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GENERAL CONTRACTOR
(CONTRACTOR NAME), TITLE
COMPANY NAME
STREET ADDRESS
CITY, STATE ZIP
EMAIL: ***@***.com
PHONE: (XXX) XXX-XXXX
FAX: (XXX) XXX-XXXX

GENERAL NOTES

1. THIS PROJECT SHALL INCORPORATE ALL ASPECTS OF THE AMERICAN INSTITUTE OF ARCHITECTS A201 "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION". CONTRACTORS SHALL BECOME FAMILIAR WITH OF THIS DOCUMENT AND APPLY TO CONSTRUCTION ACTIVITIES.
2. THESE DRAWINGS ARE INTENDED TO INDICATE COMPLETED SYSTEMS AND CONSTRUCTION. THE CONTRACTOR AND SUBCONTRACTOR SHALL BE RESPONSIBLETO DETERMINE THAT ALL SYSTEMS ARE BUDGETED AND INSTALLED CORRECTLY. THE OWNER SHOULD BE NOTIFIED OF ANY INCOMPLETE ASPECTS OF THIS PROJECT PRIOR TO CONTRACT.
3. WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER PRODUCING QUALITY END PRODUCTS TYPICAL OF SIMILAR CONSTRUCTION USING SIMILAR MATERIALS IN SIMILAR CONDITIONS. MANUFACTURER OR SUPPLIER GUIDELINES SHALL BE OBSERVED IN THE ABSENCE OF CONTRARY INFORMATION FOR THE INSTALLATION, ASSEMBLY, OR PROVISION OF MATERIALS OR EQUIPMENT.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS, WORKMAN, AND ANY ACTIVITY ON THE SITE SUBJECT TO LOSS OR DAMAGE FOR ANY REASONS UPON EXECUTION OF THE CONTRACT. IMMEDIATE REPARATIONS WILL BE REQUIRED SO AS NOT TO DELAY ANY PROJECT SCHEDULES.
5. THE SITE SHALL BE MAINTAINED IN A CLEAN AND SAFE CONDITION FREE OF DEBRIS AND RUBBISH THROUGH DAILY CLEANING AND DEPOSITS OF WASTE INTO CONTRACTOR PROVIDED CONTAINER.
6. CONTRACTOR SHALL CONFORM TO ALL GOVERNMENTAL SAFETY STANDARDS AND WORKING CONDITIONS AT ALL TIMES.
7. ARCHITECT SHALL NOT BEAR THE COSTS FOR GOVERNMENTAL ASSESSED TAXES, FEES, PERMITS, INSPECTIONS, OR OTHER COSTS.
8. CONTRACTORS SHALL COORDINATE WORK BETWEEN SUBCONTRACTORS AND IDENTIFY ALL ITEMS AND WORK WHICH ARE TO BE PROVIDED UNDER THE CONTRACT. THE CONTRACTORS SHALL PROVIDE ALL MATERIALS, LABOR, AND EQUIPMENT REQUIRED FOR COMPLETE CONSTRUCTIONS ACCORDING TO THE INTENT OF THESE DOCUMENTS.
9. ALL DISCREPANCIES IN THESE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER OR ARCHITECT IN WRITING PRIOR TO COMMENCEMENT OF WORK.
10. ALL WORK WILL BE PERFORMED IN STRICT COMPLIANCE WITH CODES, ORDINANCES, AND LAWS OF THE VARIOUS GOVERNMENTAL JURISDICTIONS RELATED TO THIS PROPERTY. IF THE CONTRACTOR OR SUBCONTRACTORS OBSERVES THAT PORTIONS OF THESE DOCUMENTS ARE NOT COMPLIANT, THE ARCHITECT MUST BE NOTIFIED PRIOR TO EXECUTION OF A CONSTRUCTION CONTRACT.
11. DO NO RELY ON SCALE OF DRAWINGS - VERIFY UNCLEAR DIMENSIONS WITH ARCHITECT.
12. ALL DIMENSIONS ARE TAKEN FROM FINISH FACE UNLESS NOTED OTHERWISE.
13. ALL DOORS ARE CENTERED OR 4" AWAY FROM HINGE SIDE WALL UNLESS NOTED OTHERWISE.
14. ALL MATERIALS, COMPONENTS, FINISHES, AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS OR STANDARD INDUSTRY PRACTICES.
15. CONTRACTOR SHALL VERIFY ALL LOCATIONS FOR TOILETS, VENTS, DUCTS, SLEEVES, CHASES, AND PENETRATIONS OF ROOF.

LAKE COUNTY

FIRE STATION NO.39
24815 WALLICK ROAD, SORRENTO, FL 32776

DRAWING SYMBOLS

- 1 — COLUMN BUBBLE
- A — WALL TYPE TAG
- REVISIONS
- SECTION # / SHEET # (A / 8-2) — SECTION SYMBOLS
- ROOM # / DOOR # (100) — DOOR TAG
- ELEVATION # / SHEET # (4 1 2 2-1 3) — INTERIOR ELEVATION SYMBOLS
- W1 — WINDOW TAG
- ROOM 100 — ROOM TAG

MATERIAL SYMBOLS

- BRICK
- CONCRETE BLOCK
- CONCRETE
- SAND/PLASTER
- BATT INSULATION
- STRUCTURAL STEEL
- GRANULAR FILL
- EARTH
- RIGID INSULATION
- FINISHED WOOD
- FRAMING WOOD
- ACOUSTICAL TILE / PANEL

ALL SYMBOLS MAY NOT BE USED ON THIS PROJECT

ABBREVIATIONS

ACT - ACOUSTIC CEILING TILE	NIC - NOT IN CONTRACT
AFF - ABOVE FINISH FLOOR	NTS - NOT TO SCALE
CG - CORNER GUARD	OC - ON CENTER
CMU - CONCRETE MASONRY UNIT	UNO - UNLESS NOTED OTHERWISE
CJ - CONTROL JOINT	SF - SQUARE FEET
CT - CERAMIC TILE	TYP - TYPICAL
DS - DOWN SPOUT	TOF - TOP OF FOOTING/FDTN
FF - FINISHED FLOOR ELEVATION	TOS - TOP OF STEEL
FD - FLOOR DRAIN	TOC - TOP OF CURB
FE - FIRE EXTINGUISHER	TOM - TOP OF MASONRY
GALV - GALVANIZED	VIF - VERIFY IN FIELD
GYP BD - GYPSUM BOARD	VCT - VINYL COMPOSITION TILE
MO - MASONRY OPENING	WH - WALL HYDRANT
UNO - UNLESS NOTED OTHERWISE	WWF - WELDED WIRE FABRIC

ALL ABBREVIATIONS MAY NOT BE USED ON THIS PROJECT

SITE LOCATION MAP



LAKE COUNTY BOARD OF COUNTY COMMISSIONERS

DISTRICT 1	DISTRICT 2	DISTRICT 3
TIMOTHY I. SULLIVAN	SEAN PARKS	WENDY BREEDEN
DISTRICT 4	**DISTRICT 5**	
LESLIE CAMPIONE	JOSH BLAKE	

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C.2 CODE DATA DETAILS
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C.5 FLORIDA PRODUCT APPROVALS
C.6 FLORIDA PRODUCT APPROVALS
C.7 FLORIDA PRODUCT APPROVALS
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C.9 FLORIDA PRODUCT APPROVALS

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1.2 DEMOLITION AND EROSION CONTROL PLAN
1.3 SITE PLAN
1.4 GRADING AND DRAINAGE PLAN
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E-401 ELECTRICAL RISER & ELECTRICAL SCHEDULES
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NO.	DESCRIPTION	DATE

STATE OF FLORIDA — JOHN P. ADAMS — AR95282 — REGISTERED ARCHITECT

John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
Ethan J. Hine, AIA
Jennifer Zaffuto, AIA, NCARB, MPA
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KTH ARCHITECTS

PRICING SET

LAKE COUNTY
FIRE STATION NO.39
COVER SHEET
24815 WALLICK ROAD, SORRENTO, FL 32776

18104A

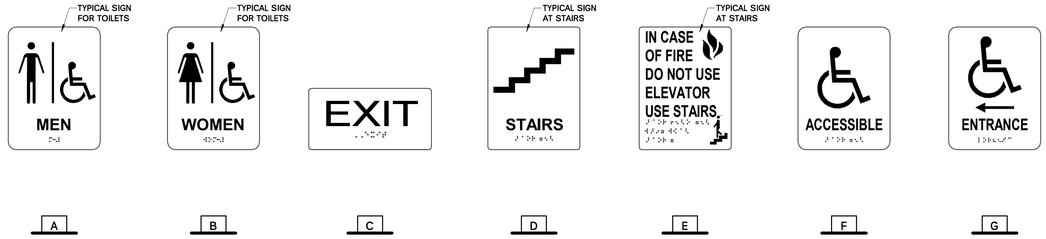
JANUARY 31, 2020

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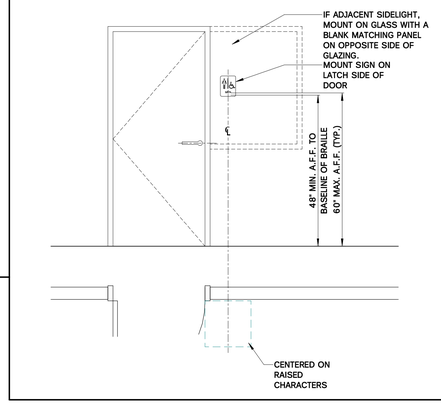
SIGNAGE DETAILS

SCALE: 3" = 1'-0"



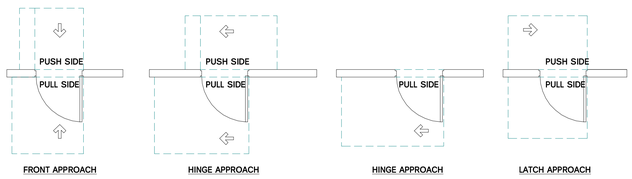
SIGN MOUNTING LOCATION

SCALE: 1/2" = 1'-0"



ADA-DOOR CLEARANCE

SCALE: 1/4" = 1'-0"

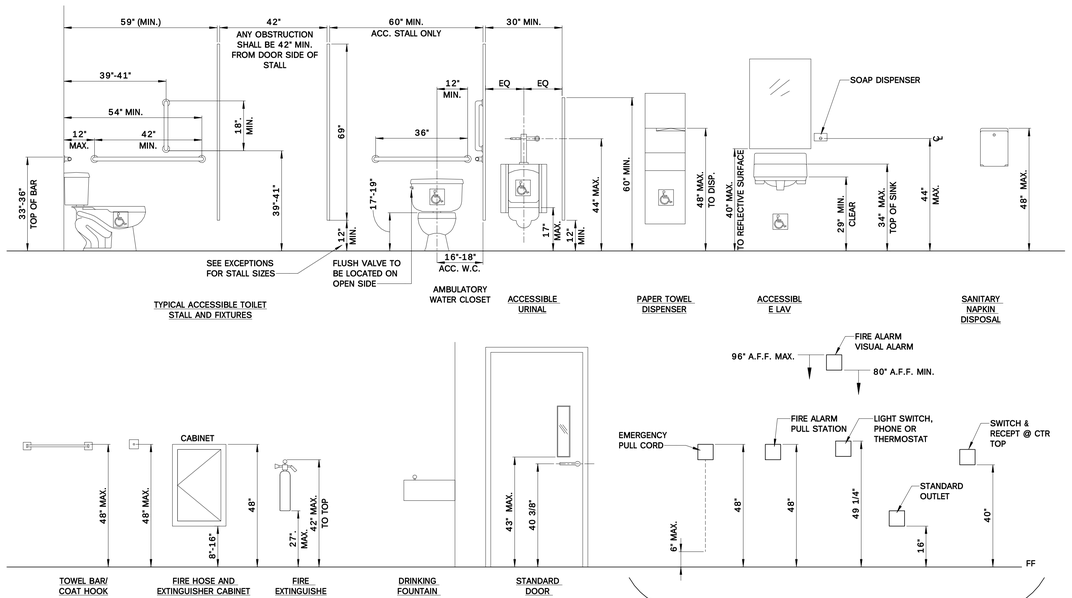


MANEUVERING CLEARANCE AT MANUAL SWINGING DOOR

SCALE: 1/4" = 1'-0"

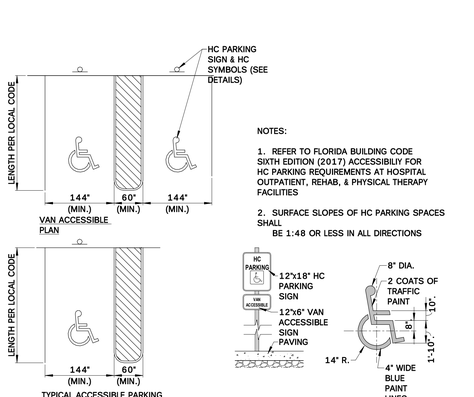
TYPICAL MOUNTING HEIGHTS

SCALE: 1/2" = 1'-0"



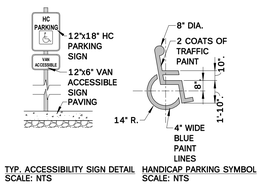
H.C. PARKING

SCALE: 3/32" = 1'-0"



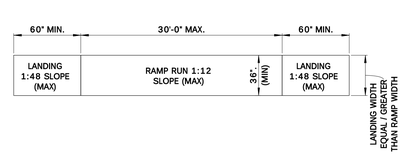
NOTES:

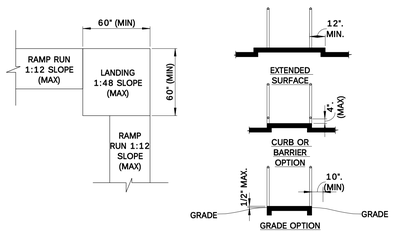
1. REFER TO FLORIDA BUILDING CODE SIXTH EDITION (2017) ACCESSIBILIY FOR HC PARKING REQUIREMENTS AT HOSPITAL OUTPATIENT, REHAB, & PHYSICAL THERAPY FACILITIES
2. SURFACE SLOPES OF HC PARKING SPACES SHALL BE 1:48 OR LESS IN ALL DIRECTIONS



RAMPS AND STAIRS

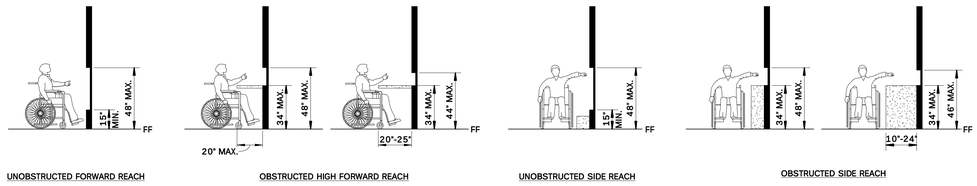
SCALE: 3/32" = 1'-0"





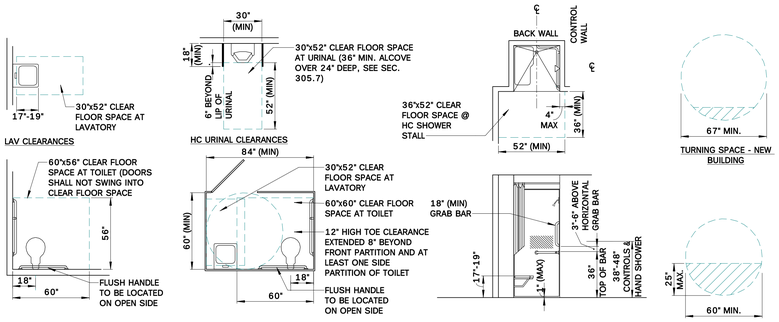
TYPICAL REACH RANGES

SCALE: 1/4" = 1'-0"



TYPICAL CLEAR SPACE

SCALE: 1/4" = 1'-0"



ACCESSIBILITY NOTES

1. THESE DIMENSIONS ARE REQUIREMENTS FOR MANEUVERING AREA AND FOR THE LOCATION OF FIXTURES, DEVICES, AND TOILET ACCESSORIES. CONFLICTS WITH THE DRAWING DETAILS OR DIMENSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.
2. NOT ALL OF THESE DIMENSIONS OR DETAILS MAY BE APPLICABLE TO THIS PROJECT. THIS INFORMATION IS PROVIDED FOR REFERENCE PURPOSES.
3. IF NOT DETERMINED OTHERWISE, STANDARD ADA 'REACH RANGE' IS 15"-48".
4. ALL PIPING FOR ACCESSIBLE LAVS, INCLUDING DRAIN PIPING UNDER COUNTER TO BE INSULATED.
5. ACCESSIBLE SIGNAGE SHALL HAVE 18" WIDE x 18" DEEP CLEAR FLOOR SPACE (SEE ANSI A117.1-2009 FOR ALTERNATE SIGN LOCATION).
6. DENOTES FIXTURES TO MEET THE ACCESSIBILITY REQUIREMENTS OF PERSONS WITH DISABILITIES.
7. HORIZONTAL GRAB BARS SHALL BE PROVIDED ACROSS THE CONTROL WALL & ON THE BACK WALL TO A POINT 18" FROM CONTROL WALL OF SHOWER.
8. VERTICAL GRAB BAR, 18" (MIN) IN LENGTH, SHALL BE PROVIDED ON THE CONTROL END WALL 3" TO 6" ABV THE HORIZONTAL GRAB BAR & 4" (MAX) INWARD FROM FRONT EDGE OF SHOWER
9. RAMP & LANDING CROSS SLOPES 1:48 MAX.
10. HANDRAILS REQ. AT RAMPS W/ 6" OR MORE RISE.
11. EDGE PROJECT AT RAMPS SHALL BE REQUIRED WHERE DROP-OFF ALONG EDGE IS GREATER THAN 1/2" WITHIN 10" OF RAMP EDGE.
12. 42" HIGH GUARDRAILS SHALL BE PROVIDED WHERE EDGE DROP-OFF GREATER THAN 30 INCHES.
13. CONTRACTOR TO SUPPLY AND INSTALL SIGNS AS SHOWN ON THIS SHEET, AS NOTED ELSEWHERE ON DRAWINGS, AND AS REQUIRED BY ANY OTHER CODE OR AGENCY HAVING JURISDICTION.

DATE

DESCRIPTION

NO.

STATE OF FLORIDA
JOHN P. ADAMS
AR90282
REGISTERED ARCHITECT

John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
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KTH ARCHITECTS

18104A

LAKE COUNTY
FIRE STATION NO.39
CODE DATA DETAILS

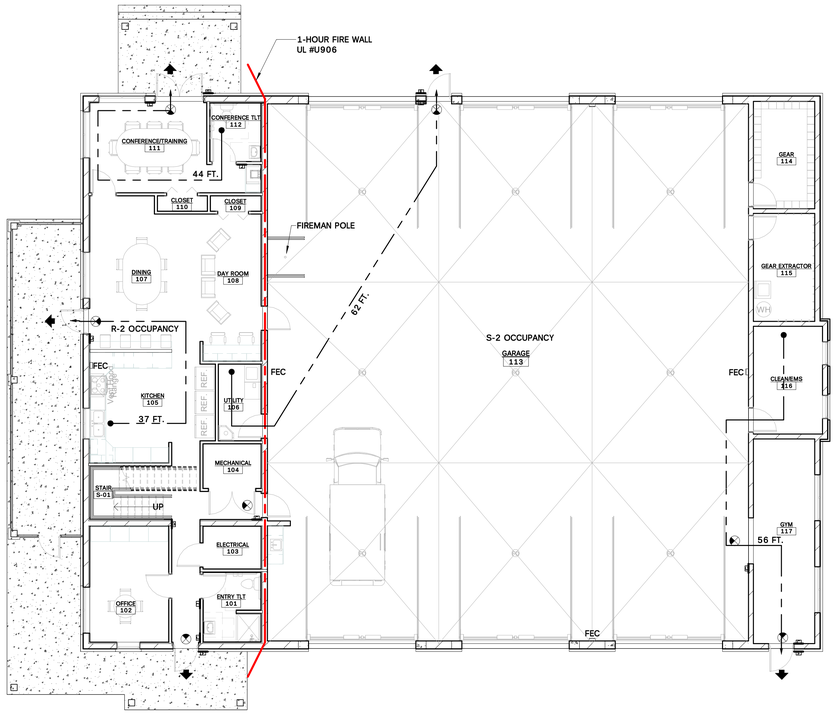
24815 WALLICK ROAD, SORRENTO, FL 32776

JANUARY 31, 2020

PRICING SET

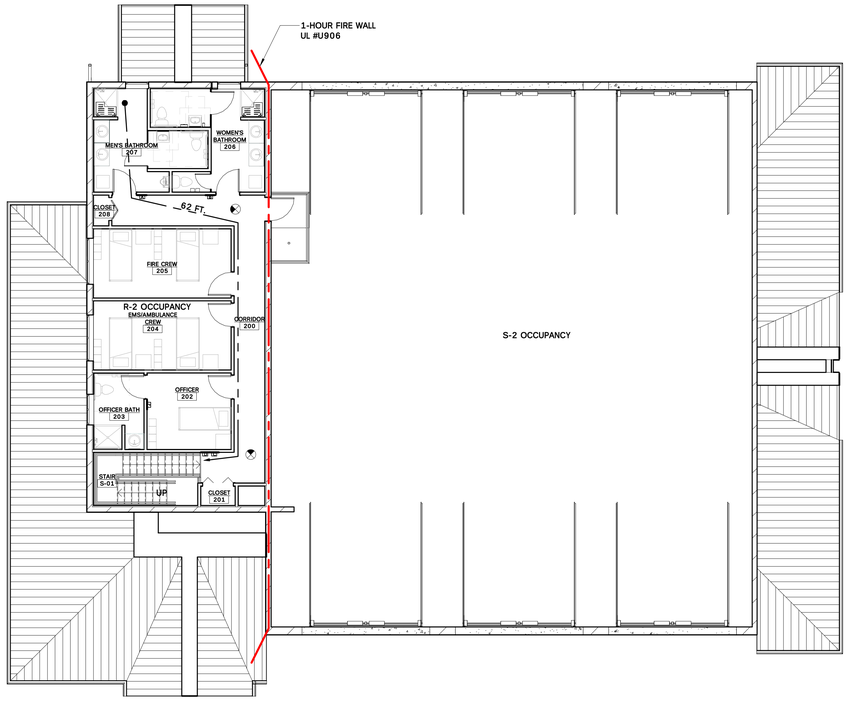
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LIFE SAFETY PLAN - FIRST FLOOR

SCALE: 1/8" = 1'-0"



SECOND FLOOR LIFE SAFETY PLAN

SCALE: 1/8" = 1'-0"

LIFE SAFETY LEGEND

1 HOUR RATED WALL	
EGRESS TRAVEL PATH	
EXIT SIGN	
EXIT DIRECTION	
EXIT DISCHARGE	
EXIT SIGN DIRECTION	
OCCUPANT LOAD	50 OCC.
FIRE EXTINGUISHER	FEC
EMERGENCY LIGHTS	
ACCESSIBLE SIGN TYPE	A — SEE SHEET C-2 FOR SIGNAGE DETAILS

LAKE COUNTY FIRE STATION 39

CODE REVIEW SUMMARY

CODE REQUIREMENTS

FBC SIXTH ADDITION (2017)

DESCRIPTION	SECTION	REQUIREMENTS	PROVIDED	REQUIREMENTS	PROVIDED
USE AND OCCUPANCY CLASSIFICATION	**310.4**	RESIDENTIAL GROUP R-2 - LIVE/WORK UNITS	FIRE STATION BUNK ROOMS, KITCHEN, LIVING AREAS, AND AUXILLARY OFFICE SPACE	S-2	FIRE TRUCK APPARATUS BAYS
SPECIAL DETAIL REQUIREMENTS BASED	**SECTION 419**	LIVE/WORK UNITS			
ON USE AND OCCUPANCY	**419.1.1**	1. THE LIVE/WORK UNIT IS PERMITTED TO BE NOT GREATER THAN 3,000 SQUARE FEET IN AREA;	THE LIVE/WORK OCCUPANCY IS 2,982 SF, INCLUDING BOTH FIRST AND SECOND FLOOR		
		2. THE NONRESIDENTIAL AREA IS PERMITTED TO BE NOT MORE THAN 50 PERCENT OF THE AREA OF	THE NON RESIDENTIAL AREA IS APPROXIMATELY 418 SF, WHICH IS 14% OF THE LIVE/WORK UNIT		
		EACH LIVE/WORK UNIT;			
		3. THE NONRESIDENTIAL AREA FUNCTION SHALL BE LIMITED TO THE FIRST OR MAIN FLOOR ONLY OF	ALL NON RESIDENTIAL FUNCTIONS ARE LOCATED ON THE FIRST (GROUND) FLOOR		
		LIVE/WORK UNIT; AND			
		4. NOT MORE THAN FIVE NONRESIDENTIAL WORKERS OR EMPLOYEES ARE ALLOWED TO OCCUPY THE	ALL WORKERS OR EMPLOYEES USING THE NONRESIDENTIAL AREAS ARE RESIDENTS OF THE LIVE/		
		NONRESIDENTIAL AREA AT ANY ONE TIME.	WORK UNIT		
	419.4	**VERTICAL OPENINGS**. FLOOR OPENINGS BETWEEN FLOOR LEVELS OF A *LIVE/WORK UNIT* ARE	STAIR BETWEEN FIRST AND SECOND FLOOR IS NOT ENCLOSED		
		PERMITTED WITHOUT ENCLOSURE			
	419.5	**FIRE PROTECTION.** THE *LIVE/WORK UNIT* SHALL BE PROVIDED WITH A MONITORED FIRE ALARM SYSTEM	A MONITORED FIRE ALARM SYSTEM AND AUTOMATIC SPRINKLER SYSTEM ARE PROVIDED		
		WHERE REQUIRED BY SECTION 907.2.9 AND AN *AUTOMATIC SPRINKLER SYSTEM* IN ACCORDANCE WITH			
		SECTION 903.2.8			
TYPE OF CONSTRUCTION	**TABLE 601**	TYPE V B		TYPE V B	
		PRIMARY STRUCTURAL FRAME 0 HOURS	0 HOURS	PRIMARY STRUCTURAL FRAME 0 HOURS	0 HOURS
		BEARING WALLS - EXTERIOR 0 HOURS	0 HOURS	BEARING WALLS - EXTERIOR 0 HOURS	0 HOURS
		INTERIOR 0 HOURS	0 HOURS	INTERIOR 0 HOURS	0 HOURS
		NONBEARING WALLS AND PARTITIONS - INTERIOR 0 HOURS	0 HOURS	NONBEARING WALLS AND PARTITIONS - INTERIOR 0 HOURS	0 HOURS
		FLOOR CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS 0 HOURS	0 HOURS	FLOOR CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS 0 HOURS	0 HOURS
		ROOF CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS 0 HOURS	0 HOURS	ROOF CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS 0 HOURS	0 HOURS
BUILDING HEIGHT	**TABLE 504.3**	60 FEET	32 FEET, 6 INCHES	60 FEET	32 FEET, 6 INCHES
	TABLE 504.4	3 STORIES	2 STORIES	3 STORIES	1 STORY
ALLOWABLE AREA	**TABLE 506.2**	21,000 SQUARE FEET	1,678 SQUARE FEET	54,000 SQUARE FEET	5,232 SQUARE FEET
BUILDING SEPARATION	**TABLE 508.4**	ONE-HOUR FIRE-RATED SEPARATION	2 HOUR (UL U906)	ONE-HOUR FIRE-RATED SEPARATION	2 HOUR (UL U906)
CORRIDOR FIRE-RESISTANCE RATING	**TABLE 1020.1**	TYPE R OCCUPANCY = 0.5 HOURS	1 HOUR (UL U314)	TYPE S OCCUPANCY = 0 HOURS	NONE PROVIDED OR REQUIRED
MINIMUM CORRIDOR WIDTH	**TABLE 1020.2**	ANY FACILITY NOT LISTED BELOW = 44 INCHES	44 INCHES	ANY FACILITY NOT LISTED BELOW = 44 INCHES	NONE PROVIDED OR REQUIRED
OCCUPANT LOAD	**TABLE 1004.1.2**	ASSEMBLY WITHOUT FIXED SEATS - UNCONCENTRATED (TABLE AND CHAIRS) 15 NET	FIRST FLOOR CONFERENCE ROOM = 12 OCCUPANTS	ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOM 300 GROSS	18
		RESIDENTIAL 200 GROSS	FIRST FLOOR = 8 OCCUPANTS FIRST FLOOR TOTAL = 20 OCCUPANTS		
			SECOND FLOOR = 7 OCCUPANTS		
STORIES WITH ONE EXIT OR ACCESS TO	**TABLE 1006.3.2**	FIRST STORY ABOVE OR BELOW GRADE PLANE			
ONE EXIT FOR OTHER OCCUPANCIES		R-2 MAXIMUM OCCUPANT LOAD OF SPACE 10	SECOND FLOOR = 7 OCCUPANTS	N/A	
		R-2 MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE 75 FEET	SECOND FLOOR = 62 FEET TO STAIR	N/A	
EXIT ACCESS STAIRWAYS AND RAMPS	**1019.3**	IN OTHER THAN GROUP 1-2 AND 1-3 OCCUPANCIES, FLOOR OPENINGS CONTAINING *EXIT ACCESS*			
		STAIRWAYS OR *RAMPS* THAT DO NOT COMPLY WITH ONE OF THE CONDITIONS LISTED IN THIS SECTION			
		SHALL BE ENCLOSED WITH A SHAFT ENCLOSURE CONSTRUCTED IN ACCORDANCE WITH SECTION 713.			
		1. *EXIT ACCESS STAIRWAYS* AND *RAMPS* THAT SERVE OR ATMOSPHERICALLY COMMUNICATE	EXIT ACCESS STAIRWAY SERVES AND ATMOSPHERICALLY COMMUNICATES BETWEEN THE FIRST AND	N/A	
		BETWEEN ONLY TWO STORIES. SUCH INTERCONNECTED STORIES SHALL NOT BE OPEN TO OTHER	SECOND FLOORS		
		STORIES.			

DATE | NO. | DESCRIPTION

STATE OF FLORIDA — JOHN P. ADAMS — AR90282 — REGISTERED ARCHITECT

John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
Ethan J. Hine, AIA
Jennifer Zaffuto, AIA, NCARB, MPA

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18104A

LAKE COUNTY
FIRE STATION NO.39
LIFE SAFETY PLANS

24815 WALLICK ROAD, SORRENTO, FL 32776

JANUARY 31, 2020

PRICING SET

C.3

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BXUV - Fire Resistance Ratings - ANSI/UL 263

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

Design No. U906

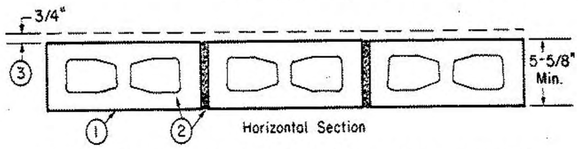
May 19, 2014

Bearing Wall Rating 2 HR.

Nonbearing Wall Rating 2 HR.

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used See Guide BXUV or BXUV7

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



1. **Concrete Blocks*** Nominal 6 by 8 by 16 in, hollow or solid. Various designs. Classification (2 hr).

See **Concrete Blocks** category for list of eligible manufacturers.

ANCHOR CONCRETE PRODUCTS INC

GAGNE & SON CONCRETE BLOCK INC

GLENWOOD MASONRY PRODUCTS

Allowable compressive stress of 57% of max allowable compressive stress in accordance with the empirical design method.

OLDCASTLE APG SOUTH INC, DBA ADAMS PRODUCTS

WESTBROOK CONCRETE BLOCK CO INC

Allowable compressive stress of 75.6% of max allowable compressive stress in accordance with the empirical design method.

2. **Mortar** Blocks laid in full bed of mortar, nom. 3/8 in. thick, of not less than 2-1/4 and not more than 3-1/2 parts of clean sharp sand to 1 part Portland cement (proportioned by volume) and not more than 50 percent hydrated lime (by cement volume). Vertical joints staggered.

3. **Portland Cement Stucco or Gypsum Plaster** Add 1/2 hr to Classification if used. Attached to concrete blocks (Item 1).

4. **Foamed Plastic*** (Optional-Not Shown) 1-1/2 in. thick max, 4 ft wide sheathing attached to concrete blocks (Item 1).

ATLAS ROOFING CORP "EnergyShield Pro Wall Insulation" and "EnergyShield Pro 2 Wall Insulation."

HUNTER PANELS Type Xci-Class A, Xci 286

THE DOW CHEMICAL CO Type Thermax Sheathing, Thermax Light Duty Insulation, Thermax Heavy Duty Insulation, Thermax Metal Building Board, Thermax White Finish Insulation, Thermax ci Exterior Insulation, Thermax IH Insulation, Thermax Plus Liner Panel and Thermax Heavy Duty Plus (HDP)

Specification & Installation of Model 20

Close Window

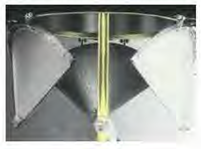
ARCHITECTURAL SPECIFICATIONS
MODEL 20
Furnish and install where shown a complete automatic-operating shutter and sliding pole unit constructed with hinged aluminum shutters attached to appendages on ceiling ring. Shutters shall open and close through the medium of connecting cage members that extend through the floor and from a cage with guard rail, guards and self-closing safety gate above the floor. It shall be topped by a tripod suspending the sliding pole which is free to move vertically with the cage actuating the opening and closing of the shutter by the weight of a person sliding down the pole. It shall be of approved type and design manufactured by the McIntire Brass Works, Inc. The hole in the floor shall be framed to suit. All equipment shall be installed in strict accordance with the manufacturer's details.





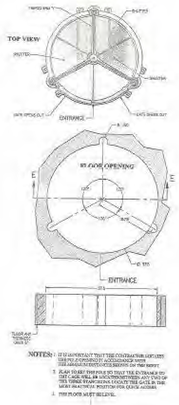
SLIDE POLES
The poles are available in any length. They are constructed of 2 ½" diameter 5/32" wall cold drawn brass tubing. Purchase of a Model 20 includes both a pole of specified length and a floor flange as well as a 32" diameter landing mat.

We reserve the right to use substitute materials in construction



INSTALLATION
To install the McIntire Automatic Shutter, simply cut or mold a hole in the floor 37 ½" in diameter. At three equi-distant points on a radius of 19 ½", cut or mold three additional holes each 3" in diameter.

The minimum clearance distances from the center of the sliding pole to any wall or obstruction are: on the cage floor 25" and on the ceiling below and downward 30".



Replacement Parts
Available for all units
CAD PDF

McIntire Brass Works, Inc.
14 Horace Street
Somerville, MA 02143
USA.

CONTACT: (617) 872-1152
PLANT: (617) 547-1819
EMAIL AEANTHONY@SLIDEPOLE.COM
PLANT FAX: (617) 547-4468
OFFICE FAX: (978) 369-4518

UL Product iQ™

BXUV.U314 -

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

Design No. U314

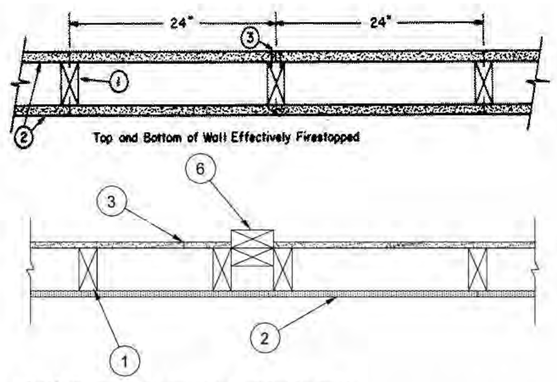
November 20, 2019

Bearing Wall Rating — 1 HR.

Finish Rating — 26 Min.

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



1. **Wood Studs** — Nom 2 by 4 in., spaced 24 in. OC, effectively fire stopped.

2. **Gypsum Board*** — 5/8 in. thick, 24 to 54 in. wide. Gypsum boards nailed to studs and bearing plates 7 in. OC with 6d cement-coated nails 1-7/8 in. long, 0.0915 in. shank diam and 1/4 in. diam head. When used in widths other than 48 in., gypsum panels to be installed horizontally.
CGC INC — Types AR, IP-AR, IP-X1, SCX, SHX, ULIX, ULX, WRX.

NATIONAL GYPSUM CO — Riyadh, Saudi Arabia — Type FR, or WR.

UNITED STATES GYPSUM CO — Type AR, FRX-G, IP-AR, IP-X1, SCX, SHX, ULIX, ULX or WRX.

USG BORAL DRYWALL SFZ LLC — Type SCX.

USG MEXICO S A DE C V — Type AR, IP-AR, IP-X1, SCX, SHX, ULX, WRX.

2A. **Gypsum Board*** — (As an alternate to Item 2) — Nom 3/4 in. thick, 4 ft wide, installed as described in Item 2.
CGC INC — Types AR, IP-AR.

UNITED STATES GYPSUM CO — Types AR, IP-AR.

USG MEXICO S A DE C V — Types AR, IP-AR.

2B. **Gypsum Board*** — (As an alternate to Items 2, 2A) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically only and secured as described in Item 2.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock ES.

2C. **Wall and Partition Facings and Accessories* —** (As an alternate to Items 2, 2A, 2B) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically only and secured as described in Item 2.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 527

3. **Joints and Nailheads —** Exposed joints covered with joint compound and paper tape. Nailheads covered with joint compound. Joint compound and paper tape may be omitted when square edge boards are used. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard with the joints reinforced with paper tape.

4. **Steel Corner Fasteners —** (Optional) — For use at wall corners. Channel shaped, 2 in. long by 1 in. high on the back side with two 1/8 in. wide cleats protruding into the 5/8 in. wide channel, fabricated from 24 gauge galv steel. Fasteners applied only to the end or cut edge (not along tapered edges) of the wallboard, no greater than 2 in. from corner of wallboard, max spacing 16 in. OC. Nailed to adjacent stud through tab using one No. 6d cement coated nail per fastener. Corners of wallboard shall be nailed to top and bottom plate using No. 6d cement coated nails.

5. **Batts and Blankets* —** (Optional, Not Shown) — Mineral wool insulation placed in stud cavities.
THERMAFIBER INC — Type SAFB, SAFB FF.

ROCKWOOL — Type SAFEnSOUND

6. **Non-Bearing Wall Partition Intersection —** (Optional) Two nominal 2 by 4 in. stud or nominal 2 by 6 in. stud nailed together with two 3in. long 10d nails spaced a max. 16 in. OC. vertically and fastened to one side of the minimum 2 by 4 in. stud with 3 in. long 10d nails spaced a max 16 in. OC. vertically. Intersection between partition wood studs to be flush with the 2 by 4 in. studs. The wall partition wood studs are to be framed by with a second 2 by 4 in. wood stud fastened with 3 in. long 10d nails spaced a max. 16 in. OC. vertically. Maximum one non-bearing wall partition intersection per stud cavity. Non-bearing wall partition stud depth shall be at a minimum equal to the depth of the bearing wall.

7. **Wall and Partition Facings and Accessories* —** (Optional, Not Shown) — For use with Item 1, Item 2, Item 3, and Item 5. For maximum fire rating of 1 hour. On one side of the wall, over the first layer of Gypsum Board (Item 2), install RefleXor membrane with the gold side facing outwards. Membrane installed with T50 staples spaced 12 inches on center in both directions as per manufacturer's instructions, seams in membrane to be overlapped by 2 inches. When RefleXor membrane is used an additional layer of Gypsum Board identical to the one used in the first layer and as specified in Item 2 shall be installed over the membrane. The additional layer of Gypsum Board to be installed through the membrane to the stud as specified in Item 2 except the fastener length shall be increased by a minimum of 5/8 inch. Install Batts and blankets in the stud cavity as per Item 5. On the other side of the wall, prior to the installation of the Gypsum Board, install Resilient Channels , 25 MSG galv steel, spaced vertically 24 in. OC, flange portion screw attached to one side of studs with 1-1/4 in. long diamond shaped point, double lead Phillips head steel screws. Over the Resilient Channels install 3/4 inch thick SONOpan panel secured to the Resilient Channels with drywall screws and washers spaced at 16 in. OC on the perimeter of the panel and 8 in. OC in the field of the panel. Over the SONOpan panel install the same Gypsum Board as specified in Item 2 with the fastener length increased by minimum 3/4 inch. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.
MSL — RefleXor membrane, SONOpan panel.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2019-11-20

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL's Follow-Up Service. Always look for the Mark on the product.

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DATE
DESCRIPTION
NO.

STATE OF FLORIDA · JOHN P. ADAMS · AR93282 · REGISTERED ARCHITECT

John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
Ethan J. Hine, AIA
Jennifer Zaffuto, AIA, NCARB, MPA
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18104A

LAKE COUNTY
FIRE STATION NO.39
UL DEESIGNS
24815 WALLICK ROAD, SORRENTO, FL 32776

JANUARY 31, 2020

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MIAMI-DADE COUNTY
DEPARTMENT OF PERMITTING, ENVIRONMENT, AND REGULATORY AFFAIRS (PERA)
BOARD AND CODE ADMINISTRATION DIVISION

MIAMI–DADE COUNTY, FLORIDA
PRODUCT CONTROL SECTION
11805 S.W. 26th Street, Room 208
Miami, Florida 33175–2474
T (786) 315–2590, F (786) 315–2599
www.miamidade.gov/pera/

NOTICE OF ACCEPTANCE (NOA)

PGT Industries
1070 Technology Drive
Nokomis, FL 34275

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami–Dade County PERA–Product Control Section to be used in Miami–Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami–Dade County Product Control Section (In Miami–Dade County) and/or the AHJ (in areas other than Miami–Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. PERA reserves the right to revoke this acceptance, if it is determined by Miami–Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

DESCRIPTION: Series "SH–700" Aluminum Single Hung Window – L.M.I.

APPROVAL DOCUMENT: Drawing No. **4040–20**, titled "Alum. Single Hung Window, Impact", sheets 1 through 11 of 11, dated 09/01/2005, with revision **"D"** dated 10/07/2011, prepared by manufacturer, signed and sealed by Anthony Lynn Miller, P. E., bearing the Miami–Dade County Product Control Revision stamp with the Notice of Acceptance number and Expiration date by the Miami–Dade County Product Control Section.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant.

LIMITATIONS: Miami–Dade County Product Control Approved Shutters Or Protection Devises shall be required for Glazing Option **"M"** at installations above 30 Ft. above ground (See sheet 1 of 11).

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state, model/series and following statement: "Miami–Dade County Product Control Approved" unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami–Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA **revises NOA No. 11–0405.10** and consists of this page 1, evidence pages E–1, E–2 and E–3, as well as approval document mentioned above.

The submitted documentation was reviewed by **Jaime D. Gascon, P. E.**

MIAMI-DADE COUNTY APPROVED

J. Gascon 10/27/11

NOA No. 11–1013.14
Expiration Date: March 26, 2016
Approval Date: November 03, 2011
Page 1

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Manufacturer's die drawings and sections.
2. Drawing No **4040–20**, titled "Alum. Single Hung Window, Impact", sheets 1 through 11 of 11, dated 09/01/2005, with revision **"D"** dated 10/07/2011, prepared by manufacturer, signed and sealed by Anthony Lynn Miller, P. E.

B. TESTS

1. Test reports on:1) Air Infiltration Test, per FBC, TAS 202–94
   2) Uniform Static Air Pressure Test, Loading per FBC TAS 202–94
   3) Water Resistance Test, per FBC, TAS 202–94
   4) Large Missile Impact Test per FBC, TAS 201–94
   5) Cyclic Wind Pressure Loading per FBC, TAS 203–94
   6) Forced Entry Test, per FBC 2411 3.2.1, TAS 202–94
   along with marked–up drawings and installation diagram of an aluminum single hung window, with fin frame, prepared by Fenestration Testing Laboratory, Inc., Test Report No. **FTL–4957**, dated 10/03/06, signed and sealed by Edmundo Largaespada, P. E.
   (Submitted under previous NOA No.07–0322.06)
2. Test reports on:1) Uniform Static Air Pressure Test, Loading per FBC TAS 202–94
   2) Large Missile Impact Test per FBC, TAS 201–94
   3) Cyclic Wind Pressure Loading per FBC, TAS 203–94
   along with marked–up drawings and installation diagram of an aluminum single hung window, with fin frame, prepared by Fenestration Testing Laboratory, Inc., Test Reports No.'s **FTL–4958** and **FTL–5063**, dated 10/03and 11/21/06, both signed and sealed by Edmundo Largaespada, P. E.
   (Submitted under previous NOA No.07–0322.06)
3. Test reports on:1) Large Missile Impact Test per FBC, TAS 201–94
   2) Cyclic Wind Pressure Loading per FBC, TAS 203–94
   along with marked–up drawings and installation diagram of an aluminum single hung window, with fin frame, prepared by Fenestration Testing Laboratory, Inc., Test Report No. **FTL–4645**, dated 08/11/05, signed and sealed by Edmundo Largaespada, P. E.
   (Submitted under previous NOA No.07–0322.06)
4. Test reports on:1) Large Missile Impact Test per FBC, TAS 201–94
   2) Cyclic Wind Pressure Loading per FBC, TAS 203–94
   along with marked–up drawings and installation diagram of an aluminum single hung window, with fin frame, prepared by Fenestration Testing Laboratory, Inc., Test Reports No.'s **FTL–4649** and **FTL–4723**, dated 10/05 and 08/11/05, both signed and sealed by Edmundo Largaespada, P. E.
   (Submitted under previous NOA No. 05–1018.01)

Jaime D. Gascon, P. E.
Product Control Section Supervisor
NOA No. 11–1013.14
Expiration Date: March 26, 2016
Approval Date: November 03, 2011

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

B. TESTS (CONTINUED)

3) Test reports on:1) Air Infiltration Test, per FBC, TAS 202–94
   2) Uniform Static Air Pressure Test, Loading per FBC TAS 202–94
   3) Water Resistance Test, per FBC, TAS 202–94
   4) Small Missile Impact Test per FBC, TAS 201–94
   5) Cyclic Wind Pressure Loading per FBC, TAS 203–94
   6) Forced Entry Test, per FBC 2411 3.2.1, TAS 202–94
   along with marked–up drawings and installation diagram of an aluminum single hung window, with fin frame, prepared by Fenestration Testing Laboratory, Inc., Test Reports No.'s **FTL–4947** and **FTL–4650**, dated 08/11/05, both signed and sealed by Edmundo Largaespada, P. E.
   (Submitted under previous NOA No.05–1018.01)
4) Test reports on:1) Uniform Static Air Pressure Test, Loading per FBC TAS 202–94
   2) Large Missile Impact Test per FBC, TAS 201–94
   3) Cyclic Wind Pressure Loading per FBC, TAS 203–94
   along with marked–up drawings and installation diagram of an aluminum single hung window, with fin frame, prepared by Fenestration Testing Laboratory, Inc., Test Reports No.'s **FTL–4948** and **FTL–4646**, dated 08/10/05, both signed and sealed by Edmundo Largaespada, P. E.
   (Submitted under previous NOA No.05–1018.01)

C. CALCULATIONS

1. Anchor verification calculations and structural analysis, complying with FBC–2007, dated 01/11/2011, prepared, signed and sealed by Robert L. Clark, P. E.
   Complies with ASTM E1300–04
   (Submitted under previous NOA No.11–0128.03)

D. QUALITY ASSURANCE

1. Miami–Dade Department of Permitting, Environment, and Regulatory Affairs (PERA).

E. MATERIAL CERTIFICATIONS

1. Notice of Acceptance No. **11–0624.01** issued to E.I. DuPont DeNemours & Co., Inc. for their **"DuPont Butacite® PVB Interlayer"** dated 09/08/11, expiring on 12/11/16.
2. Notice of Acceptance No. **11–0325.05** issued to Solutia Inc. for their **"Saflex and Vanceva clear and color interlayers"** dated 05/05/2011, expiring on 05/21/2016.

Jaime D. Gascon, P. E.
Product Control Section Supervisor
NOA No. 11–1013.14
Expiration Date: March 26, 2016
Approval Date: November 03, 2011

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

F. STATEMENTS

1. Statement letter of conformance and compliances with the FBC–2007 and FBC–2010, dated October 07, 2011, signed and sealed by Anthony Lynn Miller, P. E.
2. Statement letter of no financial interest and independency, dated October 07, 2011, signed and sealed by Anthony Lynn Miller, P. E.
3. Laboratory compliance letter for Test Reports No.'s **FTL–4957**, **FTL–4958**, **FTL–5063**, **FTL–4645**, **FTL–4649**, **FTL–4723**, **FTL–4947**, **FTL–4650**, **FTL–4948** and **FTL–4646**, issued by Fenestration Testing Laboratory, dated 10/03/06 through 08/10/05, all signed and sealed by Edmundo Largaespada, P. E.
   (Submitted under previous NOA No. 07–0322.06 and 05–1018.01)

G. OTHERS

1. Notice of Acceptance No. **11–0405.10**, issued to PGT Industries for their Series **"SH–700 Aluminum Single Hung Window – L.M.I."**, approved on 04/21/2011 and expiring on 03/23/2016.

DESIGN WIND
PRESSURE +40 PSF
/ -44 PSF

Jaime D. Gascon, P. E.
Product Control Section Supervisor
NOA No. 11–1013.14
Expiration Date: March 26, 2016
Approval Date: November 03, 2011

DATE | DESCRIPTION | NO.

STATE OF FLORIDA
JOHN P ADAMS
AR92282
REGISTERED ARCHITECT

John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
Ethan J. Hine, AIA
Jennifer Zaffuto, AIA, NCARB, MPA

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KTH ARCHITECTS

18104A

LAKE COUNTY
FIRE STATION NO.39
FLORIDA PRODUCT APPROVALS

24815 WALLICK ROAD, SORRENTO, FL 32776

JANUARY 31, 2020

PRICING SET

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⚠ GENERAL NOTES: IMPACT SINGLE HUNG FLANGED AND INTEGRAL FIN WINDOWS

1. GLAZING OPTIONS: (SEE DETAILS ON SHEET 2)

   A. 5/16" LAMI CONSISTING OF (2) LITES OF 1/8" ANNEALED GLASS WITH A .090 DUPONT BUTACITE OR SAFLEX/KEEPSAFE MAXIMUM PVB INTERLAYER.
   B. 5/16" LAMI CONSISTING OF (1) LITE OF 1/8" ANNEALED GLASS AND (1) LITE OF 1/8" HEAT STRENGTHENED GLASS WITH A .090 DUPONT BUTACITE OR SAFLEX/KEEPSAFE MAXIMUM PVB INTERLAYER.
   C. 5/16" LAMI CONSISTING OF (2) LITES OF 1/8" HEAT STRENGTHENED GLASS WITH AN .090 DUPONT BUTACITE OR SAFLEX/KEEPSAFE MAXIMUM PVB INTERLAYER.
   D. 7/16" LAMI CONSISTING OF (2) LITES OF 3/16" ANNEALED GLASS WITH AN .090 DUPONT BUTACITE OR SAFLEX/KEEPSAFE MAXIMUM PVB INTERLAYER.
   E. 7/16" LAMI CONSISTING OF (1) LITE OF 3/16" ANNEALED GLASS AND (1) LITE OF 3/16" HEAT STRENGTHENED GLASS WITH AN .090 DUPONT BUTACITE OR SAFLEX/KEEPSAFE MAXIMUM PVB.
   F. 7/16" LAMI CONSISTING OF (2) LITES OF 3/16" HEAT STRENGTHENED GLASS WITH AN .090 DUPONT BUTACITE OR SAFLEX/KEEPSAFE MAXIMUM PVB INTERLAYER.
   G. 13/16" LAMI IG: (1) LITE OF 1/8" TEMPERED GLASS, AN AIR SPACE AND 5/16" LAMI CONSISTING OF (2) LITES OF 1/8" ANNEALED GLASS WITH A .090 DUPONT BUTACITE OR SAFLEX/KEEPSAFE MAXIMUM PVB INTERLAYER.
   ⚠ H. 13/16" LAMI IG: (1) LITE OF 1/8" TEMPERED GLASS, AN AIR SPACE AND 516" LAMI CONSISTING OF (1) LITE OF 1/8" ANNEALED GLASS AND (1) LITE OF 1/8" HEAT STRENGTHENED GLASS WITH A .090 DUPONT BUTACITE OR SAFLEX/KEEPSAFE MAXIMUM PVB INTERLAYER.
   I. 13/16" LAMI IG: (1) LITE OF 1/8" TEMPERED GLASS, AN AIR SPACE AND 5/16" LAMI CONSISTING OF (2) LITES OF 1/8" HEAT STRENGTHENED GLASS WITH AN .090 DUPONT BUTACITE OR SAFLEX/KEEPSAFE MAXIMUM PVB INTERLAYER.
   J. 13/16" LAMI IG: (1) LITE OF 1/8" TEMPERED GLASS, AN AIR SPACE AND 7/16" LAMI CONSISTING OF (2) LITES OF 3/16" ANNEALED GLASS WITH A .090 DUPONT BUTACITE OR SAFLEX/KEEPSAFE MAXIMUM PVB INTERLAYER.
   K. 13/16" LAMI IG: (1) LITE OF 1/8" TEMPERED GLASS, AN AIR SPACE AND 7/16" LAMI CONSISTING OF (1) LITE OF 3/16" ANNEALED GLASS AND (1) LITE OF 3/16" HEAT STRENGTHENED GLASS WITH AN .090 DUPONT BUTACITE OR SAFLEX/KEEPSAFE MAXIMUM PVB.
   L. 13/16" LAMI IG: (1) LITE OF 1/8" TEMPERED GLASS, AN AIR SPACE AND 7/16" LAMI CONSISTING OF (2) LITES OF 3/16" HEAT STRENGTHENED GLASS WITH AN .090 DUPONT BUTACITE OR SAFLEX/KEEPSAFE MAXIMUM PVB INTERLAYER.
   ⚠ M. 13/16" LAMI IG: (1) LITE OF 1/8" ANNEALED GLASS, AN AIR SPACE AND 5/16" LAMI CONSISTING OF (2) LITES OF 1/8" ANNEALED GLASS WITH AN .090 DUPONT BUTACITE OR SAFLEX/KEEPSAFE MAXIMUM PVB INTERLAYER.

2. CONFIGURATIONS: "OX" (1/1, VIEW AND RADIUS TOP, ALL W/ LOW OR HIGH SILL OPTION)

⚠ 3. DESIGN PRESSURES: (SEE TABLES, SHEETS 3)

   A. NEGATIVE DESIGN LOADS BASED ON TESTED PRESSURE AND GLASS TABLES ASTM E 1300-02.

   B. POSITIVE DESIGN LOADS BASED ON WATER TEST PRESSURE AND GLASS TABLES ASTM E 1300-02.

4. ANCHORAGE: THE 33 1/3% STRESS INCREASE HAS NOT BEEN USED IN THE DESIGN OF THIS PRODUCT. SEE SHEETS 8 THROUGH 11 FOR ANCHORAGE DETAILS.

5. SHUTTERS ARE NOT REQUIRED.

6. FRAME AND PANEL CORNERS SEALED WITH NARROW JOINT SEALANT OR GASKET.

⚠ 7. REFERENCES: TEST REPORTS FTL-4645, FTL-4646, FTL-4647, FTL-4648, FTL-4649, FTL-4650, FTL-4651, FTL-4723, FTL-4957, FTL-4958 AND FTL-5063.
ANSI/AF&PA NDS-2001 FOR WOOD CONSTRUCTION
ADM-2000 ALUMINUM DESIGN MANUAL

8. SERIES/MODEL DESIGNATION SH700, ALSO REFERRED TO AS SH701.

⚠ 9. THIS PRODUCT HAS BEEN DESIGNED & TESTED TO COMPLY WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE, INCLUDING THE HIGH VELOCITY HURRICANE ZONE (HVHZ).

NOA DRAWING MAP

	SHEET
GENERAL NOTES	1
GLAZING DETAILS	2
DESIGN PRESSURES	3
ELEVATIONS	4
VERT. SECTIONS	5
HORIZ. SECTIONS	5
PARTS LIST	6
EXTRUSIONS	7
CORNER DETAIL	7
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PRODUCT REVISED as complying with the Florida Building Code Acceptance No. 11-1013.14 Expiration Date 03/26/2016 By Miami Dade Product Control

ANTHONY LYNN MILLER LICENSE No. 58705 STATE OF FLORIDA PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
FL P.E.# 58705

Revised By:	Date:	Revisions:	
J.J.	10/07/11	D	2010 FBC UPDATE
J.R.	04/01/11	C	CHANGED CAP GLASS TYPE TO TEMPERED FROM HS
F.K.	11/13/06	B	CHANGE NOTES 3 & 7. ADD NOTE 9. ADD GLASS TYPE M TO NOTE 1, GLAZING OPTIONS.
Drawn By: F.K.	Date: 9/1/05	Checked By: J.J.	Date: 2/23/07

1070 TECHNOLOGY DRIVE NOKOMIS, FL 34275
P.O. BOX 1629 NOKOMIS, FL 34274

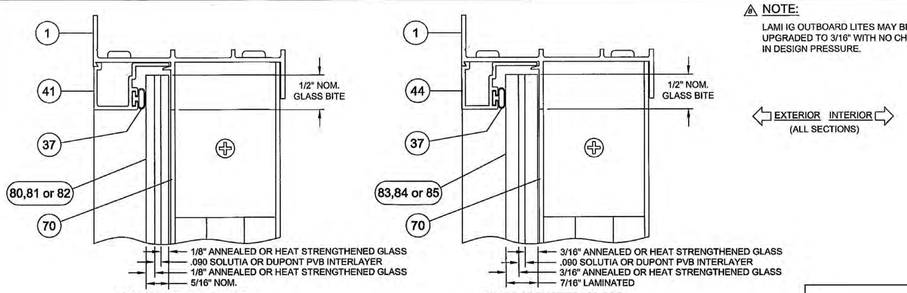
PGT Visibly Better

Description: GENERAL NOTES
Title: ALUM. SINGLE HUNG WINDOW, IMPACT
Series/Model: SH700 | Scale: NTS | Sheet: 1 of 11 | Drawing No.: 4040-20 | Rev: D

⚠ NOTE:

LAMI IG OUTBOARD LITES MAY BE UPGRADED TO 3/16" WITH NO CHANGE IN DESIGN PRESSURE.

EXTERIOR INTERIOR (ALL SECTIONS)



PRODUCT REVISED as complying with the Florida Building Code Acceptance No. 11-1013.14 Expiration Date 03/26/2016 By Miami Dade Product Control

ANTHONY LYNN MILLER LICENSE No. 58705 STATE OF FLORIDA PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
FL P.E.# 58705

Revised By:	Date:	Revisions:	
J.J.	10/07/11	D	NO CHANGES THIS SHEET
J.R.	04/01/11	C	CHANGED CAP GLASS TYPE TO TEMPERED FROM HS
F.K.	11/13/06	B	ADD ITEM 92 TO 5/16 LAMI I.G. GLASS (A,A,A) & LAMI IG NOTE
Drawn By: F.K.	Date: 9/1/05	Checked By: J.J.	Date: 2/23/07

1070 TECHNOLOGY DRIVE NOKOMIS, FL 34275
P.O. BOX 1629 NOKOMIS, FL 34274

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Description: GLAZING DETAILS
Title: ALUM. SINGLE HUNG WINDOW, IMPACT
Series/Model: SH700 | Scale: Full | Sheet: 2 of 11 | Drawing No.: 4040-20 | Rev: D

1/1 FLANGE OR INTEGRAL FIN WINDOWS W/ HIGH SILL OPTION ⚠ BASED ON FLANGED WINDOW TIP-TO-TIP FRAME DIMENSIONS — TABLE 1.

WIDTH	GLASS TYPE	WINDOW HEIGHT 63"		66"		68"		70"		72"		74"		76"	
48"	A,B,M ⚠	+80.0	-80.0	+80.0	-80.0	+80.0	-80.0	+80.0	-80.0	+80.0	-80.0	+80.0	-80.0	+80.0	-80.0
50"	A,B,M ⚠	+80.0	-80.0	+80.0	-80.0	+80.0	-80.0	+80.0	-80.0	+80.0	-80.0	+80.0	-80.0	+79.0	-79.0
52"	A,B,M ⚠	+80.0	-80.0	+80.0	-80.0	+80.0	-80.0	+80.0	-80.0	+78.8	-78.8	+77.3	-77.3	+75.9	-75.9
53 1/8"	A,B,M ⚠	+80.0	-80.0	+80.0	-80.0	+79.6	-79.6	+78.2	-78.2	+76.9	-76.9	+75.4	-75.4	+74.0	-74.0
UP TO 53 1/8"	C,D,E,F,G,H,I,J,K,L	+80.0	-80.0	+80.0	-80.0	+80.0	-80.0	+80.0	-80.0	+80.0	-80.0	+80.0	-80.0	+80.0	-80.0

STANDARD VIEW & RADIUS TOP FLANGE OR INTEGRAL FIN WINDOWS W/ HIGH SILL OPTION ⚠ BASED ON FLANGED WINDOW TIP-TO-TIP FRAME DIMENSIONS — TABLE 2.

WIDTH	GLASS TYPE	WINDOW HEIGHT 38 3/8"		44"		50 5/8"		63"		72"		74"		76"	
48"	A,B,M ⚠	+80.0	-80.0	+80.0	-80.0	+80.0	-80.0	+80.0	-80.0	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0
50"	A,B,M ⚠	+80.0	-80.0	+80.0	-80.0	+80.0	-80.0	+79.9	-79.9	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0
52"	A,B,M ⚠	+80.0	-80.0	+80.0	-80.0	+80.0	-80.0	+76.9	-76.9	+70.0	-70.0	+68.8	-68.8	+67.6	-67.6
53 1/8"	A,B,M ⚠	+80.0	-80.0	+80.0	-80.0	+80.0	-80.0	+75.0	-75.0	+68.0	-68.0	+66.7	-66.7	+65.5	-65.5
UP TO 53 1/8"	C,D,E,F,G,H,I,J,K,L	+80.0	-80.0	+80.0	-80.0	+80.0	-80.0	+80.0	-80.0	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0

CUSTOM VIEW & RADIUS TOP FLANGE OR INTEGRAL FIN WINDOWS W/ HIGH SILL OPTION ⚠ BASED ON FLANGED WINDOW TIP-TO-TIP FRAME DIMENSIONS — TABLE 3.

WIDTH	GLASS TYPE	WINDOW HEIGHT MINUS SASH HEIGHT (MAX. WINDOW HT. W/ SASH = 76" FLANGED AND 76" INTEGRAL FIN) 17 1/8"		22 11/16"		28 3/16"		33 3/4"		39 5/16"		44 13/16"		50 3/8"		55 15/16"	
53 1/8"	D,E,F,J,K,L	+80.0	-80.0	+80.0	-80.0	+80.0	-80.0	+80.0	-80.0	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0	+70.0	-70.0

GLASS TYPES: — TABLE 4.

	TEST REPORTS
A. 5/16" LAMI - (1/8"A,.090,1/8"A)	FTL-4647, 4648, 4723, 4957
B. 5/16" LAMI - (1/8"A,.090,1/8"HS)	FTL-4647, 4648
C. 5/16" LAMI - (1/8"HS,.090,1/8"HS)	FTL-4647, 4648
D. 7/16" LAMI - (3/16"A,.090, 3/16"A)	FTL-4645, 4885
E. 7/16" LAMI - (3/16"A,.080, 3/16"HS)	FTL-4645
F. 7/16" LAMI - (3/16"HS,.090, 3/16"HS)	FTL-4645
G. 13/16" LAMI IG - 1/8" T, AIR SPACE, 5/16" LAMI - (1/8"A,.090,1/8"A)	FTL-4646, 4723
H. 13/16" LAMI IG - 1/8" T, AIR SPACE, 5/16" LAMI - (1/8"A,.090,1/8"HS)	FTL-4646
I. 13/16" LAMI IG - 1/8" T, AIR SPACE, 5/16" LAMI - (1/8"HS,.090,1/8"HS)	FTL-4646
J. 13/16" LAMI IG - 1/8" T, AIR SPACE, 7/16" LAMI - (3/16"A,.090, 3/16"A)	FTL-4649, 4650
K. 13/16" LAMI IG - 1/8" T, AIR SPACE, 7/16" LAMI - (3/16"A,.090, 3/16"HS)	FTL-4649, 4650, 4958
L. 13/16" LAMI IG - 1/8" T, AIR SPACE, 7/16" LAMI - (3/16"HS,.090, 3/16"HS)	FTL-4649, 4650
M. 13/16" LAMI IG - 1/8"A, AIR SPACE, 5/16" LAMI - (1/8"A,.090, 1/8"A) ⚠	FTL-5063

NOTES:
1. WINDOWS WITH THE LOW SILL OPTION ARE LIMITED TO A POSITIVE DESIGN PRESSURE OF +64.0 PSF OR LOWER AS SHOWN IN THE TABLES. NEGATIVE DESIGN PRESSURES ARE UNEFFECTED.
2. FOR INTEGRAL FIN WINDOW DESIGN PRESSURES USE THE ABOVE TABLES BY DEDUCTING 1" FROM THE FLANGED TIP-TO-TIP FRAME DIMENSIONS. ⚠
3. AVAILABLE SASH HEIGHTS FOR CUSTOM WINDOWS ARE 12 5/8" MINIMUM TO 38" MAXIMUM. ⚠

PRODUCT REVISED as complying with the Florida Building Code Acceptance No. 11-1013.14 Expiration Date 03/26/2016 By Miami Dade Product Control

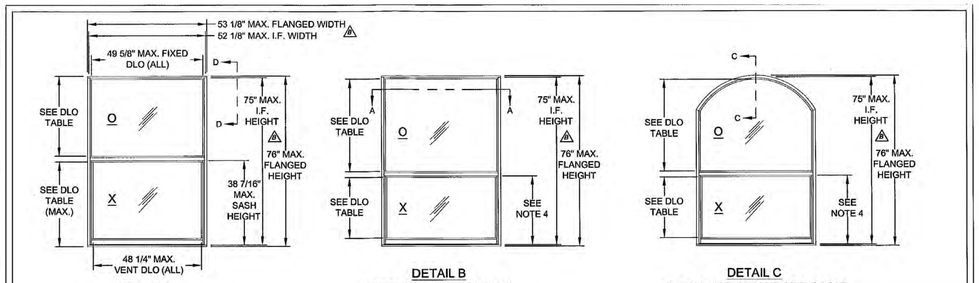
ANTHONY LYNN MILLER LICENSE No. 58705 STATE OF FLORIDA PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
FL P.E.# 58705

Revised By:	Date:	Revisions:	
J.J.	10/07/11	D	NO CHANGES THIS SHEET
J.R.	04/01/11	C	CHANGED CAP GLASS TYPE TO TEMPERED FROM HS
F.K.	11/13/06	B	UPDATE TO ASTM E 1300-09. REMOVE STD VIEW SASH INT REF. TABLE 2. REVISED CUSTOM FORMAT DPS. ADD INT. FIN. UPDATE TEST NOS.
Drawn By: F.K.	Date: 9/1/05	Checked By: J.J.	Date: 2/23/07

1070 TECHNOLOGY DRIVE NOKOMIS, FL 34275
P.O. BOX 1629 NOKOMIS, FL 34274

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Description: DESIGN PRESSURES
Title: ALUM. SINGLE HUNG WINDOW, IMPACT
Series/Model: SH700 | Scale: NTS | Sheet: 3 of 11 | Drawing No.: 4040-20 | Rev: D



VERTICAL DAYLIGHT OPENING		
	FIXED LITE	
DETAIL	LOW SILL	HIGH SILL
A	34 1/2"	34 3/16"
B	41 5/8"	41 1/4"
C	41 1/4"	40 7/8"
D	52 5/8"	52 11/16"
E	52 1/4"	52 5/16"
	SASH	
DETAIL	LOW SILL	HIGH SILL
A	34 1/2"	34 3/16"
B	27 7/16"	27 1/8"
C	27 7/16"	27 1/8"
D	16 3/8"	15 3/4"
E	16 3/8"	15 3/4"

TABLE 5.

NOTES:
1. SEE SHEET 5 FOR VERTICAL AND HORIZONTAL SECTION DETAILS.
2. SEE SHEET 7 FOR CORNER DETAIL VIEWS.
3. SEE SHEETS 8 THROUGH 11 FOR ANCHORAGE INFORMATION. ⚠
4. SASH HEIGHTS FOR STANDARD SASH WINDOWS (DETAILS B & C) ARE BASED ON A THREE OVER TWO FORMAT. ⚠

PRODUCT REVISED as complying with the Florida Building Code Acceptance No. 11-1013.14 Expiration Date 03/26/2016 By Miami Dade Product Control

ANTHONY LYNN MILLER LICENSE No. 58705 STATE OF FLORIDA PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
FL P.E.# 58705

Revised By:	Date:	Revisions:	
J.J.	10/07/11	D	NO CHANGES THIS SHEET
J.R.	04/01/11	C	NO CHANGES THIS SHEET
F.K.	11/13/06	B	ADD INTEGRAL FIN (I.F.) VERSION, CHG. NOTE 3. ADD NOTE 4.
Drawn By: F.K.	Date: 9/1/05	Checked By: J.J.	Date: 2/23/07

1070 TECHNOLOGY DRIVE NOKOMIS, FL 34275
P.O. BOX 1629 NOKOMIS, FL 34274

PGT Visibly Better

Description: ELEVATIONS
Title: ALUM. SINGLE HUNG WINDOW, IMPACT
Series/Model: SH700 | Scale: NTS | Sheet: 4 of 11 | Drawing No.: 4040-20 | Rev: D

NO.	DESCRIPTION	DATE

KTH ARCHITECTS
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STATE OF FLORIDA JOHN P. ADAMS AR90282 REGISTERED ARCHITECT

18104A

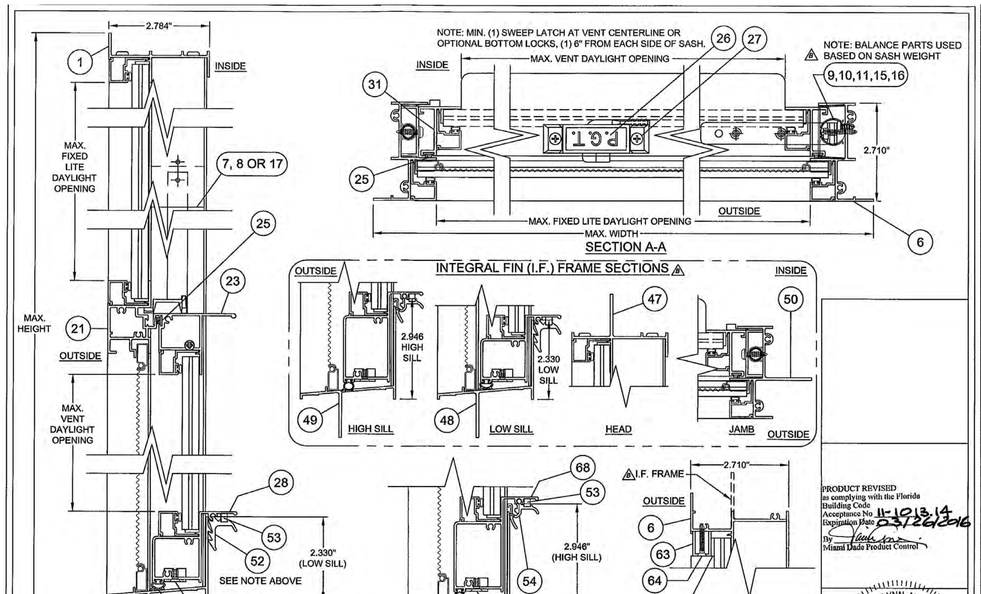
LAKE COUNTY
FIRE STATION NO.39
FLORIDA PRODUCT APPROVALS
24815 WALLICK ROAD, SORRENTO, FL 32776

JANUARY 31, 2020

PRICING SET

C.6

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PRODUCT REVISED as complying with the Florida Building Code Acceptance No 11-1013.14 Expiration Date 03/26/2016
By Miami Dade Product Control

ANTHONY LYNN MILLER LICENSE No. 58705 STATE OF FLORIDA PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
FL P.E.# 58705

Revised By:	Date:	Revisions:	
J.J.	10/07/11	D	NO CHANGES THIS SHEET
J.R.	04/01/11	C	NO CHANGES THIS SHEET
F.K.	11/13/06	B	ADD I.F. SECTIONS & CONSOLIDATE BAL. COMPONENTS
Drawn By: F.K.	Date: 9/1/05	Checked By: J.J.	Date: 2/23/07

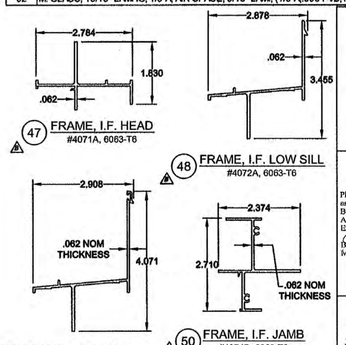
1070 TECHNOLOGY DRIVE NOKOMIS, FL 34275
P.O. BOX 1529 NOKOMIS, FL 34274

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Description: SECTIONS	
Title: ALUM. SINGLE HUNG WINDOW, IMPACT	
Series/Model: SH700	Scale: Half
Sheet: 5 of 11	Drawing No. 4040-20
Rev: D	

ITEM	DWG#	DESCRIPTION	PGT#	
1	4002A	FLANGE FRAME HEAD	612225	
2	1155	#8 X 1.000 QUAD PN. SMS	781PQA	
3	4003C	FLANGE FRAME SILL (LOW SILL)	612226	
5	1626	ADHESIVE OPEN CELL FOAM PAD	7PAD1626	
6	4004	FLANGE FRAME JAMB	612227	
7	4025	SASH STOP	612244	4
8	4025	SASH STOP (EGRESS) 1.125 LONG	612244	
9	4029	SPIRAL BALANCE, 3/8", 5/8", OR 11/16"		4
10	1080	BALANCE COVER, 3/8" OR 5/8"	6BALCVR916	4
11		#8 X .750 PH. PN. SMS	7834AA	
12		BALANCE BOTTOM BRACKET	7BALTBKT	
13	1085/1086	SASH TOP GUIDE	42504	4
15		#8 X 1 PHILLIPS FLAT HEAD S. STL	78X1FPAX	
16	1080-1	BALANCE COVER, 11/16"	6BALCVR670	4
17	4053	SASH STOP COVER	64053	
18	4029-1	SASH BRACKET	7ULBRKT	
19		#6-32 X 1/2" LG. PH. FH. TYPE F S. STL	7832X12FPFX	
21	4054C	FIXED MEETING RAIL	64054C	4
23	4006C	SASH TOP RAIL	64006	
25	1235	WSTP.,.170 X .270 BACK, FIN SEAL	67S16G	
26	1096	SWEEP LATCH	71096	
27	1016	#8 X .625 PH. FL. SMS	7858	
28	4007	SASH BOTTOM RAIL (LOW SILL)	612230	
30	1226	WSTP., BULB VINYL	6TP249	
31	4008	SASH SIDE RAIL	612231	
34	1268	SASH FACE GUIDE	42501	
35	1622	LAMI SETTING BLOCK 3/32" X 25/64" X 1"	71622K	
36	1052	LAMI IG SETTING BLOCK 1" X 3/4" X 1/16"	71052K	
37	1224	VINYL GLAZ. BEAD BULB (THICK)	6TP247WK	
38	1225	VINYL GLAZ. BEAD BULB (THIN)	6TP246K	
41	4039B	GLAZING BEAD, 5/16 LAM. GLASS.	64039B	
42	4044B	GLAZING BEAD, 5/16 LAMI W/GRILL KIT	644703	
44	4222A	GLAZING BEAD, 7/16" LAMI	64222	
45	985C	GLAZING BEAD, 7/16" LAMI W/GRILL KIT	6985	
46	4067	GLAZING BEAD, 13/16" LAMI I.G.	64067	
47	4071A	FRAME, I.F. HEAD	64071	4
48	4072A	FRAME, I.F. LOW SILL	64072	4
49	4073A	FRAME, I.F. HIGH SILL	64073	4
50	4074B	FRAME, I.F. JAMB	64074	4
52	4009	SILL LATCH (EGRESS) (LOW SILL)	764009	
53	1088	SPRING, SILL LATCH (EGRESS)	75PRNG	
54	2740	SILL LATCH (EGRESS) (HIGH SILL)	62740	
55	1014	SCREEN FRAME (HOR. & VER.)	61014	
56	1630	SCREEN CORNER KEY W/RINGS	71630	
57	1631	SCREEN CORNER KEY W/OUT RINGS	71631	
58	1073	SCREEN SPRING	7CASP	
59	1624	SCREEN SPLINE - .135 DIA FOAM	61624K	

ITEM	DWG#	DESCRIPTION	PGT#	
60	1635	SCREEN SPLINE - .135 DIA HARD	61635K	
61		SCREEN CLOTH	61816	
63	505	GLAZING CHANNEL (.688 X .500)	6533402	
64	1161	#6 X 1.000 PH. BUGLE TEK	706X1	
67		GLAZING TAPE, 1/16 X 1/2 - 7/16 LAMI	62BVI510	
68	4051A	SASH BOTTOM RAIL (HIGH SILL)	64051	
69	4050A	FLANGE FRAME SILL (HIGH SILL)	64050	
70		SILICONE, DOW 899, 995 OR EQUIV.		
80		A. GLASS, 5/16" LAMI, (1/8"A,.090 PVB,1/8"A)		
81		B. GLASS, 5/16" LAMI, (1/8"A,.090 PVB,1/8"HS)		
82		C. GLASS, 5/16" LAMI, (1/8"HS,.090 PVB,1/8"HS)		
83		D. GLASS, 7/16" LAMI, (1/8"A,.090 PVB,1/8"A)		
84		E. GLASS, 7/16" LAMI, (1/8"A,.090 PVB,1/8"HS)		
85		F. GLASS, 7/16" LAMI, (1/8"HS,.090 PVB,1/8"HS)		
86		G. GLASS, 13/16" LAMI IG; 1/8"T, AIR SPACE, 5/16" LAMI, (1/8"A,.090 PVB,1/8"A)		
87		H. GLASS, 13/16" LAMI IG; 1/8"T, AIR SPACE, 5/16" LAMI, (1/8"A,.090 PVB,1/8"HS)		
88		I. GLASS, 13/16" LAMI IG; 1/8"T, AIR SPACE, 5/16" LAMI, (1/8"HS,.090 PVB,1/8"HS)		
89		J. GLASS, 13/16" LAMI IG; 1/8"T, AIR SPACE, 7/16" LAMI, (3/16"A,.090 PVB,3/16"A)		
90		K. GLASS, 13/16" LAMI IG; 1/8"T, AIR SPACE, 7/16" LAMI, (3/16"A,.090 PVB,3/16"HS)		
91		L. GLASS, 13/16" LAMI IG; 1/8"T, AIR SPACE, 7/16" LAMI, (3/16"HS,.090 PVB,3/16"HS)		
92		M GLASS, 13/16" LAMI IG; 1/8"A, AIR SPACE, 5/16" LAMI, (1/8"A,.090 PVB,1/8"A)		



PRODUCT REVISED as complying with the Florida Building Code Acceptance No 11-1013.14 Expiration Date 03/26/2016
By Miami Dade Product Control

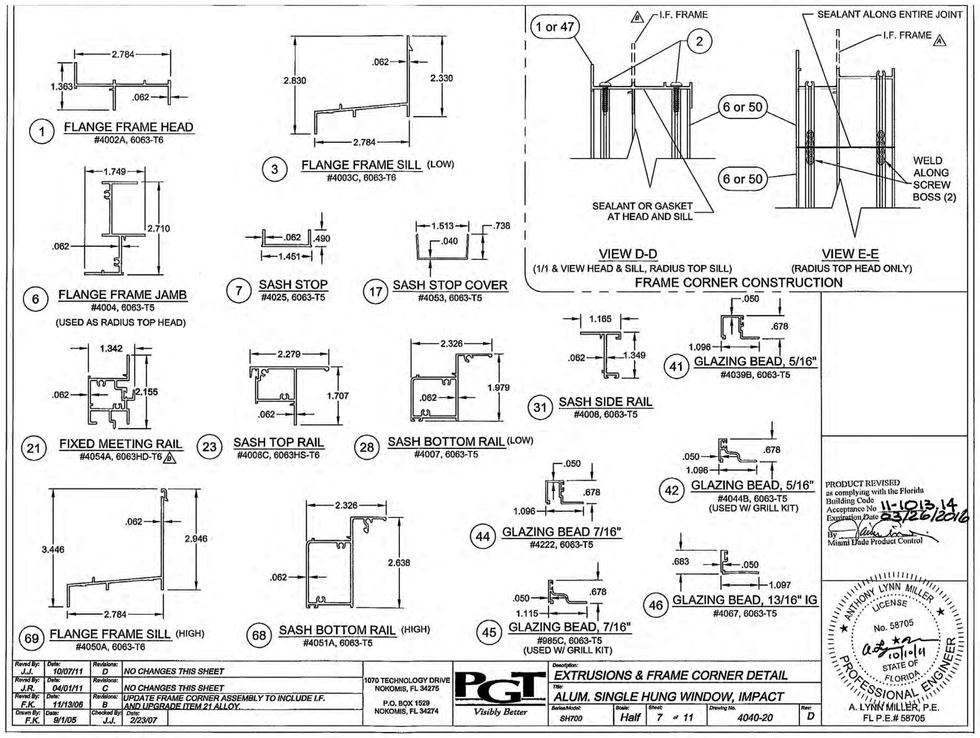
ANTHONY LYNN MILLER LICENSE No. 58705 STATE OF FLORIDA PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
FL P.E.# 58705

Revised By:	Date:	Revisions:	
J.J.	10/07/11	D	NO CHANGES THIS SHEET
J.R.	04/01/11	C	CHANGED CAP GLASS TYPE TO TEMPERED FROM HS
F.K.	11/13/06	B	ADD I.F. FRAME ITEMS 47, 48, 49 AND 50. UPGRADE ITEM 21. ADD ITEM 92. CHG. DESCRIPTION ITEMS 7,8 & 13
Drawn By: F.K.	Date: 9/1/05	Checked By: J.J.	Date: 2/23/07

1070 TECHNOLOGY DRIVE NOKOMIS, FL 34275
P.O. BOX 1529 NOKOMIS, FL 34274

PGT Visibly Better

Description: PARTS LIST	
Title: ALUM. SINGLE HUNG WINDOW, IMPACT	
Series/Model: SH700	Scale: NTS
Sheet: 6 of 11	Drawing No. 4040-20
Rev: D	



PRODUCT REVISED as complying with the Florida Building Code Acceptance No 11-1013.14 Expiration Date 03/26/2016
By Miami Dade Product Control

ANTHONY LYNN MILLER LICENSE No. 58705 STATE OF FLORIDA PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
FL P.E.# 58705

Revised By:	Date:	Revisions:	
J.J.	10/07/11	D	NO CHANGES THIS SHEET
J.R.	04/01/11	C	NO CHANGES THIS SHEET
F.K.	11/13/06	B	UPDATE FRAME CORNER ASSEMBLY TO INCLUDE I.F. AND UPGRADE ITEM 21 ALLOY.
Drawn By: F.K.	Date: 9/1/05	Checked By: J.J.	Date: 2/23/07

1070 TECHNOLOGY DRIVE NOKOMIS, FL 34275
P.O. BOX 1529 NOKOMIS, FL 34274

PGT Visibly Better

Description: EXTRUSIONS & FRAME CORNER DETAIL	
Title: ALUM. SINGLE HUNG WINDOW, IMPACT	
Series/Model: SH700	Scale: Half
Sheet: 7 of 11	Drawing No. 4040-20
Rev: D	

ANCHOR QUANTITIES FOR 1/1 FLANGED WINDOWS — TABLE 5.

SUBSTRATE:		WINDOW HEIGHT																																	
		28.603			34.603			40.603			46.603			52.603			58.603			64.603			76.000												
ANCHOR TYPE:		2,3 WOOD	2 CONC	1 CONC	2,3 WOOD	2 CONC	1 CONC	2,3 WOOD	2 CONC	1 CONC	2,3 WOOD	2 CONC	1 CONC	2,3 WOOD	2 CONC	1 CONC	2,3 WOOD	2 CONC	1 CONC	2,3 WOOD	2 CONC	1 CONC	2,3 WOOD	2 CONC	1 CONC											
WINDOW WIDTH	GLASS TYPE																																		
19.125	C,D,E,F,G, H,I,J,K,L	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1										
		1	2	1	1	1	1	2	1	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	A,B,M	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1										
		1	2	1	1	1	1	2	1	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
24.000	C,D,E,F,G, H,I,J,K,L	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1										
		1	2	1	1	1	2	1	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2	2	3	3	2	3
	A,B,M	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1										
		1	2	1	1	1	2	1	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2	2	3	3	2	3
32.000	C,D,E,F,G, H,I,J,K,L	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	2	1	1	2	1	1										
		1	2	1	2	2	2	2	2	1	2	2	2	2	2	2	3	2	2	3	2	2	3	3	2	3	3	3	4	3	3	4	4	3	4
	A,B,M	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1										
		1	2	1	2	2	2	2	3	1	2	2	2	3	1	2	3	3	2	2	2	3	3	2	2	3	3	3	4	3	3	4	4	3	4
37.000	C,D,E,F,G, H,I,J,K,L	1	1	1	1	1	1	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2										
		2	2	1	2	2	2	2	3	1	2	2	3	3	2	2	3	2	2	3	2	2	3	2	2	3	3	3	4	3	3	4	4	3	4
	A,B,M	1	1	1	1	1	1	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2										
		2	2	1	2	2	2	2	3	1	2	2	3	3	2	2	3	2	2	3	2	2	3	2	2	3	3	3	4	3	3	4	4	3	4
40.000	PSF	79																																	
	C,D,E,F,G, H,I,J,K,L	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2										
		2	2	1	2	2	2	3	3	2	2	3	3	3	2	2	4	3	3	3	3	4	4	3	3	4	4	4	5	4	4	5	5	4	5
	A,B,M	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2										
		2	2	1	2	2	2	3	3	2	2	3	3	3	2	2	4	3	3	3	3	4	4	3	3	4	4	4	5	4	4	5	5	4	5
44.000	PSF	79																																	
	C,D,E,F,G, H,I,J,K,L	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2										
		2	2	2	2	2	2	3	3	2	2	3	3	3	2	2	4	3	3	3	3	4	4	3	3	4	5	4	5	4	4	5	5	4	5
	A,B,M	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2										
		2	2	2	2	2	2	3	3	2	2	3	3	3	2	2	4	3	3	3	3	4	4	3	3	4	5	4	5	4	4	5	5	4	5
48.000	PSF	79			79																														
	C,D,E,F,G, H,I,J,K,L	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2	2	3	2	2										
		2	2	2	2	2	2	3	3	2	2	3	3	4	2	3	3	3	4	4	3	3	4	4	3	5	5	4	5	5	4	5	5	4	5
	A,B,M	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2	2	3	2	2										
		2	2	2	2	2	2	3	3	2	2	3	3	4	2	3	3	3	4	4	3	3	4	4	3	5	5	4	5	5	4	5	5	4	5
53.125	PSF	72			79	79																													
	C,D,E,F,G, H,I,J,K,L	2	2	2	2	2	2	2	2	2	2	2	2	3	2	2	3	2	2	3	2	3	3	2	3										
		2	2	2	2	2	2	3	3	2	2	3	4	4	2	3	4	3	4	4	3	4	5	4	3	5	6	4	5	6	4	5	6	4	5
	A,B,M	2	2	2	2	2	2	3	3	2	2	3	4	4	2	3	4	3	4	4	3	4	5	4	3	5	6	4	5	6	4	5	6	4	5
		2	2	2	2	2	2	3	3	2	2	3	4	4	2	3	4	3	4	4	3	4	5	4	3	5	6	4	5	6	4	5	6	4	5

ANCHORAGE NOTES:

1. ANCHOR TYPES: 1 - 1/4" ELCO TAPCONS
   2 - 1/4" ELCO SS4 CRETE-FLEX
   3 - #12 SCREWS
2. ANCHOR LOCATIONS ARE BASED ON THE FOLLOWING DIMENSIONS.
   HEAD - 18 1/2" MAX. FROM TOP CORNERS
   JAMBS - 17 1/2" MAX. FROM TOP CORNERS
   15" MAX. FROM BOTTOM CORNERS
   6" MAX. BELOW MTG. RAIL
   SILL - ANCHORS NOT REQUIRED
3. INSTALL PER THE ADJACENT TABLE ANCHOR QUANTITIES USING THE DIMENSIONAL CRITERIA OF NOTE 2.
4. TABLE WIDTH AND HEIGHT DIMENSION ARE FOR FLANGED WINDOWS. INTEGRAL FIN DIMENSIONS ARE 1" LESS.
5. DESIGN PRESSURE LIMITATIONS:
   SIZE BLOCKS OF THE ADJACENT TABLE WITH A BOLD ITALICIZED VALUE ABOVE THEM, INDICATE A MAXIMUM DESIGN PRESSURE WITH THE QUANTITY OF ANCHORS SHOWN IN BOLD. OTHERWISE, THE MAXIMUM DESIGN PRESSURE FOR THE RESPECTIVE SIZE AND GLASS TYPE IS AVAILABLE.

TABLE KEY:

MAX. PSF (DP LIMITED)	118
HEAD	2
JAMB ABOVE	2 3
MTG. RAIL	
JAMB BELOW	
MTG. RAIL	
(FULL DP)	
HEAD	2
JAMB ABOVE	2 3
MTG. RAIL	
JAMB BELOW	
MTG. RAIL	

PRODUCT REVISED as complying with the Florida Building Code Acceptance No 11-1013.14 Expiration Date 03/26/2016
By Miami Dade Product Control

ANTHONY LYNN MILLER LICENSE No. 58705 STATE OF FLORIDA PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
FL P.E.# 58705

Revised By:	Date:	Revisions:	
J.J.	10/07/11	D	NO CHANGES THIS SHEET
J.R.	04/01/11	C	NO CHANGES THIS SHEET. REVISE ANCHORAGE TABLE AND NOTES.
F.K.	11/13/06	B	ADD DP MAX. WHERE ANCHOR QTY IS RESTRICTED BY SIZE.
Drawn By: F.K.	Date: 7/28/05	Checked By: J.J.	Date: 2/23/07

1070 TECHNOLOGY DRIVE NOKOMIS, FL 34275
P.O. BOX 1529 NOKOMIS, FL 34274

PGT Visibly Better

Description: ANCHORAGE SPACING, 1/1 WINDOWS	
Title: ALUM. SINGLE HUNG WINDOW, IMPACT	
Series/Model: SH700	Scale: NTS
Sheet: 8 of 11	Drawing No. 4040-20
Rev: D	

DATE | DESCRIPTION | NO.

STATE OF FLORIDA JOHN P. ADAMS AR95282 REGISTERED ARCHITECT

John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
Ethan J. Hine, AIA
Jennifer Zaffuto, AIA, NCARB, MPA

KTH ARCHITECTS
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PRICING SET

LAKE COUNTY
FIRE STATION NO.39
FLORIDA PRODUCT APPROVALS

JANUARY 31, 2020

24815 WALLICK ROAD, SORRENTO, FL 32776

18104A

C.7

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ANCHOR QUANTITIES FOR STANDARD VIEW AND RADIUS TOP FLANGED WINDOWS — TABLE 6.

WINDOW WIDTH	GLASS TYPE	WINDOW HEIGHT 29.655			37.155			44.655			52.155			59.655			67.155			74.655			76.000		
	SUBSTRATE:	2,3 WOOD	2 CONC	1 CONC	2,3 WOOD	2 CONC	1 CONC	2,3 WOOD	2 CONC	1 CONC	2,3 WOOD	2 CONC	1 CONC	2,3 WOOD	2 CONC	1 CONC	2,3 WOOD	2 CONC	1 CONC	2,3 WOOD	2 CONC	1 CONC	2,3 WOOD	2 CONC	1 CONC
	ANCHOR TYPE:																								
19.125	C,D,E,F,G, H,I,J,K,L	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	A,B,M	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
24.000	PSF	79																							
	C,D,E,F,G, H,I,J,K,L	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	A,B,M	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
32.000	PSF	68		77																					
	C,D,E,F,G, H,I,J,K,L	1	1	1	1	1	1	1	1	1	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1
		1	1	1	1	2	2	2	2	2	2	2	2	3	2	2	3	3	3	3	2	4	3	2	4
	A,B,M	1	1	1	1	1	1	1	1	1	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1
		1	1	1	1	2	2	2	2	2	2	2	2	3	2	2	3	3	3	3	2	4	3	2	4
37.000	PSF	59		67	79																				
	C,D,E,F,G, H,I,J,K,L	1	1	1	2	1	1	2	1	2	2	1	2	2	1	2	2	1	2	2	1	2	2	1	2
		1	1	1	2	2	2	2	2	2	2	2	3	3	2	3	3	3	4	3	3	4	4	3	4
	A,B,M	1	1	1	2	1	1	2	1	2	2	1	2	2	1	2	2	1	2	2	1	2	2	1	2
		1	1	1	2	2	2	2	2	2	2	2	3	3	2	3	3	3	4	3	3	4	4	3	4
40.000	PSF	54	79	62	79																				
	C,D,E,F,G, H,I,J,K,L	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
		1	1	1	2	2	2	2	2	2	3	2	2	3	3	3	4	3	3	4	3	3	4	3	3
	A,B,M	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
		1	1	1	2	2	2	2	2	2	3	2	2	3	3	3	4	3	3	4	3	3	4	3	3
44.000	PSF	49	79	56	79		79																		
	C,D,E,F,G, H,I,J,K,L	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
		1	1	1	2	2	2	2	2	2	3	2	2	3	3	3	4	3	3	4	3	3	4	3	3
	A,B,M	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
		1	1	1	2	2	2	2	2	2	3	2	2	3	3	3	4	3	3	4	3	3	4	3	3
48.000	PSF	45	74	51	74		79	79																	
	C,D,E,F,G, H,I,J,K,L	2	2	2	2	2	2	2	2	2	2	2	2	3	2	2	2	2	2	3	2	2	3	2	2
		1	1	1	2	2	2	2	2	2	3	2	2	3	3	3	4	4	4	4	3	5	4	4	5
	A,B,M	2	2	2	2	2	2	2	2	2	2	2	2	3	2	2	3	2	2	3	2	2	3	2	2
		1	1	1	2	2	2	2	2	2	3	2	2	3	3	3	4	4	4	4	3	5	4	4	5
53.125	PSF	41	67	46	67		76	79																	
	C,D,E,F,G, H,I,J,K,L	2	2	2	2	2	2	2	2	3	2	2	3	2	2	3	3	2	3	3	2	3	3	2	3
		1	1	1	2	2	2	2	2	3	3	3	3	4	3	3	4	4	4	4	3	5	4	4	5
	A,B,M	2	2	2	2	2	2	2	2	3	2	2	3	3	2	2	3	3	2	3	3	2	3	3	2
		1	1	1	2	2	2	2	2	3	3	3	3	4	3	3	4	4	4	4	3	5	4	4	5

ANCHORAGE NOTES:

1. ANCHOR TYPES: 1 - 1/4" ELCO TAPCONS
   2 - 1/4" ELCO SS4 CRETE-FLEX
   3 - #12 SCREWS
2. ANCHOR LOCATIONS ARE BASED ON THE FOLLOWING DIMENSIONS:
   HEAD - 18 1/2" MAX. FROM TOP CORNERS
   JAMBS - 17 1/2" MAX. FROM TOP CORNERS
   15" MAX. FROM BOTTOM CORNERS
   6" MAX. BELOW MTG. RAIL
   SILL - ANCHORS NOT REQUIRED
3. INSTALL PER THE ADJACENT TABLE ANCHOR QUANTITIES USING THE DIMENSIONAL CRITERIA OF NOTE 2.
4. TABLE WIDTH AND HEIGHT DIMENSION ARE FOR FLANGED WINDOWS. INTEGRAL FIN DIMENSIONS ARE 1" LESS.
5. DESIGN PRESSURE LIMITATIONS:
   SIZE BLOCKS OF THE ADJACENT TABLE WITH A BOLD ITALICIZED VALUE ABOVE THEM, INDICATE A MAXIMUM DESIGN PRESSURE WITH THE QUANTITY OF ANCHORS SHOWN IN BOLD. OTHERWISE, THE MAXIMUM DESIGN PRESSURE FOR THE RESPECTIVE SIZE AND GLASS TYPE IS AVAILABLE.

TABLE KEY:

	MAX. PSF
(DP LIMITED)	117
HEAD	3
JAMB ABOVE	3 | 3
MTG. RAIL	
JAMB BELOW	
MTG. RAIL	
(FULL DP)	
HEAD	2
JAMB ABOVE	2 | 2
MTG. RAIL	
JAMB BELOW	
MTG. RAIL	

PRODUCT REVISED as complying with the Florida Building Code Acceptance No. 11-1013.14 Expiration Date 03/26/2016 By Miami Dade Product Control

ANTHONY LYNN MILLER LICENSE No. 58705 STATE OF FLORIDA PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
FL P.E.# 58705

Revised By:	Date:	Revisions:	
J.J.	10/07/11	D	NO CHANGES THIS SHEET
J.R.	04/01/11	C	NO CHANGES THIS SHEET
F.K.	11/13/06	B	REVISE ANCHORAGE TABLE AND NOTES. ADD DP MAX. WHERE ANCHOR QTY IS RESTRICTED BY SIZE.
F.K.	7/29/05		

Drawn By:	Date:	Checked By:	Date:
F.K.	7/29/05	J.J.	2/23/07

1070 TECHNOLOGY DRIVE NOKOMIS, FL 34275
P.O. BOX 1529 NOKOMIS, FL 34274
PGT Visibly Better

Description: ANCHORAGE SPACING, STANDARD VIEW
Title: ALUM. SINGLE HUNG WINDOW, IMPACT
Series/Model: SH700 | Scale: NTS | Sheet: 9 of 11 | Drawing No.: 4040-20 | Rev: D

ANCHOR QUANTITIES ABOVE MEETING RAIL (HEAD & JAMBS), CUSTOM FLANGED WINDOW HEIGHT MINUS SASH HEIGHT — TABLE 7.

WINDOW WIDTH	GLASS TYPE	WINDOW HEIGHT MINUS SASH HEIGHT FROM TABLE 8. 17.125			22.668			28.211			33.754			39.296			44.839			50.382			55.925		
	SUBSTRATE:	2,3 WOOD	2 CONC	1 CONC	2,3 WOOD	2 CONC	1 CONC	2,3 WOOD	2 CONC	1 CONC	2,3 WOOD	2 CONC	1 CONC	2,3 WOOD	2 CONC	1 CONC	2,3 WOOD	2 CONC	1 CONC	2,3 WOOD	2 CONC	1 CONC	2,3 WOOD	2 CONC	1 CONC
	ANCHOR TYPE:																								
19.125	D,E,F,J, K,L	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3
24.000	D,E,F,J, K,L	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1	1	1	2	2	2	2	2	2	2	2	3	3	2	3	3	2	3	3	3	3	3	3	4
32.000	D,E,F,J, K,L	1	1	1	1	1	1	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		1	1	1	2	2	2	3	2	3	3	3	3	3	2	3	4	3	4	4	3	4	5	3	5
37.000	PSF							79																	
	D,E,F,J, K,L	1	1	1	2	2	2	3	2	2	3	3	3	4	3	3	4	4	4	4	4	5	5	4	5
40.000	PSF			79	79		79			79															
	D,E,F,J, K,L	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
		1	1	1	2	2	2	3	3	3	4	3	4	4	3	4	4	3	5	4	4	5	5	4	6
44.000	PSF	79		76	79		77	79		79			79												
	D,E,F,J, K,L	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
		1	1	1	2	2	2	3	3	3	4	4	4	4	3	5	4	3	5	5	4	5	5	4	6
48.000	PSF	78	79	70	79	79	71	79		73			76												
	D,E,F,J, K,L	2	2	2	2	2	2	2	2	2	3	2	2	2	2	2	3	2	2	3	2	2	3	2	2
		1	1	1	2	2	2	3	3	3	4	4	4	5	4	5	5	4	6	5	4	6	6	5	6
53.125	PSF	71	79	63	71	79	64	74		66	77		69			69									
	D,E,F,J, K,L	2	2	2	2	2	2	2	2	3	2	2	3	3	2	3	3	2	3	3	2	3	3	2	3
		1	1	1	2	2	2	3	3	3	4	4	4	5	4	5	6	5	6	6	5	7	6	5	7

ANCHOR QUANTITIES AT JAMBS BELOW MEETING RAIL, CUSTOM FLANGED WINDOWS BASED ON SASH HT. — TABLE 8.

WINDOW WIDTH	SUBSTRATE:	SASH HEIGHT 12.776			15.776			18.776			21.776			24.776			27.776			30.776			31.106		
	ANCHOR TYPE:	2,3 WOOD	2 CONC	1 CONC	2,3 WOOD	2 CONC	1 CONC	2,3 WOOD	2 CONC	1 CONC	2,3 WOOD	2 CONC	1 CONC	2,3 WOOD	2 CONC	1 CONC	2,3 WOOD	2 CONC	1 CONC	2,3 WOOD	2 CONC	1 CONC	2,3 WOOD	2 CONC	1 CONC
19.125		1	1	1	2	1	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
24.000		2	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2	2	3	2	2	2
32.000		2	1	2	2	2	2	3	2	2	3	2	3	3	2	3	3	2	3	4	2	3	4	2	3
37.000		2	1	2	79	2	2	3	2	3	3	2	3	3	3	3	3	3	3	4	3	3	4	3	3
40.000		2	2	2	74	2	2	3	2	3	3	2	3	3	3	3	4	3	3	4	3	4	4	3	4
44.000		2	2	2	68	2	2	78	2	3	3	3	3	4	3	3	4	3	4	5	3	4	5	3	4
48.000		2	2	2	63	2	2	72	2	3	4	3	3	4	3	4	4	3	4	5	3	4	5	3	4
53.125		73			58			66	72																
		2	2	2	2	2	2	3	3	3	4	3	4	4	3	4	5	3	4	5	3	5	5	3	5

ANCHORAGE NOTES:

1. ANCHOR TYPES: 1 - 1/4" ELCO TAPCONS
   2 - 1/4" ELCO SS4 CRETE-FLEX
   3 - #12 SCREWS
2. ANCHOR LOCATIONS ARE BASED ON THE FOLLOWIING DIMENSIONS:
   HEAD - 18 1/2" MAX. FROM CORNERS
   JAMBS - 17 1/2" MAX. FROM TOP CORNERS
   11 1/2" MAX. ABOVE THE MEETING RAIL
   6" MAX. BELOW MTG. RAIL
   15" MAX. FROM BOTTOM CORNERS
   SILL - ANCHORS NOT REQUIRED
3. DETERMINE THE ANHCOR QUANTITIES FOR CUSTOM VIEW WINDOWS FROM TABLES 7. AND 8. USING THE DIMENSIONAL CRITERIA OF NOTE 2. USE TABLE 7. FOR ABOVE THE MEETING RAIL AND TABLE 8. FOR BELOW.
4. AVAILABLE SASH HEIGHTS FOR CUSTOM VIEW WINDOWS ARE 12 5/8" MIN. TO 38" MAX.
5. TABLE WIDTH AND HEIGHT DIMENSION ARE FOR FLANGED WINDOWS. INTEGRAL FIN DIMENSIONS ARE 1" LESS.
6. DESIGN PRESSURE LIMITATIONS:
   SIZE BLOCKS OF THE ADJACENT TABLE WITH A BOLD ITALICIZED VALUE ABOVE THEM, INDICATE A MAXIMUM DESIGN PRESSURE WITH THE QUANTITY OF ANCHORS SHOWN IN BOLD. OTHERWISE, THE MAXIMUM DESIGN PRESSURE FOR THE RESPECTIVE SIZE AND GLASS TYPE IS AVAILABLE.

TABLE 7. KEY:

	MAX. PSF
(DP LIMITED)	112
HEAD	2
JAMB ABOVE	2
MTG. RAIL	
(FULL DP)	
HEAD	2
JAMB ABOVE	4
MTG. RAIL	

TABLE 8. KEY:

	MAX. PSF
(DP LIMITED)	112
JAMB BELOW	2
MTG. RAIL	
(FULL DP)	
JAMB BELOW	2
MTG. RAIL	

PRODUCT REVISED as complying with the Florida Building Code Acceptance No. 11-1013.14 Expiration Date 03/26/2016 By Miami Dade Product Control

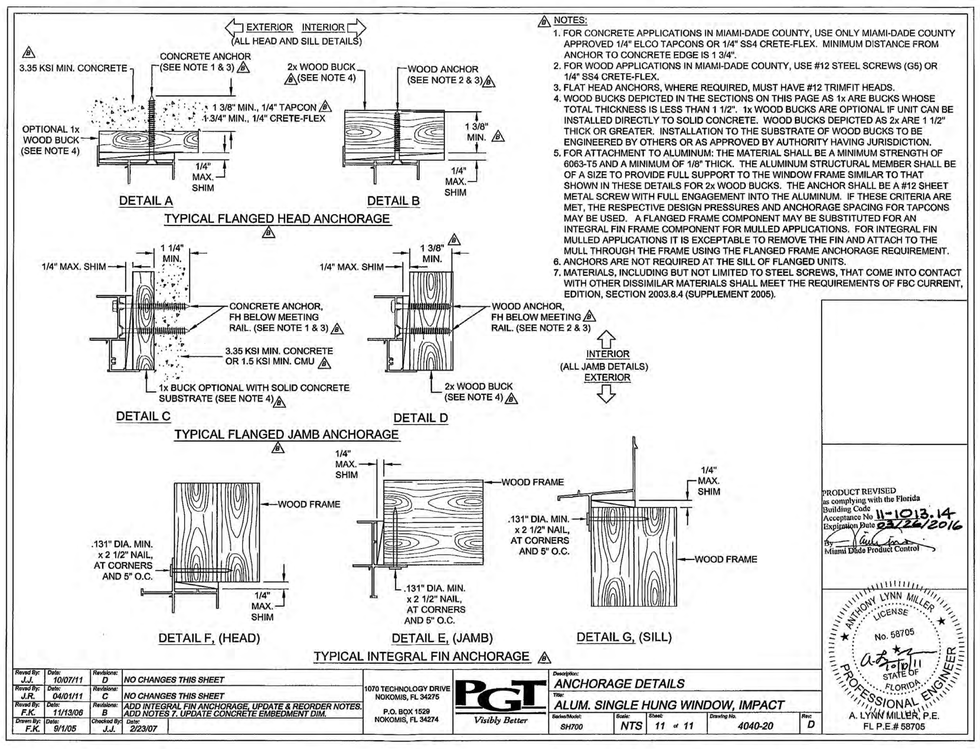
ANTHONY LYNN MILLER LICENSE No. 58705 STATE OF FLORIDA PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
FL P.E.# 58705

Revised By:	Date:	Revisions:	
J.J.	10/07/11	D	NO CHANGES THIS SHEET
J.R.	04/01/11	C	NO CHANGES THIS SHEET
F.K.	11/13/06	B	REVISE ANCHORAGE TABLE AND NOTES. ADD DP MAX. WHERE ANCHOR QTY IS RESTRICTED BY SIZE.
F.K.	7/29/05		

Drawn By:	Date:	Checked By:	Date:
F.K.	7/29/05	J.J.	2/23/07

1070 TECHNOLOGY DRIVE NOKOMIS, FL 34275
P.O. BOX 1529 NOKOMIS, FL 34274
PGT Visibly Better

Description: ANCHORAGE SPACING, CUSTOM VIEW
Title: ALUM. SINGLE HUNG WINDOW, IMPACT
Series/Model: SH700 | Scale: NTS | Sheet: 10 of 11 | Drawing No.: 4040-20 | Rev: D



NOTES:

1. FOR CONCRETE APPLICATIONS IN MIAMI-DADE COUNTY, USE ONLY MIAMI-DADE COUNTY APPROVED 1/4" ELCO TAPCONS OR 1/4" SS4 CRETE-FLEX. MINIMUM DISTANCE FROM ANCHOR TO CONCRETE EDGE IS 1 3/4".
2. FOR WOOD APPLICATIONS IN MIAMI-DADE COUNTY, USE #12 STEEL SCREWS (G5) OR 1/4" SS4 CRETE-FLEX.
3. FLAT HEAD ANCHORS, WHERE REQUIRED, MUST HAVE #12 TRIMFIT HEADS.
4. WOOD BUCKS DEPICTED IN THE SECTIONS ON THIS PAGE AS 1x ARE BUCKS WHOSE TOTAL THICKNESS IS LESS THAN 1 1/2". 1x WOOD BUCKS ARE OPTIONAL IF UNIT CAN BE INSTALLED DIRECTLY TO SOLID CONCRETE. WOOD BUCKS DEPICTED AS 2x ARE 1 1/2" THICK OR GREATER. INSTALLATION TO THE SUBSTRATE OF WOOD BUCKS TO BE ENGINEERED BY OTHERS OR AS APPROVED BY AUTHORITY HAVING JURISDICTION.
5. FOR ATTACHMENT TO ALUMINUM: THE MATERIAL SHALL BE A MINIMUM STRENGTH OF 6063-T5 AND A MINIMUM OF 1/8" THICK. THE ALUMINUM STRUCTURAL MEMBER SHALL BE OF A SIZE TO PROVIDE FULL SUPPORT TO THE WINDOW FRAME SIMILAR TO THAT SHOWN IN THESE DETAILS FOR 2x WOOD BUCKS. THE ANCHOR SHALL BE A #12 SHEET METAL SCREW WITH FULL ENGAGEMENT INTO THE ALUMINUM. IF THESE CRITERIA ARE MET, THE RESPECTIVE DESIGN PRESSURES AND ANCHORAGE SPACING FOR TAPCONS MAY BE USED. A FLANGED FRAME COMPONENT MAY BE SUBSTITUTED FOR AN INTEGRAL FIN FRAME COMPONENT FOR MULLED APPLICATIONS. FOR INTEGRAL FIN MULLED APPLICATIONS IT IS EXCEPTABLE TO REMOVE THE FIN AND ATTACH TO THE MULL THROUGH THE FRAME USING THE FLANGED FRAME ANCHORAGE REQUIREMENT.
6. ANCHORS ARE NOT REQUIRED AT THE SILL OF FLANGED UNITS.
7. MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF FBC CURRENT, EDITION, SECTION 2003.8.4 (SUPPLEMENT 2005).

PRODUCT REVISED as complying with the Florida Building Code Acceptance No. 11-1013.14 Expiration Date 03/26/2016 By Miami Dade Product Control

ANTHONY LYNN MILLER LICENSE No. 58705 STATE OF FLORIDA PROFESSIONAL ENGINEER
A. LYNN MILLER, P.E.
FL P.E.# 58705

Revised By:	Date:	Revisions:	
J.J.	10/07/11	D	NO CHANGES THIS SHEET
J.R.	04/01/11	C	NO CHANGES THIS SHEET
F.K.	11/13/06	B	ADD INTEGRAL FIN ANCHORAGE, UPDATE & REORDER NOTES. ADD NOTES 7, UPDATE CONCRETE EMBEDMENT DIM.
F.K.	9/1/05	J.J.	2/23/07

1070 TECHNOLOGY DRIVE NOKOMIS, FL 34275
P.O. BOX 1529 NOKOMIS, FL 34274
PGT Visibly Better

Description: ANCHORAGE DETAILS
Title: ALUM. SINGLE HUNG WINDOW, IMPACT
Series/Model: SH700 | Scale: NTS | Sheet: 11 of 11 | Drawing No.: 4040-20 | Rev: D

DATE	DESCRIPTION	NO.

STATE OF FLORIDA JOHN P. ADAMS AR93282 REGISTERED ARCHITECT

John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
Ethan J. Hine, AIA
Jennifer Zaffuto, AIA, NCARB, MPA
1741 KIWANIS TRAIL • DUBOIS, PA • 814.371.1561 • F 814.371.8601 • KTHarch.com
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KTH ARCHITECTS

18104A

LAKE COUNTY
FIRE STATION NO.39
FLORIDA PRODUCT APPROVALS
24815 WALLICK ROAD, SORRENTO, FL 32776

JANUARY 31, 2020

PRICING SET

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LOW HEADROOM TRACK,
HI-LIFT TRACK,
FOLLOW-THE-ROOF TRACK,
AND VERTICAL LIFT TRACK
ARE AVAILABLE OPTIONS.
3" TRACK ALSO AVAILABLE.

9'-2" WIDE (MAX) X 18'-0" HIGH (MAX)

REVISIONS					
REV. NO.	ZONE:	DATE:	ECN NO.	APPVD:	DESCRIPTION
00	-	11/29/18	--	SH	INITIAL RELEASE.

HORIZONTAL TRACK END HANGER BRACKET (SUPPLIED BY DOOR INSTALLER) CLOSES ROLLER CHANNEL. INTERMEDIATE HANGER REQUIRED FOR DOORS IF HORIZONTAL TRACK DEFLECTION EXCEEDS 1/240TH OF THE DOOR HEIGHT.

GALV STEEL TRACK HORIZONTAL - 14 GA. MIN.

GALV STEEL TRACK VERTICAL - 0.060 MIN.

OPENING HEIGHT

VERTICAL TRACK CAN BE EITHER BRACKET MOUNT, CONTINUOUS ANGLE OR REVERSE ANGLE TRACK. ALL TRACK BRACKETS AND TRACK CLIPS ARE 12 GA. GALV. STEEL. BRACKETS/CLIPS ARE ATTACHED TO TRACK WITH EITHER (2) 1/4" RIVETS OR (1) 1/4" X 5/8" BOLT AND NUT PER BRACKET/CLIP.

24" TYPICAL CTR-CTR

10"

3 1/2

SIDE ELEVATION
STANDARD-LIFT TRACK DETAILS

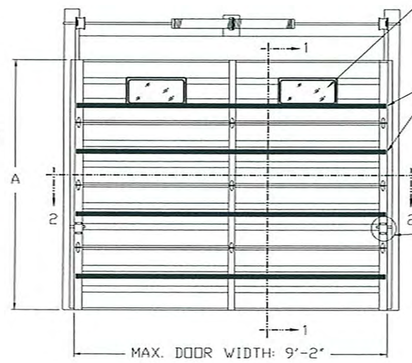
24GA EXTERIOR SKIN
(RIBBED DOORS)
NON-INSULATED MODELS:
MODELS: CLOPAY - 524, 224
IDEAL - C4ST
VINYL BACKED INSULATION MODELS:
MODELS: CLOPAY - 524V
IDEAL - C4SV
STEEL BACKED INSULATED MODELS:
MODELS: CLOPAY - 524S, 224S
IDEAL - C4SS

20GA EXTERIOR SKIN
(RIBBED DOORS)
NON-INSULATED MODELS:
MODELS CLOPAY - 520
IDEAL - C0ST
STEEL BACKED INSULATION MODELS:
MODELS CLOPAY - 520S
IDEAL - C0SS

DOOR WIDTH	NUMBER OF CENTER STILES
UP TO 9'-2"	1



OPTIONAL ALUMINUM FULL VISION LITE SECTIONS AVAILABLE (DSB, 1/8" PLEXI, OR BETTER). FULL VISION SECTIONS ARE REINFORCED WITH A 2"x2" AL L-ANGLE ATTACHED AT THE TOP OF EACH SECTION.



OPTIONAL PROPYLENE SCREW TOGETHER FRAME (MAX. 24"x12") TYPE DSB OR 1/8" PLEXI OR BETTER WINDOW LITES AVAILABLE.

2-1/4"x20 GA. GALV. STEEL U-BAR. SEE VIEW "E" AND SECTION 1-1. U-BARS ARE PLACED IN THE MIDDLE OF EACH SOLID SECTION AND BELOW THE GLAZING FOR GLAZED SECTIONS.

ONE POINT (MIN.) LOCKING REQUIRED.

#14 X 5/8" SHEET METAL SCREWS QTY (4) ALONG CENTER OF EACH HINGE

14 GAUGE CENTER HINGES

#14X5/8" SHEET METAL SCREWS QTY (4) ALONG CENTER OF EACH HINGE

14 GAUGE END HINGES

1/4"X3/4" SELF TAPPING SCREWS. QTY. (4) ALONG CORNERS OF EACH HINGE

18 GA. MIN. GALV. CENTER STILE. FASTENED TO DOOR SKIN WITH TOG-L-LOC SYSTEM.

18 GA. MIN. GALV. END STILE. FASTENED TO DOOR SKIN WITH TOG-L-LOC SYSTEM.

14 GA. GALV. CENTER HINGE FASTENED WITH (4) #14X5/8" SHEET METAL SCREWS.

SEE ROLLER HINGE DETAIL IN SECTION 1-1 FOR DETAILS.

SECTION 2-2

DOOR HEIGHT 'A'	NUMBER OF SECTIONS
8'-0"	4
8'-3" THRU 10'-0"	5
10'-3" THRU 12'-0"	6
12'-3" THRU 14'-0"	7
14'-3" THRU 16'-0"	8
16'-3" THRU 18'-0"	9

ANCHOR NOTE: FIRST (BOTTOM) ANCHOR STARTING AT NO MORE THAN HALF OF THE MAXIMUM ON-CENTER DISTANCE. HIGHEST ANCHOR INSTALLED AT LEAST AS HIGH AS THE DOOR OPENING.

SECTIONS ARE 1-7/8" THK PANELS ROLL FORMED OF 0.022" MIN. HOT DIPPED GALVANIZED STEEL.

ADJUSTABLE TOP ROLLER BRACKET OF 12 GA. GALV. STEEL, INSTALLED ON DOOR WITH (4) #14 X 5/8" LG SHEET METAL SCREWS.

2-1/4"

1-7/8"

VIEW "E"
2-1/4" TALL U-BAR
20 GA. GALV. STEEL

2-1/4" X 20 GA STEEL U-BAR. ONE PER SECTION. ATTACHED WITH (2) 1/4"x3/4" SELF TAPPING SCREWS PER STILE LOCATION. SEE VIEW "E".

OPTIONAL INSULATION (SEE MODEL DESCRIPTIONS).

END ROLLER HINGES OF 14 GA. GALV. STEEL, FASTENED WITH (4) #14 X 5/8" LG SHEET METAL SCREWS AND (4) 1/4"x3/4" SELF-TAPPING SCREWS.

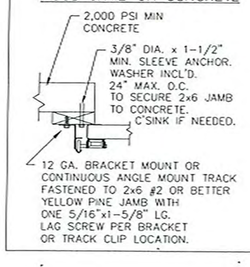
2" ROLLERS FEATURE (10) 1/4" DIA. STEEL BALL BEARINGS FULL FLOATING IN CASE HARDENED STEEL RACES.

BOTTOM ROLLER BRACKET OF 13 GA. GALV. STEEL, FASTENED WITH (4) #14 X 5/8 LG SHEET METAL SCREWS.

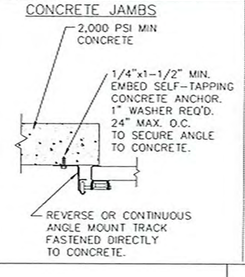
BOTTOM SECTION REINFORCED WITH TEMPERED ALUMINUM EXTRUSION WITH INTEGRAL RETAINER FOR FLEXIBLE VINYL ASTRAGAL.

SECTION 1-1

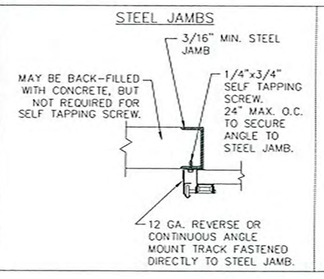
WOOD JAMB ON CONCRETE



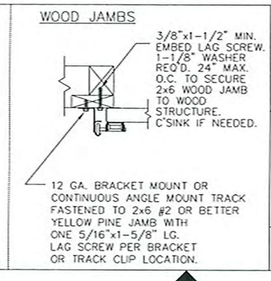
CONCRETE JAMBS



STEEL JAMBS



WOOD JAMBS



THE DESIGN OF THE SUPPORTING STRUCTURAL ELEMENTS IS THE RESPONSIBILITY OF THE BUILDING ENGINEER OR ARCHITECT OF RECORD.

SCOTT HAMILTON, P.E.
FLORIDA P.E. #63286

NOTICE:
Confidential/Proprietory information of CLOPAY BUILDING PRODUCTS CO. is contained herein and may not be disclosed, used, duplicated, made available, or distributed without its prior consent. Failure to observe this notice may result in liability for any damages and losses resulting therefrom.

Third Angle Projection

Unless Stated Otherwise TOLERANCES are
.0 = ±.031
.00 = ±.015
.000 = ±.005
.0000 = ±.001
Degrees = ±1/2°
Unless Stated Otherwise DIMENSIONS ARE IN INCHES.

DESIGN LOAD: +25.0 PSF, -25.0 PSF.
TEST LOAD: +37.5 PSF, -37.5 PSF.

Clopay Building Products Company
8585 Duke Boulevard
Mason, OH 45040 USA
Tel. No. 513-770-4800
Fax No. 513-770-4853

MANUFACTURING PRODUCT CODE: MPC: C-PAN-1E448
PART NO.: N/A
CLOPAY WINDLOAD RATING W4-DP25

DESCRIPTION: 524W4, 9'2" WIDE			
DRAWN BY: SH	DATE: 11/29/18	SCALE: N/A	DWG. SIZE B
CHECKED BY: SH	DATE: 11/29/18	SHEET 1 OF 1	
DWG. NO.: 105412		REV. NO. 00	

FLORIDA PRODUCT APPROVAL 16546

NO.	DESCRIPTION	DATE

John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
Ethan J. Hine, AIA
Jennifer Zaffuto, AIA, NCARB, MPA
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KTH ARCHITECTS

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LAKE COUNTY
FIRE STATION NO.39
FLORIDA PRODUCT APPROVALS
24815 WALLICK ROAD, SORRENTO, FL 32776

JANUARY 31, 2020

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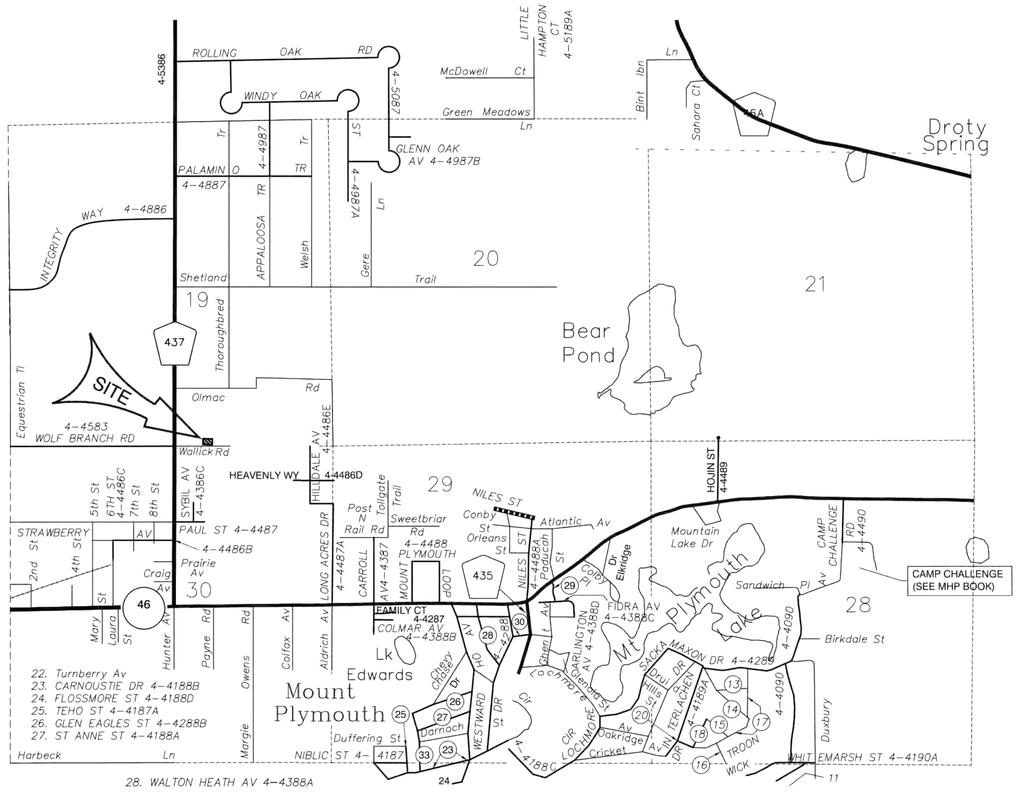
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SITE PLAN FOR
LAKE COUNTY FIRE STATION NO.39

LAKE COUNTY
FLORIDA

Lake County, Florida
Section 19, Township 19 South, Range 28 East



OWNER:
Lake County BCC
315 West Main Street
P.O. Box 7800
Tavares, Fl. 32778
Contact: Kristian Swenson
(352) 253-4976

ENGINEER/SURVEYOR:
Booth, Ern, Straughan and Hiott
902 North Sinclair Avenue
Tavares, Florida 32778
(352) 343-8481

UTILITY COMPANIES
ELECTRIC:
SECO
50 WEST ARDICE AVENUE
EUSTIS, FL 32726
(352) 357-5600

TELEPHONE:
CENTURY LINK
15241 OAKLAND AVENUE
WINTER GARDEN, FL. 34787
(407) 785-6901

WATER:
CITY OF EUSTIS

SANITARY:
CITY OF EUSTIS

NOTE:
ALL UTILITY CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF EUSTIS CONSTRUCTION SPECIFICATIONS.

DEVELOPMENT REVIEW

PROJECT # _____ APPLICATION REQUEST #_____

PROJECT NAME: LAKE COUNTY FIRE STATION 39

ALTERNATE KEY # 1802709 ORDINANCE # _____

REVIEWER PLEASE SIGN AND DATE BELOW:

ENVIRONMENTAL: _____

COMMENTS: _____

PUBLIC SAFETY / EMERGENCY 911: _____

COMMENTS: _____

HEALTH DEPARTMENT. _____

COMMENTS: _____

FIRE: _____

COMMENTS: _____

CONCURRENCY: _____

COMMENTS: _____

PUBLIC WORKS: _____

COMMENTS: _____

PLANNING ZONING: _____

COMMENTS: _____

LANDSCAPE : _____

COMMENTS: _____

PRELIMINARY/FINAL DEVELOPMENT REVIEW

APPROVAL _____

DATED _____ MANAGER, PLANNING & ZONING DIVISION (OR DESIGNEE)

INDEX OF SHEETS

1.1 COVER SHEET
1.2 DEMOLITION & EROSION CONTROL PLAN
1.3 SITE PLAN
1.4 GRADING AND DRAINAGE PLAN
1.5 GENERAL NOTES & DETAILS
1.6 DETAILS
1.7 SPECIFICATIONS

BESH
BOOTH ERN STRAUGHAN HIOTT, INC
ENGINEERS • SURVEYORS • LAND PLANNERS
902 North Sinclair Ave.
Tavares, Florida 32778
www.besandh.com
Office: 352.343.8481
Fax: 352.343.8495
Certificate of Authorization Number: 27029

DATE | DESCRIPTION | NO.

John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
Ethan J. Hine, AIA
Jennifer Zaffuto, AIA, NCARB, MPA
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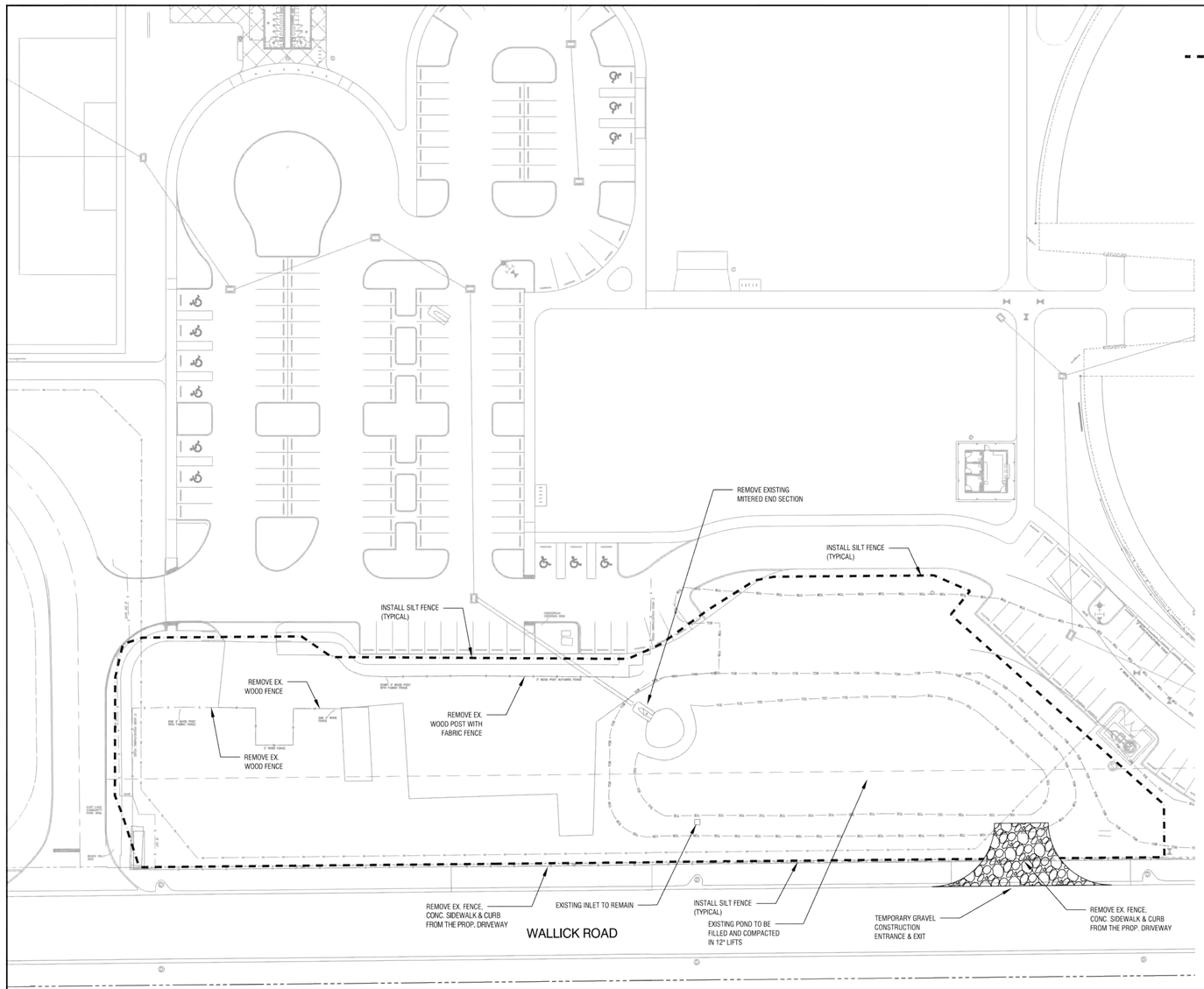
LAKE COUNTY
FIRE STATION NO.39
CIVIL COVER SHEET
24815 WALLICK ROAD, SORRENTO, FL 32776

JANUARY 31, 2020

PRICING SET

1.1

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LEGEND

SILT FENCE

Scale: 1" = 30

SCALE IN FEET

1. CONTRACTOR TO DESILT ALL PIPES PRIOR TO COMPLETION OF CONSTRUCTION OF PROJECT.

2. SILT FENCE SHOWN IS STRICTLY SCHEMATIC, FOR ILLUSTRATION ONLY. ALL FENCE TO BE WITHIN THE PROPERTY LINE OF THE PROJECT SITE.

TEMPORARY CONSTRUCTION ENTRANCE

1. THE AREA OF THE ENTRANCE SHOULD BE CLEARED OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL. A GEOTEXTILE SHOULD BE INSTALLED TO IMPROVE STABILITY AND SIMPLIFY MAINTENANCE. THE GRAVEL SHALL THEN BE PLACED OVER THE GEOTEXTILE.

2. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF MUD ONTO PUBLIC ROADS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 2-INCH STONE, AS CONDITIONS DEMAND. WILL MATERIALS SPILLED, DROPPED, OR TRACKED FROM VEHICLES ONTO ROADWAYS MUST BE REMOVED IMMEDIATELY. LOOK FOR SIGNS OF TRUCKS AND TRAILERED EQUIPMENT CUTTING CORNERS WHERE THE GRAVEL MEETS THE ROADWAY. SWEEP THE PAVED ROAD DAILY FOR SEDIMENTS.

3. CONSTRUCTION SITE OPERATORS MUST CONTROL WASTE SUCH AS DISCARDED BUILDING MATERIALS, CONCRETE TRUCK WASHOUT, CHEMICALS, LITTER, AND SANITARY WASTE AT THE CONSTRUCTION SITETHAT MAY CAUSE ADVERSE IMPACTS TO WATER QUALITY.

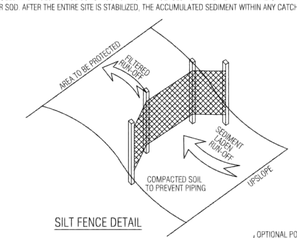
EROSION AND SEDIMENT CONTROLS
A. EROSION CONTROL DURING CONSTRUCTION
1. TEMPORARY EROSION CONTROL STRUCTURE SHALL BE UTILIZED DURING CONSTRUCTION OF AREAS ON-SITE WHERE UNSTABILIZED GRADES MAY CAUSE EROSION PROBLEMS. EROSION CONTROL STRUCTURES MAY BE REMOVED AFTER UPSLOPE HAS BEEN STABILIZED BY SOD OR COMPACTED AS DETERMINED BY THE CONTRACTOR.
2. TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE COORDINATED WITH PERMANENT MEASURES TO ASSURE ECONOMICAL, EFFECTIVE AND CONTINUOUS CONTROL THROUGHOUT THE CONSTRUCTION PHASES. TEMPORARY MEASURES SHALL NOT BE CONSTRUCTED FOR EXPEDIENCY IN LIEU OF PERMANENT MEASURES.
3. PERMANENT EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AT THE EARLIEST PRACTICABLE TIME CONSISTENT WITH GOOD CONSTRUCTION PRACTICES. ONE OF THE FIRST CONSTRUCTION ACTIVITIES SHOULD BE THE PLACEMENT OF PERMANENT AND TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AROUND THE PERIMETER OF THE PROJECT OF THE INITIAL WORK ARE TO PROTECT THE PROJECT, ADJACENT PROPERTIES, AND WATER RESOURCES.
4. STORM WATER MANAGEMENT AREAS, STORM SEWER SYSTEM AND CONTROL STRUCTURES SHALL BE EXCAVATED 1 ROUGH GRADE PRIOR TO BUILDING CONSTRUCTION OR PLACEMENT OF IMPERVIOUS SURFACE WITHIN THE AREA TO BE SERVED BY THE FACILITIES. TO PREVENT REDUCTION IN STORAGE VOLUME AND PERCOLATION RATE. ALL ACCUMULATED SEDIMENT WILL BE REMOVED FROM THE STORM WATER FACILITIES PRIOR TO FINAL GRADING, STABILIZATION AND GRASSING.
5. EROSION CONTROL STRUCTURES, SUCH AS SILT FENCE AND BERMS, SHALL BE INSTALLED AROUND INLETS AND IN SWALES TO TRAP ERODED MATERIAL, PREVENT SEDIMENTATION IN DOWN STREAM AREAS AND KEEP RUNOFF VELOCITIES LOW.
6. THE CONTRACTOR SHALL MINIMIZE THE EXTENT OF AREA EXPOSE AT ANY ONE TIME AND THE DURATION OF EXPOSURE.
7. STABILIZATION MEASURES SHALL BE INITIATED FOR EROSION AND SEDIMENT CONTROL ON DISTURBED GRASS NO MORE THAN FOURTEEN (14) DAYS AFTER THE CONSTRUCTION ACTIVITY IN ANY PORTION OF THE SITE THAT HAS CEASED.
8. THE CONTRACTOR WILL INSTALL A PERMANENT PROTECTIVE VEGETATIVE COVER FOR EROSION AND SEDIMENT CONTROL ON ALL LAND SURFACES DISTURBED BY CONSTRUCTION. THIS PROTECTIVE COVER MUST BE INSTALLED WITHIN FOURTEEN (14) DAYS AFTER FINAL GRADING OF THE EFFECTED LAND SURFACES. A PERMANENT VEGETATIVE COVER MUST BE ESTABLISHED WITHIN SIXTY (60) DAYS AFTER PLANTING OR INSTALLATION .
9. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE ADEQUATELY MAINTAINED TO PERFORM THEIR INTENDED FUNCTION DURING CONSTRUCTION OF THE PROJECT. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL. THEY MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
10. PLACEMENT OF BARRIERS OR NECESSARY REPAIRS TO BARRIERS SHALL BE ACCOMPLISHED PROMPTLY.
11. MATERIAL FROM SEDIMENT TRAPS SHALL NOT BE STOCK PILED OR DISPOSED OF IN A MANNER WHICH MAKES THEM READILY SUSCEPTIBLE TO BEING WASHED INTO ANY WATER COURSE BY RUNOFF OR HIGH WATER.
12. ANY ACCUMULATED SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE BARRIERS ARE NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.
13. TO PROVIDE DUST CONTROL, A CONTRACTOR SHALL PROVIDE A WATER TRUCK OR IRRIGATION SYSTEM AS NEEDED. TO MAINTAIN SOIL MOISTURE.
14. IF SITE SPECIFIC CONDITIONS REQUIRE ADDITIONAL MEASURES DURING ANY PHASE OF CONSTRUCTION OR OPERATION TO PREVENT EROSION OR CONTROL SEDIMENT, BEYOND THOSE SPECIFIED IN THE EROSION AND SEDIMENT CONTROL PLAN, THE CONTRACTOR MUST IMPLEMENT ADDITIONAL BEST MANAGEMENT PRACTICES AS NECESSARY, IN ACCORDANCE WITH THE SPECIFICATION IN SECTION 6 OF THE FLORIDA LAND DEVELOPMENT MANUAL; A GUIDE TO LAND AND WATER MANAGEMENT.

B. PERMANENT STABILIZATION
WHERE CONSTRUCTION IS COMPLETE, PERMANENT VEGETATION SHALL BE INSTALLED AS SPECIFIED ON THE CONSTRUCTION PLANS AND IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATION DOCUMENT. PERMANENT VEGETATION WILL INCLUDE SOD OR SEED AND MULCH.

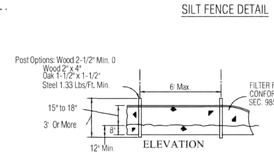
STORM WATER MANAGEMENT SYSTEM
THE STORMWATER RETENTION PONDS SHALL BE EXCAVATED TO ROUGH GRADE PRIOR TO BUILDING CONSTRUCTION OR PLACEMENT OF IMPERVIOUS SURFACES WITHIN THE DRAINAGE AREA SERVED BY THIS FACILITY. ALL ACCUMULATED SEDIMENT MUST BE REMOVED FROM THE RETENTION POND PRIOR TO FINAL GRADING, STABILIZING AND GRASSING.

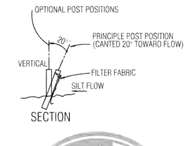
OTHER CONTROLS
A. OFFSITE VEHICLE TRACKING
PAVED STREETS ADJACENT TO THE CONSTRUCTION SITE ENTRANCE WILL BE SWEPT AS NEEDED TO PREVENT EXCESS MUD, DIRT, OR ROCK FROM LEAVING THE CONSTRUCTION SITE. ALL DUMP TRUCKS HAULING MATERIAL TO AND FROM THE CONSTRUCTION SITE WILL BE COVERED WITH A TARP. TEMPORARY STABILIZED OR ROCK CONSTRUCTION ENTRANCE MAY BE REQUIRED TO REMOVE EXCESS DIRT AND MUD FROM TIRES BEFORE CONSTRUCTION VEHICLES ENTER ADJACENT PAVED STREETS.

TIMING OF SEDIMENT AND EROSION CONTROL MEASURES
A SILT FENCE SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION ACTIVITY. THE RETENTION PONDS AND THE STORM WATER CONVEYANCE SYSTEM SHALL BE CONSTRUCTED PRIOR TO THE PLACEMENT OF ANY IMPERVIOUS AREA. AREAS WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR MORE THAN 14 DAYS SHALL BE STABILIZED WITH TEMPORARY SEED AND MULCH. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN ANY AREA, THAT AREA WILL BE STABILIZED WITH PERMANENT SEED AND MULCH OR SOD. AFTER THE ENTIRE SITE IS STABILIZED, THE ACCUMULATED SEDIMENT WITHIN ANY CATCH BASIN, STORM PIPES OR RETENTION PONDS WILL BE REMOVED.



SILT FENCE DETAIL





LAKE COUNTY
FLORIDA

EROSION CONTROL STRUCTURE

THE FOLLOWING REPRESENTS A BASIC EROSION AND SEDIMENT CONTROL PROGRAM WHICH IS TO BE IMPLEMENTED TO HELP PREVENT OFF-SITE SEDIMENTATION DURING AND AFTER CONSTRUCTION OF THE PROJECT. PERMANENT EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AT THE EARLIEST PRACTICAL TIME CONSISTENT WITH GOOD CONSTRUCTION PRACTICES. ONE OF THE FIRST CONSTRUCTION ACTIVITIES SHOULD BE THE PLACEMENT OF PERMANENT AND TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AROUND THE PERIMETER OF THE PROJECT OR THE INITIAL WORK AREA TO PROTECT THE PROJECT, ADJACENT PROPERTIES AND WATER RESOURCES. TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE COORDINATED WITH PERMANENT MEASURES TO ASSURE ECONOMICAL, EFFECTIVE AND CONTINUOUS CONTROL THROUGHOUT THE CONSTRUCTION PHASE. TEMPORARY MEASURES SHALL NOT BE CONSTRUCTED FOR EXPEDIENCY IN LIEU OF PERMANENT MEASURES. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE ADEQUATELY MAINTAINED TO PERFORM THEIR INTENDED FUNCTION DURING CONSTRUCTION OF THE PROJECT. NECESSARY REPAIRS TO BARRIERS OR REPLACEMENT OF BARRIERS SHALL BE ACCOMPLISHED PROMPTLY. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL. THEY MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER. MATERIAL FROM SEDIMENT TRAPS SHALL NOT BE STOCKPILED OR DISPOSED OF IN A MANNER WHICH MAKES THEM READILY SUSCEPTIBLE TO BEING WASHED INTO ANY WATERCOURSE BY RUNOFF OR HIGH WATER. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE BARRIERS ARE NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

NO.	DESCRIPTION	DATE

REVISION	DATE
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LAKE COUNTY
FIRE STATION #39
DEMOLITION AND
EROSION CONTROL PLAN

BOOTH ERN STRAUGHAN HOTT, INC
ENGINEERS • SURVEYORS • LAND PLANNERS
902 North Sinclair Ave.
Tavares, Florida 32778
www.besandh.com
Office: 352.343.8481
Fax: 352.343.8495
Certificate of Authorization Number: 27029

DATE:	JANUARY 24, 2020
DESIGNED BY:	BJ
DRAWN BY:	BJ
CHECKED BY.:	CCH
JOB NO.:	100002.0007
FILE NAME:	FIRESTA39

Sheet 1.2

CHARLES C. HIOTT, PE
Registered Eng 54813

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Jerome Bankovich, Jr., AIA, LEED
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800 NORTH HIGHLAND AVE. • ORLANDO, FL • 407.203.6707 • F 407.409.0650

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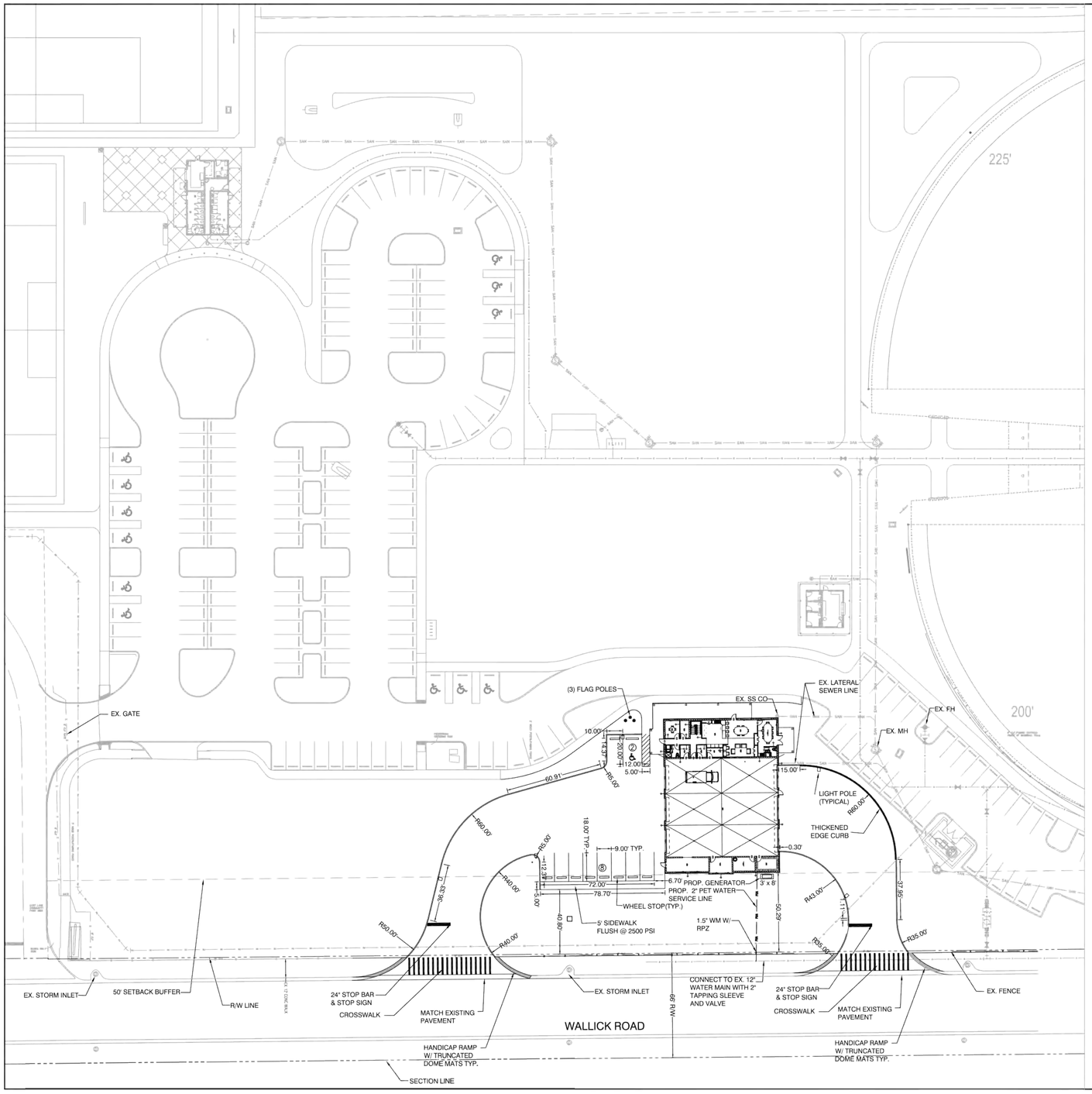
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LAKE COUNTY
FIRE STATION NO.39
DEMOLITION AND
EROSION CONTROL PLAN
24815 WALLICK ROAD, SORRENTO, FL 32776

JANUARY 31, 2020

1.2

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Scale: 1" = 30

SCALE IN FEET

LAND USE DATA

EXISTING FLUM.....PUBLIC SERVICE FACILITY AND INFRASTRUCTURE
EXISTING ZONING.....COMMUNITY FACILITIES DISTRICT (CFD)
TOTAL AREA OWNED.....74.66 ACRES OR 3,252,190 SF
LIMITS OF CONSTRUCTION AREA.....1.62 ACRES OR 70,782 SF

ADJACENT ZONING:
- NORTH..... A
- SOUTH..... A
- EAST ..... A
- WEST R-2

FLUM:
- NORTH..... URBAN LOW DENSITY
- SOUTH..... URBAN LOW DENSITY
- EAST ..... RECEIVING AREA A-1-20
- WEST ..... MT PLYMOUTH-SORRENTO PROPER

SETBACKS:
- FRONT..... 50'
- SIDE..... 50'
- REAR..... 50'

PROPOSED USE: CONSTRUCTION OF FIRE STATION.

ALTERNATE KEY NUMBER: 1802709

WATER ..... CITY OF EUSTIS
SEWER ..... CITY OF EUSTIS

BUILDING HEIGHT.....32.64'

PARKING REQUIRED = 3 PER SHIFT WITH 2 SHIFTS PER DAY= 6 SPACES
PARKING PROVIDED = 10 SPACES

WASTE MANAGEMENT ..... ROAD SIDE PICK UP
UTILITIES ..... CENTRAL WATER AND SEPTIC TANK AND DRAIN FIELD

FIRE PROTECTION..... BUILDING WILL BE SPRINKLED AND EXISTING FIRE HYDRANT IS SHOWN.
ST. JOHNS RIVER WATER MANAGEMENT PERMIT NUMBER = 119238-2

SOIL TYPE.....CANDLER SAND (0-5% SLOPE)
WELANDS / CONSERVATION .....0.00 SF

PROPOSED PAVEMENT.....18,019 SF
PROPOSED SIDEWALK ..... 675 SF
PROPOSED BUILDING (FIRE STATION).....8,253.81 SF
TOTAL PROPOSED IMPERVIOUS.....26,954.81 SF
PROPOSED IMPERVIOUS SURFACE RATIO.....0.38
MAXIMUM IMPERVIOUS SURFACE RATIO 0.50
MAXIMUM FAR 1
PROPOSED FAR 0.117
PROPOSED GRASS/OPEN SPACE/POND.....45147 SF (63.78%)

NOTES:
1. ALL STRIPING TO BE LEAD FREE THERMOPLASTIC INSTALLED PER SECTION 711, F.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
2. DETECTABLE WARNING STRIPS TO BE INSTALLED PER F.D.O.T. STANDARD INDEX NO. 304 AND SECTION 527, F.D.O.T. STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
3. ENTIRE LOT TO BE GRADED TO MATCH SITE PLAN, AS NEEDED. BAHIA SOD TO BE INSTALLED IN ALL AREAS DISTURBED AND ANY OTHER AREAS WITH OUT GRASS.
4. ALL DEBRIS, BRANCHES, AND TRASH NEEDS TO BE DISPOSED OF.
5. GRIND ALL STUMPS IF ANY TREES ARE REMOVED A MINIMUM OF 8" BELOW FINISHED GRADE.

LAKE COUNTY
FLORIDA

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DATE	REVISION
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LAKE COUNTY
FIRE STATION #39

SITE PLAN

BOOTH ERN STRAUGHAN HOTT, INC
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DESIGNED BY:	BJ
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Sheet 1.3

CHARLES C. HIOTT, PE
Registered Eng 54813

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John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
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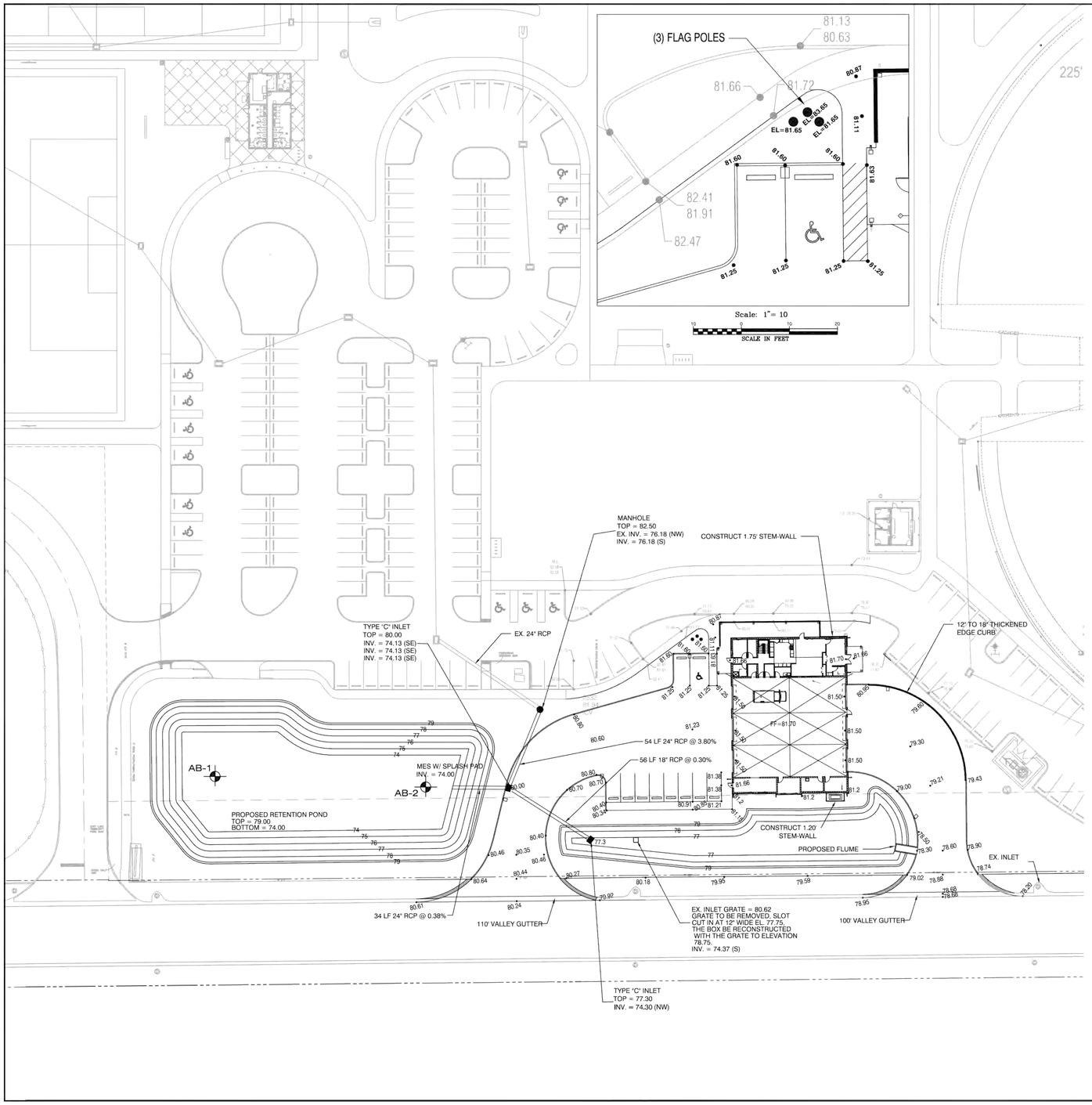
LAKE COUNTY
FIRE STATION NO.39
SITE PLAN
24815 WALLICK ROAD, SORRENTO, FL 32776

JANUARY 31, 2020

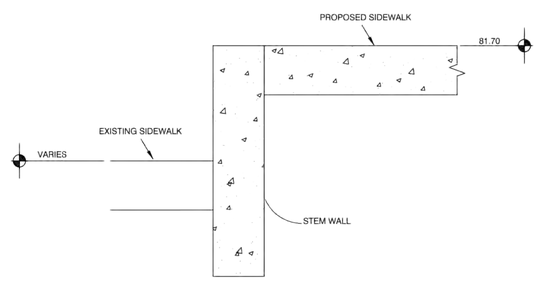
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Scale: 1"= 30
SCALE IN FEET



STEM WALL (SEE ARCHITECTURAL DRAWING)

GENERAL NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO FDOT AND LAKE COUNTY STANDARDS.
2. INFORMATION REGARDING THE LOCATION OF EXISTING UTILITIES HAS BEEN OBTAINED FROM RESPECTIVE UTILITY OWNER USING THE LATEST INFORMATION AVAILABLE. HOWEVER, THESE LOCATIONS, AS SHOWN ON THE PLANS, ARE NOT CONSIDERED TO BE ALL INCLUSIVE. THE ENGINEER HAS ATTEMPTED TO SHOW AS MUCH AS POSSIBLE ALL MAIN ELECTRICAL AND TELEPHONE UNDERGROUND CABLES AND DUCTS. THE ENGINEER HAS NOT SHOWN ELECTRICAL AND TELEPHONE SERVICE CONNECTIONS WHICH MAY EXIST WITHIN THE PRIVATE RIGHTS-OF-WAY WITHIN THIS PROJECT. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL UNDERGROUND FACILITIES WITH A FIELD REPRESENTATIVE OF EACH RESPECTIVE UTILITY.
3. THE CONTRACTOR SHALL INSURE ALL NECESSARY PERMITS ARE IN HAND BEFORE COMMENCEMENT OF CONSTRUCTION.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SATISFYING ALL REQUIREMENTS OF REGULATORY AGENCY PERMITS WITH REGARDS TO CONSTRUCTION ACTIVITIES AND CONDITIONS STATED THEREIN. ALL WORK WITHIN THE LAKE COUNTY RIGHT-OF-WAYS SHALL CONFORM WITH ALL REQUIREMENTS AND SPECIAL CONDITIONS OF THE APPROVED LAKE COUNTY PERMITS.
5. THE CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AT ALL INTERSECTIONS OF PROPOSED WORK AND EXISTING UTILITIES. THE EXPLORATORY EXCAVATIONS SHALL BE MADE 48 HOURS OR 1,000 FEET IN ADVANCE OF THE WORK, WHICHEVER IS GREATER. IF THERE IS A POTENTIAL CONFLICT, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY. INFORMATION ON THE OBSTRUCTION TO BE FURNISHED BY THE CONTRACTOR SHALL INCLUDE: LOCATION, ELEVATION, UTILITY TYPE, MATERIAL AND SIZE.
6. ALL AREAS WHERE LANDSCAPING, SOD, OR IRRIGATION HAS BEEN REMOVED OR DISTURBED BY CONTRACTOR'S OPERATIONS SHALL BE RESODDED, LANDSCAPED, OR REPAIRED WITH LIKE KIND.
7. ALL EXISTING PROPERTY, FENCING, DRIVEWAYS, PIPING, SIDEWALKS, SIGNS AND OTHER ITEMS SHALL BE RESTORED TO ORIGINAL LINE AND GRADE UNLESS APPROVED BY THE ENGINEER. ACCESS TO ADJOINING PROPERTY ALONG THE PROPOSED ROUTE SHALL BE MAINTAINED AT ALL TIMES.
8. THE SHOWN LOCATIONS OF RIGHTS-OF-WAY AND UTILITIES ARE APPROXIMATE. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO EXACTLY LOCATE ALL RIGHTS-OF-WAY AND UTILITY LINES IN THE CONSTRUCTION AREA PRIOR TO EXCAVATION. ANY DAMAGE TO ANY EXISTING UTILITY, STRUCTURE OR SERVICE SHALL BE REPAIRED, AT THE CONTRACTOR'S EXPENSE, IN A MANNER APPROVED BY THE RESPECTIVE UTILITY OWNER.
9. ALL ELEVATIONS SHOWN ON THESE DRAWINGS REFER TO NATIONAL GEODETIC VERTICAL DATUM (NGVD): 88 DATUM.
10. THE CONTRACTOR SHALL REPLACE ALL PAVING, SODDING, STABILIZED EARTH, LANDSCAPING, DRIVEWAYS, SIDEWALKS, IRRIGATION SYSTEMS, UNDERGROUND PIPING, ETC., DISTURBED OR DAMAGED BY THE CONSTRUCTION. THE CONTRACTOR SHALL REPLACE WITH EQUAL MATERIAL OR AS DIRECTED BY THE ENGINEER.
11. STEM WALL SHALL BE CONSTRUCTED WITH THE BUILDING AS PART OF THE FOUNDATION.

LAKE COUNTY
FLORIDA

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LAKE COUNTY
FIRE STATION #39
GRADING AND DRAINAGE PLAN

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902 North Sinclair Ave.
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FILE NAME:	FIRESTA39

Sheet 1.4

CHARLES C. HIOTT, PE
Registered Eng 54813

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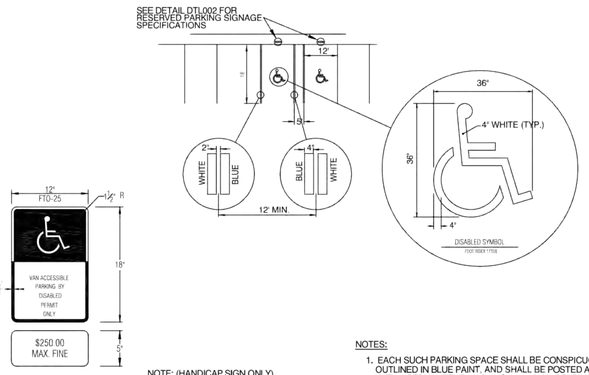
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DRAINAGE PLAN
24815 WALLICK ROAD, SORRENTO, FL 32776

JANUARY 31, 2020

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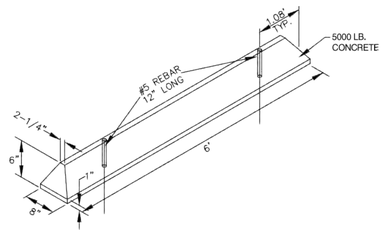
NOTE: (HANDICAP SIGN ONLY)

1. ALL LETTERS SHALL BE BLACK AND 1" IN HEIGHT. LETTERS ARE TO BE SERIES "B" OR "C", PER MUTCD.
2. TOP PORTION OF SIGN SHALL HAVE REFLECTORIZED (ENGINEERING GRADE) BLUE BACKGROUND WITH WHITE REFLECTORIZED LEGEND AND BORDER.
3. BOTTOM PORTION OF SIGN SHALL HAVE A REFLECTORIZED (ENGINEERING GRADE) WHITE BACKGROUND WITH BLACK BORDER.
4. ONE SIGN REQUIRED FOR EACH PARKING SPACE.
5. HEIGHT OF SIGN SHALL BE IN ACCORDANCE WITH SECTION 24-23 OF THE MANUAL ON UNIFORMED TRAFFIC CONTROL DEVICES (MUTCD)

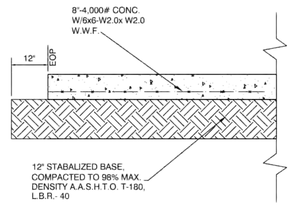
NOTES:

1. EACH SUCH PARKING SPACE SHALL BE CONSPICUOUSLY OUTLINED IN BLUE PAINT, AND SHALL BE POSTED AND MAINTAINED WITH A PERMANTENT, ABOVE GRADE SIGN BEARING THE INTERNATIONAL SYMBOL OF ACCESSIBILITY, OR THE CAPTION "PARKING BY DISABLED PERMIT ONLY." OR BEARING BOTH SUCH SYMBOL AND CAPTION. SUCH SIGNS SHALL NOT BE OBSCURED BY A VEHICLE PARKED IN THE SPACE. ALL HANDICAPPED PARKING SPACES MUST BE SIGNED AND MARKED IN ACCORDANCE WITH THE STANDARDS ADOPTED BY THE DEPARTMENT OF TRANSPOTATION. THE CITY OF EUSTIS DISCOURAGES VARIATIONS FROM THE STANDARD.
2. FL DOT RECOMMENDS MEASURING PARKING SPACE WIDTH FROM CENTER TO CENTER BETWEEN BLUE AND WHITE STRIPES.
3. THIS DETAIL IS PROVIDED TO SUPPORT LDC SECTION 3.41.3.2

HANDICAP PARKING STRIPING FOR SINGLE SPACES

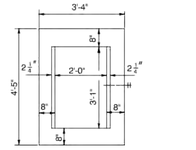


PRECAST CONC. WHEEL STOP

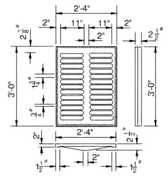


TYPICAL CONCRETE DRIVEWAY AND PARKING SECTION

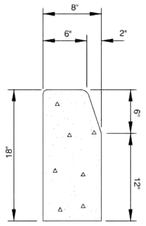
LONGITUDINAL CENTER JOINT @ 10' O.C., AND TRANSVERSE CONTRACTION JOINTS @ 20' O.C. 1/2" EXPANSION JOINTS 60' O.C. OR EVERY 3RD. TRANSVERSE JOINT TO BE AN EXPANSION JOINT.



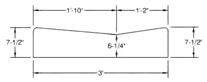
PLAN



Approx. Weight 235 Lbs.

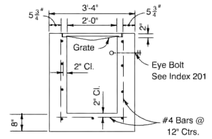


TYPE "D" CURB



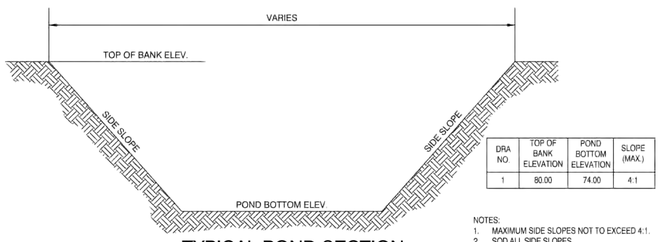
VALLEY GUTTER

NOT TO SCALE



SECTION

TYPE "C" INLET

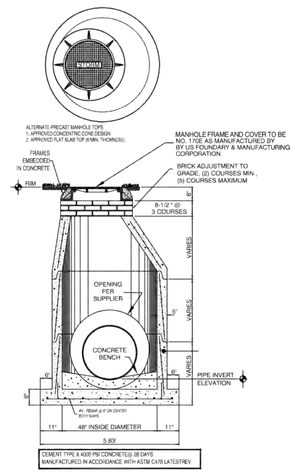


DRA NO.	TOP OF BANK ELEVATION	POND BOTTOM ELEVATION	SLOPE (MAX.)
1	80.00	74.00	4:1

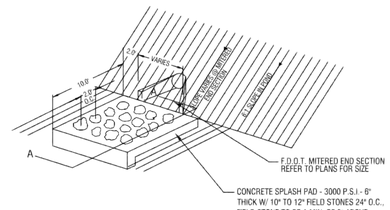
NOTES:
1. MAXIMUM SIDE SLOPES NOT TO EXCEED 4:1.
2. SOD ALL SIDE SLOPES
3. SEED AND MULCH BOTTOM

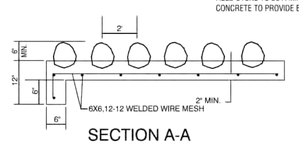
TYPICAL POND SECTION

NOT TO SCALE



Storm Precast Manhole Detail





SECTION A-A

MITERED END w/ SPLASH PAD

LAKE COUNTY
FLORIDA

NO.	DESCRIPTION	DATE

REVISION	1	2	3	4	5	6	7	8
DATE								

LAKE COUNTY FIRE STATION #39

GENERAL NOTES AND DETAILS

BOOTH ERN STRAUGHAN HIOTT, INC
ENGINEERS • SURVEYORS • LAND PLANNERS
902 North Sinclair Ave.
Tavares, Florida 32778
www.besandh.com
Office: 352.343.8481
Fax: 352.343.8495
Certificate of Authorization Number: 27029

DATE:	JANUARY 24, 2020
DESIGNED BY:	BJ
DRAWN BY:	BJ
CHECKED BY.:	CCH
JOB NO.:	100002.0007
FILE NAME:	FIRESTA39

Sheet 1.5

CHARLES C. HIOTT, PE
Registered Eng 54813

John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
Ethan J. Hine, AIA
Jennifer Zaffuto, AIA, NCARB, MPA
1741 KIWANIS TRAIL • DUBOIS, PA • 814.371.1541 • F 814.371.8801 •CTHarch.com
800 NORTH HIGHLAND AVE. • ORLANDO, FL • 407.203.6707 • F 407.409.0650
KTH ARCHITECTS

PRICING SET

LAKE COUNTY
FIRE STATION NO.39
GENERAL NOTES AND DETAILS
24815 WALLICK ROAD, SORRENTO, FL 32776

JANUARY 31, 2020

18104A

1.5

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General Water Notes

1. WATER SYSTEM COMPONENTS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND REGULATIONS, CLEANED, DISINFECTED AND BACTERIOLOGICALLY CLEARED FOR SERVICE IN ACCORDANCE WITH THE LATEST AWWA STANDARDS AND CHAPTER 62-555 FLORIDA ADMINISTRATIVE CODE
2. ALL PIPING SHALL BEAR THE "NSF" SEAL FOR POTABLE WATER
3. WATER MAINS SHALL BE PVC CONFORMING TO AWWA C-900, DR 18 FOR PIPE SIZES 4"-12". PIPES 14" OR LARGER SHALL BE AWWA C-905, DR 18. ALL COUPLINGS, CLEANING COMPOUNDS, SOLVENTS, LUBRICANTS, AND PIPE PREPARATION, FOR LAYING, SHALL BE IN ACCORDANCE WITH THE PIPE MANUFACTURERS LATEST RECOMMENDATIONS
4. DEPTH OF WATER LINES TO BE 36" MINIMUM COVER FROM FINISH GRADE.
5. WATER MAINS TO BE LOCATED 6.00 FROM BACK OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED
6. ALL SLEEVES UNDER PAVEMENT SHALL EXTEND 5' BEYOND THE BACK OF CURB.
7. DISINFECTING: FOLLOWING THE PRESSURE TESTING, THE CONTRACTOR SHALL DISINFECT ALL SECTIONS OF THE WATER DISTRIBUTION SYSTEM. DISINFECTION SHALL BE IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF AWWA STANDARD C651 'DISINFECTING WATER MAINS' AND ALL APPROPRIATE AGENCY APPROVAL.
8. ALL HYDROSTATIC TEST SHALL BE IN ACCORDANCE WITH AWWA C600 FOR DUCTILE IRON PIPE AND C605/M23 FOR PVC PIPE
9. ALL WATER MAINS SHALL BE INSTALLED, PRESSURE AND LEAK TESTED IN ACCORDANCE WITH AWWA C600, (62-555.320(2)(b)1 AND 62-555.330, F.A.C. ALL INSTALLATION, TESTING AND FIELD PROCEDURES MUST BE PROVIDED AND MUST CONFORM TO THE APPLICABLE AWWA STANDARDS
10. ALL PIPING MATERIALS AND SPECIFICATIONS COVERING PIPES, JOINTS AND PACKING MATERIALS, INTERNAL COATING AND LININGS, FITTINGS, SPECIALS AND APPURTENANCES SHALL ALL BE IN ACCORDANCE WITH THE CORRESPONDING AWWA STANDARDS AND BE CONFORMING TO NSF REQUIREMENTS, AS MAY BE APPLICABLE, WITH EXCEPTIONS ALLOWED ONLY IF DOCUMENTATION AND ASSURANCES ARE PROVIDED IN COMPLIANCE WITH PARAGRAPHS 62-555.320(3) (d) 62-555.320 (3) (b), AND 62-555.320 (21) (c), F.A.C. THE LEAD USE PROHIBITION IN RULE 62-555.322, F.A.C. SHALL ALSO APPLY. POLYETHYLENE TUBING SHALL BE PER AWWA C901. UNDERGROUND SERVICE LINES AND VALVES SHALL BE PER AWWA C800

COLOR CODING

All water main pipe, including fittings, installed on or after August 29, 2003, except pipe installed under a construction permit for which the Department received a complete application before August 29, 2003, shall be color coded or marked using blue as a predominate color to differentiate drinking water from reclaimed or other water. Underground plastic pipe shall be solid wall blue pipe, shall have a co-extruded blue external skin, or shall be white or black pipe with blue stripes incorporated into, or applied to, the pipe wall, and underground metal or concrete pipe shall have blue stripes applied to the pipe wall. Pipe striped during manufacturing of the pipe shall have continuous stripes that run parallel to the axis of the pipe, that are located at no greater than 90° intervals around the pipe, and will remain intact during and after installation of the pipe. If tape or paint is used to stripe pipe during installation of the pipe, the tape or paint shall be applied in a continuous line that runs parallel to the axis of the pipe and that is located along the top of the pipe. For pipes with an internal diameter of 24 inches or greater, tape or paint shall be applied in continuous lines along each side of the pipe as well as along the top of the pipe. Aboveground pipe as drinking water treatment plants shall be color coded and labeled in accordance with subsection 62-555.320(10), F.A.C., and all other aboveground pipe shall be painted blue or shall be color coded or marked like underground pipe.

Utility Construction Notes (DEP)

62-555.314 Location of Public Water System Mains.
For the purpose of this section, the phrase 'Water Mains' shall mean Mains, including treatment Plant process piping, conveying either raw, partially treated, or finished drinking water. Fire Hydrant leads, and service lines that are under the control of a Public Water System and that have an inside diameter of three (3") inches or greater

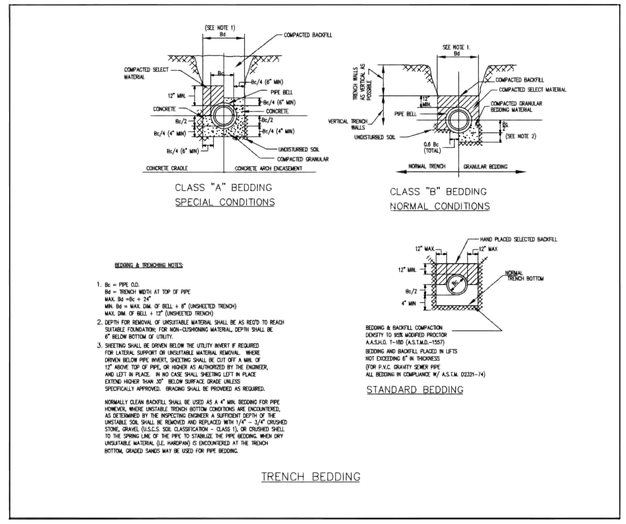
(1) Horizontal Separation Between Underground Water Mains and Sanitary or Storm Sewers, Wastewater or Stormwater Force Mains, Reclaimed Water Pipelines, and On-site Sewage Treatment and Disposal Systems.
(a) New or relocated, underground WATER MAINS shall be laid to provide a horizontal distance of at least (3) Three Feet between the outside of the WATER MAIN and the outside of any existing or proposed Storm Sewer, Storm water Force Main, or pipeline conveying reclaimed water regulated under Part II of Chapter 62-610, F.A.C.
(b) New or relocated, underground WATER MAINS shall be laid to provide a horizontal distance of at least (3) three feet, and preferably (10) Ten Feet, between the outside of the WATER MAIN and the outside of any existing or proposed vacuum-type Sanitary Sewer.
(c) New or relocated, underground WATER MAINS shall be laid to provide a horizontal distance of at least (6) Six Feet, and preferably (10) Ten Feet, between the outside of the WATER MAIN and the outside of any existing or proposed Gravity- or Pressure-type Sanitary Sewer, Wastewater Force Main, or pipeline conveying reclaimed water not regulated under Part II of Chapter 62-610 F.A.C. The Minimum Horizontal Separation distance between WATER MAINS and Gravity-type Sanitary Sewers shall be reduced to (3) Three Feet where the BOTTOM of the WATER MAIN is laid at least (6) Six Inches above the Top of the Sewer
(d) New or relocated, underground WATER MAINS shall be laid to provide a horizontal distance of at least (10) Ten Feet between the outside of the WATER MAIN, and all parts of any existing or proposed "On-site Sewage Treatment and Disposal Systems" as defined in Section 381.0065(2), F.S. and Rule 64E-6.002 F.A.C.

(2) Vertical Separation Between Underground WATER MAINS and Sanitary or Storm Sewers, Wastewater or Storm water Force Mains, and Reclaimed Water Pipelines.
(a) New or relocated underground WATER MAINS crossing any existing or proposed gravity- or vacuum-type sanitary sewer or storm sewer shall be laid so the outside of the WATER MAIN is at least (6) Six inches, and preferably 12 inches above, or at least 12 inches below the outside of the other pipeline. However, it is preferable to lay the WATER MAIN ABOVE the other pipeline.
(b) New or relocated, Underground WATER MAINS crossing any existing or proposed pressure-type sanitary sewer, wastewater or stormwater Force Main, or Pipeline conveying reclaimed water shall be laid so the outside of the WATER MAIN is at least (12) inches ABOVE or BELOW the Outside of the other pipeline. However, it is preferable to lay the WATER MAIN above the other pipeline.
(c) At the Utility crossings described in paragraphs (a) & (b) Above, one full length of Water Main Pipe shall be centered above or below the other pipeline so the WATER MAIN Joints will be as far as possible from the other pipeline. Alternatively, at such crossings, the pipes shall be arranged so that all WATER MAIN Joints are at least (3) Three feet from all joints in Vacuum-type Sanitary Sewers, Storm Sewers, Stormwater Force Mains, or pipelines conveying reclaimed water regulated under Part II of Chapter 62-610, F.A.C., and at least (6) Six Feet from all Joints in Gravity- or Pressure-type Sanitary Sewers, Wastewater force mains, or pipelines conveying reclaimed water not regulated under Part II of Chapter 62-610, F.A.C.

(3) Separation Between WATER MAINS and Sanitary or Storm Sewer Manholes:
(a) No WATER MAIN shall pass thru, or come into contact with any part of a Sanitary Manhole or a Storm Sewer Manhole.

(4) Separation Between Fire Hydrant Drains and Sanitary or Storm Sewers, Wastewater or Stormwater Force Mains, reclaimed Water Pipelines, and On-Site Sewage Treatment and Disposal Systems. New or relocated Fire Hydrants with underground Drains shall be located so that the drains are at least (3) Three Feet from any existing or proposed storm sewer, Stormwater force main, or pipeline conveying reclaimed water regulated under Part II of Chapter 62-610, F.A.C., at least (3) Three Feet, and preferably (10) Ten Feet, from any existing or proposed gravity- or Pressure-type Sanitary Sewer, Wastewater force main, or pipeline conveying reclaimed water not regulated under Part II of Chapter 62-610, F.A.C., and at least (10) Ten Feet from any existing or proposed "on-site sewage treatment and disposal system" as defined in Section 381.0065(2), F.S. and Rule 64E-6.002, F.A.C.

(5) Exceptions/Mitigation:
Adherence to the above Constraints and Separations in Items 1 through 4 shall be Compulied to, "WITHOUT EXCEPTION". If for some reason where it is not technically feasible or Economically Sensible that Items 1 through 4 cannot be complied with Contractor will Stop Work and Notify the Engineer of record for the appropriate solution which will be submitted to 'The Department of Environmental Protection' for APPROVAL, prior to work commencement



CLASS "A" BEDDING
SPECIAL CONDITIONS

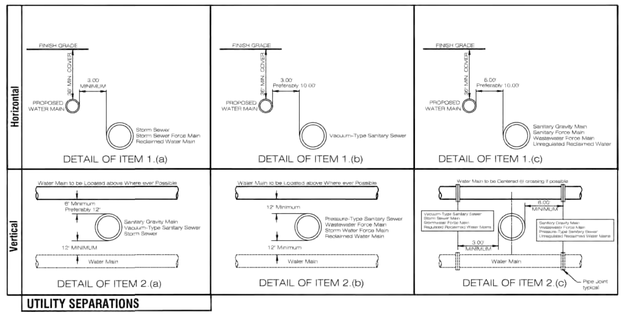
CLASS "B" BEDDING
NORMAL CONDITIONS

BEDDING & TRENCHING NOTES:

1. Bc = PIPE O.D.
   Bw = TRENCH WIDTH AT TOP OF PIPE
   MAX. Bw =Bc + 24"
   MIN. Bw = MAX. DIA. OF BELL + 8" (UNSHEETED TRENCH)
   MAX. DIA. OF BELL + 12" (UNSHEETED TRENCH)
2. DEPTH FOR REMOVAL OF UNSUITABLE MATERIAL SHALL BE AS REQ'D TO REACH SUITABLE FOUNDATION FOR NON-CUSHIONING MATERIAL, DEPTH SHALL BE 6" BELOW BOTTOM OF UTILITY.
3. SHEETING SHALL BE DRIVEN BELOW THE UTILITY INVERT IF REQUIRED FOR LATERAL SUPPORT OF UNSUITABLE MATERIAL REMOVAL. WHERE DRIVEN BELOW PIPE INVERT, SHEETING SHALL BE CUT OFF A MIN. OF 12" ABOVE TOP OF PIPE, OR HIGHER AS AUTHORIZED BY THE ENGINEER, AND LEFT IN PLACE. IN NO CASE SHALL SHEETING LEFT IN PLACE EXTEND HIGHER THAN 30" BELOW SURFACE GRADE UNLESS SPECIFICALLY APPROVED. BRACING SHALL BE PROVIDED AS REQUIRED.

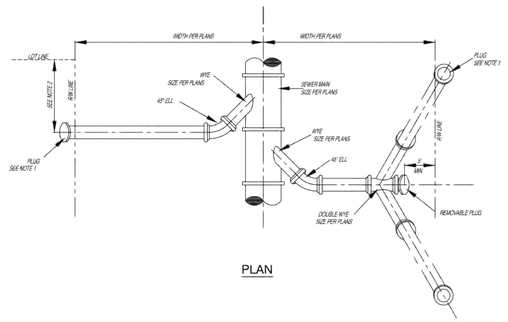
NORMALLY CLEAN BACKFILL SHALL BE USED AS A 4" MIN. BEDDING FOR PIPE HOWEVER, WHERE UNSTABLE TRENCH BOTTOM CONDITIONS ARE ENCOUNTERED, AS DETERMINED BY THE INSPECTING ENGINEER A SUFFICIENT DEPTH OF THE UNSTABLE SOIL SHALL BE REMOVED AND REPLACED WITH 1/4" – 3/4" CRUSHED STONE, GRAVEL (U.S.C.S. SOIL CLASSIFICATION – CLASS 1), OR CRUSHED SHELL TO THE SPRING LINE OF THE PIPE TO STABILIZE THE PIPE BEDDING. WHEN DRY UNSUITABLE MATERIAL (I.E. HARDPAN) IS ENCOUNTERED AT THE TRENCH BOTTOM, GRADED SANDS MAY BE USED FOR PIPE BEDDING.

TRENCH BEDDING

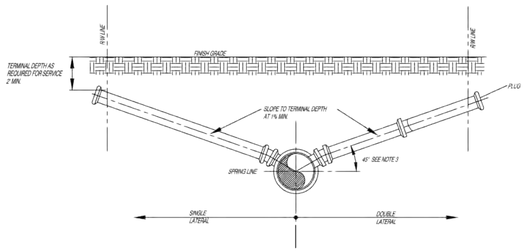


DETAIL OF ITEM 1.(a)
DETAIL OF ITEM 1.(b)
DETAIL OF ITEM 1.(c)
DETAIL OF ITEM 2.(a)
DETAIL OF ITEM 2.(b)
DETAIL OF ITEM 2.(c)

UTILITY SEPARATIONS



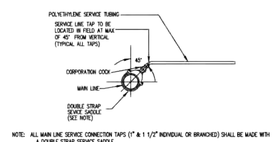
PLAN



PROFILE

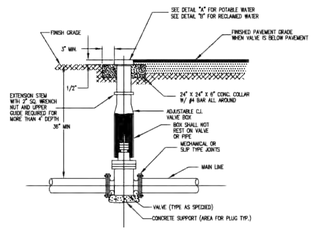
NOTES:
1. PLUG SHALL BE INSTALLED BY THE BUILDER IN ACCORDANCE WITH STANDARD PLUMBING CODES.
2. LOCATE SINGLE LATERAL AS CLOSE TO LOT LINE AS POSSIBLE, 3' MAXIMUM.
3. INVERT OF SERVICE LATERAL SHALL NOT ENTER SEWER MAIN BELOW SPRING LINE

SEWER SERVICE LATERAL DETAIL



NOTE: ALL MAIN LINE SERVICE CONNECTION TAPS (1" & 1 1/2" INDIVIDUAL OR BRANCHED) SHALL BE MADE WITH A DOUBLE STRAP SERVICE SADDLE.

TYPICAL MAIN LINE, SERVICE LINE



VALVE & VALVE BOX DETAIL

DATE | DESCRIPTION | NO.

PRICING SET

LAKE COUNTY
FIRE STATION NO.39
GENERAL NOTES AND
UTILITY DETAILS
24815 WALLICK ROAD, SORRENTO, FL 32776

JANUARY 31, 2020

1.6

KTH ARCHITECTS
1741 KIWANIS TRAIL • DUBOIS, PA • 814.371.1541 • F 814.371.8801 •CHTarch.com
800 NORTH HIGHLAND AVE. • ORLANDO, FL • 407.203.6707 • F 407.409.0650
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902 North Sinclair Ave.
Tavares, Florida 32778
www.besmith.com
Office: 352.343.8481
Fax: 352.343.8495
Certificate of Authorization Number: 27029

DATE:	JANUARY 24, 2020
DESIGNED BY:	BJ
DRAWN BY:	BJ
CHECKED BY.:	CCH
JOB NO.:	100002.0007
FILE NAME:	FIRESTA39

Sheet 1.6

CHARLES C. HIOTT, PE
Registered Eng 64813

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GENERAL PROJECT DATA

FOR IDENTIFICATION OF CONTRACTUAL AGREEMENTS, THIS SET OF DRAWINGS IS DATED JANUARY 24, 2020. ANY REVISIONS THEREAFTER WILL BE NOTED AND DATED ON THE AFFECTED DRAWING(S).

PRIOR TO THE COMMENCEMENT OF ANY WORK, A PRECONSTRUCTION MEETING WITH LAKE COUNTY IS REQUIRED. LAKE COUNTY SHALL BE NOTIFIED PRIOR TO COMMENCEMENT OF MAJOR PHASES OF CONSTRUCTION.

THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY, IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO NOTIFY THE VARIOUS UTILITIES AND TO MAKE THE NECESSARY ARRANGEMENTS FOR ANY RELOCATIONS TO THESE UTILITIES WITH THE OWNER OF THE UTILITY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING AN UNDERGROUND UTILITY, WHETHER SHOWN ON THE PLAN OR LOCATED BY THE UTILITY COMPANY. ALL UTILITIES THAT INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE RELOCATED BY THE RESPECTIVE UTILITY COMPANY AND THE CONTRACTOR SHALL COOPERATE WITH THEM DURING RELOCATION OPERATIONS. ANY DELAY OR INCONVENIENCE CAUSED TO THE CONTRACTOR BY THE RELOCATION OF VARIOUS UTILITIES SHALL BE INCIDENTAL TO THE CONTRACT, AND NO EXTRA COMPENSATION WILL BE ALLOWED.

DRAINAGE SYSTEMS

THE CONTRACTOR SHALL PERFORM ALL WORK PERTAINING TO DRAINAGE INCLUDING EXCAVATION OF W.R.A. PRIOR TO THE COMMENCEMENT OF OTHER WORK INCLUDED IN THESE PLANS. THE DRAINAGE FACILITIES SHALL BE MAINTAINED BY THE CONTRACTOR DURING THE COURSE OF THIS CONTRACT. THE CONTRACTOR SHALL INCLUDE FUNDS IN THE DRAINAGE COSTS OF THE CONTRACT TO OPERATE AND MAINTAIN THE DRAINAGE SYSTEMS DURING THE WORK PROCESS.
THE UTILITIES ARE THE PROPERTY OF THE FOLLOWING:

ELECTRIC:
SECO
50 WEST ARDICE AVENUE
EUSTIS, FL 32726
(352) 357-5600

WATER:
CITY OF EUSTIS

SANITARY:
CITY OF EUSTIS

TELEPHONE:
CENTURY LINK
15241 OAKLAND AVENUE
WINTER GARDEN, FL. 34787
(407) 785-6901

ASBUILTS

THE CONTRACTOR SHALL DELIVER TO THE ENGINEER ASBUILT DATA BY A FLORIDA LICENSED SURVEYOR, SIGNED, SEALED AND DATED BY THE RESPONSIBLE PARTY. SEE INDIVIDUAL SECTIONS (STORM, WATER SYSTEM, ETC.) FOR ADDITIONAL ASBUILT REQUIREMENTS. THE ENGINEER SHALL DELIVER ASBUILT DRAWING PLANS IN DWG FORMAT IN AUTOCAD FILES VERSION 2000 TO 2019. STANDARD TRANSFER MEDIA WILL BE ACCEPTED. THIS MEDIA INCLUDES CD OR DVD.

THE ENGINEER SHALL DELIVER ONE SCANNED SET OF APPROVED ASBUILT DRAWING PLANS. THE SCANNED SETS SHALL BE COMPLETE AND INCLUDE THE TITLE SHEET, PLAN/PROFILE SHEETS, CROSS-SECTIONS, AND DETAILS. EACH INDIVIDUAL SHEET CONTAINED IN THE PRINTED SET OF THE DRAWINGS SHALL BE INCLUDED IN THE ELECTRONIC SUBMITTAL, WITH EACH SHEET BEING CONVERTED INTO AN INDIVIDUAL TIFF (TAGGED IMAGE FILE). THE PLAN SHEETS SHALL BE SCANNED IN TIFF FORMAT AT 400 DPI RESOLUTION TO MAINTAIN LEGIBILITY OF EACH DRAWING. THEN, THE TIF IMAGES SHALL BE EMBEDDED INTO A SINGLE PDF (ADOBE ACROBAT) FILE REPRESENTING THE COMPLETE PLAN SET. THESE DRAWINGS WILL ASSIST IN THE PROCESS OF PERFORMING QUALITY CONTROL AND QUALITY ASSURANCE ON THE ELECTRONIC SUBMITTAL SPECIFIED IN THIS DOCUMENT. THE DRAWINGS WILL BE REVIEWED FOR FORMAT AND COMPLETENESS. SPECIFICALLY, THE FOLLOWING REQUIREMENTS SHALL BE MET.

1. INCLUDE A LABEL ON THE MEDIA INDICATING PROJECT NAME AND NUMBER, CONSULTANT NAME, PROJECT MANAGER AND TELEPHONE NUMBER, TYPE OF SUBMITTAL (APPROVED CONSTRUCTION PLANS OR ASBUILT DRAWING(S), ONLY DRAWINGS RELEVANT TO THE PROJECT'S PHASE OF SUBMITTAL SHALL BE INCLUDED. FOR EXAMPLE, DO NOT INCLUDE "BID SET" DRAWINGS IN A "ASBUILT DRAWING" SUBMITTAL. ALSO, DO NOT INCLUDE DRAWINGS OR DOCUMENTS THAT WOULD NOT NORMALLY BE INCLUDED IN THE SET OF PRINTED DRAWINGS, EXCEPT FOR BASE DRAWINGS OR DRAWINGS TO BE EXTERNALLY REFERENCED.

2. RECORD DRAWING DATA TO BE UPLOADED WILL INCLUDE ONLY NEW CONSTRUCTION AND CARE WILL BE TAKEN TO EXCLUDE ANY "EXISTING" FACILITIES FROM THIS DATASET SO AS TO NOT DUPLICATE INFORMATION IN THE GIS SYSTEM. EXISTING DATA CAN BE INCLUDED IN THE DRAWING BUT SHOULD RESIDE ON SEPARATE LAYERS. IT IS RECOMMENDED THAT THE PREFIX "EX-" BE ADDED TO THE LAYERS OF ALL EXISTING DATA

3. THE FOLLOWING ARE FILE FORMAT AND LAYER NAME STANDARDS:

   a) A FOLDER SHALL BE CREATED WITH THE NAMED PROJECT AND PHASE NUMBER
   b) A FILE NAMED COVERSHEET.DWG
   c) FILE NAMED SITE_PLAN.DWG SHOWING ONLY THE FOLLOWING 5 LAYERS VISIBLE:
      -LAYER NAMED LOTS
      -LAYER NAMED LOT NUMBERS
      -LAYER NAMED ADDRESSES
      -LAYER NAMED ROW SHOWING ALL RIGHTS-OF-WAYS
      -LAYER NAMED EOP SHOWING ALL EDGE OF PAVEMENTS
   d) A FILE NAMED MASTERUTILTYPLAN.DWG WITH SITE_PLAN.DWG X-REF AND ONLY THE FOLLOWING 3 LAYERS VISIBLE:
      -LAYER NAMED WATERLINE SHOWING DIFFERENT PIPE SIZES, WATER METERS, AND HYDRANTS
      -LAYER NAMED REUSEWATER AND ALL APPROPRIATE FEATURES
      -LAYER NAMED SEWER AND ALL APPROPRIATE FEATURES
   e) FILE NAMED GRADING_DRAINAGE.DWG WITH SITE_PLAN.DWG X-REF AND ONLY THE FOLLOWING 2 LAYERS VISIBLE:
      -LAYER NAMED STORMWATER AND ALL APPROPRIATE FEATURES
      -LAYER NAMED SPOTELEV SHOWING ALL SPOT ELEVATIONS
      -ANY OTHER LAYERS PERTINENT TO THE GRADING AND DRAINAGE OF THE SITE
   f) IF APPLICABLE, A FILE NAMED OFF_SITE_UTILITIES.DWG
   INCLUDE ANY OTHER FILES PERTINENT TO THE PROJECT (SURVEY, DETAILS, X-REFS ETC.)

PERMITS AND PERMIT REQUIREMENTS

THE CONTRACTOR SHALL OBTAIN FROM THE OWNER COPIES OF ALL REGULATORY AND LOCAL AGENCY PERMITS. THE CONTRACTOR SHALL BE EXPECTED TO REVIEW AND ABIDE BY ALL THE REQUIREMENTS AND LIMITATIONS SET FORTH IN THE PERMITS. A COPY OF THE PERMIT SHALL BE KEPT ON THE JOB AT ALL TIMES.

LAYOUT AND CONTROL

UNLESS OTHERWISE NOTED ON THE PLANS, THE CONTRACTOR SHALL PROVIDE FOR THE LAYOUT OF ALL THE WORK TO BE CONSTRUCTED. BENCHMARK INFORMATION SHALL BE PROVIDED TO THE CONTRACTOR BY THE OWNER OR OWNER'S SURVEYOR. ANY DISCREPENCIES BETWEEN FIELD MEASUREMENTS AND CONSTRUCTION PLAN INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.

GENERAL DESIGN INTENT

ALL PAVING SURFACES IN INTERSECTIONS AND ADJACENT SECTIONS SHALL BE GRADED TO DRAIN POSITIVELY IN THE DIRECTION SHOWN BY THE FLOW ARROWS ON THE PLANS AND TO PROVIDE A SMOOTHLY TRANSITIONED DRIVING SURFACE FOR VEHICLES WITH NO SHARP BREAKS INGRADE, AND NO UNUSUALLY STEEP OR REVERSE CROSS SLOPES. APPROACHES TO INTERSECTIONS AND ENTRANCE AND EXIT GRADES TO INTERSECTIONS WILL HAVE TO BE STAKED IN THE FIELD AT DIFFERENT GRADES THAN THE CENTERLINE GRADES TO ACCOMPLISH THE PURPOSES OUTLINED. IN ADDITION, THE STANDARD CROWN WILL HAVE TO BE CHANGED IN ORDER TO DRAIN POSITIVELY IN THE AREA OF INTERSECTIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH THE ABOVE AND THE ENGINEER SHALL BE CONSULTED SO THAT HE MAY MAKE ANY AND ALL REQUIRED INTERPRETATIONS OF THE PLANS OR GIVE SUPPLEMENTARY INSTRUCTION TO ACCOMPLISH THE INTENT OF THE PLANS.

MATERIALS/CONSTRUCTION SPECIFICATIONS

MATERIALS AND CONSTRUCTION METHODS FOR THE ROADWAY CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 1991, OR LATEST EDITION.

PAVEMENT SECTION REQUIREMENTS

CONSTRUCTION OF ROADWAYS SHALL BE 12" OF STABILIZED SUBBASE WITH A LIMEROCK BEARING PATIO OF (LBR) 40 COMPACTED TO THE MODIFIED PROCTOR MAXIMUM DRY DENSITY OF 98% PER AASHTO T-180, 6" OF LIMEROCK BASE COURSE; (LBR) 100, COMPACTED TO THE MODIFIED PROCTOR MAXIMUM DRY DENSITY OF 98% PER AASHTO T-180 AND 2" TYPE S-111 OF VIRGIN ASPHALTIC CONCRETE SURFACE COURSE WITH A MINIMUM STABILITY OF 1500 LBS. SUBGRADE PREPARATION AND PAVEMENT INSTALLATION SHALL CONFORM TO FDOT STANDARDS AND SOILS REPORT RECOMMENDATIONS.

SIDEWALKS

SIDEWALKS ARE TO BE CONSTRUCTED IN THE AREA AS SHOWN ON THE CONSTRUCTION PLANS. THE 5' SIDEWALK SHALL BE CONSTRUCTED OF 4 INCHES OF CONCRETE WITH A 28 DAY COMPRESSION STRENGTH OF 2500 PSI. JOINTS SHALL BE EITHER TOOLED OR SAWCUT AT A DISTANCE OF 5' LENGTHS, HANDICAPPED RAMPS SHALL BE PROVIDED AT ALL INTERSECTIONS AND BE IN ACCORDANCE WITH STATE REGULATIONS FOR HANDICAP ACCESSIBILITY.

QUALITY CONTROL TESTING REQUIREMENTS

ALL TESTING RESULTS SHALL BE PROVIDED TO THE OWNER/OPERATOR, LAKE COUNTY, AND THE ENGINEER. TESTING REQUIREMENTS ARE TO BE IN ACCORDANCE WITH THE OWNER/OPERATOR'S SPECIFICATIONS AND REQUIREMENTS. ALL TEST RESULTS SHALL BE PROVIDED (PASSING AND FAILING) ON A REGULAR AND IMMEDIATE BASIS. CONTRACTOR SHALL PROVIDE TESTING SERVICES THROUGH A FLORIDA LICENSED GEOTECHNICAL ENGINEERING FIRM ACCEPTABLE TO THE OWNER AND THE ENGINEER. CONTRACTOR TO SUBMIT TESTING FIRM TO OWNER FOR APPROVAL PRIOR TO COMMENCING TESTING.

SHOP DRAWINGS

SHOP DRAWINGS AND CERTIFICATIONS FOR ALL STORM DRAINAGE, WATER SYSTEM, SEWER SYSTEM, AND PAVING SYSTEM MATERIALS AND STRUCTURES ARE REQUIRED. THE CONTRACTOR SHALL SUBMIT 6 SETS OF SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO ORDERING THE MATERIALS REQUIRED FOR CONSTRUCTION.

EARTHWORK

EARTHWORK QUANTITIES

THE CONTRACTOR SHALL PERFORM HIS OWN INVESTIGATIONS AND CALCULATIONS AS NECESSARY TO ASSURE HIMSELF OF EARTHWORK QUANTITIES. THERE IS NO IMPLICATION THAT EARTHWORK BALANCES, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY IMPORT FILL NEEDED, OR FOR REMOVAL AND DISPOSAL OF EXCESS MATERIALS.

EROSION CONTROL

EROSION AND SILTATION CONTROL MEASURES ARE TO BE PROVIDED AND INSTALLED PRIOR TO COMMENCEMENT OF CONSTRUCTION. THESE MEASURES ARE TO BE INSPECTED BY THE CONTRACTOR ON A REGULAR BASIS AND ARE TO BE MAINTAINED OR REPAIRED ON AN IMMEDIATE BASIS AS REQUIRED. REFER TO WATER MANAGEMENT DISTRICT PERMIT FOR ADDITIONAL REQUIREMENTS FOR EROSION CONTROL AND SURFACE DRAINAGE. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE STABILIZED WITH SOD WITHIN 30 DAYS OF COMPLETION OF CONSTRUCTION. OTHER MATERIALS SHALL BE REVIEWED AND APPROVED BY COUNTY.

LIMITS OF DISTURBANCE

AT NO TIME SHALL THE CONTRACTOR DISTURB SURROUNDING PROPERTIES OR TRAVEL ON SURROUNDING PROPERTIES WITHOUT WRITTEN CONSENT FROM THE PROPERTY OWNER. REPAIR OR RECONSTRUCTION OF DAMAGED AREAS ON SURROUNDING PROPERTIES SHALL BE PERFORMED BY THE CONTRACTOR ON AN IMMEDIATE BASIS. ALL COSTS FOR REPAIRS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NO EXTRA COMPENSATION SHALL BE PROVIDED. GRADING AND/OR CLEARING ON PROPERTIES OTHER THAN SHOWN ON THE APPROVED PLANS IS PROHIBITED.

TREE REMOVAL

THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER WHEN ALL WORK IS LAID OUT (SURVEY STAKED), SO THAT A DETERMINATION MAY BE MADE OF SPECIFIC TREES TO BE REMOVED. NO TREES ON THE CONSTRUCTION PLANS AS BEING SAVED SHALL BE REMOVED WITHOUT PERMISSION FROM THE OWNER, ENGINEER AND THE LAKE COUNTY.

CLEARING AND GRUBBING

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEARING AND GRUBBING FOR SITE CONSTRUCTION INCLUDING CLEARING FOR PAVING, UTILITIES, DRAINAGE FACILITIES AND BUILDING CONSTRUCTION. ALL AREAS TO BE CLEARED SHALL BE FIELD STAKED AND REVIEWED BY THE OWNER AND ENGINEER PRIOR TO ANY CONSTRUCTION.

NO BURN PERMITS (INCLUDING THOSE FOR LAND CLEARING) WILL BE ISSUED IN THE LAKE COUNTY WITHOUT PRIOR AUTHORIZATION.

MATERIAL STORAGE/DEBRIS REMOVAL

1) NO COMBUSTIBLE BUILDING MATERIALS MAY BE ACCUMULATED ON THE SITE AND NO CONSTRUCTION WORK INVOLVING COMBUSTIBLE MATERIALS MAY BEGIN UNTIL INSTALLATION OF ALL REQUIRED WATER MAINS AND FIRE HYDRANTS HAVE BEEN COMPLETED, DEP APPROVAL RECEIVED FOR THE WATER MAINS, AND THE HYDRANTS ARE IN OPERATION. CONSTRUCTION WORK INVOLVING NON-COMBUSTIBLE MATERIALS, SUCH AS CONCRETE, MASONARY AND STEEL MAY BEGIN PRIOR TO THE FIRE HYDRANTS BEING OPERATIONAL.

2) ALL MATERIALS EXCAVATED SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE STOCKPILED AT ON-SITE LOCATIONS AS SPECIFIED BY THE OWNER. MATERIALS SHALL BE STOCKPILED SEPARATELY AS TO USABLE (INORGANIC) FILL STOCKPILES AND ORGANIC (MUCK) STOCKPILES IF MUCK IS ENCOUNTERED. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL UNSUITABLE FILL MATERIALS FROM THE SITE. ALL CLAY ENCOUNTERED SHALL BE EXCAVATED OUT AND REPLACED WITH CLEAN GRANULAR FILL MATERIALS.

FILL MATERIAL

ALL MATERIALS SHALL CONTAIN NO MUCK, STUMPS, ROOTS, BRUSH, VEGETATIVE MATTER, RUBBISH OR OTHER MATERIAL THAT WILL NOT COMPACT INTO A SUITABLE AND ENDURING BACKFILL. FILL SHALL BE CLEAN, NON-ORGANIC, GRANULAR MATERIAL WITH NOT MORE THAN 10% PASSING THE NO. 200 SIEVE.

COMPACTION

FILL MATERIALS PLACED UNDER ROADWAYS AND BUILDINGS SHALL BE COMPACTED TO AT LEAST 98% OF THE MAXIMUM DENSITY AS SPECIFIED IN AASHTO T-180. ALL OTHER FILL AREAS ARE TO BE COMPACTED TO AT LEAST 95% MAXIMUM DENSITY AS SPECIFIED IN AASHTO T-180. FILL MATERIALS SHALL BE PLACED AND COMPACTED IN A MAXIMUM OF 12" LIFTS. THE CONTRACTOR SHALL PROVIDE THE ENGINEER AND OWNER WITH ALL (PASSING AND FAILING) TESTING RESULTS. RESULTS SHALL BE PROVIDED ON A TIMELY AND REGULAR BASIS PRIOR TO CONTRACTOR'S PAY REQUEST SUBMITTAL FOR THE AFFECTED WORK.

PAVEMENT AND/OR ROAD AND RIGHT-OF-WAY WORK

OWNER/OPERATOR

THE ENTITY THAT WILL OWN, OPERATE AND MAINTAIN THE ROADWAYS SHOWN ON THESE PLANS IS FDOT, LAKE COUNTY, THE CONTRACTOR SHALL BE EXPECTED TO MEET ALL THE REQUIREMENTS OF THAT ENTITY.

PAVEMENT MARKINGS/SIGNAGE

PAVEMENT MARKINGS AND SIGNAGE SHALL BE PROVIDED AS SHOWN ON THE CONSTRUCTION PLANS AND SHALL MEET THE REQUIREMENTS OF THE OWNER/OPERATOR. SIGNAGE SHALL BE IN CONFORMANCE WITH MUTCD (LATEST EDITION). A 48-HOUR PAVEMENT CURING TIME WILL BE PROVIDED PRIOR TO APPLICATION OF THE PAVEMENT MARKINGS. REFLECTIVE PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH FDOT INDEX NO. 17352.

TRAFFIC CONTROL

AN MOT PLAN SHALL BE SUBMITTED TO THE INSPECTOR PRIOR TO COMMENCEMENT OF WORK. A MINIMUM OF 2-WAY, ONE LANE TRAFFIC SHALL BE MAINTAINED IN THE WORK SITE AREA. ALL CONSTRUCTION WARNING SIGNAGE SHALL BE IN PLACE PRIOR TO COMMENCEMENT OF CONSTRUCTION AND BE MAINTAINED THROUGHOUT CONSTRUCTION. ACCESS SHALL BE CONTINUOUSLY MAINTAINED FOR ALL PROPERTY OWNERS SURROUNDING THE WORK SITE AREA. LIGHTED WARNING DEVICES ARE TO BE OPERATIONAL PRIOR TO DUSK EACHNIGHT DURING CONSTRUCTION.

CURBING

CURBING SHALL BE CONSTRUCTED WHERE NOTED ON THE CONSTRUCTION PLANS. CONCRETE FOR CURBS SHALL BE DEPARTMENT OF TRANSPORTATION CLASS "I" CONCRETE WITH A 28 DAY COMPRESSION STRENGTH OF 2500 PSI. ALL CURBS SHALL HAVE SAW CUT CONTRACTION JOINTS AND SHALL BE CONSTRUCTED AT INTERVALS NOT TO EXCEED 10'-0" ON CENTER. CONSTRUCTION OF CURBS SHALL BE IN CONFORMANCE WITH FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (1991) SECTION 520 AND DETAILS PROVIDED ON THE CONSTRUCTION PLANS.

R/W RESTORATION

ALL AREAS WITHIN THE RIGHT-OF-WAYS SHALL BE FINISH GRADED WITH A SMOOTH TRANSITION INTO EXISTING GROUND. ALL SWALES SHALL BE STABILIZED IMMEDIATELY AFTER FINAL GRADING. ALL DISTURBED AREAS SHALL BE RAKED CLEAN OF ALL LIMEROCK AND ROCKS AND SODDED AFTER FINAL GRADING IN ACCORDANCE WITH THE CONSTRUCTION PLANS PRIOR TO FINAL INSPECTION. ALL GRASSING (SEED OR SOD) SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL FINAL ACCEPTANCE BY THE OWNER/OPERATOR.

SITE ACCESS

ALL ACCESS TO THE JOB SITE FOR CONSTRUCTION AND RELATED ACTIVITIES SHALL BE BY EXISTING STREETS AND ROADS, OR BY THE CONSTRUCTION EASEMENT AS APPROVED BY THE LAKE COUNTY.

SEEDING AND MULCHING

PART 1 - GENERAL

1.01 DESCRIPTION

A. The work consists of establishing a stand of grass on slopes, shoulders, lawns, and other areas by seeding as shown on the Drawings. Also included are mulching, fertilizing, watering, and maintenance as required to establish a dense, mature stand of grass.

1.02 RELATED WORK

A. Section 02120: Earthwork

B. Section 02920: Topsoil

1.03 REFERENCED STANDARDS

A. Federal Seed Act

1.04 SUBMITTALS

A. Certification: Certification of quality by the producer shall be delivered to the Owner ten days prior to use.

1.05 QUALITY ASSURANCE

A. All seeds and seed mixtures shall be free of noxious weed seeds as determined by the Florida Department of Agriculture

1. All seeds and seed mixtures shall not contain any weed seeds in excess of 0.5%.

1.06 PERMITS (Not Used)

1.07 GUARANTEE

A. All seeded areas shall be guaranteed for twelve months after date of final acceptance.

B. Replacement of seeded areas that have not produced a well established stand of Argentine Bahia grass with 90 percent area/coverage: Any seeded areas showing indication of probable non-survival or lack of health and vigor, or which do not exhibit the characteristics to meet specifications, shall be reseeded within 21 days of notice from the Owners Representative. All replacement seeding shall be furnished/installed at no additional cost to the Owners Representative and shall be guaranteed for twelve months. All replacements shall meet original specifications.

C. The Contractor will notify the Owners Representative ten days prior to the end of the guarantee period and such guarantee shall be extended until notification is received.

D. At the end of the guarantee period, all seeded areas that are dead or in unsatisfactory growth shall be replaced within two weeks.

SEEDING AND MULCHING:

PART 2 - PRODUCTS

2.01 MATERIALS

A. Seed:

1. The seed shall meet the tolerance for germination and purity in accordance with the U.S. Department of Agriculture Rules and Regulations under the latest edition of the Federal Seed Act. Seed shall be mixed by the dealer and shall be delivered to the site in sealed containers, which shall bear the Dealer's guaranteed analysis.

2. Grass seed shall be a mixture of 20 parts of Bermuda seed, 60 parts of Argentine Bahia and 50 parts rye or millet, depending on the season. The separate types of seed used shall be thoroughly dry mixed immediately before sowing. Seed that has become wet shall not be used.

3. The Bermuda seed shall be hulled, and have a minimum pure seed content of 95 percent with a minimum germination of 85 percent. The Bahia seed shall be scarified seed, having a minimum active germination of 40 percent and a total germination of 85 percent. Millet Seed shall be of the Brown Top variety with a minimum pure seed content of 90 percent with a minimum germination of 85 percent. Annual Type Rye Grass Seed shall have a minimum pure seed content of 95 percent with a minimum germation of 90 percent. All seed shall meet the requirements of the State Department of Agriculture and Consumer Services and all applicable state laws, and shall be approved by the Owners Representative before being sown.

B. Mulch:

1. Dry Mulch: The mulch material shall normally be dry mulch. Dry mulch shall be straw or hay, consisting of oat, rye or wheat straw, or of pongola, pasnut, coastal Bermuda or Bahia grass hay. Only un-deteriorated mulch, which can be readily cut into the soil, shall be used.

C. Commercial Fertilizer.

1. Commercial fertilizers shall comply with applicable State of Florida fertilizer laws.

2. The numerical designations for fertilizer indicate the minimum percentages respectively of (1) total nitrogen, (2) available phosphoric acid and (3) water soluble potash, contained in the fertilizer.

3. At least 50 percent of the nitrogen shall be from organic sources. At least 50 percent of the phosphoric acid shall be from normal super phosphate or an equivalent source, which will provide a minimum of two units of sulfur. The amount of sulfur shall be indicated on the quantitative analyses card attached to each bag or other container. The fertilizer shall contain secondary and micronutrients.

D. Water For Grassing: The water used in the grassing operations shall be obtained by the Contractor. The water shall be free of excess and harmful chemicals, acids, alkalis, or any substance, which might be harmful to plant growth or obnoxious to traffic. Salt water shall not be used.

2.02 EQUIPMENT

A. Fertilizer Spreader: The device for spreading fertilizer shall be capable of uniformly distributing the material at the specified rate.

B. Seed Spreader: The seed spreader shall be an approved mechanical hand spreader or other approved type of spreader.

C. Equipment For Cutting Mulch Into Soil: The mulching equipment shall be capable of cutting the specified materials uniformly into the soil and to the required controlled depth. Harrows will not be allowed.

D. Rollers: A cultipacker, traffic roller, or other suitable equipment will be required for rolling the grassed areas.

PART 3 - EXECUTION

3.01 PREPARATION

A. Preparation Of Area To Be Seeded: The ground to be seeded shall be prepared by disc harrowing and thoroughly pulverizing the soil as specified in Section 02920: Topsoil. The prepared soil shall be loose and reasonably smooth. It shall be reasonably free of large clods, roots and other material, which will interfere with the work and subsequent mowing and maintenance operations. Hand picking may be required.

B. Soil analysis: Before applying fertilizer, the soil pH shall be brought to a minimum range of 6.0 - 7.0.

C. No subsequent operations shall be commenced until the Owners Representative has observed the condition of the prepared areas.

3.02 APPLICATION

A. General:

1. Weather Limitations: Fertilizing, seeding or mulching operations will not be permitted when wind velocities exceed 15 miles per hour. Seed shall be sown only when the soil is moist and in proper condition to induce growth. No seeding shall be done when the ground is unduly wet, or otherwise not in a tillable condition.

2. Sequence of Operations: The operations involved in the work shall proceed in the following sequence: Preparation and fertilizing of the ground, seeding, spreading of mulch, cutting-in of mulch and rolling.

B. Fertilizing:

1. The fertilizer shall be spread uniformly at the rate of 1-1/2 pound of nitrogen per 1000 square feet by a spreading device capable of uniformly distributing the material at the specified rate per application. Three (3) applications shall be provided.

2. On steep slopes, where the use of a machine for spreading or mixing is not practicable, the fertilizer shall be spread by hand.

C. Seeding:

1. While the soil is still loose and moist, the seed shall be scattered uniformly over the grassing area at a rate of 200 pounds per acre, or 3.4 pounds per 1000 square feet. Where the slope is 4:1 or greater, the seed shall be applied at a rate of 250 pounds per acre, or 5.7 pounds per 1000 square feet.

2. Seed may be applied hydraulically, but not in the mulch slurry.

Mulching:
D

1. Approximately 2 inches, loose thickness, of the mulch material shall be applied uniformly over the seeded area, and the mulch material cut into the soil with the equipment specified, so as to produce a loose mulched thickness of 3 to 4 inches. Care shall be exercised that the materials are not cut too deeply into the soil.

2. When green mulch is used, it shall be incorporated into the soil not later than 2 days after being cut and no artificial watering of the mulch shall be done before it is applied.

3. On steep slopes, the mulch material shall be applied and, in lieu of being cut into the soil, shall be anchored down. Anchoring shall be done by either of the following methods:

   a. Placing a layer of soil, approximately 2 inches thick by 9 inches wide, along the upper limits of the mulch and spotting soil piles over the rest of the area at a maximum spacing of 4 feet.

   b. Spreading a string net over the mulch, using stakes driven flush with the top of the mulch at 6-foot centers and stringing parallel and perpendicular, with diagonals in both directions.

E. Rolling: Immediately after completion of the mulching, the entire seeded and mulched area shall be rolled thoroughly with the equipment specified. At least two trips over the entire area will be required.

F. Hydraulic mulching: Wood fiber mulch shall be applied at the following rates:

1. Flat surfaces to 3 to 1 slope 1,500 lbs. per acre
2. Slopes steeper than 3 to 1 2,000 lb. per acre
3. Critical areas, where designated 2,500 lb. per acre

G. Watering: The seeded areas shall be watered so as to provide optimum growth conditions for the establishment of the grass. In no case, however, shall the period of maintaining such moisture be less than 2 weeks after the planting.

H. Single Hydraulic Application: Using the standard hydraulic mulching equipment, the wood fiber mulch, seed and fertilizer may be applied as a combined slurry in a single application, provided that the seed is increased to the rate of 240 pounds per acre.

I. Maintenance:

1. The Contractor shall, at his expense, maintain the seeded areas in a satisfactory condition until final acceptance of the project. Such maintenance shall include the repairing of any damaged areas where the establishment of the grass stand does not appear to be developing satisfactorily, or where erosion has washed away an area and filling and leveling are required.

2. Replanting or repair necessary due to the Contractors negligence, carelessness or failure to provide routine maintenance shall be at the Contractors expense.

3. All areas which do not show a satisfactory catch of grass shall be reseeded at intervals of 21 days until a dense lawn of permanent grasses with at least 90 percent area coverage, free from any bare spots, areas of washout or erosion damage has been established.

4. Fertilization (lawns): As required to maintain healthy, vigorous turf. Minimum of three (3) applications. One application shall be applied at time of planting and two (2) during the maintenance period. Contractor to provide notice to Owners Representative prior to fertilization.

J. Mowing: Regular mowings to keep grass maintained shall be included in the base price for seeding and mulching. Bermuda grass shall be maintained at a cutting height of 1" for ballfields and 1.5" elsewhere. Bahia grass shall be mowed to maintain 3" height.

Mowing frequency should be adjusted so that no more than 1/2 of the leaf surface is removed at any one mowing.

Grass Type	Mowing Required At	Mow Height
Common Bermuda	2 to 2.5"	1.5"
Bermuda 419	1.5"	1"
Argentine Bahia	4"	3"

LAKE COUNTY
FLORIDA

NO.	DESCRIPTION	DATE

DATE	1	2	3	4	5	6	7	8
REVISION								

LAKE COUNTY
FIRE STATION #39

SPECIFICATIONS

John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
Ethan J. Hine, AIA
Jennifer Zaffuto, AIA, NCARB, MPA
1741 KIWANIS TRAIL • DUBOIS, PA. • 814.371.1541 • F 814.371.8801 KTHarch.com
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KTH ARCHITECTS

18104A

BOOTH ERN STRAUGHAN HIOTT, INC
ENGINEERS • SURVEYORS • LAND PLANNERS
902 North Sinclair Ave.
Tavares, Florida 32778
Office: 352.343.8481
Fax: 352.343.8495
www.besandh.com
Certificate of Authorization Number: 27029

DATE:	JANUARY 24, 2020
DESIGNED BY:	BJ
DRAWN BY:	BJ
CHECKED BY.:	CCH
JOB NO.:	100002.0007
FILE NAME:	FIRESTA39

Sheet 1.7

CHARLES C. HIOTT, PE
Registered Eng 54813

PRICING SET

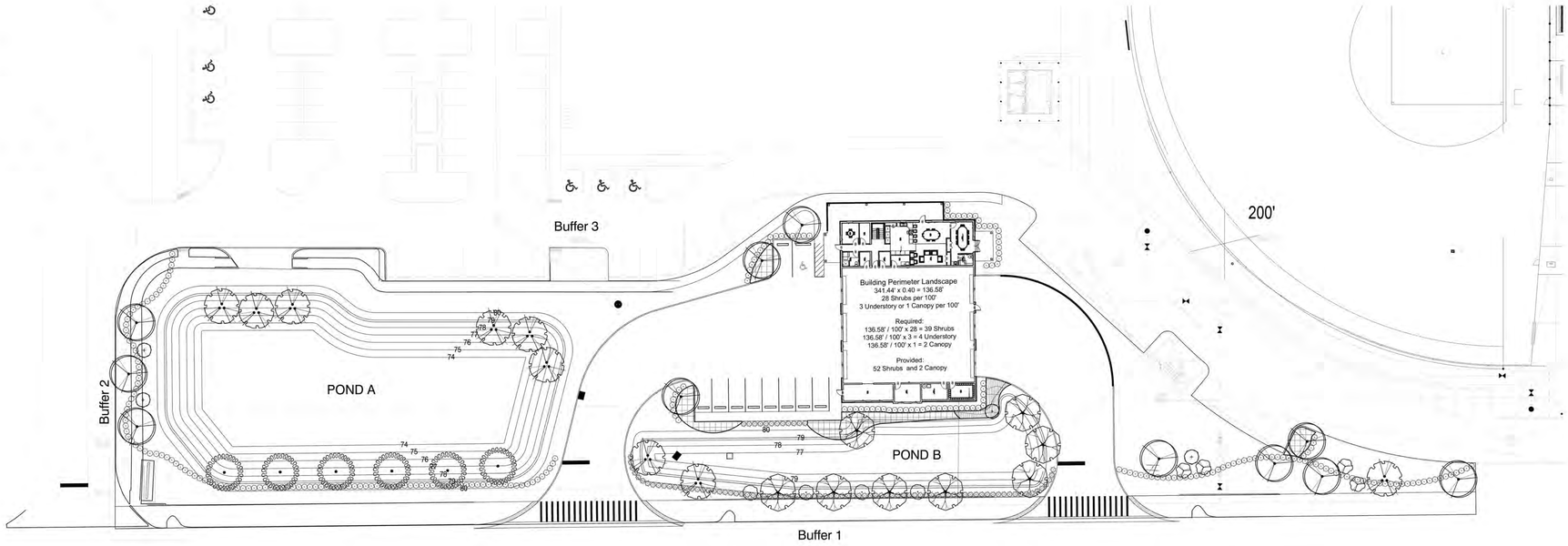
LAKE COUNTY
FIRE STATION NO.39
SPECIFICATIONS

24815 WALLICK ROAD, SORRENTO, FL 32776

JANUARY 31, 2020

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PLANT SCHEDULE

CANOPY TREES	QTY	COMMON NAME	BOTANICAL NAME	CONT	CAL	SIZE	SPACING	REMARKS
	8	Red Maple	Acer rubrum	30 gal	2.5"Cal	8`x4`	As Shown	Native
	9	Southern Magnolia	Magnolia grandiflora	30 gal	2.5"Cal	8`x4`	As Shown	Native
	11	Live Oak	Quercus virginiana	30 gal	2.5"Cal	8`x4`	As Shown	Native
	6	Bald Cypress	Taxodium distichum	30 gal	2.5"Cal	8`x4`	As Shown	Native
ORNAMENTAL TREES	**QTY**	**COMMON NAME**	**BOTANICAL NAME**	**CONT**	**CAL**	**SIZE**	**SPACING**	**REMARKS**
	4	Yaupon Holly	Ilex vomitoria	30 gal	2"Cal	8`H x 4`W	As Shown	Native
	4	Dwarf Southern Magnolia	Magnolia grandiflora `Little Gem`	30 gal	2"Cal	8`H x 4`W	As Shown	Naitve
	4	Simpson`s Stopper	Myrcianthes fragrans	30 gal	2"Cal	8`H x 4`W	As Shown	Native
SHRUBS	**QTY**	**COMMON NAME**	**BOTANICAL NAME**	**CONT**	**HEIGHT**	**WIDTH**	**SPACING**	**REMARKS**
	94	Purple Anise	Illicium floridanum	3 gal	24"	18"	36"	Native
	267	Walter`s Viburnum	Viburnum obovatum	3 gal	18"	30"	36"	Native
SHRUB AREAS	**QTY**	**COMMON NAME**	**BOTANICAL NAME**	**CONT**	**HEIGHT**	**WIDTH**	**SPACING**	**REMARKS**
	139	Yaupon Holly	Ilex vomitoria	3 gal	12"	12"	36" o.c.	Native
	39	Coontie Palm	Zamia floridana	3 gal	12"	12"	30" o.c.	Native

LANDSCAPE NOTES

CALIPER IS MEASURED SIX (6) INCHES ABOVE THE GROUND.
CANOPY TREES SHALL NOT BE PLANTED UNDER OVERHEAD UTILITIES.
SHRUBS TO BE 3' WITHIN 12 MONTHS.
ALL PLANTS ARE TO FLORIDA #1 OR BETTER.
ALL LAWN AREAS TO BE BAHIA GRASS AND NOT IRRIGATED.

RETENTION POND CALCULATIONS (3 TREES PER 150'):

POND A: 568.04' / 150' x 3 = 11.36 = 12 trees
POND B: 495.67' / 150' x 3 = 9.91 = 10 trees

Landscape Buffer	Landscape Buffer Requirement			Width		Canopy Trees		Understory Trees		Shrubs	
				required	provided	required	provided	required	provided	required	provided
	Boundary Buffer	Buffer Type	Lineal Feet			2 per 100 lineal feet		1 per 100 lineal feet		hedge planted 36" on center	
	1	A	731.31'	10'	10'	15	15	8	9	Continuous Hedge 36" on center	226
	2	A	150.55'	10'	80'	3	3	2	2	Continuous Hedge 36" on center	44

Digitally signed by Timothy W Green
Date: 2019.12.20 14:33:40 -05'00'

Landscape Plan

Sorrento Fire Station

Lake County, Florida

Green Consulting Group, Inc.
Landscape Architecture ◘ Land Planning ◘ Development Assistance
4070 United Avenue, Mount Dora, Florida 32757
352-357-9241 ◘ Fax 352-357-9278 ◘ LC26000288

NORTH

Drawing Number: 1428-02
Originated From: 1428-01
Date: December 19, 2019
Scale: 1" = 30'
Drawn By: JMA
Layout: 24"x36"

NO.	DESCRIPTION	DATE

John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
Ethan J. Hine, AIA
Jennifer Zaffuto, AIA, NCARB, MPA

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KTH ARCHITECTS

18104A

LAKE COUNTY
FIRE STATION NO.39
LANDSCAPE PLAN
24815 WALLICK ROAD, SORRENTO, FL 32776

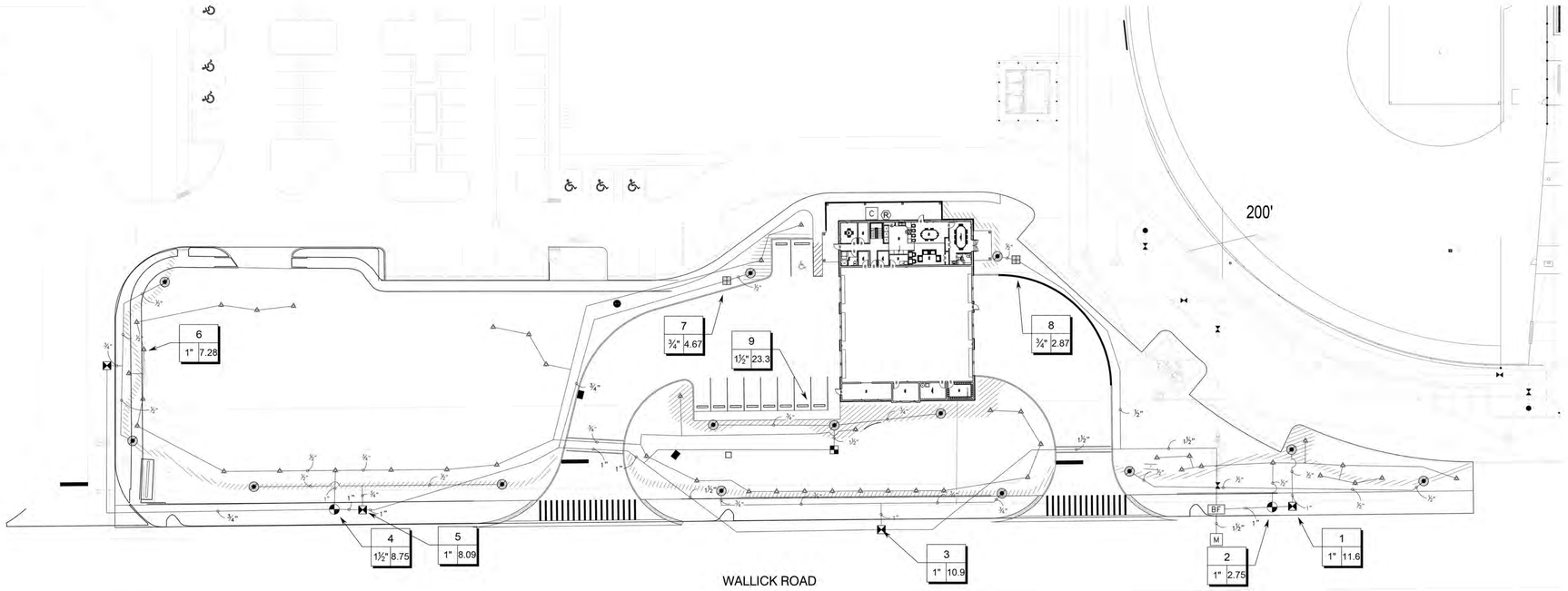
JANUARY 31, 2020

PRICING SET

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IRRIGATION SCHEDULE

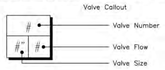
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI
1401 1402 1404 1408	Rain Bird 1800-1400 Flood 1401 Fixed flow rate (0.25-2.0GPM), full circle bubbler, 1/2" FIPT.	46	20

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Rain Bird XCZ-075-PRF 3/4" Low Flow Drip Control Kit, 3/4" Low Flow Valve, 3/4" Pressure Regulating RBY Filter, and 30psi pressure regulator. 0.2gpm-5gpm.	2
	Rain Bird XCZ-150-PRB-COM 1-1/2" High Flow Control Zone Kit, for Large Commercial Drip Zones. 1-1/2" PESB Valve with two 1" Pressure Regulating (40psi) Quick-Check Basket Filters. Flow range: 15-40gpm.	1
	Rain Bird XCZF-100-PRF 1" Medium Flow Drip Control Kit. 1" DV Valve with 1" Pressure Regulating Filter at 40psi, and MDCF Fitting. 3gpm-15gpm.	4
	Pipe Transition Point Pipe transition point from PVC lateral to drip tubing with riser.	14
	Area to Receive Dripline Rain Bird XFD-09-12-NP XFD On-Surface Pressure Compensating Landscape Dripline. 0.9 GPH emitters at 12" O.C. Dripline laterals spaced at 12" apart, with emitters offset for triangular pattern. UV Resistant. Specify XF insert fittings.	4,570 l.f.

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Rain Bird PESBR-PRS-D 1" 1", 1-1/2", and 2" Durable Chlorine-Resistant Valves for Reclaimed Water Applications. With Scrubber Mechanism Technology, Purple Flow Control Handle, and Pressure Regulator Module.	1
	Rain Bird PESBR-PRS-D 1-1/2" 1", 1-1/2", and 2" Durable Chlorine-Resistant Valves for Reclaimed Water Applications. With Scrubber Mechanism Technology, Purple Flow Control Handle, and Pressure Regulator Module.	1
BF	Febco 765 1/2" Pressure Vacuum Breaker, brass with ball valve SOV. Install 12" (305MM) above highest downstream outlet and the highest point in the downstream piping.	1

C	Rain Bird ESP8LXME-LXMM-LXMMPED with (01) ESPLXMSM4 12 Station Capable Commercial Controller. Mounted on a Powder-Coated Metal Pedestal.	1
®	Rain Bird WR2-RFC Wireless Rain and Freeze Sensor Combo, includes 1 receiver and 1 rain/freeze sensor transmitter.	1
M	Water Meter 1"	1
	Irrigation Lateral Line: PVC Class 160 SDR 26 1/2"	1,629 l.f.
	Irrigation Lateral Line: PVC Class 160 SDR 26 3/4"	472.3 l.f.
	Irrigation Lateral Line: PVC Class 160 SDR 26 1"	44.5 l.f.
	Irrigation Lateral Line: PVC Class 160 SDR 26 1 1/2"	13.1 l.f.
	Irrigation Mainline: PVC Schedule 40 1/2"	127.4 l.f.
	Irrigation Mainline: PVC Schedule 40 3/4"	347.9 l.f.
	Irrigation Mainline: PVC Schedule 40 1"	215.7 l.f.
	Irrigation Mainline: PVC Schedule 40 1 1/2"	490.0 l.f.
	Pipe Sleeve: Hi-Temp CPVC Pipe Sch 80	59.8 l.f.

Valve Callout



NOTES:

PIPE ROUTING AND VALVE LOCATIONS ARE DIAGRAMMATICAL ONLY.
IRRIGATION CONTRACTOR IS TO AVOID ANY CONFLICT WITH THE TREE AND SHRUB PLANTINGS.
ALL MAINLINES ARE TO BE 2" sch. 40 P.V.C.
ALL LATERALS ARE TO BE sch. 160 P.V.C. OF THE SIZE NOTED.
ALL HEADS TO HAVE RECLAIMED WATER USE INDICATORS.
ALL PIPES SHALL BE PURPLE IN COLOR TO DENOTE USE OF RECLAIMED WATER.
ALL PAVEMENT CROSSINGS ARE TO BE MADE IN SLEEVES THAT ARE TWO PIPE SIZES LARGER THAN THE CROSSING.
NO IRRIGATION HEADS TO BE LOCATED WITHIN 24" OF ANY BUILDING.
EXACT LOCATION OF UNDERGROUND UTILITIES SHOULD BE VERIFIED PRIOR TO CONSTRUCTION.
DESIGN PRESSURE IS 60 PSI WITH 37.5 GALLONS PER MINUTE AT THE POINT OF CONNECTION.

Irrigation Plan

Sorrento Fire Station

Lake County, Florida

Green Consulting Group, Inc.
Landscape Architecture ■ Land Planning ■ Development Assistance
4070 United Avenue, Mount Dora, Florida 32757
352-357-9241 ■ Fax 352-357-9278 ■ LC26000288

NORTH

Drawing Number: 1428-02
Originated From: 1428-01
Date: December 19, 2019
Scale: 1" = 30'
Drawn By: JMA
Layout: 24"x36"

NO.	DESCRIPTION	DATE

John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
Ethan J. Hine, AIA
Jennifer Zaffuto, AIA, NCARB, MPA

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18104A

LAKE COUNTY
FIRE STATION NO.39
IRRIGATION PLAN
24815 WALLICK ROAD, SORRENTO, FL 32776

JANUARY 31, 2020

PRICING SET

1.9

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FLOOR PLAN - FIRST FLOOR

1 / 2.1 SCALE: 1/4" = 1'-0"

CONFERENCE/TRAINING 111 · CONFERENCE TLT 112 · CLOSET 109 · CLOSET 110 · DINING 107 · DAY ROOM 108 · FIREMAN POLE · KITCHEN 105 · PANTRY · Vent Hood Range · REF. · UTILITY 106 · MECHANICAL 104 · STAIR S-01 · UP · ELECTRICAL 103 · ENTRY TLT 101 · OFFICE 102 · GARAGE 113 · LOCKERS · GEAR 114 · GEAR EXTRACTOR 115 · WH · CLEANEMS 116 · GYM 117 · DS

105'-1" · 96'-0" · 9'-1" · 62'-9 1/8" · 72'-0" · 77'-1" · 56'-0"

NO.	DESCRIPTION	DATE

John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
Ethan J. Hine, AIA
Jennifer Zaffuto, AIA, NCARB, MPA

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STATE OF FLORIDA · JOHN P. ADAMS · AR92282 · REGISTERED ARCHITECT

LAKE COUNTY
FIRE STATION NO.39
FIRST FLOOR PLAN

24815 WALLICK ROAD, SORRENTO, FL 32776

18104A

JANUARY 31, 2020

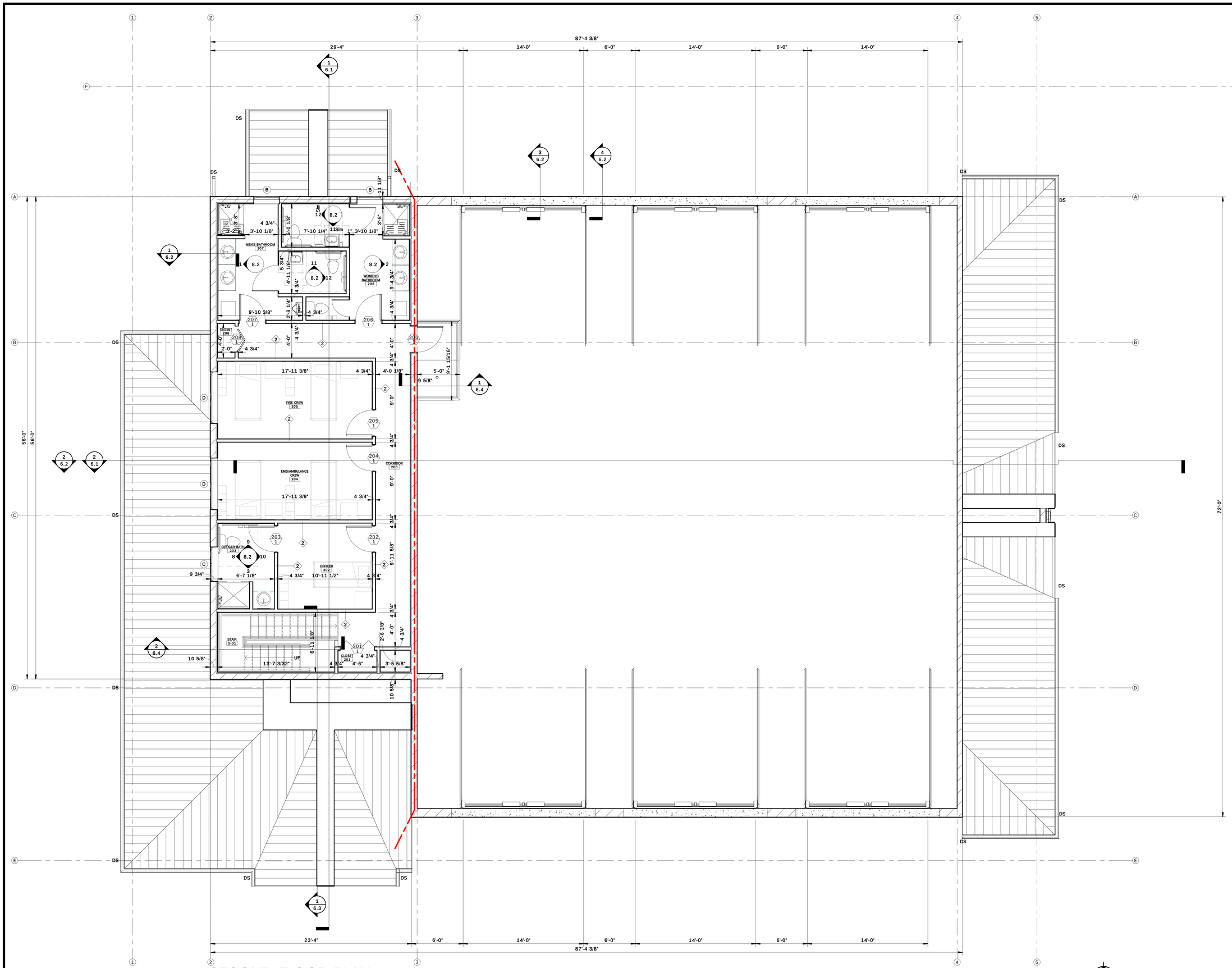
PRICING SET

2.1

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SECOND FLOOR PLAN

1 / 2.2 SCALE: 1/4" = 1'-0"



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STATE OF FLORIDA — JOHN P. ADAMS — AR90282 — REGISTERED ARCHITECT

KTH ARCHITECTS

PRICING SET

LAKE COUNTY
FIRE STATION NO.39
SECOND FLOOR PLAN

24815 WALLICK ROAD, SORRENTO, FL 32776

JANUARY 31, 2020

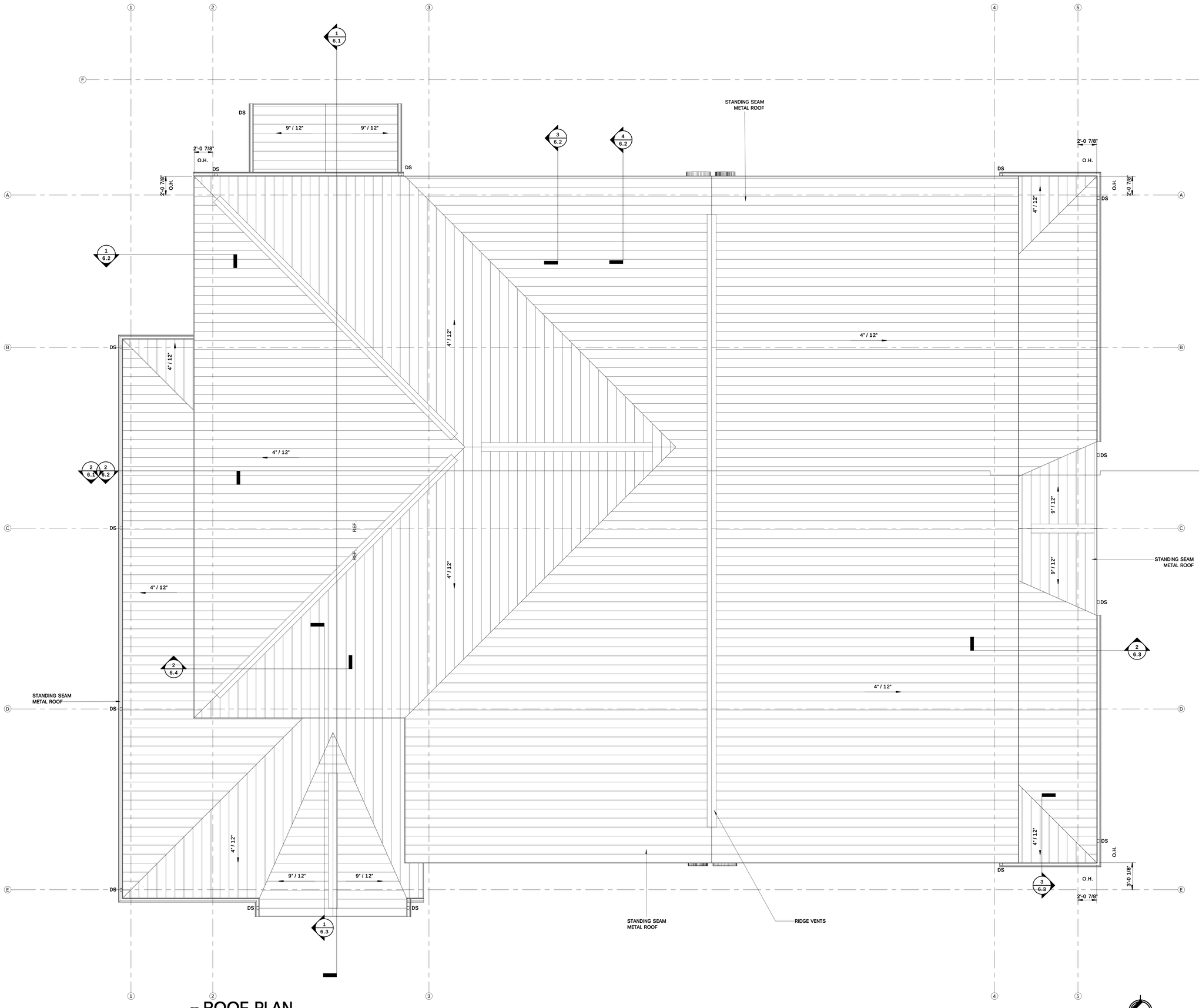
18104A

2.2

NO.	DESCRIPTION	DATE

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ROOF PLAN

1 3.1 SCALE: 1/4" = 1'-0"

DATE | DESCRIPTION | NO.

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John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
Ethan J. Hine, AIA
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LAKE COUNTY
FIRE STATION NO.39
ROOF PLAN

24815 WALLICK ROAD, SORRENTO, FL 32776

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JANUARY 31, 2020

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CEILING LEGEND

- 12'x48" RECESSED TROFFER
- 24'x24" RECESSED TROFFER
- LINEAR PENDANT FIXTURE
- UPLIGHT STRIP FIXTURE
- RECESSED CAN LIGHT

(COORDINATE LIGHT FIXTURES WITH ELECTRICAL LIGHTING PLANS, DETAILS, AND SPECIFICATIONS. SIZES MAY VARY)

- HVAC SUPPLY DIFFUSER
- HVAC RETURN DIFFUSER
- HVAC EXHAUST FAN

(COORDINATE HVAC DIFFUSERS WITH MECHANICAL DRAWINGS PLANS, DETAILS, AND SPECIFICATIONS. SIZES MAY VARY)

- 2'x2' LAY-IN SUSPENDED ACOUSTICAL CEILING PANEL
- GYPSUM BOARD CEILING

DS

7'-0" AFF

8'11" AFF

9'-0" AFF

Vent Hood

HARDIE VENTED SOFFIT

1 / 4.1 CEILING PLAN - FIRST FLOOR

SCALE: 1/4" = 1'-0"

DATE | DESCRIPTION | NO.

STATE OF FLORIDA · JOHN P. ADAMS · AR90282 · REGISTERED ARCHITECT

John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
Ethan J. Hine, AIA
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LAKE COUNTY
FIRE STATION NO.39
FIRST FLOOR REFLECTED CEILING PLAN

24815 WALLICK ROAD, SORRENTO, FL 32776

18104A

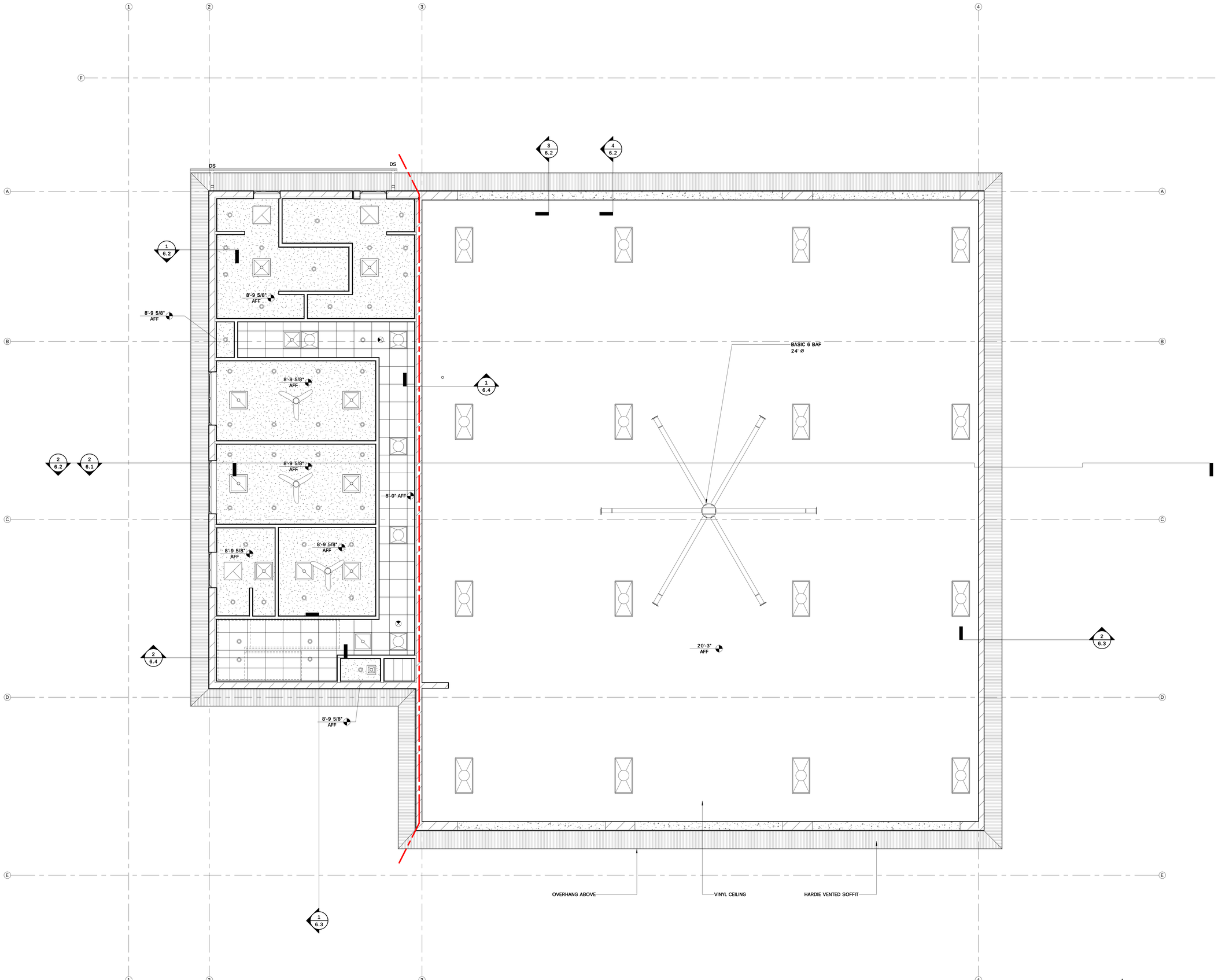
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CEILING PLAN - SECOND FLOOR

1/4.2 SCALE: 1/4" = 1'-0"

DATE | DESCRIPTION | NO.

STATE OF FLORIDA
JOHN P. ADAMS
AR90282
REGISTERED ARCHITECT

John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
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LAKE COUNTY
FIRE STATION NO.39
SECOND FLOOR REFLECTED CEILING PLAN
24815 WALLICK ROAD, SORRENTO, FL 32776

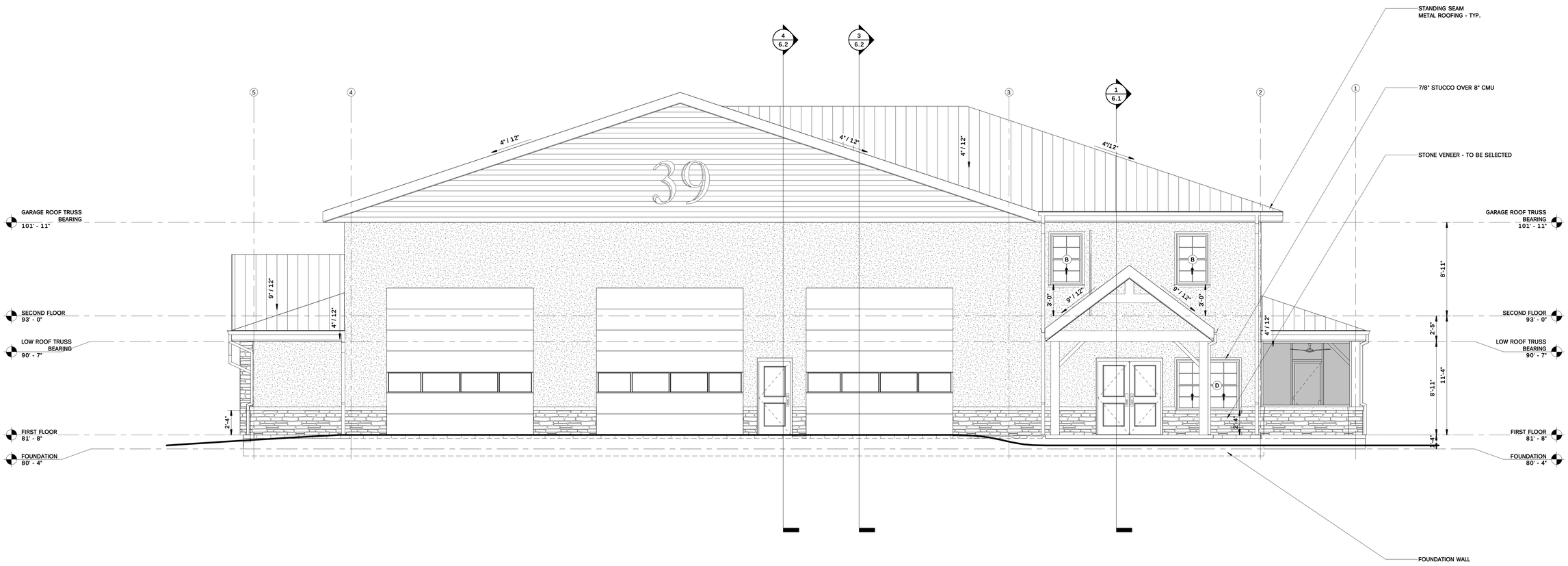
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JANUARY 31, 2020

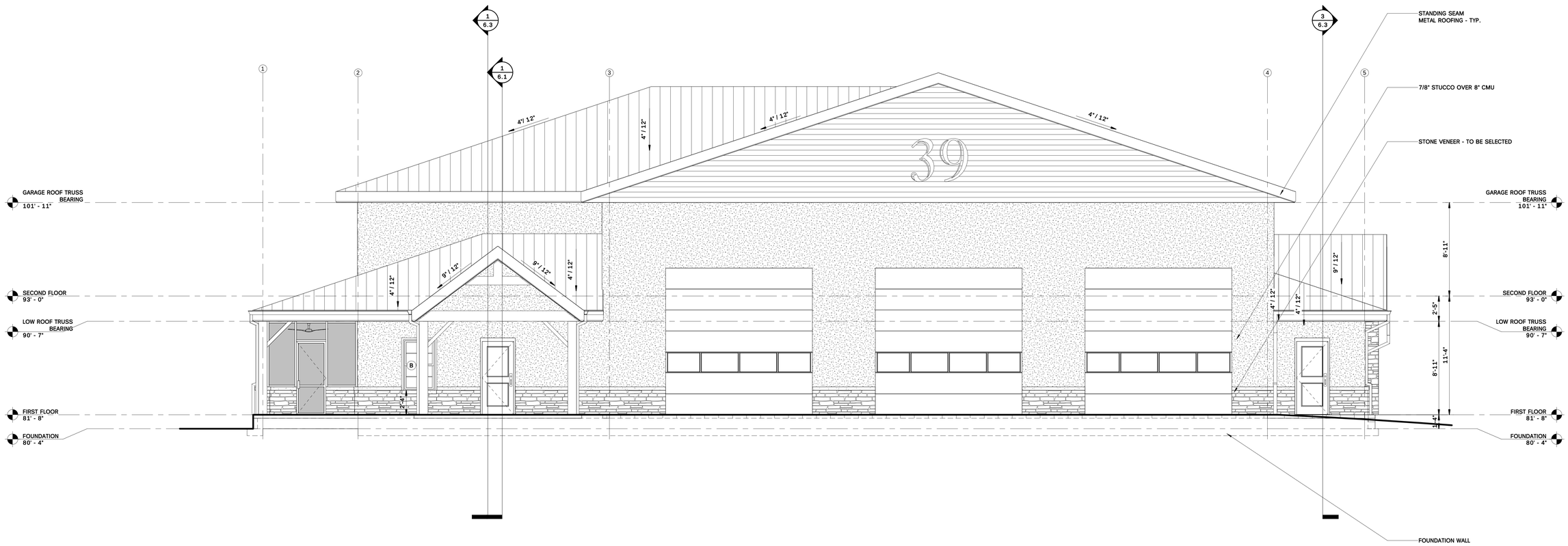
4.2

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1/5.1 EAST ELEVATION

SCALE: 1/4" = 1'-0"



3/5.1 WEST ELEVATION

SCALE: 1/4" = 1'-0"

DATE

DESCRIPTION

NO.

STATE OF FLORIDA
JOHN P. ADAMS
AR90282
REGISTERED ARCHITECT

John P. Adams, AIA
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LAKE COUNTY
FIRE STATION NO.39
EXTERIOR ELEVATIONS

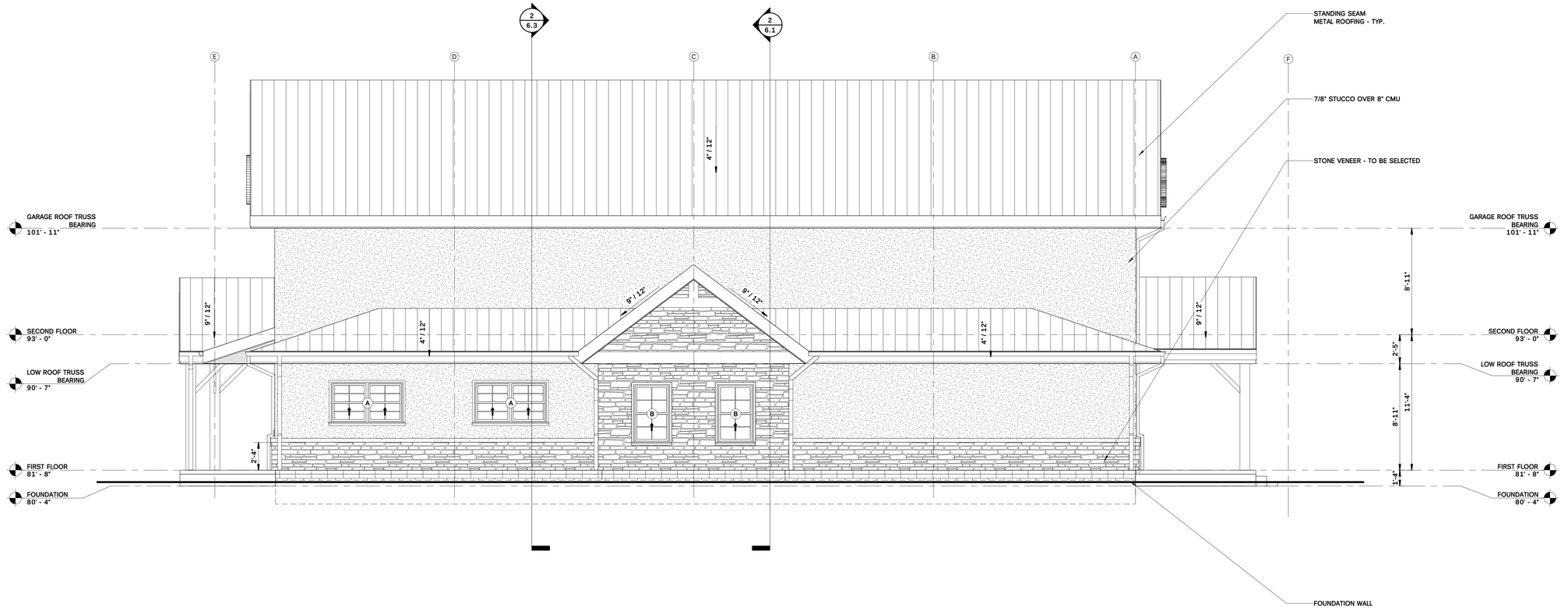
24815 WALLICK ROAD, SORRENTO, FL 32776

JANUARY 31, 2020

PRICING SET

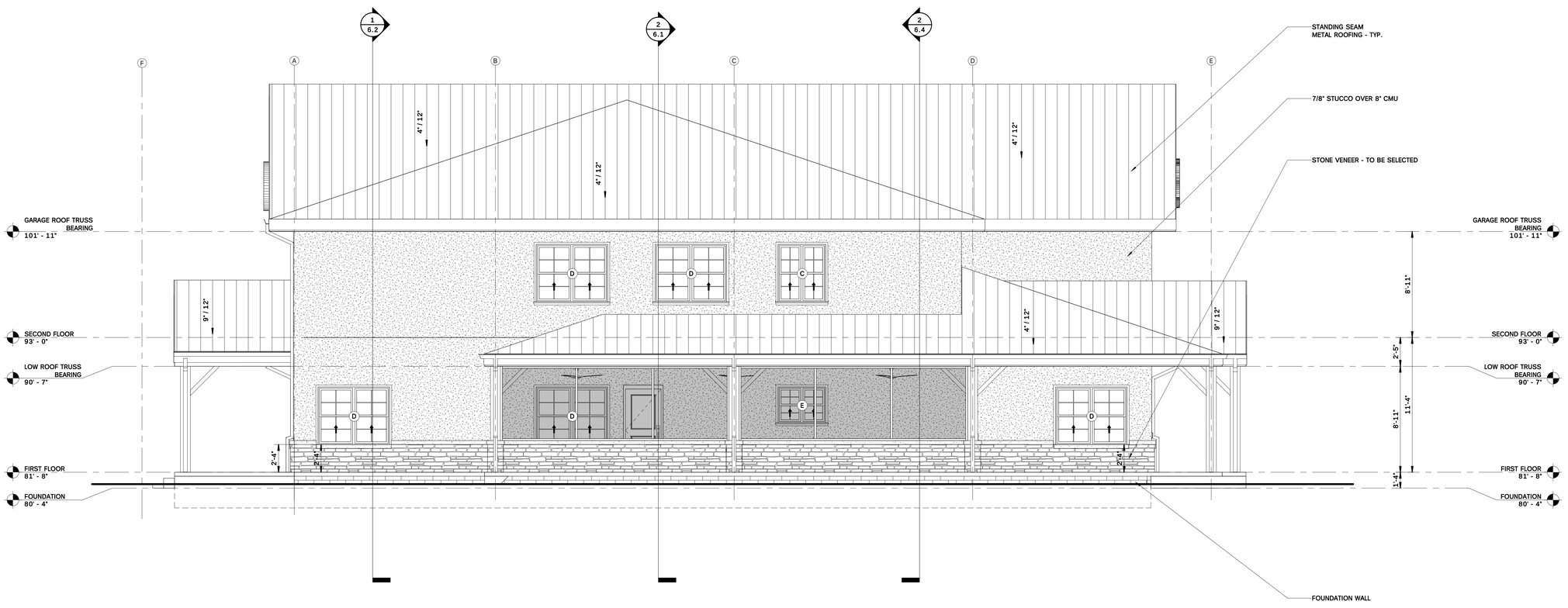
5.1

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1/5.2 SOUTH ELEVATION

SCALE: 1/4" = 1'-0"



2/5.2 NORTH ELEVATION

SCALE: 1/4" = 1'-0"

NO.	DESCRIPTION	DATE

STATE OF FLORIDA
JOHN P. ADAMS
AR90282
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LAKE COUNTY
FIRE STATION NO.39
EXTERIOR ELEVATIONS

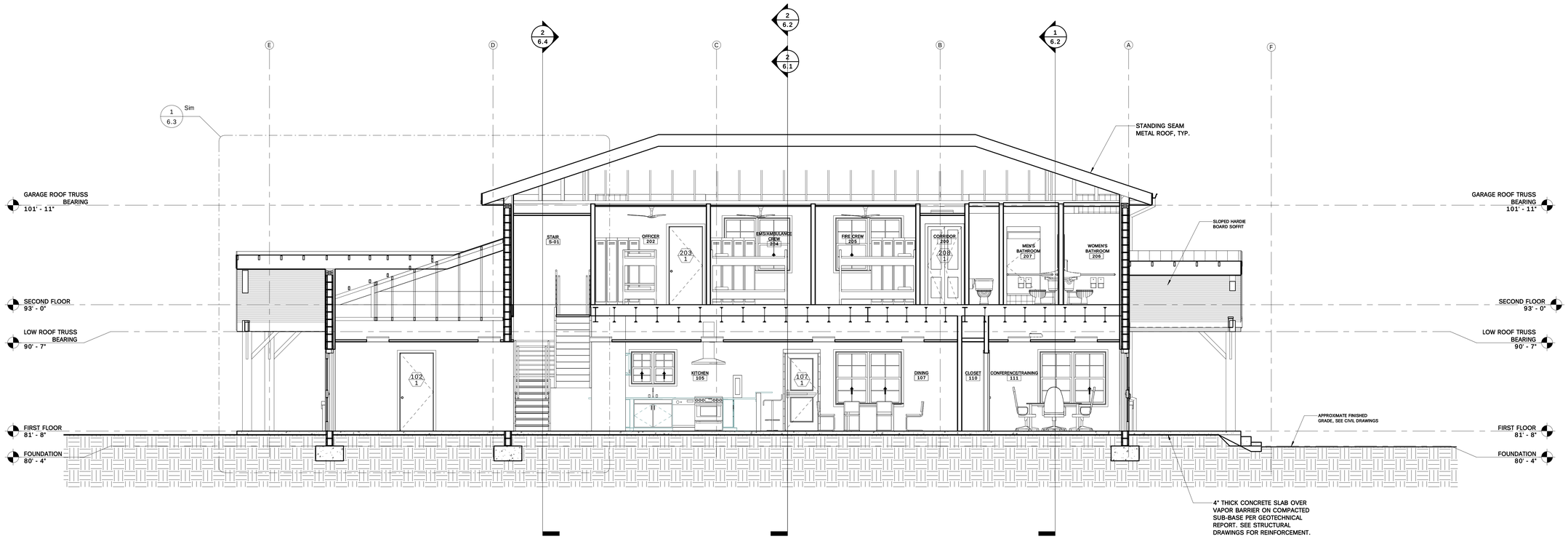
24815 WALLICK ROAD, SORRENTO, FL 32776

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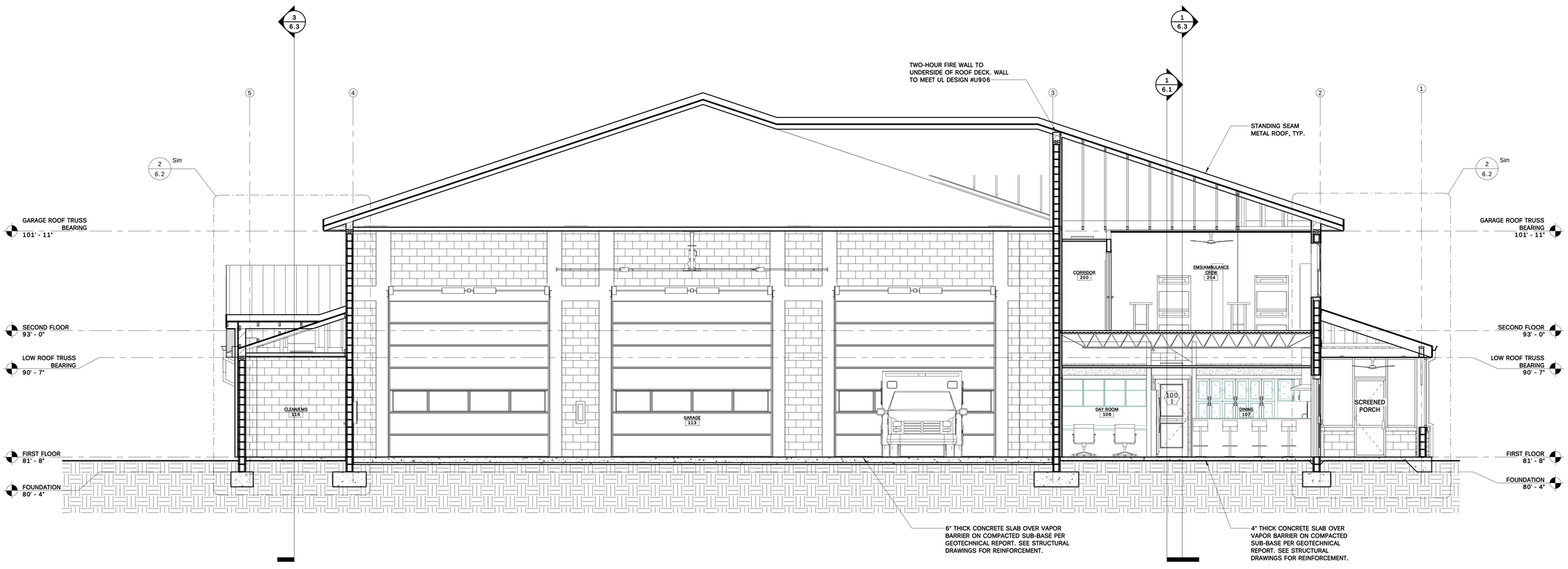
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1/6.1 BUILDING SECTION

SCALE: 1/4" = 1'-0"



2/6.1 BUILDING SECTION

SCALE: 1/4" = 1'-0"

DATE

DESCRIPTION

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LAKE COUNTY
FIRE STATION NO.39
BUILDING SECTIONS

24815 WALLICK ROAD, SORRENTO, FL 32776

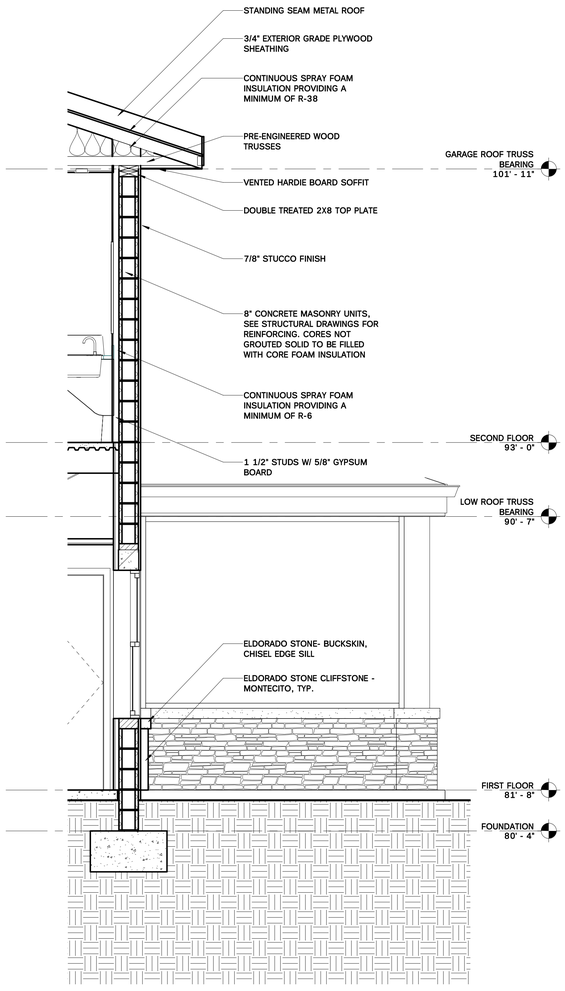
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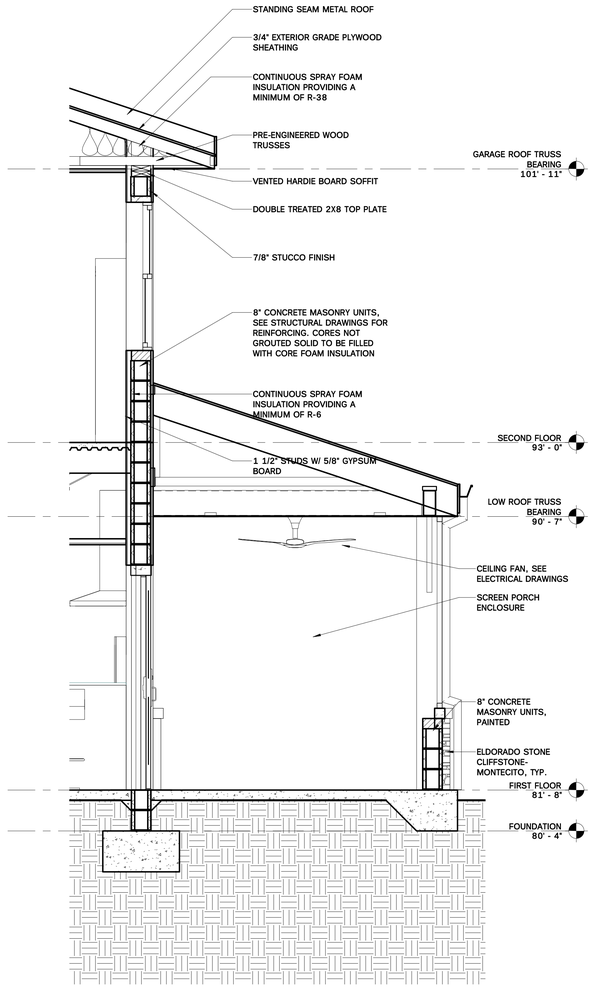
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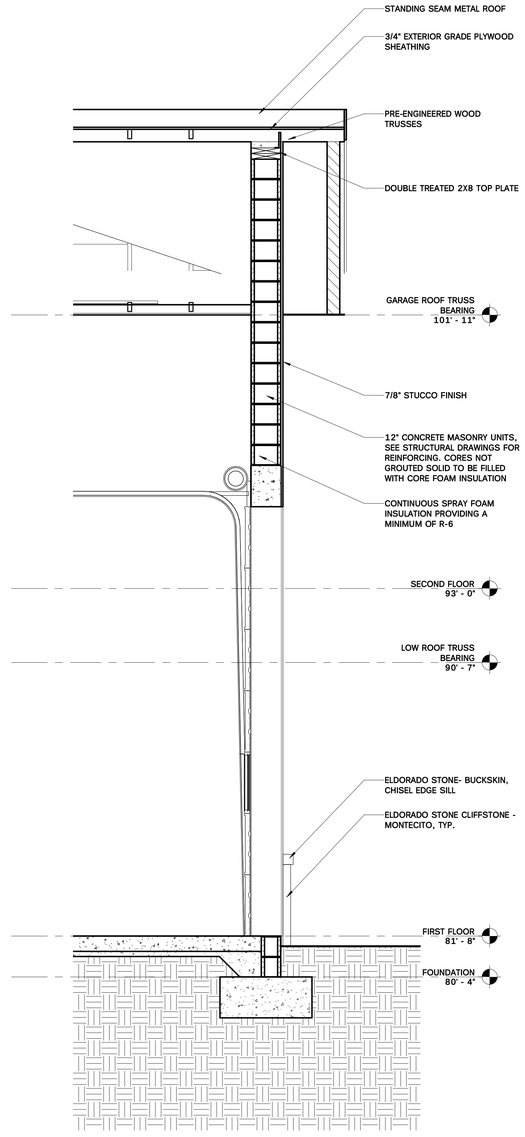
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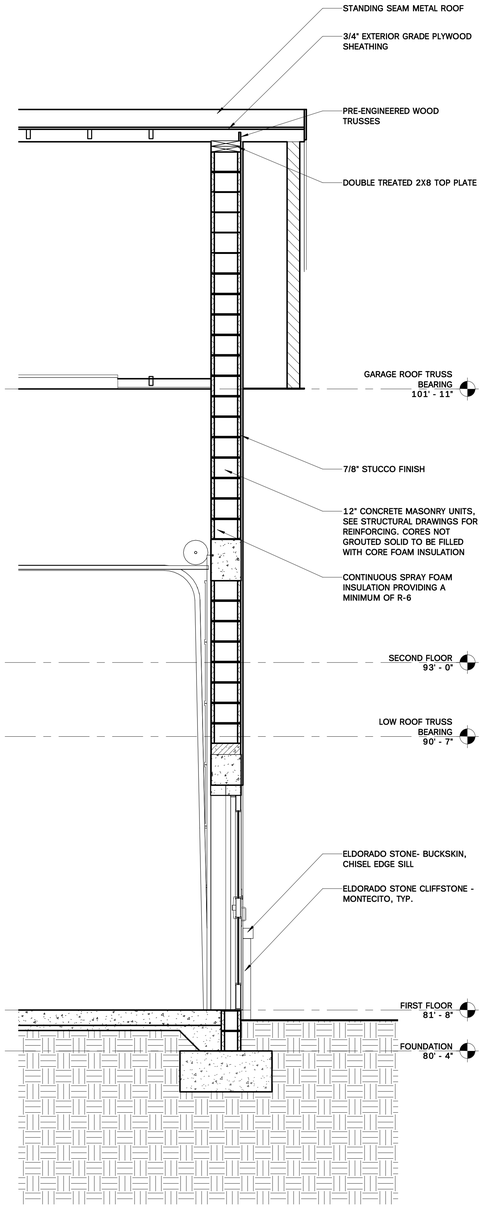
1 6.2 WALL SECTION
SCALE: 1/2" = 1'-0"



2 6.2 WALL SECTION
SCALE: 1/2" = 1'-0"



3 6.2 WALL SECTION
SCALE: 1/2" = 1'-0"



4 6.2 WALL SECTION
SCALE: 1/2" = 1'-0"

DATE
DESCRIPTION
NO.

STATE OF FLORIDA
JOHN P. ADAMS
AR90282
REGISTERED ARCHITECT

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LAKE COUNTY
FIRE STATION NO.39
WALL SECTIONS

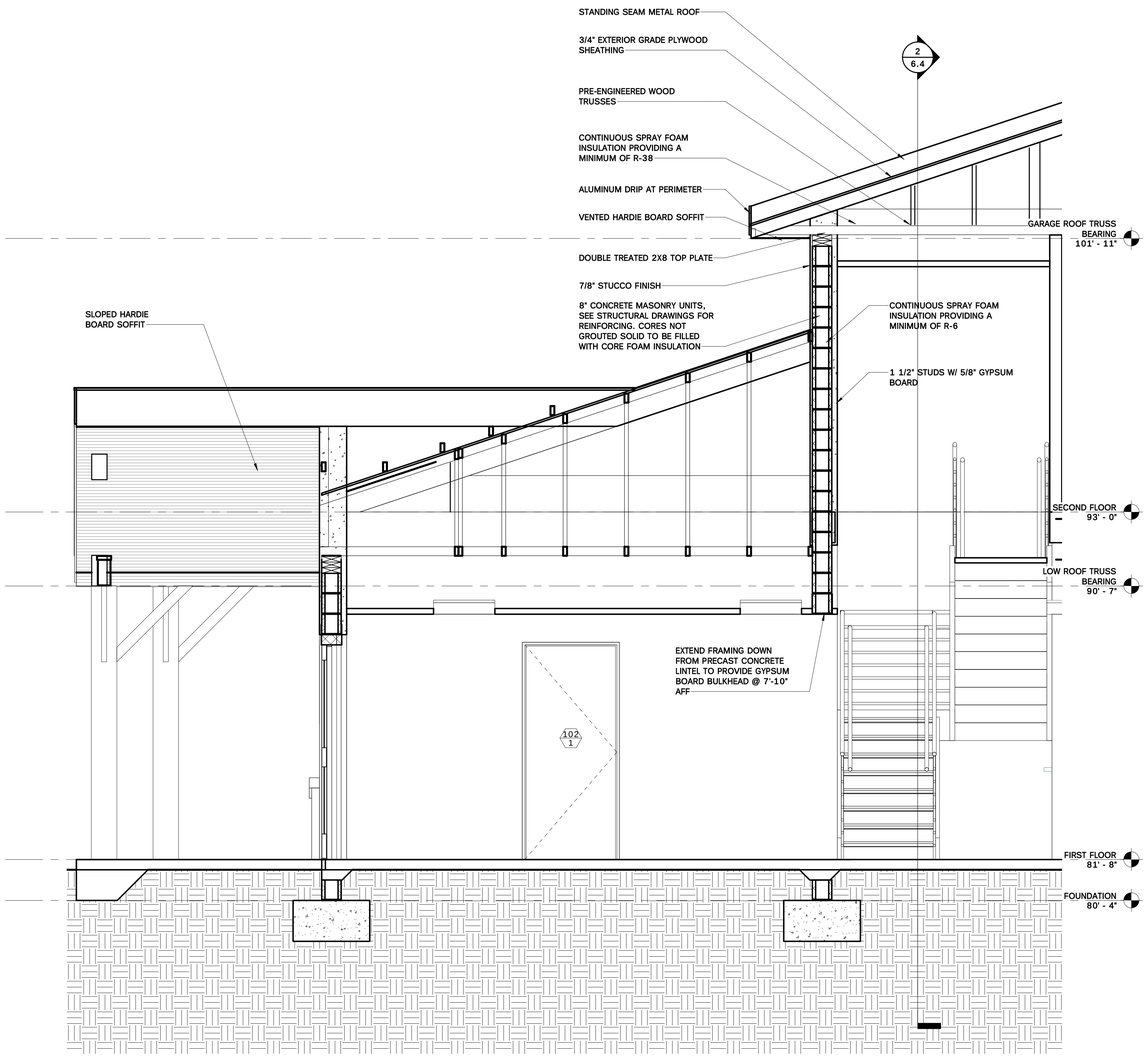
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JANUARY 31, 2020

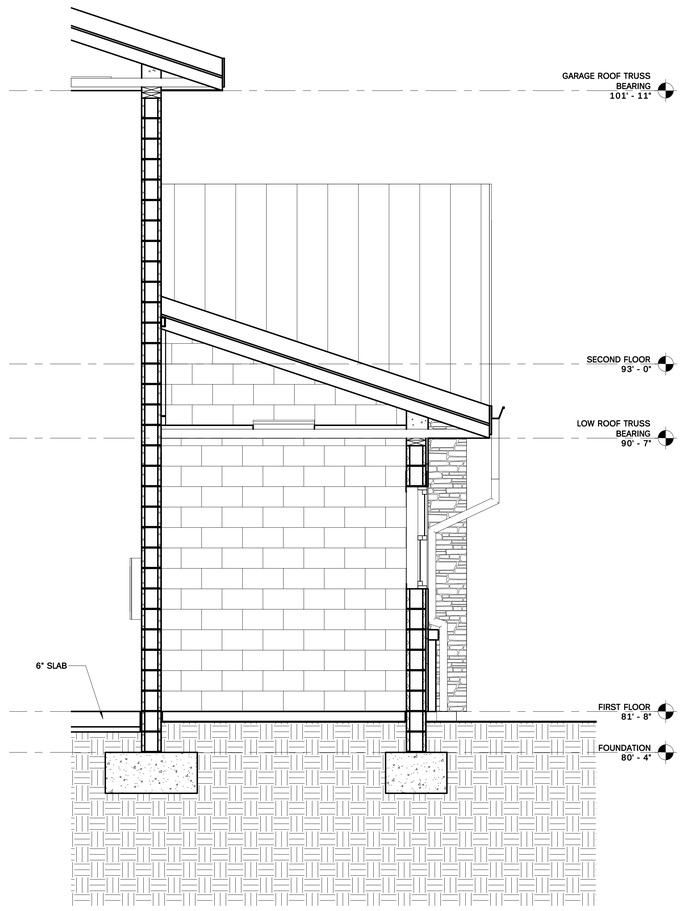
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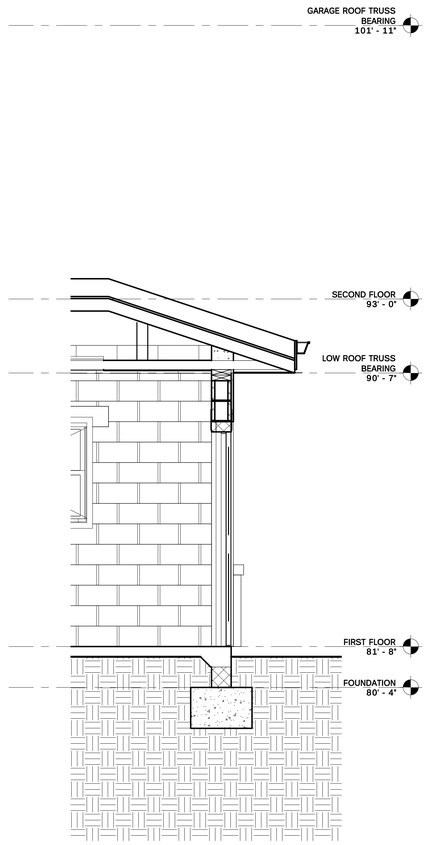
1/6.3 FRONT ENTRY SECTION

SCALE: 1/2" = 1'-0"



2/6.3 SECTION AT LOW ROOF

SCALE: 1/2" = 1'-0"



3/6.3 SECTION AT LOW ROOF

SCALE: 1/2" = 1'-0"

NO.	DESCRIPTION	DATE

John P. Adams, AIA
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LAKE COUNTY
FIRE STATION NO.39
WALL SECTIONS

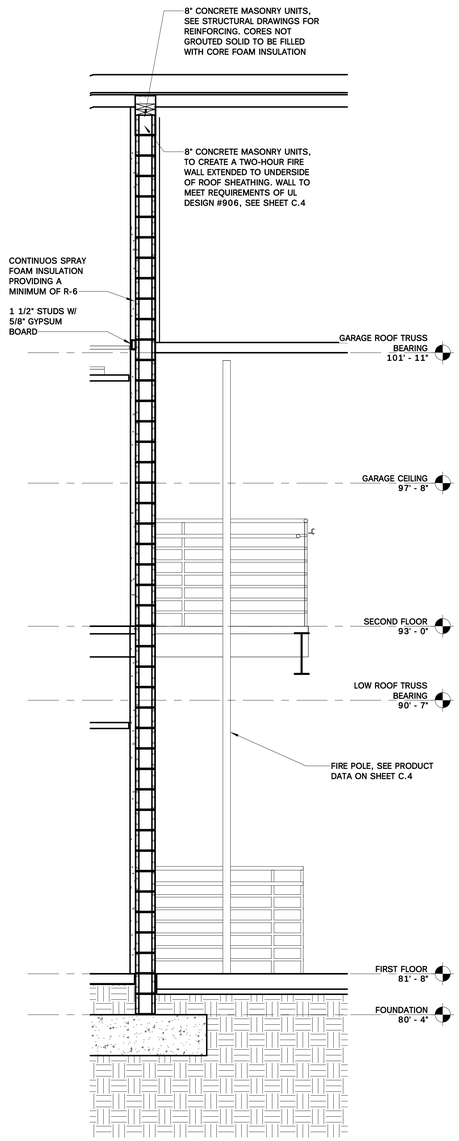
24815 WALLICK ROAD, SORRENTO, FL 32776

JANUARY 31, 2020

PRICING SET

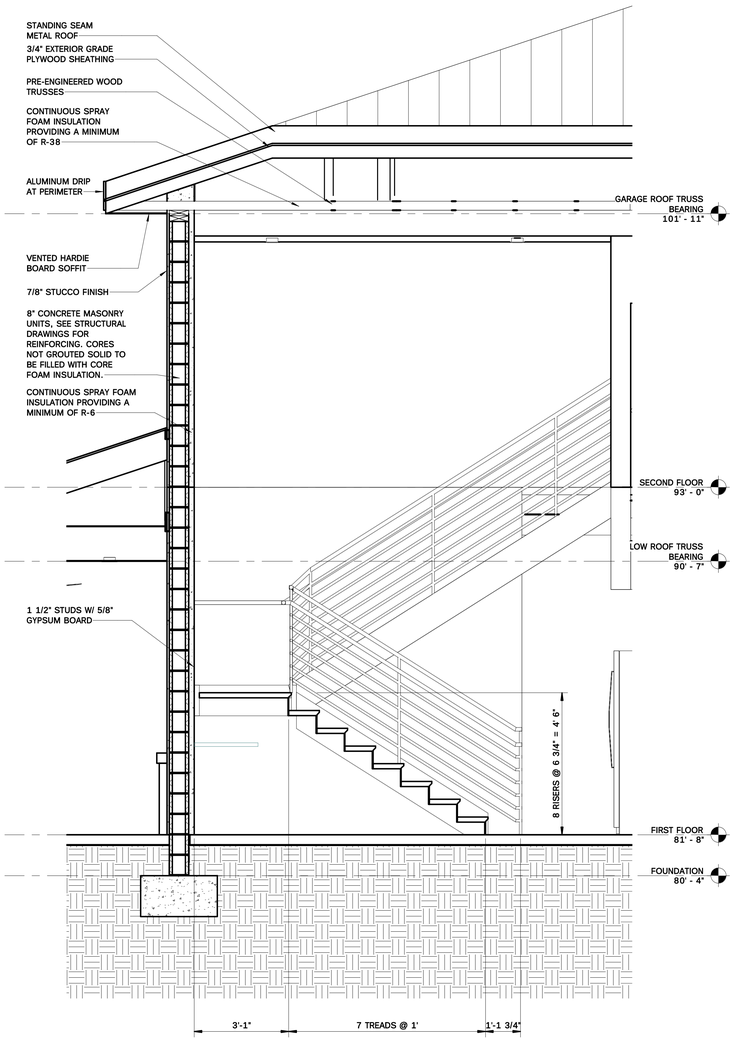
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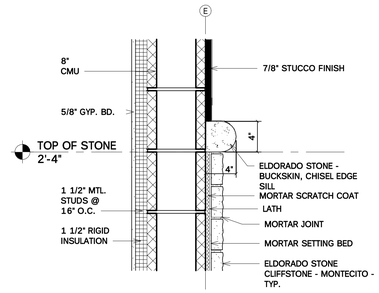
1 6.4 FIRE POLE SECTION

SCALE: 1/2" = 1'-0"



2 6.4 STAIR SECTION

SCALE: 1/2" = 1'-0"

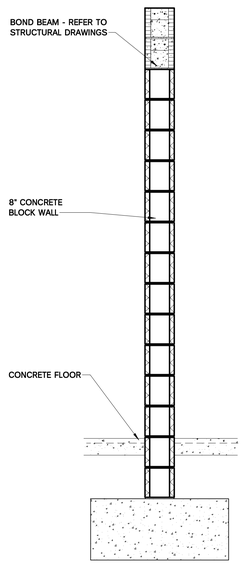


3 6.4 STONE WALL

SCALE: 1 1/2" = 1'-0"

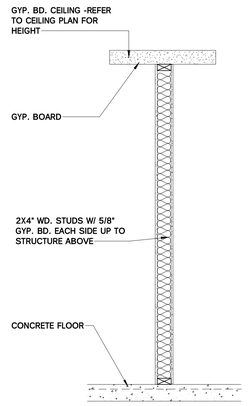
WALL TYPES

SCALE: 3/4" = 1'-0"



1 WALL TYPE

8" CMU
UL #U906



2 WALL TYPE

4" WD. STUDS W/ 5/8" GYP. BD. EACH SIDE UP TO GYP. BD. CEILING

NO.	DESCRIPTION	DATE

STATE OF FLORIDA — JOHN P. ADAMS — AR90282 — REGISTERED ARCHITECT

John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
Ethan J. Hine, AIA
Jennifer Zaffuto, AIA, NCARB, MPA

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LAKE COUNTY
FIRE STATION NO.39
STAIR SECTIONS & WALL TYPES
24815 WALLICK ROAD, SORRENTO, FL 32776

18104A

JANUARY 31, 2020

PRICING SET

6.4

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DOOR SCHEDULE

ROOM NUMBER	DOOR NUMBER	DOOR TYPE	DOOR MATERIAL	DOOR FINISH	DOOR WIDE	DOOR HEIGHT	DOOR THICK	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	JAMB TYPE	LABEL	HARDWARE SET #	COMMENTS
					2'-9 9/16"	7'-0"					J3			
100	1	D2	ALUMINUM	PREFINISHED	3'-0"	7'-0"	1 3/4"	F1	ALUMINUM	PREFINISHED	J4			
100	14	D4	HOLLOW METAL	PREFINISHED	3'-0"	7'-0"	1 3/4"	F1	HOLLOW METAL	PREFINISHED	J6			B (90 MIN)
101	1	D4	WOOD	PREFINISHED	3'-0"	7'-0"	1 3/4"	F2	HOLLOW METAL	PREFINISHED	J1			
102	1	D4	WOOD	PREFINISHED	3'-0"	7'-0"	1 3/4"	F2	HOLLOW METAL	PREFINISHED	J1			
103	1	D4	WOOD	PREFINISHED	3'-0"	7'-0"	1 3/4"	F2	HOLLOW METAL	PREFINISHED	J1			
104	1	D6	WOOD	PREFINISHED	6'-0"	7'-0"	1 3/4"	F2	HOLLOW METAL	PREFINISHED	J1			
106	12	D4	WOOD	PREFINISHED	3'-0"	7'-0"	1 3/4"	F1	HOLLOW METAL	PREFINISHED	J6			B (90 MIN)
107	1	D2	ALUMINUM	PREFINISHED	3'-0"	7'-0"	1 3/4"	F1	ALUMINUM	PREFINISHED	J4			
108	15	D4	HOLLOW METAL	PREFINISHED	3'-0"	7'-0"	1 3/4"	F1	HOLLOW METAL	PAINT	J6			B (90 MIN)
109	1	D5	WOOD	PREFINISHED	4'-0"	7'-0"	1 3/4"	-	-	PAINT	J7			
110	1	D5	WOOD	PREFINISHED	4'-0"	7'-0"	1 3/4"	-	-	PAINT	J7			
111	1	D1	ALUMINUM	PREFINISHED	6'-0"	7'-0"	1 3/4"	F1	ALUMINUM	PREFINISHED	J4			
111	2	D4	WOOD	PREFINISHED	3'-0"	7'-0"	1 3/4"	F2	HOLLOW METAL	PAINT	J1			
112	1	D4	WOOD	PREFINISHED	3'-0"	7'-0"	1 3/4"	F2	HOLLOW METAL	PAINT	J1			
113	1	D3	METAL	PREFINISHED	14'-0"	14'-0"	2"	-	HOLLOW METAL	PREFINISHED	3/6-4			OVERHEAD COILING DOOR
113	2	D3	METAL	PREFINISHED	14'-0"	14'-0"	2"	-	HOLLOW METAL	PREFINISHED	3/6-4			OVERHEAD COILING DOOR
113	3	D3	METAL	PREFINISHED	14'-0"	14'-0"	2"	-	HOLLOW METAL	PREFINISHED	3/6-4			OVERHEAD COILING DOOR
113	4	D3	METAL	PREFINISHED	14'-0"	14'-0"	2"	-	HOLLOW METAL	PREFINISHED	3/6-4			OVERHEAD COILING DOOR
113	5	D2	ALUMINUM	PREFINISHED	3'-0"	7'-0"	1 3/4"	F2	ALUMINUM	PREFINISHED	J5			
113	6	D3	METAL	PREFINISHED	14'-0"	14'-0"	2"	-	HOLLOW METAL	PREFINISHED	3/6-4			OVERHEAD COILING DOOR
113	7	D3	METAL	PREFINISHED	14'-0"	14'-0"	2"	-	HOLLOW METAL	PREFINISHED	3/6-4			OVERHEAD COILING DOOR
114	1	D4	WOOD	PREFINISHED	3'-0"	7'-0"	1 3/4"	F1	HOLLOW METAL	PAINT	J2			
115	1	D4	WOOD	PREFINISHED	3'-0"	7'-0"	1 3/4"	F1	HOLLOW METAL	PAINT	J2			
116	1	D4	WOOD	PREFINISHED	3'-0"	7'-0"	1 3/4"	F1	HOLLOW METAL	PAINT	J2			
117	1	D2	ALUMINUM	PREFINISHED	3'-0"	7'-0"	1 3/4"	F1	ALUMINUM	PREFINISHED	J5			
200	1	D4	WOOD	PREFINISHED	3'-0"	7'-0"	1 3/4"	F1	HOLLOW METAL	PAINT	J6			B (90 MIN)
201	1	D4	WOOD	PREFINISHED	4'-0"	7'-0"	1 3/4"	-	-	PAINT	J7			
202	1	D4	WOOD	PREFINISHED	3'-0"	7'-0"	1 3/4"	F2	HOLLOW METAL	PAINT	J1			
203	1	D4	WOOD	PREFINISHED	3'-0"	7'-0"	1 3/4"	F2	HOLLOW METAL	PAINT	J1			
204	1	D4	WOOD	PREFINISHED	3'-0"	7'-0"	1 3/4"	F2	HOLLOW METAL	PAINT	J1			
205	1	D4	WOOD	PREFINISHED	3'-0"	7'-0"	1 3/4"	F2	HOLLOW METAL	PAINT	J1			
206	1	D4	WOOD	PREFINISHED	3'-0"	7'-0"	1 3/4"	F2	HOLLOW METAL	PAINT	J1			
207	1	D4	WOOD	PREFINISHED	3'-0"	7'-0"	1 3/4"	F2	HOLLOW METAL	PAINT	J1			
208	1	D4	WOOD	PREFINISHED	3'-0"	7'-0"	1 3/4"	-	-	PAINT	J7			

ROOM FINISH SCHEDULE

ROOM NUMBER	ROOM NAME	FLOOR	BASE	NORTH MATERIAL	NORTH FINISH	SOUTH MATERIAL	SOUTH FINISH	EAST MATERIAL	EAST FINISH	WEST MATERIAL	WEST FINISH	CEILING MATERIAL	CEILING FINISH	CEILING HEIGHT	FINISH CLASS	COMMENTS
101	ENTRY TLT	CR-2	CR-2	GYP. BD.	PT2	GYP. BD.	CR-1/PT2	GYP. BD.	CR-1/PT2	GYP BD	CR-1/PT2	GYP BD	PT4	8'-0"		48" HIGH CERAMIC TILE ON "WET" WALLS AND FULL-HEIGHT CERAMIC TILE IN SHOWERS
102	OFFICE	FL1	VB	GYP. BD.	PT1	GYP. BD.	PT1	GYP. BD.	PT1	GYP BD	PT1	ACT	PT4	8'-0"		
103	ELECTRICAL	FL4	VB	GYP. BD.	PT2	GYP. BD.	PT2	GYP. BD.	PT2	GYP BD	PT2	ACT	PT4	8'-0"		
104	MECHANICAL	FL4	VB	GYP. BD.	PT2	GYP. BD.	PT2	GYP. BD.	PT2	GYP BD	PT2	EXPOSED				
105	KITCHEN	FL1	VB	GYP. BD.	PT2	GYP. BD.	PT2	GYP. BD.	PT2	GYP BD	PT2	ACT	PT4	8'-0"		
106	UTILITY	FL4	VB	GYP. BD.	PT2	GYP. BD.	PT2	GYP. BD.	PT2	GYP BD	PT2	GYP BD	PT4	8'-0"		
107	DINING	FL1	VB	GYP. BD.	PT1	GYP. BD.	PT1	GYP. BD.	PT1	GYP BD	PT1	ACT	PT4	8'-0"		
108	DAY ROOM	FL1	VB	GYP. BD.	PT2	GYP. BD.	PT2	GYP. BD.	PT2	GYP BD	PT2	ACT	PT4	8'-0"		
109	CLOSET	FL1	VB	GYP. BD.	PT2	GYP. BD.	PT2	GYP. BD.	PT2	GYP BD	PT2	GYP BD	PT4	8'-0"		
110	CLOSET	FL1	VB	GYP. BD.	PT2	GYP. BD.	PT2	GYP. BD.	PT2	GYP BD	PT2	GYP BD	PT4	8'-0"		
111	CONFERENCE/TRAINING	FL1	VB	GYP. BD.	CR-1/PT2	GYP. BD.	CR-1/PT2	GYP. BD.	CR-1/PT2	GYP BD	PT2	ACT	PT4	8'-0"		
112	CONFERENCE TLT	CR-2	CR-2	GYP. BD.	PT1	GYP. BD.	PT1	GYP. BD.	PT1	GYP BD	PT1	GYP BD	PT4	8'-0"		48" HIGH CERAMIC TILE ON "WET" WALLS AND FULL-HEIGHT CERAMIC TILE IN SHOWERS
113	GARAGE	FL4	VB	CONC. BLK.	PT2	CONC. BLK.	PT2	CONC. BLK	PT2	CONC. BLK	PT2	VINYL	PT4	20'-3"		
114	GEAR	FL4	VB	CONC. BLK.	PT2	CONC. BLK.	PT2	CONC. BLK	PT2	CONC. BLK	PT2	GYP BD	PT4	9'-0"		
115	GEAR EXTRACTOR	FL4	VB	CONC. BLK.	PT2	CONC. BLK.	PT2	CONC. BLK	PT2	CONC. BLK	PT2	GYP BD	PT4	9'-0"		
116	CLEAN/EMS	FL4	VB	CONC. BLK.	PT2	CONC. BLK.	PT2	CONC. BLK	PT2	CONC. BLK	PT2	GYP BD	PT4	9'-0"		
117	GYM	FL4	VB	CONC. BLK.	PT2	CONC. BLK.	PT2	CONC. BLK	PT2	CONC. BLK	PT2	GYP BD	PT4	9'-0"		
200	CORRIDOR	CARPET	VB	GYP. BD.	PT1	GYP. BD.	PT1	GYP. BD.	PT1	GYP BD	PT1	ACT	PT4	8'-0"		
201	CLOSET	CARPET	VB	GYP. BD.	PT1	GYP. BD.	PT1	GYP. BD.	PT1	GYP BD	PT1	GYP BD	PT4	8'-9 5/8"		
202	OFFICER	CARPET	VB	GYP. BD.	PT1	GYP. BD.	PT1	GYP. BD.	PT1	GYP BD	PT1	GYP BD	PT4	8'-9 5/8"		
203	OFFICER BATH	CR-2	CR-2	GYP. BD.	CR-1/PT2	GYP. BD.	PT2	GYP. BD.	CR-1/PT2	GYP BD	CR-1/PT2	GYP BD	PT4	8'-9 5/8"		
204	EMS/AMBULANCE CREW	CARPET	VB	GYP. BD.	PT1	GYP. BD.	PT1	GYP. BD.	PT1	GYP BD	PT1	GYP BD	PT4	8'-9 5/8"		
205	FIRE CREW	CARPET	VB	GYP. BD.	PT1	GYP. BD.	PT1	GYP. BD.	PT1	GYP BD	PT1	GYP BD	PT4	8'-9 5/8"		
206	WOMEN'S BATHROOM	CR-2	CR-2	GYP. BD.	CR-1/PT2	GYP. BD.	CR-1/PT2	GYP. BD.	CR-1/PT2	GYP BD	CR-1/PT2	GYP BD	PT4	8'-9 5/8"		48" HIGH CERAMIC TILE ON "WET" WALLS AND FULL-HEIGHT CERAMIC TILE IN SHOWERS
207	MEN'S BATHROOM	CR-2	CR-2	GYP. BD.	CR-1/PT2	GYP. BD.	CR-1/PT2	GYP. BD.	CR-1/PT2	GYP BD	PT2	GYP BD	PT4	8'-9 5/8"		48" HIGH CERAMIC TILE ON "WET" WALLS AND FULL-HEIGHT CERAMIC TILE IN SHOWERS
208	CLOSET	CARPET	VB	GYP. BD.	PT1	GYP. BD.	PT1	GYP. BD.	PT1	GYP BD	PT1	GYP BD	PT4	8'-9 5/8"		
S-01	STAIR	CARPET	VB	GYP. BD.	PT1	GYP. BD.	PT1			GYP BD	PT1	ACT	PT4	8'-0"		

FINISH LEGEND

KEY	KEYNOTE TEXT
CR-1	AMERICAN OLEAN 4X4 "MATT BISCUIT" 0092 W/LATICRETE "03 SILK" GROUT
CR-2	AMERICAN OLEAN 2X2 "BUFF GRANITE" A52 LATICRETE "03 SILK" GROUT NOTE: USE FLOORING TILE FOR 6" HIGH BASE COVER
FL1	BURKE FLOORING PRODUCT LVT12-702, CONCRETE "RED GIANT" 18X18
FL2	C&A FLOOR COVERING "MOON RAY" 48010, RAYON, POWERBOND RS BACKING
FL3	AMERICAN OLEAN 2X2 GRADE 5 FINISH, "BUFF GRANITE" A52 W/LATICRETE "45 RAVEN" GROUT
FL4	SEALED CONCRETE EUCO DIAMOND HARD CONCRETE SEALER
LAM1	WILSONART 4757-60 "MYSTIQUE MOONLIGHT" (COUNTERTOPS)
LAM2	WILSONART D92-60 "DOVE GRAY" (CABINETS)
MS	COLOR TO BE WHITE WITH BONE
PT1	SHERMAN WILLIAMS SW6105 "DIVINE WHITE" - EGG SHELL FINISH
PT2	COLORWHEEL "OLD WASHER" - EGG SHELL FINISH
PT3	COLORWHEEL CL3257N - 4/L33 "ECLIPSE" - SEMI-GLOSS FINISH (DOOR FRAMES)
VB	MERCER 104 - FUDGE
PT4	FLAT WHITE CEILING PAINT
VINYL	

CR - CERAMIC

FL - FLOORING

LAM - LAMINATE

PT - PAINT

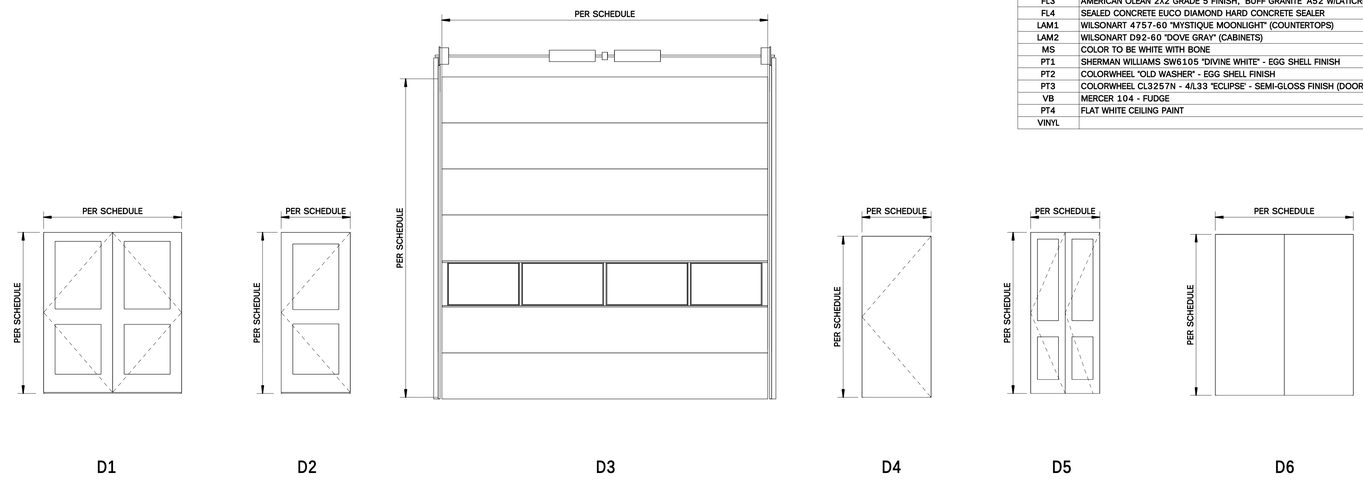
VB - VINYL BASE

MS - MARBLE SILL

ACT - ACOUSTICAL TILE

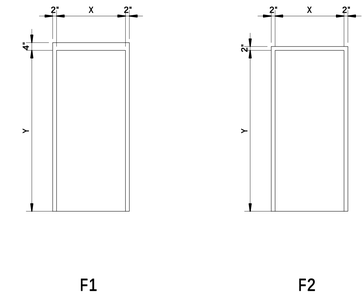
2/7.1 FINISH LEGEND ABBREVIATIONS

SCALE: 1/8" = 1'-0"



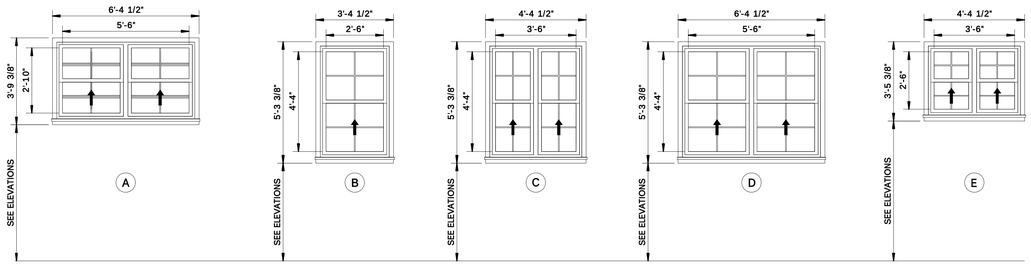
DOOR TYPES

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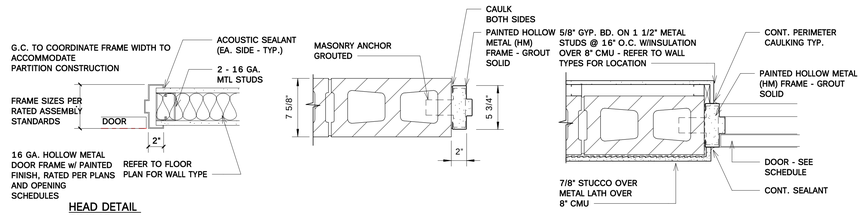
FRAME TYPES

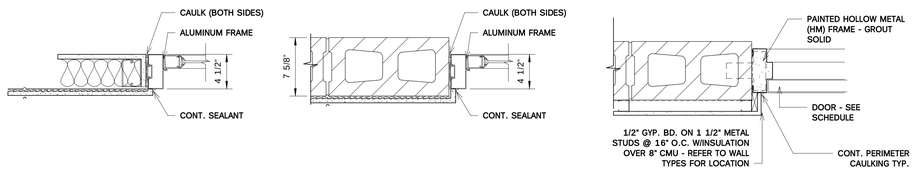
SCALE: 3/8" = 1'-0"



WINDOW TYPES

SCALE: 3/8" = 1'-0"





1/7.1 DOOR JAMB DETAILS

SCALE: 1 1/2" = 1'-0"

DATE	DESCRIPTION	NO.

STATE OF FLORIDA
JOHN P. ADAMS
AR90282
REGISTERED ARCHITECT

John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
Ethan J. Hine, AIA
Jennifer Zaffuto, AIA, NCARB, MPA

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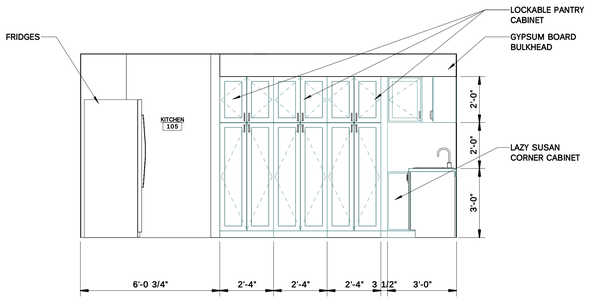
LAKE COUNTY
FIRE STATION NO.39
SCHEDULES

24815 WALLICK ROAD, SORRENTO, FL 32776

JANUARY 31, 2020

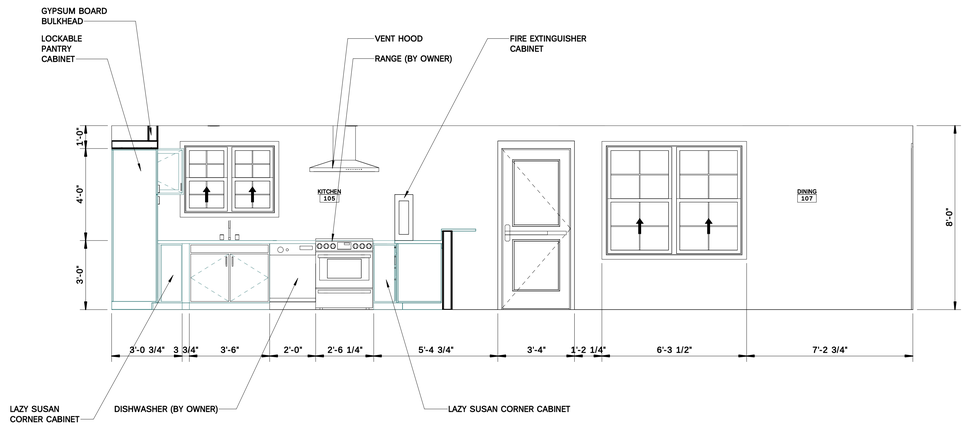
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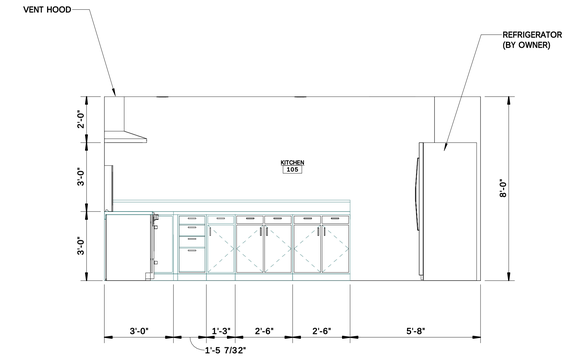
1 8.1 KITCHEN A

SCALE: 3/8" = 1'-0"



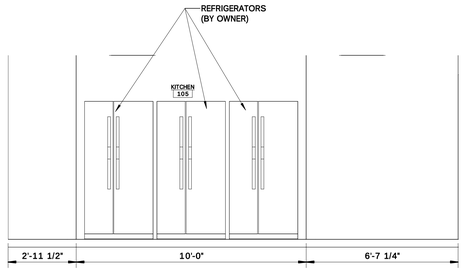
2 8.1 KITCHEN B

SCALE: 3/8" = 1'-0"



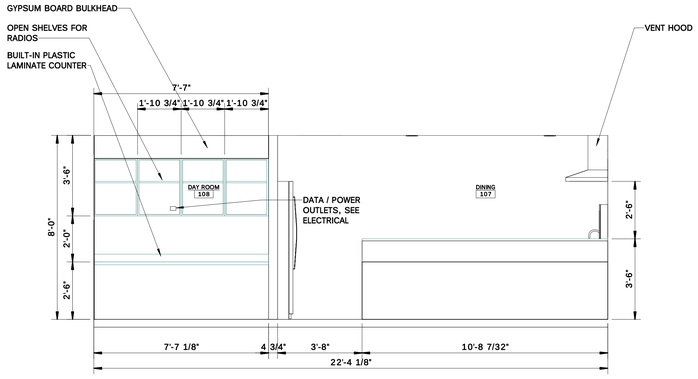
3 8.1 KITCHEN C

SCALE: 3/8" = 1'-0"



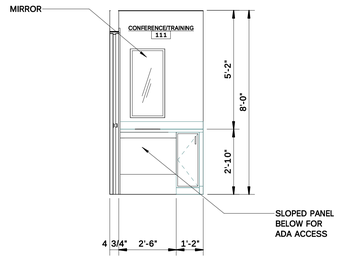
4 8.1 KITCHEN D

SCALE: 3/8" = 1'-0"



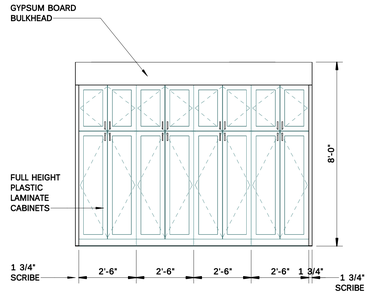
5 8.1 WORK STATION

SCALE: 3/8" = 1'-0"



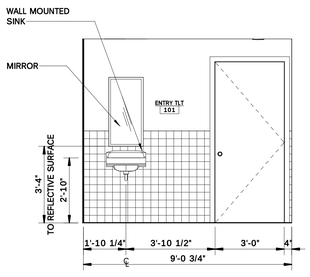
6 8.1 CONFERENCE/TRAINING

SCALE: 3/8" = 1'-0"



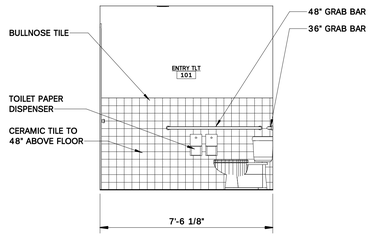
11 8.1 OFFICE

SCALE: 3/8" = 1'-0"



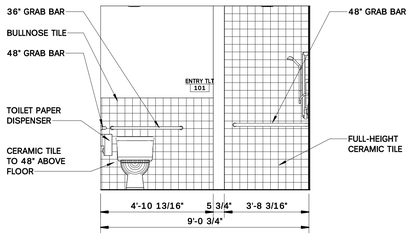
7 8.1 ENTRY TLT A

SCALE: 3/8" = 1'-0"



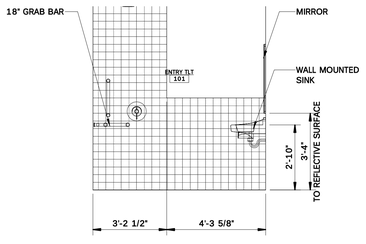
8 8.1 ENTRY TLT B

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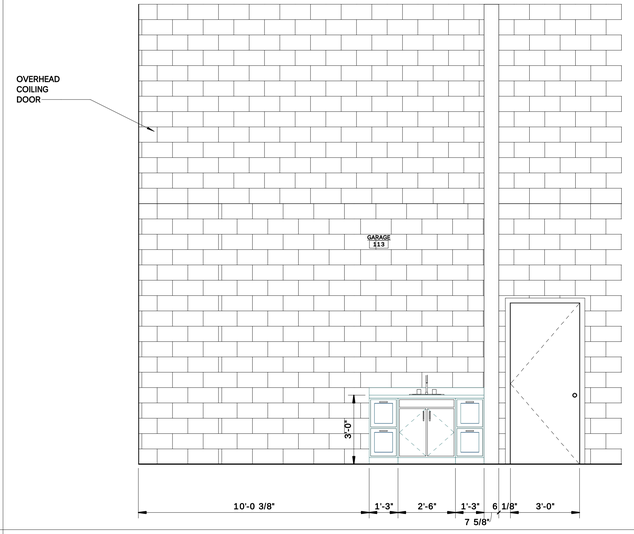
9 8.1 ENTRY TLT C

SCALE: 3/8" = 1'-0"



12 8.1 ENTRY TLT D

SCALE: 3/8" = 1'-0"



10 8.1 GARAGE

SCALE: 3/8" = 1'-0"

NO.	DESCRIPTION	DATE

STATE OF FLORIDA · JOHN P. ADAMS · AR90282 · REGISTERED ARCHITECT

John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
Ethan J. Hine, AIA
Jennifer Zaffuto, AIA, NCARB, MPA

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LAKE COUNTY
FIRE STATION NO.39
INTERIOR ELEVATIONS

24815 WALLICK ROAD, SORRENTO, FL 32776

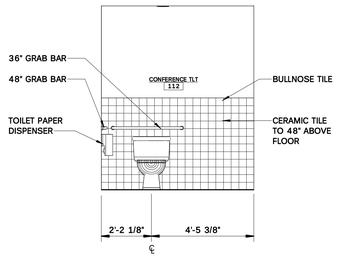
18104A

JANUARY 31, 2020

PRICING SET

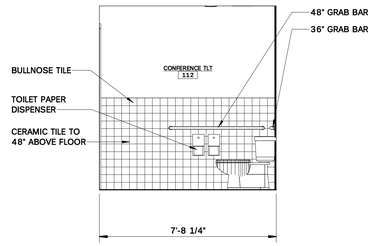
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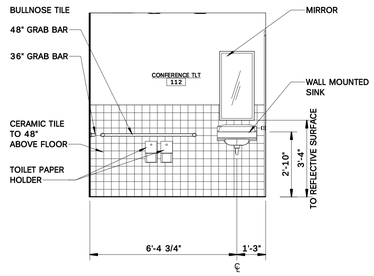
4/8.2 CONFERENCE TLT A

SCALE: 3/8" = 1'-0"



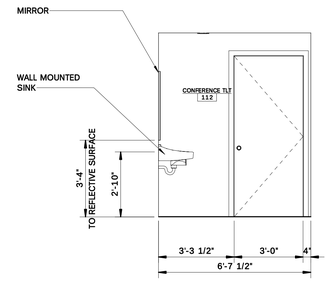
5/8.2 CONFERENCE TLT B

SCALE: 3/8" = 1'-0"



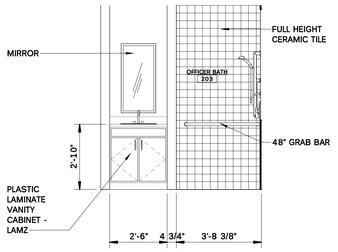
6/8.2 CONFERENCE TLT C

SCALE: 3/8" = 1'-0"



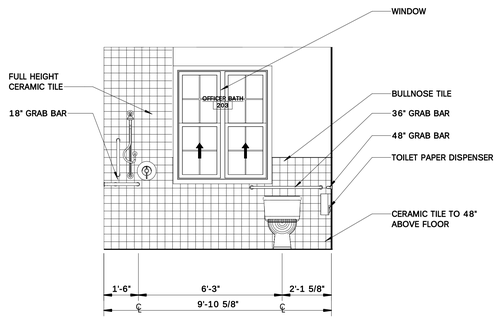
7/8.2 CONFERENCE TLT D

SCALE: 3/8" = 1'-0"



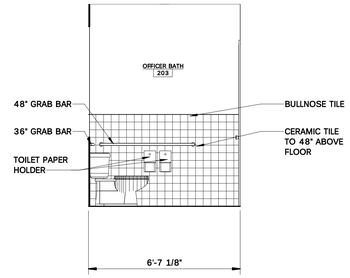
3/8.2 OFFICER BATH A

SCALE: 3/8" = 1'-0"



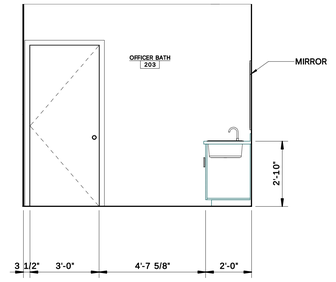
8/8.2 OFFICER BATH B

SCALE: 3/8" = 1'-0"



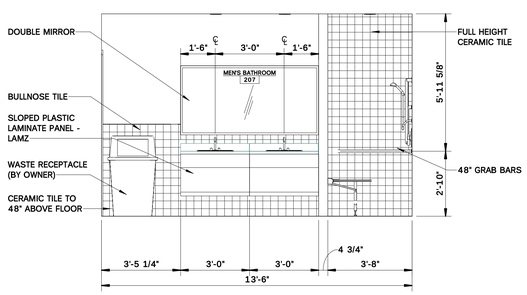
9/8.2 OFFICER BATH C

SCALE: 3/8" = 1'-0"



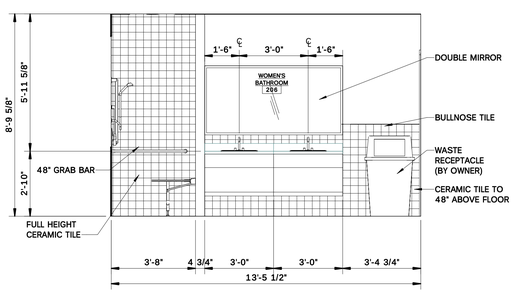
10/8.2 OFFICER BATH D

SCALE: 3/8" = 1'-0"



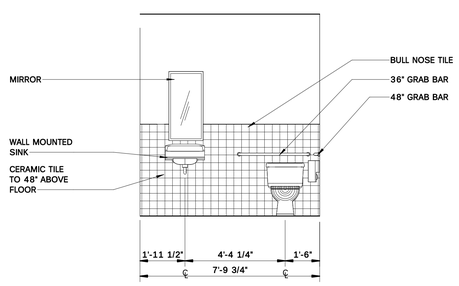
1/8.2 WOMENS BATH

SCALE: 3/8" = 1'-0"



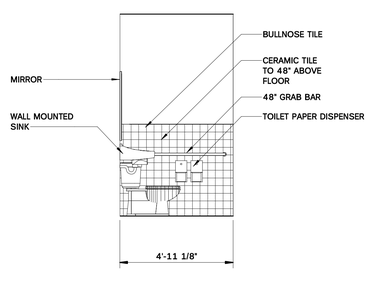
2/8.2 MENS BATH

SCALE: 3/8" = 1'-0"



11/8.2 TLT ROOM STALL A

SCALE: 3/8" = 1'-0"



12/8.2 TLT ROOM STALL B

SCALE: 3/8" = 1'-0"

NO.	DESCRIPTION	DATE

John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
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STATE OF FLORIDA
JOHN P. ADAMS
AR92282
REGISTERED ARCHITECT

PRICING SET

LAKE COUNTY
FIRE STATION NO.39
INTERIOR ELEVATIONS

18104A

24815 WALLICK ROAD, SORRENTO, FL 32776

JANUARY 31, 2020

8.2

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GENERAL STRUCTURAL NOTES

GENERAL NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR AND SHALL VERIFY AND COORDINATE ALL DIMENSIONS AND DETAILS BEFORE PROCEEDING WITH WORK. ANY DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT AND ENGINEERS.
2. DETAILS SHOWN IN ANY SECTION APPLY TO ALL SIMILAR SECTIONS AND CONDITIONS UNLESS NOTED OTHERWISE.
3. CONTRACTOR SHALL FULLY BRACE AND OTHERWISE PROTECT ALL WORK IN PROGRESS UNTIL THE BUILDING IS COMPLETED.
4. ALL STRUCTURAL ITEMS FOR THIS PROJECT HAVE BEEN DESIGNED IN ACCORDANCE WITH APPROPRIATE PROVISIONS OF EACH OF THE FOLLOWING:

   A. THE FLORIDA BUILDING CODE, (SIXTH EDITION) 2017.
   B. ACI STANDARD 318-14 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.
   C. BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530-13/ASCE 5-13/TMS 402-16).
   D. AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" 360-10.
   E. NDS FOR WOOD CONSTRUCTION WITH 2015 NDS SUPPLEMENT.
   F. ASCE 7-10 (WITH ERRATA DATED JANUARY11, 2011) "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES".

5. THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE SPECIFICATIONS AND THE ARCHITECTURAL AND MECHANICAL DRAWINGS. IF THERE IS A DISCREPANCY BETWEEN DRAWINGS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ARCHITECT PRIOR TO PERFORMING WORK. IN CASE OF CONFLICT THE MOST STRINGENT CONDITION SHALL APPLY.
6. ALL DIMENSIONS MUST BE COORDINATED WITH ARCHITECTURAL DRAWINGS AND WITH EQUIPMENT MANUFACTURER (I.E. WINDOW, DOOR, AIR HANDLER, ETC.). CONTRACTOR MUST OBTAIN AN ARCHITECTURAL DIRECTIVE IN CASE OF ANY CONFLICT. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN IN STRUCTURAL DRAWINGS.
7. ROOFTOP EQUIPMENT ANCHORAGE & OUTDOOR RACK MOUNTED EQUIPMENT ANCHORAGE. ALL ROOF TOP EQUIPMENT CURBS, ROOF TOP MECHANICAL EQUIPMENT, EQUIPMENT TIE DOWNS, AND CONNECTIONS OF ALL EQUIPMENT TO OUTDOOR RACKS OR BUILDING STRUCTURE FOR WIND LOADING ARE TO BE DESIGNED AND ENGINEERED BY A REGISTERED SPECIALTY ENGINEER RETAINED BY THE MECHANICAL EQUIPMENT SUPPLIER. SIGNED AND SEALED DRAWINGS AND CALCULATIONS ARE TO BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL. THE EQUIPMENT MANUFACTURER SHALL PROVIDE THE ATTACHMENT OF THE UNIT TO THE STRUCTURE AND SUBMIT TO THE ENGINEER LOADS, LOCATIONS, AND METHODS OF ATTACHMENT. THE STRUCTURAL ENGINEER WILL MAKE PROVISIONS IN THE DESIGN OF THE PRIMARY STRUCTURAL FRAME TO ACCOMMODATE THE LOADS AND ATTACHMENTS SUBMITTED BY THE MANUFACTURER.

CONCRETE AND REINFORCING:

1. ALL CONCRETE WORK SHALL CONFORM TO THE LATEST ACI "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, ACI-318".
2. ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTHS AS INDICATED BELOW:

CONCRETE STRENGTH	MAX WATER CEMENT RATIO	TYPE AGGREGATE	LOCATION USED
4000 PSI	0.45	STONE	ALL CONCRETE, U.N.O.
3000 PSI	0.52	STONE	SLAB ON GRADE/FOUNDATION

3. ALL REINFORCING STEEL SHALL BE INTERMEDIATE GRADE, NEW BILLET STEEL, DEFORMED BARS, CONFORMING TO ASTM A-615, GRADE 60. ALL BARS SHALL BE SECURELY SUPPORTED AND WIRED IN PLACE. PRIOR TO POURING CONCRETE. ALL REINFORCING STEEL TO BE WELDED SHALL CONFORM TO ASTM A-706.
4. ALL WELDED WIRE FABRIC (W.W.F.) IN FLAT SHEETS ONLY AND SHALL CONFORM TO ASTM A-185.
5. UNLESS NOTED, ALL BARS MARKED CONTINUOUS SHALL BE SPLICED AT ALL LAP POINTS AND CORNERS AND DEVELOPED AT NON-CONTINUOUS ENDS AS PER TYPICAL DETAILS. SPLICE CONTINUOUS TOP BARS AT CENTER BETWEEN SUPPORTS AND SPLICE CONTINUOUS BOTTOM BARS AT SUPPORTS.
6. CONCRETE COVER FOR REINFORCING BARS SHOWN IN TYPICAL DETAILS.
7. UNLESS NOTED, TEMPERATURE REINFORCING (ASTM A-615-60) TO BE 0.0018 X CONCRETE AREA.
8. PROVIDE #4 @ 12" O.C., WITH STANDARD HOOK, TOP BARS IN ALL SLABS AT DISCONTINUOUS ENDS UNLESS OTHERWISE NOTED ON PLANS. LENGTH OF BARS 1/4 OF SPAN, MINIMUM 2'-0", UNLESS OTHERWISE NOTED PROVIDE #4 @ 12" O.C IN ALL CANTILEVERS. BAR LENGTH SHALL BE CANTILEVER SPAN PLUS 10'-0" PLUS STANDARD HOOK AT CANTILEVER ENDS.
9. WHERE PIPE SLEEVES (UP TO 2" IN DIAMETER) PASS THROUGH CONCRETE BEAMS, PROVIDE ADDITIONAL STIRRUP EACH SIDE OF SLEEVE. SLEEVES FOR PIPES 2" IN DIAMETER OR LARGER MUST BE STEEL OR CAST IRON, AND THE LOCATION MUST BE APPROVED BY THE STRUCTURAL ENGINEER.
10. ALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED JUST BEFORE PLACING NEW CONCRETE IN ACCORDANCE WITH THE BUILDING CODE.
11. FOR CHAMFER OF EXPOSED CORNERS OF BEAMS AND/OR COLUMNS, SEE ARCHITECTURAL DRAWINGS.
12. CONTRACTOR SHALL COORDINATE PLACEMENT OF, OR BOX OUT FOR, ALL PIPE SLEEVES, OPENINGS, ETC. REQUIRED FOR VARIOUS TRADES.
13. CONTRACTOR SHALL COORDINATE AND NOTIFY OTHER TRADES IN SUFFICIENT TIME TO ALLOW THEM TO SET ANCHORS, INSERTS, BOLTS, HANGERS, ETC., AS REQUIRED FOR THEIR USE.
14. SEE ARCHITECTURAL DRAWINGS FOR DETAILS OF FLASHING REGLETS, FASCIA DETAILS, ETC.
15. UNDER NO CIRCUMSTANCES SHALL CONCRETE BE PUMPED THROUGH ALUMINUM PIPES. CONCRETE SHALL NOT BE PLACED IN CONTACT WITH ALUMINUM, ALUMINUM MIXING DRUMS, TRUCK MIXERS, BUGGIES, CHUTES, CONVEYORS, TREMIE PIPES, AND OTHER EQUIPMENT MADE OF ALUMINUM SHALL NOT BE USED ON THIS PROJECT.
16. SLUMPS OF OVER 4 INCHES WILL NOT BE PERMITTED UNLESS THE HRWR ADMIXTURE (SUPER PLASTICIZER) IS USED. MAXIMUM SLUMP IS THEN 8 INCHES UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
17. NO ADMIXTURE SHALL BE USED IN CONCRETE EXCEPT WITH THE PERMISSION OF THE ENGINEERS AND AFTER LABORATORY DESIGN MIX APPROVAL. ALL ADMIXTURES SHALL CONTAIN NO MORE CHLORIDE IONS THAN ARE PRESENT IN MUNICIPAL DRINKING WATER.
18. WATER REDUCING ADMIXTURE SHALL CONFORM TO THE ASTM C-494, TYPE A, AND SHALL BE USED IN ALL CONCRETE.
19. AIR ENTRAINING ADMIXTURE SHALL CONFORM TO ASTM C260. AIR CONTENT OF CONCRETE SHALL BE USED AS FOLLOWS:

    A. FOR CONCRETE EXPOSED TO SOIL AND/OR WEATHER, 5%.
    B. FOR INTERIOR WALLS, COLUMNS, AND SLABS, 3%.

20. FLY ASH - ASTMC618, TYPE C OR TYPE F SHOULD BE USED BUT NOT TO EXCEED 20% CEMENTITIOUS CONTENT.
21. ALL EXPOSED CONCRETE SLABS SHALL RECEIVE A CURING COMPOUND. THE CURING COMPOUND SHALL CONFORM TO ASTM C309 AND SHALL HAVE 30% SOLIDS MINIMUM. WATER/BLANKET CURING AS PER ACI RECOMMENDATION MAY BE USED AS ALTERNATE.

FOUNDATION NOTES:

1. SITE SOIL FOR THIS PROJECT HAS BEEN INVESTIGATED BY THE FIRM OF ARDAMAN & ASSOCIATES, INC. #19-6445 AND FOUND, AS PRESENTED IN THEIR REPORT DATED 10/24/19, SUITABLE TO SUPPORT 2000 PSF SPREAD FOOTINGS. FOUNDATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE ABOVE STATED CRITERIA.
2. FILL AND SUBGRADE PREPARATION SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER RECOMMENDATION AS CONTAINED IN THEIR REPORT STATED IN ITEM 1.
3. ALL COLUMN FOOTINGS SHALL BE CENTERED UNDER COLUMN CENTERLINES UNLESS OTHERWISE NOTED.
4. BACKFILLING AGAINST FOUNDATION WALLS SHALL BE DONE CAREFULLY WITH SMALL COMPACTION EQUIPMENT, AFTER SLABS ON GROUND ARE IN PLACE AND CONCRETE HAS SET. NO TRUCKS, BULLDOZERS, ETC. SHALL BE ALLOWED CLOSER THAN 6'-0" TO ANY FOUNDATION WALL. ANY WALL 3'-0" OR HIGHER MUST BE BRACED DURING THE CONSTRUCTION PROCESS.
5. NO FOUNDATIONS SHALL BE PLACED ABOVE 1 VERTICAL ON 2 HORIZONTAL SLOPES EXTENDED FROM THE CLOSEST EDGE OF ANY UNDISTURBED SOIL OR OTHER FOUNDATION STRUCTURE. BOTTOM OF FOOTINGS SHALL NOT BE LESS THAN 1'-0" BELOW EXISTING GRADE (U.N.O.).
6. FOR FOUNDATIONS SIZE AND REINFORCING SEE SCHEDULE.
7. CONTRACTOR SHALL TREAT SOIL BENEATH BUILDING FOR TERMITES.

MASONRY:

1. DESIGN AND CONSTRUCTION SHALL CONFORM TO BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530-13 / ASCE 5-13) / TMS 402-16 AND SPECIFICATIONS FOR MASONRY STRUCTURES ACI 530.1-13 / ASCE 6-13 (WITH ERRATA DATED JANUARY 10, 2011 / TMS 602-16).
2. MINIMUM NET COMPRESSIVE STRENGTH OF BLOCK ASSEMBLY SHALL BE 2000 P.S.I. (fm) MORTAR FOR MASONRY SHALL BE TYPE "S" OR "M".
3. FOR ALL EXTERIOR AND INTERIOR BEARING, BED JOINTS ARE TO COVER 100% OF THE MASONRY SURFACES AND ALL HEAD JOINTS ARE TO COVER 100% OF THE PROJECTED AREA OF THE FACE SHELLS.
4. FILL ALL CELLS AS REQUIRED WITH 3000 P.S.I. GROUT, SLUMP SHALL BE 8 TO 11 INCHES. SUBMIT DESIGN MIX FOR APPROVAL.
5. MINIMUM HORIZONTAL JOINT REINFORCING SHALL BE 9 GAGE HOT DIP GALVANIZED TRUSS OR LADDER TYPE JOINT REINFORCING AT 16" O.C., PROVIDE MANUFACTURE "T" AND "L" SHAPES FOR INTERSECTIONS AND CORNERS, (MINIMUM LAP 8").
6. MINIMUM VERTICAL REINFORCING SHALL BE (1)-#5 @ 48" OR (1)-#4 @ 32" O.C., (U.N.O.).
7. PROVIDE ADDITIONAL VERTICAL REINFORCING BAR AT EVERY CORNER, INTERSECTION, CONTROL JOINT, AND OPENING EDGES (U.N.O.).
8. MINIMUM SPLICE FOR VERTICAL REINFORCING IS SHOWN IN DETAIL 4-023, SPLICE FOR HORIZONTAL JOINT REINFORCING = 12".
9. WALLS ARE DESIGNED TO BE BRACED BY FLOOR OR ROOF MEMBERS, CONTRACTOR SHALL PROVIDE TEMPORARY BRACING DURING CONSTRUCTION.
10. ALL CELLS BELOW FIRST FLOOR FINISHED ELEVATION MUST BE FULLY GROUT FILLED.
11. ALL KNOCK OUT BLOCK HORIZONTAL BARS SHALL HAVE CORNER BARS AT ALL CORNERS AND WALL INTERSECTIONS. SIZE AND NUMBER OF CORNER BARS SHALL BE SAME AS HORIZONTAL BARS.
12. ALL INTERSECTING WALLS AND CORNER WALLS SHALL BE LAID IN AN OVERLAPPING MASONRY BONDING PATTERN, WITH ALTERNATE UNITS HAVING A BEARING OF NOT LESS THAN 3 INCHES ON UNIT BELOW.

WOOD FRAMING NOTES:

1. ALL WOOD FRAMING SHALL BE IN COMPLIANCE WITH THE LATEST NDS EDITION FOR WOOD CONSTRUCTION. DIMENSIONED LUMBER SHALL BE DRESSED S4S, AND SHALL BEAR THE GRADE STAMP OF THE MANUFACTURER'S ASSOCIATION.
2. ALL LUMBER SHALL BE SOUND, SEASONED, AND FREE FROM WRAP.
3. ALL FRAMING LUMBER SHALL BE SOUTHERN YELLOW PINE #2 OR BETTER.
4. INTERIOR NON-LOAD BEARING WALLS SHALL BE UTILITY GRADE OR BETTER.
5. MINIMUM OF 3-PLY STUD COLUMNS TO BE INSTALLED AT BEAM OR GIRDER TRUSS BEARING LOCATIONS UNLESS NOTED OTHERWISE.
6. INSTALL BLOCKING IN ALL WALL STUDS OVER 8'-0" AT MID-HEIGHT, AND SHEATHING JOINT. BRACE GABLE END AT 4'-0" O.C. AS SHOWN IN THE DRAWINGS.
7. ALL LUMBER IN CONTACT WITH MASONRY OR CONCRETE SHALL BE PRESSURE TREATED OR OF NATURAL DURABLE WOOD.
8. PRESSURE TREATED LUMBER SHALL BE IMPREGNATED WITH AN APPROVED TREATMENT IN ACCORDANCE WITH F.S. 11-W-571 AND BARE THE AMERICAN WOOD PRESERVES INSTITUTE EQUALITY MARK LP-2.
9. SHEATHING SHALL BE APA EXTERIOR GRADE RATED, AND INSTALLED WITH PLY-CLIPS AT 24" O.C. SEE NAILING SCHEDULE FOR SHEATHING CONNECTION.
10. FLOOR SHEATHING SHALL BE A MINIMUM OF 5/8" TONGUE AND GROOVE TYPE SUPPORTED AT 24" O.C. MAX. UNLESS NOTED OTHERWISE IN PLAN.
11. ALL NAILING AND BOLTING SHALL COMPLY WITH AMERICAN INSTITUTE OF TIMBER CONSTRUCTION REQUIREMENTS. ALL NAILS EXPOSED TO THE EXTERIOR SHALL BE GALVANIZED.
12. ALL CONNECTION HARDWARE SHALL BE GALVANIZED AND SUPPLIED BY SIMPSON STRONG TIE OR APPROVED EQUAL. SUBMIT CUT SHEETS FOR ALL CONNECTION HARDWARE TO ENGINEER FOR APPROVAL. ALL NAIL HOLES SHALL BE FILLED OR AS REQUIRED BY THE MANUFACTURER TO ACHIEVE LOAD CAPACITY.
13. BRACING: TEMPORARY BRACING OF THE ROOF SYSTEM SHALL BE INSTALLED PER BCSI-13 RECOMMENDATIONS AND SHALL BE UTILIZED AS THE PERMANENT BRACING FOR THE ROOF SYSTEM, UNLESS NOTED OTHERWISE.
14. ALL WOOD FRAMING SHALL BE IN COMPLIANCE WITH THE LATEST NDS EDITION FOR WOOD CONSTRUCTION.

DELEGATED DESIGN

1. SELECT SCOPE ITEMS IN THE PROJECT ARE CUSTOM DESIGNED AND ENGINEERED. THE ENGINEERING RESPONSIBILITY IS DELEGATED TO THE CONTRACTOR AND RELATED SUBCONTRACTORS.
2. CONTRACTOR SHALL SUBMIT SIGNED AND SEALED SHOP DRAWINGS FOR SUCH ELEMENTS DESIGNATED TO BE DESIGNED BY A DELEGATED ENGINEER.
3. DELEGATED ENGINEERING WILL ADDRESS ALL LOADING REQUIREMENTS INCLUDING WIND PRESSURES IN ACCORDANCE WITH THE LATEST FLORIDA BUILDING CODE. REFER TO THE COMPONENTS AND CLADDING PRESSURES PROVIDED FOR DESIGN PRESSURES ELEMENTS SHALL BE IN CONFORMANCE WITH.
4. DELEGATED ENGINEERED DRAWINGS SHALL DEFINE MATERIAL THICKNESS, SIZING, CONNECTIONS, ETC. OF THE SUBMITTED SYSTEM.
5. DELEGATED ENGINEERED DRAWINGS WILL BE REVIEWED AS PART OF THE SUBMITTAL PROCESS.
6. BUILDING COMPONENTS THAT ARE NOT SPECIFIED AS DELEGATED TO OTHER ENGINEERS SHALL BE SUBMITTED WITH APPROPRIATE FLORIDA PRODUCT APPROVAL INFORMATION IN THE SUBMITTAL. WHERE A FLORIDA PRODUCT APPROVAL DOES NOT EXIST FOR A COMPONENT REQUIRING APPROVAL, THE DESIGN SHALL BE DELEGATED TO AN ENGINEER ON THE CONTRACTOR'S TEAM.

PRE-ENGINEERED WOOD PRODUCTS:

1. ALL PRE-ENGINEERED WOOD PRODUCTS SHALL BE VERIFIED BY TRUSS MANUFACTURER. TRUSS MANUFACTURER SHALL HAVE THE AUTHORITY TO MAKE SUBSTITUTIONS FOR PRODUCTS SPECIFIED ON THE PLANS DUE TO AVAILABILITY OR ECONOMICS. CHANGES SPECIFIED BY THE TRUSS MANUFACTURER SHALL CONTROL. CHANGES MADE AFTER TRUSS ENGINEERING HAS BEEN PROVIDED TO ENGINEER OF RECORD, MUST BE APPROVED BY THE ENGINEER OF RECORD.
2. FRAMING PLAN IS DIAGRAMMATIC IN NATURE AND IS PROVIDED FOR ILLUSTRATION PURPOSES ONLY. TRUSS MANUFACTURER TO PROVIDE SEPARATE LAYOUT AND TRUSS COMPONENT DESIGN SIGNED AND SEALED BY A FLORIDA REGISTERED PROFESSIONAL ENGINEER.
3. ALL PRE-ENGINEERED WOOD PRODUCTS ARE THE RESPONSIBILITY OF THE TRUSS MANUFACTURER. THE TRUSS ENGINEER IS A DELEGATED ENGINEER FOR THIS PROJECT, AND AS SUCH, IS RESPONSIBLE FOR THE VALIDITY OF THE COMPONENTS PROVIDED. FRAMING LAYOUTS SHOWN MAY BE CHANGED BY THE TRUSS MANUFACTURER. THE DELEGATE ENGINEER IS RESPONSIBLE FOR PROVIDING A FINAL SEALED SET OF ALL CALCULATIONS AND LAYOUTS FOR THIS PROJECT TO THE ENGINEER OF RECORD FOR REVIEW PRIOR TO MANUFACTURE OF SAID COMPONENTS. ENGINEER OF RECORD HAS NOT REVIEWED THE PRE-ENGINEERED TRUSS MANUFACTURER'S COMPONENTS AT THIS TIME AND RESERVES THE RIGHT TO MAKE ANY CHANGES AFTER SUCH INFORMATION HAS BEEN PROVIDED FOR REVIEW. CONTRACTOR, AS PROJECT COORDINATOR, SHALL BE RESPONSIBLE FOR INSURING INFORMATION REQUESTED ABOVE HAS BEEN SUBMITTED TO ENGINEER OF RECORD IN A TIMELY MANNER WHEN AVAILABLE.
4. ALL PRE-ENGINEERED TRUSSES TO BE DESIGNED USING THE MOST RECENT TPI CRITERIA. TRUSSES TO BE HANDLED AND INSTALLED USING MOST RECENT HIB RECOMMENDATIONS. TEMPORARY AND PERMANENT BRACING SHALL BE IN ACCORDANCE WITH BCSI-13 RECOMMENDATIONS UNLESS NOTED OTHERWISE, OR MORE STRINGENT CODE REQUIREMENTS APPLY. TRUSS ENGINEER IS RESPONSIBLE FOR INDICATING ALL TRUSS TO TRUSS CONNECTORS, ALL COMPONENTS TO BE DESIGNED FOR BOTH GRAVITY AND UPLIFT LOAD CASES, INCLUDING BEAM COMPONENTS.
5. UPON REVIEW, ENGINEER OF RECORD WILL PROVIDE A REVIEW LETTER INDICATING ANY CHANGE IN STRAPPING OR SUPPORT BASED ON THAT REVIEW. CONSTRUCTION COMMENCING PRIOR TO ENGINEER'S REVIEW IS SUBJECT TO MODIFICATION BASED ON REVIEW LETTER.

POST-INSTALLED ANCHORS

1. POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS. SPECIAL INSPECTIONS (ARE/ ARE NOT) REQUIRED PER THE PROVISIONS SET FORTH BELOW. CONTRACTOR TO CONTACT MANUFACTURER'S REPRESENTATIVE FOR PROPER PRODUCT INSTALLATION TRAINING ON INITIAL ANCHORS.
2. SUBSTITUTION REQUESTS, FOR PRODUCTS OTHER THAN THOSE SPECIFIED BELOW, SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER-OF-RECORD ALONG WITH CALCULATIONS THAT ARE PREPARED & SEALED BY A REGISTERED PROFESSIONAL ENGINEER. THE CALCULATIONS SHALL DEMONSTRATE THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERTINENT EQUIVALENT PERFORMANCE VALUES (MINIMUM) OF THE SPECIFIED PRODUCT USING THE APPROPRIATE DESIGN PROCEDURE AND/OR STANDARD(S) AS REQUIRED BY THE BUILDING CODE.
3. EXPANSION ANCHORS SHALL BE STUD TYPE WITH A SINGLE PIECE OF THREE SECTION WEDGE AND ZINC PLATED IN ACCORDANCE WITH ASTM B633. THE ANCHORS SHALL MEET FEDERAL SPECIFICATION FF-S-325, GROUP II, TYPE 4, CLASS I FOR CONCRETE EXPANSION ANCHORS. ANCHORS SHALL BE HILTI KWIK BOLT 3 AS SUPPLIED BY HILTI INC. TULSA OKLAHOMA. ANCHORS SHALL BE INSTALLED IN HOLES DRILLED WITH HILTI CARBIDE TIPPED DRILL BITS OR MATCHED TOLERANCE DIAMOND CORE BITS. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURE'S RECOMMENDATIONS.
4. INJECTED ADHESIVE ANCHORS SHALL BE USED FOR INSTALLATION OF THREADED RODS. ADHESIVE SHALL BE FURNISHED IN A SIDE BY SIDE REFILL PACK WHICH KEEP COMPONENT A AND B SEPARATE. INJECTION ADHESIVE SHALL BE HILTI HIT HY 200 AS SUPPLIED BY HILTI INC. TULSA OKLAHOMA. ANCHOR RODS MEET ASTM F1554 (36 KSI). NUTS AND WASHERS SHALL BE FURNISHED TO MEET THE REQUIREMENTS OF AN ASTM F1554 (36 KSI) STEEL ROD.

SHOP DRAWINGS:

1. NO STRUCTURAL DRAWINGS SHALL BE REPRODUCED FOR USE AS SHOP DRAWINGS.
2. ALL DIMENSIONAL COORDINATION SHALL BE DONE BY THE CONTRACTOR AND/OR HIS DETAILER.
3. DETAILER SHALL CHECK ALL ARCHITECTURAL AND MECHANICAL DRAWINGS FOR ALL ATTACHMENTS, CLIPS, OPENINGS, OR DUCT WORK AFFECTING STRUCTURAL MEMBERS. ALL ITEMS SHALL BE SHOWN ON SHOP DRAWINGS.
4. ALL SHOP DRAWINGS SHALL BE SUBMITTED ELECTRONICALLY IN PDF FORMAT. DISTRIBUTION AS PER ARCHITECT INSTRUCTIONS.
5. PROVIDE SUFFICIENT SPACE ON SHOP DRAWINGS NEAR TITLE BOX (ABOUT 40 SQUARE INCHES) FOR STAMPS AND ENGINEERS COMMENTS.
6. THE SHOP DRAWINGS SHALL BEAR INITALS OF DETAILER'S CHECKER AND CONTRACTOR PRIOR TO SUBMISSION.
7. COMPLETED ERECTION PLANS SHALL BE SUBMITTED PRIOR TO OR IN CONJUNCTION WITH DETAIL DRAWINGS. BUT IN NO CASE SHALL DETAIL DRAWINGS BE SUBMITTED PRIOR TO ERECTION PLANS.
8. DETAILER SHALL SUBMIT AN INDEX OF THE DETAIL DRAWINGS WITH EACH SHOP DRAWING SUBMITTAL.
9. SHOP DRAWINGS NOT COMPLYING WITH ALL THE ABOVE ITEMS SHALL BE RETURNED FOR CORRECTIONS WITHOUT PROCESSING.
10. RESUBMITTED SHOP DRAWINGS SHALL HAVE THE FOLLOWING CHANGES INCORPORATED: FIRST RESUBMISSION TO HAVE LETTER "A" ADDED TO DRAWING

    A. NUMBER AND ANY CHANGES MARKED ON THE DRAWING MARKED 1 AT EACH ITEM CHANGED. ALL ITEMS TO BE NOTED IN REVISION BOX.
    B. SUBSEQUENT RESUBMISSION SHALL BEAR CHANGES "B" AND 2 AND 3 ETC. AS IN 11A.

11. CONTRACTOR SHALL HAVE SHOP DRAWINGS WHICH HAVE BEEN SATISFACTORILY REVIEWED BY THE ARCHITECT AND/OR ENGINEER AND CONFIRMED BY THE CONTRACTOR BEFORE PROCEEDING WITH ANY WORK.
12. DETAILER SHALL USE THE SAME STRUCTURAL ELEMENTS NUMBERS IN HIS DETAILS AS THOSE SHOWN ON CONTRACT DRAWINGS.
13. SHOP DRAWINGS FOR ALL STRUCTURAL ELEMENTS SHOULD BE SUBMITTED TO MCE WITH A MINIMUM TIME TO BE REVIEWED OF 10 WORKING DAYS. IN CASE OF A LARGE SUBMITTAL OR MORE THAN ONE SUBMITTAL FOR THE SAME PROJECT, AN ADDITIONAL WORKING DAY IS REQUIRED FOR EVERY 5 DRAWINGS/SHEETS OVER 30 DRAWINGS/SHEETS. THE TIME INDICATED ABOVE IS FOR MCE REVIEW ONLY. CONTRACTOR MUST INCLUDE ENOUGH TIME FOR DELIVERY, ARCHITECTURAL REVIEW, AND OWNERS REVIEW AND WORK THIS TIME IN THE PROJECT SCHEDULE AS NEEDED.
14. THERE SHALL BE NO DEVIATION FROM THESE CONSTRUCTION DOCUMENTS. IF ANY CHANGES ARE PROPOSED BY THE CONTRACTOR OR THE PROVIDER OF THE SHOP DRAWINGS, THEY SHOULD BE CLEARLY INDICATED, SIGNED, AND SEALED DRAWINGS AND CALCULATIONS BY A FLORIDA PROFESSIONAL ENGINEER MUST BE PROVIDED. ANY CHANGES WITHOUT PROPER DOCUMENTATION INDICATED ABOVE WILL RESULT IN SOME REVISIONS BY THE ENGINEER OF RECORD AND/OR ARCHITECT. THE COST FOR THESE REVISIONS INCLUDING ENGINEER AND ARCHITECTURAL FEES SHALL BE PAID BY THE CONTRACTOR.

Sheet List	
Sheet Number	Sheet Name
S1.1	GENERAL STRUCTURAL NOTES
S1.2	WIND DESIGN DATA AND LOAD SCHEDULE
S2.1	FOUNDATION PLAN
S2.2	SLAB ON GRADE PLAN
S2.3	2ND FLOOR & LOW ROOF FRAMING PLAN
S2.4	HIGH ROOF FRAMING PLAN
S3.1	TYPICAL DETAILS
S3.2	TYPICAL DETAILS
S4.1	SECTIONS AND DETAILS
S4.2	SECTIONS AND DETAILS
S4.3	SECTIONS AND DETAILS
S4.4	SECTIONS AND DETAILS
S5.1	WALL ELEVATIONS
S7.1	SCHEDULES
S8.1	ISOMETRIC VIEWS

TO THE BEST OF OUR KNOWLEDGE INFORMATION AND BELIEF, THESE STRUCTURAL PLANS CONFORM TO AND SATISFY, THE FLORIDA BUILDING CODE, SIXTH EDITION 2017, ACI 318-14 AND LOCAL CODES AS APPLICABLE

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CA: 8426 PROJ NO. 1136-001

NO.	DESCRIPTION	DATE

ROBERT L. BELL, P.E.
FL. LIC. No. 74081

John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
Ethan J. Hine, AIA
Jennifer Zaffuto, AIA, NCARB, MPA

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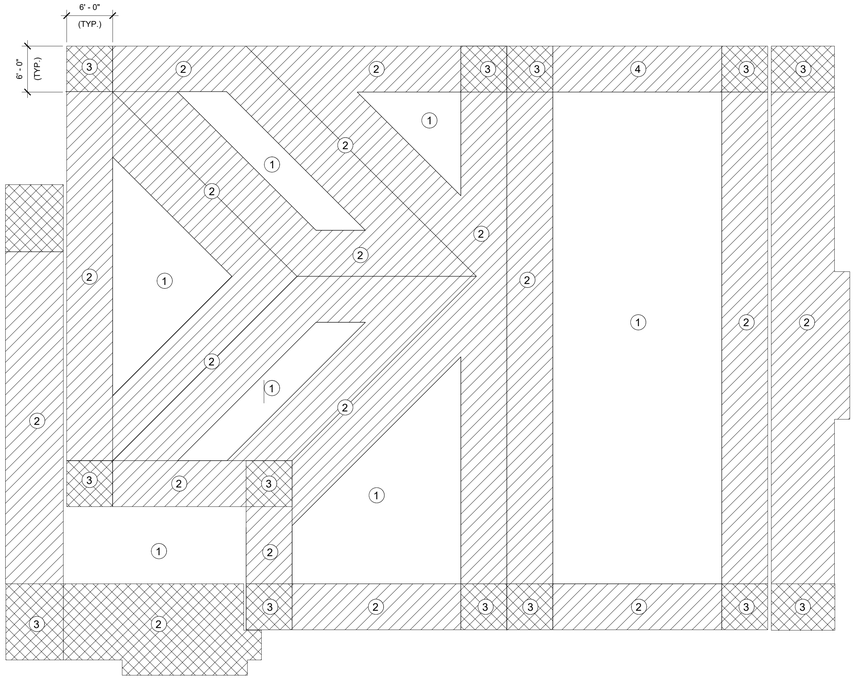
NEW LAKE COUNTY FIRE STATION NO. 39
LAKE COUNTY, FLORIDA
GENERAL STRUCTURAL NOTES
Address

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S1.1

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1 S1.2 ROOF - WIND ZONE PLAN
SCALE: 1/8" = 1'-0"

PROJECT NORTH

LOAD SCHEDULE:

ROOF:

DEAD LOAD		
ROOFING AND INSULATION	=	8 PSF
PLYWOOD SHEATHING	=	3 PSF
PRE-FAB WOOD TRUSSES	=	7 PSF
M/E/P	=	8 PSF
CEILING/MISC.	=	4 PSF
		30 PSF
LIVE LOAD	=	20 PSF

WIND DESIGN DATA:

CODE:
ASCE 7-10 FLORIDA BUILDING CODE, (SIXTH EDITION) 2017.

BASIC WIND SPEED	148 mph (Vult) 115 mph (Vasd)
CATEGORY (RISK)	IV
EXPOSURE	C
BUILDING HEIGHT	21 ft.
ENCLOSURE CLASSIFICATION	± 0.18

* GLAZED OPENINGS IN RISK CATEGORY II, III, IV LOCATED IN HURRICANE PRONE REGIONS SHALL BE PROTECTED IN ACCORDANCE WITH FBC 2017 SEC. 1609.1.2

COMPONENTS AND CLADDING (ULTIMATE) UPLIFT PRESSURE SCHEDULE

PATTERN	ZONE	MAIN ROOF EFFECTIVE WIND AREA				
		10 SQ. FT.	20 SQ. FT.	50 SQ. FT.	100 SQ. FT.	500 SQ. FT.
	1	-47 PSF	-47 PSF	-45 PSF	-42 PSF	-42 PSF
	2	-81 PSF	-75 PSF	-66 PSF	-60 PSF	-60 PSF
	3	-120 PSF	-114 PSF	-103 PSF	-94 PSF	-94 PSF
	2' ov	-103 PSF	-103 PSF	-103 PSF	-103 PSF	-103 PSF
	3' ov	-168 PSF	-155 PSF	-133 PSF	-116 PSF	-116 PSF

COMPONENTS AND CLADDING
DESIGN WIND PRESSURE (ULTIMATE) FOR WALLS, DOORS & WINDOWS

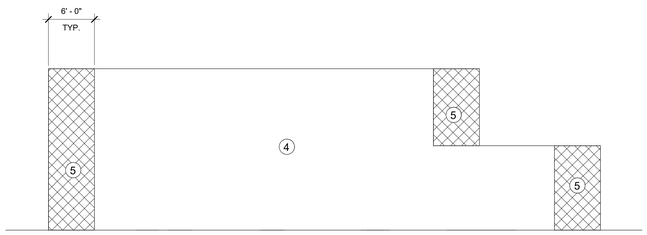
PATTERN	ZONE	EFFECTIVE WIND AREA				
		10 SQ. FT.	20 SQ. FT.	50 SQ. FT.	100 SQ. FT.	500 SQ. FT.
	4	+51 PSF/-55 PSF	+49 PSF/-53 PSF	+47 PSF/-51 PSF	+42 PSF/-47 PSF	+38 PSF/-42 PSF
	5	+51 PSF/-68 PSF	+49 PSF/-64 PSF	+47 PSF/-60 PSF	+42 PSF/-55 PSF	+38 PSF/-42 PSF

NOTE:

1. ALL EXTERIOR DOORS & WINDOW ASSEMBLIES SHALL SATISFY THE REQUIREMENTS OF THE FLORIDA BUILDING CODE (SIXTH EDITION 2017, SECTION 1709.5). ALL CONNECTIONS TO BUILDING STRUCTURE SHALL HAVE THE CAPACITY TO WITHSTAND THE PRESSURES INDICATED IN THIS SCHEDULE.
2. PLUS AND MINUS SIGNS SIGNIFY PRESSURES ACTING TOWARD AND AWAY FROM THE SURFACES, RESPECTIVELY.
3. ALL WIND PRESSURE VALUES INDICATED ARE IN POUNDS PER SQUARE FOOT (PSF). MULTIPLY ULTIMATE WIND PRESSURE BY 0.60 FOR ASD PRESSURE.



SOUTH - WIND ZONE ELEVATION
SCALE: 1/8" = 1'-0"



NORTH - WIND ZONE ELEVATION
SCALE: 1/8" = 1'-0"



EAST - WIND ZONE ELEVATION
SCALE: 1/8" = 1'-0"



WEST - WIND ZONE ELEVATION
SCALE: 1/8" = 1'-0"

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LAKE COUNTY, FLORIDA
WIND DESIGN DATA AND LOAD SCHEDULE
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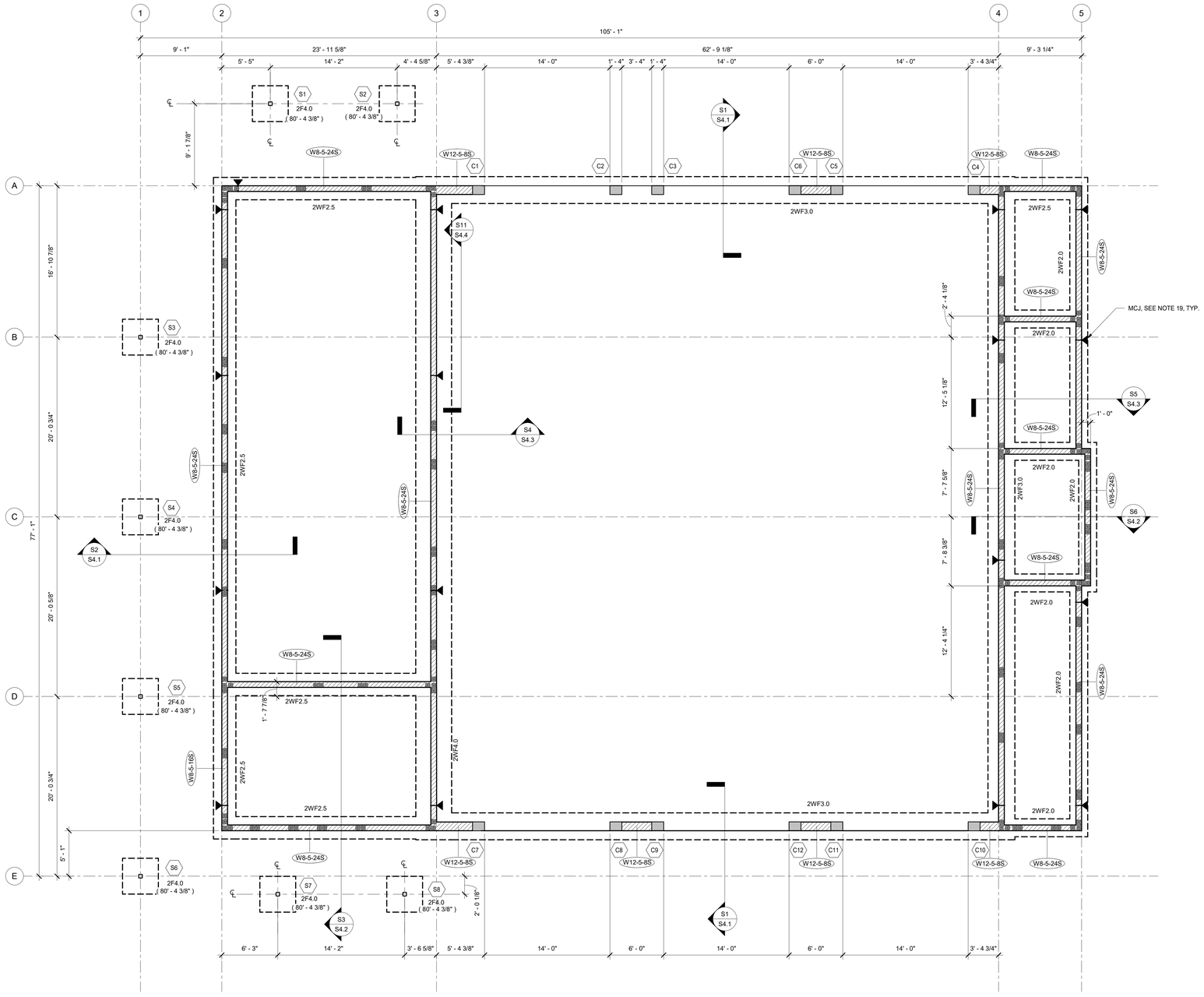
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1 S2.1 FOUNDATION PLAN
SCALE: 3/16" = 1'-0"

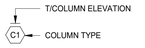
FOUNDATION PLAN NOTES:

1. FOR TYPICAL FOUNDATION PLAN DETAILS, SEE DRAWINGS S3.1 THRU S3.2.
2. FOR GENERAL STRUCTURAL NOTES, SEE DRAWING S1.1.
3. FOR FOOTING SIZE AND REINFORCING, SEE SCHEDULE ON THIS DRAWING.
4. ( ) DENOTES TOP OF FOOTING ELEVATION.
5. TOP OF FOOTING: ELEVATION @ INTERIOR = (-1'-4") TYPICAL U.N.O. ELEVATION @ EXTERIOR = (-1'-4") TYPICAL U.N.O.
6. FOR PLAN DIMENSIONS NOT SHOWN, REFER TO ARCHITECTURAL DRAWINGS.
7. TYPICAL WALL REINFORCING SCHEDULE:

   A. 8" CMU EXTERIOR WALL REINFORCING WITH (1)-#5 AT 24" O.C. VERTICAL.
   B. ▩ INDICATES ADDITIONAL (1)-#5 IN GROUT FILLED CELL.
   C. PROVIDE ADDITIONAL (1)-#5 VERTICAL IN FIRST (2) CELLS EACH SIDE OF ALL WALL OPENINGS, CORNERS AND INTERSECTIONS.



8. COLUMN DESIGNATION SHOWN THUS ⬡ ON PLAN. FOR SIZE AND REINFORCING SEE SCHEDULE ON SHEET S7.1.



9. COORDINATE LOCATION OF (CJ) CONTROL JOINTS (SAWCUTS & TOOLED JOINTS) AT WALKWAY SLABS WITH ARCHITECTURAL DRAWINGS. CONTROL JOINTS AT EXPOSED TO WEATHER WALKWAYS SHALL BE TOOLED JOINTS SEE TYPICAL DETAIL 3-201 ON S1.3.
10. ALL CMU WALLS SHALL BE REINFORCED AS SHOWN ON PLAN WITH DOWELS TO MATCH, U.N.O. ALL CELLS AT REINFORCING LOCATION SHALL BE FILLED WITH GROUT. PROVIDE INSPECTION/CLEANOUT HOLE AT BASE WHEN POUR HEIGHT IS GREATER THAN 4'-0".
11. GENERAL CONTRACTOR TO COORDINATE LOCATION OF ALL WALL PENETRATIONS REQUIRED FOR MECHANICAL EQUIPMENT AND PROVIDE A PRECAST LINTEL AT ALL OPENINGS REFER TO TYPICAL DETAIL 4-004 ON S3.1.
12. PRE-ENGINEERED/PRE-FABRICATED METAL PAN STAIRS, PROVIDE CALCULATIONS AND SHOP DRAWINGS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA. ALL STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED.
13. MASONRY CONTROL JOINT SHOWN THUS ◀ MCJ ON PLAN. MAXIMUM SPACING OF JOINTS = 24'-0", COORDINATE LOCATION WITH THE ARCH. BUILDING ELEVATIONS.
14. WHERE FOOTING MARK NUMBER HAS A SUFFIX B, I.E., WF5.0B, THE REINFORCING INDICATED SHALL BE APPLIED TO BOTTOM OF FOOTING ONLY.

WALL REINFORCING SCHEDULE

TYPE	DESCRIPTION
C8-5-24S	8" CONCRETE WALL REINF. W/ #5 AT 24" O.C. EACH WAY
W8-5-16S	8" CMU WALL REINF. W/ #5 AT 16" O.C.
W8-5-24S	8" CMU WALL REINF. W/ #5 AT 24" O.C.
W12-5-8S	12" CMU WALL REINF. W/ #5 AT 8" O.C.

WALL FOOTING SCHEDULE

MARK*	WIDTH	THICKNESS	TOP & BOTT. REINF. CONT.	TOP & BOTT. REINF. TRANSV.	REMARKS
2WF2.0	2' - 0"	1' - 4"	3-#5	#4 @ 24"	
2WF2.5	2' - 6"	1' - 4"	3-#5	#4 @ 24"	
2WF3.0	3' - 0"	1' - 4"	4-#5	#4 @ 16"	
2WF4.0	4' - 0"	1' - 4"	4-#5	#5 @ 16"	

COLUMN FOOTING SCHEDULE

MARK*	LENGTH	WIDTH	THICKNESS	TOP & BOTT. REINF.* EA. WAY U.N.O.	REMARKS
2F4.0	4' - 0"	4' - 0"	1' - 6"	5-#5	STD ACI HOOK

PROJECT NORTH

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NEW LAKE COUNTY FIRE STATION NO. 39
LAKE COUNTY, FLORIDA
FOUNDATION PLAN
Address

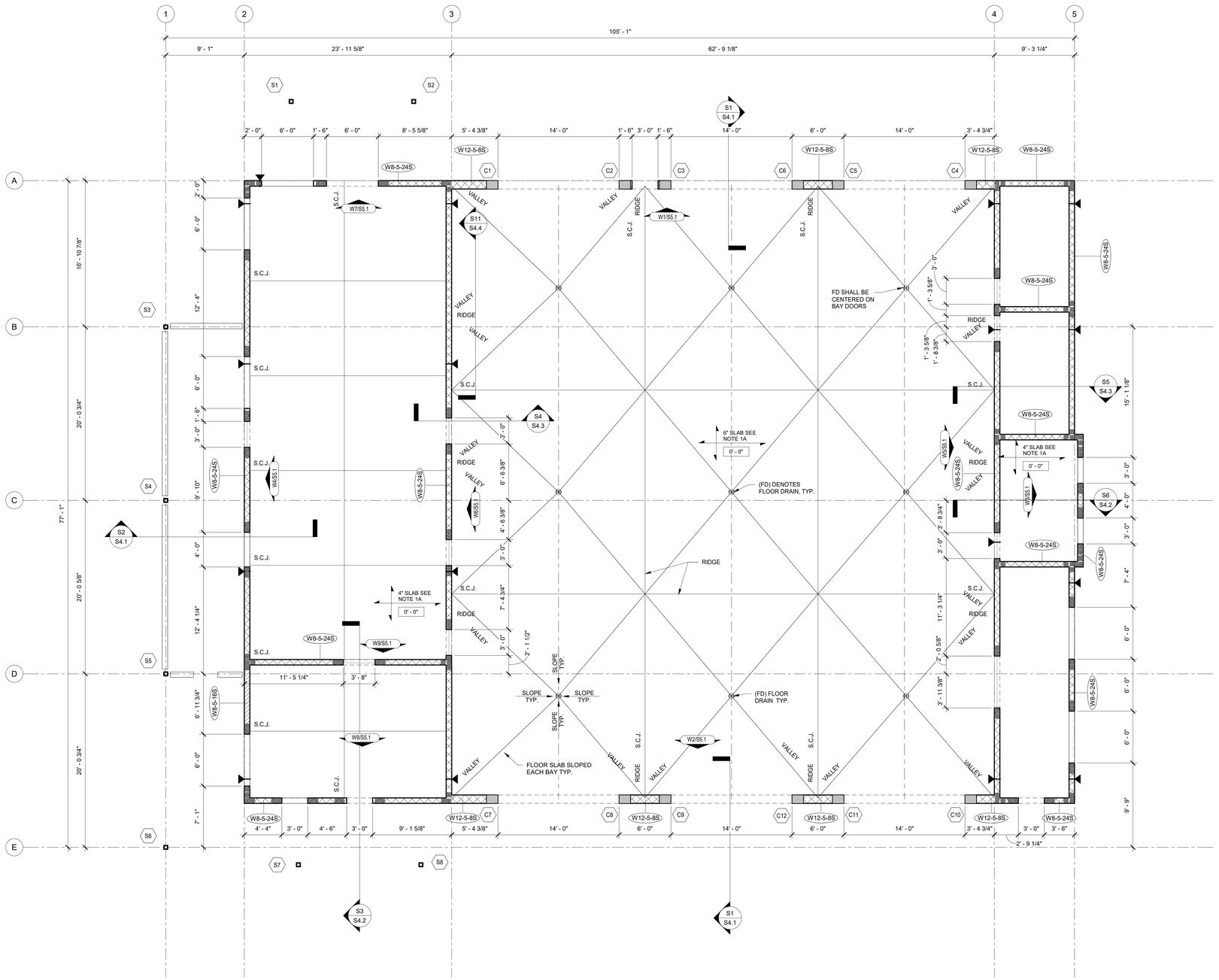
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1 S2.2 SLAB ON GRADE PLAN
SCALE: 3/16" = 1'-0"

SLAB ON GRADE PLAN NOTES:

1. SLAB ON GRADE TO BE 8" THICK CONCRETE OVER VAPOR BARRIER ON COMPACTED SUB-BASE AS PER GEOTECHNICAL REPORT REINFORCED WITH #4@12"O.C. EACH WAY, TOP AND BOTTOM. SUPPORT REINFORCING WITH SLAB BOLSTER OR APPROVED EQUAL @ 3'-0"(±) O.C. BOTH WAYS. USE OF CONCRETE BRICK IS NOT ALLOWED.
2. VAPOR BARRIER REQUIREMENTS/APPLICATION/INSTALLATION SHALL BE DONE AS PER ARCHITECTURAL OR MOISTURE CONSULTANT DOCUMENTS AND RECOMMENDATIONS. IF NONE ARE AVAILABLE, AT A MINIMUM THE FOLLOWING RECOMMENDATIONS SHALL BE FOLLOWED.
   A. VAPOR BARRIER SHALL CONFORM TO ASTM E-1745 , MEETS OR EXCEEDS CLASS "B".
   B. VAPOR BARRIER INSTALLATION SHALL FOLLOW MANUFACTURER'S INSTRUCTIONS AND ASTM E 1643-98 .
   C. UNROLL VAPOR BARRIER WITH THE LONGEST DIMENSION PARALLEL WITH THE DIRECTION OF THE POUR.
   D. LAP VAPOR BARRIER OVER FOOTINGS AND SEAL TO FOUNDATION WALLS.
   E. OVERLAP JOINTS 6 INCHES AND SEAL WITH MANUFACTURER'S TAPE.
   F. SEAL ALL PENETRATIONS (INCLUDING PIPES) WITH MANUFACTURER'S PIPE BOOT.
   G. NO PENETRATION OF THE VAPOR BARRIER IS ALLOWED EXCEPT FOR REINFORCING STEEL AND PERMANENT UTILITIES.
   H. REPAIR DAMAGED AREAS BY CUTTING PATCHES OF VAPOR BARRIER, OVERLAPPING DAMAGED AREA 6 INCHES AND TAPING ALL FOUR SIDES WITH TAPE.
3. TOP OF SLAB ELEVATION SHOWN THUS ['-'] ON PLAN EQUALS REFERENCE EL., FOR ACTUAL EL., SEE CIVIL DRAWINGS.
4. FOR GENERAL STRUCTURAL NOTES, SEE DRAWING S1.1.
5. FOR FLOOR SLAB DEPRESSION LOCATIONS AND LIMITS NOT SHOWN ON PLAN SEE ARCHITECTURAL DRAWINGS.
6. FOR PLAN DIMENSIONS NOT SHOWN, REFER TO ARCHITECTURAL DRAWINGS.
7. COLUMN DESIGNATION SHOWN THUS ⬡ ON PLAN. FOR SIZE AND REINFORCING SEE SCHEDULE ON S7.0.

   T/COLUMN ELEVATION
   C1 ← COLUMN TYPE

8. COORDINATE LOCATION OF (CJ) CONTROL JOINTS (SAWCUTS & TOOLED JOINTS) AT WALKWAY SLABS WITH ARCHITECTURAL DRAWINGS. CONTROL JOINTS AT EXPOSED TO WEATHER WALKWAYS SHALL BE TOOLED JOINTS SEE TYPICAL DETAIL 3-201 ON S3.1.
9. ALL CMU WALLS SHALL BE REINFORCED AS SHOWN ON PLAN WITH DOWELS TO MATCH, U.N.O. ALL CELLS AT REINFORCING LOCATION SHALL BE FILLED WITH GROUT. PROVIDE INSPECTION/CLEANOUT HOLE AT BASE WHEN POUR HEIGHT IS GREATER THAN 4'-0".
10. LOCATION OF MASONRY CONTROL JOINT NOT SHOWN. COORDINATE WITH ARCHITECTURAL ELEVATIONS. SEE TYPICAL DETAIL 4-002 ON S3.1.
12. GENERAL CONTRACTOR TO COORDINATE LOCATION OF ALL WALL PENETRATIONS REQUIRED FOR MECHANICAL EQUIPMENT AND PROVIDE A PRECAST LINTEL AT ALL OPENINGS REFER TO TYPICAL DETAIL 4-004 ON S3.1.
13. PRE-ENGINEERED/PRE-FABRICATED METAL PAN STAIRS, PROVIDE CALCULATIONS AND SHOP DRAWINGS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA. ALL STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED.
14. MASONRY CONTROL JOINT SHOWN THUS ◄ MCJ ON PLAN. MAXIMUM SPACING OF JOINTS = 24' - 0", COORDINATE LOCATION WITH THE ARCH. & STRUCT WALL ELEVATIONS. DO NOT LOCATE A MCJ CLOSER THAN 24" TO ANY CMU OPENING.

WALL REINFORCING SCHEDULE

TYPE	DESCRIPTION
C8-5-24S	8" CONCRETE WALL REINF. W/ #5 AT 24" O.C. EACH WAY
W8-5-16S	8" CMU WALL REINF. W/ #5 AT 16" O.C.
W8-5-24S	8" CMU WALL REINF. W/ #5 AT 24" O.C.
W12-5-8S	12" CMU WALL REINF. W/ #5 AT 8" O.C.

THICKENED SLAB SCHEDULE

MARK*	SIZE	THICKNESS	TOP & BOTT.* REINF. CONT.	TOP & BOTT.* REINF. TRANSV.	REMARKS
TS-1	1' - 0" x CONT.	1' - 0"	(2)#5	N/A	
TS-3	2' - 0" x CONT.	1' - 0"	(2)#5	#4 @ 24" O.C.	
TS-4	2' - 0" x CONT.	1' - 0"	(2)#5	#4 @ 24" O.C.	INTERIOR THICKEND SLAB

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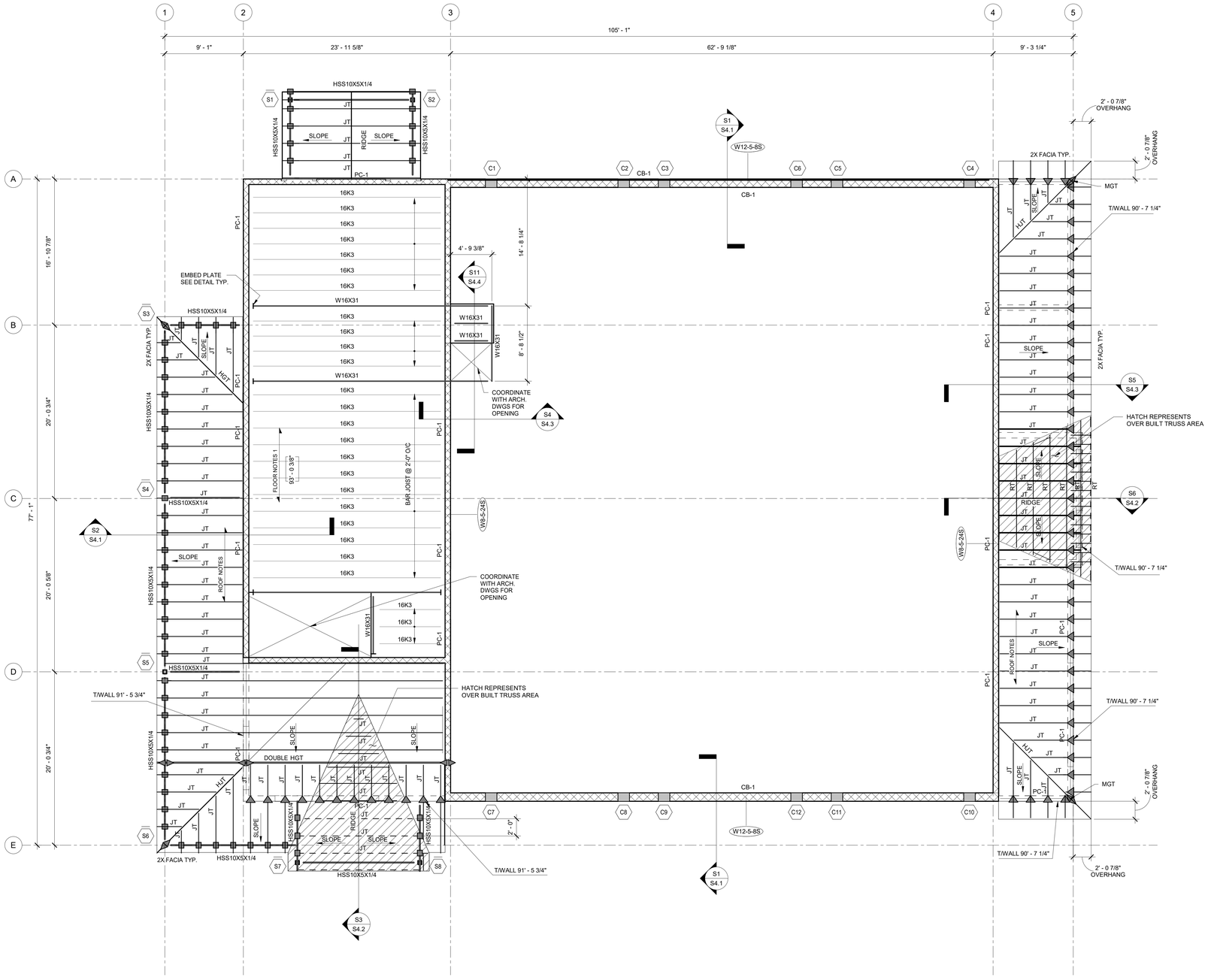
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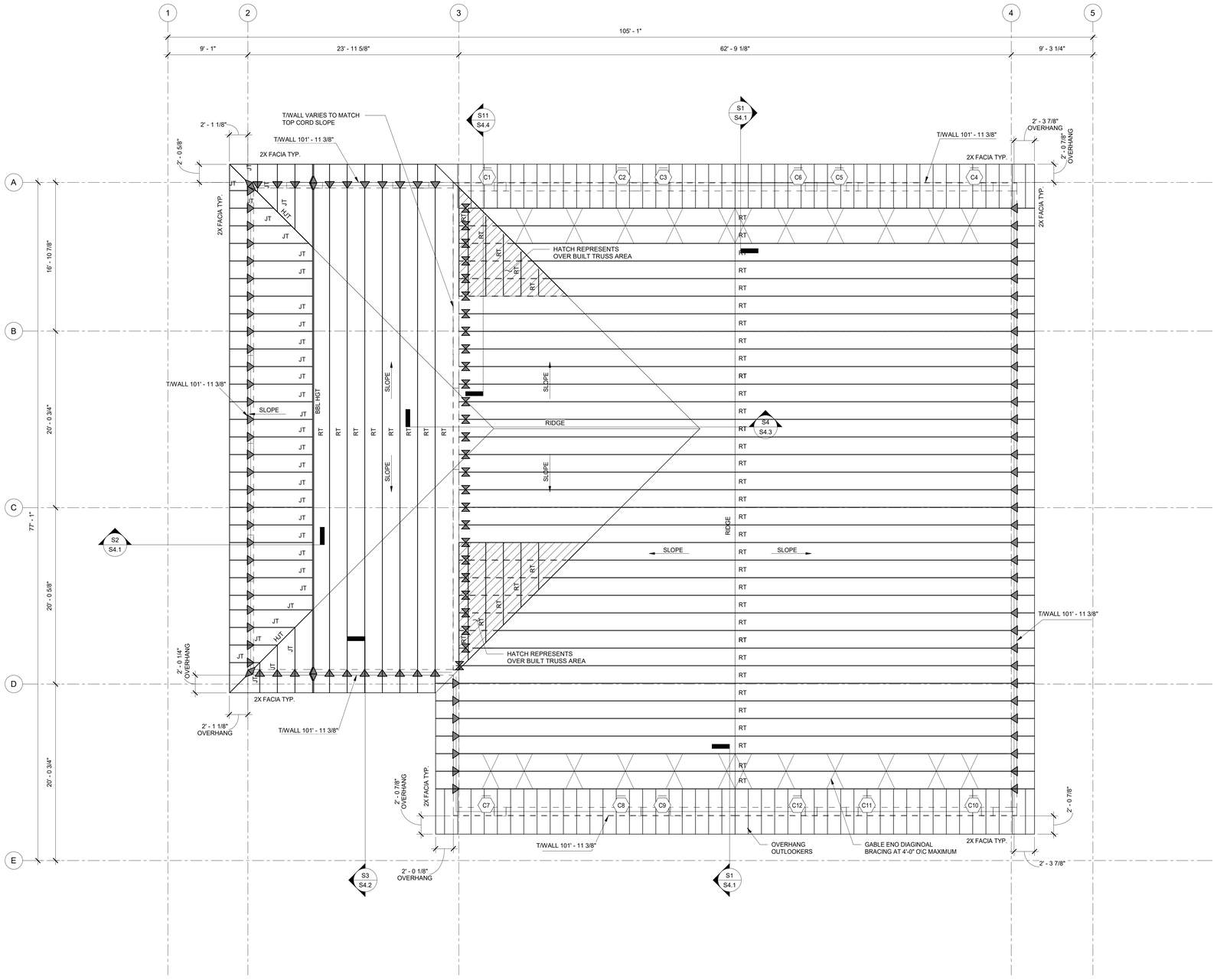
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S2.2

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1
2
3
4
5
105' - 1"
9' - 1"
23' - 11 5/8"
62' - 9 1/8"
9' - 3 1/4"
A
B
C
D
E
16' - 10 7/8"
20' - 0 3/4"
17' - 1"
20' - 0 5/8"
20' - 0 3/4"
HSS10X5X1/4
HSS10X5X1/4
HSS10X5X1/4
HSS10X5X1/4
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S6
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S2
S4.1
S3
S4.2
S1
S4.1
JT
RIDGE
SLOPE
HGT
DOUBLE HGT
PC-1
16K3
W16X31
W16X31
W16X31



1 S2.4 HIGH ROOF FRAMING PLAN
SCALE: 3/16" = 1'-0"

ROOF FRAMING PLAN (RFP) NOTES:

1. ROOF FRAMING SHALL BE 5/8" (CDX) EXTERIOR GRADE PLYWOOD SHEATHING SPANNING OVER PRE-ENG./PRE-FAB WOOD TRUSSES SPACED AT 24" OC. REFER TO THE ARCHITECTURAL DRAWINGS FOR ROOF FINISH.
2. TRUSS MANUFACTURER SHALL SUBMIT SHOP DRAWINGS AND CALCULATIONS WHICH ARE SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF FLORIDA, FOR REVIEW AND APPROVAL. TRUSS LAYOUT SHOWN IS CONCEPTUAL ONLY. FINAL LAYOUT SHALL BE BY PRE-FAB WOOD TRUSS MANUFACTURER.
3. ALL TRUSS TO TRUSS CONNECTIONS SHALL BE PROVIDED BY TRUSS SUPPLIER.
4. TOP CHORD OF TRUSS SHALL FOLLOW PROFILE OF ROOF.
5. FOR GENERAL STRUCTURAL NOTES, LOAD SCHEDULE AND WIND DESIGN DATA SEE SHEETS S1.11 & S1.2 RESPECTIVELY. FOR TYPICAL DETAILS SEE DRAWINGS S3.1 THRU S3.3.
6. FINAL PRE-ENGINEERED WOOD TRUSS CONNECTIONS TO STRUCTURE WILL BE BASED ON APPROVED SHOP DRAWINGS AND CALCULATIONS WHERE UPLIFT FORCES FOR INDIVIDUAL TRUSSES ARE REQUIRED TO BE INDICATED. ALL CONNECTORS SHALL BE SELECTED SUCH THAT PUBLISHED LOAD CAPACITIES MEET OR EXCEED UPLIFT REACTIONS SHOWN THEREON. FASTENER SIZES, TYPE AND QUANTITIES SHALL BE IN ACCORDANCE WITH MANUFACTURER'S CATALOG. TRUSS CONNECTORS SPECIFIED ANYWHERE IN THE DRAWINGS MAY BE CHANGED TO MEET THIS REQUIREMENT. ALL CONNECTORS SHALL BE SIMPSON STRONG TIE PRODUCTS OR EQUAL WITH FLORIDA PRODUCT APPROVAL NUMBER.
7. ALL WOOD TRUSSES ANCHORED INTO CMU WALL OR CONCRETE TIE BEAMS SHALL BE PROVIDED WITH MOISTURE BARRIER.
8. SHADED AREA (CROSS-HATCHED) INDICATES LOCATION OF VALLEY TRUSSES. CONNECT EACH VALLEY TRUSS TO EACH CARRYING TRUSS WITH SIMPSON VTCR.
9. CONTINUOUS BOTTOM CHORD BRACING, SEE TYPICAL DETAIL 6-008/S3.2.
10. "X" TYPE BRACING, SEE TYPICAL DETAIL 6-007/S3.2.
11. DESIGN PRE-ENGINEERED/PRE-FAB WOOD TRUSSES (RT2A) CARRYING MECH'L EQUIPMENT TO BE FREE OF DIAGONAL WEB MEMBERS FOR SERVICE CLEARANCE/SERVICE ACCESS AND TO ACCOMMODATE UNITS. SEE PRE-ENGR'D/PRE-FAB WOOD ROOF TRUSS DIAGRAM ON DWG S-3.3.
12. ▨ DENOTES OVER BUILT AREA

CONNECTOR SCHEDULE

MARK	APPLICATION	QTY	MANUF.	MODEL NO.	MAX UPLIFT LOAD	FASTENERS
▲	TRUSS TO CMU	-	SIMPSON	HETAL16	-	UPLIFT ANCHOR
◆	GIRDER TO CMU	-	SIMPSON	MGT	-	TIEDOWN
⧗	FACE MOUNT TRUSS TO CMU	-	SIMPSON	WMU1.81	-	TOP FLANGE HANGER & TOP FLANGE HANGER WITH HTM16 STRAP
▣	TRUSS TO STL BEAM		SIMPSON	MTS16	-	TWIST STRAP (6)-#10 TO STEEL

TRUSS KEY:

HJT = HIP JACK TRUSS
HGT = HIP GIRDER TRUSS
HT = HIP TRUSS
GT = GIRDER TRUSS
JT = JACK TRUSS
RT = ROOF TRUSS
VT = VALLEY TRUSS

PROJECT NORTH

TO THE BEST OF OUR KNOWLEDGE INFORMATION AND BELIEF, THESE STRUCTURAL PLANS CONFORM TO AND SATISFY, THE FLORIDA BUILDING CODE, SIXTH EDITION 2017, ACI 318-14 AND LOCAL CODES AS APPLICABLE

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CA: 8426 PROJ NO. 1136-001

DATE | NO. | DESCRIPTION

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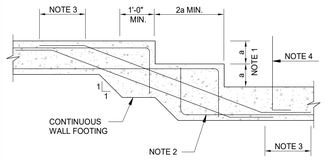
LAKE COUNTY, FLORIDA
HIGH ROOF FRAMING PLAN
Address

18104

1/31/2020

S2.4

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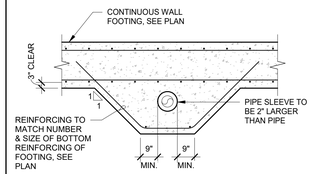


NOTE:

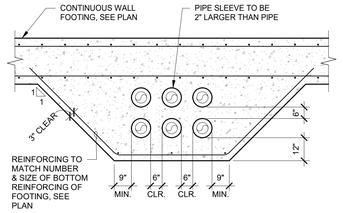
1. DIMENSION "a" TO BE KEPT IN BLOCK COURSING NOT TO EXCEED 1'-4" AT MASONRY WALLS OR 1'-6" AT CONCRETE WALLS.
2. FOOTING REINFORCING IN ALL BLOCK FOUNDATION WALLS (2)-#5 CONTINUOUS (EXTEND THRU SPREAD FOOTINGS U.N.O.).
3. DIMENSION = LAP TYPE "B" MINIMUM.
4. DOWELS AS REQUIRED.

TYPICAL STEPPED FOOTING DETAIL

3-055



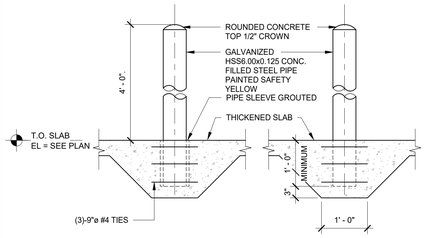
SINGLE PIPE DETAIL



BANK OF PIPES DETAIL

PIPE SLEEVE DETAIL AT FOUNDATION

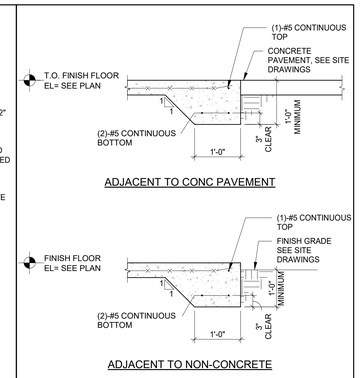
3-054



INTERIOR/REMOVABLE EXTERIOR EXTERIOR

TYPICAL BOLLARD DETAIL

3-020



SLAB ON GRADE EDGE

3-007

f'c = 4000 PSI, NORMAL WEIGHT

BAR SIZE	LAP CLASS	TENSION LAP SPLICES: LAP LENGTH PER SPACING AND COVER CASE — CASE 1 TOP BARS	CASE 1 OTHER BARS	CASE 2 TOP BARS	CASE 2 OTHER BARS	COMPRESSION LAP SPLICES
#3	A	19	15	28	22	12
	B	24	19	36	28	
#4	A	25	19	37	29	15
	B	32	25	48	37	
#5	A	31	24	47	36	19
	B	40	31	60	47	
#6	A	37	29	56	43	23
	B	48	37	72	56	
#7	A	54	42	81	63	26
	B	70	54	106	81	
#8	A	62	48	93	71	30
	B	80	62	121	93	
#9	A	70	54	105	81	34
	B	91	70	136	105	
#10	A	79	61	118	91	38
	B	102	79	153	116	
#11	A	87	67	131	101	42
	B	113	87	170	131	

NOTES:

CASE 1

BEAMS AND COLUMNS:
CONCRETE COVER >/= TO BAR DIAMETER, C-C BAR SPACING >/= TO 2X BAR DIAMETER AND WITH STIRRUPS OR TIES THROUGHOUT TENSION LAP SPLICE LENGTH NOT LESS THAN THE CODE MINIMUM.

OTHER MEMBERS:
CONCRETE COVER >/= TO THE BAR DIAMETER AND C-C BAR SPACING >/= TO 3X BAR DIAMETER.

CASE 2

BEAMS AND COLUMNS:
CONCRETE COVER < BAR DIAMETER AND C-C BAR SPACING < 2X BAR DIAMETER.

OTHER MEMBERS:
CONCRETE COVER < BAR DIAMETER OR C-C BAR SPACING < 3X BAR DIAMETER.

* LAP CLASS "B" IS TO BE USED UNLESS OTHERWISE SPECIFIED IN THESE CONTRACT DOCUMENTS.

TENSION AND COMPRESSION LAP SPLICES WITH F'c = 4000 PSI

3-066

f'c = 3000 PSI, NORMAL WEIGHT

BAR SIZE	LAP CLASS	TENSION LAP SPLICES: LAP LENGTH PER SPACING AND COVER CASE — CASE 1 TOP BARS	CASE 1 OTHER BARS	CASE 2 TOP BARS	CASE 2 OTHER BARS	COMPRESSION LAP SPLICES
#3	A	22	17	32	25	12
	B	28	22	42	32	
#4	A	29	22	43	33	15
	B	37	29	56	43	
#5	A	36	28	54	41	19
	B	47	36	70	54	
#6	A	43	33	64	50	23
	B	56	43	84	64	
#7	A	63	48	94	72	26
	B	81	63	122	94	
#8	A	72	55	107	82	30
	B	93	72	139	107	
#9	A	81	62	121	93	34
	B	105	81	157	121	
#10	A	91	70	136	105	38
	B	118	91	177	136	
#11	A	101	78	151	116	42
	B	131	101	196	151	

NOTES:

CASE 1

BEAMS AND COLUMNS:
CONCRETE COVER >/= TO BAR DIAMETER, C-C BAR SPACING >/= TO 2X BAR DIAMETER AND WITH STIRRUPS OR TIES THROUGHOUT TENSION LAP SPLICE LENGTH NOT LESS THAN THE CODE MINIMUM.

OTHER MEMBERS:
CONCRETE COVER >/= TO THE BAR DIAMETER AND C-C BAR SPACING >/= TO 3X BAR DIAMETER.

CASE 2

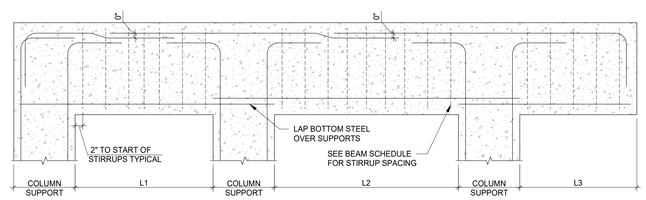
BEAMS AND COLUMNS:
CONCRETE COVER < BAR DIAMETER AND C-C BAR SPACING < 2X BAR DIAMETER.

OTHER MEMBERS:
CONCRETE COVER < BAR DIAMETER OR C-C BAR SPACING < 3X BAR DIAMETER.

* LAP CLASS "B" IS TO BE USED UNLESS OTHERWISE SPECIFIED IN THESE CONTRACT DOCUMENTS.

TENSION AND COMPRESSION LAP SPLICES WITH F'c = 3000 PSI

3-065

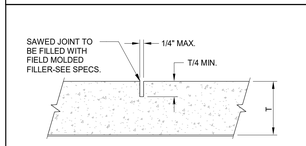


NOTE:

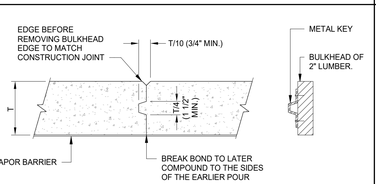
1. WHERE TOP & BOTTOM BARS ARE IN MULTIPLE LAYERS, PROVIDE 1" CLEAR BETWEEN LAYERS TYPICAL.
2. SEE TENSION AND COMPRESSION LAP SPLICE TABLES FOR PROPER LAP AND CONCRETE STRENGTH.
3. ALL BOTTOM LAYERS OF STEEL MUST BE LAPPED OVER CENTERLINE OF SUPPORT.
4. ALL TOP AND INTERMEDIATE LAYERS OF STEEL MUST BE LAPPED AT MID-SPAN OF BEAM.
5. SEE CONCRETE BEAM SCHEDULE FOR ALL BEAM REINFORCING AND SEE FRAMING PLANS FOR BEAM DESIGNATION AND PLACEMENT.

TYPICAL CONCRETE BEAM BAR PLACEMENT DIAGRAM

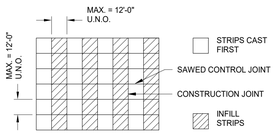
3-062



SAWED CONTROL JOINT DETAIL



BULKHEAD DETAILS FOR CONSTRUCTION JOINT



SLAB PLACEMENT SEQUENCE

NOTES:

1. CONCRETE FOR SLAB ON GRADE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AS INDICATED ON THE "CONCRETE AND REINFORCING" NOTES.
2. SUPERPLASTICIZER SHALL BE USED IN SLAB ON GRADE CONCRETE - SEE SPECIFICATIONS.
3. SLAB ON GRADE CONCRETE MIX SHALL HAVE A WATER-CEMENT RATIO AS INDICATED IN SPECS AND OR NOTES.
4. CONSTRUCTION JOINTS SHALL BE LOCATED A MINIMUM OF 5'-0" AWAY FROM ANY OTHER JOINTS TO WHICH THEY ARE PARALLEL.
5. SAW CUTTING SHALL BE DONE WITH A POWER SAW WITH A MASONRY CUTTING BLADE. CUTTING SHALL BE DONE AS SOON AS CONCRETE HARDENS ENOUGH SO THAT THE BLADE DOES NOT DISLODGE THE AGGREGATES.
6. WHERE SAWCUT IS DISCONTINUED AT A TRANSVERSE JOINT, STOP CUT 2" SHORT.
7. SLAB REINFORING NOT SHOWN FOR CLARITY.

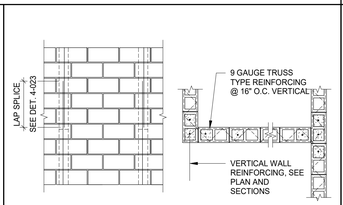
TYPICAL SLAB ON GRADE JOINT DETAILS

3-201

THE MINIMUM CLEAR COVER FOR REINFORCEMENT BARS SHALL BE ONE BAR DIAMETER OR THE VALUES TABULATED BELOW, WHICHEVER IS THE GREATER.		
SLABS (LT.WT. CONC. OR STONE CONC.)		1"
GIRDERS AND BEAMS (TO STIRRUPS)		1 1/2"
JOISTS (STONE OR LT.WT.) BOTTOM BARS		1 1/4"
TIED COLUMNS AND PIERS		
SURFACE EXPOSED TO EARTH AND WEATHER	(TO TIES)	2"
OTHER SURFACES	(TO TIES)	1 1/2"
FOUNDATION ELEMENTS		
FORMED SURFACES		2"
SURFACES PLACED AGAINST EARTH		3"
WALLS		
SURFACES EXPOSED TO EARTH		2"
SURFACES EXPOSED TO WEATHER		1 1/2"
OTHER SURFACES		1"

TYPICAL CONCRETE COVER FOR REINFORCING BARS

3-064



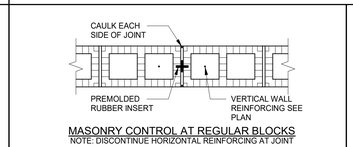
ELEVATION PLAN

NOTE:

PROVIDE INSPECTION PORT AT BOTTOM OF LIFT GREATER THAN 4' - 0" IN HEIGHT.

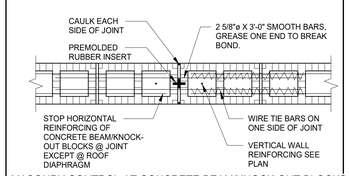
TYP MASONRY WALL DETAIL

4-001



MASONRY CONTROL AT REGULAR BLOCKS

NOTE: DISCONTINUE HORIZONTAL REINFORCING AT JOINT



MASONRY CONTROL AT CONCRETE BEAM/KNOCK-OUT BLOCKS

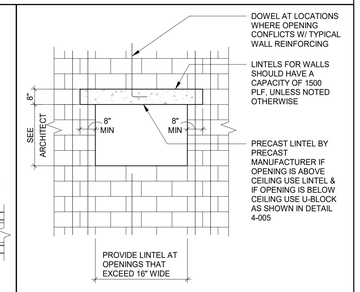
NOTE: DISCONTINUE HORIZONTAL REINFORCING AT JOINT

NOTE:

1. MAXIMUM SPACING OF CONTROL JOINT EQUALS 24'-0" OR THREE TIMES WALL HEIGHT (WHICH EVER IS SMALLER)

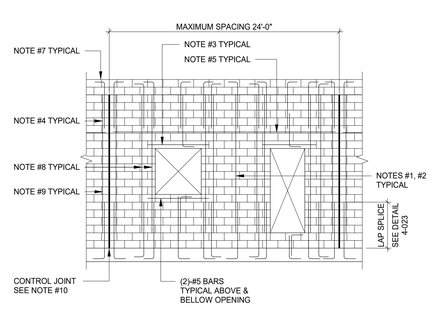
MASONRY CONTROL JOINT

4-002



TYPICAL LINTEL OVER DUCT OPENING

4-004

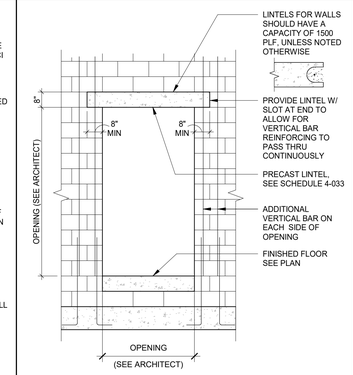


CMU WALL REINFORCING LAYOUT

4-009

NOTES:

1. VERTICAL WALL REINFORCING SHALL ALIGN WITH VERTICAL FOUNDATION DOWELS. DOWELS SHALL BE PLACED AS SHOWN ON DETAILS WITH STANDARD ACI HOOK DIRECTLY ON TOP OF BOTTOM LAYER OF FOOTING REINFORCING. REFER TO CMU WALL REINFORCING SCHEDULE ON PLAN FOR SIZE AND SPACING.
2. TYPICAL VERTICAL WALL REINFORCING TO BE PLACED AS SHOWN ON DETAILS. GROUT CELLS FULL THAT CONTAIN REINFORCEMENT.
3. REFER TO CMU LINTEL SCHEDULE FOR SIZE, LOCATION AND QUANTITY OF LINTEL REINFORCEMENT.
4. VERTICAL REINFORCING BARS MAY BE SPLICED IN 6'-0" TO 8'-0" LENGTHS.
5. HORIZONTAL WALL REINFORCING SHALL BE TRUSS TYPE AT 16" O.C. ABOVE GRADE AND 8" O.C. BELOW GRADE UNLESS OTHERWISE NOTED ON PLANS AND DETAILS. DISCONTINUE AT CONTROL JOINTS.
6. CONTRACTOR SHALL USE THE LOW LIFT METHOD OF GROUTED MASONRY CONSTRUCTION UNLESS CLEAN OUTS ARE PROVIDED AT EACH VERTICAL REINFORCING BAR.
7. REFER TO PLANS AND DETAILS FOR SIZE AND LOCATION OF BOND BEAMS AND QUANTITY OF REINFORCING. LAP REINFORCING 24" MINIMUM. DISCONTINUE BOND BEAMS AT CONTROL JOINTS.
8. REFER TO LINTEL SCHEDULE NOTES FOR VERTICAL BARS ADJACENT TO OPENING.
9. PROVIDE VERTICAL WALL REINFORCING IN FIRST CELL NEXT TO CONTROL JOINTS/CORNERS/OPENINGS, TYPICAL.
10. VERTICAL CONTROL JOINTS SHALL TERMINATE AT TOP OF FOOTING.
11. PROVIDE CORNER BARS TO MATCH TYPE AND QUANTITY OF HORIZONTAL WALL REINFORCING, TYPICAL.



TYPICAL LINTEL OVER OPENING

4-005

NOTE:
IN CASE OF CONFLICT BETWEEN INFORMATION SHOWN ON THIS DRAWING, SECTION DRAWINGS OR ARCHITECTURAL DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND ENGINEER OF THE CONFLICT IN ORDER TO RECEIVE A CLARIFICATION BEFORE PROCEEDING TO WORK. DIMENSIONS, SIZES AND REINFORCEMENT OF STRUCTURAL ELEMENTS SHOWN IN THIS DRAWING ARE MINIMUM TO BE USED UNLESS NOTED OTHERWISE (U.N.O.) IN PLANS.

NO.	DESCRIPTION	DATE

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18104

NEW LAKE COUNTY FIRE STATION NO. 39

LAKE COUNTY, FLORIDA
TYPICAL DETAILS
Address

1/31/2020

PRICING SET

S3.1

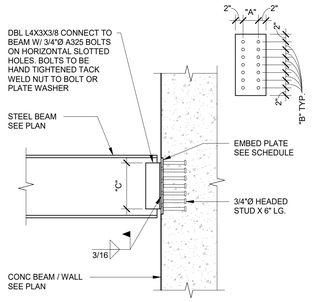
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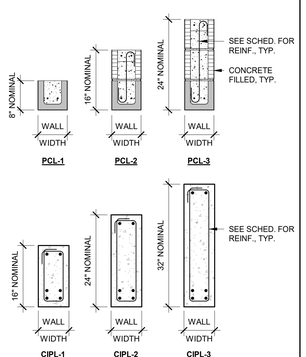


EMBED PLATE SCHEDULE					
BEAM SIZE	PLATE SIZE	NO. OF 3/4"Ø HEADED STUDS	"A" (IN.)	"B" (IN.)	"C" (IN.)
W10	1/2" X 10" X 10"	4	6"	6	7
W12	1/2" X 10" X 12"	6	6"	4	9
W14	1/2" X 10" X 14"	6	6"	5	11
W16	1/2" X 10" X 16"	8	6"	4	13
W18	3/4" X 10" X 18"	10	6"	3 1/2	15
W21	3/4" X 10" X 22"	12	6"	3 1/2	18 1/2
W24	3/4" X 10" X 24"	14	6"	3	19
W27	1" X 10" X 27"	14	6"	3 1/2	22

STEEL BEAM TO CONCRETE CONNECTION

5-005

CMU LINTEL SCHEDULE					
WALL THICKNESS	LINTEL DEPTH	BOTTOM REINFORCING	TOP REINFORCING	STIRRUPS & SPACING	NOTES
PCL-1	8"	(2)-#5	-	-	-
PCL-2	16"	(2)-#5	(2)-#5	-	-
PCL-3	24"	-	-	-	-
CIPL-1	16"	-	-	-	-
CIPL-2	24"	-	-	-	-
CIPL-3	32"	-	-	-	-



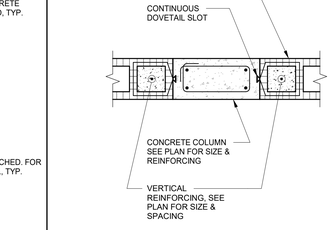
NOTES:

1. PRECAST CONCRETE LINTELS CAN BE INSTALLED AT ALL OPENINGS PER SCHEDULE. CAST IN PLACE CONCRETE LINTELS SHALL BE PLACED WHERE SHOWN ON PLANS. SUBSTITUTED UPON APPROVAL BY ENGINEER.
2. GROUTED LINTEL (THROUGH) BLOCKS SHALL EXTEND A MINIMUM OF 8" BEYOND FACE OF OPENING EACH SIDE UNLESS NOTED OTHERWISE. THE FIRST TWO VERTICAL CELLS EACH OF THE OPENING SHALL BE GROUTED AND CONTAIN 2-#5 VERTICAL EACH FACE.

   NOTE: THE FIRST CELL EACH SIDE OF THE OPENING SHALL BE GROUTED TO LINTEL LEVEL. SECOND CELL SHALL BE GROUTED TO ROOF LEVEL.
3. SEE SPECIFIC DETAIL FOR BRICK LEDGE SUPPORT ANGLE OF LOOSE LINTEL SCHEDULE.
4. CONSTRUCTION/CONTROL JOINT SHALL NOT BE LOCATED WITHIN WIDTH OF OPENING, NOR SHALL IT BE LOCATED WITHIN 24" OF THE OPENING ON EITHER SIDE.
5. CONCRETE LINTEL BEARING EACH SIDE OF LINTEL TO BE EQUAL TO DEPTH OF LINTEL, TYPICAL UNLESS NOTED OTHERWISE.

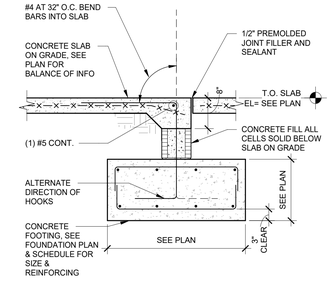
TYP. PRECAST/C.I.P. LINTEL DETAIL

4-033



CONCRETE COLUMN TO MASONRY CONNECTION

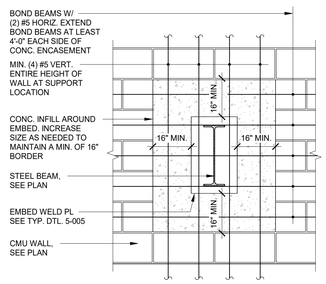
4-022



SLAB HAUNCH BEARING ON CMU WALL SECTION

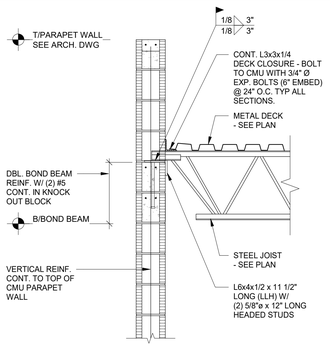
4-017

NOTE:
IN CASE OF CONFLICT BETWEEN INFORMATION SHOWN ON THIS DRAWING, SECTION DRAWINGS OR ARCHITECTURAL DRAWINGS, THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD AND CONFLICT IN ORDER TO RECEIVE A CLARIFICATION BEFORE PROCEEDING TO WORK. DIMENSIONS, SIZES AND REINFORCEMENT OF STRUCTURAL ELEMENTS SHOWN IN THIS DRAWING ARE MINIMUM TO BE USED UNLESS NOTED OTHERWISE (U.N.O.) IN PLANS.



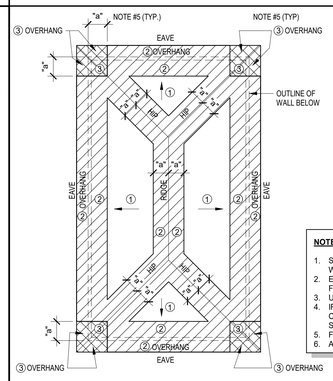
STEEL BEAM CONNECTION AT CMU WALL DETAIL

5-010



SECTION AT WALL SINGLE BEARING

5-203



AREA #1	SEE NOTE #3 AND MAIN ROOF TYPE 1 NAILING PATTERN.
AREA #2	SEE NOTE #3 AND MAIN ROOF AND OVERHANGS TYPE②NAILING PATTERN.
AREA #3	SEE NOTE #3 AND MAIN ROOF AND OVERHANGS TYPE③NAILING PATTERN.

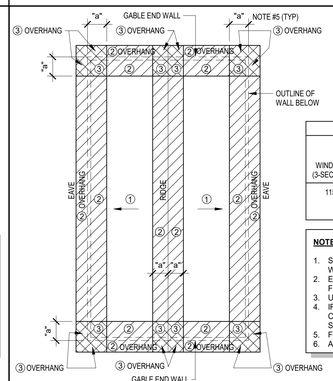
ROOF SHEATHING FASTENING SCHEDULE						
WIND VELOCITY (3-SECOND GUST)	PANEL LOCATION	ROOF FASTENING ZONE				
		MAIN ROOF			OVERHANG (EAVES)	
		①	②	③	②	③
115 mph,g	SUPPORTED PANEL END AND EDGES	6	6	6	6	6
	PANEL FIELD	12	6	4	6	4

NOTES:

1. SEE STRUCTURAL NOTES FOR SHEATHING SPECIFICATIONS AND DRAWING S000 FOR WIND DESIGN DATA.
2. END JOINTS OF THE ROOF SHEATHING SHALL BE STAGGERED AND OCCUR OVER FRAMING MEMBER.
3. USE MINIMUM OF 10d COMMON OR 8d RING SHANK NAILS.
4. IF A PNEUMATIC NAILER WITH FASTENER SIZE LESS THAN .131"ø X 2 1/2" IS USED. THE CONTRACTOR MUST CONTACT THE ENGINEER OF RECORD FOR AN EQUIVALENT NAIL SPACING.
5. FOR DIMENSION "a" MINIMUM EDGE DISTANCE REFER TO WIND DESIGN DATA.
6. AT UNSUPPORTED PANEL EDGES PROVIDE ADDITIONAL 2X BLOCKING AS REQUIRED.

HIP ROOF SHEATHING - FASTENING SCHEDULE

6-002



AREA #1	SEE NOTE #3 AND MAIN ROOF TYPE 1 NAILING PATTERN.
AREA #2	SEE NOTE #3 AND MAIN ROOF AND OVERHANGS TYPE②NAILING PATTERN.
AREA #3	SEE NOTE #3 AND MAIN ROOF AND OVERHANGS TYPE③NAILING PATTERN.

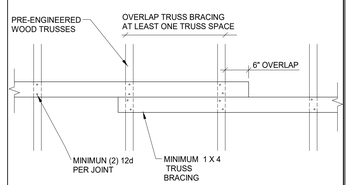
ROOF SHEATHING FASTENING SCHEDULE						
WIND VELOCITY (3-SECOND GUST)	PANEL LOCATION	ROOF FASTENING ZONE				
		MAIN ROOF		SHEATHING TO GABLE END WALL FRAMING	OVERHANG (EAVES)	
		①	②	③	②	③
115 mph,g	SUPPORTED PANEL END AND EDGES	6	6	6	6	6
	PANEL FIELD	12	6	4	6	4

NOTES:

1. SEE STRUCTURAL NOTES FOR SHEATHING SPECIFICATIONS AND DRAWING S000 FOR WIND DESIGN DATA.
2. END JOINTS OF THE ROOF SHEATHING SHALL BE STAGGERED AND OCCUR OVER FRAMING MEMBER.
3. USE MINIMUM OF 10d COMMON OR 8d RING SHANK NAILS.
4. IF A PNEUMATIC NAILER WITH FASTENER SIZE LESS THAN .131"ø X 2 1/2" IS USED. THE CONTRACTOR MUST CONTACT THE ENGINEER OF RECORD FOR AN EQUIVALENT NAIL SPACING.
5. FOR DIMENSION "a" MINIMUM EDGE DISTANCE REFER TO WIND DESIGN DATA.
6. AT UNSUPPORTED PANEL EDGES PROVIDE ADDITIONAL 2X BLOCKING AS REQUIRED.

GABLE ROOF SHEATHING - FASTENING SCHEDULE

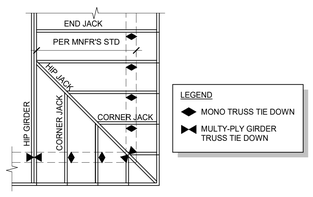
6-001



TRUSS BRACING OVERLAP DETAIL CF4

SCALE: N.T.S.

6-007

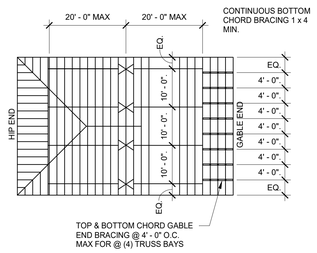


NOTES:

1. USE SIMPSON HETAL20 TRUSS TIE DOWN CONNECTORS (OR EQUAL) W/ TSS AT CONCRETE TIE BEAMS OR MASONRY BOND BEAMS.
2. USE SIMPSON H2.5A/H3 HURRICANE CLIPS (OR EQUAL) AT FRAMED WALLS.
3. NUMBER AND SIZE OF NAILS AS PER MANUFACTURERS' SPECIFICATIONS.
4. PROVIDE MOISTURE BARRIER BETWEEN WOOD TRUSS BEARING AND CONCRETE TIE BEAMS/MASONRY BOND BEAMS.

UPLIFT CONNECTIONS @ HIP ROOF FRAMING DETAIL

6-006

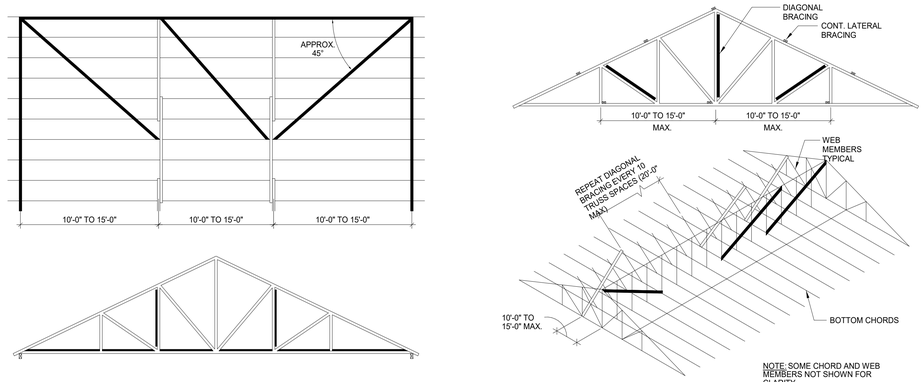


NOTES:

1. SEE TRUSS MANUFACTURER'S TRUSS ENGINEERING CUT SHEETS FORM ANY ADDITIONAL PERMANENT BRACING/S REQUIRED.
2. "T" BRACING MAY BE USED IN PLACE OF PERMANENT BRACING PROVIDED IT EXTENDS OVER AT LEAST 90% OF THE WEB.

REQUIRED MINIMUM PERMANENT TRUSS BRACING PLAN

6-005



TRUSS BRACING DETAILS-GABLE ROOF

NO SCALE

6-004

FASTENER SCHEDULE		
CONNECTION	FASTENER	NO. OR SPACING
BAND JOIST TO SILL OR TOP PLATE, TOE NAIL	8d	6 IN. O.C.
JOIST TO BAND JOIST, FACE NAIL	16d COMMON	3
JOIST TO SILL OR GIRDER, TOE NAIL	8d COMMON	3
BRIDGING TO JOIST, TOE NAIL EACH END	8d COMMON	2
LEDGER STRIP	16d COMMON	3 @ EACH JOIST
1x6 OR LESS SUB-FLOOR TO EACH JOIST, FACE NAIL	8d COMMON	2
OVER 1x6 SUB-FLOOR TO EACH JOIST, FACE NAIL	8d COMMON	3
2-INCH SUB-FLOOR TO JOIST OR GIRDER, BLIND & FACE NAIL	16d COMMON	2
SOLE PLATE TO JOIST OR BLOCKING, FACE NAIL	16d COMMON	16 IN. O.C.
TOP OR SOLE PLATE TO STUD, END NAIL	16d COMMON	2
STUD TO SOLE PLATE, TOE NAIL	8d COMMON	4
DOUBLE STUDS, FACE NAIL	10d COMMON	24 IN. O.C.

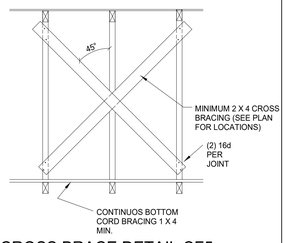
FASTENER SCHEDULE (CONT.)		
CONNECTION	FASTENER	NO. OR SPACING
DOUBLE TOP PLATES, FACE NAIL	10d COMMON	16 IN. O.C.
TOP PLATES, LAP & INTERSECTIONS FACE NAIL	-- --	2-16d OR 3-10d COMMON
CONTINUOUS HEADER, TWO PIECES	16d COMMON	16 IN. O.C. ALONG EA. EDGE
CEILING JOIST TO PLATE, TOE NAIL	8d COMMON	3
CONTINUOUS HEADER TO STUD, TOE NAIL	8d COMMON	3
CEILING JOIST, LAPS OVER PARTITIONS, FACE NAIL	-- --	3-16d OR 4-10d COMMON
CEILING JOIST TO PARALLEL RAFTERS, FACE NAIL	-- --	3-16d OR 4-10d COMMON
RAFTER TO PLATE, TOE NAIL	8d COMMON	3
1-INCH BRACE TO EACH STUD & PLATE, FACE NAIL	8d COMMON	2
5.1 RATIO PROVIDE BLOCKING AT END BAYS. TYPICAL	-- --	-- --
OVER 1x6 SHEATHING TO EACH BEARING, FACE NAIL	8d COMMON	3
BUILT-UP CORNER STUDS	16d COMMON	24 IN. O.C.

FASTENER SCHEDULE (CONT.)		
CONNECTION	FASTENER	NO. OR SPACING
BUILT-UP GIRDERS & BEAMS OF THREE MEMBERS	20d COMMON	32 IN. O.C. @ TOP & BOTTOM AND STAGGERED 2 ENDS & @ EACH SPLICE
LAP JOIST 3" ON BEAMS	-- --	-- --
STUDS TO SOLE PLATE, END NAIL	16d COMMON	2 EACH END
SHEATHING - SUB-FLOORING	8d COMMON	6d OR 12d COMMON
SHEATHING - WALL	8d COMMON	6d OR 12d COMMON
SHEATHING - ROOF	8d COMMON	6d COMMON

TYPICAL FASTENER SCHEDULE

6-009

MISCELLANEOUS FASTENERS				
MODEL SERIES	FASTENERS			
	TOP	FACE	JOIST	COMMENTS
LBV	(6)-16d	(4)-16d	(6)-10d x 1-1/2"	
DSC	40-SDS 1/4" x 3"			
LSTA-30	22-10d			
MTS-30	14-10d			
ABU-44	12-16d			
MTS-16	14-10d x 1-1/2"			
CC-44	(2)-5/8"Ø BEAM | (2)-5/8"Ø POST			
ECC-44	(2)-5/8"Ø BEAM | (2)-5/8"Ø POST			



CROSS BRACE DETAIL CF5

SCALE: N.T.S.

6-008

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CA: 8426 PROJ.NO. 1136-001

NO.	DESCRIPTION	DATE

ROBERT L. BELL, P.E.
FL. LIC. No. 74081

John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
Ethan J. Hine, AIA
Jennifer Zaffuto, AIA, NCARB, MPA

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NEW LAKE COUNTY FIRE STATION NO. 39
LAKE COUNTY, FLORIDA
TYPICAL DETAILS
Address

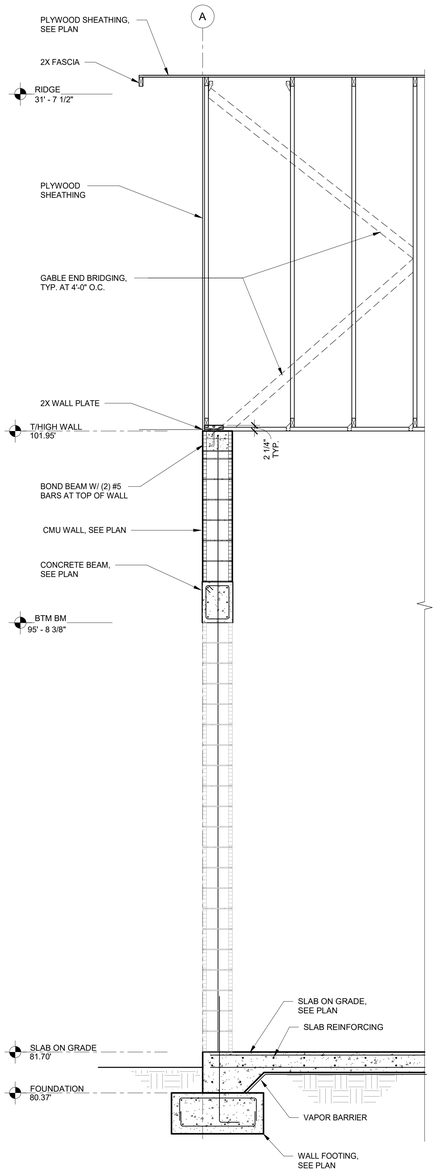
1/31/2020

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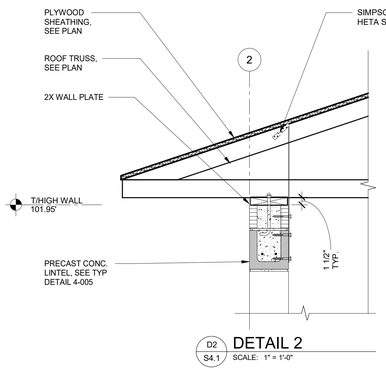
S3.2

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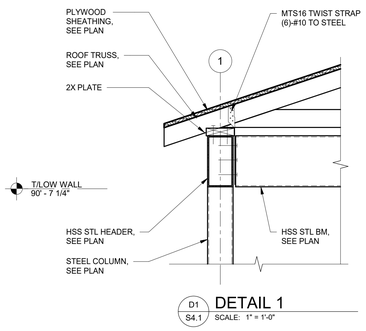
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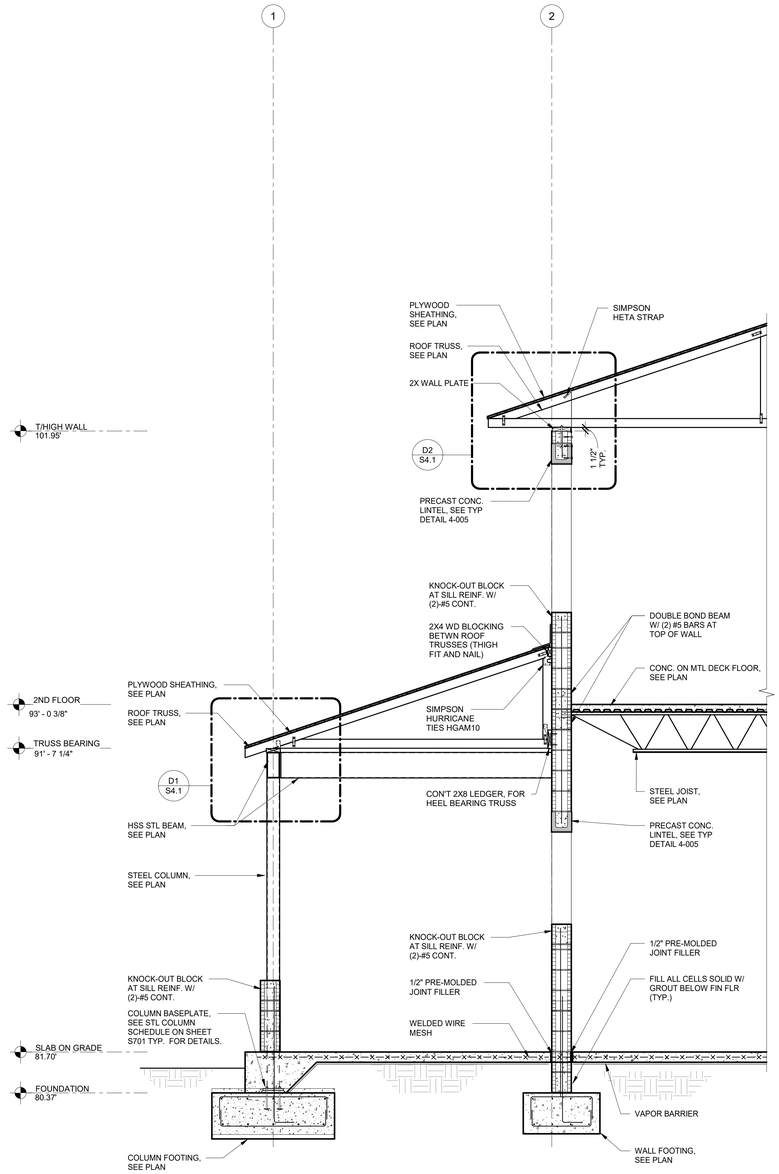
S1 S4.1 WALL SECTION 1
SCALE: 1/2" = 1'-0"



D2 S4.1 DETAIL 2
SCALE: 1" = 1'-0"



D1 S4.1 DETAIL 1
SCALE: 1" = 1'-0"



S2 S4.1 WALL SECTION 2
SCALE: 1/2" = 1'-0"

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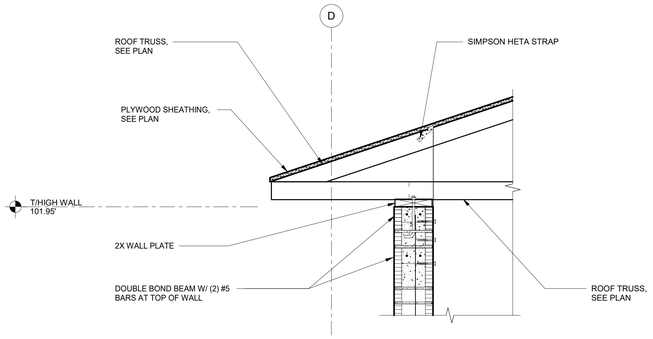
18104

NEW LAKE COUNTY FIRE STATION NO. 39
LAKE COUNTY, FLORIDA
SECTIONS AND DETAILS
Address

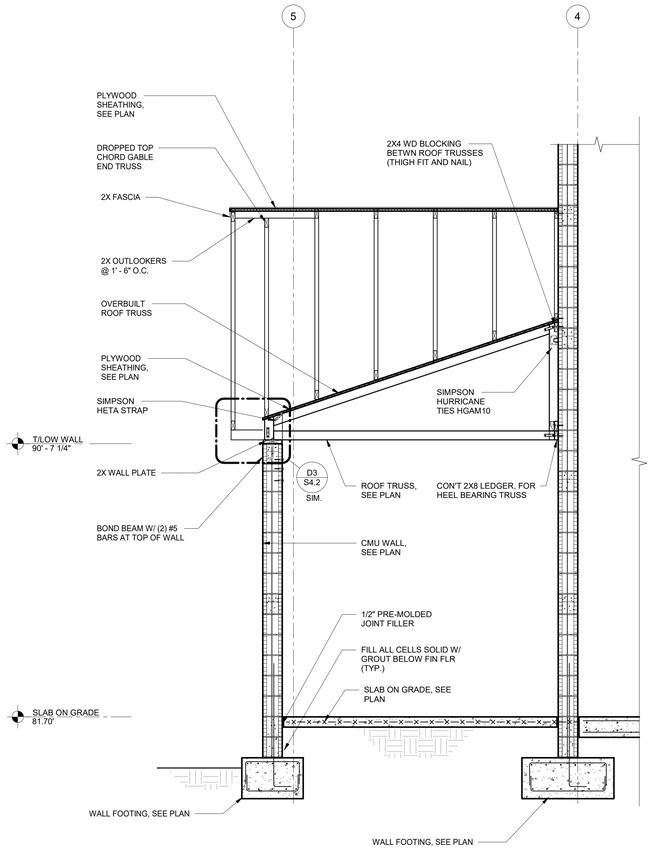
1/31/2020

S4.1

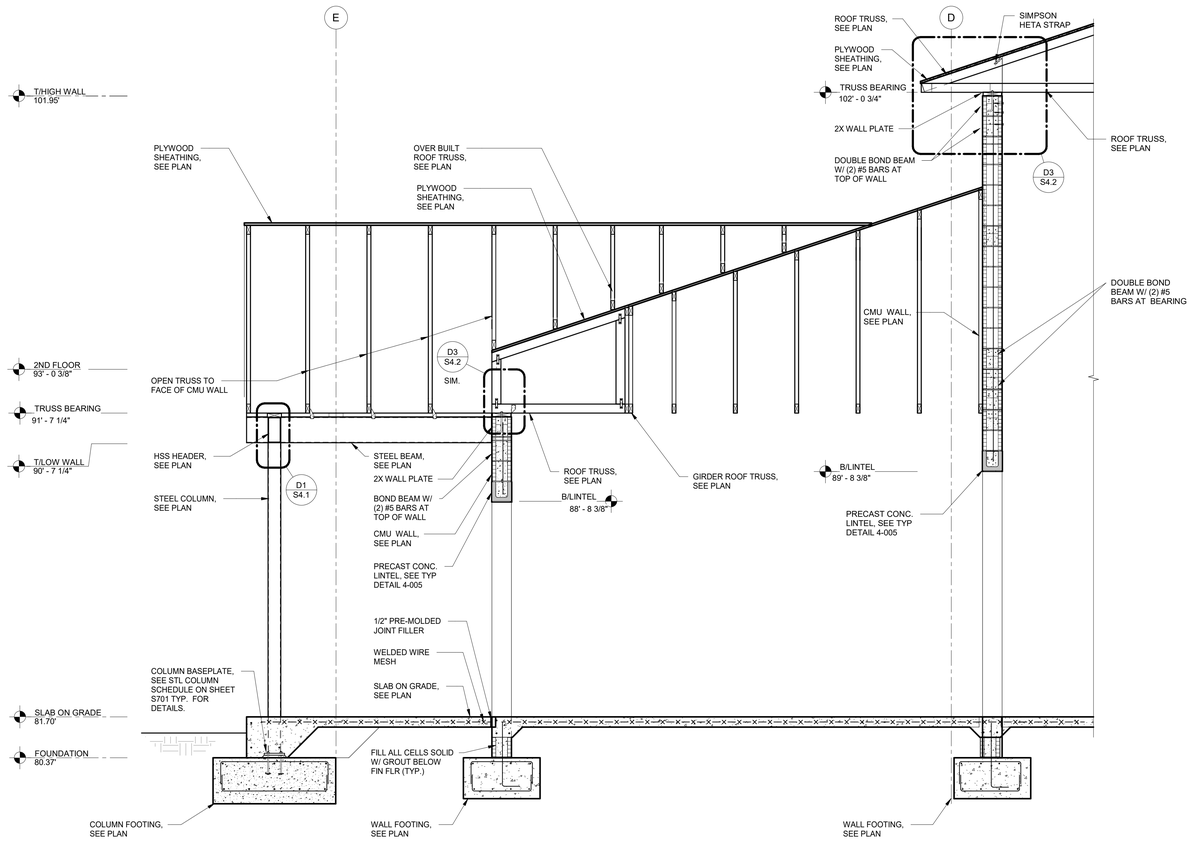
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D3 / S4.2 DETAIL 3
SCALE: 1" = 1'-0"



S6 / S4.2 WALL SECTION 6
SCALE: 1/2" = 1'-0"



S3 / S4.2 WALL SECTION 3
SCALE: 1/2" = 1'-0"

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S4.2

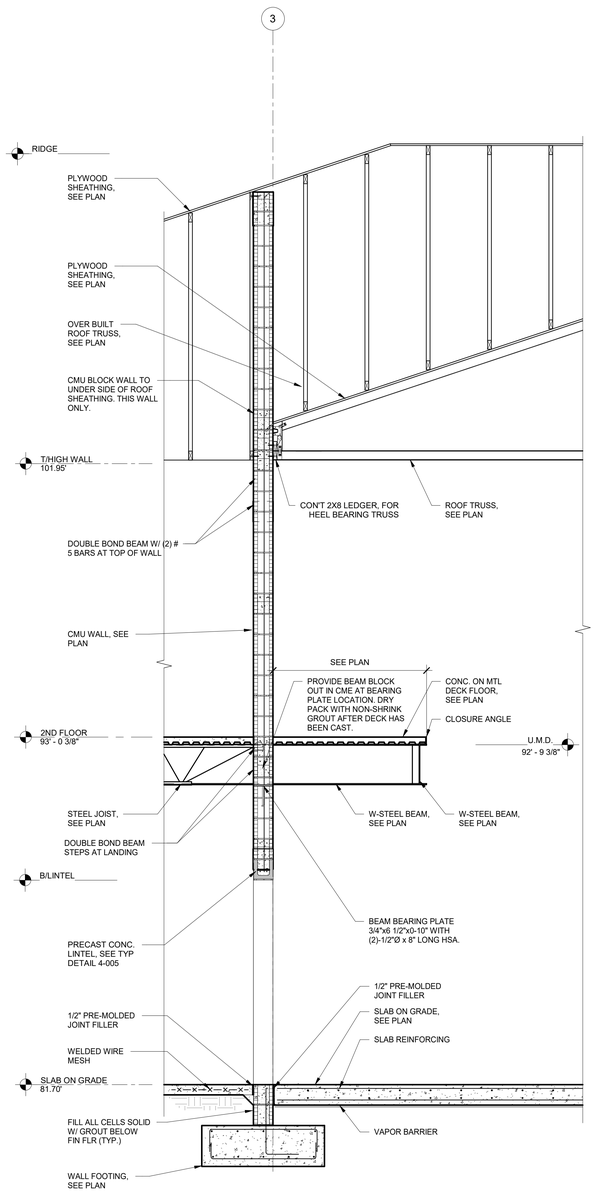
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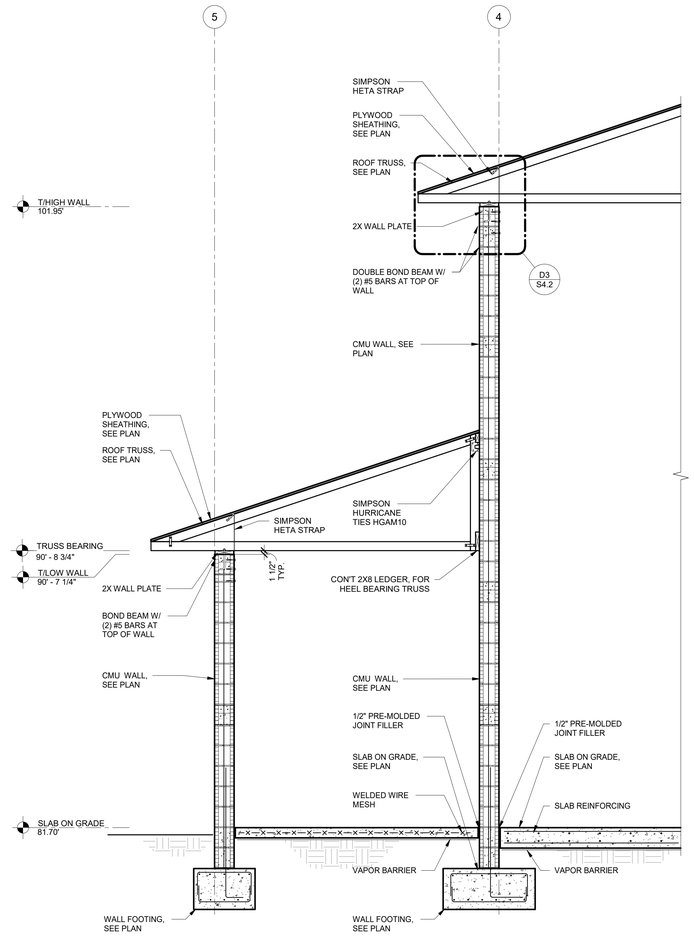
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S4 / S4.3 WALL SECTION 4
SCALE: 1/2" = 1'-0"



S5 / S4.3 WALL SECTION 5
SCALE: 1/2" = 1'-0"

NO.	DESCRIPTION	DATE

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PRICING SET

S4.3

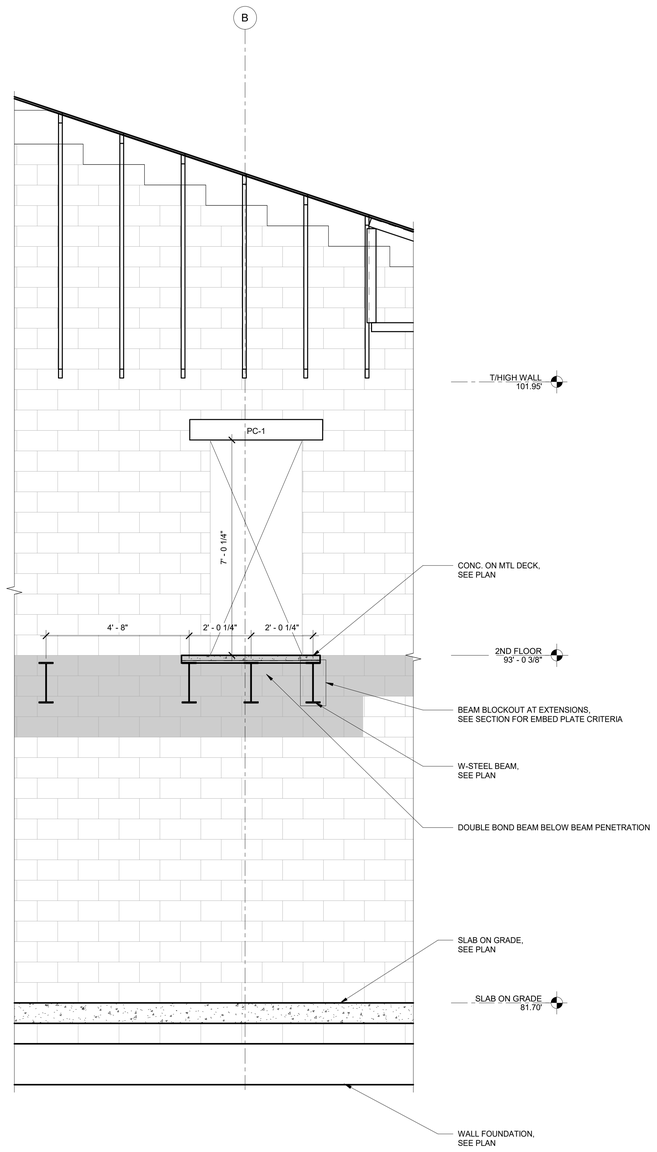
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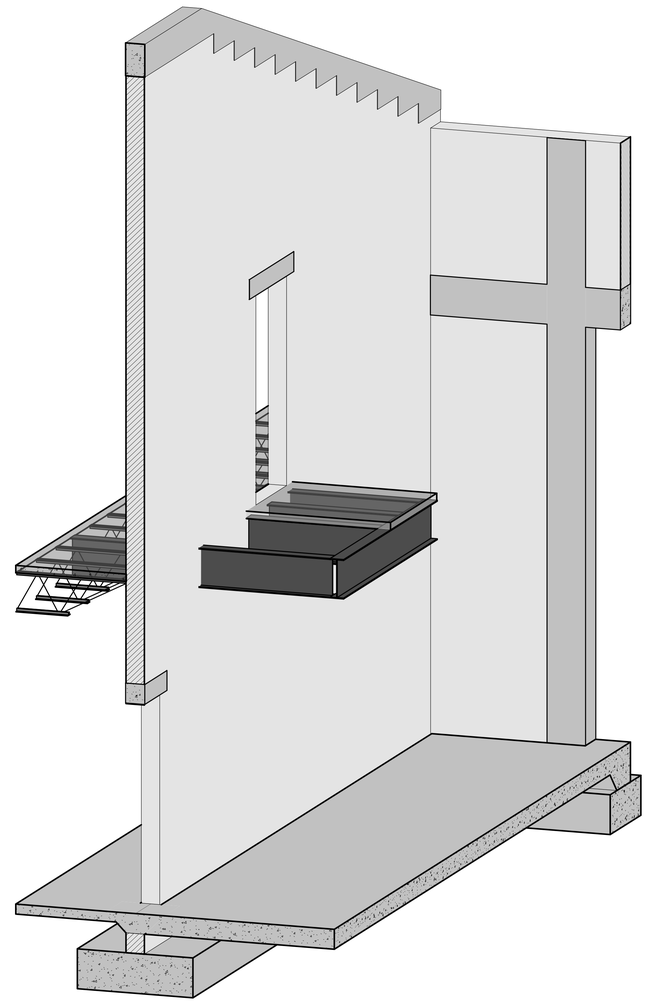
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S11 / S4.4 SECTION 11
SCALE: 1/2" = 1'-0"



V3 / S4.4 ISOMETRIC VIEW 3
SCALE:

NO.	DESCRIPTION	DATE

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PRICING SET

S4.4

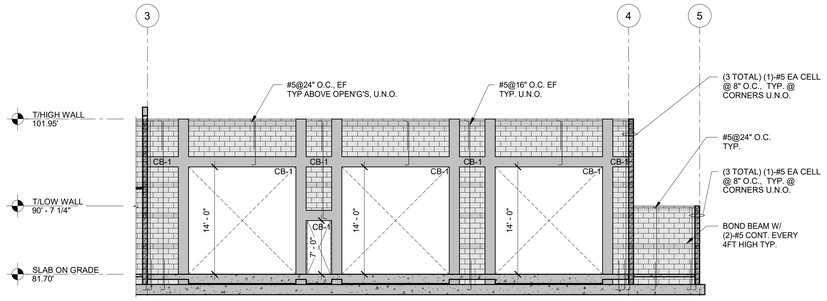
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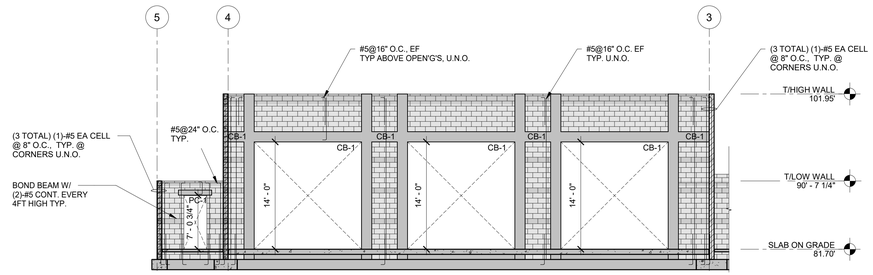
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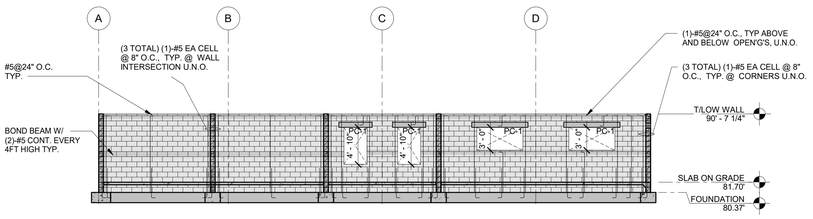
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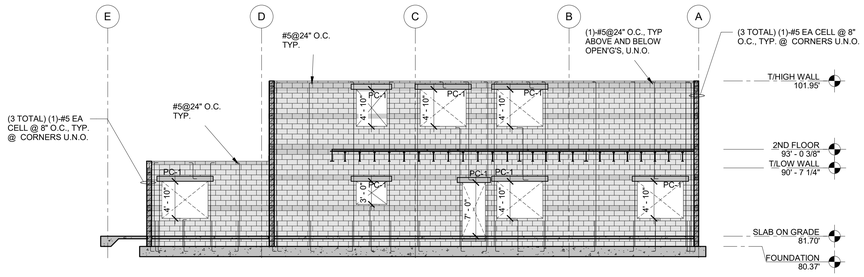
W1 S5.1 WALL ELEVATION 1
SCALE: 1/8" = 1'-0"



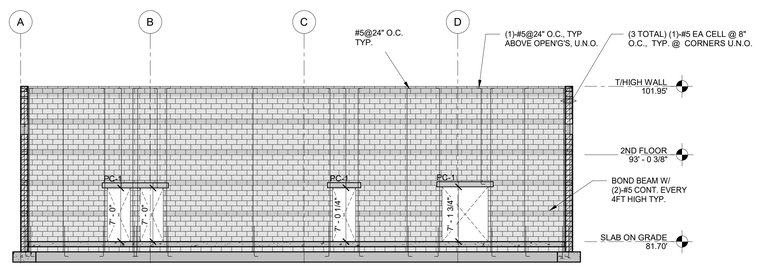
W2 S5.1 WALL ELEVATION 2
SCALE: 1/8" = 1'-0"



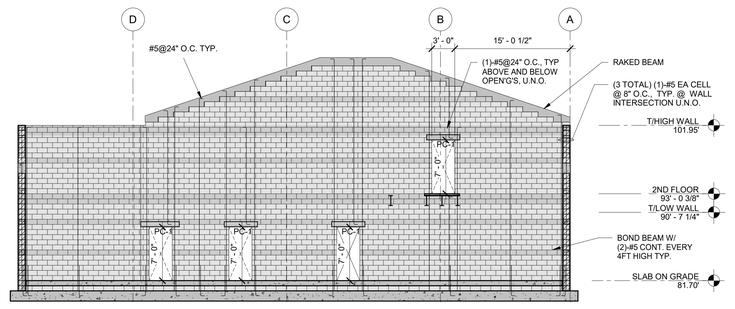
W3 S5.1 WALL ELEVATION 3
SCALE: 1/8" = 1'-0"



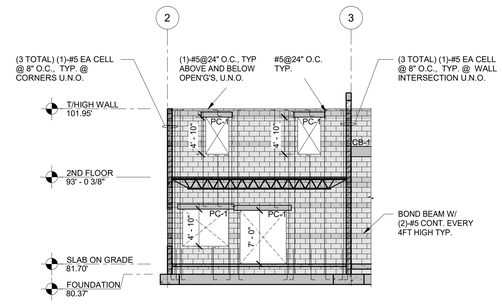
W4 S5.1 WALL ELEVATION 4
SCALE: 1/8" = 1'-0"



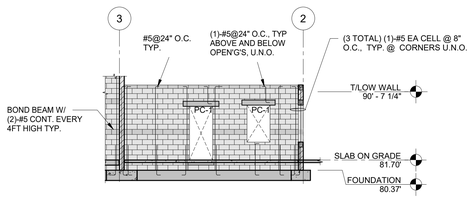
W5 S5.1 WALL ELEVATION 5
SCALE: 1/8" = 1'-0"



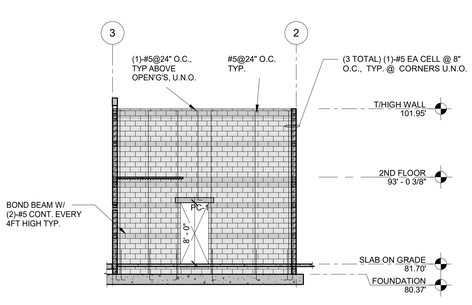
W6 S5.1 WALL ELEVATION 6
SCALE: 1/8" = 1'-0"



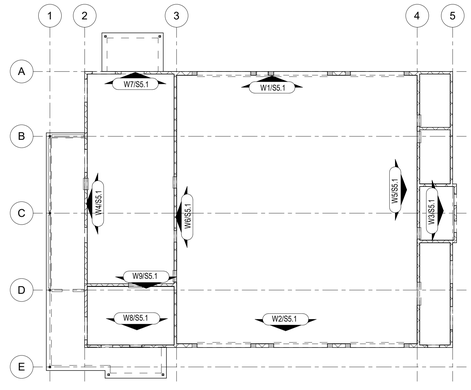
W7 S5.1 WALL ELEVATION 7
SCALE: 1/8" = 1'-0"



W8 S5.1 WALL ELEVATION 8
SCALE: 1/8" = 1'-0"



W9 S5.1 WALL ELEVATION 9
SCALE: 1/8" = 1'-0"



1 S5.1 KEYPLAN OF ELEVATIONS
SCALE: 1/16" = 1'-0"

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CA: 8426 PROJ NO. 1136-001

DATE
NO. DESCRIPTION

ROBERT L. BELL, P.E.
FL. LIC. No. 74081

John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
Ethan J. Hine, AIA
Jennifer Zaffuto, AIA, NCARB, MPA

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18104

NEW LAKE COUNTY FIRE STATION NO. 39
LAKE COUNTY, FLORIDA
WALL ELEVATIONS
Address

1/31/2020

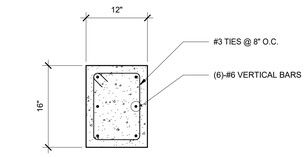
PRICING SET

S5.1

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T/HIGH WALL													T/HIGH WALL
101' - 11 3/8"													101' - 11 3/8"
2ND FLOOR													2ND FLOOR
93' - 0 3/8"	12 x 16	12 x 16	12 x 16	12 x 16	12 x 16	12 x 16	12 x 16	12 x 16	12 x 16	12 x 16	12 x 16	12 x 16	93' - 0 3/8"
FOUNDATION													FOUNDATION
80' - 4 3/8"	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	80' - 4 3/8"
Column Locations	A-3(4' - 8 3/8")	A-3(20' - 0 3/8")	A-3(24' - 8 3/8")	A-4(-2' - 8 3/4")	A-4(-18' - 0 3/4")	A-4(-22' - 8 3/4")	E(5' - 6 7/8")-3(4' - 8 3/8")	E(5' - 6 7/8")-3(20' - 0 3/8")	E(5' - 6 7/8")-3(24' - 8 3/8")	E(5' - 6 7/8")-4(-2' - 8 3/4")	E(5' - 6 7/8")-4(-18' - 0 3/4")	E(5' - 6 7/8")-4(-22' - 8 3/4")	

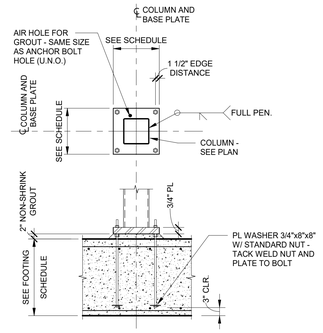
CONCRETE COLUMN SCHEDULE
SCALE: 1/8" = 1'-0"



CONC. COL. - 12X16
SCALE: 1" = 1'-0"

T/LOW WALL								T/LOW WALL
90' - 7 1/4"								90' - 7 1/4"
SLAB ON GRADE	HSS5X5X1/4	HSS5X5X1/4	HSS5X5X1/4	HSS5X5X1/4	HSS5X5X1/4	HSS5X5X1/4	HSS5X5X1/4	HSS5X5X1/4	SLAB ON GRADE
81' - 8 3/8"	S1	S2	S3	S4	S5	S6	S7	S8	81' - 8 3/8"
Column Locations	A(9' - 1 7/8")-2(5' - 5")	A(9' - 1 7/8")-3(-4' - 4 5/8")	B-1	C-1	D-1	E-1	E(-2' - 0 1/8")-2(6' - 3")	E(-2' - 0 1/8")-3(-3' - 6 5/8")	
BASE PLATE	BP1	BP1	BP1	BP1	BP1	BP1	BP1	BP1	

STEEL COLUMN SCHEDULE
SCALE: 1/8" = 1'-0"



BP1 / S7.1 BASE PLATE - BP1
SCALE: 1/2" = 1'-0"

BASE PLATE SCHEDULE			
BASE PLATE	SIZE	ANCHOR BOLTS	REMARKS
BP1	3/4"x8"x8"	(4) - 3/4"ø X 8" LG	HSA

NO.	DESCRIPTION	DATE

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NEW LAKE COUNTY FIRE STATION NO. 39
LAKE COUNTY, FLORIDA
SCHEDULES
Address

18104

1/31/2020

PRICING SET

S7.1

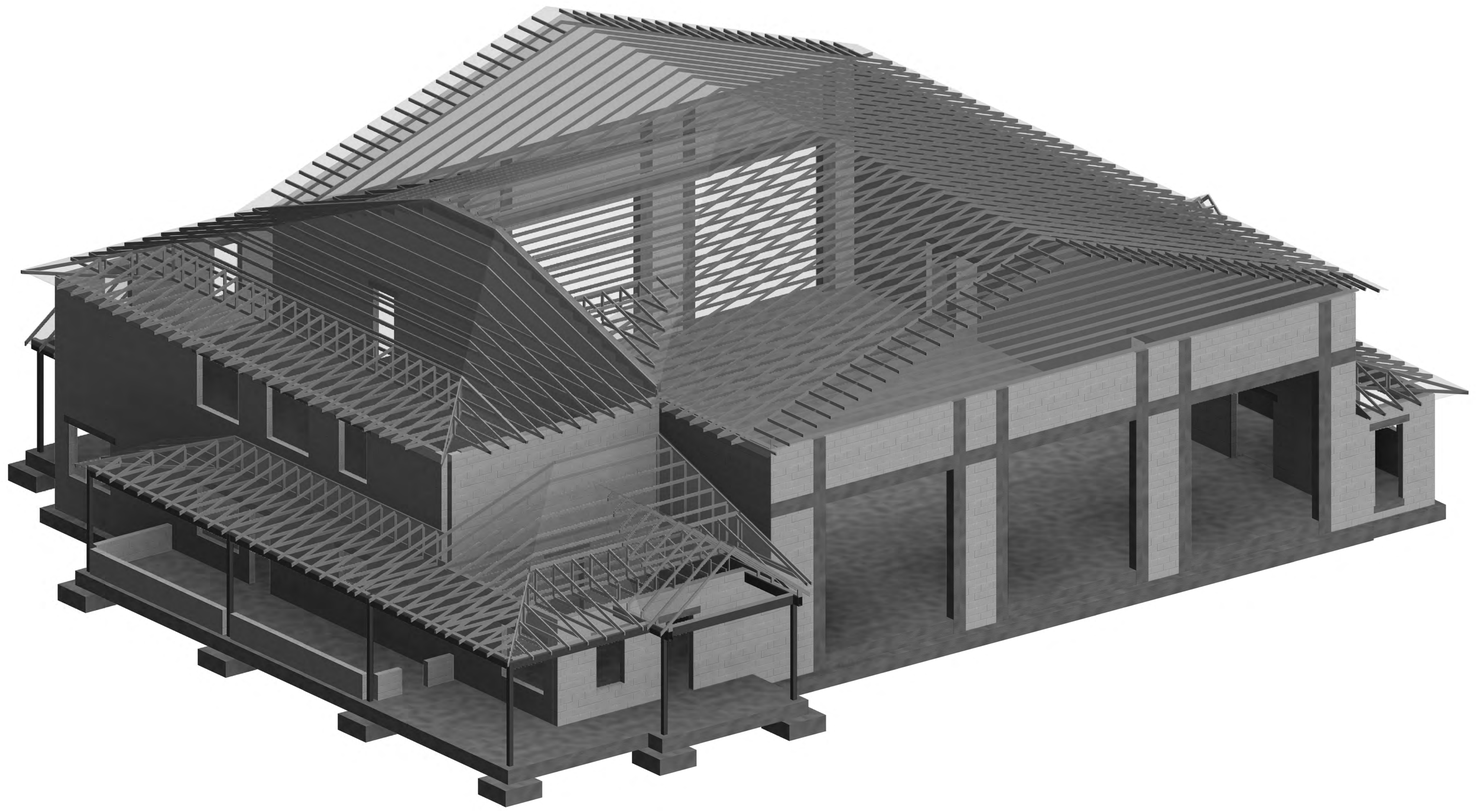
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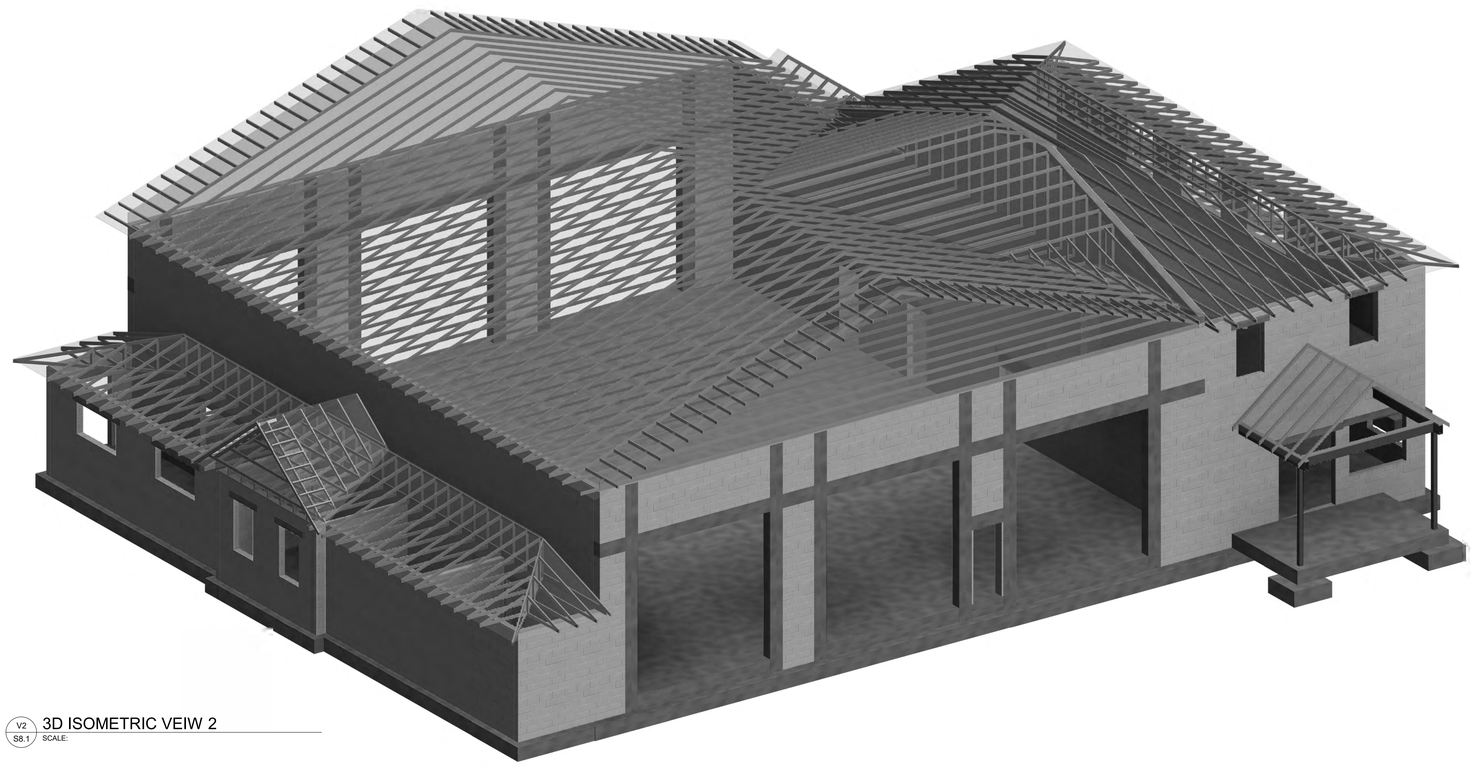
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V1 / S8.1 3D ISOMETRIC VEIW 1
SCALE:



V2 / S8.1 3D ISOMETRIC VEIW 2
SCALE:

NO.	DESCRIPTION	DATE

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NEW LAKE COUNTY FIRE STATION NO. 39

LAKE COUNTY, FLORIDA
ISOMETRIC VIEWS
Address

18104

1/31/2020

PRICING SET

S8.1

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FIRE PROTECTION SYMBOLS AND ABBREVIATIONS

NOTE: SYMBOLS AND ABBREVIATIONS INDICATED HERE AND NOT USED IN THE CONTRACT DOCUMENTS DO NOT APPLY TO THIS PROJECT. ADDITIONAL SYMBOLS MAY BE INDICATED IN THE CONTRACT DOCUMENTS.

PIPE FITTINGS

- ELBOW DOWN
- ELBOW UP
- TEE DOWN
- TEE UP
- PIPE CAP
- PIPING CONNECTION

PIPE VALVES AND SPECIALTIES

- SHUTOFF VALVE
- BUTTERFLY VALVE
- CHECK VALVE
- O S & Y VALVE
- FLOW SWITCH
- PIPE HANGER

GENERAL SYMBOLS

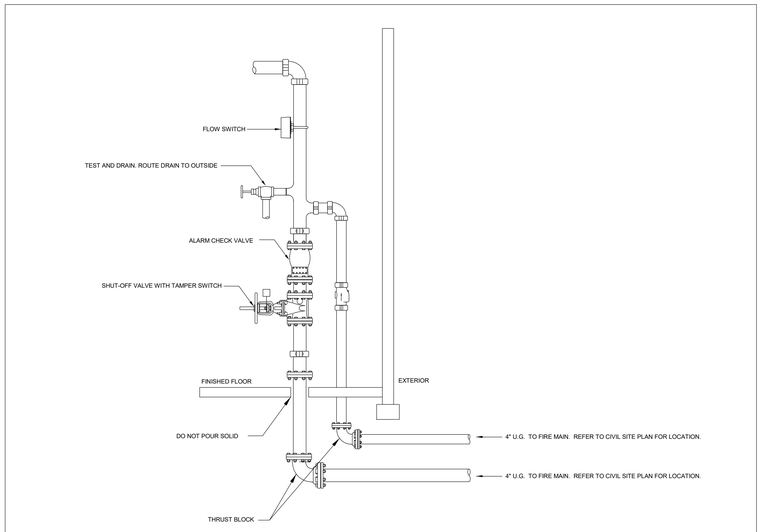
- FIRE DEPARTMENT CONNECTION
- INSPECTOR'S TEST ASSEMBLY
- INSPECTOR'S TEST AND DRAIN ASSEMBLY
- SPRINKLER ZONE BOUNDARY
- HYDRAULIC CALCULATION DESIGN AREA

PIPING SYSTEM LABELS

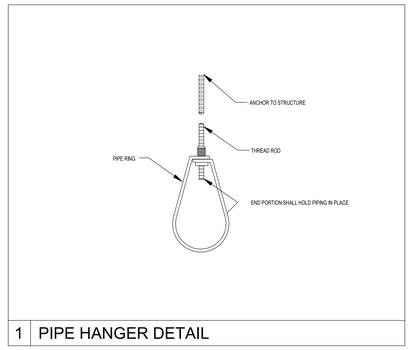
NEW	EXISTING	
F	XF	FIRE SUPPLY
SPR	XSPR	SPRINKLER PIPE

REFERENCE SYMBOLS

- NEW CONNECTION TO EXISTING
- 1 KEYNOTE NUMBER
- # REVISION NUMBER



2 FIRE RISER DETAIL



1 PIPE HANGER DETAIL

ABBREVIATIONS

ACC	-	ACCESS	MAX	-	MAXIMUM
ACV	-	ALARM CHECK VALVE	MFR	-	MANUFACTURER
AFF	-	ABOVE FINISHED FLOOR	MIN	-	MINIMUM/MINUTE
ALT	-	ALTERNATE	MISC	-	MISCELLANEOUS
AP	-	ACCESS PANEL	MTD	-	MOUNTED
APPROX	-	APPROXIMATE	MTG	-	MOUNTING
ARCH	-	ARCHITECTURAL			
ASSY	-	ASSEMBLY	NFPA	-	NATIONAL FIRE PROTECTION ASSOCIATION
ATS	-	AUTOMATIC TRANSFER SWITCH	NO	-	NUMBER
			NOM	-	NOMINAL
BLDG	-	BUILDING	NPT	-	NATIONAL PIPE THREAD
BOT	-	BOTTOM	NTS	-	NOT TO SCALE
BTWN	-	BETWEEN			
			OC	-	ON CENTER
CFCI	-	CONTRACTOR FURNISHED CONTRACTOR INSTALLED	OD	-	OUTSIDE DIAMETER
CL	-	CENTERLINE	OFCI	-	OWNER FURNISHED CONTRACTOR INSTALLED
CLG	-	CEILING	OFOI	-	OWNER FURNISHED OWNER INSTALLED
CONN	-	CONNECTION/CONNECT			
CONTR	-	CONTRACTOR			
CORR	-	CORRIDOR	PIV	-	POST INDICATOR VALVE
			PRESS	-	PRESSURE
D	-	DEPTH/DRAIN LINE	PRV	-	PRESSURE REDUCING VALVE
DCBP	-	DOUBLE CHECK BACKFLOW PREVENTER	PSF	-	POUNDS PER SQUARE FOOT
DDBP	-	DOUBLE DETECTOR BACKFLOW PREVENTER	PSI	-	POUNDS PER SQUARE INCH
DET	-	DETAIL	PSIG	-	POUNDS PER SQUARE INCH GAUGE
DIA	-	DIAMETER			
DIM	-	DIMENSION	RAD	-	RADIUS
DN	-	DOWN	REC	-	RECESSED
DWG	-	DRAWING	REQD	-	REQUIRED
			RI	-	ROUGH-IN
EA	-	EACH	RPM	-	REVOLUTIONS PER MINUTE
ELEV	-	ELEVATION	RPBP	-	REDUCED PRESSURE ZONE BACKFLOW PREVENTER
EQUIP	-	EQUIPMENT			
EXT	-	EXTERIOR			
			SCH	-	SCHEDULE
F	-	FIRE SUPPLY	SHT	-	SHEET
FACP	-	FIRE ALARM CONTROL PANEL	SPEC	-	SPECIFICATION
FDC	-	FIRE DEPARTMENT CONNECTION	SPR	-	SPRINKLER
FDV	-	FIRE DEPARTMENT VALVE	SQ	-	SQUARE
FLR	-	FLOOR	S/S	-	STAINLESS STEEL
FS	-	FLOW SWITCH	STRU	-	STRUCTURAL/STRUCTURE
FT	-	FEET			
FTG	-	FOOTING	TEMP	-	TEMPERATURE
			TOB	-	TOP OF BEAM
GA	-	GAUGE	TOD	-	TOP OF DECK
GAL	-	GALLON	TOJ	-	TOP OF JOIST
GALV	-	GALVANIZED	TOS	-	TOP OF SLAB/TOP OF STEEL
GPM	-	GALLONS PER MINUTE	TYP	-	TYPICAL
HD	-	HUB DRAIN	UBC	-	UNIFORM BUILDING CODE
IBC	-	INTERNATIONAL BUILDING CODE	UFC	-	UNIFORM FIRE CODE
ID	-	INSIDE DIAMETER	UNO	-	UNLESS NOTED OTHERWISE
IE	-	INVERT ELEVATION			
IFC	-	INTERNATIONAL FIRE CODE	V	-	VALVE
IN	-	INCHES	VEL	-	VELOCITY
JP	-	JOCKEY PUMP	VOL	-	VOLUME
JPC	-	JOCKEY PUMP CONTROLLER			
			W	-	WIDTH
L	-	LENGTH	W/	-	WITH
LBS	-	POUNDS	W/O	-	WITHOUT
			X	-	EXISTING

FIRE PROTECTION SPECIFICATIONS

DESCRIPTION

A. THIS SECTION SPECIFIES MATERIALS, METHODS, AND EQUIPMENT TO BE USED FOR AUTOMATIC SPRINKLER SYSTEM AND RELATED FIRE PROTECTION PIPING TWELVE INCHES ABOVE THE SERVICE ENTRANCE BUILDING.
B. RESEARCH INDICATES THERE IS NO DOCUMENTATION OR INDICATION THAT MICROBIOLOGICALLY INFLUENCED CORROSION (MIC) EXISTS IN THE AREA OF THE PROJECT.
C. NFPA 13'S SEISMIC REQUIREMENTS ARE NOT PART OF THIS PROJECT.
D. BUILDING IS PROVIDED WITH MULTIPLE SPRINKLER ZONE(S)
E. EACH WET PIPE ZONE SHALL BEGIN WITH:
1. INDICATING-TYPE FLOOR CONTROL VALVE WITH SUPERVISORY SWITCH
2. PRESSURE GAUGE
3. WATERFLOW SWITCH
4. INSPECTOR'S TEST AND DRAIN ASSEMBLY

F. ENGINEER OF RECORD: CONTRACTOR SHALL BE ENGINEER OF RECORD.

QUALITY ASSURANCE

A. CODES AND STANDARDS:

1. THIS INSTALLATION SHALL CONFORM TO THE FOLLOWING:
2. NFPA 13, INSTALLATION OF SPRINKLER SYSTEMS 2017 EDITION
3. NFPA 24, INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES 2010 EDITION
4. NFPA 72, NATIONAL FIRE ALARM CODE 2014 EDITION
5. NFPA 101, LIFE SAFETY CODE 2017 EDITION FLORIDA SPECIFIC
6. LOCAL AND STATE BUILDING, MECHANICAL, AND FIRE CODES
7. UNDERWRITERS LABORATORIES (UL) FIRE PROTECTION EQUIPMENT DIRECTORY

B. CONTRACTOR INSTALLATION PROGRAM:
1. THE CONTRACTOR SHALL OBTAIN A CURRENT HYDRANT FLOW TEST FOR THE PURPOSES OF DESIGN AND HYDRAULIC CALCULATION FOR THIS PROJECT.
2. PROVIDE LICENSED PERSONS EMPLOYED BY SPRINKLER CONTRACTOR TO PERFORM PLANNING, CALCULATIONS, LAYOUT, INSTALLATION, AND TESTING OF FIRE PROTECTION SYSTEMS. THE FOLLOWING ARE ACCEPTABLE:
a. CERTIFIED SPRINKLER DESIGNER
b. NATIONAL INSTITUTE FOR CERTIFICATION OF ENGINEERING TECHNOLOGIES, (NICET) LEVEL IV
c. LICENSED PROFESSIONAL ENGINEER
2. PROVIDE JOURNEYMAN SPRINKLER FITTER(S) FOR INSTALLATION AND SUPERVISION.
3. CONTRACTOR SHALL BE LICENSED IN THE STATE OF FLORIDA FOR INSTALLATION OF FIRE PROTECTION SYSTEMS.
4. CONTRACTOR SHALL SUBMIT PRE-QUALIFICATION EVIDENCE OF AT LEAST 3 PROJECTS OF COMPARABLE SIZE SUCCESSFULLY COMPLETED WITH THEIR BID.
5. DISTORTION OR MISREPRESENTATION OF QUALIFICATION EVIDENCE MAY RESULT IN CONTRACT CESSATION.

C. ELECTRICAL COORDINATION

1. ALL RELAYS, WIRE, CONDUIT, PUSHBUTTONS, PILOT LIGHTS, AND OTHER DEVICES REQUIRED FOR POWER SIDE OR THE CONTROL OF ELECTRICAL EQUIPMENT SHALL BE FURNISHED BY DIVISION 26 AND DIVISION 28 CONTRACTORS, EXCEPT AS SPECIFICALLY NOTED ELSEWHERE IN THIS SPECIFICATION.
2. SHOULD ANY CHANGE IN ELECTRICAL EQUIPMENT SIZE, HORSEPOWER RATING OR MEANS OF CONTROL BE MADE TO ANY MOTOR OR OTHER ELECTRICAL EQUIPMENT AFTER CONTRACTS ARE AWARDED, SPRINKLER CONTRACTOR IS TO IMMEDIATELY NOTIFY DIVISION 26 AND DIVISION 28 CONTRACTORS OF THIS CHANGE AND PAY ANY COSTS DUE TO THIS CHANGE.
3. DIVISION 26 CONTRACTORS SHALL PROVIDE ALL POWER WIRING AND SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL CONTROL WIRING AND ITS CONDUIT. CONTROL WIRING SHALL CONFORM TO DIVISION 26 AND 28 REQUIREMENTS FOR CONTROL WIRING.
4. FURNISH WIRING DIAGRAMS TO DIVISION 26 AND DIVISION 28 CONTRACTORS FOR EQUIPMENT AND DEVICES FURNISHED BY SPRINKLER CONTRACTOR WHICH HAVE BEEN INDICATED TO BE WIRED BY DIVISION 26 AND DIVISION 28 CONTRACTORS.

MATERIALS

A. MATERIALS AND EQUIPMENT:

1. MATERIALS AND EQUIPMENT IN SYSTEM SHALL BE NEW AND CURRENT PRODUCTS OF MANUFACTURER REGULARLY ENGAGED IN PRODUCTION OF SUCH MATERIALS AND EQUIPMENT.
2. WHERE 2 OR MORE PIECES OF EQUIPMENT ARE REQUIRED TO PERFORM INTERRELATED FUNCTIONS, THEY SHALL BE PRODUCTS OF SAME MANUFACTURER.
3. CLEAN AND CAP PIPE AFTER FABRICATION AND PRIOR TO PLACING PIPE IN BUILDING.
4. MARK PIPE WITH TAGS THAT CAN BE REMOVED DURING INSTALLATION SO NO PERMANENT MARKINGS REMAIN ON UNPAINTED PIPE LOCATED IN EXPOSED AREAS.
5. APPROVAL GUIDES:
6. UNLESS OTHERWISE SHOWN, PRODUCTS SHALL BE UL LISTED IN THE LATEST PUBLICATION OF THE UL FIRE PROTECTION EQUIPMENT DIRECTORY AND / OR APPROVED IN THE LATEST FACTORY MUTUAL RESEARCH CORPORATION APPROVAL GUIDE FOR SERVICE INTENDED.

PIPE

A. ABOVE GROUND - 2" AND SMALLER:
a. PIPE: CARBON STEEL PIPE, SCHEDULE 40, AMERICAN SOCIETY FOR TESTING OF MATERIALS (ASTM) A795, A53, OR A135
b. FITTINGS:
1). MALLEABLE IRON, THREADED, CLASS 125, 175 PSI COLD WATER PRESSURE (CWP) RATING, ANSI B16.3
2). DUCTILE IRON OR MALLEABLE IRON, GROOVED FOR MECHANICAL COUPLING, 175 PSI CWP RATING, MALLEABLE IRON CONFORMING TO ASTM A47. FITTING, GASKET, AND COUPLING SHALL BE FURNISHED BY SAME MANUFACTURER.
c. JOINTS:
1). THREADED, TAPERED PIPE THREADS, ANSI B1.20.1
2). MECHANICAL:
A). GROOVED COUPLINGS SHALL BE SAME MANUFACTURER AS USED FOR GROOVED FITTINGS.
B). MALLEABLE IRON, ASTM A47, EQUAL TO VICTAULIC, STYLE 75
C). RIGID MECHANICAL, ASTM A-536, EQUAL TO VICTAULIC, STYLE 005
D). WET SYSTEMS GASKET: GRADE E EPDM GASKET PER UL 157 AND UL 213
E). DRY SYSTEMS GASKET: VICTAULIC "FLUSHSEAL" OR EQUAL
F). RIGID OR ZERO FLEX TYPE COUPLINGS SHALL BE PROVIDED WHEN OPERATING PRESSURES CAUSE PIPING TO MOVE OUT OF PLACE OR SWAY ON HANGERS. FLEXIBLE COUPLINGS MAY BE USED WHERE PIPE IS BRACED OR CLAMPED INTO RIGID POSITION.

B. ABOVE GROUND - 2" AND SMALLER:
a. PIPE: CARBON STEEL PIPE, SCHEDULE 10, ASTM A795, ASTM A53, OR A135
a. FITTINGS:
1). CARBON STEEL BUTT WELD, ASTM A234 GRADE WPB/ASME B16.9, SCHEDULE 10, SEAMLESS
2). DUCTILE IRON OR MALLEABLE IRON, ROLL GROOVED FOR MECHANICAL COUPLING, 175 PSI CWP RATING, MALLEABLE IRON CONFORMING TO ASTM A47. FITTING, GASKET, AND COUPLING SHALL BE FURNISHED BY SAME MANUFACTURER.
A). ACCEPTABLE MANUFACTURERS: ANVIL GRUVLOK, TYCO GRINNELL, VICTAULIC, VIKING, OR EQUAL
c. JOINTS:
1). WELDED, WELDING ELECTRODES SHALL BE LINCOLN OR EQUAL WITH COATING AND DIAMETER AS RECOMMENDED BY MANUFACTURER FOR TYPE AND THICKNESS OF WORK BEING DONE.
2). ROLL GROOVE

VALVES

A. BALL VALVE:
1. ACCEPTABLE MANUFACTURERS: MILWAUKEE VALVE CO., MUELLER, NIBCO, STOCKHAM, VICTAULIC, OR EQUAL
2. PROVIDE HIGH PRESSURE VALVES AND FITTINGS WHEN PRESSURES EXCEED 175 PSI WATER WORKING PRESSURE.

B. BUTTERFLY VALVE:
1. ACCEPTABLE MANUFACTURERS: KENNEDY, MILWAUKEE VALVE CO., MUELLER, NIBCO, STOCKHAM, TYCO FIRE PRODUCTS, VICTAULIC, OR EQUAL
2. MILWAUKEE VALVE CO., SERIES BB FOR VALVE SIZES 1" TO 2-1/2" OR EQUAL.
3. KENNEDY VALVE CO., FIG. G300 FOR SIZES 2-1/2" TO 6", VICTAULIC, SERIES 705 FIRELOCK FOR VALVE SIZES 2-1/2" TO 8", OR EQUAL
4. PROVIDE HIGH PRESSURE VALVES AND FITTINGS WHEN PRESSURES EXCEED 175 PSI WATER WORKING PRESSURE.

C. TEST AND DRAIN VALVES:
1. ACCEPTABLE MANUFACTURERS: AGF, VICTAULIC, OR EQUAL
2. AGF TESTANDRAIN, VICTAULIC, STYLE 720, TESTMASTER II, OR EQUAL
3. PROVIDE HIGH PRESSURE VALVES AND FITTINGS WHERE PRESSURES EXCEED 175 PSI WATER WORKING PRESSURE.

D. DRAIN VALVES:
1. ACCEPTABLE MANUFACTURERS: KENNEDY, NIBCO, OR EQUAL
2. THREAD-IN BONNET BRONZE GLOBE VALVES, RATED TO 175 PSI NON-SHOCK COLD WATER WORKING PRESSURE
3. PROVIDE HIGH PRESSURE VALVES AND FITTINGS WHEN PRESSURES EXCEED 175 PSI COLD WATER WORKING PRESSURE.

SPRINKLER HEAD

A. MANUFACTURERS:
1. UNLESS OTHERWISE NOTED BELOW, SHALL BE MANUFACTURED BY RELIABLE, TYCO FIRE PRODUCTS, VIKING, OR EQUAL.
B. AUTOMATIC, HAVING TEMPERATURE AND PRESSURE RATING SUITABLE FOR LOCATION.
C. ARCHITECT WILL REVIEW DEVIATIONS FROM SPECIFIED STYLES FOR APPROVAL PRIOR TO INSTALLATION.
D. TEMPERATURE CLASS OF SPRINKLER HEADS SHALL VARY IF INSTALLED CLOSE TO HEAT SOURCES, UNDER SKYLIGHTS OR IN SPECIAL HAZARD AREAS. REFER TO NFPA 13 FOR REQUIREMENTS.
E. SPRINKLER CABINETS:

1. SHALL BE COMPLETE WITH REQUIRED NUMBER OF SPARE SPRINKLER HEADS OF EACH TYPE AND TEMPERATURE RATING PER NFPA 13
2. SHALL BE PROVIDED WITH AT LEAST ONE SPRINKLER WRENCH FOR EACH TYPE OF SPRINKLER INSTALLED
3. PROVIDE MULTIPLE CABINETS TO MEET THIS REQUIREMENT.
4. COORDINATE CABINET LOCATIONS WITH OWNER'S REPRESENTATIVE.

HANGERS

A. ACCEPTABLE MANUFACTURERS: AFCON, ANVIL, B-LINE, TOLCO, OR EQUAL
B. CONCRETE EXPANSION HANGERS, WHEN PROVIDED, ARE TO BE HILTI, PHILLIPS, POWERS, OR EQUAL
C. HANGER RODS SHALL COMPLY WITH MANUFACTURER STANDARDIZATION SOCIETY (MSS) STANDARDS AND MANUFACTURER'S PUBLISHED LOAD RATING.
D. PROVIDE HANGER ROD, HANGER ROD ATTACHMENTS, BOLTS, U-BOLTS, NUTS, STUDS AND WASHERS WITH ELECTROPLATED ZINC COATING OR WITH HOT-DIPPED GALVANIZED FINISH.
E. RISER CLAMPS SHALL BE ELECTROPLATED ZINC COATED OR HAVE A HOT-DIPPED GALVANIZED FINISH AND SHALL NOT PROTRUDE MORE THAN 2" BEYOND EDGE OF HOLE. PROVIDE ANVIL FIG. 261 OR EQUAL.

PRESSURE GAUGES

A. ACCEPTABLE MANUFACTURERS: ASHCROFT, POTTER-ROEMER, VIKING, OR EQUAL
B. PRESSURE GAUGES SHALL BE 3-1/2", CORROSION RESISTANT MOVING PARTS, POLYCARBONATE WINDOW, AND PROVIDED WITH CONNECTION NOT SMALLER THAN 1/4" NPT.
C. INCLUDE BALL VALVE WITH PROVISIONS FOR DRAINING ON EACH PRESSURE GAUGE.

EXECUTION

A. SPRINKLER CONTRACTOR, PRIOR TO PREPARATION OF INSTALLATION DRAWINGS AND HYDRAULIC DESIGN CALCULATIONS, SHALL PROVIDE HYDRANT FLOW TEST INFORMATION FROM WITHIN THE LAST 12 MONTHS.
B. SYSTEMS THAT ARE HYDRAULICALLY CALCULATED MUST INCLUDE 1.2 FACTOR FOR DESIGN AREA.
C. FIRE PROTECTION SYSTEM LAYOUT AND INSTALLATION DRAWINGS:

1. CONTRACTOR SHALL REVIEW DESIGN DRAWINGS AND SPECIFICATIONS, AND SHALL PROVIDE INSTALLATION DRAWINGS, CALCULATIONS, AND PRODUCT DATA SHEETS.
2. CONCEAL SPRINKLER PIPING ABOVE CEILINGS WHERE POSSIBLE.
3. CONTRACTOR SHALL CONSULT WITH ARCHITECT DURING DEVELOPMENT OF PIPING LAYOUT TO AVOID CONFLICTS WITH GENERAL APPEARANCE. PIPE ROUTING IS A CRITICAL ISSUE DUE TO ATTRIBUTES OF THIS BUILDING.
4. CONTRACTOR SHALL BE RESPONSIBLE TO HAVE EXAMINED "REFLECTED CEILING" DRAWINGS AS WELL AS MECHANICAL, ELECTRICAL, PIPING, INFORMATION TECHNOLOGY, STRUCTURAL AND ARCHITECTURAL BUILDING PLANS PRIOR TO SYSTEM LAYOUT.
5. CONTRACTOR SHALL COORDINATE ROUTING OF PIPING WITH OTHER TRADES AND ARCHITECT.
6. CONTRACTOR SHALL PARTICIPATE IN COORDINATION PROCESS AND SHALL NOT INSTALL PIPING PRIOR TO COORDINATION WITH OTHER TRADES.

INSPECTION

A. INVESTIGATE SITE CONDITIONS; VERIFY UTILITY LOCATIONS AND ELEVATIONS BEFORE START OF EXCAVATION. FORWARD DISCREPANCIES TO ARCHITECT/ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.

INSTALLATION

A. INSTALL HYDRAULICALLY DESIGNED SPRINKLER SYSTEM AND ASSOCIATED ACCESSORIES ACCORDING TO REQUIREMENTS OF NFPA 13 AND AS SHOWN ON DRAWINGS.
B. INSTALL PIPE, FITTINGS, COUPLINGS, AND VALVES ACCORDING TO REQUIREMENTS OF MANUFACTURER.
C. PROVIDE NONFERROUS METAL PIPE IN MRI AREA(S).
D. KEEP MATERIALS WITHIN LISTED TEMPERATURE RANGE TO ASSURE JOINTING IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
E. PIPE AND FITTINGS SHALL BE OF CORRESPONDING MATERIALS WHEN ASSEMBLED.
F. ABOVE GROUND PIPE:
1. PROVIDE PIPE IDENTIFICATION SYSTEM WITH FLOW DIRECTIONAL ARROWS ON FIRE PROTECTION PIPE IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. FOR ADDITIONAL INFORMATION, REFER TO SECTION 20 0553 - MECHANICAL SYSTEMS IDENTIFICATION.
2. COAT EXPOSED THREADS WITH CORROSION INHIBITIVE PAINT, EQUAL TO RUST-OLEUM. APPLY PAINT PER MANUFACTURER'S INSTRUCTIONS.
G. PROVIDE READILY REMOVABLE FITTINGS AT END OF CROSS-MAINS. MINIMUM SIZE OF FLUSHING CONNECTION SHALL BE 2".
H. PROVIDE TEST CONNECTION FOR EACH FLOW SWITCH.
I. PROVIDE AUXILIARY DRAINS AT LOW POINTS OF SYSTEMS PER REQUIREMENTS OF NFPA 13.
J. IDENTIFY VALVE WITH BRASS TAG DENOTING WHICH FLOW SWITCH IS BEING TESTED, WHEN TEST VALVES ARE LOCATED REMOTE FROM FLOW SWITCH.
K. CLAMP-ON OR SADDLE TYPE FITTINGS ARE NOT ALLOWED. OUTLET FITTINGS INSERTED INTO HOLES DRILLED INTO PIPING OR PIPE-O-LETS ARE NOT ALLOWED.
L. PROVIDE REDUCING FITTINGS OR PROVIDE SHOP FABRICATED WELD-O-LETS TO CHANGE PIPE SIZES IN SPRINKLER/STANDPIPE SYSTEMS. NO BUSHINGS OR GROOVED REDUCING COUPLINGS, SUCH AS VICTAULIC, STYLE 750, ARE ALLOWED.
M. SPRINKLERS ARE REQUIRED TO BE INSTALLED IN THE CENTER OF CEILING TILES.(WHERE THEY ARE INSTALLED.
N. INSTALL TAMPER SWITCH ON EACH SHUTOFF VALVE.
O. INSTALL LOCKING DEVICE WITH EACH SHUTOFF VALVE TO PREVENT INADVERTENT CLOSING OF VALVE. KEYS SHALL BE INDEXED TO IDENTIFY VALVE LOCATION.
P. INSTALL SPRINKLER HEADS AS RECOMMENDED BY MANUFACTURER. SPRINKLERS SHALL BE SET LEVEL AND AT LOCATIONS TO AVOID INTERFERENCE WITH SPRAY PATTERN OF SPRINKLER. WHEN DUCTS AND LIGHTS ARE OBSTRUCTIONS TO SPRINKLER DISTRIBUTION, PROVIDE ADDITIONAL HEADS BENEATH OBSTRUCTION.
Q. MAKE JOINTS OF THREADED PIPE BY CUTTING PIPE SQUARE AND REAMING INSIDE.
R. USE JOINT COMPOUND SPARINGLY.
S. INSTALL JOINTS FOR MECHANICAL COUPLED PIPE ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. USE MANUFACTURER'S GASKET LUBRICANT SPARINGLY.
T. PIPE GROOVING SHALL BE PER COUPLING MANUFACTURER'S INSTRUCTIONS.
U. WELDED JOINTS SHALL BE MADE IN FABRICATION SHOP. NO WELDING ALLOWED AT PROJECT SITE.
V. HANGERS, BRACING, AND RESTRAINT OF SYSTEM PIPING:
1. PROVIDE HANGERS AND ASSOCIATED PARTS TO SUPPORT PIPING IN PERFECT ALIGNMENT WITHOUT SAGGING OR INTERFERENCE, TO PERMIT FREE EXPANSION AND CONTRACTION, AND MEET REQUIREMENTS OF NFPA 13 AND MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. MAINS PARALLEL TO JOISTS SHALL NOT BE SUPPORTED FROM A SINGLE JOIST. MAINS PARALLEL TO JOISTS SHALL BE SUPPORTED BY TRAPEZE HANGER AND BE POSITIONED EQUALLY BETWEEN TWO JOISTS. TRAPEZE HANGERS SHALL BE POSITIONED TO LOAD JOISTS AT PANEL POINTS ONLY.
3. SUPPORT PIPE FROM TOP FLANGE OF JOISTS AND BEAMS.
4. DO NOT SUPPORT EQUIPMENT OR PIPING FROM METAL ROOF DECK.
W. INSTALL PRESSURE GAUGES AS REQUIRED IN MANUFACTURER'S INSTALLATION INSTRUCTIONS AND AS REQUIRED BY CODE, AND AS REQUIRED PER NFPA STANDARDS.

TESTING

A. PERFORM ALL NFPA REQUIRED ACCEPTANCE TESTS.
B. TEST SPRINKLER SYSTEM AS ENTIRE SYSTEM OR PARTIAL SYSTEM. SYSTEM SHALL BE HYDROSTATICALLY TESTED AT NOT LESS THAN 200 PSI OR 50 PSI ABOVE STATIC PRESSURE IN EXCESS OF 150 PSI FOR 2 H. NO LEAKAGE ALLOWED. REPLACE DEFECTIVE JOINTS WITH NEW MATERIALS. NO CAULKING OF DEFECTIVE JOINTS ALLOWED. RE-TEST SYSTEM AFTER DEFECTIVE JOINTS ARE REPLACED, UNTIL SATISFACTORY RESULTS ARE OBTAINED.
C. PIPE SHALL NOT BE CONCEALED UNTIL SATISFACTORILY PRESSURE TESTED.
D. OWNER'S REPRESENTATIVE OR ENGINEER MAY WITNESS TESTS. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER A MINIMUM OF 3 DAYS IN ADVANCE TO ALLOW FOR PARTICIPATION.
E. LOG OF TESTS SHALL BE KEPT AT JOB SITE AND SHALL IDENTIFY:

1. WHO PERFORMED TEST
2. TIME OF TEST
3. DATE OF TEST
4. SECTION OF SYSTEM TESTED
5. RESULTS OF TEST
6. COMPLETED CONTRACTOR'S MATERIAL AND TEST CERTIFICATION FORM(S) FROM NFPA 13

F. OPERATE FLOW SWITCHES TO TEST THAT SIGNALS ARE TRANSMITTED TO FIRE ALARM CONTROL PANEL. INCLUDE TEST FOR TAMPER SWITCHES.

DATE | DESCRIPTION | NO.

DANIEL CESAR LICENSE No. 68670 STATE OF FLORIDA PROFESSIONAL ENGINEER

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Jerome Bankovich, Jr., AIA, LEED
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18104A /18-005

LAKE COUNTY
FIRE STATION NO. 39
FIRE PROTECTION LEGEND & SPECS
24815 WALLICK ROAD, SORRENTO, FL 32776

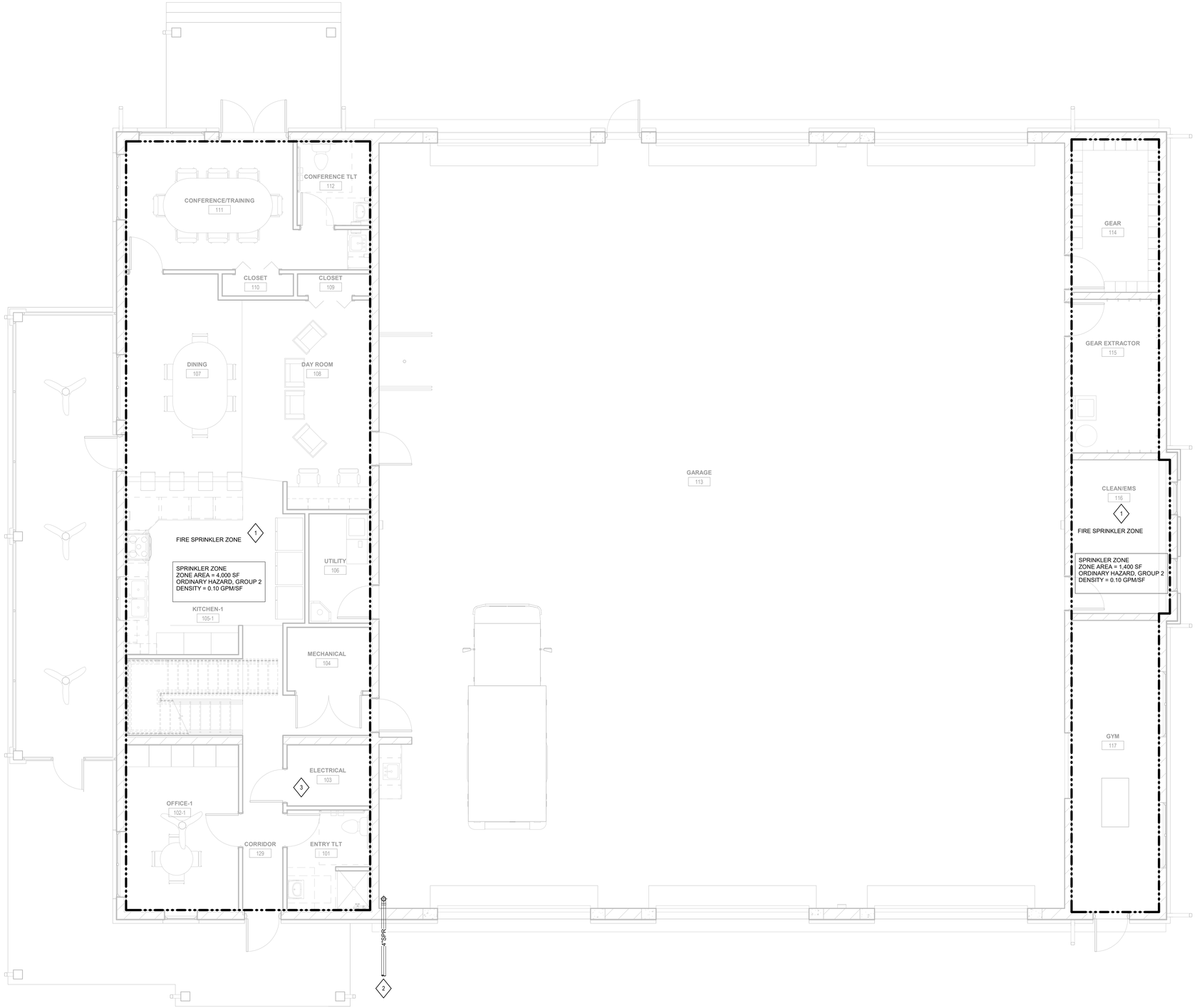
JANUARY 31, 2020

PRICING SET

FP01

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1 **FIRE PROTECTION PLAN- 1ST FLOOR**
SCALE: 1/4" = 1'-0"

GENERAL NOTES

1. SEE LIFE SAFETY DRAWINGS FOR ADDITIONAL INFORMATION. BUILDING CONSTRUCTION TYPE IS II-B, OCCUPANCIES ARE MERCANTILE FOR ALL SPACES EXCEPT RESTRAINTS WHICH ARE ASSEMBLY OCCUPANCY CY. TREAT AND PROTECT ALL SPACES IN ACCORDANCE WITH THE HIGHER SPRINKLER REQUIREMENTS FOR MERCANTILE AS DETAILED IN THESE DOCUMENTS.
2. SEE CIVIL DRAWINGS FOR ADDITIONAL INFORMATION REGARDING SITE UTILITIES AND LAYOUTS.
3. CIVIL INFORMATION PROVIDED HERE FOR CONVENIENT REFERENCE AND INTENT ONLY. THIS IS NOT FOR CONSTRUCTION AND NOT IN THE FIRE PROTECTION SCOPE.
4. ALL OCCUPANCIES ARE TO BE TREATED AS MERCANTILE OCCUPANCIES AS DEFINED IN NFPA CODES, (MIXED NON-SEPARATED). PROVIDE ORDINARY HAZARD GROUP 2 PROTECTION OF ALL SPACES. SPACE SPRINKLERS TO PROTECT A NOMINAL 100 TO 120 SQUARE FEET PER HEAD. THIS SPACING WILL ALLOW FOR EASIER RELOCATION DURING SUBSEQUENT TENANT FITOUTS. UNDER NO CIRCUMSTANCES PROTECT MORE THAN 130 SQUARE FEET PER SPRINKLER HEAD OR SPACE SPRINKLERS MORE THAN 15 FEET APART. OBEY INSTALLATION AND POSITING REQUIREMENTS OF NFPA 13.
5. ALL SPRINKLERS SHALL BE OF THE FOLLOWING CHARACTERISTICS: K FACTOR = NOMINAL 5.6, ORDINARY TEMPERATURE NOMINAL 155 F.QUICK RESPONSE CHARACTERISTIC. PROVIDE ONLY SSU OR SSP SPRINKLERS AS DISCUSSED IN NFPA 13. PENDENT SPRINKLERS INSTALLED IN CEILINGS SHALL BE SEMI RECESSED PENDENT TYPE, WITH COLOR APPROVED BY THE ARCHITECT. IN SHELL SPACES PROVIDE UPRIGHT SPRINKLER HEADS TO PROTECT THE SHELL.
6. UNDERGROUND SPRINKLER PIPING SHALL BE BY OTHERS. UNDERGROUND WORK MAY ONLY BE EXECUTED BY A CONTRACTOR HOLDING A CLASS I II OR V CERTIFICATION FROM FLORIDA. THE BUILDING SPRINKLER SYSTEM SHALL BEGIN AT THE FLANGE PROVIDED BY THE SITE CONTRACTOR AT 1 FOOT ABOVE THE FINISHED FLOOR.
7. THIS IS TO BE A WET AUTOMATIC SPRINKLER SYSTEM. THE DESIGN APPROACH SHALL BE THE AREA DENSITY METHOD UTILIZING A DENSITY OF 0.2 GPM PER FOOT SQUARED. THE CALCULATION SHALL BE FOR THE MOST HYDRAULICALLY REMOTE 1,500 MINIMUM SQUARE FEET OF PROJECT REGARDLESS OF REDUCTIONS ALLOWED IN NFPA. HOSE STREAM ALLOWANCE SHALL BE 250 GPM ADDED AT THE NEAREST SITE FIRE HYDRANT
8. INSTALL THE PIPING GRID IN SUPPORT OF THESE LAYOUT REQUIREMENTS AND UTILIZE CONNECTIONS AS NECESSARY TO FEED SPRINKLERS. PROVIDE TEE(S) OR OTHER OUTLETS TO FEED SPRINKLERS AND PLUG UNUSED CONNECTIONS FOR FUTURE USE.
9. SPRINKLER PIPING SHALL NOT PENETRATE STRUCTURAL MEMBERS. THERE IS NO NEED FOR ENGINEERED STRUCTURAL OPENINGS.
10. BUILDING PIPING MAY BE LAYED OUT AS ONE SINGLE ZONE. INDIVIDUAL TENANTS NEED NOT BE PROVIDED WITH SEPARATE SPRINKLER ZONES.
11. THE FIRE SUPPRESSION SYSTEM FOR THIS PROJECT SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH THE FOLLOWING:

    THE FLORIDA BUILDING CODE FAMILY OF CODES 2017, 6TH EDITION.

    THE FLORIDA FIRE PREVENTION ACT 6TH EDITION INCLUDING THE FLORIDA SPECIFIC EDITIONS OF NFPA 1, 2012 AND NFPA 101 2012, NFPA 13 2010 EDITION, NFPA 45 2011 EDITION AND NFPA 72 2010 EDITION.

    PIPE SIZING:

1"	RUNOUTS
1-1/4"	2 HEADS
1-1/2"	3-4 HEADS
2"	5 HEADS OR MORE
3"	CROSSMAINS
4"	MAINS

SHEET KEYNOTES

1. SPACES ARE TO BE TREATED AS ORDINARY HAZARDS OCCUPANCIES AS DEFINED IN NFPA CODES WITH A DENSITY OF 0.1 GPM/SQFT. UNDER NO CIRCUMSTANCES PROTECT MORE THAN 130 SQUARE FEET PER SPRINKLER HEAD OR SPACE SPRINKLERS MORE THAN 15 FEET APART. OBEY INSTALLATION AND POSITING REQUIREMENTS OF NFPA 13. SPRINKLERS ARE NOT REQUIRED ABOVE AND BELOW CEILING TILES IN ACCORDANCE WITH NFPA 13, 8.15.1.2.2.
2. 4" NEW LINE TO EXISTING FIRE MAIN. CONTRACTOR SHALL COORDINATE EXACT LOCATION OF FIRE LINE IN FIELD AND WITH CIVIL DRAWINGS BEFORE STARTING ANY WORK.
3. ELECTRICAL SPACE, PROVIDE ORDINARY HAZARD GROUP 2 SPRINKLER PROTECTION FOR SPACE. PROVIDE MECHANICAL GUARDS FOR SPRINKLER.

SCOPE NARRATIVE

THE CONTRACTOR OR HIS CHOSEN AGENT SHALL BE ENGINEER OF RECORD. THE CONTRACTOR SHALL PRODUCE STAMPED AND SEALED INSTALLATION DRAWINGS IN ACCORDANCE WITH THE FLORIDA BUILDING CODE 6TH EDITION 2017 AND THE FLORIDA FIRE PREVENTION ACT 6TH EDITION, BASED ON DESIGN CRITERIA LISTED IN THESE CONTRACT DOCUMENTS AS PREPARED BY THE DELEGATING ENGINEER AND ANY PERSONALLY DEVELOPED INFORMATION.

THE CONTRACTOR SHALL PROVIDE PROTECTION THROUGHOUT THE ENTIRE BUILDING. PIPE ROUTING AND SPRINKLER HEAD LAYOUT SHALL BE PROVIDED BY THE CONTRACTOR. A CURRENT FLOW TEST IS NOT AVAILABLE FROM THE DELEGATING ENGINEER AND SHOULD BE PROVIDED BY THE CONTRACTOR. CONTRACTOR TO PERFORM ALL HYDRAULIC CALCULATION OF THE SPACE. THE CONTRACTOR SHALL COORDINATE ALL
WORK WITH OTHER TRADES

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LAKE COUNTY
FIRE STATION NO. 39
FIRE PROTECTION PLAN – 1ST FLOOR

24815 WALLICK ROAD, SORRENTO, FL 32776

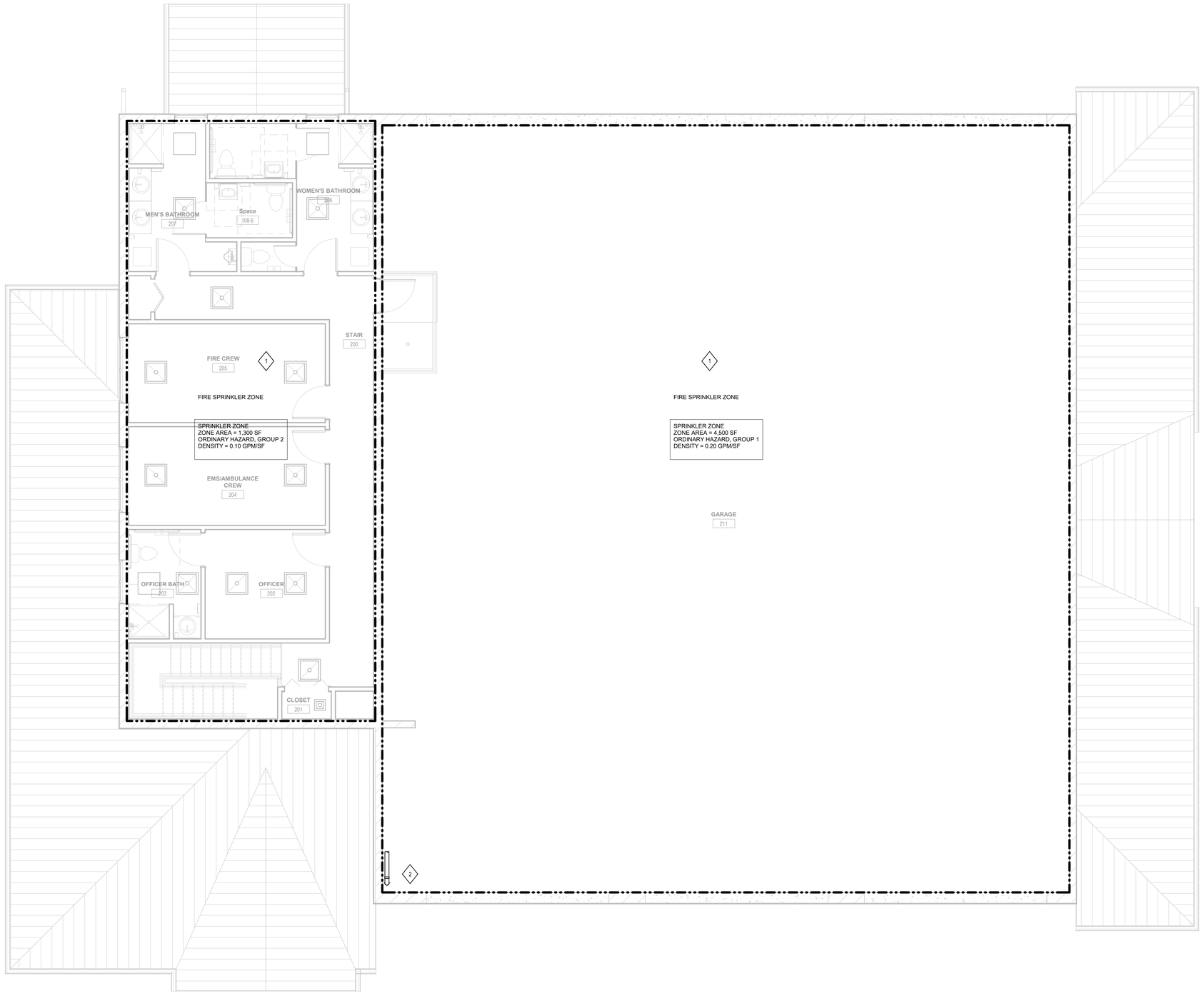
18104A /18-005

JANUARY 31, 2020

PRICING SET

FP21

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1 **FIRE PROTECTION PLAN- 2ND FLOOR**
SCALE: 1/4" = 1'-0"

GENERAL NOTES

1. SEE LIFE SAFETY DRAWINGS FOR ADDITIONAL INFORMATION. BUILDING CONSTRUCTION TYPE IS II-B, OCCUPANCIES ARE MERCANTILE FOR ALL SPACES EXCEPT RESTRAINTS WHICH ARE ASSEMBLY OCCUPANCY CY. TREAT AND PROTECT ALL SPACES IN ACCORDANCE WITH THE HIGHER SPRINKLER REQUIREMENTS FOR MERCANTILE AS DETAILED IN THESE DOCUMENTS.
2. SEE CIVIL DRAWINGS FOR ADDITIONAL INFORMATION REGARDING SITE UTILITIES AND LAYOUTS.
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5. ALL SPRINKLERS SHALL BE OF THE FOLLOWING CHARACTERISTICS: K FACTOR = NOMINAL 5.6, ORDINARY TEMPERATURE NOMINAL 155 F,QUICK RESPONSE CHARACTERISTIC. PROVIDE ONLY SSU OR SSP SPRINKLERS AS DISCUSSED IN NFPA 13. PENDENT SPRINKLERS INSTALLED IN CEILINGS SHALL BE SEMI RECESSED PENDENT TYPE, WITH COLOR APPROVED BY THE ARCHITECT. IN SHELL SPACES PROVIDE UPRIGHT SPRINKLER HEADS TO PROTECT THE SHELL.
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4"	MAINS

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DATE | NO. | DESCRIPTION

DANIEL CESAR LICENSED No. 68670 STATE OF FLORIDA PROFESSIONAL ENGINEER

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18104A /18-005

LAKE COUNTY
FIRE STATION NO. 39
FIRE PROTECTION PLAN – 2ND FLOOR
24815 WALLICK ROAD, SORRENTO, FL 32776

JANUARY 31, 2020

PRICING SET

FP22

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MECHANICAL, SYMBOLS AND ABBREVIATIONS

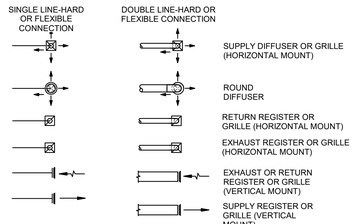
ABBREVIATIONS

ACC	AIR COOLED
ACCU	AIR-COOLED CONDENSING
ACU	AIR CONDITIONING UNIT
AD	ACCESS
AFF	ABOVE FINISHED
AF	AIR FLOW
AHU	AIR-HANDLING UNIT
AMP	AMPERAG
APD	AIR PRESSURE
ARI	AIR CONDITIONING AND REFRIGERATION INSTITUTE
ASME	AMERICAN SOCIETY OF ENGINEERS
B	BOILER
BD	BACKDRAFT
BFP	BACKFLOW
BHP	BRAKE
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
CC	COOLING
CF	CUBIC FEET PER MINUTE
CH	CHILLER
CHP	CHILLED WATER
CHR	CHILLED WATER RETURN
CHS	CHILLED WATER SUPPLY
CO	CLEAN
CO2	CARBON
COM	COMPRESSOR
COP	COEFFICIENT OF
CP	CONDENSATE
CU	CONDENSING
CV	CONSTANT
CW	COLD WATER
DB	DECIBELS
Db	DRY-BULB
DEG	DEGRE
DP	DEW POINT
DX	DIRECT EXPANSION
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY
EF	EXHAUST
EGS	EMERGENCY GAS
ENT	ENTERING
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EWT	ENTERING WATER
EX.	EXISTING
F	FAHRENHEIT
FC	FLUSH CLEAN
F/S	COMBINATION FIRE SMOKE
FCU	FAN COIL UNIT
FD	FLOOR DRAIN OR FIRE
F	FLOW
FP	FEET PER MINUTE
FPS	FEET PER
FS	FLOW SWITCH
FSTAT	FREEZESTAT
HB	HOSE BIBB
HC	HEATING COIL
HP	HORSEPOWE
HSTAT	HUMIDISTAT
HW	HOT WATER
HWC	HOT WATER COIL
HWP	HEATING HOT WATER
HWR	HEATING HOT WATER
HWS	HEATING HOT WATER
HX	HEAT
HZ	HERTZ
I/O	INPUT/OUTPUT
IN	INCHES
IN HG	INCHES OF
IN WG	INCH WATER
IPLV	INTEGRATED PART LOAD
kW	KILOWATT
kWh	KILOWATT HOUR
LAT	LEAVING AIR TEMPERATURE
LB/HR	POUNDS PER
LF	LINEAR FOOT
LWT	LEAVING WATER
MA	MAXIMU
MB	1,000 BTUH
MC	MINIMUM BRANCH CIRCUIT
ME	MECHANICAL EQUIPMENT
MER	MINIMUM EFFICIENCY REPORTING
M	MANHOL
MIN	MINIMU
N/A	NOT APPLICABLE
NC	NOISE CRITERIA OR NORMALLY
NG	NATURAL
NGF	NATURAL GAS
NO	NORMALLY
NPLV	NON-STANDARD PART LOAD
NPSH	NET POSITIVE SUCTION HEAD
NTS	NOT TO
OA	OUTSIDE AIR
OD	OUTSIDE DIAMETER
P	PUM
PCF	POUNDS PER CUBIC FOOT
PD	PRESSURE
PF	PRE-FILTER
PHC	PREHEAT COIL
PPM	PARTS PER MILLION
PSI	POUNDS PER SQUARE
RA	RETURN AIR
REA	RELIEF AIR
RF	RETURN
RH	RELATIVE HUMIDITY
RC	REHEAT COIL
RLA	RUN LOAD
RO	REVERSE
RP	REVOLUTIONS PER
RTU	ROOF TOP
SA	SUPPLY AIR
SAD	SOUND ATTENUATING DEVICE
SAT	SUPPLY AIR TERMINAL
SD	SMOKE DETECTOR OR SMOKE
SF	SUPPLY
SP	STATIC PRESSURE
SQ.FT	SQUARE FOOT
SS	STAINLESS STEEL
TAB	TESTING, ADJUSTING, BALANCE
TSP	TOTAL STATIC PRESSURE
TSTAT	THERMOSTA
UH	UNIT HEATER
UL	UNDERWRITERS
VAV	VARIABLE AIR VOLUME
VFD	VARIABLE FREQUENCY
VTR	VENT THRU
W	WATTS
Wb	WET-BULB
WCO	WALL CLEAN
WF	WATER FILTER
WPD	WATER PRESSURE
YC	YARD CLEAN

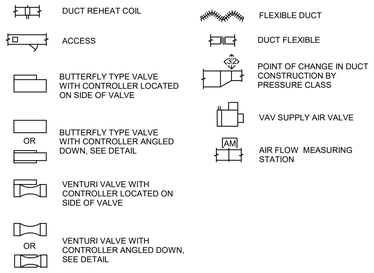
PIPING SYSTEM LABELS

WATER		WASTE OR	
DCW	DOMESTIC COLD	SAN	WASTE OR SOIL
DHW	DOMESTIC HOT	SD	SUBSOIL DRAIN
DHR	DOMESTIC HOT WATER	S	STOR
CSW	COLD SOFT	OD	OVERFLOW DRAIN
HT	HEAT TRACE HOT WATER	F	FORCE
NPW	NON-POTABLE	CWW	CLEARWATER WASTE
DI	DEIONIZED WATER	IW	INDIRECT WASTE
RO	REVERSE OSMOSIS	GW	GREASE WASTE
PW	PURE WATER	CRW	CORROSION RESISTANT WASTE
PCW	PROCESS COLD		UNDERFLOOR WASTE OR SOIL, SUBSOIL, STORM & FORCE MAIN
PHW	PROCESS HOT		
PHR	PROCESS HOT WATER	VENT	
LCW	LAB COLD	V	VENT
LHW	LAB HOT WATER	CWV	CLEARWATER VENT
LHR	LAB HOT WATER	CRV	CORROSION RESISTANT
TF	TRAP FILLER LINE		
TW	TEMPERED		

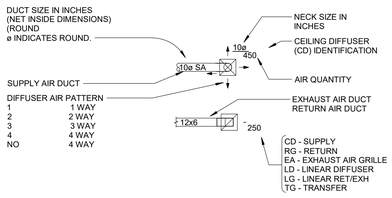
DUCTWORK AT DIFFUSERS & GRILLES



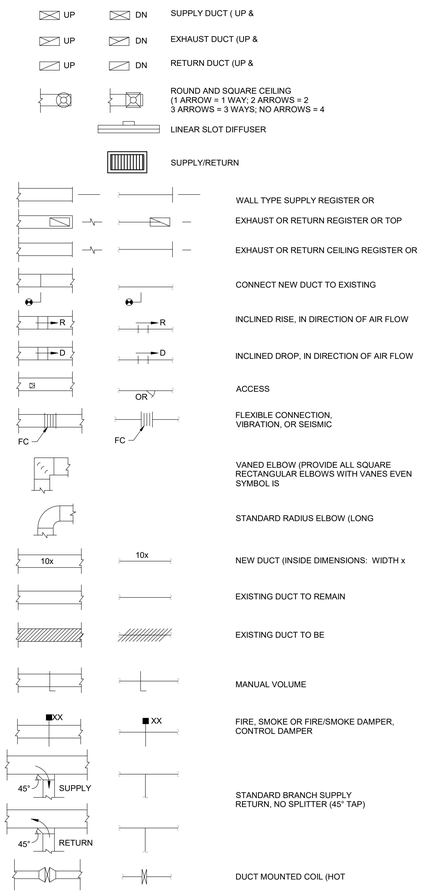
DUCTWORK SPECIALTIES



DIFFUSER NOTATION



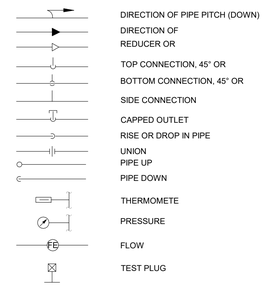
DUCTWORK SYMBOLS



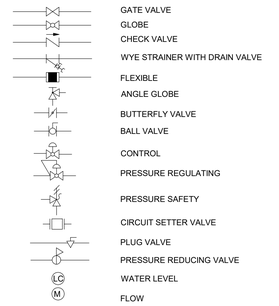
DRAINS AND CLEANOUTS



GENERAL PIPING SYMBOLS



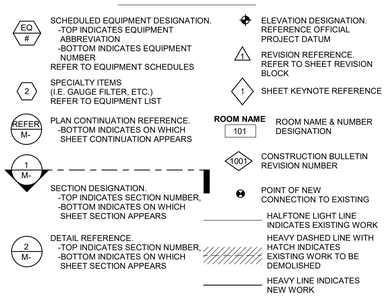
VALVE SYMBOLS



FIELD MOUNTED CONTROLS

T	SPACE	T	TEMPERATURE
H	SPACE HUMIDISTAT	H	HUMIDITY
F SD	DUCT SMOKE	P	PRESSURE

DRAWING SYMBOLS



DESIGN CRITERIA

OUTDOOR DESIGN

A. SUMMER
- DRY-BULB TEMPERATURE = 93.9°
(BASED ON 0.4% DRY-BULB TEMPERATURE FOR ORLANDO INTERNATIONAL AIRPORT, FL AS PUBLISHED BY 2013 ASHRAE HANDBOOK OF
- WET-BULB TEMPERATURE = 79.6°
(BASED ON 0.4% EVAPORATION WET-BULB TEMPERATURE FOR ORLANDO INTERNATIONAL AIRPORT, FL AS PUBLISHED BY 2013 ASHRAE HANDBOOK OF

B. WINTER
- DRY-BULB TEMPERATURE = 37.4°
(BASED ON 99.6% DRY-BULB CONDITIONS FOR ORLANDO INTERNATIONAL AIRPORT, FL AS PUBLISHED BY 2013 ASHRAE HANDBOOK OF

NO.	DESCRIPTION	DATE

DANIEL CESAR LICENSE No. 68670 STATE OF FLORIDA PROFESSIONAL ENGINEER

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FIRE STATION NO. 39
MECHANICAL LEGEND
24815 WALLICK ROAD, SORRENTO, FL 32776

JANUARY 31, 2020

PRICING SET

M001

DCL ENGINEERING
800 HIGHLAND AVE. SUITE 102,
ORLANDO, FL 32803
CA LIC. NO.: 31963
PHONE: (352) 514-9025

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MECHANICAL SPECIFICATIONS

APPLICABLE CODES/STANDARDS:

1. FLORIDA BUILDING CODE 6TH EDITION (2017) - BUILDING, MECHANICAL, PLUMBING AND ENERGY CONSERVATION
2. NFPA LATEST EDITION
3. SMACNA DUCT CONSTRUCTION STANDARDS (2005)
4. ASHRAE STANDARD 62.1 (2013)
5. NATIONAL ELECTRICAL CODE (2014)

BASIS OF DESIGN

1. THE MECHANICAL CONTRACT DOCUMENTS HAVE BEEN PREPARED USING THE ASHRAE 99.6% DESIGN CRITERIA WITH THE FOLLOWING DESIGN CONDITIONS:

	INDOOR	OUTDOOR
SUMMER	75 DEG F DB / 50% RH	92 DEG F DB / 79 DEG F WB
WINTER	72 DEG F DB	36 DEG F DB

GENERAL

1. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL, EQUIPMENT, ACCESS PANELS, CONTROL SYSTEMS, DEVICES, PERMITS AND SERVICES NECESSARY FOR FURNISHING AN INSTALLATION OF A COMPLETE SERVICEABLE MECHANICAL SYSTEM AS OUTLINED IN THE CONTRACT DRAWINGS AND SPECIFICATIONS. THE EQUIPMENT, DEVICES AND ACCESSORIES SHALL BE INSTALLED AND ADJUSTED FOR PROPER AND CONTINUOUS OPERATION.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY FITTINGS AS REQUIRED BY ALL APPLICABLE CODES AND GOVERNING AUTHORITIES.
3. ALL MECHANICAL SYSTEMS ARE TO BE INSTALLED IN ACCORDANCE WITH FLORIDA BUILDING CODE ALL APPLICABLE SECTIONS OF THE NFPA STANDARDS, ANSI STANDARDS, U.L. STANDARDS, LOCAL CODES, LOCAL ORDINANCES, AMENDMENTS AND MANUFACTURER RECOMMENDATIONS.
4. ALL MATERIALS SHALL BE NEW (UNLESS OTHERWISE INDICATED) ANY DAMAGE EQUIPMENT SHALL BE REPLACED AT NOT COST TO THE OWNER. DURING CONSTRUCTION, EQUIPMENT SHALL BE STORED IN THE MANUFACTURER'S ORIGINAL PACKAGING IN A SAFE AND DRY PLACE UNTIL READY FOR USE.
5. ALL WORK SHALL BE COORDINATED ALL OTHER TRADES PRIOR TO BEGINNING ANY WORK OR ORDERING ANY MATERIALS. COORDINATE ALL WORK FOR SIZES, LOCATIONS, CLEARANCES, ACCESS AND ELECTRICAL CONNECTIONS WITH ALL THE TRADES. CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING OF ANY CONFLICTS, CODE OR SAFETY ISSUES THAT MAY EXIST PRIOR TO ANY FABRICATION OR ORDERING OF EQUIPMENT. RESOLUTION OF SUCH CONFLICTS THAT WERE NOT REPORTED PRIOR TO STARTING CONSTRUCTION SHALL REMAIN RESPONSIBILITY OF THE CONTRACTOR AND CHANGE ORDER PROPOSALS FOR SUCH WORK WILL NOT BE ACCEPTED.
6. THESE DRAWINGS AND SPECIFICATIONS REPRESENT THE DESIGN INTENT BASED ON INFORMATION AVAILABLE AT THE TIME OF DESIGN. ANY SUBSTANTIAL MODIFICATIONS OR ALTERATIONS MADE DURING THE CONSTRUCTION PHASE SHALL BE REPORTED TO THE ENGINEER PRIOR TO START WORK. MODIFICATIONS MADE WITHOUT THE ENGINEER'S WRITTEN APPROVAL SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR.
7. CONTRACTOR TO FIELD ROUTE DUCTS AS REQUIRED. FOR CLARITY, ALL DUCT RISERS AND DROPS ARE NOT SHOWN. CONTRACTOR TO PROVIDE AT NO ADDITIONAL COST TO THE OWNER ALL DUCT OFFSETS, BENDS AND TRANSITIONS REQUIRED FOR COMPLETE FUNCTIONAL SYSTEM AND TO ACCOMMODATE FIELD CONDITIONS.
8. WALL, ROOF AND CEILING OPENINGS INDICATED ON DRAWINGS ARE NOMINAL DIMENSIONS ONLY, ADJUST OPENING AS REQUIRED. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING FIRE RATING AND WEATHERPROOFING INTEGRITY OF ALL DUCTWORK AND PIPING AND PENETRATIONS. ALL PIPING AND/OR EQUIPMENT PENETRATIONS SHALL BE SLEEVED AND FIRE RATED AS REQUIRED TO MAINTAIN WALLS OR FLOOR INTEGRITY.
9. HANG PIPING AND EQUIPMENT (WHERE INDICATED ON DRAWINGS) FROM STRUCTURE AS NECESSARY. COORDINATE WITH STRUCTURAL/ARCHITECT FOR WEIGHTS AND PROPER ATTACHMENTS. PROVIDE SUPPORTING AS REQUIRED FOR INSTALLATION OF EQUIPMENT.
10. MECHANICAL PLANS ARE IN GENERAL DIAGRAMMATIC IN NATURE SHALL BE READ IN CONJUNCTION WITH THE ARCHITECTURAL, PLUMBING, ELECTRICAL AND STRUCTURAL PLANS. INFORMATION GIVEN HEREIN AND ON DRAWINGS IS AS EXACT AS COULD BE SECURED BUT IS NOT GUARANTEED. DO NOT SCALE DRAWINGS FOR EXACT DIMENSIONS.
11. PROVIDE ADEQUATE SIDE CLEARANCE PER NEC. AT MINIMUM OF 3' CLEARANCE IN FRONT OF ANY 120-240 VOLTS RATED PANELS AND DISCONNECTS AND 4' CLEARANCE IN FRONT OF ANY 480 VOLTS RATED PANELS OR DISCONNECTS.
12. PROVIDE A MINIMUM OF 20' CLEARANCE BETWEEN OUTSIDE AIR INTAKES AND ANY EXHAUST OPENING, FAN OR VENT. COORDINATE NEW EXHAUST/INTAKE OPENINGS OR VENTS FOR PLUMBING EQUIPMENT WITH EXISTING INTAKES AND VENTS.
13. NO WORK SHALL BE COVERED OR CONCEALED UNTIL PROPERLY INSPECTED AND TESTED.
14. THE CONTRACTOR SHALL CONTINUALLY RECORD ALL DEVIATIONS TO THE CONTRACT DOCUMENTS MADE DURING CONSTRUCTION AND PROVIDE A COMPLETE SET OF THESE RECORD DRAWINGS TO THE OWNER WITHIN 30 DAYS OF COMPLETION OF CONSTRUCTION. IF REQUIRED BY THE AUTHORITY HAVING JURISDICTION, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SECURE THE SERVICES OF A LICENSED PROFESSIONAL ENGINEER TO PROVIDE SIGNED AND SEALED RECORD DRAWINGS.
15. ALL MECHANICAL SERVICES TERMINATE 5'-0" FROM THE BUILDING EXTERIOR WALLS, UNLESS SHOWN OTHERWISE ON DRAWINGS. REFER TO CIVIL DRAWINGS FOR ALL METERING AND SITE UTILITY CONNECTIONS. CONTRACTOR SHALL MAKE FINAL CONNECTIONS TO SITE UTILITIES.
16. ALL DUCTWORK AND/OR PIPING SHALL BE CONCEALED IN WALLS, CHASES OR CEILINGS UNLESS NOTED OTHERWISE ON DRAWINGS. PAINT ALL EXPOSED DUCTWORK BLACK UNLESS NOTED OTHERWISE.
17. PROVIDE ACCESS PANELS TO ALL VALVES AND DEVICES WITHIN CHASES OR ABOVE NON-ACCESSIBLE CEILINGS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
18. COORDINATE ALL ELECTRICAL EQUIPMENT CONNECTIONS WITH DIVISION 26 PRIOR TO ORDERING ANY EQUIPMENT. CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING OF ANY CONFLICTS OR SAFETY ISSUES THAT MAY EXIST PRIOR TO ORDERING OF EQUIPMENT.
19. DO NOT RUN ANY PIPING ABOVE ELECTRICAL PANELS, THROUGH ELECTRICAL ROOMS OR ANY OTHER WATER SENSITIVE AREAS UNLESS NOTED OTHERWISE ON THE PLANS.
20. INSULATE ALL PIPING FROM CONCRETE. INSULATION SHALL HAVE A FIRE/SMOKE RATING LESS THAN 25/50.
21. DO NOT PENETRATE WALL FOOTINGS WITH PIPING. COORDINATE TO DROP FOOTINGS AS REQUIRED TO CLEAR PLUMBING SERVICES WHERE ABSOLUTELY NECESSARY. ALL PIPING PENETRATING A BEARING WALL OR FOOTING MUST BE SLEEVED AND LOCATION APPROVED BY STRUCTURAL ENGINEER.
22. PERFORM ALL WORK NECESSARY TO PREPARE THE STRUCTURE FOR THE INSTALLATION OF THE WORK. ALL HOLES, OPENINGS AND DAMAGED MATERIALS OCCURRED DURING THE CONSTRUCTION PERIOD SHALL BE REPAIRED. ALL PENETRATIONS SHALL BE SLEEVED AND SEALED TO BE WATER AND AIR TIGHT.

SUBSTITUTIONS

1. EQUIPMENT INDICATED AS BASIS OF DESIGN (BOD) ON THE DRAWINGS AND WITHIN THESE SPECIFICATIONS SHALL BE CONSIDERED AS "STANDARD OF QUALITY". NO SUBSTITUTIONS SHALL BE MADE WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER.
2. DEVIATIONS FROM SPECIFIED EQUIPMENT AFFECTING ELECTRICAL REQUIREMENTS SHALL BE COORDINATED BETWEEN VENDOR AND CONTRACTOR PRIOR TO SUBMITTING BIDS. ANY DEVIATION THAT WAS NOT COORDINATED SHALL NOT CAUSE ANY CHANGES OF BID AT A LATER TIME.
3. SUBSTITUTIONS ARE ACCEPTABLE PROVIDED THAT THE SUBSTITUTED EQUIPMENT HAS EQUIVALENT CAPACITY AS THAT SCHEDULED AND IS PROVIDED BY AN ACCEPTABLE MANUFACTURER AS LISTED FOR THAT EQUIPMENT TYPE. CONTRACTOR SHALL SUBMIT PRODUCT DATA FOR ALL SUBSTITUTIONS TO THE ENGINEER FOR APPROVAL PRIOR SUBSTITUTING OR ORDERING. SUBMITTALS SHALL INCLUDE DIMENSIONS, WEIGHT, CLEARANCES, FAN/PUMP CURVES, ELECTRICAL CHARACTERISTICS, SOUND LEVEL DATA, AND INSTALLATION DETAILS. SUBSTITUTION ARE WILL ONLY BE ACCEPTABLE AFTER WRITTEN APPROVAL FROM THE ENGINEER. CONTRACTOR SHALL BE FINANCIALLY RESPONSIBLE FOR ANY AND ALL CHANGES TO ENGINEERING PLANS REQUIRED BY AUTHORITY HAVING JURISDICTION FOR ALL THE SUBSTITUTIONS.

EQUIPMENT GENERAL

1. ALL EQUIPMENT SHALL BE UL LISTED, NO EXCEPTIONS.
2. EACH TYPE OF EQUIPMENT SHALL BE BY ONE MANUFACTURER AND SHALL HAVE CAPACITIES AND CHARACTERISTICS AS LISTED IN THE EQUIPMENT SCHEDULES.
3. UNLESS OTHERWISE NOTED, ALL MECHANICAL EQUIPMENT SHALL BE PROVIDED WITH VIBRATION ISOLATING MOUNTINGS TO PREVENT TRANSMISSION OF VIBRATION TO AND WITHIN THE BUILDING STRUCTURE.
4. LOCATE ALL MECHANICAL EQUIPMENT SUCH THAT THE MANUFACTURER'S RECOMMENDED SERVICE CLEARANCE INCLUDING CLEARANCE BETWEEN UNIT), AND THE FBC REQUIRED CLEARANCE TO COMBUSTIBLES IS MAINTAINED.
5. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. IF FIELD CONDITIONS PROHIBIT INSTALLATION OF EQUIPMENT IN LOCATIONS SHOWN, SUBMIT A WRITTEN REQUEST FOR INFORMATION (RFI) TO THE ENGINEER IMMEDIATELY BEFORE PROCEEDING.
6. WHENEVER POSSIBLE, DO NOT LOCATE ROOFTOP EQUIPMENT SUCH THAT THE SERVICE PANEL IS WITHIN 10'-0" OF AN OPEN ROOF EDGE WHICH REQUIRES GUARDS.

SHOP DRAWINGS AND SUBMITTALS:

1. SUBMIT SHOP DRAWINGS AND MANUFACTURER'S DATA FOR ALL NEW EQUIPMENT TO ENGINEER FOR APPROVAL PRIOR TO PURCHASING AND/OR FABRICATION. SHOP DRAWINGS FOR EQUIPMENT REQUIRING ELECTRIC POWER AND/OR CONTROL WIRING SHALL INCLUDE COMPLETE WIRING DIAGRAMS.
2. WHENEVER REQUIRED BY DIVISION 1, CONTRACTOR SHALL SUBMIT COMPLETE DUCTWORK SHOP DRAWINGS FOR REVIEW BY THE ENGINEER. SHOP DRAWINGS SHALL INCLUDE COORDINATION WITH OTHERDISCIPLINES AND EXACT OPENINGS REQUIRED IN EXTERIOR WALLS AND ALL DEVICES WITH THEIR RESPECTIVE SERVICE CLEARANCES.
3. DUCTWORK SHOP DRAWINGS WILL ONLY BE REVIEWED FOR COMPLIANCE WITH DESIGN DRAWINGS AND SPECIFICATIONS. DRAWINGS WILL NOT BE CHECKED FOR COORDINATION WITH OTHER TRADES OR BUILDINGS STRUCTURE. IT IS THE RESPONSIBILITY OF THE CONTRACTORS TO COORDINATE AND VERIFY ROUTING AND EXACT LOCATION OF SYSTEM COMPONENTS.

SYSTEM IDENTIFICATION:

1. PROVIDE IDENTIFICATION LABELS ON OR NEAR EACH PIECE OF EQUIPMENT AND EACH OPERATION DEVICE AND DISCONNECT. LABELS SHALL BE CONSTRUCTED OF ENGRAVED PLASTIC LAMINATE SIGN OR PLASTIC EQUIPMENT MARKER PERMANENTLY SECURED TO EQUIPMENT. LETTERING SHALL BE MINIMUM 1/2-INCH HIGH FOR EQUIPMENT NAME AND 5/8-INCH HIGH FOR EQUIPMENT INFORMATION.
2. VALVES SHALL BE TAGGED USING PLASTIC LAMINATE TAGS SECURED WITH BRASS CHAINS INDICATING THE VALVE SIZE, SERVICE AND FUNCTION.

DUCTWORK AND DUCTWORK ACCESSORIES/

1. ASSEMBLE, INSTALL AND SEAL ALL DUCTWORK IN ACCORDANCE WITH THE LATEST SMACNA "HVAC DUCT CONSTRUCTION STANDARD" AND "FIBROUS GLASS DUCT CONSTRUCTION STANDARDS". CONSTRUCT DUCTWORK TO MINIMUM 2" DUCT CLASS, SEAL CLASS "A" UNLESS NOTED OTHERWISE. ANY WORK WHICH DOES NOT CONFORM TO THESE STANDARDS MAY BE REJECTED AT ANY TIME.
   ALL DUCTWORK SHALL BE AS FOLLOWS OR APPROVED EQUAL:
   a. SUPPLY, OUTSIDE AIR, MAKE-UP AIR AND RETURN AIR DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED SHEET STEEL UNLESS NOTED OTHERWISE. ALL SUPPLY, OUTSIDE AIR AND RETURN DUCTS SHALL BE PROVIDED WITH 1-1/2" INSULATION THICKNESS AND R-VALUE OF AT LEAST 6.0. FLEXIBLE GLASS FIBER EQUAL TO OWENS CORNING "ALL SERVICE DUCT WRAP" OR JOHNS MANVILLE MICROLITE. 1-1/2" THICK, MINIMUM DENSITY OF 0.75 LB/FT3 WITH THERMAL CONDUCTIVITY OF NOT MORE THAN 0.27 AT 75°F MEAN TEMPERATURE, AND SUITABLE FOR TEMPERATURES TO 250°F.
   b. WHERE ALLOWED BY THE AUTHORITY HAVING JURISDICTION, LOW PRESSURE SUPPLY AND RETURN AIR DUCTWORK CAN BE CONSTRUCTED OF 1.5" THICK R-6 FOIL FACED ANTI-MICROBIAL FIBERGLASS DUCT BOARD TAPED AND SEALED BY KNAUF, JOHNS MANVILLE, OWENS CORNING, OR EQUIVALENT.
   c. ALL EXHAUST AIR DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED STEEL OR STAINLESS STEEL, 2-INCH PRESSURE CLASS, SMACNA SEAL CLASS "A". WET EXHAUST DUCTS SHALL BE ALUMINUM OR STAINLESS STEEL.
   d. ALL HOOD EXHAUST DUCTWORK SYSTEM BE CONSTRUCTED OF 304 STAINLESS STEEL WELDED CONSTRUCTIONS, 3-INCH PRESSURE CLASS, SMACNA SEAL CLASS "A". FIRST QUALITY, COLD ROLLED ANNEALED, PICKLED , ASTM A240 AND A480, FINISH No. 2B FOR CONCEALED DUCTS AND FINISH No. 4 FOR ALL EXPOSED DUCTS.
   e. MAKE-UP AIR DUCTS SHALL BE GALVANIZED SHEET METAL WITH 1-1/2" INSULATION THICKNESS AND R-VALUE OF AT LEAST 6.0.
   f. PROVIDE ALL EXTERIOR INSULATED DUCTWORK WITH A MINIMUM 8 MIL THICK ALUMINUM OR PVC JACKET.
   g. PROVIDE INSULATION AND JACKET FOR ALL SUPPLY, OUTSIDE AIR AND RETURN DUCTWORK: JACKET EQUAL TO OWENS-CORNING "FRK" OR JOHNS MANVILLE "FSK". GLASS FIBER REINFORCED FOIL KRAFT LAMINATE WITH PERMEANCE NOT EXCEEDING 0.02 PERM AND BEACH PUNCTURE RESISTANCE 25 UNITS MINIMUM.
   h. PROVIDE INSULATION AND JACKET AS INDICATED BELOW FOR SUPPLY AND RETURN DUCTWORK. FLEXIBLE GLASS FIBE EQUAL TO OWENS CORNING "ALL SERVICE DUCT WRAP" OR JOHNS MANVILLE MICROLITE. 1-1/2" THICK, MINIMUM DENSITY OF 0.75 LB/FT3 WITH THERMAL CONDUCTIVITY OF NOT MORE THAN 0.27 AT 75°F MEAN TEMPERATURE, AND SUITABLE FOR TEMPERATURES TO 250°F. JACKET EQUAL TO OWENS-CORNING "FRK" OR JOHNS MANVILLE "FSK". GLASS FIBER REINFORCED FOIL KRAFT LAMINATE WITH PERMEANCE NOT EXCEEDING 0.02 PERM AND BEACH PUNCTURE RESISTANCE 25 UNITS MINIMUM.

1. FLEXIBLE DUCT SHALL COMPLY WIT UL-181 CLASS 1. FLEXIBLE DUCTWORK SHALL HAVE AN INNER FIBERGLASS WOVEN LINER, ENCAPSULATING HELIX COIL, A FIBERGLASS INSULATING BLANKET (R-VALUE OF AT LEAST 6.0) AND OUTER VAPOR BARRIER OF FIBERGLASS REINFORCED METALIZED FILM LAMINATE. FLEXIBLE DUCTS SHALL BE THERMAFLEX MK-C OR APPROVED EQUAL. NO FLEX DUCT SHALL EXCEED 15' -0" IN LENGTH.
2. ALL INSULATION SHALL HAVE A FIRE/SMOKE RATING LESS THAN 25/50.
3. ALL STEEL DUCTWORK SHALL BE JOINED WITH A NON-HARDENING, NON-MIGRATING MASTIC APPROPRIATE FOR THE ENVIRONMENTAL CONDITIONS OF THE SPACE FOR WHICH IT IS INSTALLED. FLEXIBLE DUCTWORK SHALL MEET THE FLORIDA ENERGY EFFICIENCY CODE. SEAL ALL SHEET METAL JOINTS WITH A SEALANT COMPOUNDED SPECIFICALLY FOR SEALING JOINTS AND SEAMS IN DUCTWORK. SEALANT SHALL BE EQUAL TO RCD#8 MASTIC. JOINTS FOR DUCTWRAP AND DUCTBOARD SHALL BE WITH GLASS FIBER FABRIC WITH A VAPOR BARRIER COATING OF 30 MILL DRY FILM THICKNESS. VAPOR BARRIER COATING SHALL BE EQUAL TO RCD#9.
4. ALL DUCTS SIZES ARE CLEAR INSIDE DIMENSIONS. COORDINATE DUCTWORK ROUTING, DIMENSION AND ELEVATION WITH ALL TRADES. MAKE ALLOWANCES FOR BEAMS, PIPING AND OTHER OBSTRUCTIONS. TRANSFORM, DIVIDE OR OFFSET DUCTS AS REQUIRED, IN SUCH A MANNER AS TO MAINTAIN SAME CROSS SECTIONAL AREA. DUCT SIZE SUBSTITUTIONS ARE ACCEPTABLE ONLY IF THE CLEAR AREA SUBSTITUTED IS NOT LESS THAN THAT SHOWN AND THE DUCT ASPECT RATIO IS LESS THAN 3 TO 1.
5. PROVIDE 45-DEGREE ENTRY ON ALL RECTANGULAR BRANCH CONNECTIONS. PROVIDE CONICAL TAPS WITH DAMPERS ON ALL ROUND BRANCH CONNECTIONS.
6. PROVIDE LONG RADIUS ELBOWS, 3-PIECE ELBOWS, OR TURNING VANES AT ALL 90-DEGREE TURNS. SQUARE ELBOWS ARE NOT ACCEPTABLE.
7. TEST ALL DUCTWORK FOR LEAKS PRIOR TO INSULATING OR CONCEALING IT. THE MAXIMUM ALLOWABLE LEAKAGE RATE SHALL BE IN ACCORDANCE WITH SMACNA.
8. PROVIDE VOLUME DAMPERS AT ALL BRANCH TAKE-OFFS OR AS INDICATED ON PLANS. DAMPER SHALL BE PROVIDED WITH LOCKING QUADRANTS ON EXPOSED OR ACCESSIBLE. PROVIDE VOLUME DAMPERS SIMILAR TO YOUNG REGULATORS FOR AIR DEVICES LOCATED IN HARD CEILINGS OR COORDINATE CEILING ACCESS PANELS WITH ARCHITECT/OWNER.
9. PROVIDE NORMALLY CLOSED OUTSIDE AIR DAMPERS TO AUTOMATICALLY OPEN ONLY WHEN THE HEATING OR COOLING SYSTEMS (HEATER OR COMPRESSOR) IS OPERATING IN THE OCCUPIED MODE. DAMPERS SHALL BE ACCESSIBLE AND NEAR THE BUILDING ENTRY POINT.
10. PROVIDE GRAVITY BACKDRAFT DAMPERS IN ALL EXHAUST DUCTS NEAR THE BUILDING EXIT POINT. DAMPERS SHALL BE INSTALLED WHERE THEY ARE ACCESSIBLE.
11. PROVIDE FLEXIBLE CONNECTORS AT ALL DUCT CONNECTIONS TO FANS OR AIR HANDLING UNITS, UNLESS SPECIFICALLY NOTED OTHERWISE.
12. PROVIDE RETURN AIR DUCT SMOKE DETECTORS FOR ALL AIR HANDLING SYSTEMS GREATER THAN 2,000 CFM. UPON ACTIVATION, SMOKE DETECTORS SHALL AUTOMATICALLY SHUTDOWN THE AIR HANDLING SYSTEM AND GENERATE A SIGNAL TO THE BUILDING FIRE ALARM (IF PROVIDED). PROVIDE A REMOTE KEY SWITCH WITH PILOT LIGHT IN CEILING BELOW UNIT FOR DETECTOR RESET.
13. ELBOWS OR CHANGES IN DUCT DIRECTION GREATER THAN 45 DEGREES SHALL BE FITTED WITH AIR TURNS CONSISTING OF CURVED AIRFOIL BLADES OR VANES WHICH ALLOW THE AIR TO MAKE ABRUPT TURNS WITHOUT TURBULENCE. TURNING VANES ARE NOT ALLOW IN RETURN AND/OR EXHAUST SYSTEMS.
14. PROVIDE FIRE, SMOKE OR COMBINATION FIRE/SMOKE DAMPERS IN ALL PENETRATIONS OF RATED SURFACES AS REQUIRED BY CODE. DAMPERS SHALL BE INSTALLED ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND THE U.L. LISTING REQUIREMENTS. INTERLOCK MECHANICAL SYSTEMS WITH THE FIRE ALARM SYSTEM.

DUCTWORK SUPPORTS AND HANGERS

1. DUCTWORK SHALL NOT BE SUPPORTED BY ANYTHING OTHER THAN THE BUILDING STRUCTURE. NOTHING SHALL BE SUPPORTED BY THE DUCTWORK EITHER.
2. PROVIDE ALL NECESSARY HANGER RODS, CLAMPS AND ATTACHMENTS TO PROPERLY INSTALL AND SUPPORT DUCTWORK, MECHANICAL PIPING AND EQUIPMENT FROM THE BUILDING STRUCTURE.
3. DUCTWORK AND MECHANICAL EQUIPMENT SHALL BE PROVIDED UNISTRUT AND SUSPENSION RODS AS REQUIRED.
4. ALL SUPPORTS EXPOSED TO OUTDOORS SHALL BE PRIMED AND PAINTED TO PREVENT RUSTING. FINISH COLOR AS SELECTED BY OWNER.
5. WIRE STRAPS OR PERFORATED METAL STRAPPING IS NOT ACCEPTABLE FOR SUPPORTS FOR DUCTWORK.
6. PROVIDE MANUFACTURED PIPE HANGERS, RODS, AND INSERTS OR CLAMPS FOR THE PROPER SUPPORT OF ALL PIPING. BAND IRON, TIE WIRE, OR WIRE STRAPPING ARE NOT ACCEPTABLE. ALL PIPES SHALL BE SUPPORTED AT REGULAR INTERVALS. PIPE SWAY AND/OR VIBRATION WILL NOT BE ACCEPTABLE. DO NOT HANG PIPING FROM ANYTHING OTHER THAN THE BUILDING STRUCTURE.

BAY FAN

1. MANUFACTURER BIG ASS FANS OR APPROVED EQUAL.
2. FAN SHAL BE 24' IN DIAMETER AND BE MOUNTED TO I BEAM WITHIN STRUCTURE.
3. CE MARKED AND INTERTEK/ETL CERTIFIED. BUILT TO UL 507 AND CSA 22.2

AIR HANDLING UNITS (SPLIT SYSTEM)

1. ACCEPTABLE MANUFACTURERS ARE: LG OR APPROVED EQUAL.
2. SYSTEM SHALL BE VARIABLE REFRIGERANT FLOW (VRF).
3. SYSTEM SHALL BE SPLIT AIR-TO-AIR SYSTEM, ELECTRIC AIR CONDITIONING UNITS AND HEAT PUMPS AS SCHEDULED ON DRAWINGS. UNITS WITH INTEGRAL ELECTRIC RESISTANCE HEATERS SHALL HAVE A SINGLE POINT ELECTRIC CONNECTION.
4. UNIT CABINET SHALL BE CONSTRUCTED OF GALVANIZED STEEL, BONDED AND COATED WITH BAKED ENAMEL. CABINET INSULATION SHALL COMPLY WITH FLORIDA ENERGY CODE.
5. INDOOR AIR FANS SHALL BE FORWARD CURVED, CENTRIFUGAL FAN, CLASS 1.
6. SYSTEM SHALL HAVE PROTECTION FOR HIGH AND LOW PRESSURE, COMPRESSOR MOTOR OVERLOAD AND A TIMING DEVICE WHICH WILL PREVENT THE COMPRESSOR FROM BEING SUBJECTED TO A STARTING MORE THAN ONCE EVERY FIVE MINUTES.
7. AIR HANDLING UNITS SHALL BEAR THE UL AND ARI LABELS AND SHALL BE FRONT OR BOTTOM RETURN, UPFLOW, DIRECT DRIVEN, AND PROVIDED WITH ELECTRIC HEAT CAPACITY AS LISTED IN THE SCHEDULE, SINGLE POINT POWER CONNECTION, INTEGRAL CIRCUIT BREAKER, AND THERMOSTAT WITH HEAT STAGING CONTROLS.
8. PRIMARY DRAIN LINE SHALL BE RUN TO DRAIN OR DRYWELL.
9. SECONDARY DRAIN SHALL BE PROVIDED WITH FLOAT SWITCH. FLOAT SWITCH SHALL SHUT DOWN UNIT ANYTIME PRIMARY DRAIN GET CLOGGED. CONTRACTOR SHALL VERIFY SWITCHES ARE FUNCTIONING AND REPAIR IF NECESSARY.
10. AIR HANDLING UNITS SHALL NOT BE STARTED UNTIL ALL ROUGH CONSTRUCTION IS COMPLETE OR AS OTHERWISE DIRECTED BY THE MANUFACTURER. CHANGE ALL AIR HANDLING UNIT FILTERS AT THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES.

CONDENSING UNITS (SPLIT SYSTEM)

1. ACCEPTABLE MANUFACTURERS ARE: LG OR APPROVED EQUAL.
2. SYSTEM SHALL BE VARIABLE REFRIGERANT FLOW (VRF).
3. CONDENSING UNITS SHALL HAVE THE FOLLOWING CHARACTERISTICS:
   A. COMPRESSORS: HERMETICALLY SEALED DIRECT COOL TYPE WITH STARTER, CRANKCASE HEATER, LOW AND
   B. HIGH PRESSURE SAFETY SWITCHES. ANTI-SHORT CYCLE TIMER, TIME DELAY RELAY. LOW AMBIENT PRESSURE CONTROLLER, LIQUID LINE SOLENOID VALVE AND SIGHT GLASS, WINTER START KIT, EVAPORATOR COIL FREEZE STAT, REFRIGERANT SERVICE VALVES WITH GAGE PORTS, AND FIELD INSTALLED FILTER DRYER. PROVIDE A FIVE (5) YEAR WARRANTY ON ALL COMPRESSORS.
   C. OUTDOOR FANS: DIRECT DRIVE, CORROSION RESISTANT, PROPELLER TYPE WITH PROTECTED AND VIBRATION ISOLATED MOTOR.
   D. CASING AND FAN GUARD SHALL BE CORROSION RESISTANT.
4. CONDENSING UNITS SHALL BE SCREENED FROM VIEW FROM ANY PUBLIC OR PRIVATE RIGHT AWAY, COMMON AREAS, LAKES AND ABUTTING PROPERTIES. SCREENING SHALL UTILIZE OPAQUE FENCING, SCREEN WALL AND/OR SHRUBS AND OTHER VEGETATION. COORDINATE SCREENING WITH ARCHITECT OR LANDSCAPING DESIGNER.
5. PROVIDE CONCRETE PADS FOR GRADE MOUNTED CONDENSING UNITS. PADS SHALL BE MINIMUM OF 4-INCH THICK, 3,000 PSI CONCRETE, AND SHALL BE 4-INCH LARGER ON EACH SIDE THAN THE FOOTPRINT OF THE CONDENSING UNIT. VERIFY UNIT DIMENSIONS WITH APPROVED SHOP DRAWINGS PRIOR TO FABRICATION OF PADS.
6. SYSTEM SHALL HAVE PROTECTION FOR HIGH AND LOW PRESSURE, COMPRESSOR MOTOR OVERLOAD AND A TIMING DEVICE WHICH WILL PREVENT THE COMPRESSOR FROM BEING SUBJECTED TO A STARTING MORE THAN ONCE EVERY FIVE MINUTES.

AIR HANDLING UNIT CONDENSATE DRAIN PIPING

1. CONDENSATE PIPE TO BE TYPE L COPPER OR SUNLIGHT RESISTANT SCHEDULE 40 PVC. ROUTE AS INDICATED ON PLANS.
2. UNITS 5 TONS AND SMALLER MAY DRAIN TO GRADE. FOR UNITS LARGER THAN 5 TONS COORDINATE WITH PLUMBER TO PROVIDE HUB DRAIN(S) IN MECHANICAL ROOM AND DRYWELL(S).
3. DRAIN LINES SHALL SLOPE A MINIMUM OF 1/8" PER FOOT TOWARDS THE DRAIN LOCATION. TRENCHING POINT SHALL COMPLY FLORIDA BUILDING CODE - MECHANICAL.
4. PROVIDE A P-TRAP WITH CLEANOUT. REFER TO DETAILS FOR SIZING. ALL DRAIN PIPING SHALL BE MINIMUM 3/4-INCH OR AT LEAST THE SIZE OF THE COIL DRAIN.
5. CONNECTION. SLOPE ALL DRAIN PIPING A MINIMUM OF 1/8" PER FOOT TOWARDS THE DRAIN LOCATION.
6. INSULATE DRAIN LINES WITH 1" ARMAFLEX INSULATION RATED FOR PLENUM APPLICATION TO COMPLY FLORIDA BUILDING CODE - MECHANICAL.
7. UNDERGROUND DRAIN LINES SHALL BE RUN IN SLEEVE WITH BOTH END SEALED.

PIPE HANGERS AND SUPPORTS:

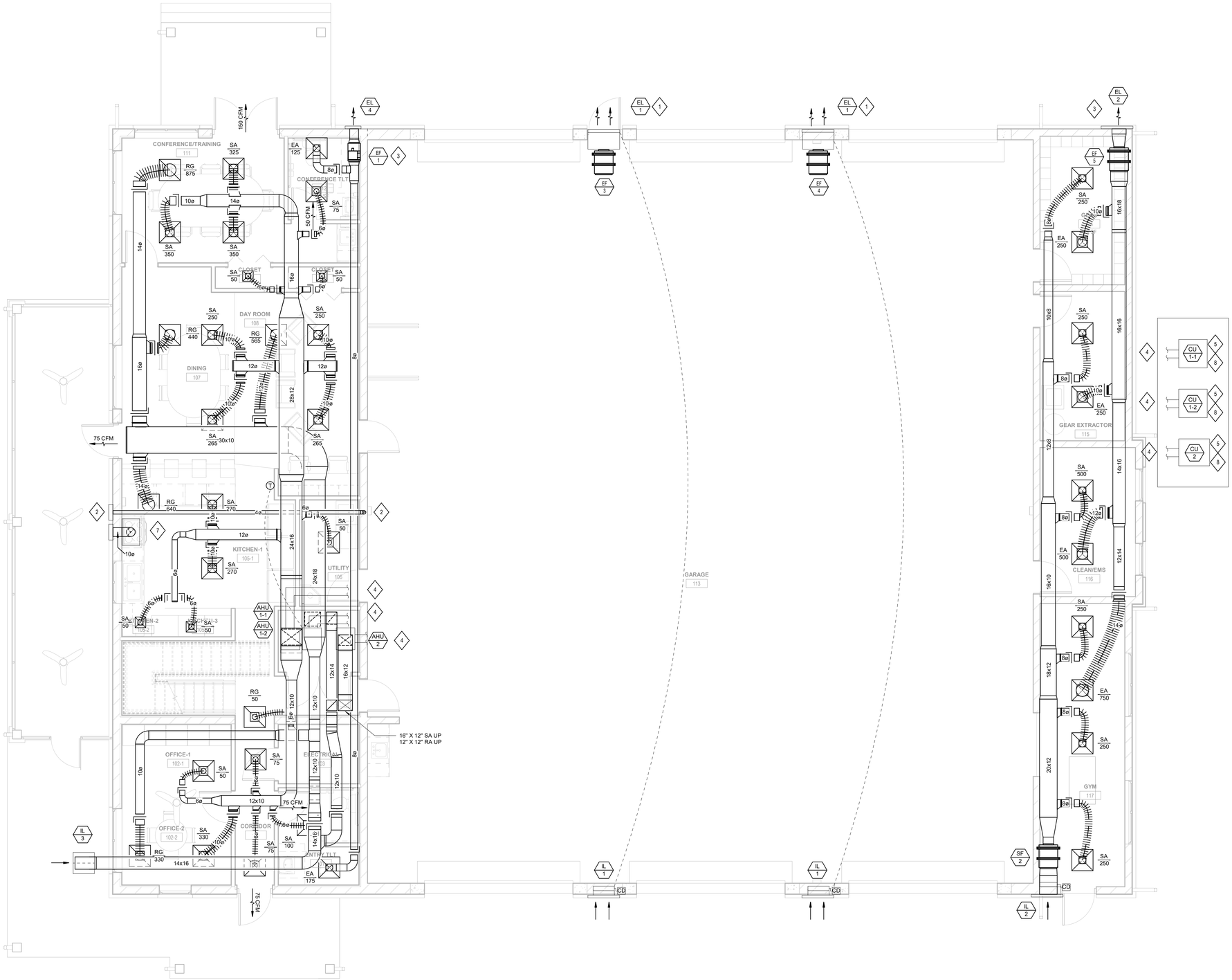
1. PIPE SUPPORTS SHALL BE IN ACCORDANCE FLORIDA BUILDING CODE. PIPE HANGERS SHALL BE INSTALLED AT MINIMUM 5'-0" ON CENTER, SECURELY ATTACHED TO BUILDING STRUCTURE.
2. ATTACH LINES TO PREVENT MOVEMENT. SUPPORT LINES SUCH AS LINES HANGERS DO NOT BLOCK ACCESS TO FILTERS, CONTROLS, ETC.
3. ALL VIBRATING TYPE EQUIPMENT SHALL BE PROPERLY FITTED WITH VIBRATION ISOLATION EQUIPMENT SIZED IN ACCORDANCE WITH EQUIPMENT WEIGHT AND DUTY (EQUAL TO MASON ISOLATORS).
4. PROVIDE FLEXIBLE CONNECTORS AT ALL SUPPLY AND RETURN CONNECTIONS TO AIR HANDLING EQUIPMENT. CONNECTORS SHALL BE HEAVY CANVAS OR NEOPRENE FABRIC WITH AIRTIGHT SEAMS.

FANS

1. ACCEPTABLE MANUFACTURERS ARE: GREENHECK, COOK, PENN, AND BROAN.
2. ALL FANS SHALL BEAR THE AMCA CERTIFIED RATINGS LABEL AND THE UL LABEL. ALL FAN MOTORS SHALL BE PROPERLY GROUNDED.
3. ALL FANS SHALL HAVE A SOUND LEVEL RATING NOT IN EXCESS OF THAT SPECIFIED.
4. ALL CENTRIFUGAL FANS SHALL HAVE TRUE WHEEL WITH INLET PERPENDICULAR TO DISCHARGE. ROOF MOUNTED FANS SHALL HAVE SPUN ALUMINUM HOUSINGS, ROOF CURB, AND DISCONNECT SWITCH MOUNTED INSIDE THE HOUSING. INTEGRAL BACKDRAFT DAMPERS SHALL BE TOTALLY CHATTERPROOF WITH NO METAL CONTACT.
5. CEILING EXHAUST FANS SHALL HAVE ACOUSTICALLY LINED HOUSINGS AND SHALL BE PROVIDED WITH A TERMINAL BOX ON THE INSIDE OF THE HOUSING WITH CORD, PLUG, AND RECEPTACLE. ENTIRE FAN, MOTOR, AND WHEEL ASSEMBLY SHALL BE EASILY REMOVABLE WITHOUT DISTURBING THE HOUSING.
6. ALL CEILING FANS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND VIBRATION FREE.
7. COORDINATE EXHAUST FAN LOCATIONS AND EXTERIOR EXHAUST GRILLES. AT MINIMUM, EXHAUST EQUIPMENT SHALL BE INSTALLED 15'-0" FROM ANY OPERABLE WINDOW, DOOR OR FRESH AIR INTAKE.

AIR DISTRIBUTION DEVICES

1. ACCEPTABLE MANUFACTURERS ARE: TITUS, PRICE, METALAIRE, TUTTLE & BAILEY, AND BARBER COLEMAN.
2. PROVIDE AND INSTALL ALL AIR DEVICES IN LOCATIONS INDICATED ON DRAWINGS. VERIFY LOCATIONS AND CEILING TYPES WITH ARCHITECTURAL DRAWINGS PRIOR TO ORDERING. PROVIDE INTEGRAL VOLUME DAMPER FOR ALL AIR DEVICES LOCATED IN HARD CEILINGS AND INTEGRAL RADIATION DAMPER FOR ALL DEVICES LOCATED IN RATED CEILINGS.
3. ALL AIR DEVICES SHALL BE ALUMINUM, EXCEPT THOSE INSTALLED IN RATED WALLS OR CEILINGS WHICH



1 **MECHANICAL FLOOR PLAN - 1ST FLOOR**
SCALE: 1/4" = 1'-0"

GENERAL NOTES

1. FOR CLARITY PIPING RISERS AND DROPS ARE NOT SHOWN. CONTRACTOR TO PROVIDE AT NO ADDITIONAL COST TO THE OWNER ALL DUCT OFFSETS, BENDS AND TRANSITIONS REQUIRED FOR COMPLETE FUNCTIONAL SYSTEM.
2. UNDERCUT ALL INTERIOR DOORS 1" ABOVE FINISHED CARPET/FLOOR. COORDINATE UNDERCUT WITH ARCHITECT /INTERIOR DESIGNER.
3. CONTRACTOR TO ENSURE A MINIMUM 10'-0" SEPARATION FROM ANY INTAKE AND ANY EXHAUST OR VENT.
4. ROUTE ALL DUCTWORK IN ABOVE CEILING. HOLD DUCTWORK TIGHT TO STRUCTURE. FOR CLARITY, NOT ALL THE DUCTWORK RISERS AND DROPS ARE SHOWN.
5. CONTRACTOR TO COORDINATE WITH ALL TRADES TO ENSURE ADEQUATE ACCESS IS PROVIDED TO PROPERLY MAINTAIN ALL AIR HANDLER UNITS, CONTROL DAMPERS, SMOKE DETECTORS AND SIMILAR ABOVE CEILING EQUIPMENT.

SHEET KEYNOTES

1. INTERLOCK GARAGE EXHAUST FANS WITH INTAKE LOUVER. EXHAUST PLENUM/FANS SHALL BE PROVIDED WITH A GRAVITY/BACKDRAFT LOUVER.
2. 4" ROUND GALVANIZED STEEL DUCT WITH SMOOTH INTERIOR FOR DRYER EXHAUST. ROUTE DUCT THROUGH WALL. SEE ARCHITECTURAL FOR FLASHING DETAILS. DUCT LENGTH SHALL NOT EXCEED 35 EQUIVALENT FEET. IF LENGTH EXCEEDS 35 FEET THEN AN EQUIPMENT RATED FOR LONG RUNS SHALL BE PROVIDED. WHERE THE DUCT IS CONCEALED WITHIN THE BUILDING CONSTRUCTION, THE EQUIVALENT LENGTH OF THE EXHAUST DUCT SHALL BE IDENTIFIED WITH A PERMANENT LABEL. LABEL SHALL BE LOCATED WITHIN 6FT. OF THE EQUIPMENT CONNECTION.
3. EXHAUST FAN WITH BACKDRAFT DAMPER. REFER TO FAN SCHEDULE FOR DETAILS. ROUTE EXHAUST SYSTEM THROUGH WALL WITH WEATHER PROOF RAIN CAP. SEAL PENETRATION AS NECESSARY AND PAINT WALL CAP TO MATCH ADJACENT WALL.
4. REFRIGERANT LINES (SUCTION AND LIQUID) AND CONDENSATE DRAIN LINE. ROUTE LINES FROM CONDENSING UNITS LOCATED OUTSIDE TO AIR CONDITIONING UNIT INSIDE. PIPE SIZED PER MANUFACTURER INSTRUCTIONS. INSULATE SUCTION LINES AND CONDENSATE LINES WITH MINIMUM 1" ARMAFLEX INSULATION. REFER TO DETAIL.
5. PROVIDE A HOUSE KEEPING PAD FOR CONDENSING UNITS LOCATED OUTSIDE TO AIR CONDITIONING. CLEARANCE FOR CONDENSING UNITS SHALL BE AS REQUIRED BY THE MANUFACTURER. CONDENSING UNIT SHALL BE SCREENED FROM VIEW FROM ANY PUBLIC OR PRIVATE RIGHT OF WAY, COMMON AREAS, LAKES AND ABUTTING PROPERTIES, SUCH SCREEN SHALL UTLIZE OPAQUE FENCING, SCREEN WALL AND OR SHRUBS AND OTHER VEGETATION. COORDINATE SCREENING WTIH ARCHITECT AND/OR LANDSCAPING DESIGNER.
6. PROVIDE THERMOSTAT MOUNTED AT 54" A.F.F. WHERE SHOWN. CONNECT THERMOSTAT TO AHU 1-1 & 1-2.
7. PROVIDE 250 CFM DUCTLESS KITCHEN HOOD.
8. COORDINATE CONDENSING UNIT LOCATIONS WITH ROOF TO PROVIDE DIRECT RUNOFF ON TOP OF UNITS.

NO.	DESCRIPTION	DATE

DANIEL CESAR LICENSED No. 68670 STATE OF FLORIDA PROFESSIONAL ENGINEER

John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
Ethan J. Hine, AIA
Jennifer Zaffuto, AIA, NCARB, MPA

KTH ARCHITECTS
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800 NORTH HIGHLAND AVE. • ORLANDO, FL • 407.203.6707 • F 407.489.0650

18104A /18-005

LAKE COUNTY
FIRE STATION NO. 39
MECHANICAL PLAN – 1ST FLOOR
24815 WALLICK ROAD, SORRENTO, FL 32776

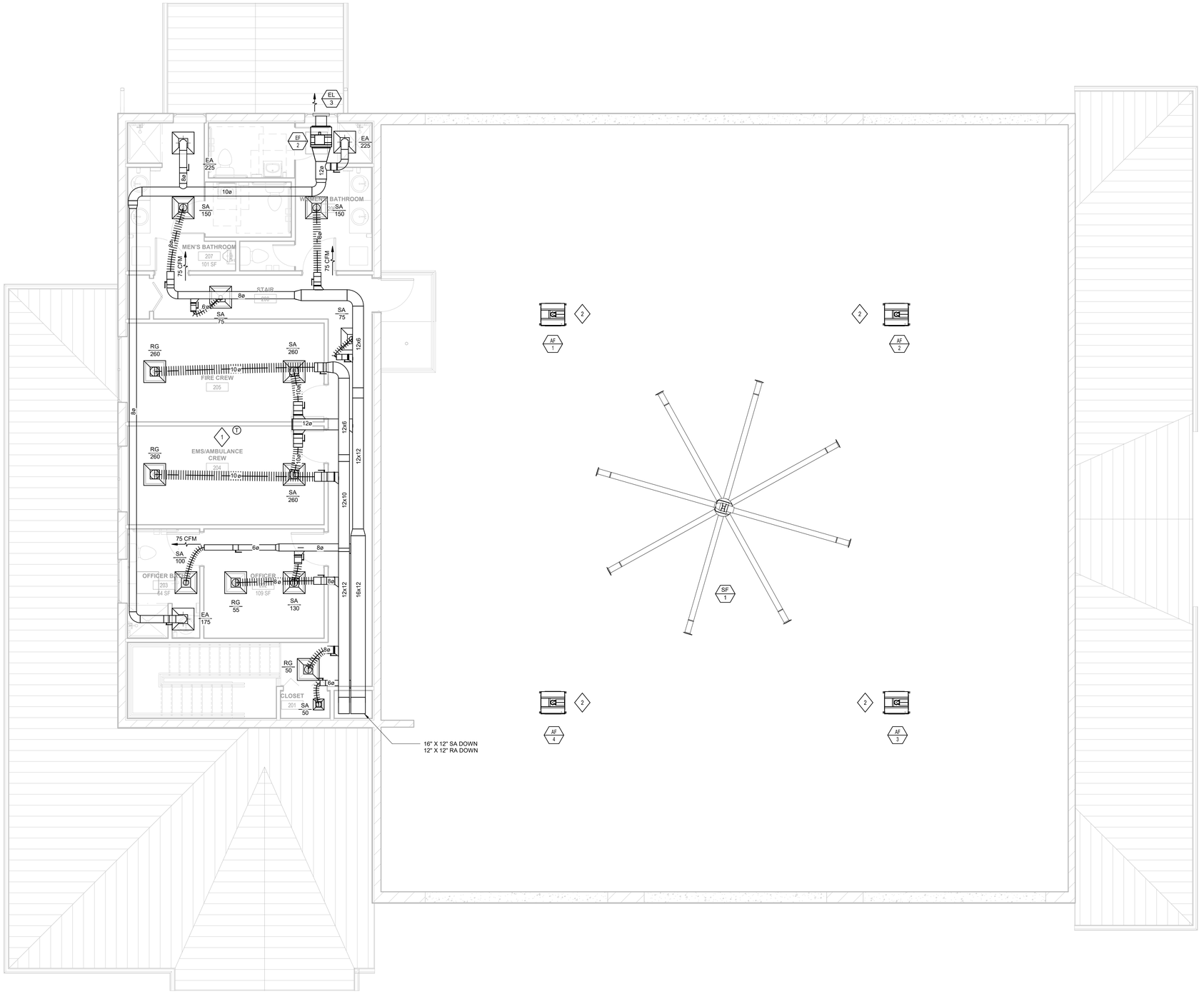
JANUARY 31, 2020

PRICING SET

DCL ENGINEERING
800 HIGHLAND AVE. SUITE 102,
ORLANDO, FL 32803
CA LIC. NO.: 31963
PHONE: (352) 514-9025

M201

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GENERAL NOTES

1. FOR CLARITY PIPING RISERS AND DROPS ARE NOT SHOWN. CONTRACTOR TO PROVIDE AT NO ADDITIONAL COST TO THE OWNER ALL DUCT OFFSETS, BENDS AND TRANSITIONS REQUIRED FOR COMPLETE FUNCTIONAL SYSTEM.
2. UNDERCUT ALL INTERIOR DOORS 1" ABOVE FINISHED CARPET/FLOOR. COORDINATE UNDERCUT WITH ARCHITECT /INTERIOR DESIGNER.
3. CONTRACTOR TO ENSURE A MINIMUM 10'-0" SEPARATION FROM ANY INTAKE AND ANY EXHAUST OR VENT.
4. ROUTE ALL DUCTWORK IN ABOVE CEILING. HOLD DUCTWORK TIGHT TO STRUCTURE. FOR CLARITY, NOT ALL THE DUCTWORK RISERS AND DROPS ARE SHOWN.
5. CONTRACTOR TO COORDINATE WITH ALL TRADES TO ENSURE ADEQUATE ACCESS IS PROVIDED TO PROPERLY MAINTAIN ALL AIR HANDLER UNITS, CONTROL DAMPERS, SMOKE DETECTORS AND SIMILAR ABOVE CEILING EQUIPMENT.

SHEET KEYNOTES

1. PROVIDE THERMOSTAT MOUNTED AT 54" A.F.F. WHERE SHOWN. CONNECT THERMOSTAT TO AHU 2 ON THE FIRST FLOOR.
2. AIRVAC 911 TO BE HUNG FROM CEILING. COORDINATE SWITCH LOCATION IN FIELD AND WITH DOORS.

1 MECHANICAL FLOOR PLAN - 2ND FLOOR

SCALE: 1/4" = 1'-0"

NO.	DESCRIPTION	DATE

DANIEL CESAR LICENSE No. 68670 STATE OF FLORIDA PROFESSIONAL ENGINEER

John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
Ethan J. Hine, AIA
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LAKE COUNTY
FIRE STATION NO. 39
MECHANICAL PLAN – 2ND FLOOR
24815 WALLICK ROAD, SORRENTO, FL 32776

18104A /18-005

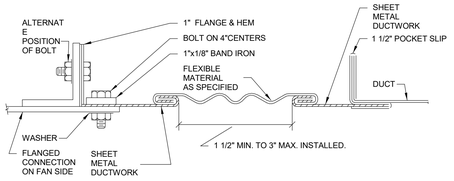
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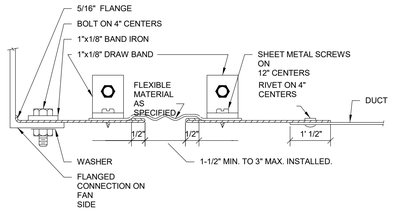
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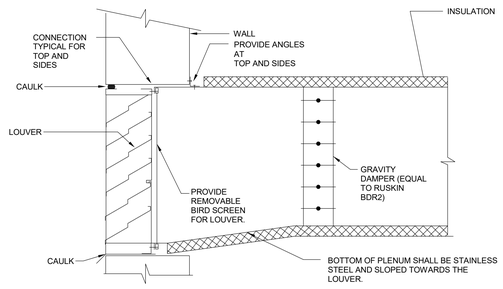


A RECTANGULAR FLEXIBLE CONNECTION

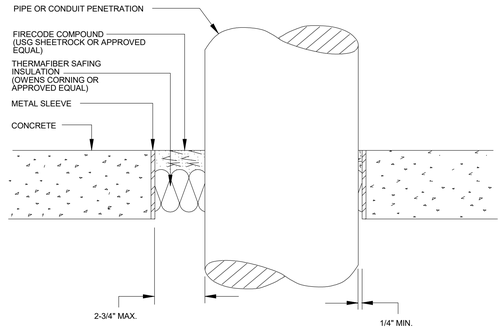


B ROUND FLEXIBLE CONNECTION

11 FLEXIBLE DUCT CONNECTIONS
SCALE: NOT TO SCALE

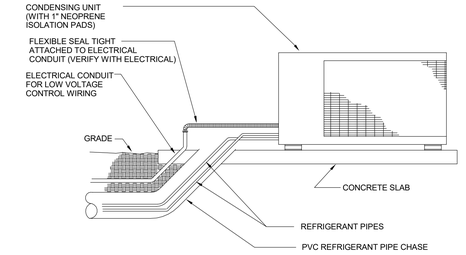


9 LOUVER DETAIL
SCALE: NOT TO SCALE

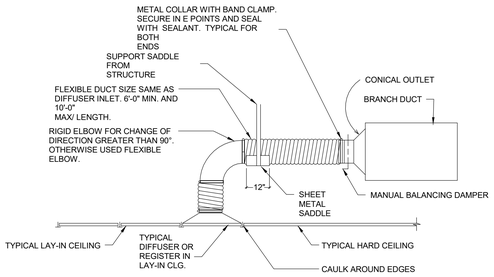


NOTES:
(1) PENETRATION DETAIL IN ACCORDANCE WITH WALL ASSEMBLY U.L. SYSTEM NO. 449.

10 PIPE THRU FLOOR (WALL ASSEMBLY SYSTEM UL 449)
SCALE: NOT TO SCALE

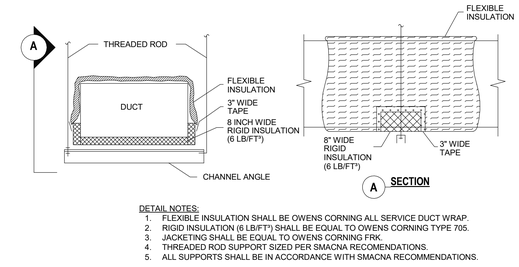


5 CONDENSING UNIT INSTALLATION DETAIL
SCALE: NOT TO SCALE



NOTE:
1. INSULATE FLEXIBLE AS REQUIRED. INSTALL FLEX DUCTWORK AS STRAIGHT AS POSSIBLE.

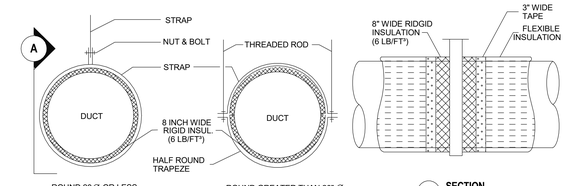
6 BRANCH DUCTWORK TO DIFFUSER/GRILLE
SCALE: NOT TO SCALE



A SECTION

DETAIL NOTES:
1. FLEXIBLE INSULATION SHALL BE OWENS CORNING ALL SERVICE DUCT WRAP.
2. RIGID INSULATION (6 LB/FT³) SHALL BE EQUAL TO OWENS CORNING TYPE 705.
3. JACKETING SHALL BE EQUAL TO OWENS CORNING FRK.
4. THREADED ROD SUPPORT SIZED PER SMACNA RECOMENDATIONS.
5. ALL SUPPORTS SHALL BE IN ACCORDANCE WITH SMACNA RECOMMENDATIONS.

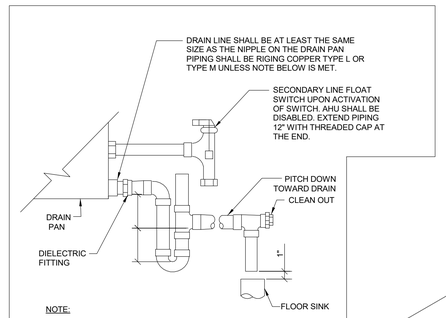
1 SUPPORT FOR RECTANGULAR DUCT WITH INSULATION
SCALE: NOT TO SCALE



A SECTION

DETAIL NOTES:
1. FLEXIBLE INSULATION SHALL BE OWENS CORNING ALL SERVICE DUCT WRAP.
2. RIGID INSULATION (6 LB/FT³) SHALL BE EQUAL TO OWENS CORNING TYPE 705.
3. JACKETING SHALL BE EQUAL TO OWENS CORNING FRK.
4. DUCT HANGER STAP, 1-1/2" GALVANIZED AS RECOMMENDED BY SMACNA UNLESS NOTED OTHERWISE.
5. ALL SUPPORTS SHALL BE IN ACCORDANCE WITH SMACNA RECOMMENDATIONS.

2 SUPPORT FOR ROUND DUCT WITH INSULATION
SCALE: NOT TO SCALE

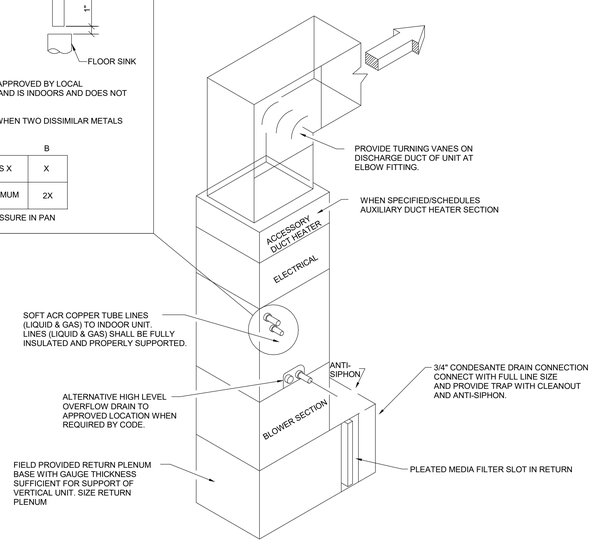


NOTE:

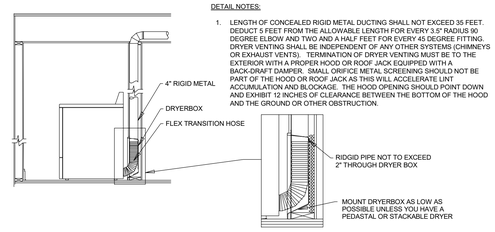
1. CPVC PIPE MAY BE USED ONLY IF APPROVED BY LOCAL AUTHORITYHAVING JURISDICTION AND IS INDOORS AND DOES NOT PASS THROUGH RATED BARRIERS.
2. DIELECTRIC FITTING TO BE USED WHEN TWO DISSIMILAR METALS ARE TO BE CONNECTED.

UNIT	A	B
DRAW THRU	2" PLUS X	X
BLOW THRU	1" MINIMUM	2X

WHERE X= STATIC PRESSURE IN PAN

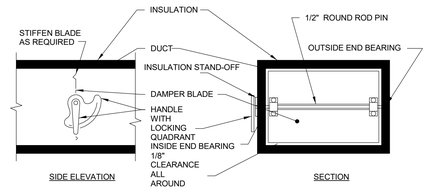


12 VERTICAL UNIT INSTALLATION DETAIL
SCALE: 12" = 1'-0"



DETAIL NOTES:
1. LENGTH OF CONCEALED RIGID METAL DUCTING SHALL NOT EXCEED 35 FEET. DEDUCT 5 FEET FROM THE ALLOWABLE LENGTH FOR EVERY 3.5" RADIUS 90 DEGREE ELBOW AND TWO AND A HALF FEET FOR EVERY 45 DEGREE FITTING. DRYER VENTING SHALL BE INDEPENDENT OF ANY OTHER SYSTEMS (CHIMNEYS OR EXHAUST VENTS). TERMINATION OF DRYER VENTING MUST BE TO THE EXTERIOR WITH A PROPER HOOD OR ROOF JACK EQUIPPED WITH A BACK-DRAFT DAMPER. SMALL ORIFICE METAL SCREENING SHOULD NOT BE PART OF THE HOOD OR ROOF JACK AS THIS WILL ACCELERATE LINT ACCUMULATION AND BLOCKAGE. THE HOOD OPENING SHOULD POINT DOWN AND EXHIBIT 12 INCHES OF CLEARANCE BETWEEN THE BOTTOM OF THE HOOD AND THE GROUND OR OTHER OBSTRUCTION.

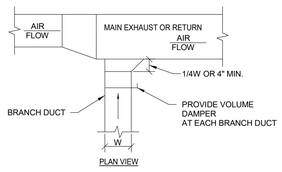
7 DRYER VENT BOX DETAIL
SCALE: NOT TO SCALE



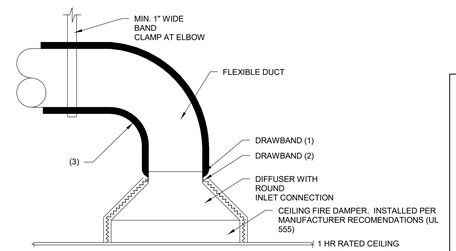
DETAIL NOTE:

1. DELETE INSULATION STAND-OFF ON DUCTWORK WITHOUT EXTERIOR INSULATION.
2. DETAIL SHOWS SINGLE BLADE DAMPER. DAMPER INSTALLATION SHALL BE SIMILAR FOR MULTI-BLADE DAMPERS & ROUND DAMPERS.

3 BALANCING DAMPER
SCALE: NOT TO SCALE



8 EXHAUST OR RETURN BRANCH DUCTWORK
SCALE: NOT TO SCALE



DETAIL KEYNOTES:
(1) PULL FLEXIBLE DUCT'S INNER LINER OVER DIFFUSER COLLAR ANI
(2) SECURE FLEXIBLE DUCT INSULATION AND OUTER JACKET WITH D
(3) MAINTAIN MIN. 1.5 RADIUS ELBOW

4 DIFFUSER/GRILLE CONNECTOR
SCALE: NOT TO SCALE

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ORLANDO, FL 32803
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DATE | DESCRIPTION | NO.

DANIEL CESAR LICENSED No.68670 STATE OF FLORIDA PROFESSIONAL ENGINEER

John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
Ethan J. Hine, AIA
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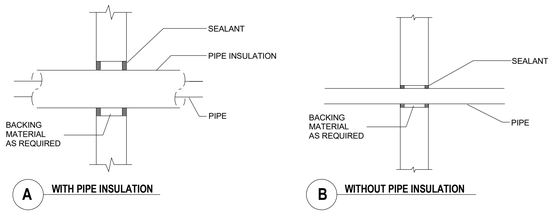
LAKE COUNTY
FIRE STATION NO. 39
MECHANICAL DETAILS
24815 WALLICK ROAD, SORRENTO, FL 32776

JANUARY 31, 2020

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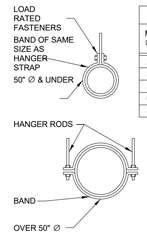


A WITH PIPE INSULATION

B WITHOUT PIPE INSULATION

NOTES:
(1) WHERE WALL IS FIRE RATED, APPLY FIRE STOPPING SYSTEM (COMBINATION OF SEALANT, BACKING MATERIAL AND INSULATION) MEETING THIS RATING.

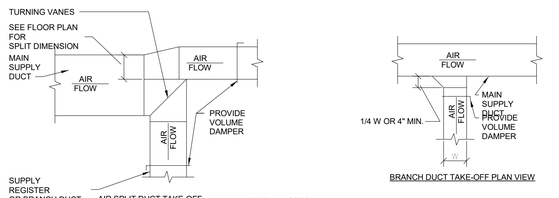
1 PIPE THRU INTERIOR WALL
SCALE: NOT TO SCALE



HANGER STRAPS OR RODS			
MAX. DUCT ∅ IN.	QUANTITY/SIZE IN.	MAX. LOAD LBS.	MAX. SPACING IN.
26	ONE 1 x 22 GA STRAP	260	144
36	ONE 1 x 18 GA STRAP	420	144
50	ONE 1 x 16 GA STRAP	700	144
60	TWO 3/8∅. RODS	1,320	144
84	TWO 1/2∅ RODS	2,500	144

NOTE:
TABULATED DATA FROM SMACNA ALLOWS FOR DUCT REINFORCING AND INSULATION, BUT NO EXTERNAL LOAD.

2 ROUND DUCT HANGERS
SCALE: NOT TO SCALE



DETAIL NOTES:

THE SUPPLY REGISTER TAKE-OFF MAY BE USED FOR UP TO 25% OF THE MAIN DUCT CFM. THE BRANCH DUCT TAKE-OFF MAY BE USED FOR UP TO 15% OF THE MAIN DUCT CFM ANYTIME AND UP TO 40%.

3 SUPPLY DUCTWORK TAKE OFFS
SCALE: NOT TO SCALE

NO.	DESCRIPTION	DATE

DANIEL CESAR LICENSE No. 68670 STATE OF FLORIDA PROFESSIONAL ENGINEER

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LAKE COUNTY
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JANUARY 31, 2020

PRICING SET

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AIR FILTERS

MARK	SERVES	CFM	ESP (IN W.G.)	QTY.	TYPE	DRIVE	CONTROL	MOUNTING	ELECTRICAL HP	ELECTRICAL VOLT	ELECTRICAL PH	NOTES BASIS OF DESIGN: BIG ASS FANS & LOREN COOK
AF-1	GARAGE	2000	N/A	1	VERTICAL	N/A	CONST.	GARAGE CEILING	3/4	230	1	AIRVAC 911
AF-2	GARAGE	2000	N/A	1	VERTICAL	N/A	CONST.	GARAGE CEILING	3/4	230	1	AIRVAC 911
AF-3	GARAGE	2000	N/A	1	VERTICAL	N/A	CONST.	GARAGE CEILING	3/4	230	1	AIRVAC 911
AF-4	GARAGE	2000	N/A	1	VERTICAL	N/A	CONST.	GARAGE CEILING	3/4	230	1	AIRVAC 911

NOTES:
1. AIRVAC 911 TO BE INSTALLED IN THE VERTICAL POSITION. SUPPORT FROM CEILING. REFER TO SPECS.
2. PROVIDE DISCONNECT.
3. FANS TO BE UL RATED. FAN(S) SHALL BE SPARK RESISTANCE CONSTRUCTION.
4. ALL APPROPRIATE FILTERS TO BE INSTALLED WITH EXHAUST REMOVAL SYSTEM.
5. PHOTO ELECTRIC EYES AND MAGNETIC DOOR SWITCHES TO BE INSTALLED ON EXHAUST REMOVAL SYSTEM.

SUPPLY FANS

MARK	SERVES	CFM	ESP (IN W.G.)	QTY.	TYPE	DRIVE	CONTROL	MOUNTING	ELECTRICAL HP	ELECTRICAL VOLT	ELECTRICAL PH	NOTES BASIS OF DESIGN: BIG ASS FANS & LOREN COOK
SF-1	GARAGE	N/A	N/A	1	24" CEILING FAN	N/A	VFD	GARAGE CEILING	2	230	1	POWERFOIL X 3.0
SF-2	CLEAN/GYM	1,925	0.75	1	INLINE	BELT	CONST.	ABOVE CEILING	3/4	230	1	DB-9

NOTES:
1. INLINE FANS SHALL BE PROVIDED WITH 4 SET OF ISOLATORS
2. PROVIDE DISCONNECT.
3. FANS TO BE UL RATED. FAN(S) SHALL BE SPARK RESISTANCE CONSTRUCTION.
4. INTERLOCK SUPPLY FAN(S) WITH ASSOCIATED EXHAUSTS.

LOUVER SCHEDULE

TAG	QTY	MODEL	WIDTH (in)	HEIGHT (in)	AIR FLOW (cfm)	FLOW DIR.	FREE AREA (sq ft)	FREE AREA %	FREE AREA VEL (fpm)	PRESSURE DROP (w.g.)
IL-1	2	EME3625DFLMD	36.00	24.00	1870	I	2.33	39	801	0.07
IL-2	1	EME3625DFLMD	36.00	24.00	1925	I	2.33	39	825	0.08
IL-3	1	EME3625DFLMD	24.00	24.00	1225	I	1.50	38	815	0.07
EL-1	2	EME3625DFLMD	36.00	24.00	1870	E	2.33	39	801	0.06
EL-2	1	EME3625DFLMD	36.00	24.00	1925	E	2.33	39	825	0.07
EL-3	1	EME3625DFLMD	18.00	18.00	690	E	0.73	33	942	0.09
EL-4	1	EME3625DFLMD	14.00	14.00	330	E	0.36	27	906	0.08

NOTES:

1.) AMCA 540 and AMCA 550 approved 3" deep, vertical blade wind driven rain louver.

AIR DISTRIBUTION DEVICE SCHEDULE

SYMBOL	TYPE	AIRFLOW (CFM)	SIZE (IN x IN)	DUCT CONNECTION SIZE	COLOR	REMARKS
SUPPLY CD CFM	SUPPLY CEILING GRILLE 24x24 MODULAR SIZE	0 - 50	12 x 12	SEE PLAN FOR DUCT CONNECTION	WHITE	SUPPLY DIFFUSERS SHALL BE EQUAL TO PRICE AMD WITH18x18 DIMENSION "A" SIZE FOR UNIFORM APPEARANCE MAX.NECK VELOCITY 700 FPM MAX. NC = 30 MAX. PRESSURE DROP 0.10" CEILING LAY-IN OR SURFACE MOUNT USED FOR GENERAL PURPOSE
		51 - 240	24 x 24			
		241 - 325	24 x 24			
		330 - 480	24 x 24			
		485 - 740	24 x 24			
SIDEWALL CEILING/DUCT	SUPPLY AIR GRILLE VARIABLE SIZE	0 - 130	6 x 6	SEE PLAN FOR DUCT CONNECTION	WHITE	SUPPLY GRILLES SHALL BE EQUAL TO PRICE 620 L-STYLE MAX. NECK VELOCITY 700 FPM MAX. NC = 30 MAX. PRESSURE DROP 0.10" DUCT OR CEILING/WALL SURFACE MOUNT ALTERNATE SIZES WITH EQUIVALENT CORE AREA ARE ACCEPTABLE USED FOR GENERAL PURPOSE AND AREAS WITH EXPOSED CEILINGS
		131 - 235	10 x 6			
		236 - 400	12 x 8			
		401 - 775	18 x 10			
		776 - 1270	24 x 12			
RETURN/EXHAUST AIR RG CFM EA CFM	RETURN GRILLE	0 - 50	12 x 12	SEE PLAN FOR DUCT CONNECTION	WHITE	RETURN/EXHAUST GRILLES SHALL BE EQUAL TO PRICE 630 L-STYLE WITH 10x10 DUCT CONNECTION SIZE MAX. NECK VELOCITY 450 FPM MAX. NC = 20 MAX. PRESSURE DROP 0.10" CEILING LAY-IN OR SURFACE MOUNT USED FOR GENERAL PURPOSE PROVIDE 22x22 GRILLE PLENUM BOXES FOR ALL 24x24 RETURN/EXHAUST GRILLES WITH AIRFLOW GREATER THAN 400 CFM.
		51 - 240	24 x 24			
		241 - 325	24 x 24			
		330 - 480	24 x 24			
		485 - 980	24 x 24			
RETURN RG CFM	RETURN GRILLE	0 - 2,000	24 x 48	SEE PLAN FOR DUCT CONNECTION SIZE TO 46x22 GRILLE PLENUM BOX	WHITE	RETURN/EXHAUST GRILLES SHALL BE EQUAL TO PRICE 630 L-STYLE WITH 22x46 DUCT CONNECTION SIZE MAX. NECK VELOCITY 450 FPM MAX. NC = 20 MAX. PRESSURE DROP 0.10" CEILING LAY-IN OR SURFACE MOUNT USED FOR GENERAL PURPOSE

NOTES:
1. TRANSITION DUCTWORK AS REQUIRED TO GRILLE CONNECTION SIZE INDICATED.
2. DIFFUSERS/GRILLES/REGISTERS SHALL BE ALUMINUM.
3. PROVIDE INTEGRAL VOLUME DAMPER.
4. PROVIDE FLEXIBLE DUCT CONNECTIONS TO ALL AIR DISTRIBUTION DEVICES IN LAY-IN CEILINGS. EXPOSED AIR DISTRIBUTION DEVICES SHALL HAVE HARD DUCT CONNECTIONS.

OUTSIDE AIR CALCULATIONS

SYSTEM	ROOM NAME	ROOM NUMBER	OCCUPANCY CLASSIFICATION		AREA (SQ.FT.)	OCCUPANT LOAD	VALUES Rp	Pz	Ra	Az	ESTIMATED OUTSIDE AIR Vbz=Rp*Pz+Ra*Az
AHU-1-1/1-2	ENTRY BATH	101	DWELLING	TOILET ROOMS AND BATHROOMS	68.0	-	-	-	-	68.0	-
AHU-1-1/1-2	OFFICE	102	OFFICES	OFFICE SPACES	94.0	1.0	5.0	1.0	0.1	94.0	10.6
AHU-1-1/1-2	STORAGE	104	RETAIL	STORAGE ROOMS	57.0	1.0	-	1.0	0.1	57.0	6.8
AHU-1-1/1-2	KITCHEN	106	DWELLING	KITCHENS	215.0	-	-	-	-	215.0	-
AHU-1-1/1-2	UTILITY	107	RETAIL	STORAGE ROOMS	56.0	1.0	-	1.0	0.1	56.0	6.7
AHU-1-1/1-2	DAY ROOM	109	HOTELS	BEDROOM/LIVING ROOM	216.0	3.0	5.0	3.0	0.1	216.0	28.0
AHU-1-1/1-2	CONFERENCE/TRAINI...	110	OFFICES	CONFERENCE ROOMS	208.0	11.0	5.0	11.0	0.1	208.0	67.5
AHU-1-1/1-2	CONFERENCE BATH	111	DWELLING	TOILET ROOMS AND BATHROOMS	51.0	-	-	-	-	51.0	-
NATURAL	GARAGE	112	STORAGE	REPAIR GARAGES, ENCLOSED PARKING...	4439.0	-	-	-	-	4439.0	-
NATURAL	GEAR	113	RETAIL	STORAGE ROOMS	112.0	1.0	-	1.0	0.1	112.0	13.4
NATURAL	GEAR EXTRACTOR	114	RETAIL	STORAGE ROOMS	113.0	1.0	-	1.0	0.1	113.0	13.6
NATURAL	CLEAN/EMS	115	RETAIL	STORAGE ROOMS	127.0	1.0	-	1.0	0.1	127.0	15.2
NATURAL	GYM	116	SPORTS	HEALTH CLUB/ WEIGHT ROOM	215.0	3.0	20.0	3.0	0.1	215.0	72.9
AHU-1-1/1-2	STORAGE	126	RETAIL	STORAGE ROOMS	9.0	1.0	-	1.0	0.1	9.0	1.1
AHU-1-1/1-2	STORAGE	127	RETAIL	STORAGE ROOMS	16.0	1.0	-	1.0	0.1	16.0	1.9
AHU-1-1/1-2	CORRIDOR	129	PUBLIC	CORRIDORS	200.0	-	-	-	0.1	200.0	12.0
AHU-1-1/1-2	STORAGE	138	RETAIL	STORAGE ROOMS	10.0	1.0	-	1.0	0.1	10.0	1.2
AHU-1-1/1-2	STORAGE	139	RETAIL	STORAGE ROOMS	12.0	1.0	-	1.0	0.1	12.0	1.4
AHU-2	EMS/AMBULANCE...	203	HOTELS	BEDROOM/LIVING ROOM	162.0	2.0	5.0	2.0	0.1	162.0	19.7
AHU-2	FIRE CREW	204	HOTELS	BEDROOM/LIVING ROOM	162.0	2.0	5.0	2.0	0.1	162.0	19.7
AHU-2	MENS BATHROOM	205	DWELLING	TOILET ROOMS AND BATHROOMS	93.0	-	-	-	-	93.0	-
AHU-2	WOMENS BATHROOM	206	DWELLING	TOILET ROOMS AND BATHROOMS	101.0	-	-	-	-	101.0	-
AHU-2	OFFICER	207	HOTELS	BEDROOM/LIVING ROOM	107.0	2.0	5.0	2.0	0.1	107.0	16.4
AHU-2	OFFICER BATH	208	DWELLING	TOILET ROOMS AND BATHROOMS	68.0	-	-	-	-	68.0	-
AHU-2	STORAGE	209	RETAIL	STORAGE ROOMS	21.0	1.0	-	1.0	0.1	21.0	2.5
AHU-1-1/1-2	DINING-1	108-1	FOOD	DINING ROOM	145.0	11.0	7.5	11.0	0.2	145.0	108.6
AHU-1-1/1-2	DINING-2	108-2	FOOD	DINING ROOM	36.0	3.0	7.5	3.0	0.2	36.0	29.0
AHU-2	CORRIDOR	108-8	PUBLIC	CORRIDORS	327.0	-	-	-	0.1	327.0	19.6
										TOTAL OUTSIDE AIR REQUIRED FOR AHUs =	468.0

AIR HANDING UNIT SYSTEM (DUCTED)

MARK	SERVES	CFM	ESP (IN W.G.)	OA CFM	NOMINAL COOL CAP. (TONs)	NOMINAL TOTAL CAP. (BTUs)	SENSIBLE CAPACITY (BTUs)	FILTER EFFICIENCY (MERV)	EAT DB	EAT WB	LAT DB	LAT WB	AUXILIARY HEAT (kW)	ELECTRICAL HP	ELECTRICAL VOLT	ELECTRICAL PH	ELECTRICAL MCA	ELECTRICAL MOP	UNIT WEIGHT (LBS)	NOTES BASIS OF DESIGN: LENNOX
AHU-1-1	1ST FLOOR	1,870	0.75	200	5.0	60,000	41,723	8	95.0	80.0	55.9	54.6	9.0	1	230	1	35.7	50.0	280	CBA38MV-048
AHU-1-2	1ST FLOOR	1,870	0.75	200	5.0	60,000	41,723	8	95.0	80.0	55.9	54.6	9.0	1	230	1	35.7	50.0	280	CBA38MV-048
AHU-2	2ND FLOOR	1,300	0.75	150	4.0	48,000	31,119	8	95.0	80.0	54.3	53.7	8.0	1	230	1	29.2	40.0	268	CBA38MV-060

NOTES:
1. REFRIGERANT LINES AND REQUIRED INSULATION SHALL BE SIZED AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
2. THERMOSTAT SHALL BE PROGRAMMABLE. SEVEN (7) DAY PROGRAMMABLE THERMOSTAT.
3. UNIT SHALL BE PROVIDED WITH DISCONNECT OR COORDINATE DISCONNECT WITH ELECTRICAL. EACH AHU SHALL BE PROVIDED WITH FACTORY INSTALLED CIRCUIT BREAKER.
4. UNIT SHALL BE SINGLE POINT CONNECTION. DISCONNECT SHALL INCLUDE SINGLE POINT HEATER POWER AND INDOOR UNIT.
5. PROVIDE HEATING/COOLING PROGRAMMABLE HUMIDISTAT AND 24 VOLT CONTROL WIRING. HUMIDISTAT SHALL HAVE THE SAME NUMBER OF STAGES OF HEATING AND COOLING AS ASSOCIATED AHU UNIT. HUMIDISTAT SHALL HAVE DUAL SETPOINT (HEATING AND COOLING).

AIR CONDITIONING CONDENSING UNIT (DUCTED)

MARK	SERVES	NOMINAL TOTAL CAP. (BTUs)	SENSIBLE CAPACITY (BTUs)	INDOOR UNITS CONNECTED	REFRIGERANT TYPE	EFFCIENCY (SEER)	COMPRESSOR QTY	COMPRESSOR TYPE	ELECTRICAL LRA	ELECTRICAL MCA	ELECTRICAL MOP	ELECTRICAL VOLT	ELECTRICAL PH	NOTES BASIS OF DESIGN: LENNOX
CU-1-1	1ST FLOOR	60,000	41,723	AHU-1-1	R-410A	16.0	1	SCROLL	N/A	35.7	50.0	230	1	16ACX-060-230
CU-1-2	1ST FLOOR	60,000	41,723	AHU-1-2	R-410A	16.0	1	SCROLL	N/A	35.7	50.0	230	1	16ACX-060-230
CU-2	2ND FLOOR	48,000	31,119	AHU-2	R-410A	16.0	1	SCROLL	N/A	29.2	40.0	230	1	XC16-048-230

NOTES:
1. OUTSIDE DESIGN CONDITIONS - SUMMER: 92°F DB, 79° WB. WINTER: 35°F DB.
2. REFRIGERANT LINES AND REQUIRED INSULATION SHALL BE SIZED AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
3. PROVIDE A 5 MINUTE (ADJ.) TIME DELAY TO PREVENT COMPRESSOR FROM SHORT CYCLING. PROVIDE UNIT WITH HOT GAS BYPASS LINE.
4. INSTALL UNIT PER MANUFACTURER RECOMMENDATIONS.

EXHAUST FANS

MARK	SERVES	CFM	ESP (IN W.G.)	QTY.	TYPE	DRIVE	CONTROL	MOUNTING	ELECTRICAL HP	ELECTRICAL VOLT	ELECTRICAL PH	NOTES BASIS OF DESIGN: LOREN COOK
EF-1	1ST FLOOR	330	0.75	1	INLINE	BELT	CONST.	ABOVE CEILING	3/4	230	1	60SQN-B
EF-2	2ND FLOOR	690	0.75	1	INLINE	BELT	CONST.	ABOVE CEILING	1/4	230	1	150SQN-HP
EF-3	GARAGE	1,870	0.75	1	WALL PAC	BELT	CONST.	WALL	3/4	230	1	DB-9
EF-4	GARAGE	1,870	0.75	1	WALL PAC	BELT	CONST.	WALL	3/4	230	1	DB-9
EF-5	CLEAN/GYM	1,925	0.75	1	WALL PAC	BELT	CONST.	ABOVE CEILING	3/4	230	1	DB-9

NOTES:
1. INLINE FANS SHALL BE PROVIDED WITH 4 SET OF ISOLATORS
2. PROVIDE DISCONNECT.
3. FANS TO BE UL RATED. FAN(S) SHALL BE SPARK RESISTANCE CONSTRUCTION.
4. INTERLOCK EXHAUST FAN(S) WITH ASSOCIATED AIR HANDLING UNIT.
5. EXHAUST FAN(S) SHALL BE PROVIDED WITH BACKDRAFT DAMPER.

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18104A /18-005

LAKE COUNTY
FIRE STATION NO. 39
MECHANICAL SCHEDULES
24815 WALLICK ROAD, SORRENTO, FL 32776

JANUARY 31, 2020

PRICING SET

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PLUMBING FIXTURE/EQUIPMENT SCHEDULE

MARK	FIXTURE	SOIL/ WASTE (IN)	VENT (IN)	COLD WATER (IN)	HOT WATER (IN)	DESCRIPTION
FCO	FLOOR CLEANOUT	REFER TO PLANS	-	-	-	EPOXY COATED CAST IRON FLOOR CLEANOUT WITH 5 IN. ROUND ADJUSTABLE GASKETED HEAVY DUTY NICKEL BRONZE TOP, REMOVABLE GAS TIGHT GASKETED, BRASS CLEANOUT AND NO HUB OUTLET. ADJUST TO FINISHED FLOOR. COORDINATE TOP FINISH WITH ARCHITECT. EQUAL TO CO-200RX OR ZURN-Z4100.
HB-1	HOSE BIBB	-	-	3/4"	-	SANITARY; AUTO DRAINING, FREEZELESS WITH VACUUM BREAKER, BACKFLOW PROTCETED. ALUMINUM, BRASS OR CHROME BOX. REFER TO ARCHITECTURAL FLOOR PLANS FOR WALL THICKNESS AND MOUNTING HEIGHT REQUIREMRNTS. EQUAL TO WOODFORD B65.
L-1	SINK	2"	1-1/2"	1/2"	1/2"	SINK: AMERICAN STANDARD OVALYN 9482.000 UNIVERSAL ACCESS UNDERCOUNTER SINK. UNDERCOUNTED, UNGLAZED RIM, VITREOUS CHINA, REAR OVERFLOW, COLOR SELECTED BY ARCHITECT. SUPPLIED WITH MOUNTING KIT AND TEMPLATE. FAUCET: MOEN MODEL: 8884 W/MIXING VALVE MODEL: 104451 FAUCET, SINGLE LEVER HANDLE, WITH 0.50 GPM AERATOR, VANDAL RESISTANT. ALL CHROME FINISH, 4" COVER PLATE LESS POP-UP. STOPS AND SUPPLIES:McGUIRE 162 SUPPLYSTOP & WALL MOUNTED CHROME PLATED BRASS WITH SOLID RING ESCUTHEONS. TRAPS: PERFORATED GRID STRAINER 1 1/4" O.D. OFFSET TAIL PIECE 17 GAUGE 1 1/4" X 1 1/2" P=TRAP W/CLEANOUT, ALL OF THE ABOVE HALL BE CHROME PLATED CAST BRASS, INCLUDING ESCUTCHEON PLATE. TAIL PIECE OFFSET ADJUSTED TO HEIGHT AS RECOMMENDED BY THE MANUFACTURER TO MEET ADA.
KS-1	KITCHEN SINK	2"	2"	1/2"	1/2"	SINK: 25"x19.5" DROP-IN SINK, 304 STAINLESS STEEL, 18 GAUGE, DOUBLE BOLW, LUSTRUOS SATIN. EQUAL TO ELKAY DLR251910. FAUCET: SINGLE HANDLE DECK MOUNT, SOLID BRASS FABRICATED BODY WITHOUT ESCUTCHEON PLATE. FINISHED SELECTED BY ARCHITECT. EQUAL TO DELTA 9959-DST. TRAP: LK-99, 1-1/2" X 4" STAINLESS STEEL TAILPIECE P-TRAP, 304 STAINLESS STEEL CONICAL STRAINER, CHROME PLATED. STOPS AND SUPPLIES: CHICAGO FAUCET #1006, ANGLE PATTERN, LOCK SHIELD CAP, LOOSE KEY HANDLE, WITH COPPER ALLOY CONTROL VALVE BODIES, STEMS, AND GLAND NUTS, 1/2" NPT INLET X 1/2" COMPRESSION OUTLET. PROVIDE THERMOSTATIC MIXING VALVE FOR ALL SINKS. WATER-TEMPERATURE LIMITING DEVICE SHALL CONFORM TO ASSE 1070 OR CSA B125.3. MIXING VALVE SHALL BE EQUAL TO WATT USG-B LAVATORY VALVE OR APPROVED EQUAL.
US-1	MOP SINK	3"	2"	3/4"	3/4"	JANITOR SINK: FLOOR MOUNTED, PRECAST TERRAZZO, 24" x 24" x 12" DEEP, STAINLESS STEEL CAP, SQUARE, INTEGRAL STAINLESS STEEL GRID STRAINER DRAIN OUTLETWITH STAINLESS STEEL SPLASH PANELS. EQUAL TO FIAT TSB100. 24" x 24" x 12" DEEP. STAINLESS STEEL CAP, SQUARE, INTEGRAL STAINLESS STEEL GRID STRAINER DRAIN OUTLET. FAUCET: CAST OR WROUGHT COPPER ALLOY, COMBINATION FAUCET MOUNTED 36" ABOVE FINISHED FLOOR. SPOUT SHALL HAVE PAIL HOOK, 3/4" HOSE CONNECTION, TOP OR BOTTOM WALL BRACE. HANDLES ON FAUCETS SHALL BE CAST, FORMED, OR DROP FORGED COPPER ALLOY. ESCUTCHEONS SHALL BE EITHER FORGED COPPER ALLOY OR CRS. VALVES SHALL INCLUDE CONCEALED INTEGRAL STOPS, 8" CENTERS. ELEVATED VACUUM BREAKER MOUNTED 7'-6" ABOVE FINISHED FLOOR. EXPOSED PARTS SHALL BE POLISHED CHROME PLATED. EQUAL TO STERN WILLIAMS T-10-VB FAUCET. PROVIDE WITH STAINLESS STEEL MOP HANGER BRACKET WITH CAPACITY FOR UP TO THREE MOPS.
WC-1	WATER CLOSET	3"	2"	3/4"	-	AMERICAN STANDARD 3305.000: FLOOR MOUNTED, SIPHON JET, ELONGATED BOWL, 1.6 GALLON PER FLUSH W/BOLTCAPS, VITREOUS CHINA LOSET, 2 1/8" GLAZED TRAPWAY, COLOR SELECTED BY ARCHITECT. MOUNTING HEIGHT PER ADA, ANSI STANDARDS. BENEKE OR EQUAL: SEAT LESS COVER, OPEN FRONT ELONGATED, EXTRA HEAVY SOLID PLASTIC, CONTOURED, W/ STAINLESS STEEL SELF SUSTAINING CKECK HINGE.
FD	FLOOR DRAIN	3"	-	-	-	CAST IRON FLOOR DRAIN, TWO PIECE BODY W/DOUBLE DRAIN FLANGE AND 1/2" PRIME TAP, PERFORATED SS GRATE & FILTER BASKET.
SH-1	SHOWER	2"	1 1/2"	1/2"	1/2"	SYMMONS 1-100 SAFETYMIX: ADJUSTABLE STOP SCREW, SUPER SHOWER HEAD WITH ARM AND FLANGE, STAINLESS STEEL FINISH.
WM-1	WASHING MACHINE	3"	2"	3/4"	1/2"	RECESSED 9" x 8" HIGH IMPACT WASHER BOX WITH 2" OFFSET DRAIN, 1/4" TURN VALVES WITH MOUNTED WATER HAMMER ARRESTER AND PLATE FACEPLATE FRAME. EQUAL TO OATEY 38748.
EW-1	SINK WITH EYE WASH	2"	2"	1/2"	1/2"	SINK: 22"x 19-1/2" DROP-IN SINK, 304 STAINLESS STEEL, 18 GAUGE, SINGLE BOWL, LUSTROUS SATIN. EQUAL TO ELKAY LR2219. FAUCET: FAUCET WITH TWO SEPERATE WATER CHANNELS. 8" SPREAD GOOSENECK FACUET, TWIN NON-AERATED SPRAYS, 2.6 GPM AT 30 PSI FOR EYEWASH. SNASI Z358.1, ASME A112.18.1, CSA B125-98. EQUAL TO SPEAKMAN SEF-1800CA PROVIDE THERMOSTATIC MIXING VALVE FOR ALL SINKS. WATER-TEMPERATURE LIMITING DEVICE SHALL CONFORM TO ASSE 1070 OR CSA B125.3. MIXING VALVE SHALL BE EQUAL TO WATT USG-B LAVATORY VALVE OR APPROVED EQUAL. TRAP: MCGUIRE PW2150WC, 1-1/2"x 5" CAST P-TRAP WITH INSULATION KIT. STOPS AND SUPPLIES: ZURN Z8804-XL-LK-PC, ANGLE PATTERN, LOCK SHIELD CAP, LOOSE KEY HANDLE, WITH COOPER ALLOY CONTROL VALVE. BODIES, STEMS, AND GLAND NUTS, 1/2" NPT INLET X 1/2" COMPRESSION OUTLET. STRAINER AND TAILPIECE: STAINLESS STEEL BODY, STRAINER BASKET RUBBER SEAL AND TAILPIECE. EQUAL TO ELKAY LK99.
UR-1	URINAL	2"	2"	1"	-	TOTO UT105U OR APPROVED EQUAL. WALL MOUNTED WHITE COMPACT URINAL WITH CONCEALED INTEGRAL TRAP. WASHOUT FLUGH ACTION WITH 3/4" TOP OR BLACK SPUD INLET WITH FLUSH VALVE TEU1UA12#CP 0.125 GPF.
S-1	SINK	2"	2"	1/2"	1/2"	SINK: 22"x 19-1/2" DROP-IN SINK, 304 STAINLESS STEEL, 18 GAUGE, SINGLE BOWL, LUSTROUS SATIN, EQUAL TO ELKAY LR2219. FAUCET: MANUAL SINK FAUCET, 0.5 GPM, CONCEALED DECK-MOUNT WITH 8" FIXED CENTERS. RIGID SWING GOOSENECK SPOUT FINISHED SELECTED BY ARCHITECT. VANDAL PROOF NON-AERATING OUTLET TYPE. EQUAL TO CHICAGO FAUCET 786-GN2FACBCP. PROVIDE THERMOSTATIC MIXING VALVE FOR ALL SINKS. WATER-TEMPERATURE LIMITING DEVICE SHALL CONFIRM TO ASSE 1070 OR CSA B125.3. MIXING VALVE SHALL BE EQUAL TO WATT USG-B LAVATORY VALVE OR APPROVED EQUAL. TRAP: MCGUIRE PW2150WC, 1-1/2"x 5" CAST P-TRAP WITH INSULATION KIT. STOPS AND SUPPLIES: ZURN Z8804-XL-LK-PC, ANGLE PATTERN, LOCK SHIELD CAP, LOOSE KEY HANDLE, WITH COOPER ALLOY CONTROL VALVE. BODIES, STEMS, AND GLAND NUTS, 1/2" NPT INLET X 1/2" COMPRESSION OUTLET. STRAINER AND TAILPIECE: STAINLESS STEEL BODY, STRAINER BASKET RUBBER SEAL AND TAILPIECE. EQUAL TO ELKAY LK99.

NOTES:

1. ALL FIXTURES SHALL COMPLIED WITH THE FLORIDA BUILDING CODE WATER CONSERVATION TABLE.
2. PROVIDE INSULATION KID FOR DRAIN , TRAP AND SUPPLY TO ALL SINKS AND LAVATORIES.
3. ALL SUPPLIES SHALL BE CHROME PLATED I.P.S. BRASS. PLASTIC SUPPLIERS ARE NOT ACCEPTABLE.
4. PROVIDE ALL BOLTS, CAPS, STRAINERS, STOPS, SUPPLIES, TRAPS, ETC. FOR A COMPLETE INSTALLATION.

PLUMBING SYMBOLS AND ABBREVIATIONS

PIPING SYSTEM LABELS

WATER

- DCW — DOMESTIC COLD WATER
- DHW — DOMESTIC HOT WATER
- DHR — DOMESTIC HOT WATER RETURN
- CSW — COLD SOFT WATER
- HT — HEAT TRACE HOT WATER
- NPW — NON-POTABLE WATER
- DI — DEIONIZED WATER
- RO — REVERSE OSMOSIS WATER
- PW — PURE WATER
- PCW — PROCESS COLD WATER
- PHW — PROCESS HOT WATER
- PHR — PROCESS HOT WATER RETURN
- LCW — LAB COLD WATER
- LHW — LAB HOT WATER
- LHR — LAB HOT WATER RETURN
- TF — TRAP FILLER LINE
- TW — TEMPERED WATER

WASTE OR STORM

- SAN — WASTE OR SOIL
- SD — SUBSOIL DRAIN
- S — STORM
- OD — OVERFLOW DRAIN
- FM — FORCE MAIN
- CWW — CLEARWATER WASTE
- IW — INDIRECT WASTE
- GW — GREASE WASTE
- CRW — CORROSION RESISTANT WASTE
- UNDERFLOOR WASTE OR SOIL, SUBSOIL, STORM & FORCE MAIN

VENT

- V — VENT
- CWV — CLEARWATER VENT
- CRV — CORROSION RESISTANT VENT

PIPING SYMBOLS

SINGLE	DOUBLE	
		ELBOW DOWN
		ELBOW UP
		BOTTOM CONNECTION (45° OR 90°)
		TOP CONNECTION (45° OR 90°)
D	D	45° PIPE RISE(R) / DROP(D)
		TEE (REFER TO SPECIFICATION FOR SIDE, TOP OR BOTTOM TEE)
		EXISTING PIPING TO REMAIN
		LINE CONTINUATION BREAK
		FLOW DIRECTION
	N/A	CONNECTION POINT
OR		ECCENTRIC REDUCER
		CONCENTRIC REDUCER

VALVE SYMBOLS

- GATE VALVE
- GLOBE VALVE
- CHECK VALVE
- WYE STRAINER WITH DRAIN VALVE
- FLEXIBLE CONNECTION
- ANGLE GLOBE VALVE
- BUTTERFLY VALVE
- BALL VALVE
- CONTROL VALVE
- PRESSURE REGULATING VALVE
- PRESSURE SAFETY VALVE
- CIRCUIT SETTER VALVE
- PLUG VALVE
- PRESSURE REDUCING VALVE (PRV)
- WATER LEVEL CONTROLLER (LC)
- FLOW METER (M)

DRAINS AND CLEANOUTS

- FLOOR DRAIN/FLOOR SINK
- ROOF DRAIN
- HUB DRAIN
- FIXTURE WASTE TRAP
- CLEANOUT
- FCO — FLOOR CLEANOUT

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	MAX	MAXIMUM
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS	MH	MANHOLE
		MIN	MINIMUM
CO	CLEAN OUT	N/A	NOT APPLICABLE
CW	COLD WATER (POTABLE)	NTS	NOT TO SCALE
EX.	EXISTING	SQ.FT	SQUARE FOOT (FEET)
FCO	FLUSH CLEAN OUT	SS	STAINLESS STEEL
FPM	FEET PER MINUTE	TAB	TESTING, ADJUSTING, BALANCE
FPS	FEET PER SECOND	UL	UNDERWRITERS LABORATORY
HB	HOSE BIBB	VTR	VENT THRU ROOF
HW	HOT WATER	WCO	WALL CLEAN OUT
ID	INSIDE DIAMETER	YCO	YARD CLEAN OUT
IN	INCHES		

DRAWING SYMBOLS

- 2 / H4 — DETAIL NUMBER / DRAWING NUMBER WHERE DRAWN
- A / H7 — SECTION LETTER / DRAWING NUMBER WHERE SHOWN
- P / 1 — EQUIPMENT (PUMP INDICATED)
- 1 — REVISION REFERENCE
- 1 — GENERAL OR SPECIAL NOTES REFERENCE

ELECTRIC WATER HEATER

MARK	SERVES	LOCATION	kW INPUT	GPH 80 DEG RISE	GALLONS STORAGE	CONECTION SIZES INLET	CONECTION SIZES OUTLET	TYPE	ELECTRICAL VOLT	ELECTRICAL PH	ELECTRICAL HZ	INPUT KW	SHIPPING WEIGHT (LBS)	NOTES BASIS OF DESIGN: AO SMITH
EWH-1	1ST & 2ND FLOOR	MECH ROOM	6.0	30.8	50	3/4"	3/4"	ELECTRIC	240	1	60	6.0	161	PNS-50
EWH-2	GEAR EXTRAC	GEAR EXTRAC	12.2	1.0	N/A	3/4"	3/4"	ELECTRIC	240	1	60	12.2	13	C2VA-120E

NOTES:

1. MOUNT ON 4" THICK PADS. PAD DIMENSIONS SHALL EXCEED UNIT DIMENSIONS BY 6"
2. FLOOR MOUNTED TYPE, SET STORAGE TEMP TO 110 DEG F
3. PROVIDE EWH WITH TMV, THERMAL EXPANSION TANK, & PRESSURE RELIEF VALVE INDIRECTLY OVER FLOOR DRAIN

EXPANSION TANKS

MARK	DESCRIPTION	MANUFACTURER & MODEL NO.	VOLUMES
ET-1	EXPANSION TANK, DOMESTIC HOT WATER	AMTROL #ST-12C	6.4GALLON, 50 MAX. ACCEPTABLE FACTOR, ASME

PLUMBING SPECIFICATIONS

APPLICABLE CODES AND STANDARDS

1. FLORIDA BUILDING CODE 6TH EDITION (2017) - BUILDING, MECHANICAL, PLUMBING AND ENERGY CONSERVATION.
2. NFPA LATEST EDITIONS.
3. ASTM LATEST STANDARDS.
4. NATIONAL ELECTRICAL CODE (NFPA 72 - 2014)

GENERAL

1. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL, EQUIPMENT, ACCESS PANELS, CONTROL SYSTEMS, DEVICES, PERMITS AND SERVICES NECESSARY FOR FURNISHING AN INSTALLATION OF A COMPLETE SERVICEABLE MECHANICAL SYSTEM AS OUTLINED IN THE CONTRACT DRAWINGS AND SPECIFICATIONS. THE SYSTEMS, EQUIPMENT, DEVICES AND ACCESSORIES SHALL BE INSTALLED, FINISHED AND ADJUSTED FOR CONTINUOUS AND PROPER OPERATION.
2. ALL MECHANICAL SYSTEMS ARE TO BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE SECTIONS OF THE NFPA STANDARDS, ANSI STANDARDS, LOCAL CODES, LOCAL ORDINANCES, AMENDMENTS AND MANUFACTURER RECOMMENDATIONS.
3. ALL MATERIALS SHALL BE NEW (UNLESS OTHERWISE INDICATED) ANY DAMAGE EQUIPMENT SHALL BE REPLACE AT NOT COST TO THE OWNER. ALL EQUIPMENT SHALL BE STORED IN A SAFE, DRY PLACE IN THE MANUFACTURERIS ORIGINAL PACKAGING UNTIL READY FOR USE. THE OWNER SHALL NOT BE RESPONSIBLE FOR PROVIDING ANY PART OF THE PROJECT, UNLESS SPECIFICALLY NOTED.
4. CONTRACTOR SHALL WARRANTY ALL MECHANICAL SYSTEMS, EQUIPMENT, PARTS AND LABOR FOR A PERIOD OF ONE (1) YEAR. ONE YEAR PERIOD SHALL NOT START UNTIL PROJECT IS COMPLETED AND CONTRACTOR HAD RECEIVED CERTIFICATED OF COMPLETION. ALL EQUIPMENT AND WORK (LABOR + PARTS) SHALL BE FULLY GUARANTEED. ALL REPAIRED MADE DURING THE GUARANTEE SHALL BE GUARANTEE FOR AN ADDITIONAL YEAR FROM THE TIME THE REPAIR IS COMPLETED. CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY DAMAGE TO THE BUILDING, ITS COMPONENTS, OTHER EQUIPMENT OR ANY PROCESS, CAUSED BY DEFECTS OR IMPROPER INSTALLATIONS OF ITS EQUIPMENT.
5. ALL WORK ON THIS PROJECT SHALL BE COORDINATED WITH THE OWNER AND ALL OTHER TRADES PRIOR TO BEGINNING ANY WORK OR ORDERING ANY MATERIALS. COORDINATE ALL WORK FOR SIZE, LOCATION, CLEARANCE, ACCESS AND ELECTRICAL CONNECTIONS WITH ALL THE TRADES. CONTRACTOR SHALL NOTIFY THE ARCHITECT THE ARCHITECT IN WRITING OF ANY CONFLICTS, CODE OR SAFETY ISSUES THAT MAY EXIST PRIOR TO ANY FABRICATION OR ORDERING OF EQUIPMENT. RESOLUTION OF SUCH CONFLICTS WHICH ARE NOT REPORTED PRIOR TO CONSTRUCTION SHALL REMAIN RESPONSIBILITY OF THE CONTRACTOR AND CHANGE ORDER PROPOSALS FOR SUCH WORK WILL NOT BE ACCEPTED.
6. THESE DRAWINGS AND SPECIFICATIONS REPRESENT THE DESIGN INTENT BASED ON INFORMATION AVAILABLE AT THE TIME OF DESIGN. ANY SUBSTANTIAL MODIFICATIONS OR ALTERATIONS MADE DURING THE CONSTRUCTION PHASE SHALL BE REPORTED TO THE ENGINEER PRIOR TO WORK. MODIFICATIONS MADE WITHOUT THE ENGINEER'S WRITTEN APPROVAL SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR
7. CONTRACTOR TO FIELD ROUTE PIPING AS REQUIRED. FOR CLARITY, PIPING RISERS AND DROPS ARE NOT SHOWN. CONTRACTOR TO PROVIDE AT NO ADDITIONAL COST TO THE OWNER ALL PIPING OFFSETS, BENDS AND TRANSITIONS REQUIRED FOR COMPLETE FUNCTIONAL SYSTEM. PAINT ALL EXPOSED PIPING BLACK EXCEPT FOR GAS PIPING.
8. WALL, ROOF AND CEILING OPENINGS INDICATED ON DRAWINGS ARE NOMINAL DIMENSIONS ONLY, ADJUST OPENING AS REQUIRED. ALL PIPING AND/OR EQUIPMENT PENETRATIONS SHALL BE SLEEVED AND FIRE RATED AS REQUIRED. CONTRACTOR TO PATCH ALL FLOOR PENETRATIONS.
9. HANG PIPING FROM STRUCTURE AS NECESSARY. COORDINATE WITH STRUCTURAL/ARCHITECT. PROVIDE SUPPORTING AS REQUIRED FOR INSTALLATION OF EQUIPMENT.
10. MECHANICAL PLANS ARE IN GENERAL DIAGRAMMATIC IN NATURE SHALL BE READ IN CONJUNCTION WITH THE ARCHITECTURAL, PLUMBING, ELECTRICAL AND STRUCTURAL PLANS. INFORMATION GIVEN HEREIN AND ON DRAWINGS IS AS EXACT AS COULD BE SECURED BUT IS NOT GUARANTEED. DO NOT SCALE DRAWINGS FOR EXACT DIMENSIONS.
11. PROVIDE A MINIMUM OF 3' CLEARANCE IN FRONT OF ANY 120-240 VOLTS RATED PANELS AND DISCONNECTS AND 4' CLEARANCE IN FRONT OF ANY 480 VOLTS RATED PANELS OR DISCONNECTS, PROVIDE ADEQUATE SIDE CLEARANCE PER NEC.
12. PROVIDE A MINIMUM OF 10' CLEARANCE BETWEEN OUTSIDE AIR INTAKES AND ANY VENTS OR EXHAUST OPENINGS. COORDINATE NEW OPENING OR VENTS WITH EXISTING EQUIPMENT, INTAKES AND VENTS.

PLUMBING GENERAL

1. ALL PLUMBING SERVICES TERMINATE 5'-0" FROM THE BUILDING EXTERIOR WALLS.
2. NO LEAD OR ASBESTOS CONTAINING MATERIALS OF ANY KIND SHALL BE USED IN THE FABRICATION OF POTABLE WATER SUPPLY SYSTEMS. GALVANIZED STEEL PIPING SHALL NOT BE USED FOR POTABLE WATER SUPPLY PIPING.
3. INSTALL ALL WORK IN COMPLIANCE WITH ADA REQUIREMENTS.
4. PROVIDE "P" TRAPS WITH CLEANOUTS IN THE DRAINS OF ALL FIXTURES EXCEPT THOSE WITH INTERNAL TRAPS OR AS SPECIFICALLY NOTED ON PLANS.
5. PROVIDE FLOOR DRAINS WITH TRAP PRIMERS IN ALL PUBLIC BATHROOMS.
6. ALL PIPING SHALL BE CONCEALED IN WALLS, CHASES, CEILINGS, ETC. UNLESS SPECIFICALLY NOTED ON DRAWINGS. ANY PIPING OR ACCESSORIES THAT MUST BE EXPOSED SHALL HAVE A POLISHED CHROME FINISH.
7. INSTALL ALL VALVES AND CONTROLS IN ACCESSIBLE LOCATIONS, EXCEPT AS SPECIFICALLY NOTED ON PLANS OR PROHIBITED BY CODE.
8. ALL PIPE SIZES ARE CLEAR INSIDE DIMENSIONS. COORDINATE PIPING ROUTING, DIMENSION AND ELEVATION WITH ARCHITECT/OWNER. MAKE ALLOWANCES FOR BEAMS, PIPING AND OTHER OBSTRUCTIONS
9. PROVIDE MIN. 6x6 INCH PAINTED ALUMINUM ACCESS DOORS WITH FULL HINGE AND KEY, FOR ACCESS TO ALL VALVES, CONTROLS, AND ACCESSORIES CONCEALED IN PLASTER, TILE, DRYWALL, OR INACCESSIBLE CEILINGS, OR IN WALLS. GROUP DEVICES AT A SINGLE LOCATION, AS AVAILABLE.
10. COORDINATE THE ELECTRICAL CHARACTERISTICS OF ALL ELECTRICAL EQUIPMENT WITH THE ELECTRICAL CONTRACTOR PRIOR TO ORDERING.
11. PIPING SHALL NOT PASS THROUGH 'WORK OF ANY KIND UNLESS APPROVED BY THE ENGINEER.
12. PIPING SHALL NOT BE RUN ABOVE ELECTRICAL PANELS, THROUGH ELECTRICAL ROOMS OR ANY OTHER WATER SENSITIVE AREAS, EXCEPT AS SPECIFICALLY NOTED ON PLANS.
13. INSULATE ALL PIPING FROM CONCRETE WITH INSULATION MATERIAL. INSULATION SHALL HAVE A FIRE/SMOKE RATING LESS THAN 25/50.
14. INSULATE ALL HOT WATER LINES IN ACCORDANCE WITH THE ENERGY EFFICIENCY CODE.
15. INSTALL METALLIC PIPING AS REQUIRED BY CODE IN THE FIRE RATE WALLS.
16. PROVIDE DIELECTRIC UNIONS FOR CONNECTION BETWEEN DISSIMILAR PIPES.
17. INSTALL ALL EXTERIOR HOSE BIBBS 20" AFF.
18. WATER SERVICE UNDERGROUND SHALL BE SEPARATED FROM SEWER LINES BY A MINIMUM OF 5 FEET OF UNDISTURBED OR COMPACTED EARTH.
19. REFER TO SITE PLANS FOR METERS AND SITE UTILITIES.

SANITARY WASTE & VENT PIPING

1. ALL SANITARY WASTE & VENT PIPING ABOVE AND BELOW GROUND SHALL BE CAST IRON. ALL SANITARY WASTE PIPING 3" TO 6" SHALL BE SLOPED AT NO LESS THAN 1/8" PER FOOT. ALL SANITARY WASTE 2 1/2" AND SMALLER SHALL BE SLOPED AT NO LESS THAN 14' PER FOOT.
2. DWV PVC, SCHEDULE 40 AND PVC FITTINGS AND PRIMED/GLUED JOINTS IS AN ACCEPTABLE SUBSTITUTE TO CAST IRON PIPING IF INSTALLED PER CODE AND APPROVED BY THE AUTHORITY HAVING JURISDICTION
3. THE MINIMUM SANITARY WASTE & VENT PIPE SIZE SHALL BE 1 1/2".
4. VERIFY LOCATIONS AND INVERT ELEVATIONS OF ANY AND ALL EXISTING WASTE, VENT, AND STORM DRAIN PIPING PRIOR TO BEGINNING ANY WORK.

DOMESTIC WATER PIPING

1. ALL DOMESTIC WATER PIPING ABOVE GROUND SHALL BE TYPE "L" COPPER WITH WROUGHT COPPER FITTINGS AND LEAD FREE SOLDER JOINTS.
2. ALL DOMESTIC WATER PIPING BELOW GROUND OR SLAB SHALL BE TYPE "K" COPPER WITH WROUGHT COPPER FITTINGS AND NO JOINTS BELOW FLOORS.
3. CPVC PIPING WITH CPVC FITTINGS AND PRIMED/GLUED JOINTS IS AN ACCEPTABLE SUBSTITUTE TO COPPER PIPING IF INSTALLED PER FLORIDA BUILDING CODE AND APPROVED BY THE AUTHORITY HAVING JURISDICTION.
4. ALL NEW WATER SUPPLY PIPING SHALL BE RUN OVERHEAD (DO NOT RUN WATER SUPPLY PIPING BELOW CONCRETE FLOOR SLABS) UNLESS SPECIFICALLY STATED ON PLANS OR AS ABSOLUTELY NECESSARY TO MATCH AN EXISTING INSTALLATION.
5. THE MINIMUM DOMESTIC WATER PIPE SIZE SHALL BE1/2".
6. ALL HOT WATER SUPPLY PIPING SHALL BE INSULATED WITH 1" THICK, MIN. R-6, CLOSED CELL FOAM INSULATION (ARMAFLEX OR EQUIVALENT).
7. ALL NEW DOMESTIC WATER PIPING SHALL BE DISINFECTED BY INTRODUCING A SOLUTION OF CALCIUM HYPOCHLORITE OF 50 PARTS PER MILLION OF CHLORIDE AND AS PER AWWA STANDARDS.

VENTS

1. VENT PIPING SHALL BE DWV PVC, SCHEDULE 40.
2. ALL TRAPS OR TRAPPED FIXTURES SHALL BE PROVIDED WITH AN INDIVIDUAL VENT UNLESS OTHERWISE NOTED.
3. CONNECT ALL VENT PIPING SHOWN TO EXISTING BUILDING MAIN VENT IN LOCATION INDICATED ON PLAN.
4. SLOPE ALL HORIZONTAL VENTS SUCH THAT WATER MAY DRAIN BACK INTO THE SANITARY SYSTEM.
5. SINKFAUCET VENTS THRU ROOF WITH WEATHERPROOF RAIN CAP. COORDINATE LOCATIONS WITH EXISTING EQUIPMENT AND ARCHITECT. SEAL ROOF PENETRATION AS NECESSARY.

WATER HEATERS OR INSTANTANEOUS WATER HEATER

1. THE MAXIMUM HOT WATER DISCHARGE TEMPERATURE SHALL NOT EXCEED 140°F. UNLESS OTHERWISE NOTED ON PLANS.
2. PROVIDE ISOLATION VALVES AT THE INLET AND OUTLET OF ALL WATER HEATERS.
3. PROVIDE A SEPARATE DISCONNECT SWITCH FOR ALL ELECTRIC WATER HEATERS OR A GAS SHUTOFF VALVE FOR ALL GAS WATER HEATERS.

VALVES & ACCESSORIES

1. PROVIDE WATER HAMMER ARRESTORS OR AIR CHAMBERS AS REQUIRED TO ELIMINATE WATER HAMMER AND COMPLY WITH LOCAL REGULATIONS, PARTICULARLY AT ALL APPLIANCES OR DEVICES WITH QUICK-CLOSING VALVES. ARRESTORS SHALL BE FACTORY FABRICATED. INSTALL ARRESTORS AND SIZE PER PLUMBING AND DRAINAGE INSTITUTE STANDARD PDIWH-201. HAMMER ARRESTORS SHALL BE EQUAL TO PRECISION PLUMBING PRODUCTS, PISTON TYPE.
2. AIR CHAMBERS SHALL NOT BE CONSIDERED AN EQUAL TO WATER ARRESTOR AS SPECIFIED.
3. PROVIDE A MAIN SHUTOFF VALVE AT THE BUILDING'S DOMESTIC WATER SERVICE ENTRANCE.
4. ALL DOMESTIC WATER VALVES SHALL BE OF BRONZE BODY, TWO PIECE CONSTRUCTION, FULL PORT AND STAINLESS STEEL TRIM EQUAL TO NIBCO-585-70-68 OR APPROVED EQUAL. IF PVC OR CPVC PIPING IS UTILIZED, BALL PATTERN WITH TRUE CPVC UNION, NFS 61 EQUAL TO APEX VX SERIES OR APPROVED EQUAL, ARE ACCEPTABLE.
5. PROVIDE VACUUM BREAKERS FOR ALL SILLCOCKS, HOSE BIBBS, AND WALL HYDRANTS.
6. PROVIDE CLEANOUTS AT ALL CHANGES OF DIRECTION OF MORE THAN 45 DEGREES OR EVERY 50 FEET OF STRAIGHT PIPE FOR ALL SANITARY WASTE AND STORM DRAIN PIPING.
7. PROVIDE CLEANOUTS AT THE BASE OF ALL STACKS. PROVIDE A YARD CLEANOUT FLUSH WITH FINISHED GRADE WITHIN 5 FEET OF THE BUILDING SEWER EXITING THE BUILDING. COORDINATE ALL CLEANOUT LOCATIONS WITH THE ARCHITECT PRIOR TO INSTALLATION.
8. PROVIDE DIELECTRIC UNIONS AT ALL POINTS OF CONNECTION BETWEEN PIPES OF DISSIMILAR METALS.
9. APPLY MIN. 20 MILS THICK SCOTCHWRAP (OR EQUIVALENT) VINYL TAPE COVERING OVER ALL STEEL OR COPPER WATER PIPING IN CONTACT WITH MASONRY OR CONCRETE.
10. PROVIDE CHROME PLATED ESCUTCHEONS WHERE PIPES PENETRATE ANY EXPOSED WALLS, PARTITIONS, ETC. TO COVER THE PENETRATION.
11. DOMESTIC WATER SUPPLY ASSEMBLY: CHROME FINISH TUBING WITH ANGLE SHUT OFF VALVES.
12. PROVIDE THERMOSTATIC MIXING VALVE FOR ALL SINKS. WATER TEMPERATURE LIMITING DEVICES SHALL CONFORM TO ASSE 1070 OR CSA B125-3. MIXING VALVE SHALL BE EQUAL TO WATT USG-B LAVATORY OR APPROVED EQUAL.

CIRCULATION PUMP

MARK	SERVES	MIN. CAPACITY (GPM)	NET PRESSURE (FT)	TYPE	ELECTRICAL HP	ELECTRICAL VOLT	ELECTRICAL PH	NOTES BASIS OF DESIGN: BELL & GOSSETT
CP-1	UNIT 4600	7	30	INLINE	1/6	120	1	ALL BRONZE CIRCULATING BELL & GOSSETT PD-36.

NOTES:

1. REFER TO ELECTRICAL FOR CONNECTIONS AND BREAKER SIZING.
2. PROVIDE ALL GAUGES, TEMPERATURE/PRESSURE AS REQUIRED BY LOCAL CODES AND MANUFACTURERS RECOMMEDATIONS.

FIXTURES

1. ALL PLUMBING FIXTURES SHALL BE SELECTED BY OWNER AND SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR. FIXTURES SHALL BE COMPLETED WITH DRAINS, TRAPS, SUPPLIES AND ANY OTHER ACCESSORIES REQUIRED. ALL FIXTURES AND FAUCETS SHALL COMPLY WITH THE FLORIDA BUILDING CODE WATER SAVING STANDARD. FIXTURES HAVE BEEN SELECTED TO ESTABLISH A STANDARD OF QUALITY AND SUBSTITUTIONS ARE NOT PERMITIED UNLESS SUBMITTED AND APPROVED PRIOR TO USE.
2. ALL VITREOUS CHINA FIXTURES SHALL BE WHITE UNLESS OTHERWISE NOTED.
3. SEE ARCHITECHTURAL PLANS FOR EXACT FIXTURE LOCATIONS AND MOUNTING HEIGHTS.
4. ALL FIXTURES IN THE SAME BUILDING OR AREA SHALL HAVE IDENTICAL FAUCETS, ESCUTCHEONS, AND TRIM KITS, UNLESS SPECIFICALLY NOTED ON PLANS. INSTALL HOT WATER SUPPLY ON THE LEFT SIDE OF ALL FIXTURES.
5. ALL LAVATORIES IN PUBLIC RESTROOMS SHALL HAVE 0.5 GPM FLOW RESTRICTING AERATORS.
6. FLUSH CONTROLS SHALL BE INSTALLED ON THE WIDE SIDE OF ALL WATER CLOSET STALLS.
7. PROVIDE CONCEALED ARM CARRIERS OR 2X10 PT BLOCKING WITH ALL WALL MOUNTED LAVATORIES, URINALS, WATER CLOSETS, AND WATER COOLERS. CARRIERS OR BLOCKING SHALL WITHSTAND A MINIMUM VERTICAL LOAD OF 250 POUNDS ON THE FRONT OF THE FIXTURE.
8. PROVIDE PROTECTIVE ANTI-MICROBIAL INSULATION ON THE SUPPLY SET AND WASTE DRAIN AND TRAP OF ALL HANDICAPPED LAVATORIES.
9. ALL WATER CLOSETS SHALL BE THE ELONGATED TYPE WITH OPEN FRONT SEATS.

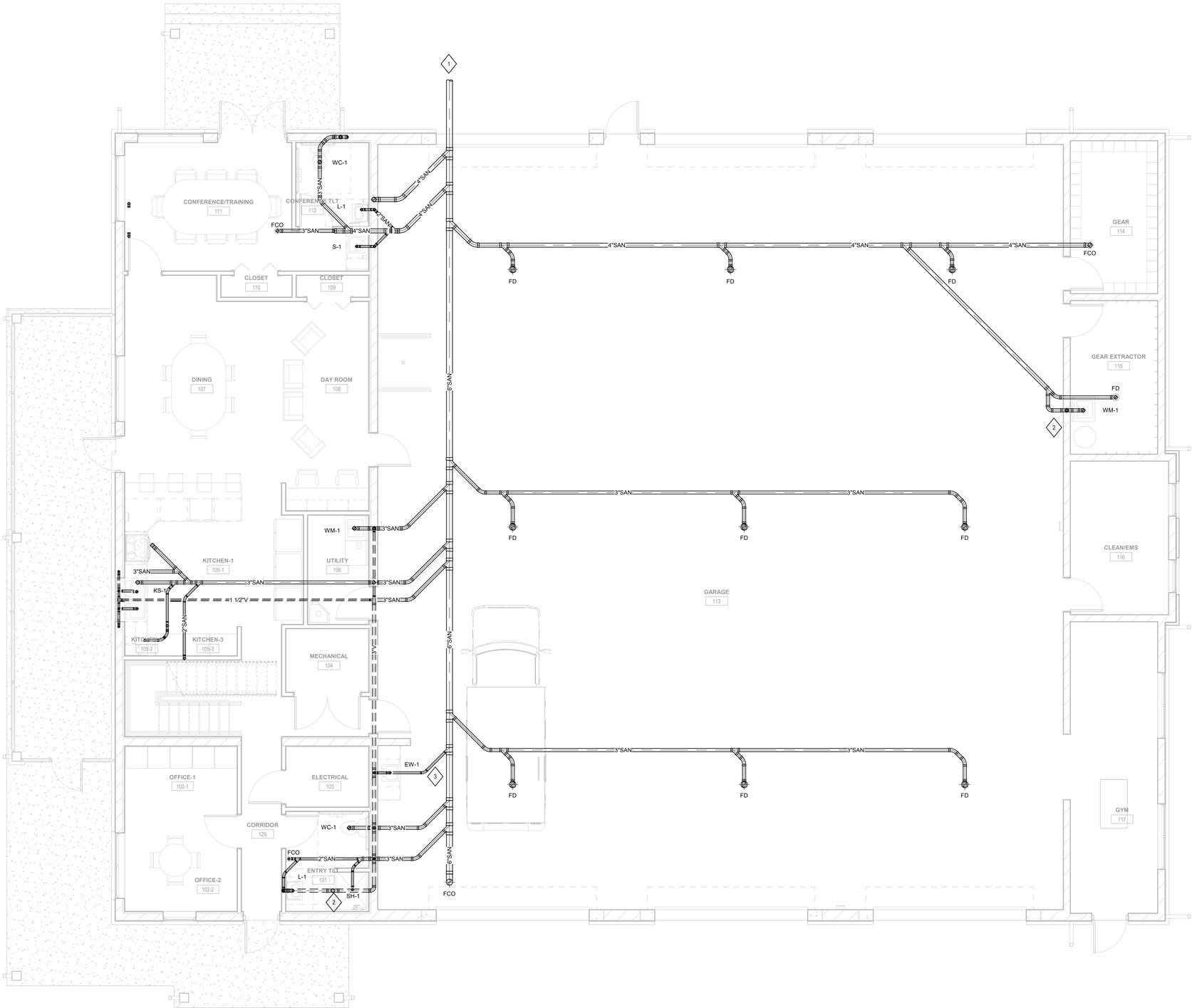
SUPPORTS & PENETRATI

GENERAL NOTES

1. FOR CLARITY, PIPING RISERS AND DROPS ARE NOT SHOWN. CONTRACTOR TO PROVIDE AT NO ADDITIONAL COST TO THE OWNER ALL DUCT OFFSETS, BENDS AND TRANSITIONS REQUIRED FOR COMPLETE FUNCTIONAL SYSTEM.
2. REFER TO DETAILS FOR ALL RISER DIAGRAMS AND FOR PIPE SIZES.
3. ALL SANITARY PIPING SHALL BE SLOPE AT MINIMUM 1/8" PER L.F.
4. CONTRACTOR TO ENSURE A MINIMUM 10'-0" SEPARATION FROM ANY INTAKE OR ANY EXHAUST OR VENT

SHEET KEYNOTES

1. TIE IN NEW LINES TO EXISTING LINES IN SITE. CONTRACTOR TO FIELD VERIFY EXACT LOCATION IN FIELD AND WITH CIVIL DRAWING.
2. PLUMBING FIXTURES VENTS THRU ROOF WITH WEATHERPROOF RAIN CAP. COORDINATE LOCATIONS WITH EXISTING EQUIPMENT, INTAKES AND VENTS. SEAL ROOF PENETRATION AS NECESSARY.
3. PROVIDE EYEWASH FOR SINK.



1 **SANITARY FLOOR PLAN - 1ST FLOOR**
SCALE: 1/4" = 1'-0"

DCL ENGINEERING
800 HIGHLAND AVE. SUITE 102,
ORLANDO, FL 32803
CA LIC. NO.: 31963
PHONE: (352) 514-9025

NO.	DESCRIPTION	DATE

DANIEL CESAR LICENSE No. 68670 STATE OF FLORIDA PROFESSIONAL ENGINEER

John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
Ethan J. Hine, AIA
Jennifer Zaffuto, AIA, NCARB, MPA

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LAKE COUNTY
FIRE STATION NO. 39
SANITARY PLAN – 1ST FLOOR
24815 WALLICK ROAD, SORRENTO, FL 32776

18104A / 18-005

JANUARY 31, 2020

PRICING SET

P201

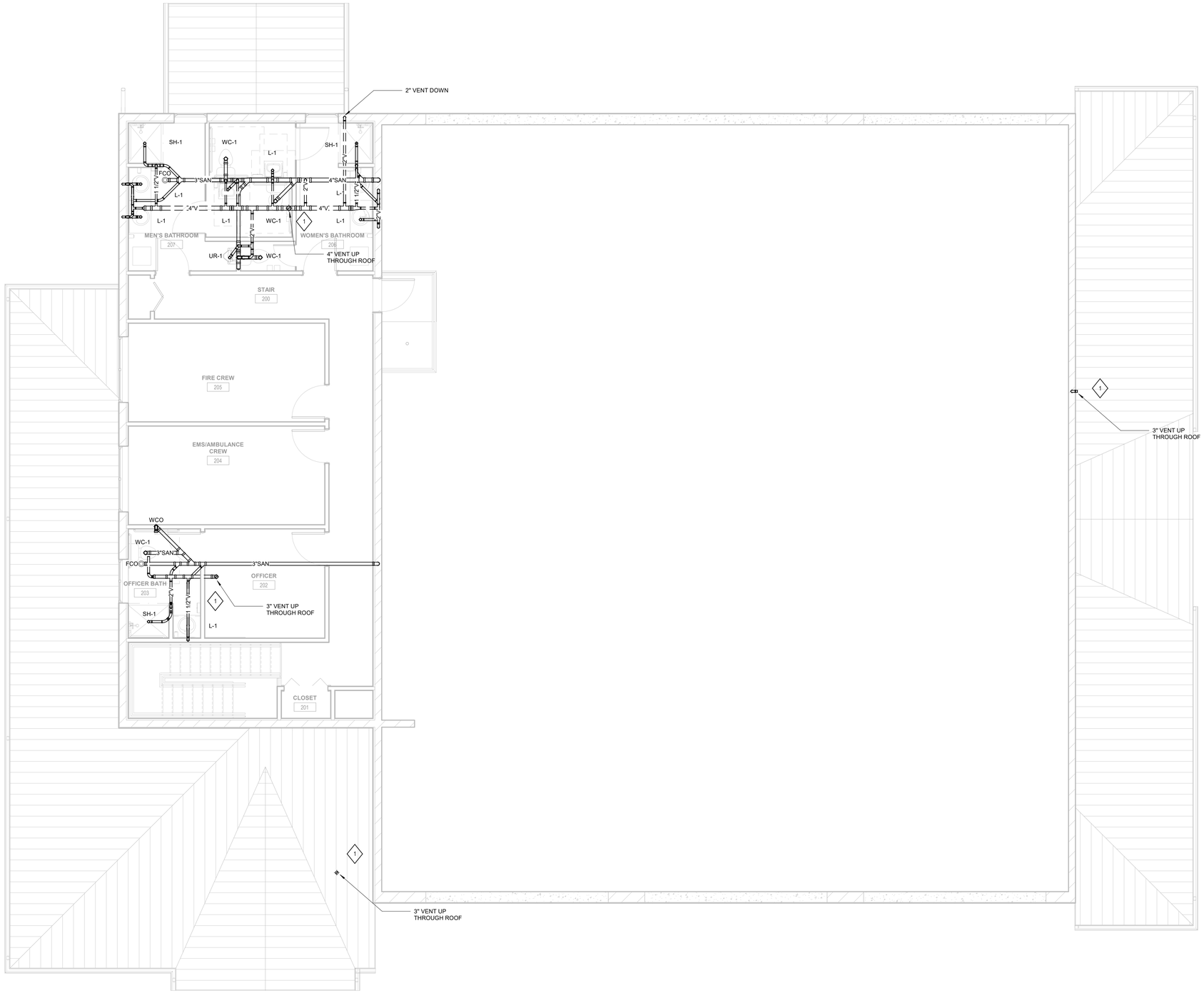
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1 SANITARY FLOOR PLAN - 2ND FLOOR

SCALE: 1/4" = 1'-0"

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CA LIC. NO.: 31963
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LAKE COUNTY
FIRE STATION NO. 39
SANITARY PLAN – 2ND FLOOR
24815 WALLICK ROAD, SORRENTO, FL 32776

18104A /18-005

JANUARY 31, 2020

PRICING SET

P202

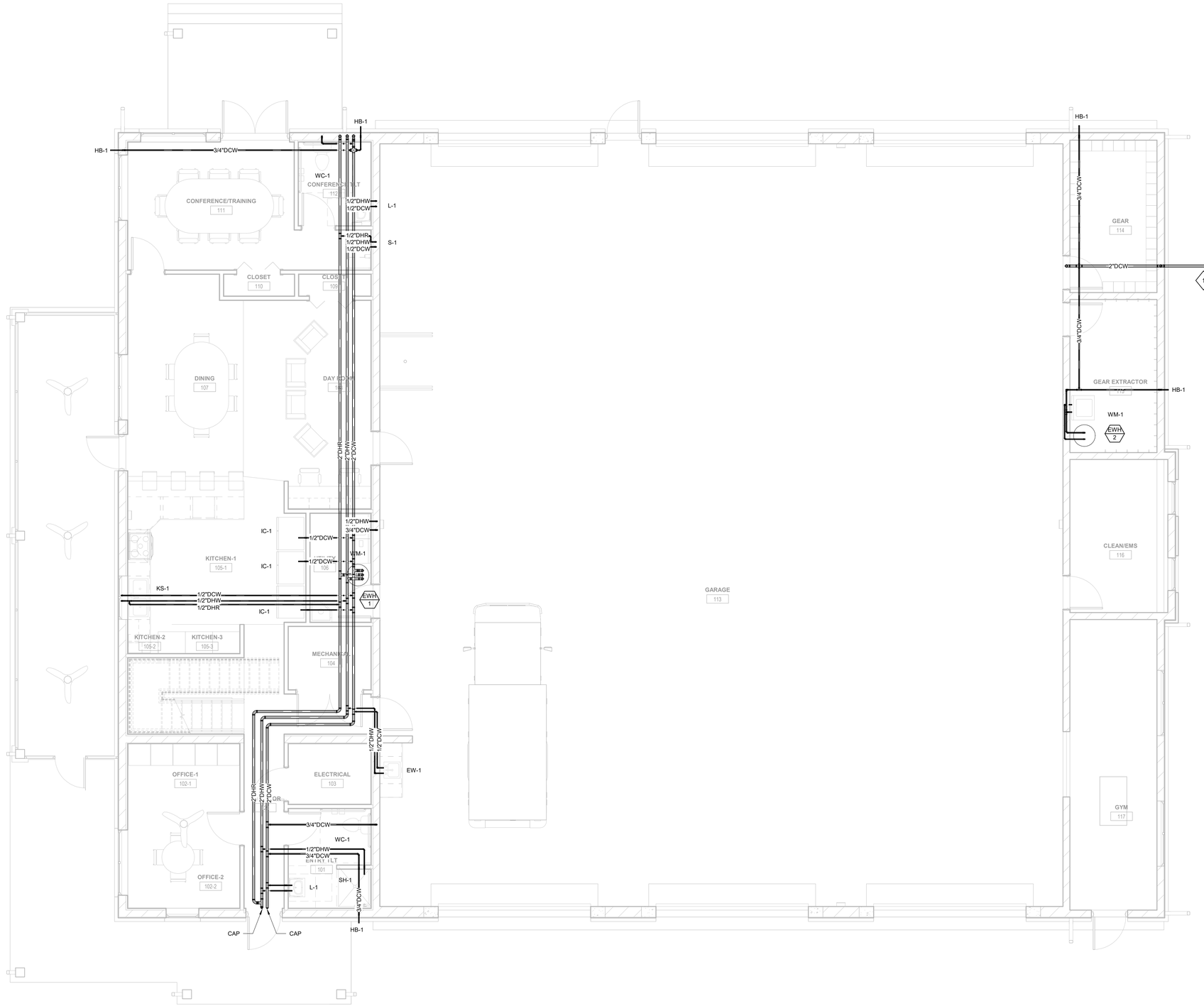
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1 DOMESTIC WATER FLOOR PLAN - 1ST FLOOR

SCALE: 1/4" = 1'-0"

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ORLANDO, FL 32803
CA LIC. NO.: 31963
PHONE: (352) 514-9025

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LAKE COUNTY
FIRE STATION NO. 39
DOMESTIC WATER PLAN – 1ST FLOOR
24815 WALLICK ROAD, SORRENTO, FL 32776

181104A /18-005

JANUARY 31, 2020

P301

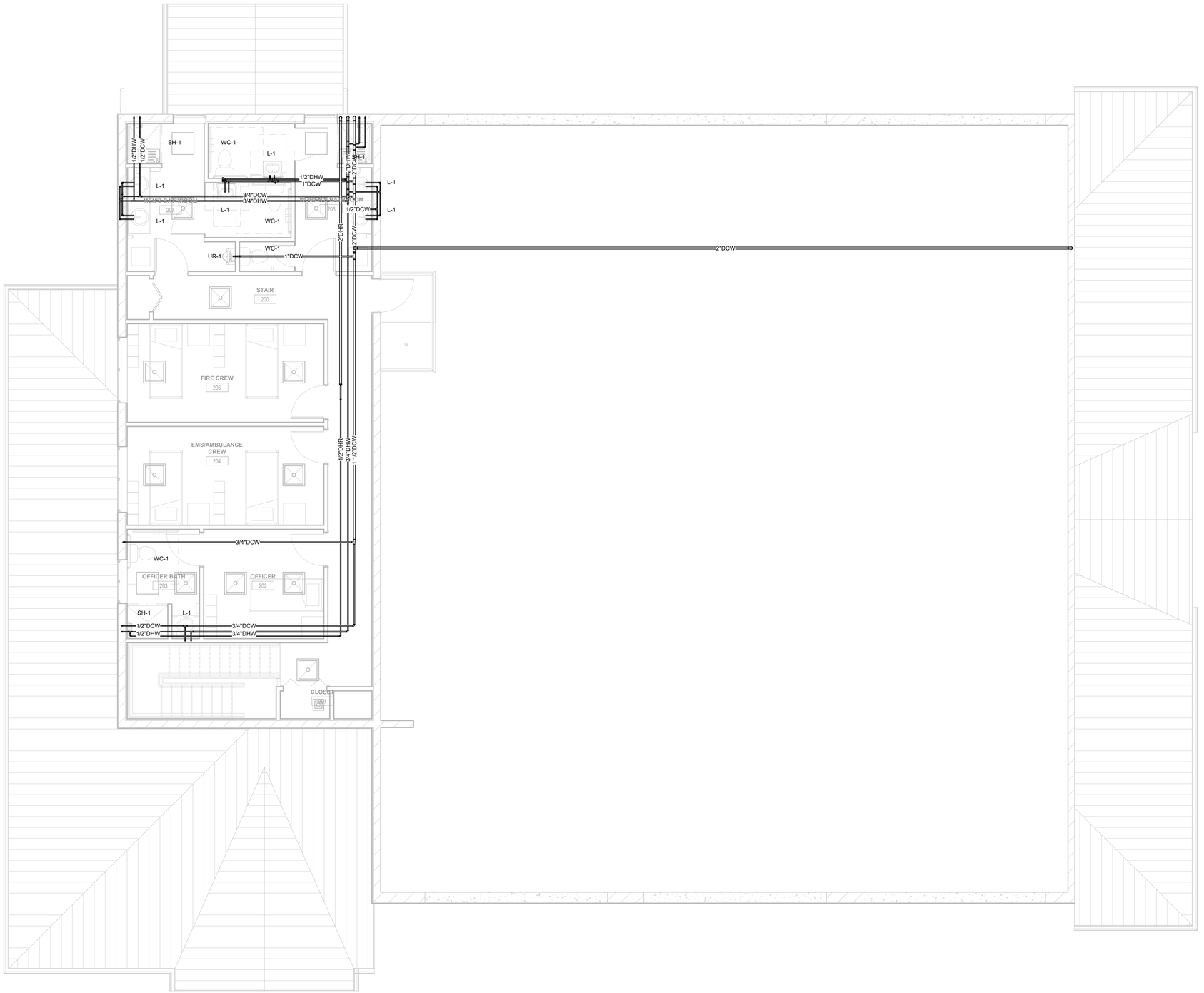
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1 **DOMESTIC WATER FLOOR PLAN - 2ND FLOOR**
SCALE: 1/4" = 1'-0"

DCL ENGINEERING
800 HIGHLAND AVE. SUITE 102,
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CA LIC. NO.: 31963
PHONE: (352) 514-9025

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LAKE COUNTY
FIRE STATION NO. 39
DOMESTIC WATER PLAN – 2ND FLOOR
2481S WALLICK ROAD, SORRENTO, FL 32776

JANUARY 31, 2020

P302

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P401

JANUARY 31, 2020

LAKE COUNTY
FIRE STATION NO. 39
SANITARY ISOMETRIC

24815 WALLICK ROAD, SORRENTO, FL 32776

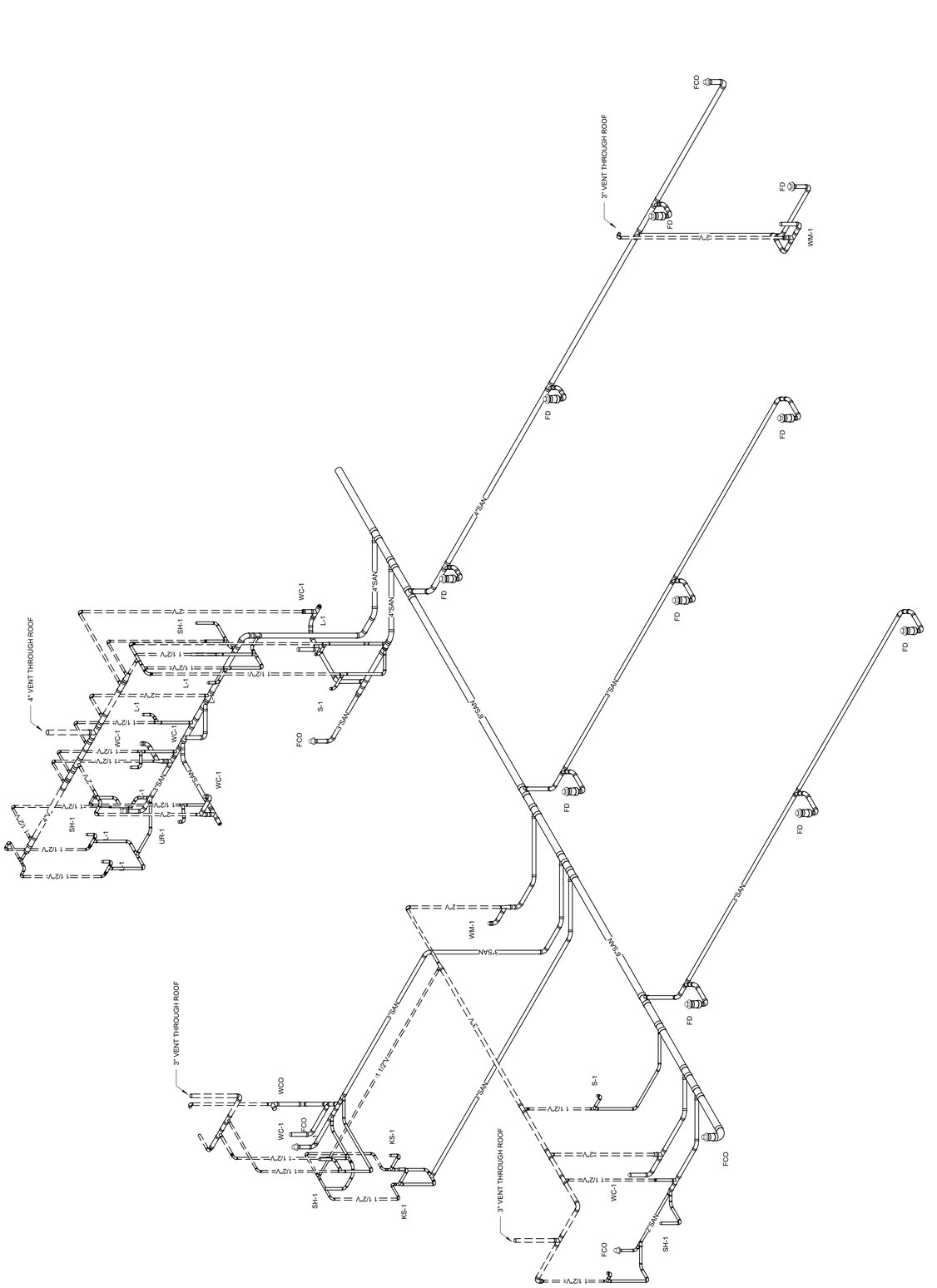
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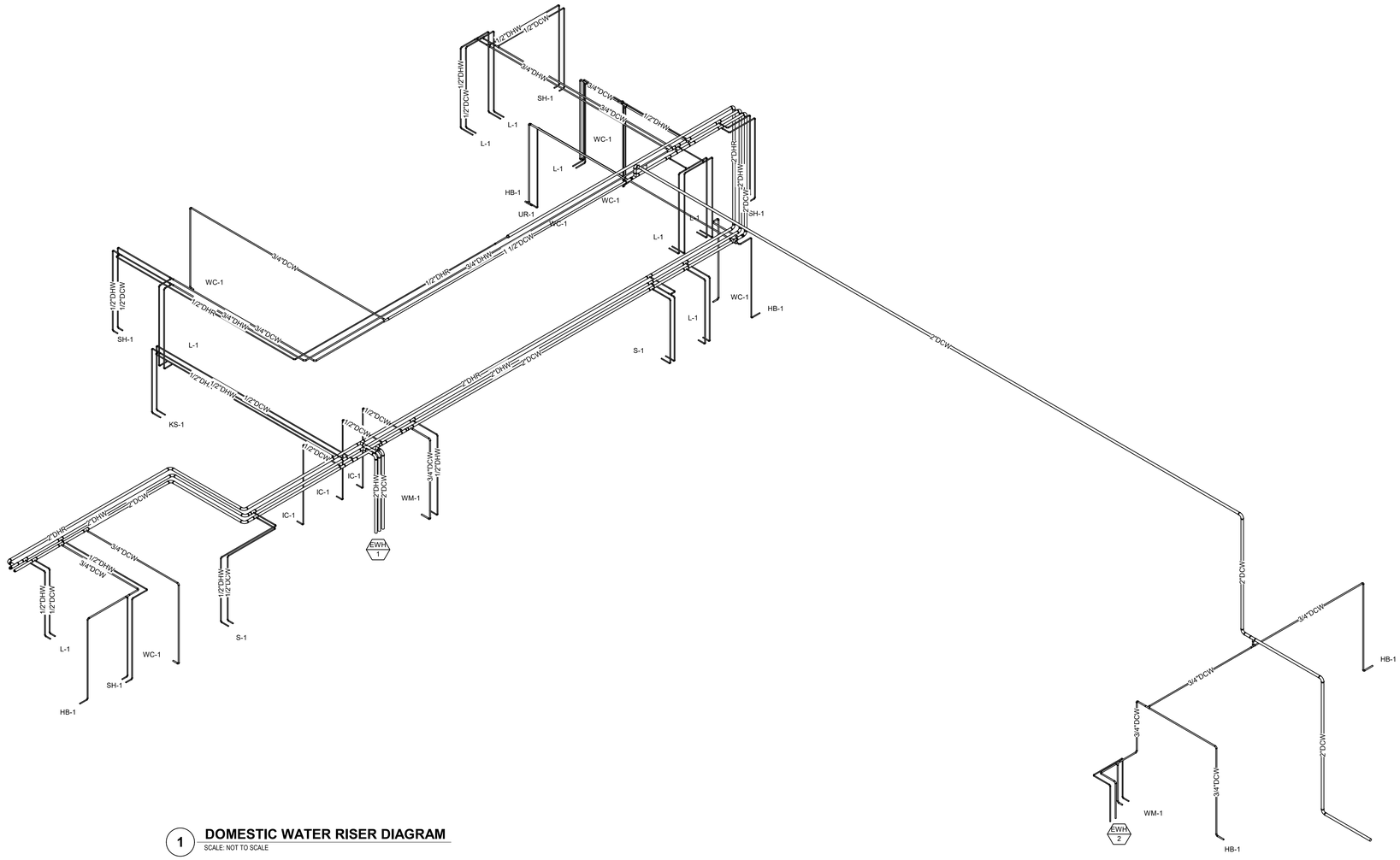
DANIEL CESAR
LICENSED
No. 69870
STATE OF FLORIDA
PROFESSIONAL ENGINEER

NO.	DESCRIPTION	DATE



1 **SANITARY RISER DIAGRAM**
SCALE: NOT TO SCALE

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1 **DOMESTIC WATER RISER DIAGRAM**
SCALE: NOT TO SCALE

NO.	DESCRIPTION	DATE

DANIEL CESAR LICENSE No. 68670 STATE OF FLORIDA PROFESSIONAL ENGINEER

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LAKE COUNTY
FIRE STATION NO. 39
DOMESTIC ISOMETRIC
24815 WALLICK ROAD, SORRENTO, FL 32776

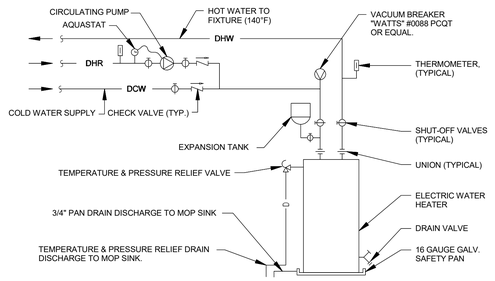
JANUARY 31, 2020

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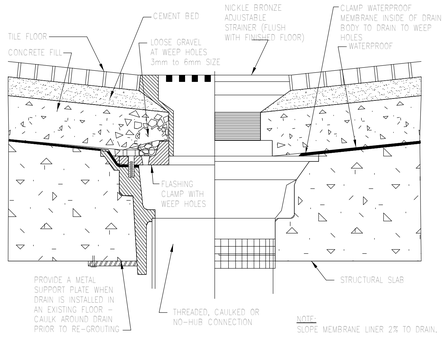
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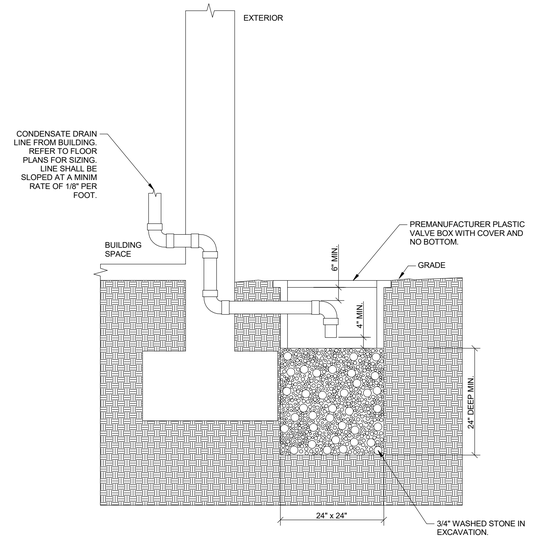
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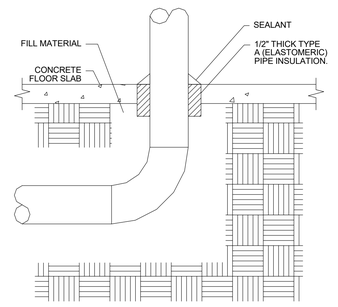
6 WATER HEATER CONNECTION DETAIL
SCALE: 1/2" = 1'-0"



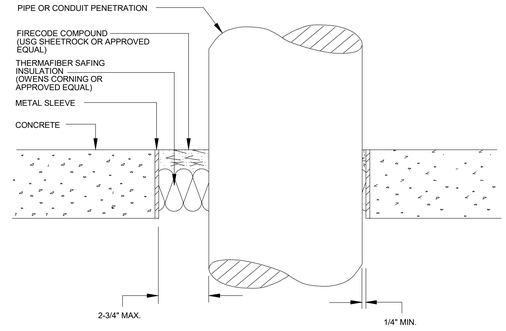
7 TYPE C FLOOR DRAIN DETAIL
SCALE: 1/2" = 1'-0"



4 FRENCH DRAIN DETAIL
SCALE: NOT TO SCALE



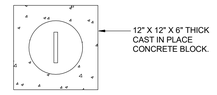
1 PIPE THRU SLAB ON GRADE
SCALE: NOT TO SCALE

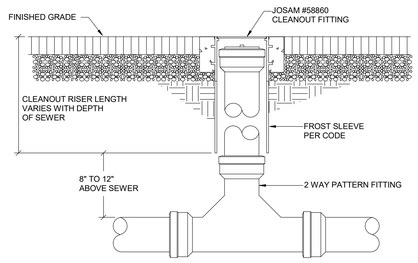


NOTES:
(1) PENETRATION DETAIL IN ACCORDANCE WITH WALL ASSEMBLY U.L. SYSTEM NO. 449.

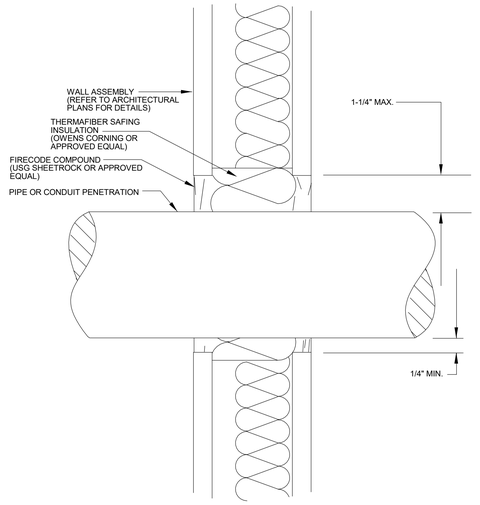
2 PIPE THRU FLOOR (WALL ASSEMBLY SYSTEM UL 449)
SCALE: NOT TO SCALE

NOTES:
(1) DO NOT USE THIS DETAIL FOR PAVED AREAS.





5 CLEAN OUT DETAIL
SCALE: NOT TO SCALE



NOTES:
(1) PENETRATION DETAIL IN ACCORDANCE WITH WALL ASSEMBLY U.L. SYSTEM NO. 605.

3 PIPE THRU EXTERIOR WALL
SCALE: NOT TO SCALE

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PRICING SET

LAKE COUNTY
FIRE STATION NO. 39
PLUMBING DETAILS
24815 WALLICK ROAD, SORRENTO, FL 32776

18104A /18-005

JANUARY 31, 2020

P601

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ELECTRICAL SYMBOL LEGEND

(ALL SYMBOL SHOWN ARE NOT NECESSARILY USED ON THE DRAWINGS)

LIGHTING FIXTURES

SUBCRIPTS: A-1b = PANEL A, CIRCUIT 1, SWITCH b
(REFER TO LIGHTING SCHEDULE)

- FLUORESCENT STRIP, OR INDUSTRIAL FIXTURE.
- 2'X4' FLUORESCENT LIGHT FIXTURE. (NL = NIGHT LIGHT)
- 2'X4' FLUORESCENT LIGHT FIXTURE WITH INTEGRAL EMERGENCY BATTERY TYPE BALLAST "NL" INDICATES FIXTURE IS ON A NIGHT LIGHT CIRCUIT AND IS NOT SWITCHED.
- 2'X2' FLUORESCENT LIGHT FIXTURE WITH INTEGRAL EMERGENCY BATTERY TYPE BALLAST "NL" INDICATES FIXTURE IS ON A NIGHT LIGHT CIRCUIT AND IS NOT SWITCHED.
- COMPACT FLUORESCENT, INCANDESCENT AND HID CELING LIGHT/DOWN LIGHT
- EMERGENCY OR NIGHTLIGHT (NL) COMPACT FLUORESCENT. INCADESCENT AND HID CEILING LIGH/DOWN LIGHT
- WALL MOUNTED COMPACT FLUORESCENT, INCADESCENT AND HID FIXTURE
- TRACK LIGHT. PLAN INDICATES LENGTH OF TRACK
- EXIT LIGHT WITH DIRECUONAL ARROWS AS INDICATED SHADING INDICATES FACE(S) OF FIXTURE. STEM INDICATES WALL MOUNTED 84-AFF UON
- EMERGENCY BATTERY OPERATED WALL PACK WITH 2 AIMABLE HEADS
- WALL MOUNTED FULL-CUTOFF FIXTURE
- CEILING MOUNTED FAN.
- RECESSED X 4' FLUORESCENT FIXTURE
- OS — CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR LUMON LOS-CDT SERIES.
- $ — SINGLE POLE SNITCH

LP1 -2,4,6 HOMERUN, LP1 = PANEL DESIGNATION
2,4,6 CIRCUITS

- CONDUIT
- CONDUIT CAPPED
- CONDUIT CONTINUES

COMMUNICATIONS

- DATA/0CW OUTLET WITH FLUSH MOUNTED 4-11/113" SQUARE SINGLE GANG JUNCTION BOX. PROVIDE BLANK BUILDING STANDARD COVER PLATE. EXTEND 1" CONCEALED CONDUIT TO ABOVE ACCESSIBLE CEILING AND STUB-OUT WITH PLASTIC BUSHING. OR AS NOTED. INSTALL PULL WIRE.
- TV — TELEVISION COAXIAL OUTLET WITH FLUSH MOUNTED 4-11/16" SQUARE SINGLE GANG JUNCTION BOX. PROVIDE BLANK BUILDING STANDARD COVER PLATE. EXTEND 1" CONCEALED CONDUIT TO ABOVE ACCESSIBLE CEILING AND STUB-OUT WITH PLASTIC BUSHING. OR AS NOTED. INSTALL PULL WIRE.
- COMM OUTLET WITH FLUSH MOUNTED 4-11/16" SQUARE SINGLE GANG JUNCTION BOX. PROVIDE BLANK BUILDING STANDARD COVER PLATE. EXTEND 1" CONCEALED CONDUIT TO ABOVE ACCESSIBLE CEILING AND STUB-OUT WITH PLASTIC BUSHING. OR AS NOTED. INSTALL PULL WIRE.
- COAXIAL OUTLET WITH FLUSH MOUNTED 4-11/16" SQUARE SINGLE GANG JUNCTION BOX. PROVIDE BLANK BUILDING STANDARD COVER PLATE. INSTALL PULL WIRE.
- WAP — SURFACE MOUNTED WIRELESS ACCESS POINT DATA DEVICE.

WIRING DEVICES

EWC=ELECTRIC WATER COOLER
WP=WEATHERPROOF
GFI=GROUND FAULT INTERRUPTER
EX=EXPLOSION PROOF
IG=ISOLATED GROUND
C=SENSOR CONTROLLED

- DUPLEX CONVENIENCE OUTLET MOUNTED 18" AFF LION. BOX INDICATES FLUSH IN FLOOR
- QUAD (DOUBLE DUPLEX") OUTLET MOUNTED 18" AFF LION. BOX INDICATES FLUSH IN FLOOR
- SPECIAL PURPOSE OUTLET. VOLTAGE, AMPERAGE AND MOUNTING ELEVATION AS NOTED ON PLANS BOX INDICATES FLUSH IN FLOOR
- DUPLEX/QUAD OUTLET MOUNTED HORIZONTALLY ABOVE COUNTERTOP OR BACKSPLASH 44" AFF UON
- DUPLEX OUTLET MOUNTED 42" AFF UON
- QUAD & DATA OUTLET BOX, FLOOR MOUNTED
- JUNCTION BOX, FLUSH MOUNTED IN CEILING U0N BOX INDICATES IN FLOOR STEM INDICATES WALL MOUNTED
- P — PULL BOX, FLUSH MOUNTED IN CEILING UON BOX INDICATES IN FLOOR STEM INDICATES WALL MOUNTED
- LOS, PUSHBUTTON DOORBELL BUZZER, OR SHUNT TRIP MOUNTED 42" AFF UON
- TC — TIME CLOCK

ABREVIATIONS

A - AMPERE
A/C - AIR CONDITIONING
AC - ALTERNATING CURRENT
AFF - ABOVE FINISHED FLOOR
AFG - ABOVE FINISHED GRADE
AHU - AIR HANDLER UNIT (HVAC)
AWG - AMERICAN WIRE GAUGE
C - CONDUIT OR CONDUCTOR
CFL - COMPACT FLUORESCENT LAMP
CH - CONDUIT HEIGHT
CONC- CONCRETE
COND- CONDUIT
CU - COPPER
DISC - DISCONNECT
ECB - ENCLOSED CIRCUIT BREAKER
ELEC - ELECTRICAL
EM - EMERGENCY
EMS - ELECTRICAL MENAGEMENT SYSTEM
EMT - ELECTRICAL METALLIC TUBING
EWC - ELECTRIC WATER COOLER
EX - EXISTING
FA - FIRE ALARM
FACP - FIRE ALARM CONTROL PANEL
FPL - FLORIDA POWER AND LIGHT
G - GROUND
GFI - GROUND FAULT INTERRUPTER
GND - GROUND (ELECTRICAL)
GRC - GALVANIZED RIGID CONDUIT
HVAC - HEATING, VENTILATION AND AIR CONDITIONING
HID - HIGH INTENSITY DISCHARGE LIGHT
I.G. - ISOLATED GROUND
J - JUNCTION
KAIC - (THOUSAND) AMPERE INTERRUPTING CAPACITY
KVA - KILOVOLT-AMPERE
KW - KILOWATT
LED - LIGHT EMITTING DIODE
LTG - LIGHT, LIGHTING
KCMIL - THOUSAND CIRCULAR MILS
MCU - MASTER CONTROL UNIT
MCP - MOTOR CIRCUIT PROTECTION
MH - METAL HALIDE
N - NEUTRAL
NA - NOT APPLICABLE
NF - NON-FUSED
NL - NIGHT LIGHT
NEC - NATIONAL ELECTRICAL CODE
NEMA - NATIONAL ELECTRICAL MANUFACTURERS ASSOC.
NFPA - NATIONAL FIRE PROTECTION ASSOC.
P - POLE
PNL - PANELBOARD
PVC - POLYVINYL CHLORIDE
RM - ROOM
RGS - RIGID GALVANIZED STEEL
SPEC - SPECIFICATION
SS - STAINLESS STEEL
TBD - TO BE DETERMINED
TVSS - TRANSIENT VOLTAGE SURGE SUPPRESSION
TYP - TYPICAL
UON - UNLESS OTHERWISE NOTED
V - VOLT
W - WIRE
W - WATT
WP - WEATHERPROOF

EQUIPMENT

- NON—FUSED DISCONNECT: 30 = AMPERE SIZE
- FUSED DISCONNECT
- MOTOR
- ELECTRICAL PANEL BOARD
- TELEPHONE PANEL BOARD
- TVSS — TRANSIENT VOLTAGE SURGE SUPPRESSOR (TYPE AS NOTED)
- FACP — FIRE ALARM CONTROL PANEL (SIMPLEX 4010 ADDRESSABLE)
- FAAP — FIRE ALARM ANNUNCIATOR PANEL (SIMPLEX 4606 SERIES)
- F — MANUAL PULLSTATION. 44" AFF UON
- F — ADA FIRE ALARM AUDIBLE/VISUAL INDICATOR MOUNTED AT 80" AFF UON
- S (I) — SMOKE DETECT : I = IONIZATION P = PHOTOELECTRIC
- H — XXcd — FIRE ALARM COMBINATION HORN/STROBE XX - DENOTES CANDELA RATING
- XXcd — FIRE ALARM STROBE ONLY XX - DENOTES CANDELA RATING

NO.	DESCRIPTION	DATE

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FIRE STATION NO. 39
ELECTRICAL LEGEND
24815 WALLICK ROAD, SORRENTO, FL 32776

18104A

Janurary 24, 2020

PRICING SET

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ELECTRICAL GENERAL PROVISIONS

PART 1 - GENERAL

A. GENERAL CONDITION AND REQUIREMENTS:

THIS WORK IS SUBJECT TO THE GENERAL CONDITIONS AND THE GENERAL REQUIREMENTS BOUND THEREIN. THE FOLLOWING CODES AND REGULATIONS (LATEST VERSION) SHALL GOVERN THE EXTENT AND INSTALLATION OF ELECTRICAL WORK UNLESS MORE STRINGENT REQUIREMENTS ARE SHOWN ON THE DRAWINGS OR SPECIFIED HEREIN:

a) 2014 N.E.C. & F.B.C. 2017 6TH EDITION.
b) NATIONAL FIRE PROTECTION ASSOCIATION STANDARDS (NFPA)
c) UNDERWRITERS LABORATORIES, INC (UL)
d) NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)
e) APPLICABLE LOCAL AND STATE BUILDING CODES

B. SCOPE:

1. THE SCOPE OF THIS DIVISION CONSISTS OF FURNISHING ALL PLANT LABOR, EQUIPMENT, SUPERVISION, APPLIANCE, MATERIALS AND PERFORMING ALL OPERATIONS REQUIRED TO COMPLETE ALL ITEMS OF WORK IN ACCORDANCE WITH THESE SPECIFICATIONS, APPLICABLE

2. THE WORK PROVIDED UNDER THIS DIVISION SHALL INCLUDE ALL LABOR, MATERIALS, PERMITS, INSPECTIONS AND RE-INSPECTION FEES, TOOLS, EQUIPMENT, TRANSPORTATION, INSURANCE, TEMPORARY PROTECTION, TEMPORARY LIGHTING, SUPERVISION AND INCIDENTAL ESSENTIAL FOR PROPER INSTALLATION AND OPERATION, EVEN THOUGH NOT SPECIFICALLY MENTIONED OR INDICATED BUT WHICH ARE USUALLY PROVIDED OR ARE ESSENTIAL FOR PROPER INSTALLATION AND OPERATION OF ALL ELECTRICAL SYSTEMS AS INDICATED IN THE CONTRACT DOCUMENTS.

C. SUBSTITUTION/APPROVED EQUAL:

1. PROVIDE ONLY UL LABELED PRODUCTS (WHERE APPLICABLE) OF TYPES INDICATED. ALL MATERIALS SHALL BE NEW AND IN PERFECT CONDITION. NOTWITHSTANDING ANY REFERENCE IN THESE DRAWINGS TO ANY ARTICLE, DEVICE, PRODUCT, MATERIAL, FORM, OR TYPE OF CONSTRUCTION BY NAME, MAKE OR A CATALOG NUMBER SUCH SHALL NOT BE CONSTRUCTED AS LIMITING CONDITION. THE CONTRACTOR IN SUCH CASES MAY AT HIS OPTION USE ANY ARTICLE, DEVICE, PRODUCT, MATERIAL, FORM OR TYPE OF CONSTRUCTION WHICH IN THE JUDGEMENT OF THE ARCHITECT/ENGINEER, EXPRESSED IN WRITING, IS EQUAL TO THAT SPECIFIED.

2. COST SAVINGS SHALL BE FORWARDED TO THE OWNER.

D. FEES, PERMITS AND REGULATIONS:

1. CONFORM TO ALL GOVERNING CODES, ORDINANCES OR REGULATIONS OF CITY, COUNTY, AND STATE HAVING JURISDICTION. WHERE LOCAL CODES ARE NOT APPLICABLE, CONFORM TO NATIONAL ELECTRIC CODE, LATEST REVISION.

2. BID WORK TO CONFORM TO CODE AT NO ADDITIONAL EXPENSE TO OWNER.

E. CONTRACTOR'S RESPONSIBILITIES:

1. COORDINATE WORK WITH OTHER TRADES. POWER AND TELEPHONE COMPANIES.
2. COORDINATE WORK SCHEDULE AND MATERIAL DELIVERY.

3. PROVIDE A COMPETENT SUPERINTENDENT IN CHARGE OF WORK AT ALL TIME. REPLACE SUPERINTENDENT NOT DEEMED COMPETENT BY ARCHITECT. DO NOT WITHDRAW OR CHANGE SUPERINTENDENT WITHOUT PRIOR APPROVAL OF ARCHITECT.

4. PROVIDE QUALIFIED MECHANICS. INSTALL MATERIALS AND EQUIPMENT IN NEAT, WORKMANLIKE MANNER. REMOVE AND REPLACE ANY MATERIAL OR EQUIPMENT, WHICH IS IMPROPERLY INSTALLED, OR DAMAGED IN THE OPINION OF THE ARCHITECT, AT CONTRACTOR'S EXPENSE.

5. EXAMINE WORK OF OTHERS. NOTIFY ARCHITECT IMMEDIATELY IN WRITING IF ANY CONDITION EXISTS WHICH WILL PREVENT SATISFACTORY INSTALLATION OF MATERIALS OR EQUIPMENT. STARTING OF WORK WITHOUT NOTIFICATION INDICATES ACCEPTANCE AND SUBSEQUENT CHANGES REQUIRED WILL BE AT CONTRACTOR'S EXPENSE.

6. THE INTEGRITY OF FIRE-RATED PARTITIONS SHALL BE MAINTAINED AROUND PENETRATING ELECTRICAL ELEMENTS. FIRE-RATED SEALANT, SLEEVES ESCUTCHEONS AND SIMILAR UNITS SHALL BE PROVIDED WHERE REQUIRED BY REFERENCE CODES AND AUTHORITIES HAVING JURISDICTION.

F. INTERPRETATIONS OF DRAWINGS:

1. THE DRAWINGS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO SHOW EXACT LOCATIONS OF CONDUIT RUNS, OUTLET BOXES, JUNCTION BOXES, PULL BOXES, ETC. THE LOCATIONS OF EQUIPMENT, APPLIANCES, FIXTURES, CONDUIT, OUTLETS, BOXES AND SIMILAR DEVICES SHOWN ON THE DRAWINGS ARE APPROXIMATE ONLY. EXACT LOCATIONS SHALL BE AS ACCEPTED BY THE ENGINEER DURING CONSTRUCTION. OBTAIN IN THE FIELD ALL INFORMATION RELEVANT TO THE PLACING OF ELECTRICAL WORK, IN AN ACCEPTABLE MANNER.

2. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOUND DURING CONSTRUCTION OF THE PROJECT AND DO NOT PROCEED WITH THAT PORTION OF THE PROJECT, UNTIL A WRITTEN DEFINITIVE STATEMENT IS RECEIVED PROVIDING CLEAR DIRECTION. IF A CONFLICT EXISTS BETWEEN THE CONTRACT DOCUMENTS AND ANY APPLICABLE CODE OR STANDARD, THE MOST STRINGENT REQUIREMENT SHALL BE INCLUDED FOR THIS PROJECT. THE ENGINEER SHALL MAKE THE DECISION REGARDING QUESTIONABLE AREAS OF CONFLICT.

3. COMPARE ALL DRAWINGS AND VERIFY FIGURES BEFORE LAYING OUT WORK AND "BE RESPONSIBLE FOR ANY ERRORS WHICH MIGHT HAVE BEEN AVOIDED THEREBY. SPECIAL NOTICE SHALL BE TAKEN OF CODE REQUIRED ELECTRICAL CLEARANCE AND ARCHITECT SHALL BE NOTIFIED IMMEDIATELY OF DISCREPANCIES.

4. WHEN MEASUREMENTS ARE AFFECTED BY CONDITIONS ALREADY ESTABLISHED, CONTRACTOR TO TAKE MEASUREMENTS NOTWITHSTANDING GIVING SCALE OR FIGURE DIMENSIONS ON DRAWINGS.

G. SERVICE AND METERING:

1. COMPANY: THE UTILITY COMPANY SERVING THIS PROJECT, WHICH WILL BE REFERRED TO AS THE UTILITY COMPANY HEREIN.

2. SERVICE: MAKE ALL ARRANGEMENTS WITH THE UTILITY COMPANY FOR OBTAINING A COMPLETE SERVICE. PAY ALL CHARGES AND PROVIDE ALL LABOR AND MATERIAL FOR THE SERVICE. SERVICE SHALL BE OBTAINED AT 120/240 VOLTS FROM THE UTILITY COMPANY. PROVIDE UNDERGROUND CABLES AND CONDUITS FOR INCOMING SERVICES FROM THE UTILITY'S PAD MOUNTED TRANSFORMER TO DISTRIBUTION EQUIPMENT. INSTALL METER SOCKET, AND PROVIDE CT CABINET AND WIRING. CONTRACTOR SHALL ALSO INCLUDE INSTALLATION COST OF UTILITY REQUIRED CONDUITS FROM THE UTILITY POLE TO PAD MOUNTED TRANSFORMER.

3. FEES: CONTACT THE UTILITY COMPANY TO DETERMINE IF ANY FEES, CHARGES OR COSTS WILL BE DUE THE COMPANY, AS REQUIRED FOR TEMPORARY POWER, PERMANENT POWER, INSTALLATIONS, HOOK-UPS, ETC. HIS FEE, CHARGE OR COST SHALL BE INCLUDED IN THE BID PRICE.

4. PAYMENT: PAY FOR ALL REQUIRED LICENSES, FEES AND INSPECTIONS. INCLUDE ALL COSTS IN THE PROPOSED CONSTRUCTION COST SUBMISSION. THESE COSTS SHALL INCLUDE BUT NOT BE LIMITED TO ALL-APPLICABLE TAXES, PERMITS, NECESSARY NOTICES, CERTIFICATES AND ALL COSTS REQUIRED TO OBTAIN IT.

H. CUTTING AND PATCHING:

THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL OPENING REQUIREMENTS WITH THE GENERAL CONTRACTOR. GENERAL CONTRACTOR SHALL PROVIDE ALL OPENINGS AND CLOSE IT.
IF GENERAL CONTRACTOR IS NOT PROPERTY INFORMED THIS DIVISION WILL PROVIDE OPENINGS AT HIS OWN EXPENSE. CUTTING OF STEEL, WOOD OR OTHER MAIN STRUCTURAL PARTS MUST BE APPROVED BY ARCHITECT PRIOR TO CUTTING.

I. HANDLING OF MATERIALS AND EQUIPMENT:

1. RECEIVE, HOUSE, HANDLE AND DELIVER TO PROPER LOCATION, MATERIALS AND EQUIPMENT.

2. PROTECT FROM DAMAGE, MOISTURE, DIRT, DEBRIS, AND WORK OF OTHER TRADES. USE OF PAPER, CARDBOARD, OTHER FLIMSY MATERIAL WILL NOT BE PERMITTED. REPLACE OR REFINISH MARKED OR DAMAGED SURFACES TO SATISFACTION OF ARCHITECT/ENGINEER.

J. CLEAN UP:

1. KEEP PREMISES FREE FROM ACCUMULATIONS OF WASTE MATERIAL OR RUBBISH.
   a. LEAVE PREMISES AND WORK IN CLEAN, ORDERLY CONDITION ACCEPTABLE TO ARCHITECT/ENGINEER.

   b. CLEAN ALL MATERIALS AND EQUIPMENT OF DIRT, DUST, PAINT, SPOTS, SOIL MARKS, ETC. ANY MATERIAL IN LESS THAN NEW CONDITION WILL BE REPLACED AT CONTRACTOR'S EXPENSE.

K. LABELS:

1. PROVIDE FOR ALL EQUIPMENT, APPARATUS, DISCONNECT AND REMOTE CONTROL SWITCHES, ETC., RIGID, LAMINATED, PHONEMIC LABELS, BLACK WITH WHITE LETTERS SELF ADHESIVE BACK. TAPE LABELS OR ADHESIVE NOT PERMITTED.

2. SPECIFIC EQUIPMENT (I.E, ELECTRICAL PANELS AND EQUIPMENT) SHALL BE IDENTIFIED WITH ONE INCH HIGH, 3-INCHES LONG, 1/16 -INCH THICK LABEL WITH 1/4 -INCH LETTERS.

L. AS BUILT DRAWINGS:

1. DURING PROGRESS OF WORK, KEEP ONE SET OF PRINTS OR JOB SHOWING ANY CHANGES FROM ORIGINAL PRINT.
2. UPON COMPLETION OF WORK; FURNISH ARCHITECT/ENGINEER WITH CLEAN SET OF LEGIBLE AND ACCURATELY MARKED PRINTS INDICATING ALL CHANGES FROM ORIGINAL PLANS.

M. GUARANTEE AND SERVICE:

1. CONTRACTOR AND MANUFACTURER TO GUARANTEE EQUIPMENT FOR ONE (1) YEAR AFTER FINAL ACCEPTANCE.

2. CONTRACTOR TO GUARANTEE MATERIAL AND WORKMANSHIP FOR ONE (1) YEAR AFTER FINAL ACCEPTANCE AND REPLACE ANY DEFECTS WITHOUT EXPENSE TO OWNER. FURNISH LUBRICATION, CLEANING NECESSARY ADJUSTMENTS AND/OR REPLACEMENTS, PREVENTATIVE MAINTENANCE, ETC.

3. LIGHT BULB REPLACEMENT LIMITED TO 30 DAYS.

N. SUBMITTALS:

1. WITHIN FIVE (5) DAYS AFTER AWARD OF CONTRACT THE CONTRACTOR SHALL ORDER AND SCHEDULE DELIVERY OF ALL MATERIALS AND EQUIPMENT CONCERNED WITH THIS PORTION TO ENGINEER, IN QUADRUPLICATE, A STATEMENT OF CONFIRMATION LISTING EQUIPMENT SUPPLIER, DATE ORDERED AND DELIVERY DATE. WHERE CHOICE OF MANUFACTURER IS GIVEN TO THE CONTRACTOR, LIST THE ONE ORDERED. THE FOLLOWING ITEMS MUST BE INCLUDED IN SUBMITTAL LETTER: PANELS, SWITCHBOARD, DISCONNECTS STARTERS, WIRE, CONDUIT, ELECTRIC METALLIC TUBING, OUTLET BOXES, DEVICES, PLATES, PLASTIC NAME PLATES, SPECIAL PURPOSE EQUIPMENT AND LIGHTING FIXTURES.

2. SHOP DRAWINGS TO BE SUBMITTED NO LATER THAN FORTY-FIVE (45) DAYS AFTER AWARD OF CONTRACT AND PRIOR TO INSTALLATION OF MATERIAL REQUIRING CONTRACTOR AT ONE TIME. INTERMITTENT OR INCOMPLETE SUBMITTALS WILL NOT BE CONSIDERED. MATERIAL OR EQUIPMENT REQUIRING SHOPS DRAWINGS APPROVAL IS NOT TO BE INSTALLED ON PROJECT UNTIL APPROVED SHOP DRAWINGS HAVE BEEN RETURNED BY ARCHITECT/ENGINEER.

O. INSPECTIONS:

1. DURING THE PROGRESS OF THE WORK, THE ENGINEER, OR OWNER'S REPRESENTATIVE, WILL MAKE OBSERVATIONS AT THE SITE TO DETERMINE CONFORMATION OF WORK WITH PLANS, SPECIFICATIONS AND THE INTENT THEREOF. DEFICIENCIES, VIOLATIONS AND INCORRECT WORKMANSHIP OR MATERIALS AND EQUIPMENT AND CORRECTIVE ACTION THEREFORE WILL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR, FOR HIS IMMEDIATE REMEDIAL ACTION.

P. INTERRUPTION OF EXISTING SERVICE:

1. 48 HOURS ADVANCE NOTICE IS REQUIRED FOR OUTAGES ON FEEDER4 AND BRANCH CIRCUIT CONSIDERED VITAL TO OPERATION BY OWNER, CONTRACTOR SHALL REQUEST SUCH OUTAGE, WITH ANTICIPATED DURATION THEREOF, IN WRITING FROM OWNER AND SHALL OBTAIN OWNER'S PERMISSION THEREFORE.

Q. SAMPLES:

1. PHYSICAL SAMPLES OF MATERIAL AND EQUIPMENT PROPOSED FOR INSTALLATION ON THIS PROJECT SHALL BE SUBMITTED TO ARCHITECT/ENGINEER UPON REQUEST.
2. SAMPLES SHALL BE SUBMITTED THROUGH THE GENERAL CONTRACTOR WITH ALL SHIPPING AND HANDLING CHARGES PREPAID. ANY EXPENSE INCURRED IN SECURING, DELIVERY AND RETURN OF SAMPLES IS RESPONSIBILITY OF CONTRACTOR. SAMPLES SHALL BE DELIVERED TO LOCATION DESIGNATED BY ARCHITECT/ENGINEER. IDENTIFY SAMPLE WITH SHIPPING TAG, WIRED IN PLACE, CONTAINING THE FOLLOWING INFORMATION:
   a. NAME OF PROJECT.
   b. NAME OF CONTRACTOR.
   c. SPECIFICATION SECTION NUMBER COVERING SAMPLE.
   d. MANUFACTURER'S NAME AND CATALOG NUMBER.
   e. DATE SUBMITTED.

3. SAMPLES SHALL REMAIN THE POSSESSION OF CONTRACTOR EXCEPT AS FOLLOWS:

   a. APPROVED SAMPLES, WITHOUT PHYSICAL DAMAGE, MAY BE INSTALLED ON THE PROJECT.
   b. SAMPLES NOT CALLED FOR WITHIN 14 DAYS AFTER NOTIFICATION WILL BE DISPOSED OF BY THE ARCHITECT/ENGINEER.

R. SPARE PARTS AND TOOLS:

1. FURNISH TO THE OWNER, AND OBTAIN RECEIPT FOR IT, THE FOLLOWING:
   a. HAVE ALL PREVIOUSLY LISTED DEFECTS CORRECTED.
   b. COMPLETE ALL WORK.
   c. TEST ALL SYSTEMS AND HAVE DATA ON SUCH TEST.
   d. HAVE ALL DIRECTORIES, LABELS AND INSTRUCTIONS.
   e. COMPILED WITH APPLICABLE PARAGRAPHS OF THIS SECTION.

2. FURNISH ADEQUATE MECHANICS AND PERSONNEL TO OPERATE SYSTEMS, MAKE ADJUSTMENTS, AND ASSIST WITH INSPECTION AS DIRECTED BY ARCHITECT/ENGINEER.

ELECTRICAL WORK

PART 1- PRODUCTS

A. CONDUIT:

CONDUIT SHALL BE PROVIDED AS FOLLOW, UNLESS OTHERWISE NOTED:
ELECTRICAL METALLIC TUBING (EMT): PROVIDE IN STUD AND HOLLOW MASONRY WALLS, ABOVE SUSPENDED AND FURRED CEILINGS, (MAXIMUM RUN LENGTH LENGTH OF 6'0") AND ALL TERMINATION TO EQUIPMENT SUBJECT TO VIBRATION. (MAXIMUM RUN LENGTH OF 4'0"). ALL FITTINGS SHALL BE APPLETON AST SERIES OR APPROVED EQUAL. LIQUID-TIGHT SHALL BE USED IN DAMP OR WET LOCATIONS AND FOR EQUIPMENT CONTAINING LIQUIDS. ALL FITTINGS SHALL BE O.Z. GEDNEY AKC SERIES OR APPROVED EQUAL. PLASTIC CONDUIT AS MANUFACTURED BY ONE OF THE FOLLOWING:
A) CARLON PLASTIC PRODUCTS CORP.
B) CANTEX PLASTIC PRODUCTS
C) HATFIELD WIRE AND CABLE COMPANY.

A NYLON PULL WIRE SHALL BE INSTALLED IN ALL EMPTY CONDUITS. IDENTIFY INTENDED USE AT BOTH ENDS.

B. COUPLINGS AND CONNECTORS:

1. COUPLINGS AND CONNECTOR MANUFACTURED BY ONE OF THE FOLLOWING (OR APPROVED EQUAL): A) APPLETON ELECTRIC COMPANY, B) RACO C), STEEL CITY.

C. OUTLET BOXES:

1. GALVANIZED, STAMPED STEEL, 4-INCHES SQUARE BY 1-1/2 INCHES DEEP MINIMUM SIZE FOR WALL OUTLETS, MANUFACTURED BY, A) APPLETON ELECTRIC COMPANY, B) GENERAL CABLE COMPANY C) HATFIELD WIRE AND CABLE, D) REYNOLDS METAL COMPANIES, E) SIMPLEX WIRE AND CABLE F) TRIANGLE CONDUIT AND WIRE COMPANY OR APPROVED EQUAL

D. PANELBOARDS:

1. SQUARE-D, GENERAL ELECTRIC OR SIEMENS.

E. WIRE:

1. WIRE FOR THIS PROJECT AS MANUFACTURED BY ONE OF THE FOLLOWING: A) ANACONDA, B) GENERAL CABLE COMPANY, C) HATFIELD WIRE AND CABLE, D) REYNOLDS METAL COMPANY, E) SIMPLEX WIRE AND CABLE, F) TRIANGLE CONDUIT AND WIRE COMPANY OR APPROVED EQUAL

F. WIRING DEVICES:

1. SINGLE POLE SWITCH (ARROW HART #1991, HUBBLE #1221, PASS AND SEYMOUR #20AC 1).
2. THREE WAY SWITCH (HUBBLE #1223, ARROW HART #1993, PASS AND SEYMOUR #20AC).
3. RECEPTACLE, DUPLEX (HUBBLE #5262, ARROW HART #5262).
4. RECEPTACLE GFI (ARROW HART GF5242-I WITH 4501 COVER, HUBBLE GF5262-I WITH WP-26 COVER)

PART 2 - EXECUTION

A. GROUNDING:

1. PROVIDE EQUIPMENT GROUND SYSTEM IN ACCORDANCE WITH NATIONAL ELECTRIC CODE ARTICLE 250.

   a. ALL BRANCH CIRCUIT RACEWAY CONTAIN MINIMUM ONE NO. 12 AWG, TYPE TW, GREEN CODED GROUND WIRE.
   b. GROUND CONDUCTOR FOR PANEL FEEDER AND BRANCH CIRCUITS WITH OVER CURRENT PROTECTION RATED MORE THAN 20 AMPERES SIZE.
   c. ALL FIXTURES, RECEPTACLES, SWITCHES BONDED TO GROUNDING SYSTEM.
   d. GREEN CODED GROUND CONTINUOUS FROM SERVICE ENTRANCE AND IN ADDITION TO NEUTRAL (1) NEUTRAL NOT USED AS GROUND FOR EQUIPMENT. EQUIPMENT GROUND BONDED TO NEUTRAL AT MAIN SERVICE ENTRANCE ONLY. (2) GREEN CODED GROUND CONDUCTORS TERMINATED UNDER EQUIPMENT GROUND BAR OF PANELS.

B. RACEWAYS:

1. PROVIDE ALL RACEWAYS FOR ALL SYSTEMS. RACEWAY LOCATIONS SHOWN ARE DIAGRAMMATIC, UNLESS SPECIFICALLY NOTED, AND GOVERN OBSTRUCTIONS. EXPOSED RACEWAYS RUN IN NEAT MANNER ACCEPTABLE TO ARCHITECT. RACEWAYS SUPPORTED USING USING CONDUIT CLAMPS SUPPORT OR HOLD RACEWAYS IN PLACE.

   a. RACEWAYS IMBEDDED IN EARTH, IN CONCRETE, IN DAMP OR WET LOCATIONS HOT DIPPED GALVANIZED RIGID, HEAVY WALL, THREADED NON-METALLIC, HIGH IMPACT DIRECT BURIAL TYPE II, PVC, WHERE PERMITTED BY CODES.
   b. RACEWAYS IN WALL OR FURRED CEILING TO BE ELECTRIC METALLIC TUBING
   c. RIGID STEEL CONDUIT USED FOR EXPOSED EXTERIOR RACEWAYS.

2. RACEWAYS REAMED SMOOTH AFTER CUTTING AND/OR THREADING.

3. RIGID STEEL, THREADED CONDUITS AND SCHEDULE 40 PVC TO HAVE DOUBLE LOCKNUTS AND O.Z. TYPE B BUSHING.

4. ELECTRIC METALLIC TUBING COUPLING AND CONNECTORS MACHINED STEEL, SET SCREW TYPE.

5. CONNECTIONS TO MOTORS AND VIBRATING EQUIPMENT MADE WITH SUFFICIENT STEEL, SET SCREW TYPE.

   a. USE FLEXIBLE, NON-METALLIC, LIQUID-TIGHT CONDUIT, UL APPROVED, FOR MOTOR CONNECTIONS.
   b. FLEXIBLE CONDUIT NOT USED FOR FIXTURE CONNECTIONS, EXCEPT RECESSED OR LAY-IN TYPE FIXTURES.
   c. MINIMUM SIZE 1/2 -INCH.

6. MINIMUM 24" RADIUS ELBOWS AND CONDUITS TO BE USED WHEN RISING FROM BELOW FLOOR ON SURFACE OF WALLS EXCEPT FOR LOW VOLTAGE RACEWAYS.

7. LOW VOLTAGE RACEWAYS (SYSTEMS OPERATING AT 70 VOLTS OR BELOW) TYPE 4 POLYVINYL CHLORIDE, UL FORMULA NON-METALLIC

   a. LOW VOLTAGE RACEWAYS TO HAVE BUSHING AT ALL TERMINALS.

   b. NYLON PULL CHORD 5W POUND TEST MINIMUM, LEFT IN ALL RACEWAYS, IN WHICH CONDUCTORS ARE NOT INSTALLED.

C. OUTLET BOXES:

1. EXCEPT AS NOTED OTHERWISE, ALL OUTLETS LOCATED AS FOLLOWS: (MEASURED FROM FINISHED FLOOR LEVEL TO BOTTOM OF BOX)

   a. SWITCHES----------48" TO OPERABLE PART
   b. RECEPTACLES----------15"
   c. WALL TELEPHONES---------48"

2. PROVIDE REQUIRED OUTLETS, SWITCH, PULL AND JUNCTION BOXES OF SUITABLE TYPE FOR MOUNTING INDICATED. BOXES SHALL BE GALVANIZED STEEL, NOT LESS THAN 4" SQUARE AND 1-1/2" DEEP UNLESS OTHERWISE INDICATED. BOXES SHALL BE SECURE TO STRUCTURE INDEPENDENT OF CONDUIT SUPPORTERS. PLASTER RINGS SHALL BE PROVIDED FOR RECESSED UNITS.

3. CONTRACTOR SHALL COORDINATE LOCATIONS OF UNITS INDICATED ON ELECTRICAL DRAWING WITH ACTUAL LOCATIONS ESTABLISHED BY ARCHITECT OR MECHANICAL CONTRACTOR FOR CLARIFICATION BEFORE PRECEDING WITH INSTALLATION.

D. PANELBOARDS (SHOP DRAWINGS REQUIRED):

1. BRANCH CIRCUIT PANEL BOARDS CIRCUIT BREAKER TYPE WITH BOLT-ON BREAKERS DEAD FRONT, LOCKING DOOR, FLUSH LOCK MASTER KEYPAD.

2. BREAKERS CLEARLY NUMBERED. WHERE SPACES ARE CALLED FOR, PROVIDE HARDWARE REQUIRED FOR FUTURE INSTALLATION OF BREAKERS. BUS AND HARD WARE BRACED FOR INTERRUPTING, CAPACITY OF LARGEST BREAKER IN PANEL: INTERRUPTING RATING AS SHOWN ON DRAWINGS.

3. PROVIDE TYPE CIRCUIT DIRECTORY UNDER TRANSPARENT SHIELD, ON INSIDE OF COVER OF EACH PANEL BOARD. DIRECTORY TO ACCURATELY LIST CIRCUIT NUMBER, LOCATION, TYPE OF OUTLETS INDICATE CONTROLLED AND CONNECTED LOAD ON CIRCUIT

4. PROVIDE LAMINATED, RIGID PLASTIC LABEL BELOW DIRECTORY WORDED AS FOLLOWS:
INSTALLED BY
(NAME OF THE CONTRACTOR)
(YEAR)

5. PROVIDE EACH PANEL BOARD WITH GREEN CODED BAR, NOT CONNECTED TO NEUTRAL, FOR GREEN EQUIPMENT GROUND WIRES. BACK BAR TO HAVE MINIMUM CAPACITY OF 11 TERMINAL WITH SOLDERLESS BOX LUGS FORE WIRE SIZE #12 MINIMUM TO #4 MAXIMUM. LOCATE BAR ADJACENT TO NEUTRAL BAR, BOLT OR WELD TO PANEL CAN.

6. PROVIDE PLASTIC LABEL LISTING PANEL DESIGNATION, VOLTAGE AND PHASE ON INSIDE OF PANEL COVER ABOVE DIRECTORY.

E. DISCONNECT SWITCHES (SHOP DRAWINGS REQUIRED):

1. PROVIDE DISCONNECT SWITCHES, FUSED AND NON-FUSED AS REQUIRED BY CODES.

   a. SWITCHES NENA RATED DUTY, FED. SPEC. W-S-865C
   b. RATED 240 VOLTS FOR 208 VOLT SYSTEM, AND 600 VOLTS FOR 480 VOLT SYSTEM.

2. EACH MOTOR, REMOTE FROM PANEL LOCATION, TO HAVE NON-FUSED DISCONNECT SWITCH OR BREAKER WITHIN SIGHT OF MOTOR LOCATION. SAFETY SWITCHES SAME MANUFACTURER AS BRANCH CIRCUIT PANELBOARDS. EXTERIOR SWITCH NEMA 3R.

F. BRANCH CIRCUIT WIRING:

1. CONDUCTORS TO BE COPPER. NO WIRE SMALLER THAN NUMBER # 12 AWG ANY BRANCH CIRCUIT

2. CONDUCTOR INSULATION, UNLESS OTHERWISE NOTED, TYPE THWN, INSULATION CODED AS FOLLOWS:

   a. 120/208/240 VOLT SYSTEM:
      (1) PHASE A, BLACK
      (2) PHASE B, RED
      (3) PHASE C, BLUE
      (4) NEUTRAL, WHITE
      (5) TRAVELERS, PURPLE
      (6) GROUND, GREEN

   b. 277/480 VOLT SYSTEM
      (1) PHASE A, YELLOW
      (2) PHASE B, ORANGE
      (3) PHASE C, BROWN
      (4) NEUTRAL, GRAY
      (5) TRAVELERS, 3 WAY, PINK
      (6) GROUND, GREEN

3. SAME COLOR INSULATION FOR PARTICULAR PHASE OR PART OF CIRCUIT RUN WITH SAME COLOR THROUGHOUT JOB. COLOR CODE INTEGRAL PART OF INSULATION. PAINTED OR TAPED CONDUCTORS NOT ACCEPTED EXCEPT AS FOLLOWS:

   a. WIRE SIZED NO. 1 AND LARGER MAY BE COLOR CODED WITH 3M TAPE (NO.35) FOR ENTIRE LENGTH OF EXPOSED AREA IN GUTTERS, PANEL CANS, SWITCHBOARDS, OR WIREWAYS.

4. SPLICES OR JOINTS IN CONDUCTORS MECHANICALLY AND ELECTRICALLY SOUND, MADE IN OUTLET BOXES ONLY, EXCEPT BALLAST CONNECTION. ALL JOINT MADE USUING TYPE Y, G, R, B SCOTCH-LOCK CONNECTORS ONLY.

   a. AT EACH OUTLET, LOOP OF WIRE 8-INCHES LONG LEFT FOR CONNECTION TO DEVICE.
   b. FLUORESCENT FIXTURE WIRING TO CONFIRM TO NATIONAL ELECTRIC CODE, ARTICLE 410-24; USE THHN INSULATION.

5. OUTLETS CONNECTED AS INDICATED ON PLANS, ALTERING CIRCUITS NOT PERMITTED WITHOUT WRITTEN APPROVAL OF ENGINEER.

6. ALL BRANCH CIRCUIT AND FEEDER RACEWAYS CONTAIN GREEN CODED, TW, GROUND WIRE IN ADDITION TO OTHER CONDUCTORS.

G. WIRING DEVICES (SHOP DRAWINGS REQUIRED):

1. PROVIDE ALL WIRING DEVICES INDICATED ON PLANS. COLOR OF DEVICE SELECTED BY ARCHITECT AT TIME OF SUBMITTAL.

H. DEVICE PLATES (SHOP DRAWINGS REQUIRED):

1. WIRING DEVICES TO HAVE PLASTIC TYPE PLATE AS REQUIRED BY DEVICE. COLOR BY ARCHITECT. OUTLET WITHOUT DEVICES, EXCEPT TELEPHONE, TO HAVE BLANK PLATE. PLATES HOLD IN PLACE BY OVAL HEAD, STAINLESS STEEL SCREWS, MATCHING PLATE BY COLOR.

I. FIXTURES (SHOP DRAWINGS REQUIRED):

1. PROVIDE FIXTURES AS LISTED ON FIXTURE SCHEDULE, COMPLETELY WIRED AND LAMPED WHERE DESIGNATED ON DRAWINGS. CORRELATE SUPPORT AND MOUNTING METHOD WITH ALL SUBCONTRACTORS INVOLVED WITH SURROUNDING SURFACE.

   a. FIXTURE SUPPORT BOLTED OR WELDED TO SUPPORT SURFACE.

2. FLORESCENT FIXTURE BALLAST CBM CERTIFIED, SOUND RATING A WITH AUTOMATIC THERMAL RESET. JEFFERSON, ADVANCE, SOLA OR APPROVED EQUAL ENERGY SAVING TYPE.

J. LAMPS:

PROVIDE NEW LAMPS IN ACCORDANCE WITH THE FOLLOWING:

   a. FLUORESCENT: 3500K/TB OT T5/OCTRON
   b. INCANDESCENT: INSIDE FROSTED WITH A MINIMUM RATING OF 140 VOLTS UNLESS OTHERWISE INDICATED.
   c. LOW VOLTAGE MR-16 MEDIUM SPOT

K. EXIT LIGHTS (SHOP DRAWINGS REQUIRED):

PROVIDE ALL EXIT LIGHT UNITS WHERE INDICATED ON DRAWINGS IN ACCORDANCE WITH ALL LOCAL CODE REQUIREMENT, INCLUDING FIRE DEPARTMENT.

L. POWER AND CONTROL WIRING TO EQUIPMENT:

1. PROVIDE ALL ELECTRICAL POWER CONNECTIONS TO EQUIPMENT INDICATED ON PLANS UNLESS OTHERWISE DIRECTED.

2. CONTROL EQUIPMENT, MOTOR STARTERS, RELAYS, LINE VOLTAGE CONTROLS TRANSFORMER, LOW VOLTAGE CONTROLS AND DEVICES NECESSARY FOR THE OPERATION OF HEATING, AIR CONDITIONING, VENTILATION AND PLUMBING SYSTEM FURNISHED AND SET IN PLACE BY RESPECTIVE SUBCONTRACTOR.

3. ALL CONTROL WIRING UNDER DIVISION 15 OF SPECIFICATIONS.

M. MOTOR STARTER:

1. ALL MOTORS SHALL BE FURNISHED AND INSTALLED BY MECHANICAL AND CONNECTED BY ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL MOTORS STARTER NOT FURNISHED WITH EQUIPMENT.

N. TELEPHONE SYSTEM:

1. PROVIDE ALL RACEWAYS, PULL BOXES, OUTLETS, AND TERMINAL BOARDS REQUIRED FOR SYSTEM SHOWN.
   a. TERMINATE RACEWAYS IN MANNER SUITABLE TO TELEPHONE COMPANY, IN LOCATIONS SHOWN.
   b. COORDINATE ENTIRE SYSTEM WITH TELEPHONE COMPANY PRIOR TO INSTALLATION
   c. GROUNDING AS INDICATED AND/OR DIRECTED BY LOCAL TELEPHONE COMPANY
   d. ALL TELEPHONE SYSTEM, INCLUDING EQUIPMENT, SWITCHES, AND WIRING TO BE PROVIDED BY OWNER/REPRESENTATIVE.

GENERAL NOTES:

1. CONCRETE WORK REQUIRED FOR THE INSTALLATION OR CONSTRUCTION OF ANY OF THE ELECTRICAL WORK SPECIFIED HEREIN SHALL CONFORM TO THE REQUIREMENTS OF THE APPLICABLE SECTIONS OF THE SPECIFICATIONS.

2. CONDUITS RUN EXPOSED AND VULNERABLE TO MECHANICAL INJURY SHALL BE RIGID, HEAVY-WALL, GALVANIZED STEEL OR ALUMINUM. ALUMINUM CONDUITS MAY NOT BE USED BELOW GRADE OR EMBEDDED IN CONCRETE.

3. CONDUITS RUN EXPOSED OUTSIDE OR IN FLOOR SLABS SHALL BE RIGID, HEAVY-WALL, GALVANIZED OR SHERARDIZED STEEL OR SCHEDULE 80 PVC.

4. CONDUITS RUN BELOW GRADE, EXTERIOR TO THE BUILDING SHALL BE SCHEDULE 40 HEAVY WALL, HIGH IMPACT POLYVINYL CHLORIDE ELECTRICAL CONDUIT.

5. OUTLET BOXES AND COVERS SHALL BE GALVANIZED OR SHERARDIZED, ONE-PIECE PRESSED STEEL, KNOCKOUT TYPE, AND OF AN APPROVED MAKE.

6. OUTLET BOXES SHALL BE EQUIPPED WITH PLASTER RING, EXTENSION RINGS OR FIXTURE STUDS AS MAY BE REQUIRED. DO NOT INSTALL BOXES BACK TO BACK.

7. BOXES EXPOSED TO RAIN OR OTHER MOISTURE SHALL BE CROUSE-HINDS TYPE FS, FD CONDULET BOXES WITH APPROPRIATE INUSE COVERS AND GASKETS.

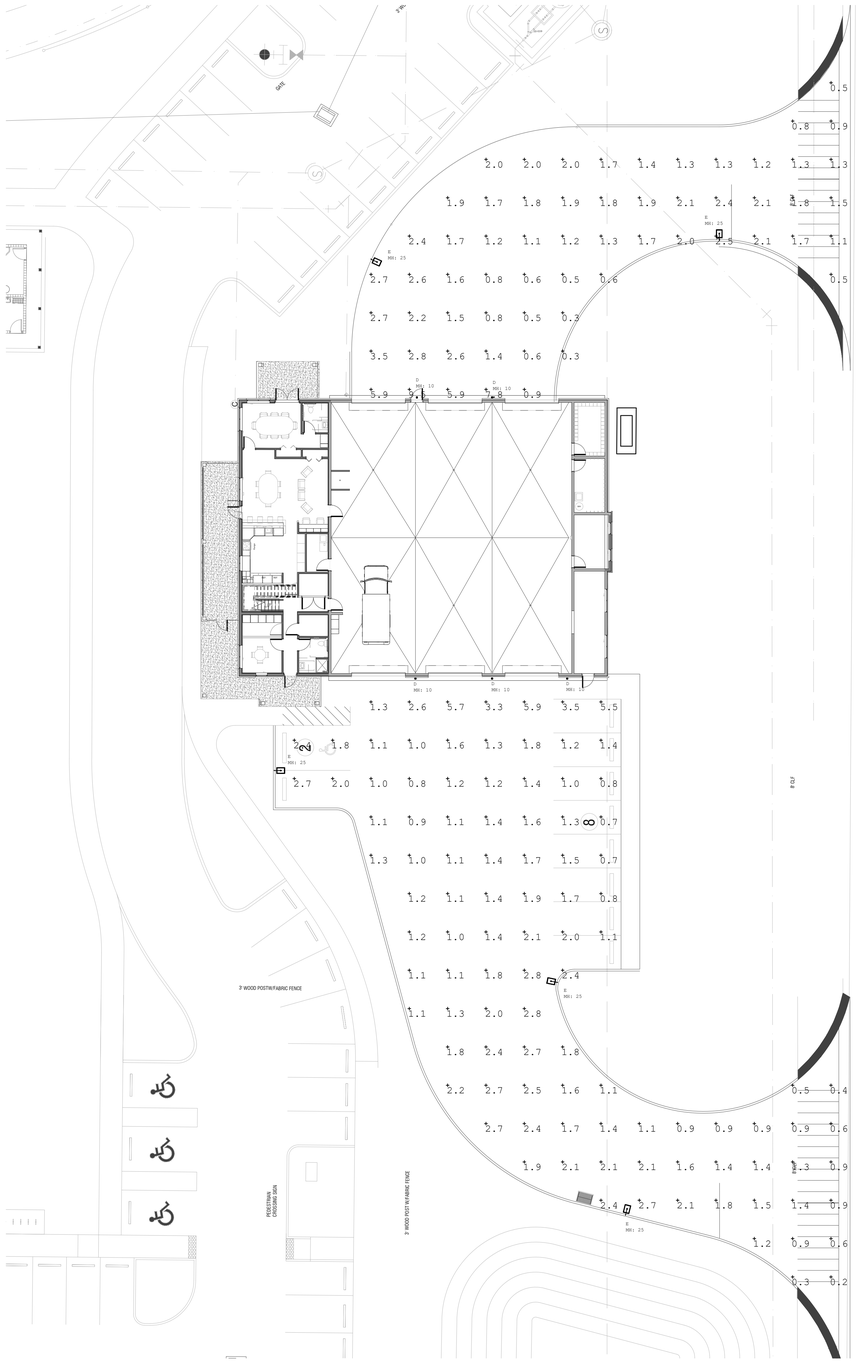
8. DUPLEX 20 AMP CONVENIENCE RECEPTACLES (COLOR AS SELECTED BY ARCHITECT,) 120 VOLT GROUNDING TYPE, SHALL HAVE TWO CURRENT-CARRYING CONTACTS AND ONE GROUNDING CONTACT WHICH IS INTENTIONALLY CONNECTED TO THE FRAME. (ONLY P&S OR HUBBELL #5242 OR LEVITON #5014 ARE APPROVED).

9. GROUND FAULT RECEPTACLE SHALL BE DUPLEX TYPE.

10. WEATHERPROOF DEVICES: ALL RECEPTACLES,

Luminaire Schedule						
Tag	Symbol	Qty	Label	Arrangement	LLF	Description
E		5	VSX-1_T3_10L_4K	SINGLE	1.000	VSX-1-T3-10L-4K-UNV
D		5	TWR1_LED_P2_40K_MVOLT_DDBTXD_	SINGLE	1.000	TWR1 LED P2 40K MVOLT DDBTXD M2

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Driveway1	Illuminance	Fc	1.93	9.5	0.3	6.43	31.67
Driveway2	Illuminance	Fc	1.64	5.9	0.2	8.20	29.50

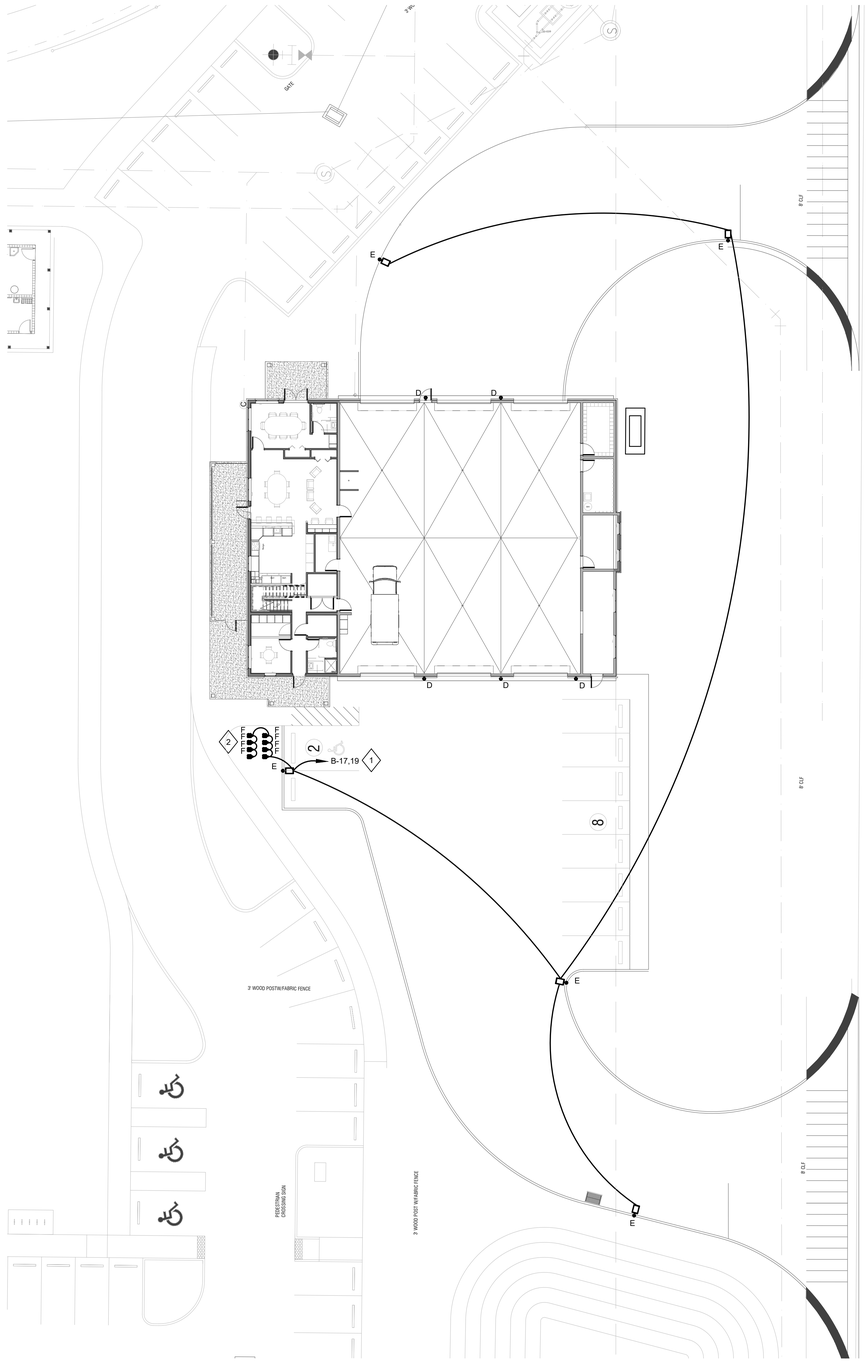


2 SITE PLAN PHOTOMETRICS

SCALE: 1/16" = 1'-0"

KEYED NOTES

1. LIGHTS SHOULD BE CONTROLLED / OPERATED VIA TIME CLOCK OR PHOTOCELL.
2. FLAG POLE LIGHTS. COORDINATE EXACT LOCATION WITH ARCHITECTURAL DRAWINGS.



1 SITE PLAN

SCALE: 1/16" = 1'-0"

NO.	DESCRIPTION	DATE

FRANCISCO J. CABAL - FL PE #87110

John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
Ethan J. Hine, AIA
Jennifer Zaffuto, AIA, NCARB, MPA

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KTH ARCHITECTS

LAKE COUNTY
FIRE STATION NO. 39
SITE PLAN & PHOTOMETRICS
24815 WALLICK ROAD, SORRENTO, FL 32776

18104A

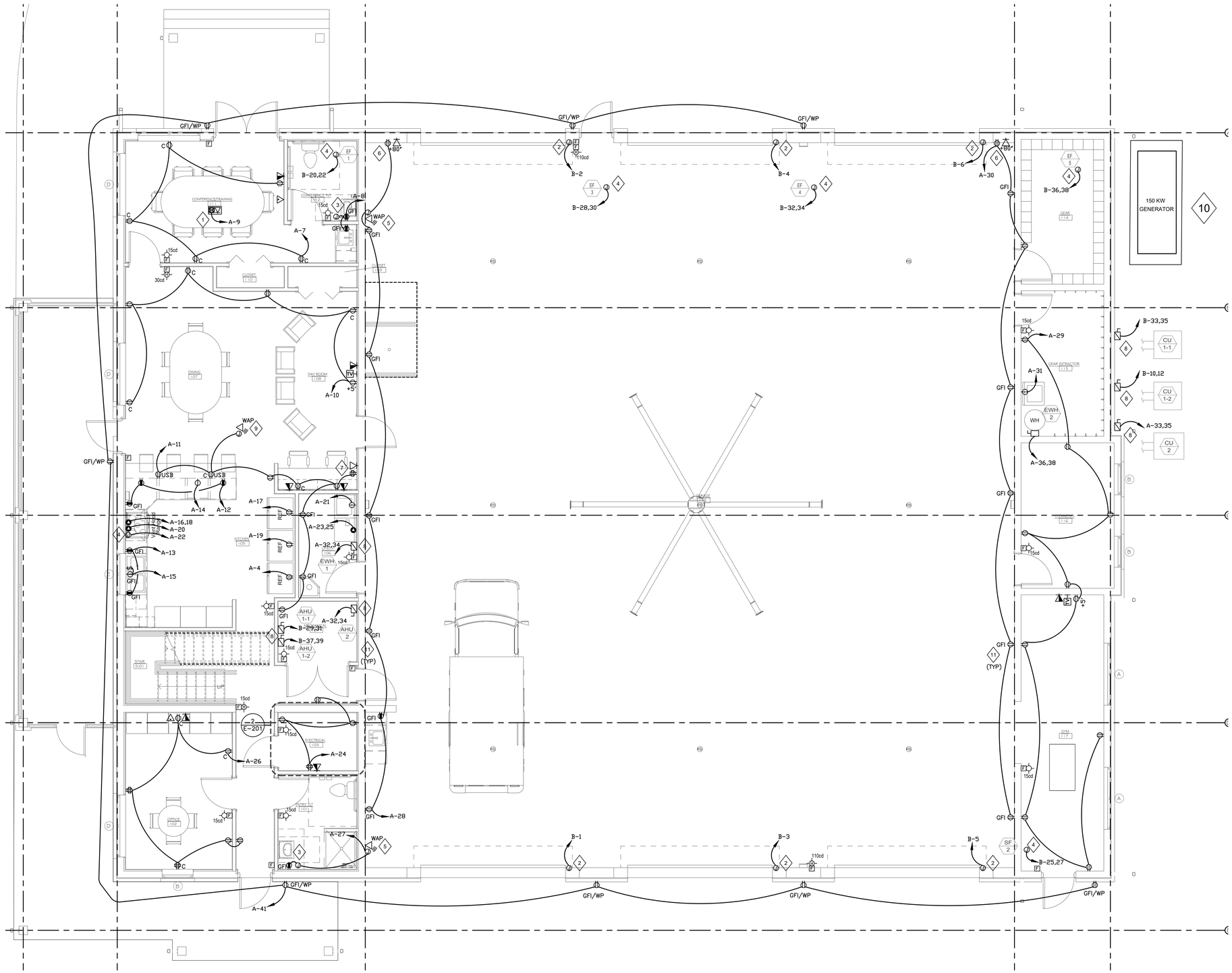
Janurary 24, 2020

PRICING SET

E101

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1 FIRST FLOOR POWER & SYSTEMS PLAN

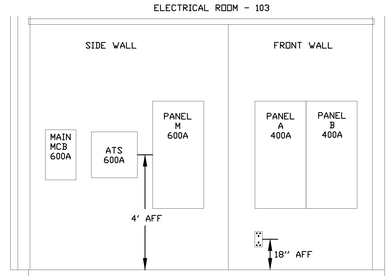
SCALE: 1/4" = 1'-0"

GENERAL NOTES

1. COORDINATE MOUNTING HEIGHTS AND LOCATIONS OF ALL DEVICES WITH CONSTRUCTION DOCUMENTS.
2. VERIFY AND COORDINATE EXACT ELECTRICAL REQUIREMENTS OF ALL EQUIPMENT WITH MANUFACTURER'S RECOMMENDATIONS PRIOR TO INSTALLATION OF EQUIPMENT.

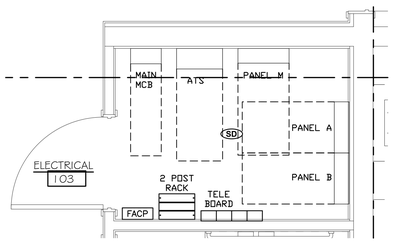
KEYED NOTES

1. COORDINATE EXACT LOCATION OF FLOOR RECEPTACLES WITH CONFERENCE ROOM DESKS ON ARCHITECTURE DRAWINGS.
2. PROVIDE JUNCTION BOX FOR ROLLER DOOR OPENER. COORDINATE EXACT LOCATION WITH ARCHITECT AND/OR OWNER.
3. WALL JUNCTION BOX. COORDINATE EXACT PLACEMENT WITH ARCHITECTURAL DRAWINGS.
4. JUNCTION BOX FOR MECHANICAL EQUIPMENT. COORDINATE LOCATION WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
5. PROVIDE WIRELESS ACCESS POINT DATA 7' AFF.
6. COORDINATE EXACT PLACEMENT WITH ARCHITECTURAL DRAWINGS.
7. PROVIDE RECEPTACLE AND DATA FOR RADIO ABOVE SHELF AND COORDINATE EXACT PLACEMENT WITH ARCHITECTURAL DRAWINGS.
8. DISCONNECT FOR MECHANICAL EQUIPMENT. COORDINATE LOCATION WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
9. CEILING JUNCTION BOX FOR WAP. PROVIDE WIRELESS ACCESS POINT DATA 7' AFF. COORDINATE LOCATION WITH ARCHITECT.
10. PROVIDE STAND-BY GENERATOR AND CONNECT AS REQUIRED ON POWER RISER DIAGRAM ON SHEET E-401.



3 103 ELECTRICAL ROOM ELEVATION

SCALE: NTS



2 103 ELECTRICAL ROOM FLOOR PLAN

SCALE: 1/2" = 1'-0"

NO.	DESCRIPTION	DATE

FRANCISCO J. CABRAL LICENSE — No. 87110 — STATE OF FLORIDA — PROFESSIONAL ENGINEER

FRANCISCO J. CABRAL - FL PE #87110

John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
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LAKE COUNTY
FIRE STATION NO. 39
FIRST FLOOR POWER & SYSTEMS PLAN
24815 WALLICK ROAD, SORRENTO, FL 32776

18104A

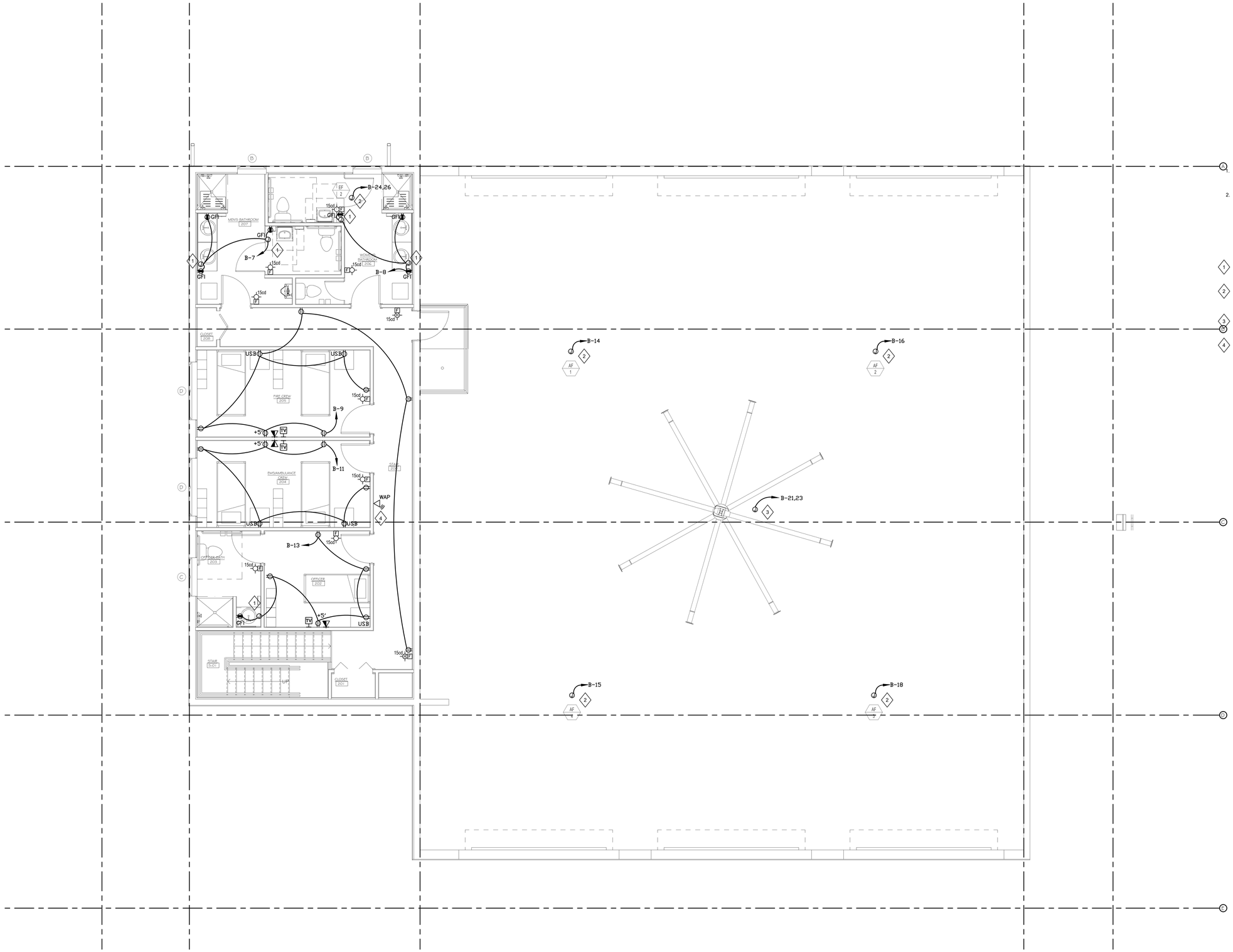
Janurary 24, 2020

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1 **SECOND FLOOR POWER & SYSTEMS PLAN**
SCALE: 1/4" = 1'-0"

GENERAL NOTES

1. COORDINATE MOUNTING HEIGHTS AND LOCATIONS OF ALL DEVICES WITH CONSTRUCTION DOCUMENTS.
2. VERIFY AND COORDINATE EXACT ELECTRICAL REQUIREMENTS OF ALL EQUIPMENT WITH MANUFACTURER'S RECOMMENDATIONS PRIOR TO INSTALLATION OF EQUIPMENT.

KEYED NOTES

1. WALL JUNCTION BOX, COORDINATE EXACT PLACEMENT WITH ARCHITECTURAL DRAWINGS.
2. JUNCTION BOX FOR MECHANICAL EQUIPMENT. COORDINATE LOCATION WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
3. PROVIDE JUNCTION BOX FOR 24' DIA BIG ASS FAN. VERIFY EXACT LOCATION ON SITE/OWNER.
4. PROVIDE WIRELESS ACCESS POINT DATA 12" BELOW CEILING.

NO.	DESCRIPTION	DATE

FRANCISCO J. CARBAL LICENSE No. 87110 STATE OF FLORIDA PROFESSIONAL ENGINEER
FRANCISCO J. CARBAL - FL PE #87110

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LAKE COUNTY
FIRE STATION NO. 39
SECOND FLOOR POWER & SYSTEMS PLAN
24815 WALLICK ROAD, SORRENTO, FL 32776
18104A

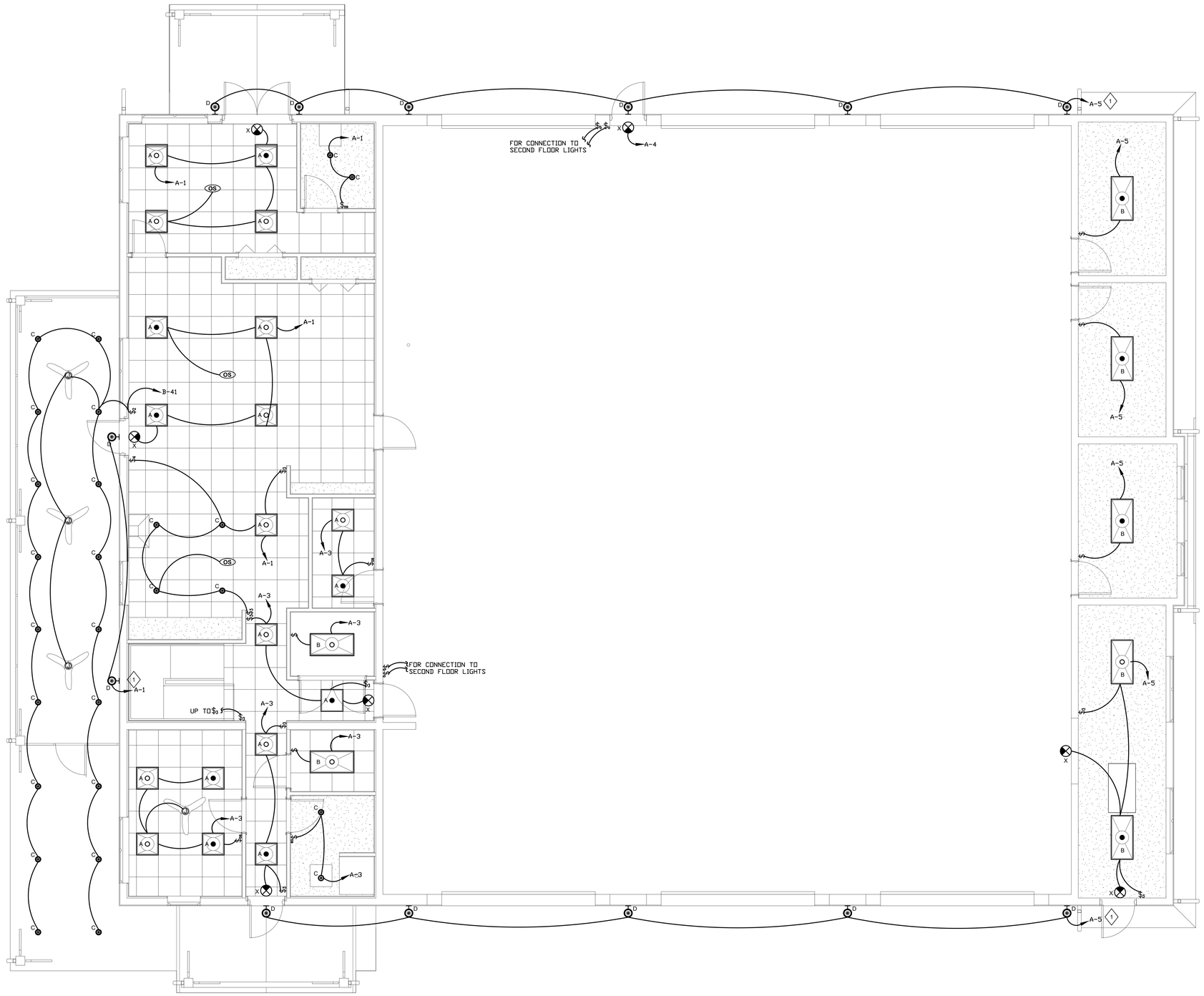
January 24, 2020

PRICING SET

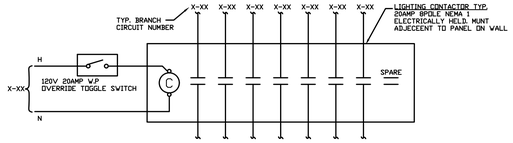
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1 **FIRST FLOOR LIGHTING PLAN**
SCALE: 1/4" = 1'-0"



INTERIOR LIGHTING CONTROL DIAGRAM "TYP."
NTS

1. LIGHTING CONTROLSWITCH CONNECTED TO LIGHTING CONTACTOR. UTILIZE TO CONTROL ALL LIGHTING FIXTURES.
2. PROVIDE ULTRA WHITE LAMPS.

GENERAL NOTES

1. ALL EXIT SIGNS SHOULD BE CIRCUITED TO NEARBY LIGHTING CIRCUIT. COORDINATE EXACT LOCATION ON SITE.
2. PROVIDE 90-MINUTE BATTERY PACK FOR FIXTURES DESIGNATED AS EMERGENCY LIGHTS.

KEYED NOTES

1. LIGHT SHOULD BE CONTROLLED / OPERATED VIA TIME CLOCK OR PHOTOCELL.

NO.	DESCRIPTION	DATE

FRANCISCO J CABRAL LICENSE No. 87110 STATE OF FLORIDA PROFESSIONAL ENGINEER
FRANCISCO J CABRAL - FL PE #87110

John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
Ethan J. Hine, AIA
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LAKE COUNTY
FIRE STATION NO. 39
FIRST FLOOR LIGHTING PLAN
24815 WALLICK ROAD, SORRENTO, FL 32776

18104A

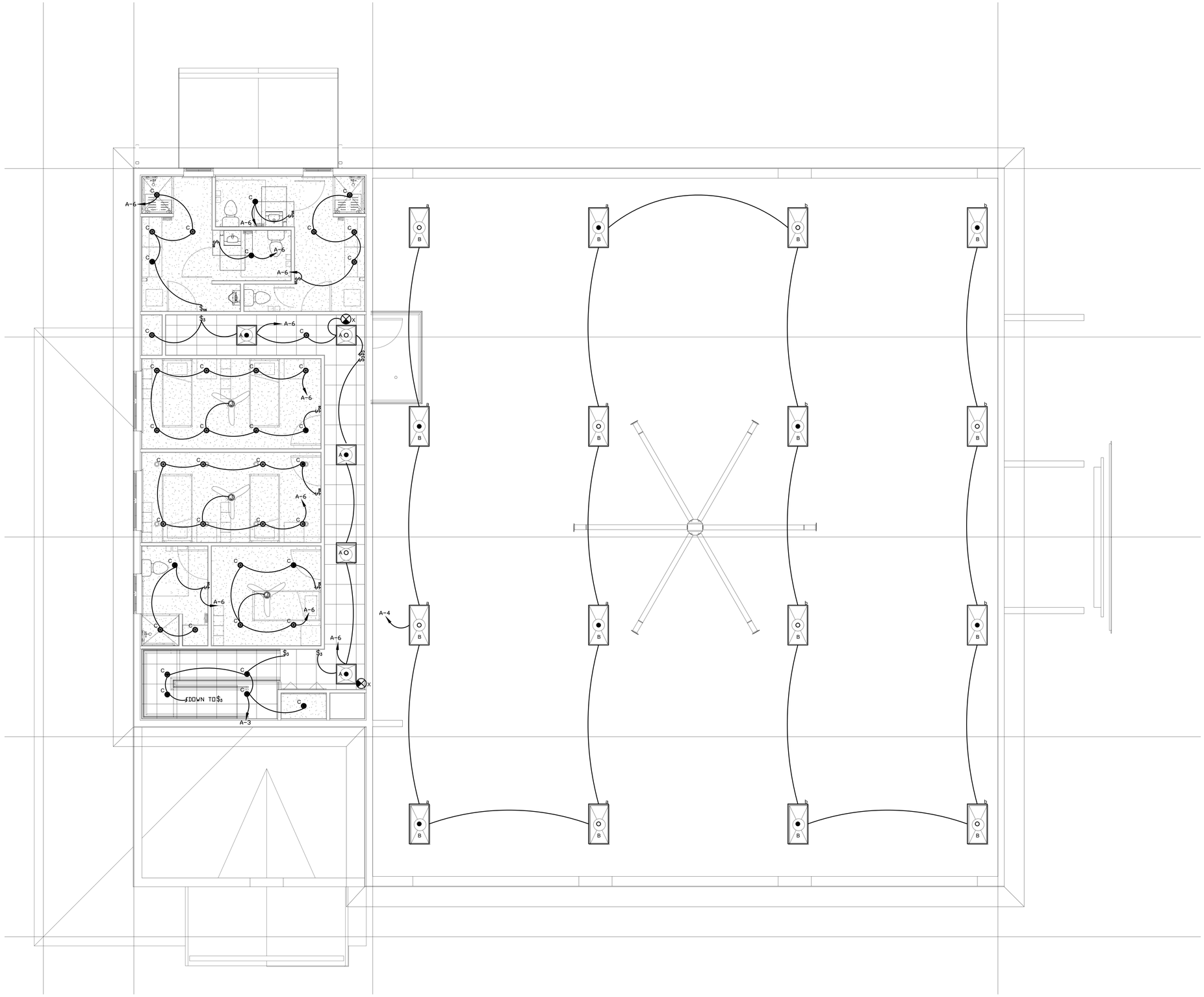
Janurary 24, 2020

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GENERAL NOTES

1. ALL EXIT SIGNS SHOULD BE CIRCUITED TO NEARBY LIGHTING CIRCUIT. COORDINATE EXACT LOCATION ON SITE.
2. PROVIDE 90-MINUTE BATTERY PACK FOR FIXTURES DESIGNATED AS EMERGENCY LIGHTS.

KEYED NOTES

1. CEILING J-BOX FOR CEILING FAN. COORDINATE EXACT LOCATION WITH ARCHITECTURE DRAWINGS.

1 **SECOND FLOOR LIGHTING PLAN**
SCALE: 1/4" = 1'-0"

NO.	DESCRIPTION	DATE

FRANCISCO J. CABRAL
LICENSE
No. 87110
STATE OF FLORIDA
PROFESSIONAL ENGINEER
FRANCISCO J. CABRAL - FL PE #87110

John P. Adams, AIA
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KTH ARCHITECTS

LAKE COUNTY
FIRE STATION NO. 39
SECOND FLOOR LIGHTING PLAN
24815 WALLICK ROAD, SORRENTO, FL 32776
18104A

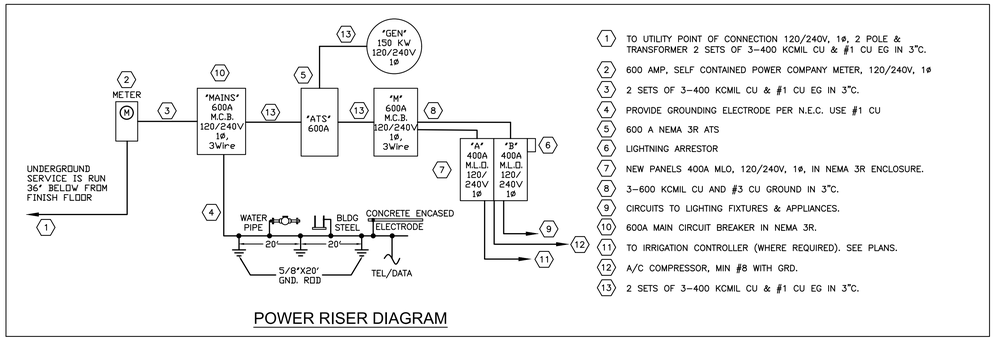
Janurary 24, 2020

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POWER RISER DIAGRAM

UPDATED: 1/22/2020 6:58 pm
ISSUED FOR: APPROVAL

PANEL M

LOCATION: **ELEC RM** | VOLTAGE: 120/240V | TRIM: SURFACE | MAIN: 600A MCB | SYSTEM: 1ø, 3W | BUS RATING 600A | CONN. LOAD: 157.1 KVA | FEED: BOTTOM | GROUND BUS: YES COPPER

CKT	LOAD SERVED	COND	PHASE	NEUT	GND	BKR	DMD	L1	L2	L3	DMD	BKR	GND	NEUT	PHASE	COND	LOAD SERVED	CKT
1	PANEL A	3"	600	600	#3	400/2	SF	42131			–	–	–	–	–	–	"	2
3			600				SF		41330		–	–	–	–	–	–	"	4
5	PANEL B	3"	600	600	#3	400/2	SF	37029			–	–	–	–	–	–	"	6
7			600				SF		36609		–	–	–	–	–	–	"	8
9	"	–	–	–	–	–	–	–	–		–	–	–	–	–	–	"	10
11	"	–	–	–	–	–	–	–	–		–	–	–	–	–	–	"	12
13	"	–	–	–	–	–	–	–	–		–	–	–	–	–	–	"	14
15	"	–	–	–	–	–	–	–	–		–	–	–	–	–	–	"	16
17	"	–	–	–	–	–	–	–	–		–	–	–	–	–	–	"	18
19	"	–	–	–	–	–	–	–	–		–	–	–	–	–	–	"	20
21	"	–	–	–	–	–	–	–	–		–	–	–	–	–	–	"	22
23	"	–	–	–	–	–	–	–	–		–	–	–	–	–	–	"	24
25	"	–	–	–	–	–	–	–	–		–	–	–	–	–	–	"	26
27	"	–	–	–	–	–	–	–	–		–	–	–	–	–	–	"	28
29	"	–	–	–	–	–	–	–	–		–	–	–	–	–	–	"	30
31	"	–	–	–	–	–	–	–	–		–	–	–	–	–	–	"	32
33	"	–	–	–	–	–	–	–	–		–	–	–	–	–	–	"	34
35	"	–	–	–	–	–	–	–	–		–	–	–	–	–	–	"	36
37	"	–	–	–	–	–	–	–	–		–	–	–	–	–	–	"	38
39	"	–	–	–	–	–	–	–	–		–	40/2	–	–	–	–	SURGE PROTACTION	40
41	"	–	–	–	–	–	–	–	–		–							42
	INTERRUPT RATING: 42,000 AIC							79160	77939								**FROM:** ATS	

LOADS (IN VA)	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER
LIGHTING	4723	1.25	5904
RECEPTS TO 10 KVA	10000	1.0	10000
RECEPTS REMAINING	37876	0.5	18938
SPACE HEATING	0	0.0	0
AIR CONDITIONING	66400	1.0	66400

LOADS	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER
NON-SEASONAL MOTORS	0	1.0	0
LARGEST MOTOR	0	0.25	0
WATER HEATING	18200	1.0	18200
KITCHEN EQUIP.	19900	1.0	19900

REMAINING CONTINUOUS LOADS	0	1.25	0
REMAINING NON-CONTINUOUS LOADS	0	1.0	0
DEMAND LOADS	0	1.0	0
TOTAL CONNECTED LOAD	157.1 KVA		654.6 AMPS
MIN. FEEDER/PANEL CAP.	139.3 KVA		580.6 AMPS
OVERALL DEMAND FACTOR	0.89		

UPDATED: 2/9/2020 8:29 pm
ISSUED FOR: APPROVAL

PANEL A

LOCATION: **ELEC RM** | VOLTAGE: 120/240V | TRIM: SURFACE | MAIN: 400A MLO | SYSTEM: 1ø, 3W | BUS RATING 400A | CONN. LOAD: 83.7 KVA | FEED: TOP | GROUND BUS: YES COPPER

CKT	LOAD SERVED	COND	PHASE	NEUT	GND	BKR	DMD	L1	L2	L3	DMD	BKR	GND	NEUT	PHASE	COND	LOAD SERVED	CKT
1	LTG CONF.,DINING & KITCHEN	1/2"	#12	#12	#12	20/1	L	614 762			L	20/1	#12	#12	#12	1/2"	GARAGE LTG	2
3	LTG OFFICE, BATH, ELEC, STORAGE	1/2"	#12	#12	#12	20/1	L		753 900		K	20/1	#12	#12	#12	1/2"	REC. REF-3 106	4
5	LTG GYM, CLEAN, GEAR ROOM	1/2"	#12	#12	#12	20/1	L	693 1781			L	20/1	#12	#12	#12	1/2"	LTG SECOND FLOOR	6
7	REC. CONFR. 110	1/2"	#12	#12	#12	20/1	R		900 1080		R	20/1	#12	#12	#12	1/2"	JBOX CONFR. BATH 111	8
9	REC. CONFR. FLOOR	1/2"	#12	#12	#12	20/1	R	360 1080			R	20/1	#12	#12	#12	1/2"	REC. DINNING & DRY 108-109	10
11	REC. UTL, MECH, WAP & DINNING	1/2"	#12	#12	#12	20/1	R		1620 1500		K	20/1	#12	#12	#12	1/2"	REC. KITCHEN-1 106	12
13	REC. KITCHEN-2 106	1/2"	#12	#12	#12	20/1	K	1500 900			K	20/1	#12	#12	#12	1/2"	REC. DISHWASHER 106	14
15	REC. DISPOSAL 106	1/2"	#12	#12	#12	20/1	K		855 5000		K	50/2	#10	#6	#6	1"	RANGE REC.	16
17	REC. REF-1 106	1/2"	#12	#12	#12	20/1	K	885 5000			K				#6			18
19	REC. REF-2 106	1/2"	#12	#12	#12	20/1	K		800 1200		K	20/1	#12	#12	#12	1/2"	REC. MICROWAVE 106	20
21	REC. WASHER 107	1/2"	#12	#12	#12	20/1	R	1200 1200			K	20/1	#12	#12	#12	1/2"	HOOD 106	22
23	REC. DRYER	3/4"	#10	#10	#10	25/2	R		2500 1260		R	20/1	#12	#12	#12	1/2"	REC. ELE, LOBBY & STORAGE	24
25			#10				R	2500 1080			R	20/1	#12	#12	#12	1/2"	REC. OFFICE 102	26
27	JBOX ENTRY BATH 101, GRG WAP	1/2"	#12	#12	#12	20/1	R		1800 1260		R	20/1	#12	#12	#12	1/2"	REC GARAGE 1, WAP	28
29	REC. GEAR, EMS, GYM	1/2"	#12	#12	#12	20/1	R	1800 900			R	20/1	#12	#12	#12	1/2"	REC GARAGE 2	30
31	REC. WASHER 114	1/2"	#12	#12	#12	20/1	R		1200 5760		R	50/2	#10	#6	#6	1"	AHU 2	32
33	CU-2	3/4"	#6	#6	#8	40/2	A	3504 5760			R				#6			34
35			#6				A		3504 6100		W	60/2	#10	#4	#4	1"	WATER HEATER (EWH-2) 114	36
37	WATER HEATER (EWH-1) 105	3/4"	#8	#8	#10	40/2	W	3000 6100			W				#4			38
39			#8				W		3000 –		–	40/2	–	–	–	–	SURGE PROTECTION	40
41	REC EXTERIOR	3/4"	#8	#8	#10	20/1	R	1440 –			–				–			42
	INTERRUPT RATING: 10,000 AIC							42350	41367								**FROM:** PANEL M	

LOADS (IN VA)	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER
LIGHTING	4629	1.25	5786
RECEPTS TO 10 KVA	10000	1.0	10000
RECEPTS REMAINING	23980	0.5	11990
SPACE HEATING	0	0.0	0
AIR CONDITIONING	7008	1.0	7008

LOADS	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER
NON-SEASONAL MOTORS	0	1.0	0
LARGEST MOTOR	0	0.25	0
WATER HEATING	18200	1.0	18200
KITCHEN EQUIP.	19900	0.65	12935

REMAINING CONTINUOUS LOADS	0	1.25	0
REMAINING NON-CONTINUOUS LOADS	0	1.0	0
DEMAND LOADS	0	1.0	0
TOTAL CONNECTED LOAD	83.7 KVA		348.8 AMPS
MIN. FEEDER/PANEL CAP.	65.9 KVA		274.7 AMPS
OVERALL DEMAND FACTOR	0.79		

UPDATED: 2/10/2020 2:11 pm
ISSUED FOR: APPROVAL

PANEL B

LOCATION: **ELEC RM** | VOLTAGE: 120/240V | TRIM: SURFACE | MAIN: 400A MLO | SYSTEM: 1ø, 3W | BUS RATING 400A | CONN. LOAD: 74.9 KVA | FEED: TOP | GROUND BUS: YES COPPER

CKT	LOAD SERVED	COND	PHASE	NEUT	GND	BKR	DMD	L1	L2	L3	DMD	BKR	GND	NEUT	PHASE	COND	LOAD SERVED	CKT
1	DOOR OPENER 1 112	1/2"	#12	#12	#12	20/1	R	800 800			R	20/1	#12	#12	#12	1/2"	DOOR OPENER 4 112	2
3	DOOR OPENER 2 112	1/2"	#12	#12	#12	20/1	R		800 800		R	20/1	#12	#12	#12	1/2"	DOOR OPENER 5 112	4
5	DOOR OPENER 3 112	1/2"	#12	#12	#12	20/1	R	800 800			R	20/1	#12	#12	#12	1/2"	DOOR OPENER 6 112	6
7	REC. WOMENS BATHROOM 1 206	1/2"	#12	#12	#12	20/1	R		1450 1560		R	20/1	#12	#12	#12	1/2"	REC. MENS BATHROOM 1 205	8
9	REC. 204, CORRIDOR	1/2"	#12	#12	#12	20/1	R	1840 4284			A	50/2	#10	#6	#6	3/4"	CU 1-2	10
11	REC. EMS/AMBULANCE CREW 203	1/2"	#12	#12	#12	20/1	R		1080 4284		A				#6			12
13	REC. 207, 208	1/2"	#12	#12	#12	20/1	R	1400 1840			A	20/1	#10	#10	#10	3/4"	AF-1	14
15	AF-4	3/4"	#10	#10	#10	20/1	A		1840 1840		A	20/1	#10	#10	#10	3/4"	AF-2	16
17	SITE LIGHTS	1/2"	#12	#12	#12	20/2	L	343 1840			A	20/1	#10	#10	#10	3/4"	AF-3	18
19			#12				L		141 828		A	20/2	#12	#12	#12	1/2"	EF-1	20
21	FAN 112 (SF-1)	3/4"	#10	#10	#10	25/2	R	936 828			A				#12			22
23			#10				R		936 348		A	20/2	#12	#12	#12	1/2"	EF-2	24
25	SF-2	1/2"	#12	#12	#12	20/2	A	828 348			A				#12			26
27			#12				A		828 828		A	20/2	#12	#12	#12	1/2"	EF-3	28
29	AHU 1-1	1"	#4	#4	#10	60/2	A	6480 828			A				#12			30
31			#4				A		6480 828		A	20/2	#12	#12	#12	1/2"	EF-4	32
33	CU 1-1	3/4"	#6	–	#10	50/2	A	4284 828			A				#12			34
35			#6				A		4284 828		A	20/2	#12	#12	#12	1/2"	EF-5	36
37	AHU 1-2	1"	#4	#4	#10	60/2	A	6480 828			A				#12			38
39			#4				A		6480 –		–	40/2	–	–	–	–	SURGE PROTECTION	40
41	OUTDOOR LIGHTS, FANS	1/2"	#12	#12	#12	20/1	L	956 –			–				–			42
	INTERRUPT RATING: 10,000 AIC							38153	36777								**FROM:** PANEL M	

LOADS (IN VA)	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER
LIGHTING	1642	1.25	2053
RECEPTS TO 10 KVA	10000	1.0	10000
RECEPTS REMAINING	3896	0.5	1948
SPACE HEATING	0	0.0	0
AIR CONDITIONING	59392	1.0	59392

LOADS	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER
NON-SEASONAL MOTORS	0	1.0	0
LARGEST MOTOR	0	0.25	0
WATER HEATING	0	1.0	0
KITCHEN EQUIP.	0	1.0	0

REMAINING CONTINUOUS LOADS	0	1.25	0
REMAINING NON-CONTINUOUS LOADS	0	1.0	0
DEMAND LOADS	0	1.0	0
TOTAL CONNECTED LOAD	74.9 KVA		312.2 AMPS
MIN. FEEDER/PANEL CAP.	73.4 KVA		305.8 AMPS
OVERALL DEMAND FACTOR	0.98		

LIGHTING FIXTURE SCHEDULE (AS NOTED OR APPROVED EQUAL)

TYPE	QTY	MANUFACTURER	MODEL SERIES / STYLE	LAMP TYPE	VOLTS	INPUT WATTS	REMARKS
A	24	HE WILLIAMS	LP	LED	120	39.2	LP-22-L40/835-UNV
B	23	HE WILLIAMS	LP	LED	120	48.2	LP-24-L50/835-UNV
C	66	HE WILLIAMS	6DR	LED	120	36.4	6DR-L40/830-UNV-O-N-F1
D	13	LITHONIA	WALLPACK	LED	120	32	TWR1-LED-40K-MV
E	5	VISIONARIE	POLE LIGHT	LED	240	70	VSX1-T3-10L-4K-UNV
F	8	B-K LIGHTING	TENAYA 2	LED	240	42	STY2LED47N5P12D42MT
X	10	LITHONIA	LHQM	LED	120	5	LHQM LED R (HO RO)

LIGHTING FIXTURE SCHEDULE GENERAL NOTES :

1. ALL LIGHTING FIXTURES WERE SELECTED AS A BASIS-OF-DESIGN. WERE CHOSEN FOR PERFORMANCE, ENERGY EFFICIENCY, AND AESTHETICS. ALTERNATE PACKAGES MUST BE SUBMITTED FOR REVIEW 10 DAYS PRIOR TO BID. WRITTEN APPROVAL WILL BE REQUIRED TO BID.

2. CONTRACTOR SHALL CAREFULLY COORDINATE THE LIGHTING FIXTURE TYPES WITH THE TYPE OF CEILING WHERE THE LIGHTING FIXTURES ARE TO BE INSTALLED, MODIFY CATALOG NUMBER AS REQUIRED TO COORDINATE WITH CEILING.

3. WHEN FUTURE MODEL NUMBER DIFFERS FROM FUTURE DESCRIPTION THEN FUTURE DESCRIPTION SHALL GOVERN

4. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS ON ILLUMINARIES INCLUDING BALLAST LAMPS ETC.

NO.	DESCRIPTION	DATE

FRANCISCO J CABRAL LICENSE No. 87110 STATE OF FLORIDA PROFESSIONAL ENGINEER
FRANCISCO CABRAL - FL PE #87110

John P. Adams, AIA
Jerome Bankovich, Jr., AIA, LEED
Ethan J. Hine, AIA
Jennifer Zaffuto, AIA, NCARB, MPA

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LAKE COUNTY
FIRE STATION NO. 39
ELECTRICAL RISER & ELECTRICAL SCHEDULES
24815 WALLICK ROAD, SORRENTO, FL 32776

18104A

January 24, 2020

PRICING SET

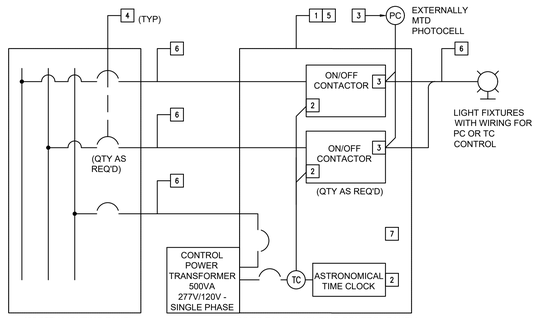
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DCL ENGINEERING
800 HIGHLAND AVE. STE 102
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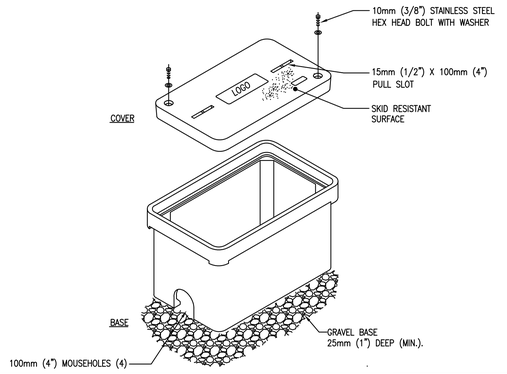
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OUTSIDE PC/TC PANEL NOTES:

1. FURNISH ALL LABOR AND MATERIAL REQUIRED FOR A COMPLETE LIGHTING CONTROL SYSTEM AS SHOWN ON THE DRAWINGS AND SPECIFICATIONS. CONTRACTOR SHALL COORDINATE WITH THE MANUFACTURER AND PROVIDE ANY AND ALL SERVICE HOURS BY THE MANUFACTURER'S SERVICE REPRESENTATIVE IN ORDER TO PROGRAM THE LIGHTING CONTROL PANEL AND CERTIFY CLOSE OUT DOCUMENTS. SITE LIGHTING CONTROLS SHALL MEET THE REQUIREMENTS OF ASHRAE 90.1-2010, CHAPTER 9, SECTION 9.4.1.7. ALL ENCLOSURES SHALL BE HINGED DOOR, NEMA 3R RATED, UNLESS INSTALLED INDOORS.
2. CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR BUSINESS HOURS AND SCHEDULING TIME CLOCK CONTROL IN THE ASTRONOMICAL TIME CLOCK SCHEDULER. TIME CLOCK CONTROLLED (TC) LIGHTING SHALL TURN OFF ONE HOUR AFTER THE CLOSE OF BUSINESS. TC LIGHTING SHALL REMAIN OFF UNTIL THE BUSINESS REOPENS IN THE MORNING OR THE PHOTOCELL SWITCHES ALL LIGHTING OFF IN THE MORNING.
3. PHOTOCELL CONTROLLED (PC) LIGHTING SHALL TURN ON AND OFF BASED ON THE AUTOMATIC LIGHT SENSOR SWITCH (PHOTOCELL). INCLUDE A TIME DELAY FEATURE PROGRAMMED INTO THE PHOTOCELL OR THE LIGHTING CONTROL PANEL TO PREVENT INTERMITTENT SWITCHING. PHOTOCELL SHALL BE CONDUIT POST TOP MOUNTED FROM THE SERVICE EQUIPMENT RACK FACING NORTH, OR WALL MOUNTED AS SHOWN ON THE INDIVIDUAL BUILDING PLANS. PHOTOCELL SHALL BE TORK #2101 OR EQUAL.
4. CIRCUIT BREAKERS FEEDING LIGHTING CIRCUITS ARE AS SHOWN ON THE PLANS AND PANELBOARD SCHEDULES. OVERCURRENT AND SHORT CIRCUIT PROTECTION IS PROVIDED BY THE CIRCUIT BREAKER. SWITCHING OF THE LIGHTING LOAD IS CONTROLLED BY THE LIGHTING RELAYS IN THE LIGHTING CONTROL PANEL. EACH CIRCUIT SHALL HAVE ITS OWN INDIVIDUAL RELAY TO OPEN AND CLOSE THE CIRCUIT. QUANTITY OF LIGHTING CIRCUITS IS AS SHOWN ON PLANS AND PANELBOARD SCHEDULES.
5. EACH LIGHTING CONTACTOR IN THE LIGHTING CONTROL PANEL FEEDING LIGHTING CIRCUITS ARE AS SHOWN ON THE PLANS. RELAYS ARE GROUPED TOGETHER INTO SWITCHING GROUPS, LABELED EITHER PC OR TC. PHOTOCELL(S) TURN ON AND OFF ALL EXTERIOR LIGHTING. TC GROUP LIGHTING IS TURNED OFF ONE HOUR AFTER CLOSE OF BUSINESS AND REMAINS OFF UNTIL BUSINESS OPENS IN THE MORNING.
6. REFER TO PANELBOARD SCHEDULES AND PLANS FOR CONDUIT AND WIRE REQUIREMENTS.
7. PC/TC PANEL SHALL BE ABLE TO BE CONTROLLED REMOTELY VIA FIBER FROM THE FACILITIES NETWORK. PROVIDE A FIBER MEDIA CONVERTER, BACNET CAPABLE PLC AND AUXILIARY INPUTS TO CONTACTORS FOR OPERATION.



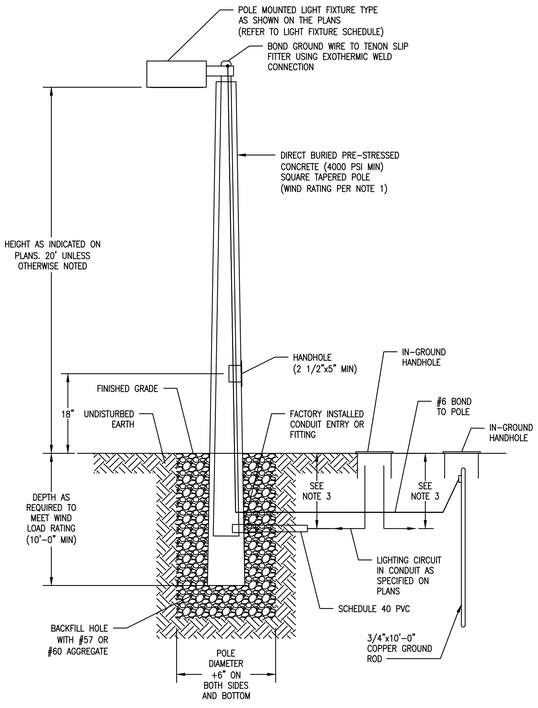
LIGHTING/SECURITY HANDHOLE | 9



DETAIL NOTES:

1. PROVIDE STANDARD HANDHOLE.
2. HANDHOLE OR IN-GROUND JUNCTION BOX SHALL BE SIZED PER NEC.
3. PROVIDE 1" X 3/8" BELL PULL SLOT FOR EACH HANDHOLE.
4. COVER, RING AND BOX SHALL BE MADE OF THE SAME MATERIAL.
5. PROVIDE IMPRINTED LOGO TO MATCH. LOGO SHALL BE BASED ON THE PURPOSE OF THE CONTENTS.
   5.1. "LIGHTING" FOR LIGHTING CIRCUITS
   5.2. "FIBER" FOR FIBER-OPTIC CABLES ASSOCIATED WITH SECURITY

LIGHTING/SECURITY HANDHOLE | 2



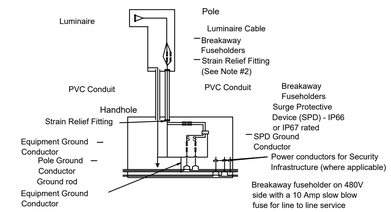
POLE MTD FIXTURE NOTES:

1. WHERE STRUCTURAL DRAWINGS ARE NOT PROVIDED, WIND RATINGS SHALL BE IN ACCORDANCE WITH THE 2017 EDITION OF THE FLORIDA BUILDING CODE. POLE, BASE, ANCHOR BOLT AND LIGHT FIXTURE ASSEMBLY SHALL BE CERTIFIED BY THE MANUFACTURER FOR THE WIND RATING. THE CONTRACTOR SHALL PROCURE THE SERVICES OF A FLORIDA LICENSED PROFESSIONAL STRUCTURAL ENGINEER TO PROVIDE SIGNED AND SEALED CALCULATIONS AND DRAWINGS CERTIFYING THE POLE MTD LIGHT FIXTURE DETAIL AND/OR MODIFYING THE DETAIL AS REQUIRED TO MEET THE REQUIRED WIND RATINGS PER THE FLORIDA BUILDING CODE.
2. INSTALL SITE LIGHTING AS INDICATED, IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS, APPLICABLE REQUIREMENTS OF NEC STANDARDS, APPLICABLE REQUIREMENTS OF STATE, COUNTY AND LOCAL CODES, AND WITH RECOGNIZED INDUSTRY PRACTICES TO ENSURE SITE LIGHTING FULFILLS ALL REQUIREMENTS.
3. COMPLY WITH NEC ARTICLE 300.5 FOR RACEWAY BURIAL DEPTH.
4. LIGHT FIXTURES AND ASSOCIATED WIRING SHALL BE INSTALLED IN ACCORDANCE WITH NEC ARTICLE 410.
5. PROVIDE IN-GROUND JUNCTION BOX SET AT EACH POLE EXCEPT THE LAST POLE IN A RUN. PROVIDE QUAZITE BOX # PG1118BA12/PG1118HH00 OR APPROVED EQUAL FOR IN GROUND APPLICATIONS. TOP SHALL BE FLUSH WITH FINISHED GRADE.
6. PROVIDE SUFFICIENT SPACE ENCOMPASSING HAND ACCESS AND CABLE ENTRANCE HOLES FOR INSTALLATION OF UNDERGROUND CABLING.
7. PROVIDE BUSSMAN HEB FUSEHOLDER (LITTLEFUSE LEB-XX-S) WITH "BREAKAWAY" RECEPTACLES IN ALL CONDUCTORS RUNNING TO THE TOP OF EACH POLE. LOCATE FUSE HOLDER AT HAND HOLE OR IN BASE JUNCTION BOX AS APPLICABLE. PROVIDE KTK FUSES IN EACH PHASE CONDUCTOR, SIZED 1.5 TIMES MAXIMUM FULL LOAD CURRENT OF DRIVER SERVED BY EACH CONDUCTOR. DO NOT EXCEED RATING OF CIRCUIT OVERCURRENT PROTECTIVE DEVICE. PROVIDE FUSE BLANKS IN NEUTRAL CONDUCTORS. MAKE UP ALL OTHER SPLICES IN POLE OR POLE BASE USING SCOTCHCAST 400 RESIN FOR WATERTIGHT CONNECTION.
8. VOLTAGE DROP HAS BEEN CALCULATED FOR WIRING ARRANGEMENTS AS SHOWN. CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY SIZING CONDUCTORS SHOULD HE/SHE DEVIATE FROM THE SPECIFIC ARRANGEMENT SHOWN ON THE DRAWINGS, LIMITING VOLTAGE DROP TO 3% AT THE FARTHEST FIXTURE.
9. PROVIDE EQUIPMENT GROUNDING CONNECTIONS FOR EACH POLE MTD LIGHT FIXTURE INSTALLATION.
10. ALL HARDWARE (E.G. WASHERS, NUTS, ETC.) SHALL BE STAINLESS STEEL.
11. ALL LIGHT FIXTURES SHALL BE FULL CUTOFF. REFER TO LIGHTING FIXTURE SCHEDULE FOR ADDITIONAL DETAILS AND REQUIREMENTS.

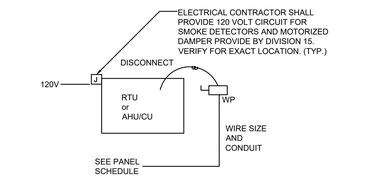
ALTERNATIVE POLE NOTES:

1. WHERE THE INSTALLATION OF A LIGHT POLE CONFLICTS WITH THE INSTALLATION OF OTHER UTILITIES THE CONTRACTOR SHALL PROVIDE AN ALUMINUM LIGHT POLE INSTALLED ON A SPREAD FOOTING FOUNDATION.
2. ALUMINUM LIGHT POLE SHALL BE HAPCO RTA SERIES WITH ASSOCIATED MOUNTED HARDWARE, ARMS, AND ACCESSORIES FOR MINIMUM 150 MPH WIND RATING OR APPROVED EQUAL. PROVIDE SHOP DRAWINGS FOR ENGINEERING REVIEW OF POLE, POLE HARDWARE, AND FOUNDATION ADEQUACY BEFORE PURCHASING.
   2.1. LIGHT POLE SPECIFICATIONS:
   2.1.1. POLES: ASTM B221, ALLOY 6063-T6
   2.1.2. ARM TUBE EXTRUSIONS: ASTM B221 - ALOY 6063-T6.
   2.1.3. FINISH: FOR POLE AND ARMS: 50 GRIT SATIN RUBBED FINISH.
   2.1.4. POLE CONNECTIONS, EXTRUSIONS, BARS AND PLATES: ASTM B221 - ALLOY 6063-T6
   2.1.5. ALUMINUM CAPS AND COVERS: ASTM B-26 (319-F)
   2.1.6. WELD METAL: ER4043
   2.1.7. STAINLESS STEEL FASTENERS AND HARDWARE: AISI GRADE 304.
   2.1.8. ALUMINUM ALLOY 6063: T4 CONDITION AND HEAT TREATED IN ACCORDANCE WITH ASTM B597 TO T6.
3. POLE SHALL BE SUPPLIED WITH A TENON UNLESS FIELD CONDITIONS REQUIRE POLE TO BE SET BACK FROM THE ROAD FARTHER THAN WHAT IS SHOWN ON PLANS, IN THIS INSTANCE PROVIDE A POLE WITH ARM AND CAPS.

POLE DETAIL | 10



LIGHT POLE WIRING DIAGRAM | 8

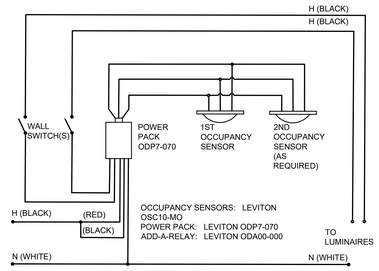


TYPE	TONS	DISC.	WIRE	GROUND	CONDUIT
RTU or AHU/CU	X	XX/X/60	X	X	X"

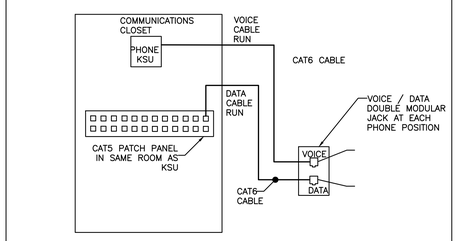
NOTES:

1. VERIFY NAMEPLATE RATINGS, LOCATIONS, AND POINT OF POWER CONNECTIONS PRIOR TO ROUGH-IN.
2. DO NOT LOCATE DISCONNECT SWITCHES OVER UNIT ACCESS PANELS.
3. PROVIDE A 3/4" EMPTY CONDUIT THROUGH INACCESSIBLE LOCATIONS(I.E. WALLS, UNDER SLAB) FOR CONTROL WIRING. COORDINATE WITH MECHANICAL PLANS.
4. EQUIP. REQUIREMENTS ARE FOR MANUFACTURE AND MODLE NUMBER LISTED ON MECHANICAL PLANS. THE MECH. CONTRACTOR SHALL BARE ANY ADDITIONAL COST.

MECH. EQUIPMENT POWER RISER DETAIL | 7

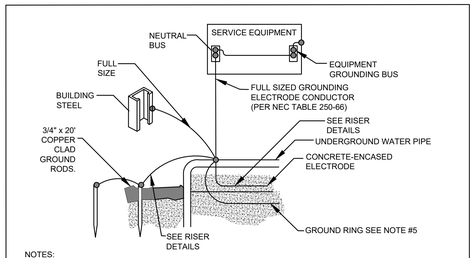


CEILING OCCUPANCY SENSOR DETAIL | 6



NOTES:
1 – ALL COMPONENTS PROVIDED BY PHONE VENDOR
2 – ALL JACKS TO BE LABELED VOICE AND/OR DATA
3 – ALL JACK TO BE NUMBERED TO CORRESPOND WITH PATCH PANEL
4 – PLENUM RATED CABLE TO BE USED AS REQUIRED BY CODE
5 – INSTALL 3/4" CONDUIT FROM THE BOX TO AREA ABOVE THE CEILING.

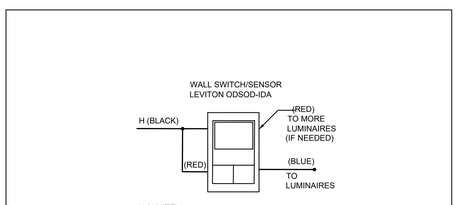
VOICE / DATA WIRING SCHEMATIC | 5



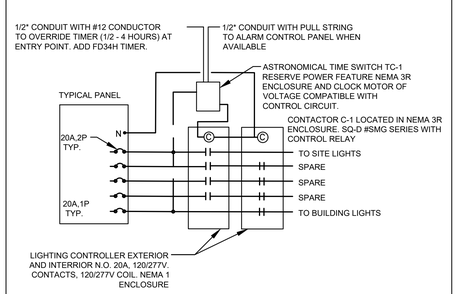
NOTES:

1. FULL SIZE GROUND MEANS THAT GROUND CONDUCTOR SIZE SHALL BE AS SHOWN ON SERVICE EQUIPMENT ON THE POWER RISER DIAGRAM.
2. AFTER GROUNDING SYSTEM IS INSTALLED, GROUND RESISTANCE SHALL BE MEASURED, TO ASSURE THAT GROUND VALUE OF 5 OHM MAXIMUM RESISTANCE IS ACHIEVED. IF NOT, ADDITIONAL GROUNDING SHALL BE PROVIDED TO MEET THE SPECIFIED VALUE.
3. ALL CONNECTIONS TO GROUND RODS SHALL BE EXOTHERMIC WELD CONNECTIONS.
4. GROUND CONDUCTOR SHALL BE LOCATED WITHIN OR NEAR BOTTOM OF CONCRETE FOUNDATION OR FOOTING THAT IS IN DIRECT CONTACT WITH THE EARTH, AND SHALL CONSIST OF AT LEAST 20 FEET OF ONE OR MORE STEEL REINFORCING BEARS OR RODS OF NOT LESS THAN 1/2 INCH DIAMETER. OR OF AT LEAST 20 FEET OF BARE COPPER CONDUCTOR.
5. A GROUND RING ENCIRCLING THE BUILDING OR STRUCTURE, IN DIRECT CONTACT WITH EARTH, CONSISTING OF AT LEAST (20 FT.) OF BARE COPPER CONDUCTOR NOT SMALLER THEN 2 AWG SHALL BE INSTALLED, PER ARTICLE-250.52(A)(4),NEC.

GROUNDING ELECTRODE CONDUCTOR DETAIL | 2

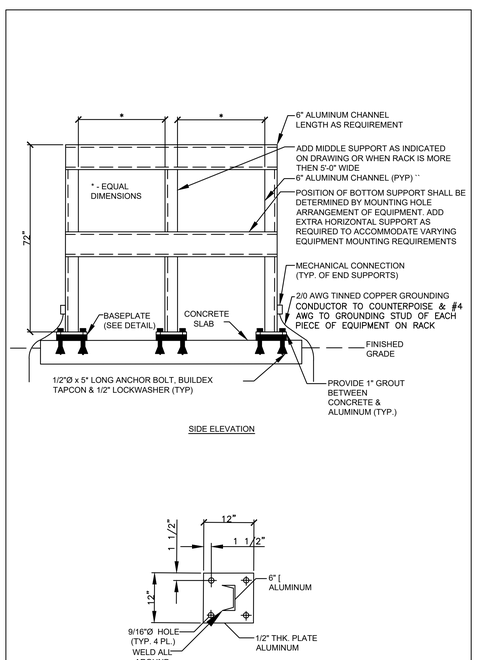


WALL OCCUPANCY SENSOR DETAIL | 4



NOTE:
CONTROL DEVICE TO BE INSTALL THAT AUTOMATICALLY TURNS LIGHTING OFF WITHIN 30 MINUTES OF ALL OCCUPANTS LEAVING THE SPACE, EXCEPT SPACES WITH MULTISCENE CONTROL IN CLASS ROOMS, CONFERENCE ROOMS, AND EMPLOYEE LUNCH/BREAK ROOMS.

LIGHTING CONTROL DIAGRAM | 3



SIDE ELEVATION

NOTE:
USE STAINLESS STEEL HARDWARE TO MOUNT EQUIPMENT

BASEPLATE DETAIL

EQUIPMENT RACK DATAIL | 1

NO.	DESCRIPTION	DATE

FRANCISCO J. CABRAL LICENSE No. 87110 STATE OF FLORIDA PROFESSIONAL ENGINEER
FRANCISCO CABRAL - FL PE #87110

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ELECTRICAL DETAILS
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18104A

January 24, 2020

PRICING SET

E501

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