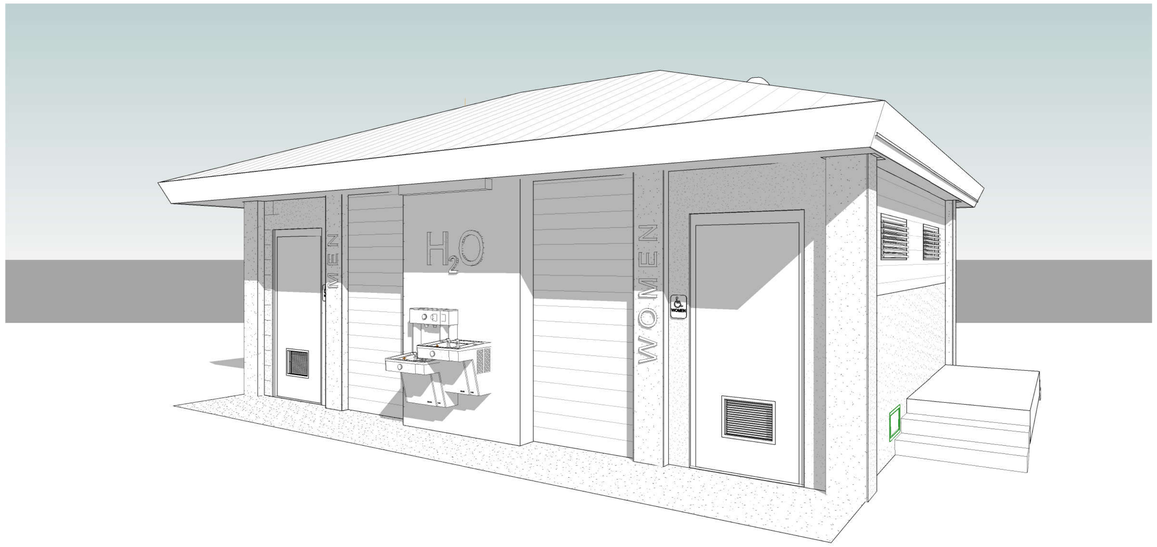
SHEET INDEX

KINGFISH BOAT RAMP RESTROOMS

752 MANATEE AVENUE
HOLMES BEACH, FLORIDA 34217

Manatee County Parks and Recreation



BUILDING DATA:

OCCUPANCY:	Business (B)
CONSTRUCTION TYPES:	V-B
EXISTING BUILDING SF:	--
AREA DEMOLISHED SF:	--
TOTAL SF:	436 SF
NEW ADDITION SF:	--
TOTAL SF:	436 SF

DESIGN LOADS

ULTIMATE DESIGN WIND SPEED:	148 mph
NOMINAL DESIGN WIND SPEED:	115 mph
IMPORTANCE FACTOR:	1.0
EXPOSURE:	D
INTERNAL PRESSURE COEFFICIENT:	± 0.18
BUILDING RISK CATEGORY:	Category II
TOTAL SF:	436 SF

CERTIFICATION

TO THE BEST OF THE ARCHITECT'S KNOWLEDGE INFORMATION, AND BELIEF, THIS DESIGN IS IN COMPLIANCE WITH APPLICABLE CODES AND LAWS.

CPH, Inc. DATE

PROJECT DIRECTORY

Architect	CPH, Inc.	Civil	CPH, Inc.	Structural	CPH, Inc.	Mechanical	CPH, Inc.	Fire Alarm	-
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Landscape	CPH, Inc.	Electrical	CPH, Inc.	Plumbing	CPH, Inc.	Specialty	-	Fire Protection	-
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Plans Prepared By :
CPH, Inc.

State of Florida Licenses:
Architect No. AA2600926
Engineer No. 3215
Landscape No. LC0000298
Surveyor No. 7143

Architect of Record
##/##/2021
BROOK K. SHERRARD
CPH, Inc.

CELEBRATING 40 +YEARS cph

No.	Revision	DATE

Designed:	CPH, INC.
Drawn:	JLD / KAR
Checked:	BKS
Job No.:	M13112
08/13/21	© 2021

COVER SHEET

KINGFISH BOAT RAMP RESTROOMS
752 MANATEE AVENUE
HOLMES BEACH, FLORIDA 34217

THIS SHEET NOT VALID FOR CONSTRUCTION WITHOUT COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND

Sheet No.
G000

ABREVIATIONS

A		
	&	AND
	@	AT
	A/E	ARCHITECT / ENGINEER
	AB	ANCHOR BOLT
	AC	AIR CONDITIONING
	ACC	ACCESSIBLE
	ACOUST	ACOUSTICAL
	ACT	ACOUSTIC CEILING TILE
	AD	AREA DRAIN
	AD	ACCESS DOOR
	ADJ	ADJACENT
	AFF	ABOVE FINISHED FLOOR
	AFG	ABOVE FINISHED GRADE
	AGGR	AGGREGATE
	ALT	ALTERNATE
	ALUM	ALUMINUM
	ANOD	ANODIZED
	APC	ACOUSTICAL PANEL CEILING
	APPROX	APPROXIMATE
	ARCH	ARCHITECTURAL
	ASPH	ASPHALT
	ATTN	ATTENTION
	AUTO	AUTOMATIC
	AV	AUDIOVISUAL
B		
	BD	BOARD
	BIT	BITUMINOUS
	BLDG	BUILDING
	BLK	BLOCK
	BLKG	BLOCKING
	BM	BEAM
	BO	BOTTOM OF
	BOB	BOTTOM OF BEAM
	BOC	BOTTOM OF CURB
	BOT	BOTTOM
	BRG	BEARING
	BRK	BRICK
	BRKT	BRACKET
	BSMNT	BASEMENT
	BUR	BUILT UP ROOFING
C		
	3BS	
	C	CHANNEL
	C/C	CENTER TO CENTER
	CAB	CABINET
	CAT	CATEGORY
	CB	CATCH BASIN
	CB	CEMENT BOARD
	CBU	CEMENTITIOUS BACKER UNIT
	CCTV	CLOSED CIRCUIT TELEVISION
	CEM	CEMENT
	CER	CERAMIC
	CG	CORNER GUARD
	CH	CHILLER
	CI	CAST IRON
	CIP	CAST-IN-PLACE
	CJ	CONTROL JOINT
	CL	CENTERLINE
	CLG	CEILING
	CLR	CLEAR
	CMU	CONCRETE MASONRY UNIT
	CNTR	COUNTER
	CO	CLEANOUT
	COL	COLUMN
	CONC	CONCRETE
	COND	CONDITION
	CONN	CONNECTION
	CONST	CONSTRUCTION
	CONT	CONTINUOUS
	CONTR	CONTRACTOR
	COORD	COORDINATE
	CORR	CORRIDOR
	CPT	CARPET
	CT	CERAMIC TILE
	CTR	CENTER
	CTSK	COUNTERSUNK
	CUST	CUSTODIAL
	CW	COLD WATER
D		
	D	DEEP, DEPTH
	DBL	DOUBLE
	DEG	DEGREE
	DEMO	DEMOLISH OR DEMOLITION
	DEMO	DEMOLITION
	DEPT	DEPARTMENT
	DF	DRINKING FOUNTAIN
	DIA	DIAMETER
	DIAG	DIAGONAL
	DIFF	DIFFUSER
	DIM	DIMENSION
	DIMS	DIMENSIONS
	DISP	DISPENSER
	DIV	DIVISION
	DMPF	DAMP PROOFING
	DN	DOWN
	DO	DOOR OPENING
	DR	DOOR
	DRN	DRAIN
	DS	DOWNSPOUT
	DTL	DETAIL
	DW	DISHWASHER
	DWG	DRAWING
	DWR	DRAWER
E		
	E	EAST
	EA	EACH
	EB	EXPANSION BOLT
	EJ	EXPANSION JOINT
	EL	ELEVATION
	ELEC	ELECTRICAL
	ELEV	ELEVATOR
	EMER	EMERGENCY
	ENCL	ENCLOSURE
	ENG	ENGINEER
	EP	ELECTRICAL PANEL
	EPDM	ETHYLENE PROPYLENE DIENE M-CLASS
	EQ	EQUAL
	EQUIP	EQUIPMENT

ABREVIATIONS

	EWC	ELECTRIC WATER COOLER
	EXH	EXHAUST
	EXIST	EXISTING
	EXP	EXPANSION
	EXT	EXTERIOR
F		
	FA	FIRE ALARM
	FB	FACE BRICK
	FD	FLOOR DRAIN OR FIRE DEPARTMENT
	FDC	FIRE DEPARTMENT CONNECTION
	FE	FIRE EXTINGUISHER
	FEC	FIRE EXTINGUISHER CABINET
	FF&E	FURNITURE, FIXTURES AND EQUIPMENT
	FFB	FLUSH FLOOR BOX
	FFEL	FINISH FLOOR ELEVATION
	FH	FULL HEIGHT OR FLAT HEAD
	FHC	FIRE HOSE CABINET
	FIN	FINISH
	FIXT	FIXTURE
	FLASH	FLASHING
	FLR	FLOOR
	FLUOR	FLUORESCENT
	FND	FOUNDATION
	FO	FACE OF OR FINISHED OPENING
	FP	FIRE PROTECTION
	FPG	FIREPROOFING
	FR	FIRE RESISTANT
	FRC	FIBER REINFORCED CONCRETE
	FRP	FIBER REINFORCED PLASTIC
	FRT	FIRE RETARDANT TREATED
	FS	FLOOR SINK
	FT	FEET/FOOT
	FTG	FOOTING
	FURN	FURNITURE
	FURR	FURRING
	FWC	FABRIC WALL COVERING
	FWP	FABRIC WRAPPED PANEL
G		
	GA	GAUGE
	GALV	GALVANIZED
	GB	GRAB BAR
	GC	GENERAL CONTRACT(OR)
	GEN	GENERAL
	GFRC	GLASS FIBER REINFORCED CONCRETE
	GL	GLASS
	GLAZ	GLAZING
	GR	GRADE
	GRAN	GRANULAR
	GRD	GROUND
	GRFG	GLASS FIBER REINFORCED GYPSUM
	GSM	GALVANIZED SHEET METAL
	GV	GAS VALVE
	GWB	GYPSUM WALL BOARD
	GYP	GYPSUM
H		
	H	HIG
	HB	HOSE BIB
	HC	HANDICAPPED OR HOLLOW CORE
	HDWD	HARDWOOD
	HDWR	HARDWARE
	HGT	HEIGHT
	HM	HOLLOW METAL
	HNDRL	HANDRAIL
	HO	HOLD OPEN
	HORIZ	HORIZONTAL
	HP	HIGH POINT
	HR	HOUR
	HRC	HOSE REEL CABINET
	HT	HEIGHT
	HTG	HEATING
	HVAC	HEATING VENTILATION & AIR CONDITIONING
	HW	HOT WATER
I		
	ID	INSIDE DIAMETER
	IN	INCH/INCHES
	INCAND	INCANDESCENT
	INCL	INCLUDED/INCLUDING
	INFO	INFORMATION
	INSUL	INSULATED OR INSULATION
	INT	INTERIOR
	INTERM	INTERMEDIATE
	INV	INVERT
J		
	JAN	JANITOR
	JC	JANITOR'S CLOSET
	JST	JOIST
	JT	JOINT
K		
	KIT	KITCHEN
	KO	KNOCK OUT
L		
	LAM	LAMINATE
	LAV	LAVATORY
	LB	POUND
	LF	LINEAR FEET
	LLH	LONG LEG HORIZONTAL
	LLV	LONG LEG VERTICAL
	LT	LIGHT
	LTG	LIGHTING
	LTWT	LIGHTWEIGHT
	LVL	LEVEL
	LVR	LOUVER
M		
	MAINT	MAINTENANCE
	MAS	MASONRY
	MAT	MATERIAL
	MAX	MAXIMUM
	MB	MACHINE BOLT
	MECH	MECHANICAL
	MED	MEDIUM
	MEMBR	MEMBRANE
	MEZZ	MEZZANINE
	MFR	MANUFACTURER
	MH	MANHOLE
	MIN	MINIMUM
	MISC	MISCELLANEOUS
	MO	MASONRY OPENING
	MR	MOISTURE RESISTANT
	MTD	MOUNTED

ABREVIATIONS

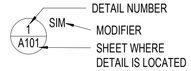
	MTG	MOUNTING
	MTL	METAL
	MULL	MULLION
N		
	N	NORTH
	NA	NOT APPLICABLE
	NC	NOISE CRITERIA
	NIC	NOT IN CONTRACT
	NO	NUMBER
	NOM	NOMINAL
	NR	NON RATED
	NTS	NOT TO SCALE
O		
	CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
	OA	OUTSIDE AIR
	OC	ON CENTER
	OD	OUTSIDE DIAMETER
	OD	OVERFLOW DRAIN
	OF	OWNER FURNISHED
	OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
	OFF	OFFICE
	OFOI	OWNER FURNISHED, OWNER INSTALLED
	OH	OVERHEAD
	OPNG	OPENING
	OPP	OPPOSITE
	ORD	OVERFLOW ROOF DRAIN
	ORIG	ORIGINAL
P		
	P	PAINT
	PAV	PAVING
	PBD	PARTICLE BOARD
	PC	PRECAST
	PDF	POWER DRIVEN FASTENER
	PERF	PERFORATED
	PERIM	PERIMETER
	PERP	PERPENDICULAR
	PI.	PLATE
	PLAM	PLASTIC LAMINATE
	PLAS	PLASTER
	PLBG	PLUMBING
	PLF	POUNDS PER LINEAR FOOT
	PLYWD	PLYWOOD
	PNL	PANEL
	PNT	PAINT OR PAINTED
	POL	POLISHED
	PR	PAIR
	PREFAB	PREFABRICATED
	PROJ	PROJECT
	PSF	POUNDS PER SQUARE FOOT
	PT	POINT
	PT	PRESSURE TREATED
	PTD	PAINTED
	PTN	PARTITION
	PVC	POLYVINYL CHLORIDE
Q		
	QT	QUARRY TILE
	QTY	QUANTITY
R		
	R	RADIUS/RISER
	RA	RETURN AIR
	RAD	RADIUS
	RB	RESILIENT BASE
	RBR	RUBBER
	RCP	REFLECTED CEILING PLAN
	RD	ROOF DRAIN
	REC	RECESSED
	RECPT	RECEPTACLE
	REF	REFERENCE
	REFR	REFRIGERATOR
	REG	REGISTER
	REINF	REINFORCED REINFORCING
	REINF	REINFORCED
	REL	RELOCATE
	REM	REMOVABLE
	REQ	REQUIRE/REQUIRED
	REQD	REQUIRED
	RESIL	RESILIENT
	REV	REVISION/REVISED
	RM	ROOM
	RO	ROUGH OPENING
	RTD	RATED
	RTG	RATING
	RWL	RAIN WATER LEADER
S		
	S	SOUTH
	SA	SUPPLY AIR
	SAF	SELF ADHERED FLASHING
	SC	SOLID CORE
	SCHED	SCHEDULE
	SD	STORM DRAIN
	SECT	SECTION
	SF	SQUARE FEET/FOOT
	SH	SPRINKLER HEAD
	SHR	SHOWER
	SHT	SHEET
	SIM	SIMILAR
	SJ	SAW JOINT
	SM	SHEET METAL
	SM	SURFACE MOUNTED
	SP	STANDPIPE
	SPEC	SPECIFIED OR SPECIFICATION
	SPK	SPRINKLE
	SPKR	SPEAKER
	SQ	SQUARE
	SS	STAINLESS STEEL
	SSK	SERVICE SINK
	STA	STATION
	STC	SOUND TRANSMISSION COEFFICIENT
	STL	STEEL
	STOR	STORAGE
	STRG	STRINGER
	STRUCT	STRUCTURAL
	STRUCT	STRUCTURE OR STRUCTURAL
	SUBCAT	SUBCATEGORY
	SUSP	SUSPENDED
	SYM	SYMMETRICAL
	SYS	SYSTEM

ABREVIATIONS

T		
	T	TREAD
	T&B	TOP AND BOTTOM
	T&G	TONGUE AND GROOVE
	TB	TOWEL BAR
	TDC	TRAFFIC DECK COATING
	TEL	TELEPHONE/TELECOM
	TELE	TELEPHONE
	TEMP	TEMPORARY
	THK	THICKNESS
	THRU	THROUGH
	TKBD	TACK BOARD
	TLT	TOILET
	TMPD	TEMPERED
	TO	TOP OF
	TOB	TOP OF BEAM
	TOC	TOP OF CONCRETE OR TOP OF CURB
	TOS	TOP OF STEEL
	TOW	TOP OF WALL
	TS	TUBE STEEL
	TV	TELEVISION
	TYP	TYPICAL
U		
	UL	UNDERWRITERS LABORATORY
	UNFIN	UNFINISHED
	UNO	UNLESS NOTED OTHERWISE
	UON	UNLESS OTHERWISE NOTED
	URNL	URINAL
V		
	VAC	VENTILATION AND AIR CONDITIONING
	VAR	VARIES
	VCT	VINYL COMPOSITION TILE
	VER	VERIFY
	VERT	VERTICAL
	VEST	VESTIBULE
	VIF	VERIFY IN FIELD
	VP	VISION PANEL
	VR	VAPOR RETARDER
	VT	VINYL TILE
	VWC	VINYL WALL COVERING
W		
	W	WIDE OR WEST
	W/	WITH
	W/O	WITHOUT
	WC	WATER CLOSET
	WD	WOOD
	WIN	WINDOW
	WM	WIRE MESH
	WP	WATERPROOF OR WATERPROOFING
	WPM	WATERPROOF MEMBRANE
	WS	WEATHER-STRIPPING
	WSCT	WAINSCOT
	WT	WEIGHT
	WV	WATER VALVE
	WWF	WELDED WIRE FABRIC
	WWM	WELDED WIRE MESH
Y		
	YR	YEAR

DRAWING CONVENTIONS

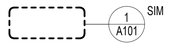
REFERENCE SYMBOL (TYP.)



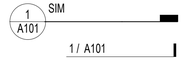
WALL SECTIONS

BUILDING SECTIONS

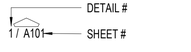
ENLARGEMENT REFERENCE



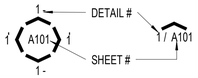
DETAIL SECTIONS



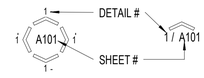
CASEWORK ELEVATION



EXTERIOR ELEVATION

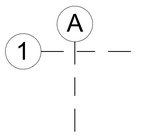


INTERIOR ELEVATION



ACCENT WALL FINISH TAG

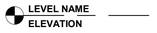
COLUMN GRID



DATUM

SPOT ELEVATION

VERTICAL ELEVATION



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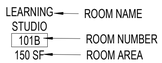

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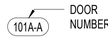

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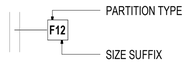
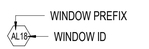


EXTERIOR WALL TAG

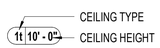
WINDOW TAG



WINDOW PREFIX LEGEND

AL	ALUMINUM WINDOW
HM	HOLLOW METAL WINDOW
SF	STOREFRONT
CW	CURTAINWALL
LV	LOUVER

CEILING TYPE



PLUMBING FIXTURE TAG

TOILET ACCESSORY TAG

SIGN TAG

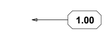
ACOUSTICAL PARTITION TAG

GYPSUM TYPE TAG

FURNITURE TAG

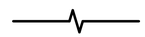
EQUIPMENT TAG

KEYNOTE



MATCHLINE

BREAK LINE



FLOORING INSTALL DIRECTION

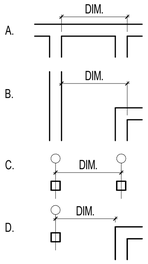
REVISION TAG

MATERIAL LEGEND

- BRICK
- CONCRETE
- CONCRETE MASONRY UNIT
- CONTINUOUS WOOD MEMBER
- INSULATION - FOAM
- INSULATION - RIGID
- INSULATION - SPRAY FOAM
- SEMI RIGID INSULATION
- BATT INSULATION
- FINISHED WOOD MEMBER
- GYPSUM WALL BOARD
- METAL
- PLYWOOD
- WOOD BLOCKING
- EARTH

DIMENSIONING

1. DOORS NOT OTHERWISE DIMENSIONED SHALL BE:
   A. 8" FROM FACE OF ADJACENT MASONRY WALL TO ROUGH DOOR OPENING.
   B. 4" FROM FACE OF ADJACENT STUD WALL TO ROUGH DOOR OPENING.
2. SEE LARGE SCALE DETAILS FOR LOCATIONS AND ALIGNMENTS OF PARTITIONS NOT DIMENSIONED ON FLOOR PLANS.
3. UNLESS OTHERWISE NOTED, PLAN DIMENSIONS ARE TAKEN FROM:



DRAWING CONVENTIONS

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Plans Prepared By :
CPH, Inc.

State of Florida Licenses:
Architect No. AA2600926
Engineer No. 3215
Landscape No. LC0000298
Surveyor No. 7143

Architect of Record
####/2021
BROOK K. SHERRARD
CPH, Inc.

CELEBRATING 40 +YEARS cph

No.	DATE	Revision

Designed:	Designer
Drawn:	Author
Checked:	Checker
Job No.:	M13112
08/13/21	© 2021

GENERAL INFORMATION AND ABBREVIATIONS

KINGFISH BOAT RAMP RESTROOMS

752 MANATEE AVENUE
HOLMES BEACH, FLORIDA 34217

NOT FOR CONSTRUCTION

THIS SHEET NOT VALID FOR CONSTRUCTION WITHOUT COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND

Sheet No.
G001

PROJECT SUMMARY / SCOPE OF WORK

THIS PROJECT CONSISTS OF A CONSTRUCTING A NEW 436 SQUARE FOOT RESTROOM BUILDING AT KINGFISH BOAT RAMP AS DEPICTED IN THE PLANS

AUTHORITIES HAVING JURISDICTION

BUILDING:	MANATEE COUNTY BUILDING AND DEVELOPMENT SERVICES 1112 MANATEE AVENUE WEST BRADENTON, FLORIDA 34205 (941) 749-3047
FIRE / LIFE SAFETY:	WEST MANATEE FIRE AND RESCUE DISTRICT 701 63RD STREET BRADENTON, FLORIDA 34209 (941) 761-1555

ABBREVIATIONS

N/A	NOT APPLICABLE AS PART OF THIS PROJECT	FSD	FIRE SEPARATION DISTANCE
AGP	ABOVE GRADE PLANE - STORY	AHJ	AUTHORITY HAVING JURISDICTION
FDVA	FIRE DEPARTMENT VEHICLE ACCESS	OL	OCCUPANT LOAD

APPLICABLE CODES

BUILDING:	(A)	2020	FLORIDA BUILDING CODE 7TH EDITION
FIRE:	(B1)	2020	FLORIDA FIRE PREVENTION CODE 7th EDITION
	(B2)	2020	NFPA 1, FIRE CODE - FLORIDA AMENDED 7th EDITION
	(B3)	2021	FIRE PREVENTION CODE OF WEST MANATEE FIRE & RESCUE DISTRICT ORDINANCE 2020-06
LIFE SAFETY:	(C)	2020	NFPA 101, LIFE SAFETY CODE - FLORIDA AMENDED 7th EDITION
PLUMBING:	(D)	2020	FLORIDA BUILDING CODE 7th EDITION - PLUMBING
FUEL / GAS:	(E)	2020	FLORIDA BUILDING CODE 7th EDITION - FUEL GAS
MECHANICAL:	(F)	2020	FLORIDA BUILDING CODE 7th EDITION - MECHANICAL
ELECTRICAL:	(G1)	2020	FLORIDA BUILDING CODE 7th EDITION - CHAPTER 27
	(G2)	2017	NFPA 70, NATIONAL ELECTRICAL CODE (BY REFERENCE)
ENERGY:	(H)	2020	FLORIDA BUILDING CODE 7th EDITION - ENERGY CONSERVATION
ACCESSIBILITY:	(J)	2020	FLORIDA BUILDING CODE 7th EDITION - ACCESSIBILITY
EXISTING:	(K)	2020	FLORIDA BUILDING CODE 7th EDITION - EXISTING
OTHER:			- RESERVED -

ALTERATION LEVEL (K) Chapter 5

** NOT APPLICABLE **

USE & OCCUPANCY CLASSIFICATION

FBC - BUILDING (A) CHAPTER 3	FFPC: (B1) CHAPTER 6 / NFPA 101: (C) CHAPTER 40, 42
B - BUSINESS	BUSINESS

SPECIAL REQUIREMENTS BASED UPON USE & OCCUPANCY (A) CHAPTER 4

** NOT APPLICABLE **

TYPES OF CONSTRUCTION (A) CHAPTER 6

TYPE V-B CONSTRUCTION, NOT SPRINKLERED (FBC TABLE 503)

FIRE RESISTANCE OF BLDG. ELEMENTS BY CONSTRUCTION TYPE (A) CHAPTER 6

OCCUPANCY:	FIRE RATING:
PRIMARY STRUCT. FRAME:	0 HOURS
BEARING WALLS - EXT:	0 HOURS
BEARING WALLS - INT:	0 HOURS
NONBEARING WALLS - EXT:	0 HOURS
NONBEARING WALLS - INT:	0 HOURS
FLOOR CONSTRUCTION:	0 HOURS
ROOF CONSTRUCTION:	0 HOUR
EXIT ACCESS ENCLOSURES / CORRIDORS:	N/A
EXIT ACCESS ENCLOSURES / STAIRS:	N/A

NOTE: REFER TO GENERAL INFORMATION SHEETS FOR APPLICABLE UL ASSEMBLIES TO PROVIDE REQUIRED FIRE RESISTANCE OF BLDG. ELEMENTS

BUILDING HEIGHT BY CONSTRUCTION TYPE (F.B.C. Chapter 5 - General Building Heights and Areas)

ALLOWABLE HEIGHT:	1 STORIES / 40 FT.
ACTUAL BUILDING HEIGHT:	1 STORIES / 12' - 0"

BUILDING AREA BY CONSTRUCTION TYPE (F.B.C. Chapter 5 - General Building Heights and Areas)

ALOWABLE BUILDING AREA:	9,000 SF
ACTUAL BUILDING AREA:	436 SF

OPENING PROTECTIVES IN FIRE RESISTANT CONSTRUCTION

CONSTRUCTION TYPE	FIRE RESISTANCE RATING
1 - HOUR FIRE BARRIER:	3/4 HOUR
2 - HOUR FIRE BARRIER	1 1/2 HOUR
1- HOUR EXIT ENCLOSURE	1 HOUR
SMOKE PARTITION	N/A

INTERIOR FINISHES (per NFPA 101 14.3.3.2 - more stringent than FBC)

CONSTRUCTION TYPE	FIRE RESISTANCE RATING
EXITS	CLASS A
EXIT ACCESS CORRIDORS	CLASS B
OTHER THAN EXITS	CLASS C
LOW HEIGHT PARTITIONS	CLASS C (SEE NOTE 1)
INTERIOR FLOOR FINISHES	CLASS II
GENERAL ASSEMBLY AREAS (>300)	CLASS B
ASSEMBLY AREAS (<300)	CLASS C

NOTES:
1. PARTITIONS NOT EXCEEDING 60 INCHES AND IN LOCATIONS OTHER THAN EXITS

OCCUPANT LOADS

THE CALCULATED OCCUPANT LOAD RESULTS IN A TOTAL BUILDING POPULATION FOR EGRESS OF **3 PERSONS** AS INDICATED BELOW. REFER TO EGRESS CAPACITY TABLES BELOW FOR EGRESS BY FLOOR OR AREA. REFER TO THE LIFE SAFETY DRAWINGS FOR THE OCCUPANCY SCHEDULES.

LEVEL	OCCUPANT LOAD	PROVIDED EGRESS
FIRST FLOOR	3 PERSONS	3 PERSONS
SECOND FLOOR	N/A	N/A PERSONS
TOTAL CAPACITY FOR EGRESS	3 PERSONS	3 PERSONS

EGRESS CAPACITY

REFER TO THE LIFE SAFETY DRAWINGS FOR THE LOCATION AND CAPACITY OF ALL EGRESS COMPONENTS

EXITS

LEVEL	EXIT WIDTH - REQUIRED	EXIT WIDTH - PROVIDED
FIRST FLOOR	3 PERSONS X 0.2" = **.6 INCHES**	**108 INCHES**

EGRESS COMPONENTS

MIN. NUMBER OF EXITS:	1 (PER F.B.C. TABLE 1006.2.1
MAX. TRAVEL DISTANCE:	200 FT. (PER F.B.C TABLE 1017.2)
MAX. COMMON PATH OF TRAVEL:	75 FT. (PER F.B.C TABLE 1006.2.1)
MAX. DEAD END CORRIDOR:	20 FT. (PER F.B.C. SECTION 1020.4)
MIN. CORRIDOR WIDTH:	44 INCHES CLEAR (PER FBC TABLE 1020.2)
MIN. STAIR WIDTH:	N/A
MIN. DOOR WIDTH:	0.2" PER PERSON (NFPA 7.3.3.1) BUT NO LESS THAN 32" (PER F.B.C. SECTION 11010.1.1)

FIRE ALARM AND PROTECTION SYSTEMS

FIRE SUPPRESION SYSTEM (ESFR)	NO	FIRE ALARM SYSTEM	NO
AUTOMATIC FIRE DETECTION SYSTEM	NO	SMOKE CONTROL SYSTEM	NO
SUPERVISION	NO		

OCCUPANT LOAD SCHEDULE

OCCUPANCY CLASSIFCATION	AREA	MODIFIER	OCCUPANCY LOAD
Accessory Storage Areas, Mechanical Equipment Room	61 SF	300 SF	1
Business Areas		150 SF	2
			3

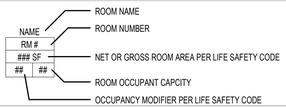
TRAVEL DISTANCE

PATH ID	DISTANCE
A	19'
B	15'
C	19'

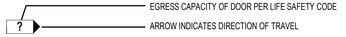
LIFE SAFETY LEGEND

- A — TRAVEL PATH ID; MAXIMUM TRAVEL DISTANCE PATH
- PRIMARY EGRESS; EXIT SIGN
- FE — FIRE EXTINGUISHER ON WALL BRACKET; FEC — FIRE EXTINGUISHER IN SEMI-RECESSED CABINET
- LOCK BOX- EXACT LOCATION TO BE COORDINATED WITH LOCAL FIRE DEPARTMENT. MOUNTING HT. 6'-8" A.F.F., TIE TO FIRE ALARM

ROOM CAPACITY TAG

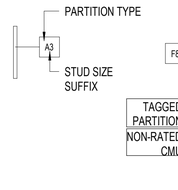


DOOR CAPACITY TAG

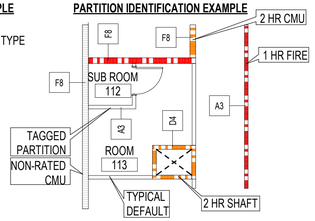


NOTES:
1. REFER TO SYSTEM DRAWINGS FOR LOCATION OF HEAT AND SMOKE DETECTORS
2. REFER TO MECHANICAL FOR LOCATION OF FIRE AND SMOKE DAMPERS
3. COORDINATE WITH ELECTRICAL DRAWINGS FOR EXACT LOCATION OF EMERGENCY LIGHTING, FIRE ALARM STROBES, AND PULL STATIONS
4. REFER TO TRAVEL DISTANCE SCHEDULE FOR TRAVEL DISTANCES
5. ALL SIGNAGE INCLUDING MAXIMUM OCCUPANCY, FIRE EXTINGUISHER INSIDE, EXIT DIAGRAMS, ETC. TO BE IN ACCORDANCE WITH S.R.E.F. STANDARDS AND REQUIREMENTS.

PARTITION TAG EXAMPLE



PARTITION IDENTIFICATION EXAMPLE



- GRAPHIC PARTITIONS ARE CALLED OUT FOR CLARIFICATION OF EXAMPLE ONLY AND MAY NOT BE CALLED OUT ON PLANS
- RATINGS AS SHOWN WILL BE INDICATED ON LIFE SAFETY PLANS ONLY.

K9 PARTITION ID DIAGRAM

NOT TO SCALE

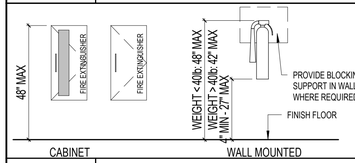
ROOF TRUSS

FIREFIGHTER SAFETY WARNING SIGNS FOR STRUCTURES WITH LIGHT-FRAME TRUSS TYPE CONSTRUCTION IN ACCORDANCE WITH THE FLORIDA ADMINISTRATIVE CODE 69A-3.012:

- STRUCTURES WITH LIGHT-FRAME TRUSS ROOFS SHALL BE MARKED WITH THE LETTER "R"
- SYMBOLS MUST BE ALL WEATHER AND CONTRASTING BACKGROUND
- MALTESE CROSS SHALL:
  1. MEASURE 8" HORIZONTALLY AND 8" VERTICALLY
  2. BE BRIGHT RED REFLECTIVE IN COLOR
  3. BE WITHIN 24" OF AND TO THE LEFT OF THE MAIN ENTRY
  4. SHALL BE NOT LESS THAN 4 FEET ABOVE GRADE
  5. BE NOT MORE THAN 6 FEET ABOVE GRADE
- IT MAY BE DETERMINED THAT ADDITIONAL SIGNS MAY BE NEEDED AS DETERMINED BY THE FIRE MARSHAL

I9 TRUSS IDENTIFICATION SIGNAGE

NOT TO SCALE

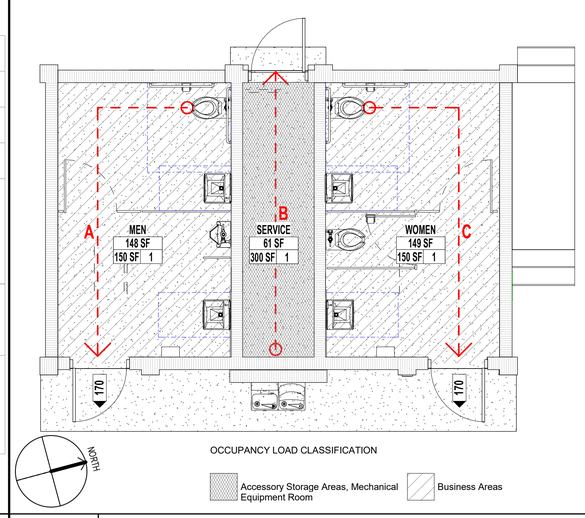


FIRE EXTINGUISHERS SHALL BE LOCATED AND INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF NFPA-1, SECTION 13.6 AND NFPA-10 OF THE FLORIDA FIRE PROTECTION CODE (FFPC), LOCATED SO THAT ALL AREAS ARE WITHIN 75' OF AN EXTINGUISHER. QUANTITY AND LOCATIONS WILL BE REVIEWED AND APPROVED WITH THE AUTHORITY HAVING JURISDICTION.

- PROVIDE ABC DRY CHEMICAL TYPE 2A-10BC, OR EQUIVALENT, LIGHT HAZARD EXTINGUISHER, TYP. WALL MOUNTED OR CABINET PER PLAN.

G9 FIRE EXTINGUISHER LEGEND

NOT TO SCALE



OCCUPANCY LOAD CLASSIFICATION

Accessory Storage Areas, Mechanical Equipment Room

Business Areas

A9 LIFE SAFETY PLAN

1/4" = 1'-0"

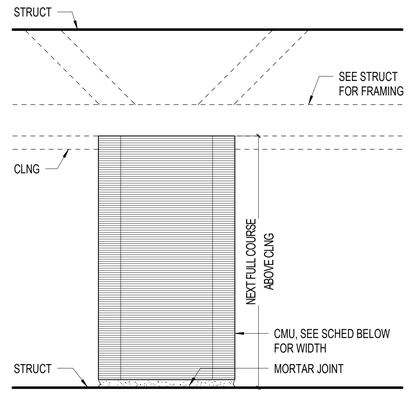
4ft. 0 4ft. 8ft.

GENERAL NOTES - PARTITIONS

1. PARTITIONS ARE DISTINGUISHED ON FLOOR PLANS BY GRAPHIC AND TWO-PART SYMBOL DESIGNATIONS. THE ALPHANUMERIC SYMBOL INDICATES THE PARTITION TYPE AND THE NUMERIC CHARACTER DESIGNATES THE STUD, CMU OR CONCRETE WIDTH. REFER TO THE PARTITION TYPE DIAGRAMS.
2. PARTITIONS REQUIRED TO BE SMOKE AND/OR FIRE RESISTANT ARE DISTINGUISHED GRAPHICALLY ON THE LIFE SAFETY PLANS. REFER TO THE FIRE & SMOKE RESISTANCE LEGEND.
3. FLR, CLNG AND STRUCT DELINEATED IN THE PARTION TYPE SECTIONS ARE DIAGRAMMATIC AND DO NOT REFLECT EXACT CONSTRUCTION CONDITIONS OR GEOMETRY.
4. GYPSUM BOARD TYPES INDICATED IN THE PARTITION TYPE SECTIONS IS TYPICAL UNLESS NOTED OTHERWISE IN THE GYPSUM BOAD SCHEDULE FOR THE PARTITION LOCATION (EXAMPLE: A TYPE 'A3' PARTITION AT A WET WALL WILL RECEIVE 5/8" MOISTURE AND MOLD RESISTANT GYP BD IN LIEU OF 5/8" GYP BD; A TYPE 'A3' PARTITION SCHEDULED TO RECEIVE TILE WILL HAVE ½" TILE BACKER IN LIEU OF 5/8" GYP BD)
5. REFER TO PARTITION HEAD DETAILS FOR CONSTRUCTION AT RATED PARTITIONS. WHERE A SPECIFIC DETAIL IS NOTE PROVIDED, COORDINATE WITH ARCHITECT.
6. ALL DIMENSIONS ARE FROM FACE OF GYPSUM BOARD TO FACE OF GYPSUM BOARD. REFER TO PARTITION TYPE MATRICES FOR PARTITION WIDTH DIMENSIONS UNLESS INDICATED TO BE SHOWN ON PLANS.
7. SEALANT: REFER TO THE SEALANT SCHEDULE FOR SEALANT TYPES AT ALL PARTITIONS. ALL PARTITIONS SHALL HAVE SCHEDULED SEALANT AT THE HEAD, SILL, THRU-PENETRATIONS, OPENINGS AND JUNCTURES WITH DISSIMILAR MATERIALS.
8. INSULATION: REFER TO INSUALTION SCHEDULE FOR INSULATION TYPE AT ALL PARTITIONS.
9. FOR PARTITONS DESIGNATED TO RECEIVE SOUND ATTENUATION BLANKETS (SAB), EXTEND SAB TO FULL HEIGHT OF PARTITION U.N.O. FLOOR TRACK TO BE SET IN A CONT BED OF SCHEDULED SEALANT.
10. IF NO SYMBOL DESIGNATION IS PROVIDED, STUD WALLS SHALL BE TYPE A3 AND MASONRY WALLS SHALL BE TYPE F8
11. REFER TO SPECIFICATIONS FOR MINIMUM STUD THICKNESS, MAXIMUM SPACING AND ALLOWABLE LIMITING HEIGHTS AND DEFLECTION CRITERIA FOR GYPSUM BOARD ASSEMBLIES.
12. FIRE RESISTANT AND SMOKE RESISTANT SMOKE BARRIER RATINGS ARE TO SURROUND ALL OPENINGS IN RATED PARTITIONS.
13. SMOKE RESISTANT, FIRE RESISTANT AND FIRE RESISTANT SMOKE BARRIER PARTITIONS SHALL EXTEND AND SEAL TO THE INSIDE FACE OF EXTERIOR SHEATHING, INCLUDING EXTENSIONS THROUGH SOFFITS.
14. EACH NEW FIRE WALL, FIRE BARRIER, FIRE PARTITION, SMOKE BARRIER, SMOKE PARTITION, OR ANY OTHER NEW WALL REQUIRED TO HAVE PROTECTED OPENINGS SHALL BE PERMANENTLY IDENTIFIED WITH SIGNS OR STENCILING ABOVE ANY DECORATIVE CEILING AND IN CONCEALED SPACES WITH THE WORDING, "FIRE AND SMOKE BARRIER - PROTECT ALL OPENINGS." SUCH SIGNS OR STENCILING SHALL BE IN 4 INCH HIGH LETTERS, 1/2 INCH STROKE, AND NOT MORE THAN 15 FEET ON CENTER OR AS REQUIRED BY LOCAL CODE
15. REFER TO STRUCTURAL DRAWINGS FOR REINFORCING INFORMATION
16. REFER TO CASEWORK AND TOILET ACCESSORY SHEETS FOR MOUNTING INFORMATION AND BACKING REQUIREMENTS.
17. DO NOT UTILIZE BULLNOSE BLOCK AT WALLS DESIGNATED TO RECEIVE CORNER GUARDS.
18. ALL PENETRATIONS TRHU FIRE AND/OR SMOKE RATED PARTITION SHALL BE SEALED TO MAINTAIN THE INTEGRITY OF THE PARTITION RATING. REFER TO SEALANT SCHEDULE
19. ALL PENETRATIONS TRHU SOUND RATED PARTITION SHALL BE SEALED TO MAINTAIN THE INTEGRITY OF THE PARTITION RATING. REFER TO SEALANT SCHEDULE

GRAPHIC PATTERN	WALL RATING
	SMOKE
	1 - HOUR
	2 - HOUR
	3 - HOUR
	4 - HOUR

WALL RATING LEGEND



FLOOR PLAN DESIGNATION (K#)

DESIGN CRITERIA REFER TO LIFE SAFETY PLANS FOR PARTITION RATINGS

RATING	UL DESIGN #	GRAPHIC	STC	STC W/ 3" SAB
NON-RATED	N/A		N/A	N/A

CONSTRUCTION

SUFFIX	CMU WIDTH	OVERALL WIDTH	REMARKS
4	3 5/8"	3 5/8" *	* SOLID UNITS ONLY AT RATED WALL ** SEE EQUIV. THICKNESS TABLE AT RATED WALL
6	5 5/8"	5 5/8" **	
8	7 5/8"	7 5/8"	
10	9 5/8"	9 5/8"	
12	11 5/8"	11 5/8"	

PARTITION TYPE K

A13 PARTITION TYPE

NOT TO SCALE

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CPH, Inc.

State of Florida Licenses:
Architect No. AA2600926
Engineer No. 3215
Landscape No. LC0000298
Surveyor No. 7143

Architect of Record
##/##/2021
BROOK K. SHERRARD
CPH, Inc.

CELEBRATING 40 +YEARS cph

No.	DATE	Revision

Designed:	CPH, INC.
Drawn:	JLD / KAR
Checked:	BKS
Job No.:	M13112
08/13/21	© 2021

LIFE SAFETY, CODE ANALYSIS & PARTITION TYPES

KINGFISH BOAT RAMP RESTROOMS

752 MANATEE AVENUE
HOLMES BEACH, FLORIDA 34217

NOT FOR CONSTRUCTION

THIS SHEET NOT VALID FOR CONSTRUCTION WITHOUT COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND

Sheet No.
G010

CODE SUMMARY

LIFE SAFETY LEGEND

LIFE SAFETY PLAN

PARTITION TYPE

SECTION 03300 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes cast-in-place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes, for the following:
1. Footings.
2. Slabs-on-grade.

1.2 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Design Mixtures: For each concrete mixture. Submit alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

C. Steel Reinforcement Shop Drawings: Placing drawings that detail fabrication, bending, and placement. Include bar sizes, lengths, material, grade, bar schedules, stirrup spacing, bent bar diagrams, bar arrangement, splices and laps, mechanical connections, tie spacing, hoop spacing, and supports for concrete reinforcement.

1.3 QUALITY ASSURANCE

A. Testing Agency Qualifications: An independent agency, qualified according to ASTM C 1077 and ASTM E 329 for testing indicated.
1. Personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician, Grade 1, according to ACI CP-1 or an equivalent certification program.
2. Personnel performing laboratory tests shall be ACI-certified Concrete Strength Testing Technician and Concrete Laboratory Testing Technician - Grade I. Testing Agency laboratory supervisor shall be an ACI-certified Concrete Laboratory Testing Technician - Grade II.

B. Concrete Testing Service: Engage a qualified independent testing agency to perform material evaluation tests and to design concrete mixtures.

PART 2 - PRODUCTS

2.1 FORM-FACING MATERIALS

A. Rough-Formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.

2.2 STEEL REINFORCEMENT

A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60, deformed.

2.3 REINFORCEMENT ACCESSORIES

A. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place. Manufacture bar supports from steel wire, plastic, or precast concrete according to CRSI's "Manual of Standard Practice," of greater compressive strength than concrete and as follows:

2.4 CONCRETE MATERIALS

A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source, throughout Project:
1. Portland Cement: ASTM C 150, Type I/II, gray.

B. Normal-Weight Aggregates: ASTM C 33, Class 3S coarse aggregate or better, graded. Provide aggregates from a single source.
1. Maximum Coarse-Aggregate Size: 1 inch nominal.
2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.

C. Water: ASTM C 94/C 94M and potable.

2.5 ADMIXTURES

A. Air-Entraining Admixture: ASTM C 260.

2.6 FIBER REINFORCEMENT

A. Synthetic Micro-Fiber: Monofilament polypropylene micro-fibers engineered and designed for use in concrete, complying with ASTM C 1116/C 1116M, Type III, 1 to 2-1/4 inches long.

2.7 CURING MATERIALS

A. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.

B. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.

C. Water: Potable.

D. Clear, Waterborne, Membrane-Forming Curing and Sealing Compound: ASTM C 1315, Type 1, Class A.

2.8 CONCRETE MIXTURES, GENERAL

A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, according to ACI 301.
1. Use a qualified independent testing agency for preparing and reporting proposed mixture designs based on laboratory trial mixtures.

B. Limit water-soluble, chloride-ion content in hardened concrete to 0.06 percent by weight of cement.

2.9 CONCRETE MIXTURES FOR BUILDING ELEMENTS

A. Footings: Proportion normal-weight concrete mixture as follows:
1. Minimum Compressive Strength: 3000 psi at 28 days.
2. Maximum Water-Cementitious Materials Ratio: 0.50.
3. Slump Limit: 4 inches, plus or minus 1 inch.

B. Slabs-on-Grade: Proportion normal-weight concrete mixture as follows:
1. Minimum Compressive Strength: 3000 psi at 28 days.
2. Minimum Cementitious Materials Content: 470 lb/cu. yd..
3. Slump Limit: 4 inches, plus or minus 1 inch.
4. Synthetic Micro-Fiber: Uniformly disperse in concrete mixture at manufacturer's recommended rate, but not less than 1.5 lb/cu. yd..

2.10 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M, and furnish batch ticket information.
1. When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

PART 3 - EXECUTION

3.1 FORMWORK

A. Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads.

B. Construct forms tight enough to prevent loss of concrete mortar.

C. Set edge forms, bulkheads, and intermediate screed strips for slabs to achieve required elevations and slopes in finished concrete surfaces. Provide and secure units to support screed strips; use strike-off templates or compacting-type screeds.

D. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.

3.2 EMBEDDED ITEMS

A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
1. Install anchor rods, accurately located, to elevations required and complying with tolerances in Section 7.5 of AISC's "Code of Standard Practice for Steel Buildings and Bridges."

3.3 STEEL REINFORCEMENT

A. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.

B. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials that would reduce bond to concrete.

C. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.

D. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.

3.4 JOINTS

A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.

B. Contraction Joints in Slabs-on-Grade: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of concrete thickness as follows:
1. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch-wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks.

3.5 CONCRETE PLACEMENT

A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed.

B. Do not add water to concrete during delivery, at Project site, or during placement unless approved by Architect.

C. Before test sampling and placing concrete, water may be added at Project site, subject to limitations of ACI 301.
1. Do not add water to concrete after adding high-range water-reducing admixtures to mixture.

D. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation.
1. Deposit concrete in horizontal layers of depth to not exceed formwork design pressures and in a manner to avoid inclined construction joints.
2. Consolidate placed concrete with mechanical vibrating equipment according to ACI 301.

E. Deposit and consolidate concrete for floors and slabs in a continuous operation, within limits of construction joints, until placement of a panel or section is complete.
1. Consolidate concrete during placement operations so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
2. Maintain reinforcement in position on chairs during concrete placement.
3. Screed slab surfaces with a straightedge and strike off to correct elevations.
4. Slope surfaces uniformly to drains where required.
5. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane, before excess bleedwater appears on the surface. Do not further disturb slab surfaces before starting finishing operations.

F. Hot-Weather Placement: Comply with ACI 301 and as follows:
1. Maintain concrete temperature below 90 deg F at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
2. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade uniformly moist without standing water, soft spots, or dry areas.

3.6 FINISHING FORMED SURFACES

A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Remove fins and other projections that exceed specified limits on formed-surface irregularities.

3.7 FINISHING FLOORS AND SLABS

A. General: Comply with ACI 302.1R recommendations for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.

B. Float Finish: Consolidate surface with power-driven floats or by hand floating if area is small or inaccessible to power driven floats. Restraighten, cut down high spots, and fill low spots. Repeat float passes and restraightening until surface is left with a uniform, smooth, granular texture.
1. Apply float finish to surfaces to receive trowel finish.

C. Trowel and Fine-Broom Finish: Apply a first trowel finish to surfaces. While concrete is still plastic, slightly scarify surface with a fine broom.

3.8 CONCRETE PROTECTING AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.

B. Evaporation Retarder: Apply evaporation retarder to unformed concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.

C. Formed Surfaces: Cure formed concrete surfaces, including underside of beams, supported slabs, and other similar surfaces. If forms remain during curing period, moist cure after loosening forms. If removing forms before end of curing period, continue curing for the remainder of the curing period.

D. Cure concrete according to ACI 308.1, by one or a combination of the following methods:
1. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
a. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive floor coverings.
b. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive penetrating liquid floor treatments.
c. Cure concrete surfaces to receive floor coverings with either a moisture-retaining cover or a curing compound that the manufacturer certifies will not interfere with bonding of floor covering used on Project.

3.9 FIELD QUALITY CONTROL

A. Testing and Inspecting: Engage a qualified testing and inspecting agency to perform tests and inspections and to submit reports.

B. Inspections:
1. Steel reinforcement placement.
2. Headed bolts and studs.
3. Verification of use of required design mixture.
4. Concrete placement, including conveying and depositing.
5. Curing procedures and maintenance of curing temperature.
6. Verification of concrete strength before removal of shores and forms from beams and slabs.

C. Concrete Tests: Testing of composite samples of fresh concrete obtained according to ASTM C 172 shall be performed according to the following requirements:
1. Testing Frequency: Obtain one composite sample for each day's pour of each concrete mixture exceeding 5 cu. yd., but less than 25 cu. yd., plus one set for each additional 50 cu. yd. or fraction thereof.
2. Slump: ASTM C 143/C 143M; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture. Perform additional tests when concrete consistency appears to change.
3. Air Content: ASTM C 231, pressure method, for normal-weight concrete;one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
4. Concrete Temperature: ASTM C 1064/C 1064M; one test hourly when air temperature is 40 deg F and below and when 80 deg F and above, and one test for each composite sample.
5. Unit Weight: ASTM C 567, fresh unit weight of structural lightweight concrete; one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
6. Compression Test Specimens: ASTM C 31/C 31M.
a. Cast and laboratory cure two sets of two standard cylinder specimens for each composite sample.
b. Cast and field cure two sets of two standard cylinder specimens for each composite sample.
7. Compressive-Strength Tests: ASTM C 39/C 39M; test one set of two laboratory-cured specimens at 7 days and one set of two specimens at 28 days.
a. Test one set of two field-cured specimens at 7 days and one set of two specimens at 28 days.
b. A compressive-strength test shall be the average compressive strength from a set of two specimens obtained from same composite sample and tested at age indicated.
8. When strength of field-cured cylinders is less than 85 percent of companion laboratory-cured cylinders, Contractor shall evaluate operations and provide corrective procedures for protecting and curing in-place concrete.
9. Strength of each concrete mixture will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi.
10. Test results shall be reported in writing to Architect, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.

END OF SECTION 03300

SECTION 04200 - UNIT MASONRY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
1. Concrete masonry units.
2. Mortar and grout.
3. Steel reinforcing bars.
4. Miscellaneous masonry accessories.

1.2 SUBMITTALS

A. Shop Drawings: For the following:
1. Reinforcing Steel: Detail bending and placement of unit masonry reinforcing bars. Comply with ACI 315, "Details and Detailing of Concrete Reinforcement."

1.3 QUALITY ASSURANCE

A. Source Limitations for Masonry Units: Obtain exposed masonry units of a uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, from single source from single manufacturer for each product required.

B. Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for exposed masonry, from single manufacturer for each cementitious component and from single source or producer for each aggregate.

C. Masonry Standard: Comply with ACI 530.1/ASCE 6/TMS 602 unless modified by requirements in the Contract Documents.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Store masonry units on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are dry.

B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.

C. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.

D. Deliver preblended, dry mortar mix in moisture-resistant containers designed for use with dispensing silos. Store preblended, dry mortar mix in delivery containers on elevated platforms, under cover, and in a dry location or in covered weatherproof dispensing silos.

E. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

1.5 PROJECT CONDITIONS

A. Protection of Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.
1. Extend cover a minimum of 24 inches down both sides of walls and hold cover securely in place.

B. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar, and soil that come in contact with such masonry.

C. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.

PART 2 - PRODUCTS

2.1 MASONRY UNITS, GENERAL

A. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to contain chips, cracks, or other defects exceeding limits stated in the standard. Do not use units where such defects will be exposed in the completed Work.

2.2 CONCRETE MASONRY UNITS

A. Shapes: Provide shapes indicated and as follows, with exposed surfaces matching exposed faces of adjacent units unless otherwise indicated.
1. Provide square-edged units for outside corners unless otherwise indicated.

B. CMUs: ASTM C 90.
1. Density Classification: Normal weight.
2. Size (Width): Manufactured to dimensions 3/8 inch less than nominal dimensions.

2.3 MORTAR AND GROUT MATERIALS

A. Portland Cement: ASTM C 150, Type I or II, except Type III may be used for cold-weather construction. Provide natural color or white cement as required to produce mortar color indicated.

B. Hydrated Lime: ASTM C 207, Type S.

C. Portland Cement-Lime Mix: Packaged blend of portland cement and hydrated lime containing no other ingredients.

D. Aggregate for Mortar: ASTM C 144.
1. For mortar that is exposed to view, use washed aggregate consisting of natural sand or crushed stone.
2. For joints less than 1/4 inch thick, use aggregate graded with 100 percent passing the No. 16 sieve.

E. Aggregate for Grout: ASTM C 404.

F. Water: Potable.

2.4 REINFORCEMENT

A. Uncoated Steel Reinforcing Bars: ASTM A 615/A 615M or ASTM A 996/A 996M, Grade 60.

2.5 MISCELLANEOUS ANCHORS

A. Anchor Bolts: L-shaped steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and, where indicated, flat washers; hot-dip galvanized to comply with ASTM A 153/A 153M, Class C; of dimensions indicated.

B. Ladder Truss

2.6 MISCELLANEOUS MASONRY ACCESSORIES

A. Reinforcing Bar Positioners: Wire units designed to fit into mortar bed joints spanning masonry unit cells and hold reinforcing bars in center of cells. Units are formed from 0.148-inch steel wire, hot-dip galvanized after fabrication. Provide units designed for number of bars indicated.

2.7 MORTAR AND GROUT MIXES

A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, or other admixtures, unless otherwise indicated.
1. Use portland cement-lime mortar unless otherwise indicated.

B. Preblended, Dry Mortar Mix: Furnish dry mortar ingredients in form of a preblended mix. Measure quantities by weight to ensure accurate proportions, and thoroughly blend ingredients before delivering to Project site.

C. Mortar for Unit Masonry: Comply with ASTM C 270, Proportion Specification. Provide the following types of mortar for applications stated unless another type is indicated.
1. For masonry below grade or in contact with earth, use Type M.

D. Grout for Unit Masonry: Comply with ASTM C 476.
1. Use grout of type indicated or, if not otherwise indicated, of type (fine or coarse) that will comply with Table 1.15.1 in ACI 530.1/ASCE 6/TMS 602 for dimensions of grout spaces and pour height.
2. Proportion grout in accordance with ASTM C 476, paragraph 4.2.2 for specified 28-day compressive strength indicated, but not less than 3000 psi
3. Provide grout with a slump of 8 to 11 inches as measured according to ASTM C 143/C 143M.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Thickness: Build cavity and composite walls and other masonry construction to full thickness shown. Build single-wythe walls to actual widths of masonry units, using units of widths indicated.

B. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.

C. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures.
1. Mix units from several pallets or cubes as they are placed.

3.2 TOLERANCES

A. Dimensions and Locations of Elements:
1. For dimensions in cross section or elevation do not vary by more than plus 1/2 inch or minus 1/4 inch.
2. For location of elements in plan do not vary from that indicated by more than plus or minus 1/2 inch.
3. For location of elements in elevation do not vary from that indicated by more than plus or minus 1/4 inch in a story height or 1/2 inch total.

B. Lines and Levels:
1. For bed joints and top surfaces of bearing walls do not vary from level by more than 1/4 inch in 10 feet, or 1/2 inch maximum.
2. For vertical lines and surfaces do not vary from plumb by more than 1/4 inch in 10 feet, 3/8 inch in 20 feet, or 1/2 inch maximum.
3. For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2 inch maximum.
4. For faces of adjacent exposed masonry units, do not vary from flush alignment by more than 1/16 inch except due to warpage of masonry units within tolerances specified for warpage of units.

C. Joints:
1. For bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch, with a maximum thickness limited to 1/2 inch.
2. For exposed bed joints, do not vary from bed-joint thickness of adjacent courses by more than 1/8 inch.
3. For head and collar joints, do not vary from thickness indicated by more than plus 3/8 inch or minus 1/4 inch.

3.3 LAYING MASONRY

A. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry in stack bond; do not use units with less than nominal 4-inch horizontal face dimensions at corners or jambs.

B. Built-in Work: As construction progresses, build in items specified in this and other Sections. Fill in solidly with masonry around built-in items.

C. Where built-in items are to be embedded in cores of hollow masonry units, place a layer of metal lath, wire mesh, or plastic mesh in the joint below and rod mortar or grout into core.

3.4 MORTAR BEDDING AND JOINTING

A. Lay hollow CMUs as follows:
1. With face shells fully bedded in mortar and with head joints of depth equal to bed joints.
2. With webs fully bedded in mortar in all courses of piers, columns, and pilasters.
3. With webs fully bedded in mortar in grouted masonry, including starting course on footings.
4. With entire units, including areas under cells, fully bedded in mortar at starting course on footings where cells are not grouted.

B. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness unless otherwise indicated.

3.5 REINFORCED UNIT MASONRY INSTALLATION

A. Placing Reinforcement: Comply with requirements in ACI 530.1/ASCE 6/TMS 602.

B. Grouting: Do not place grout until entire height of masonry to be grouted has attained enough strength to resist grout pressure.
1. Comply with requirements in ACI 530.1/ASCE 6/TMS 602 for cleanouts and for grout placement, including minimum grout space and maximum pour height.

3.6 REPAIRING, POINTING, AND CLEANING

A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Install new units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement.

B. Pointing: During the tooling of joints, enlarge voids and holes, except weep holes, and completely fill with mortar. Point up joints, including corners, openings, and adjacent construction, to provide a neat, uniform appearance. Prepare joints for sealant application, where indicated.

C. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.

D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:
1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
2. Protect adjacent stone and nonmasonry surfaces from contact with cleaner by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape.
3. Clean concrete masonry by cleaning method indicated in NCMA TEK 8-2A applicable to type of stain on exposed surfaces.

END OF SECTION 04200

SECTION 06100 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
1. Framing with dimension lumber.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.
2. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
3. Include copies of warranties from chemical treatment manufacturers for each type of treatment.

1.3 DELIVERY, STORAGE, AND HANDLING

A. Stack lumber flat with spacers beneath and between each bundle to provide air circulation. Protect lumber from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

ARCHITECTURAL SPECIFICATIONS

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Plans Prepared By :
CPH, Inc.

State of Florida Licenses:
Architect No. AA2600926
Engineer No. 3215
Landscape No. LC0000298
Surveyor No. 7143

Architect of Record
BROOK K. SHERRARD
CPH, Inc.

CELEBRATING 40 +YEARS cph

No.	DATE	Revision

Designed:	CPH, INC.
Drawn:	JLD / KAR
Checked:	BKS
Job No.:	M13112
08/13/21	© 2021

SPECIFICATIONS

KINGFISH BOAT RAMP RESTROOMS

752 MANATEE AVENUE
HOLMES BEACH, FLORIDA 34217

NOT FOR CONSTRUCTION

THIS SHEET NOT VALID FOR CONSTRUCTION WITHOUT COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND

Sheet No.
G050

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
1. Factory mark each piece of lumber with grade stamp of grading agency.
2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
3. Provide dressed lumber, S4S, unless otherwise indicated.

B. Maximum Moisture Content of Lumber: 19 percent unless otherwise indicated.

2.2 WOOD-PRESERVATIVE-TREATED LUMBER

A. Preservative Treatment by Pressure Process: AWPA U1; Use Category UC2 for interior construction not in contact with the ground, Use Category UC3b for exterior construction not in contact with the ground, and Use Category UC4a for items in contact with the ground.
1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium. Do not use inorganic boron (SBX) for sill plates.

B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or that does not comply with requirements for untreated material.

C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.

D. Application: Treat all rough carpentry unless otherwise indicated.
1. Wood framing and furring attached directly to the interior of below-grade exterior masonry or concrete walls.
2. Wood framing members that are less than 18 inches above the ground in crawlspaces or unexcavated areas.

2.3 DIMENSION LUMBER FRAMING

A. Load-Bearing Partitions: No. 2 grade.
1. Application: Walls.
2. Species:
a. Spruce-pine-fir (south); NeLMA, WCLIB, or WWPA.

2.4 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
1. Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.

B. Nails, Brads, and Staples: ASTM F 1667.

C. Power-Driven Fasteners: NES NER-272.

D. Lag Bolts: ASME B18.2.1.

2.5 METAL FRAMING ANCHORS

A. Allowable Design Loads: Provide products with allowable design loads, as published by manufacturer, that meet or exceed those indicated. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.

B. Hot-Dip, Heavy-Galvanized Steel Sheet: ASTM A 653/A 653M; structural steel (SS), high-strength low-alloy steel Type A (HSLAS Type A), or high-strength low-alloy steel Type B (HSLAS Type B); G185 coating designation; and not less than 0.036 inch thick.
1. Use for wood-preservative-treated lumber and where indicated.

C. Joist Hangers: U-shaped joist hangers with 2-inch- long seat and 1-1/4-inch- wide nailing flanges at least 85 percent of joist depth.
1. Thickness: 0.062 inch.

D. Hold-Downs: Brackets for bolting to wall studs and securing to foundation walls with anchor bolts or to other hold-downs with threaded rods and designed with first of two bolts placed seven bolt diameters from reinforced base.
1. Bolt Diameter: 3/4 inch.
2. Width: 3-3/16 inches.
3. Body Thickness: 0.138 inch.
4. Base Reinforcement Thickness: 0.239 inch.

2.6 MISCELLANEOUS MATERIALS

A. Flexible Flashing: Composite, self-adhesive, flashing product consisting of a pliable, rubberized-asphalt compound, bonded to a high-density polyethylene film, aluminum foil, or spunbonded polyolefin to produce an overall thickness of not less than 0.025 inch.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.

B. Metal Framing Anchors: Install metal framing anchors to comply with manufacturer's written instructions. Install fasteners through each fastener hole.

C. Sort and select lumber so that natural characteristics will not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.

D. Comply with AWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.
1. Use inorganic boron for items that are continuously protected from liquid water.
2. Use copper naphthenate for items not continuously protected from liquid water.

E. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
1. NES NER-272 for power-driven fasteners.
2. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.
3. Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate Attachments," in ICC's International Residential Code for One- and Two-Family Dwellings.

F. Use steel common nails unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood. Drive nails snug but do not countersink nail heads unless otherwise indicated.

3.2 WALL AND PARTITION FRAMING INSTALLATION

A. General: Provide single bottom plate and double top plates using members of 2-inch nominal thickness whose widths equal that of studs, except single top plate may be used for non-load-bearing partitions. Fasten plates to supporting construction unless otherwise indicated.
1. For exterior walls, provide 2-by-6-inch nominal- size wood studs spaced 16 inches o.c. unless otherwise indicated.

B. Construct corners and intersections with three or more studs.

C. Frame openings with multiple studs and headers. Provide nailed header members of thickness equal to width of studs. Support headers on jamb studs.
1. For load-bearing walls, provide double-jamb studs for openings 60 inches and less in width, and triple-jamb studs for wider openings. Provide headers of depth indicated or, if not indicated, according to Table R502.5(1) or Table R502.5(2), as applicable, in ICC's International Residential Code for One- and Two-Family Dwellings.

D. Provide diagonal bracing in exterior walls, at both walls of each external corner, at 45-degree angle, full-story height unless otherwise indicated. Use metal wall bracing, let into studs in saw kerf.

3.3 PROTECTION

A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

B. Protect rough carpentry from weather. If, despite protection, rough carpentry becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

END OF SECTION 06100

SECTION 06175 - SHOP-FABRICATED WOOD TRUSSES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
1. Wood roof trusses.
2. Metal truss accessories.

1.2 ACTION SUBMITTALS

A. Shop Drawings: Show fabrication and installation details for trusses.
1. Show location, pitch, span, camber, configuration, and spacing for each type of truss required.
2. Indicate sizes, stress grades, and species of lumber.
3. Indicate locations of permanent bracing required to prevent buckling of individual truss members due to design loads.
4. Indicate locations, sizes, and materials for permanent bracing required to prevent buckling of individual truss members due to design loads.
5. Indicate type, size, material, finish, design values, orientation, and location of metal connector plates.

B. Delegated-Design Submittal: For metal-plate-connected wood trusses indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.3 DELIVERY, STORAGE, AND HANDLING

A. Handle and store trusses to comply with recommendations in TPI BCSI, "Building Component Safety Information: Guide to Good Practice for Handling, Installing, Restraining, & Bracing Metal Plate Connected Wood Trusses."
1. Store trusses flat, off of ground, and adequately supported to prevent lateral bending.
2. Protect trusses from weather by covering with waterproof sheeting, securely anchored.
3. Provide for air circulation around stacks and under coverings.

B. Inspect trusses showing discoloration, corrosion, or other evidence of deterioration. Discard and replace trusses that are damaged or defective.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional engineer, as defined in Division 01 Section "Quality Requirements," to design metal-plate-connected wood trusses.

B. Structural Performance: Provide metal-plate-connected wood trusses capable of withstanding design loads within limits and under conditions indicated. Comply with requirements in TPI 1 unless more stringent requirements are specified below.
1. Design Loads: As indicated.
2. Maximum Deflection Under Design Loads:
a. Roof Trusses: Vertical deflection of 1/180 of span.

C. Comply with applicable requirements and recommendations of the following publications:
1. TPI 1, "National Design Standard for Metal Plate Connected Wood Truss Construction."
2. TPI DSB, "Recommended Design Specification for Temporary Bracing of Metal Plate Connected Wood Trusses."
3. TPI BCSI, "Building Component Safety Information: Guide to Good Practice for Handling, Installing, Restraining, & Bracing Metal Plate Connected Wood Trusses."

D. Wood Structural Design Standard: Comply with applicable requirements in AF&PA's "National Design Specifications for Wood Construction" and its "Supplement."

2.2 DIMENSION LUMBER

A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
1. Factory mark each piece of lumber with grade stamp of grading agency.
2. For exposed lumber indicated to receive a stained or natural finish, omit grade stamp and provide certificates of grade compliance issued by grading agency.
3. Provide dressed lumber, S4S.
4. Provide dry lumber with 19 percent maximum moisture content at time of dressing.

B. Minimum Chord Size for Roof Trusses: 2 by 6 inches nominal for both top and bottom chords.

C. Permanent Bracing: Provide wood bracing that complies with requirements for miscellaneous lumber in Division 06 Section "Rough Carpentry."

2.3 METAL CONNECTOR PLATES

A. Source Limitations: Obtain metal connector plates from single manufacturer.

B. General: Fabricate connector plates to comply with TPI 1.

C. Hot-Dip Heavy-Galvanized-Steel Sheet: ASTM A 653/A 653M; Structural Steel (SS), high-strength low-alloy steel Type A (HSLAS Type A), or high-strength low-alloy steel Type B (HSLAS Type B); G185 coating designation; and not less than 0.036 inch thick.
1. Use for wood-preservative-treated lumber and where indicated.

2.4 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
1. Provide fasteners for use with metal framing anchors that comply with written recommendations of metal framing manufacturer.
2. Where trusses are exposed to weather, in ground contact, made from pressure-preservative treated wood, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.

B. Nails, Brads, and Staples: ASTM F 1667.

2.5 METAL FRAMING ANCHORS AND ACCESSORIES

A. Allowable Design Loads: Provide products with allowable design loads, as published by manufacturer, that meet or exceed those indicated. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.

B. Hot-Dip Heavy-Galvanized-Steel Sheet: ASTM A 653/A 653M; Structural Steel (SS), high-strength low-alloy steel Type A (HSLAS Type A), or high-strength low-alloy steel Type B (HSLAS Type B); G185 coating designation; and not less than 0.036 inch thick.
1. Use for wood-preservative-treated lumber and where indicated.

2.6 MISCELLANEOUS MATERIALS

A. Galvanizing Repair Paint: SSPC-Paint 20, with dry film containing a minimum of 94 percent zinc dust by weight.

2.7 FABRICATION

A. Cut truss members to accurate lengths, angles, and sizes to produce close-fitting joints.

B. Fabricate metal connector plates to sizes, configurations, thicknesses, and anchorage details required to withstand design loads for types of joint designs indicated.

C. Assemble truss members in design configuration indicated; use jigs or other means to ensure uniformity and accuracy of assembly with joints closely fitted to comply with tolerances in TPI 1. Position members to produce design camber indicated.
1. Fabricate wood trusses within manufacturing tolerances in TPI 1.

D. Connect truss members by metal connector plates located and securely embedded simultaneously in both sides of wood members by air or hydraulic press.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install wood trusses only after supporting construction is in place and is braced and secured.

B. If trusses are delivered to Project site in more than one piece, assemble trusses before installing.

C. Hoist trusses in place by lifting equipment suited to sizes and types of trusses required, exercising care not to damage truss members or joints by out-of-plane bending or other causes.

D. Install and brace trusses according to TPI recommendations and as indicated.

E. Install trusses plumb, square, and true to line and securely fasten to supporting construction.

F. Space trusses as indicated; adjust and align trusses in location before permanently fastening.

G. Anchor trusses securely at bearing points; use metal truss tie-downs or floor truss hangers as applicable. Install fasteners through each fastener hole in metal framing anchors according to manufacturer's fastening schedules and written instructions.

H. Securely connect each truss ply required for forming built-up girder trusses.

I. Install and fasten permanent bracing during truss erection and before construction loads are applied. Anchor ends of permanent bracing where terminating at walls or beams.
1. Install bracing to comply with Division 06 Section "Rough Carpentry."

J. Install wood trusses within installation tolerances in TPI 1.

K. Do not alter trusses in field. Do not cut, drill, notch, or remove truss members.

L. Replace wood trusses that are damaged or do not meet requirements.
1. Damaged trusses may be repaired according to truss repair details signed and sealed by the qualified professional engineer responsible for truss design, when approved by Architect.

3.2 REPAIRS AND PROTECTION

A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

B. Protect wood trusses from weather. If, despite protection, wood trusses become wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

C. Repair damaged galvanized coatings on exposed surfaces with galvanized repair paint according to ASTM A 780 and manufacturer's written instructions.

END OF SECTION 06175

SECTION 07210 - THERMAL INSULATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
1. Spray polyurethane foam insulation.
2. Fire Barrier (If needed)

1.2 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Research/Evaluation Reports: For foam-plastic insulation, from ICC-ES.

1.3 QUALITY ASSURANCE

A. Surface-Burning Characteristics: As determined by testing identical products according to ASTM E 84 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Protect insulation materials from physical damage and from deterioration due to moisture, soiling, and other sources. Store inside and in a dry location. Comply with manufacturer's written instructions for handling, storing, and protecting during installation.

PART 2 - PRODUCTS

2.1 SPRAY POLYURETHANE FOAM INSULATION

A. Closed-Cell Polyurethane Foam Insulation: ASTM C 1029, Type II, with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, per ASTM E 84.
1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
a. Certainteed
b. Demilec
2. Minimum density of 1.5 lb/cu. ft., thermal resistivity of 6.2 deg F x h x sq. ft./Btu x in. at 75 deg F.

B. Ignition Barrier shall be equal to FireFree88, Safecoat latex or Aldocoat 757.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Comply with insulation manufacturer's written instructions applicable to products and applications indicated.

B. Extend insulation to envelop entire area to be insulated. Cut and fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.

3.2 INSTALLATION OF INSULATION FOR FRAMED CONSTRUCTION

A. Apply insulation units to substrates by method indicated, complying with manufacturer's written instructions.

B. Spray-Applied Insulation: Apply spray-applied insulation according to manufacturer's written instructions. Retain paragraph below for miscellaneous voids if needed for sound deadening, sound absorption, thermal protection, or air-infiltration reduction.

C. Miscellaneous Voids: Install insulation in miscellaneous voids and cavity spaces where required to prevent gaps in insulation using the following materials:
1. Spray Polyurethane Insulation: Apply according to manufacturer's written instructions.

D. Apply thermal barrier in accordance with manufacturer's directions.

END OF SECTION 07210

SECTION 074113 - METAL ROOF PANELS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
1. Exposed-fastener, lap-seam metal roof panels.

1.2 PERFORMANCE REQUIREMENTS

A. General Performance: Metal roof panels shall comply with performance requirements without failure due to defective manufacture, fabrication, installation, or other defects in construction.

B. Hydrostatic-Head Resistance: No water penetration when tested according to ASTM E 2140.

C. Roof shall meet 2007 Florida Building Code requirements

1.3 SUBMITTALS

A. Manufacturer Certificates: Signed by manufacturer certifying that roof panels comply with energy performance requirements specified in "Performance Requirements" Article.
1. Submit evidence of meeting performance requirements.

B. Provide State of Florida or Miami-Dade County NOA

1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver components, sheets, metal roof panels, and other manufactured items so as not to be damaged or deformed. Package metal roof panels for protection during transportation and handling.

B. Unload, store, and erect metal roof panels in a manner to prevent bending, warping, twisting, and surface damage.

C. Stack metal roof panels on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal roof panels to ensure dryness. Do not store metal roof panels in contact with other materials that might cause staining, denting, or other surface damage.

D. Protect strippable protective covering on metal roof panels from exposure to sunlight and high humidity, except to extent necessary for period of metal roof panel installation.

1.5 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace metal roof panel assemblies that fail in materials or workmanship within specified warranty period.
1. Failures include, but are not limited to, the following:
a. Structural failures including rupturing, cracking, or puncturing.
b. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
2. Warranty Period: Five years from date of Substantial Completion.

B. Special Warranty on Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal roof panels that show evidence of deterioration of factory-applied finishes within specified warranty period.
1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:
a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
2. Finish Warranty Period: 10 years from date of Substantial Completion.

C. Special Weathertightness Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace metal roof panel assemblies that fail to remain weathertight, including leaks, within specified warranty period.
1. Weathertight Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PANEL MATERIALS

A. Aluminum Sheet: Coil-coated sheet, ASTM B 209, alloy as standard with manufacturer, with temper as required to suit forming operations and structural performance required.
1. Surface: Smooth, flat finish.
2. Exposed Coil-Coated Finish:
a. 2-Coat Fluoropolymer: AAMA 620. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
3. Concealed Finish: Apply pretreatment and manufacturer's standard white or light-colored acrylic or polyester backer finish, consisting of prime coat and wash coat with a minimum total dry film thickness of 0.5 mil.

B. Panel Sealants:
1. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch wide and 1/8 inch thick.

2.2 UNDERLAYMENT MATERIALS

A. Self-Adhering, High-Temperature Sheet: 40 mils thick minimum, consisting of slip-resisting, polyethylene-film top surface laminated to layer of butyl or SBS-modified asphalt adhesive, with release-paper backing; cold applied. Provide primer when recommended by underlayment manufacturer.
1. W. R. Grace Ultra.
2. Thermal Stability: Stable after testing at 240 deg F; ASTM D 1970.
3. Low-Temperature Flexibility: Passes after testing at minus 20 deg F; ASTM D 1970.

2.3 SUBSTRATE BOARDS

A. Glass-Mat Gypsum Sheathing Board: ASTM C 1177/C 1177M.
1. Type and Thickness: Regular, 1/4 inch.
2. Product: Subject to compliance with requirements, provide Dens-Dek by Georgia-Pacific Corporation.

B. Substrate-Board Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FMG 4470, designed for fastening substrate board to substrate.

2.4 MISCELLANEOUS MATERIALS

A. Panel Fasteners: Self-tapping screws, bolts, nuts, self-locking rivets and bolts, end-welded studs, and other suitable fasteners designed to withstand design loads. Provide exposed fasteners with heads matching color of metal roof panels by means of plastic caps or factory-applied coating. Provide EPDM, PVC, or neoprene sealing washers.

B. Bituminous Coating: Cold-applied asphalt mastic, SSPC-Paint 12, compounded for 15-mil dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

2.5 EXPOSED-FASTENER, LAP-SEAM METAL ROOF PANELS

A. General: Provide factory-formed metal roof panels designed to be installed by lapping side edges of adjacent panels and mechanically attaching panels to supports using exposed fasteners in side laps. Include accessories required for weathertight installation.

B. Vee-Rib-Profile, Exposed-Fastener Metal Roof Panels: Formed with raised, V-shaped ribs and recesses that are approximately same size, evenly spaced across panel width, and with rib/recess sides angled at approximately 45 degrees.
1. Material: Aluminum sheet, 0.032 inch thick.
a. Exterior Finish: 2-coat fluoropolymer.
b. Color: As selected by Architect from manufacturer's full range.
2. Rib Spacing: 5.3 inches o.c.
3. Panel Coverage: 30 inches.
4. Panel Height: 1.375 inches.

2.6 ACCESSORIES

A. Roof Panel Accessories: Provide components approved by roof panel manufacturer and as required for a complete metal roof panel assembly including trim, copings, fasciae, corner units, ridge closures, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal roof panels unless otherwise indicated.
1. Closures: Provide closures at eaves and ridges, fabricated of same metal as metal roof panels.
2. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch- thick, flexible closure strips; cut or premolded to match metal roof panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.
3. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.

2.7 FABRICATION

A. Fabricate and finish metal roof panels and accessories at the factory to greatest extent possible, by manufacturer's standard procedures and processes and as necessary to fulfill indicated performance requirements. Comply with indicated profiles and with dimensional and structural requirements.

B. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of panel.

C. Fabricate metal roof panel side laps with factory-installed captive gaskets or separator strips that provide a tight seal and prevent metal-to-metal contact, in a manner that will seal weathertight and minimize noise from movements within panel assembly.

D. Sheet Metal Accessories: Fabricate flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to the design, dimensions, metal, and other characteristics of item indicated.
1. Form exposed sheet metal accessories that are without excessive oil canning, buckling, and tool marks and that are true to line and levels indicated, with exposed edges folded back to form hems.
2. End Seams for Aluminum: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with epoxy seam sealer. Rivet joints for additional strength.
3. Fabricate cleats and attachment devices of size and metal thickness recommended by SMACNA's "Architectural Sheet Metal Manual" or by metal roof panel manufacturer for application, but not less than thickness of metal being secured.

ARCHITECTURAL SPECIFICATIONS

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Landscape No. LC0000298
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Architect of Record

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No.	DATE	Revision

Designed:	CPH, INC.
Drawn:	JLD / KAR
Checked:	BKS
Job No.:	M13112
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SPECIFICATIONS
KINGFISH BOAT RAMP RESTROOMS
752 MANATEE AVENUE
HOLMES BEACH, FLORIDA 34217

NOT FOR CONSTRUCTION

THIS SHEET NOT VALID FOR CONSTRUCTION WITHOUT COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND

Sheet No.
G051

2.8 FINISHES

A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

C. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine solid roof sheathing to verify that sheathing joints are supported by framing or blocking and that installation is within flatness tolerances required by metal roof panel manufacturer.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 UNDERLAYMENT INSTALLATION

A. Self-Adhering Sheet Underlayment: Apply primer if required by manufacturer. Comply with temperature restrictions of underlayment manufacturer for installation. Apply wrinkle free, in shingle fashion to shed water, and with end laps of not less than 6 inches staggered 24 inches between courses. Overlap side edges not less than 3-1/2 inches. Roll laps with roller. Cover underlayment within 14 days.

3.3 PREPARATION

A. Substrate Board: Install substrate boards over roof sheathing on entire roof surface. Attach with substrate-board fasteners.
1. Install substrate board with long joints in continuous straight lines, perpendicular to roof slopes with end joints staggered between rows. Tightly butt substrate boards together.
2. Comply with UL requirements for fire-rated construction.

B. Miscellaneous Framing: Install subpurlins, eave angles, furring, and other miscellaneous roof panel support members and anchorage according to metal roof panel manufacturer's written instructions.

3.4 METAL ROOF PANEL INSTALLATION, GENERAL

A. Provide metal roof panels of full length from eave to ridge unless otherwise indicated or restricted by shipping limitations.

B. Thermal Movement. Rigidly fasten metal roof panels to structure at one and only one location for each panel. Allow remainder of panel to move freely for thermal expansion and contraction. Predrill panels for fasteners.
1. Point of Fixity: Fasten each panel along a single line of fixing located at ridge.
2. Avoid attaching accessories through roof panels in a manner that will inhibit thermal movement.

C. Install metal roof panels as follows:
1. Commence metal roof panel installation and install minimum of 300 sq. ft. in presence of factory-authorized representative.
2. Field cutting of metal panels by torch is not permitted.
3. Install panels perpendicular to purlins.
4. Locate and space fastenings in uniform vertical and horizontal alignment.
5. Provide metal closures at rake edges and each side of ridge caps.
6. Flash and seal metal roof panels with weather closures at eaves, rakes, and perimeter of all openings.
7. Install ridge caps as metal roof panel work proceeds.
8. End Splices: Locate panel end splices over, but not attached to, structural supports. Stagger panel end splices to avoid a four-panel splice condition.
9. Install metal flashing to allow moisture to run over and off metal roof panels.

D. Fasteners:
1. Aluminum Roof Panels: Use aluminum or stainless-steel fasteners for surfaces exposed to the exterior and aluminum or galvanized-steel fasteners for surfaces exposed to the interior.

E. Anchor Clips: Anchor metal roof panels and other components of the Work securely in place, using manufacturer's approved fasteners according to manufacturers' written instructions.

F. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with bituminous coating, by applying rubberized-asphalt underlayment to each contact surface, or by other permanent separation as recommended by metal roof panel manufacturer.
1. Coat back side of roof panels with bituminous coating where roof panels will contact wood, ferrous metal, or cementitious construction.

G. Joint Sealers: Install gaskets, joint fillers, and sealants where indicated and where required for weatherproof performance of metal roof panel assemblies. Provide types of gaskets, fillers, and sealants indicated or, if not indicated, types recommended by metal roof panel manufacturer.
1. Seal metal roof panel end laps with double beads of tape or sealant, full width of panel. Seal side joints where recommended by metal roof panel manufacturer.
2. Prepare joints and apply sealants to comply with requirements in Division 07 Section "Joint Sealants."

3.5 METAL ROOF PANEL INSTALLATION

A. Lap-Seam Metal Roof Panels: Fasten metal roof panels to supports with fasteners at each lapped joint at location and spacing recommended by manufacturer.
1. Apply panels and associated items for neat and weathertight enclosure. Avoid "panel creep" or application not true to line.
2. Lap ribbed or fluted sheets one full rib corrugation.
3. Provide metal-backed EPDM washers under heads of exposed fasteners bearing on weather side of metal roof panels.
4. Locate and space exposed fasteners in uniform vertical and horizontal alignment. Use proper tools to obtain controlled uniform compression for positive seal without rupture of washer.
5. Install screw fasteners with power tools having controlled torque adjusted to compress washer tightly without damage to washer, screw threads, or panels. Install screws in predrilled holes.
6. Provide sealant tape at lapped joints of metal roof panels and between panels and protruding equipment, vents, and accessories.
7. Apply a continuous ribbon of sealant tape to weather-side surface of fastenings on end laps, and on side laps of nesting-type panels; on side laps of corrugated nesting-type, ribbed, or fluted panels; and elsewhere as needed to make panels weatherproof to driving rains.
8. At panel end splices, nest panels with minimum 6-inch end lap, sealed with butyl-rubber sealant and fastened together by interlocking clamping plates.

3.6 ACCESSORY INSTALLATION

A. General: Install accessories with positive anchorage to building and weathertight mounting and provide for thermal expansion. Coordinate installation with flashings and other components.
1. Install components required for a complete metal roof panel assembly including trim, copings, ridge closures, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items.

B. Pipe Flashing: Form flashing around pipe penetration and metal roof panels. Fasten and seal to metal roof panels as recommended by manufacturer.

3.7 CLEANING

A. Remove temporary protective coverings and strippable films, if any, as metal roof panels are installed unless otherwise indicated in manufacturer's written installation instructions. On completion of metal roof panel installation, clean finished surfaces as recommended by metal roof panel manufacturer. Maintain in a clean condition during construction.

B. Replace metal roof panels that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION 074113

SECTION 07460 - SIDING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Fiber cement siding panels, fascia, moulding and accessories.

1.2 SUBMITTALS

A. Product Data: Manufacturer's data sheets on each product to be used, including:
1. Preparation instructions and recommendations.
2. Storage and handling requirements and recommendations.
3. Installation methods.

B. Shop Drawings: Provide detailed drawings of atypical non-standard applications of cementitious siding materials which are outside the scope of the standard details and specifications provided by the manufacturer.

C. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

D. Verification Samples: For each finish product specified, two samples, minimum size 4 by 6 inches (100 by 150 mm), representing actual product, color, and patterns.

E. Provide NOA from State of Florida

1.3 QUALITY ASSURANCE

A. Installer Qualifications: Minimum of 2 years experience with installation of similar products.

B. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
1. Finish areas designated by Architect.
2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
3. Refinish mock-up area as required to produce acceptable work.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Store siding on edge or lay flat on a smooth level surface. Protect edges and corners from chipping. Store sheets under cover and keep dry prior to installing.

C. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.5 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.6 WARRANTY

A. Product Warranty: Limited product warranty against manufacturing defects.
1. Hardieplank lap and Hardipanel vertical siding for 50 years.
2. HardieTrim for 10 years.

B. Finish Warranty: Limited product warranty against manufacturing finish defects.
1. When used for its intended purpose, properly installed and maintained according to Hardie's published installation instructions, James Hardie's ColorPlus finish with ColorPlus Technology, for a period of 15 years from the date of purchase: will not peel; will not crack; and will not chip.

C. Workmanship Warranty: Application limited warranty for 2 years.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: James Hardie Building Products, Inc; 26300 La Alameda, Suite 250, Mission Viejo, CA 92691. ASD. Toll Free Residential: (888) J-HARDIE. Toll Free Commercial: (866) 274-3464. Tel: (949) 348-1800. Fax: (949) 367-0185. Email: info@JamesHardie.com. Web - Residential: http://www.jameshardie.com. Web - Commercial: http://www.jameshardiecommercial.com.

2.2 SIDING

A. Code Compliance Requirement for Materials:
1. National Evaluation Report No. NER 405 (BOCA, ICBO, SBCCI)
2. Metro Dade County, Florida Acceptance No. 07-0148, 04
3. US Department of Housing and Urban Development Materials Release 1263d
4. Non-asbestos fiber-cement siding where required to be non-combustible shall be tested in accordance with ASTM E136.

B. Lap Siding: Hardieplank as manufactured by James Hardie Building Products, Inc.
1. Type: Smooth 7-1/4 inches (159 mm) with 6 inches (127 mm) exposure.

C. Trim: Hardietrim Fascia and Moulding as manufactured by James Hardie Building Products, Inc.

2.3 FASTENERS

A. Masonry Framing Fasteners:
1. Concrete Walls: Erica Stud Nail, ET&F ASM No.-144-125, 0.14 inch shank by 0.30 inch head by 2 inches corrosion resistant nail.
2. Wood framing: 6d common corrosion resistant nails.

2.4 FINISHES

A. Factory Primer: Provide factory applied universal primer.
1. Primer: PrimePlus by James Hardie.

B. Factory Finish: Refer to Exterior Finish Schedule.
1. Product: ColorPlus by James Hardie.

C. Factory Finish Color for Trim, Soffit and Siding Colors:
1. Boothbay BlueJH70-20

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If framing preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

C. Nominal 2 inch by 4 inch (51 m by 102 mm) wood framing selected for minimal shrinkage and complying with local building codes. Minimum 1-1/2 inches (38 mm) face and straight, true, of uniform dimensions and properly aligned.
1. Protect siding from other trades.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION - HARDIEPLANK SIDING

A. Install materials in strict accordance with manufacturer's installation instructions.

B. Starting: Install a minimum 1/4 inch (6 mm) thick lath starter strip at the bottom course of the wall. Apply planks horizontally with minimum 1-1/4 inches (32 mm) wide laps at the top. The bottom edge of the first plank overlaps the starter strip.

C. Allow minimum vertical clearance between the edge of siding and any other material in strict accordance with the manufacturer's installation instructions.

D. Align vertical joints of the planks over framing members.

E. Maintain clearance between siding and adjacent finished grade.

F. Locate splices at least 12 inches (305 mm) away from window and door openings.

G. Wind Resistance: Where a specified level of wind resistance Is required Hardieplank lap siding is installed to framing members and secured with fasteners described in Table No. 2 in National Evaluation Service Report No. NER-405.

3.4 INSTALLATION - HARDIETRIM FASCIA AND MOULDING

A. Install materials in strict accordance with manufacturer's installation instructions. Install flashing around all wall openings.

B. Fasten through trim into structural framing or code complying sheathing. Fasteners must penetrate minimum 3/4 inch (19 mm) or full thickness of sheathing. Additional fasteners may be required to ensure adequate security.

C. Place fasteners no closer than 3/4 inch (19 mm) and no further than 2 inches (51 mm) from side edge of trim board and no closer than 1 inch (25 mm) from end. Fasten maximum 16 inches (406 mm) on center.

D. Maintain clearance between trim and adjacent finished grade.

E. Trim inside corner with single board.

F. Allow 1/8 inch gap between trim and siding.

G. Seal gap with high quality, paint-able caulk.

H. Overlay siding with Hardietrim moulding at windows, doors and inside corners.

I. Fasten through overlapping boards. Do not nail between lap joints.

J. Overlay siding with single board of outside corner board then align second corner board to outside edge of first corner board. Do not fasten Hardietrim boards to Hardietrim boards.

K. Shim frieze board as required to align with corner trim.

L. Install Hardietrim fascia over structural subfascia.

3.5 FINISHING

A. Finish factory primed siding with a minimum of one coat of high quality 100 percent acrylic or latex or oil based exterior grade paint within 180 days of installation. Follow paint manufacturer's written product recommendation and written application instructions.

3.6 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION 07460

SECTION 07920 - JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
1. Silicone joint sealants.
2. Latex joint sealants.

1.2 QUALITY ASSURANCE

A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.

B. Source Limitations: Obtain each kind of joint sealant from single source from single manufacturer.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint-sealant manufacturer, based on testing and field experience.

B. Liquid-Applied Joint Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied joint sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.

C. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

2.2 SILICONE JOINT SEALANTS

A. Mildew-Resistant, Single-Component, Acid-Curing Silicone Joint Sealant: ASTM C 920, Type S, Grade NS, Class 25, for Use NT.
1. Products: Subject to compliance with requirements, **[provide one of the following]**:
a. BASF Building Systems; Omniplus.
b. Dow Corning Corporation; 786 Mildew Resistant.
c. GE Advanced Materials - Silicones; Sanitary SCS1700.
d. May National Associates, Inc.; Bondaflex Sil 100 WF.
e. Tremco Incorporated; Tremsil 200 Sanitary.

2.3 LATEX JOINT SEALANTS

A. Latex Joint Sealant: Acrylic latex or siliconized acrylic latex, ASTM C 834, Type OP, Grade NF.
1. Products: Subject to compliance with requirements, provide one of the following:
a. BASF Building Systems; Sonolac.
b. Bostik, Inc.; Chem-Calk 600.
c. Pecora Corporation; AC-20+.
d. Schnee-Morehead, Inc.; SM 8200.
e. Tremco Incorporated; Tremflex 834.

2.4 JOINT SEALANT BACKING

A. General: Provide sealant backings of material that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

B. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin), and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

2.5 MISCELLANEOUS MATERIALS

A. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
2. Clean porous joint substrate surfaces by brushing, grinding, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:
a. Unglazed surfaces of ceramic tile.

B. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT SEALANTS

A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.

B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

C. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
1. Do not leave gaps between ends of sealant backings.
2. Do not stretch, twist, puncture, or tear sealant backings.
3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.

D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.

E. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
1. Place sealants so they directly contact and fully wet joint substrates.
2. Completely fill recesses in each joint configuration.
3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

F. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
1. Remove excess sealant from surfaces adjacent to joints.
2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
3. Provide concave joint profile per Figure 8A in ASTM C 1193, unless otherwise indicated.
a. Use masking tape to protect surfaces adjacent to recessed tooled joints.

3.4 JOINT-SEALANT SCHEDULE

A. Joint-Sealant Application: Exterior joints in vertical surfaces and horizontal nontraffic surfaces.
1. Joint Locations:
a. Perimeter joints of frames of doors.
2. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.

B. Joint-Sealant Application: Mildew-resistant interior joints in vertical surfaces and horizontal nontraffic surfaces.
1. Joint Sealant Location:
a. Joints between plumbing fixtures and adjoining walls, floors, and counters.
2. Joint Sealant: Single component, nonsag, mildew resistant, acid curing.
3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.

END OF SECTION 07920

ARCHITECTURAL SPECIFICATIONS

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Architect of Record
BROOK K. SHERRARD
CPH, Inc.

CELEBRATING 40 +YEARS cph

No.	DATE	Revision

Designed:	CPH, INC.
Drawn:	JLD / KAR
Checked:	BKS
Job No.:	M13112
08/13/21	© 2021

SPECIFICATIONS

KINGFISH BOAT RAMP RESTROOMS

752 MANATEE AVENUE
HOLMES BEACH, FLORIDA 34217

NOT FOR CONSTRUCTION

THIS SHEET NOT VALID FOR CONSTRUCTION WITHOUT COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND

Sheet No.
G052

SECTION 08110 - STEEL DOORS AND FRAMES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Steel doors
B. Steel frames

1.02 SUBMITTALS

A. Submit for review six (6) complete copies of the hollow metal shop drawings covering complete identification of items required for the project. Include manufacturer's names and identification of product.
1. Shop Drawings: submit complete and detailed with respect to quantities, dimensions, specified performance, and design criteria, materials and similar data to enable the Architect to review the information as required.
2. Include NOA or FBC numbers validating compliance with Miami-Dade County Product Control Approval System of the Florida Building Code Approval System.

B. Indicate door elevations, internal reinforcement, closure method, and cutouts for louvers.
C. Submit manufacturer's installation instructions, including a current copy of ANSI A250.11 as part of the shop drawing submittal.

1.03 DELIVERY, STORAGE, AND HANDLING

A. Storage of Doors
1. Store doors vertically in a dry area, under proper cover. Place the units on at least 4" high wood sills on floors in a manner that will prevent rust and damage. Avoid storage in non-vented plastic or canvas shelters, which create a humidity chamber and promote rusting. If the door becomes wet, or moisture appears, remove protective wrapping immediately. Provide a 4" space between the doors to permit air circulation. Proper storage is required to meet the requirements of ANSI/SDI A250.10 and HMMA 840.

B. Storage of Frames
1. Store frames in an upright position with heads uppermost under cover on 4" wood sills on floors in a manner that will prevent rust and damage. Do not use non-vented plastic or canvas shelters, which create a humidity chamber and promote rusting. Store assembled frames in a vertical position, five units maximum in a stack. Provide a 2" space between frames to permit air circulation.
2. Provide proper storage for doors and frames, to maintain the quality and integrity of the factory applied paint, and maintain the requirements of ANSI/SDI A250.10 and HMMA 840.
3. Sand, touch up and clean prime painted surfaces prior to finish painting in accordance with the manufacturer's instructions.

1.04 COORDINATION

A. Coordinate Work with other directly affected sections involving manufacture or fabrication of internal cutouts and reinforcement for door hardware, electric devices and recessed items.
B. Coordinate work with frame opening construction, door and hardware installation.
C. Sequence installation to accommodate required door hardware.
D. Verify field dimensions for factory assembled frames prior to fabrication.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Acceptable manufacturers for doors and frames specified are listed below. Only the products of the listed manufacturers will be accepted. No alternates will be accepted.
1. Steelcraft, Cincinnati, Ohio

B. Provide steel doors and frames from a single manufacturer.

2.02 DOORS:

A. Hurricane Doors: Designed to resist the cyclic pressures, static pressures and missile impact loads as detailed in the Miami-Dade County Product Control Approval System of the Florida Building Code Approval System and meets the requirements of Miami - Dade County test protocols PA 201, PA 202, PA 203 and Florida Building Code test protocols TAS 201, TAS 202 and TAS 203.
B. Construct doors to these designs and gages:
1. Exterior Doors: Zinc-Iron Alloy-Coated galvannealed steel, ASTM A 653, Class A60, 16 gage Zinc-Iron Alloy-Coated galvannealed steel, with closed tops.
a. Include galvannealed components and internal reinforcements with galvannealed doors.
b. Close tops of exterior swing-out doors to eliminate moisture penetration. Galvannealed steel top caps are permitted.
2. Factory prime painted doors indicated on door schedule as HM.
3. Hardware Reinforcements:
a. Hinge reinforcements for full mortise hinges: minimum 7 gage [0.180" (4.7mm)].
b. Lock reinforcements: minimum 16 gage [0.053" (1.3mm)].
c. Closer reinforcements: minimum 14 gage [0.067" (1.7mm)], 20" long.
d. Galvannealed doors: include galvannealed hardware reinforcements.
e. Projection welded hinge and lock reinforcements to the edge of the door.
f. Provided adequate reinforcements for other hardware as required.

C. Full Flush Type Doors Construction
1. ANSI-A250.4 criteria and tested to 5,000,000 operating cycles.
2. Approved door core constructions:
a. Honeycomb: Reinforced, stiffened, sound deadened and insulated with impregnated Kraft honeycomb core completely filling the inside of the doors and laminated to inside faces of both panels using contact adhesive applied to both panels and honeycomb core.
b. Polystyrene: Reinforced, stiffened, sound deadened and insulated with a rigid polystyrene core bonded to the inside faces of both panels with contact adhesive. Fill voids around the perimeter of the door with honeycomb.
c. Steel Stiffened: Vertically stiffened with steel stiffeners and sound deadened with fiberglass batt insulation. Fabricate hat shaped stiffeners from 20 gage (.8 mm). Locate vertical interior webs 6" (152 mm) apart, welded to the inside of the face sheets 5" (127 mm) on center. Weld the hat shape stiffeners together at the top and bottom of the door. Fill areas between stiffeners with fiberglass.
3. Vertical edge seams: Provide doors with continuous vertical mechanical inter-locking joints at lock and hinge edges with visible edge seams. Apply a continuous bead of structural epoxy in the internal vertical connection.
a. Welded Vertical Edges (W): Continuous vertical mechanical interlocking joint; edge seams welded, epoxy filled, and ground smooth.
4. Bevel hinge and lock door edges 1/8 inch (3 mm) in 2 inches (50 mm). Square edges on hinge and/or lock stiles are not acceptable.
5. Reinforce top and bottom of doors with galvannealed 14 gage, welded to both panels.

D. Louver Requirements:
1. General: Provide louvers in accordance with door manufacturer's instructions. Louver sizes shall be found on the architectural drawings.
2. Louver Manufacturer: Air Louvers; Security Louver 1500-A

E. Threshold Requirements:
1. General: Provide thresholds in accordance with door manufacturer's instructions.
2. Threshold Manufacturer: Pemco; 2005 series with silicone or vinyl seal

F. Electrical Requirements:
1. General: Coordinate electrical requirements for doors and frames. Make provisions for installation of electrical items arranged so that wiring can be readily removed and replaced.
2. Doors with Electric Hinges:
a. General: Furnish conduit raceway to permit wiring from electric door hardware.
b. Hinge Locations: Provide electric hinge at intermediate or center location. Top or bottom electric hinge locations are not acceptable.
c. Refer to 08710 for electrified hardware items.

2.03 DOOR FRAMES:

A. Construct exterior and metal door frames to these profiles, designs and gages;
1. Exterior Frames: Zinc-Iron Alloy-Coated galvannealed steel, ASTM A 653, Class A60, 16 gage Zinc-Iron Alloy-Coated galvannealed steel.

B. Flush Frames: knocked down for field assembly or set-up and welded with temporary shipping bars. Factory die-mitered corner connections reinforced with four integral tabs to secure and interlock at jambs to head. Unless otherwise indicated, frame will have 2" faces and 5/8" stops. Frame depths per the architectural door schedule.
1. Provide frames with a minimum of six wall anchors and two adjustable base anchors of manufacturer's standard design. Acceptable products:
2. Provide welded 3 sided frames as follows:
Face welded: Weld miter joints between head and jamb faces completely along their length either internally or externally. The remaining elements of the frame profile (soffit, stop and rabbets) are not welded. Grind and finish face

C. Prepare frames to receive inserted type door silencers (3) per strike jamb on single doors, and (2) per head for pair of doors. Stick-on silencers are not permitted.
D. Frame Hardware Reinforcements:
1. Mortise hinge reinforcement: minimum 7 gage [0.180" (4.7mm)].
a. Provide high frequency hinge reinforcement for top hinge on all exterior, cross corridor, and stairwell frames, in accordance with SDI 111-H, Example "A" Application, where full mortise hinges are specified.
2. Strike reinforcements: minimum 16 gage [0.053" (1.3mm)] and prepared for an ANSI-A115.1-2 strike.
3. Closer reinforcement: minimum 14 gage [0.067" (1.7mm)] steel.
4. Projection weld hinge and strike reinforcements to the door frame.
5. Provide metal plaster guards for all mortised cutouts.
6. Provide adequate reinforcements for other hardware as required.
7. Include galvanized hardware reinforcements in all galvannealed frames.

E. Electrical Requirements:
1. General: Coordination all electrical requirements for doors and frames. Make provisions for installation of electrical items arranged so that wiring can be readily removed and replaced.
a. Provide cutouts and reinforcements required for metal door frame to accept electric components.
b. Provide cutouts and reinforcements required to accept security system components.
c. Refer to 08710 for electrified hardware items.

2.05 FABRICATION:

A. Face Welded Frames:
1. Continuous face weld the joint between the head and jamb faces along their length either internally or externally. Grind, prime paint, and finish smooth face joints with no visible face seams.

2.06 FINISH:

A. Doors, frames and frame components are required to be cleaned, phosphatized, and finished with one coat of baked-on rust inhibiting prime paint in accordance with the ANSI/SDI A250.10 "Test Procedures and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames."

PART 3 EXECUTION:

3.01 INSTALLATION:

A. Install doors and frames in accordance with Steel Door Institute's recommended erection instructions for steel frames ANSI A250.11.
B. Remove temporary steel spreaders prior to installation of frames.
C. Set frames accurately in position; plumb, align and brace until permanent anchors are set. After wall construction is complete, remove temporary wood spreaders.
1. Field splice only at approved locations indicated on the shop drawings. Weld, grind, and finish as required to conceal evidence of splicing on exposed faces.

D. Provide full height 3/8" to 1-1/2" thick strip of polystyrene foam blocking at frames requiring grouting where continuous hinges are specified. Apply the strip to the back of the frame, where the hinge is to be installed, to facilitate field drilling or tapping.
E. Where grouting is required in masonry, provide and install temporary bottom and intermediate wood spreaders to maintain proper width and avoid bowing or deforming of frame members. Refer to ANSI A250.11-2001, Standard.
2. Hollow Metal Frames to receive grouting: comply with a current copy of ANSI/SDI Standard A250.8, paragraph 4.2.2, whereby grout will be mixed to provide a 4" maximum slump consistency and hand troweled into place. Do not use grout mixed to a thinner, pumpable consistency; this practice is not recommended and not permissible. Refer to HMMA 820 TN01 Grouting Hollow Metal Frames.

F. Provide a vertical wood brace during grouting of frame at openings over 4'0" wide, to prevent sagging of frame header.
G. Apply hardware in accordance with hardware manufacturers' instructions and Section 08710 FINISH HARDWARE of these Specifications. Install hardware with only factory-provided fasteners. Adjust door installation to provide uniform clearance at head and jambs, to achieve maximum operational effectiveness and appearance.

3.02 ADJUSTING:

A. Final Adjustments: Adjust operating doors and hardware items just prior to final inspection and acceptance by the Owner and Architect. Leave work in complete and proper operating condition. Remove and replace defective work, including doors or frames that are damaged, bowed or otherwise unacceptable.
B. Prime Coat Touch-Up: Immediately after erection, sand smooth rusted or damaged areas of prime coat, and apply touch-up of compatible air-drying primer.

3.03 PROTECTION

A. Provide protective measures required throughout the construction period to ensure that door and frame units will be without damage or deterioration, other than normal weathering, at time of acceptance.

SECTION 08620 - UNIT SKYLIGHTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
1. Unit skylights mounted on curbs.

1.2 SUBMITTALS

A. Product Data: For each type of unit skylight indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for unit skylights.

B. Provide State of Florida or Miami-Dade County NOA.

1.3 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of unit skylights that fail in materials or workmanship within specified warranty period.
1. Failures include, but are not limited to, the following:
a. Uncontrolled water leakage.
b. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
c. Yellowing of acrylic glazing.
2. Warranty Period: Ten years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS
1. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings

2.2 MATERIALS

A. Provide Solatube 290 DS, with Type MR Flashing kit, vusion diffuser, and required accessories.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Proceed with unit skylight installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Coordinate installation of unit skylight with installation of substrates, vapor retarders, roofing membrane, and flashing as required to ensure that each element of the Work performs properly and that combined elements are waterproof and weathertight.

B. Comply with recommendations in AAMA 1607 and with manufacturer's written instructions for installing unit skylights.

C. Install unit skylights level, plumb, and true to line, without distortion.

D. Anchor unit skylights securely to supporting substrates.

E. Where metal surfaces of unit skylights will contact incompatible metal or corrosive substrates, including preservative-treated wood, apply bituminous coating on concealed metal surfaces, or provide other permanent separation recommended in writing by unit skylight manufacturer.

F. Set unit skylight flanges in thick bed of roofing cement to form a seal unless otherwise indicated.

G. Where cap flashing is indicated, install to produce waterproof overlap with roofing or roof flashing. Seal with thick bead of mastic sealant except where overlap is indicated to be left open for ventilation.

3.3 CLEANING

A. Clean exposed unit skylight surfaces according to manufacturer's written instructions. Touch up damaged metal coatings and finishes.

B. Remove excess sealants, glazing materials, dirt, and other substances.

C. Remove and replace glazing that has been broken, chipped, cracked, abraded, or damaged during construction period.

D. Protect unit skylight surfaces from contact with contaminating substances resulting from construction operations.

END OF SECTION 08620

SECTION 08710 - DOOR HARDWARE

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:
1. Commercial door hardware for swinging doors.
2. Cylinders for doors specified in other Sections.

1.2 SUBMITTALS

A. Product Data: Include construction and installation details, material descriptions, dimensions of individual components and profiles, and finishes.

B. Warranty: Special warranty specified in this Section.

1.3 QUALITY ASSURANCE

A. Installer Qualifications: An employer of workers trained and approved by lock manufacturer.
1. Installer's responsibilities include supplying and installing door hardware and providing a qualified Architectural Hardware Consultant available during the course of the Work to consult with Contractor, Architect, and Owner about door hardware and keying.
2. Installer shall have warehousing facilities in Project's vicinity.
3. Scheduling Responsibility: Preparation of door hardware and keying schedules.

B. Architectural Hardware Consultant Qualifications: A person who is currently certified by DHI as an Architectural Hardware Consultant and who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project.

C. Source Limitations: Obtain each type and variety of door hardware from a single manufacturer, unless otherwise indicated.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up for door hardware delivered to Project site.

B. Tag each item or package separately with identification related to the final door hardware sets, and include basic installation instructions, templates, and necessary fasteners with each item or package.

1.5 COORDINATION

A. Templates: Distribute door hardware templates for doors, frames, and other work specified to be factory prepared for installing door hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

1.6 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period.
1. Failures include, but are not limited to, the following:
a. Structural failures including excessive deflection, cracking, or breakage.
b. Faulty operation of operators and door hardware.
c. Deterioration of metals, metal finishes, and other materials beyond normal weathering and use.
2. Warranty Period: Three years from date of Substantial Completion, except as follows:
a. Exit Devices: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

A. General: Provide door hardware for each door to comply with requirements in this Section and door hardware sets indicated in Part 3 "Door Hardware Sets" Article.

B. Designations: Requirements for design, grade, function, finish, size, and other distinctive qualities of each type of door hardware are indicated in Part 3 "Door Hardware Sets" Article. Products are identified by using door hardware designations, as follows:
1. Named Manufacturers' Products: Manufacturer and product designation are listed for each door hardware type required for the purpose of establishing minimum requirements. Manufacturers' names are abbreviated in Part 3 "Door Hardware Sets" Article.

C. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, manufacturers specified.

2.2 HINGES, GENERAL

A. Quantity: Three Hinges: For doors with heights 61 to 90 inches.

B. Template Requirements: Except for hinges and pivots to be installed entirely (both leaves) into wood doors and frames, provide only template-produced units.

C. Hinge Weight: Unless otherwise indicated, provide the following:
1. Entrance Doors: Heavy-weight hinges.
2. Doors with Closers: Antifriction-bearing hinges.

D. Hinge Base Metal: Unless otherwise indicated, provide the following:
1. Exterior Hinges: Stainless steel, with stainless steel Non-Removable Pin (NRP).

E. Fasteners: Comply with the following:
1. Machine Screws: For metal doors and frames. Install into drilled and tapped holes.

2.3 HINGES

A. Butts and Hinges: BHMA A156.1. Listed under Category A in BHMA's "Certified Product Directory."

B. Template Hinge Dimensions: BHMA A156.7.

C. Available Manufacturers:
1. Stanley per Door N.O.A.
2. Hager per Door N.O.A..

2.4 OPERATING TRIM

A. Standard: BHMA A156.6.

B. Materials: Fabricate from stainless steel, unless otherwise indicated.

C. Available Manufacturers:
1. Schlage per N.O.A..
2. IVES Hardware; an Ingersoll-Rand Company (IVS).

2.5 STOPS AND HOLDERS

A. Stops and Bumpers: BHMA A156.16, Grade 1.
1. Provide floor stops for doors unless wall or other type stops are scheduled or indicated. Do not mount floor stops where they will impede traffic. Where floor or wall stops are not appropriate, provide overhead holders.

B. Available Manufacturers:
1. IVES Hardware; an Ingersoll-Rand Company (IVS) per N.O.A.

2.6 FABRICATION

A. Manufacturer's Nameplate: Do not provide products that have manufacturer's name or trade name displayed in a visible location except in conjunction with required fire-rated labels and as otherwise approved by Architect.

B. Base Metals: Produce door hardware units of base metal, fabricated by forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness. Furnish metals of a quality equal to or greater than that of specified door hardware units and BHMA A156.18. Do not furnish manufacturer's standard materials or forming methods if different from specified standard.

C. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to commercially recognized industry standards for application intended, except aluminum fasteners are not permitted. Provide Phillips flat-head screws with finished heads to match surface of door hardware, unless otherwise indicated.
1. Concealed Fasteners: For door hardware units that are exposed when door is closed, except for units already specified with concealed fasteners. Do not use through bolts for installation where bolt head or nut on opposite face is exposed unless it is the only means of securely attaching the door hardware. Where through bolts are used on hollow door and frame construction, provide sleeves for each through bolt.
2. Spacers or Sex Bolts: For through bolting of hollow-metal doors.

2.7 FINISHES

A. Standard: BHMA A156.18, as indicated in door hardware sets.

B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

ARCHITECTURAL SPECIFICATIONS

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Architect of Record
BROOK K. SHERRARD
CPH, Inc.

CELEBRATING 40 +YEARS cph

Revision | No. | DATE

Designed:	CPH, INC.
Drawn:	JLD / KAR
Checked:	BKS
Job No.:	M13112
08/13/21	© 2021

SPECIFICATIONS
KINGFISH BOAT RAMP RESTROOMS
752 MANATEE AVENUE
HOLMES BEACH, FLORIDA 34217

NOT FOR CONSTRUCTION

THIS SHEET NOT VALID FOR CONSTRUCTION WITHOUT COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND

Sheet No.
G053

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Mounting Heights: Mount door hardware units at heights indicated as follows unless otherwise indicated or required to comply with governing regulations.

B. Install each door hardware item to comply with manufacturer's written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.
1. Set units level, plumb, and true to line and location. Adjust and reinforce attachment substrates as necessary for proper installation and operation.
2. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.

3.3 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

3.4 CLEANING AND PROTECTION

A. Clean adjacent surfaces soiled by door hardware installation.

B. Clean operating items as necessary to restore proper function and finish.

C. Provide final protection and maintain conditions that ensure that door hardware is without damage or deterioration at time of Substantial Completion.

3.5 DOOR HARDWARE SETS

A. Type 1 Doors No. 1, 2 & 3
Each shall be given:
Electrified locks with timer
1 Schlage ND Series Lockset with Athens lever style, entrance / office lock, finish 626 Satin Chromium Plated
Door 3 shall also have the Tactile Warning on outside lever
1 LCN 4100 surface mounted closer with metal cover, finish 626 Satin Chromium Plated
Balance as required by NOA.

END OF SECTION - 08710

SECTION 09220 - PORTLAND CEMENT PLASTER

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:
1. Exterior portland cement plasterwork (stucco) on solid- plaster bases.

1.3 DELIVERY, STORAGE, AND HANDLING

A. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic, and other causes.

1.4 PROJECT CONDITIONS

A. Comply with ASTM C 926 requirements.

B. Exterior Plasterwork:
1. Apply and cure plaster to prevent plaster drying out during curing period. Use procedures required by climatic conditions, including moist curing, providing coverings, and providing barriers to deflect sunlight and wind.
2. Apply plaster when ambient temperature is greater than 40 deg F.
3. Protect plaster coats from freezing for not less than 48 hours after set of plaster coat has occurred.

PART 2 - PRODUCTS

2.1 METAL LATH

A. Expanded-Metal Lath: ASTM C 847 with ASTM A 653/A 653M, G60, hot-dip galvanized zinc coating.
1. Diamond-Mesh Lath: Flat.
a. Weight: 2.5 lb/sq. yd..

2.2 ACCESSORIES

A. General: Comply with ASTM C 1063 and coordinate depth of trim and accessories with thicknesses and number of plaster coats required.

2.3 MISCELLANEOUS MATERIALS

A. Water for Mixing: Potable and free of substances capable of affecting plaster set or of damaging plaster, lath, or accessories.

B. Fiber for Base Coat: Alkaline-resistant glass or polypropylene fibers, 1/2 inch long, free of contaminants, manufactured for use in portland cement plaster.

C. Bonding Compound: ASTM C 932.

D. Steel Drill Screws: For metal-to-metal fastening, ASTM C 1002 or ASTM C 954, as required by thickness of metal being fastened; with pan head that is suitable for application; in lengths required to achieve penetration through joined materials of not fewer than three exposed threads.

E. Fasteners for Attaching Metal Lath to Substrates: Complying with ASTM C 1063.

2.4 PLASTER MATERIALS

A. Portland Cement: ASTM C 150, Type I or II.
1. Color for Finish Coats: White.

B. Lime: ASTM C 206, Type S; or ASTM C 207, Type S.

C. Sand Aggregate: ASTM C 897.
1. Color for Job-Mixed Finish Coats: White.

2.5 PLASTER MIXES

A. General: Comply with ASTM C 926 for applications indicated.
1. Fiber Content: Add fiber to base-coat mixes after ingredients have mixed at least two minutes. Comply with fiber manufacturer's written instructions for fiber quantities in mixes, but do not exceed 1 lb of fiber/cu. ft. of cementitious materials. Reduce aggregate quantities accordingly to maintain workability.

B. Base-Coat Mixes for Use over Monolithic Concrete: Single base coats for two-coat plasterwork as follows:
1. Portland Cement Mix: For cementitious material, mix 1 part portland cement and 0 to 3/4 part lime. Use 2-1/2 to 4 parts aggregate per part of cementitious material (sum of separate volumes of each component material).

C. Job-Mixed Finish-Coat Mixes:
1. Portland Cement Mix: For cementitious materials, mix 1 part portland cement and 3/4 to 1-1/2 parts lime. Use 1-1/2 to 3 parts aggregate per part of cementitious material (sum of separate volumes of each component material).

D. Modified Cement plaster shall be equal to StoSilco Shield and reinforcing mesh.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames, cast-in anchors, and structural framing, for compliance with requirements and other conditions affecting performance.
1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Protect adjacent work from soiling, spattering, moisture deterioration, and other harmful effects caused by plastering.

B. Prepare solid-plaster bases that are smooth or that do not have the suction capability required to bond with plaster according to ASTM C 926.

C. Coordination with Sprayed Fire-Resistive Materials:
1. Before sprayed fire-resistive materials are applied, attach offset anchor plates or ceiling runners (tracks) to surfaces indicated to receive sprayed fire-resistive materials. Where offset anchor plates are required, provide continuous plates fastened to building structure not more than 24 inches o.c.

3.3 INSTALLING METAL LATH

A. Expanded-Metal Lath: Install according to ASTM C 1063.
1. Flat-Ceiling and Horizontal Framing: Install [**flat diamond-mesh**] [**flat rib**] lath.
2. On Solid Surfaces, Not Otherwise Furred: Install self-furring [**diamond-mesh**] lath.

3.4 INSTALLING ACCESSORIES

A. Install according to ASTM C 1063 and at locations indicated on Drawings.

3.5 PLASTER APPLICATION

A. General: Comply with ASTM C 926.
1. Do not deviate more than plus or minus 1/4 inch in 10 feet from a true plane in finished plaster surfaces, as measured by a 10-foot straightedge placed on surface.
2. Grout hollow-metal frames, bases, and similar work occurring in plastered areas, with base-coat plaster material, before lathing where necessary. Except where full grouting is indicated or required for fire-resistance rating, grout at least 6 inches at each jamb anchor.
3. Finish plaster flush with metal frames and other built-in metal items or accessories that act as a plaster ground, unless otherwise indicated. Where casing bead does not terminate plaster at metal frame, cut base coat free from metal frame before plaster sets and groove finish coat at junctures with metal.
4. Provide plaster surfaces that are ready to receive field-applied finishes indicated.

B. Bonding Compound: Apply on concrete plaster bases.

C. Plaster Finish Coats: Apply to provide float finish to match Architect's sample.

D. Modified Cement plaster shall be applied in two coats with reinforcing mesh embedded in the first coat.

3.6 CUTTING AND PATCHING

A. Cut, patch, replace, and repair plaster as necessary to accommodate other work and to restore cracks, dents, and imperfections. Repair or replace work to eliminate blisters, buckles, crazing and check cracking, dry outs, efflorescence, sweat outs, and similar defects and where bond to substrate has failed.

3.7 CLEANING AND PROTECTION

A. Remove temporary protection and enclosure of other work. Promptly remove plaster from doorframes, windows, and other surfaces not indicated to be plastered. Repair floors, walls, and other surfaces stained, marred, or otherwise damaged during plastering.

END OF SECTION 09220

SECTION 09910 - PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
1.2 SUMMARY
A. This Section includes surface preparation and the application of paint systems on the following substrates:
1. Masonry.
2. Dens-Glass Gold.

PART 2 - PRODUCTS

2.1 MANUFACTURERS
A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Benjamin Moore & Co.
2. Sherwin-Williams Company (The).
3. Color Wheel
2.2 PAINT, GENERAL
A. Material Compatibility:
1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.
B. Colors: As indicated in a color schedule.

2.3 PRIMERS/SEALERS
A. Interior / Exterior Latex Primer/Sealer: Fresh Start Latex Primer 023 (3.8 mils wet, 1.1 mils dry)
2.4 INTERIOR PAINTS (Walls and Ceiling)
A. 1. 1st Coat: Moore's Fresh Start 023 Acrylic Primer
3. 2nd Coat: Moorecraft Super Spec Acrylic Epoxy Coating 256 (4 mils wet, 1.5 mils dry per coat)
2.5 EXTERIOR STUCCO (Walls and Eaves)
A. Gloss Finish
1. 1st Coat: Moore's Fresh Start 023 Acrylic Primer
2. 2nd Coat: Moore's Super Spec HP Aliphatic Acrylic Urethane Gloss P74 (2.8 mils wet, 2 mils dry per coat)

2.5 CONCRETE FLOORING
A. Clear Finish
1. 1st Coat: Moore's Super Spec HP Fast Dry Epoxy Floor Sealer/Finish P41 (4.9 mils wet, 1.5 mils dry per coat)
2. Aggregate: Moore's ASuper Spec HP Anti-Slip Aggregate P67

PART 3 - EXECUTION

3.1 EXAMINATION
A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of work.
B. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
C. Begin coating application only after unsatisfactory conditions have been corrected and surfaces are dry.
1. Beginning coating application constitutes Contractor's acceptance of substrates and conditions.
3.2 PREPARATION
A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates indicated.
B. Remove plates, machined surfaces, and similar items already in place that are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
2. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
C. Clean substrates of substances that could impair bond of paints, including dirt, oil, grease, and incompatible paints and encapsulants.
1. Remove incompatible primers and reprime substrate with compatible primers as required to produce paint systems indicated.
D. Masonry Substrates:
1. Concrete and masonry substrates should be clean, dry and free of oil, grease, form release agents and curing compounds.
2. New concrete and masonry must be allowed to cure 28 days.
3. Prime all exposed edges of masonry.
3.3 APPLICATION
A. Apply paints according to manufacturer's written instructions.
1. Use applicators and techniques suited for paint and substrate indicated.
2. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
B. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.
C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.
3.4 CLEANING AND PROTECTION
A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.
3.5 INTERIOR PAINTING SCHEDULE
A. Masonry Substrates: Including stucco ceilings.
1. Epoxy System
a. Prime Coat: Acrylic-based primer.
b. Topcoat: Acrylic epoxy coating (semigloss).
B. Concrete Substrates (Flooring):
1. Epoxy System:
a. Prime Coat: Epoxy sealer.
b. Topcoat: Epoxy sealer with non slip aggregate.
3.6 EXTERIOR SYSTEMS
A. Masonry: Including stucco ceilings
1. Acrylic / Urethane System: .
a. Prime Coat: Acrylic-based primer.
b. Topcoat: Acrylic urethane (gloss).
B. Concrete Substrates (Flooring):
1. Epoxy System:
a. Prime Coat: Epoxy sealer.
b. Topcoat: Epoxy sealer with non slip aggregate.

END OF SECTION 09910

SECTION 10280 - TOILET, BATH, AND LAUNDRY ACCESSORIES

PART 1 - GENERAL

1.1 SUMMARY
A. Section Includes:
1. Public-use washroom accessories.
2. Underlavatory guards.
1.2 SUBMITTALS
A. Product Data: For each type of product indicated. Include the following:
1. Construction details and dimensions.
2. Anchoring and mounting requirements, including requirements for cutouts in other work and substrate preparation.
3. Material and finish descriptions.
4. Features that will be included for Project.
5. Manufacturer's warranty.
1.3 QUALITY ASSURANCE
A. Source Limitations: For products listed together in the same Part 2 articles, obtain products from single source from single manufacturer.
B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
1.4 COORDINATION
A. Coordinate accessory locations with other work to prevent interference with clearances required for access by people with disabilities, and for proper installation, adjustment, operation, cleaning, and servicing of accessories.
B. Deliver inserts and anchoring devices set into concrete or masonry as required to prevent delaying the Work.

PART 2 - PRODUCTS

2.1 MATERIALS
A. Stainless Steel: ASTM A 666, Type 304, 0.031-inch minimum nominal thickness unless otherwise indicated.
B. Galvanized-Steel Mounting Devices: ASTM A 153/A 153M, hot-dip galvanized after fabrication.
C. Fasteners: Screws, bolts, and other devices of same material as accessory unit and tamper-and-theft resistant where exposed, and of galvanized steel where concealed.
D. Chrome Plating: ASTM B 456, Service Condition Number SC 2 (moderate service).
E. Mirrors: ASTM C 1503, Mirror Glazing Quality, clear-glass mirrors, nominal 6.0 mm thick.
F. ABS Plastic: Acrylonitrile-butadiene-styrene resin formulation.
2.2 PUBLIC-USE WASHROOM ACCESSORIES
A. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
1. Bobrick Washroom Equipment, Inc.
2. Bradley Corporation.

2.3 UNDERLAVATORY GUARDS
A. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
1. Truebro by IPS Corporation.
B. Underlavatory Guard C:
1. Description: Insulating pipe covering for supply and drain piping assemblies that prevent direct contact with and burns from piping; allow service access without removing coverings.
2. Material and Finish: Antimicrobial, molded plastic, white.
2.4 FABRICATION
A. General: Fabricate units with tight seams and joints, and exposed edges rolled. Hang doors and access panels with full-length, continuous hinges. Equip units for concealed anchorage and with corrosion-resistant backing plates.
B. Keys: Provide universal keys for internal access to accessories for servicing and resupplying. Provide minimum of six keys to Owner's representative.

PART 3 - EXECUTION

3.1 INSTALLATION
A. Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated.
B. Grab Bars: Install to withstand a downward load of at least 250 lbf, when tested according to ASTM F 446.
3.2 ADJUSTING AND CLEANING
A. Adjust accessories for unencumbered, smooth operation. Replace damaged or defective items.
B. Remove temporary labels and protective coatings.
C. Clean and polish exposed surfaces according to manufacturer's written recommendations.

END OF SECTION 10280

ARCHITECTURAL SPECIFICATIONS

cph
www.cphcorp.com
A Full Service A & E Firm
500 WEST FULTON STREET
SANFORD, FLORIDA 32771
Ph:(407) 322-6841
Plans Prepared By :
CPH, Inc.
State of Florida Licenses:
Architect No. AA2600926
Engineer No. 3215
Landscape No. LC0000298
Surveyor No. 7143
Engineer of Record
TBD-F Prot License

CELEBRATING 40 +YEARS cph

No.	Revision	DATE

Designed:	CPH, INC.
Drawn:	JLD / KAR
Checked:	BKS
Job No.:	M13112
08/13/21	© 2021

SPECIFICATIONS
KINGFISH BOAT RAMP RESTROOMS
752 MANATEE AVENUE
HOLMES BEACH, FLORIDA 34217

NOT FOR CONSTRUCTION

THIS SHEET NOT VALID FOR CONSTRUCTION WITHOUT COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND

Sheet No.
G054

GENERAL NOTES

1 THE FOLLOWING NOTES SHALL APPLY TO ALL STRUCTURAL DRAWINGS.

2 (NOT USED)

3 THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS SHOWN ON THE STRUCTURAL DRAWINGS WITH THE ARCHITECTURAL DRAWINGS. ALL DIMENSIONS AND ELEVATIONS SHOWN ON THE STRUCTURAL DRAWINGS ARE INTENDED TO AUGMENT, NOT SUPERSEDE, THOSE SHOWN ON THE ARCHITECTURAL DRAWINGS. DO NOT SCALE DRAWINGS. DRAWINGS MAY NOT BE TO SCALE.

4 THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS AND NOTIFY THE ARCHITECT PRIOR TO FABRICATION AND CONSTRUCTION. FOR DIMENSIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS, SEE THE ARCHITECTURAL DRAWINGS.

5 IF MATERIAL QUANTITIES, STRENGTHS OR SIZES INDICATED BY THE DRAWINGS OR SPECIFICATIONS ARE NOT IN AGREEMENT WITH THESE NOTES, THE BETTER QUALITY AND/OR QUANTITY, STRENGTH OR NOTED SHALL BE PROVIDED.

6 THE STRUCTURAL MODIFICATIONS ARE DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER CONSTRUCTION IS FULLY COMPLETED. THE CONTRACTOR IS SOLELY RESPONSIBLE TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO ENSURE THE SAFETY OF THE BUILDING AND ITS COMPONENT PARTS DURING CONSTRUCTION, INCLUDING PROVISIONS FOR CHANGEABLE WEATHER UNTIL THE BUILDING IS CLOSED AND CONDITIONED.
THE CONTRACTOR SHOULD DESIGN, INSTALL AND SUBSEQUENTLY REMOVE ANY SHORING, SHEETING, TEMPORARY BRACING, GUYS OR TIEDOWNS NECESSARY TO MAINTAIN SAFETY AND STRUCTURAL STABILITY DURING CONSTRUCTION.

7 IT SHALL BE THE SOLE RESPONSIBLY OF THE CONTRACTOR TO INITIATE, MAINTAIN AND SUPERVISE ALL SAFETY PROCEDURES, WHILE FOLLOWING ALL APPLICABLE SAFETY CODES, BUILDING CODES AND GOVERNING REGULATIONS WITH JURISDICTION OVER THE CONSTRUCTION SITE DURING ALL PHASES OF CONSTRUCTION. THE STRUCTURAL ENGINEER OF RECORD IS NOT RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION OR FOR RELATED SAFETY PROCEDURES.

8 ANY FRAMING SHOWN ON DRAWINGS THAT SUPPORT EQUIPMENT (WHETHER SUPPORTED ABOVE OR SUSPENDED BELOW), DESIGN LOADS, OPENINGS AND PENETRATIONS, AND STRUCTURAL MEMBERS IN ANY MANNER RELATED TO HVAC, PLUMBING, ELECTRICITY OR FIRE PROTECTION REQUIREMENTS IS BASED ON EQUIPMENT DESIGNED, SHOWN AND/OR SPECIFIED IN THE CONSTRUCTION DOCUMENTS.
ALL REQUIREMENTS FRAMING MAY NOT BE SHOWN. USING THE DETAILS PROVIDED ON THE STRUCTURAL DRAWINGS, THE GENERAL CONTRACTOR AND SUB-CONTRACTOR AND/OR EACH PRIME CONTRACTOR MUST COORDINATE AND INSTALL THE ACTUAL FRAMING REQUIRED FOR THE EQUIPMENT TO BE INSTALLED, AND INCLUDE COST FOR ALL REQUIRED FRAMING IN THE BID.

9 EXISTING BUILDING: INSTALL TEMPORARY SUPPORT AND OTHER MEASURES AS REQUIRED TO PREVENT DAMAGE TO THE EXISTING BUILDING DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN, INSTALLATION AND FINAL CLEARANCE OF REQUIRED NEEDLING, SHORING, UNDERPINNING OR BRACING OF THE EXISTING BUILDING. FIELD VERIFY ALL EXISTING DIMENSIONS, ELEVATIONS AND CONDITIONS WHICH AFFECT THE NEW CONSTRUCTION PRIOR TO THE START OF WORK. EXISTING CONDITIONS SHOWN ON THE DRAWINGS ARE ASSUMED, HAVE NOT BEEN CONFIRMED, ARE NOT GUARANTEED AND MAY CONFLICT WITH THE NEW WORK REQUIRED. FIELD VERIFY THAT THE EXISTING FRAMING AFFECTED BY THE NEW WORK IS IN SOUND CONDITION AND DOES NOT DISPLAY VISIBLE SIGNS OF DISTRESS OR DETERIORATION OR HAS BEEN PREVIOUSLY MODIFIED OR ALTERED. IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BETWEEN THE INFORMATION SHOWN ON THE DRAWINGS AND ACTUAL FIELD CONDITIONS; DO NOT PROCEED WITH THAT PORTION OF WORK UNTIL ALL DISCREPANCIES HAVE BEEN RESOLVED. THE CONTRACTOR SHOULD SUBMIT A FIELD SURVEY SHOWING ALL DISCREPANCIES BETWEEN THE EXISTING CONDITION AND THE NEW WORK, BASED ON THE REPORTED FIELD CONDITIONS, THE ARCHITECT WILL SUBMIT SUPPLEMENTAL INSTRUCTIONS FOR ALL WORK (NEW OR EXISTING) REQUIRING MODIFICATIONS.

10 THE STRUCTURAL DRAWINGS ARE ONE DISCIPLINE OF THE CONTRACT DOCUMENTS AND DO NOT BY THEMSELVES CONTAIN ALL THE INFORMATION REQUIRED TO PROPERLY COMPLETE THE PROJECT STRUCTURE. THE GENERAL CONTRACTOR SHALL REFER TO THE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS AND COORDINATE THE INFORMATION INDICATED IN THESE CONSTRUCTION DOCUMENTS WITH THE STRUCTURAL DRAWINGS TO PROPERLY CONSTRUCT THE PROJECT.

11 ALL DETAILS, SECTIONS AND NOTES INDICATED ON THE CONSTRUCTION DOCUMENTS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS ELSEWHERE UNLESS OTHERWISE SHOWN.

12 SHOULD ANY OF DETAILED INSTRUCTIONS SHOWN ON THE PLANS CONFLICT WITH THESE STRUCTURAL NOTES. THE SPECIFICATIONS, OR WITH EACH OTHER, THE STRICTEST PROVISION SHALL GOVERN.

13 SPECIALTY ENGINEERED PRODUCTS
THE GENERAL CONTRACTOR IS RESPONSIBLE TO COORDINATE THE PROPER SUBMISSION OF SHOP DRAWINGS FOR SPECIALTY ENGINEERED PRODUCTS WHICH SHALL BE SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE WHERE THE PROJECT IS LOCATED. CONTRACTOR'S RESPONSIBILITY TO ASSURE THAT THE SPECIALTY ENGINEERED SHOP DRAWINGS ARE SUBMITTED IN A TIMELY MANNER SO AS TO ALLOW REVIEWS AND RESUBMISSIONS AS REQUIRED. ALL SPECIALTY ENGINEERED PRODUCTS SHALL BE DESIGNED FOR THE APPROPRIATE GRAVITY LOADS AND WIND LOADS INCLUDING UPLIFT LATERAL LOADS TO ASSURE STABILITY. SPECIALTY ENGINEERED PRODUCTS SHALL BE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
1. STEEL STAIRS
2. LADDERS
3. HANDRAILS
4. CLADDING SYSTEMS
5. MISCELLANEOUS STEEL

14 SPECIAL INSPECTIONS: NO SPECIAL INSPECTIONS ARE REQUIRED FOR STRUCTURAL ITEMS. REFER TO OTHER DISCIPLINES FOR SPECIAL INSPECTIONS OF NON-STRUCTURAL SYSTEMS WHERE REQUIRED.

15 SHOP DRAWINGS
A. SUBMIT THE FOLLOWINGS DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION:
1. STRUCTURAL STEEL
2. CONCRETE MIX DESIGNS
3. CONCRETE REINFORCEMENT
4. STRUCTURAL MASONRY
5. STEEL JOIST AND CALCULATIONS
6. METAL DECK
7. WOOD TRUSSES
B. THE CONTRACTOR SHALL REVIEW AND ACCEPT FULL RESPONSIBILITY FOR DIMENSIONAL CORRECTNESS. ALL SHOP DRAWINGS MUST BEAR THE APPROVAL STAMP OF THE CONTRACTOR (TO INCLUDE INITIALS, DATE AND DISPOSITION), PRIOR TO REVIEW BY THE ARCHITECT OR ENGINEER. THE ENGINEER WILL RETURN ALL DRAWINGS, UN-REVIEWED, THAT DO NOT BEAR THE APPROVAL STAMP OF THE CONTRACTOR.

16 CHANGES AND MODIFICATIONS:
SUBMIT WRITTEN REQUEST TO THE ARCHITECT FOR APPROVAL OF ANY PROPOSED CHANGE TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
SPLICING, CUTTING, NOTCHING AND OTHER ALTERATIONS TO STRUCTURAL MEMBERS IS PROHIBITED WITHOUT WRITTEN AUTHORIZATION OF THE STRUCTURAL
ENGINEER.
ANY UNAUTHORIZED DEVIATION FROM THE CONTRACT DOCUMENTS, AND CORRECTION THEREOF, IS THE RESPONSIBILITY OF THE CONTRACTOR.

17 CONTRACTOR SHALL BRACE ALL CONSTRUCTION AGAINST GRAVITY, LATERAL & UPLIFT LOADS UNTIL STRUCTURE IS COMPLETE.

DESIGN CRITERIA

THE STRUCTURAL DESIGN OF THIS BUILDING WAS BASED ON THE DESIGN CRITERIA:

A. BUILDING CODE
INTERNATIONAL BUILDING CODE 2020 7th EDITION

B. DESIGN ROOF LOADS

DEAD LOADS	20	PSF
LIVE LOADS	20	PSF

C. DESIGN FLOOR LOADS

LIVE LOADS	100	PSF

D. ROOF SNOW LOAD DATA:

GROUND SNOW LOAD, Pg	N/A
FLAT ROOF SNOW LOAD, Pf	N/A
EXPOSURE FACTOR, Ce	
IMPORTANCE FACTOR, Is	1.0
THERMAL FACTOR, Ct	
ROOF SLOPE FACTOR, Cs	
SLOPED ROOF SNOW LOAD, Ps	
FOR SNOW DRIFTS LOADS	

SEE DIAGRAM ON THIS SHT.

E. WIND DESIGN DATA:

ULTIMATE DESIGN WIND SPEED, Vult	148 MPH
NOMINAL DESIGN WIND SPEED, Vasd	115 MPH
RISK CATEGORY:	II
WIND EXPOSURE CATEGORY:	D
INTERNAL PRESSURE COEFFICIENTS	+-0.18
COMPONENTS AND CLADDING WIND PRESSURE:	

SEE WIND LOAD TABLES ON THIS SHT.

WIND PRESSURES PER ASCE: 7-16

F. WIND-BORNE DEBRIS REGION (WITHIN HURRICANE-PRONE REGIONS)
1. WITHIN 1 MILE OF THE COASTAL MEAN HIGH WATER LINE
WHERE Vult IS 130 MPH OR GREATER; OR
2. IN AREAS WHERE Vult IS 140 MPH OR GREATER.

G. EARTHQUAKE DESIGN DATA:
SEISMIC IMPORTANCE FACTOR, Ie
MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETERS,

Ss=	0.19g	S1=	0.093g
SITE CLASS:	D		
Fa=	1.6	Fv=	2.4
SMs=		SM1=	0.222g

DESIGN SPECTRAL RESPONSE ACELERATION PARAMTERS,

SDs=	0.21...	SD1=	0.148g

SEISMIC DESIGN CATEGORY: C
BASIC SEISMIC FORCE-RESISTING SYSTEM:
LIGHT FRAME WALLS WITH WOOD STRUCTURAL PANELS
BASE SHEAR: 6.1 KIPS
SEISMIC RESPONSE COEFFICIENT, Cs 0.02...
RESPONSE MODIFICATION COEFFICIENT,R 7
ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE

CONCRETE

1 ALL CONCRETE SHALL BE IN ACCORDANCE WITH THE "AMERICAN CONCRETE INSTITUTE BUILDING CODE" (ACI 318) AND WITH "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ASI 301) LATEST EDITIONS.

2 CONCRETE MEMBERS SHALL HAVE THE FOLLWING MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS:
A. STRUCTURAL CONCRETE

CLASS	LOCATION	f'c (psi)
I	FOUNDATIONS	3000
II	INTERIOR SLABS ON GRADE AND ALL INTERIOR CONCRETE NOT OTHERWISE IDENTIFIED	4000
III	INTERIOR SLABS ON GRADE AND ALL INTERIOR CONCRETE NOT OTHERWISE IDENTIFIED	4000 (W/AIR)
IV	NOT USED	1500

B. ALL DEFORMED REINFORCING BARS: ASTM A615, GR. 60
C. ALL WELDED WIRE FABRIC: ASTMA1064, DELIVERED IN FLAT SHEETS

ALL OTHER CONCRETE TO BE 4000 PSI UNLESS NOTED OTHERWISE

3 ALL CONCRETE CONSTRUCTION SHALL CONFORM TO THE LATEST ADOPTED EDITIONS OF THE STANDARDS AND MATERIAL SPEFICIATIONS REFERENCED HEREIN.

4 CONCRETE MIX SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 301 CHAPTER 3, METHOD 1 OR METHOD 3. CONTRACTOR SHALL SUBMIT BACKUP DATA PER SECTION 26.4 OF ACI 318 LATEST EDITION.

5 ALL REINFORCING STEEL SHALL BE NEW DOMESTIC DEFORMED BILLET STEEL CONFORMING TO ASTM A615 GR. 60. SUBMIT ALL REINFORCING STEEL SHOP DRAWINGS FOR APPROVAL PRIOR TO ANY FABRICATION.

6 CONCRETE COVER FOR REINFORCING STEEL SHALL BE AS REQUIRED BY ACI SPECIFICATIONS.

7 WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185. WELDED WIRE FABRIC SHALL BE LAPPED AT LEAST 12 INCHES UNLESS NOTED OTHERWISE.

8 REBAR LAP LENGTH SHALL BE 48 BAR DIAMETERS MINIMUM, UNLESS NOTED OTHERWISE ON DRAWINGS.

9 PROVIDE ACI STANDARD HOOKS UNLESS NOTED OTHERWISE ON DRAWINGS.

10 ALL CONCRETE WORK SHALL CONFORM TO ACI 318 LATEST EDITION "THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE STRUCTURES", ACI 301 "SPECIFICATIONS FOR STRUCTRUAL CONCRETE FOR BUILDINGS," ACI 305 "HOT WEATHER CONCRETING," AND ACI 306 "COLD WEATHER CONCRETING."

11 ALL CONCRETE DETAILS SHALL CONFORM TO ACI 315 LATEST EDITION "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" UNLESS NOTED OTHERWISE ON THE DRAWINGS.

12 CONTRACTOR SHALL REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR LOCATIONS AND SIZES OF SLEEVES, OPENINGS, EMBEDDED ITEMS, SLAB RECESSES, SLOPES, ETC. THESE ITEMS SHAL BE COORDINATED WITH OTHER TRADES AND INSTALLED PRIOR TO CONCRETE PLACEMENT.

13 CONTRACTOR SHALL VERIFY ANCHOR BOLT SIZES AND LOCATIONS PRIOR TO CONCRETE PLACEMENT.

14 BAR LENGTHS PROVIDED ON DRAWINGS DO NOT INCLUDE HOOK LENGTH. HOOKS SHALL BE PROVIDED AT TOP BARS, AT BEAM ENDS, AND SLAB EDGES.

15 CONTRACTOR SHALL PROVIDE CHAIRS, BOLSTERS, SPACERS, ETC. AS REQUIRED TO SECURELY SUPPORT REINFORCEMENT. SUPPORT ITEMS ON EXPOSED CONCRETE SHALL BE PLASTIC SUPPORT REINFORCEMENT, TIPPED OR STAINLESS STEEL. IN HIGHLY CORROSIVE ENVIRONMENTS, SUPPORT ITEMS SHALL BE PLASTIC.

16 ONE COPY OF ALL CONCRETE TEST RESULTS SHALL BE SUBMITTED BY THE TESTING AGENCY DIRECTLY TO THE ENGINEER OF RECORD.

17 THE CONTRACTOR SHALL SEAL ALL HAIRLINE CRACKING IN CONCRETE SLAB ON GRADE WITH A CRACK SUPPRESSION KIT SUCH AS LATICRETE OR APPROVED EQUAL.

18 A COPY OF THE "FIELD REFERENCE MANUAL" ACI SP-15 LATEST EDITION SHALL BE KEPT BY THE CONTRACTOR ON SITE.

19 FIELD MANUAL: PROVIDE AT LEAST ONE COPY OF THE ACI FIELD REFERENCE MANUAL.

20 CONCRETE COVER: UNLESS OTHERWISE NOTED, DETAIL REINFORCING TO PROVIDE MINIMUM COVER AS FOLLOWS:

A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3 INCHES
B. CONCRETE EXPOSED TO EARTH OR WEATHER	
#5 BARS AND SMALLER	1-1/2 INCHES
OTHERS	2 INCHES
C. CONCRETE NOT EXPOSED TO EARTH OR WEATHER	
BEAM AND COLUMN BARS INCLUDING TIES, STIRRUPS AND SPIRALS	1-1/2 INCHES
SLABS, WALLS AND JOISTS:	
#11 BARS AND SMALLER	3/4 INCHES
OTHERS	1-1/2 INCHES

21 SLUMP, (AT POINT OF PLACEMENT): 5" (+/- 1")

22 CALCIUM CHLORIDE SHALL NOT BE USED IN ANY FORM.

23 EXPANSION BOLTING:
UNLESS NOTED OTHERWISE ON PLANS OR IN SECTIONS, ALL EXPANSION BOLTS IN CONCRETE SHALL BE "HILTI KWIK BOLT 3 EXPANSION ANCHORS". ANCHORS USED IN EXTERIOR APPLICATIONS SHALL BE HOT-DIP GALVANIZED CARBON STEEL OR STAINLESS STEEL.

24 UNLESS NOTED OTHERWISE ON PLANS OR IN SECTIONS, ALL EPOXY ANCHORS FOR USE IN APPLICATIONS INVOLVING CONCRETE SHALL USE EITHER:
A) HILTI HIT HY 200 ADHESIVE ANCHORING SYSTEM.
B) SIMPSON STRONG-TIE AT HIGH STRENGTH ACRYLIC-TIE ANCHORING ADHESIVE.
INSTALL ALL ANCHORS FOLLOWING MANUFACTURER'S INSTALLATION INSTRUCTIONS

FOUNDATION PLAN NOTES

1. DESIGN SOIL BEARING PRESSURE IS 2,000 PSF PER THE GEOTECHNICAL REPORT.
2. A GEOTECHNICAL REPORT ON THE SUBSURFACE SOILS CONDITIONS HAS BEEN PREPARED FOR THIS PROJECT BY ARDAMAN & ASSOCIATES, INC REPORT NO.11-7511 DATED: JUNE 21, 2021.
3. ALL CONTRACTORS INVOLVED WITH THE EXCAVATION, BACKFILL AND FOUNDATION CONSTRUCTION SHALL FAMILIARIZE THEMSELVES WITH THIS REPORT.
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5. TOP OF FOOTINGS @ EL. (-1'-4") MIN. BELOW TOP OF SLAB UNLESS NOTED OTHERWISE.
BELOW ADJACENT FINISH GRADE. VERIFY ALL TOP OF FOOTING ELEVATIONS W/ ARCHITECTURAL DRAWINGS PRIOR TO FABRICATION AND CONSTRUCTION.
6. IF NOT OTHERWISE SPECIFIED IN GEOTECHNICAL REPORT, COMPACT ALL FILL TO 98% OF OPTIMUM LABORATORY DENSITY IN ACCORDANCE WITH ASTM D698 STANDARD PROCTOR METHOD.
7. DO NOT BACKFILL AGAINST FOUNDATION OR BASEMENT WALLS UNTIL FLOOR SLAB/FRAMING IS IN PLACE OR PERMISSION IS OBTAINED FROM THE ARCHITECT.
8. EXCEPT FOR CANTILEVER RETAINING WALLS OR UNLESS NOTED OTHERWISE ON DRAWINGS, SUBGRADE WALLS ARE SUPPORTED BY THE FLOOR ABOVE AND BELOW. PROPER TEMPORARY BRACING MAY BE USED IN LIEU OF THE FLOOR SUPPORT BASED ON THE DESIGN BY A PROFESSIONAL ENGINEER.
9. ALL FOOTINGS ARE TO REST ON FIRM, LEVEL, UNDISTURBED SOIL OR ENGINEERED FILL, OF BEARING CAPACITY NOTED, REGARDLESS OF ELEVATIONS SHOWN ON DRAWINGS.
10. WHERE ROCK OR SHALE IS THE BEARING MATERIAL, PROVIDE 6" DEEP PENETRATION.
11. WHERE FOOTINGS ARE IN CLOSE PROXIMITY OF SEWERS, BOTTOM OF FOOTINGS SHALL BE AT LEAST 8" BELOW INVERT ELEVATION OF SEWERS.
12. EXCAVATIONS FREE OF WATER AT ALL TIMES.
13. USE LEAN CONCRETE (FC=1500 PSI) FOR OVER-EXCAVATION OF FOOTINGS AND REPLACEMENT OF WEAKENED...
14. PROVIDE POSITIVE DRAINAGE AWAY FROM EXCAVATIONS SO AS NOT TO ALLOW STANDING WATER FOR LONG PERIODS OF TIME.
15. PROVIDE A 10 MIL THICK VAPOR BARRIER BETWEEN THE COMPACTED BASE AND CONCRETE SLAB.
16. DO NOT PUNCTURE THE VAPOR BARRIER. LAP AND TAPE ENDS.
17. PERFORM ALL SITEWORK UNDER THE DIRECT SUPERVISION OF A GEOTECHNICAL ENGINEER.
18. FOUNDATION BEARING SURFACES SHALL BE INSPECTED UNDER THE DIRECTION OF THE PROJECT GEOTECHNICAL ENGINEER.

STRUCTURAL WOOD

1. WOOD FRAMING SHALL COMPLY WITH THE SOUTHERN PINE INSPECTION BUREAU, OR SHALL CONFORM TO SPECIFICATIONS AS PUBLISHED BY THE WESTERN WOODS PRODUCTS ASSOCIATION.
2. WOOD FRAMING 2 INCHES X 4 INCHES AND LARGER SHALL BE NO. 2 SOUTHERN PINE, NO. 2 DOUGLAS FIR LARCH, OR EQUIVALENT (U.N.O.).
3. WOOD COLUMNS 6 INCHES X 6 INCHES AND LARGER SHALL BE NO. 1 SOUTHERN PINE, NO. 1 DOUGLAS FIR LARCH, OR EQUIVALENT.
4. ALL EXPOSED WOOD RAFTERS AND COLUMNS SHALL BE "SELECT" GRADE AS DESCRIBED IN AITC.
5. ALL PLATES IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE TREATED (USE CATEGORY 2 AS SPECIFIED BY AWPA) FOR MOISTURE PROTECTION. ALL WOOD EXPOSED TO WEATHER SHALL BE PRESSURE TREATED (USE CATEGORY 3B AS SPECIFIED BY AWPA) OR WESTERN RED CEDAR.
6. GLUED-LAMINATED MEMBERS SHALL BE INDUSTRIAL APPEARANCE, E1 8, WITH GRADES AND SPECIES AS FOLLOWS, U.N.O. MEMBER SIZES BASED ON CURRENT NDS WESTERN SPECIES

· SIMPLY SUPPORTED SPAN MEMBERS:

SPECIES	GRADE
DOUGLAS FIR	24F-V4
SOUTHERN PINE	24F-V3

· MULTI SPAN MEMBERS:

SPECIES	GRADE
DOUGLAS FIR	24F-V8
SOUTHERN PINE	24F-V8

7. PRE-FABRICATED METAL PLATED WOOD TRUSSES
A. TRUSS FABRICATION AND INSTALLATION SHALL COMPLY WITH THE FOLLOWING STANDARDS:
1. ANSI/TPI 1 "NATIONAL DESIGN STANDARD FOR METAL-PLATE-CONNECTED WOOD TRUSS CONSTRUCTION"
2. TPI HIB "COMMENTARY AND RECOMMENDATIONS FOR HANDLING INSTALLING & BRACING METAL PLATE CONNECTED WOOD TRUSSES".
3. TPI DSB "RECOMMENDED DESIGN SPECIFICATION FOR TEMPORARY BRACING OF METAL PLATE CONNECTED WOOD...
B. TRUSSES SHALL BE DESIGNED FOR THE FOLLOWING LOADS:
1. TOP CHORD: LIVE LOAD = 20 PSF
DEAD LOAD = 10 PSF
2. BOTTOM CHORD: LIVE LOAD = 5 PSF (NON-CONCURENT)
DEAD LOAD = 10 PSF
3. REFERENCE ROOF PLAN FOR ADDITIONAL MECHANICAL EQUIPMENT LOADS
4. REQUIRED UPLIFT
C. ALL TRUSS-TO-TRUSS CONNECTORS SHALL BE SPECIFIED BY THE TRUSS MANUFACTURER. TRUSS-TO-FRAMING CONNECTORS SHALL BE SPECIFIED BY THE ENGINEER OF RECORD, UNLESS SPECIFICALLY NOTED.
D. BOTTOM CHORD TENSION SPLICES ARE PROHIBITTED WITHIN THE MIDDLE 13 OF THE SPAN.
E. FABRICATOR SHALL SUBMIT SHOP DRAWINGS SHOWING LAYOUT OF MEMBERS, BRIDGING, BRACING, ERECTION DETAILS, TRUSS PENETRATIONS, AND DESIGN CALCULATIONS SEALED BY A REGISTERED ENGINEER (STATE).

8. ROOF DECK:
A. ALL ROOF DECK SHALL BE APA RATED STRUCTURAL I GRADE PLYWOOD OR OSB (ORIENTED STRAND BOARD). STRUCTURAL I GRADES MAY HAVE EITHER AN EXTERIOR OR EXPOSURE I DESIGNATION (U.N.O.).
B. ROOF SHEATHING SHALL BE 23 32 INCH THICK MINIMUM (48/24) U.N.O.
C. STAGGER ENDS OF SHEETS
D. PROVIDE BLOCKING AT EDGES OF ALL ROOF SHEETS. PLYWOOD CLIPS MAY BE USED AT ROOF INSTEAD OF BLOCKING, UNLESS BLOCKING REQUIRED FOR NAILING.
E. NAIL EDGES OF ROOF SHEETS AT 6 IN. O.C. MAXIMUM (U.N.O.).
F. NAIL FACES OF ROOF SHEETS AT 12 IN. O.C. MAXIMUM.
G. USE MINIMUM 10D COMMON NAILS (U.N.O.).

9. WALL SHEATHING
A. ALL WALL SHEATHING SHALL BE APA RATED STRUCTURAL I GRADE PLYWOOD OR OSB (ORIENTED STRAND BOARD)....
B. WALL SHEATHING SHALL BE 15 32 INCH THICK MINIMUM (32/16) U.N.O.
C. STAGGER ENDS OF SHEETS.
D. PROVIDE BLOCKING AT EDGES OF ALL SHEARWALL SHEETS.
E. NAIL EDGES OF SHEARWALL SHEETS PER SCHEDULE ON PLAN (OTHER WALLS AT 6 IN. O.C. MAXIMUM).
F. NAIL FACES OF WALL SHEETS AT 12 IN. O.C. MAXIMUM.
G. USE MINIMUM 8D COMMON NAILS (U.N.O.).

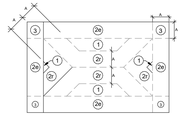
10. CONNECTORS SHALL BE AS MANUFACTURED BY THE SIMPSON CO. OR APPROVED EQUAL. CONNECTORS USED WITH PRESSURE TREATED LUMBER OR IN UNCONDITIONED SPACE, SHALL HAVE THE ZMAX (6185) COATING.
11. NAILING, UNLESS NOTED OTHERWISE, SHALL BE PER THE 2012 INTERNATIONAL BUILDING CODE.
12. ANCHOR BOLTS SHALL BE ASTM F1554, TYPICAL U.N.O.

ASCE 7-16 / ULTIMATE COMPONENT AND CLADDING ROOF PRESSURE

ZONE	EFFECTIVE WIND AREA	COEFFICIENT	ULTIMATE PNET (psf)		NOMINAL PNET (psf)	
1	10	1.03	43.2	-77.6	26.0	-46.6
1	20	1.03	37.3	-68.7	22.4	-41.2
1	50	1.03	29.5	-57.0	17.7	-34.2
1	> 100	1.03	23.6	-48.1	14.2	-28.9
2e	10	1.03	43.2	-107.0	26.0	-64.2
2e	50	1.03	29.5	-80.6	17.7	-48.4
2e	100	1.03	23.6	-69.3	14.2	-41.6
2e	> 200	1.03	23.6	-57.9	14.2	-34.7
2r	10	1.03	43.2	-107.0	26.0	-64.2
2r	50	1.03	29.5	-80.6	17.7	-48.4
2r	100	1.03	23.6	-69.3	14.2	-41.6
2r	> 200	1.03	23.6	-57.9	14.2	-34.7
3	10	1.03	43.2	-107.0	26.0	-64.2
3	50	1.03	29.5	-80.6	17.7	-48.4
3	100	1.03	23.6	-69.3	14.2	-41.6
3	> 200	1.03	23.6	-57.9	14.2	-34.7

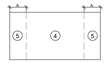
ASCE 7-16 / ULTIMATE COMPONENT AND CLADDING WALL PRESSURE

ZONE	EFFECTIVE WIND AREA	COEFFICIENT	ULTIMATE PNET (psf)		NOMINAL PNET (psf)	
4	10	1.03	57.9	-62.8	34.7	-37.7
4	50	1.03	51.9	-56.8	31.1	-34.1
4	200	1.03	46.7	-51.6	28.0	-31.0
4	500	1.03	43.2	-48.1	26.0	-28.9
5	10	1.03	57.9	-62.8	34.7	-37.7
5	50	1.03	51.9	-56.8	31.1	-34.1
5	200	1.03	46.7	-51.6	28.0	-31.0
5	500	1.03	43.2	-48.1	26.0	-28.9



ROOF PLAN


LONG WALL


SHORT WALL

MASONRY

CONCRETE BLOCK DESIGN AND CONSTRUCTION SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" (TMS 402/ACI 530/ASCE 5) AND "SPECIFICATIONS FOR MASONRY STRUCTURES" (TMS 602/ACI 530.1/ASCE 6)

1 MASONRY MATERIALS SHALL CONFORM TO THE LATEST EDITION OF THE FOLLOWING SPECIFICATIONS:
A. HOLLOW LOAD BEARING CONCRETE BLOCK: ASTM C-90, GR. N1. MINIMUM COMPRESSIVE STRENGTH = 1900 PSI AT 28 DAYS
B. MORTAR: ASTM C-270, TYPE S. MINIMUM COMPRESSIVE STRENGTH = 1800 PSI AT 28 DAYS
C. MORTAR: ASTM C-270, TYPE M. MINIMUM COMPRESSIVE STRENGTH = 2500 PSI AT 28 DAYS
D. GROUT: ASTM C-476. MINIMUM COMPRESSIVE STRENGTH = 2000 PSI AT 28 DAYS
E. MASONRY REINFORCEMENT: ASTM A-82 GALVANIZED
F. MASONRY PRISM STRENGTH: F'm = 1500 PSI

2 TYPICAL REINFORCING:
VERTICAL - REF. PLAN FOR SIZE AND SPACING
HORIZONTAL - #9 WIRE IN DUR-O-WALL (LADUR TRUSS TYPE) OR APPROVED EQUAL AT 16" O.C. IN MASONRY WALLS, EXCEPT AT 8" O.C. FOR
WALL BELOW GRADE OR STACK BOND WALLS (U.N.O. ON DRAWINGS)

3 PRIOR TO DELIVERY OF MASONRY UNITS TO THE JOB SITE, FURNISH TO THE OWNER AFFIDAVITS FROM AN APPROVED TESTING LABORATORY CERTIFYING THAT ALL UNITS CONFORM TO THEIR RESPECTIVE ASTM REQUIREMENTS.

4 PROVIDE CLEANOUT AT THE BASE OF ALL GROUTED MASONRY CELLS. CLEAN MASONRY VOID TO BE GROUTED OF ALL DEBRIS AND MORTAR PROTRUSIONS.

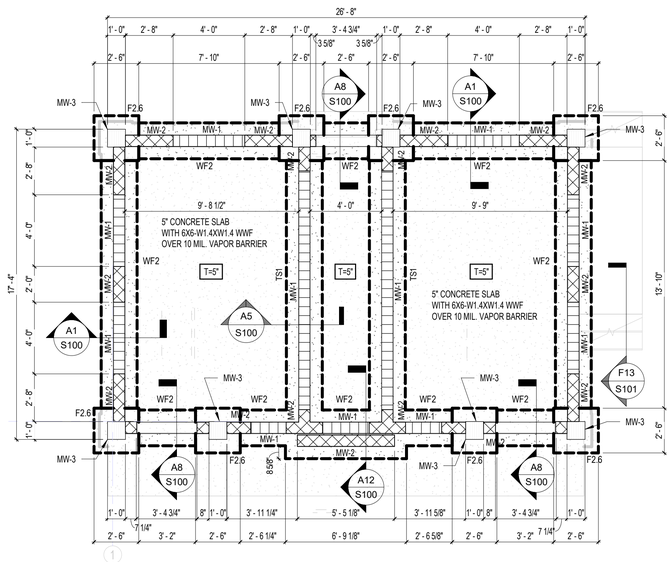
5 GROUT ALL CAVITIES CONTAINING REINFORCEMENT IN LIFTS NOT TO EXCEED 5'-0" (REFER TO DETAILS).

6 LABORATORY PREPARED MIXES SHALL BE PREPARED AND TESTED IN ACCORDANCE WITH ASTM C-270. FIELD MORTAR SHALL BE TESTED WITH AN APPROVED TESTING LABORATORY IN ACCORDANCE WITH ASTM C-780. TWO SETS OF THREE MORTAR CUBES SHALL BE TAKEN DIRECTLY FROM THE MIXER FOR EACH DAY OF MASONRY WORK. TEST THE CUBES AT 28 DAYS. ACCEPTANCE OF THE MORTAR SHALL BE AT THE DESCRETION OF THE ENGINEER.

7 CALCIUM CHLORIDE AND/OR ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL NOT BE INCLUDED IN MORTAR OR GROUT MIX, EXCEPT WHEN APPROVED IN WRITING BY THE STRUCTURAL ENGINEER. NO ANTI-FREEZE COMPOUNDS SHALL BE USED TO LOWER THE MORTAR'S FREEZING POINT.

8 NO EXTERIOR MASONRY SHALL BE LAID WHEN THE OUTSIDE AIR TEMPERATURE IS LESS THAN 40 DEGREES FAHRENHEIT, UNLESS THE RECOMMENDATIONS SPECIFIED BY THE INTERNATIONAL MASONRY INDUSTRY ALL-WEATHER COUNCIL IN THEIR PUBLICATION "RECOMMENDED PRACTICES AND GUIDE SPECIFICATIONS FOR COLD WEATHER MASONRY" ARE STRICTLY FOLLOWED.

9 THE MASONRY CONTRACTOR SHALL PROVIDE BRACING TO WITHSTAND HORIZONTAL PRESSURES AS REQUIRED BY THE BUILDING CODE AND LO



FOOTING SCHEDULE

MARK	DIMENSIONS	REINFORCING	REMARK
F2.6	2'-6" X 2'-6" x 16"	(3)#5 O.C. E.W.	
W2.0	2'-0"X16" CONT.	(3)#5 CONT. & #5 @ 12" O.C. TRANSV.	
TB1	SEE DETAIL A5/S100		

NORTH

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5. TOP OF FOOTINGS @ EL. (-1'-4") MIN. BELOW TOP OF SLAB UNLESS NOTED OTHERWISE. BELOW ADJACENT FINISH GRADE. VERIFY ALL TOP OF FOOTING ELEVATIONS W/ ARCHITECTURAL DRAWINGS PRIOR TO FABRICATION AND CONSTRUCTION.
6. IF NOT OTHERWISE SPECIFIED IN GEOTECHNICAL REPORT, COMPACT ALL FILL TO 98% OF OPTIMUM LABORATORY DENSITY IN ACCORDANCE WITH ASTM D698 STANDARD PROCTOR METHOD.
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11. WHERE FOOTINGS ARE IN CLOSE PROXIMITY OF SEWERS, BOTTOM OF FOOTINGS SHALL BE AT LEAST 8" BELOW INVERT ELEVATION OF SEWERS.
12. EXCAVATIONS FREE OF WATER AT ALL TIMES.
13. USE LEAN CONCRETE (FC=1500 PSI) FOR OVER-EXCAVATION OF FOOTINGS AND REPLACEMENT OF WEAKENED...
14. PROVIDE POSITIVE DRAINAGE AWAY FROM EXCAVATIONS SO AS NOT TO ALLOW STANDING WATER FOR LONG PERIODS OF TIME.
15. PROVIDE A 10 MIL THICK VAPOR BARRIER BETWEEN THE COMPACTED BASE AND CONCRETE SLAB.
16. DO NOT PUNCTURE THE VAPOR BARRIER. LAP AND TAPE ENDS.
17. PERFORM ALL SITEWORK UNDER THE DIRECT SUPERVISION OF A GEOTECHNICAL ENGINEER.
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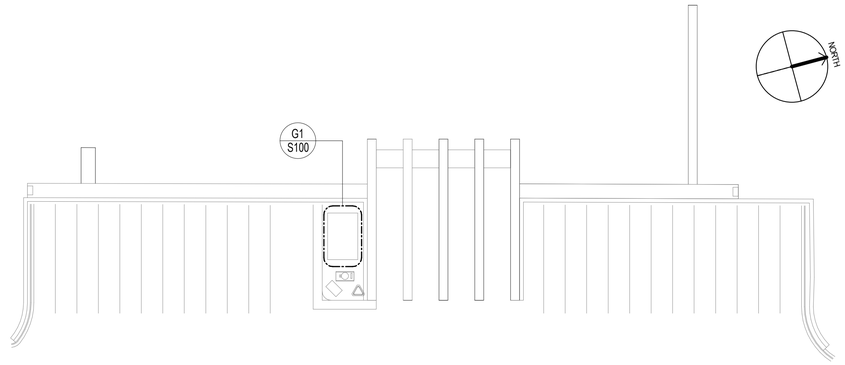
MASONRY WALL REINFORCEMENT SCHEDULE

MARK	LEGEND	THICKNESS	REINFORCING
MW-1		8" CMU	#5 @ 40" O.C. VERT.
MW-2		8" CMU	#5 VERTICAL @ EACH CELL GROUTED SOLID.
MW-3		12"X12"X8" CMU COLUMN	(4) #5 VERTICAL CELL GROUTED SOLID.

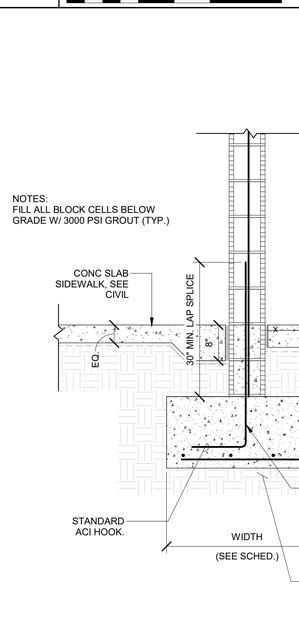
NOTES:
1. WALL SEGMENTS SHALL BE REINFORCED WITH 9 GA. STANDARD GALVANIZED LATERAL REINFORCING @ 16" O.C. HORIZONTAL. EXTEND REINFORCING 6" INTO POURED ELEMENTS AND AROUND ENCASED STEEL. PRODUCT BY WIREBOND OR APPROVED EQUAL.
2. ADJACENT TO ANY EXTERIOR WALL OPENING, PROVIDE 8" X 16" FULLY GROUTED CMU PIER W/ (1) # 5 EACH CELL FULL HEIGHT.
3. ALL MASONRY REINFORCED CELLS SHALL BE FILLED WITH 3,000 PSI GROUT MIX.
4. REFER TO SHEET S101 FOR WALL REINFORCEMENT DETAILS.



KEY PLAN

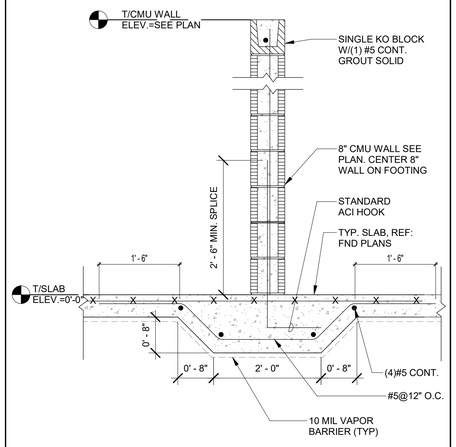
G1 — FOUNDATION PLAN

1/4" = 1'-0"



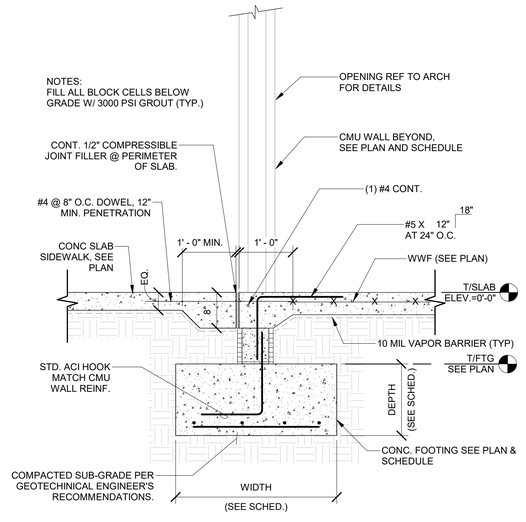
A1 — EXT CMU WALL FTG. SECTION

3/4" = 1'-0"



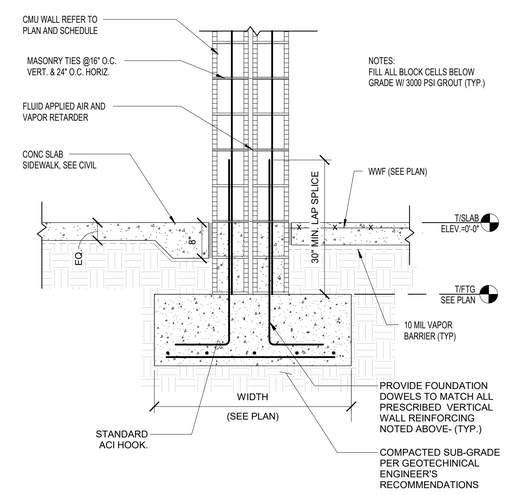
A5 — NONBEARING WALL THICKENESS SLAB FOOTING

3/4" = 1'-0"



A8 — CMU WALL FOOTING SECTION @ OPENING

3/4" = 1'-0"



A12 — FOOTING SECTION

3/4" = 1'-0"

cph
www.cphcorp.com
A Full Service
A & E Firm
500 WEST FULTON STREET
SANFORD, FLORIDA 32771
Ph:(407) 322-6841
Plans Prepared By :
CPH, Inc.
STATE OF FLORIDA LICENSES:
Architect No. AA2600926
Engineering No. 3215
Landscape No. LC0000298
Survey No. 7143
Architect of Record
JOSE M. ORTIZ
TCPH, INC.-I

CELEBRATING 40 +YEARS cph

No.	Revision	DATE

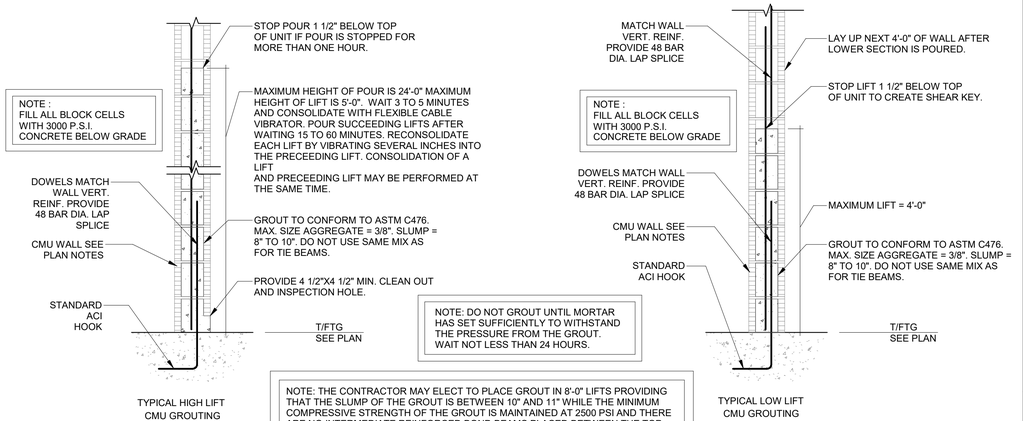
Designed:	EA
Drawn:	DAS
Checked:	JMO
Job No.:	M13112
08/13/2021	© 2021

FOUNDATION PLAN
KINGFISH BOAT RAMP RESTROOMS
752 MANATEE AVENUE
HOLMES BEACH, FLORIDA 34217

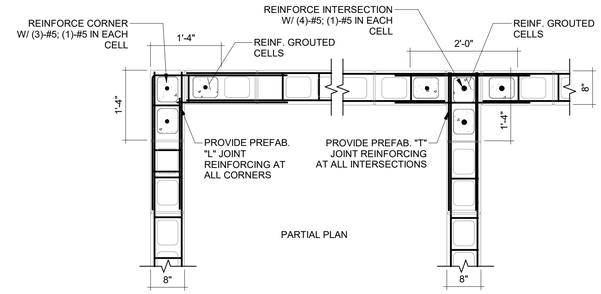
NOT FOR CONSTRUCTION

THIS SHEET NOT VALID FOR CONSTRUCTION WITHOUT COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND

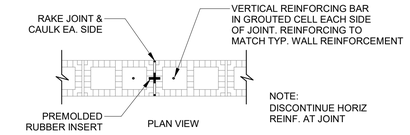
Sheet No.
S100



I1	CMU WALL GROUTING DETAIL
3/4" = 1'-0"	

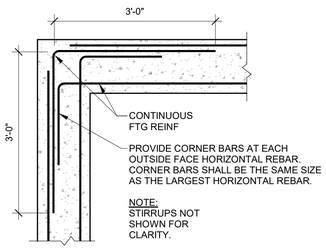


J8	CMU WALL REINFORCEMENT PLAN DETAIL
3/4" = 1'-0"	

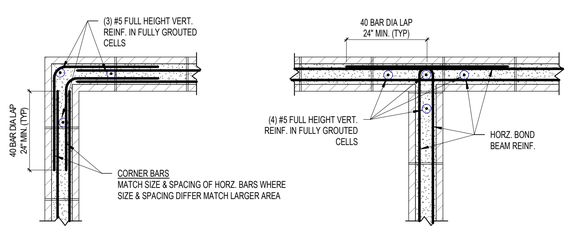


NOTES :
1.- SAW CUT BOND BEAMS, TIE BEAMS 1" DEEP TO CONTINUE WALL CONTROL JOINT TO TOP OF WALL.
2.- CONTROL JOINT LOCATIONS PER ARCH. DRAWINGS. REFER TO DWGS. FOR SPECIFIED LOCATIONS AS NOTED THUS ▲
3.- CONTINUE ALL LINTELS, BOND BEAMS, TIE BEAMS REINF. THROUGH THE JOINT. DO NOT CUT LINTEL, BOND BEAM AND TIE BEAM REINF. AT JOINT.

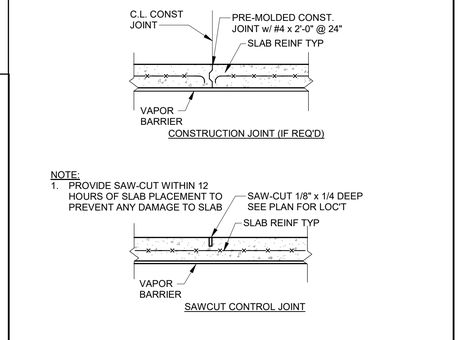
J13	CMU CONTROL JOINT
3/4" = 1'-0"	



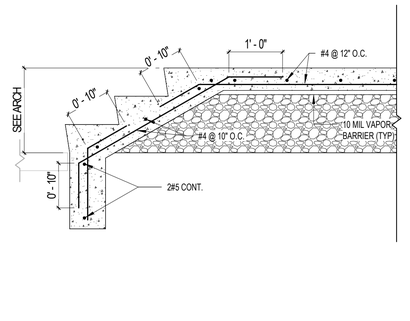
F1	TYP. CONTINUITY CORNER1
3/4" = 1'-0"	



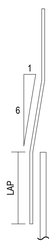
F5	MASONRY BOND BEAM CORNER DETAILS
3/4" = 1'-0"	



F10	SLAB ON GRADE JOINTS1
3/4" = 1'-0"	



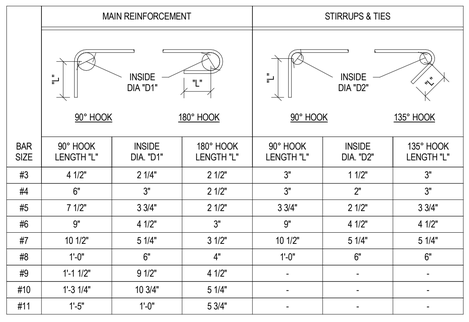
F13	STAIR REINF. SECTION
3/4" = 1'-0"	



CONCRETE STRENGTH	f'c = 3000 PSI				f'c = 4000 PSI			
CLASS OF LAP SPLICE	CLASS "A"		CLASS "B"		CLASS "A"		CLASS "B"	
BAR SIZE	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	1'-10"	1'-5"	2'-4"	1'-10"	1'-7"	1'-3"	2'-1"	1'-7"
#4	2'-5"	1'-10"	3'-1"	2'-5"	2'-1"	1'-7"	2'-9"	2'-1"
#5	3'-0"	2'-4"	3'-11"	3'-0"	2'-7"	2'-0"	3'-5"	2'-7"
#6	3'-7"	2'-9"	4'-8"	3'-7"	3'-1"	2'-5"	4'-1"	3'-1"
#7	5'-3"	4'-0"	6'-9"	5'-2"	4'-6"	3'-6"	5'-11"	4'-6"
#8	6'-0"	4'-7"	7'-9"	6'-0"	5'-2"	4'-0"	6'-9"	5'-2"
#9	6'-9"	5'-2"	8'-9"	6'-9"	5'-10"	4'-6"	7'-7"	5'-10"
#10	7'-7"	5'-10"	9'-10"	7'-7"	6'-7"	5'-1"	8'-6"	6'-7"
#11	8'-5"	6'-6"	10'-11"	8'-5"	7'-3"	5'-7"	9'-5"	7'-3"

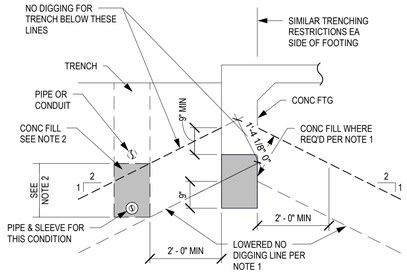
NOTES:
1. UNLESS INDICATED OTHERWISE, USE CLASS "B" LAP SPLICE LENGTHS, MULTIPLIED BY THE APPLICABLE FACTORS(S) LISTED BELOW.
2. WHERE THE CLEAR SPACING OF BARS BEING SPLICED IS LESS THAN 2 BAR DIAMETERS, INCREASE THE LAP LENGTH BY 50%.
3. WHERE THE BAR COVER IS LESS THAN OR EQUAL TO THE BAR DIAMETER, INCREASE THE LAP LENGTH BY 50%
4. A CLASS "A" SPLICE MAY BE USED ONLY WHERE NOTED ON THE DRAWINGS. WHERE DEVELOPMENT LENGTH (Ld) IS REQUIRED OR CALLED OUT ON THE DRAWINGS, USE CLASS "A" LAP SPLICE LENGTH.
5. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS.
6. LAP SPLICE LENGTHS IN TABLE ARE FOR NORMAL WEIGHT CONCRETE. WHERE LIGHTWEIGHT AGGREGATE CONCRETE IS USED, INCREASE LAP SPLICE LENGTH BY 30%
7. SPLICES OF HORIZONTAL REINFORCEMENT IN WALLS SHALL BE STAGGERED.
8. SPLICES OF HORIZONTAL REINFORCEMENT IN WALLS CONTAINING TWO CURTAINS OF REINFORCEMENT SHALL NOT OCCUR IN THE SAME LOCATION.

A1	REBAR OFFSET & LAP SPLICE REQUIREMENTS
1" = 1'-0"	



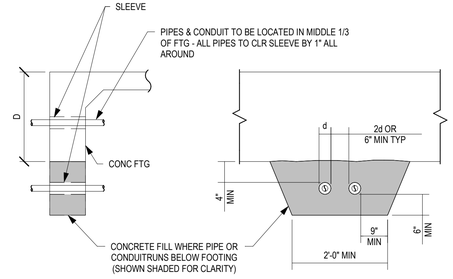
BAR SIZE	MAIN REINFORCEMENT 90° HOOK LENGTH "L"	MAIN REINFORCEMENT INSIDE DIA. "D1"	MAIN REINFORCEMENT 180° HOOK LENGTH "L"	STIRRUPS & TIES 90° HOOK LENGTH "L"	STIRRUPS & TIES INSIDE DIA. "D2"	STIRRUPS & TIES 135° HOOK LENGTH "L"
#3	4 1/2"	2 1/4"	2 1/2"	3"	1 1/2"	3"
#4	6"	3"	2 1/2"	3"	2"	3"
#5	7 1/2"	3 3/4"	2 1/2"	3 3/4"	2 1/2"	3 3/4"
#6	9"	4 1/2"	3"	9"	4 1/2"	4 1/2"
#7	10 1/2"	5 1/4"	3 1/2"	10 1/2"	5 1/4"	5 1/4"
#8	1'-0"	6"	4"	1'-0"	6"	6"
#9	1'-1 1/2"	9 1/2"	4 1/2"	-	-	-
#10	1'-3 1/4"	10 3/4"	5 1/4"	-	-	-
#11	1'-5"	1'-0"	5 3/4"	-	-	-

A5	REBAR STANDARD HOOKS & BENDS
1" = 1'-0"	



PARALLEL TO FTG

NOTES:
1. WHERE TRENCH OCCURS BELOW "NO DIGGING LINE" (SHOWN AS HEAVY DASHED LINE), LOWER BOTTOM OF FTG WITH CONC FILL TO LOWER NO DIGGING LINE AS REQ'D (SHOWN AS LT DASHED LINE).
2. IN LIEU OF LOWERING BOTT OF FTG WHERE TRENCH OCCURS BELOW NO DIGGING LINE, FILL PORTION OF TRENCH BELOW NO DIGGING LINE W/ CONC FILL PRIOR TO EXCAVATING FTG. PROVIDE SLEEVE W/ 1" CLR AROUND PIPE ENCASED IN CONC.
3. SEE PIPES PERPENDICULAR TO FOOTING FOR ADDITIONAL NOTES.



PERPENDICULAR TO FTG

NOTES:
1. CONCRETE FILL SHALL HAVE f'c @ 28 DAYS > 1500 PSI.
2. CONCRETE FILL TO BE SAME WIDTH AS FTG AND FULL WIDTH OF PIPE TRENCH. STEP FTG IF PIPE IS MORE THAN 2'-6" BELOW BOTT OF FTG.
3. NO PIPE SHALL BE PLACED BELOW SPREAD FTGS - TYP.
4. IF PIPE IS IN PLACE PRIOR TO CASTING CONCRETE, WRAP PIPE W/ 1" THICK GLASS WOOL INSULATION IN LIEU OF SLEEVE.
5. PROVIDE 2" CLR MINIMUM, BETWEEN PIPES OR CONDUIT & REINFORCING.
6. NO PIPES UNDER PRESSURE ALLOWED WITHIN FTG IN LONGITUDINAL DIRECTION.
7. CONDUITS WITHIN FTG SHALL BE LOCATED SUCH THAT VERTICAL RISERS DO NOT CROSS ADJACENT HORIZONTAL CONDUIT. MINIMUM COVER SHALL BE 1 1/2" AND 2d MINIMUM SEPARATION.

A9	UNDERGROUND UTILITIES AT FOUNDATIONS
1/2" = 1'-0"	

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STATE OF FLORIDA LICENSES:
Architect No. AA2600926
Engineering No. 3215
Landscape No. LC0000298
Survey No. 7143
Architect of Record
JOSE M. ORTIZ
TCPH, INC.-I

CELEBRATING 40 +YEARS cph

No.	Revision	DATE

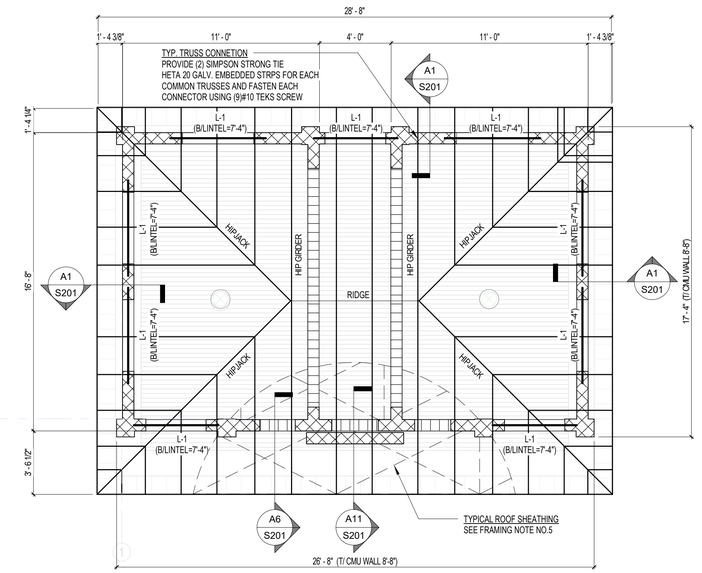
Designed:	Designer
Drawn:	CPH Inc.
Checked:	Checker
Job No.:	M13112
08/13/2021	© 2021

TYPICAL CONCRETE DETAILS
KINGFISH BOAT RAMP RESTROOMS
752 MANATEE AVENUE
HOLMES BEACH, FLORIDA 34217

NOT FOR CONSTRUCTION

THIS SHEET NOT VALID FOR CONSTRUCTION WITHOUT COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND

Sheet No.
S101

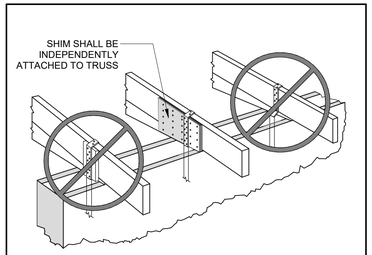


G1 | ROOF FRAMING PLAN

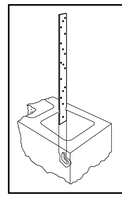
1/4" = 1'-0"

WOOD FRAMING PLAN NOTES

1 L# DENOTES PRECAST LINTEL SEE SCHEDULE.
2 THE GENERAL CONTRACTOR SHALL VERIFY ALL RTU WEIGHTS, LOCATIONS, CURB DIMENSIONS, SUPPORT RACK DIMENSIONS, ROOF OPENING SIZES AND ROOF OPENING LOCATIONS WITH MECH, ARCH, AND SUPPLIER PRIOR TO FABRICATION AND CONSTRUCTION. REPORT ANY DISCREPANCIES TO ARCHITECT AND ENGINEER.
3 THE TRUSS LAYOUT ABOVE IS USED ONLY FOR THE TYPE AND LOCATION OF CONNECTORS REQUIRED. SEE SIGNED AND SEALED TRUSS LAYOUT PROVIDED BY TRUSS SYSTEM ENGINEER FOR CONSTRUCTION.
4 TRUSS SYSTEM ENGINEER SHALL SUBMIT SIGNED AND SEALED SHOP DRAWINGS FOR REVIEW BY ARCHITECT / ENGINEER PRIOR TO CONSTRUCTION.
5 ALL PLYWOOD ROOF SHEATHING SHALL BE PRESSURE TREATED 5/8 INCH *APA RATED SHEATHING*, 32/16 SPACING. ALL PANELS SHALL BE NAILED WITH 10D GALVANIZED NAILS AT 4 INCHES O.C. AT ALL ENDS AND EDGES AND AT 6 INCHES O.C. AT ALL INTERMEDIATE SUPPORTS. ALL PLYWOOD PANEL END JOINTS SHALL OCCUR OVER SUPPORTS AND SHALL BE STAGGERED ONE HALF PANEL LENGTH FROM ADJACENT PANELS.
6 ALL TRUSS-TO-TRUSS CONNECTIONS ARE PROVIDED BY TRUSS SYSTEM ENGINEER.
7 ALL BUILDING ELEVATIONS AND DOOR/WINDOW LOCATIONS & SIZES ARE ILLUSTRATED WITHIN THE STRUCTURAL DRAWINGS FOR REFERENCE ONLY, REFER TO ARCHITECTURAL DRAWINGS FOR THE ACTUAL.
8 CONTRACTOR SHALL COORDINATE WITH TRUSS DESIGNER (MANUFACTURER) TO AVOID POTENTIAL CONFLICT OF MECHANICAL DUCTS CROSSING BETWEEN WOOD TRUSSES.
9 ALL ROOF TRUSSES, GIRDERS, AND/OR RAFTERS SHALL BE ANCHORED TO TOP OF STRUCTURAL BEARING WALL/BEAM AS FOLLOWS:
COMMON PRE-ENG. TRUSSES TO CMU: (2) USP HTA20 STRAPS
COMMON PRE-ENG. TRUSSES GIRDERS TO CMU: MUGT15 CONNECTOR
10 VERIFY ALL TOP OF PARAPET AND WALL BEARING ELEVATION W/ ARCH. DWGS AND REPORT DISCREPANCIES PRIOR TO FABRICATION AND CONCTRUCTION.
11 VERIFY ALL RTU WEIGHTS AND LOCATIONS WITH MECHANICAL PRIOR TO FABRICATION AND CONSTRUCTION. REPORT DISCREPANCIES PRIOR TO FABRICATION AND CONCTRUCTION.



MISLOCATED EMBEDDED TRUSS ANCHORS WHICH ARE GREATER THAN 1/8" AND LESS THAN 1 1/2" FROM THE FACE OF THE TRUSS SHALL HAVE A SHIM PROVIDED BETWEEN THE STRAP AND THE TRUSS. ALL SHIMS AND REQUIRED FASTENERS SHALL BE DESIGNED BY THE TRUSS MANUFACTURER'S DELEGATED ENGINEER.

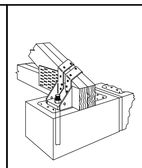


USP CONNECTORS

DOUBLE ANCHOR:

(2) HTA20 - EMBEDDED STRAPS
CAPACITY = 3230 lbs.

USE (10)-10dX1 1/2"
GALVANIZED NAILS, EACH
CONNECTOR.



USP CONNECTORS

2-PLY MEMEBER REQUIRED
MUGT15 - CONNECTOR
CAPACITY = 4495 LBS

USE (1)-5/8" DIA A307
ANCHOR DRILL/EPOXY 7 1/2"
USING HILTI HIT-HY150 MAX
ADHESIVE ANCHORING
SYSTEM AND (28)-10dX1 1/2"
GALVANIZED NAILS INTO
GIRDER TRUSS

CORROSION PROTECTION

ALL HURRICANE CONNECTORS, STRAPS THEIR FASTENERS ARE TO BE PAINTED WITH ONE COAT OF ONE OF THE FOLLOWING CORROSION PROTECTION PRODUCTS:

- COAL TAR EPOXY-POLYAMIDE (SSPC-PAINT 16)
- EPOXY-POLYAMIDE PRIMER (SSPC-PAINT 22)

FOLLOW ALL MANUFACTURER'S DIRECTIONS ON PREPING AND CLEANING THE MATERIAL SURFACES PRIOR TO PAINT APPLICATION

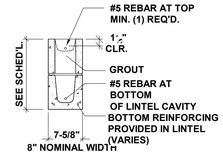
ALL CONNECTORS SHALL BE "USP" STRUCTURAL CONNECTORS (www.USPconnectors.com) WITH ALLOWABLE LOAD BASED ON THE 56th EDITION FULL-INE PRODUCT CATALOG. EQUIVALENT CONNECTORS FROM OTHER MANUFACTURERS, WITH EQUAL OR GREATER ALLOWABLE LOAD VALUES MAY BE USED AS AN ALTERNATE WITH THE APPROVAL OF THE ENGINEER OF RECORD.

TYPE DESIGNATION:

F = FILLED WITH GROUT / U = UNFILLED
NUMBER OF #5 REBAR AT BOTTOM OF LINTEL CAVITY

8F16-1B/1T

NOMINAL HEIGHT
NOMINAL WIDTH
NUMBER OF # 5 REBAR AT TOP



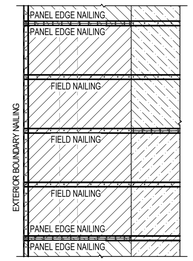
CAST-CRETE®

LINTEL SCHEDULE

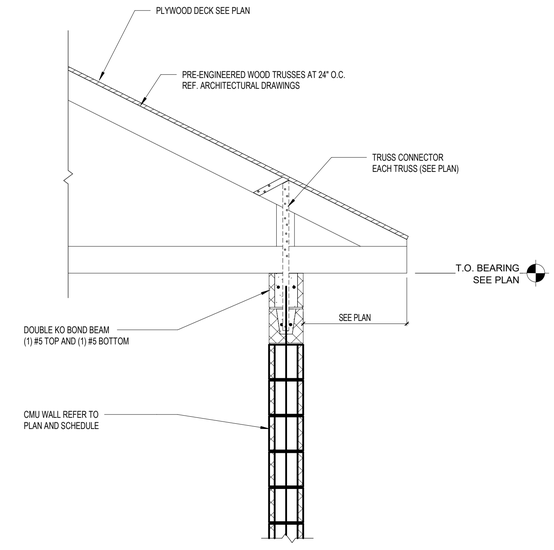
MARK	TYPE	ALLOWABLE LOADS (lbs./ft.)	COMMENTS
L1	8F8-1B/1T	752 GRAVITY / 591 UPLIFT	UP TO 8'-0" ROUGH OPENING PRECAST LINTELPROVIDE 8" END BEARING EA SIDE

ROOF / SHEATHING NAILING SCHEDULE

LOCATION	SIZE	SPACING
BOUNDARY	10d RING SHANK	4"
PANEL EDGE	10d RING SHANK	4"
FIELD	10d RING SHANK	6"

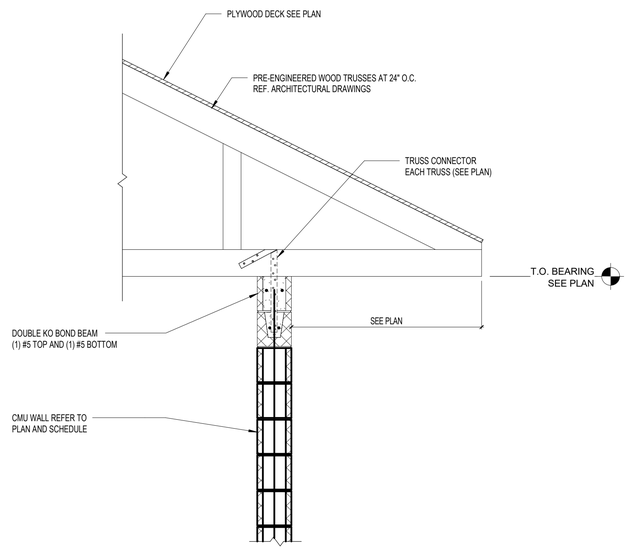


TYP. NAILING DIAGRAM



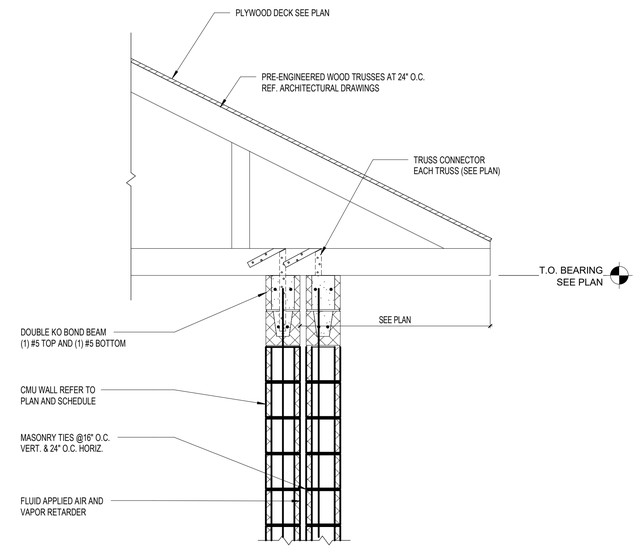
A1 | FRAMING SECTION - 2

3/4" = 1'-0"



A6 | FRAMING SECTION - 3

3/4" = 1'-0"



A11 | FRAMING SECTION - 4

3/4" = 1'-0"

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Engineering No. 3215
Landscape No. LC0000298
Survey No. 7143

Architect of Record
JOSE M. ORTIZ
TCPH, INC.-I

CELEBRATING 40 +YEARS cph

No.	Revision	DATE

Designed:	EA
Drawn:	DAS
Checked:	JMO
Job No.:	M13112
08/13/2021	© 2021

ROOF FRAMING PLAN

KINGFISH BOAT RAMP RESTROOMS

752 MANATEE AVENUE
HOLMES BEACH, FLORIDA 34217

NOT FOR CONSTRUCTION

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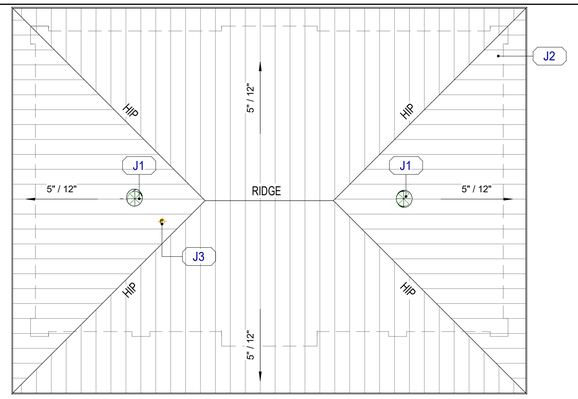
Sheet No.
S201



J1 ROOF PLAN

1/4" = 1'-0"

4ft. 0 4ft. 8ft.

ROOF LEGEND

SYMBOL	DESCRIPTION
	5-V CRIMP ALUMINUM ROOFING PANELS OVER GP 1/4" DENS DECK ON GRACE ULTRA HIGH TEMPERATURE SELF ADHESIVE LEAK BARRIER ON 5/8" CDX PLYWOOD ON PRE-ENGINEERED WOOD TRUSSES @ 24" O.C. 1⁄d NAILS @ 4' O.C. EDGES & 6' O.C. IN FIELD
	SOLATUBE LIGHTING SYSTEM
	TOP OF WALL SEE STRUCT. AND EXTERIOR ELEVATIONS

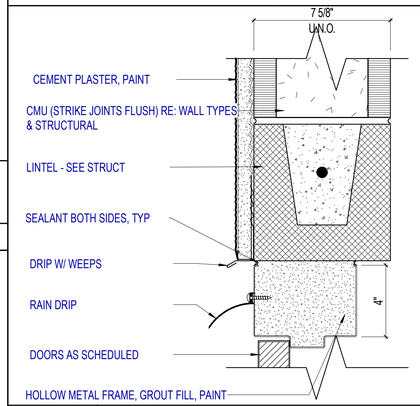
GENERAL NOTES:

1. PROVIDE MANUF. STANDARD DETAILS FOR ROOF PENETRATIONS
2. COORDINATE WALL MTD. ITEMS WITH EXTERIOR ELEVATIONS.
3. COORDINATE ALL ROOF DRAINAGE WITH CIVIL.
4. REFER TO WALL SECTIONS & DETAILS FOR ADDITIONAL ROOF DETAILING.

CEILING LEGEND AND NOTES

Q1 | 8' - 0" — 3/8" X 4" X 4' AROMATIC CEDAR WITH JOINTS STAGGERED, OVER 1/2" C-D EXPOSURE 1 PLYWOOD ON BOTTOM CHORD OF TRUSSES, STAGGERED JOINTS, TYPICAL

Q2 | 8' - 0" — 1/4" HARDIE SOFFIT BOARD OVER 1/2" C-D EXPOSURE 1 PLYWOOD



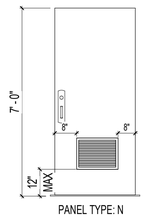
H6 HOLLOW METAL DOOR HEAD 4"

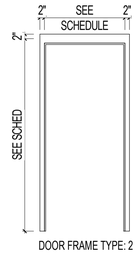
3" = 1'-0"

4 inch. 0 4 inch. 8 inch

STEEL CRAFT SERIES 16-4 FL
NOA #: 20-1005.15
APPROVAL DATE:
EXPIRATION DATE:
SUBMIT SHOP DRAWINGS SIGNED AND SEALED BY AN ENGINEER REGISTERED IN STATE OF FLORIDA.
GALVANIZED HOLLOW METAL DOORS AND FRAMES SHALL BE PAINTED WITH A BITUMINOUS COATING, TYPICAL OF ALL DOORS.
TRESHOLD: PEMCO 2005 SERIES WITH SILICONE OR VINYL SEAL.
LOUVERS: AIR LOUVERS, SECURITY LOUVER #1500-A WITH INSECT SCREEN.

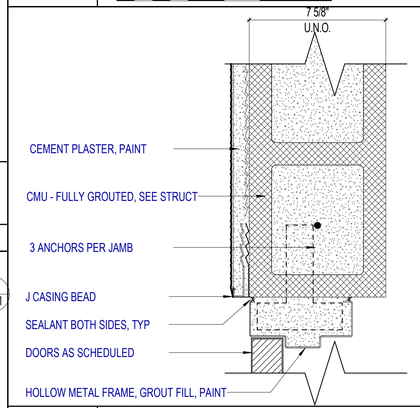
GALVANIZED HOLLOW METAL FRAME, PAINTED. PAINT INTERIOR OF FRAME WITH BITUMINUOUS COATING





H9 DOOR FRAME AND PANEL TYPES

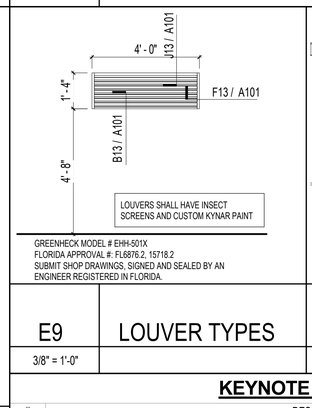
NOT TO SCALE



D6 HOLLOW METAL DOOR JAMB

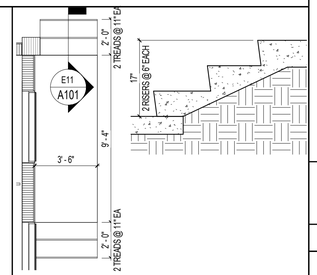
3" = 1'-0"

4 inch. 0 4 inch. 8 inch



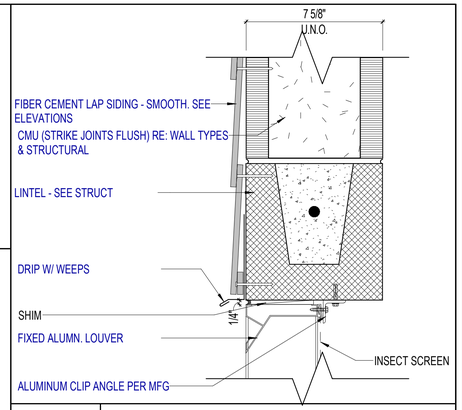
E9 LOUVER TYPES

3/8" = 1'-0"



E11 PEDESTAL DETAIL

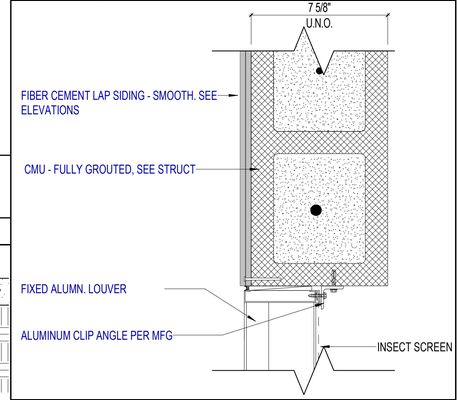
1/4" = 1'-0"



J13 ALUMINUM LOUVER HEAD

3" = 1'-0"

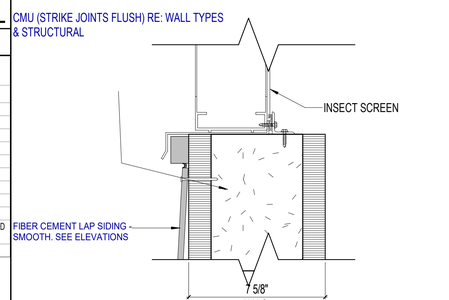
4 inch. 0 4 inch. 8 inch



F13 ALUMINUM LOUVER JAMB (EWS-CPM)

3" = 1'-0"

4 inch. 0 4 inch. 8 inch



B13 ALUMINUM LOUVER SILL

3" = 1'-0"

4 inch. 0 4 inch. 8 inch

KEYNOTE LEGEND

#	DESCRIPTION
A1	ELKAY FREE STANDING HI-LO DRINKING FOUNTAIN (VRCTLRDDWSC) WITH BOTTLE FILLER (VRCWS), OR APPROVED EQUAL
A2	ALUMINUM LOUVERS WITH INSECT SCREEN. MIAMI NOA / FLORIDA APPROVAL REQUIRED
F1	ATTIC ACCESS 20" X 30", FIELD LOCATE
F2	SURFACE MOUNTED LIGHT FIXTURE, SEE ELECTRICAL.
F3	16" SOLATUBE SKYLIGHT DIFFUSER, TYPICAL
I2	CMU (STRIKE JOINTS FLUSH) RE: WALL TYPES & STRUCTURAL
M5	FIBER CEMENT LAP SIDING - SMOOTH. SEE ELEVATIONS
J1	SOLATUBE SKYLIGHT SYSTEM
J2	5-V CRIMP ALUMINUM ROOFING PANELS OVER GP 1/4" DENS DECK ON GRACE ULTRA HIGH TEMPERATURE SELF ADHESIVE LEAK BARRIER ON 5/8" CDX PLYWOOD ON PRE-ENGINEERED WOOD TRUSSES @ 24" O.C. 18d¢d NAILS @ 4' O.C. EDGES & 6' O.C. IN FIELD
J3	VENT PIPE. SEE PLUMBING

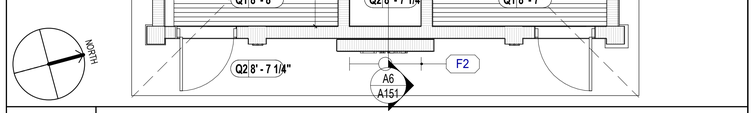
DOOR MAG-LOCK HARDWARE

#	DESCRIPTION	CATALOG #
1	MAIN CONTROL UNIT: MODEL PSU -100 WITH A 12 VOLT BATTERY BACK-UP SYSTEM	910I- 12
2	(2) PUSH BUTTONS: EMERGENCY RELEASE OVERRIDE BUTTON	CAMDEM CM 30-E
3	TIMER CONTROL: 365 DAY ANNUAL TIMER WITH MEMORY BACK-UP	SA027Q
4	MAGNET: MAGNETIC LOCK WITRH 1200LBS HOLDING FORCE	MODEL # ECL - ACC500
5	BATTERY: 12 VOLT / AMP HOURS RECHARGABLE	
6	(1) KEY EMERGENCY KEY SWITCH LOCATE AT FRONT OF BUILDING	

INSTALL CONDUIT FOR MAG LOCKS IN WALLS PRIOR TO FILLING WITH CONCRETE AND STUB INTO ATTIC SPACE WITH PULL STRING, COORDINATE WITH DOOR HARDWARE INSTALLER AND ELECTRICIAN. NO EXPOSED CONDUIT ALLOWED INSIDE OF RESTROOMS. SEE SPECIFICATIONS FOR ADDITIONAL DOOR HARDWARE INFORMATION.

DOOR SCHEDULE

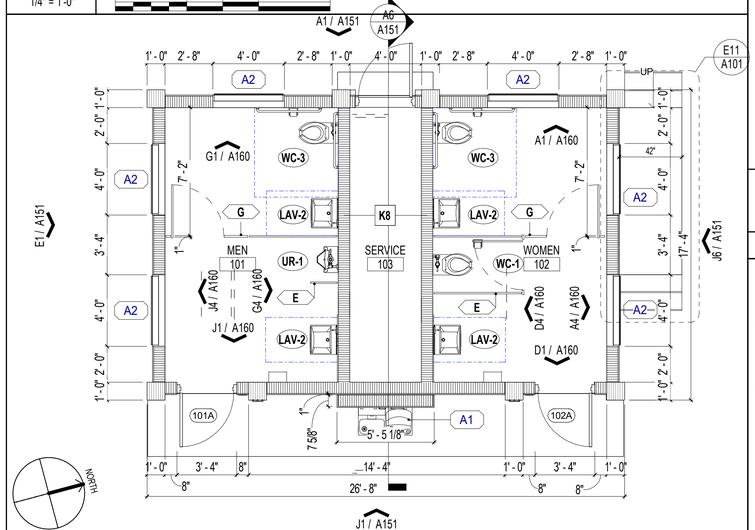
MARK	DOOR FRAME HEIGHT	DOOR FRAME WIDTH	DOOR FRAME TYPE	DOOR FRAME MATERIAL	DOOR PANEL TYPE	DOOR PANEL MATERIAL	RATING	GLAZING	DETAILS HEAD	DETAILS JAMB	DETAILS SILL	COMMENTS
101A	7' - 0"	3' - 0"	2	AL	N	HM	N/A	N/A	H6/A101	D6/A101	A6/A101	
102A	7' - 0"	3' - 0"	2	AL	N	HM	N/A	N/A	H6/A101	D6/A101	A6/A101	
103B	7' - 0"	3' - 0"	2	AL	N	HM	N/A	N/A	H6/A101	D6/A101	A6/A101	



F1 REFLECTED CEILING PLAN

1/4" = 1'-0"

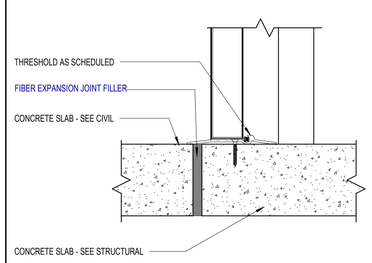
4ft. 0 4ft. 8ft.



A1 FLOOR PLAN

1/4" = 1'-0"

4ft. 0 4ft. 8ft.



A6 HOLLOW METAL DOOR SILL

3" = 1'-0"

4 inch. 0 4 inch. 8 inch

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State of Florida Licenses:
Architect No. AA2600926
Engineer No. 3215
Landscape No. LC0000298
Surveyor No. 7143
Architect of Record
##/##/2021
BROOK K. SHERRARD
CPH, Inc.

CELEBRATING 40 +YEARS cph

No.	DATE	Revision

Designed:	CPH, INC.
Drawn:	JLD / KAR
Checked:	BKS
Job No.:	M13112
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FLOOR, RCP, AND ROOF PLAN

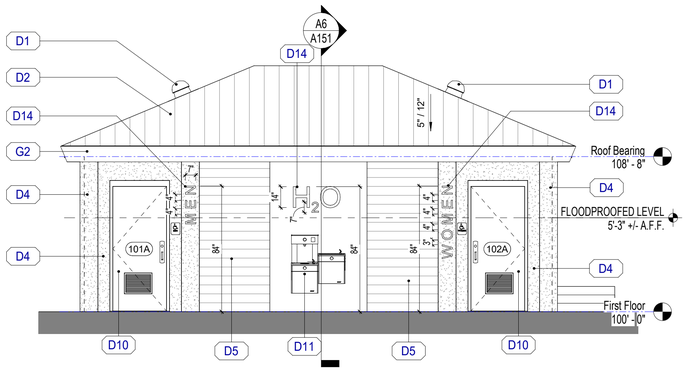
KINGFISH BOAT RAMP RESTROOMS

752 MANATEE AVENUE
HOLMES BEACH, FLORIDA 34217

NOT FOR CONSTRUCTION

THIS SHEET NOT VALID FOR CONSTRUCTION WITHOUT COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND

Sheet No.
A101

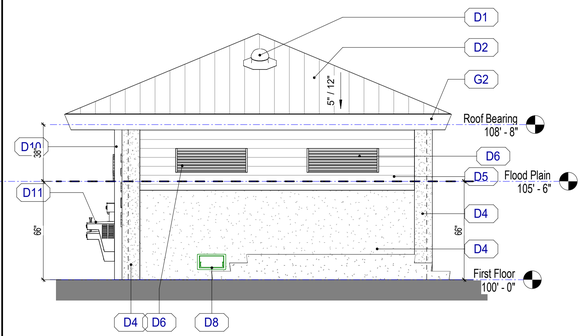


J1

EAST ELEVATION

1/4" = 1'-0"

4ft. 0 4ft. 8ft.



J6

NORTH ELEVATION

1/4" = 1'-0"

4ft. 0 4ft. 8ft.

KEYNOTE LEGEND

#	DESCRIPTION
D1	SOLATUBE LIGHTING SYSTEM
D2	5-V CRIMP METAL ROOFING SYSTEM
D4	STUCCO ON CMU, PAINT
D5	HARDI PLANK LAP SIDING 5/16" x 7-1/4 WITH 6" EXPOUSURE. COLORPLUS: BOOTH BAY BLUE. SECURE DIRECTLY TO CMU WITH MASONRY SIDING NAIL PER MANUFACTURER DETAILS.
D6	ALUMINUM LOUVERS WITH INSECT SCREEN. MIAMI NOA / FLORIDA APPROVAL REQUIRED
D8	FLOOD BARRIER. SEE SHEET A170 FOR DETAILS
D10	3'-0" x 7'-0" HOLLOW METAL IMPACT RESISTANT (GALVANIZED) DOOR & FRAME W/ LOUVER, PAINTED
D11	ELKAY FREE STANDING HI-LO DRINKING FOUNTAIN (VRCTLRDDWSC) WITH BOTTLE FILLER (VRCWS), OR APPROVED EQUAL
D13	VENT PIPE. SEE PLUMBING
D14	ALUMINUM DIMENSIONAL LETTER. ARIAL TYPEFACE.
G2	HARDIE TRIM BOARD 5/4, 1" x 11.25" SMOOTH, PAINTED. OVER P.T. 2x10 SUB FASCIA.

E1

SOUTH ELEVATION

1/4" = 1'-0"

4ft. 0 4ft. 8ft.

A1

WEST ELEVATION

1/4" = 1'-0"

4ft. 0 4ft. 8ft.

A6

BUILDING SECTION

3/4" = 1'-0"

1ft. 0 1ft. 2ft.

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BUILDING SECTION AND ELEVATIONS

KINGFISH BOAT RAMP RESTROOMS

752 MANATEE AVENUE
HOLMES BEACH, FLORIDA 34217

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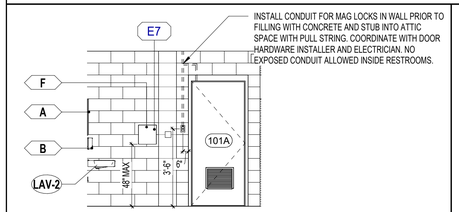
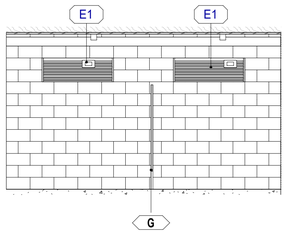
Sheet No.
A151



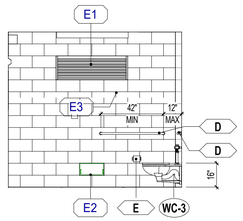
J1 — 101 MEN'S RESTROOM - SOUTH ELEVATION

1/4" = 1'-0"



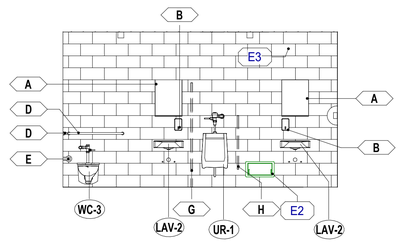
J4 — 101 MEN'S RESTROOM - WEST ELEVATION

1/4" = 1'-0"



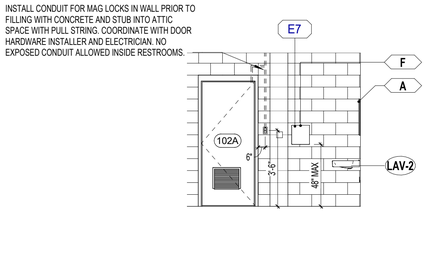
G1 — 101 MEN'S RESTROOM - NORTH ELEVATION

1/4" = 1'-0"



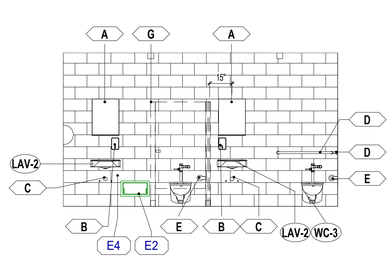
G4 — 101 MEN'S RESTROOM - EAST ELEVATION

1/4" = 1'-0"



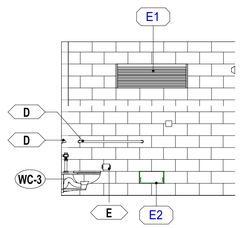
D1 — 102 WOMEN'S RESTROOM - SOUTH ELEVATION

1/4" = 1'-0"



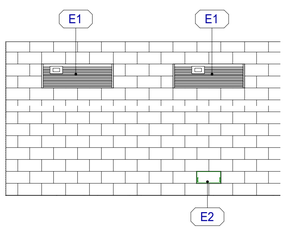
D4 — 102 WOMEN'S RESTROOM - WEST ELEVATION

1/4" = 1'-0"



A1 — 102 WOMEN'S RESTROOM - NORTH ELEVATION

1/4" = 1'-0"



A4 — 102 WOMEN'S RESTROOM - EAST ELEVATION

1/4" = 1'-0"

ROOM FINISH SCHEDULE

ROOM		WALLS (PLAN NORTH)							
NUMBER	NAME	NORTH	EAST	SOUTH	WEST	BASE	FLOOR	CEILING	COMMENTS
101	MEN	PT1, PT2	PT1, PT2	PT1, PT2	PT1, PT2	VB-1	SC-1		
102	WOMEN	PT1, PT2	PT1, PT2	PT1, PT2	PT1, PT2	VB-1	SC-1		
103	SERVICE	PT1, PT2	PT1, PT2	PT1, PT2	PT1, PT2	VB-1	SC-1		

MATERIAL FINISH SCHEDULE

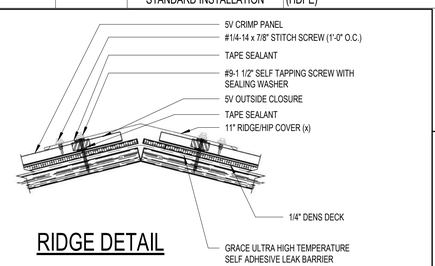
MARK	BASIS OF DESIGN	DESCRIPTION	FINISH	COMMENTS
EXTERIOR PAINT				
EPT-1	SHERWIN WILLIAMS			
EPT-2	SHERWIN WILLIAMS			
EPT-3	SHERWIN WILLIAMS			
INTERIOR PAINT				
PT-1	BENJIMAN MOORE	EPOXY PAINT ON MASONRY. TYPICAL AT ALL INTERIOR WALLS.		COLOR: TBD
PT-2	BENJAMIN MOORE	EPOXY PAINT ON MASONRY. TYPICAL AT ALL INTERIOR WALLS.		COLOR: TBD
SEALED CONCRETE				
SC-1	DAYTON	SUPERIOR SEALER OR EQUIVALENT. CLASS B, SALT AND PEPPER FINISH WITH SMALL EXPOSED AGGREGATE (>FF-45). FINISH TO BE LEVEL 2, WITH A SPECTRAL GLOSS OF 30 TO 49.	HIGH GLOSS (SATIN)	
VINYL BASE				
VB-1	JOHNSONITE	4" COVE BASE COLOR: TBD		

TOILET ACCESSORY SCHEDULE

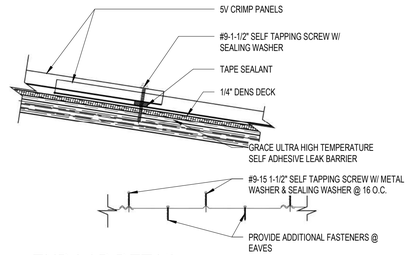
MARK	DESCRIPTION	MANUFACTURER	MODEL	MOUNTING HEIGHT	REMARKS
A	24" X 36" ACRYLIC FLAT FRAME MIRROR	--	--	40" AFF TO BOTTOM OF MIRROR SURFACE	BY OWNER
B	FOAM SOAP DISPENSER	--	--	40" AFF TO BOTTOM	BY OWNER
C	PIPE INSULATION	TRUBRO	--	AT ALL LAVATORIES	WHITE
D	GRAB BARS	BOBRICK	B-68137	36" AFF	
E	TISSUE DISPENSER	--	--	21" TO BOTTOM OF UNIT AND 36" TO CENTER FROM WALL	BY OWNER
F	HAND DRYER	EXCEL DRYER	XL-BW & #40502	37" TO BOTTOM OF DRYER UNIT	SURFACE-MOUNT
G	TOILET PARTITIONS, FLOOR BRACED	--	--	PER MANUFACTURER STANDARD INSTALLATION	HIGH-DENSITY POLYETHYLENE (HDPE)
H	URINAL SCREEN	--	--	PER MANUFACTURER STANDARD INSTALLATION	HIGH-DENSITY POLYETHYLENE (HDPE)

KEYNOTE LEGEND

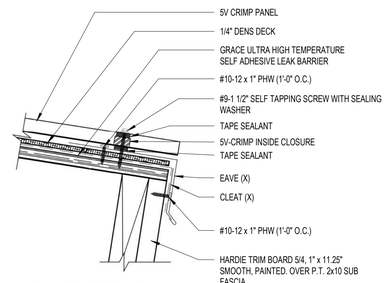
#	DESCRIPTION
E1	ALUMINUM LOUVERS WITH INSECT SCREEN. MIAMI NOA / FLORIDA APPROVAL REQUIRED
E2	FLOOD BARRIER. SEE SHEET A170 FOR DETAILS
E3	EPOXY PAINT ON CEMENTOUS COATING ON MASONRY TYPICAL AT ALL INTERIOR WALLS.
E4	HOSE BIBB, SECURE. SEE PLUMBING.
E7	INSTALL CONDUIT FOR HANDRYER IN WALLS PRIOR TO FILLING WITH CONCRETE AND STUB INTO ATTIC WITH PULL STRING, COORDINATE WITH ELECRICIAN. NO EXPOSED COUNDUIT ALLOWED INSIDE OF RESTROOMS.



RIDGE DETAIL



END LAP DETAIL



EAVE DETAIL

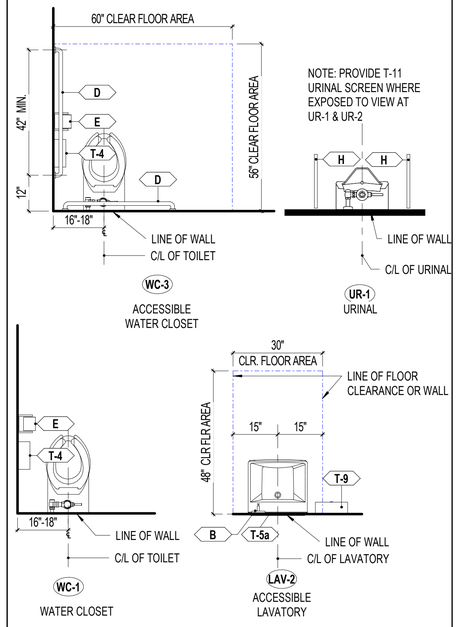
FINISH PLAN GENERAL NOTES

1. ALL FINISH SELECTIONS IDENTIFIED IN LEGENDS, SCHEDULES, AND SPECIFICATIONS ARE NOT SUBJECT TO 'OR EQUAL' SUBSTITUTIONS U.N.O. THE CONTRACTOR AND SUBCONTRACTORS SHALL SUBMIT PRODUCTS AND FINISHES AS INDICATED IN THE DOCUMENTS.
2. NOTIFY ARCHITECT OF SCHEDULED FINISHES THAT ARE UNAVAILABLE OR DISCONTINUED AT THE EARLIEST OPPORTUNITY SUCH THAT A SUBSTITUTION CAN BE SELECTED WITHOUT JEOPARDIZING THE CONSTRUCTION SCHEDULE.
3. INSTALL ALL FINISH MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED SPECIFICATIONS, SURFACE PREPARATION, ADHESIVES AND BACKINGS: INCLUDING WALLCOVERINGS, COATINGS, FLOORING MATERIALS, LAMINATES, ETC.
4. FLOOR MATERIAL TRANSITIONS AT DOOR OPENINGS ARE TO BE CENTERED BELOW THE DOOR IN THE CLOSED POSITION, UNLESS NOTED OTHERWISE. SEE ALSO TRANSITION DETAILS THIS SHEET.
5. WHERE FLOOR FINISH THICKNESS REQUIRES, FLOAT FLOOR SLAB AT FINISH TRANSITION AREAS A MINIMUM OF 2'-0" OR TO A ACHIEVE A MAXIMUM SLOPE OF 1:20 (WHICHEVER IS GREATER) TO ACHIEVE A UNIFORM AND FLUSH TRANSITION BETWEEN FINAL FINISHED SURFACES.
6. ACCESS PANELS, VISIBLE COVES OR ENCASEMENTS, VISIBLE ELECTRICAL PANELS, ETC. TO SHALL BE PAINTED TO MATCH ADJACENT SURFACES.
7. WHEREVER MORE THAN ONE FLOOR, WALL OR CEILING FINISH IS INDICATED FOR ANY SPACE IN THE SCHEDULE OF FINISHES, REFER TO DETAIL DRAWINGS FOR EXACT EXTENT OF EACH
8. IN SPACES WHERE FIXED EQUIPMENT IS SHOWN, BASE SHALL ONLY BE INSTALLED AT EXPOSED WALL SURFACES.
9. ALL EXPOSED FERROUS METAL SURFACES INCLUDING JOISTS, TRUSSES, BEAMS, DRAINS & LEADER PIPES, PLUMBING PIPES, HANGARS, STRAPS, A.C. DUCTS, ELECTRICAL CONDUITS AND OTHER MISCELLANEOUS ITEMS, IF NOT REQUIRED TO BE SHOP PRIMED, SHALL RECEIVE ONE (1) COAT OF PRIMER FOR GALVANIZED OR NON-GALVANIZED METAL (AS THE CASE MAY BE) PLUS TWO (2) COATS OR PAINT AS INDICATED IN THE FINISH SCHEDULE AND SPECIFICATIONS.
10. ALL EXPOSED FERROUS METAL SURFACES INCLUDING JOISTS, TRUSSES, BEAMS, DRAINS & LEADER PIPES, PLUMBING PIPES, HANGARS, STRAPS, A.C. DUCTS, ELECTRICAL CONDUITS AND OTHER MISCELLANEOUS ITEMS, IF NOT REQUIRED TO BE SHOP PRIMED, SHALL RECEIVE ONE (1) COAT OF PRIMER FOR GALVANIZED OR NON-GALVANIZED METAL (AS THE CASE MAY BE) PLUS TWO (2) COATS OR PAINT AS INDICATED IN THE FINISH SCHEDULE AND SPECIFICATIONS.

RESTROOM PLAN GENERAL NOTES

1. TOILET ROOM SIGNS BY G.C. SHALL COMPLY WITH ANSI A117.1 SECTION 703.
2. ALL TOILET ACCESSORIES AND PLUMBING FIXTURES SHALL BE MOUNTED IN ACCORDANCE TO ANSI A117.1
3. LAVATORIES SHALL BE LOCATED SUCH THAT TOP OF RIM OR COUNTER SURFACE TO BE AT A MAX. OF 34" A.F.F. PROVIDE 29" MIN. CLEARANCE BETWEEN FINISH FLOOR AND BOTTOM OF APRON AND SHALL COMPLY WITH ANSI A117.1 SECTION 606.
4. LAVATORIES AND ELECTRIC WATER COOLERS SHALL BE LOCATED SUCH THAT A CLEAR FLOOR SPACE OF 30" X 48" IS PROVIDED AND SHALL COMPLY WITH ANSI A117.1 SECTION 305.3 & SECTION 306.
5. PROVIDE PROTECTIVE INSULATION WHICH SHALL COMPLY WITH ANSI A117.1, SECTION 606.6 AT ALL ACCESSIBLE LAVATORIES WITH EXPOSED PIPING.
6. UNO WATER CLOSETS & URINAL FLUSH CONTROLS AND FAUCETS SHALL BE AUTOMATIC OR BATTERY OPERATED AND SHALL COMPLY WITH ANSI A117.1 SECTION 604.4. CONTROLS FOR FLUSH VALVES SHALL BE MOUNTED ON THE OPEN SIDE OF TOILET AREAS NOT MORE THAN 44" A.F.F. REFER TO PLUMBING FOR FIXTURE TYPE AND CONTROLS
7. ACCESSIBLE URINALS SHALL BE WALL HUNG WITH AN ELONGATED RIM AT A MAX. OF 17" A.F.F. AND SHALL COMPLY WITH ANSI A117.1, SECTION 605.2
8. ACCESSIBLE TOILET STALL DOORS SHALL BE 32" CLEAR, SHALL BE SELF CLOSING, AND SHALL BE EQUIPPED WITH A GRASPABLE PULL ON BOTH SIDES. STALLS SHALL COMPLY WITH ANSI A117.1, SECTION 404.2.3
9. ADDITIONAL STALLS SHALL BE PROVIDED IN CONFORMANCE WITH ANSI A117.1-2009, SECTION 604.
10. URINAL SCREENS AND TOILET PARTITIONS TO BE PROVIDED AND INSTALLED BY G.C.
11. U.N.O. ALL ACCESSORIES AND DISPENSERS SHALL BE SUPPLIED AND INSTALLED BY GC.
12. NEW RESTROOM(S) TO BE FULLY ACCESSIBLE PER THE PROVISIONS OF ANSI A117.1.

NOTES
1. ALL TOILET ACCESSORIES SHOWN ARE DIAGRAMMATIC IN NATURE AND NOT INTENDED TO ACCURATELY REFLECT THE SPECIFIED PRODUCT. REFER TO TOILED ACCESSORY SCHEDULE AND SPECIFICATIONS.
2. PLUMBING FIXTURES SHOWN ARE DIAGRAMMATIC IN NATURE AND NOT INTENDED TO ACCURATELY REFLECT THE SPECIFIED PRODUCT. REFER TO PLUMBING FIXTURE SCHEDULE.
3. CONTRACTOR TO NOTIFY ARCHITECT OF ANY DISCREPANCIES IN THE REQUIRED INSTALLATION MOUNTING HEIGHTS AND CLEARANCES PRIOR TO INSTALLATION OF FIXTURES AND/OR ACCESSORIES.



A10	ROOF DETAILS	A13	TYPICAL PLUMBING FIXTURE CONFIGURATION LEGEND
3" = 1'-0"		NOT TO SCALE	

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INTERIOR ELEVATIONS, FINISH SCHEDULE & NOTES

KINGFISH BOAT RAMP RESTROOMS
752 MANATEE AVENUE
HOLMES BEACH, FLORIDA 34217

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Sheet No.
A160

DETAIL DIAGRAM
MODEL 1540-520
FLOOD VENT INSULATED

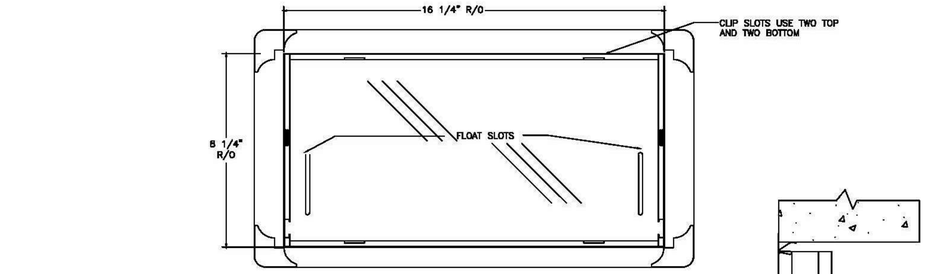

FIGURE 1
FRONT VIEW

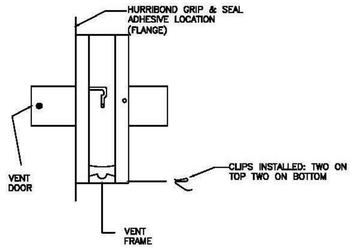

FIGURE 2
SIDE VIEW

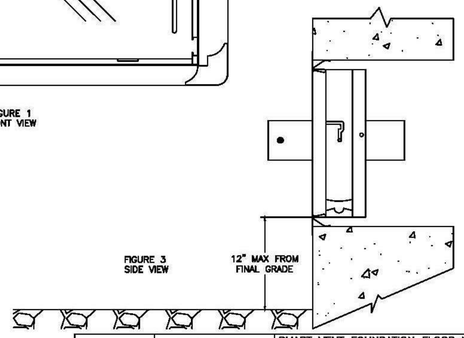

FIGURE 3
SIDE VIEW

SMART VENT®
877-441-8368
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SMART VENT FOUNDATION FLOOD VENTS
430 ANDBRO DR., UNIT 1
PITMAN NJ 08071

FLOOD VENT INSULATED
MODEL 1540-520

SIZE	DWG NO.	REV
A	1540-520	B

DATE. 8-21-16 | SHEET 1 OF 2

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INSTALLATION INSTRUCTIONS
& DETAILS
MODEL 1540-520
FLOODVENT INSULATED

INSTALLATION INSTRUCTIONS

1. REMOVE VENT DOOR FROM VENT FRAME. (TURN UPSIDE DOWN, ROTATE BOTTOM OF DOOR OUTWARD AND SLIDE OUT)
2. PREPARE A CLEAN 16.25" WIDE BY 8.25" HIGH ROUGH OPENING (APPROX. 1 BLOCK WIDE X 1 BLOCK HIGH) FOR EACH VENT. ENSURE THE BOTTOM OF THE ROUGH OPENING IS NO MORE THAN 12" ABOVE THE FINISHED GRADE.
3. APPLY A BEAD OF HURRIBOND GRIP & SEAL OR EQUIVALENT ADHESIVE AROUND THE BACK OF THE FLANGE ON THE VENT FRAME. (FIG. 2)
4. INSERT INSTALLATION CLIPS INTO THE TWO SLOTS ON THE TOP AND TWO SLOTS ON THE BOTTOM OF THE FRAME.
5. THE SPRING ARM OF THE CLIPS SHOULD BE ON THE OUTSIDE OF THE VENT FRAME. COMPRESS THE BOTTOM TWO CLIPS AND BEGIN SLIPPING THE FRAME INTO THE OPENING. ENSURE THAT THE BOTTOM CLIPS ARE IN THE OPENING BEFORE ALLOW THEM TO DECOMPRESS.
6. WITH THE FRAME NOW IN THE OPENING, AND THE BOTTOM SPRINGS IN PLACE, COMPRESS THE TOP SPRINGS AND PUSH THE VENT FRAME INTO THE OPENING COMPLETELY UNTIL THE FRAME IS FLUSH WITH THE WALL.
7. RE-CHECK THAT FRAME IS SQUARE AND SLOTS ARE CLEAR OF DEBRIS, AND CAULK.
8. INSTALL THE DOOR INTO FRAME BY GRASPING THE BOTTOM OF DOOR (WITH FLOAT PINS DOWN) AND FRONT (SMALL SCREEN IN FRONT). SLIDE DOOR INTO FRAME AND ROTATE UNTIL IT IS LATCHED.
9. TO OPEN THE DOOR INSERT TWO CREDIT CARDS INTO THE FLOAT SLOTS AS SHOWN IN THE DIAGRAM. THIS WILL UNLATCH THE DOOR FOR REMOVAL AND CLEANING.

DETAIL SPECIFICATIONS:
MATERIAL: STAINLESS STEEL
OPERATION: AUTOMATIC NON-POWERED ACTIVATION AND OPERATION

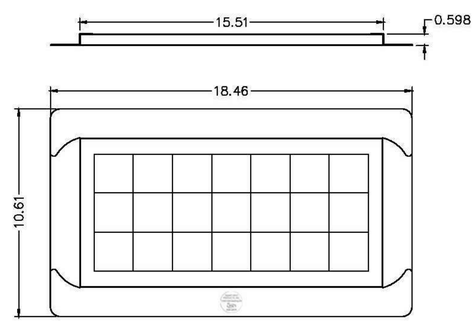
INSTALLATION:
SECURED W/ 4 STAINLESS STEEL INSTALLATION CLIPS INCLUDED AND AN ADHESIVE
HYDROSTATIC RELIEF: 200 SQ. FT PER VENT
REQUIREMENTS: MINIMUM OF 2 VENTS PER ENCLOSED AREA MOUNTED ON AT LEAST TWO DIFFERENT WALLS

COLORS: STAINLESS (STANDARD)
EXTERIOR POWDER COATED WHITE, WHEAT, GRAY, AND BLACK (AVAILABLE)

MEETS THE REQUIREMENTS FOR ENGINEERED OPENINGS AS SET FORTH BY:
FEMA, NFIP, ICC, & ASCE
SUPPORTIVE DOCUMENTS, TB 1-08, 44CFR 60.3(C)(5), ASCE 24-14
ICC EVALUATION # ESR-2074

SHEET 2 OF 2

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED



Material: 0.024" Stainless Steel
Finish : Powder Coat White

TOLERANCES UNLESS OTHERWISE SPECIFIED	
X.X	+/-0.06
X.XX	+/-0.03
X.XXX	+/-0.005

SMART VENT
Foundation Flood Vents
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SMART VENT PRODUCTS, INC
430 Andbro Dr. Unit 1
Pitman NJ 08071

Flood Vent Sealing Kit
Single

SIZE	FSCM NO.	DWG NO.	REV
		1540-526	

DR. BB | DATE. 6/19/20 | SHEET

SMART VENT
Foundation Flood Vents

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INSTALLATION INSTRUCTIONS
& DETAILS
MODEL 1540-526
FLOOD VENT SEALING KIT

INSTALLATION INSTRUCTIONS

1. PREPARE A CLEAN 16.25" WIDE BY 8.25" HIGH ROUGH OPENING (APPROX. 1 BLOCK WIDE X 1 BLOCK HIGH) FOR EACH FRAME. ENSURE THE BOTTOM OF THE ROUGH OPENING IS NO MORE THAN 12" ABOVE THE FINISHED GRADE.
2. APPLY A BEAD OF HURRIBOND GRIP & SEAL OR EQUIVALENT ADHESIVE AROUND THE BACK OF THE FLANGE ON THE FRAME.
3. INSERT THE SEALING KIT FRAME INTO THE INTERIOR OPENING. 1540-520 WILL BE INSTALLED INTO THE EXTERIOR OPENING. 1540-520 MUST BE INSTALLED FOR EXTERIOR WALL APPLICATIONS.
4. WITH THE FRAME NOW IN THE OPENING, CHECK THAT THE FRAME IS SQUARE AND FIRMLY ADHERED.

DETAIL SPECIFICATIONS:
MATERIAL: STAINLESS STEEL – Powder Coat White Finish
: Homasote® – Medium Density Fiber Board (Cellulose Based)

OPERATION: AUTOMATIC NON-POWERED ACTIVATION AND OPERATION

INSTALLATION:
SECURED W/ AN ADHESIVE (HURRIBOND)
HYDROSTATIC RELIEF: Coupled with 1540-520 Insulated Smart Vent to Provide 200 SQ. FT PER VENT
NOTE: Wall must be minimum 7" thick to couple 1540-526 Flood Vent Sealing Kit with 1540-520 Flood Vent

COLORS: WHITE (STANDARD)

MEETS THE REQUIREMENTS FOR ENGINEERED OPENINGS AS SET FORTH BY:
FEMA, NFIP, ICC, & ASCE
SUPPORTIVE DOCUMENTS, TB 1-08, 44CFR 60.3(C)(5), ASCE 24-14
ICC EVALUATION # ESR-2074

SHEET 2 OF 2

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CPH, Inc.

State of Florida Licenses:
Architect No. AA2600926
Engineer No. 3215
Landscape No. LC0000298
Surveyor No. 7143

Architect of Record
BROOK K. SHERRARD
CPH, Inc.

CELEBRATING 40 +YEARS cph

No.	Revision	DATE

Designed:	CPH, INC.
Drawn:	JLD / KAR
Checked:	BKS
Job No.:	M13112
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FLOOD VENT DETAILS
KINGFISH BOAT RAMP RESTROOMS
752 MANATEE AVENUE
HOLMES BEACH, FLORIDA 34217

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THIS SHEET NOT VALID FOR CONSTRUCTION WITHOUT COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND

Sheet No.
A170

PLUMBING DRAWING INDEX

SHEET	NAME
P000	PLUMBING LEGEND
P001	PLUMBING SPECIFICATIONS
P002	PLUMBING SPECIFICATIONS
P201	FIRST FLOOR PLAN SANITARY
P301	FIRST FLOOR PLAN DOMESTIC WATER
P401	ROOF PLAN PLUMBING
P501	PLUMBING SANITARY RISER
P502	PLUMBING DOMESTIC WATER RISER
P600	SCHEDULES AND DETAILS - PLUMBING

PLUMBING GENERAL NOTES

1. ALL PLUMBING WORK SHALL BE INSTALLED IN ACCORDANCE WITH 2020 FLORIDA BUILDING CODE - PLUMBING.
2. LOCATE ALL VALVES IN ACCESSIBLE AREAS AS DEFINED BY THE 2020 FPC. CONTRACTOR SHALL PROVIDE ACCESS DOORS WHERE NECESSARY. (12"x12") MIN.
3. PROVIDE THERMOSTATIC MIXING VALVES AT WATER HEATERS AS STATED IN SCHEDULES.
4. VENT PIPING SHOWN IS ONLY FOR DIAGRAMMATIC PURPOSES. COORDINATE FINAL CONNECTION TO EXISTING VTR AT EXISTING RESTROOM GROUP, PLAN NORTH OF THIS PROJECT.
5. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS TO ENSURE PROPER BID - NO EXCEPTIONS WILL BE MADE.
6. ROUTE T&P VALVE PIPING TO EXISTING ADJACENT FLOOR DRAIN ONLY.
7. PROPERLY SLEEVE ALL PIPING ROUTED THROUGH WALLS AND FLOOR SLABS, AND PROTECT TO PREVENT CORROSION. SLEEVES SHALL BE RATED ASSEMBLIES WHERE THE WALL IS A RATED WALL. DIELECTRIC UNIONS SHALL BE USED TO CONNECT COPPER TO STEEL PIPE AND SHALL HAVE METAL CONNECTIONS ON EACH END THREADED TO MATCH THE ADJACENT PIPING. SEPARATE METAL COMPONENTS WITH A NYLON INSULATOR TO PREVENT CURRENT FLOW BETWEEN DISSIMILAR METALS.
8. PROVIDE PIPE MARKERS FOR ALL PIPING ABOVE THE CEILING SPACES IN ACCORDANCE WITH SPECIFICATION SECTION 220553, "IDENTIFICATION FOR PLUMBING PIPING AND EQUIPMENT".
9. LABEL ALL VALVES ABOVE CEILINGS AND IN CONCEALED SPACES. LABEL AT CEILING TILE WITH VALVE # AND TYPE OF WATER. (i.e.; BLUE= COLD WATER, LETTERING CW VLV1-001). SEE SPECIFICATIONS FOR TAGGING.
10. PROVIDE WATER HAMMER ARRESTORS IN ALL CW AND HW SUPPLY PIPING AS REQUIRED AND/OR AS SHOWN ON WATER RISERS. INSTALL IN ACCORDANCE WITH PDI-WH201 STANDARDS. SEE SCHEDULE ON THIS SHEET FOR SIZES. AIR CHAMBERS ARE NOT ACCEPTABLE SUBSTITUTIONS.
11. PROVIDE THERMAL INSULATION FOR HOT WATER PIPING IN ACCORDANCE WITH THE ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION AND PER SPECIFICATIONS.
12. PROVIDE ALL LAVATORIES WITH HW FROM THE WATER HEATER THERMOSTATIC MIXING VALVE SET TO 105°F.
13. PROVIDE CLEANOUTS AT THE BASE OF EACH SANITARY STACK IN ACCORDANCE WITH 2020 FLORIDA PLUMBING CODE. CLEANOUTS SHALL BE SIZED TO MATCH THE PIPING BEING SERVED. CLEANOUTS SHALL BE SPACED AT 75'-0" MAX. ALSO PROVIDE CLEANOUTS IN HORIZONTAL CHANGE OF DIRECTIONS >45°.
14. THE MANUFACTURERS OF ALL EQUIPMENT SHOWN ARE THE BASIS OF DESIGN. SEE SPECIFICATIONS FOR OTHER ACCEPTABLE MANUFACTURERS.
15. FIRE CAULK AND SLEEVE ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES. REFER TO LIFE SAFETY PLANS FOR RATED ASSEMBLY LOCATIONS. REFER TO ARCHITECTURAL SHEET FOR DETAILS AND UL ASSEMBLY NUMBERS
16. REFER TO ARCHITECTURAL SHEETS FOR ALL FIXTURE MOUNTING HEIGHTS.
17. COORDINATE UNDERGROUND PIPING INVERT ELEVATIONS WITH STRUCTURAL FOOTING ELEVATIONS AND CIVIL INVERT CONNECTIONS PRIOR TO ANY UNDERGROUND PIPING INSTALLATIONS. IF FOOTINGS ARE IN CONFLICT AND WHERE A PIPING ROLL DOWN IS NOT POSSIBLE, COORDINATE WITH STRUCTURAL ENGINEER FOR DROPS IN FOOTINGS IN SPECIFIC LOCATIONS.
18. COORDINATE ALL CEILING PIPING AND ELEVATIONS IN SHOP DRAWINGS WITH HVAC, FIRE PROTECTION AND ELECTRICAL TRADES TO ENSURE CLEARANCES AND PENETRATIONS, PRIOR TO INSTALLATION.
19. SLOPE ALL SANITARY PIPING 2 1/2"□ OR LESS AT 1/4" PER FOOT. SLOPE ALL SANITARY PIPING 3"□ TO 6"□ AT 1/8" PER FOOT.
20. SIZE VALVES AND FITTINGS THE SAME SIZE AS THE PIPING WHERE THEY ARE LOCATED UNLESS NOTED OTHERWISE.
21. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY SUPPORTING DEVICES FOR ALL FIXTURES INCLUDED IN THIS CONTRACT OR SPECIFIED HEREIN.
22. PROVIDE TRAP PRIMER CONNECTIONS ON ALL FLOOR DRAINS.
23. CONTRACTOR SHALL ROUGH-IN ALL WASTES AND WATER SUPPLIES FOR FIXTURES AND PERFORM FINAL CONNECTIONS AS NEEDED.
24. INSTALL PRESSURE REDUCING VALVES ON ANY PORTION OF BUILDING PIPING THAT EXCEEDS 80 PSI.
25. THE CONTRACTOR SHALL BASE HIS PROPOSAL UPON THE EQUIPMENT AS SCHEDULED OR SPECIFIED, USING THE MANUFACTURERS AND MODEL NUMBERS AS CALLED FOR IN THE SPECIFICATIONS AND SCHEDULED ON THE DRAWINGS. IF MORE THAN ONE MANUFACTURER OF EQUIPMENT IS SPECIFIED, ANY ONE OF THE MANUFACTURERS OF EQUIPMENT MAY BE USED IN THIS CONTRACTOR'S PROPOSAL. IF THIS CONTRACTOR WISHES TO USE EQUIPMENT NOT SPECIFIED, HE MUST, AT THE TIME OF BIDDING, SUBMIT SEPARATELY ON LETTERHEAD STATIONARY OF THE BIDDER, THE EQUIPMENT HE WOULD SUBSTITUTE AND THE COST TO BE ADDED OR TO BE DEDUCTED FROM HIS PROPOSAL.
26. ROUGH IN ALL FLUSH VALVE WATER CLOSETS SO THAT THE FLUSH VALVE HANDLE IS TO THE WIDE SIDE OF THE ROOM, AS PER FLORIDA PLUMBING CODE.
27. THIS FACILITY SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT (ADA) ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES.
28. DISINFECT DOMESTIC WATER PIPING BY EITHER OF TWO WAYS: FILL SYSTEM WITH 50ppm CHLORINE SOLUTION AND STAND FOR 24 HOURS OR 200ppm CHLORINE SOLUTION AND STAND FOR 3 HOURS.

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Engineer No. 3215
Landscape No. LC0000298
Surveyor No. 7143

JEFFREY A. DEAL
LICENSE
No. 87451
STATE OF FLORIDA
PROFESSIONAL ENGINEER

CELEBRATING 40 +YEARS cph

No.	DATE	Revision

Designed:	CPH
Drawn:	CPH
Checked:	CPH
Job No.:	M13112
08/13/2021	© 2021

PLUMBING LEGEND

KINGFISH BOAT RAMP RESTROOMS

752 MANATEE AVENUE WEST
HOLMES BEACH
MANATEE COUNTY, FLORIDA

NOT FOR CONSTRUCTION

THIS SHEET NOT VALID FOR CONSTRUCTION WITHOUT COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND

Sheet No.
P000

SECTION 22 0517

SLEEVES AND SLEEVE SEALS FOR PLUMBING PIPING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. PIPE SLEEVES.

1.02 REFERENCE STANDARDS

A. ASTM C592 - STANDARD SPECIFICATION FOR MINERAL FIBER BLANKET INSULATION AND BLANKET-TYPE PIPE INSULATION (METAL-MESH COVERED) (INDUSTRIAL TYPE); 2016.

B. ASTM E814 - STANDARD TEST METHOD FOR FIRE TESTS OF PENETRATION FIRESTOP SYSTEMS; 2013A (REAPPROVED 2017).

PART 2 PRODUCTS

2.01 PIPE SLEEVES

A. MANUFACTURERS:

1. FLEXICRAFT INDUSTRIES; PIPE WALL SLEEVE: WWW.FLEXICRAFT.COM/#SLE.

B. VERTICAL PIPING:

1. SLEEVE LENGTH: 1 INCH (25 MM) ABOVE FINISHED FLOOR.
2. PROVIDE SEALANT FOR WATERTIGHT JOINT.
3. BLOCKED OUT FLOOR OPENINGS: PROVIDE 1-1/2 INCH (40 MM) ANGLE SET IN SILICON ADHESIVE AROUND OPENING.
4. DRILLED PENETRATIONS: PROVIDE 1-1/2 INCH (40 MM) ANGLE RING OR SQUARE SET IN SILICONE ADHESIVE AROUND PENETRATION.

C. PLASTIC OR SHEET METAL: PIPE PASSING THROUGH INTERIOR WALLS, PARTITIONS, AND FLOORS, UNLESS STEEL OR BRASS SLEEVES ARE SPECIFIED BELOW.

D. CLEARANCES:

1. PROVIDE ALLOWANCE FOR INSULATED PIPING.
2. WALL, FLOOR, FLOOR, PARTITIONS, AND BEAM FLANGES: 1 INCH (25 MM) GREATER THAN EXTERNAL; PIPE DIAMETER.
3. ALL RATED OPENINGS: CAULKED TIGHT WITH FIRE STOPPING MATERIAL CONFORMING TO ASTM E814 IN ACCORDANCE WITH SECTION 07 8400 TO PREVENT THE SPREAD OF FIRE, SMOKE, AND GASES.

PART 3 EXECUTION

3.01 PREPARATION

A. REAM PIPE AND TUBE ENDS. REMOVE BURRS. BEVEL PLAIN END FERROUS PIPE.

B. REMOVE SCALE AND FOREIGN MATERIAL, FROM INSIDE AND OUTSIDE, BEFORE ASSEMBLY.

3.02 INSTALLATION

A. ROUTE PIPING IN ORDERLY MANNER, PLUMB AND PARALLEL TO BUILDING STRUCTURE. MAINTAIN GRADIENT.

B. INSTALL PIPING TO CONSERVE BUILDING SPACE, TO NOT INTERFERE WITH USE OF SPACE AND OTHER WORK.

C. INSTALL PIPING AND PIPE SLEEVES TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE, JOINTS, OR CONNECTED EQUIPMENT.

D. PROVIDE SLEEVES WHEN PENETRATING FLOORS, WALLS, AND PARTITIONS. SEAL PIPE INCLUDING SLEEVE PENETRATIONS TO ACHIEVE FIRE RESISTANCE EQUIVALENT TO FIRE SEPARATION REQUIRED.

1. UNDERGROUND PIPING: CAULK PIPE SLEEVE WATERTIGHT WITH LEAD AND OAKUM OR MECHANICALLY EXPANDABLE CHLOROPRENE INSERTS WITH BITUMEN SEALED METAL COMPONENTS.
2. ABOVEGROUND PIPING:

A. PACK SOLID USING MINERAL FIBER CONFORMING TO ASTM C592.

B. FILL SPACE WITH AN ELASTOMER CAULK TO A DEPTH OF 0.50 INCH (15 MM) WHERE PENETRATIONS OCCUR BETWEEN CONDITIONED AND UNCONDITIONED SPACES.

E. WHEN INSTALLING MORE THAN ONE PIPING SYSTEM MATERIAL, ENSURE SYSTEM COMPONENTS ARE COMPATIBLE AND JOINED TO ENSURE THE INTEGRITY OF THE SYSTEM. PROVIDE NECESSARY JOINING FITTINGS. ENSURE FLANGES, UNION, AND COUPLINGS FOR SERVICING ARE CONSISTENTLY PROVIDED.

3.03 CLEANING

A. UPON COMPLETION OF WORK, CLEAN ALL PARTS OF THE INSTALLATION.

B. CLEAN EQUIPMENT, PIPES, VALVES, AND FITTINGS OF GREASE, METAL CUTTINGS, AND SLUDGE THAT MAY HAVE ACCUMULATED FROM THE INSTALLATION AND TESTING OF THE SYSTEM.

SECTION 22 0523

GENERAL-DUTY VALVES FOR PLUMBING PIPING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. APPLICATIONS.

B. GENERAL REQUIREMENTS.

C. BALL VALVES.

D. CHECK VALVES.

1.02 REFERENCE STANDARDS

A. ASME B16.18 - CAST COPPER ALLOY SOLDER JOINT PRESSURE FITTINGS; 2012.

B. ASTM B62 - STANDARD SPECIFICATION FOR COMPOSITION BRONZE OR OUNCE METAL CASTINGS; 2017.

C. MSS SP-45 - BYPASS AND DRAIN CONNECTIONS; 2003 (REAFFIRMED 2008).

D. MSS SP-80 - BRONZE GATE, GLOBE, ANGLE AND CHECK VALVES; 2013.

E. MSS SP-110 - BALL VALVES THREADED, SOCKET-WELDING, SOLDER JOINT, GROOVED AND FLARED ENDS; 2010.

F. NSF 61 - DRINKING WATER SYSTEM COMPONENTS - HEALTH EFFECTS; 2017.

G. NSF 372 - DRINKING WATER SYSTEM COMPONENTS - LEAD CONTENT; 2016.

1.03 QUALITY ASSURANCE

A. MANUFACTURER:

1. OBTAIN VALVES FOR EACH VALVE TYPE FROM SINGLE MANUFACTURER.
2. COMPANY MUST SPECIALIZE IN MANUFACTURING PRODUCTS SPECIFIED IN THIS SECTION, WITH NOT LESS THAN THREE YEARS OF DOCUMENTED EXPERIENCE.

1.04 DELIVERY, STORAGE, AND HANDLING

A. PREPARE VALVES FOR SHIPPING AS FOLLOWS:

1. MINIMIZE EXPOSURE OF OPERABLE SURFACES BY SETTING PLUG AND BALL VALVES TO OPEN POSITION.
2. PROTECT VALVE PARTS EXPOSED TO PIPED MEDIUM AGAINST RUST AND CORROSION.
3. PROTECT VALVE PIPING CONNECTIONS SUCH AS GROOVES, WELD ENDS, THREADS, AND FLANGE FACES.
4. SECURE CHECK VALVES IN EITHER THE CLOSED POSITION OR OPEN POSITION.

B. USE THE FOLLOWING PRECAUTIONS DURING STORAGE:

1. MAINTAIN VALVE END PROTECTION AND PROTECT FLANGES AND SPECIALTIES FROM DIRT.

A. PROVIDE TEMPORARY INLET AND OUTLET CAPS.

B. MAINTAIN CAPS IN PLACE UNTIL INSTALLATION.

2. STORE VALVES IN SHIPPING CONTAINERS AND MAINTAIN IN PLACE UNTIL INSTALLATION.

A. STORE VALVES INDOORS IN DRY ENVIRONMENT.

B. STORE VALVES OFF THE GROUND IN WATERTIGHT ENCLOSURES WHEN INDOOR STORAGE IS NOT AN OPTION.

PART 2 PRODUCTS

2.01 APPLICATIONS

A. PROVIDE THE FOLLOWING VALVES FOR THE APPLICATIONS IF NOT INDICATED ON DRAWINGS:

1. SHUTOFF: BALL.
2. THROTTLING: BALL.

B. SUBSTITUTIONS OF VALVES WITH HIGHER CWP CLASSES OR SWP RATINGS FOR SAME VALVE TYPES ARE PERMITTED WHEN SPECIFIED CWP RATINGS OR SWP CLASSES ARE NOT AVAILABLE.

C. REQUIRED VALVE END CONNECTIONS FOR NON-WAFER TYPES:

1. COPPER TUBE:

A. 2 NPS (50 DN) AND SMALLER: THREADED ENDS EXCEPT WHERE SOLDER-JOINT VALVE-END OPTION IS INDICATED IN VALVE SCHEDULES BELOW.

B. 2-1/2 NPS (65 DN) TO 4 NPS (100 DN): GROOVED OR FLANGED ENDS EXCEPT WHERE THREADED VALVE-END OPTION IS INDICATED IN VALVE SCHEDULES BELOW.

D. DOMESTIC, HOT AND COLD WATER VALVES:

1. 2 NPS (50 DN) AND SMALLER:

A. BRONZE: PROVIDE WITH SOLDER-JOINT ENDS.

B. BALL: TWO PIECE, FULL PORT, BRONZE WITH STAINLESS-STEEL TRIM.

2.02 GENERAL REQUIREMENTS

A. VALVE PRESSURE AND TEMPERATURE RATINGS: NO LESS THAN RATING INDICATED AS REQUIRED FOR SYSTEM PRESSURES AND TEMPERATURES.

B. VALVE SIZES: MATCH UPSTREAM PIPING UNLESS OTHERWISE INDICATED.

C. VALVES IN INSULATED PIPING: WITH 2 NPS (50 DN) STEM EXTENSIONS AND THE FOLLOWING FEATURES:

1. BALL VALVES: EXTENDED OPERATING HANDLE OF NON-THERMAL-CONDUCTIVE MATERIAL, AND PROTECTIVE SLEEVE THAT ALLOWS OPERATION OF VALVE WITHOUT BREAKING THE VAPOR SEAL OR DISTURBING INSULATION.
2. MEMORY STOPS: FULLY ADJUSTABLE AFTER INSULATION IS INSTALLED.

D. VALVE-END CONNECTIONS:

1. SOLDER JOINT CONNECTIONS: ASME B16.18.

E. GENERAL ASME COMPLIANCE:

1. SOLDER-JOINT CONNECTIONS: ASME B16.18.

F. VALVE MATERIALS FOR POTABLE WATER: NSF 61 AND NSF 372.

G. BRONZE VALVES:

1. FABRICATE FROM DEZINCIFICATION RESISTANT MATERIAL.
2. COPPER ALLOYS CONTAINING MORE THAN 15 PERCENT ZINC ARE NOT PERMITTED.

H. VALVE BYPASS AND DRAIN CONNECTIONS: MSS SP-45.

I. SOLDERING LIMITATIONS: OBTAIN EACH VALVE TYPE FROM A SINGLE MANUFACTURER.

2.03 BRONZE BALL VALVES

A. TWO PIECE, FULL PORT WITH STAINLESS STEEL TRIM:

1. COMPLY WITH MSS SP-110.
2. SWP RATING: 150 PSIG (1035 KPA).
3. CWP RATING: 600 PSIG (4140 KPA).
4. BODY: LEAD FREE BRONZE.
5. ENDS: THREADED.
6. SEATS: PTFE.
7. STEM: STAINLESS STEEL.
8. BALL: STAINLESS STEEL, VENTED.
9. MANUFACTURERS:

A. CRANE.

B. [NIBCO].

C. WATTS.

2.04 BRONZE SWING CHECK VALVES

A. CLASS 125: CWP RATING: 200 PSIG (1380 KPA).

1. COMPLY WITH MSS SP-80, TYPE 3.
2. DESIGN: HORIZONTAL FLOW.
3. BODY: LEAD FREE BRONZE, ASTM B62.
4. ENDS: THREADED AS INDICATED.
5. DISC: BRONZE.
6. MANUFACTURERS:

A. CRANE..

B. NIBCO.

C. WATTS.

PART 3 EXECUTION

3.01 EXAMINATION

A. DISCARD ALL PACKING MATERIALS AND VERIFY THAT VALVE INTERIOR, INCLUDING THREADS AND FLANGES ARE COMPLETELY CLEAN WITHOUT SIGNS OF DAMAGE OR DEGRADATION THAT COULD RESULT IN LEAKAGE.

B. VERIFY VALVE PARTS TO BE FULLY OPERATIONAL IN ALL POSITIONS FROM CLOSED TO FULLY OPEN.

C. CONFIRM GASKET MATERIAL TO BE SUITABLE FOR THE SERVICE, TO BE OF CORRECT SIZE, AND WITHOUT DEFECTS THAT COULD COMPROMISE EFFECTIVENESS.

D. SHOULD VALVE IS DETERMINED TO BE DEFECTIVE, REPLACE WITH NEW VALVE.

3.02 INSTALLATION

A. PROVIDE UNIONS OR FLANGES WITH VALVES TO FACILITATE EQUIPMENT REMOVAL AND MAINTENANCE WHILE MAINTAINING SYSTEM OPERATION AND FULL ACCESSIBILITY FOR SERVICING.

B. PROVIDE SEPARATE VALVE SUPPORT AS REQUIRED AND LOCATE VALVE WITH STEM AT OR ABOVE CENTER OF PIPING, MAINTAINING UNIMPEDED STEM MOVEMENT.

C. INSTALL CHECK VALVES WHERE NECESSARY TO MAINTAIN DIRECTION OF FLOW AS FOLLOWS:

1. LIFT CHECK: INSTALL WITH STEM PLUMB AND VERTICAL.
2. SWING CHECK: INSTALL HORIZONTAL MAINTAINING HINGE PIN LEVEL.

SECTION 22 0529

HANGERS AND SUPPORTS FOR PLUMBING PIPING AND EQUIPMENT

PART 1 PRODUCTS

1.01 SUPPORT AND ATTACHMENT COMPONENTS

A. GENERAL REQUIREMENTS:

1. COMPLY WITH MSS SP-58.
2. PROVIDE ALL REQUIRED HANGERS, SUPPORTS, ANCHORS, FASTENERS, FITTINGS, ACCESSORIES, AND HARDWARE AS NECESSARY FOR THE COMPLETE INSTALLATION OF PLUMBING WORK.
3. PROVIDE PRODUCTS LISTED, CLASSIFIED, AND LABELED AS SUITABLE FOR THE PURPOSE INTENDED, WHERE APPLICABLE.
4. DO NOT USE WIRE, CHAIN, PERFORATED PIPE STRAP, OR WOOD FOR PERMANENT SUPPORTS UNLESS SPECIFICALLY INDICATED OR PERMITTED.
5. STEEL COMPONENTS: USE CORROSION RESISTANT MATERIALS SUITABLE FOR THE ENVIRONMENT WHERE INSTALLED.

A. INDOOR DRY LOCATIONS: USE ZINC-PLATED STEEL OR APPROVED EQUIVALENT UNLESS OTHERWISE INDICATED.

B. OUTDOOR AND DAMP OR WET INDOOR LOCATIONS: USE GALVANIZED STEEL, STAINLESS STEEL, OR APPROVED EQUIVALENT UNLESS OTHERWISE INDICATED.

C. ZINC-PLATED STEEL: ELECTROPLATED IN ACCORDANCE WITH ASTM B633.

D. GALVANIZED STEEL: HOT-DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123/A123M OR ASTM A153/A153M.

B. METAL CHANNEL (STRUT) FRAMING SYSTEMS:

1. MANUFACTURERS:

A. COOPER B-LINE, A DIVISION OF EATON CORPORATION: WWW.COOPERINDUSTRIES.COM/#SLE.

B. THOMAS & BETTS CORPORATION: WWW.TNB.COM/#SLE.

C. UNISTRUT, A BRAND OF ATKORE INTERNATIONAL INC: WWW.UNISTRUT.COM/#SLE.

D. SOURCE LIMITATIONS: FURNISH CHANNELS (STRUTS) AND ASSOCIATED FITTINGS, ACCESSORIES, AND HARDWARE PRODUCED BY A SINGLE MANUFACTURER.

E. APPROVED EQUAL

2. PROVIDE FACTORY-FABRICATED CONTINUOUS-SLOT METAL CHANNEL (STRUT) AND ASSOCIATED FITTINGS, ACCESSORIES, AND HARDWARE REQUIRED FOR FIELD-ASSEMBLY OF SUPPORTS.
3. COMPLY WITH MFMA-4.
4. CHANNEL MATERIAL:

A. INDOOR DRY LOCATIONS: USE PAINTED STEEL, ZINC-PLATED STEEL, OR GALVANIZED STEEL.

B. OUTDOOR AND DAMP OR WET INDOOR LOCATIONS: USE GALVANIZED STEEL.

5. MINIMUM CHANNEL THICKNESS: STEEL SHEET, 12 GAGE, 0.1046 INCH (2.66 MM).
6. MINIMUM CHANNEL DIMENSIONS: 1-5/8 INCH (41 MM) WIDTH BY 13/16 INCH (21 MM) HEIGHT.

C. HANGER RODS: THREADED ZINC-PLATED STEEL UNLESS OTHERWISE INDICATED.

1. MINIMUM SIZE, UNLESS OTHERWISE INDICATED OR REQUIRED:

A. EQUIPMENT SUPPORTS: 1/2 INCH (13 MM) DIAMETER.

B. PIPING UP TO 1 INCH (27 MM) NOMINAL: 1/4 INCH (6 MM) DIAMETER.

C. PIPING LARGER THAN 1 INCH (27 MM) NOMINAL: 3/8 INCH (10 MM) DIAMETER.

D. TRAPEZE SUPPORT FOR MULTIPLE PIPES: 3/8 INCH (10 MM) DIAMETER.

D. THERMAL INSULATED PIPE SUPPORTS:

1. MANUFACTURERS:

A. KB ENTERPRISES: WWW.SNAPPITZ.COM/#SLE.

B. APPROVED EQUAL

2. GENERAL CONSTRUCTION AND REQUIREMENTS:

A. INSULATED PIPE SUPPORTS TO BE PROVIDED AT HANGER, SUPPORT, AND GUIDE LOCATIONS ON PIPE REQUIRING INSULATION OR ADDITIONAL SUPPORT.

B. SURFACE BURNING CHARACTERISTICS: FLAME SPREAD INDEX/SMOKE DEVELOPED INDEX OF 5/30, MAXIMUM, WHEN TESTED IN ACCORDANCE WITH ASTM E84 OR UL 723.

C. PIPE SUPPORTS TO BE PROVIDED FOR NOMINALLY SIZED, 1/2 INCH TO 30 INCH (12.7 MM TO 762 MM) IRON PIPES.

D. INSULATION INSERTS TO CONSIST OF POLYISOCYANURATE (URETHANE) INSULATION SURROUNDED BY A 360 DEGREE, PVC JACKETING.

3. PVC JACKET:

A. PIPE INSULATION PROTECTION SHIELDS TO BE PROVIDED WITH A BALL BEARING HINGE AND LOCKING SEAM.

B. MINIMUM SERVICE TEMPERATURE: MINUS 40 DEGREES F (MINUS 40 DEGREES C).

C. MAXIMUM SERVICE TEMPERATURE: 180 DEGREES F (82 DEGREES C).

D. MOISTURE VAPOR TRANSMISSION: 0.0071 PERM INCH (0.0092 NG/PA S M), WHEN TESTED IN ACCORDANCE WITH ASTM E96/E96M.

E. THICKNESS: 60 MIL (1.524 MM).

F. CONNECTIONS: BRUSH ON WELDING ADHESIVE.

4. PIPE INSULATION PROTECTION SHIELDS TO BE PROVIDED AT THE HANGER POINTS AND GUIDE LOCATIONS ON PIPES REQUIRING INSULATION AS INDICATED ON DRAWINGS.

G. ANCHORS AND FASTENERS:

1. MANUFACTURERS - MECHANICAL ANCHORS:

A. HILTI, INC: WWW.US.HILTI.COM/#SLE.

B. ITW RED HEAD, A DIVISION OF ILLINOIS TOOL WORKS, INC: WWW.ITWREDHEAD.COM/#SLE.

C. POWERS FASTENERS, INC: WWW.POWERS.COM/#SLE.

D. SIMPSON STRONG-TIE COMPANY INC: WWW.STRONGTIE.COM/#SLE.

E. APPROVED EQUAL

2. MANUFACTURERS - POWDER-ACTUATED FASTENING SYSTEMS:

A. HILTI, INC: WWW.US.HILTI.COM/#SLE.

B. ITW RAMSET, A DIVISION OF ILLINOIS TOOL WORKS, INC: WWW.RAMSET.COM/#SLE.

C. POWERS FASTENERS, INC: WWW.POWERS.COM/#SLE.

D. SIMPSON STRONG-TIE COMPANY INC: WWW.STRONGTIE.COM/#SLE.

E. APPROVED EQUAL

3. UNLESS OTHERWISE INDICATED AND WHERE NOT OTHERWISE RESTRICTED, USE THE ANCHOR AND FASTENER TYPES INDICATED FOR THE SPECIFIED APPLICATIONS.
4. CONCRETE: USE PRESET CONCRETE INSERTS, EXPANSION ANCHORS, OR SCREW ANCHORS.
5. SOLID OR GROUT-FILLED MASONRY: USE EXPANSION ANCHORS OR SCREW ANCHORS.
6. HOLLOW MASONRY: USE TOGGLE BOLTS.
7. HOLLOW STUD WALLS: USE TOGGLE BOLTS.
8. STEEL: USE BEAM CLAMPS, MACHINE BOLTS, OR WELDED THREADED STUDS.
9. SHEET METAL: USE SHEET METAL SCREWS.
10. WOOD: USE WOOD SCREWS.
11. PRESET CONCRETE INSERTS: CONTINUOUS METAL CHANNEL (STRUT) AND SPOT INSERTS SPECIFICALLY DESIGNED TO BE CAST IN CONCRETE CEILINGS, WALLS, AND FLOORS.

A. COMPLY WITH MFMA-4.

B. CHANNEL MATERIAL: USE GALVANIZED STEEL.

C. MINIMUM CHANNEL THICKNESS: STEEL SHEET, 12 GAGE, 0.1046 INCH (2.66 MM) MINIMUM BASE METAL THICKNESS.

D. MANUFACTURER: SAME AS MANUFACTURER OF METAL CHANNEL (STRUT) FRAMING SYSTEM.

12. POST-INSTALLED CONCRETE AND MASONRY ANCHORS: EVALUATED AND RECOGNIZED BY ICC EVALUATION SERVICE, LLC (ICC-ES) FOR COMPLIANCE WITH APPLICABLE BUILDING CODE.

PART 2 EXECUTION

2.01 INSTALLATION

A. INSTALL PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

B. INSTALL ANCHORS AND FASTENERS IN ACCORDANCE WITH ICC EVALUATION SERVICES, LLC (ICC-ES) EVALUATION REPORT CONDITIONS OF USE WHERE APPLICABLE.

C. PROVIDE INDEPENDENT SUPPORT FROM BUILDING STRUCTURE. DO NOT PROVIDE SUPPORT FROM PIPING, DUCTWORK, CONDUIT, OR OTHER SYSTEMS.

D. UNLESS SPECIFICALLY INDICATED OR APPROVED BY ARCHITECT, DO NOT PROVIDE SUPPORT FROM SUSPENDED CEILING SUPPORT SYSTEM OR CEILING GRID.

E. UNLESS SPECIFICALLY INDICATED OR APPROVED BY ARCHITECT, DO NOT PROVIDE SUPPORT FROM ROOF DECK.

F. DO NOT PENETRATE OR OTHERWISE NOTCH OR CUT STRUCTURAL MEMBERS WITHOUT APPROVAL OF STRUCTURAL ENGINEER.

G. PROVIDE THERMAL INSULATED PIPE SUPPORTS COMPLETE WITH HANGERS AND ACCESSORIES. INSTALL THERMAL INSULATED PIPE SUPPORTS DURING THE INSTALLATION OF THE PIPING SYSTEM.

H. EQUIPMENT SUPPORT AND ATTACHMENT:

1. USE METAL FABRICATED SUPPORTS OR SUPPORTS ASSEMBLED FROM METAL CHANNEL (STRUT) TO SUPPORT EQUIPMENT AS REQUIRED.
2. USE METAL CHANNEL (STRUT) SECURED TO STUDS TO SUPPORT EQUIPMENT SURFACE-MOUNTED ON HOLLOW STUD WALLS WHEN WALL STRENGTH IS NOT SUFFICIENT TO RESIST PULL-OUT.
3. USE METAL CHANNEL (STRUT) TO SUPPORT SURFACE-MOUNTED EQUIPMENT IN WET OR DAMP LOCATIONS TO PROVIDE SPACE BETWEEN EQUIPMENT AND MOUNTING SURFACE.
4. UNLESS OTHERWISE INDICATED, MOUNT FLOOR-MOUNTED EQUIPMENT ON PROPERLY SIZED 3 INCH (80 MM) HIGH CONCRETE PAD CONSTRUCTED IN ACCORDANCE WITH SECTION 03 3000.
5. SECURELY FASTEN FLOOR-MOUNTED EQUIPMENT. DO NOT INSTALL EQUIPMENT SUCH THAT IT RELIES ON ITS OWN WEIGHT FOR SUPPORT.

I. PRESET CONCRETE INSERTS: USE MANUFACTURER PROVIDED CLOSURE STRIPS TO INHIBIT CONCRETE SEEPAGE DURING CONCRETE POUR.

J. SECURE FASTENERS ACCORDING TO MANUFACTURER'S RECOMMENDED TORQUE SETTINGS.

K. REMOVE TEMPORARY SUPPORTS.

2.02 FIELD QUALITY CONTROL

A. SEE SECTION 01 4000 - QUALITY REQUIREMENTS, FOR ADDITIONAL REQUIREMENTS.

B. INSPECT SUPPORT AND ATTACHMENT COMPONENTS FOR DAMAGE AND DEFECTS.

C. REPAIR CUTS AND ABRASIONS IN GALVANIZED FINISHES USING ZINC-RICH PAINT RECOMMENDED BY MANUFACTURER. REPLACE COMPONENTS THAT EXHIBIT SIGNS OF CORROSION.

D. CORRECT DEFICIENCIES AND REPLACE DAMAGED OR DEFECTIVE SUPPORT AND ATTACHMENT COMPONENTS.

SECTION 22 0553

IDENTIFICATION FOR PLUMBING PIPING AND EQUIPMENT

PART 1 PRODUCTS

1.01 IDENTIFICATION APPLICATIONS

A. AIR HANDLING UNITS: NAMEPLATES.

B. AIR TERMINAL UNITS: TAGS.

C. CONTROL PANELS: NAMEPLATES.

D. PIPING: STENCILS

E. PUMPS: NAMEPLATES.

F. SMALL-SIZED EQUIPMENT: TAGS.

G. THERMOSTATS: NAMEPLATES.

H. VALVES: TAGS

1.02 NAMEPLATES

A. MANUFACTURERS:

1. BRIMAR INDUSTRIES, INC: WWW.PIPEMARKER.COM/#SLE.
2. KOLBI PIPE MARKER CO: WWW.KOLBIPIPEMARKERS.COM.
3. SETON IDENTIFICATION PRODUCTS: WWW.SETON.COM.
4. APPROVED EQUAL

B. DESCRIPTION: LAMINATED THREE-LAYER PLASTIC WITH ENGRAVED LETTERS.

1. LETTER COLOR: WHITE.
2. LETTER HEIGHT: 1/4 INCH (6 MM).
3. BACKGROUND COLOR: BLACK.
4. PLASTIC: CONFORM TO ASTM D709.

1.03 TAGS

A. MANUFACTURERS:

1. ADVANCED GRAPHIC ENGRAVING: WWW.ADVANCEDGRAPHICENGRAVING.COM.
2. BRADY CORPORATION: WWW.BRADYCORP.COM.
3. BRIMAR INDUSTRIES, INC: WWW.PIPEMARKER.COM/#SLE.
4. KOLBI PIPE MARKER CO: WWW.KOLBIPIPEMARKERS.COM.
5. SETON IDENTIFICATION PRODUCTS: WWW.SETON.COM.
6. APPROVED EQUAL

B. PLASTIC TAGS: LAMINATED THREE-LAYER PLASTIC WITH ENGRAVED BLACK LETTERS ON LIGHT CONTRASTING BACKGROUND COLOR. TAG SIZE MINIMUM 1-1/2 INCH (40 MM) DIAMETER.

C. METAL TAGS: BRASS WITH STAMPED LETTERS; TAG SIZE MINIMUM 1-1/2 INCH (40 MM) DIAMETER WITH SMOOTH EDGES.

D. VALVE TAG CHART: TYPEWRITTEN LETTER SIZE LIST IN ANODIZED ALUMINUM FRAME.

1.04 STENCILS

A. MANUFACTURERS:

1. BRADY CORPORATION: WWW.BRADYCORP.COM.
2. KOLBI PIPE MARKER CO.: WWW.KOLBIPIPEMARKERS.COM.
3. SETON IDENTIFICATION PRODUCTS: WWW.SETON.COM.
4. APPROVED EQUAL

B. STENCILS: WITH CLEAN CUT SYMBOLS AND LETTERS OF FOLLOWING SIZE:

1. 3/4 TO 1-1/4 INCH (20-30 MM) OUTSIDE DIAMETER OF INSULATION OR PIPE: 8 INCH (200 MM) LONG COLOR FIELD, 1/2 INCH (15 MM) HIGH LETTERS.
2. 1-1/2 TO 2 INCH (40-50 MM) OUTSIDE DIAMETER OF INSULATION OR PIPE: 8 INCH (200 MM) LONG COLOR FIELD, 3/4 INCH (20 MM) HIGH LETTERS.
3. 2-1/2 TO 6 INCH (65-150 MM) OUTSIDE DIAMETER OF INSULATION OR PIPE: 12 INCH (300 MM) LONG COLOR FIELD, 1-1/4 INCH (30 MM) HIGH LETTERS.
4. DUCTWORK AND EQUIPMENT: 2-1/2 INCH (65 MM) HIGH LETTERS.

C. STENCIL PAINT: SEMI-GLOSS ENAMEL, COLORS CONFORMING TO ASME A13.1.

1.05 PIPE MARKERS

A. MANUFACTURERS:

1. BRADY CORPORATION: WWW.BRADYCORP.COM.
2. BRIMAR INDUSTRIES, INC: WWW.PIPEMARKER.COM/#SLE.
3. KOLBI PIPE MARKER CO: WWW.KOLBIPIPEMARKERS.COM.
4. MIFAB, INC: WWW.MIFAB.COM.
5. SETON IDENTIFICATION PRODUCTS: WWW.SETON.COM.
6. APPROVED EQUAL

B. COMPLY WITH ASME A13.1.

C. PLASTIC TAPE PIPE MARKERS: FLEXIBLE, VINYL FILM TAPE WITH PRESSURE SENSITIVE ADHESIVE BACKING AND PRINTED MARKINGS.

D. COLOR CODE AS FOLLOWS:

POTABLE, COOLING, OTHER WATER: GREEN WITH WHITE LETTERS.

2. FIRE QUENCHING FLUIDS: RED WITH WHITE LETTERS.
3. TOXIC AND CORROSIVE FLUIDS: ORANGE WITH BLACK LETTERS.
4. FLAMMABLE FLUIDS: YELLOW WITH BLACK LETTERS.
5. COMBUSTIBLE FLUIDS: BROWN WITH WHITE LETTERS.
6. COMPRESSED AIR: BLUE WITH WHITE LETTERS.

PART 2 EXECUTION

2.01 PREPARATION

A. DEGREASE AND CLEAN SURFACES TO RECEIVE ADHESIVE FOR IDENTIFICATION MATERIALS.

2.02 INSTALLATION

A. INSTALL PLASTIC NAMEPLATES WITH CORROSIVE-RESISTANT MECHANICAL FASTENERS, OR ADHESIVE. APPLY WITH SUFFICIENT ADHESIVE TO ENSURE PERMANENT ADHESION AND SEAL WITH CLEAR LACQUER.

B. INSTALL TAGS WITH CORROSION RESISTANT CHAIN.

C. INSTALL PLASTIC TAPE PIPE MARKERS COMPLETE AROUND PIPE IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.

D. USE TAGS ON PIPING 3/4 INCH (20 MM) DIAMETER AND SMALLER.

1. IDENTIFY SERVICE, FLOW DIRECTION, AND PRESSURE.
2. INSTALL IN CLEAR VIEW AND ALIGN WITH AXIS OF PIPING.
3. LOCATE IDENTIFICATION NOT TO EXCEED 20 FEET (6 M) ON STRAIGHT RUNS INCLUDING RISERS AND DROPS, ADJACENT TO EACH VALVE AND TEE, AT EACH SIDE OF PENETRATION OF STRUCTURE OR ENCLOSURE, AND AT EACH OBSTRUCTION.

E. INSTALL DUCTWORK WITH PLASTIC NAMEPLATES. IDENTIFY WITH AIR HANDLING UNIT IDENTIFICATION NUMBER AND AREA SERVED. LOCATE IDENTIFICATION AT AIR HANDLING UNIT, AT EACH SIDE OF PENETRATION OF STRUCTURE OR ENCLOSURE, AND AT EACH OBSTRUCTION.

SECTION 22 0553

IDENTIFICATION FOR PLUMBING PIPING AND EQUIPMENT

PART 1 GENERAL

1.01 SECTION INCLUDES

A. NAMEPLATES.

B. TAGS.

C. PIPE MARKERS.

D. CEILING TACKS.

1.02 REFERENCE STANDARDS

A. ASME A13.1 - SCHEME FOR THE IDENTIFICATION OF PIPING SYSTEMS; 2015.

PART 2 PRODUCTS

2.01 IDENTIFICATION APPLICATIONS

A. PIPING: PIPE MARKERS.

B. TANKS: NAMEPLATES.

C. VALVES: TAGS AND CEILING TACKS WHERE LOCATED ABOVE LAY-IN CEILING.

2.02 NAMEPLATES

A. MANUFACTURERS:

1. BRIMAR INDUSTRIES, INC: WWW.PIPEMARKER.COM/#SLE.
2. SETON IDENTIFICATION PRODUCTS: WWW.SETON.COM.

B. DESCRIPTION: LAMINATED THREE-LAYER PLASTIC WITH ENGRAVED LETTERS.

1. LETTER COLOR: WHITE.
2. LETTER HEIGHT: 1/4 INCH (6 MM).
3. BACKGROUND COLOR: BLACK.
4. PLASTIC: CONFORM TO ASTM D709.

2.03 TAGS

A. MANUFACTURERS:

1. BRADY CORPORATION: WWW.BRADYCORP.COM.
2. BRIMAR INDUSTRIES, INC: WWW.PIPEMARKER.COM/#SLE.
3. KOLBI PIPE MARKER CO: WWW.KOLBIPIPEMARKERS.COM.
4. SETON IDENTIFICATION PRODUCTS: WWW.SETON.COM.

B. PLASTIC TAGS: LAMINATED THREE-LAYER PLASTIC WITH ENGRAVED BLACK LETTERS ON LIGHT CONTRASTING BACKGROUND COLOR. TAG SIZE MINIMUM 1-1/2 INCH (40 MM) DIAMETER.

2.04 PIPE MARKERS

A. MANUFACTURERS:

1. BRADY CORPORATION: WWW.BRADYCORP.COM.
2. BRIMAR INDUSTRIES, INC: WWW.PIPEMARKER.COM/#SLE.
3. KOLBI PIPE MARKER CO: WWW.KOLBIPIPEMARKERS.COM.
4. SETON IDENTIFICATION PRODUCTS: WWW.SETON.COM.

B. COMPLY WITH ASME A13.1.

C. PLASTIC PIPE MARKERS: FACTORY FABRICATED, FLEXIBLE, SEMI- RIGID PLASTIC, PREFORMED TO FIT AROUND PIPE OR PIPE COVERING; MINIMUM INFORMATION INDICATING FLOW DIRECTION ARROW AND IDENTIFICATION OF FLUID BEING CONVEYED.

D. UNDERGROUND PLASTIC PIPE MARKERS: BRIGHT COLORED CONTINUOUSLY PRINTED PLASTIC RIBBON TAPE, MINIMUM 6 INCHES (150 MM) WIDE BY 4 MIL (0.10 MM) THICK, MANUFACTURED FOR DIRECT BURIAL SERVICE.

E. COLOR CODE AS FOLLOWS:

1. POTABLE, COOLING, BOILER, FEED, OTHER WATER: GREEN WITH WHITE LETTERS.

2.05 CEILING TACKS

A. MANUFACTURERS:

1. CRAFTMARK: WWW.CRAFTMARKID.COM.

B. DESCRIPTION: STEEL WITH 3/4 INCH (20 MM) DIAMETER COLOR CODED HEAD.

C. COLOR CODE AS FOLLOWS:

1. PLUMBING VALVES: GREEN.

PART 3 EXECUTION

3.01 PREPARATION

A. DEGREASE AND CLEAN SURFACES TO RECEIVE ADHESIVE FOR IDENTIFICATION MATERIALS.

3.02 INSTALLATION

A. INSTALL PLASTIC NAMEPLATES WITH CORROSIVE-RESISTANT MECHANICAL FASTENERS, OR ADHESIVE. APPLY WITH SUFFICIENT ADHESIVE TO ENSURE PERMANENT ADHESION AND SEAL WITH CLEAR LACQUER.

B. INSTALL TAGS WITH CORROSION RESISTANT CHAIN.

C. INSTALL PLASTIC PIPE MARKERS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

D. INSTALL UNDERGROUND PLASTIC PIPE MARKERS 6 TO 8 INCHES (150 TO 200 MM) BELOW FINISHED GRADE, DIRECTLY ABOVE BURIED PIPE.

E. LOCATE CEILING TACKS TO LOCATE VALVES OR DAMPERS ABOVE LAY-IN PANEL CEILINGS. LOCATE IN CORNER OF PANEL CLOSEST TO EQUIPMENT.

SECTION 22 0719

PLUMBING PIPING INSULATION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. PIPING INSULATION.

1.02 REFERENCE STANDARDS

A. ASTM C177 - STANDARD TEST METHOD FOR STEADY-STATE HEAT FLUX MEASUREMENTS AND TH

F. ASTM B32 - STANDARD SPECIFICATION FOR SOLDER METAL; 2008 (REAPPROVED 2014).
G. ASTM B88 - STANDARD SPECIFICATION FOR SEAMLESS COPPER WATER TUBE; 2016.
H. ASTM B88M - STANDARD SPECIFICATION FOR SEAMLESS COPPER WATER TUBE (METRIC); 2016.
I. ASTM B813 - STANDARD SPECIFICATION FOR LIQUID AND PASTE FLUXES FOR SOLDERING OF COPPER AND COPPER ALLOY TUBE; 2016.
J. ASTM B828 - STANDARD PRACTICE FOR MAKING CAPILLARY JOINTS BY SOLDERING OF COPPER AND COPPER ALLOY TUBE AND FITTINGS; 2016.
K. ASTM D1785 - STANDARD SPECIFICATION FOR POLY(VINYL CHLORIDE) (PVC) PLASTIC PIPE, SCHEDULES 40, 80, AND 120; 2015, WITH EDITORIAL REVISION (2018).
L. ASTM D2241 - STANDARD SPECIFICATION FOR POLY (VINYL CHLORIDE) (PVC) PRESSURE-RATED PIPE (SDR SERIES); 2015.
M. ASTM D2466 - STANDARD SPECIFICATION FOR POLY(VINYL CHLORIDE) (PVC) PLASTIC PIPE FITTINGS, SCHEDULE 40; 2017.
N. ASTM D2564 - STANDARD SPECIFICATION FOR SOLVENT CEMENTS FOR POLY(VINYL CHLORIDE) (PVC) PLASTIC PIPING SYSTEMS; 2012.
O. ASTM D2855 - STANDARD PRACTICE FOR THE TWO-STEP (PRIMER & SOLVENT CEMENT) METHOD OF JOINING POLY (VINYL CHLORIDE) (PVC) OR CHLORINATED POLY (VINYL CHLORIDE) (CPVC) PIPE AND PIPING COMPONENTS WITH TAPERED SOCKETS; 2015.
P. AWWA C651 - DISINFECTING WATER MAINS; 2014.
Q. CISPI 301 - STANDARD SPECIFICATION FOR HUBLESS CAST IRON SOIL PIPE AND FITTINGS FOR SANITARY AND STORM DRAIN, WASTE AND VENT PIPING APPLICATIONS; 2009 (REVISED 2012).
R. CISPI 310 - SPECIFICATION FOR COUPLING FOR USE IN CONNECTION WITH HUBLESS CAST IRON SOIL PIPE AND FITTINGS FOR SANITARY AND STORM DRAIN, WASTE, AND VENT PIPING APPLICATIONS; 2011 (REVISED 2012).
S. MSS SP-58 - PIPE HANGERS AND SUPPORTS - MATERIALS, DESIGN, MANUFACTURE, SELECTION, APPLICATION, AND INSTALLATION; 2009.
T. NSF 61 - DRINKING WATER SYSTEM COMPONENTS - HEALTH EFFECTS; 2017.
U. NSF 372 - DRINKING WATER SYSTEM COMPONENTS - LEAD CONTENT; 2016.

1.04 QUALITY ASSURANCE
A. PERFORM WORK IN ACCORDANCE WITH APPLICABLE CODES.
B. VALVES: MANUFACTURER'S NAME AND PRESSURE RATING MARKED ON VALVE BODY.
C. IDENTIFY PIPE WITH MARKING INCLUDING SIZE, ASTM MATERIAL CLASSIFICATION, ASTM SPECIFICATION, POTABLE WATER CERTIFICATION, WATER PRESSURE RATING.

1.05 DELIVERY, STORAGE, AND HANDLING
A. PROVIDE TEMPORARY END CAPS AND CLOSURES ON PIPING AND FITTINGS. MAINTAIN IN PLACE UNTIL INSTALLATION.
B. PROTECT PIPING SYSTEMS FROM ENTRY OF FOREIGN MATERIALS BY TEMPORARY COVERS, COMPLETING SECTIONS OF THE WORK, AND ISOLATING PARTS OF COMPLETED SYSTEM.

1.06 FIELD CONDITIONS
A. DO NOT INSTALL UNDERGROUND PIPING WHEN BEDDING IS WET OR FROZEN.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS
A. POTABLE WATER SUPPLY SYSTEMS: PROVIDE PIPING, PIPE FITTINGS, AND SOLDER AND FLUX (IF USED), THAT COMPLY WITH NSF 61 AND NSF 372 FOR MAXIMUM LEAD CONTENT; LABEL PIPE AND FITTINGS.

2.02 SANITARY SEWER PIPING, ABOVE GRADE
A. CAST IRON PIPE: CISPI 301, HUBLESS, SERVICE WEIGHT.
1. FITTINGS: CAST IRON.
2. JOINTS: CISPI 310, NEOPRENE GASKETS AND STAINLESS STEEL CLAMP-AND-SHIELD ASSEMBLIES.
B. PVC PIPE: ASTM D1785 SCHEDULE 40, OR ASTM D2241 SDR 26 WITH NOT LESS THAN 150 PSI (1 034 KPA) PRESSURE RATING.
1. FITTINGS: ASTM D2466, PVC.
2. JOINTS: SOLVENT WELDED, WITH ASTM D2564 SOLVENT CEMENT.

2.03 DOMESTIC WATER PIPING, ABOVE GRADE
A. COPPER TUBE: ASTM B88 (ASTM B88M), TYPE K (A), DRAWN (H).
1. FITTINGS: ASME B16.18, CAST COPPER ALLOY OR ASME B16.22, WROUGHT COPPER AND BRONZE.
2. JOINTS: ASTM B32, ALLOY SN95 SOLDER.

2.04 PIPE HANGERS AND SUPPORTS
A. PROVIDE HANGERS AND SUPPORTS THAT COMPLY WITH MSS SP-58.
1. IF TYPE OF HANGER OR SUPPORT FOR A PARTICULAR SITUATION IS NOT INDICATED, SELECT APPROPRIATE TYPE USING MSS SP-58 RECOMMENDATIONS.
2. OVERHEAD SUPPORTS: INDIVIDUAL STEEL ROD HANGERS ATTACHED TO STRUCTURE OR TO TRAPEZE HANGERS.
3. TRAPEZE HANGERS: WELDED STEEL CHANNEL FRAMES ATTACHED TO STRUCTURE.
4. VERTICAL PIPE SUPPORT: STEEL RISER CLAMP.
5. FLOOR SUPPORTS: CONCRETE PIER OR STEEL PEDESTAL WITH FLOOR FLANGE; FIXTURE ATTACHMENT.
B. PLUMBING PIPING - DRAIN, WASTE, AND VENT:
1. HANGERS FOR PIPE SIZES 1/2 INCH (15 MM) TO 1-1/2 INCHES (40 MM): MALLEABLE IRON, ADJUSTABLE SWIVEL, SPLIT RING.
2. HANGERS FOR PIPE SIZES 2 INCHES (50 MM) AND OVER: CARBON STEEL, ADJUSTABLE, CLEVIS.
3. WALL SUPPORT FOR PIPE SIZES TO 3 INCHES (80 MM): CAST IRON HOOK.
4. FLOOR SUPPORT: CAST IRON ADJUSTABLE PIPE SADDLE, LOCK NUT, NIPPLE, FLOOR FLANGE, AND CONCRETE PIER OR STEEL SUPPORT.
C. PLUMBING PIPING - WATER:
1. HANGERS FOR PIPE SIZES 1/2 INCH (15 MM) TO 1-1/2 INCHES (40 MM): MALLEABLE IRON, ADJUSTABLE SWIVEL, SPLIT RING.
2. HANGERS FOR COLD PIPE SIZES 2 INCHES (50 MM) AND OVER: CARBON STEEL, ADJUSTABLE, CLEVIS.
3. HANGERS FOR HOT PIPE SIZES 2 INCHES (50 MM) TO 4 INCHES (100 MM): CARBON STEEL, ADJUSTABLE, CLEVIS.
4. WALL SUPPORT FOR PIPE SIZES TO 3 INCHES (80 MM): CAST IRON HOOK.
5. FLOOR SUPPORT FOR COLD PIPE: CAST IRON ADJUSTABLE PIPE SADDLE, LOCK NUT, NIPPLE, FLOOR FLANGE, AND CONCRETE PIER OR STEEL SUPPORT.

2.05 MANUFACTURED SLEEVE-SEAL SYSTEMS
A. MANUFACTURERS:
1. THE METRAFLEX COMPANY; METRASEAL: WWW.METRAFLEX.COM/#SLE.
B. MODULAR/MECHANICAL SEAL:
1. SYNTHETIC RUBBER INTERLOCKING LINKS CONTINUOUSLY FILL ANNULAR SPACE BETWEEN PIPE AND WALL/CASING OPENING.
2. PROVIDE WATERTIGHT SEAL BETWEEN PIPE AND WALL/CASING OPENING.
3. ELASTOMER ELEMENT SIZE AND MATERIAL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
4. GLASS REINFORCED PLASTIC PRESSURE END PLATES.

2.06 RELIEF VALVES
A. PRESSURE:
1. MANUFACTURERS:
A. CLA-VAL CO: WWW.CLA-VAL.COM.
B. WATTS REGULATOR COMPANY: WWW.WATTSREGULATOR.COM.
2. ANSI Z21.22, AGA CERTIFIED, BRONZE BODY, TEFLON SEAT, STEEL STEM AND SPRINGS, AUTOMATIC, DIRECT PRESSURE ACTUATED.
B. TEMPERATURE AND PRESSURE:
1. MANUFACTURERS:
A. CLA-VAL CO: WWW.CLA-VAL.COM.
B. WATTS REGULATOR COMPANY: WWW.WATTSREGULATOR.COM.
2. ANSI Z21.22, AGA CERTIFIED, BRONZE BODY, TEFLON SEAT, STAINLESS STEEL STEM AND SPRINGS, AUTOMATIC, DIRECT PRESSURE ACTUATED, TEMPERATURE RELIEF MAXIMUM 210 DEGREES F (98.9 DEGREES C), CAPACITY ASME BPVC-IV CERTIFIED AND LABELLED.

PART 3 EXECUTION

3.01 EXAMINATION
A. VERIFY THAT EXCAVATIONS ARE TO REQUIRED GRADE, DRY, AND NOT OVER-EXCAVATED.

3.02 PREPARATION
A. REAM PIPE AND TUBE ENDS. REMOVE BURRS. BEVEL PLAIN END FERROUS PIPE.
B. REMOVE SCALE AND DIRT, ON INSIDE AND OUTSIDE, BEFORE ASSEMBLY.
C. PREPARE PIPING CONNECTIONS TO EQUIPMENT WITH FLANGES OR UNIONS.

3.03 INSTALLATION
A. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
B. PROVIDE NON-CONDUCTING DIELECTRIC CONNECTIONS WHEREVER JOINTING DISSIMILAR METALS.
C. ROUTE PIPING IN ORDERLY MANNER AND MAINTAIN GRADIENT. ROUTE PARALLEL AND PERPENDICULAR TO WALLS.
D. INSTALL PIPING TO MAINTAIN HEADROOM, CONSERVE SPACE, AND NOT INTERFERE WITH USE OF SPACE.
E. GROUP PIPING WHENEVER PRACTICAL AT COMMON ELEVATIONS.
F. INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE, JOINTS, OR CONNECTED EQUIPMENT. REFER TO SECTION 22 0516.
G. PROVIDE CLEARANCE IN HANGERS AND FROM STRUCTURE AND OTHER EQUIPMENT FOR INSTALLATION OF INSULATION AND ACCESS TO VALVES AND FITTINGS.
H. PROVIDE ACCESS WHERE VALVES AND FITTINGS ARE NOT EXPOSED.
1. COORDINATE SIZE AND LOCATION OF ACCESS DOORS WITH SECTION 08 3100.
I. INSTALL VENT PIPING PENETRATING ROOFED AREAS TO MAINTAIN INTEGRITY OF ROOF ASSEMBLY.
J. PROVIDE SUPPORT FOR UTILITY METERS IN ACCORDANCE WITH REQUIREMENTS OF UTILITY COMPANIES.
K. INSTALL VALVES WITH STEMS UPRIGHT OR HORIZONTAL, NOT INVERTED. REFER TO SECTION 22 0523.
L. COPPER PIPE AND TUBE: MAKE SOLDERED JOINTS IN ACCORDANCE WITH ASTM B828, USING SPECIFIED SOLDER, AND FLUX MEETING ASTM B813; IN POTABLE WATER SYSTEMS USE FLUX ALSO COMPLYING WITH NSF 61 AND NSF 372.
M. PVC PIPE: MAKE SOLVENT-WELDED JOINTS IN ACCORDANCE WITH ASTM D2855.
N. SLEEVE PIPES PASSING THROUGH PARTITIONS, WALLS AND FLOORS.
O. PIPE HANGERS AND SUPPORTS:
1. INSTALL IN ACCORDANCE WITH ASME B31.9.
2. PLACE HANGERS WITHIN 12 INCHES (300 MM) OF EACH HORIZONTAL ELBOW.
3. WHERE SEVERAL PIPES CAN BE INSTALLED IN PARALLEL AND AT SAME ELEVATION, PROVIDE MULTIPLE OR TRAPEZE HANGERS.
P. MANUFACTURED SLEEVE-SEAL SYSTEMS:
1. INSTALL MANUFACTURED SLEEVE-SEAL SYSTEMS IN SLEEVES LOCATED IN GRADE SLABS AND EXTERIOR CONCRETE WALLS AT PIPING ENTRANCES INTO BUILDING.
2. PROVIDE SEALING ELEMENTS OF THE SIZE, QUANTITY, AND TYPE REQUIRED FOR THE PIPING AND SLEEVE INNER DIAMETER OR PENETRATION DIAMETER.
3. LOCATE PIPING IN CENTER OF SLEEVE OR PENETRATION.
4. INSTALL FIELD ASSEMBLED SLEEVE-SEAL SYSTEM COMPONENTS IN ANNULAR SPACE BETWEEN SLEEVE AND PIPING.
5. TIGHTEN BOLTING FOR A WATER-TIGHT SEAL.
6. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

3.04 APPLICATION
A. INSTALL UNIONS DOWNSTREAM OF VALVES AND AT EQUIPMENT OR APPARATUS CONNECTIONS.
B. INSTALL BRASS MALE ADAPTERS EACH SIDE OF VALVES IN COPPER PIPED SYSTEM. SOLDER ADAPTERS TO PIPE.
C. INSTALL BALL VALVES FOR SHUT-OFF AND TO ISOLATE EQUIPMENT, PART OF SYSTEMS, OR VERTICAL RISERS.
D. INSTALL BALL VALVES FOR THROTTLING, BYPASS, OR MANUAL FLOW CONTROL SERVICES.

3.05 TOLERANCES
A. DRAINAGE PIPING: ESTABLISH INVERT ELEVATIONS WITHIN 1/2 INCH (10 MM) VERTICALLY OF LOCATION INDICATED AND SLOPE TO DRAIN AT MINIMUM OF 1/4 INCH PER FOOT (1:50) SLOPE.
B. WATER PIPING: SLOPE AT MINIMUM OF 1/32 INCH PER FOOT (1:400) AND ARRANGE TO DRAIN AT LOW POINTS.

3.06 DISINFECTION OF DOMESTIC WATER PIPING SYSTEM
A. PRIOR TO STARTING WORK, VERIFY SYSTEM IS COMPLETE, FLUSHED AND CLEAN.
B. INJECT DISINFECTANT, FREE CHLORINE IN LIQUID, POWDER, TABLET OR GAS FORM, THROUGHOUT SYSTEM TO OBTAIN 50 TO 80 MG/L RESIDUAL.
C. BLEED WATER FROM OUTLETS TO ENSURE DISTRIBUTION AND TEST FOR DISINFECTANT RESIDUAL AT MINIMUM 15 PERCENT OF OUTLETS.
D. MAINTAIN DISINFECTANT IN SYSTEM FOR 24 HOURS.
E. IF FINAL DISINFECTANT RESIDUAL TESTS LESS THAN 25 MG/L, REPEAT TREATMENT.
F. FLUSH DISINFECTANT FROM SYSTEM UNTIL RESIDUAL EQUAL TO THAT OF INCOMING WATER OR 1.0 MG/L.
G. TAKE SAMPLES NO SOONER THAN 24 HOURS AFTER FLUSHING, FROM 10 PERCENT OF OUTLETS AND FROM WATER ENTRY, AND ANALYZE IN ACCORDANCE WITH AWWA C651.

3.07 SCHEDULES
A. PIPE HANGER SPACING:
1. METAL PIPING:
A. PIPE SIZE: 1/2 INCHES (15 MM) TO 1-1/4 INCHES (32 MM):
1) MAXIMUM HANGER SPACING: 6.5 FT (2 M).
2) HANGER ROD DIAMETER: 3/8 INCHES (9 MM).
B. PIPE SIZE: 1-1/2 INCHES (40 MM) TO 2 INCHES (50 MM):
1) MAXIMUM HANGER SPACING: 10 FT (3 M).
2) HANGER ROD DIAMETER: 3/8 INCH (9 MM).
C. PIPE SIZE: 2-1/2 INCHES (65 MM) TO 3 INCHES (75 MM):
1) MAXIMUM HANGER SPACING: 10 FT (3 M).
2) HANGER ROD DIAMETER: 1/2 INCH (13 MM).
2. PLASTIC PIPING:
A. ALL SIZES:
1) MAXIMUM HANGER SPACING: 6 FT (1.8 M).
2) HANGER ROD DIAMETER: 3/8 INCH (9 MM).

SECTION 22 1006
PLUMBING PIPING SPECIALTIES

PART 1 GENERAL

1.01 SECTION INCLUDES
A. CLEANOUTS.
B. WATER HAMMER ARRESTORS.
C. MIXING VALVES.

1.02 REFERENCE STANDARDS
A. NSF 61 - DRINKING WATER SYSTEM COMPONENTS - HEALTH EFFECTS; 2017.
B. NSF 372 - DRINKING WATER SYSTEM COMPONENTS - LEAD CONTENT; 2016.
C. PDI-WH 201 - WATER HAMMER ARRESTERS; 2010.

1.03 QUALITY ASSURANCE
A. MANUFACTURER QUALIFICATIONS: COMPANY SPECIALIZING IN MANUFACTURING THE PRODUCTS SPECIFIED IN THIS SECTION WITH NOT LESS THAN THREE YEARS DOCUMENTED EXPERIENCE.

1.04 DELIVERY, STORAGE, AND HANDLING
A. ACCEPT SPECIALTIES ON SITE IN ORIGINAL FACTORY PACKAGING. INSPECT FOR DAMAGE.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS
A. SPECIALTIES IN POTABLE WATER SUPPLY SYSTEMS: PROVIDE PRODUCTS THAT COMPLY WITH NSF 61 AND NSF 372 FOR MAXIMUM LEAD CONTENT.

2.02 CLEANOUTS
A. MANUFACTURERS:
1. JAY R. SMITH MANUFACTURING COMPANY: WWW.JAYRSMITH.COM.
2. JOSAM COMPANY: WWW.JOSAM.COM.
3. ZURN INDUSTRIES, LLC: WWW.ZURN.COM.
B. CLEANOUTS AT INTERIOR FINISHED FLOOR AREAS (CO-3):
1. LACQUERED CAST IRON BODY WITH ANCHOR FLANGE, REVERSIBLE CLAMPING COLLAR, THREADED TOP ASSEMBLY, AND ROUND GASKETED SCORED COVER IN SERVICE AREAS AND ROUND GASKETED DEPRESSED COVER TO ACCEPT FLOOR FINISH IN FINISHED FLOOR AREAS.
C. CLEANOUTS AT INTERIOR FINISHED WALL AREAS (CO-4):
1. LINE TYPE WITH LACQUERED CAST IRON BODY AND ROUND EPOXY COATED GASKETED COVER, AND ROUND STAINLESS STEEL ACCESS COVER SECURED WITH MACHINE SCREW.
D. CLEANOUTS AT INTERIOR UNFINISHED ACCESSIBLE AREAS (CO-5): CALKED OR THREADED TYPE. PROVIDE BOLTED STACK CLEANOUTS ON VERTICAL RAINWATER LEADERS.

2.03 WATER HAMMER ARRESTORS
A. MANUFACTURERS:
1. JAY R. SMITH MANUFACTURING COMPANY: WWW.JAYRSMITH.COM.
2. WATTS REGULATOR COMPANY, A PART OF WATTS WATER TECHNOLOGIES: WWW.WATTSREGULATOR.COM.
3. ZURN INDUSTRIES, LLC: WWW.ZURN.COM.
B. WATER HAMMER ARRESTORS:
1. STAINLESS STEEL CONSTRUCTION, BELLOWS TYPE SIZED IN ACCORDANCE WITH PDI-WH 201, PRECHARGED SUITABLE FOR OPERATION IN TEMPERATURE RANGE MINUS 100 TO 300 DEGREES F (MINUS 73 TO 149 DEGREES C) AND MAXIMUM 250 PSI (1700 KPA) WORKING PRESSURE.

2.04 MIXING VALVES
A. THERMOSTATIC MIXING VALVES:
1. MANUFACTURERS:
A. HONEYWELL INTERNATIONAL INC: YOURHOME.HONEYWELL.COM.
B. LEONARD VALVE COMPANY: WWW.LEONARDVALVE.COM.
2. VALVE: CHROME PLATED CAST BRASS BODY, STAINLESS STEEL OR COPPER ALLOY BELLOWS, INTEGRAL TEMPERATURE ADJUSTMENT.
3. ACCESSORIES:
A. CHECK VALVE ON INLETS.
B. VOLUME CONTROL SHUT-OFF VALVE ON OUTLET.
C. STEM THERMOMETER ON OUTLET.
D. STRAINER STOP CHECKS ON INLETS.

PART 3 EXECUTION

3.01 INSTALLATION
A. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
B. EXTEND CLEANOUTS TO FINISHED FLOOR OR WALL SURFACE. LUBRICATE THREADED CLEANOUT PLUGS WITH MIXTURE OF GRAPHITE AND LINSEED OIL. ENSURE CLEARANCE AT CLEANOUT FOR RODDING OF DRAINAGE SYSTEM.
C. INSTALL FLOOR CLEANOUTS AT ELEVATION TO ACCOMMODATE FINISHED FLOOR.
D. INSTALL APPROVED POTABLE WATER PROTECTION DEVICES ON PLUMBING LINES WHERE CONTAMINATION OF DOMESTIC WATER MAY OCCUR; ON BOILER FEED WATER LINES, JANITOR ROOMS, FIRE SPRINKLER SYSTEMS, PREMISE ISOLATION, IRRIGATION SYSTEMS, FLUSH VALVES, INTERIOR AND EXTERIOR HOSE BIBBS.
E. INSTALL WATER HAMMER ARRESTORS COMPLETE WITH ACCESSIBLE ISOLATION VALVE ON HOT AND COLD WATER SUPPLY PIPING TO LAVATORY SINKS.

SECTION 22 3000
PLUMBING EQUIPMENT

PART 1 GENERAL

1.01 SECTION INCLUDES
A. WATER HEATERS:
1. COMMERCIAL ELECTRIC.

1.02 REFERENCE STANDARDS
A. UL 174 - STANDARD FOR HOUSEHOLD ELECTRIC STORAGE TANK WATER HEATERS; CURRENT EDITION, INCLUDING ALL REVISIONS.

1.03 QUALITY ASSURANCE
A. MANUFACTURER QUALIFICATIONS: COMPANY SPECIALIZING IN MANUFACTURING THE TYPE OF PRODUCTS SPECIFIED IN THIS SECTION, WITH MINIMUM THREE YEARS OF DOCUMENTED EXPERIENCE.
B. CERTIFICATIONS:
1. WATER HEATERS: NSF APPROVED.
2. ELECTRIC WATER HEATERS: UL LISTED AND LABELED TO UL 174.
3. PRODUCTS REQUIRING ELECTRICAL CONNECTION: LISTED AND CLASSIFIED BY UNDERWRITERS LABORATORIES INC., AS SUITABLE FOR THE PURPOSE SPECIFIED AND INDICATED.

1.04 DELIVERY, STORAGE, AND HANDLING
A. PROVIDE TEMPORARY INLET AND OUTLET CAPS. MAINTAIN CAPS IN PLACE UNTIL INSTALLATION.

1.05 WARRANTY
A. PROVIDE FIVE YEAR MANUFACTURER WARRANTY FOR DOMESTIC WATER HEATERS.

PART 2 PRODUCTS

2.01 WATER HEATERS
A. MANUFACTURERS:
1. A.O. SMITH WATER PRODUCTS CO: WWW.HOTWATER.COM.
2. RHEEM MANUFACTURING COMPANY: WWW.RHEEM.COM.
B. COMMERCIAL ELECTRIC:
1. TYPE: FACTORY-ASSEMBLED AND WIRED, ELECTRIC, VERTICAL STORAGE.
2. PERFORMANCE:
A. REFER TO DRAWINGS.
3. ELECTRICAL CHARACTERISTICS:
A. REFER TO DRAWINGS.
4. TANK: GLASS LINED WELDED STEEL; 4 INCH (100 MM) DIAMETER INSPECTION PORT, THERMALLY INSULATED WITH MINIMUM 2 INCHES (50 MM) GLASS FIBER ENCASED IN CORROSION-RESISTANT STEEL JACKET; BAKED-ON ENAMEL FINISH.
5. CONTROLS: AUTOMATIC IMMERSION WATER THERMOSTAT; EXTERNALLY ADJUSTABLE TEMPERATURE RANGE FROM 60 TO 180 DEGREES F (16 TO 82 DEGREES C), FLANGED OR SCREW-IN NICHROME ELEMENTS, HIGH TEMPERATURE LIMIT THERMOSTAT.
6. ACCESSORIES:
A. WATER CONNECTIONS: BRASS.
B. DIP TUBE: BRASS.
C. DRAIN VALVE.
D. ANODE: MAGNESIUM.
E. TEMPERATURE AND PRESSURE RELIEF VALVE: ASME LABELED.
7. HEATING ELEMENTS: FLANGE-MOUNTED IMMERSION ELEMENTS; INDIVIDUAL ELEMENTS SHEATHED WITH INCOLOY CORROSION-RESISTANT METAL ALLOY, RATED LESS THAN 75 W/SQ IN (11.6 W/SQ M).

PART 3 EXECUTION

3.01 INSTALLATION
A. INSTALL PLUMBING EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS, AS REQUIRED BY CODE, AND COMPLYING WITH CONDITIONS OF CERTIFICATION, IF ANY.
B. COORDINATE WITH PLUMBING PIPING AND RELATED FUEL PIPING WORK TO ACHIEVE OPERATING SYSTEM.
C. DOMESTIC HOT WATER HEATERS:
1. INSTALL DOMESTIC WATER HEATER WITH CLEARANCE FOR REMOVAL WITHOUT DISTURBING OTHER INSTALLED EQUIPMENT OR PIPING.
2. SUPPORT UNIT WALL MOUNTED SHELF..
3. PIPE RELIEF VALVES AND DRAINS TO NEAREST FLOOR DRAIN OR MOP SINK.
D. DOMESTIC WATER STORAGE TANKS:
1. PROVIDE STEEL PIPE SUPPORT, INDEPENDENT OF BUILDING STRUCTURAL FRAMING MEMBERS.
2. CLEAN AND FLUSH PRIOR TO DELIVERY TO SITE. SEAL UNTIL PIPE CONNECTIONS ARE MADE.

SECTION 22 4000
PLUMBING FIXTURES

PART 1 GENERAL

1.01 SECTION INCLUDES
A. WATER CLOSETS.
B. LAVATORIES.
C. SERVICE SINKS.
D. UNDER-LAVATORY PIPE SUPPLY COVERS.
E. ELECTRIC WATER COOLERS.

1.02 REFERENCE STANDARDS
A. ADA STANDARDS - AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS FOR ACCESSIBLE DESIGN; 2010.
B. ASME A112.18.9 - PROTECTORS/INSULATORS FOR EXPOSED WASTE AND SUPPLIES ON ACCESSIBLE FIXTURES; 2011.
C. ASTM C1822 - STANDARD SPECIFICATION FOR INSULATING COVERS ON ACCESSIBLE LAVATORY PIPING; 2015.
D. ASHRAE STD 18 - METHODS OF TESTING FOR RATING DRINKING-WATER COOLERS WITH SELF-CONTAINED MECHANICAL REFRIGERATION; 2013.
E. ASME A112.6.1M - SUPPORTS FOR OFF-THE-FLOOR PLUMBING FIXTURES FOR PUBLIC USE; 1997 (REAFFIRMED 2017).
F. ASME A112.18.1 - PLUMBING SUPPLY FITTINGS; 2012.
G. ASME A112.19.2 - CERAMIC PLUMBING FIXTURES; 2013.
H. ASTM E84 - STANDARD TEST METHOD FOR SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS; 2018.
I. ICC A117.1 - ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES; 2017.
J. NSF 61 - DRINKING WATER SYSTEM COMPONENTS - HEALTH EFFECTS; 2017.
K. NSF 372 - DRINKING WATER SYSTEM COMPONENTS - LEAD CONTENT; 2016.

1.03 QUALITY ASSURANCE
A. MANUFACTURER QUALIFICATIONS: COMPANY SPECIALIZING IN MANUFACTURING THE TYPE OF PRODUCTS SPECIFIED IN THIS SECTION, WITH MINIMUM THREE YEARS OF DOCUMENTED EXPERIENCE.

1.04 REGULATORY REQUIREMENTS
A. PRODUCTS REQUIRING ELECTRICAL CONNECTION: LISTED AND CLASSIFIED BY UNDERWRITERS LABORATORIES INC., AS SUITABLE FOR THE PURPOSE SPECIFIED AND INDICATED.

1.05 DELIVERY, STORAGE, AND HANDLING
A. ACCEPT FIXTURES ON SITE IN FACTORY PACKAGING. INSPECT FOR DAMAGE.
B. PROTECT INSTALLED FIXTURES FROM DAMAGE BY SECURING AREAS AND BY LEAVING FACTORY PACKAGING IN PLACE TO PROTECT FIXTURES AND PREVENT USE.

1.06 WARRANTY
A. PROVIDE FIVE YEAR MANUFACTURER WARRANTY FOR ELECTRIC WATER COOLER.

PART 2 PRODUCTS

2.01 GENERAL
A. POTABLE WATER SYSTEMS: PROVIDE PLUMBING FITTINGS AND FAUCETS THAT COMPLY WITH NSF 61 AND NSF 372 FOR MAXIMUM LEAD CONTENT; LABEL PIPE AND FITTINGS.

2.02 TANK TYPE WATER CLOSETS
A. TANK TYPE WATER CLOSET MANUFACTURERS:
1. AMERICAN STANDARD, INC: WWW.AMERICANSTANDARD-US.COM/#SLE.
2. KOHLER COMPANY: WWW.KOHLER.COM.
3. ZURN INDUSTRIES, INC: WWW.ZURN.COM.
B. BOWL: ASME A112.19.2; FLOOR MOUNTED, SIPHON JET, VITREOUS CHINA, 16.5 INCHES (420 MM) HIGH, CLOSE-COUPLED CLOSET COMBINATION WITH ELONGATED RIM, INSULATED VITREOUS CHINA CLOSET TANK WITH FITTINGS AND LEVER FLUSHING VALVE, BOLT CAPS, VANDALPROOF COVER LOCKING DEVICE.
1. WATER CONSUMPTION: MAXIMUM 1.28 GALLONS (4.8 LITERS) PER FLUSH.
C. SEAT MANUFACTURERS:
1. AMERICAN STANDARD, INC: WWW.AMERICANSTANDARD-US.COM/#SLE.
2. BEMIS MANUFACTURING COMPANY: WWW.BEMISMFG.COM.
3. CHURCH SEAT COMPANY: WWW.CHURCHSEATS.COM.
D. SEAT: SOLID WHITE PLASTIC, OPEN FRONT, EXTENDED BACK, LESS COVER, COMPLETE WITH SELF-SUSTAINING HINGE.
E. HANDLE HEIGHT: 44 INCHES (1117 MM) OR LESS.

2.03 LAVATORIES
A. LAVATORY MANUFACTURERS:
1. AMERICAN STANDARD, INC: WWW.AMERICANSTANDARD-US.COM/#SLE.
2. KOHLER COMPANY: WWW.KOHLER.COM.
3. ZURN INDUSTRIES, INC: WWW.ZURN.COM.
B. VITREOUS CHINA WALL HUNG BASIN: ASME A112.19.2; VITREOUS CHINA WALL HUNG LAVATORY, WITH 4 INCH (100 MM) HIGH BACK, RECTANGULAR BASIN WITH SPLASH LIP, FRONT OVERFLOW, AND SOAP DEPRESSION.
1. DRILLING CENTERS: 4 INCH (100 MM).
C. SUPPLY FAUCET: ASME A112.18.1; CHROME PLATED COMBINATION SUPPLY FITTING WITH POP-UP WASTE, WATER ECONOMY AERATOR WITH MAXIMUM FLOW OF 0.5 GALLON PER MINUTE (LOW-FLOW) (1.9 LITERS PER MINUTE (LOW-FLOW)), INDEXED HANDLES.
D. ACCESSORIES:
1. CHROME PLATED 17 GAGE, 0.0538 INCH (1.37 MM) BRASS P-TRAP WITH CLEAN-OUT PLUG AND ARM WITH ESCUTCHEON.
2. OFFSET WASTE WITH PERFORATED OPEN STRAINER.
3. WHEEL HANDLE STOPS.
4. RIGID SUPPLIES.
5. CARRIER:
A. MANUFACTURERS:
1) JOSAM COMPANY: WWW.JOSAM.COM.
2) ZURN INDUSTRIES, INC: WWW.ZURN.COM.
B. ASME A112.6.1M; CAST IRON AND STEEL FRAME WITH TUBULAR LEGS, LUGS FOR FLOOR AND WALL ATTACHMENT, THREADED STUDS FOR FIXTURE HANGER, BEARING PLATE AND STUDS.

2.04 UNDER-LAVATORY PIPE SUPPLY COVERS
A. MANUFACTURERS:
1. PLUMBEREX SPECIALTY PRODUCTS, INC; _____: WWW.PLUMBEREX.COM/#SLE.
B. BASIS OF DESIGN: PLUMBEREX SPECIALTY PRODUCTS, INC; WWW.PLUMBEREX.COM/#SLE.
1. SLIM FIT UNDER-LAVATORY INSULATORS (NON-SEWN): PLUMBEREX TRAP GEAR.
C. GENERAL:
1. INSULATE EXPOSED DRAINAGE PIPING INCLUDING HOT, COLD AND TEMPERED WATER SUPPLIES UNDER LAVATORIES OR SINKS PER ADA STANDARDS.
2. CONSTRUCTION: 1/8 INCH (3.2 MM) PVC WITH ANTIMICROBIAL, ANTIFUNGAL AND UV RESISTANT PROPERTIES.
A. COMPLY WITH ASTM E84 FOR FLAME AND SMOKE DEVELOPMENT.
B. COMPLY WITH ASTM C1822 TYPE I FOR COVERS ON ACCESSIBLE LAVATORY PIPING.
C. COMPLY WITH ASME A112.18.9 FOR COVERS ON ACCESSIBLE LAVATORY PIPING.
D. COMPLY WITH ICC A117.1.
3. COLOR: HIGH GLOSS WHITE.

2.05 ELECTRIC WATER COOLERS
A. ELECTRIC WATER COOLER MANUFACTURERS:
1. ELKAY MANUFACTURING COMPANY: WWW.ELKAY.COM.
2. HAWS CORPORATION: WWW.HAWSCO.COM.
3. OASIS, A LYNN TILTON COMPANY: WWW.OASISCOOLERS.COM
B. WATER COOLER: ELECTRIC, MECHANICALLY REFRIGERATED; SURFACE HANDICAPPED MOUNTED; STAINLESS STEEL TOP, VINYL ON STEEL BODY, ELEVATED ANTI-SQUIRT BUBBLER WITH STREAM GUARD, AUTOMATIC STREAM REGULATOR, PUSH BUTTON, MOUNTING BRACKET; INTEGRAL AIR COOLED CONDENSER AND STAINLESS STEEL GRILLE.
1. CAPACITY: 8 GALLONS PER HOUR (30.3 LITERS PER HOUR) OF 50 DEGREES F (10 DEGREES C) WATER WITH INLET AT 80 DEGREES F (27 DEGREES C) AND ROOM TEMPERATURE OF 90 DEGREES F (32 DEGREES C), WHEN TESTED IN ACCORDANCE WITH ASHRAE STD 18.
2. ELECTRICAL: 115 V, 60 HERTZ COMPRESSOR, 6 FOOT (2 M) CORD AND PLUG FOR CONNECTION TO ELECTRIC WIRING SYSTEM INCLUDING GROUNDING CONNECTOR.

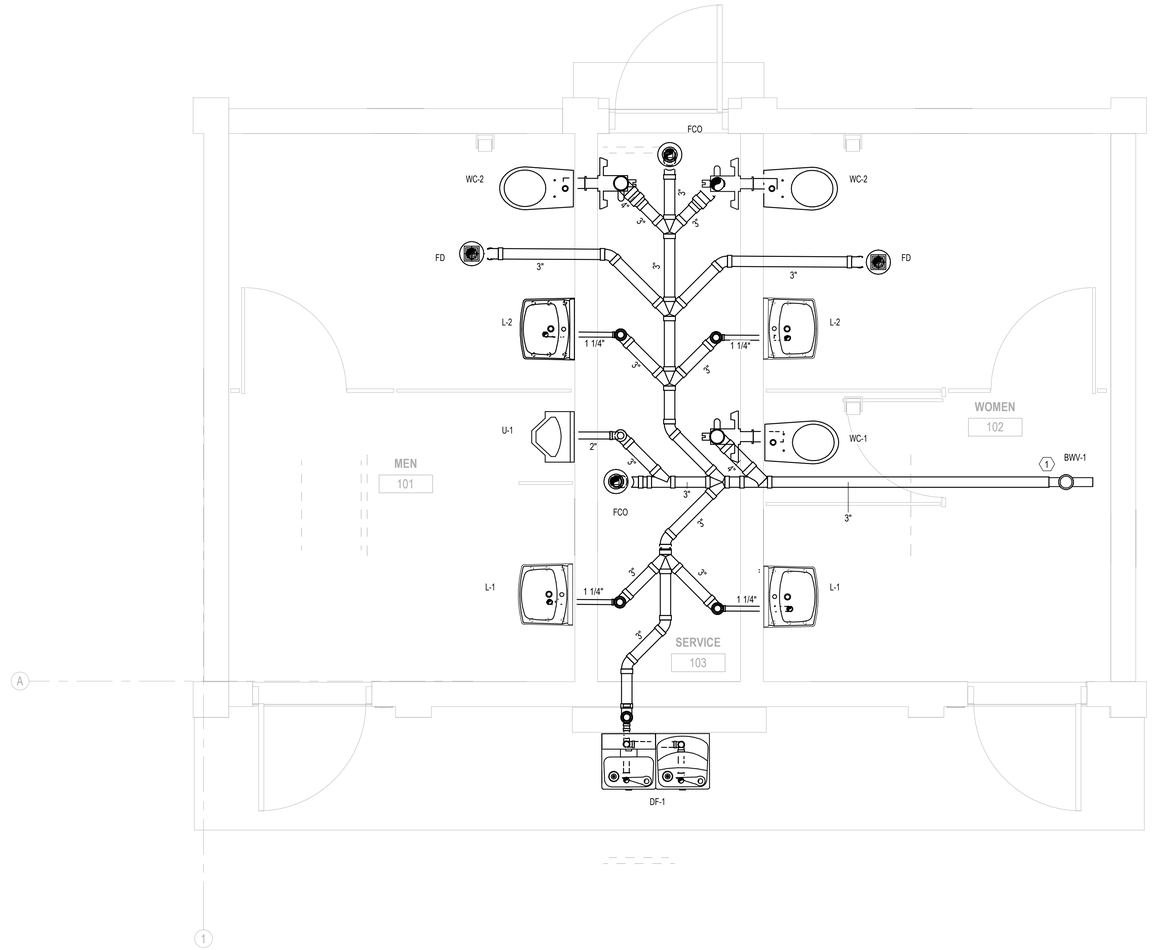
2.06 SERVICE SINKS
A. BOWL: 36 BY 24 BY 10 INCH (900 BY 600 BY 250 MM) HIGH WHITE MOLDED STONE, FLOOR MOUNTED, WITH ONE INCH (25 MM) WIDE SHOULDERS, VINYL BUMPER GUARD, STAINLESS STEEL STRAINER.
B. TRIM: ASME A112.18.1 EXPOSED WALL TYPE SUPPLY WITH CROSS HANDLES, SPOUT WALL BRACE, VACUUM BREAKER, HOSE END SPOUT, STRAINERS, ECCENTRIC ADJUSTABLE INLETS, INTEGRAL SCREWDRIVER STOPS WITH COVERING CAPS AND ADJUSTABLE THREADED WALL FLANGES.
C. ACCESSORIES:
1. 5 FEET (1.5 M) OF 1/2 INCH (13 MM) DIAMETER PLAIN END REINFORCED PLASTIC HOSE.
2. HOSE CLAMP HANGER.
3. MOP HANGER.

GENERAL NOTES

1. COORDINATE PLUMBING WORK WITH ALL TRADES.

KEY NOTES

1. ROUTE SANITARY LINE TO CONNECTION POINT WITH SANITARY STUB. VERIFY LOCATION WITH CIVIL PLAN.



1 FIRST FLOOR PLAN SANITARY

1/2" = 1'-0"

cph
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A Full Service A & E Firm
500 West Fulton Street
Sanford, FL 32771
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Plans Prepared By :
CPH, Inc.

State of Florida Licenses:
Architect No. AA2600926
Engineer No. 3215
Landscape No. LC0000298
Surveyor No. 7143

JEFFREY A. DEAL
LICENSE
No. 87451
STATE OF FLORIDA
PROFESSIONAL ENGINEER

CELEBRATING 40 +YEARS cph

No.	DATE	Revision

Designed:	CPH
Drawn:	CPH
Checked:	CPH
Job No.:	M13112
08/13/2021	© 2021

FIRST FLOOR PLAN SANITARY

KINGFISH BOAT RAMP RESTROOMS

752 MANATEE AVENUE WEST
HOLMES BEACH
MANATEE COUNTY, FLORIDA

NOT FOR CONSTRUCTION

THIS SHEET NOT VALID FOR CONSTRUCTION WITHOUT COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND

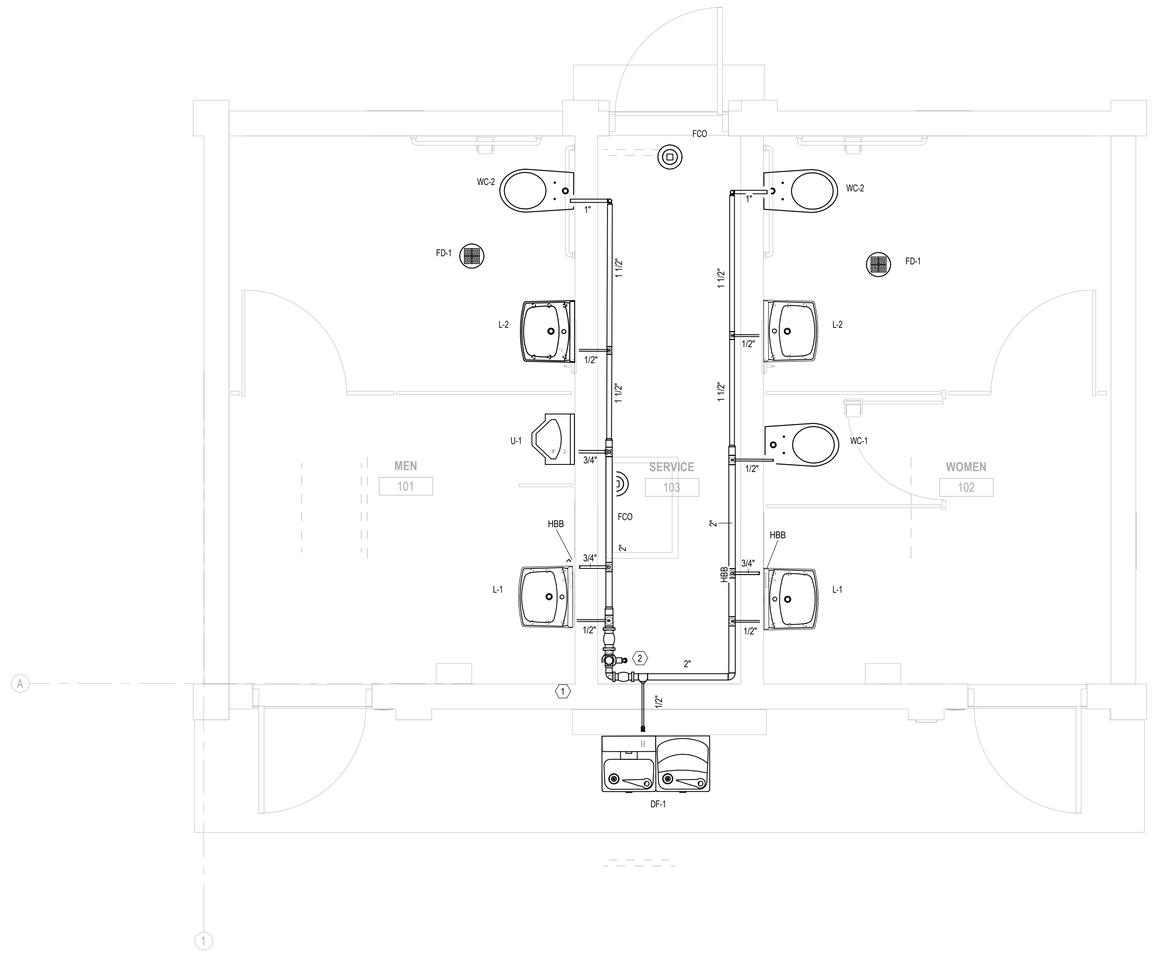
Sheet No.
P201

GENERAL NOTES

1. COORDINATE DOMESTIC WATER PIP WITH ALL TRADES.

KEY NOTES

1. ROUTE DOMESTIC WATER LINE TO CONNECTION POINT WITH DOMESTIC WATER STUB. VERIFY LOCATION WITH CIVIL PLANS.
2. PROVIDE FULL PORT BALL VALVES TO ISOLATE BUILDING AND EACH RESTROOM GROUP INDIVIDUALLY. INSTALL VALVES NO HIGHER THAN 60" A.F.F. PROVIDE ENGRAVED TAG INDICATING: "BLDG", "MEN", OR "WOMEN". AFFIX TAG TO CORRESPONDING VALVE.



1 FIRST FLOOR PLAN DOMESTIC WATER

1/2" = 1'-0"

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No. 87451
STATE OF FLORIDA
PROFESSIONAL ENGINEER

CELEBRATING 40 +YEARS cph

No.	Revision	DATE

Designed:	CPH
Drawn:	CPH
Checked:	CPH
Job No.:	M13112
08/13/2021	© 2021

FIRST FLOOR PLAN DOMESTIC WATER

KINGFISH BOAT RAMP RESTROOMS

752 MANATEE AVENUE WEST
HOLMES BEACH
MANATEE COUNTY, FLORIDA

NOT FOR CONSTRUCTION

THIS SHEET NOT VALID FOR CONSTRUCTION WITHOUT COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND

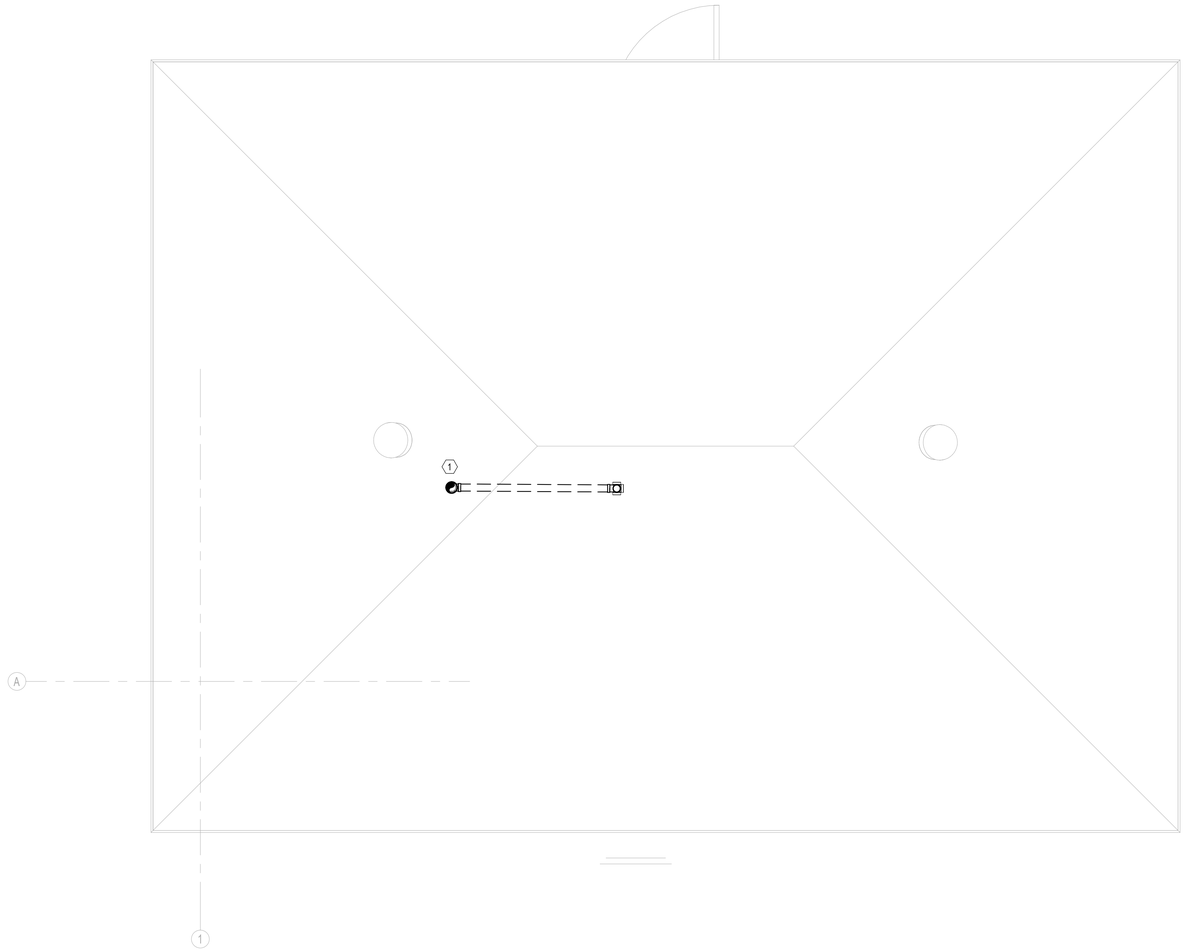
Sheet No.
P301

GENERAL NOTES

1. COORDINATE ROOF MODICATIONS WITH ALL TRADES

KEY NOTES

1. 3" VTR. ROUTE THRU ROOF FULL SIZE.



1 ROOF PLAN PLUMBING

1/2" = 1'-0"

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Landscape No. LC0000298
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JEFFREY A. DEAL
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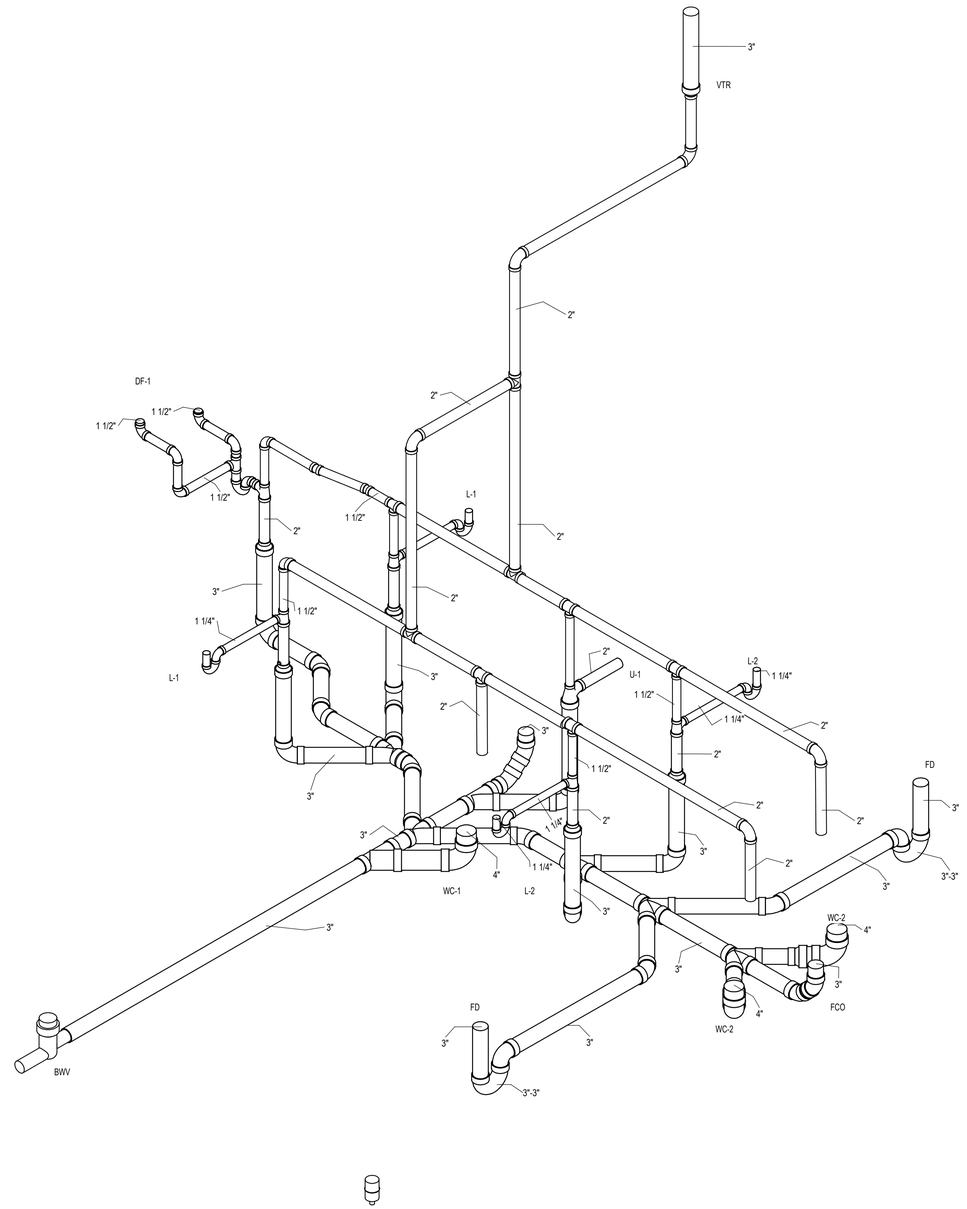
P401



1 PLUMBING SANITARY RISER

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PLUMBING SANITARY RISER

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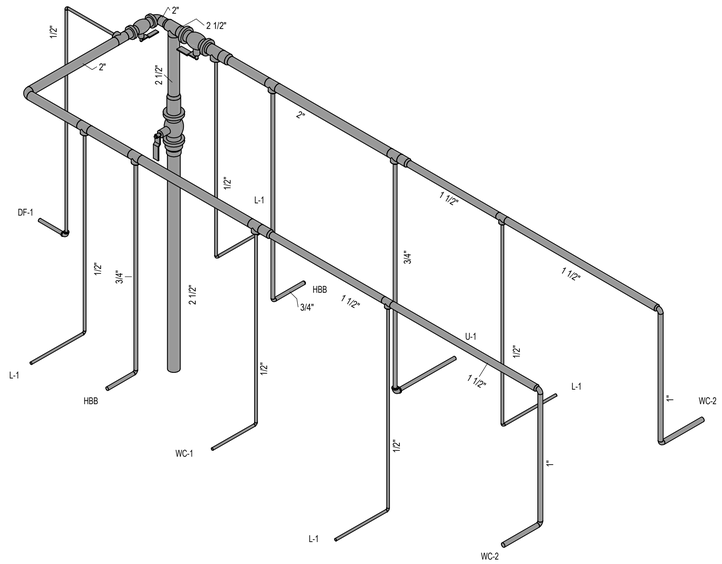

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PLUMBING DOMESTIC WATER RISER
KINGFISH BOAT RAMP RESTROOMS
752 MANATEE AVENUE WEST
HOLMES BEACH
MANATEE COUNTY, FLORIDA

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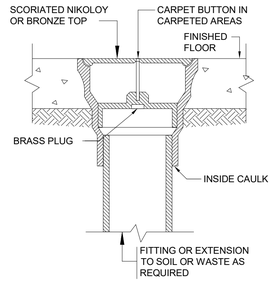
Sheet No.
P502

PLUMBING FIXTURE SCHEDULE

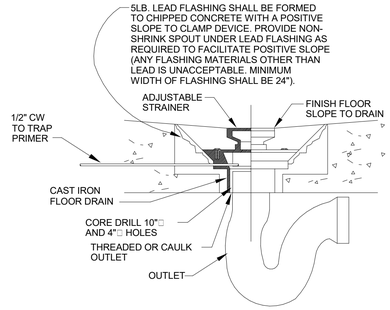
MARK	FIXTURE	MANUFACTURER/MODEL	WASTE CONNECTION	VENT CONNECTION	HOT WATER CONNECTION	COLD WATER CONNECTION	REMARKS
BWV-1	BACK WATER VALVE	OATEY 43900	--	--	--	--	3" PVC BACKWATER VALVE WITH THREADED CAP
DF-1	DRINKING FOUNTAIN	ELKAY MODEL VRCTLDDWSK	1-1/2"	1-1/2"	--	3/8"	ELKAY VANDAL-RESISTANT BOTTLE FILLING STATION AND BI-LEVEL COOLER, NON-FILTERED NON REFRIGERATED STAINLESS.
FCO	FLOOR CLEANOUT	WATTS MODEL CO-200-RX	3"	--	--	--	EPOXY COATED CAST IRON FLOOR CLEANOUT WITH 5" ROUND ADJUSTABLE HEAVY DUTY NICKEL BRONZE TOP. NO HUB OUTLET. SAFE LIVE LOAD 7500 - 10000 LBS.
FD	FLOOR DRAIN	WATTS MODEL FD-100-A	3"	--	--	--	EPOXY COATED CAST IRON FLOOR DRAIN WITH ANCHOR FLANGE AND REVERSIBLE CLAMPING COLLAR WITH PRIMARY AND SECONDARY WEEPHOLES, ADJUSTABLE 5" DIAMETER HEELPROOF NICKLE BRONE STRAINER, NO-BUB CONN. AND TRAP PRIMER CONNE.
HBB	HOSE BIBB (WALL TYPE)	ZURN Z-1342	3/4"	--	--	--	Z1342 ENCASED, ANTI-SIPHON, WALL FAUCET FOR USE IN MODERATE CLIMATE INSTALLATION. COMPLETE WITH Z1399-VB EXTERNAL VACUUM BREAKER, ALL BRONZE INTERIOR COMPONENTS, VANDAL- RESISTANT OPERATING STEM, ROUGH BRONZE EXTERIOR AND 3/4 MALE HOSE CONNECTION. CHROME-PLATED ROUGH CAST BRONZE BOX AND HINGED COVER WITH LOOSE KEY INCLUDED. LOOSE KEY PROVIDED WITH EACH HYDRANT AS STANDARD.
L-1	LAVATORY	KOHLER K-2005	1-1/4"	1-1/2"	--	1/2"	MCGUIRE CAST BRASS P-TRAP W/TUBLAR WALL BEND (SIZE AS REQUIRED), SUPPLY FITTING: ZURN MODEL Z6955-XL-S, .5 GPM, SELF-SUSTAINING, BATTERY BACKUP SENSOR ACTIVATED FAUCET OR EQUAL. PROVIDE ZURN Z-1232 CARRIER
L-2	LAVATORY-ADA	KOHLER K-2005	1-1/4"	1-1/2"	--	1/2"	MCGUIRE CAST BRASS P-TRAP W/TUBLAR WALL BEND (SIZE AS REQUIRED), TRUEBRO WHITE HANDICAP LAV-GUARD INSULATION KIT#102. SUPPLY FITTIN: ZURN MODEL Z6955-XL-S, .5 GPM, SELF-SUSTAINING, BATTERY BACKUP SENSOR ACTIVATED FAUCET OR EQUAL. PROVIDE ZURN Z-1232 CARRIER
U-1	URINAL	SLOAN SU-1009	2"	1-1/2"	--	3/4"	WHITE VITREOUS CHINA WASHDOWN URINAL, .125 GALLON PER FLUSH. WALL HUNG, WASHDOWN FLUSHING, INTEGRAL FLUSHING RIM, 3/4" TOP SPUD INLET, 2" I.P.S OUTLET, SLOAN ROYAL EXPOSED MANUAL URINAL FLUSHOMETER ROYAL 186 WITH 3/4" I.P.S SCREWDRIVER BAK-CHEK ANGLE STOP WITH FREE SPINNING VANDAL RESISTANT STOP CAP, .5 GPF OR EQUAL. COMPLETE WITH MOUNTING HARDWARE.
WC-1	WATER CLOSET	ZURN Z5615-BWL-AM WITH 1.6 FLUSH VALVE	4"	2"	--	1"	WALL HUNG FRONT RIM DESIGN , SIPHON JET FLUSHING WITH 1-1/2" TOP SPUD, SLOAN ROYAL MANUAL FLUSHOMETER 111-1.6-PBPH551A-3-1/16 OR EQUAL. 1" I.P.S SCREWDRIVER BAK-CHEK ANGLE STOP WITH FREE SPINNING VANDAL RESISTANT STOP CAP. SPUD COUPLING AND FLANGE FOR 1-1/2" TOP SPUD, ELONGATED, STANDARD WHITE, OPEN FRONT TOILET SEAT-LESS COVER WITH STAINLESS STEEL CHECK HINGE. FURNISHED WITH ZURN WALL MOUNTED CARRIER Z1202-N
WC-2	WATER CLOSET-ADA	ZURN Z5615-BWL-AM WITH 1.6 FLUSH VALVE	4"	2"	--	1"	WALL HUNG FRONT RIM DESIGN, ELONGATED BOWL DESIGN WITH HEIGHT AT 18" ABOVE FINISHED FLOOR TO MEET ADA REQUIREMENTS, SIPHON JET FLUSHING WITH 1-1/2" TOP SPUD, SLOAN ROYAL MANUAL FLUSHOMETER 111-1.6-PBPH551A-3-1/16 OR EQUAL. 1" I.P.S SCREWDRIVER BAK-CHEK ANGLE STOP WITH FREE SPINNING VANDAL RESISTANT STOP CAP. SPUD COUPLING AND FLANGE FOR 1-1/2" TOP SPUD. ELONGATED, STANDARD WHITE, OPEN FRONT TOILET SEAT-LESS COVER WITH STAINLESS STEEL CHECK HINGE. FURNISHED WITH ZURN WALL MOUNTED CARRIER Z1202-N
WHA-1	SHOCK ARRESTOR	SIOUZ CHIEF WILKINS ZURN	AS REQUIRED	--	--	--	WATER HAMMER ARRESTOR SIZING 3/4" SIOUX CHIEF 653-B OR WILKINS 1250-B OR ZURN Z1700-200



JOSAM 56000 SERIES

1 FLOOR CLEANOUT DETAIL

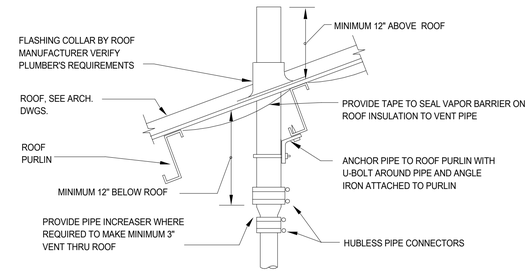
NTS



NOTE: THE GENERAL CONTRACTOR SHALL PROVIDE A ONE PIECE WATER PROOF MEMBRANE FLOOR AND BASE IN THE TOILET ROOM(S).

2 FLOOR DRAIN WITH TRAP PRIMER DETAIL

NTS



REFER TO PLANS FOR VTR PIPE SIZES AND LOCATIONS. VTR SHALL BE LOCATED A MINIMUM OF TEN FEET HORIZONTAL FROM OR THREE FEET VERTICAL ABOVE ANY BUILDING OPENING OR FRESH AIR INTAKE. LOCATE VTR A MINIMUM OF ONE FOOT FROM ANY VERTICAL SURFACE. WHERE ROOF SYSTEM DIFFERS COORDINATE ANCHORING AND FLASHING WITH ROOFING CONTRACTOR AND ARCH DRAWINGS

3 VENT THROUGH ROOF DETAIL

NTS

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SCHEDULES AND DETAILS - PLUMBING

KINGFISH BOAT RAMP RESTROOMS

752 MANATEE AVENUE WEST
HOLMES BEACH
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Sheet No.
P600

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
LIGHTING	
	LIGHT FIXTURE - STRIP LED WALL MOUNT
	LIGHT FIXTURE - STRIP LED CEILING MOUNT
	EXIT SIGN - WALL MOUNTED
	EMERGENCY BATTERY UNIT WITH HEADS
S	SINGLE POLE SWITCH, K= KEY SWITCH, MD=MOTION DETECTOR
OS	OCCUPANCY SENSOR - CEILING
LC	LIGHTING CONTACTOR
TC	TIME CLOCK
PC	PHOTOCELL
POWER	
	DUPLEX RECEPTACLE, NEMA 5-20R, 20A, 125V, G=GFCI, WP= WEATHERPROOF
J	JUNCTION BOX
J	JUNCTION BOX - WALL MOUNT
	PANELBOARD - SURFACE MOUNT

SYMBOL	DESCRIPTION
WIRING	
	CONDUIT ROUTED UNDERFLOOR / UNDERGROUND
	RACEWAY W/#12 CONDUCTORS UNO
	RACEWAY TURNED UP
	RACEWAY TURNED DOWN
	HOMERUN TO PANELBOARD 1/2"C W/3#12 CONDUCTORS UNO
	CONDUIT CAP-OFF
MISCELLANEOUS	
UNIT #	EQUIPMENT TAG
# SHEET	DIAGRAM TAG
1	REVISION SYMBOL
1	KEYNOTE SYMBOL
XX	SCHEDULED EQUIPMENT
F01	FEEDER SCHEDULE

CODES IN EFFECT

1. ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE LATEST ACCEPTED EDITION OF THE NATIONAL ELECTRICAL CODE.
2. WORK AND EQUIPMENT UNDER THIS DIVISION SHALL BE IN STRICT COMPLIANCE WITH THE CODES, STANDARDS, AND PRACTICES LISTED HEREIN. THEIR RESPECTIVE DATES ARE FURNISHED AS THE MINIMUM REQUIREMENTS UNLESS OTHERWISE DETERMINED BY THE LOCAL AUTHORITIES HAVING JURISDICTION.

ABBREVIATIONS

MARK	DESCRIPTION
ABV	ABOVE
AFF	ABOVE FINISHED FLOOR
ACL	ACROSS THE LINE
AC	ALTERNATING CURRENT
A	AMPERE
AMP	AMPERE
AIC	AMPERES INTERRUPTING CAPACITY
AL	ALUMINUM
BR	BRANCH
BKR	BREAKER
BGB	BUILDING GROUND BOX
CAB	CABINET
CLG	CEILING
C.B.	CIRCUIT BREAKER
CCT	CIRCUIT
C.U.	COEFFICIENT OF UTILIZATION
C	CONDUIT
CONT	CONTINUOUS
CP	CONTROL PANEL
Cu	COPPER
CUH	CABINET UNIT HEATER
CT	CURRENT TRANSFORMER
Hz	HERTZ (CYCLES/SECOND)
DED	DEDICATED CIRCUIT
DC	DIRECT CURRENT
DS	DISCONNECT SWITCH
DPDT	DOUBLE POLE DOUBLE THROW
DPST	DOUBLE POLE SINGLE THROW
ELEC	ELECTRIC
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EM	EMERGENCY
EQ	EQUIPMENT
EUH	ELECTRIC UNIT HEATER
EX	EXISTING
FPB	FAN POWERED BOX
FB	FLOORBOX
FVNR	FULL VOLTAGE NON-REVERSING
F	FUSE
FUT	FUTURE
GRD	GROUND
GFI	GROUND FAULT INTERRUPTER
HV	HIGH VOLTAGE
HP	HORSE POWER
IC	INTERRUPTING CAPACITY
IG	ISOLATED GROUND
IMC	INTERMEDIATE GRADE CONDUIT
JB	JUNCTION BOX
kW	KILOWATT
kVA	KILOVOLT-AMPERE
KO	KNOCKOUT
LED	LIGHT EMITTING DIODE
LTG	LIGHTING
LV	LOW VOLTAGE
MFR	MANUFACTURER
MTR	MOTOR
MCP	MOTOR CIRCUIT PROTECTOR
MCC	MOTOR CONTROL CENTER
MTD	MOUNTED
NEC	NATIONAL ELECTRICAL CODE
NL	NIGHT LIGHT (UNSWITCHED CCT.)
NC	NORMALLY CLOSED
NO	NORMALLY OPENED
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OCPD	OVERCURRENT PROTECTION DEVICE
PNL	PANEL
PH	PHASE
PT	POTENTIAL TRANSFORMER
PWR	POWER
PRI	PRIMARY
PA	PUBLIC ADDRESS
PB	PULL BOX
RT	RAINTIGHT
RECEP	RECEPTACLE
RC	REMOTE CONTROL
R	RELOCATED
SEC	SECONDARY
SP	SINGLE POLE
SPD	SURGE PROTECTION DEVICE
SPST	SINGLE POLE SINGLE THROW
SPDT	SINGLE POLE DOUBLE THROW
SPEC	SPECIFICATION
SS	STAINLESS STEEL
UNO	UNLESS NOTED OTHERWISE
VP	VAPORPROOF
VT	VAPORTIGHT
V	VOLT
VA	VOLT-AMPERE
WT	WATERTIGHT
W	WATT
WP	WEATHERPROOF

GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH CODES AND STANDARDS LISTED IN THE SPECIFICATIONS.
2. THE DRAWINGS ARE DIAGRAMMATIC AND THE OMISSION OF AN ITEM NECESSARY FOR THE PROPER FUNCTIONING OF THE SYSTEM DOES NOT RELIEVE THE CONTRACTOR FROM FURNISHING AND INSTALLING THAT ITEM.
3. NOTIFY ARCHITECT/ ENGINEER OF ANY CONFLICTS PRIOR TO PURCHASING EQUIPMENT AND PRIOR TO CUTTING OPENING.
4. PRIOR TO BID, COORDINATE ALL ELECTRICAL WORK WITH OTHER TRADES. SEE SPECIFICATIONS FOR REQUIREMENTS.
5. CONTRACTOR SHALL NOT CONCEAL ANY WORK UNTIL INSPECTED BY ELECTRICAL INSPECTOR AND/OR ARCHITECT/ENGINEER. CONTRACTOR SHALL NOTIFY A/E OF A SCHEDULED INSPECTION TIME WITHIN 72 HOURS. CONTRACTORS SHALL NOT CONCEAL WORK UNTIL APPROVED.
6. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH ARCHITECT AND GENERAL CONTRACTOR ON REQUIREMENTS FOR STRUCTURAL SUPPORT AND FRAMING FOR ALL ELECTRICAL EQUIPMENT AND SYSTEMS. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND VERIFYING STRUCTURAL SUPPORT AND FRAMING.
7. THE SIZE, LOCATION, WEIGHT, AND NEC ARTICLE 110 REQUIRED SERVICE CLEARANCES OF EQUIPMENT INSTALLED UNDER DIVISION 16 ELECTRICAL SHALL BE COORDINATED WITH ALL OTHER TRADES.
8. WHERE CROWDED LOCATIONS EXIST OR WHERE THERE IS A POSSIBILITY OF CONFLICT BETWEEN TRADES, CONTRACTOR SHALL MAKE COMPOSITE DRAWINGS SHOWING THE EXACT LOCATION OF DUCTS, CONDUIT AND EQUIPMENT. DRAWINGS SHALL BE BASED ON FIELD MEASUREMENTS AND, AFTER CONSULTATION AND AGREEMENT BETWEEN THE TRADES, SHALL BE APPROVED BY THE ARCHITECT BEFORE INSTALLATION OF THE WORK.
9. INSTALL SURGE SUPPRESSOR IN EACH PANEL WITH EQUIPMENT SHOWN ON THE PANEL SCHEDULE AS SURGE OR TVSS. SPD # SL3050-208-2G-MNT-M6E-F2 OR APPROVED EQUAL, INSTALLED AS CLOSE AS POSSIBLE TO PANELBOARD SERVED.
10. ALL SITE EXCAVATION OR TRENCHING SHALL BE DONE BY HAND. ALL CONDUITS SHALL HAVE A MINIMUM BURIAL DEPTH OF 24".
11. ELECTRICAL CONTRACTOR IS TO PROVIDE PULL STRINGS IN ALL EMPTY CONDUIT AND RACEWAYS WITH LABELING TAGS AT EACH END.
12. ALL RACEWAY TERMINATIONS SHALL HAVE BUSHINGS AND BE GROUNDED WHERE RACEWAY IS METAL.
13. ALL WALL OUTLETS AND FLOOR OUTLETS SHALL HAVE A 3/4" MINIMUM CONDUIT CONTINUOUS TO PANEL OF BRANCH CIRCUIT.
14. ALL NEW PANELS SHALL BE BONDED TO THE BUILDING'S GROUNDING ELECTRODE SYSTEM IN ACCORDANCE WITH NEC ARTICLE 250.58.
15. ALL BARE METAL SURFACES SHALL BE PRIMED AND PAINTED TO PREVENT ANY RUST, INCLUDING BUT NOT LIMITED TO ANGLE FRAMING, EQUIPMENT SUPPORTS, MOUNTING HARDWARE, ETC.
16. NO SPLICES SHALL BE PERMITTED IN UNDERGROUND/FLUSH IN-GRADE PULL BOXES WITHOUT PRIOR WRITTEN APPROVAL BY OWNER
17. ALL RACEWAYS SHALL HAVE A GREEN GROUNDING CONDUCTOR.
24. ELECTRICAL CONTRACTOR SHALL IDENTIFY HIGH-LEG PHASE WITH ORANGE CONDUCTOR OR TAPE AT EACH POINT WHERE A CONNECTION IS MADE WERE NEUTRAL IS PRESENT (NEC 110.15).

1 E000 - Electrical Legend

12" = 1'-0"

ELECTRICAL DRAWING INDEX

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Sheet No.
E000

SECTION 16000 - ELECTRICAL GENERAL CONDITIONS

1.01 GENERAL REQUIREMENTS

A. THIS PORTION OF THE WORK IS PART OF TOTAL PROJECT AND ALL PROVISIONS OF THE PROJECT GENERAL REQUIREMENTS, CONDITIONS OF THE CONTRACT, SUPPLEMENTARY CONDITIONS AND ALL OTHER CONTRACT DOCUMENTS SHALL, ALSO APPLY TO THIS SECTION OF THE PROJECT. ALL THE PLANS AND SPECIFICATIONS ARE TO BE A PART OF THE TOTAL PROJECT AND ALL CONTRACTORS ARE HEREBY DIRECTED TO THESE PLANS AND SPECIFICATIONS FOR THE TOTAL SCOPE OF THE WORK. ANY DISCREPANCY OR DIFFERENCES BETWEEN ANY OF THESE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR ENGINEER FOR INTERPRETATION.

B. THE ELECTRICAL DRAWINGS SHOW THE SCOPE AND THE GENERAL ARRANGEMENT OF ALL ELECTRICAL EQUIPMENT, AND WIRING DEVICES AND SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING CONSTRUCTION, SITE CONDITIONS, AND AS THE WORK OF OTHER TRADES PERMITS. THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC ONLY, AND ARE NOT INTENDED TO INCLUDE ALL THE DETAILS OR DIMENSIONS SHOWN ON THE ARCHITECTURAL, STRUCTURAL, OR MECHANICAL DRAWINGS, AND CONVERSELY THE SAME; HOWEVER, EACH DRAWING IS INTENDED TO SUPPLEMENT THE OTHERS, AND THE INTERPRETATION OF THE DRAWINGS SHALL BE SUCH THAT THE ARCHITECTURAL, STRUCTURAL, MECHANICAL OR ELECTRICAL DETAILS ARE INCLUDED ON ALL THE VARIOUS DRAWINGS. FIGURED DIMENSIONS, WHERE SHOWN, SHALL TAKE PRECEDENCE OVER SCALED DRAWINGS. WHEN NO FIGURES OR DIMENSIONS ARE NOTED, THE DRAWINGS SHALL BE ACCURATELY FOLLOWED. IN THE EVENT CERTAIN DETAILS AND ITEMS NECESSARY FOR THE COMPLETE BUILDING AND TO OBTAIN THE DESIRED RESULTS ARE OMITTED FROM THE PLANS AND SPECIFICATIONS, THE CONTRACTOR SHALL REQUEST INSTRUCTIONS AND INSTALL SAME. THE ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS SHOWN ON ALL OF THE DRAWINGS. GENERAL AND STRUCTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER ELECTRICAL DRAWINGS. THE CONTRACTOR SHALL INVESTIGATE THE STRUCTURAL AND FINISH CONDITIONS AFFECTING THE WORK AND SHALL ARRANGE HIS WORK ACCORDINGLY.

C. IN THE EVENT CERTAIN DISCREPANCIES ARE DISCOVERED BETWEEN PLANS AND SPECIFICATIONS AFTER BIDDING HAS TAKEN PLACE, THE INTERPRETATION OF THE INTENDED FUNCTION WILL BE BY THE OWNER. THE CONTRACTOR SHALL BEAR THE COST OF FURNISHING AND INSTALLING THE REQUIRED MATERIAL SO AS TO PROVIDE A COMPLETE AND WORKING SYSTEM.

1.02 SUBSTITUTION CLAUSE

EACH ITEM SPECIFIED HEREIN SHALL REQUIRE PRIOR APPROVAL OF THE ARCHITECT FOR ANY SUBSTITUTIONS. IF ANY CONTRACTOR WISHES TO BID ON ANY EQUIPMENT OTHER THAN THE MANUFACTURERS LISTED, HE SHALL REQUEST IN WRITING APPROVAL OF SAID EQUIPMENT AT LEAST SEVEN (7) CALENDAR DAYS PRIOR TO BID DATE OR AS SET FORTH IN THE ARCHITECTURAL SPECIFICATIONS. (ARCHITECTURAL SPECIFICATIONS TAKE PRECEDENCE). ALL ITEMS SUBMITTED FOR PRIOR APPROVAL SHALL BE BOUND IN A BINDER AND SEPARATED WITH INDEX TABS.

1.03 SCOPE

A. ALL LABOR, MATERIAL, SERVICES AND SKILLED SUPERVISION NECESSARY FOR CONSTRUCTION, ERECTION, INSTALLATION, AND CONNECTION OF ALL CIRCUITS AND ELECTRICAL EQUIPMENT SPECIFIED HEREIN OR SHOWN ON DRAWINGS, IN A WORKMAN LIKE MANNER. DELIVER TO OWNER UPON COMPLETION READY FOR USE IN ALL RESPECTS, THE FOLLOWING COMPLETE ELECTRICAL SYSTEM:

1. COMPLETE SECONDARY SERVICES AND BRANCH CIRCUIT WIRING
2. COMPLETE EQUIPMENT WIRING
3. ALL LIGHTING FIXTURES COMPLETE WITH LAMPS AS SPECIFIED HEREIN
4. TELEPHONE CONDUIT SYSTEM & PULL STRING
5. FIRE ALARM AND WIRING OF DEVICES INDICATED
6. ALL CONTROL WIRING FOR TEMPERATURE CONTROLS
7. ALL TEMPORARY WIRING FOR LIGHTS AND POWER DURING CONSTRUCTION
8. AUTOMATION WIRING FOR ALL EQUIPMENT SPECIFIED UNDER MECHANICAL SECTION
9. ALL EMPTY RACEWAYS AS SHOWN ON PLANS WITH PULL STRING
10. PUBLIC ADDRESS OR MUSIC SYSTEMS
11. RELOCATION OF ANY EXISTING ELECTRICAL EQUIPMENT AS REQUIRED

B. FAILURE TO MENTION ANY SPECIFIC ITEMS NECESSARY FOR A COMPLETE SYSTEM SHALL NOT EXCUSE THE CONTRACTOR FROM FURNISHING AND INSTALLING SAME.

1.04 CODES AND STANDARDS

A. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH ALL APPLICABLE CODES, SPECIFICATIONS, LOCAL ORDINANCES, INDUSTRY STANDARDS, LATEST EDITION OF THE NEC, AND UTILITY COMPANY REGULATIONS. IN NO CASE WILL WORK OR MATERIALS INFERIOR TO THESE SPECIFICATIONS BE ACCEPTED EVEN IF PERMITTED BY CODE.

B. IN CASES OF DIFFERENCE BETWEEN BUILDING CODES, SPECIFICATIONS, STATE LAWS, LOCAL ORDINANCES, INDUSTRY STANDARDS AND UTILITY COMPANY REGULATIONS AND THE CONTRACT DOCUMENTS, THE MOST STRINGENT WILL GOVERN.

1.05 COORDINATION

A. THE ELECTRICAL WORK SHALL BE COORDINATED WITH THE REQUIREMENTS OF THESE SPECIFICATIONS, AND ALSO WITH THE REQUIREMENTS OF THE OTHER DIVISIONS AND WITH ALL OF THE DRAWINGS FOR THE ENTIRE PROJECT. THE ELECTRICAL WORK SHALL BE ACCOMPLISHED ON SUCH A SCHEDULE AND IN SUCH A MANNER AS NOT TO DELAY NOR INTERFERE WITH OTHER CONSTRUCTION WORK.

B. THE CONTRACTOR SHALL PROMPTLY REPORT TO THE OWNER ANY DELAY OR DIFFICULTIES ENCOUNTERED IN THE INSTALLATION OF HIS WORK WHICH MIGHT PREVENT PROMPT AND PROPER INSTALLATION OF HIS WORK OR MAKE IT UNSUITABLE TO CONNECT OR RECEIVE THE WORK OF OTHERS. HIS FAILURE TO SO REPORT SHALL CONSTITUTE AN ACCEPTANCE OF THE WORK OF THE CONTRACTOR AS BEING FIT AND PROPER FOR THE RECEPTION OF HIS WORK.

C. THE CONTRACTOR SHALL CAREFULLY LAY OUT HIS WORK ON THE PREMISES AND MAKE PROPER PROVISION FOR THE OTHER WORK. OFFSETS SHALL BE MADE WHEREVER IT IS NECESSARY TO CLEAR FINISH ROOMS, STRUCTURAL MEMBERS, OR OTHER OBSTRUCTIONS. THE CONTRACTOR SHALL CAREFULLY PLAN HIS WORK SO AS TO MINIMIZE THE NUMBER OF OFFSETS REQUIRED.

D. THE CONTRACTOR SHALL ALSO CAREFULLY COORDINATE THE LOCATION OF ALL EQUIPMENT CONDUIT RUNS, FLOOR AND WALL PENETRATIONS, ETC., WITH THE INSTALLATION OF WORK IN DIVISION 15000 AND OTHER SECTIONS OF THESE SPECIFICATIONS. ANY WORK INSTALLED BY THE CONTRACTOR WITHOUT CONSIDERING EQUIPMENT, DUCTWORK, PIPING, ETC., OF OTHER TRADES, SHALL BE CHANGED OR RELOCATED AS REQUIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. THIS INCLUDES ALL ELECTRICAL DEVICES, SWITCHES, RECEPTACLES, PHONE/COMMUNICATION OUTLETS, ETC. THAT ARE MOUNTED IN WALLS ABOVE OR AROUND CABINETS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY FINAL LOCATION AND MOUNTING HEIGHTS WITH ARCHITECTURAL CASEWORK/INTERIOR ELEVATIONS/DETAILS. WHERE APPLICABLE, THE CONTRACTOR SHALL ALSO VERIFY WITH THE OWNER OR OWNER'S REPRESENTATIVE FOR ANY SPECIFIC CONDITIONS OR REQUIREMENTS FOR ELECTRICAL DEVICES MENTIONED ABOVE.

E. ALL ELECTRICAL SERVICE AND TELEPHONE SERVICE REQUIREMENTS SHALL BE COORDINATED BY THE CONTRACTOR AS SHOWN ON PLANS AND CONFIRMED WITH THE UTILITY COMPANY BY THE CONTRACTOR TO ENSURE THAT UTILITIES ARE ACCEPTED BY THE UTILITY COMPANY IT CONCERNS.

1.06 INSTALLATION AND ARRANGEMENT

THE CONTRACTOR SHALL ARRANGE CONDUITS, RACEWAYS AND ELECTRICAL EQUIPMENT TO PERMIT READY ACCESS TO COMPONENTS AND TO CLEAR THE OPENING TO SWINGING AND OVERHEAD DOORS AND OF ACCESS PANELS. THIS ALSO INCLUDES THE INSTALLATION OF ALL SERVICE DISCONNECTS AT MECHANICAL EQUIPMENT. THE CONTRACTOR SHALL MOUNT SERVICE DISCONNECTS ON AN ADJACENT WALL OR NON-REMOVABLE PANELS TO ALLOW REMOVABLE PANELS TO BE REMOVED FOR FUTURE SERVICING OF EQUIPMENT.

1.07 RECORD DRAWINGS ("AS-BUILTS")

A. RECORD DRAWINGS - THE CONTRACTOR SHALL FURNISH TO THE OWNER AND ARCHITECT RECORD DRAWINGS SHOWING CONDUIT SYSTEMS WHERE APPLICABLE. CONDUIT SIZES, REROUTING, ETC., FOR UNDER FLOOR CONDUITS SHALL BE SHOWN. ALSO PROVIDE A REPRODUCIBLE TRACING OF THE SITE PLAN SHOWING POWER, TELEPHONE, CABLE, TV, SITE LIGHTING, ETC. IN ADDITION TO THESE DRAWINGS, A COMPLETE SET OF DRAWINGS FOR FIRE ALARM AND COMMUNICATION SYSTEM.

B. TYPEWRITTEN OR NEATLY HAND WRITTEN PANEL SCHEDULES SHALL BE PROVIDED FOR PANELBOARDS INDICATING THE LOADS SERVED AND THE CORRECT BRANCH CIRCUIT NUMBER, AS INSTALLED. ALSO LEAVE LEGIBLE CIRCUIT CARD IN POCKET OF BREAKER PANEL DOOR.

1.08 EQUIPMENT AND MATERIALS

A. ALL MATERIALS SHALL BE NEW AND SHALL BEAR THE MANUFACTURER'S NAME, TRADE NAME AND THE UL LABEL IN EVERY CASE WHERE A STANDARD HAS BEEN ESTABLISHED FOR THE PARTICULAR MATERIAL. THE EQUIPMENT TO BE FURNISHED UNDER EACH SECTION OF THE SPECIFICATIONS SHALL BE ESSENTIALLY THE STANDARD PRODUCT OF A UNITED STATES OF AMERICA MANUFACTURER REGULARLY ENGAGED IN THE PRODUCTION OF THE REQUIRED TYPE OF EQUIPMENT AND SHALL BE THE MANUFACTURER'S LATEST AND APPROVED DESIGN.

B. DELIVERY AND STORAGE: EQUIPMENT AND MATERIALS SHALL BE DELIVERED TO THE SITE AND STORED IN ORIGINAL CONTAINERS, SUITABLY SHELTERED FROM THE ELEMENTS, BUT READILY ACCESSIBLE FOR INSPECTION UNTIL INSTALLED. ALL ITEMS SUBJECT TO MOISTURE DAMAGE SHALL BE STORED IN DRY, HEATED SPACES.

C. EQUIPMENT AND MATERIALS OF THE SAME GENERAL TYPE SHALL BE OF THE SAME MAKE THROUGH THE WORK TO PROVIDE UNIFORM APPEARANCE, OPERATION AND MAINTENANCE.

D. PROTECTION OF WORK: THE CONTRACTOR SHALL TAKE PRECAUTIONS AT ALL TIMES TO PROPERLY PROTECT THE ELECTRICAL EQUIPMENT FROM DAMAGE. UNINSTALLED EQUIPMENT SHALL REMAIN CRATED AND COVERED WITH CANVAS OR HEAVY PLASTIC TARPAULINS UNTIL INSTALLED. EQUIPMENT THAT IS BEING INSTALLED, OR HAS BEEN INSTALLED, SHALL BE PROTECTED AGAINST DIRT, WATER, CONSTRUCTION DEBRIS, WEATHER, THEFT, AND CHEMICAL OR MECHANICAL DAMAGE. ALL DAMAGED EQUIPMENT SHALL BE REPAIRED AND/OR REPLACED. AT THE COMPLETION OF THE WORK, ALL FIXTURES, EQUIPMENT, AND MATERIALS SHALL BE THOROUGHLY CLEANED AND POLISHED. THE CONTRACTOR SHALL REPAIR AND CORRECT, AT HIS OWN EXPENSE, ALL DAMAGES AND DEFECTS WHICH DEVELOP BEFORE THE WORK IS ACCEPTED BY THE OWNER.

E. SAFETY WARNING SIGNS SHALL BE FURNISHED AND INSTALLED AT ALL ELECTRICAL EQUIPMENT AND SWITCHGEAR.

F. DIMENSIONS: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT ITEMS TO BE FURNISHED FIT THE SPACE AVAILABLE. HE SHALL MAKE NECESSARY FIELD MEASUREMENTS TO ASCERTAIN SPACE REQUIREMENTS, INCLUDING THOSE FOR CONNECTIONS, AND SHALL FURNISH AND INSTALL SIZES AND SHAPES OF EQUIPMENT SO THAT THE FINAL INSTALLATION SHALL SUIT THE TRUE INTENT AND MEANING OF THE DRAWINGS AND SPECIFICATIONS.

G. MANUFACTURER'S DIRECTIONS SHALL BE FOLLOWED COMPLETELY IN DELIVERY, STORAGE, PROTECTION AND INSTALLATION OF ALL EQUIPMENT AND MATERIALS. THE CONTRACTOR SHALL PROMPTLY GIVE NOTICE IN WRITING OF ANY CONFLICT BETWEEN ANY REQUIREMENT OF THE CONTRACT DOCUMENTS AND THE MANUFACTURER'S DIRECTIONS AND SHALL OBTAIN THE WRITTEN INSTRUCTION BEFORE PROCEEDING WITH THE WORK. SHOULD THE CONTRACTOR PERFORM ANY WORK THAT DOES NOT COMPLY WITH THE MANUFACTURER'S DIRECTIONS OR SUCH WRITTEN INSTRUCTIONS, HE SHALL BEAR ALL COSTS ARISING IN CORRECTING THE DEFICIENCIES.

1.09 EQUIPMENT ACCESSORIES

A. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL EQUIPMENT, ACCESSORIES, CONNECTIONS, AND INCIDENTAL ITEMS NECESSARY TO FULLY COMPLETE THE WORK, READY FOR USE, OCCUPANCY AND OPERATION BY THE OWNER.

B. WHERE EQUIPMENT REQUIRING DIFFERENT ARRANGEMENT OF CONNECTIONS FROM THOSE SHOWN OR APPROVED, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL THE EQUIPMENT TO OPERATE PROPERLY AND IN HARMONY WITH THE INTENT OF THE DRAWINGS AND SPECIFICATIONS. THE CONTRACTOR SHALL MAKE ALL INCIDENTAL CHANGES IN HEATERS, PANELBOARD, CONDUIT, WIRING, ETC. HE SHALL PROVIDE ANY ADDITIONAL MOTORS, CONTROLLERS, AND OTHER ADDITIONAL EQUIPMENT REQUIRED FOR THE PROPER OPERATION OF THE SYSTEM RESULTING FROM THE SELECTION OF EQUIPMENT, INCLUDING ALL REQUIRED CHANGE IN AFFECTED TRADES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER LOCATION OF ROUGHING-IN AND CONNECTIONS. SUCH CHANGES SHALL BE MADE AT NO INCREASE IN THE CONTRACT AMOUNT OR ADDITIONAL COST TO THE OTHER TRADES.

C. ANCHORS, BOLTS, AND SCREWS: SECURELY FASTEN CONDUIT STRAPS, CUTOUT SWITCHES, ETC., TO WALLS, SLABS, ETC., WITH CADMIUM PLATED SCREWS AND ACKERMAN-JOHNSON LEAD CINCH ANCHORS, EXPANSION BOLTS OR APPROVED EQUAL ANCHORS, FITTED IN HOLES DRILLED WITH STAR DRILL AND FOR MORE SEVERE SERVICES, USE LEAD CINCH ANCHOR BOLTS OR APPROVED MANUFACTURER. FOR EXPOSED WORK, USE CADMIUM PLATED BOLTS. WOOD PLUGS WILL NOT BE ACCEPTED.

1.10 ELECTRICAL WORKMANSHIP

A. WHEREVER EQUIPMENT REQUIRING ELECTRICAL CONNECTION IS SPECIFIED, ALL WORKMANSHIP AND MATERIALS SHALL CONFORM WITH THE REQUIREMENTS OF THE ELECTRICAL SECTION OF THE SPECIFICATIONS. ALL DISCONNECT SWITCHES, STARTERS, PUSH BUTTON STATIONS, AND HAND-OFF AUTO SWITCHES SHALL BE FURNISHED, INSTALLED AND WIRED BY THE CONTRACTOR EXCEPT WHERE LISTED SPECIFICALLY TO BE FURNISHED WITH THE ITEM OF EQUIPMENT IT CONTROLS, IN WHICH CASE THE CONTRACTOR SHALL MOUNT AND WIRE COMPLETELY. ADDITIONAL DISCONNECTS REQUIRED BY THE ELECTRICAL CODE SHALL BE FURNISHED, INSTALLED AND CONNECTED UNDER THE ELECTRICAL SECTION OF THE SPECIFICATIONS.

B. COORDINATION: THE CONTRACTOR SHALL CHECK THE MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS TO ASSURE THE PROPER LOCATION AND ELECTRICAL SERVICE CHARACTERISTICS TO THE INDIVIDUAL OUTLETS SERVING MECHANICAL AND ELECTRICAL EQUIPMENT AND SHALL REQUEST APPROVAL OF ANY REQUIRED MODIFICATION TO SUIT THE ACTUAL EQUIPMENT TO BE FURNISHED.

C. IDENTIFICATION FOR ELECTRICAL EQUIPMENT AND CIRCUITS SHALL BE PROVIDED AND FURNISHED UNDER THIS SECTION, USING ITEM NUMBERS AND NOMENCLATURE AS SHOWN ON THE ELECTRICAL DRAWINGS, OR AS INSTRUCTED BY THE ARCHITECT.

1. ALL SWITCHGEAR, DISTRIBUTION PANELBOARDS, TRANSFORMERS, PANELBOARDS, DISCONNECTS, ASSOCIATED MOTOR STARTERS, CONTACTORS, AND TIME CLOCKS FURNISHED BY THE CONTRACTOR SHALL BE IDENTIFIED, BY NAMEPLATES INDICATING DESIGNATED LEGEND, VOLTAGE AND PHASE AND SHALL BE SECURELY FASTENED TO THE EQUIPMENT.

1.11 SYSTEM OPERATING TESTS

NECESSARY TESTS AND ADJUSTMENTS: ALL NECESSARY TESTS AND ADJUSTMENTS FOR THE PROPER OPERATION OF THE ELECTRICAL SYSTEM SHALL BE PERFORMED BY THE CONTRACTOR WITH INSTRUMENTS FURNISHED BY HIM FOR THIS PURPOSE. THE TEST RESULTS SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT FOR REVIEW AND APPROVAL.

1.12 INSTRUCTIONS TO OWNER

THE CONTRACTOR SHALL INSTRUCT THE OPERATING PERSONNEL OF THE OWNER IN THE PROPER OPERATION AND MAINTENANCE OF ALL ELEMENTS OF THE ELECTRICAL SYSTEMS.

1.13 OPERATING AND MAINTENANCE MANUALS

SPARE PARTS LISTS, OPERATING INSTRUCTIONS, MANUFACTURER'S RECOMMENDED PREVENTATIVE MAINTENANCE INSTRUCTIONS AND SPECIFICATIONS SHEETS FOR EACH ITEM OF THE ELECTRICAL EQUIPMENT SHALL BE SUBMITTED, IN TRIPLICATE, BY THE CONTRACTOR AT THE PAY APPLICATION FOR 75% COMPLETION. ALL PAYMENT REQUEST OVER 75% WILL BE DENIED UNTIL THIS INFORMATION IS RECEIVED.

SECTION 16111 - CONDUITS

1.01 GENERAL

ALL WIRES AND CABLES SHALL BE RUN IN CONDUIT, WHICH SHALL BE STANDARD HEAVY WALL, INTERMEDIATE, OR ELECTRIC METALLIC TUBING (EMT). RIGID PVC CONDUIT MAY BE USED FOR UNDERGROUND WORK IF APPROVED BY LOCAL CODE.

2.01 PRODUCTS

A. RIGID CONDUIT: THICK WALL HOT-DIPPED GALVANIZED, ASA STANDARD SPECIFICATION NO. C80-1, ENAMELED INSIDE AND OUT JOINTS SHALL BE WATERTIGHT THREADED TYPE WITH APPROVED SEALANT APPLIED TO MALE THREADS.

B. ELECTRIC METALLIC TUBING (EMT): ELECTRO-GALVANIZED, ANSI STANDARD SPECIFICATION NO. C80-3, ENAMELED INSIDE AND OUT. FITTINGS SHALL BE ALL STEEL COMPRESSION TYPE AS MFD. BY T & B.

C. RIGID STEEL AND EMT CONDUITS AS MANUFACTURED BY YOUNGSTOWN, TRIANGLE, GENERAL ELECTRIC, NATIONAL, REPUBLIC, OR ALLIED.

D. SCHEDULE 80 PVC CONDUIT, USED FOR UNDERGROUND INSTALLATION, SHALL BE AT LEAST 2 FEET BELOW FINISH GRADE. ALL JOINTS SHALL BE WATERTIGHT. WHERE STUBBED UP THROUGH FLOOR, SLAB OR ABOVE GRADE, A 90° RIGID GALVANIZED ELBOW SHALL BE USED WITH RIGID GALVANIZED STUB UP TO 2 INCHES ABOVE GRADE. A BARE GROUND WIRE TO MEET CODE REQUIREMENTS SHALL BE INSTALLED WITH ALL CIRCUITS PULLED INTO PVC CONDUITS. CONDUIT SHALL BE AS MANUFACTURED BY CARLON. JOINT SEALANT SHALL BE AS PER MANUFACTURER'S RECOMMENDATION FOR SPECIAL PIPE.

E. CONDUIT SUPPORTS: ALL CONDUITS SHALL BE SECURED IN PLACE WITH APPROVED STRAPS, HANGER, OR CLAMPS PER NEC. NO WIRE FOR SUPPORT WILL BE ALLOWED.

F. FLEXIBLE CONDUIT: CONDUIT CONNECTIONS TO MOTORS AND VIBRATING EQUIPMENT SHALL BE MADE WITH 18-INCH MAXIMUM OF TYPE U.S. GRAY LIQUID AND TIGHT NEOPRENE JACKETED FLEXIBLE CONDUIT AS MANUFACTURED BY ANACONDA. FITTINGS SHALL BE LIQUID TIGHT INSULATED THROAT TYPE AS MANUFACTURED BY T. & B. BX WILL NOT BE PERMITTED.

3.01 INSTALLATION

A. CONDUITS INSTALLED IN OR UNDER CONCRETE OR BELOW GRADE SHALL BE THICK WALL PVC (SCH. 80) OR RIGID STEEL IF REQUIRED BY LOCAL CODES. SERVICE CONDUITS EXPOSED SHALL BE RIGID STEEL.

B. ALL POWER AND LIGHTING CONDUITS IN BUILDING SHALL BE EMT UNLESS OTHER TYPE IS REQUIRED BY LOCAL CODES.

C. USE FACTORY ELBOWS FOR 1-1/2" CONDUIT AND LARGER.

D. WHERE FLEXIBLE CONDUIT IS USED FROM OUTLET BOXES TO LIGHTING FIXTURES, USE 1/2" INCH FLEXIBLE METAL CONDUIT WITH AN APPROVED GROUNDING CONNECTOR. MC CABLE WITH APPROVED GROUNDING CONDUCTOR IS ALLOWED.

E. REAM AND CLEAN CONDUIT BEFORE INSTALLATION AND PLUG OPENINGS AND BOXES TO KEEP THEM CLEAN DURING CONSTRUCTION.

F. ALL EXPOSED CONDUIT SHALL RUN NEATLY AT RIGHT ANGLES, PLUMB AND PARALLEL TO WALLS. ALIGN CONDUIT TERMINATIONS AT PANELBOARDS, SWITCHBOARDS, JUNCTION BOXES, ETC., AND INSTALL PLUMB. PROVIDE SUPPORTS AS REQUIRED TO HOLD ALIGNMENT.

G. CONDUITS SHALL BE NEATLY GROUPED WHERE SEVERAL LINES FOLLOW A PARALLEL COURSE. THEY SHALL BE WALL SUPPORTED, USING RING OR TRAPEZE-TYPE HANGERS. PERFORATED STRAP HANGERS OR TWISTED WIRE SHALL NOT BE ACCEPTED. HANGERS SHALL BE INSTALLED ON ALL CONDUIT RUNS AND SHALL NOT EXCEED 8'-0" ON CENTER.

SECTION 16120 - WIRES AND CABLES

1.01 GENERAL

ALL WIRES SHALL BE NEW SOFT DRAWN, ANNEALED COPPER HAVING CONDUCTIVITY NOT LESS THAN 98% OF PURE COPPER AND WITH 600V THERMO-PLASTIC INSULATION. WIRE SHALL CONFORM TO THE LATEST REQUIREMENT OF THE NEC, MEET ASME AND ANSI SPECIFICATIONS AND SHALL BE STANDARD AWG SIZE.

2.01 PRODUCTS

A. LIGHTING AND RECEPTACLE, BRANCH MOTOR POWER AND PANEL FEEDERS CIRCUITS SHALL HAVE TYPE THHN/THWN/MTW INSULATION BUILDING WIRE (UNLESS OTHERWISE REQUIRED). ALL CONDUCTORS INSTALLED IN DAMP OR WET LOCATIONS OR UNDER GRADE SHALL HAVE THWN-2 INSULATION. ALL WIRING INSTALLED IN HIGH-TEMPERATURE AREAS SHALL HAVE TYPE AVA INSULATION.

B. ALL STRANDED CONDUCTORS SHALL BE FURNISHED WITH FINISHED FORGED COPPER CONNECTING LUGS, DRILLED OR REAMED THE FULL DIAMETER OF BASE CONDUCTORS.

C. ALL MAINS AND FEEDERS ARE TO RUN THE ENTIRE LENGTH IN CONTINUOUS PIECES WITHOUT JOINTS OR SPLICES. JOINTS IN BRANCH CIRCUITS SHALL OCCUR ONLY AT OUTLETS AND J BOXES WITH NO SPLICES OR TAPS IN CONDUITS.

D. PHASE COLORS PER ELECTRICAL STANDARDS:
208/120V - BLACK, RED, BLUE
480/277V - BROWN, ORANGE, YELLOW

E. AC, MC, BX CABLES PERMITTED AS ALLOWED BY LOCAL CODE. MC CABLE ALLOWED FOR TERMINATING LIGHTING FIXTURES IN SUSPENDED CEILINGS.

SECTION 16130 - OUTLET BOXES

1.01 GENERAL

SIZE ALL BOXES IN ACCORDANCE WITH NEC 314.16.

2.01 PRODUCTS

A. INTERIOR
1. LIGHTING OUTLETS SHALL BE STANDARD 4-INCH OUTLET BOXES PROVIDED WITH 3/8" MALLEABLE IRON FIXTURE STUDS AND BOX HANGERS WHERE REQUIRED.
2. SWITCH AND RECEPTACLE OUTLETS LOCATED IN WALLS SHALL BE STANDARD SINGLE OR GANGED 4-INCH BOXES WITH COVERS AS REQUIRED FOR CONCEALED WORK.

B. EXTERIOR:
1. LIGHTING OUTLETS SHALL BE WEATHERPROOF DIE-CAST ALUMINUM ROUND BOXES.
2. SWITCH AND RECEPTACLE OUTLETS SURFACE-MOUNTED SHALL BE TYPES FS AND FD

C. BOXES SHALL BE MANUFACTURED BY APPLETON ELECTRIC CO., UNIVERSAL, RACO, NATIONAL ELECTRIC PRODUCTS, CROUSE-HINDS OR STEEL CITY.

SECTION 16131 - PULL AND JUNCTION BOXES

1.01 GENERAL

A. SIZE PER NEC 314.16 FOR CONDUCTORS SMALLER THAN #4AWG, OR PER NEC 314.28 FOR CONDUCTORS #4AWG AND LARGER.
B. BOXES SHALL HAVE REMOVABLE SCREW COVERS FOR INSTALLATION AS INDICATED ON THE PLANS.

2.01 PRODUCTS

A. ABOVE-GRADE: GALVANIZED STEEL APPLETON , UNIVERSAL, RACO, NATIONAL ELECTRIC PRODUCTS, OR STEEL CITY.
B. IN-GRADE: CONCRETE OR COMPOSITE POLYMER, OLD CASTLE, CROUSE-HINDS

3.01 INSTALLATION

A. ABOVE-GRADE: BOX SHALL BE SECURELY MOUNTED WITH SUPPORTS INDEPENDENT OF THE CONDUITS ENTERING OR LEAVING THE BOXES.
B. IN-GRADE: SEE PLAN DETAILS

SECTION 16140 - WIRING DEVICES

1.01 GENERAL

PROVIDE EACH SWITCH AND RECEPTACLE OUTLET UNLESS OTHERWISE NOTED OR HEREIN SPECIFIED WITH UNDERWRITER'S APPROVED SPECIFICATION GRADE DEVICES AS LISTED BELOW:

2.01 PRODUCTS

CATALOG NUMBERS ARE HUBBELL WIRING CO., UNLESS NOTED OTHERWISE.

A.	WALL SWITCHES: 120/277V, 20A ROCKER SWITCH SLIDING DIMMER SWITCH, 1000W	PART # SNAP2121 (SPST); SNAP2123 (3-WAY) AS103
B.	RECEPTACLES (5-20R) DUPLEX 125V/20A CONTROLLED DUPLEX GFCI DUPLEX 125V/20A	PART # HBL5352 BR20C1 OR BR20C2 AS INDICATED IN PLANS GFR5362G

C. DEVICE PLATES: ALL SWITCHES AND RECEPTACLES SHALL BE EQUIPPED WITH SMOOTH NYLON PLATES. WHERE UNITS ARE GROUPED TOGETHER, THEY SHALL BE UNDER ONE COMMON PLATE. COLOR PER ARCHITECTURAL SPECIFICATIONS. PLATES SHALL BE STAINLESS STEEL IN ALL KITCHEN AREAS OF RESTAURANTS, MECHANICAL ROOMS, AND AREAS SUBJECT TO DAMAGE.

D. THE ABOVE SPECIFIED DEVICES ARE HUBBELL AND CONSTITUTE THE QUALITY AND TYPE OF DEVICES. COMPARABLE DEVICES AS MANUFACTURED BY P & S, WOODHEAD, & ARROW HART WILL BE ACCEPTABLE.

3.01 INSTALLATION

A. MOUNT SWITCHES 48" ABOVE FLOOR TO CENTERLINE OF BOX.

B. COORDINATE SWITCH MOUNTING LOCATION WITH DETAILS.

C. IN GENERAL, MOUNT WALL RECEPTACLES 12" ABOVE FLOOR.

SECTION 16170 - DISCONNECT SAFETY SWITCHES

1.01 GENERAL

PROVIDE AND INSTALL ALL CIRCUIT DISCONNECT SWITCHES AS INDICATED ON PLANS AND SPECIFIED HEREIN.

2.01 PRODUCTS

A. DISCONNECT SWITCHES SHALL BE TYPE H.D. HEAVY DUTY, QUICK-MAKE QUICK-BREAK HORSEPOWER RATED, AND IN NEMA 1 ENCLOSURE. UNITS IN OUTDOOR LOCATIONS SHALL BE NEMA 3R ENCLOSURES.

B. UNITS SHALL HAVE VISIBLE CIRCUIT CONDITION IDENTIFICATION AND SHALL BE COVER INTERLOCKED. PROVISIONS SHALL BE MADE FOR PADLOCKING THE HANDLE IN THE "OFF" OR "ON" POSITION.

C. ALL FUSED UNITS SHALL BE EQUIPPED WITH FUSETRON CARTRIDGE FUSES AS MANUFACTURED BY BUSSMAN MANUFACTURING.

D. ALL SWITCHES THROUGHOUT SHALL BE OF THE SAME MANUFACTURER AND SHALL HAVE U.L. LABEL. UNITS SHALL BE AS MANUFACTURED BY GENERAL ELECTRIC, SQUARE D, EATON OR SIEMENS.

SECTION 16401 - TEMPORARY ELECTRICAL SERVICES

1.01 GENERAL

CONTRACTOR SHALL HAVE RESPONSIBILITY FOR THE BASIC TEMPORARY WIRING, ALONG WITH MAINTENANCE THROUGHOUT THE DURATION OF THE PROJECT. BASIC TEMPORARY WIRING SHALL INCLUDE LIGHTING, POWER AND WIRING REQUIREMENTS FOR TEMPORARY CONSTRUCTION USE. IT IS NOT TO FORESEE ALL THE USAGE FOR TEMPORARY; HENCE, ONLY THE BASIC ITEMS SHOULD BE INVOLVED AND IF ADDITIONAL POWER OR LIGHTING IS REQUIRED, THEN THOSE REQUIRING SAME SHALL MAKE PROVISIONS FOR TEMPORARY LIGHTING AS REQUIRED TO PERFORM THEIR OWN WORK.

2.01 PRODUCTS

A. ALL UTILITY CHARGES FOR ELECTRICAL USE SHALL BE PAID BY OTHERS.

B. THE CHARGES BY THE UTILITY COMPANY FOR PROVIDING SERVICE CONNECTIONS SHALL BE INCORPORATED AS A PART OF THESE SPECIFICATIONS AND SHALL BE PAID BY THE ELECTRICAL CONTRACTOR.

C. THE TEMPORARY SERVICE SHALL BE 1 PHASE, 3 WIRE MINIMUM IN LOCATIONS AS REQUIRED. SIZE PER SECTION 16.100 PARAGRAPH 1.07 HERE IN.THE ELECTRICAL SERVICE AND SERVICING EQUIPMENT SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND THE REQUIREMENTS OF THE SERVICING UTILITY COMPANY.

D. RECEPTACLES SHALL BE SPACED SO THAT ALL PARTS OF THE WORK AREA MAY BE REACHED BY A 50-FOOT EXTENSION CORD FOR 120 VOLT APPLIANCES, AND 100 FOOT EXTENSION CORD FOR 208 VOLT OR 240 VOLT EQUIPMENT. DISTANCES FOR LENGTH OF EXTENSION CORDS SHALL BE MEASURED HORIZONTALLY ALONG FLOOR LINES. THESE APPLIANCE CIRCUITS SHALL BE LIMITED TO 20 AMPERE.

3.01 INSTALLATION

A. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, INSTALLING, MAINTAINING, AND REMOVING THE TEMPORARY LIGHTING AND POWER WIRING AS HEREIN DESCRIBED. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ONLY THIS AMOUNT OF WORK AND IF ADDITIONAL TEMPORAR

GENERAL NOTES

1. ALL WIRING SHALL BE CUPPER.
2. CO-ORDINATE ALL LIGHTING FIXTURE LOCATION WITH ARCHITECTUREAL REFLECTED CEILING LAYOUT.
3. FOR SYMBOLS DESCRIPTION SEE SHEET E000.

(#) KEY NOTES

1. PROVIDED EMERGENCY LIGHTING AHEAD OF ALL LOCAL SWITCHING.
2. EXTERIOR LIGHT CONTROL BY A PHOTOCELL.
3. PHOTOCELL MOUNTED AT SOFFIT.
4. PROVIDE 1 CHANNEL DW200B TIME CLOCK OR APPROVED EQUAL. FOR WIRE AND CONDUIT SIZES GO TO SHEET E501.
5. PROVIDE TORK 2001 PHOTOCELL OR APPROVED EQUAL.CONNECT EQUIPMENT BY MANUFACTURER SPECIFICATION.
6. PROVIDE CMR 9 OCCUPANCY SENSOR OR APPROVED EQUAL. CONNECT EQUIPMENT BY MANUFACTURER SPECIFICATION.
7. PROVIDE 2 CONTACTOR EATON ONE C30CNE40A0 & THE OTHER C30CN20A0 OR APPROVED EQUAL.

LIGHT FIXTURE SCHEDULE

FIXTURE TYPE	DESCRIPTION	MANUFACTURER	MODEL NUMBER	VOLTAGE	WATTS PER FIXTURE
A	VTC436L840-UNV	Day-Brite	VTC436L840-UNV	120 V	35.00
DW	LED 4' EM	Day-Brite	DW-L-E-35L-840-4-UNV-EMLED	120 V	35.00
EV	The EV Series is a compact architectural emergency lighting unit designed for fast wall mount installation and reliable service	Dual Lighting	EV	120 V	2.00

1 FIRST FLOOR CEILING PLAN LIGHTING

1/4" = 1'-0"

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CELEBRATING 40 +YEARS cph

No.	DATE	Revision

Designed:	CPH
Drawn:	KTF
Checked:	CJD
Job No.:	M13112
08/13/2021	© 2021

FIRST FLOOR CEILING PLAN LIGHTING

KINGFISH BOAT RAMP RESTROOMS

752 MANATEE AVENUE WEST
HOLMES BEACH
MANATEE COUNTY, FLORIDA

NOT FOR CONSTRUCTION

THIS SHEET NOT VALID FOR CONSTRUCTION WITHOUT COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND

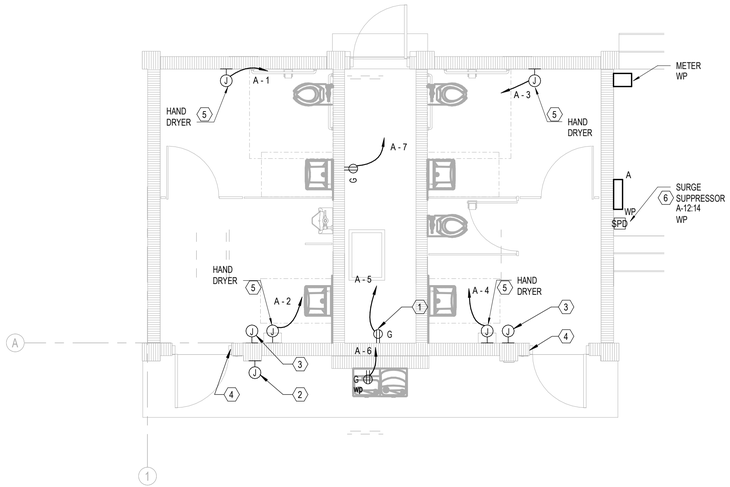
Sheet No.
E201

GENERAL NOTES

1. ALL WIRING SHALL BE COPPER.
2. FOR SYMBOLS DESCRIPTION SEE SHEET E000.

(#) KEY NOTES

1. MOUNT RECEPTACEL AT CEILING FOR DOOR LOCK SYSTEM.
2. RECESSED 2" WIDE (2" X 4") BOX MOUNTED 48" AFF TO CENTER FOR MAG-LOCK KEYED SWITCH. BOX RECESSED IN POURED CONCRETE COLUMN CENTERED IN 4" SPACE FACING DRINKING FOUNTAIN. INSTAL 3/4" CONDUIT RECESSED IN CONCRETE FROM BOX THEN UP TO CEILING SPACE ABOVE CHASE. INSTALL PULLSTRING.
3. RECESSED 2" X 4" BOX MOUNTED 48" AFF TO CENTER FOR MAG-LOCK OVERRIDE SWITCH. BOX RECESSED IN POURED CONCRETE WALL. INSTAL 3/4" CONDUIT RECESSED IN CONCRETE FROM BOX THEN UP TO CEILING SPACE ABOVE CHASE. INSTALL PULLSTRING.
4. INSTAL 3/4" CONDUIT FROM DOOR FRAME, THROUGH HEADER THEN RECESSED IN CONCRETE UP TO CEILING SPACE ABOVE CHASE. INSTALL PULLSTRING.
5. CONTRACTOR SHALL PROVIDE MOTOR RATED DISCONNECT SWITCH AT SIGHT OF THE DRYERS OR CIRCUIT BREAKER CAPABLE OF BEING LOCKED IN OPEN POSITION IN COMPLIANCE WITH NEC 110.25.
6. CONTRACTOR SHALL PROVIDE "SL3-050-240-2G-SN-T-M6E-F-2" SURGE PROTECTION OR APPROVED EQUAL.



1 FIRST FLOOR PLAN POWER

1/4" = 1'-0"

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CPH, Inc.
State of Florida Licenses:
Architect No. AA2600926
Engineer No. 3215
Landscape No. LC0000298
Surveyor No. 7143
CHRISTOPHER J. DeWAL LICENSE No. 58964 STATE OF FLORIDA PROFESSIONAL ENGINEER

CELEBRATING 40 +YEARS cph

No.	DATE	Revision

Designed:	CPH
Drawn:	KTF
Checked:	CJD
Job No.:	M13112
08/13/2021	© 2021

FIRST FLOOR PLAN POWER
KINGFISH BOAT RAMP RESTROOMS
752 MANATEE AVENUE WEST
HOLMES BEACH
MANATEE COUNTY, FLORIDA

NOT FOR CONSTRUCTION

THIS SHEET NOT VALID FOR CONSTRUCTION WITHOUT COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND

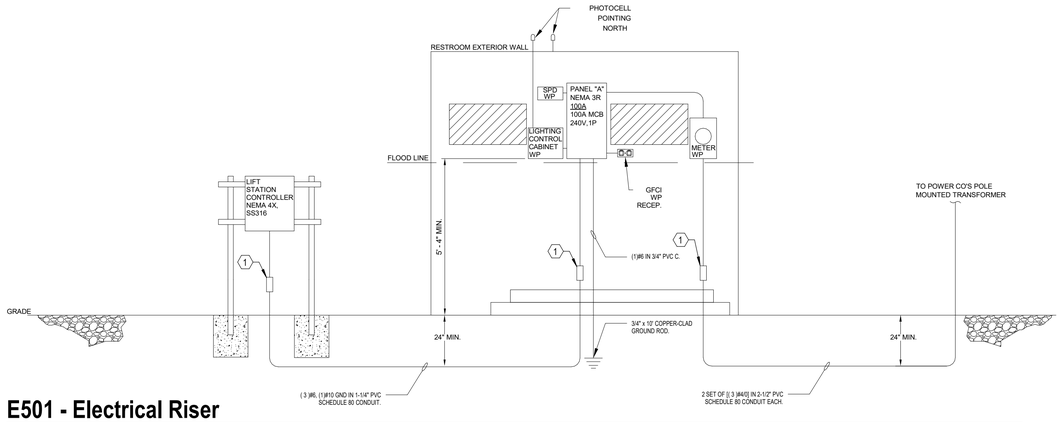
Sheet No.
E301

GENERAL NOTES

1. ALL WIRING SHALL BE COPPER.
2. ELECTRICAL PANEL, LIGHTING CONTROL CABINET, METER & SPD SHALL BE MOUNTED ABOVE THE FLOOD LEVEL.
3. ELECTRICAL CONDUIT UNIONS AND CONNECTIONS SHALL BE AIRTIGHT & WATERTIGHT.

(#) KEY NOTES

1. CONDUIT UNION TRANSITION FROM PVC TO METAL CONDUIT.



1 E501 - Electrical Riser

12" = 1'-0"

2 E501 - Key Notes

12" = 1'-0"

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ELECTRICAL RISER

KINGFISH BOAT RAMP RESTROOMS

752 MANATEE AVENUE WEST
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Sheet No.
E501

Branch Panel: A

Location: WOMEN 102
Supply From: Utility
Mounting: SURFACE
Enclosure: NEMA-3R

Volts: 240/120V
Phases: 1
Wires: 3

A.I.C. Rating: 22 KAIC
Mains Type: M.C.B.
Mains Rating: 100 A
MCB Rating: 100 A

CKT	Wire Size	Circuit Description	Trip	Poles	A		B		Poles	Trip	Circuit Description	Wire Size	CKT
1	(2)#12, (1)#12G	HAND DRYER	20 A	1	1.20	1.20			1	20 A	HAND DRYER	(2)#12, (1)#12G	2
3	(2)#12, (1)#12G	HAND DRYER	20 A	1			1.20	1.20	1	20 A	HAND DRYER	(2)#12, (1)#12G	4
5	(2)#12, (1)#12G	DOOR LOCK SYSTEM	20 A	1	0.18	1.00			1	20 A	WATER FOUNTAIN	(2)#12, (1)#12G	6
7	(2)#12, (1)#12G	RECEPTACLE	20 A	1			0.18	0.01	1	20 A	TIME CLOCK	(2)#12, (1)#12G	8
9	(2)#12, (1)#12G	LIGHTING - RESTROOMS	20 A	1	0.15	0.04			1	20 A	LIGHTING - EXTERIOR	(2)#12, (1)#12G	10
11	(2)#12, (1)#12G	LIGHTING - SERVICE ROOM	20 A	1			0.07	0.00	2	30 A	SPD	(3)#6, (1)#6G	12
13	(3)#6, (1)#10G	SANITARY PUMP	50 A	2	3.34	0.00			--	--	--	--	14
15	--	--	--	--			3.34	0.74	1	20 A	PARKING LIGHTING #1	(2)#6,(1)#6G	16
17	(2)#12, (1)#12G	VENDING MACHINE	20 A	1	1.44	0.63			1	20 A	PARKING LIGHTING #2	(2)#8,(1)#8G	18
19	(2)#12, (1)#12G	RECEPT. - LIFT STATION & EXT WALL	20 A	1			0.36	0.42	1	20 A	PARKING LIGHTING #3	(2)#8,(1)#8G	20
21		SPARE	20 A	1	0.00	0.53			1	20 A	PARKING LIGHTING #4	(2)#6,(1)#6G	22
23		SPARE	20 A	1			0.00	0.53	1	20 A	PARKING LIGHTING #5	(2)#6,(1)#6G	24
25		SPARE	20 A	1	0.00	0.00			1	20 A	SPARE		26
27		SPACE	--	--			0.00	0.00	--	--	SPACE		28
			Total Load:		9.7 kVA		8.1 kVA						
			Total Amps:		81 A		67 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	0.2 kVA	100.00%	0.2 kVA		
Other	0.0 kVA	100.00%	0.0 kVA	**Total Conn. Load:**	17.8 kVA
Power	16.1 kVA	100.00%	16.1 kVA	**Total Est. Demand:**	17.8 kVA
				Total Conn. Current:	74 A
				Total Est. Demand Current:	74 A

Notes:

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PANEL SCHEDULES

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Sheet No.
E601