit Cost**	**Total Cost**
D-C1	72003110	18" Curb & Gutter (Standard)	333	lf		$ -
D-C2	72003210	24" Curb & Gutter (Standard)	1160	lf		$ -
					CONCRETE SUBTOTAL	**$ -**
PAVING						
Item		**Description**	**Quantity**		**Unit Cost**	**Total Cost**
D-P1	3050108	Graded Aggregate Base Course	910	sy		$ -
D-P2	4011004	Liquid Asphalt Binder PG64-22	46	tn		$ -
D-P3	4013990	Mill Existing Asphalt Pavement - Variable	2375	sy		$ -
D-P4	4030310	Hot Mix Asphalt Intermediate Course Type A	91	tn		$ -
D-P5	4030320	Hot Mix Asphalt Surface Course Type B	629	tn		$ -
D-P6	4030360	Hot Mix Asphalt Surface Course Type E (Leveling)	121	tn		$ -
D-P7	4039030	Traffic Pattern XD	321	sy		$ -
D-P8	321316	4" Thick Concrete Sidewalk/Pathway	285	sy		$ -
					PAVING SUBTOTAL	**$ -**
EROSION AND SEDIMENT CONTROLS						
Item		**Description**	**Quantity**		**Unit Cost**	**Total Cost**
D-EC1	8100200	Temporary Cover	0.43	ac		$ -
D-EC2	8152004	Inlet Structure Filter - Type F (Weighted)	2	ea		$ -
D-EC3	8153000	Silt Fence	710	lf		$ -
D-EC4	8153090	Replace/Repair Silt Fence	355	lf		$ -
D-EC5	8156200	Cleaning Inlet Structure Filters	12	ea		$ -
D-EC6	8156211	Inlet Structure Filter - Type E (Catch Basin Type 1)	6	ea		$ -
D-EC7	8156219	Inlet Structure Filter - Type A	4	lf		$ -
D-EC8	8156490	Stabilized Construction Entrance	270	sy		$ -
					EROSION SUBTOTAL	**$ -**

EXHIBIT A: FEE PROPOSAL
A-4: Project D - Lagoon Pope Intersection

DAYTIME (7 AM TO 7 PM WORK HOURS)

RFP 2016-0009 - COLIGNY AREA IMPROVEMENTS

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ITEM	SPEC. NO. SCDOT OR SPEC PROV.	DESCRIPTION	QUANTITY NUMBER OF UNITS	QUANTITY UNIT MEASURE	COST PER UNIT	COST TOTAL COST
MAST-ARM TRAFFIC SIGNAL						
Item		**Description**	**Quantity**		**Unit Cost**	**Total Cost**
D-TS1	SC-4	Mast-Arm Traffic Signal Installation	1	ls		$ -
			MAST-ARM TRAFFIC SIGNAL SUBTOTAL			**$ -**
		TOTAL FEE (PROJECT D ONLY)			**$ -**	

EXHIBIT A: FEE PROPOSAL

A-5 COLIGNY PARK

RFP 2016-0009 - COLIGNY REDEVELOPMENT PROJECT

LIST OF ESTIMATED QUANTITIES / UNIT COST BID SCHEDULE

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ITEM	DESCRIPTION	QUANTITY		COST	
		NUMBER OF UNITS	UNIT MEASURE	PER UNIT	TOTAL COST
ADMINISTRATIVE & STARTUP					
Item	**Description**	**Quantity**	**Unit**	**Unit Cost**	**Total Cost**
1	Mobilization	1	LS		$ -
2	ES & PC Installation and Maintenance	1	LS		$ -
3	Construction Entrance	1	LS		$ -
4	As-Built Survey	1	LS		$ -
5	Traffic Control	1	LS		$ -
6	Contractor provided testing	1	LS		$ -
7	Contractor's General Conditions	1	LS		$ -
				ADMINISTRATIVE & STARTUP SUBTOTAL	**$ -**
	Total				
SITE PREPARATION & DEMOLITION					
Item	**Description**	**Quantity**	**Unit**	**Unit Cost**	**Total Cost**
1	Remove gravel parking, boardwalk, RR ties, signs & rope fence	1	LS		$ -
2	Remove Sanitary sewer man and manoles	294	LF		$ -
3	Remove storm pipe and structures	198	LF		$ -
4	Haul & dispose of debris	1	LS		$ -
5	Field staking & layout	1	LS		$ -
8	Erosion control	1	LS		$ -
9	Temporary/Tree protection fencing	340	LF		$ -
10	4" Conduit	600	LF		$ -
11	6" Conduit	300	LF		$ -
12	Misc. Site Preparation & Demolition	1	LS		$ -
				SITE PREPARATION & DEMOLITION SUBTOTAL	**$ -**
WATER DISTRIBUTION SYSTEM					
Item	**Description**	**Quantity**		**Unit Cost**	**Total Cost**
1	6" DIP Fire main	60	LF		$ -
2	Remote FDC	1	EA		$ -
3	2" Water Lateral	920	LF		$ -
4	2" Gate Valve & Box	3	EA		$ -
5	2" Meter Assembly w/ Backflow Preventor	3	EA		$ -
6	1" HDPE Water Lateral	110	LF		$ -
7	Exterior Hose Bib	3	EA		$ -
8	Misc. Water Distribution System	1	LS		$ -
				WATER DISTRIBUTION SYSTEM	**$ -**
SANITARY SEWER SYSTEM					
Item	**Description**	**Quantity**		**Unit Cost**	**Total Cost**
1	Connect to existing system	2	EA		$ -
2	8" PVC Gravity Sewer	405	LF		$ -
3	6" PVC Sewer Lateral	187	LF		$ -
4	4" PVC Sewer Lateral	111	LF		$ -
5	Sanitary Sewer Manholes	3	EA		$ -
6	6" Cleanouts	4	EA		$ -
7	4" Cleanouts	3	EA		$ -
8	Misc. Sanitary Sewer System	1	LS		$ -
				SANITARY SEWER SYSTEM SUBTOTAL	**$ -**
GRADING & DRAINAGE					
Item	**Description**	**Quantity**		**Unit Cost**	**Total Cost**
1	Clearing & Grubbing	6.2	AC		$ -
2	Earthwork and Grading Complete	1	LS		$ -
3	Select Fill	5000	CY		$ -
4	Temporary Grassing	11600	SY		$ -
5	Curb & Gutter	795	LF		$ -
6	Flush Header Curb	370	LF		$ -
7	Storm Manhole	3	EA		$ -
8	Grate Inlet	11	EA		$ -
9	15" RCP Stormwater Pipe	374	LF		$ -
10	18" RCP Stormwater Pipe	461	LF		$ -
11	24" RCP Stormwater Pipe	496	LF		$ -
12	36" RCP Stormwater Pipe	72	LF		$ -
13	Yard Inlets	18	EA		$ -
14	6" Perforated HDPE w/ sock	662	LF		$ -
15	8" Perforated HDPE w/ sock	28	LF		$ -
16	12" HDPE	313	LF		$ -
17	Misc. Storm Drainage	1	LS		$ -

EXHIBIT A: FEE PROPOSAL

A-5 COLIGNY PARK

RFP 2016-0009 - COLIGNY REDEVELOPMENT PROJECT

LIST OF ESTIMATED QUANTITIES / UNIT COST BID SCHEDULE

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		GRADING & DRAINAGE SUBTOTAL			**$ -**
SITE PAVING					
Item	**Description**	**Quantity**	**Unit**	**Unit Cost**	**Total Cost**
1	Full depth pavement (2" surface course, tack coat, prime coat)	270	SY		$ -
2	8" Graded aggregate base course	320	SY		$ -
3	Vehicular permeable pavers (Pavers, 10" rock base, Geogrid)	802	SY		$ -
4	Decorative pavers on aggregate base	462	SF		$ -
5	Decorative pavers on concrete base	1997	SF		$ -
6	4" Stamped board form decorative concrete	764	SF		$ -
7	6" Fractured earth decorative concrete	5761	SF		$ -
8	4" Oystershell concrete	26826	SF		$ -
9	6" Oystershell concrete	26800	SF		$ -
10	4" colored salt salt finish concrete	1705	SF		$ -
11	4" Stained compass rose paving area	314	SF		$ -
12	Palm tree planter well with brick border	4	EA		$ -
13	Concrete banding	6908	LF		$ -
14	Curb cut concrete ramps	24	EA		$ -
15	ADA truncated dome strips	794	SF		$ -
16	Pavement marking	1	LS		$ -
17	Signage- traffic & parking (civil dwgs)	1	LS		$ -
18	Misc. Site Paving	1	LS		$ -
19	Detectable Warning Surface (Chocolate Brown)	464	SF		$ -
			SITE PAVING SUBTOTAL		**$ -**
SITE ELECTRICAL, POWER & COMMUNICATIONS					
Item	**Description**	**Quantity**	**Unit**	**Unit Cost**	**Total Cost**
1	Transformer pad	1	EA		$ -
2	Pump connection, breaker, conductor	2	EA		$ -
3	Fan connection, breaker, conductor	1	EA		$ -
4	Electric charging station	1	EA		$ -
5	1" pvc conduit, installed	2000	LF		$ -
6	1 1/2" pvc conduit, installed	1000	LF		$ -
7	2" pvc conduit, installed	1500	LF		$ -
8	3" pvc conduit, installed	500	LF		$ -
9	4" pvc conduit, installed	500	LF		$ -
10	6" pvc conduit, installed	530	LF		$ -
11	Copper wire, #600 kcmil-thhn	600	LF		$ -
12	Copper wire, #350 kcmil-thhn	2400	LF		$ -
13	Copper wire, #2-thhn	800	LF		$ -
14	Copper wire, #4-thhn	400	LF		$ -
15	Copper wire, #8-thhn	300	LF		$ -
16	Copper wire, #10-thhn	7000	LF		$ -
17	Copper wire, #12- thhn	2000	LF		$ -
18	Trenching & backfill up to 2" PVC conduit	100	LF		$ -
19	60 amp, 3- #6 conductors for charging station	100	LF		$ -
20	GFCI receptacles in weatherproof enclosure	8	EA		$ -
21	Fixture Type B-1 bollards with receptacles	30	EA		$ -
22	Fixture Type B-2 bollards without receptacles	6	EA		$ -
23	Fixture type B3-Bike bollard with light	6	EA		$ -
24	Fixture Type P, Internal column lights	20	EA		$ -
25	Fix. Type T, post lights on handrails (sm. domes)	35	EA		$ -
26	Fixture Type U1, linear sign uplight	4	EA		$ -
27	Fixture Type U2, In ground tree uplight	4	EA		$ -
28	Fixture Type U3, Round sign uplights	4	EA		$ -
29	Fixture Type S, Wall wash lights	6	EA		$ -
30	Handholes	7	EA		$ -
31	Power pedestals	7	EA		$ -
32	Emergency Phone in weatherproof box	1	EA		$ -
33	Security Camera Rough-Ins	32	EA		$ -
34	WiFi Rough-Ins	6	EA		$ -
35	WP, USB	5	EA		$ -
36	NEMA 4X Box for Media Converter	1	EA		$ -
37	Misc. Site Electrical, Power & Communications	1	LS		$ -
				SITE ELECTRICAL, POWER & COMMUNICATIONS SUBTOTAL	**$ -**
BUILDINGS					
Item	**Description**	**Quantity**	**Unit**	**Unit Cost**	**Total Cost**
1	Children's Museum (to 5' line)	1	LS		$ -
2	Playground Restroom Building	1	LS		$ -
3	Pavilion (to 5' line)	1	LS		$ -
4	Restroom Building (to 5' line)	1	LS		$ -
5	Misc. Buildings	1	LS		$ -
				BUILDINGS SUBTOTAL	**$ -**

EXHIBIT A: FEE PROPOSAL

A-5 COLIGNY PARK

RFP 2016-0009 - COLIGNY REDEVELOPMENT PROJECT

LIST OF ESTIMATED QUANTITIES / UNIT COST BID SCHEDULE

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SITE CARPENTRY					
Item	**Description**	**Quantity**	**Unit**	**Unit Cost**	**Total Cost**
1	Pond pavilion (structure above deck)	1	LS		$ -
2	Pier at Pond pavilion (deck below structure)	400	SF		$ -
3	Boardwalks with Cable Rails	832	SF		$ -
4	On grade boardwalk (by compass rose)	183	SF		$ -
5	On grade boardwalk (along Nassau St)	662	SF		$ -
6	Playground pedestrian bridge & rail	265	SF		$ -
7	Playground enclosure fence	640	LF		$ -
8	Rope & pile fence	333	LF		$ -
9	Curved tongue & groove wall type 1	201	LF		$ -
10	Curved tongue & groove wall type 2	15	LF		$ -
11	Pile Wall	10	LF		$ -
12	Bulkhead with cable rail	96	LF		$ -
13	Misc. Site Carpentry	1	LS		$ -
				SITE CARPENTRY SUBTOTAL	**$ -**
SITE CONSTRUCTION					
Item	**Description**	**Quantity**	**Unit**	**Unit Cost**	**Total Cost**
1	Raised planter/seatwall (includes fill)	100	LF		$ -
2	Grand lawn arbor trellises	2	EA		$ -
3	Swing Trellises	2	EA		$ -
4	Circular Arbor Tree	1	LS		$ -
5	Playground gateway arbor	1	LS		$ -
6	Custom Playground Gateway- Secondary Gate Leaf	4	EA		$ -
7	Custom Playground Gateway- Main Gate Leaf	2	EA		$ -
8	Sand playground surface	291	CY		$ -
9	Concrete curb restraint for playground sand	225	LF		$ -
10	Poured in place rubber playground surfacing	3378	SF		$ -
11	Cantilevered deck including post & rope railing	200	SF		$ -
12	Misc. Site Construction	1	LS		$ -
				SITE CONSTRUTION SUBTOTAL	**$ -**
INTERACTIVE WATER FEATURE					
Item	**Description**	**Quantity**	**Unit**	**Unit Cost**	**Total Cost**
1	Interactive fountain (all 3 sections), installed	1	LS		$ -
2	Footwash	1	LS		$ -
3	Misc. Interactive Water Feature	1	LS		$ -
				INTERACTIVE WATER FEATURE SUBTOTAL	**$ -**
SIGNAGE					
Item	**Description**	**Quantity**	**Unit**	**Unit Cost**	**Total Cost**
1	Discovery Trail Gateway Feature	2	EA		$ -
2	Park ID Signs	4	EA		$ -
3	Building Address Signs (Type D Sign)	4	EA		$ -
4	Park Rules Signs	2	EA		$ -
5	Playground Rules Sign	1	EA		$ -
6	Fountain Rules Sign	1	EA		$ -
7	Interpretive Signs- freestanding	9	EA		$ -
8	Interpretive Signs- Handrail mounted	2	EA		$ -
9	Interpr. Sign w/ Sound Module, Solar panel & 50' cable- Freestanding	1	EA		$ -
10	Park Information Kiosk with map & cabinet	1	EA		$ -
11	Emergency Phone Sign (Type A Sign)	1	EA		$ -
12	Security Camera/WifFi Hotspot Sign (Typ B Sign)	6	EA		$ -
13	No Water Entry Signs (Type C Sign)	4	EA		$ -
14	Electric Car Charging Station Sign (Type E Sign)	1	EA		$ -
15	Misc. Signage	1	LS		$ -
				SIGNAGE SUBTOTAL	**$ -**
SITE FURNISHINGS					
Item	**Description**	**Quantity**	**Unit**	**Unit Cost**	**Total Cost**
1	Shade Umbrella 16'	1	EA		$ -
2	Shade Umbrella 20'	2	EA		$ -
3	Benches with backs	28	EA		$ -
4	Benches without backs	6	EA		$ -
5	Circular Ipe benches	2	EA		$ -
6	Fallen Tree log benches	3	EA		$ -
7	Picnic Tables	4	EA		$ -
8	Bike Racks (non illuminated)	50	EA		$ -
9	Fixed Decorative bollards	13	EA		$ -
10	Removeable Decorative bollards	6	EA		$ -
11	Trash receptacles - Single	10	EA		$ -

EXHIBIT A: FEE PROPOSAL

A-5 COLIGNY PARK

RFP 2016-0009 - COLIGNY REDEVELOPMENT PROJECT

LIST OF ESTIMATED QUANTITIES / UNIT COST BID SCHEDULE

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12	Trash receptacles - Double/Recycling	5	EA		$ -
13	Drinking Fountains	2	EA		$ -
14	Whimsical Wading Birds Sculptures	1	SET		$ -
15	Bronze Crabs (Small, Med & Large)	1	SET		$ -
16	Turtles on Log Sculpture	1	EA		$ -
17	Human Sized Frog sculpture (sits on bench)	1	EA		$ -
18	Fan at Pond Pavilion	1	EA		$ -
19	Pond Aerator/Floating Fountain	1	EA		$ -
20	Misc. Site Furnishings	1	LS		$ -
				SITE FURNISHINGS SUBTOTAL	**$ -**
LANDSCAPING, MULCH & TURF					
Item	**Description**	**Quantity**	**Unit**	**Unit Cost**	**Total Cost**
1	Cercis canadnesis 'Forest Pansy' - 1.5" Cal.	11	EA		$ -
2	Chionanthus virginicus- 6-8'	27	EA		$ -
3	Lagerstroemia x Muskogee -1.5" Cal.	21	EA		$ -
4	Lagerstroemia x Natchez -1.5" Cal.	6	EA		$ -
5	Magnolia grandiflora 'Alta'- 2.5" cal	10	EA		$ -
6	Nyssa sylvatica-2.5" Cal.	6	EA		$ -
7	Pinus taeda- 1.5" Cal.	28	EA		$ -
8	Pinus thunbergii- 1.5" Cal.	13	EA		$ -
9	Quercus phellos- 4" Cal.	44	EA		$ -
10	Quercus virginiana 'High Rise'- 4" Cal.	71	EA		$ -
11	Sabal palmetto- 16-20' ht.	150	EA		$ -
12	Sabal palmetto- matched 18' ht.	21	EA		$ -
13	Sassafras albidum- 2" Cal.	8	EA		$ -
14	Taxodium distichum 'Shawnee Brave'- 3" Cal.	21	EA		$ -
15	Ulmus parvifolia 'Emer II'- 4" Cal.	7	EA		$ -
16	Vitex agnus-castus- 15 gal.	24	EA		$ -
17	Abelia x ' Rose Creek'- 1 Gal.	155	EA		$ -
18	Alocassia portadora- 1 Gal.	28	EA		$ -
19	Azalea indica ' Formosa'- 3 Gal.	30	EA		$ -
20	Azalea x 'Robled'- Autumn Chiffon- 3 Gal.	46	EA		$ -
21	Azalea x 'Roblef'- Autumn Sundance- 3 Gal.	30	EA		$ -
22	Camellia japonica 'Berenice Boddy'- 7 Gal.	4	EA		$ -
23	Camellia sasanqua 'Yuletide'- 7 Gal.	8	EA		$ -
24	Cleyera japonica- 7 Gal.	23	EA		$ -
25	Cycas revoluta- 18-24" ht.	57	EA		$ -
26	Cycas revoluta 1- 36-48" ht.	16	EA		$ -
27	Ilex vomitoria 'nana'- 3 Gal.	105	EA		$ -
28	Ilex vomitoria 'Will Flemming'- 7 Gal.	39	EA		$ -
29	Illicium floridanum- 7 Gal.	78	EA		$ -
30	Leucothoe axillaris- 7 Gal.	34	EA		$ -
31	Loropetalum chinese 'Purple Diamond'- 3 Gal.	287	EA		$ -
32	Miscanthus sinensis 'Adagio'- 3 Gal.	71	EA		$ -
33	Myrica cyrifera- 7 Gal.	36	EA		$ -
34	Podocarpus macrophyllus- 7 Gal.	57	EA		$ -
35	Prunus caroliniana- 15 Gal.	7	EA		$ -
36	Rosa x 'Double Knockout'- 3 Gal.	57	EA		$ -
37	Serenoa repens 'Cinerea'- 3 Gal	632	EA		$ -
38	Viburnum odoratissimum 'Awabuki'- 3 Gal.	9	EA		$ -
39	Agapanthus africanus 'Storm Cloud'- 1 Gal.	37	EA		$ -
40	Asparagus meyeri- 1 Gal.	81	EA		$ -
41	Canna flaccida- 4" pot	144	EA		$ -
42	Canna 'Tropicana Gold'- B.R. (wet mix)	919	EA		$ -
43	Dianella tasmanica 'Variegata'-1 Gal.	18	EA		$ -
44	Dietes vegeta- 1 Gal.	408	EA		$ -
45	Dryopteris erythrosora-1 Gal.	113	EA		$ -
46	Eragrostis curvula- 4" pot	13556	EA		$ -
47	Gaura lindheimeri "Whirling Butterflies'- 1 Gal.	106	EA		$ -
48	Hemorcallis 'Stella D oro'- 1 Gal.	269	EA		$ -
49	Iris virginica- 1 Gal.	16	EA		$ -
50	Iris virginica- B.R. (wet mix)	919	EA		$ -
51	Juncus effusus- B.R. (wet mix)	517	EA		$ -
52	Lantana camara ' New Gold'- 1 Gal.	202	EA		$ -
53	Liriope muscari 'Super Blue'- 1 Gal.	4372	EA		$ -
54	Muhlenbergia capillaris- 1 Gal.	3201	EA		$ -
55	Ophiopogon japonicus- 4" pot	47	EA		$ -
56	Pontederia cordata- B.R. (wet mix)	517	EA		$ -
57	Rosa x 'Meigalpio'- 1 Gal.	13	EA		$ -
58	Rosmarinus officinalis 'Blue Spires'- 3 Gal.	342	EA		$ -
59	Sagittaria latifolia- B.R. (wet mix)	517	EA		$ -
60	Spartina bakeri- 1 Gal.	917	EA		$ -

EXHIBIT A: FEE PROPOSAL

A-5 COLIGNY PARK

RFP 2016-0009 - COLIGNY REDEVELOPMENT PROJECT

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61	Saururus cernuus- B.R. (wet mix)	517	EA		$ -
62	Tripsacum dactyloides 'nana'- 1 Gal.	257	EA		$ -
63	Tulbaghia violacea- 1 Gal.	244	EA		$ -
64	Pinestraw Mulch	91610	SF		$ -
65	Cynodon dactylon ' Celebration' Sod	119827	SF		$ -
66	Fine Grading- turf areas & plant beds	211437	SF		$ -
67	Misc. Landscaping, Mulch & Turf	1	LS		$ -
				LANDSCAPING, MULCH & TURF SUBTOTAL	**$ -**
IRRIGATION SYSTEM					
Item	**Description**	**Quantity**		**Unit Cost**	**Total Cost**
1	Hunter PROS-06-PRS30, spray nozzle, swing pipe, lateral fittings, installed, adjusted	20	EA		$ -
2	Hunter PROS-06-PRS30, MP rotator nozzle, swing pipe, lateral fittings, installed, adjusted	370	EA		$ -
3	Hunter PROS-12-PRS30, MP rotator nozzle, swing pipe, lateral fittings, installed, adjusted	546	EA		$ -
4	Hunter I-20-04-SS, swing pipe, lateral fitting, installed, adjusted	79	EA		$ -
5	RainBird 100-PEB 1" control valve, mainline fittings, valve box, wire splice, intalled, adjusted	8	EA		$ -
6	RainBird 150-PEB 1-1/2" mainline fittings, valve box, wire splice, installed, adjusted	25	EA		$ -
7	RainBird 33-DLRC 3/4", mainline fitting, 1" swing joint, 10" valve box, gravel, installed	5	EA		$ -
8	RainBird LXD 2 Wire controller, wall mount, conduit, power to controller, installed, programmed	1	EA		$ -
9	RainBird WR2-RC wireless rain sensor, installed & programmed	1	EA		$ -
10	RainBird 14 GA Maxi Cable, installed	4300	LF		$ -
11	1" PVC electrical conduit, installed	4300	LF		$ -
12	RainBird FD-101 decoder, installed, wire splice connectors, programmed into controller	15	EA		$ -
13	RainBird FD-202 decoder, installed, wire splice connectors, programmed into controller	10	EA		$ -
14	RainBird FD-401 decoder, installed, wire splice connectors, programmed into controller	3	EA		$ -
15	RainBird SD-210 sensor decoder, installed, wire splice connectors, programmed into controller	1	EA		$ -
16	CST Flow Sensor, 1-1/2", installed, Hunter Sensor Decoder, valve box	1	EA		$ -
17	Superior 3100 1-1/2" Master Valve, installed, fittings to mainline pipe, valve box, decoder	1	EA		$ -
18	RainBird XCZ-100-PRB-COM 1" drip control valve kit, installed, fittings to mainline, jumbo valve box, wire splices, gravel, adjusted	13	EA		$ -
19	RainBird XFCV-06-12 inline drip tubing, fittings, stakes, installed, flushed, tested	13000	LF		$ -
20	Flush Valve for inline drip tubing, installed, valve box	13	EA		$ -
21	RainBird OPERIND Drip operation indicator for inline drip tubing, installed	13	EA		$ -
22	RainBird SXB-1032 drip bubbler, installed	1	EA		$ -
23	RainBird XFCV-06-12 Drip Tree rings with swing pipe, lateral fittings, installed	10	EA		$ -
24	2" Bronze gate valve, valve box, gravel, installed	10	EA		$ -
25	installed	8	EA		$ -
26	Controller grounding point, installed as per detail	1	EA		$ -
27	1" SDR 21 bell end lateral pipe and fittings, installed	21400	LF		$ -
28	1.5" SDR 21 bell end lateral pipe and fittings, installed	1400	LF		$ -
29	2" SDR 21 bell end lateral pipe and fittings, installed	100	LF		$ -
30	1-1/2" SCH 40 bell end mainline pipe and fittings, installed	140	LF		$ -
31	2" SCH 40 bell end mainline pipe and fittings, installed	3700	LF		$ -
32	2.5" SCH 40 bell end mainline pipe and fittings, installed	20	LF		$ -
33	4" SCH 40 PVC bell end sleeve, installed	2000	LF		$ -
34	2" Water meter, installed, permits and fees	1	LS		$ -
35	Watts 007 Double Check Valve backflow preventer, piping, valve box, installed	1	EA		$ -
36	Misc. Irrigation System	1	LS		$ -
				IRRIGATION SYSTEM SUBTOTAL	**$ -**
	TOTAL FEE PARK ONLY			**$**	**-**

EXHIBIT A: FEE PROPOSAL
A-6: Project D - Lagoon Pope Intersection

NIGHT TIME (7 PM TO 7 AM WORK HOURS)

RFP 2016-0009 - COLIGNY AREA IMPROVEMENTS

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ITEM	SPEC. NO. SCDOT OR SPEC PROV.	DESCRIPTION	QUANTITY NUMBER OF UNITS	QUANTITY UNIT MEASURE	COST PER UNIT	COST TOTAL COST
MISCELLANOUS						
Item		**Description**	**Quantity**		**Unit Cost**	**Total Cost**
D-M1	1031000	Mobilization	1	ls		$ -
D-M2	1050800	Construction Staking, Lines and Grades	1	ls		$ -
D-M3	SC-3	As-Built Survey	1	ls		$ -
D-M4	1071000	Traffic Control	1	ls		$ -
D-M5	6271010	4" White Solid Lines Thermoplastic - 90 mil.	795	lf		$ -
D-M6	6271020	12" White Solid Lines - Thermo. - 125 mil.	661	lf		$ -
D-M7	6271025	24" White Solid Lines (Stop/Diag Lines) - Thermo. - 125 mil	114	lf		$ -
D-M8	6271030	White Single Arrows (LT, STRGHT, RT) Thermo. - 125 mil.	12	ea		$ -
D-M9	6271035	White Word Message "ONLY" - Thermoplastic - 125 mil.	2	ea		$ -
D-M10	6271040	White Combination Arrows (Str&Rt.) Thermo. - 125 mil	2	ea		$ -
D-M11	6271074	4" Yellow Solid Lines Thermoplastic - 90 mil.	600	lf		$ -
D-M12	675027G	Furnish & Install 4.0" Shecdule 80 PVC Conduit	400	lf		$ -
D-M13	675027O	Furnish & Install 6.0" Schedule 80 PVC Conduit	400	lf		$ -
D-M17	101453	18" Stop Sign & Post	3	ea		$ -
D-M18	101453	18" Yield Sign & Post	2	ea		$ -
D-M19	7204900	Detectable Warning Surface (Chocolate Brown)	284	sf		$ -
					MISCELLANOUS SUBTOTAL	**$ -**
DEMOLITION						
Item		**Description**	**Quantity**		**Unit Cost**	**Total Cost**
D-D1	2021000	Removal of Structures & Obstructions	1	ls		$ -
D-D2	2023000	Remove Existing Sidewalks, Pavement and Base	740	sy		$ -
D-D3	2024100	Remove Existing Curb & Gutter	540	lf		$ -
					DEMOLITION SUBTOTAL	**$ -**
STORM DRAINAGE						
Item		**Description**	**Quantity**		**Unit Cost**	**Total Cost**
D-SD1	7143618	18" RCP Stormwater Pipe	266	lf		$ -
D-SD2	7143624	24" RCP Stormwater Pipe	328	lf		$ -
D-SD3	7191005	Curb Inlet (Hooded)	4	ea		$ -
D-SD4	7192105	Storm Manhole	3	ea		$ -
					STORM DRAINAGE SUBTOTAL	**$ -**
EARTHWORK						
Item		**Description**	**Quantity**		**Unit Cost**	**Total Cost**
D-E1	9520305	Earthwork and Grading Complete	1	ls		$ -
					EARTHWORK SUBTOTAL	**$ -**
CONCRETE						
Item		**Description**	**Quantity**		**Unit Cost**	**Total Cost**
D-C1	72003110	18" Curb & Gutter (Standard)	333	lf		$ -
D-C2	72003210	24" Curb & Gutter (Standard)	1160	lf		$ -
					CONCRETE SUBTOTAL	**$ -**
PAVING						
Item		**Description**	**Quantity**		**Unit Cost**	**Total Cost**
D-P1	3050108	Graded Aggregate Base Course	910	sy		$ -
D-P2	4011004	Liquid Asphalt Binder PG64-22	46	tn		$ -
D-P3	4013990	Mill Existing Asphalt Pavement - Variable	2375	sy		$ -
D-P4	4030310	Hot Mix Asphalt Intermediate Course Type A	91	tn		$ -
D-P5	4030320	Hot Mix Asphalt Surface Course Type B	629	tn		$ -
D-P6	4030360	Hot Mix Asphalt Surface Course Type E (Leveling)	121	tn		$ -
D-P7	4039030	Traffic Pattern XD	321	sy		$ -
D-P8	321316	4" Thick Concrete Sidewalk/Pathway	285	sy		$ -
					PAVING SUBTOTAL	**$ -**
EROSION AND SEDIMENT CONTROLS						
Item		**Description**	**Quantity**		**Unit Cost**	**Total Cost**
D-EC1	8100200	Temporary Cover	0.43	ac		$ -
D-EC2	8152004	Inlet Structure Filter - Type F (Weighted)	2	ea		$ -
D-EC3	8153000	Silt Fence	710	lf		$ -
D-EC4	8153090	Replace/Repair Silt Fence	355	lf		$ -
D-EC5	8156200	Cleaning Inlet Structure Filters	12	ea		$ -
D-EC6	8156211	Inlet Structure Filter - Type E (Catch Basin Type 1)	6	ea		$ -
D-EC7	8156219	Inlet Structure Filter - Type A	4	lf		$ -
D-EC8	8156490	Stabilized Construction Entrance	270	sy		$ -
					EROSION SUBTOTAL	**$ -**
MAST-ARM TRAFFIC SIGNAL						

EXHIBIT A: FEE PROPOSAL
A-6: Project D - Lagoon Pope Intersection

NIGHT TIME (7 PM TO 7 AM WORK HOURS)

RFP 2016-0009 - COLIGNY AREA IMPROVEMENTS

LIST OF ESTIMATED QUANTITIES / UNIT COST BID SCHEDULE

The unit prices given on this document, along with any negotiated changes in quantities, shall become the basis for, and included in, the contract agreement. Offerors are responsible for verifying all quantities and notifying the Owner of any discrepancies greater than 10% of estimate, in writing, prior to the bid opening. 7-digit SCDOT specifcation numbers refer to the 2007 Standard Specifications for Highway Constructionof the South Carolina Department of Transportation. SC refers to the Special Condition. Technical Specification #s101453 refers to Project Manual Technical Specification

ITEM	SPEC. NO. SCDOT OR SPEC PROV.	DESCRIPTION	QUANTITY NUMBER OF UNITS	QUANTITY UNIT MEASURE	COST PER UNIT	COST TOTAL COST
Item		**Description**	**Quantity**		**Unit Cost**	**Total Cost**
D-TS1	SC-4	Mast-Arm Traffic Signal Installation	1	ls		$ -
			MAST-ARM TRAFFIC SIGNAL SUBTOTAL			**$ -**
		TOTAL FEE (PROJECT D ONLY)				
		NIGHT (WORK HOURS 7 PM - 7 AM)			$	-

SECTION 013310 – ELECTRONIC SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

B. See Division 1 Section "Construction Progress Documentation" for submitting schedules and reports, including Contractor's Construction Schedule.

C. See Division 1 Section "Quality Requirements" for submitting test and inspection reports and for mockup requirements.

D. See Division 1 Section "Closeout Procedures" for submitting warranties.

E. See Division 1 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.

F. See Division 1 Section "Operation and Maintenance Data" for submitting operation and maintenance manuals.

G. See Division 1 Section "Demonstration and Training" for submitting videotapes of demonstration of equipment and training of Owner's personnel.

1.2 DEFINITIONS

A. Action Submittals: Written and graphic information that requires Architect's responsive action.

B. Informational Submittals: Written information that does not require Architect's responsive action. Submittals may be rejected for not complying with requirements.

C. Electronic Submittal: Submittals transmitted to the architect by vendor-hosted website.

1.3 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

A. General: At Contractor's written request, copies of Architect's electronic files will be provided to Contractor for Contractor's use in connection with the Project, subject to the following conditions:
   1. Digital Reproduction of Instruments of Service (limited to CAD drawings only and not to be considered Contract Documents as defined by the General Conditions for the Contract for Construction) may be obtained for specific qualified purposes with appropriate authorization and subject to a Letter of Agreement stating Terms and Conditions for release (use form included at the end of this Section.) The following billing rates will apply:
      a. AutoCAD Drawing File Format: $30 per Drawing.
      b. Adobe PDF Format: $10 per Drawing.
   2. Autodesk AutoCAD drawings are represented in the "Drawing" file format. Additional charges for file format conversion may apply. Adobe PDF files are not modifiable and

may be viewed using Adobe Acrobat Reader, available as a free download at www.adobe.com.

1.4 SUBMITTAL PROCEDURES

A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
   1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
   2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
      a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

B. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.
   1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
   2. Initial Submittal: Submit concurrently with startup construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
   3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's construction schedule.
      a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.
   4. Format: Arrange the following information in a tabular format:
      a. Scheduled date for first submittal.
      b. Specification Section number and title.
      c. Submittal category: Action; informational.
      d. Name of subcontractor.
      e. Description of the Work covered.
      f. Scheduled date for Architect's final release or approval.
      g. Scheduled date of fabrication.
      h. Scheduled dates for purchasing.
      i. Scheduled dates for installation.
      j. Activity or event number

C. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
   1. Initial Review: Allow 10 working days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
   2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
   3. Resubmittal Review: Allow 10 working days for review of each resubmittal.

D. Identification: Clearly label each submittal for identification.

1. Indicate name of firm or entity that prepared each submittal on label or title block.
2. Include the following information for processing and recording action taken:
   a. Project name.
   b. Date.
   c. Name and address of Architect.
   d. Name and address of Contractor.
   e. Name and address of subcontractor.
   f. Name and address of supplier.
   g. Name of manufacturer.
   h. Submittal number or other unique identifier, including revision identifier.
      1) Submittal number shall use Specification Section number followed by a decimal point and then a sequential number (e.g., 06100.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., 06100.01.A).
   i. Number and title of appropriate Specification Section.
   j. Drawing number and detail references, as appropriate.
   k. Location(s) where product is to be installed, as appropriate.
   l. Other necessary identification.

E. Deviations: Highlight, encircle, or otherwise specifically identify deviations from the Contract Documents on submittals.

F. Transmittal: If one hardcopy is required package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form to match, or similar to form sent electronically. Architect will discard submittals received from sources other than Contractor.

G. Resubmittals: Make resubmittals in same form as initial submittal.
   1. Note date and content of previous submittal.
   2. Note date and content of revision in label or title block and clearly indicate extent of revision.
   3. Resubmit submittals until they are marked "No Exceptions Taken" or "Make Corrections Noted."

H. Distribution: Furnish final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities.

I. Use for Construction: Use only final submittals with mark indicating "No Exceptions Taken" or "Make Corrections Noted" .

J. Electronic Submittal Procedures

   1. **<u>The Contractor shall contact the vendor and include the full cost of the vendor-hosted website project subscription in their bid amount. This cost is to be included in the Contract Amount.</u>**
   2. Shop drawing and product data submittals shall be transmitted to Architect in electronic (PDF) format using vendor-hosted website service designed for transmitting submittals between construction team members.
   3. The electronic submittal process is not intended for color samples, color charts, or physical material samples. Where the documents require submittals of this type Contractor to send electronic transmittal with date action is required. Architect shall return submittal electronically upon receipt or when selection is made.
   4. Submittal Preparation - Contractor may use any or all of the following options:

a. Subcontractors and Suppliers provide electronic (PDF) submittals to Contractor via the vendor-hosted website.
b. Subcontractors and Suppliers provide paper submittals to General Contractor who electronically scans and converts to PDF format.
c. Subcontractors and Suppliers provide paper submittals to Scanning Service which electronically scans and converts to PDF format.

2. Contractor shall review and apply electronic stamp certifying that the submittal complies with the requirements of the Contract Documents including verification of manufacturer / product, dimensions and coordination of information with other parts of the work.
3. Contractor shall transmit each submittal to Architect using the vendor-hosted website. Architect shall receive same-day email notice of each submittal.
4. Architect / Engineer review comments will be made available on the vendor-hosted website for downloading. Contractor shall receive same-day email notice of completed review.
5. Distribution of reviewed submittals to subcontractors and suppliers is the responsibility of the Contractor.
6. Vendor hosting the website shall offer training regarding use of website and PDF submittals.
7. Internet Service and Equipment Requirements:
   a. Email address and Internet access at Contractor's main office.
   b. PDF review software for applying electronic stamps and comments such as Adobe Acrobat (www.adobe.com), Bluebeam PDF Revu (www.bluebeam.com), or other.

PART 2 - PRODUCTS

2.1 VENDOR-HOSTED WEBSITE

A. Contractor shall select from one of the following approved vendor-hosted website services designed for transmitting documents between construction team members;
   1. Submittal Exchange www.submittalexchange.com 1-800-714-0024.
   2. Other (approved prior to bid)

2.2 ACTION SUBMITTALS

A. General: Prepare and submit Action Submittals required by individual Specification Sections.

B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
   1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
   2. Mark each copy of each submittal to show which products and options are applicable.
   3. Include the following information, as applicable:
      a. Manufacturer's written recommendations.
      b. Manufacturer's product specifications.
      c. Manufacturer's installation instructions.
      d. Manufacturer's catalog cuts.
      e. Wiring diagrams showing factory-installed wiring.
      f. Printed performance curves.
      g. Operational range diagrams.
      h. Compliance with specified referenced standards.
      i. Testing by recognized testing agency.
   4. Number of Copies: Architect reserves the right to require one (1) hardcopy of any submittal. Required electronic copy to be sent same day hardcopy is sent.

C. Shop Drawings: Prepare Project-specific information, scanned accurately to scale and able to be printed accurately to scale if architect wishes to print. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
   1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
      a. Dimensions.
      b. Identification of products.
      c. Fabrication and installation drawings.
      d. Roughing-in and setting diagrams.
      e. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
      f. Shopwork manufacturing instructions.
      g. Templates and patterns.
      h. Schedules.
      i. Notation of coordination requirements.
      j. Notation of dimensions established by field measurement.
      k. Relationship to adjoining construction clearly indicated.
      l. Seal and signature of professional engineer if specified.
      m. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.

D. Samples: Submit samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
   1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
   2. Electronic transmittal for all samples to be sent the same day physical sample is sent/shipped to the architect.
   3. Identification: Attach label on unexposed side of Samples that includes the following:
      a. Generic description of Sample.
      b. Product name and name of manufacturer.
      c. Sample source.
      d. Number and title of appropriate Specification Section.
   4. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
   5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
      a. Number of Samples: Submit two full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.
   6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
      a. Number of Samples: Submit three sets of Samples. Architect will retain two Sample sets; remainder will be returned. Mark up and retain one returned Sample set as a Project Record Sample.

E. Product Schedule or List: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location.

1. Submit product schedule or list electronically, unless otherwise indicated.

F. Submittals Schedule: Comply with requirements specified in Division 1 Section "Construction Progress Documentation."

G. Application for Payment: Comply with requirements specified in Division 1 Section "Payment Procedures."

H. Schedule of Values: Comply with requirements specified in Division 1 Section "Payment Procedures."

I. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Use CSI Form 1.5A. Include the following information in tabular form:
   1. Submit subcontractor list electronically, unless otherwise indicated.

2.3 INFORMATIONAL SUBMITTALS

A. General: Prepare and submit Informational Submittals required by other Specification Sections.
   1. Submit each submittal electronically, unless otherwise indicated.
   2. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
   3. Test and Inspection Reports: Comply with requirements specified in Division 1 Section "Quality Requirements."

B. Coordination Drawings: Comply with requirements specified in Division 1 Section "Project Management and Coordination."

C. Contractor's Construction Schedule: Comply with requirements specified in Division 1 Section "Construction Progress Documentation."

D. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

E. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include names of firms and personnel certified.

F. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.

G. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.

H. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.

I. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.

J. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.

K. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.

L. Research/Evaluation Reports: Prepare written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project.

M. Preconstruction Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.

N. Compatibility Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.

O. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.

P. Maintenance Data: Prepare written and graphic instructions and procedures for operation and normal maintenance of products and equipment. Comply with requirements specified in Division 1 Section "Operation and Maintenance Data."

Q. Design Data: Prepare written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

R. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer.

S. Manufacturer's Field Reports: Prepare written information documenting factory-authorized service representative's tests and inspections. Include the following, as applicable:
   1. Statement on condition of substrates and their acceptability for installation of product.
   2. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
   3. Results of operational and other tests and a statement of whether observed performance complies with requirements.

T. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.

U. Construction Photographs: Comply with requirements specified in Division 1 Section "Photographic Documentation."

V. Material Safety Data Sheets (MSDSs): Submit information directly to Owner; do not submit to Architect.
   1. Architect will not review submittals that include MSDSs and will return them for resubmittal.

2.4 DELEGATED DESIGN

A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
   1. Design professional shall be an engineer licensed in good standing in the State of South Carolina.
   2. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.

B. Delegated-Design Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit a statement, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
   1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.

B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.
   1. Any submittals received without Contractor’s stamp will be returned by the Architect for resubmittal.

3.2 ARCHITECT'S ACTION

A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.

B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:

1. Submittal Review: Checking is only for conformance with the design concept of the project and compliance with the information given in the contract documents. Contractor is responsible for dimensions to be confirmed and correlated at the job site; for information that pertains solely to the fabrication processes or to techniques of construction; and for coordination of the work of all trades. Approval of items does not relieve the contractor from complying with all requirements of the contract documents.
   A. NO EXCEPTIONS TAKEN (Work may proceed)
   B. MAKE CORRECTIONS NOTED (Work may proceed with corrections)
   C. REVISE AND RESUBMIT (Resubmittal required)
   D. REJECT (Resubmittal required)

C. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.

D. Partial submittals are not acceptable, will be considered nonresponsive, and will be returned without review.

E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION 013310

SECTION 23 34 01 Ceiling Fans

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes
    1. The ceiling-mounted circulation fan is the model scheduled with the capacities indicated. The fan shall be furnished with mounting hardware and a remote control as manufactured by Haiku® Home.
B. Summary of Work
    1. Installation of the fan, wireless network (optional), miscellaneous or structural metal work (if required), field electrical wiring, cable, conduit, fuses and disconnect switches, other than those addressed in the installation scope of work, shall be provided by others. Installation services are available through Haiku Home. Consult the appropriate installation scope of work for information on the available installation options, overview of customer and installer responsibilities, and details on installation site requirements.

1.2 RELATED SECTIONS
A. 21 00 00 Fire Suppression
B. 23 00 00 Heating, Ventilating, and Air Conditioning (HVAC)
C. 26 00 00 Electrical

1.3 REFERENCES
A. International Organization for Standardization (ISO)
B. National Electric Code (NEC)
C. National Fire Protection Association (NFPA)
D. Underwriters Laboratory (UL)

1.4 SUBMITTALS

A. Shop Drawings: Drawings detailing product dimensions, weight, and attachment methods
B. Part 2 Product Data: Specification sheets on the ceiling-mounted fan, specifying electrical and installation requirements, features and benefits, and controller information
C. Part 2 Product Documentation: The manufacturer shall furnish a copy of all installation, operation, and maintenance instructions for the fan.
D. Schedule

1.5 QUALITY ASSURANCE

A. Certifications
    1. Safety
        a. The fan assembly, as a system, shall be ETL-certified and built pursuant to the following standards.

1) United States a) UL 507. Standard for Safety for Electric Fans.

b. The fan motor shall be ETL-certified and built pursuant to the following standards.

1) United States

a) UL 1004-1. Standard for Safety for Rotating Electrical Machines - Part 1 General Requirements.

b) UL 1004-3. Standard for Safety for Thermally Protected Motors.

c) UL 1004-7. Standard for Safety for Electronically Protected Motors.

B. Manufacturer Qualifications

1. The fan and any accessories shall be supplied by Haiku Home that has a minimum of ten (10) years of product experience.
2. ISO 9001-certified

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver product in original, undamaged packaging with identification labels intact. The fan shall be new, free from defects, and factory tested.
B. The fan and its components must be stored in a safe, dry location until installation.

1.7 WARRANTY

A. The manufacturer shall replace any products or components defective in material or workmanship, free of charge to the customer (including transportation charges within the USA, F.O.B. Lexington, KY), pursuant to the complete terms and conditions of the Haiku Home Non-Prorated Warranty in accordance to the following schedule:
B. Industrial and Commercial Installations Item Period of Coverage Motor 2 years All other components 1 year Labor to repair the defect will be provided free of charge at the Haiku Home service center for defects arising during the Warranty Period. Residential Installations Item Period of Coverage Motor Lifetime of motor All other components 1 year Labor to repair the defect will be provided free of charge at the Haiku Home service center for defects arising during the Warranty Period

PART 2 PRODUCT

2.1 MANUFACTURER

A. Haiku Home, PO Box 11307, Lexington, Kentucky 40575. Phone (877) 244-3267. Fax (859) 233-0139. Website: www.haikuhome.com.

2.2 HAIKU® L SERIES

A. Complete Unit

1. Regulatory Requirements: The fan assembly, as a system, shall be ETL-certified and built pursuant to relevant safety standards as described above.
2. Quality: The fan shall display good workmanship in all aspects of its construction. Field balancing of the airfoils shall not be necessary.
3. Colors: Airfoil colors may be selected by the architect or owner as described in 2.2.C, “Airfoils.”
4. A wall-mounted controller (in addition to the standard remote control) may be selected at the time of order.

B. Mounting System

1. The fan shall be suitable for flat or sloped ceilings with heights ranging from 8–18 ft .
2. The fan shall be equipped with a mounting bracket, control box, wiring cover, mounting ball and wedge, lower cover ring and trim, extension tubes, motor hub and LED light assembly, and mounting hardware.
3. A 6.3-inch and 11.3-inch extension tube shall be included with the fan.
4. The fan shall have a diameter of 52”.

C. Airfoils

1. The fan shall be equipped with three airfoils spanning a total diameter of 52” (1.3 m).
2. Airfoils shall be made of hybrid resin.
3. Airfoils shall be available in a black or white finish as specified by the architect or owner.

D. Motor

1. The fan shall have an electronically commutated motor (ECM) rated for 100–125 VAC, single-phase or 200–240 VAC, single-phase.
    a. The 100–125 VAC motor shall draw 2.5–17.7 watts depending on the speed at which the fan is operated.
2. The 100–125 VAC fan shall be damp-rated for use in covered outdoor spaces.
3. The fan shall be designed for continuous operation in ambient temperatures of 32–104°F (0–40°C), and a humidity range of 20–90% (non-condensing).
4. The fan’s motor unit and motor unit trim shall be available in black or white as specified by the architect or owner.

E. Safety Cable

1. The fan shall be equipped with a safety cable that provides an additional means of securing the fan assembly to the building structure. The safety cable shall be 1.5 mm in diameter and fabricated of aircraft steel.
2. Field construction of safety cables is not permitted.

F. Haiku Wall Control

1. The fan shall be equipped with a wireless Haiku Wall Control in addition to the standard remote control, as specified by the architect or owner.
2. The Haiku Wall Control shall enable SenseME Technology for the fan and shall include temperature, humidity, and motion sensors.
3. A Wi-Fi module shall be included with the Haiku Wall Control. The Wi-Fi module shall be installed in the fan's control box to enable the wall control to communicate wirelessly with the fan.
4. The user shall be able to use the Haiku Home app on their mobile digital device to group the Haiku Wall control with one or more fans for simultaneous control of fan speed, light brightness, and app features.
5. The Haiku Wall Control buttons shall control the fan (on/off and variable speed).

PART 3 EXECUTION

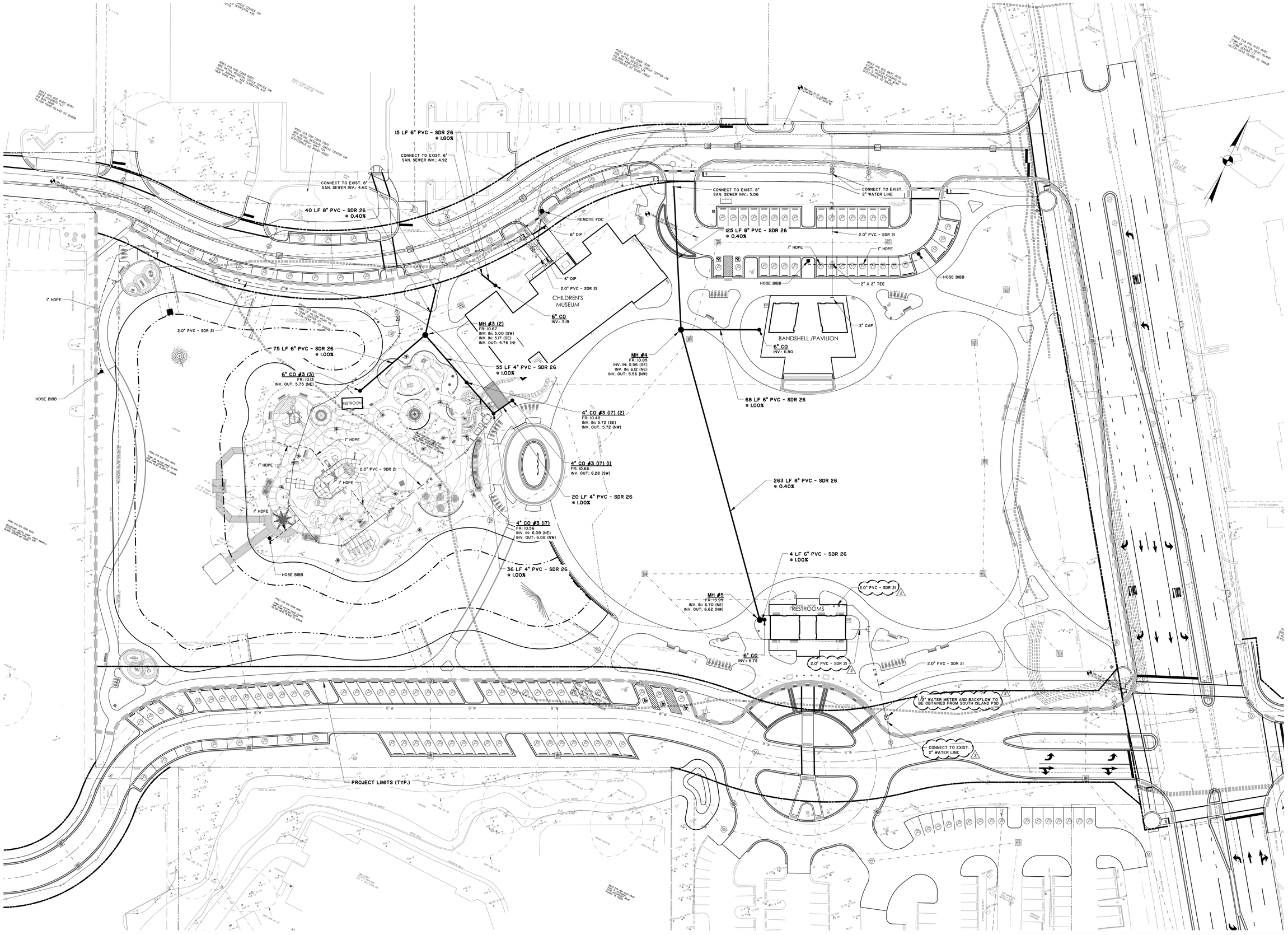
3.1 PREPARATION

A. The fan location must have an appropriate ceiling-mounted outlet box marked, "Acceptable for Fan Support." If there is not an appropriate outlet box already installed at the location, one must be installed on a ceiling joist or beam and be properly wired. Additional mounting options may be available. Consult the installation guide for additional details.
B. The fan location must be free from obstacles such as lights, cables, or other building components.
C. Check the fan location for proper electrical requirements. Consult the installation guide for appropriate circuit requirements.

3.2 INSTALLATION

A. Install the fan and wall control according to the manufacturer's installation guide, which includes acceptable mounting methods.
B. Required Distances
    1. Airfoils must be at least 7 ft (2.1 m) above the floor.
    2. The airfoils must have at least 2 ft (0.6 m) clearance from all obstructions.
    3. The fan shall not be located where it will be subjected to rain or continuous wind gusts, or in close proximity to the outputs of HVAC systems or radiant heaters. Consult the installation guide for additional details.

END OF SECTION



Town of Hilton Head Island
One Town Center Court
Hilton Head Island, SC 29928

SOUTH CAROLINA
THOMAS & HUTTON ENGINEERING CO.
No. COO285
CERTIFICATE OF AUTHORIZATION

CONSTRUCTION DOCUMENTS
FOR
COLIGNY PARK
Hilton Head Island, South Carolina

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
No. 24757
RYAN W. SMITH

DRAWN BY:
JBJ

CHECKED BY:
SKM

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#	REVISION	DATE	BY
2	ADDENDUM #2	7.29.16	BJ

DATE
6-30-2016
PROJECT NUMBER
01-16002
SHEET TITLE
WATER AND SEWER PLAN

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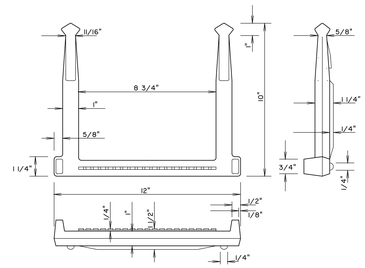
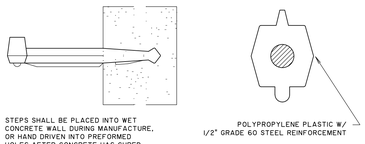
SHEET NUMBER
C2.1

Z:\24634\24634.0002\Engineering\Drawings\Construction Plans\24634.0002 - WS-PL.dwg, Thursday, July 28, 2016, Printed By: Jenkins, Barry



MANHOLE STEPS SHALL BE M.A. IND.,INC. MODEL NO. PS 1, PS 1-PF OR EQUIVALENT

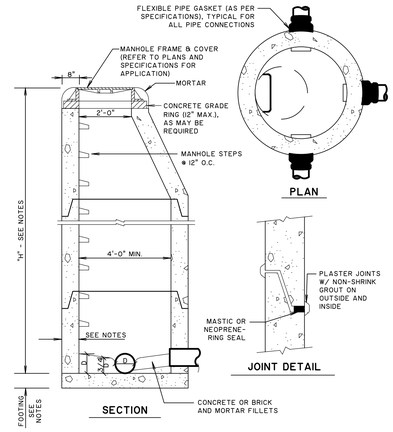


STEPS SHALL BE PLACED INTO WET CONCRETE WALL DURING MANUFACTURE, OR HAND DRIVEN INTO PREFORMED HOLES AFTER CONCRETE HAS CURED.

POLYPROPYLENE PLASTIC W/ 1/2" GRADE 60 STEEL REINFORCEMENT

MANHOLE STEP DETAIL

NOT TO SCALE



NOTES:
1. IN PAVED AREAS MANHOLE FRAMES WILL BE FLUSH WITH FINISHED PAVEMENT GRADE. IN NON-PAVED AREAS MANHOLE FRAMES WILL BE SET 2" ABOVE FINISHED GRADE.
2. PRECAST REINFORCED CONCRETE MANHOLE TOPS, RISERS, AND BASES SHALL CONFORM TO ASTM C478.
3. BRICK MANHOLES - WHEN "H" IS LESS THAN 12 FT., FOOTING AND BRICK WALLS SHALL BE 8" THICK. WHEN "H" IS GREATER THAN 12 FT., FOOTING AND BRICK WALLS BELOW 12 FT. SHALL BE 12" THICK. PLASTER WITH 1/2" 1:2 MORTAR ON OUTSIDE.

STANDARD MANHOLE

NOT TO SCALE

DUCTILE IRON LINE

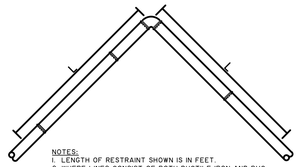
PIPE DIA.	L
4	28
6	40
8	52
10	62
12	73
16	94
20	114
24	132

PVC LINE

PIPE DIA.	L
4	52
6	74
8	96
10	115
12	136

NOTES:
1. LENGTH OF RESTRAINT SHOWN IS IN FEET.
2. WHERE LINES CONSIST OF BOTH DUCTILE IRON AND PVC WITHIN THE LIMITS OF REQUIRED RESTRAINT, LIMITS FOR PVC SHALL APPLY.

DEAD END RESTRAINT



NOTES:
1. LENGTH OF RESTRAINT SHOWN IS IN FEET.
2. WHERE LINES CONSIST OF BOTH DUCTILE IRON AND PVC WITHIN THE LIMITS OF REQUIRED RESTRAINT, LIMITS FOR PVC SHALL APPLY.

PVC LINE

PIPE DIA.	BEND ANGLE 11 1/4°	22 1/2°	45°	90°
4	3	6	12	29
6	4	8	17	41
8	5	11	22	53
10	6	13	26	64
12	7	15	31	75

DUCTILE IRON LINE

PIPE DIA.	BEND ANGLE 11 1/4°	22 1/2°	45°	90°
4	2	4	8	20
6	3	6	12	28
8	4	7	15	36
10	4	9	18	43
12	5	10	21	51
16	6	13	27	65
20	8	16	33	79
24	9	18	38	92

MINIMUM RESTRAINED LENGTH (L)

HORIZONTAL BEND RESTRAINT

NOTES:
1. LENGTH OF RESTRAINT SHOWN IS IN FEET.
2. WHERE LINES CONSIST OF BOTH DUCTILE IRON AND PVC WITHIN THE LIMITS OF REQUIRED RESTRAINT, LIMITS FOR PVC SHALL APPLY.
3. U1 AND U2 = UNINTERRUPTED STRAIGHT RUNS OF PIPE IN EACH DIRECTION.
4. Ur = THE SMALLER OF U1 OR U2.
5. L = MINIMUM RESTRAINED LENGTH ALONG THE BRANCH.
6. WHERE Ur IS LESS THAN 5', RESTRAIN TEE AS A 90°. HORIZONTAL BEND.

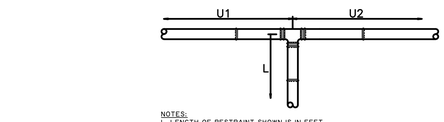
PVC LINE

Ur / TEE	5'-10'	11'-20'	21'-35'	> 35'
4X4	43	28	4	*
6X4	38	17	*	*
6X6	64	49	25	*
8X4	34	6	*	*
8X6	61	42	10	*
8X8	87	72	48	12
10X4	29	*	*	*
10X6	58	34	*	*
10X8	84	66	35	*
10X10	106	91	67	31
12X4	24	*	*	*
12X6	54	26	*	*
12X8	82	60	23	*
12X10	104	86	57	13
12X12	126	112	87	51

MINIMUM RESTRAINED LENGTH (L)

*RESTRAIN AT TEE ONLY.

TEE RESTRAINT (PVC LINE)



NOTES:
1. LENGTH OF RESTRAINT SHOWN IS IN FEET.
2. WHERE LINES CONSIST OF BOTH DUCTILE IRON AND PVC WITHIN THE LIMITS OF REQUIRED RESTRAINT, LIMITS FOR PVC SHALL APPLY.
3. U1 AND U2 = UNINTERRUPTED STRAIGHT RUNS OF PIPE IN EACH DIRECTION.
4. Ur = THE SMALLER OF U1 OR U2.
5. L = MINIMUM RESTRAINED LENGTH ALONG THE BRANCH.
6. WHERE Ur IS LESS THAN 5', RESTRAIN TEE AS A 90°. HORIZONTAL BEND.

DUCTILE IRON LINE

Ur / TEE	5'-10'	11'-20'	21'-35'	36'-50'	50'-75'	75'-100'
4X4	23	15	2	*	*	*
6X4	21	9	*	*	*	*
6X6	35	27	14	*	*	*
8X4	18	3	*	*	*	*
8X6	33	23	5	*	*	*
8X8	47	39	26	6	*	*
10X4	16	*	*	*	*	*
10X6	31	18	*	*	*	*
10X8	46	36	19	*	*	*
10X10	57	49	36	17	*	*
12X4	13	*	*	*	*	*
12X6	30	14	*	*	*	*
12X8	44	32	13	*	*	*
12X10	56	47	31	7	*	*
12X12	68	60	47	28	*	*
16X6	26	4	*	*	*	*
16X8	41	25	*	*	*	*

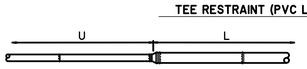
DUCTILE IRON LINE

Ur / TEE	5'-10'	11'-20'	21'-35'	36'-50'	50'-75'	75'-100'
16X10	54	41	20	*	*	*
16X12	66	56	38	*	*	*
16X16	89	81	38	*	*	*
20X6	22	*	*	*	*	*
20X8	38	18	*	*	*	*
20X10	51	35	8	*	*	*
20X12	64	51	28	*	*	*
20X16	87	77	60	35	10	*
20X20	108	100	87	67	48	*
24X6	18	*	*	*	*	*
24X8	35	10	*	*	*	*
24X10	49	29	*	*	*	*
24X12	62	45	17	*	*	*
24X16	86	73	53	22	*	*
24X20	107	97	81	57	33	*
24X24	127	119	106	86	66	33

MINIMUM RESTRAINED LENGTH (L)

*RESTRAIN AT TEE ONLY.

TEE RESTRAINT (DUCTILE IRON LINE)



DUCTILE IRON LINE

REDUCER	U	L
6X4	30	21
8X4	72	38
8X6	29	22
10X4	123	51
10X6	63	38
10X8	26	21
12X4	186	64
12X6	106	53
12X8	59	39
12X10	26	21
16X6	214	79
16X8	141	68
16X10	91	56
16X12	54	40
20X10	174	84
20X12	123	71
20X16	51	40
24X12	207	97
24X16	113	72
24X20	48	39

PVC LINE

REDUCER	U	L
6X4	56	38
8X4	134	69
8X6	53	40
10X4	227	94
10X6	117	71
10X8	49	39
12X4	343	118
12X6	196	99
12X8	109	72
12X10	48	40

U = MINIMUM UNINTERRUPTED STRAIGHT RUN OF PIPE ON SMALL SIDE OF REDUCER.

L = MINIMUM RESTRAINED LENGTH.

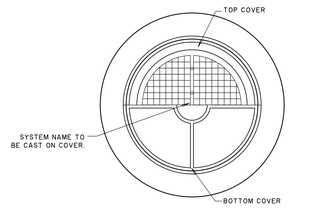
* WHERE MINIMUM "U" IS NOT MET, PIPE ON LARGE SIDE OF REDUCER SHALL BE RESTRAINED FOR A MINIMUM OF "L" FEET.

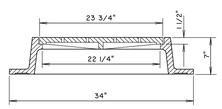
NOTES:
1. LENGTH OF RESTRAINT SHOWN IS IN FEET.
2. WHERE LINES CONSIST OF BOTH DUCTILE IRON AND PVC WITHIN THE LIMITS OF REQUIRED RESTRAINT, LIMITS FOR PVC SHALL APPLY.

REDUCER RESTRAINT

RESTRAINED JOINTS DETAILS

NOT TO SCALE





NOTE:
CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE, DISTORTION OR OTHER DEFECTS. THEY SHALL BE SMOOTH AND WELL CLEANED BY SHOTBLASTING OR BY SOME OTHER APPROVED METHOD.

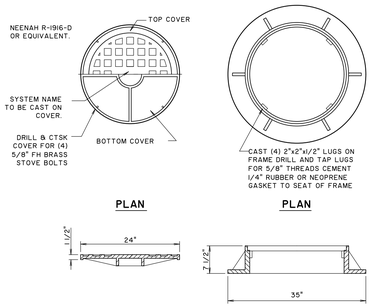
MATERIALS USED IN THE MANUFACTURE OF CASTINGS SHOULD CONFORM TO ASTM, AASHTO, ASA, MIL, AMS OR SPECIFICATIONS FOR GRAY IRON OR DUCTILE IRON AS FOLLOWS: GRAY IRON-ASTM A48, CLASS 35B, DUCTILE IRON-ASTM A536, CLASS 80-55-06.

ALL CASTINGS SHALL BE MANUFACTURED TRUE TO PATTERN: COMPONENT PARTS SHALL FIT TOGETHER IN A SATISFACTORY MANNER, ROUND FRAMES AND COVERS SHALL BE OF NON-ROCKING DESIGN, OR SHALL HAVE MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING UNDER TRAFFIC.

DEVIATIONS SHALL NOT EXCEED TOLERANCES PERMITTED BY ASTM STANDARDS.

MANHOLE FRAME AND COVER DETAIL

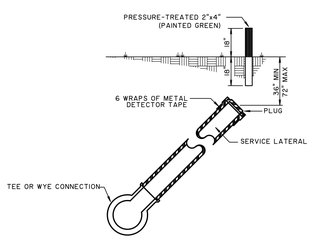
NOT TO SCALE



NOTES:
1. CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE, DISTORTION OR OTHER DEFECTS. THEY SHALL BE SMOOTH AND WELL CLEANED BY SHOTBLASTING OR BY SOME OTHER APPROVED METHOD.
2. MATERIALS USED IN THE MANUFACTURE OF CASTINGS SHALL CONFORM TO ASTM, AASHTO, ASA, MIL, AMS OR SPECIFICATIONS FOR GRAY IRON OR DUCTILE IRON, AS FOLLOWS: GRAY IRON-ASTM A48, CLASS 35B, DUCTILE IRON ASTM A536, CLASS 80-55-06.
3. ALL CASTINGS SHALL BE MANUFACTURED TRUE TO PATTERN: COMPONENT PARTS SHALL FIT TOGETHER IN A SATISFACTORY MANNER, ROUND FRAMES AND COVERS SHALL BE OF NON-ROCKING DESIGN, OR SHALL HAVE MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING UNDER TRAFFIC. DEVIATIONS SHALL NOT EXCEED TOLERANCES PERMITTED BY ASTM STANDARDS.

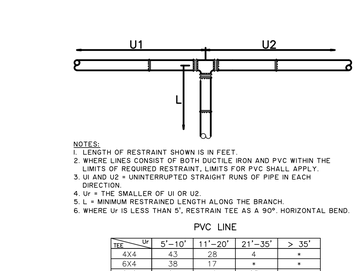
WATER-TIGHT MANHOLE FRAME AND COVER DETAIL

NOT TO SCALE



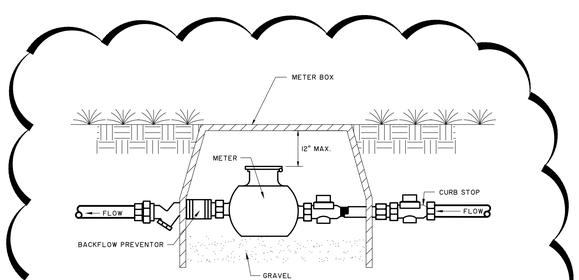
SERVICE CONNECTION DETAIL

NOT TO SCALE



WATER SERVICE CONNECTION DETAIL

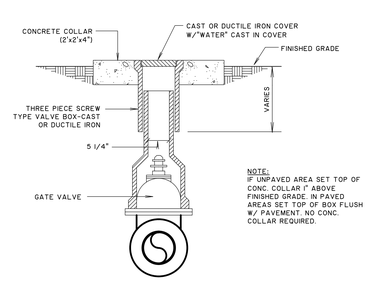
NOT TO SCALE



NOTE:
1. APPLICABLE TO 3/4", 5/8" AND 1" ONLY.

WATER METER W/BACKFLOW PREVENTOR

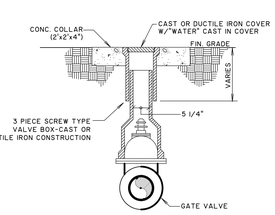
NOT TO SCALE



NOTE:
IF UNPAVED AREA SET TOP OF CONC. COLLAR 1" ABOVE FINISHED GRADE. IN PAVED AREAS SET TOP OF BOX FLUSH W/ PAVEMENT. NO CONC. COLLAR REQUIRED.

VALVE BOX DETAIL

NOT TO SCALE

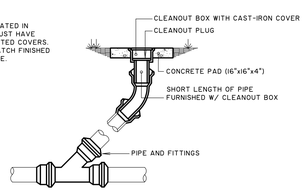


VALVE SECTION

FIRE HYDRANT DETAIL

NOT TO SCALE

NOTE:
CLEANOUTS LOCATED IN PAVED AREAS MUST HAVE H20 TRAFFIC-RATED COVERS. COVERS WILL MATCH FINISHED PAVEMENT GRADE.



CLEANOUT DETAIL

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Town of Hilton Head Island
One Town Center Court
Hilton Head Island, SC 29928

SOUTH CAROLINA
THOMAS & HUTTON ENGINEERING CO.
No. C00285
CERTIFICATE OF AUTHORIZATION

CONSTRUCTION DOCUMENTS FOR
COLIGNY PARK
Hilton Head Island, South Carolina

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 24757
RYAN M. SMITH

DRAWN BY: JBJ
CHECKED BY: SKM

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#	REVISION	DATE	BY
2	ADDENDUM #2	7.29.16	BJ

DATE
6-30-2016
PROJECT NUMBER
01-16002
SHEET TITLE
WATER AND SEWER DETAILS

SHEET NUMBER
C2.2

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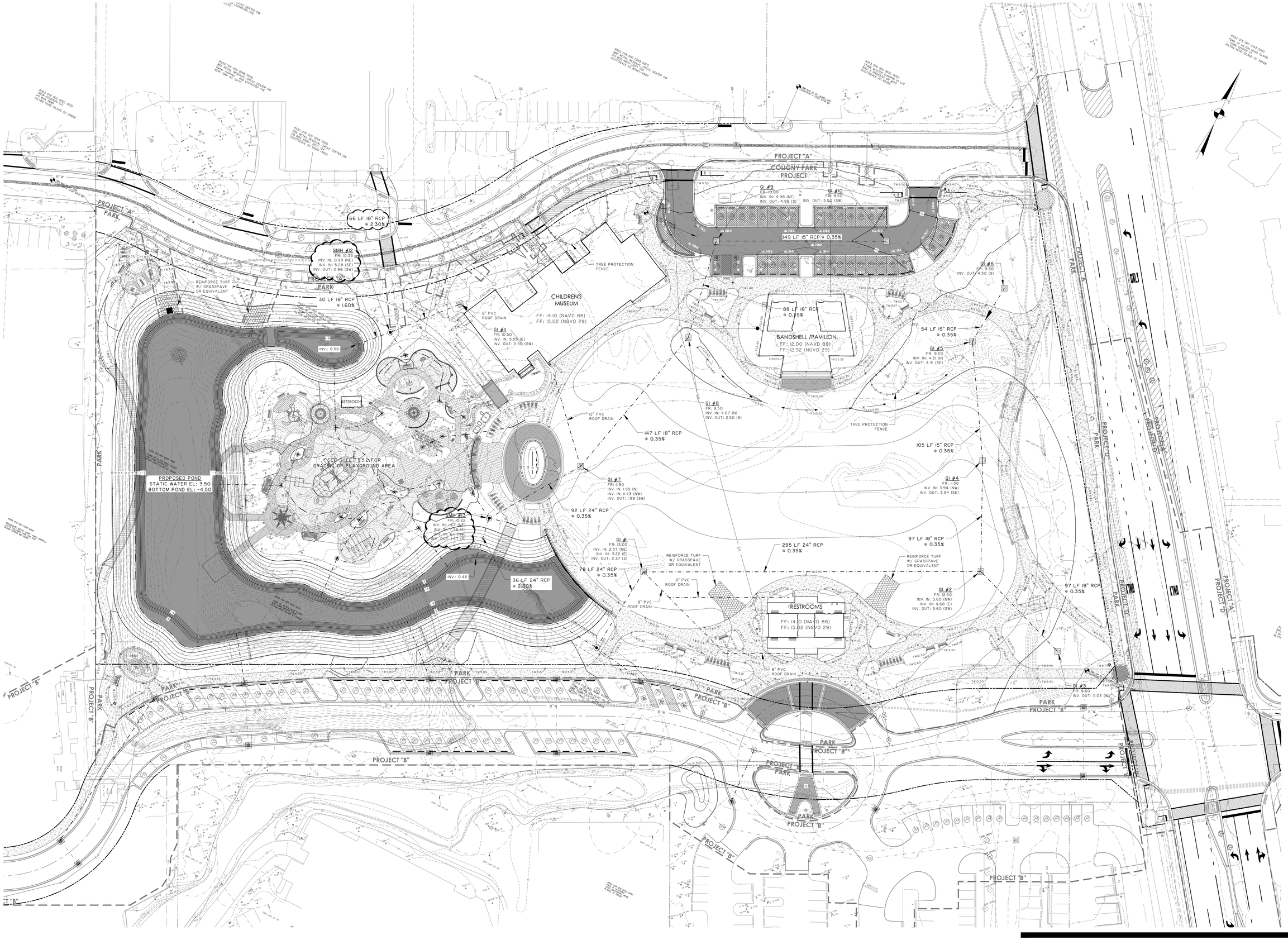

0' 15' 30' 60' 90' 120'

SCALE: 1" - 30'-0"

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CONSTRUCTION DOCUMENTS
FOR
COLIGNY PARK
Hilton Head Island, South Carolina

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
No. 24757
RYAN M. SMITH

DRAWN BY:
JBJ
CHECKED BY:
SKM

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#	REVISION	DATE	BY
2	ADDENDUM #2	7.29.16	BJ

DATE
6-30-2016
PROJECT NUMBER
01-16002
SHEET TITLE
PAVING, GRADING & DRAINAGE PLAN

SHEET NUMBER
C3.1

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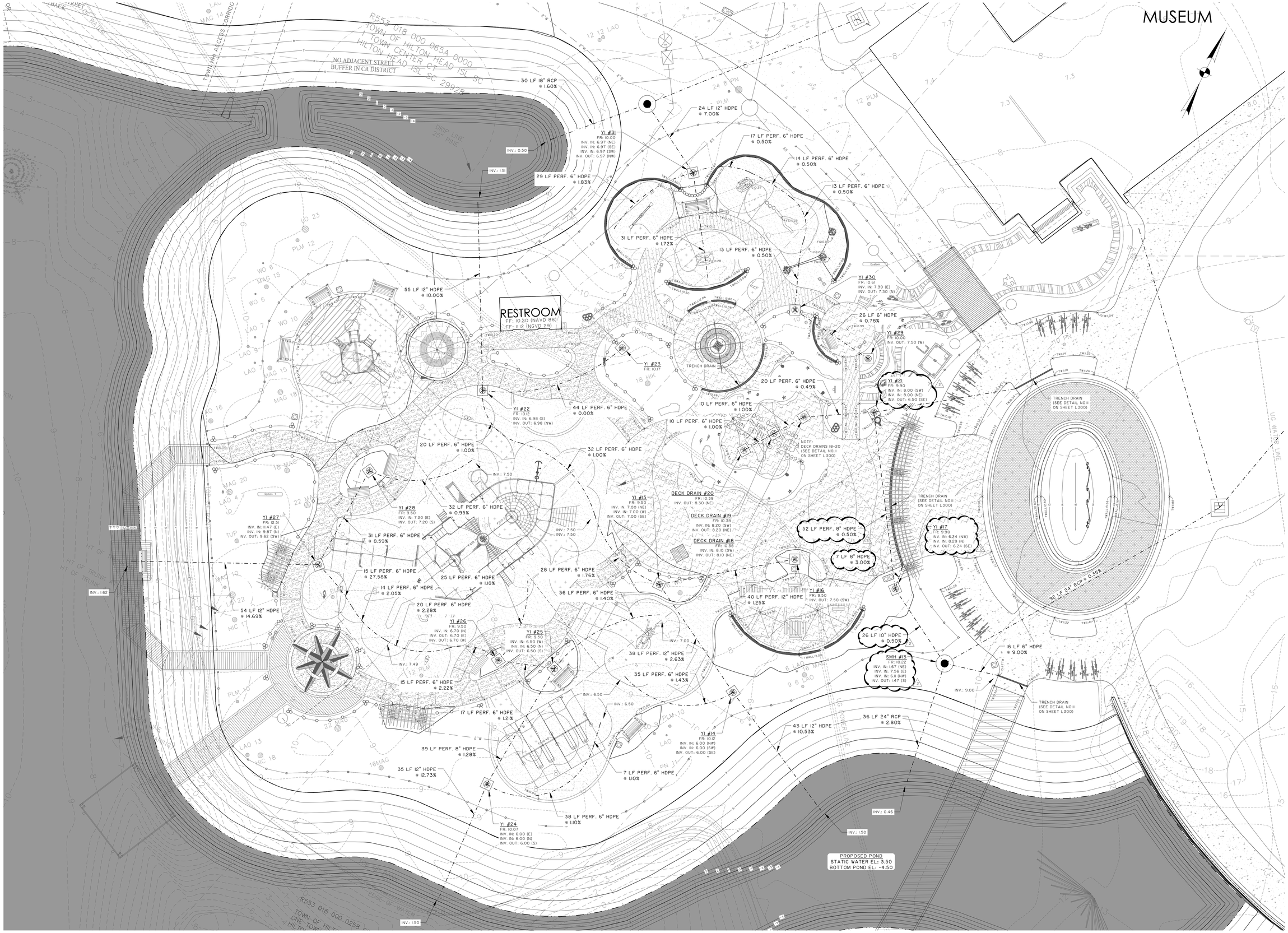

0' 5' 10' 20' 30' 40'

SCALE: 1" - 10'-0"

Z:\24634\24634.0002\Engineering\Drawings\Construction Plans\24634.0002 - PGD-PLAYGROUND.dwg, Thursday, July 28, 2016, Printed By: Jenkins, Barry

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CONSTRUCTION DOCUMENTS FOR

COLIGNY PARK

Hilton Head Island, South Carolina

SOUTH CAROLINA
PROFESSIONAL ENGINEER
No. 24757
RYAN M. SMITH

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#	REVISION	DATE	BY
2	ADDENDUM #2	7.29.16	BJ

DATE
6-30-2016

PROJECT NUMBER
01-16002

SHEET TITLE
PAVING, GRADING & DRAINAGE PLAN - PLAYGROUND

SHEET NUMBER
C3.2

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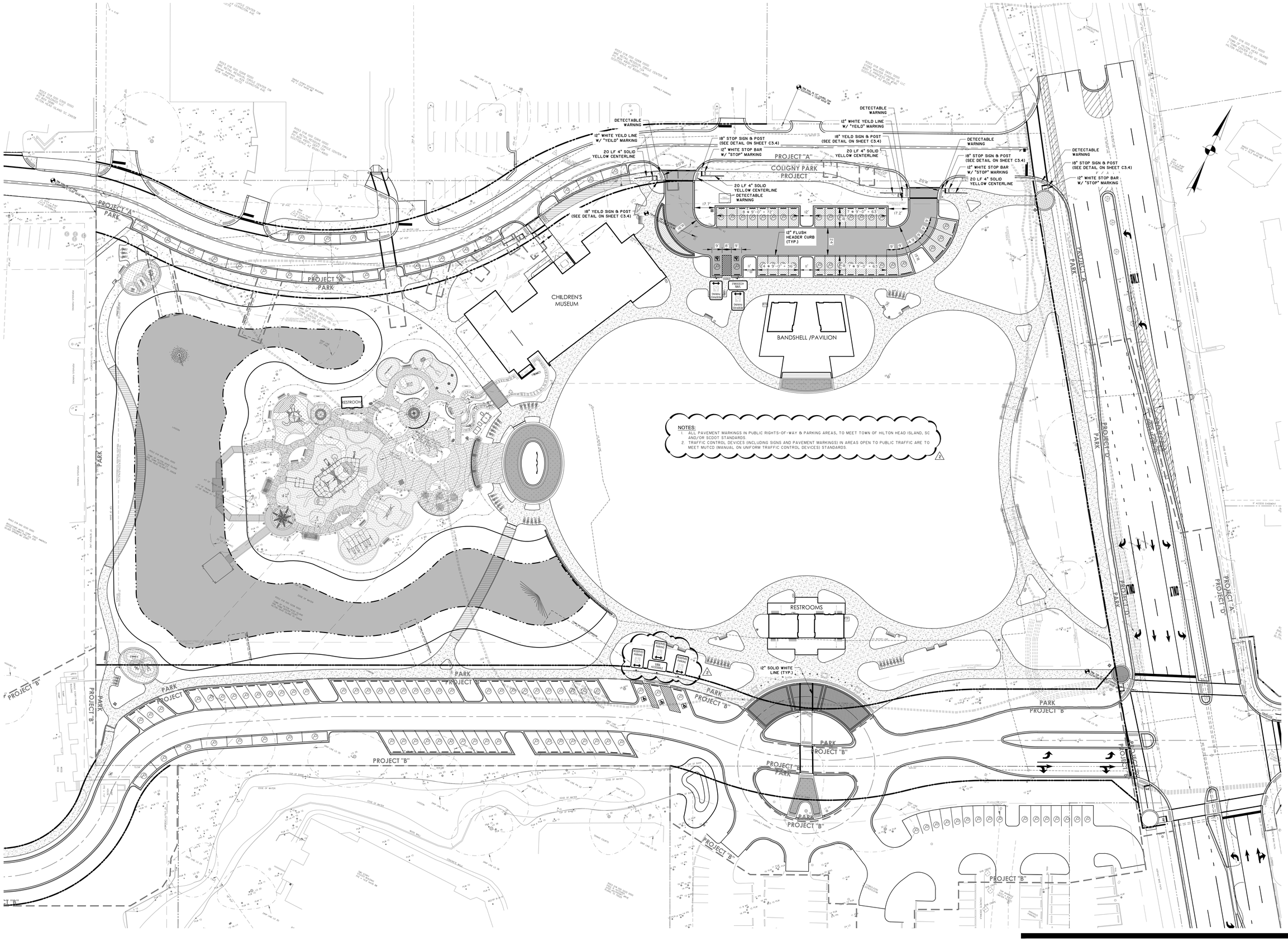

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Hilton Head Island, SC 29928

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CONSTRUCTION DOCUMENTS FOR

COLIGNY PARK

Hilton Head Island, South Carolina

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 24757 RYAN M. SMITH

DRAWN BY: JBJ

CHECKED BY: SKM

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#	REVISION	DATE	BY
2	ADDENDUM #2	7.29.16	BJ

DATE
6-30-2016

PROJECT NUMBER
01-16002

SHEET TITLE
STAKING & SIGNAGE PLAN

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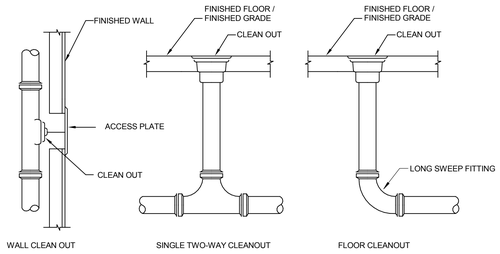
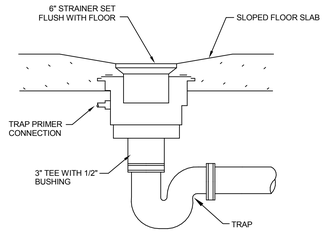
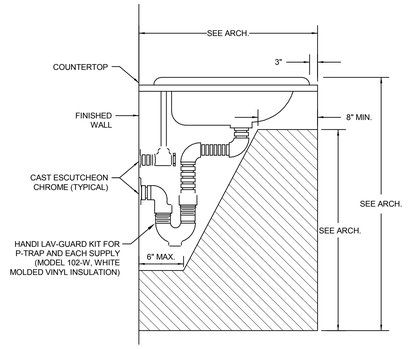
SHEET NUMBER
C4.1



1 / P0.501 CLEANOUT DETAIL
NOT TO SCALE



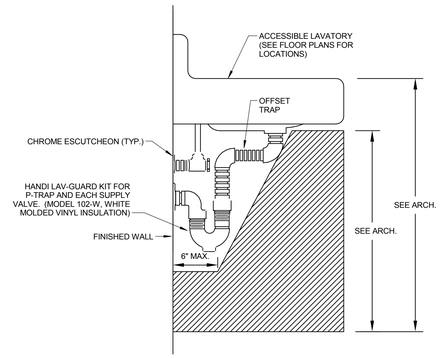
2 / P0.501 FLOOR DRAIN INSTALLATION DETAIL
NOT TO SCALE



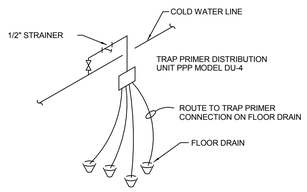
NOTE:

CABINETS AND / OR COUNTERTOP INSTALLATIONS WITH SKIRTED FACES MAY OMIT INSULATION KITS IF ADA CLEARANCES SHOWN ARE MET.

3 / P0.501 P-TRAP INSULATION DETAIL W/ ADA CLEARANCES
NOT TO SCALE



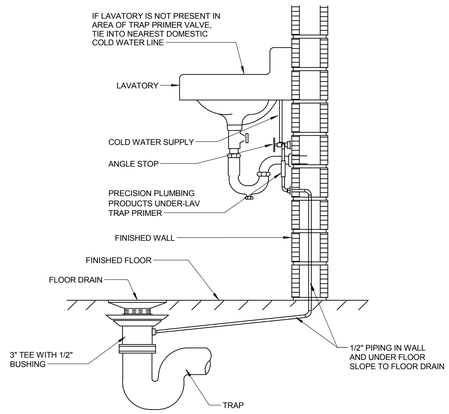
4 / P0.501 P-TRAP INSULATION DETAIL WITH ADA CLEARANCES
NOT TO SCALE



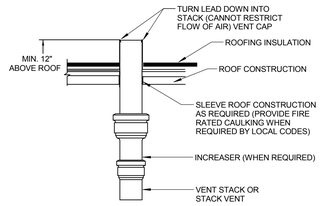
NOTE:

INSTALL TRAP PRIMER DISTRIBUTION UNIT IN CHASE WALL PROVIDE POSITIVE SLOPE TO TRAP CONNECTION.

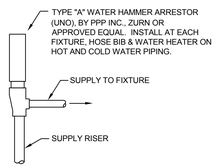
5 / P0.501 TRAP PRIMER DETAIL
NOT TO SCALE



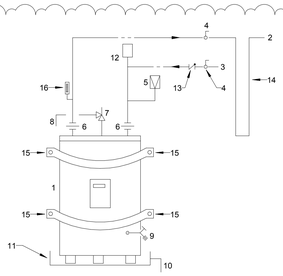
6 / P0.501 TRAP PRIMER VALVE DETAIL
NOT TO SCALE



7 / P0.501 VTR DETAIL
NOT TO SCALE

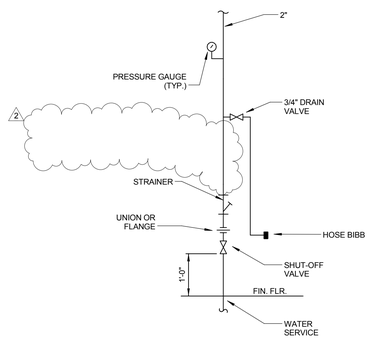


8 / P0.501 WATER HAMMER ARRESTOR DETAIL
NOT TO SCALE



1. WATER HEATER
2. HOT WATER TO SYSTEM - 140°F
3. COLD WATER SUPPLY
4. SHUT-OFF VALVE
5. VACUUM RELIEF VALVE
6. DIELECTRIC UNION
7. PRESSURE & TEMPERATURE RELIEF VALVE
8. RELIEF VALVE DISCHARGE PIPED FULL SIZE TO FLOOR DRAIN
9. DRAIN VALVE
10. DRIP PAN DRAIN TO FLOOR DRAIN
11. SEISMIC RATED PLATFORM & GALVANIZED STEEL DRIP PAN. BASIS OF DESIGN: HOLD-RITE 40-S-22 & HOLD-RITE QP-22, OR EQUAL.
12. THERMAL EXPANSION TANK
13. CHECK VALVE
14. HEAT TRAP >24"
15. STRAP(S)/FASTENER(S) ACCORDING TO CONTRACTOR'S SEISMIC ENGINEER'S DESIGN
16. THERMOMETER

9 / P0.501 WATER HEATER INSTALLATION DETAIL
NOT TO SCALE



10 / P0.501 WATER SERVICE RISER INSTALLATION DETAIL
NOT TO SCALE

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CONSTRUCTION DOCUMENTS FOR
COLIGNY PARK
Hilton Head Island, South Carolina

DRAWN BY: KMM
CHECKED BY: MAU

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SHEET TITLE
PLUMBING DETAILS

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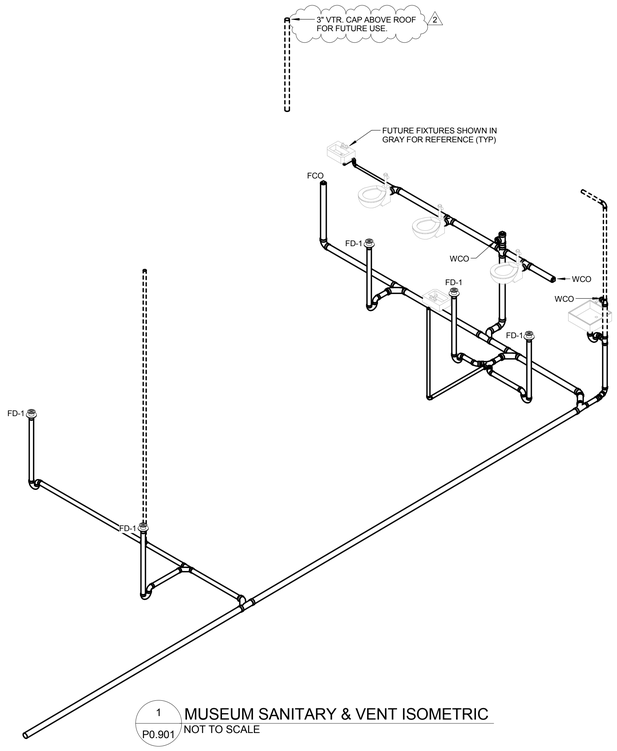
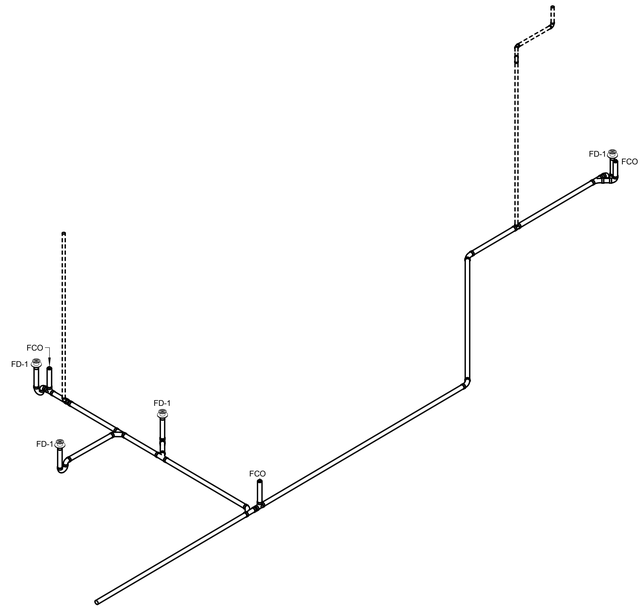
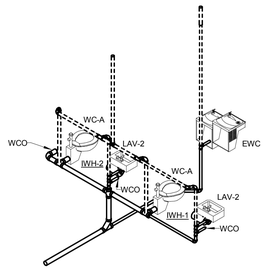


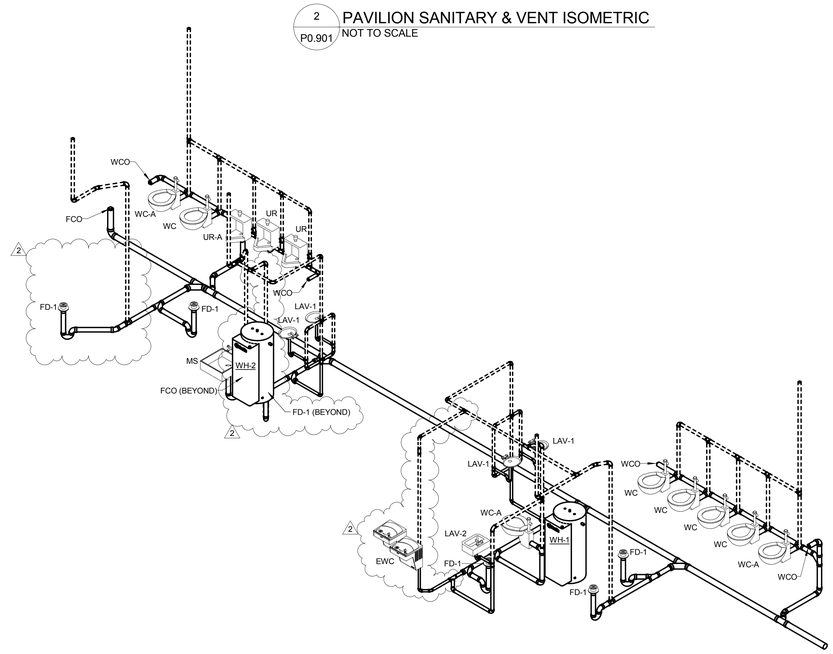
1 P0.901 MUSEUM SANITARY & VENT ISOMETRIC
NOT TO SCALE



2 P0.901 PAVILION SANITARY & VENT ISOMETRIC
NOT TO SCALE



3 P0.901 POND RESTROOM SANITARY & VENT ISOMETRIC
NOT TO SCALE



4 P0.901 RESTROOM SANITARY & VENT ISOMETRIC
NOT TO SCALE

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CONSTRUCTION DOCUMENTS
FOR
COLIGNY PARK
Hilton Head Island, South Carolina

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KMM

CHECKED BY:
MAU

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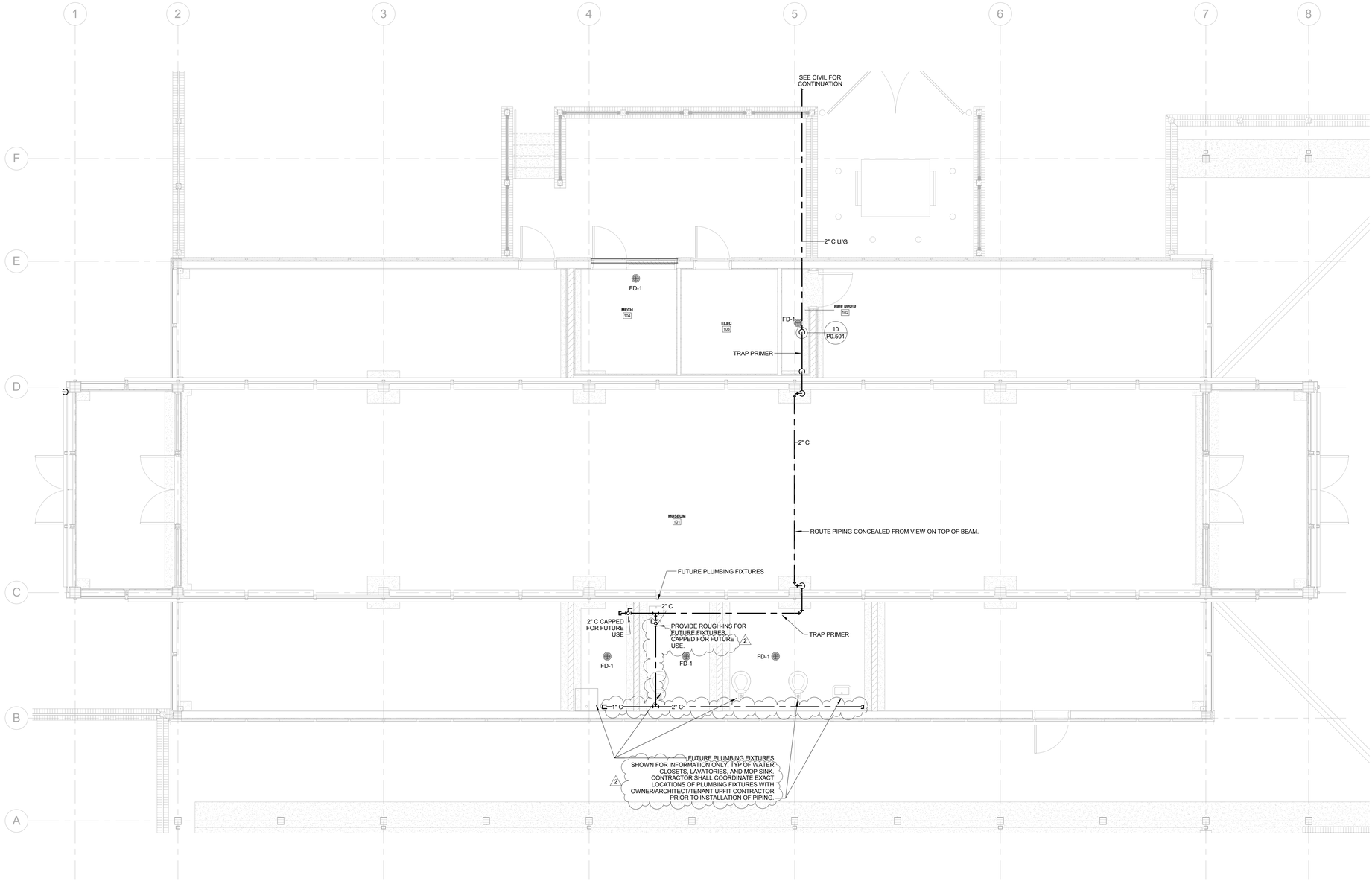

1 / P1.101 MUSEUM DOMESTIC HOT & COLD WATER PLAN
SCALE: 1/4" = 1'-0"

GENERAL NOTES

1. WHERE PIPE SIZE IS NOT SHOWN, REFER TO FIXTURE SCHEDULE OR EQUIPMENT INSTALLATION MANUAL FOR CONNECTION SIZE.
2. PROVIDE HAMMER ARRESTOR FOR EVERY FIXTURE. SEE DETAIL.
3. ROUTE 1/2" C TRAP PRIMER PIPING TO ALL FLOOR DRAINS FROM DOMESTIC COLD WATER LINES. SEE DETAILS.
4. IN AREAS WITH EXPOSED CEILINGS, PIPING SHALL BE ROUTED AS TIGHT TO STRUCTURE AS POSSIBLE, UNO.

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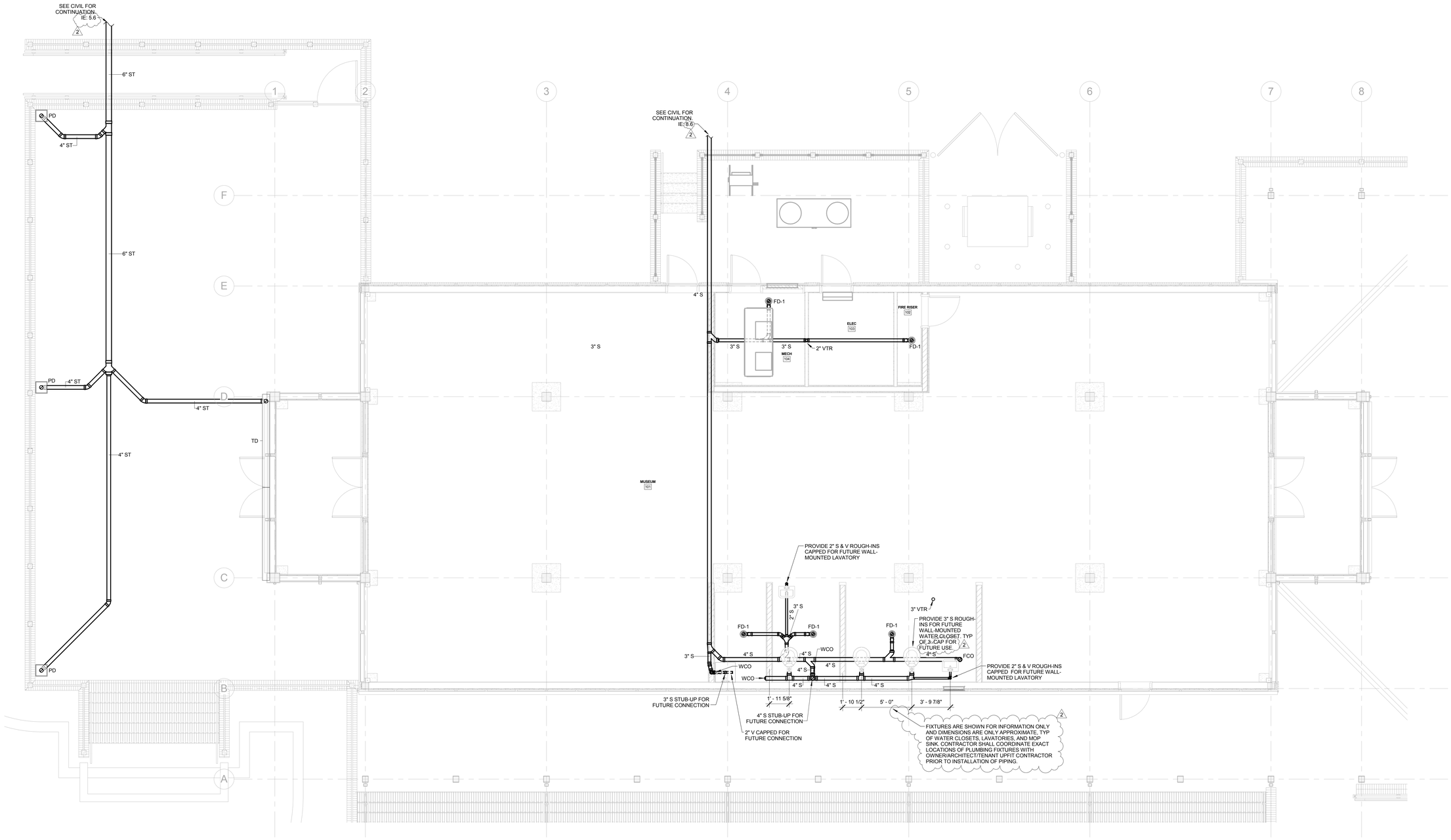

1 / P1.102 MUSEUM SANITARY & VENT PLAN
SCALE: 1/4" = 1'-0"

GENERAL NOTES

1. WHERE PIPE SIZE IS NOT SHOWN, REFER TO FIXTURE SCHEDULE OR EQUIPMENT INSTALLATION MANUAL FOR CONNECTION SIZE.
2. PROVIDE TRAP PRIMER CONNECTION ON ALL FLOOR DRAINS.
3. IN AREAS WITH EXPOSED CEILINGS, PIPING SHALL BE ROUTED AS TIGHT TO STRUCTURE AS POSSIBLE.
4. ALL VENT PIPING IS DRAWN DIAGRAMATTICALLY FOR CLARITY. COORDINATE INSTALLATION OF VENT PIPING WITH OTHER TRADES.

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CONSTRUCTION DOCUMENTS FOR
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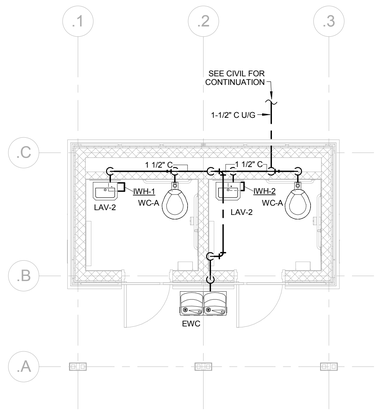
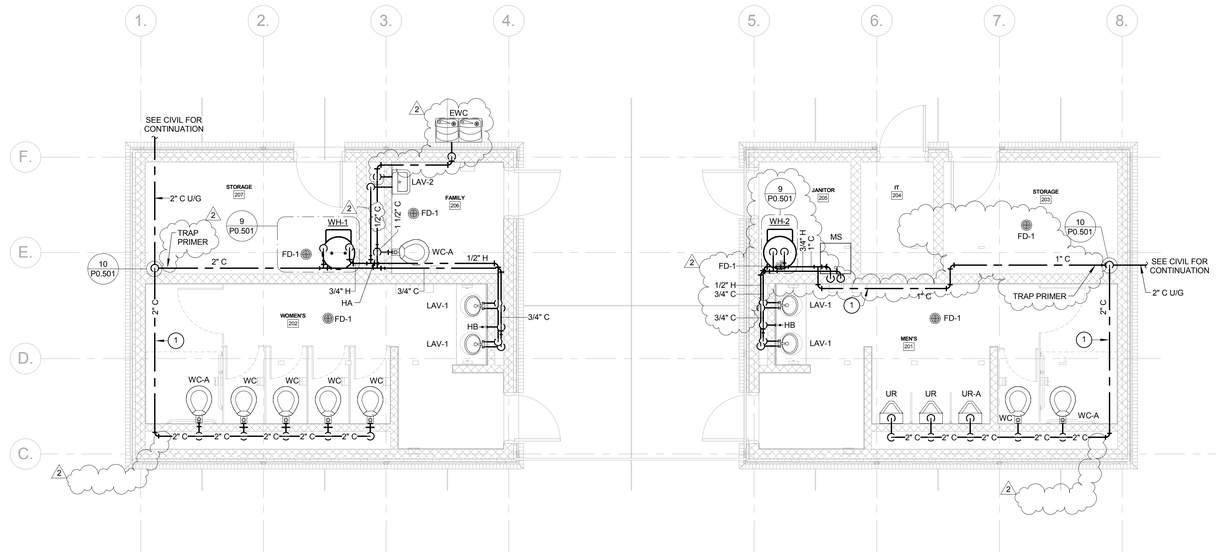


1 P2.101 POND RESTROOM - DOMESTIC HOT & COLD WATER PLAN
SCALE: 1/4" = 1'-0"



2 P2.101 RESTROOM - DOMESTIC HOT & COLD WATER PLAN
SCALE: 1/4" = 1'-0"

KEY NOTES

1. DO NOT ROUTE PIPING THROUGH IT ROOM. SUPPORT PIPING ON WALL AND PAINT TO MATCH WALL COLOR. INSTALL LABELS ON TOP OF PIPING OUT OF SIGHT FROM STANDING HEIGHT.

GENERAL NOTES

1. WHERE PIPE SIZE IS NOT SHOWN, REFER TO FIXTURE SCHEDULE OR EQUIPMENT INSTALLATION MANUAL FOR CONNECTION SIZE.
2. PROVIDE HAMMER ARRESTOR FOR EVERY FIXTURE. SEE DETAIL.
3. ROUTE 1/2" C TRAP PRIMER PIPING TO ALL FLOOR DRAINS FROM DOMESTIC COLD WATER LINES. SEE DETAILS.
4. IN AREAS WITH EXPOSED CEILINGS, PIPING SHALL BE ROUTED AS TIGHT TO STRUCTURE AS POSSIBLE, UNO.

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SHEET TITLE
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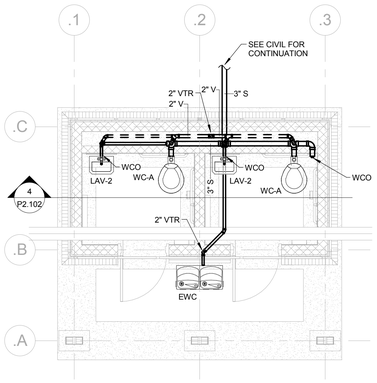
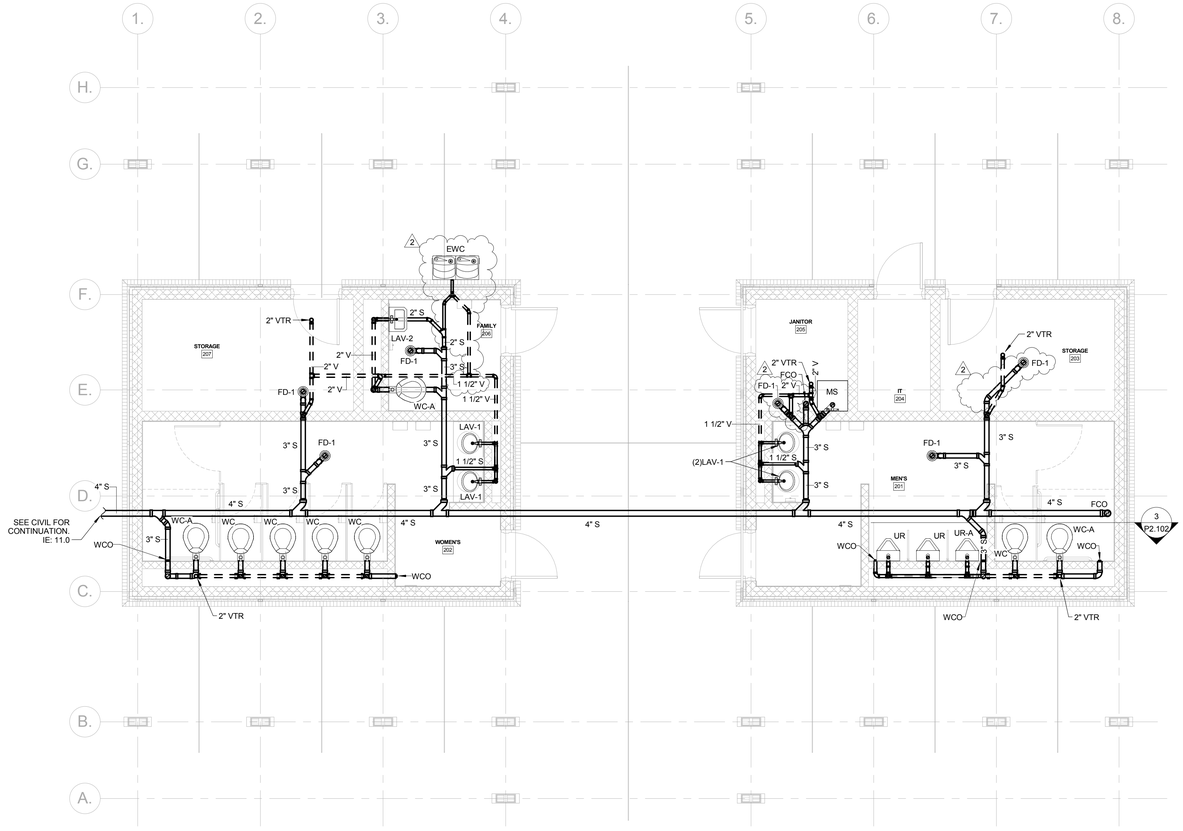
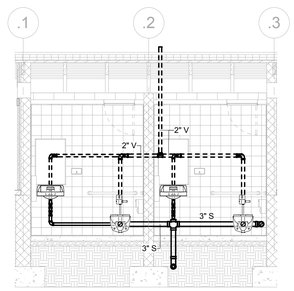


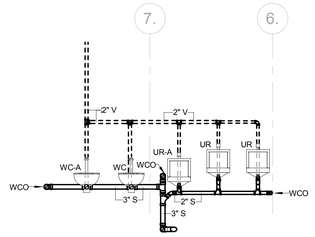
1 P2.102 POND RESTROOM SANITARY & VENT PLAN
SCALE: 1/4" = 1'-0"



2 P2.102 RESTROOM SANITARY & VENT PLAN
SCALE: 1/4" = 1'-0"



4 P2.102 POND RESTROOM SANITARY & VENT SECTION
NOT TO SCALE



3 P2.102 RESTROOM MEN'S 201 SECTION
NOT TO SCALE

GENERAL NOTES

1. WHERE PIPE SIZE IS NOT SHOWN, REFER TO FIXTURE SCHEDULE OR EQUIPMENT INSTALLATION MANUAL FOR CONNECTION SIZE.
2. PROVIDE TRAP PRIMER CONNECTION ON ALL FLOOR DRAINS.
3. IN AREAS WITH EXPOSED CEILINGS, PIPING SHALL BE ROUTED AS TIGHT TO STRUCTURE AS POSSIBLE.
4. ALL VENT PIPING IS DRAWN DIAGRAMATTICALLY FOR CLARITY. COORDINATE INSTALLATION OF VENT PIPING WITH OTHER TRADES.

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CONSTRUCTION DOCUMENTS FOR
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SHEET TITLE
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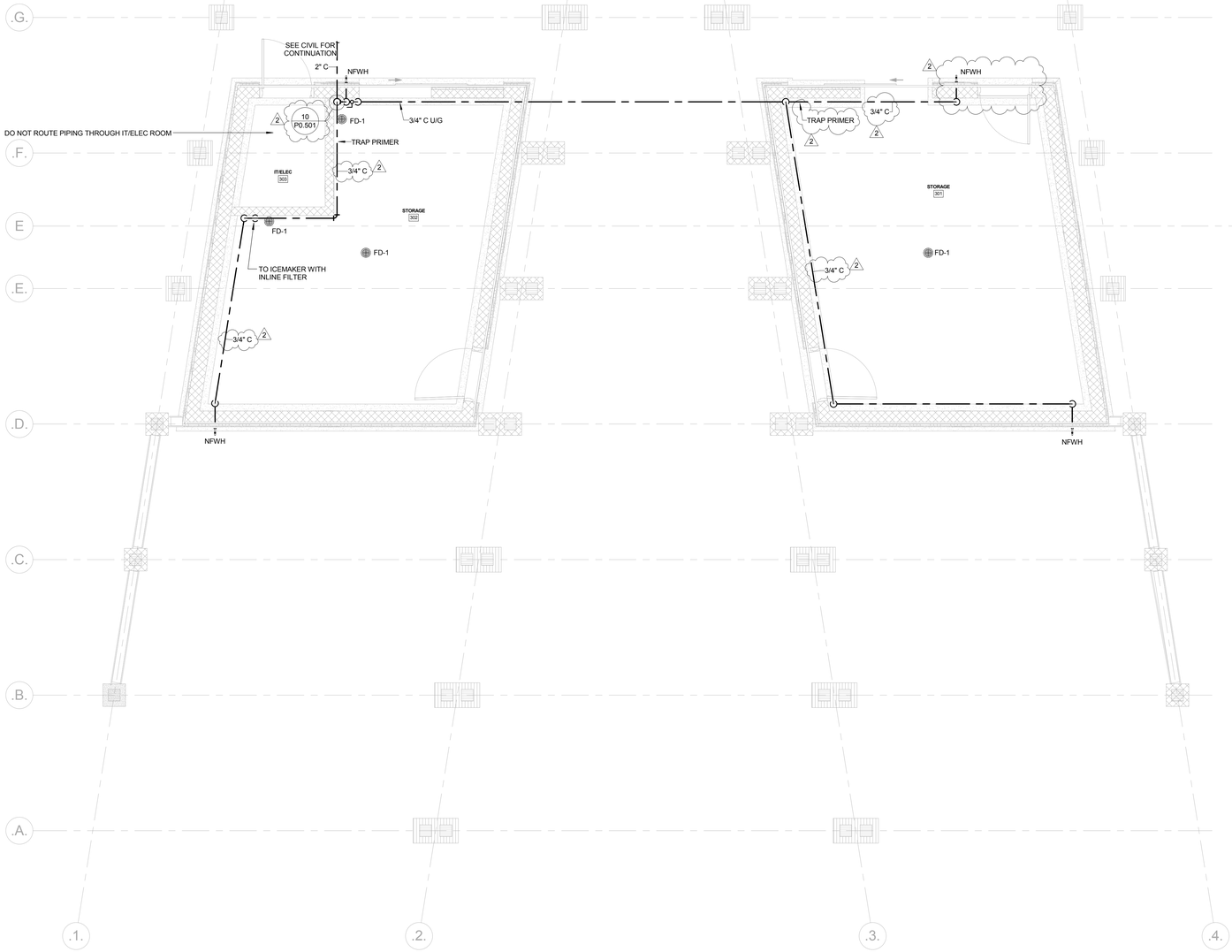

1 / P3.101 PAVILION DOMESTIC HOT & COLD WATER PLAN
SCALE: 1/4" = 1'-0"

GENERAL NOTES

1. WHERE PIPE SIZE IS NOT SHOWN, REFER TO FIXTURE SCHEDULE OR EQUIPMENT INSTALLATION MANUAL FOR CONNECTION SIZE.
2. PROVIDE HAMMER ARRESTOR FOR EVERY FIXTURE. SEE DETAIL.
3. ROUTE 1/2" C TRAP PRIMER PIPING TO ALL FLOOR DRAINS FROM DOMESTIC COLD WATER LINES. SEE DETAILS.
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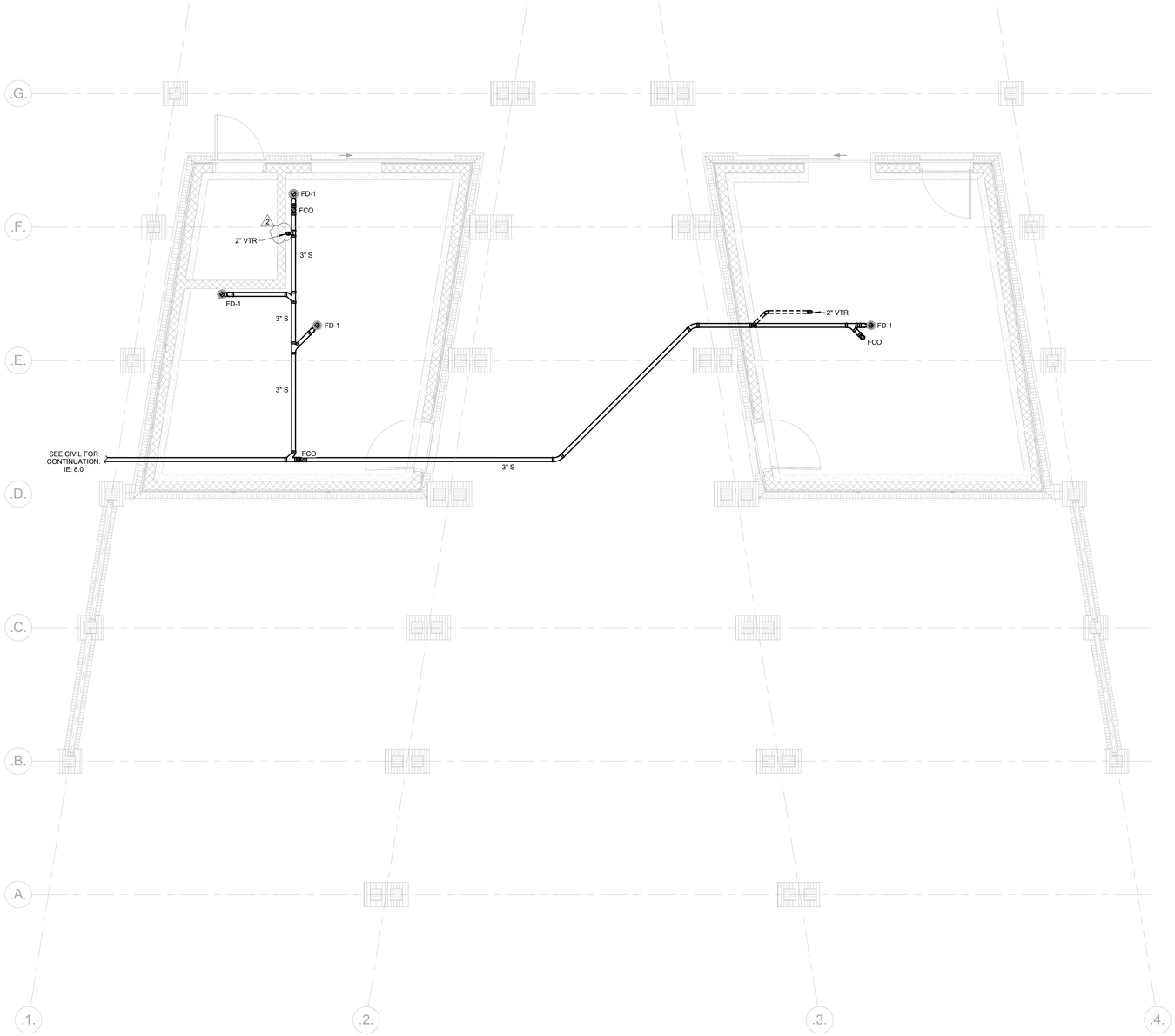

1 / P3.102 PAVILION SANITARY & VENT PLAN
SCALE: 1/4" = 1'-0"

GENERAL NOTES

1. WHERE PIPE SIZE IS NOT SHOWN, REFER TO FIXTURE SCHEDULE OR EQUIPMENT INSTALLATION MANUAL FOR CONNECTION SIZE.
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CONSTRUCTION DOCUMENTS
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LLR

Fire Sprinkler System Specification Sheet

(Per §40-10-250)

Project Data

Project name: COLIGNY PARK - CHILDREN'S MUSEUM

Location in South Carolina: Address (street # & street name): 2274 CLEMENTS FERRY RD | State project: ☐ Yes ☒ No
City: CHARLESTON | County: BERKELEY | State project #: N/A

Water Supply Information
(flow test data must be less than 1 year old per §40-10-250(A)(1))

Date test conducted: 05 / 09 / 2016 | Static pressure (psi): 62 | Residual pressure (psi): 48 | Flow (gpm): 1029.9

Distances of test gauges relative to the base of the riser: Horizontal (ft): 150 | Vertical (elevation difference in ft): 0

Source of water supply: ☐ Municipal dead-end ☒ Municipal circulation ☐ Other: | Pipe Size (in.): 8

Test data by/from: Name: JOE GILLING | Title: N/A
Organization: OUTSOURCE SERVICES, INC. | Telephone #: 843-683-9503

Fire pump: ☐ Yes ☒ No ☐ New ☐ Existing | Pump Capacity (gpm): N/A | Churn Pressure (psi): N/A | Rated Pressure (psi): N/A | Pressure @ 150% flow (psi): N/A

On-site storage tank: ☐ Yes ☒ No ☐ New ☐ Existing | Tank capacity (gallons): N/A

NFPA Hazard Classification
(attach continuation page when necessary)

Area #	Class or Code Reference	Description of Hazard Protected (commodity description, storage height, and arrangement as applicable.)
1	LIGHT HAZARD	BATHROOMS (SLOPED CEILINGS)
2	ORDINARY GROUP 1	EXHIBIT AREAS AND MECH., ELEC., & JANITORS ROOMS (SLOPED CEILINGS)
3	LIGHT HAZARD	EXTERIOR COMBUSTIBLE CANOPY - DRY PIPE SYSTEM

Design Parameters
(attach continuation page when necessary)

Area #	System Type	Density (gpm/ft²) / Area (ft²) or Other (reference code section)	Inside Hose (gpm)	Outside Hose (gpm)
1	WET	0.10 / 1950	---	100
2	WET	0.15 / 1950	---	250
3	DRY	0.10 / 1950	---	100

Seismic Design Data: S_{DS}= 0.387

Codes and Standards
(attach continuation page when necessary)

Applicable Codes, Standards & Editions (i.e. "2006 IBC", "2007 NFPA 13", etc.) **for the Scope of Work on the Sprinkler System**

NFPA 13, 2010 EDITION; 2012 IBC; 2012 IFC

Scope of work (such as sprinkler system A.G. from 1'-0" A.F.F., U.G. from tap to 5'-0" outside, etc.) and notes (attach continuation page when necessary):
NEW ABOVEGROUND WET PIPE SPRINKLER SYSTEM & DRY PIPE SPRINKLER SYSTEM STARTING AT 5'-0" OUTSIDE OF BUILDING IN ACCORDANCE WITH NFPA 13, 2010.

Specifier's Information

Name: MARK UYAK
Engineering services provided through a firm: ☒ Yes ☐ No
Firm name: DWG, INC CONSULTING ENGINEERS
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Revision No.: _____ Page 1 of 1 Signature: _____ Date: 06/28/16

GENERAL FIRE PROTECTION NOTES

1. DO NOT SCALE DRAWINGS. ROUGH FROM ARCHITECTURAL AND EQUIPMENT MANUFACTURER'S DRAWINGS. COORDINATE CEILING FINISHES AND HEIGHTS AS APPLICABLE.
2. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH NFPA 13, 2010 EDITION AND ALL APPLICABLE LOCAL CODES AND ORDINANCES.
3. COORDINATE SPRINKLER SYSTEMS WITH ALL TRADES TO AVOID INTERFERENCE AND CONFLICTS PRIOR TO INSTALLATION OF PIPING, VALVES, AND EQUIPMENT.
4. LOCATE VALVES TO PERMIT EASY ACCESSIBILITY AND IN ACCORDANCE WITH NFPA 13.
5. WHENEVER THE WORD "PROVIDE" IS USED, IT SHALL MEAN FURNISH AND INSTALL COMPLETE AND READY FOR USE.
6. UNLESS OTHERWISE SHOWN OR NOTED, ALL PIPING SHALL BE RUN CONCEALED IN WALLS, CHASES, AND/OR ABOVE CEILINGS.
7. PROVIDE SPRINKLER COVERAGE THROUGHOUT BUILDING IN ACCORDANCE WITH SPECIFICATIONS AND NFPA 13, 2010 EDITION.
8. SPRINKLER CONTRACTOR SHALL PROVIDE A WALL MOUNTED ELECTRIC ALARM BELL WITH BATTERY BACKUP TO SOUND ALARM CONDITIONS. THE BELL SHALL BE CONNECTED TO THE PRESSURE AND FLOW SWITCHES ON THE SPRINKLER SERVICE RISER. REFER TO THE ELECTRICAL DRAWINGS FOR ALL ASSOCIATED WIRING.
9. PROVIDE SEISMIC BRACING PER NFPA 13, 2010 EDITION.
10. ALL SPRINKLER HEADS SHALL BE CENTERED IN LAY-IN CEILING TILES OR CENTERED IN "HALF-TILE" LOCATIONS THROUGHOUT THE BUILDING.
11. SPRINKLER HEADS SHALL BE QUICK RESPONSE, STANDARD COVERAGE TYPE THROUGHOUT THE BUILDING.
12. THE BUILDING HAS STRUCTURAL COMPONENTS, PIPING, DUCTWORK, RACEWAYS, SUSPENDED LIGHT FIXTURES, ETC. THAT IMPOSE OBSTRUCTIONS TO SPRINKLERS. CONTRACTOR SHALL PROVIDE HEADS APPROPRIATELY BELOW AND ABOVE, OR ON EACH SIDE OF, OBSTRUCTIONS TO PROVIDE PROPER COVERAGE OF THE ENTIRE FACILITY IN ACCORDANCE WITH NFPA 13 AS IT RELATES TO OBSTRUCTIONS.
13. ALL SITE UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. VERIFY EXACT LOCATION AND INVERT ELEVATION IN FIELD BEFORE BEGINNING WORK.
14. ALL SUSPENDED PIPING SHALL BE SUPPORTED FROM FLOOR AND/OR ROOF STRUCTURAL MEMBERS. IN NO CASE SHALL PIPING BE SUSPENDED FROM FLOOR AND ROOF DECK.
15. ALL PIPING IN AREAS WITH EXPOSED STRUCTURE SHALL BE INSTALLED TIGHT TO EXPOSED BEAMS. EXACT LOCATIONS OF PIPING AND SPRINKLER HEADS IN PLAN AND ELEVATION SHALL BE COORDINATED WITH THE ARCHITECT DURING THE SHOP DRAWING REVIEW PHASE.
16. ALL WORK AND SYSTEM OUTAGES SHALL BE COMPLETED IN ACCORDANCE WITH NFPA 25 AND SHALL BE FULLY COORDINATED WITH THE OWNER.
17. CONTRACTOR SHALL PERFORM AND PROVIDE ALL REQUIRED HYDRAULIC CALCULATIONS FOR NEW SYSTEM USING THE FIRE FLOW TEST DATA. IF FIRE FLOW TEST DATA IS MORE THAN 12 MONTHS OLD, THE CONTRACTOR SHALL PROVIDE A NEW FIRE FLOW TEST.
18. COORDINATE SPRINKLER SYSTEMS WITH STRUCTURE AND ALL OTHER TRADES TO AVOID INTERFERENCE AND CONFLICTS PRIOR TO INSTALLATION OF PIPING, VALVES, AND EQUIPMENT.
19. FIRE SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED SUBMITTALS TO AUTHORITIES HAVING JURISDICTION FOR PERMITTING AND ANY OTHER REQUIRED SUBMITTALS OR APPROVALS. FIRE SPRINKLER SHOP DRAWINGS, PRODUCT DATA, HYDRAULIC CALCULATIONS, AND SEISMIC CALCULATIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW. CONTRACTOR SHALL ADDRESS ALL COMMENTS BY THE ENGINEER OF RECORD UNTIL PRELIMINARY REVIEW IS COMPLETE PRIOR TO SUBMITTING TO THE AUTHORITY HAVING JURISDICTION FOR PERMITTING.
20. INTERIOR WET-PIPE SPRINKLER SYSTEM PIPING SHALL BE SCHEDULE 10 OR SCHEDULE 40 BLACK STEEL. DRY-PIPE SPRINKLER SYSTEM PIPING AND EXTERIOR WET-PIPE SPRINKLER SYSTEM SHALL BE SCHEDULE 40 GALVANIZED STEEL. PIPING AND FITTINGS. SEE SPECIFICATIONS FOR ADDITIONAL PIPING REQUIREMENTS.
21. THE END SPRINKLER ON A LINE SHALL BE RESTRAINED PER NFPA 13, 2010. SHOW DETAIL FOR END OF LINE RESTRAINTS ON SHOP DRAWING.
22. COORDINATE WORK WITH AUTHORITY HAVING JURISDICTION. OBTAIN ALL PERMITS AND PASS ALL INSPECTIONS FROM AUTHORITY HAVING JURISDICTION.

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FIRE PROTECTION SYMBOL LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SPRINKLER PIPING		PRESSURE GAUGE
	GATE VALVE	PS	PRESSURE SWITCH
	SWING CHECK VALVE	TS	TAMPER SWITCH
	BUTTERFLY VALVE	FS	FLOW SWITCH

LIGHT HAZARD

LIGHT HAZARD, DRY PIPE SYSTEM

ORDINARY HAZARD, GROUP 1

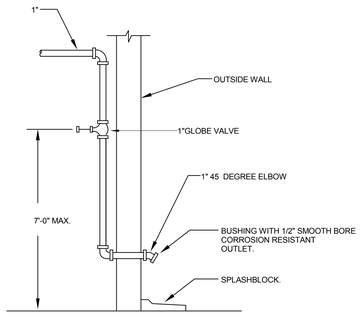
OUTSIDE OF SCOPE OF WORK

FIRE PROTECTION CODES & STANDARDS

CODE	DESCRIPTION
ASCE 7-10	MINIMUM DESIGN LOADS FOR BUILDINGS & OTHER STRUCTURES
I.B.C. (2012)	INTERNATIONAL BUILDING CODE
I.F.C. (2012)	INTERNATIONAL FIRE CODE
NFPA 13 (2010)	STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS
NFPA 25 (2011)	STANDARD FOR THE INSPECTION, TESTING, AND MAINTENANCE OF WATER-BASED FIRE PROTECTION SYSTEMS

ABBREVIATIONS

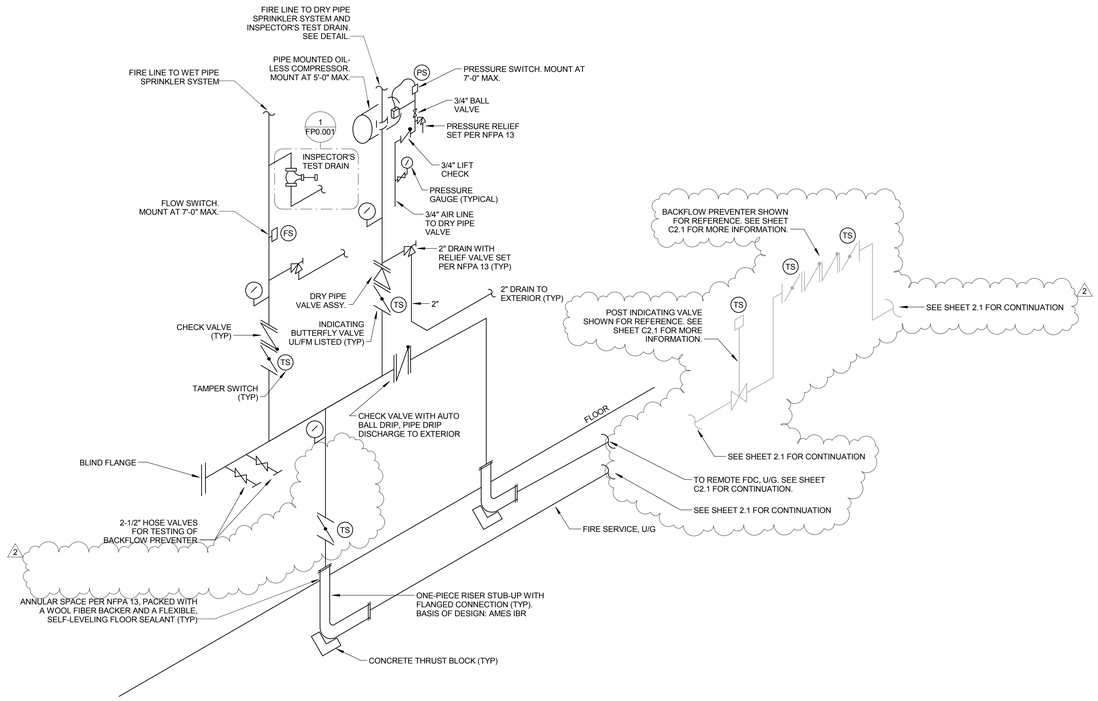
ABR	DESCRIPTION
(E)	EXISTING
AFC	ABOVE FINISHED CEILING
FDC	FIRE DEPARTMENT CONNECTION
FP	FIRE PROTECTION
FS	FIRE SPRINKLER
PSIG	POUNDS PER SQUARE INCH GAUGE
SF	SQUARE FOOT
TYP	TYPICAL
U/G	UNDERGROUND
UNO	UNLESS OTHERWISE NOTED



NOTES:

1. INSTALL INSPECTOR'S TEST CONNECTION FOR DRY PIPE SYSTEM AT THE HYDRAULICALLY MOST REMOTE POINT IN THE DRY PIPE SYSTEM.
2. INSTALL INSPECTOR'S TEST CONNECTION FOR WET PIPE SYSTEM AT THE EXTERIOR RISER ROOM WALL.
3. INSTALL VERTICAL PIPING IN AN ACCESSIBLE WORK AREA. COORDINATE LOCATION WITH ARCHITECT/OWNER.
4. PROVIDE CONCRETE SPLASHBLOCK AT EXTERIOR DISCHARGE LOCATIONS.

1 FP0.001 INSPECTORS DRAIN CONNECTION DETAIL
NOT TO SCALE



2 FP0.001 FIRE CONNECTION PIPING SCHEMATIC
NOT TO SCALE

Town of Hilton Head Island
One Town Center Court
Hilton Head Island, SC 29928

CONSTRUCTION DOCUMENTS FOR
COLIGNY PARK
Hilton Head Island, South Carolina

DRAWN BY: KMM
CHECKED BY: MAU

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PROFESSIONAL STAMPS:

#	REVISION	DATE	BY
2	ADDENDUM 2	07/29/16	

DATE 06/30/2016
PROJECT NUMBER 01-16002
SHEET TITLE FIRE PROTECTION NOTES & LEGENDS

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SHEET NUMBER
FP0.001

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GENERAL ELECTRICAL NOTES

1. BRANCH CIRCUIT WIRING SHALL BE NO. 12 AWG UNLESS NOTED OTHERWISE. WHERE CONDUCTOR AND RACEWAY SIZE ARE SHOWN AT HOMERUN, SUCH SIZE SHALL BE USED FOR THE ENTIRE CIRCUIT. EXCEPTION: FINAL CONNECTION TO DEVICES, IN OUTLET BOXES, IS NOT REQUIRED TO BE LARGER THAN NO. 12 AWG. BRANCH CIRCUITS OVER 100' SHALL BE NO. 10 AWG.
2. PRIOR TO ROUGH-IN, COORDINATE THE LOCATION AND MOUNTING HEIGHT OF ALL WALL MOUNTED DEVICES WITH THE ARCHITECTURAL INTERIOR ELEVATIONS, MILLWORK SHOP DRAWINGS, AND EXISTING CONDITIONS. IN THE EVENT OF A CONFLICT, NOTIFY THE ARCHITECT. MINOR ADJUSTMENTS IN DEVICE LOCATION, I.E. 5'-0" IN ANY DIRECTION SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER.
3. COORDINATE THE LOCATION OF ALL FLOOR-MOUNTED OUTLETS WITH THE ARCHITECT PRIOR TO ROUGH-IN.
4. WHERE DEVICES ARE REQUIRED TO BE IDENTIFIED, PROVIDE ENGRAVED PLATE USING 1/8" HIGH BLACK LETTERS.
5. OUTLET BOXES FOR SWITCHES, RECEPTACLES, ETC MOUNTED ON OPPOSITE SIDES OF FIRE RATED PARTITIONS SHALL NOT BE MOUNTED IN THE SAME WALL CAVITY. SEPARATE WALL PENETRATIONS BY MOUNTING ON OPPOSITE SIDES OF WALL STUDS OR OTHER VERTICAL STRUCTURAL MEMBER IN THE WALL.
6. INSTALL SURFACE METAL RACEWAY SO AS TO MINIMIZE THE NUMBER OF VERTICAL RUNS. CONCEAL RACEWAY ABOVE LAY-IN CEILING, IN NEW WALLS, AND ABOVE CANOPY STRUCTURE TO THE GREATEST EXTENT POSSIBLE.
7. RACEWAYS SHALL BE INSTALLED CONCEALED IN NEW WALL CONSTRUCTION ABOVE CEILINGS, BELOW FLOOR, AND IN OTHER CAVITIES TO THE GREATEST EXTENT POSSIBLE. WHERE EXPOSED RACEWAYS MUST BE USED, LAYOUT RACEWAYS TO MINIMIZE THE NUMBER OF VERTICAL RUNS.
8. FEEDER CONDUITS AND BRANCH CIRCUITS SHALL COMPLY WITH DETAILS ON DRAWINGS AND SHALL BE COORDINATED WITH THE WORK OF OTHER TRADES BEFORE AND DURING CONSTRUCTION.
9. WHERE LIGHT SWITCH AND ABOVE COUNTER RECEPTACLES ARE INDICATED TO BE MOUNTED ADJACENT TO EACH OTHER, THE DEVICES SHALL BE MOUNTED AT THE SAME HEIGHT UNDER A COMMON DEVICE PLATE. IN THE CASE WHERE THE VOLTAGES ARE DIFFERENT, THEY SHALL BE MOUNTED IN DIFFERENT OUTLET BOXES.
10. THE ARRANGEMENT, GROUPING, AND ROUTING OF BRANCH CIRCUITS SHALL BE PROVIDED AT THE CONTRACTOR'S DISCRETION IN ACCORDANCE WITH GENERALLY ACCEPTED PRACTICE FOR ELECTRICAL WORK, THE NATIONAL ELECTRICAL CODE REQUIREMENTS, AND LOCAL ORDINANCES.
11. A COMMON NEUTRAL MAY BE UTILIZED FOR SITE POWER/LIGHTING CIRCUITS ONLY. THE COMMON NEUTRAL SHALL BE INSTALLED IN A HOMERUN FOR 2 OR 3 BRANCH CIRCUITS ONLY IF A MEANS TO SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS AT THE POINT WHERE THE BRANCH CIRCUITS ORIGINATE IS PROVIDED PER ARTICLE 210.4(B) OF THE NATIONAL ELECTRICAL CODE.
12. MULTIPLE SINGLE-POLE BRANCH CIRCUITS (UP TO 3 HOTS, 3 NEUTRALS, 1 GROUND) RATED FOR 30-AMPS OR LESS MAY BE PULLED INTO A SINGLE RACEWAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SIZING THE RACEWAYS AND DERATING CONDUCTORS PER NEC ARTICLE 310.15.
13. A GROUND CONDUCTOR SHALL BE PROVIDED IN ALL RACEWAYS UNLESS NOTED OTHERWISE.
14. SEE THE ARCHITECTURAL DRAWINGS FOR ALL LOCATIONS OF FIRE RATED WALLS.
15. THE USE OF MC CABLE IS ALLOWED ONLY WHERE SPECIFICALLY NOTED ON DRAWINGS. MC CABLE IN EXTERIOR APPLICATIONS SHALL HAVE CORROSION RESISTANT JACKET.
16. COORDINATE THE ROUTING OF UNDERGROUND CONDUCTORS/CONDUIT WITH STRUCTURAL FOOTINGS OF BUILDING.
17. WHERE FLOOR MOUNTED RECEPTACLES/DEVICES ARE GROUPED, PROVIDE DEVICES GROUPED IN ONE FLOOR BOX.
18. PROVIDE EXPANSION JOINT COUPLINGS ANYWHERE A CONDUIT PASSES THROUGH A BUILDING EXPANSION JOINT.
19. OUTLET BOXES SHALL BE EXTRA DEEP. BOX DEPTH SHALL BE WALL THICKNESS IF POSSIBLE. INDUSTRY STANDARDS SHALL BE USED IF WALL THICKNESS DEPTH IS NOT POSSIBLE
20. ALL FLOOR BOXES SHALL BE INSTALLED TO MAINTAIN THE FIRE RATING OF THE FLOOR. COORDINATE CORE DRILLING HOLES IN FLOOR WITH STRUCTURAL ENGINEER.
21. PROVIDE FLEXIBLE CONDUIT FOR ALL CONDUITS CROSSING EXPANSION JOINTS. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION OF EXPANSION JOINTS.
22. AREAS OF WORK EXIST FOR THIS PROJECT WHICH WERE NOT ACCESSIBLE OR LIMITED ACCESS DURING DESIGN. AS SUCH, CONTRACTOR SHALL VERIFY ALL UTILITIES IN AREA OF WORK BEFORE DEMOLITION OF ANY SERVICE. ANY ELECTRICAL COMPONENTS NOT SHOWN SHALL BE IDENTIFIED AND THE ARCHITECT AND ENGINEER SHALL BE NOTIFIED AS SOON AS POSSIBLE. NO ELECTRICAL REWORK SHALL BE COMMENCED WITHOUT COORDINATION OF BOTH ARCHITECT AND ENGINEER.
23. WHERE INFORMATION SHOWN ON THESE DRAWINGS CONFLICTS WITH VERIFIED FIELD CONDITIONS, IT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER
24. WHEREVER ON THE ELECTRICAL DRAWINGS THE WORD "PROVIDE" IS USED, IT SHALL BE INFERRED TO MEAN "FURNISH AND INSTALL."

GENERAL POWER NOTES

1. PROVIDE UTILITY TRANSFORMER PAD IN ACCORDANCE WITH UTILITY REQUIREMENTS. COORDINATE THE EXACT LOCATION OF THE PAD-MOUNTED TRANSFORMER AND UTILITY SERVICE POINT IN THE FIELD WITH THE UTILITY COMPANY. COORDINATE WITH UTILITY COMPANY TO PROVIDE METER ON SERVICE. METER SHALL BE LOCATED AS PER UTILITY COMPANY REQUIREMENTS. ALL COSTS ASSOCIATED WITH THE PAD, PRIMARY CONDUIT, METER AND PERMITTING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. THE GROUND ROD CLUSTER FOR THE SERVICE GROUND SHALL CONSIST OF THREE 3/4" X 10'-0" COPPER CLAD STEEL GROUND RODS. THEY SHALL BE DRIVEN IN A TRIANGULAR CONFIGURATION APPROXIMATELY 10' APART AND INTER-CONNECTED IN DELTA WITH A NO.4/0 BARE COPPER CONDUCTOR. TOPS OF THE RODS SHALL BE 12" BFG. CONNECTION TO THE RODS SHALL BE WITH EXOTHERMIC WELDS.
3. ALL BRANCH CIRCUITS INDICATED ON THESE PLANS TO BE LARGER THAN NO. 12 AWG SHALL BE SIZED AS INDICATED FOR THE ENTIRE
4. WHEN A RECEPTACLE IS INDICATED TO BE MOUNTED ADJACENT TO A COMPUTER/TELEPHONE/ TELEVISION OUTLET, THE DEVICE(S) SHALL BE MOUNTED WITHIN 6" CENTER-TO-CENTER.
5. STUB OUT AND CAP (2) 4-INCH SPARE CONDUITS FROM THE MAIN SERVICE PANEL TO 5'-0" BEYOND BUILDING SLAB.
6. STUB-UP (6) 3/4-INCH SPARE CONDUITS FROM EACH FLUSH MOUNTED PANELBOARD TO ABOVE FINISHED CEILING.
7. PROVIDE & INSTALL AN ENGRAVED LAMINATED PLASTIC NAMEPLATE ON EACH ITEM OF MECHANICAL AND ELECTRICAL EQUIPMENT, TO INDICATE THE DESIGNATION OF THE UNIT ON THE PLANS & THE BRANCH CIRCUIT SERVING THE EQUIPMENT.

GENERAL LIGHTING NOTES

1. SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR THE EXACT LOCATION OF ALL CEILING MOUNTED LIGHTING FIXTURES.
2. EXACT LOCATIONS OF LIGHTING FIXTURES IN MECHANICAL SPACES SHALL BE DETERMINED IN THE FIELD. DO NOT SUPPORT FIXTURES FROM DUCT OR PIPING. PROVIDE CHAIN OR TRAPEZE-TYPE HANGERS WHERE FIXTURES CAN NOT BE MOUNTED DIRECTLY TO CEILING.
3. LIGHTING FIXTURE CATALOG NUMBERS ARE INDICATIVE OF THE STYLE OF FIXTURE REQUIRED. CONTRACTOR SHALL PROVIDE FIXTURES WITH THE PROPER TRIM, VOLTAGE AND OPTIONS NECESSARY FOR INSTALLATION.
4. DOUBLE-FACED EXIT FIXTURES SHALL BE OF THE SAME MANUFACTURER & SERIES AS THE SINGLE TYPE SPECIFIED.
5. REGARDLESS OF CATALOG NUMBER INDICATED IN SCHEDULE, PROVIDE BATTERY PACKS FOR ALL FIXTURES INDICATED ON THE DRAWINGS TO BE EMERGENCY TYPE.
6. REGARDLESS OF HOW NOTED ON PLANS, ALL EMERGENCY LIGHTING FIXTURES INDICATED IN PRIVATE SPACES SHALL BE WIRED SO AS TO BE SWITCHED "ON/OFF" WITHOUT OPERATING THE EMERGENCY BALLAST. ALL EMERGENCY LIGHTING FIXTURES INDICATED IN PUBLIC SPACES OR MEANS OF EGRESS (CORRIDORS, LOBBIES, BATHROOMS, AUDITORIUMS, STAIRWELLS, ETC.) SHALL BE WIRED AHEAD OF LOCAL SWITCH AS A NIGHT LIGHT AND SHALL NOT BE SWITCHED. EMERGENCY BALLAST SHALL NOT BE ACTIVATED UNLESS A LOSS OF NORMAL BUILDING POWER OCCURS.
7. REGARDLESS OF CATALOG NUMBER INDICATED IN SCHEDULE, ALL EXIT SIGNS SHALL BE PROVIDED WITH A BATTERY PACK, SHALL BE WIRED AHEAD OF LOCAL SWITCH AND SHALL NOT BE SWITCHED.
8. REGARDLESS OF CATEGORY NUMBER, ALL EM FIXTURES SHALL BE PROVIDED MEANS OF BACKUP POWER
9. WHERE LIGHT SWITCH AND ABOVE COUNTER RECEPTACLES ARE INDICATED TO BE MOUNTED ADJACENT TO EACH OTHER, THE DEVICES SHALL BE MOUNTED AT THE SAME HEIGHT UNDER A COMMON DEVICE PLATE. EXCEPT IN THE CASE WHERE THE VOLTAGES ARE DIFFERENT, THEY SHALL BE MOUNTED IN DIFFERENT OUTLET BOXES.
10. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING DETAILS OF LIGHT FIXTURE TO ACOUSTICAL CEILING SYSTEM AND STRUCTURE.
11. ALL EXIT SIGNS SHALL BE CONNECTED TO LOCAL LIGHTING CIRCUIT AHEAD OF ALL SWITCHING.

GENERAL SIGNAL NOTES

1. PROVIDE CONDUIT FOR HVAC CONTROL CIRCUITS AS REQUIRED TO INTER-CONNECT HVAC UNIT TO CONTROL CIRCUITS. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH MECHANICAL CONTRACTOR AND CONTROLS PROVIDER TO DETERMINE SCOPE OF CONDUITS REQUIRED FOR HVAC CONTROLS. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL REQUIRED CONDUIT. COORDINATE POINTS OF CONNECTION WITH DIVISION 23. PROVIDE PULL CORD IN ALL EMPTY CONDUITS. SEE MECHANICAL PLANS FOR EXACT LOCATIONS OF ALL HVAC EQUIPMENT (AHU, HP, CU, RTU, DUCT SMOKE DETECTORS, VAV, FCU, THERMOSTATS, ETC).
3. COMMUNICATION BACKBOARD (CBB) SHALL BE 8'H X 4'L X 3/4"D PLYWOOD WITH THE BOTTOM AT 6" AFF. EXTEND A NO. 6 BARE COPPER GROUNDING CONDUCTOR FROM THE ELECTRICAL SERVICE GROUND TO THE BACKBOARD AND LEAVE WITH SUFFICIENT SLACK TO REACH ANY PLACE THEREON. COAT BACKBOARD WITH A MINIMUM OF TWO COATS FIRE RETARDANT PAINT.
4. EXTEND A 1" CONDUIT WITH PULL WIRE FROM EACH COMMUNICATION DEVICE TO THE COMMUNICATION BACKBOARD OR MEDIA CONVERTER BOX.
5. THESE DOCUMENTS MAY NOT INCLUDE ENTIRE ELECTRICAL INFRASTRUCTURE REQUIRED TO SUPPORT THE BUILDING AUTOMATION SYSTEM. COORDINATE WITH BAS PROVIDER ON ALL NECESSARY INFRASTRUCTURE FOR A COMPLETE AND WORKING SYSTEM.
6. THE MAIN TELECOMMUNICATIONS GROUNDING BUSBAR SHALL BE A PRE-DRILLED COPPER BUSBAR WITH STANDARD NEMA BOLT HOLE SIZING THAT IS NO SMALLER THAN 6MM THICK BY 100MM WIDE BY 1 FOOT LONG. THE MTGB SHALL BE BONDED TO THE BUILDING SERVICE GROUND AND ALL TELECOMMUNICATIONS METALLIC RACEWAYS LOCATED IN THE SAME ROOM. MTGB CONNECTIONS SHALL BE LISTED TWO HOLE COMPRESSION TYPE. GROUNDING BUSBAR SHALL BE PROVIDED IN EACH IT ROOM.
7. A 4AWG INSULATED COPPER CONDUCTOR RUNNING FROM THE TMGB TO ALL OTHER TBGS SHALL CONSTITUTE THE TELECOMMUNICATIONS BONDING BACKBONE (TBB).
8. ALL VOICE AND DATA COMMUNICATION CABLES SHALL BE LESS THAN 295 FEET LONG.
9. PROVIDE ELECTRONIC FORMAT CABLE ADMINISTRATIONS SHOP DRAWINGS AND RECORD DRAWINGS.
10. TEST ALL COMMUNICATION DROPS AND FIBER OPTIC CABLES. SUBMIT TEST REPORTS.
11. ALL DEVICE COVER PLATES SHALL BE QUAD PLATES BY PANDUIT. LABEL ALL CABLES AT THE DEVICE COVER PLATE AND AT THE TERMINATION IN THE COMMUNICATION ROOM.
12. ALL COMMUNICATION CABLING SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE AND EIA/TIA STANDARDS.
13. CABLE SHALL BE CONCEDED IN ALL FINISHED AREAS AND ROUTED PARALLEL OR PERPENDICULAR TO THE BUILDING STRUCTURE.
14. REMOVE ALL EXPOSED ABANDONED COMMUNICATION CABLE FOUND DURING THE CONSTRUCTION PROCESS.
15. ALL SITE CONDUITS SHALL BE 36" BELOW GRADE MINIMUM. ALL GROUND RODS AND ASSOCIATED GROUND WIRES SHALL BE 24" BELOW GRADE.

3

ABBREVIATIONS

ABR	DESCRIPTION
(E)	EXISTING
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
BAS	BUILDING AUTOMATION SYSTEM
BFC	BELOW FINISHED CEILING
BFG	BELOW FINISHED GRADE
BOD	BOTTOM OF DEVICE
CBB	COPPER BUSS BAR
cd	CANDELA
CLG	CEILING
DB	DRY BULB
ECB	ENCLOSED CIRCUIT BREAKER
EF	EXHAUST FAN
FACP	FIRE ALARM CONTROL PANEL
FCU	FAN COIL UNIT
FDS	FUSED DISCONNECT SWITCH
FSD	FIRE/SMOKER DAMPER
GBB	GROUND BUSS BAR
GFCI	GROUND-FAULT CIRCUIT-INTERRUPTING
GFI	GROUND-FAULT INTERRUPTING
GP	GENERAL PURPOSE
HP	HEAT PUMP
ICP	IRRIGATION CONTROL PANEL
IG	ISOLATED GROUND
J-BOX	JUNCTION BOX
KW	KILOWATTS
LCS	LIGHTING CONTROL SYSTEM
NEC	NATIONAL ELECTRIC CODE
NFDS	NON-FUSED DISCONNECT SWITCH
OC	ON CENTER
RFAP	REMOTE FIRE ALARM ANNUNCIATOR PANEL
RTU	ROOF TOP UNIT
SD	SMOKE DETECTOR
SPD	SURGE PROTECTION DEVICE
TBB	TELEPHONE BACKBOARD
TGB	TELEPHONE GROUNDING BUS BAR
UNO	UNLESS OTHERWISE NOTED
UTP	UNSHIELDED TWISTED PAIR
VFD	VARIABLE FREQUENCY DRIVE
W/	WITH
WB	WET BULB
WH	WATER HEATER
WP	WEATHERPROOF
XFMR	TRANSFORMER

ELECTRICAL CODES & STANDARDS

CODE	DESCRIPTION
IBC (2012)	INTERNATIONAL BUILDING CODE
IECC (2009)	INTERNATIONAL ENERGY CONSERVATION CODE
IFC (2012)	INTERNATIONAL FIRE CODE
NFPA 70 (2011)	NATIONAL ELECTRIC CODE
NFPA 72 (2010)	NATIONAL FIRE ALARM CODE

ELECTRICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	LIGHT FIXTURE		SINGLE RECEPTACLE (G.F.C.I.)
	LIGHT FIXTURE (EMERGENCY)		DUPLEX RECEPTACLE (GENERAL PURPOSE)
	LIGHT FIXTURE		DUPLEX RECEPTACLE (G.F.C.I.)
	LIGHT FIXTURE (EMERGENCY)		DUPLEX RECEPTACLE (FLOOR MOUNTED)
	LIGHT FIXTURE		QUADPLEX RECEPTACLE (GENERAL PURPOSE)
	LIGHT FIXTURE (EMERGENCY)		QUADPLEX RECEPTACLE (G.F.C.I.)
	LIGHT FIXTURE		QUADPLEX RECEPTACLE (FLOOR MOUNTED)
	LIGHT FIXTURE (EMERGENCY)	J	JUNCTION BOX (AS NOTED)
	LIGHT FIXTURE	J	JUNCTION BOX, (FLOOR MOUNTED)
	LIGHT FIXTURE (EMERGENCY)	J	JUNCTION BOX, (CEILING MOUNTED)
	LIGHT FIXTURE		SPECIAL PURPOSE RECEPTACLE
	LIGHT FIXTURE (EMERGENCY)	TV	TELEVISION CONNECTION LOCATION
	LIGHT FIXTURE	M	MOTOR CONNECTION (AS NOTED)
	LIGHT FIXTURE (EMERGENCY)	WF	Wi-Fi ACCESS POINT ROUGH-IN ONLY
	LIGHT FIXTURE		DISCONNECT SWITCH, (NON-FUSED)
	LIGHT FIXTURE (POLE MOUNTED)	DS	DISCONNECT SWITCH, (ENCL. CIRCUIT BREAKER)
	LIGHT FIXTURE (EMERGENCY)		EMERGENCY PHONE (EXTERIOR WALL MOUNTED; ROUGH IN ONLY)
	EXIT SIGN WITH (2) EMERGENCY HEADS		DATA OUTLET (WALL MOUNTED; ROUGH IN ONLY)
	EXIT SIGN, SINGLE SIDED		PHONE/DATA OUTLET (WALL MOUNTED; ROUGH IN ONLY)
	EXIT SIGN, DOUBLE SIDED		PHONE OUTLET (FLOOR MOUNTED; ROUGH IN ONLY)
$	LIGHT SWITCH, SINGLE POLE		PHONE/DATA OUTLET (FLOOR MOUNTED; ROUGH IN ONLY)
$3	LIGHT SWITCH, 3 WAY TYPE		CCTV CAMERA (WALL MOUNTED 10'-6"; ROUGH IN ONLY)
$4	LIGHT SWITCH, 4 WAY TYPE		CCTV CAMERA (POLE MOUNTED AT 10'-6" AFG; ROUGH IN ONLY)
$D	LIGHT SWITCH, DIMMER TYPE		CCTV CAMERA (CEILING MOUNTED; ROUGH IN ONLY)
$T	LIGHT SWITCH, DIGITALLY TIMED (0-30 MINUTES)	FACP	FIRE ALARM CONTROL PANEL
$a	LOWER CASE SUBSCRIPT INDICATES SWITCH-LEG	RFAP	REMOTE FIRE ALARM ANNUNCIATOR
OS	OCCUPANCY SENSOR (CEILING MOUNTED)	FSD	FIRE / SMOKE DAMPER
OS	OCCUPANCY SENSOR (WALL MOUNTED)	TS	FIRE ALARM TAMPER SWITCH
PC	PHOTOCELL LIGHTING CONTROL	FS	FIRE ALARM FLOW SWITCH
0	LIGHTING CONTROL SCHEME CALLOUT	PS	FIRE ALARM PRESSURE SWITCH
T	THERMOSTAT (WALL MOUNTED)	SPD	SURGE PROTECTION DEVICE
H	HUMIDISTAT (WALL MOUNTED)	SD	SMOKE DETECTOR (DUCT MOUNTED)
H	HUMIDISTAT (DUCT MOUNTED)	HD	HEAT DETECTOR (CEILING MOUNTED)
SD	SMOKE DETECTOR (CEILING MOUNTED)	HD	HEAT DETECTOR (DUCT MOUNTED)
PP X	POWER PEDESTAL: (SINGLE/DOUBLE HEAD); SEE SCHEDULE IN DETAIL A - FOUR DEDICATED DUPLEX RECEPTACLES B - ONE DUPLEX RECEPTACLE: ONE NEMA L14-50R C - TWO DUPLEX RECEPTACLES; TWO NEMA L5-30R D - SIX DEDICATED DUPLEX RECEPTACLES	HH X	HAND HOLE: SEE SCHEDULE IN DETAIL A - TWO DEDICATED QUADRUPLEX RECEPTACLES B - NO POWER; PULL BOX ONLY

SEISMIC REQUIREMENTS FOR ELECTRICAL SYSTEMS

PER IBC-2012/ASCE 7-10

A. EQUIPMENT, APPLIANCES AND SUPPORTS (INCLUDING ROOF CURBS & ROOF RAILS) EXPOSED TO WIND SHALL BE DESIGNED AND INSTALLED TO RESIST THE WIND PRESSURES DETERMINED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE. WHERE SEISMIC RESTRAINT IS REQUIRED, THE MORE DEMANDING FORCE OF WIND AND SEISMIC MUST BE USED. SEE SEISMIC INFORMATION CONTAINED IN THE STRUCTURAL DRAWINGS FOR SITE SPECIFIC INFORMATION ON SEISMIC DESIGN CATEGORY.SEE EQUIPMENT SCHEDULES AND DETAILS FOR SPECIFIC COMPONENT IMPORTANCE FACTOR DESIGNATIONS.
B. USE APPLICABLE TABLE BELOW TO DETERMINE SEISMIC RESTRAINT REQUIREMENTS FOR EACH MECHANICAL COMPONENT.
C. FOR ALL COMPONENTS REQUIRING SEISMIC RESTRAINT, THE COMPONENT SUPPORTS AND ATTACHMENTS SHALL BE DESIGNED BY A REGISTERED DESIGN PROFESSIONAL. SUBMITTALS MUST INCLUDE STAMPED AND SIGNED DRAWINGS AND CALCULATIONS.
D. WHERE SEISMIC RESTRAINT IS REQUIRED, HOUSEKEEPING PADS NEEDED FOR THE INSTALLATION OF EQUIPMENT UNDER THIS CONTRACT MUST BE DESIGNED BY THE SEISMIC ENGINEER. DO NOT POUR ANY HOUSEKEEPING PADS PRIOR TO THE RECEIPT OF THE SEISMIC SUBMITTAL.
E. SEISMIC RESTRAINTS FOR CONDUIT, CABLE TRAY, AND BUS DUCT MUST BE SHOWN ON LAYOUT DRAWINGS SHOWING SPECIFIC RESTRAINT LOCATIONS ALONG WITH ACCOMPANYING DETAILS AND CALCULATIONS.
F. REFER TO ASCE 7-10 FOR SEISMIC INSTALLATION GUIDELINES.

ELECTRICAL COMPONENT IMPORTANCE FACTOR (Ip) DESIGNATION

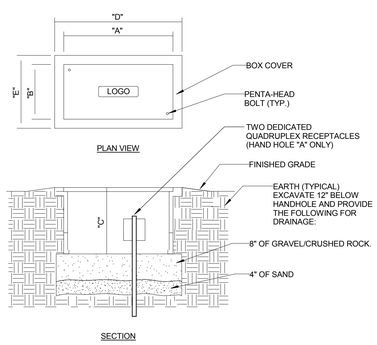
Ip = 1.0	Ip = 1.5
• ALL ASSOCIATED ELECTRICAL WORK UNLESS NOTED OTHERWISE.	• EMERGENCY LIGHTS • EXIT LIGHTS

SEISMIC DESIGN CATEGORIES D,E,F

	COMPONENT IMPORTANCE FACTOR (Ip)			
	1.0		1.5	
COMPONENT IDENTIFICATION	SEISMIC RESTRAINT REQUIREMENT	NOTES	SEISMIC RESTRAINT REQUIREMENT	NOTES
ROOF MOUNTED	RESTRAIN ALL	1	RESTRAIN ALL	-
FLOOR MOUNTED	RESTRAIN ALL	1,2	RESTRAIN ALL	-
WALL MOUNTED	RESTRAIN ALL	1,2	RESTRAIN ALL	-
COMPONENT SUPPORTS	RESTRAIN ALL	1,2	RESTRAIN ALL	-
SUSPENDED EQUIPMENT	RESTRAIN ALL	1	RESTRAIN ALL	-
SINGLE CONDUIT	>3"	3,4	>1"	3,4
CABLE TRAY/BUS DUCT TRAPEZED CONDUIT	RESTRAIN IF ANY CONDUIT ON TRAPEZE > 3" RESTRAIN IF TOTAL WEIGHT OF SUSPENDED COMPONENT > 10 LBS/FT	4	RESTRAIN IF ANY CONDUIT ON TRAPEZE > 1" RESTRAIN IF TOTAL WEIGHT OF SUPPORTED COMPONENT > 10 LBS/FT	4
COMPONENT CERTIFICATION (SEE NOTE 5)	NOT REQUIRED	-	REQUIRED	-
PENDANT, LAY-IN, & CAN LIGHTS	REQUIRED	-	REQUIRED	6

NOTES:
1. EQUIPMENT 20 LBS. OR LESS IS EXEMPT IF FLEXIBLE CONNECTIONS ARE PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.
2. RESTRAINTS ARE NOT REQUIRED IF THE COMPONENT WEIGHS 400 LBS. OR LESS, IS MOUNTED AT 4 FT. OR LESS ABOVE A FLOOR, AND HAS FLEXIBLE CONNECTIONS BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.
3. ALL NON-DUCTILE PIPING (IE - PLASTIC) MUST BE RESTRAINED.
4. RESTRAINT IS NOT REQUIRED IF SUSPENDED 12" OR LESS FROM THE STRUCTURE AND THE HANGERS ARE DETAILED TO AVOID SIGNIFICANT BENDING OF THE HANGERS AND THEIR ATTACHMENTS AND PROVISIONS ARE MADE FOR PIPING TO ACCOMMODATE EXPECTED DEFLECTIONS.
5. COMPONENT CERTIFICATION MUST BE SUPPLIED BY THE EQUIPMENT MANUFACTURER AT TIME OF SUBMITTAL FOR REVIEW BY ENGINEER OF RECORD.
6. THE RESTRAINT OF PENDANT, LAY-IN, & CAN LIGHTS IS GOVERNED BY "CISCA-04 FOR SEISMIC ZONES" (CEILINGS AND INTERIOR SYSTEMS CONSTRUCTION ASSOCIATION).

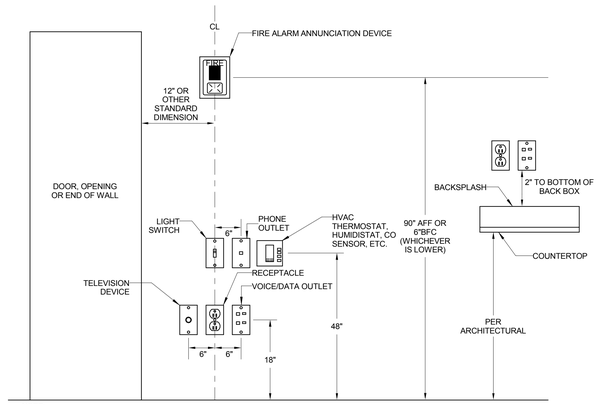
2



HANDHOLE SCHEDULE							
HANDHOLE NO.	LOAD CAPACITY	COVER LOGO	DIMENSIONS				
			"A"	"B"	"C"	"D"	"E"
A	TIER 8	ELECTRICAL	21.25"	11.75"	18"	25"	15.5"
B	TIER 8	ELECTRICAL	21.25"	11.75"	18"	25"	15.5"

* BASIS OF DESIGN IS QUAZITE PG STYLE HANDHOLES.
* ALL HANDHOLES SHALL BE UL LISTED TO MEET ANSI 77 REQUIREMENTS.
* BOXES AND COVERS SHALL BE GREEN IN COLOR.
* PROVIDE TWO (2) PENTA-SOCKET LUG WRENCHES TO OWNER.
* DIMENSIONS INDICATED IN SCHEDULES INDICATES THE MINIMUM.

4 E0.001 HANDHOLE DETAIL
NOT TO SCALE



NOTE:
DEVICES SHOWN WITHIN 48" OF EACH OTHER ON ALL ELECTRICAL PLANS SHALL BE ALIGNED PER THIS DETAIL.
IF DEVICES ARE SHOWN IN MIDDLE OF WALL, THEN CENTER DEVICES ON WALL.

Town of Hilton Head Island
One Town Center Court
Hilton Head Island, SC 29928

CONSTRUCTION DOCUMENTS FOR
COLIGNY PARK
Hilton Head Island, South Carolina

DRAWN BY: MRF
CHECKED BY: DAW

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PROFESSIONAL STAMPS:

#	REVISION	DATE	BY
2.	ADDENDUM 2	07/29/16	

DATE
06/30/2016
PROJECT NUMBER
01-16002
SHEET TITLE
ELECTRICAL NOTES & LEGENDS

SHEET NUMBER
E0.001

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DWG Project No. 15008-00

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SITE LIGHT FIXTURE SCHEDULE

FIXTURE SPECIFICATIONS				LAMPING	ELECTRICAL			
TYPE	FIXTURE DESCRIPTION	MANUFACTURER	CAT. #	NO.	LAMP TYPE	FIXT. LOAD	VOLTS	MOUNTING REMARKS	NOTES
B1	BOLLARD WITH RECEPTACLE	FAIRWEATHER	MODEL B-3-L, SCHEDULE 40 PIPE, 36" HEIGHT, WITH OUTLET BOX CAVITY AND RECEPTACLE	-	LED	180	120 V	DIRECT BURY	PROVIDE TWO CIRCUITS: ONE FOR RECEPTACLE AND ONE FOR LIGHT
B2	BOLLARD WITHOUT RECEPTACLE	FAIRWEATHER	MODEL B-3-L, SCHEDULE 40 PIPE, 36" HEIGHT	-	LED	20	120 V	DIRECT BURY	
B3	BICYCLE BOLLARD	STRUCTURA INC.	DBL-36-L30-SO-D8Z-P1/S4-220D-STD	-	LED	10	120 V	PROVIDE ANCHOR BOLTS, MOUNT IN CONCRETE	FIXTURE SERVES AS BICYCLE RACK
P	INTERNAL COLUMN LIGHT	HALO	SLD612-80-30-WH-UNV	-	LED	15	120 V	MOUNT TO TOP OF COLUMN	ROUTE POWER THROUGH COLUMN POSTS
S	STEP LIGHT FIXTURE	JUNO	IC115LEDHSG-838LED-13-3K-BZ	-	LED	13	120 V	SURFACE MOUNT TO CONCRETE	
T	HANDRAIL POST LIGHT	WAC LIGHTING	3011-30-BBR	-	LED	5	120 V	SEE LANDSCAPE DETAILS	
U1	LINEAR SIGN UPLIGHT FIXTURE	WINONA	BLS727W-LCB-16-MSL4-700ADJ1-50X20DEG-LLP10A-35 K-MVOLT-F-CLB10A-DBT	-	LED	57	120 V	PROVIDE ANCHOR BOLTS, MOUNT IN CONCRETE	
U2	UPLIGHT FIXTURE	LSI LIGHTING	XIG-B-LED-19-350-WW-UE-SP10-BRZ	-	LED	23	120 V	1'6"AFF, SEMI-RECESSED	
U3	SIGN UPLIGHT FIXTURE	WAC LIGHTING	5012-30-BBR-S	-	LED	15	120 V	SURFACE MOUNT TO CONCRETE	
2 Z	LARGE SHOEBOX FIXTURE	EATON	MP-TR-3F-150-120-BZ	1	METAL HALIDE	150	120 V	19' LWPS POLE DIRECT BURY 4' DEEP; LIGHT FIXTURE AT 19' AFG	POLE SHALL MATCH PALMETTO ELECTRIC COOP. POLE

LIGHT FIXTURE SCHEDULE

FIXTURE SPECIFICATIONS				LAMPING	ELECTRICAL			
TYPE	FIXTURE DESCRIPTION	MANUFACTURER	CAT. #	NO.	LAMP TYPE	FIXT. LOAD	VOLTS	MOUNTING REMARKS	NOTES
C1	LINEAR DIRECT	PINNACLE ARCHITECTURAL LIGHTING	EX3-WET-N-30HO-4-IND-S-120-1D-FIN-FINISH	-	LED	35	120 V	SURFACE MOUNT	
C1E	LINEAR DIRECT	PINNACLE ARCHITECTURAL LIGHTING	EX3-WET-N-30HO-4-IND-S-120-1D-EM-FINISH	-	LED	35	120 V	SURFACE MOUNT	
C2	LINEAR DIRECT/INDIRECT	PINNACLE ARCHITECTURAL LIGHTING	EX3B-WET-O-30HO-30HO-IND-WA-120-1D-FINISH	-	LED	70	120 V	WALL MOUNT (SIDE OF BEAM)	
D	DOWNLIGHT	CREE	KR4	-	LED	18	120 V	RECESSED	
DE	DONWLIGHT, EMERGENCY	CREE	KR4	-	LED	18	120 V	RECESSED	
L4	STRIP LIGHT	H.E. WILLIAMS	80-4-L63/850-DRV-UNV	-	LED	52	120 V	2' CHAIN HANGER	
V	EXTERIOR DOWNLIGHT	KENALL	HRDL6L-26L30K-DV-FW-CSS-8	-	LED	26	120 V	RECESSED	
W2	WALL PACK	LUMIERE	303-W1-LEDB2-3000-UNV-T4-BZ-LCF	-	LED	16	120 V	WALL MOUNT 8'6"AFF	
W2E	WALL PACK	LUMIERE	303-W1-LEDB2-3000-UNV-T4-BZ-LCF	-	LED	16	120 V	WALL MOUNT 8'6"AFF	

1 2 14 4 5 14 7 8 9 10 11 12 13 14 15 16 17

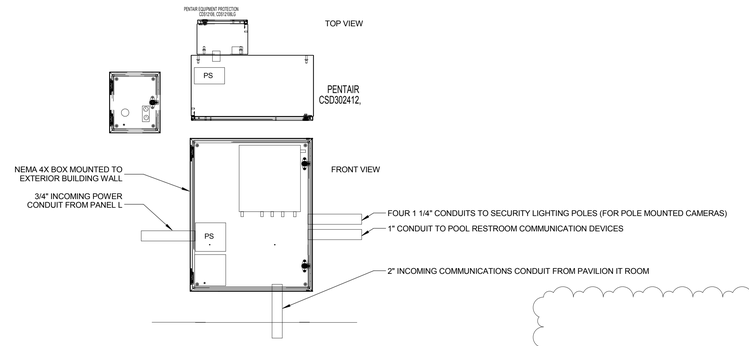
LIGHTING CONTROL SCHEME SCHEDULE

CONTROL SCHEME	CONTROL TYPE DESCRIPTION
1	MANUAL ON/OFF BY WALL MOUNTED SWITCH.
2	MANUAL DIMMING BY WALL MOUNTED DIMMER SWITCH.
4	MANUAL ON/OFF, SCENE SWITCHING WITH WALL MOUNTED SCENE SWITCH. CONTROL MAINTAINED BY ROOM CONTROLLER.
5	MANUAL ON WITH WALL MOUNTED SINGLE LEVEL VACANCY SENSOR. CONTROL MAINTAINED BY ROOM CONTROLLER.
7	MANUAL ON WITH CEILING MOUNTED VACANCY SENSOR(S) AND WALL MOUNTED DIMMER SWITCH(ES). CONTROL MAINTAINED BY ROOM CONTROLLER.
8	MANUAL ON, DUAL-LEVEL SWITCHING WITH WALL MOUNTED VACANCY SENSOR. CONTROL MAINTAINED BY ROOM CONTROLLER.
9	MANUAL ON SCENE SWITCHING WITH CEILING MOUNTED VACANCY SENSORS. CONTROL MAINTAINED BY ROOM CONTROLLER.
10	MANUAL ON, DUAL-LEVEL SWITCHING WITH WALL MOUNTED VACANCY SENSOR AND CEIILING MOUNTED PHOTOSENSOR WITH ON/OFF CONTROL. CONTROL MAINTAINED BY ROOM CONTROLLER.
11	MANUAL ON, DUAL-LEVEL SWITCHING WITH CEILING MOUNTED VACANCY SENSOR AND CEILING MOUNTED PHOTOSENSOR WITH ON/OFF CONTROL. CONTROL MAINTAINED BY ROOM CONTROLLER.
12	MANUAL ON, DIMMING WITH CEILING MOUNTED VACANCY SENSOR AND CEILING MOUNTED PHOTOSENSOR WITH DIMMING CONTROL. CONTROL MAINTAINED BY ROOM CONTROLLER.
13	SCHEDULE ON/OFF DURING BUSINESS HOURS WITH AFTER-HOURS CEILING MOUNTED OCCUPANCY SENSOR CONTROL. SCHEDULE CONTROL MAINTAINED BY LCP.
14	SCHEDULE ON/OFF DURING BUSINESS HOURS WITH AFTER-HOURS CEILING MOUNTED OCCUPANCY SENSOR CONTROL AND MANUAL SWITCH OVERRIDE.
15	SCHEDULE ON/OFF DURING BUSINESS HOURS WITH AFTER-HOURS WALL MOUNTED OCCUPANCY SENSOR CONTROL AND MANUAL SWITCH OVERRIDE. SCHEDULE CONTROL MAINTAINED BY LCP.
16	SCHEDULE ON/OFF VIA TIME CLOCK WITH PHOTOSENSOR AND MANUAL OVERRIDE. PHOTOSENSOR SHALL BE WALL MOUNTED ON EXTERIOR.
17	SCHEDULE ON/OFF VIA TIME CLOCK WITH PHOTOSENSOR AND MANUAL DIMMING OVERRIDE. PHOTOSENSOR SHALL BE WALL MOUNTED ON EXTERIOR.

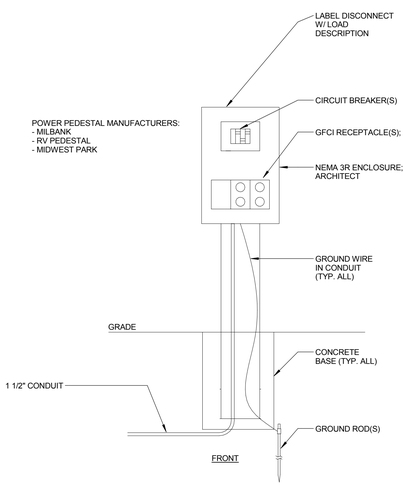
NOTES:
1. CONTROL SCHEME NUMBERS MAY NOT BE SEQUENTIAL; NOT ALL NUMBERS MAY BE PRESENT.
2. ROOM CONTROLLER BASIS OF DESIGN: WATT STOPPER LMRC-210 OR EQUAL
3. WALL MOUNTED SWITCH BASIS OF DESIGN: WATT STOPPER LMSW-101 OR EQUAL
4. WALL MOUNTED DIMMER SWITCH BASIS OF DESIGN: WATT STOPPER LMDM-100 OR EQUAL
5. WALL MOUNTED DUAL LEVEL SWITCH BASIS OF DESIGN: WATT STOPPER LMSW-102 OR EQUAL
6. WALL MOUNTED SCENE SWITCH BASIS OF DESIGN: WATT STOPPER LMSW OR EQUAL, WITH NECESSARY NUMBER OF SCENE BUTTONS, OR EQUAL
7. WALL MOUNTED, SINGLE LEVEL VACANCY SENSOR BASIS OF DESIGN: WATT STOPPER LMDW-101 OR EQUAL
8. WALL MOUNTED, DUAL LEVEL VACANCY SENSOR BASIS OF DESIGN: WATT STOPPER LMDW-102 OR EQUAL
9. CEILING MOUNTED OCCUPANCY/VACANCY SENSOR BASIS OF DESIGN: WATT STOPPER LMDC-100 OR EQUAL
10. WALL MOUNTED OCCUPANCY/VACANCY SENSOR (NO SWITCH) BASIS OF DESIGN: WATT STOPPER LMPX-100 OR EQUAL
11. PHOTOSENSOR BASIS OF DESIGN: WATT STOPPER LMLS-400 OR EQUAL

EQUIPMENT CONNECTION SCHEDULE

UNIT I.D.	ELECTRICAL VOLTS	PHASE	LOAD (VA)	BRANCH CIRCUIT WIRING	DISCONNECT / STARTER	NOTES
CU-1				NOT IN SCOPE	NOT IN SCOPE	
CU-2	208 V	2	6053	2#12, #12G, 3/4"C	NFDS 30/1/4X	
CU-3	208 V	2	6053	2#12, #12G, 3/4"C	NFDS 30/1/4X	
CU-4/5	208 V	2	6053	2#10, #10G, 3/4"C	NFDS 30/1/4X	
WH-1	208 V	1	2000	2#12, #12G, 3/4"C	NFDS 30/1/4X	
WH-2	208 V	1	2000	2#12, #12G, 3/4"C	NFDS 30/1/4X	
IWH-1	208 V	2	4100	2#10, #10G, 3/4"C	PROVIDE PERMANENT MEANS OF LOCKOUT IN PANEL	
IWH-2	208 V	2	4100	2#10, #10G, 3/4"C	PROVIDE PERMANENT MEANS OF LOCKOUT IN PANEL	
AIR HANDLING UNITS						
AH-1				NOT IN SCOPE	NOT IN SCOPE	
CEILING FANS						
BAF-1	120 V	1	52	2#12, #12G, 3/4"C	MOTOR RATED SWITCH	
BAF-1	120 V	1	52	2#12, #12G, 3/4"C	MOTOR RATED SWITCH	
BAF-1	120 V	1	52	2#12, #12G, 3/4"C	MOTOR RATED SWITCH	
BAF-1	120 V	1	52	2#12, #12G, 3/4"C	MOTOR RATED SWITCH	
BAF-1	120 V	1	52	2#12, #12G, 3/4"C	MOTOR RATED SWITCH	
BAF-1	120 V	1	52	2#12, #12G, 3/4"C	MOTOR RATED SWITCH	
BAF-1	120 V	1	52	2#12, #12G, 3/4"C	MOTOR RATED SWITCH	
BAF-1	120 V	1	52	2#12, #12G, 3/4"C	MOTOR RATED SWITCH	
BAF-1	120 V	1	52	2#12, #12G, 3/4"C	MOTOR RATED SWITCH	
BAF-1	120 V	1	52	2#12, #12G, 3/4"C	MOTOR RATED SWITCH	
BAF-1	120 V	1	52	2#12, #12G, 3/4"C	MOTOR RATED SWITCH	
BAF-1	120 V	1	52	2#12, #12G, 3/4"C	MOTOR RATED SWITCH	
BAF-1	120 V	1	52	2#12, #12G, 3/4"C	MOTOR RATED SWITCH	
BAF-1	120 V	1	52	2#12, #12G, 3/4"C	MOTOR RATED SWITCH	
BAF-1	120 V	1	52	2#12, #12G, 3/4"C	MOTOR RATED SWITCH	
BAF-2	120 V	1	1200	2#12, #12G, 3/4"C	MOTOR RATED SWITCH	
DUCTLESS MINI SPLIT						
AH-2				POWERED FROM OUTDOOR UNIT	MOTOR RATED SWITCH	
AH-3				POWERED FROM OUTDOOR UNIT	MOTOR RATED SWITCH	
AH-4				POWERED FROM OUTDOOR UNIT	MOTOR RATED SWITCH	
AH-5				POWERED FROM OUTDOOR UNIT	MOTOR RATED SWITCH	
ELECTRIC HEATER						
EH-4	208 V	3	5000	3#10, #10G, 3/4"C	NFDS 30/1/4X	
IRH-1	120 V	1	450	2#12, #12G, 3/4"C	PROVIDE PERMANENT MEANS OF LOCKOUT IN PANEL	
IRH-2	120 V	1	450	2#12, #12G, 3/4"C	PROVIDE PERMANENT MEANS OF LOCKOUT IN PANEL	
IRH-3	120 V	1	450	2#12, #12G, 3/4"C	PROVIDE PERMANENT MEANS OF LOCKOUT IN PANEL	
IRH-4	120 V	1	450	2#12, #12G, 3/4"C	PROVIDE PERMANENT MEANS OF LOCKOUT IN PANEL	
IRH-5	120 V	1	450	2#12, #12G, 3/4"C	PROVIDE PERMANENT MEANS OF LOCKOUT IN PANEL	
IRH-6	120 V	1	450	2#12, #12G, 3/4"C	PROVIDE PERMANENT MEANS OF LOCKOUT IN PANEL	
IRH-7	120 V	1	450	2#12, #12G, 3/4"C	PROVIDE PERMANENT MEANS OF LOCKOUT IN PANEL	
IRH-8	120 V	1	450	2#12, #12G, 3/4"C	PROVIDE PERMANENT MEANS OF LOCKOUT IN PANEL	
UH-1	208 V	2	3000	2#12, #12G, 3/4"C	NFDS 30/1/4X	
UH-2	208 V	2	3000	2#12, #12G, 3/4"C	NFDS 30/1/4X	
UH-3	208 V	2	3000	2#12, #12G, 3/4"C	NFDS 30/1/4X	
UH-4	208 V	2	3000	2#12, #12G, 3/4"C	NFDS 30/1/4X	
EXHAUST FANS						
EF-1	120 V	1	312	2#12, #12G, 3/4"C	MOTOR RATED SWITCH	
EF-2	120 V	1	312	2#12, #12G, 3/4"C	MOTOR RATED SWITCH	
EF-3	120 V	1	312	2#12, #12G, 3/4"C	MOTOR RATED SWITCH	
EF-4	120 V	1	312	2#12, #12G, 3/4"C	MOTOR RATED SWITCH	
EF-5	120 V	1	312	2#12, #12G, 3/4"C	MOTOR RATED SWITCH	
EF-6	120 V	1	312	2#12, #12G, 3/4"C	MOTOR RATED SWITCH	
EF-7	120 V	1	312	2#12, #12G, 3/4"C	MOTOR RATED SWITCH	
EF-8	120 V	1	312	2#12, #12G, 3/4"C	MOTOR RATED SWITCH	
EF-9	120 V	1	312	2#12, #12G, 3/4"C	MOTOR RATED SWITCH	



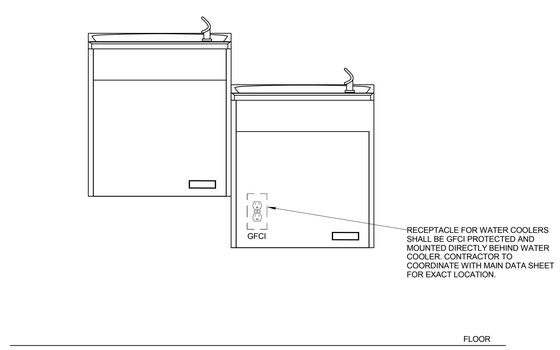
4 E0.002 EXTERIOR NEMA BOX DETAIL
NOT TO SCALE



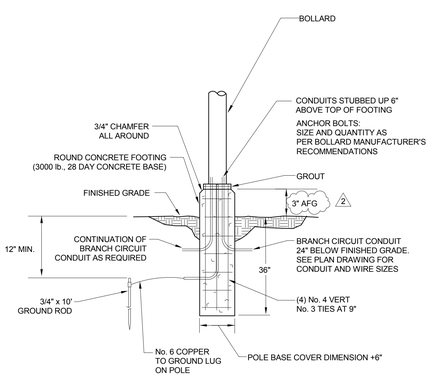
POWER PEDESTAL CONDUIT/CONDUCTOR SCHEDULE

TYPE	CONDUIT/CONDUCTOR SIZE
A	50A MOCP - 3#8, #10G, 1 1/2"C
B	70A MOCP - 3#4, #8G, 1 1/2"C
C	60A MOCP - 3#6, #10G, 1 1/2"C
D	70A MOCP - 3#4, #8G, 1 1/2"C

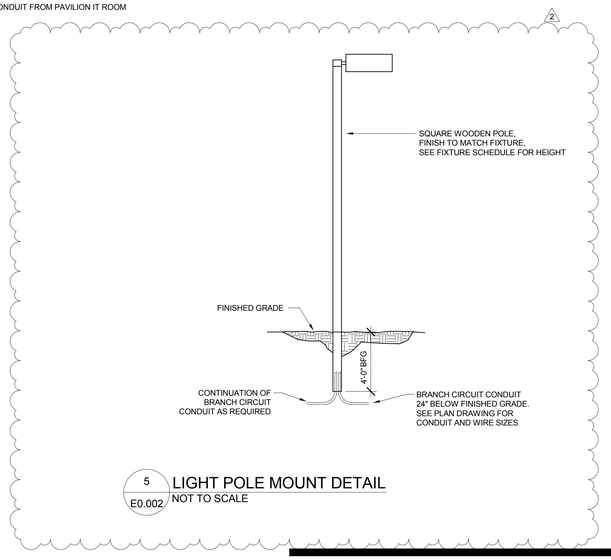
1 E0.002 ELECTRICAL POWER PEDESTAL DETAIL
NOT TO SCALE



2 E0.002 WATER COOLER ELEVATION
SCALE: NOT TO SCALE



3 E0.002 BOLLARD MOUNT DETAIL
NOT TO SCALE



5 E0.002 LIGHT POLE MOUNT DETAIL
NOT TO SCALE

Town of Hilton Head Island
One Town Center Court
Hilton Head Island, SC 29928

CONSTRUCTION DOCUMENTS FOR
COLIGNY PARK
Hilton Head Island, South Carolina

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PROFESSIONAL STAMPS:

#	REVISION	DATE	BY
2	ADDENDUM 2	07/29/16	

DATE 06/30/2016
PROJECT NUMBER 01-16002
SHEET TITLE ELECTRICAL SCHEDULES & DETAILS

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SHEET NUMBER
E0.002

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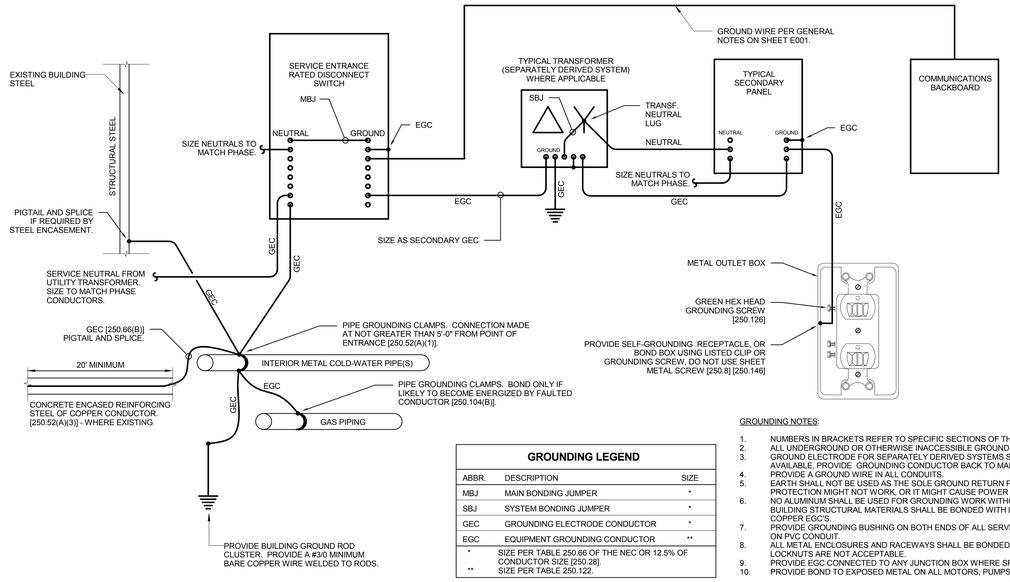


GROUNDING LEGEND		
ABBR.	DESCRIPTION	SIZE
MBJ	MAIN BONDING JUMPER	*
SBJ	SYSTEM BONDING JUMPER	*
GEC	GROUNDING ELECTRODE CONDUCTOR	*
EGC	EQUIPMENT GROUNDING CONDUCTOR	**
*	SIZE PER TABLE 250.66 OF THE NEC OR 12.5% OF CONDUCTOR SIZE [250.28].	
**	SIZE PER TABLE 250.122.	

1 / E0.010 GROUNDING DETAIL
NOT TO SCALE

GROUNDING NOTES:

1. NUMBERS IN BRACKETS REFER TO SPECIFIC SECTIONS OF THE NATIONAL ELECTRICAL CODE.
2. ALL UNDERGROUND OR OTHERWISE INACCESSIBLE GROUND CONNECTIONS AND SPLICES SHALL BE EXOTHERMICALLY WELDED [250.68].
3. GROUND ELECTRODE FOR SEPARATELY DERIVED SYSTEMS SHALL BE THE NEAREST METAL WATER PIPE OR STRUCTURAL METAL. IF EITHER IS NOT AVAILABLE, PROVIDE GROUNDING CONDUCTOR BACK TO MAIN GROUND BUS AT SERVICE ENTRANCE.
4. PROVIDE A GROUND WIRE IN ALL CONDUITS.
5. EARTH SHALL NOT BE USED AS THE SOLE GROUND RETURN PATH FOR ANY EQUIPMENT POWERED UNDER THIS PROJECT. OTHERWISE OVERCURRENT PROTECTION MIGHT NOT WORK, OR IT MIGHT CAUSE POWER QUALITY PROBLEMS.
6. NO ALUMINUM SHALL BE USED FOR GROUNDING WORK WITHOUT THE SPECIFIC WRITTEN PERMISSION OF THE ENGINEER. EXCEPTION: ALUMINUM BUILDING STRUCTURAL MATERIALS SHALL BE BONDED WITH LISTED ALUMINUM EQUIPMENT WITH ALUMINUM TO COPPER CONNECTORS FOR ROUTING COPPER EGC'S.
7. PROVIDE GROUNDING BUSHING ON BOTH ENDS OF ALL SERVICE ENTRANCE RACEWAYS, SIZE AS A GEC [250.80]. THIS INCLUDES RIGID STEEL ELBOWS ON PVC CONDUIT.
8. ALL METAL ENCLOSURES AND RACEWAYS SHALL BE BONDED TO GROUND [250.86]. FOR CIRCUITS OVER 250V PROVIDE BOND PER [250.97], STANDARD LOCKNUTS ARE NOT ACCEPTABLE.
9. PROVIDE EGC CONNECTED TO ANY JUNCTION BOX WHERE SPLICE IS MADE [250.148].
10. PROVIDE BOND TO EXPOSED METAL ON ALL MOTORS, PUMPS, AND LIGHTING FIXTURES PER [250.112].

ELECTRICAL SERVICE GENERAL NOTES:

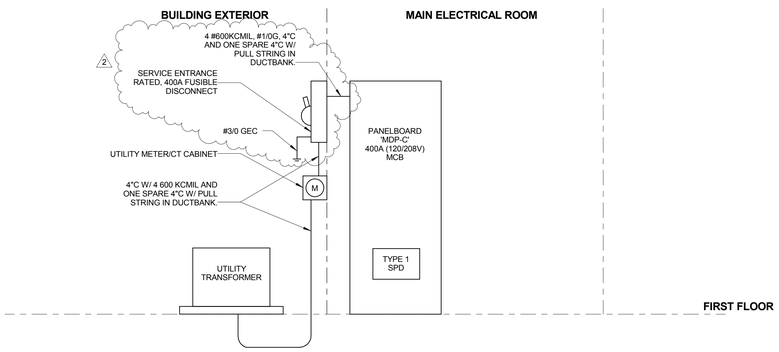
1. CONTRACTOR SHALL COORDINATE INSTALLATION OF METER ON BUILDING WITH UTILITY COMPANY. CONTRACTOR SHALL INSTALL PER REQUIREMENTS OF UTILITY COMPANY.
2. CONTRACTOR SHALL PROVIDE AND INSTALL ALL REQUIRED ELECTRICAL COMPONENTS TO MAKE UTILITY CONNECTION IN ACCORDANCE WITH UTILITY COMPANY'S REQUIREMENTS. UTILITY COMPANY SHALL INSPECT WORK PRIOR TO PROVIDING CONNECTION TO UTILITY SERVICE TRANSFORMER.
3. SERVICE DISCONNECTS SHALL BE PROPERLY LABELED IN ACCORDANCE WITH UTILITY REQUIREMENTS. UTILITY COMPANY SHALL NOT PROVIDE CONNECTION TO SERVICES WITHOUT PROPER IDENTIFICATION.

AVAILABLE FAULT CURRENT
BASED ON A **300** KVA, **2** %Z UTILITY TRANSFORMER THE MAXIMUM FAULT CURRENT AVAILABLE AT THE SERVICE ENTRANCE DISCONNECT IS CALCULATED TO BE **22,553** AMPS. LABEL THE SERVICE ENTRANCE DISCONNECT WITH THIS MAXIMUM FAULT CURRENT AND THE DATE OF INSTALLATION. CONTACT ENGINEER 2 WEEKS PRIOR TO SUBSTANTIAL COMPLETION TO CONFIRM THE AVALABLE FAULT CURRENT PRIOR TO LABELING EQUIPMENT.

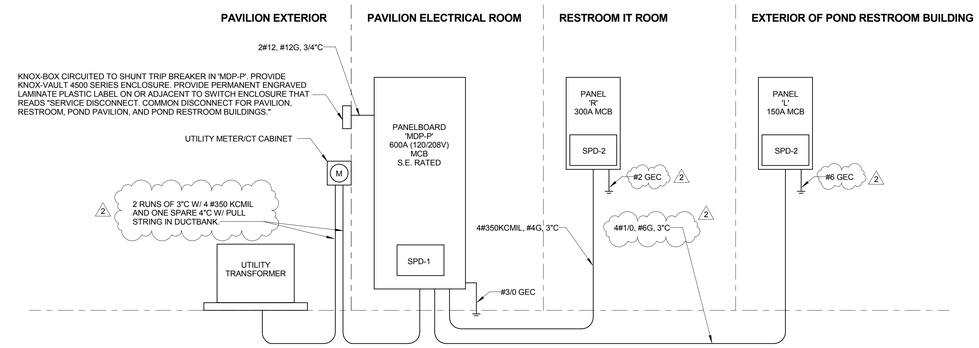
SURGE PROTECTION DEVICE (SPD) SCHEDULE

SPD ID	LOCATION TYPE	SURGE CURRENT RATING	SURGE COUNTER	VISUAL & AUDIBLE ALARM	NETWORK MONITORING	ENCLOSURE
SPD-1	TYPE 1	200kA / mode	YES	YES	NO	NEMA 1
SPD-2	TYPE 2	120kA / mode	YES	YES	NO	NEMA 1

2



2 / E0.010 CHILDREN'S MUSEUM ONE-LINE DIAGRAM
NOT TO SCALE



3 / E0.010 PAVILLION/RESTROOM ONE-LINE DIAGRAM
NOT TO SCALE

Town of Hilton Head Island
One Town Center Court
Hilton Head Island, SC 29928

CONSTRUCTION DOCUMENTS FOR
COLIGNY PARK
Hilton Head Island, South Carolina

DRAWN BY: MWC
CHECKED BY: DAW

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PROFESSIONAL STAMPS:

#	REVISION	DATE	BY
2	ADDENDUM 2	07/29/16	

DATE 06/30/2016
PROJECT NUMBER 01-16002
SHEET TITLE ELECTRICAL ONE-LINE DIAGRAM

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DWG Project No. 15008-00

SHEET NUMBER
E0.010

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LOAD CENTER SCHEDULE

Panel Name: L
Location:
Source: MDP-P
Mounting: Surface
Volts: 120/208 Wye
Phases: 3
Wires: 4
Enclosure: Type 4X
A.I.C. Rating: 10000
Mains Rating: 150 A
Mains Type: MAIN CIRCUIT BREAKER
Notes: * - INDICATES GFCI BREAKER

CKT NO.	CIRCUIT DESIGNATION	TRIP	POLES	A	B	C	POLES	TRIP	CIRCUIT DESIGNATION	CKT NO.
1	SPARE	20 A	1	0 VA / 7210 VA			3	60 A	FOUNTAIN CONTROL PANEL	2
3	LTG-POND RESTROOM	20 A	1		0 VA / 7210 VA					4
5	REC-DOCK	20 A	1			360 VA / 7210 VA				6
7	REC-PARK USB	20 A	1	900 VA / 450 VA			1	20 A	+ IRH-6	8
9	BAF-2-DOCK	20 A	1		1200 VA / 450 VA		1	20 A	+ IRH-7	10
11	EWC	20 A	1			1440 VA / 2050 VA	2	30 A	+ IWH-1	12
13	AUTOMATIC FLUSH VALVES	20 A	1	360 VA / 2050 VA						14
15	HAND DRYER	20 A	1		1440 VA / 2050 VA		2	30 A	+ IWH-2	16
17	HAND DRYER	20 A	1			1440 VA / 2050 VA				18
19	BATHROOM REC/EXHAUST FANS	20 A	1	530 VA / 1200 VA			1	20 A	MEDIA CONVERTER	20
21	LTG-EXTERIOR POLES	20 A	1		750 VA / 0 VA		1	20 A	SPARE	22
23	SPARE	20 A	1			0 VA / 0 VA	1	20 A	SPARE	24
25	SPARE	20 A	1	0 VA / 0 VA			--	--	SPD BREAKER	26
27	PREPARED SPACE	--	--		0 VA / 0 VA		--	--	SPD BREAKER	28
29	PREPARED SPACE	--	--			0 VA / 0 VA	--	--	SPD BREAKER	30
	TOTAL PHASE LOAD:			12700 VA	13095	14545			* - PROVIDE PERMANENT MEANS OF LOCKOUT	
	TOTAL PHASE CURRENT:			106 A	110 A	122 A				
	PANEL TOTALS									
	TOTAL CONNECTED LOAD:			40356						
	TOTAL CONNECTED CURRENT:			112 A						

PANELBOARD SCHEDULE

Panel Name: R
Location: IT 204
Source: MDP-P
Mounting: Surface
Volts: 120/208 Wye
Phases: 3
Wires: 4
Enclosure: Type 1
A.I.C. Rating: 10000
Mains Rating: 300 A
Mains Type: MAIN CIRCUIT BREAKER

CKT NO.	CIRCUIT DESIGNATION	TRIP	POLES	A	B	C	POLES	TRIP	CIRCUIT DESIGNATION	CKT NO.
1	LTG-SITE	20 A	1	740 VA / 600 VA			1	20 A	LTG-SITE	2
3	REC-BOLLARD	20 A	1		1260 VA / 900 VA		1	20 A	REC-BOLLARD	4
5	REC-BOLLARD	20 A	1			900 VA / 1440 VA	1	20 A	REC-SCULPTURE	6
7	REC-BOLLARD	20 A	1	900 VA / 4320 VA			2	70 A	POWER PEDESTAL	8
9	REC-BOLLARD	20 A	1		720 VA / 4320 VA					10
11	REC-BOLLARD	20 A	1			900 VA / 3600 VA	2	60 A	POWER PEDESTAL	12
13	BAF	20 A	1	100 VA / 3600 VA						14
15	BAF	20 A	1		160 VA / 4320 VA		2	70 A	POWER PEDESTAL	16
17	IRH-1, 2	20 A	1			1350 VA / 4320 VA				18
19	REC-RESTROOM BLDG	20 A	1	1480 VA / 3600 VA			2	60 A	POWER PEDESTAL	20
21	HAND DRYER	20 A	1		1440 VA / 3600 VA					22
23	EWC	20 A	1			1440 VA / 2880 VA	2	50 A	POWER PEDESTAL	24
25	AUTOMATIC FLUSH VALVE	20 A	1	540 VA / 2880 VA						26
27	WH-1	20 A	2		1000 VA / 960 VA		1	20 A	LTG-INTERIOR	28
29						1000 VA / 1440 VA	1	20 A	HAND DRYER	30
31	IRH-3, 4, 5	20 A	1	1350 VA / 1440 VA			1	20 A	HAND DRYER	32
33	HAND DRYER	20 A	1		1440 VA / 1440 VA		1	20 A	HAND DRYER	34
35	EF-1-6	20 A	1			530 VA / 1480 VA	1	20 A	REC-RESTROOM BLDG	36
37	WH-2	20 A	2	1000 VA / 1500 VA			2	20 A	UH-1	38
39					1000 VA / 1500 VA					40
41	CU-3	20 A	2			3030 VA / 1500 VA	2	20 A	UH-2	42
43				3030 VA / 1500 VA						44
45	REC-POE	20 A	1		180 VA / 1500 VA		2	20 A	UH-3	46
47	LTG-PARK	20 A	1			180 VA / 1500 VA				48
49	SPARE	20 A	1	0 VA / 1500 VA			2	20 A	UH-4	50
51	SPARE	20 A	1		0 VA / 1500 VA					52
53	SPARE	20 A	1			0 VA / 0 VA	1	20 A	SPARE	54
55	PREPARED SPACE	--	--	0 VA / 0 VA			--	--	SPD BREAKER	56
57	PREPARED SPACE	--	--		0 VA / 0 VA		--	--	SPD BREAKER	58
59	PREPARED SPACE	--	--			0 VA / 0 VA	--	--	SPD BREAKER	60
	TOTAL PHASE LOAD:			30080 VA	27236	27480				
	TOTAL PHASE CURRENT:			251 A	227 A	229 A				
	PANEL TOTALS									
	TOTAL CONNECTED LOAD:			85042						
	TOTAL CONNECTED CURRENT:			236 A						

PANELBOARD SCHEDULE

Panel Name: MDP-C
Location:
Source:
Mounting: Surface
Volts: 120/208 Wye
Phases: 3
Wires: 4
Enclosure: Type 1
A.I.C. Rating: 42000
Mains Rating: 400 A
Mains Type: MAIN CIRCUIT BREAKER

CKT NO.	CIRCUIT DESIGNATION	TRIP	POLES	A	B	C	POLES	TRIP	CIRCUIT DESIGNATION	CKT NO.
1	BAF	20 A	1	360 VA / 510 VA			1	20 A	LIGHTING	2
3	AIR COMPRESSOR	20 A	1		860 VA / 100 VA		1	20 A	FIRE ALARM PANEL *	4
5	RECP - EXTERIOR	20 A	1			720 VA / 180 VA	1	20 A	RECP - EXTERIOR FLOOR BOX	6
7	RECP - EXTERIOR FLOOR BOX	20 A	1	180 VA / 360 VA			1	20 A	RECP - FLOOR BOX	8
9	SPARE	20 A	1		0 VA / 0 VA		1	20 A	SPARE	10
11	SPARE	20 A	1			0 VA / 0 VA	1	20 A	SPARE	12
13	SPARE	20 A	1	0 VA / 0 VA			1	20 A	SPARE	14
15	SPARE	20 A	1		0 VA / 0 VA		1	20 A	SPARE	16
17	SPARE	20 A	1			0 VA / 0 VA	1	20 A	SPARE	18
19	SPARE	20 A	1	0 VA / 0 VA			1	20 A	SPARE	20
21	SPARE	20 A	1		0 VA / 0 VA		1	20 A	SPARE	22
23	SPARE	20 A	1			0 VA / 0 VA	1	20 A	SPARE	24
25	SPARE	20 A	1	0 VA / 0 VA			1	20 A	SPARE	26
27	SPARE	20 A	1		0 VA / 0 VA		1	20 A	SPARE	28
29	SPARE	20 A	1			0 VA / 0 VA	1	20 A	SPARE	30
31	PREPARED SPACE	--	--	0 VA / 0 VA			--	--	PREPARED SPACE	32
33	PREPARED SPACE	--	--		0 VA / 0 VA		--	--	PREPARED SPACE	34
35	PREPARED SPACE	--	--			0 VA / 0 VA	--	--	PREPARED SPACE	36
37	PREPARED SPACE	--	--	0 VA / 0 VA			--	--	SPD BREAKER	38
39	PREPARED SPACE	--	--		0 VA / 0 VA		--	--	SPD BREAKER	40
41	PREPARED SPACE	--	--			0 VA / 0 VA	--	--	SPD BREAKER	42
	TOTAL PHASE LOAD:			1410 VA	964	900				
	TOTAL PHASE CURRENT:			12 A	8 A	8 A				
	PANEL TOTALS									
	TOTAL CONNECTED LOAD:			3332						
	TOTAL CONNECTED CURRENT:			9 A						

* PAINT BREAKER HANDLE RED

PANELBOARD SCHEDULE

Panel Name: MDP-P
Location: IT/ELEC 303
Source:
Mounting: Surface
Volts: 120/208 Wye
Phases: 3
Wires: 4
Enclosure: Type 1
A.I.C. Rating: 42000
Mains Rating: 600 A
Mains Type: MAIN CIRCUIT BREAKER
Notes: * - INDICATES GFCI BREAKER

CKT NO.	CIRCUIT DESIGNATION	TRIP	POLES	A	B	C	POLES	TRIP	CIRCUIT DESIGNATION	CKT NO.
1	LTG-PAVILLION	20 A	1	840 VA / 3840 VA			2	70 A	POWER PEDESTAL	2
3	LTG-PAVILLION	20 A	1		750 VA / 3840 VA					4
5	REC-BOLLARDS	20 A	1			180 VA / 2880 VA	2	50 A	POWER PEDESTAL	6
7	REC-HAND HOLE	20 A	1	360 VA / 2880 VA						8
9	REC-HAND HOLE	20 A	1		360 VA / 2700 VA		2	30 A	ICE MAKER	10
11	SPARE	0 A	1			0 VA / 2700 VA				12
13	SPARE	0 A	1	0 VA / 360 VA			1	20 A	* REC-HAND HOLE	14
15	BAF-PAVILLION	20 A	1		200 VA / 360 VA		1	20 A	* REC-HAND HOLE	16
17	REC-PAVILLION IT/ELEC 303	20 A	1			180 VA / 360 VA	1	20 A	* REC-HAND HOLE	18
19	REC-PAVILLION IT/ELEC 303	20 A	1	180 VA / 360 VA			1	20 A	* REC-HAND HOLE	20
21	REC-PAVILLION IT/ELEC 303	20 A	1		180 VA / 360 VA		1	20 A	* REC-HAND HOLE	22
23	REC-PAVILLION BAND RECEPTACLE	20 A	1			180 VA / 360 VA	1	20 A	* REC-HAND HOLE	24
25	REC-PAVILLION	20 A	1	1150 VA / 3030 VA			2	30 A	CU-4/5	26
27	REC-PAVILLION	20 A	1		360 VA / 3030 VA					28
29	REC-PAVILLION	20 A	1			360 VA / 0 VA	1	20 A	SPARE	30
31	REC-PAVILLION	20 A	1	1080 VA / 0 VA			1	20 A	SPARE	32
33	REC-PAVILLION BAND RECEPTACLE	50 A	3		3600 VA / 0 VA		1	20 A	SPARE	34
35						3600 VA / 0 VA	1	20 A	SPARE	36
37				3600 VA / 0 VA			1	20 A	SPARE	38
39	EH-4	20 A	3		1670 VA / 0 VA		1	20 A	SPARE	40
41						1670 VA / 0 VA	1	20 A	SPARE	42
43				1670 VA / 0 VA			--	--	PREPARED SPACE	44
45	VEHICLE CHARGING STATION	40 A	2		2500 VA / 0 VA		--	--	PREPARED SPACE	46
47						2500 VA / 0 VA	--	--	PREPARED SPACE	48
49	SPARE	20 A	1	0 VA / 28230 VA			3	300 A	PANEL R	50
51	SPARE	20 A	1		0 VA / 27110 VA					52
53	SPARE	20 A	1			0 VA / 25630 VA				54
55	SPD BREAKER	--	--	0 VA / 12250 VA			3	150 A	PANEL L	56
57	SPD BREAKER	--	--		0 VA / 12650 VA					58
59	SPD BREAKER	--	--			0 VA / 14550 VA				60
	TOTAL PHASE LOAD:			59830 VA	59670	55142				
	TOTAL PHASE CURRENT:			504 A	503 A	460 A				
	PANEL TOTALS									
	TOTAL CONNECTED LOAD:			179637						
	TOTAL CONNECTED CURRENT:			499 A						

L	MDP-C
R	MDP-P

Town of Hilton Head Island
One Town Center Court
Hilton Head Island, SC 29928

CONSTRUCTION DOCUMENTS
FOR
COLIGNY PARK
Hilton Head Island, South Carolina

DRAWN BY: MWC
CHECKED BY: DAW

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PROFESSIONAL STAMPS:

#	REVISION	DATE	BY
2	ADDENDUM 2	07/29/16	

DATE
06/30/2016
PROJECT NUMBER
01-16002
SHEET TITLE
ELECTRICAL PANEL SCHEDULES

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DWG Project No. 15008-00

SHEET NUMBER
E0.050

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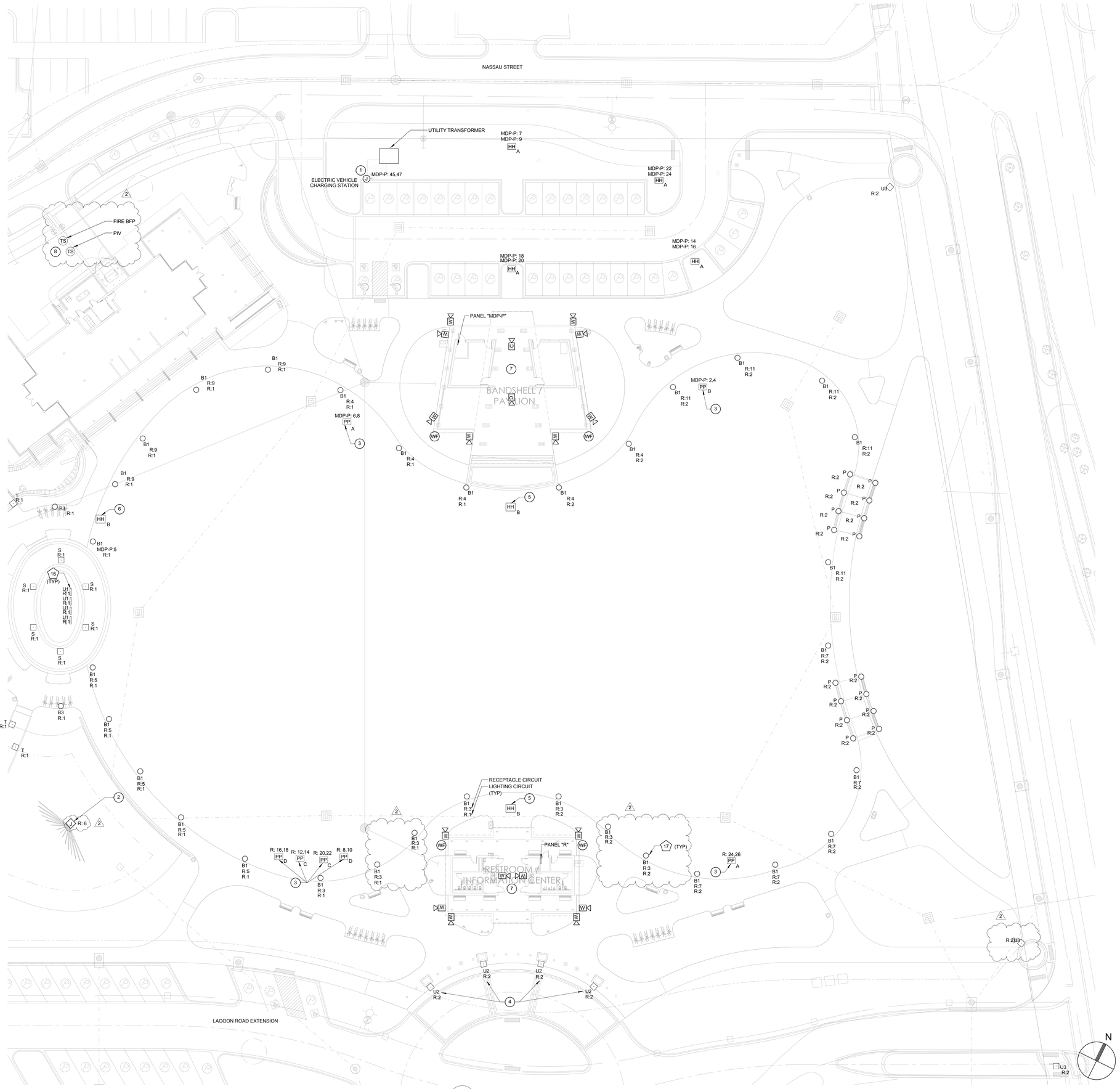

1 E0.060 ELECTRICAL SITE PLAN - PAVILLION
SCALE: 1" = 20'-0"

KEY NOTES

1. PROVIDE PEDESTAL MOUNT EXTERIOR CAR CHARGING STATION. BASIS OF DESIGN IS SCHNEIDER ELECTRIC EV230PDR DUAL CHARGING UNIT OR PRIOR APPROVED EQUAL. COORDINATE FINAL LOCATION WITH OWNER PRIOR TO INSTALLATION.
2. PROVIDE 120V DEDICATED CIRCUIT FOR SCULPTURE POWER. COORDINATE FINAL LOCATION WITH PLINTH CONSTRUCTION PRIOR TO INSTALLATION.
3. POWER PEDESTAL. COORDINATE QUANTITIES AND LOCATION WITH OWNER PRIOR TO INSTALLATION.
4. COORDINATE EXACT LOCATION AND MOUNTING WITH ARCHITECT PRIOR TO INSTALLATION.
5. HAND HOLE FOR CONDUIT/CONDUCTOR CONNECTION BETWEEN PAVILION BUILDING AND RESTROOM BUILDING. COORDINATE EXACT LOCATION WITH CIVIL SITE PLAN.
6. HAND HOLE FOR CONDUIT/CONDUCTOR CONNECTION BETWEEN PAVILION BUILDING AND POOL RESTROOM BUILDING. COORDINATE EXACT LOCATION WITH CIVIL SITE PLAN.
7. PROVIDE CONDUIT FROM COMMUNICATION DEVICES MOUNTED TO BUILDING BACK TO TELEPHONE BACKBOARD IN IT ROOM.
8. COORDINATE QUANTITY OF TAMPER SWITCHES WITH FIRE PROTECTION DRAWINGS.

GENERAL NOTES

1. COORDINATE WITH PALMETTO ELECTRIC COOPERATIVE FOR LIGHTING LAGOON ROAD EXTENSION. ROUTE 2 INCH CONDUIT WITH PULL STRING 36 INCHES BELOW FINISHED GRADE BETWEEN PALMETTO ELECTRIC PROVIDED FIXTURES AND TO UTILITY POWER SOURCE. STUB UP CONDUIT AT EACH FIXTURE LOCATION. PLACE LIGHTS IN ACCORDANCE WITH THE HILTON HEAD STREET LIGHTING GUIDELINES. FINAL PLACEMENT SHALL BE AT THE DISCRETION OF PALMETTO ELECTRIC FOR FIELD ADJUSTMENT. LIGHT POLES TO BE PROVIDED AND INSTALLED BY PALMETTO ELECTRIC.
2. COORDINATE CONDUIT ROUTING TO MINIMIZE ROUTING NEAR TREES/ROOTS.
3. SITE BOLLARD DIMMING SWITCH LOCATED IN RESTROOM IT ROOM. SEE SHEET E3.102 FOR LOCATION.
4. PROVIDE #10, #10G SIZE WIRE FOR SITE ELECTRICAL CIRCUITS. PROVIDE SHARED NEUTRAL FOR CIRCUITS IN SHARED CONDUIT.
5. SEE CIVIL SHEETS FOR SITE CONDUIT SIZES AND ROUTING.
6. POWER PEDESTALS SHALL BE LOCATED IN LANDSCAPE BED. COORDINATE LOCATION WITH ARCHITECT PRIOR TO INSTALLATION.

Town of Hilton Head Island
One Town Center Court
Hilton Head Island, SC 29928

CONSTRUCTION DOCUMENTS FOR
COLIGNY PARK
Hilton Head Island, South Carolina

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01-16002
SHEET TITLE
ELECTRICAL SITE PLAN PAVILLION

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DWG Project No. 15008-00

SHEET NUMBER
E0.060

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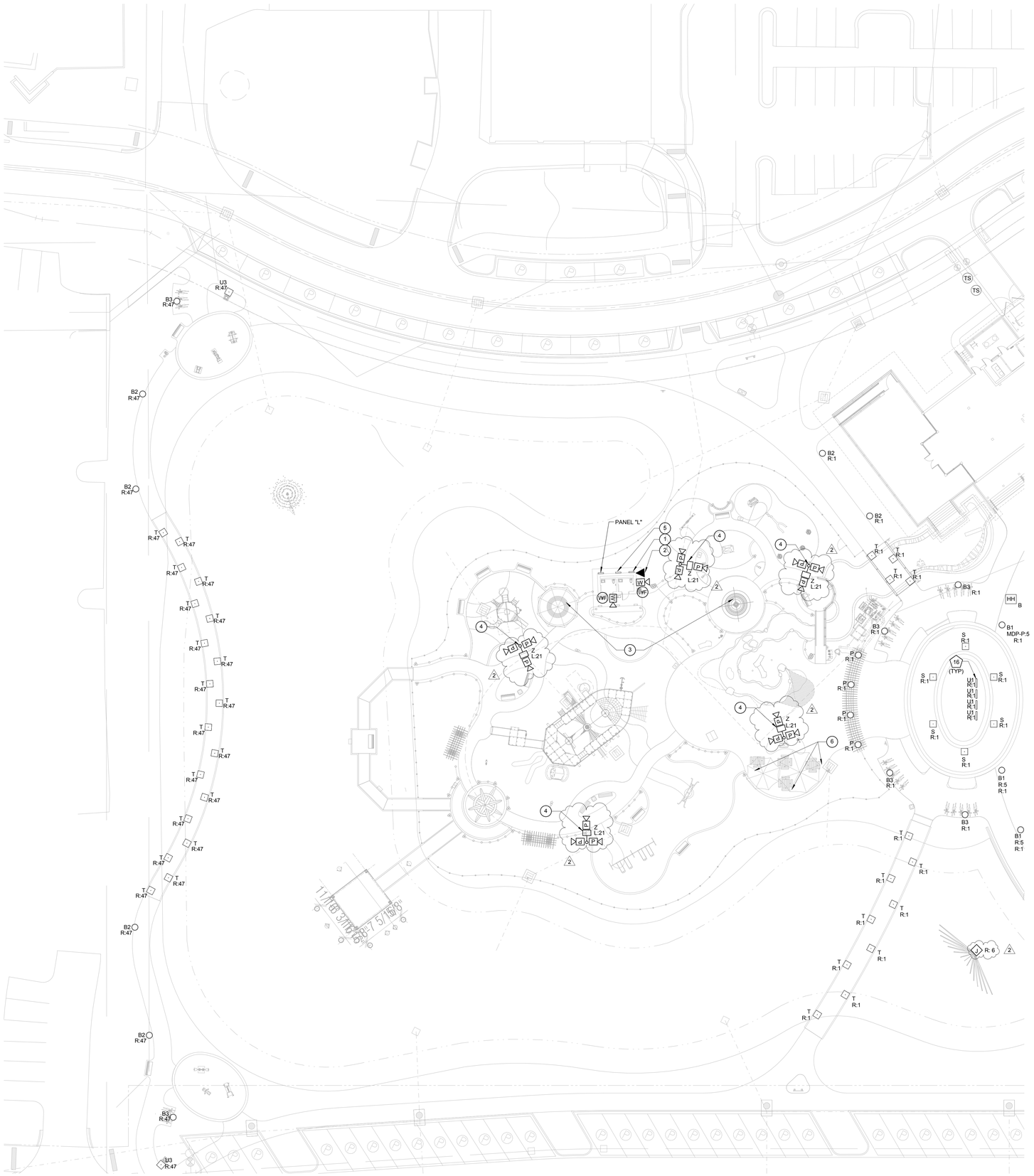

1 E0.061 ELECTRICAL SITE PLAN - PARK
SCALE: 1" = 20'-0"

KEY NOTES

1. FOUNTAIN CONTROL PANEL. POWER FOR ASSOCIATED PUMPS AND CONTROLS TO WATER FEATURE VAULT AND FOUNTAINS FROM CONTROL PANEL PROVIDED BY OTHERS.
2. PROVIDE EMERGENCY PHONE IN ACCORDANCE WITH HILTON HEAD ISLAND REQUIREMENTS. COORDINATE LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.
3. PROVIDE RECESSED RECEPTACLE WITH WEATHERPROOF COVER IN BENCH. SEE ARCHITECTURAL DETAILS FOR MOUNTING.
4. CAMERAS MOUNTED TO LIGHT POLE.
5. NEMA 4X BOX. PROVIDE CONDUIT FROM COMMUNICATION DEVICES MOUNTED TO BUILDING AND MOUNTED TO POLES IN AREA BACK TO MEDIA CONVERTER. SEE DETAIL ON SHEET E0.002.
6. PROVIDE RECESSED RECEPTACLE WITH WEATHERPROOF COVER IN WOOD WALL. SEE ARCHITECTURAL DETAILS FOR MOUNTING.

GENERAL NOTES

1. COORDINATE WITH PALMETTO ELECTRIC FOR LIGHTING LAGOON ROAD EXTENSION. ROUTE 2 INCH CONDUIT WITH PULL STRING 36 INCHES BELOW FINISHED GRADE BETWEEN PALMETTO ELECTRIC PROVIDED FIXTURES AND TO UTILITY POWER SOURCE. STUB UP CONDUIT AT EACH FIXTURE LOCATION. PLACE LIGHTS IN ACCORDANCE WITH THE HILTON HEAD STREET LIGHTING GUIDELINES. FINAL PLACEMENT SHALL BE AT THE DISCRETION OF PALMETTO ELECTRIC FOR FIELD ADJUSTMENT. LIGHT POLES TO BE PROVIDED AND INSTALLED BY PALMETTO ELECTRIC.
2. COORDINATE LIGHTING INSTALLATION WITH LANDSCAPE PLANS AND DETAILS.
3. PROVIDE CONDUIT FROM COMMUNICATION DEVICES SHOWN ON THIS SHEET BACK TO MEDIA CONVERTER MOUNTED ON POOL RESTROOM BUILDING.

Town of Hilton Head Island
One Town Center Court
Hilton Head Island, SC 29928

CONSTRUCTION DOCUMENTS
FOR
COLIGNY PARK
Hilton Head Island, South Carolina

DRAWN BY:
MWC

CHECKED BY:
DAW

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DATE
06/30/2016

PROJECT NUMBER
01-16002

SHEET TITLE
ELECTRICAL SITE PLAN PARK

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DWG Project No. 15008-00

SHEET NUMBER
E0.061

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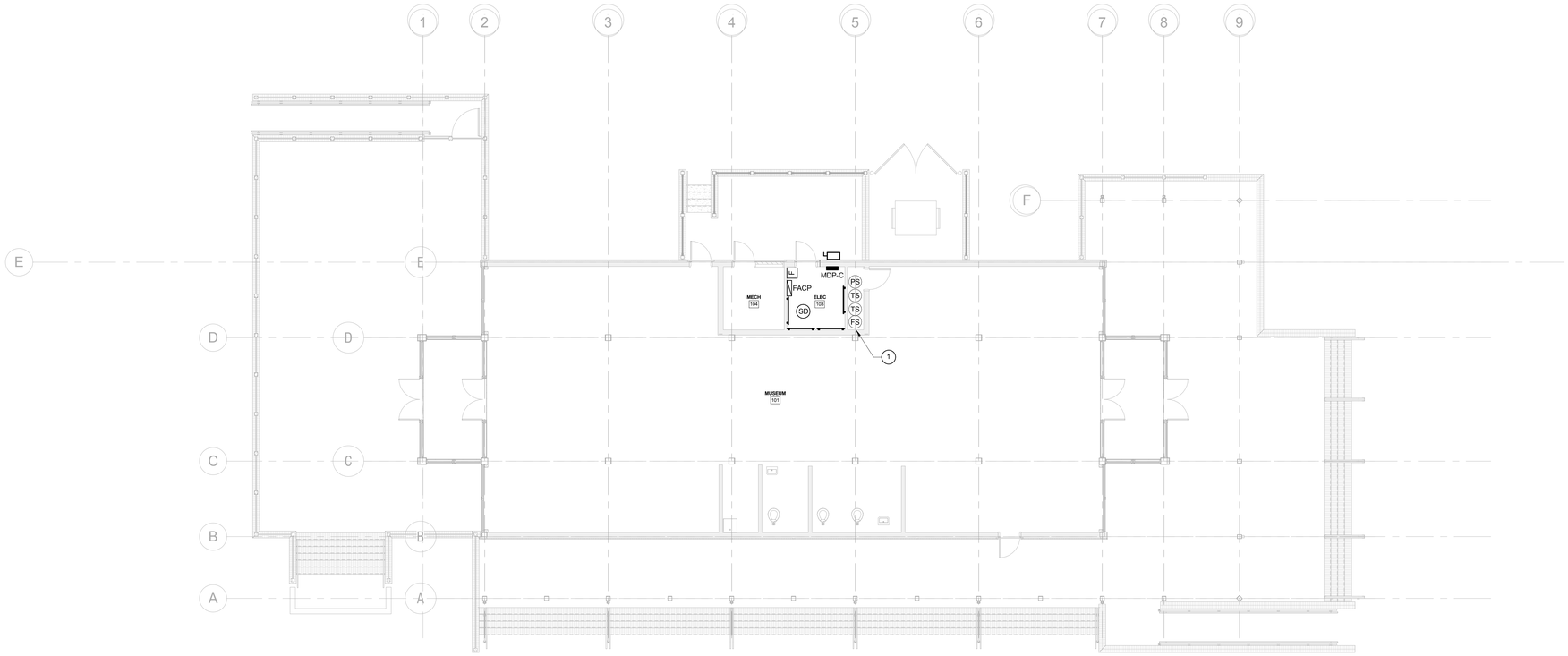

1 / E1.103 CHILDRENS MUSEUM SYSTEMS PLAN
SCALE: 1/8" = 1'-0"

KEY NOTES

1. COORDINATE QUANTITY OF PRESSURE, FLOW, AND TAMPER SWITCHES WITH FIRE PROTECTION DRAWINGS.

GENERAL NOTES

2

1. SEE SHEET E0.060 FOR LOCATION OF TAMPER SWITCHES FOR PIV AND FIRE BFP.

Town of Hilton Head Island
One Town Center Court
Hilton Head Island, SC 29928

CONSTRUCTION DOCUMENTS
FOR
COLIGNY PARK
Hilton Head Island, South Carolina

DRAWN BY:
MWC

CHECKED BY:
DAW

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PROFESSIONAL STAMPS:

#	REVISION	DATE	BY
1	ADDENDUM 2	07/29/16	

DATE
06/30/2016

PROJECT NUMBER
01-16002

SHEET TITLE
CHILDRENS MUSEUM SYSTEMS PLAN

DWG CONSULTING ENGINEERS
listen.consult.sustain
Wood+Partners Inc. WiPi
Landscape Architects
Land Planners
PO Box 23949 ■ Hilton Head Island, SC 29925
843.681.6618 ■ Fax 843.681.7086 ■ www.woodandpartners.com

DWG Project No. 15008-00

SHEET NUMBER
E1.103

N

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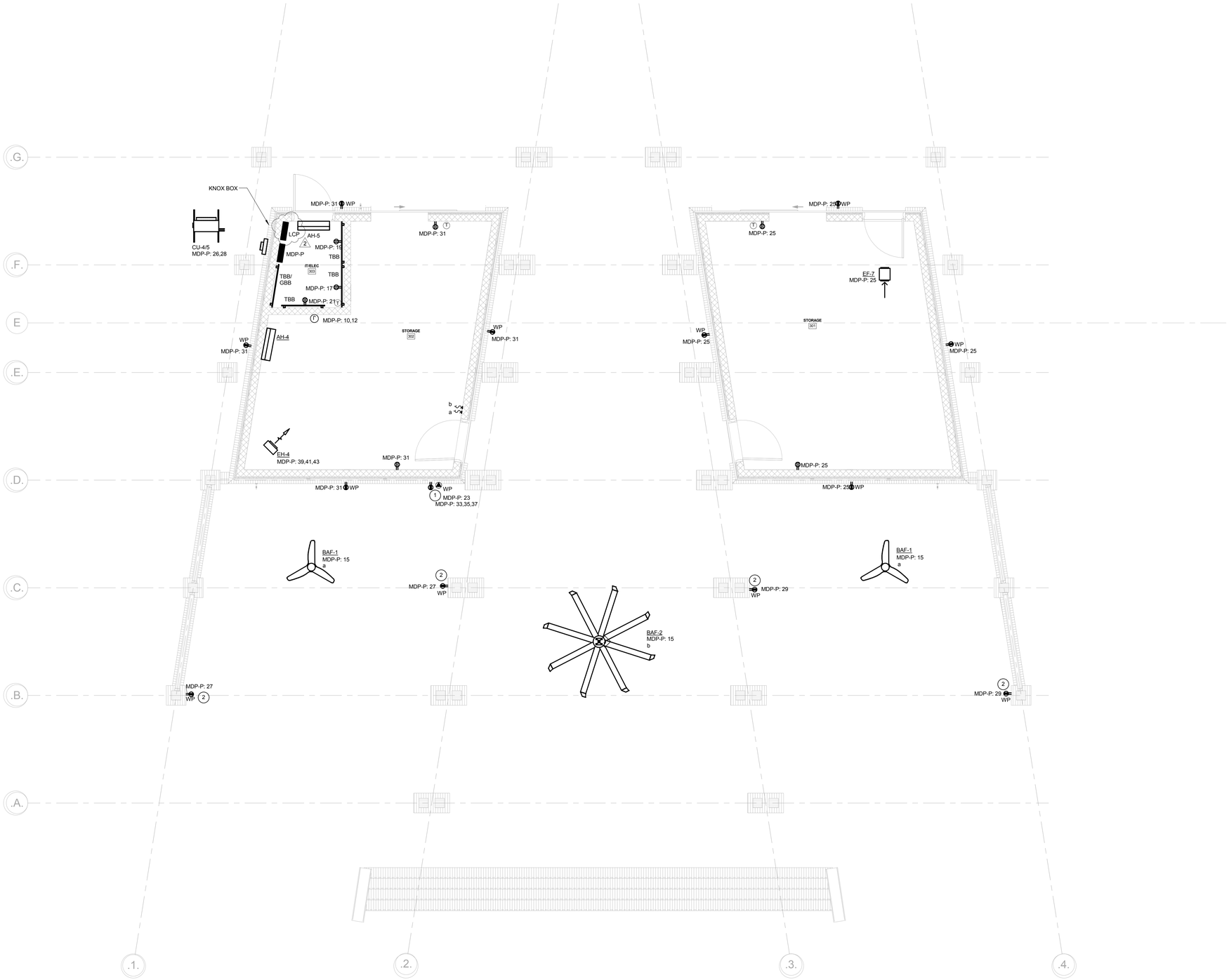

1 / E2.101 PAVILION POWER & TELECOM. PLAN
SCALE: 1/4" = 1'-0"

KEY NOTES

1. PROVIDE COLE LIGHTING TL310-WCS PLUG BOX FOR EXTERIOR WEATHERPROOF RECEPTACLE ENCLOSURE. PROVIDE WITHIN ENCLOSURE:
   - LEGRAND CR6369 TWIST LOCK W/ 3#8 & 1#10(G) in 3/4"C.
   - 5-20R GFCI RECEPTACLE.
2. RECEPTACLE TO BE FED FROM UNDERGROUND AND FLUSH IN COLUMN.

GENERAL NOTES

1. ALL EXPOSED CONDUIT SHALL BE RUN BEHIND AND ON TOP OF STRUCTURAL BEAMS TO MAXIMIZE CONCEALMENT. ALL EXPOSED CONDUIT SHALL BE PAINTED.
2. SEE SITE PLAN FOR CAMERA ROUGH-IN LOCATIONS.

Town of Hilton Head Island
One Town Center Court
Hilton Head Island, SC 29928

CONSTRUCTION DOCUMENTS
FOR
COLIGNY PARK
Hilton Head Island, South Carolina

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PAVILION POWER & TELECOM. PLAN

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E2.101

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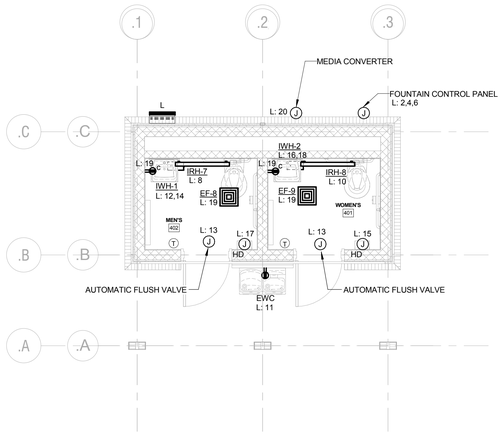
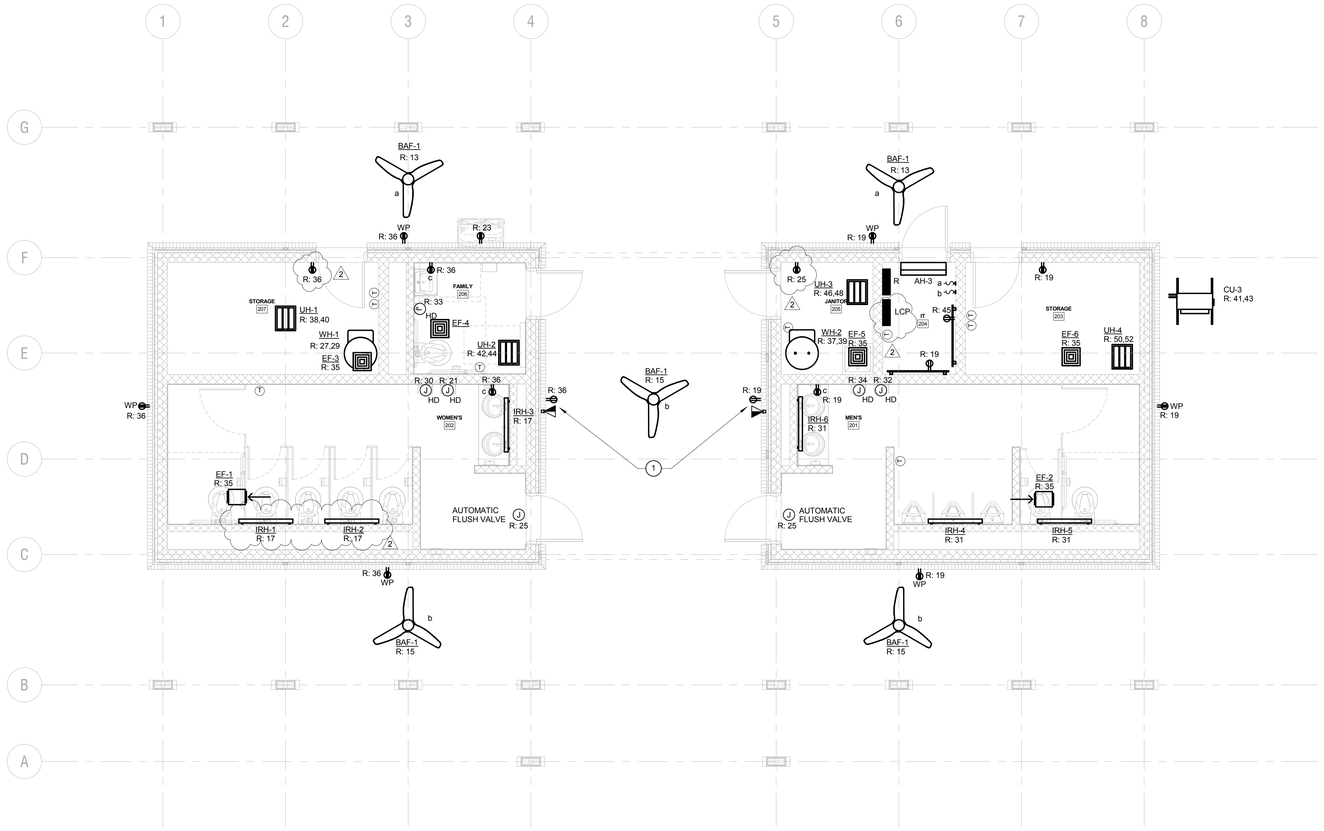
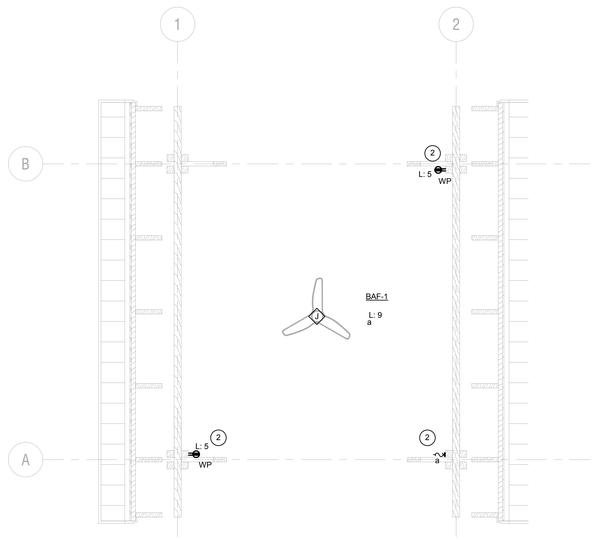


1 E3.101 RESTROOM MAIN - POWER & TELECOM. PLAN
SCALE: 1/4" = 1'-0"



2 E3.101 RESTROOM MAIN - POWER & TELECOM. PLAN
SCALE: 1/4" = 1'-0"



3 E3.101 POND PAVILION - POWER & TELECOM. PLAN
SCALE: 1/4" = 1'-0"

KEY NOTES

1. POWER/DATA FOR FUTURE VIDEO DISPLAYS. COORDINATE LOCATION AND MOUNTING HEIGHT WITH ARCHITECT PRIOR TO ROUGH-IN.
2. COORDINATE WITH HANDRAIL INSTALLATION. USE MC CABLE TO ROUTE POWER THROUGH GAPS OF PAVILION FRAMING.

GENERAL NOTES

1. ALL EXPOSED CONDUIT SHALL BE RUN BEHIND AND ON TOP OF STRUCTURAL BEAMS TO MAXIMIZE CONCEALMENT. ALL EXPOSED CONDUIT SHALL BE PAINTED.
2. SEE SITE PLANS FOR CAMERA ROUGH-IN LOCATIONS.
3. COORDINATE POWER LOCATION AND ROUGH-IN OF AUTOMATIC PLUMBING FIXTURES WITH PLUMBING CONTRACTOR

Town of Hilton Head Island
One Town Center Court
Hilton Head Island, SC 29928

CONSTRUCTION DOCUMENTS
FOR
COLIGNY PARK
Hilton Head Island, South Carolina

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SEISMIC AND WIND REQUIREMENTS FOR MECHANICAL SYSTEMS

IBC-2012 /ASCE 7-10

A. PER SECTION 301.15 OF THE 2012 EDITION OF THE INTERNATIONAL MECHANICAL CODE, MECHANICAL EQUIPMENT, APPLIANCES AND SUPPORTS (INCLUDING ROOF CURBS & ROOF RAILS) EXPOSED TO WIND SHALL BE DESIGNED AND INSTALLED TO RESIST THE WIND PRESSURES DETERMINED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE. WHERE SEISMIC RESTRAINT IS REQUIRED, THE MORE DEMANDING FORCE OF WIND AND SEISMIC MUST BE USED. SEE SEISMIC INFORMATION CONTAINED IN THE STRUCTURAL DRAWINGS FOR SITE SPECIFIC INFORMATION ON SEISMIC DESIGN CATEGORY.
B. SEE EQUIPMENT SCHEDULES AND DETAILS FOR SPECIFIC COMPONENT IMPORTANCE FACTOR DESIGNATIONS.
C. USE APPLICABLE TABLE BELOW TO DETERMINE SEISMIC RESTRAINT REQUIREMENTS FOR EACH MECHANICAL COMPONENT.
D. FOR ALL COMPONENTS REQUIRING SEISMIC RESTRAINT, THE COMPONENT SUPPORTS AND ATTACHMENTS SHALL BE DESIGNED BY A REGISTERED DESIGN PROFESSIONAL. SUBMITTALS MUST INCLUDE STAMPED AND SIGNED DRAWINGS AND CALCULATIONS.
E. WHERE SEISMIC RESTRAINT IS REQUIRED, HOUSEKEEPING PADS NEEDED FOR THE INSTALLATION OF EQUIPMENT UNDER THIS CONTRACT MUST BE DESIGNED BY THE SEISMIC ENGINEER. DO NOT POUR ANY HOUSEKEEPING PADS PRIOR TO THE RECEIPT OF THE SEISMIC SUBMITTAL.
F. SEISMIC RESTRAINTS FOR PIPING AND DUCTWORK MUST BE SHOWN ON LAYOUT DRAWINGS SHOWING SPECIFIC RESTRAINT LOCATIONS ALONG WITH ACCOMPANYING DETAILS AND CALCULATIONS.

MECHANICAL COMPONENT IMPORTANCE FACTOR (Ip) DESIGNATION

Ip = 1.0	Ip = 1.5
◆ ALL HVAC COMPONENTS EXCEPT AS NOTED IN Ip=1.5	

SEISMIC DESIGN CATEGORIES D,E,F

		COMPONENT IMPORTANCE FACTOR (Ip)			
		1.0		1.5	
COMPONENT IDENTIFICATION		SEISMIC RESTRAINT REQUIREMENT	NOTES	SEISMIC RESTRAINT REQUIREMENT	NOTES
ROOF MOUNTED		RESTRAIN ALL	1	RESTRAIN ALL	-
FLOOR MOUNTED		RESTRAIN ALL	1, 2	RESTRAIN ALL	-
WALL MOUNTED		RESTRAIN ALL	1, 2	RESTRAIN ALL	-
COMPONENT SUPPORTS		RESTRAIN ALL	1	RESTRAIN ALL	-
SUSPENDED EQUIPMENT	INLINE W/ DUCT	RESTRAIN IF >75 LBS PROVIDE FLEX. CONN.	3	RESTRAIN IF >75 LBS PROVIDE FLEX. CONN.	3
	NOT INLINE W/ DUCT/PIPE	RESTRAIN ALL	1	RESTRAIN ALL	-
SUSPENDED DUCTILE PIPING (STEEL, ALUMINUM, COPPER, ETC.)		>3"	4	>1"	4
SUSPENDED NON DUCTILE PIPING (CAST IRON, PLASTIC, CERAMIC)		RESTRAIN ALL	4	RESTRAIN ALL	4
SUSPENDED PIPE ON TRAPEZE		RESTRAIN IF ANY PIPE ON TRAPEZE > 3" RESTRAIN IF TOTAL WEIGHT OF PIPES ON TRAPEZE > 10 LBS/FT	4	RESTRAIN IF ANY PIPE ON TRAPEZE > 1" RESTRAIN IF TOTAL WEIGHT OF PIPES ON TRAPEZE > 10 LBS/FT	4
DUCTWORK		6 SQ.FT. AND LARGER	-	6 SQ.FT. AND LARGER	5
MULTIPLE DUCTS ON TRAPEZE		RESTRAIN IF TOTAL WEIGHT OF DUCTS ON TRAPEZE > 10 LBS/FT	4	RESTRAIN IF TOTAL WEIGHT OF DUCTS ON TRAPEZE > 10 LBS/FT	4
COMPONENT CERTIFICATION (SEE NOTE 6)		NOT REQUIRED	6	REQUIRED	6

NOTES:
1. EQUIPMENT 20 LBS. OR LESS IS EXEMPT IF FLEXIBLE CONNECTIONS ARE PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.
2. RESTRAINTS ARE NOT REQUIRED IF THE COMPONENT WEIGHS 400 LBS. OR LESS, IS MOUNTED AT 4 FT. OR LESS ABOVE A FLOOR, AND HAS FLEXIBLE CONNECTIONS BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.
3. FLEXIBLE CONNECTIONS REQUIRED FOR PIPE CONNECTIONS ONLY.
4. RESTRAINT IS NOT REQUIRED IF THE PIPING / DUCTWORK IS SUPPORTED BY HANGERS AND EACH HANGER IN THE PIPING RUN IS 12 IN. OR LESS IN LENGTH FROM THE TOP OF THE PIPE TO THE SUPPORTING STRUCTURE. WHERE PIPES ARE SUPPORTED ON A TRAPEZE, THE TRAPEZE SHALL BE SUPPORTED BY HANGERS HAVING A LENGTH OF 12 IN. OR LESS. WHERE ROD HANGERS ARE USED, THEY SHALL BE EQUIPPED WITH SWIVELS, EYE NUTS OR OTHER DEVICES TO PREVENT BENDING IN THE ROD.
5. ALL DUCTWORK , REGARDLESS OF SIZE, DESIGNED TO CARRY TOXIC, HIGHLY TOXIC, OR EXPLOSIVE GASES OR USED FOR SMOKE CONTROL MUST BE RESTRAINED.
6. COMPONENT CERTIFICATION MUST BE SUPPLIED BY THE EQUIPMENT MANUFACTURER AT TIME OF SUBMITTAL FOR REVIEW BY ENGINEER OF RECORD.

GENERAL HVAC NOTES

1. THE DRAWINGS SHOW THE GENERAL ARRANGEMENT AND LOCATION OF EQUIPMENT, DUCTWORK, PIPING, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE MECHANICAL INSTALLATION W/ THE STRUCTURE AND OTHER TRADES AND SHALL PROVIDE ADDITIONAL OFFSETS AND FITTINGS AS NECESSARY.
2. COORDINATE WORK WITH AUTHORITY HAVING JURISDICTION AND OBTAIN ALL PERMITS AND INSPECTIONS.
3. PROVIDE OWNER WITH CERTIFICATES OF FINAL INSPECTION AND ACCEPTANCE FROM AUTHORITY HAVING JURISDICTION.
4. THE HEATING, VENTILATING AND AIR CONDITIONING SYSTEMS SHALL COMPLY WITH THE THE CODES LISTED ON THIS SHEET AS WELL AS ALL LOCAL CODE OFFICIAL REQUIREMENTS. IN THE EVENT OF A CONFLICT BETWEEN CODES, THE MOST STRINGENT SHALL ALWAYS GOVERN.
5. DUCT DIMENSIONS ON DRAWINGS ARE CLEAR INSIDE DIMENSIONS.
6. THE CONTRACTOR SHALL CHECK AND VERIFY ALL CLEARANCES PRIOR TO FABRICATION OR INSTALLATION OF EQUIPMENT, DUCTWORK, AND PIPING SYSTEMS. WHERE CONDITIONS REQUIRE A CHANGE IN DUCT OR PIPE ROUTING, NOTIFY THE ARCHITECT FOR AN ACCEPTABLE ALTERNATIVE METHOD. AVOID ROUTING DUCTWORK DIRECTLY OVER LIGHT FIXTURES, DIFFUSERS, AND OTHER CEILING MTD. DEVICES. LOCATE ALL MECHANICAL EQUIPMENT SO THAT FILTERS AND COMPONENTS REQUIRING ACCESS (SERVICE AND MAINTENANCE) ARE FULLY ACCESSIBLE.
7. PROVIDE CURVED RADIUS ELBOW AT FIRST SUPPLY & RETURN FITTING FOR ALL HVAC UNITS. PROVIDE TURNING VANES IN ALL 90 DEGREE ELBOWS IN ALL RECTANGULAR SUPPLY/RETURN/EXHAUST DUCT SYSTEMS. ANY OFFSETS REQUIRED IN DUCT SYSTEMS SHALL BE INSTALLED PER SMACNA 2005 2ND EDITION MANUAL. SHARP ANGLED TRANSITIONS OR OFFSETS 'WILL NOT BE ALLOWED'. PROVIDE DUCT ACCESS DOORS AS REQUIRED.
8. INSTALL ALL DUCT MOUNTED DEVICES (DAMPERS, ACCESS DOORS, ETC.) AND PIPING SPECIALTIES IN EASILY ACCESSIBLE LOCATIONS. ADVISE THE ARCHITECT IN ADVANCE OF INSTALLATION IF ACCESS WILL BE HINDERED SO AN ALTERNATE LOCATION CAN BE SELECTED.
9. ALL DUCT TAKE-OFFS SHALL BE INSTALLED AS SHOWN BY DETAILS ON THE PLANS WITH A MANUAL BALANCING DAMPER AT EVERY TAKE-OFF. WHERE DUCT RUN-OUT SIZE IS NOT SHOWN PROVIDE DUCT SAME SIZE AS GRILLE NECK SIZE. PRE-INSULATED FLEXIBLE DUCT MAY BE USED FOR FINAL CONNECTION TO SUPPLY GRILLES (MAX. LENGTH 5').
10. ALL MECHANICAL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS WITH PRESCRIBED CLEARANCES FOR SERVICE AND MAINTENANCE. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IF RECOMMENDED CLEARANCES ARE NOT POSSIBLE BEFORE INSTALLING EQUIPMENT.
11. SEISMIC PROTECTION OF EQUIPMENT, DUCTWORK, PIPING AND UTILITIES SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 16 OF THE INTERNATIONAL BUILDING CODE, 2012 EDITION. ALL SEISMIC RESTRAINT AND BRACING SHALL BE SUBSTANTIATED BY MANUFACTURER'S SUBMITTALS PER THE SPECIFICATIONS. FOR ADDITIONAL INFORMATION, SEE 'SEISMIC AND WIND REQUIREMENTS FOR MECHANICAL SYSTEMS' ON THIS SHEET. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING INSTALLATION OF SEISMIC BRACING DEVICES WITH THE OWNER'S SEISMIC SPECIAL INSPECTOR. PROVIDE A MINIMUM OF SEVEN DAYS ADVANCE NOTICE OF INSTALLATION.
12. BALANCE ALL AIR DISTRIBUTION DEVICES, EXHAUST FANS, AND OUTSIDE AIR QUANTITIES AS SCHEDULED OR SHOWN ON THE DRAWINGS. PROVIDE MARKERS AT ALL DAMPER LOCATIONS SHOWING FULL OPEN/CLOSED POSITIONS AND DAMPER SETTING FOR REQUIRED AIRFLOW. PROVIDE FINAL TEST AND BALANCE REPORT ALONG W/ SCHEMATIC DRAWINGS SHOWING DIFFUSER LOCATION W/ DESIGN AND ACTUAL CFM. THE DIFFUSER TAGS ON THE DRAWINGS SHALL CORRESPOND TO THE DIFFUSER TAGS ON THE REPORT. THIS REPORT SHALL BE SUBMITTED BEFORE THE FINAL INSPECTION IS PERFORMED. SEE SPECIFICATIONS FOR FURTHER INFORMATION.
13. ALL CONTROL WIRING, CONDUIT AND CONTROLS ACCESSORIES NECESSARY TO IMPLEMENT THE OUTLINED SEQUENCES OF OPERATION SHALL BE PROVIDED BY THE CONTROLS CONTRACTOR.
14. ALL EXPOSED PIPING AND DUCTWORK SHALL BE PAINTED. COORDINATE W/ ARCHITECTURAL PLANS/SPECIFICATIONS FOR EXPOSED LOCATIONS AND PAINTING REQUIREMENTS.
15. SEE ARCHITECTURAL DOCUMENTS FOR ROOF PENETRATION AND FLASHING REQUIREMENTS.
16. WHERE "APPROXIMATELY" IS USED TO DEFINE INSTALLATION LOCATIONS, CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES TO VERIFY THERE ARE NO CONFLICTS PRIOR TO INSTALLATION AT DIMENSION LISTED.

HVAC SYMBOL LEGEND

X / Y	AIR TERMINAL TAG, X=TYPE MARK, Y=CFM	— — —	COMPONENT TO BE DEMOLISHED
	AIR TERMINAL DIFFUSER (CEILING MOUNTED)	X"x Y"	DUCTWORK (X" = WIDTH, Y" = HEIGHT)
	AIR TERMINAL RETURN GRILLE (CEILING MOUNTED)		TURNING VANES
	SIDEWALL REGISTER / GRILLE		CONDENSING UNIT
T	THERMOSTAT		CEILING MOUNTED EXHAUST FAN
	EQUIPMENT CLEARANCE		PREINSULATED FLEXIBLE DUCT
	FIRE DAMPER		CABLE OPERATED DAMPER
	MANUAL DAMPER		FLEXIBLE DUCT CONNECTION
T	THERMOSTAT (DUCT MOUNTED)	M	MOTORIZED DAMPER
	CONNECTION TO EXISTING SYSTEM		VARIABLE VOLUME TERMINAL UNIT

MECHANICAL CODES & STANDARDS

CODE	DESCRIPTION
IBC (2012)	INTERNATIONAL BUILDING CODE
IECC (2009)	INTERNATIONAL ENERGY CONSERVATION CODE
IMC (2012)	INTERNATIONAL MECHANICAL CODE
NFPA 90A (2009)	STANDARD FOR THE INSTALLATION AIR-CONDITIONING & VENTILATING SYSTEMS
SMACNA	MANUAL FOR THE BALANCING & ADJUSTMENT OF AIR DISTRIBUTION SYSTEMS

MECHANICAL ABBREVIATIONS

ABBR	DESCRIPTION
(E)	EXISTING
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AH	AIR HANDLER
APD	AIR PRESSURE DROP
BOD	BASIS OF DESIGN
BOP	BASIS OF PIPE
CFM	CUBIC FEET PER MINUTE
CU	CONDENSING UNIT
DIA	DIAMETER
DRN	DRAIN
EA	EXHAUST AIR
EF	EXHAUST FAN
EH	ELECTRIC HEATER
ESP	EXTERNAL STATIC PRESSURE
FPM	FEET PER MINUTE
FRPM	FAN ROTATIONS PER MINUTE
FT	FEET
GPM	GALLONS PER MINUTE
HP	HEAT PUMP
HP	HORSEPOWER
IN	INCHES
LAT	LEAVING AIR TEMPERATURE
MBH	THOUSANDS OF BTU'S PER HOUR
MC	MECHANICAL CONTRACTOR
MD	MANUAL DAMPER
NC	NOISE CRITERIA
NO	NORMALLY OPEN
OA	OUTSIDE AIR
PD	PRESSURE DROP
PS	PIPE SUPPORT
RA	RETURN AIR
REFR	REFRIGERANT
RH	RELATIVE HUMIDITY
RPM	ROTATIONS PER MINUTE
SA	SUPPLY AIR
SF	SUPPLY FAN
TYP	TYPICAL
UG	UNDERGROUND
UH	UNIT HEATER
UNO	UNLESS OTHERWISE NOTED
VFD	VARIABLE FREQUENCY DRIVE
VNT	VENT
W/	WITH
WMS	WIRE MESH SCREEN
°F	DEGREES FAHRENHEIT

DESIGN CONDITIONS

SUMMER	OUTDOOR: 95F DB / 80F WB
	INDOOR: 75F DB / 50% RH
WINTER	OUTDOOR: 25F DB
	INDOOR: 70F DB / 50% RH

EXHAUST FAN SCHEDULE

UNIT I.D.	CAPACITY CFM	E.S.P. INCHES W.G.	TYPE	FRPM	MAXIMUM SOUND RATING (SONES)	BASIS OF DESIGN	MODEL
EF-1	375	0.25 in-wg	INLINE	1725	4.8	GREENHECK	SQ-90-VG
EF-2	375	0.25 in-wg	INLINE	1725	4.8	GREENHECK	SQ-90-VG
EF-3	150	0.25 in-wg	CABINET	1400	2.5	GREENHECK	SP-A90
EF-4	75	0.25 in-wg	CABINET	700	1.2	GREENHECK	SP-B90
EF-5	75	0.25 in-wg	CABINET	700	1.2	GREENHECK	SP-B90
EF-6	150	0.25 in-wg	CABINET	1400	2.5	GREENHECK	SP-A90
EF-7	150	0.25 in-wg	INLINE	1535	3.3	GREENHECK	SQ-65-VG
EF-8	75	0.25 in-wg	CABINET	700	1.2	GREENHECK	SP-B90
EF-9	75	0.25 in-wg	CABINET	700	1.2	GREENHECK	SP-B90

NOTES:
1. SEE SPECIFICATIONS FOR MORE INFORMATION.
2. SEE ELECTRICAL DRAWINGS FOR VOLTAGE INFORMATION.
3. DIRECT DRIVE FANS SHALL BE SUPPLIED WITH SPEED CONTROLLER.
4. EF-1, 2, 3, 4, & 5 SHALL BE CONTROLLED PROGRAMMABLE TIME CLOCK.
5. EF-6, 7, & 8 SHALL BE TIED INTO LINE VOLTAGE THERMOSTAT IN SPACE.

2

CEILING FAN SCHEDULE

TAG	DESCRIPTION	FRPM (MAX)	FINISH	BASIS OF DESIGN	MODEL
BAF-1	52" DIAMETER, HIGH VOLUME, LOW SPEED FAN	182	WHITE W/ SILVER TRIM	BIG ASS FANS	HAIKU L SERIES
BAF-2	10' DIAMTER, HIGH VOLUME, LOW SPEED FAN	107	WHITE W/ SILVER TRIM	BIG ASS FANS	ESSENCE

NOTES:
1. SEE ELECTRICAL DRAWINGS FOR VOLTAGE INFORMATION.
2. PROVIDE FANS WITH WALL MOUNTED SPEED CONTROLLER. SEE ELECTRICAL PLANS FOR LOCATION.
3. PROVIDE BAF-2 WITH
4. BAF-2 IS FULLY WET RATED.
5. BAF-1 IS DAMP RATED FOR OUTDOOR COVERED INSTALLATION.

SPLIT SYSTEM VAV AIR HANDLING UNITSCHEDULE

INDOOR UNIT I.D.	OUTDOOR UNIT I.D.	AIR CAPACITY CFM TOTAL	AIR CAPACITY CFM O/A (MIN)	E.S.P. INCHES W.G.	HP	COOLING COIL TOTAL MBH	COOLING COIL SENS. MBH	ENTERING AIR D.B. °F	ENTERING AIR W.B. °F	LEAVING AIR D.B. °F	LEAVING AIR W.B. °F	BASIS OF DESIGN	MODEL	OUTDOOR MODEL
AH-1	CU-1	5000	850	2.00 in-wg	7.5	191.3	132.4	80 °F	67 °F	55 °F	54 °F	DAIKIN	DESTINY 001	RCS 001

NOTES:
1. SPLIT SYSTEM SHALL BE PROVIDED WITH MANUFACTURER PROVIDED VARIABLE FREQUENCY DRIVE (VFD) AND INTEGRATED CONTROL PANEL WITH FACTORY PROGRAMMED SEQUENCE OF OPERATIONS FOR VARIABLE AIR VOLUME (VAV) OPERATION. SPLIT SYSTEM SHALL BE COOLING ONY, WITH HEATING CAPABILITIES PROVIDED AT THE VAV TERMINAL UNITS, PROVIDED DURING THE TENANT UPFIT. TEMPERATURE AND HUMIDITY CONTROLLERS SHALL BE PROVIDED DURING THE TENANT UPFIT.
2. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
3. UNIT SHALL BE 208 VOLT 3 PHASE.
4. PROVIDE SEACOAST COATING ON CONDENSER COILS.
5. PROVIDE WITH DRY BULB ECONOMIZER.

2

LOUVER SCHEDULE

UNIT I.D.	AIR PRESSURE DROP	AIR VELOCITY	CFM	DIMENSION FREE AREA	DIMENSION HEIGHT	DIMENSION WIDTH	SCHEDULE NOTES	BASIS OF DESIGN	MODEL
L-1	0.11 in-wg	794 FPM	4500	5.01 SF	60"	24"	EXHAUST	RUSKIN	ELF6375DXD
L-2	0.09 in-wg	642 FPM	5000	6.71 SF	36"	48"	INTAKE	RUSKIN	ELF6375DXD
L-3	0.08 in-wg	612 FPM	350	0.57 SF	24"	12"	EXHAUST	RUSKIN	EME520DD
L-4	0.09 in-wg	661 FPM	375	0.57 SF	24"	12"	EXHAUST	RUSKIN	EME520DD
L-5	0.09 in-wg	661 FPM	375	0.57 SF	24"	12"	EXHAUST	RUSKIN	EME520DD
L-6	0.09 in-wg	661 FPM	375	0.57 SF	24"	12"	INTAKE	RUSKIN	EME520DD
L-7	0.09 in-wg	661 FPM	375	0.57 SF	24"	12"	INTAKE	RUSKIN	EME520DD
L-8	0.07 in-wg	594 FPM	150	0.25 SF	12"	12"	INTAKE	RUSKIN	EME520DD
L-9	0.07 in-wg	594 FPM	120	0.25 SF	12"	12"	INTAKE	RUSKIN	EME520DD
L-10	0.07 in-wg	594 FPM	150	0.25 SF	12"	12"	EXHAUST	RUSKIN	EME520DD
L-11	0.07 in-wg	594 FPM	120	0.25 SF	12"	12"	EXHAUST	RUSKIN	EME520DD
L-12	0.07 in-wg	594 FPM	150	0.25 SF	12"	12"	INTAKE	RUSKIN	EME520DD
L-13	0.07 in-wg	594 FPM	150	0.25 SF	12"	12"	EXHAUST	RUSKIN	EME520DD
L-14	0.02 in-wg	396 FPM	75	0.25 SF	12"	12"	INTAKE	RUSKIN	EME520DD
L-15	0.02 in-wg	396 FPM	75	0.25 SF	12"	12"	INTAKE	RUSKIN	EME520DD
L-16	0.03 in-wg	396 FPM	75	0.25 SF	12"	12"	EXHAUST	RUSKIN	EME520DD
L-17	0.03 in-wg	396 FPM	75	0.25 SF	12"	12"	EXHAUST	RUSKIN	EME520DD
L-18	0.02 in-wg	396 FPM	75	0.25 SF	12"	12"	INTAKE	RUSKIN	EME520DD
L-19	0.02 in-wg	396 FPM	75	0.25 SF	12"	12"	INTAKE	RUSKIN	EME520DD

NOTES:
1. LOUVERS SHALL BE EXTRUDED ALUMINUM.
2. COORDINATE FINISH WITH ARCHITECT DURING SUBMITTAL PHASE.

DUCTLESS MINI-SPLIT SCHEDULE

INDOOR UNIT I.D.	OUTDOOR UNIT I.D.	AIRFLOW (CFM)	RATED COOLING CAPACITY (MBH)	EAT DB °F	EAT WB °F	RATED HEATING CAPACITY (MBH)	BASIS OF DESIGN	MODEL	OUTDOOR MODEL
AH-2	CU-2	625	22	80 °F	67 °F	-	MITSUBISHI	MSY-GA24NA	MUY-GA24NA
AH-3	CU-3	625	22	80 °F	67 °F	-	MITSUBISHI	MSY-GA24NA	MUY-GA24NA
AH-4	CU-4/5	625	22	80 °F	67 °F	-	MITSUBISHI	MSY-GA24NA	MUY-GA24NA
AH-5	CU-4/5	625	22	80 °F	67 °F	-	MITSUBISHI	MSY-GA24NA	MUY-GA24NA

NOTES:
1. SEE SPECIFICATIONS FOR MORE INFORMATION.
2. SEE ELECTRICAL DRAWINGS FOR VOLTAGE INFORMATION.
3. PROVIDE SEACOAST COATING ON CONDENSER COILS.

ELECTRIC HEATER SCHEDULE

UNIT I.D.	CAPACITY	DESCRIPTION	REMARKS	BASIS OF DESIGN	MODEL	NOTES
EH-4	5 KW	-	UNIT HEATER	MARKEL	F2F5105N	1, 2, 3, 4,
IRH-1	1536 BTUH	42"	RADIANT INFRARED HEATER, SURFACE MOUNT	MARKEL	CV45YX	1, 2, 4, 5
IRH-2	1536 BTUH	42"	RADIANT INFRARED HEATER, SURFACE MOUNT	MARKEL	CV45YX	1, 2, 4, 5
IRH-3	1536 BTUH	42"	RADIANT INFRARED HEATER, SURFACE MOUNT	MARKEL	CV45YX	1, 2, 4, 5
IRH-4	1536 BTUH	42"	RADIANT INFRARED HEATER, SURFACE MOUNT	MARKEL	CV45YX	1, 2, 4, 5
IRH-5	1536 BTUH	42"	RADIANT INFRARED HEATER, SURFACE MOUNT	MARKEL	CV45YX	1, 2, 4, 5
IRH-6	1536 BTUH	42"	RADIANT INFRARED HEATER, SURFACE MOUNT	MARKEL	CV45YX	1, 2, 4, 5
IRH-7	1536 BTUH	42"	RADIANT INFRARED HEATER, SURFACE MOUNT	MARKEL	CV45YX	1, 2, 4, 5
IRH-8	1536 BTUH	42"	RADIANT INFRARED HEATER, SURFACE MOUNT	MARKEL	CV45YX	1, 2, 4, 5
UH-1	3 KW	-	UNIT HEATER, CEILING RECESSED	MARKEL	HF3386D-RP	1, 2, 4, 5
UH-2	3 KW	-	UNIT HEATER, CEILING RECESSED	MARKEL	HF3386D-RP	1, 2, 4, 5
UH-3	3 KW	-	UNIT HEATER, CEILING RECESSED	MARKEL	HF3386D-RP	1, 2, 4, 5
UH-4	3 KW	-	UNIT HEATER, CEILING RECESSED	MARKEL	HF3386D-RP	1, 2, 4, 5

NOTES:
1. SEE ELECTRICAL DRAWINGS FOR VOLTAGE INFORMATION.
2. FURNISH WITH MANUFACTURER PROVIDED SUPPORT BRACKET.
3. FURNISH WITH INTEGRAL THERMOSTAT.
4. FURNISH WITH INTEGRAL POWER DISCONNECT SWITCH.
5. FURNISH WITH LINE VOLTAGE THERMOSTAT. SEE DRAWINGS FOR LOCATION.

2

2

AIR DISTRIBUTION SCHEDULE

TYPE MARK	DESCRIPTION	FACE SIZE W	FACE SIZE H OR Ø	NECK SIZE W	NECK SIZE H OR Ø	BASIS OF DESIGN	MODEL
PD106	PLAQUE FACE DIFFUSER	12"	12"	0"	6"	PRICE	ASPD
PD108	PLAQUE FACE DIFFUSER	12"	12"	0"	8"	PRICE	ASPD
Supply Air							

NOTES:
1. SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL CEILING MOUNTED AIR DISTRIBUTION DEVICES.
2. COORDINATE MOUNTING TYPE AND ACCESSORIES WITH ARCHITECTURAL CEILING GRID.
3. COORDINATE AIR DISTRIBUTION LOCATIONS WITH ALL OTHER TRADES.
4. AIR DISTRIBUTION TO BE ALUMINUM CONSTRUCTION WITH BAKEIDENAMEL "WHITE" FINISH UNLESS NOTED OTHERWISE.
5. SURFACE MOUNTED AIR DISTRIBUTION DEVICES SHALL BE MOUNTED WITHOUT VISIBLE FASTENERS.
6. ALL CEILING DIFFUSERS SHALL BE 4-WAY BLOW UNLESS NOTED OTHERWISE.

2

Town of Hilton Head Island
One Town Center Court
Hilton Head Island, SC 29928

CONSTRUCTION DOCUMENTS FOR
COLIGNY PARK
Hilton Head Island, South Carolina

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PROFESSIONAL STAMPS:

#	REVISION	DATE	BY
2	ADDENDUM 2	07/29/16	

DATE 06/30/2016
PROJECT NUMBER 01-16002
SHEET TITLE HVAC - NOTES & LEGENDS

DWG CONSULTING ENGINEERS
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DWG Project No. 15008-00

SHEET NUMBER M0.001

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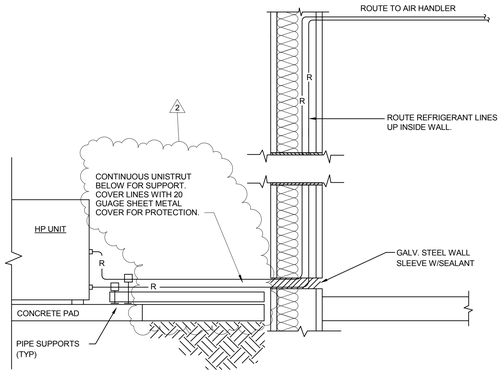
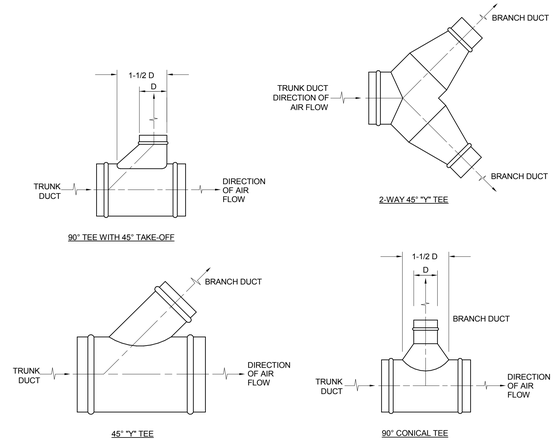


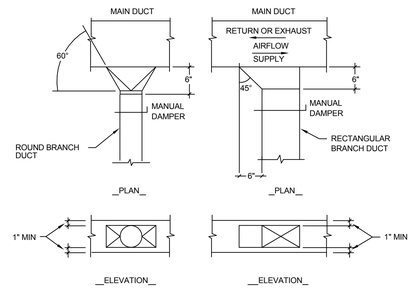
NOTES:

1. ALL PIPING SHALL BE HARD DRAWN COPPER TUBING WITH SOLDERED JOINTS.
2. SUCTION LINE INSULATION OUTDOORS SHALL BE PAINTED WITH A WEATHERPROOF COATING.

1 / M0.002 HEAT PUMP INSTALLATION DETAIL
NOT TO SCALE



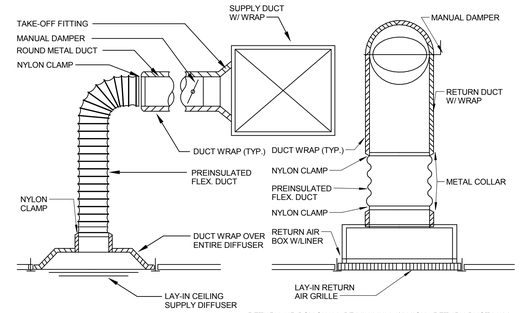
2 / M0.002 ROUND DUCT BRANCH TAKE OFF DETAIL
NOT TO SCALE



NOTES:

1. CONTRACTOR MAY SUBSTITUTE A MANUFACTURED FITTING FOR THE DETAILED TAKE-OFF ABOVE.
2. TAKE-OFFS IN MEDIUM PRESSURE DUCT SHALL HAVE AN OVERSIZED INTAKE.
3. SPIN-IN FITTINGS WITH INTEGRAL SCOOP AND DAMPER SHALL ONLY BE USED ON LOW PRESSURE DUCT.
4. FITTINGS SHALL BE SCREWED TO THE TRUNK DUCT AND SEALED WITH MASTIC. MASTIC TAPE IS NOT ACCEPTABLE. SEE SPECIFICATIONS.

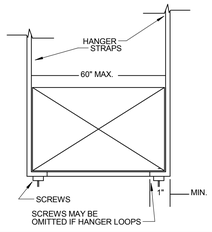
3 / M0.002 TYPICAL DUCT TAKE OFF INSTALLATION DETAIL
NOT TO SCALE



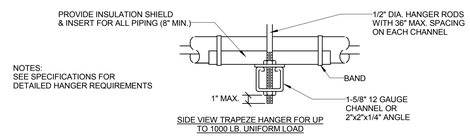
NOTES:

1. INSTALL NYLON CLAMPS ON INNER FLEX DUCT LINER AND OUTER JACKET. TAPE ENDS OF PREINSULATED FLEX. DUCT AT THE DIFFUSER AND THE BRANCH DUCT CONNECTION.
2. RETURN AIR BOX SHALL BE MINIMUM 12" HIGH. RETURN DUCT MAY TAP INTO THE SIDE OF THE BOX A MINIMUM OF 6" ABOVE GRILLE.
3. PROVIDE YOUNG REGULATOR REMOTE DAMPER CONTROLLER FOR EACH DIFFUSER AND GRILLE LOCATED IN AREAS WITH INACCESSIBLE CEILINGS. LOCATE CONTROLLER IN A CONCEALED, ACCESSIBLE LOCATION.

4 / M0.002 TYPICAL DIFFUSER/GRILLE INSTALLATION DETAIL
NOT TO SCALE

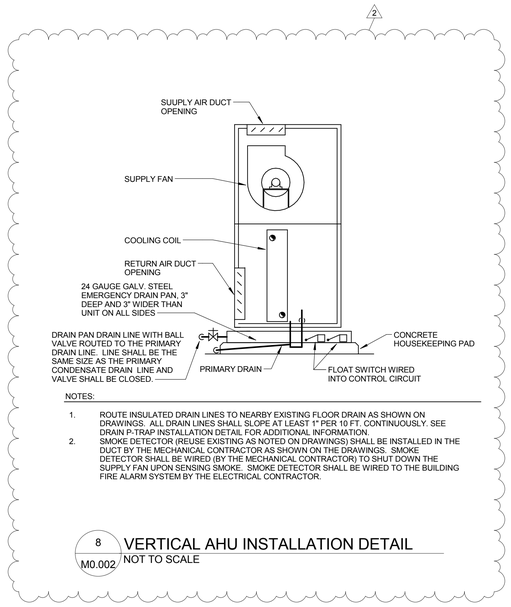


MAXIMUM PIPE/TUBING SUPPORT SPACING											
NOM. SIZE	IN.	THRU 3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8
PIPE	FT.	7	7	7	9	10	11	12	14	16	17	19
TUBING	FT.	5 FT	6	7	8	8	9	10	12	13	14	16
NOTE: FOR TRAPEZE HANGER TAKE SPACING OF SMALLEST SIZE ON TRAPEZE.												



NOTES:
SEE SPECIFICATIONS FOR DETAILED HANGER REQUIREMENTS

6 / M0.002 MECHANICAL PIPE SUPPORT DETAIL
NOT TO SCALE



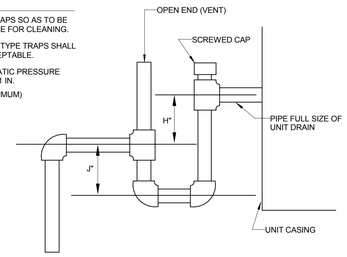
NOTES:

1. ROUTE INSULATED DRAIN LINES TO NEARBY EXISTING FLOOR DRAIN AS SHOWN ON DRAWINGS. ALL DRAIN LINES SHALL SLOPE AT LEAST 1" PER 10 FT. CONTINUOUSLY. SEE DRAIN P-TRAP INSTALLATION DETAIL FOR ADDITIONAL INFORMATION.
2. SMOKE DETECTOR (REUSE EXISTING AS NOTED ON DRAWINGS) SHALL BE INSTALLED IN THE DUCT BY THE MECHANICAL CONTRACTOR AS SHOWN ON THE DRAWINGS. SMOKE DETECTOR SHALL BE WIRED (BY THE MECHANICAL CONTRACTOR) TO SHUT DOWN THE SUPPLY FAN UPON SENSING SMOKE. SMOKE DETECTOR SHALL BE WIRED TO THE BUILDING FIRE ALARM SYSTEM BY THE ELECTRICAL CONTRACTOR.

8 / M0.002 VERTICAL AHU INSTALLATION DETAIL
NOT TO SCALE

NOTES:

1. LOCATE TRAPS SO AS TO BE ACCESSIBLE FOR CLEANING.
2. "RUNNING" TYPE TRAPS SHALL BE UNACCEPTABLE.
3. H = FAN STATIC PRESSURE (IN. W.C.) + 1 IN.
4. J = H/2 (MINIMUM)

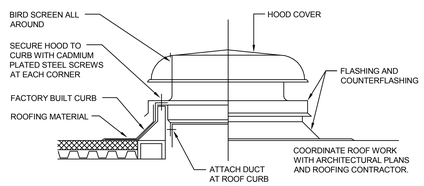


9 / M0.002 CONDENSATE DRAIN TRAP INSTALLATION DETAIL
NOT TO SCALE

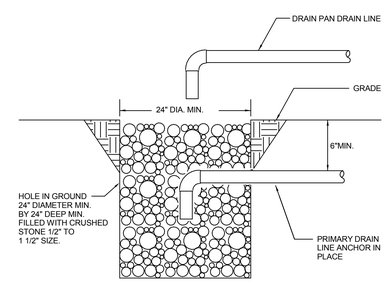
TABLE 4-1 RECTANGULAR DUCT HANGERS MINIMUM SIZE								
MAXIMUM HALF OF DUCT PERIMETER	PAIR AT 10 FT. SPACING		PAIR AT 8 FT. SPACING		PAIR AT 5 FT. SPACING		PAIR AT 4FT. SPACING	
	STRAP	WIRE/ROD	STRAP	WIRE/ROD	STRAP	WIRE/ROD	STRAP	WIRE/ROD
P/2= 30"	1" X 22 GA.	10 GA. (.135")	1" X 22 GA.	10 GA. (.135")	1" X 22 GA.	12 GA. (.106")	1" X 22 GA.	12 GA. (.106")
P/2= 72"	1" X 18 GA.	3/8"	1" X 20 GA.	1/4"	1" X 22 GA.	1/4"	1" X 22 GA.	1/4"
P/2= 96"	1" X 16 GA.	3/8"	1" X 18 GA.	3/8"	1" X 20 GA.	3/8"	1" X 22 GA.	1/4"
P/2= 120"	1-1/2"X16GA.	1/2"	1" X 16 GA.	3/8"	1" X 18 GA.	3/8"	1" X 20 GA.	1/4"
P/2= 168"	1-1/2"X16GA.	1/2"	1-1/2"X16GA.	1/2"	1" X 16 GA.	3/8"	1" X 18 GA.	3/8"
P/2= 192"	NOT GIVEN	1/2"	1-1/2"X16GA.	1/2"	1" X 16 GA.	3/8"	1" X 16 GA.	3/8"
P/2=193" UP	SPECIAL ANALYSIS REQUIRED							

WHEN STRAPS ARE LAP JOINED USE THESE MINIMUM FASTENERS	SINGLE HANGER MAXIMUM ALLOWABLE LOAD	
	STRAP	WIRE OR ROD (DIA.)
1" X 18,20,22 GA. - TWO #10 OR ONE 1/4" BOLT 1" X 16 GA. - TWO 1/4" DIA. 1-1/2" X 16 GA. -TWO 3/8" DIA. PLACE FASTENERS IN SERIES, NOT SIDE BY SIDE.	1" X 22 GA. - 260 LBS. 1" X 20 GA. - 320 LBS. 1" X 18 GA. - 420 LBS. 1" X 16 GA. - 700 LBS. 1-1/2 " X 16 GA. - 1100 LBS.	1/4"-270 LBS. 3/8"-680 LBS. 1/2"-1250 LBS. 5/8"-2000 LBS. 3/4"-3000 LBS.

5 / M0.002 SUPPORT DETAIL
NOT TO SCALE



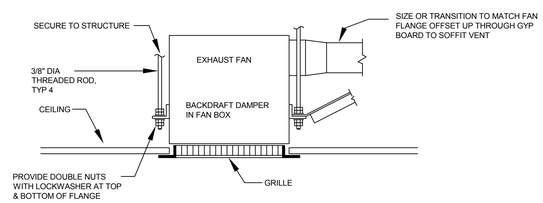
7 / M0.002 EXHAUST HOOD INSTALLATION DETAIL
NOT TO SCALE



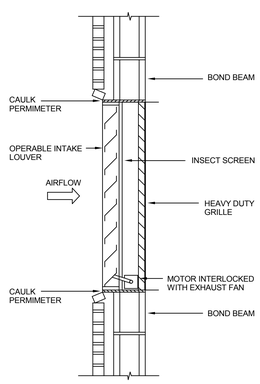
NOTES:

1. COVER WITH LANDSCAPE AFTER INSPECTION IS COMPLETED.
2. CONTRACTOR SHALL VERIFY THAT THE PRIMARY CONDENSATE DRAIN LINE IS IN WORKING ORDER BY RUNNING WATER DOWN THRU THE DRAIN LINE FROM THE POINT OF THE COIL CONNECTION PRIOR TO BURIAL.
3. PRIMARY CONDENSATE SHALL BE ROUTED BELOW GROUND TO DRAIN PIT AS SHOWN.
4. DRAIN PAN DRAIN LINE SHALL TERMINATE 6" ABOVE FINISHED GRADE OVER TOP OF THE DRAIN PIT.

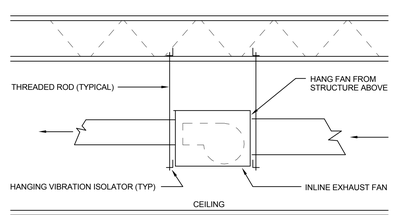
12 / M0.002 DRAIN PIT DETAIL
NOT TO SCALE



13 / M0.002 TYPICAL EXHAUST FAN DETAIL
NOT TO SCALE



10 / M0.002 INTAKE LOUVER INSTALLATION DETAIL
NOT TO SCALE



11 / M0.002 IN-LINE EXHAUST INSTALLATION DETAIL1
NOT TO SCALE

Town of Hilton Head Island
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CONSTRUCTION DOCUMENTS FOR
COLIGNY PARK
Hilton Head Island, South Carolina

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PROFESSIONAL STAMPS:

#	REVISION	DATE	BY
2	ADDENDUM 2	07/29/16	

DATE 06/30/2016
PROJECT NUMBER 01-16002
SHEET TITLE HVAC DETAILS

DWG CONSULTING ENGINEERS listen.consult.sustain
Wood+Partners Inc. WPi Landscape Architects Land Planners
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DWG Project No. 15008-00

SHEET NUMBER
M0.002

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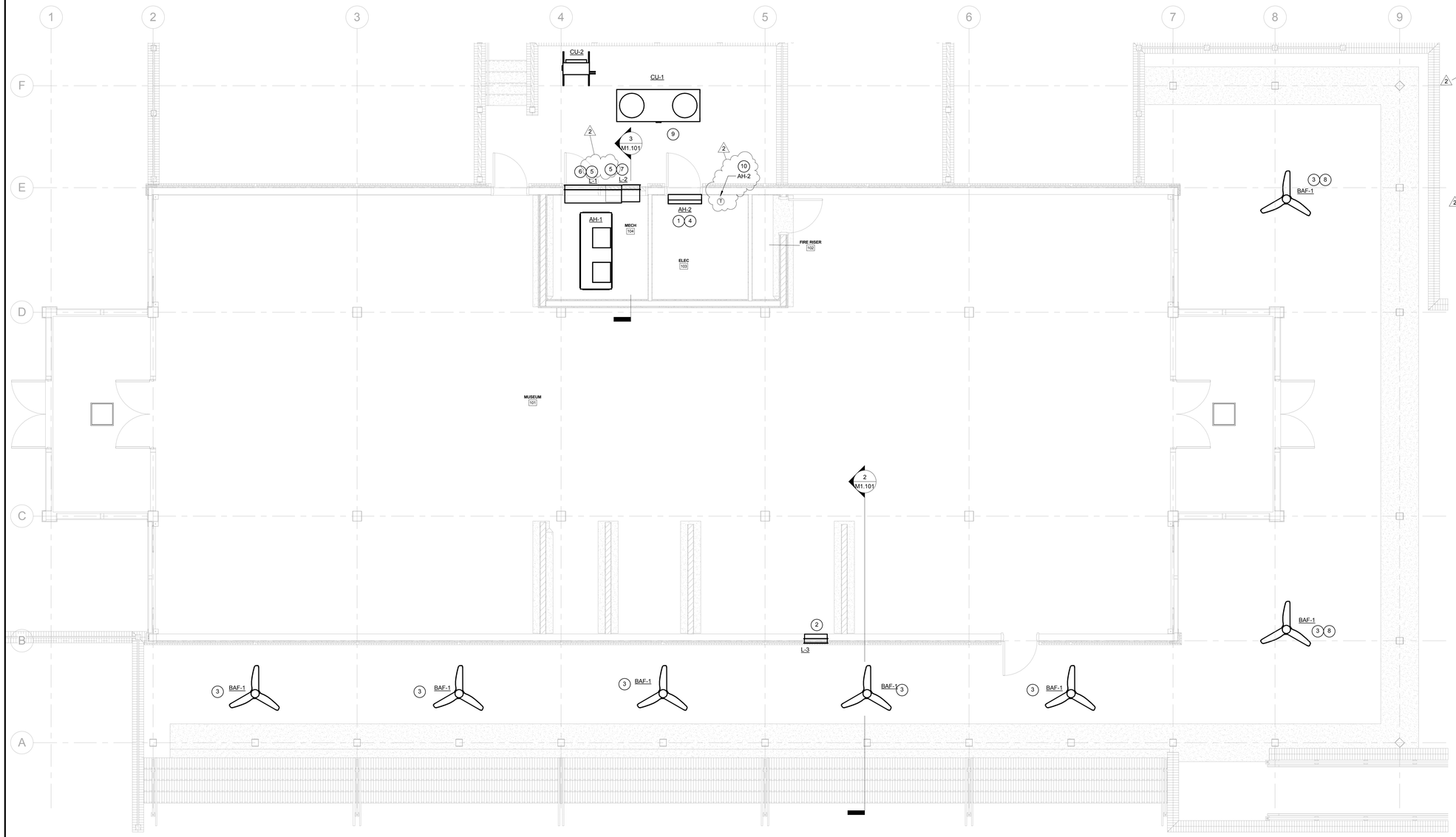
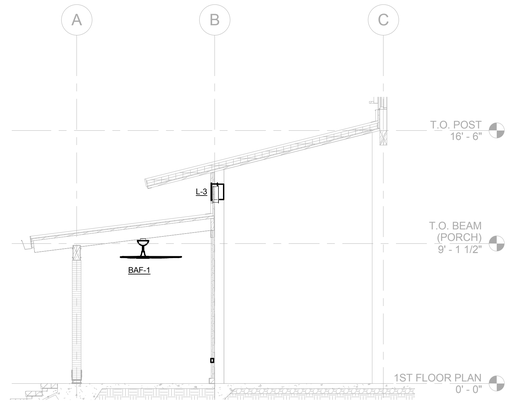
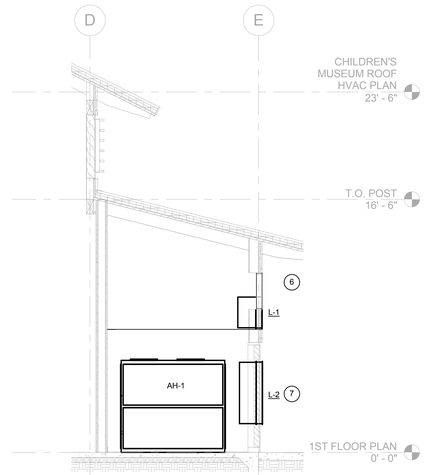


1 M1.101 CHILDREN'S MUSEUM HVAC PLAN
SCALE: 1/4" = 1'-0"



2 M1.101 EXHAUST DUCT SECTION
SCALE: 1/4" = 1'-0"



3 M1.101 AHU-1 SECTION
SCALE: 1/4" = 1'-0"

KEY NOTES

1. TERMINATE CONDENSATE LINES FOR AH-2 AT FLOOR DRAIN IN MECHANICAL ROOM. PROVIDE CONDENSATE PUMP.
2. SIDEWALL LOUVER ABOVE LOW ROOF. SEE SECTION.
3. FAN SHALL BE 52" HAIKU L-SERIES BIG ASS FAN RATED FOR OUTDOOR COVERED USE. FAN SHALL BE MOUNTED SO THAT THE BLADES ARE 9' - 0" AFF. PROVIDE FANS WITH WALL MOUNTED SPEED CONTROLLER. SEE ELECTRICAL PLANS FOR LOCATION.
4. MOUNT AIR HANDLER ABOVE DOOR.
5. PROVIDE INSULATED PLENUM ON BACK OF LOUVER FOR FUTURE DUCT CONNECTION.
6. MOUNT LOUVER ABOVE DOOR AT 11'-0" AFF. SEE SECTION.
7. MOUNT LOUVER BESIDE DOOR.
8. MOUNT FAN ON BOTTOM OF 6"x16" GIRDER.
9. COVER REFRIGERANT LINES WITH 20 GUAGE SHEET METAL FOR PROTECTION, AND SUPPORT ON CONTINUOUS UNSITRUT. SEE DETAIL.
10. THERMOSTAT SHALL BE LOCATED ON ISOLATION BASE SO AS NOT TO BE AFFECTED BY TEMPERATURE CONDUCTION THROUGH WALL.

GENERAL NOTES

Town of Hilton Head Island
One Town Center Court
Hilton Head Island, SC 29928

CONSTRUCTION DOCUMENTS
FOR
COLIGNY PARK
Hilton Head Island, South Carolina

DRAWN BY:
EAG

CHECKED BY:
MAU

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2	ADDENDUM 2	07/29/16	

DATE
06/30/2016

PROJECT NUMBER
01-16002

SHEET TITLE
CHILDREN'S MUSEUM HVAC PLAN

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DWG Project No. 15008-00

SHEET NUMBER
M1.101

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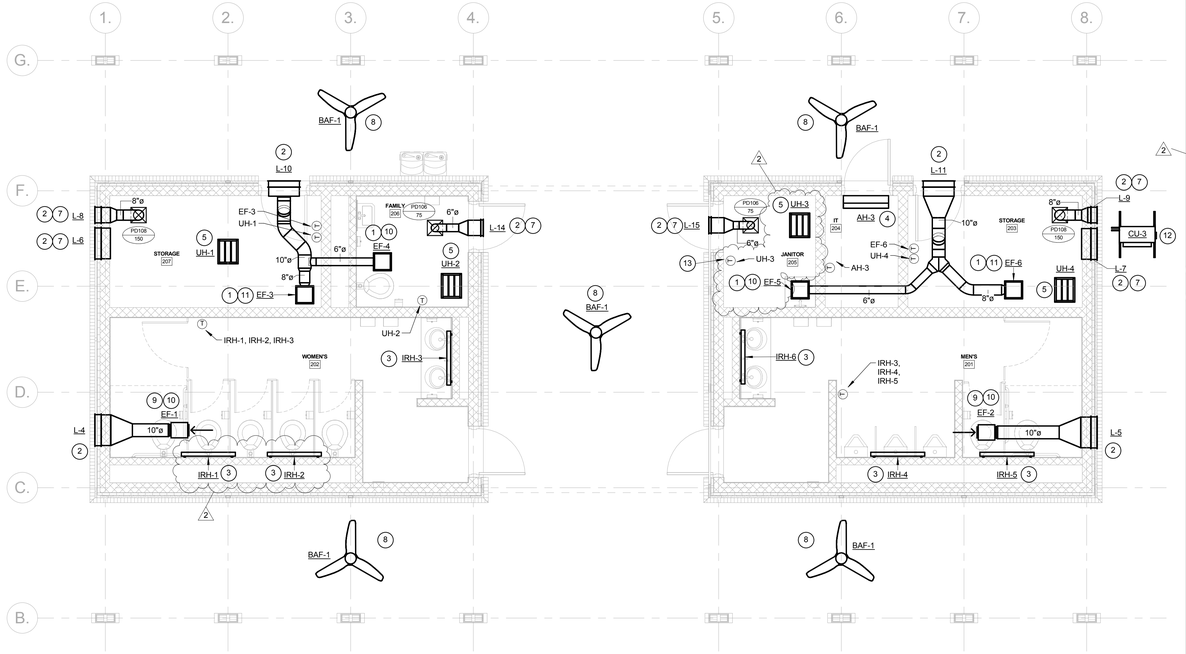
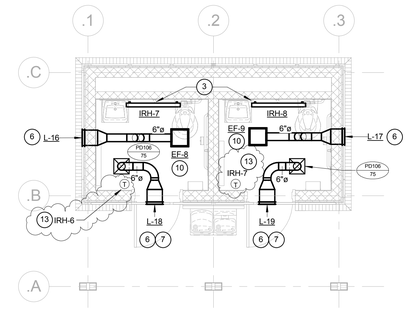


1 M2.101 BATHROOM MAIN - HVAC PLAN
SCALE: 1/4" = 1'-0"



2 M2.101 BATHROOM POOL - HVAC PLAN
SCALE: 1/4" = 1'-0"

KEY NOTES

1. EXHAUST DUCT UP TO SIDEWALL EXHAUST LOUVER.
2. MOUNT LOUVER 10' -0" AFF.
3. MOUNT INFRARED HEATER ON WALL AT 9' - 0" AFF.
4. ROUTE CONDENSATE TO FLOOR DRAIN IN ADJACENT JANITORS CLOSET.
5. CEILING SURFACE MOUNTED UNIT HEATER CONTROLED BY THERMOSTAT IN ROOM.
6. MOUNT LOUVER AT 9'-6" AFF.
7. PROVIDE BAROMETRIC BACKDRAFT DAMPER IN LOUVER.
8. FAN SHALL BE 5' - 0" HAIKU BIG ASS FAN RATED FOR OUTDOOR USE. FAN SHALL BE MOUNTED SO THAT THE BLADES ARE 9' - 0" AFF. PROVIDE FANS WITH WALL MOUNTED SPEED CONTROLLER. SEE ELECTRICAL PLANS FOR LOCATION.
9. HANG EXHAUST FAN FROM STRUCTURE 10'-0" AFF. EXPOSED DUCTWORK TO BE SPIRAL.
10. EXHAUST FAN TO BE TIED INTO TIME CLOCK FOR SPACE.
11. EXHAUST FAN TO BE TIED INTO THERMOSTAT IN SPACE.
12. CONDENSING UNIT TO BE MOUNTED ON 6" THICK CONRETE HOUSEKEEPING PAD. COVER REFRIGERANT LINES WITH 20 GUAGE SHEET METAL FOR PROTECTION, AND SUPPORT ON CONTINUOUS UNSITRUT. SEE DETAIL.
13. THERMOSTAT SHALL BE LOCATED ON ISOLATION BASE SO AS NOT TO BE AFFECTED BY TEMPERATURE CONDUCTION THROUGH WALL.

GENERAL NOTES

Town of Hilton Head Island
One Town Center Court
Hilton Head Island, SC 29928

CONSTRUCTION DOCUMENTS
FOR
COLIGNY PARK
Hilton Head Island, South Carolina

DRAWN BY:
EAG

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#	REVISION	DATE	BY
1	ADDENDUM 2	07/29/16	

DATE
06/30/2016

PROJECT NUMBER
01-16002

SHEET TITLE
RESTROOM HVAC PLANS

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DWG Project No. 15008-00

SHEET NUMBER
M2.101

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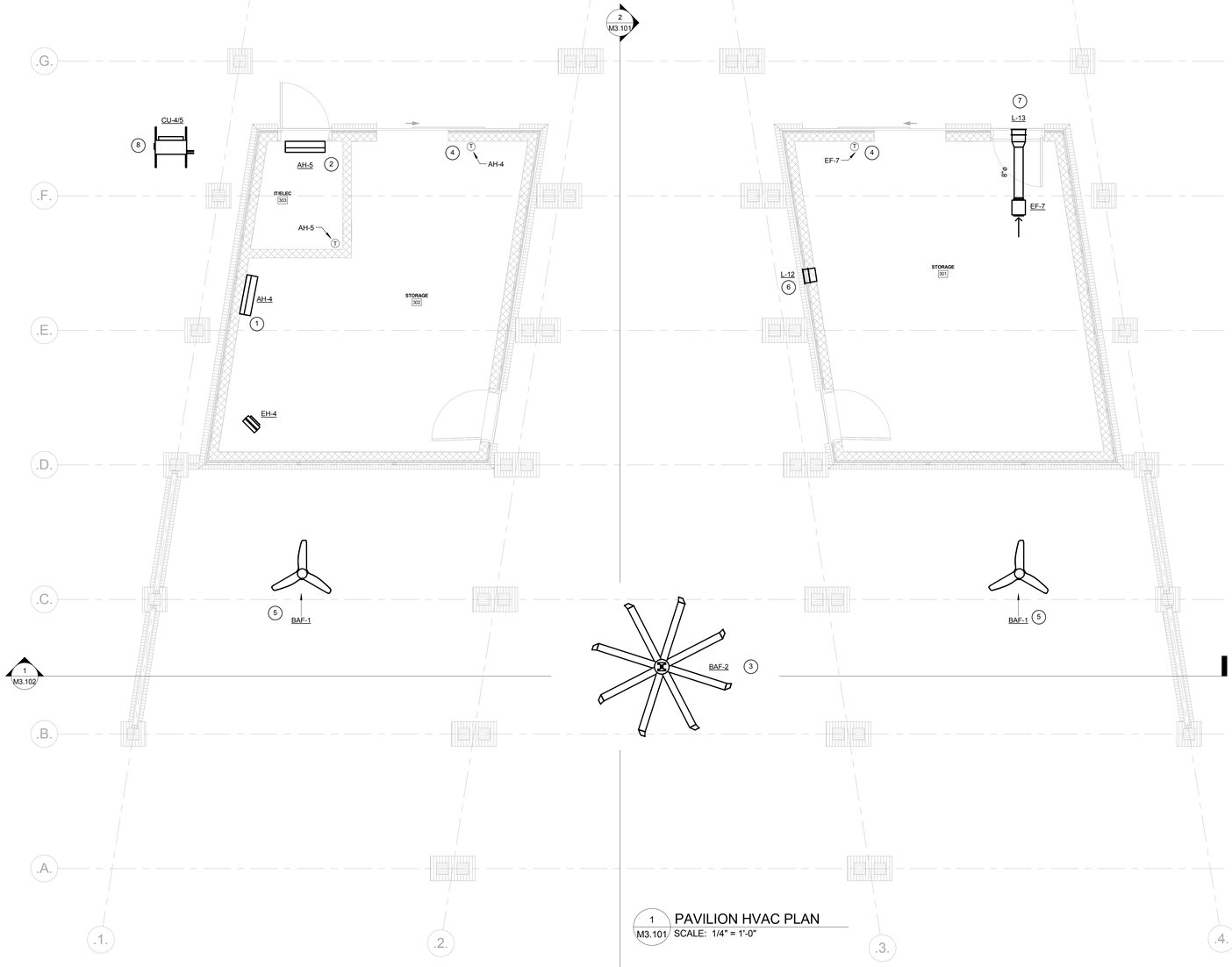
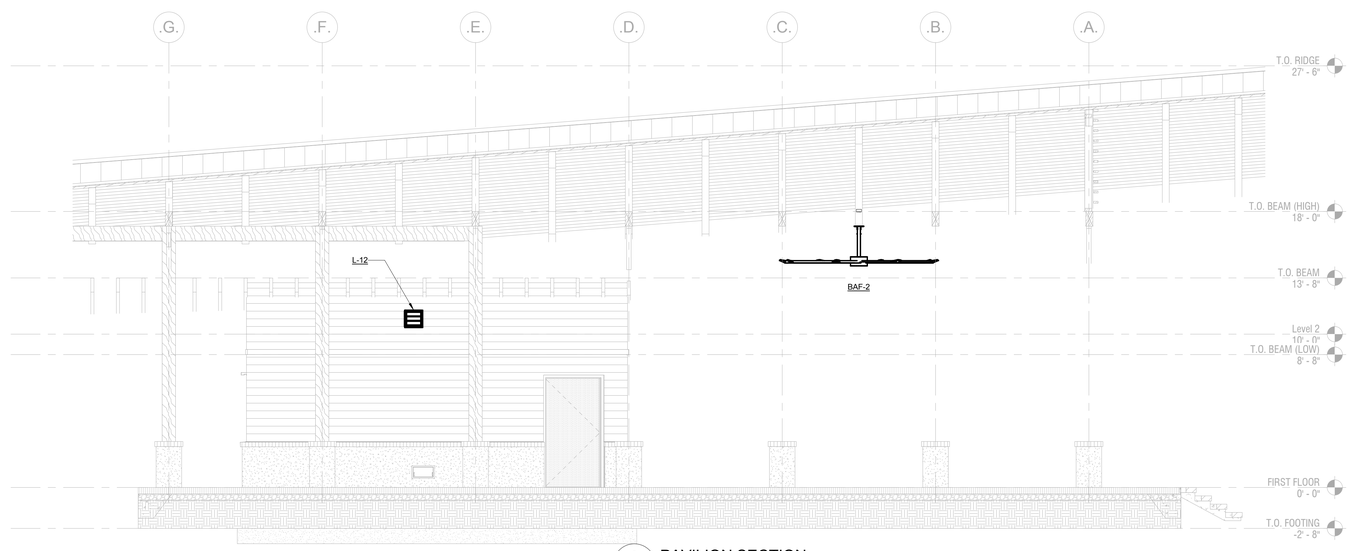


1 M3.101 PAVILION HVAC PLAN
SCALE: 1/4" = 1'-0"



2 M3.101 PAVILION SECTION
SCALE: 1/4" = 1'-0"

KEY NOTES

1. ROUTE CONDENSATE TO FLOOR DRAIN IN ROOM.
2. ROUTE CONDENSATE TO FLOOR DRAIN IN ADJACENT STORAGE ROOM.
3. FAN TO BE A 10' FOOT ESSENCE BIG ASS FAN RATED FOR OUTDOOR USE. FAN SHALL BE MOUNTED SO THAT THE BLADES ARE 14' - 6" AFF. PROVIDE FAN WITH WALL MOUNTED SPEED CONTROLLER. SEE ELECTRICAL PLANS FOR LOCATION.
4. THERMOSTAT SHALL BE LOCATED ON ISOLATION BASE SO AS NOT TO BE AFFECTED BY TEMPERATURE CONDUCTION THROUGH WALL.
5. FAN SHALL BE 5' - 0" HAIKU BIG ASS FAN RATED FOR OUTDOOR USE. FAN SHALL BE MOUNTED SO THAT THE BLADES ARE 9' - 0" AFF. PROVIDE FANS WITH WALL MOUNTED SPEED CONTROLLER. SEE ELECTRICAL PLANS FOR LOCATION.
6. MOUNT LOUVER 11'-0" AFF. PROVIDE BAROMETRIC RELIEF DAMPER.
7. MOUNT LOUVER 8'-6" AFF.
8. CONDENSING UNIT TO BE MOUNTED ON 6" THICK CONRETE HOUSEKEEPING PAD. COVER REFRIGERANT LINES WITH 20 GUAGE SHEET METAL FOR PROTECTION, AND SUPPORT ON CONTINUOUS UNSITRUT. SEE DETAIL.

GENERAL NOTES

Town of Hilton Head Island
One Town Center Court
Hilton Head Island, SC 29928

CONSTRUCTION DOCUMENTS
FOR
COLIGNY PARK
Hilton Head Island, South Carolina

DRAWN BY:
EAG

CHECKED BY:
MAU

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PROFESSIONAL STAMPS:

#	REVISION	DATE	BY
1	ADDENDUM 2	07/29/16	

DATE
06/30/2016

PROJECT NUMBER
01-16002

SHEET TITLE
PAVILION HVAC PLAN & SECTIONS

DWG CONSULTING ENGINEERS
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Wood+Partners Inc. WiPi
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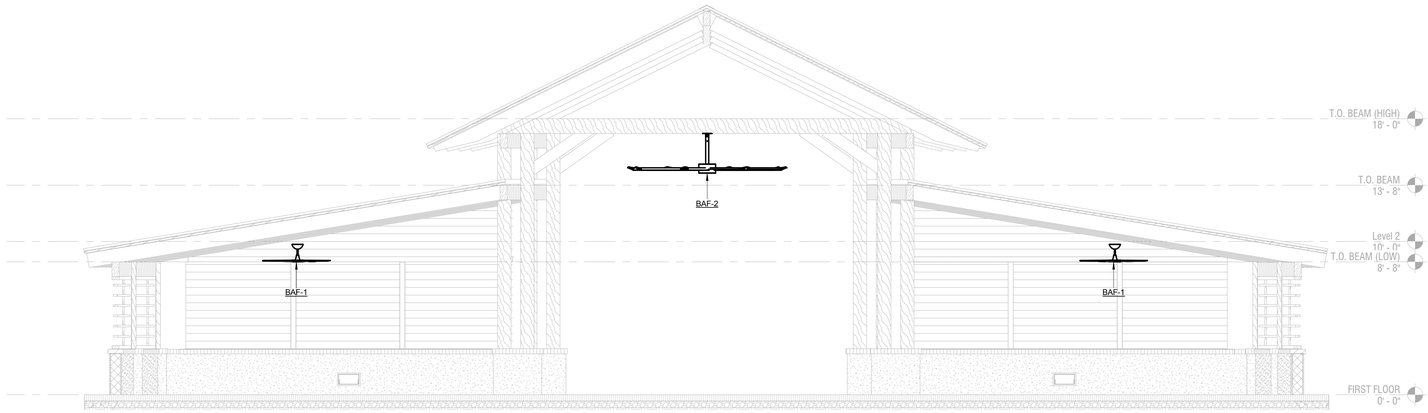
Land Planners
PO Box 23949 ■ Hilton Head Island, SC 29925
843.681.6618 ■ Fax 843.681.7086 ■ www.woodandpartners.com

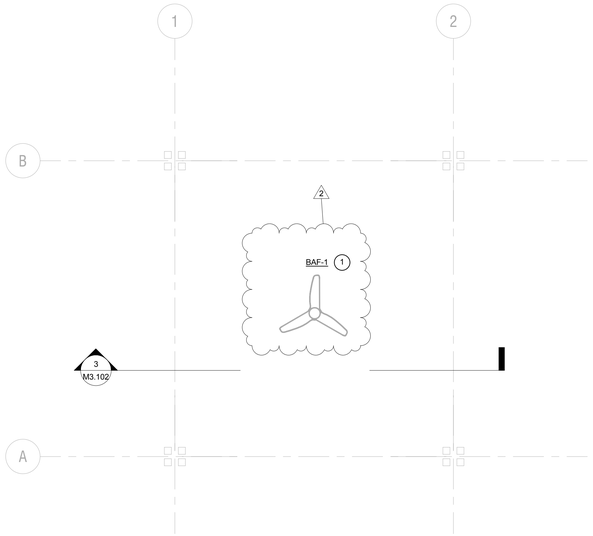
DWG Project No. 15008-00

SHEET NUMBER
M3.101

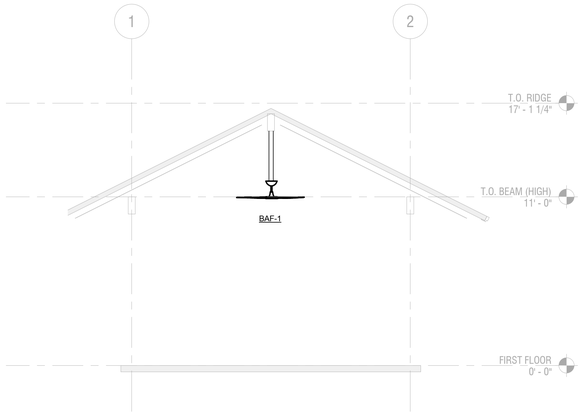
C:\Users\RGorney\Documents\15008 - WTS TOHHI - MEP - 2015_RGorney.rvt



1 / M3.102 PAVILION FAN SECTION
SCALE: 1/4" = 1'-0"



2 / M3.102 POND PAVILION HVAC PLAN
SCALE: 1/4" = 1'-0"



3 / M3.102 POND PAVILION SECTION
SCALE: 1/4" = 1'-0"

KEY NOTES

1. BAF-1 WILL BE A 5 FT HAIKU BIG ASS FAN RATED FOR OUTDOOR USE. MOUNT FAN SO THAT BLADES ARE 11' - 0" AFF. PROVIDE FAN WITH WALL MOUNTED SPEED CONTROLLER. SEE ELECTRICAL PLANS FOR LOCATION.

2

GENERAL NOTES

Town of Hilton Head Island
One Town Center Court
Hilton Head Island, SC 29928

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