ATTACHMENT

90% DRAWINGS AND SPECIFICATIONS

- Drawings-1.pdf

  General Phase 1 and Phase 2 Drawings

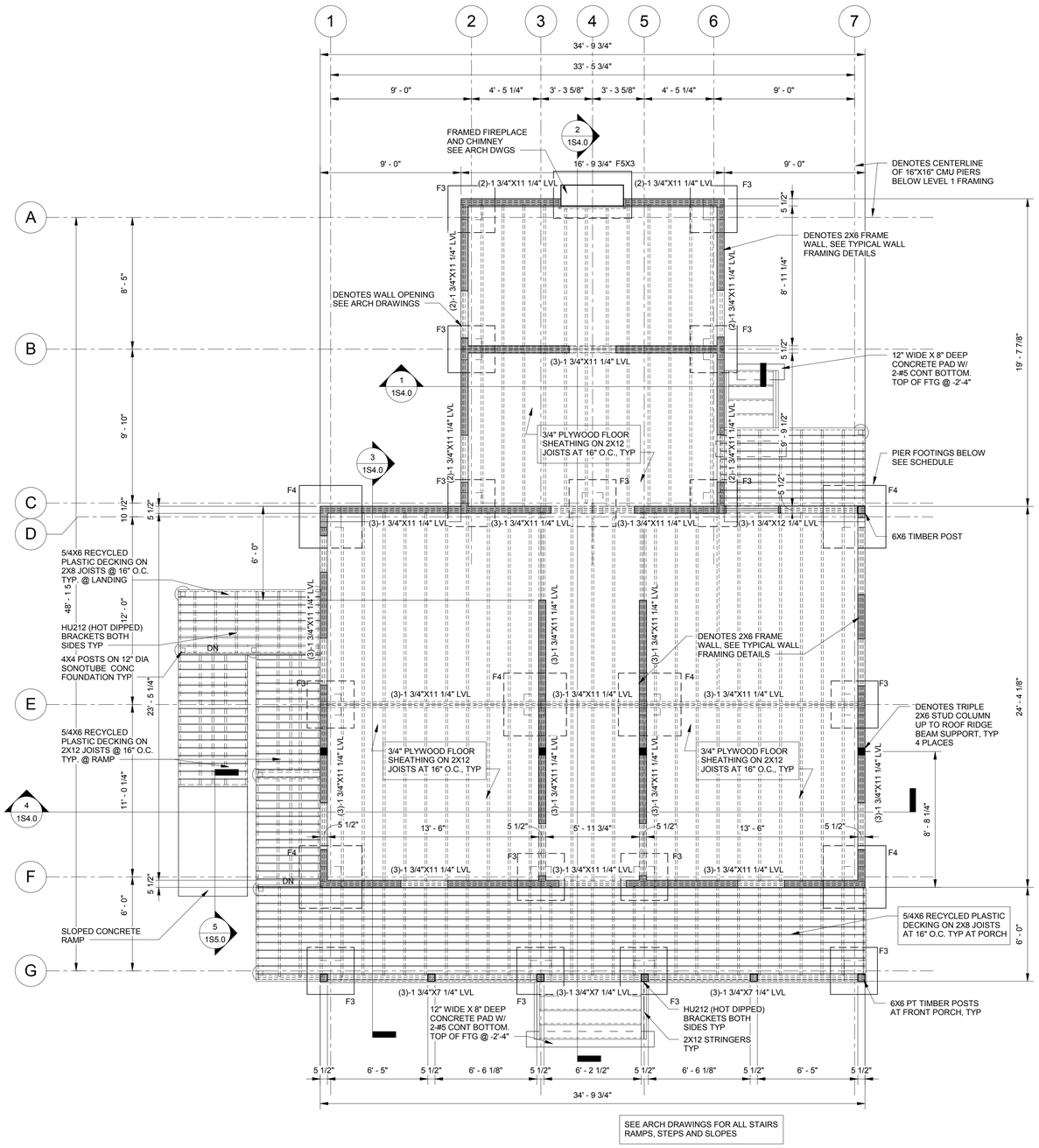
- Drawings-2.pdf

  Drawings for Replica Cottage and Education Cottage (Lighthouse Experience)

- Drawings-3.pdf

  General Phase 1 and Phase 2 Specifications and Details

Note: all drawings and specifications for both Phase 1 and Phase 2 were done at the same time. To simplify for this grant request, drawings only for Phase 1 buildings have been removed.



1 LEVEL 1 FRAMING & FOUNDATION PLAN

1/4" = 1'-0"

PLAN NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR ALL WALL OPENING DIMENSIONS
2. SEE TYPICAL WALL FRAMING DETAILS FOR HEADERS AND STRAP REQUIREMENTS
3. SEE ARCH. DWGS FOR ALL NON LOAD BEARING WALLS (NOT SHOWN)
4. ALL WINDOWS AND DOORS SHALL BE DESIGNED TO A MINIMUM DESIGN PRESSURE OF 56 psf.

PIER FOOTING SCHEDULE

MARK	WIDTH X LENGTH	DEPTH	REINFORCEMENT
F3	3'-0" X 3'-0"	1'-4"	(4)-#5 CONT. E.W. BOTT.
F4	4'-0" X 4'-0"	1'-4"	(5)-#5 CONT. E.W. BOTT.
F5X3	5'-0" X 3'-0"	1'-4"	(6)-#5 CONT. S.W. BOTT. (4)-#5 CONT. L.W. BOTT.

PLYWOOD FLOOR SHEATHING NOTES:

ALL PLYWOOD FLOOR SHEATHING SHALL BE:
3/4" PLYWOOD SHEATHING, DOC PS-1 OR PS-2 APA RATED AND STAMPED, 24/16 SPAN RATED, EXPOSURE 1 GLUE, 7 PLY MINIMUM, ATTACHED PER THE SCHEDULE BELOW

FLOOR SHEATHING NAILING SCHEDULE

LOCATION	NAIL SIZE	TYP SPACING	PERIMETER
ALL SUPPORTS	10d COMMON	6" O.C.	3" O.C.

NOTE: ALL NAILS SHALL PENETRATE 1" MIN INTO TOP OF FRAMING MEMBERS.

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CAPE CANAVERAL LIGHTHOUSE FOUNDATION

LIGHTHOUSE KEEPERS COTTAGES

LIGHTHOUSE RD — CAPE CANAVERAL AIRFOCE STATION, FL

LEVEL 1 FRAMING & FOUNDATION PLAN

drawn	checked	approved
KWD	TLA	TLA

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job no. 2014003

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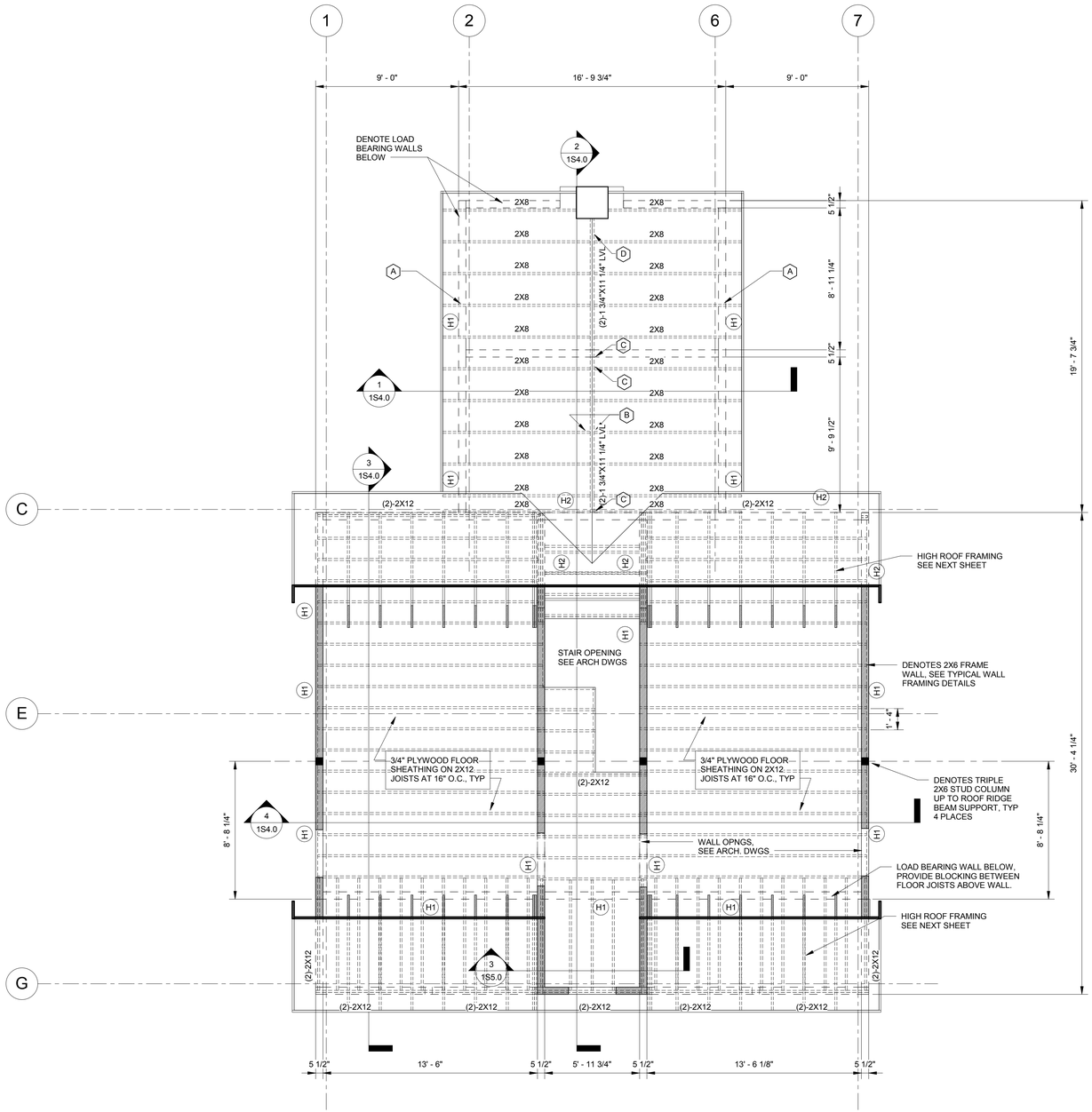


1 LEVEL 2 & LOW ROOF FRAMING PLAN

1/4" = 1'-0"

PLAN NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR ALL ROOF OVERHANGS AND SLOPES
2. (X) DENOTES TRUSS CONNECTION TYPE, SEE SCHEDULE
3. HEADER SCHEDULE:
   - (H1) DENOTES (3)-2X8 HEADER, SEE S5.0 FOR TYP WALL DETAILS
   - (H2) DENOTES (3)-2X8 HEADER, SEE S5.0 FOR TYP WALL DETAILS

PLYWOOD ROOF SHEATHING NOTES:

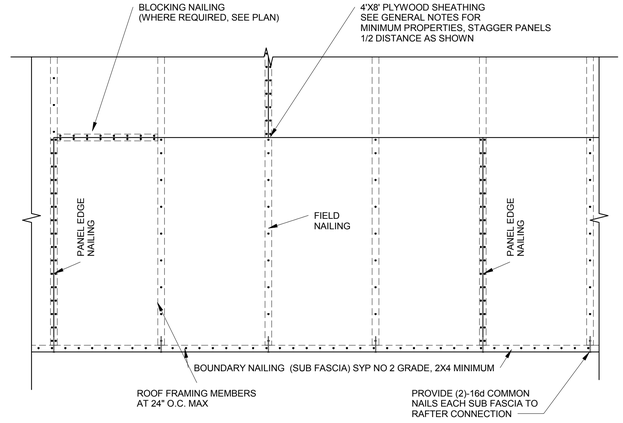
ALL ROOF AND WALL SHEATHING SHALL BE:
5/8" PLYWOOD SHEATHING, DOC PS-1 OR PS-2 APA RATED AND STAMPED, 48/24 SPAN RATED, EXPOSURE 1 GLUE, 5 PLY MINIMUM, ATTACHED PER THE SCHEDULE BELOW

LOW ROOF SHEATHING NAILING SCHEDULE

LOCATION	NAIL SIZE	SPACING
BOUNDARY	8d	2 1/2"
PANEL EDGE	8d	2 1/2"
FIELD	8d	4"
BLOCKING (WHERE REQD, SEE PLAN)	8d	3"

MINIMUM NAIL PROPERTIES:

8d RING SHANK NAILS:
0.113" NOMINAL SHANK DIAMETER
0.012" RING DIAMETER
16-20 RINGS PER INCH
0.28" FULL ROUND HEAD DIAMETER
2" MINIMUM NAIL LENGTH



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FLOOR SHEATHING NAILING SCHEDULE

LOCATION	NAIL SIZE	TYP SPACING	PERIMETER
ALL SUPPORTS	10d COMMON	6" O.C.	3" O.C.

NOTE: ALL NAILS SHALL PENETRATE 1" MIN INTO TOP OF FRAMING MEMBERS.

LOW ROOF TRUSS ANCHOR SCHEDULE

CONN. MARK	SIMPSON MODEL	FASTENER REQUIREMENTS		CAPACITY
		JOIST	SUPPORT	(LBS)
(A)	H10A	(9)-10d X 1 1/2" NAILS	(9)-10d X 1 1/2" NAILS	1140
(B)	LRU210	(7)-SD #10-2 1/2"	(6)-SD #10-2 1/2"	1510
(C)	(2)-H6	(8)-8d X 1 1/2" NAILS	(8)-8d X 1 1/2" NAILS	1900
(D)	HU28-2	(6)-10d X 1 1/2" NAILS	(14)-16d NAILS	1135

ALL ANCHORS SHALL BE INSTALLED TO MEET THE MANUFACTURER'S INSTALLATION REQUIREMENTS. PROVIDE SHIMS AS REQUIRED TO MEET TOLERANCES.

ALL ANCHORS TO RECEIVE 'HOT DIPPED' FINISH.

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LIGHTHOUSE KEEPERS COTTAGES

LIGHTHOUSE RD — CAPE CANAVERAL AIRFOCE STATION, FL

LEVEL 2 & LOW ROOF FRAMING PLAN

drawn	checked	approved
KWD	TLA	TLA

RZK AA-C001568
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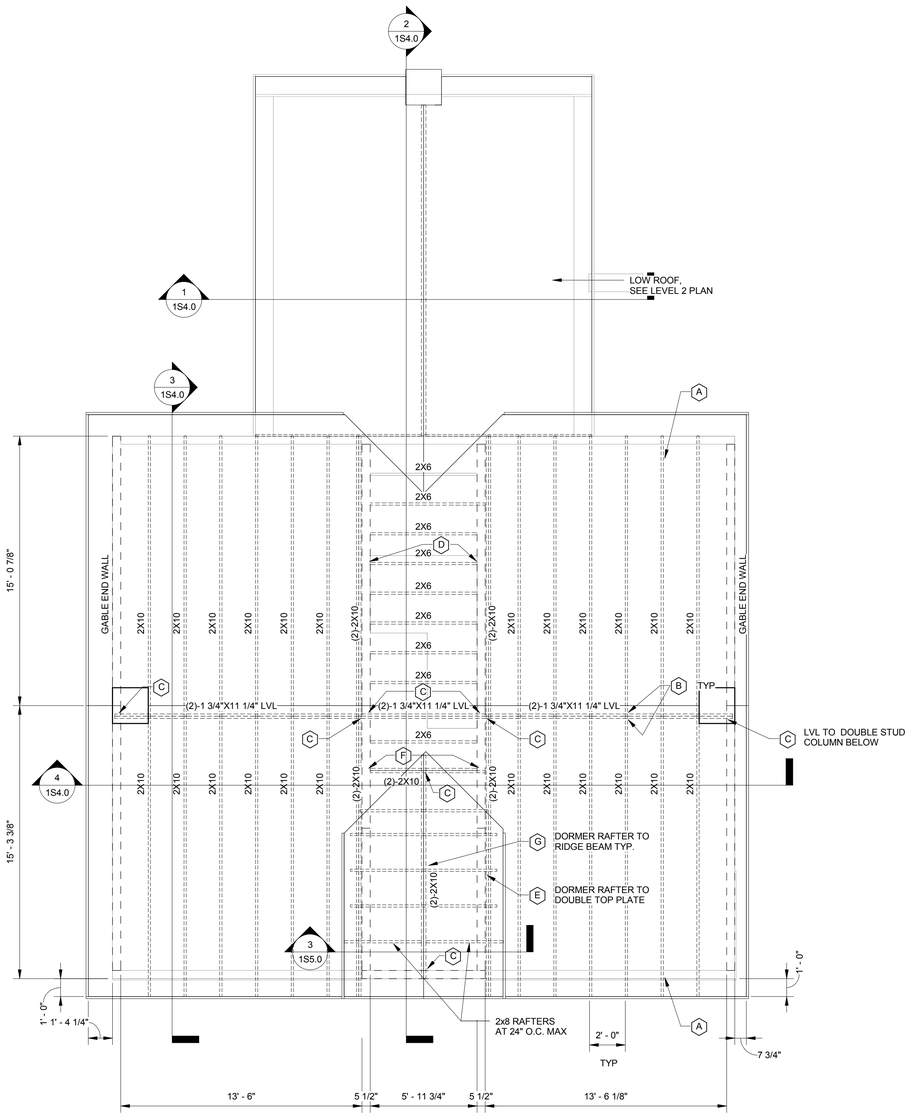

1 HIGH ROOF FRAMING PLAN
1/4" = 1'-0"

PLAN NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR ALL ROOF OVERHANGS AND SLOPES
2. (X) DENOTES RAFTER CONNECTION TYPE, SEE SCHEDULE

PLYWOOD ROOF SHEATHING NOTES:

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HIGH ROOF SHEATHING NAILING SCHEDULE

LOCATION	NAIL SIZE	SPACING
BOUNDARY	8d	2 1/2"
PANEL EDGE	8d	2 1/2"
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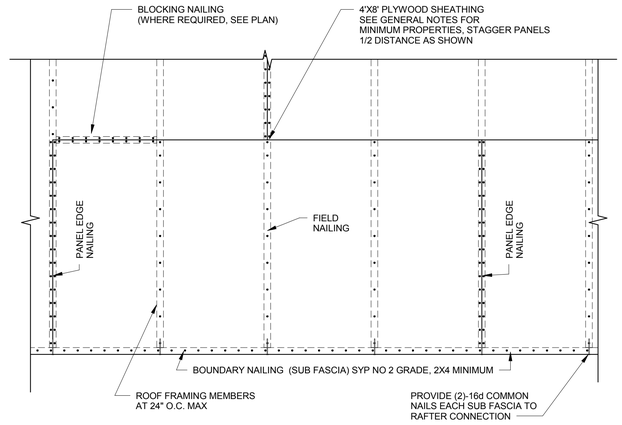

HIGH ROOF TRUSS ANCHOR SCHEDULE

CONN. MARK	SIMPSON MODEL	FASTENER REQUIREMENTS		CAPACITY
		JOIST	SUPPORT	(LBS)
A	H10A	(9)-10d X 1 1/2" NAILS	(9)-10d X 1 1/2" NAILS	1140
B	LRU210	(7)-SD #10-2 1/2"	(6)-SD #10-2 1/2"	1510
C	(2)-H6	(8)-8d X 1 1/2" NAILS	(8)-8d X 1 1/2" NAILS	1900
D	HU26	(2)-10d X 1 1/2" NAILS	(4)-16d NAILS	335
E	H2.5A	(5)-8d X 1 1/2" NAILS	(5)-8d X 1 1/2" NAILS	600
F	HU28-2	(6)-10d X 1 1/2" NAILS	(14)-16d NAILS	1135
G	LRU26	(5)-SD #10-2 1/2"	(4)-SD #10-2 1/2"	645

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HIGH ROOF FRAMING PLAN

drawn	checked	approved
KWD	TLA	TLA

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job no. 2014003

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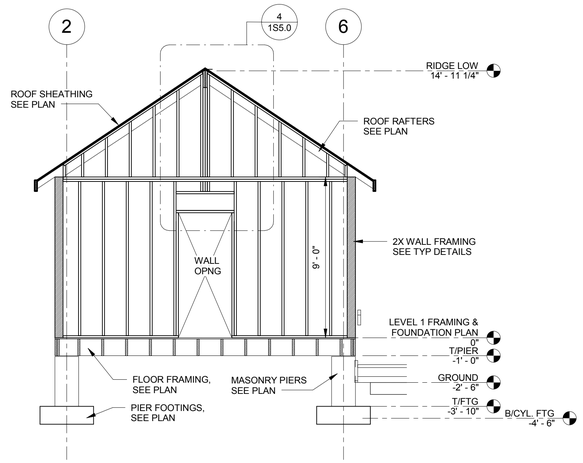
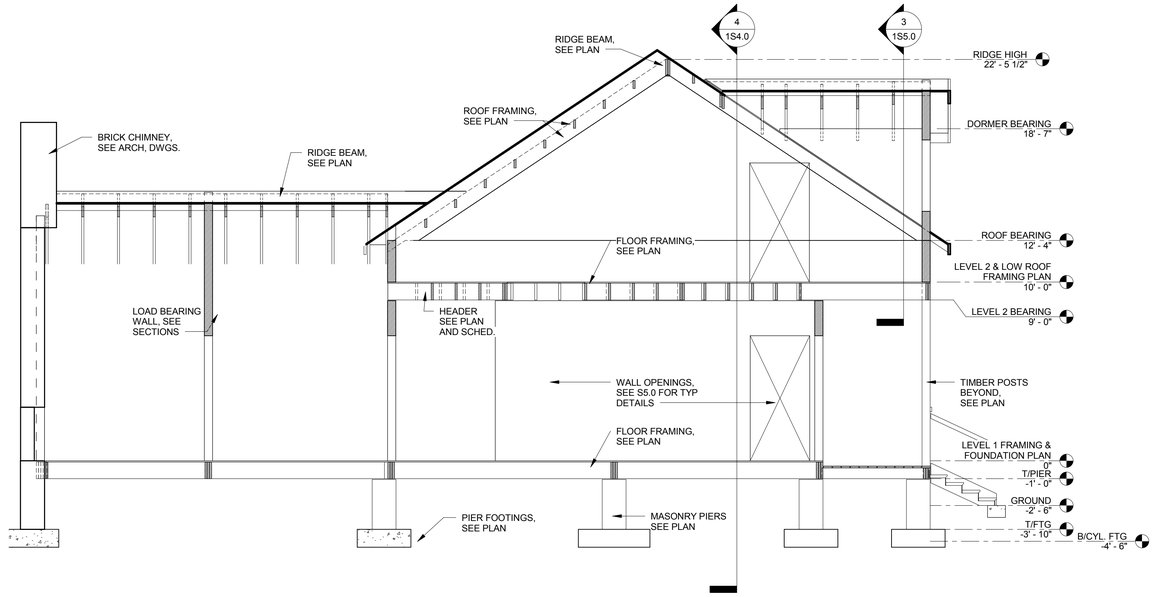


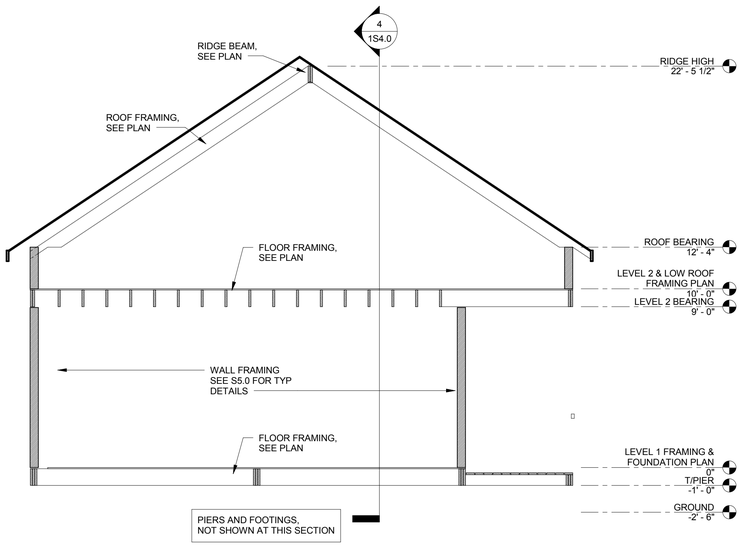
1 BUILDING SECTION 1

1/4" = 1'-0"



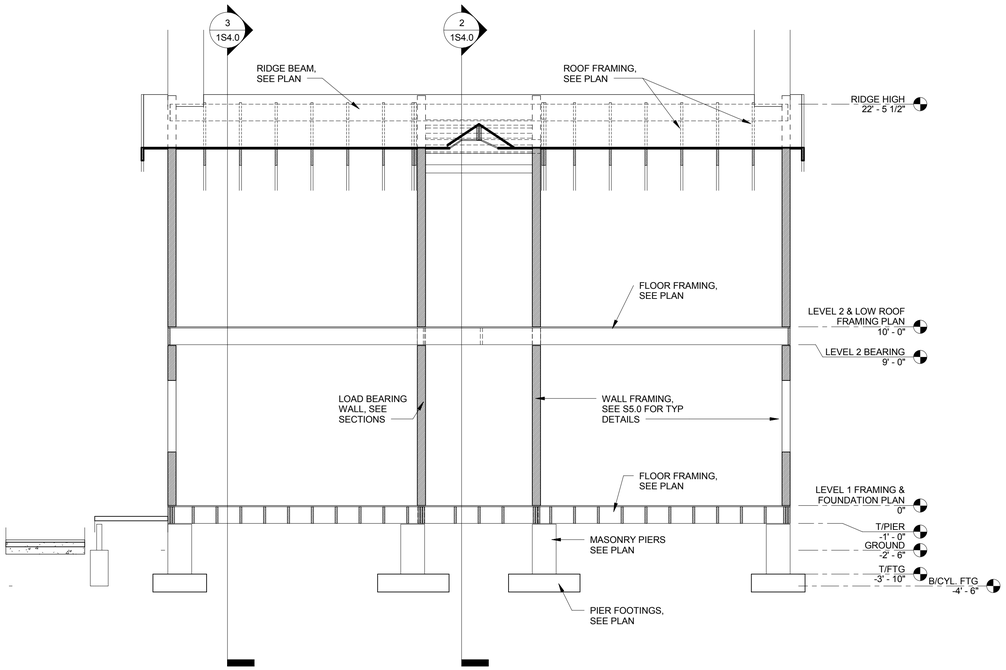
2 BUILDING SECTION 2

1/4" = 1'-0"



3 BUILDING SECTION 3

1/4" = 1'-0"



4 BUILDING SECTION 4

1/4" = 1'-0"

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LIGHTHOUSE KEEPERS COTTAGES

LIGHTHOUSE RD — CAPE CANAVERAL AIRFOCE STATION, FL

BUILDING SECTIONS

drawn	checked	approved
KWD	TA	TA

AA-C001568
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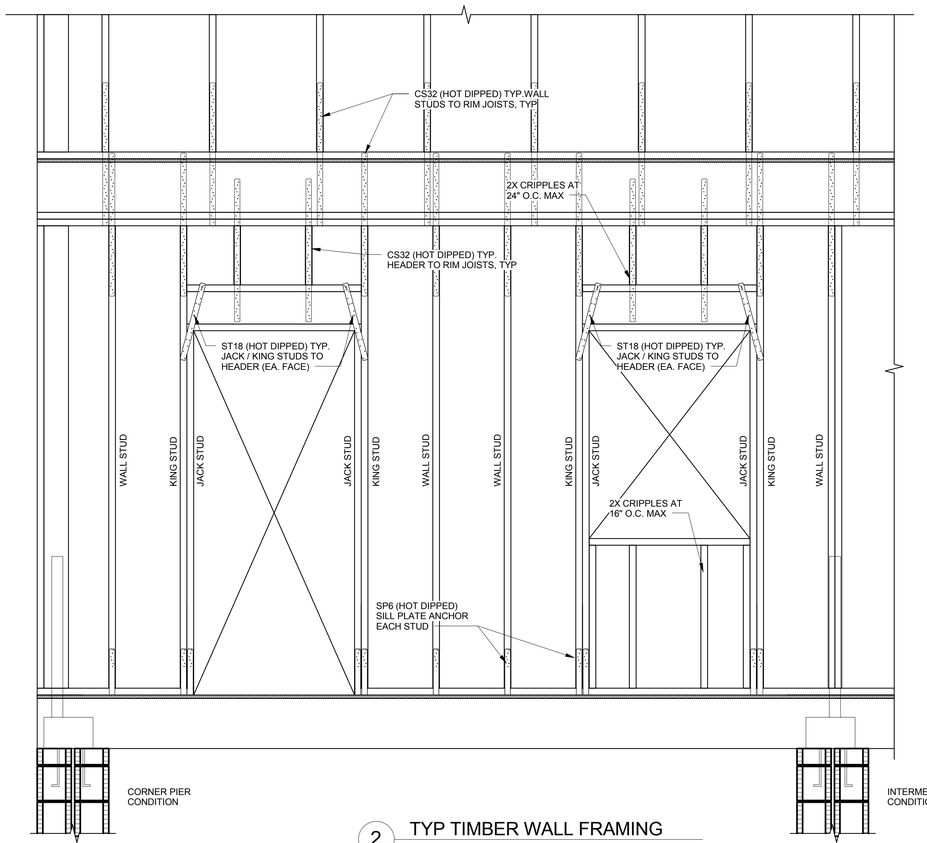
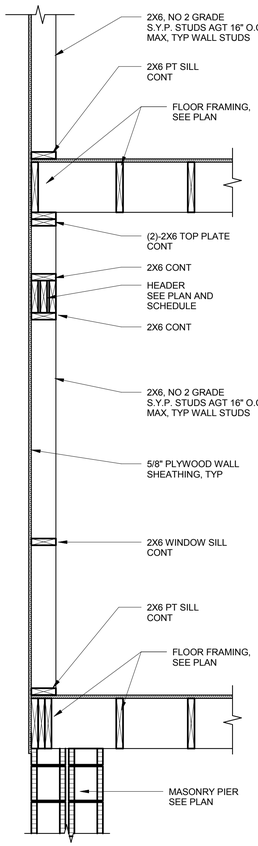
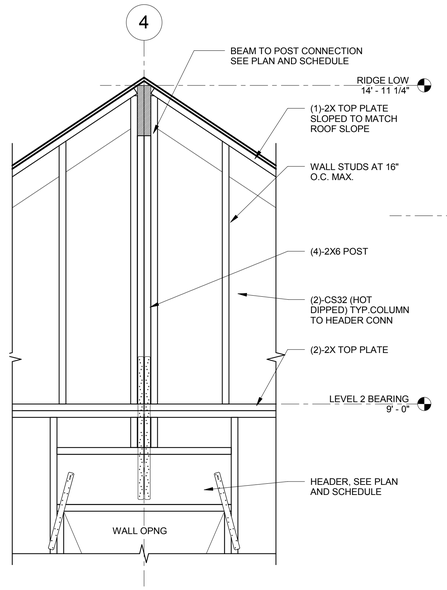
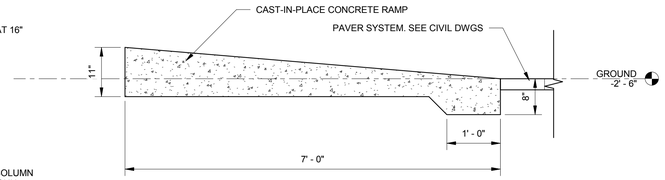


2 TYP TIMBER WALL FRAMING
3/4" = 1'-0"

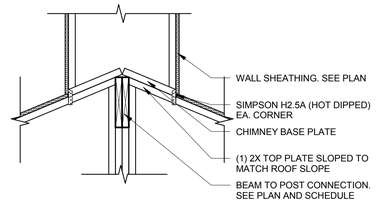




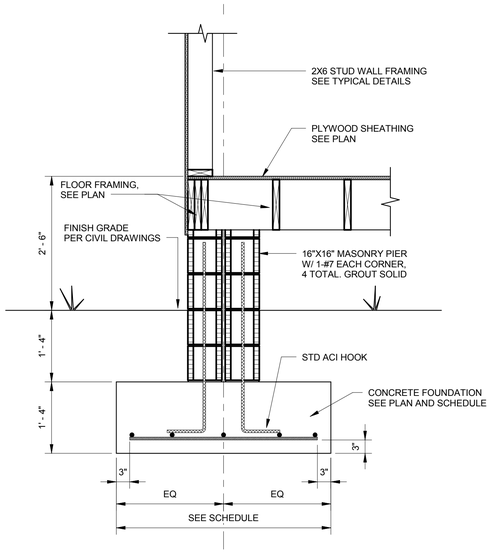
4 DETAIL AT RIDGE BEAM SUPPORT
3/4" = 1'-0"

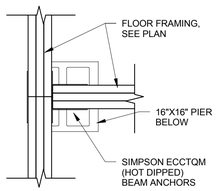


5 CONCRETE RAMP SECTION
3/4" = 1'-0"



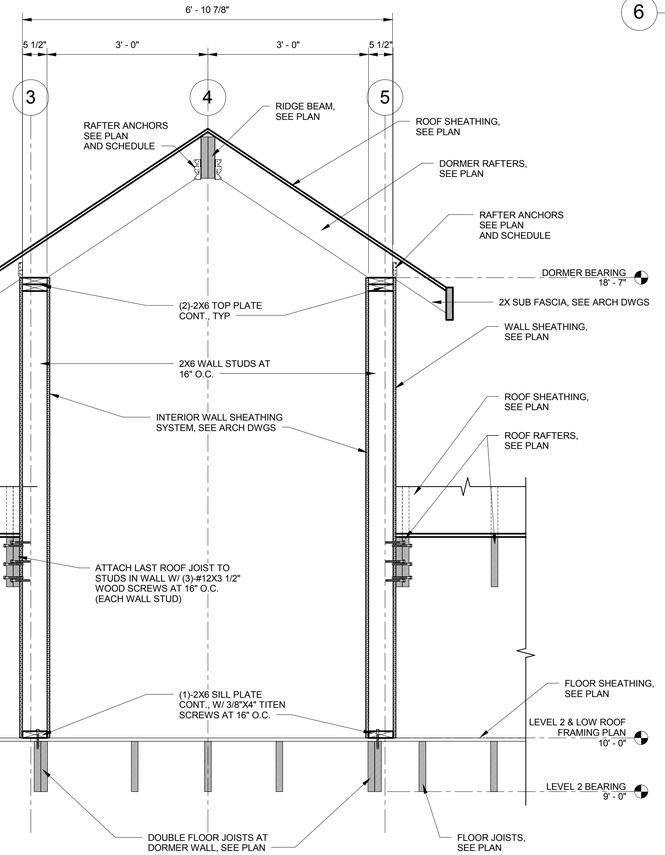
6 CHIMNEY DETAIL
3/4" = 1'-0"





TOP VIEW

1 PIER AND FOUNDATION SECTION
3/4" = 1'-0"



3 DORMER INTERIOR SECTION
3/4" = 1'-0"

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SECTIONS AND DETAILS

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DESIGN CRITERIA

ALL STRUCTURAL WORK FOR THIS PROJECT HAS BEEN ENGINEERED IN ACCORDANCE WITH: THE FLORIDA BUILDING CODE, 2010 AND ASCE-7 10 "MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES.

ALL CONSTRUCTION SHALL COMPLY WITH THE REQUIREMENTS AND SPECIFICATIONS OF THESE CODES AND THEIR REFERENCED STANDARDS, AND ALL OTHER APPLICABLE FEDERAL, STATE, AND LOCAL CODES, STANDARDS, REGULATIONS AND LAWS.

THIS STRUCTURE IS LOCATED IN A "WIND BORNE DEBRIS REGION" AS DEFINED BY THE FLORIDA BUILDING CODE AND THE STRUCTURE HAS BEEN DESIGNED AS AN "ENCLOSED" BUILDING. ALL EXTERIOR WALL OPENINGS SHALL HAVE EQUIPMENT OR COVERINGS WHICH MEET THE IMPACT RESISTANT REQUIREMENTS OF FBC "PROTECTION OF OPENINGS". CURRENT NOA'S (NOTICE OF ACCEPTANCE) CERTIFICATIONS SHALL BE SUBMITTED FOR ALL WINDOWS, DOORS AND COVERINGS.

THE GENERAL CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION SHOWN ON THE DRAWINGS WITH CIVIL, ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS. ANY QUESTIONS OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD BEFORE STARTING CONSTRUCTION.

ALL STRUCTURAL WORK SHALL BE INSPECTED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE AND ALL LOCAL ORDINANCES. THE OWNER SHALL ENGAGE AN EXPERIENCED, QUALIFIED INSPECTION AGENCY, SUBJECT TO THE REVIEW BY THE ARCHITECT OR ENGINEER TO PERFORM ALL INSPECTION WORK AS REQUIRED.

THE CONTRACTOR SHALL PROTECT ANY ADJACENT PROPERTY, HIS OWN WORK AND THE PUBLIC FROM HARM. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE CONSTRUCTION MEANS AND METHODS, AND JOB SITE SAFETY INCLUDING ALL OSHA REQUIREMENTS.

THE STRUCTURE IS DESIGNED TO BE STRUCTURALLY SOUND WHEN COMPLETED. PRIOR TO COMPLETION, THE CONTRACTOR IS RESPONSIBLE FOR STABILITY AND TEMPORARY BRACING, INCLUDING, BUT NOT LIMITED TO, LOAD BEARING CONCRETE AND MASONRY WALLS, STRUCTURAL STEEL FRAMES, FLOOR AND ROOF FRAMING. WHEREVER THE CONTRACTOR IS UNSURE OF THE REQUIREMENTS, THE CONTRACTOR SHALL RETAIN A FLORIDA LICENSED ENGINEER TO DESIGN AND INSPECT THE TEMPORARY BRACING AND STABILITY OF THE STRUCTURE DURING CONSTRUCTION

DESIGN GRAVITY LOADS

LOCATION	UNIFORM LIVE LOAD	CONCENTRATED LIVE LOAD	UNIFORM DEAD LOAD
ROOF	20 PSF	-	-
OFFICE	50 PSF	2000 LBS	-
STAIRS	100 PSF	300 LBS	-

DESIGN WIND LOADS

WIND SPEED: (3 SECOND GUST) (ULTIMATE)	V=160 MPH
RISK CATEGORY:	II
EXPOSURE:	D
MEAN ROOF HEIGHT:	25 FT.
INTERNAL PRESSURE COEFFICIENTS:	+/- 0.18

FOUNDATIONS AND SOIL PREP

FOUNDATIONS HAVE BEEN DESIGNED TO BEAR ON UNDISTRUBED SOILS OR BE PROPERLY COMPACTED FILL HAVING AN ALLOWABLE BEARING CAPACITY OF 2000 PSF.

THE CONTRACTOR SHALL OBSERVE WATER CONDITIONS AT THE SITE AND TAKE THE NECESSARY PRECAUTIONS TO INSURE THAT THE FOUNDATION EXCAVATIONS REMAIN DRY DURING CONSTRUCTION. PROVIDE FOR DEWATERING AS NECESSARY.

THE OWNER/CONTRACTOR SHALL RETAIN THE SERVICES OF A PROFESSIONAL GEOTECHNICAL ENGINEER, SUBJECT TO THE APPROVAL OF THE ARCHITECT, TO INSPECT THE FOUNDATIONS, BEARING LEVELS, ETC., AND VERIFY THAT THE MATERIAL ON WHICH FOUNDATIONS BEAR HAS AT LEAST THE ABOVE NOTED CAPACITY NOTED ABOVE.

AS A MINIMUM, ALL SOILS BELOW THE BUILDING SHALL BE COMPACTED TO WITHIN TWO FEET BELOW BEARING TO 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY.

TIMBER

ALL WOOD FRAMING CONSTRUCTION, WORKMANSHIP AND MATERIALS (INCLUDING TRUSSES) SHALL CONFORM WITH THE SPECIFICATIONS AND REQUIREMENTS OF THE REFERENCES LISTED BELOW:

"AMERICAN INSTITUTE OF TIMBER CONSTRUCTION"

"NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION"

ALL LUMBER SHALL BE FACTORY MARKED WITH GRADE STAMP OF INSPECTION AGENCY, SHOWING COMPLIANCE WITH GRADING RUL REQM.

GALVANIZED METAL HANGERS AND FRAMING ANCHORS SHALL BE USED AND SHALL BE FASTENED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.

ANCHORING AND NAILING NOT SPECIFIED SHALL COMPLY WITH THE NAILING SCHEDULE PER THE FBC.

ALL STRUCTURAL LUMBER SHALL BE AS A MINIMUM, NO. 2 GRADE SOUTHERN YELLOW PINE, AND SHALL HAVE AT LEAST THE FOLLOWING MINIMUM ALLOWABLE DESIGN STRESSES AND MODULUS OF ELASTICITY AT A MAXIMUM MOISTURE CONTENT OF 19%:

TIMBER DESIGN PROPERTIES

SIZE	Fb (BENDING)	Fv (SHEAR)	Fc (COMPR)	Ft (TENSION)	E
2X4	1500 PSI	90 PSI	1650 PSI	825 PSI	1,600,000
2X6	1250 PSI	90 PSI	1600 PSI	725 PSI	1,600,000
2X8	1200 PSI	90 PSI	1550 PSI	650 PSI	1,600,000
2X10	1050 PSI	90 PSI	1500 PSI	575 PSI	1,600,000
2X12	975 PSI	90 PSI	1450 PSI	550 PSI	1,600,000

CAST IN PLACE CONCRETE

ALL REINFORCED CONCRETE WORK SHALL BE IN CONFORMANCE WITH:
ACI 318, 08, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"
ACI 301, 08, "SPECIFICATIONS FOR STRUCTURAL CONCRETE"

PRIOR TO CONCRETE PLACEMENT, THE CONTRACTOR SHALL SUBMIT A CONCRETE MIX DESIGN PREPARED IN ACCORDANCE WITH THESE SPECIFICATIONS TO THE EOR FOR REVIEW.

SLAB ON GRADE CONSTRUCTION:
CONTRACTOR SHALL PROVIDE EITHER A CHEMICAL OR WET CURING PROCESS TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO STARTING WORK.

ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE, (145 PCF +/-)
ALL CEMENT SHALL CONFORM TO ASTM C150, TYPE 1.
MAXIMUM AGGREGATE SIZE SHALL BE 1 1/2" INCHES FOR FOOTINGS.
3/4" FOR ALL WALLS AND SLABS AND SHALL CONFORM TO ASTM C33.

ALL CONCRETE WORK SHALL BE EXECUTED IN STRICT ACCORDANCE WITH SECTIONS 5.7 THRU 5.13 OF ACI 318. THE CONTRACTOR SHALL OBTAIN AND READ THESE SECTIONS OF THE CODE PRIOR TO PLACING CONCRETE.

CONCRETE REINFORCING:
DEFORMED BARS: ASTM A615, GRADE 60
WELDED WIRE FABRIC: ASTM A185
(PROVIDE IN FLAT SHEETS) USE PLASTIC CHAIRS FOR SLAB ON GRADE
EPOXY COATED: ASTM A775

REINFORCING PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT EXCEPT AS SHOWN ON THE DRAWINGS OR PERMITTED BY THE EOR.

ALL CONCRETE REINFORCEMENT SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED AND SPACED IN FORMS AND SECURED IN PLACE IN ACCORDANCE WITH ACI 315, "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT"

REINFORCING LAPS LENGTHS SHALL BE DETAILED PER THE FOLLOWING:
CRSI DESIGN HANDBOOK 2002 OR LATER
TABLE A-1: "DEFINITIONS OF LAP CATEGORIES"
TABLE A-3 (a) THRU (f): "TENSION LAP SPLICE LENGTHS"

UNLESS NOTED OTHERWISE ON PLAN/SCHEDULE, ALL LAP SPLICE LENGTHS SHALL BE CLASS B FROM THE APPROPRIATE CATEGORY DEFINED IN TABLE A-1 NOTED ABOVE

SPLICES IN TOP REINFORCEMENT SHALL BE MADE AT MIDSPAN.
SPLICES IN BOTTOM REINFORCEMENT SHALL BE OVER SUPPORTS.
SPLICES IN WALL FOOTING REINF SHALL BE: CLASS "A" TENSION, CATEGORY 3 WELDED WIRE FABRIC: 8" LAP MIN.

TOP BARS IN BEAMS SHALL TERMINATE IN A STD ACI HOOK AT DISCONT.ENDS

ALL REINFORCING SHALL BE HELD SECURELY IN POSITION WITH STANDARD ACCESSORIES DURING PLACEMENT OF CONCRETE. REINFORCING SUPPORTS FOR ALL EXOSED CONCRETE SHALL BE GALVANIZED WITH PLASTIC COATED FEET.

ALL COLUMN TIES AND BEAM STIRRUPS SHALL HAVE 135 DEGREE HOOKS. SEE TYPICAL BEAM DIAGRAMS AND SCHEDULE.

CONTRACTOR SHALL VERIFY DIMENSIONS AND LOCATIONS OF ALL SLOTS, PIPE SLEEVES, ETC., AS REQUIRED FOR MECHANICAL TRADES BEFORE CONCRETE IS PLACED.

CALCIUM CHLORIDE SHALL NOT BE USED IN ANY FORM.

CONCRETE TESTING:

FOUR SETS OF TEST CYLINDERS SHALL BE MADE AND TESTED FOR EACH 50 YARDS OR LESS OF CONCRETE POURED IN ANY DAY FOR EACH DESIGN MIX. TESTS SHALL BE MADE FOR 7 DAYS, TWO AT 28 DAYS AND ONE HELD IN RESERVE. FIELD CURED CYLINDERS SHALL BE CURED UNDER FIELD CONDITIONS IN ACCORDANCE WITH ASTM C31.

THE SAMPLES USED TO FABRICATE TEST SPECIMENS SHALL BE OBTAINED IN ACCORDANCE WITH ASTM C172.

IF CONCRETE IS DEPOSITED ON THE JOB USING A PUMP, THEN SAMPLES SHALL BE TAKEN FROM THE END OF THE PUMP. DO NOT SAMPLE FROM THE MIXING TRUCK.

CONCRETE MIX DESIGNS

LOCATION	MIN f'c AT 28 DAYS	MAX W/C RATIO	SLUMP *	% OF AIR ENTRAIN.
FOOTINGS,	3000 PSI	0.50	5"	4.0
* - PLUS / MINUS 1"				

MASONRY

ALL MASONRY WORK SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" (ACI 530) AND THE "SPECIFICATIONS FOR MASONRY STRUCTURES" (ACI 530.1) OF THE AMERICAN CONCRETE INSTITUTE.

CONCRETE MASONRY UNITS SHALL BE NORMAL WEIGHT, HOLLOW, LOAD BEARING UNITS CONFORMING TO ASTM C90, TYPE N-II

MORTAR SHALL CONFORM TO ASTM C270, TYPE M OR S.
ALL PORTLAND CEMENT SHALL CONFORM TO ASTM C150 TYPE I.
LIME SHALL CONFORM TO ASTM C207.
ALL MASONRY CEMENT SHALL CONFORM TO ASTM C91.
THICKNESS OF MORTAR SHALL NOT EXCEED 5/8".
FULL BEAD AND HEAD JOINTS SHALL BE USED.

MASONRY GROUT SHALL CONFORM TO ASTM C476.
Fc OF GROUT SHALL BE 3000 PSI MIN.
THE MAXIMUM AGGREGATE SIZE SHALL BE 3/8" GRADED TO PRODUCE FINE GROUT IN CONFORMANCE WITH ASTM C476 AND C404.
SLUMP OF GROUT SHALL BE 8 TO 11 INCHES.

MINIMUM 28 DAY ULTIMATE COMPRESSIVE STRENGTH (fm=1500 PSI)

MASONRY REINFORCING SHALL CONFORM TO ASTM A615, GRADE 60.

EXCAVATION, BACKFILL AND DEWATERING

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING LOGGING, SHORING, AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL BUILDING DEPARTMENT AND OSHA REGULATIONS. DO NOT EXCAVATE WITHIN ONE FOOT OF THE ANGLE OF REPOSE OF ANY SOIL BEARING FOUNDATION UNLESS THE FOUNDATION IS PROPERLY PROTECTED AGAINST SETTLEMENT.

DO NOT BACKFILL AGAINST WALLS UNTIL 7 DAYS AFTER THE WALLS ARE BRACED BY THE STRUCTURE OR ARE TEMPORARILY BRACED. DO NOT BACKFILL UNTIL AFTER COMPLETION AND INSPECTION OF ANY WATERPROOFING.

THE CONTRACTOR IS RESPONSIBLE FOR THE DISPOSAL OF ALL ACCUMULATED WATER IN A MANNER THAT DOES NOT INCONVENIENCE OR DAMAGE THE WORK.

EXTERIOR WALL OPENINGS (WOOD)

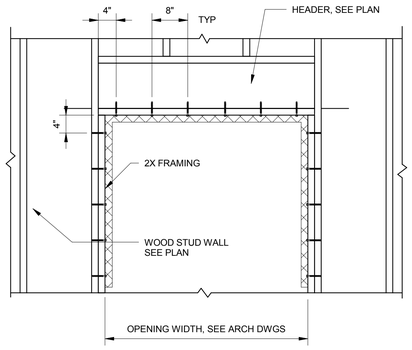
ALL EXTERIOR WALL OPENING ASSEMBLIES SHALL BE DESIGNED TO RESIST THE COMPONENT AND CLADDING WIND LOADS SHOWN ON THESE DRAWINGS.

ALL EXTERIOR WALL OPENING ASSEMBLIES SHALL BE TESTED BY AN APPROVED INDEPENDENT TESTING LABORATORY AND SHALL BE LABELED WITH AN APPROVED LABEL IDENTIFYING THE MANUFACTURER, PERFORMANCE CHARACTERISTICS, AND APPROVED PRODUCT CERTIFYING AGENCY, TESTING LABORATORY, EVALUATION ENTITY OR MIAMI DADE PRODUCT APPROVAL TO INDICATE COMPLIANCE WITH THE REQUIREMENTS OF ONE OF THE FOLLOWING SPECIFICATIONS:

ANSI / AAMA / NWWDA 101 /I.S 2 OR 101/I.S. 2.NAFS OR
AAMA / WDMA / CSA 101 / I.S. 2 / A440 OR
TAS 202 (HVHZ SHALL COMPLY WITH TAS 202 UTILIZING ASTM E1300-02 OR FBC SECTION 2404
ALL EXTERIOR WALL OPENING ASSEMBLIES SHALL BE ANCHORED TO THE STRUCTURE PER THE MANUFACTURER'S INSTALLATION REQUIREMENTS AND AS A MINIMUM THE REQUIREMENTS SHOWN BELOW, (WHICH EVER IS MORE STRINGENT)

BUCK ANCHORS SHALL BE: 1/4" DIA SDS SCREWS (SIZED TO PROVIDE 3" MIN PENETRATION INTO JAMB (SIMPSON STRONG TIE)

PROVIDE ANCHORS WITHIN 4" OF ALL CORNERS FOR BOTH VERTICAL AND HORIZONTAL BUCKS, AND AT 8" O.C. FOR THE LENGTH OF EACH BUCK.



PLYWOOD SHEATHING

ALL PLYWOOD SHALL CONFORM TO THE MOST CURRENT APPLICABLE SPECIFICATION AND SUPPLEMENTS OF THE AMERICAN PLYWOOD ASSOCIATION.

ALL PLYWOOD WALL AND ROOF SHEATHING SHALL BE XX INCH DOC PS1 OR PS2, "APA RATED SHEATHING", (WITH A TRADEMARK OF AN APPROVED TESTING AND GRADING AGENCY) 5 PLY, 32/16 SPAN RATING, EXTERIOR GRADE, EXPOSURE 1 GLUE.

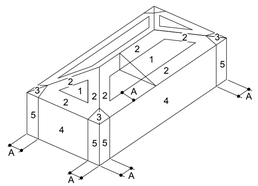
ALL PLYWOOD PANEL END JOINTS SHALL OCCUR OVER SUPPORTS AND SHALL BE STAGGERED ONE HALF PANEL LENGTH FROM ADJACENT PANELS.

ALL PLYWOOD DENOTED AS FIRE-REARDANT TREATED PLYWOOD SHALL BE PRESSURE IMPREGNATED TO COMPLY WITH AMERICAN WOOD PRESERVERS' ASSOCIATION (AWPA) C27 FOR INTERIOR TYPE A TREATMENT.

SEE PLANS FOR ATTACHMENT SCHEDULES AND DIAGRAMS.

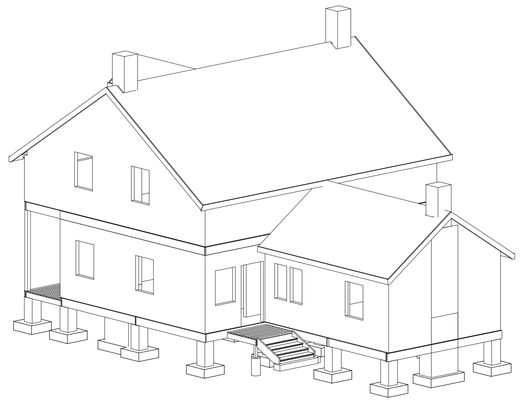
COMPONENT AND CLADDING DESIGN WIND PRESSURES

ZONE	AREA (FT2)	(+). PRESS. (PSF)	(-) PRESS. (PSF)
1	10	25.9	-41.1
1	20	23.6	-40.0
1	50	20.6	-38.5
1	100	18.3	-37.3
2	10	25.9	-71.6
2	20	23.6	-65.9
2	50	20.6	-58.3
2	100	18.3	-52.6
3	10	25.9	-105.9
3	20	23.6	-99.1
3	50	20.6	-89.9
3	100	18.3	-83.1
4	10	45.0	-48.8
4	20	43.1	-46.9
4	50	40.4	-44.2
4	100	33.1	-41.9
5	10	45.0	-60.2
5	20	43.1	-56.0
5	50	40.4	-50.7
5	100	33.1	-46.9

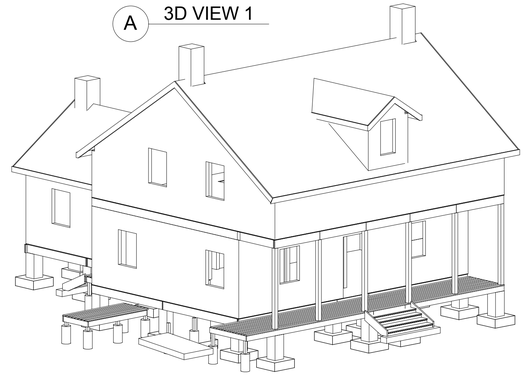


HIPPED ROOFS

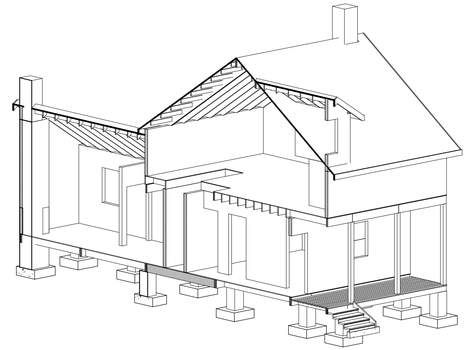
A=3 FT



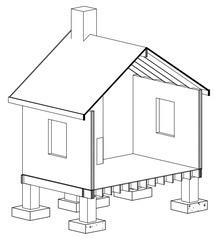
A 3D VIEW 1



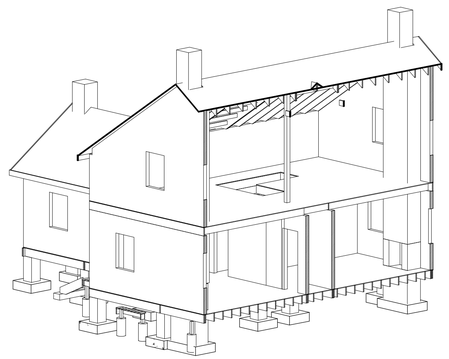
B 3D VIEW 2



C 3D VIEW 3



D 3D VIEW 4



E 3D VIEW 5

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REVISIONS AND UPDATES

10/01/14		90% CONSTRUCTION DOCUMENTS
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CAPE CANAVERAL LIGHTHOUSE FOUNDATION

LIGHTHOUSE KEEPERS COTTAGES

LIGHTHOUSE RD — CAPE CANAVERAL AIRFOCE STATION, FL

GENERAL NOTES

drawn CW | checked TLA | approved TLA

AA-C001568

JACK J. ROOD, ARCHITECT
FL. REG. #AR0007947

FOR REVIEW
NOT FOR CONSTRUCTION

job no. 2012059

2S0.0

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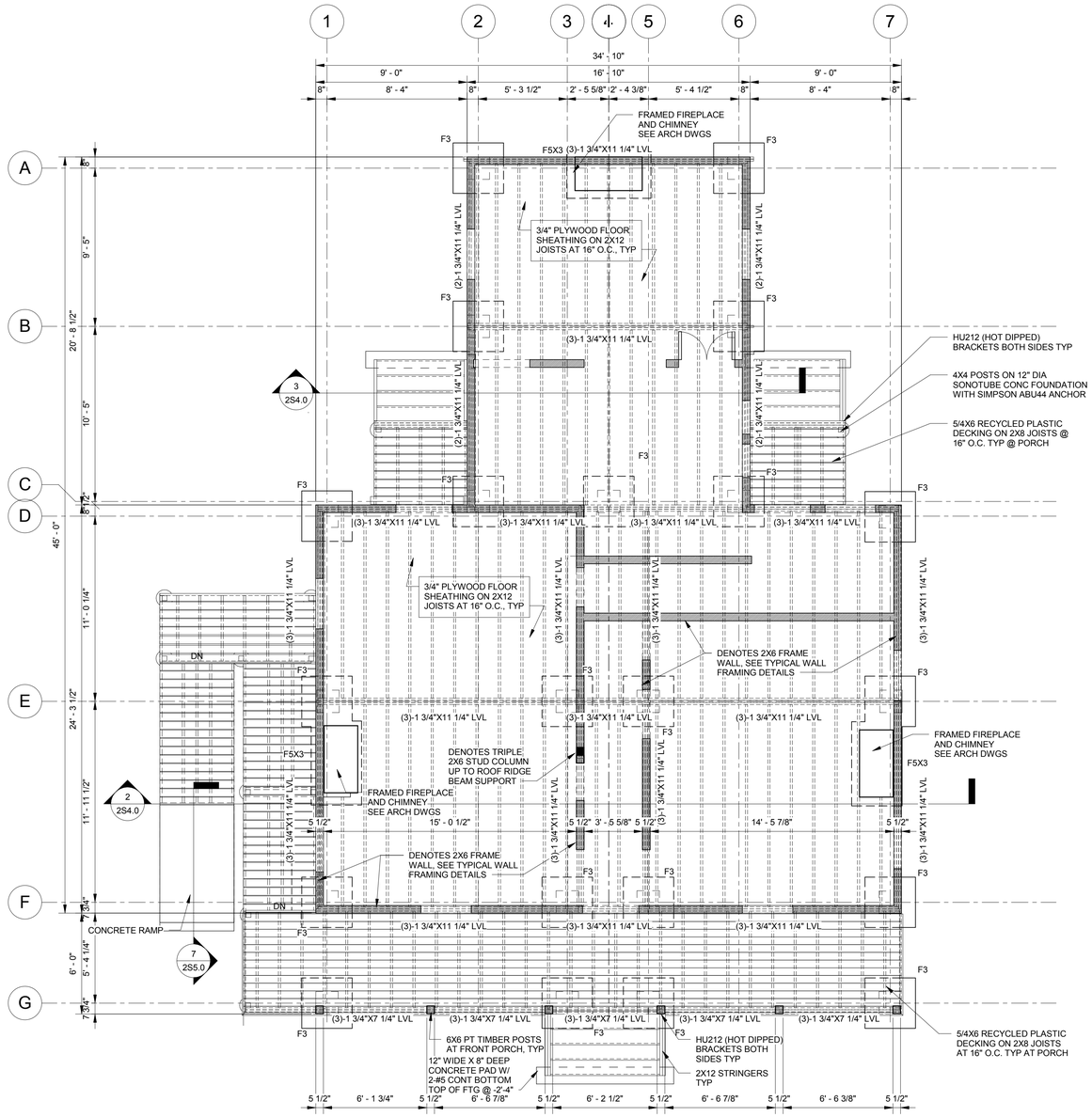

1 LEVEL 1 FRAMING & FOUNDATION PLAN

1/4" = 1'-0"

PLAN NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR ALL WALL OPENING DIMENSIONS
2. DENOTES 2x6 TIMBER FRAMED WALL W/ STUDS AT 16" O.C., TYP, SEE S3.0 FOR TYPICAL TIMBER WALL FRAMING DETAILS
3. SEE ARCH. DWGS FOR ALL NON LOAD BEARING WALLS, NOT SHOWN.
4. ALL WINDOWS AND DOORS SHALL BE DESIGNED TO A MINIMUM DESIGN PRESSURE OF 56 psf.

PIER FOOTING SCHEDULE

MARK	WIDTH X LENGTH	DEPTH	REINFORCEMENT
F3	3'-0" X 3'-0"	1'-4"	(4)-#5 CONT. E.W. BOTT.
F4	4'-0" X 4'-0"	1'-4"	(5)-#5 CONT. E.W. BOTT.
F5X3	5'-0" X 3'-0"	1'-4"	(6)-#5 CONT. S.W. BOTT. (4)-#5 CONT. L.W. BOTT.

PLYWOOD FLOOR SHEATHING NOTES:

ALL PLYWOOD FLOOR SHEATHING SHALL BE:
3/4" PLYWOOD SHEATHING, DOC PS-1 OR PS-2 APA RATED AND STAMPED, 24/16 SPAN RATED, EXPOSURE 1 GLUE, 7 PLY MINIMUM, ATTACHED PER THE SCHEDULE BELOW

FLOOR SHEATHING NAILING SCHEDULE

LOCATION	NAIL SIZE	TYP SPACING	PERIMETER
ALL SUPPORTS	10d COMMON	6" O.C.	3" O.C.

NOTE: ALL NAILS SHALL PENETRATE 1" MIN INTO TOP CHORD OF TRUSS

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CAPE CANAVERAL LIGHTHOUSE FOUNDATION

LIGHTHOUSE KEEPERS COTTAGES

LIGHTHOUSE RD — CAPE CANAVERAL AIRFOCE STATION, FL

FOUNDATION AND FLOOR PLAN

drawn	checked	approved
CW	TLA	TLA

JACK J. ROOD, ARCHITECT
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AA-C001568

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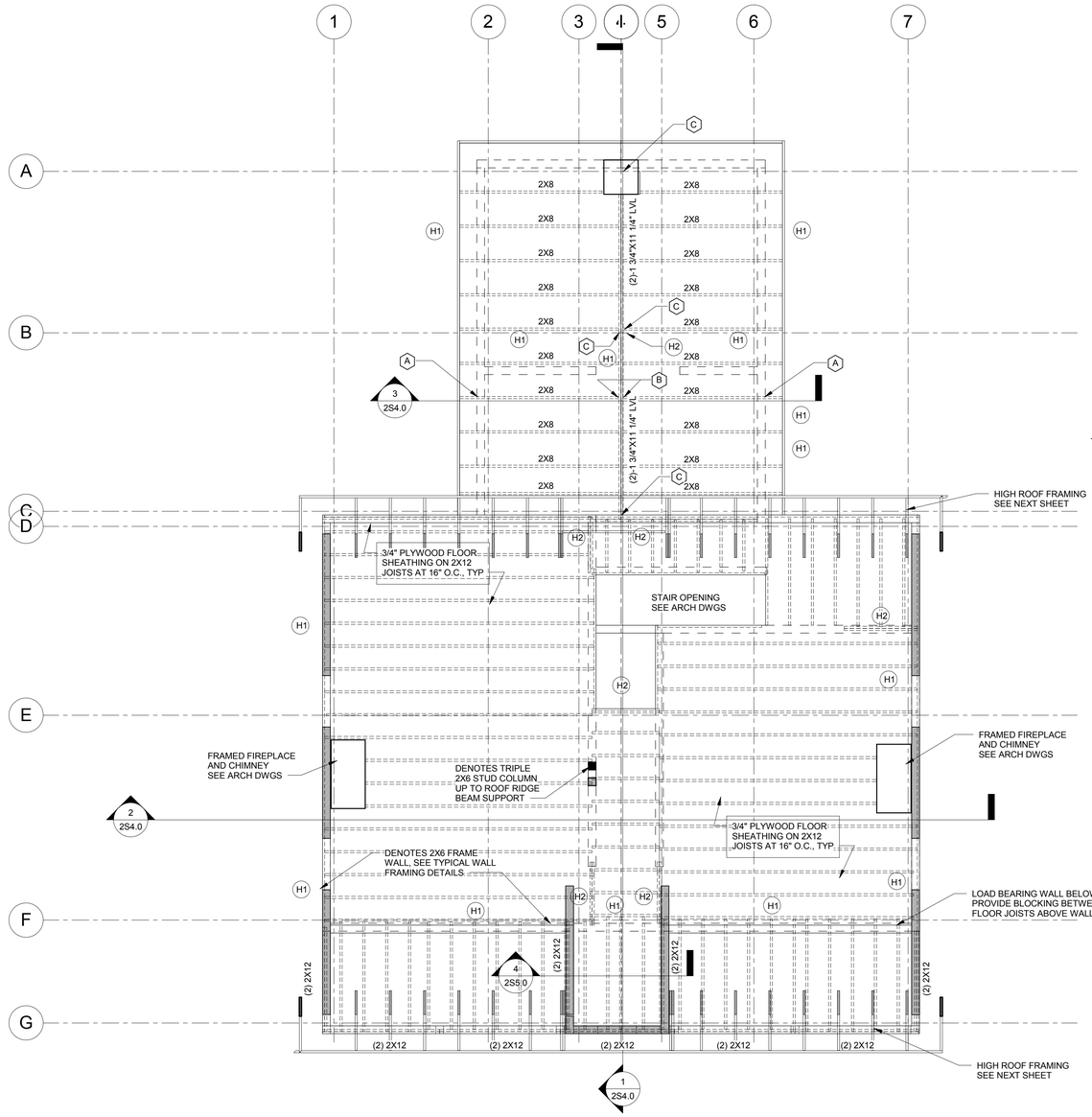


1 LEVEL 2 & LOW ROOF FRAMING PLAN

1/4" = 1'-0"

PLAN NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR ALL ROOF OVERHANGS AND SLOPES
2. (X) DENOTES TRUSS CONNECTION TYPE, SEE SCHEDULE
3. (H1) - DENOTES (3) 2X8 HEADER SEE 3/S5.0
4. (H2) - DENOTES (3)-2X12 HEADER SEE 3/S5.0

PLYWOOD ROOF SHEATHING NOTES:

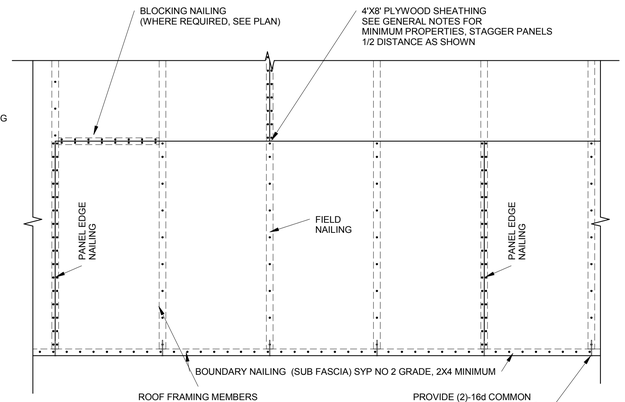
ALL ROOF AND WALL SHEATHING SHALL BE:
5/8" PLYWOOD SHEATHING, DOC PS-1 OR PS-2 APA RATED AND STAMPED, 48/24 SPAN RATED, EXPOSURE 1 GLUE, 5 PLY MINIMUM, ATTACHED PER THE SCHEDULE BELOW

LOW ROOF SHEATHING NAILING SCHEDULE

LOCATION	NAIL SIZE	SPACING
BOUNDARY	8d	2 1/2"
PANEL EDGE	8d	2 1/2"
FIELD	8d	4"
BLOCKING (WHERE REQD, SEE PLAN)	8d	3"

MINIMUM NAIL PROPERTIES:

8d RING SHANK NAILS:
0.113" NOMINAL SHANK DIAMETER
0.012" RING DIAMETER
16-20 RINGS PER INCH
0.28" FULL ROUND HEAD DIAMETER
2" MINIMUM NAIL LENGTH



LOW ROOF TRUSS ANCHOR SCHEDULE

CONN. MARK	SIMPSON MODEL	FASTENER REQUIREMENTS JOIST	FASTENER REQUIREMENTS SUPPORT	CAPACITY (LBS)
(A)	H10A	(9)-10d X 1 1/2" NAILS	(9)-10d X 1 1/2" NAILS	1140
(B)	LRU210	(7)-SD #10-2 1/2"	(6)-SD #10-2 1/2"	1510
(C)	(2)-H6	(8)-8d X 1 1/2" NAILS	(8)-8d X 1 1/2" NAILS	1900

ALL ANCHORS SHALL BE INSTALLED TO MEET THE MANUFACTURER'S INSTALLATION REQUIREMENTS. PROVIDE SHIMS AS REQUIRED TO MEET TOLERANCES.

ALL ANCHORS TO RECEIVE 'HOT DIPPED' FINISH.

PLYWOOD FLOOR SHEATHING NOTES:

ALL PLYWOOD FLOOR SHEATHING SHALL BE:
3/4" PLYWOOD SHEATHING, DOC PS-1 OR PS-2 APA RATED AND STAMPED, 24/16 SPAN RATED, EXPOSURE 1 GLUE, 7 PLY MINIMUM, ATTACHED PER THE SCHEDULE BELOW

FLOOR SHEATHING NAILING SCHEDULE

LOCATION	NAIL SIZE	TYP SPACING	PERIMETER
ALL SUPPORTS	10d COMMON	6" O.C.	3" O.C.

NOTE: ALL NAILS SHALL PENETRATE 1" MIN INTO TOP OF FRAMING MEMBERS.

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LIGHTHOUSE KEEPERS COTTAGES

LIGHTHOUSE RD — CAPE CANAVERAL AIRFOCE STATION, FL

LEVEL 2 / LOW ROOF FRAMING PLAN

drawn	checked	approved
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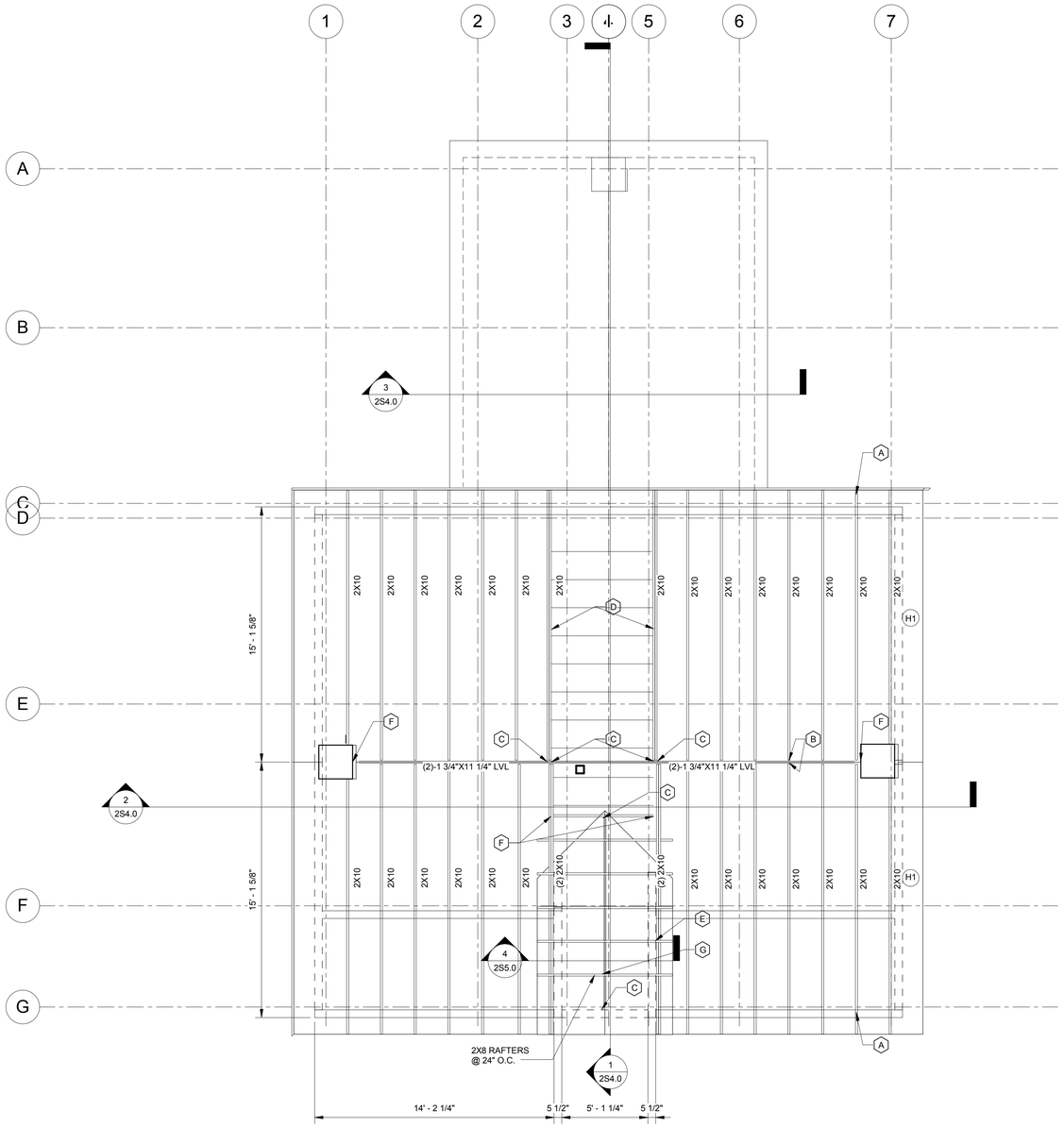


1 HIGH ROOF FRAMING PLAN

1/4" = 1'-0"

HIGH ROOF TRUSS ANCHOR SCHEDULE

CONN. MARK	SIMPSON MODEL	FASTENER REQUIREMENTS		CAPACITY (LBS)
		JOIST	SUPPORT	
A	H10A	(9)-10d X 1 1/2" NAILS	(9)-10d X 1 1/2" NAILS	1140
B	LRU210	(7)-SD #10-2 1/2"	(6)-SD #10-2 1/2"	1510
C	(2)-H6	(8)-8d X 1 1/2" NAILS	(8)-8d X 1 1/2" NAILS	1900
D	HU26	(2)-10d X 1 1/2" NAILS	(4)-16d NAILS	335
E	H2.5A	(5)-8d X 1 1/2" NAILS	(5)-8d X 1 1/2" NAILS	600
F	HU28-2	(6)-10d X 1 1/2" NAILS	(14)-16d NAILS	1135
G	LRU26	(5)-SD #10-2 1/2"	(4)-SD #10-2 1/2"	645

ALL ANCHORS SHALL BE INSTALLED TO MEET THE MANUFACTURER'S INSTALLATION REQUIREMENTS. PROVIDE SHIMS AS REQUIRED TO MEET TOLERANCES.

ALL ANCHORS TO RECEIVE 'HOT DIPPED' FINISH.

PLAN NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR ALL ROOF OVERHANGS AND SLOPES
2. (X) DENOTES TRUSS CONNECTION TYPE, SEE SCHEDULE
3. (H1) - DENOTES (3)-2X8 HEADER
4. (H2) - DENOTES (3)-2X12 HEADER

PLYWOOD ROOF SHEATHING NOTES:

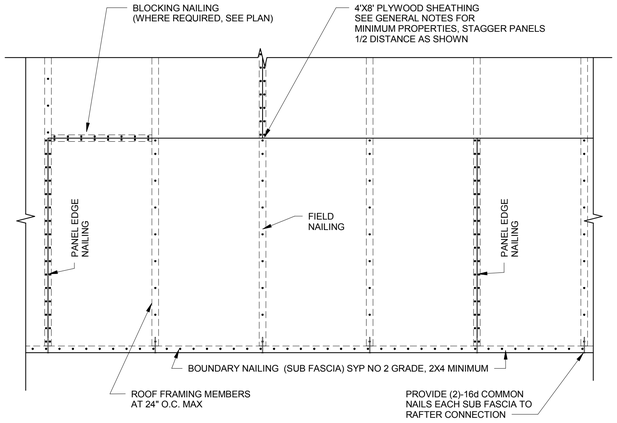
ALL ROOF AND WALL SHEATHING SHALL BE:
5/8" PLYWOOD SHEATHING, DOC PS-1 OR PS-2 APA RATED AND STAMPED, 48/24 SPAN RATED, EXPOSURE 1 GLUE, 5 PLY MINIMUM, ATTACHED PER THE SCHEDULE BELOW

HIGH ROOF SHEATHING NAILING SCHEDULE

LOCATION	NAIL SIZE	SPACING
BOUNDARY	8d	2 1/2"
PANEL EDGE	8d	2 1/2"
FIELD	8d	4"
BLOCKING (WHERE REQD, SEE PLAN)	8d	3"

MINIMUM NAIL PROPERTIES:

8d RING SHANK NAILS:
0.113" NOMINAL SHANK DIAMETER
0.012" RING DIAMETER
16-20 RINGS PER INCH
0.28" FULL ROUND HEAD DIAMETER
2" MINIMUM NAIL LENGTH



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LIGHTHOUSE RD — CAPE CANAVERAL AIRFOCE STATION, FL

ROOF FRAMING PLAN

drawn	checked	approved
CW	TLA	TLA

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JACK J. ROOD, ARCHITECT
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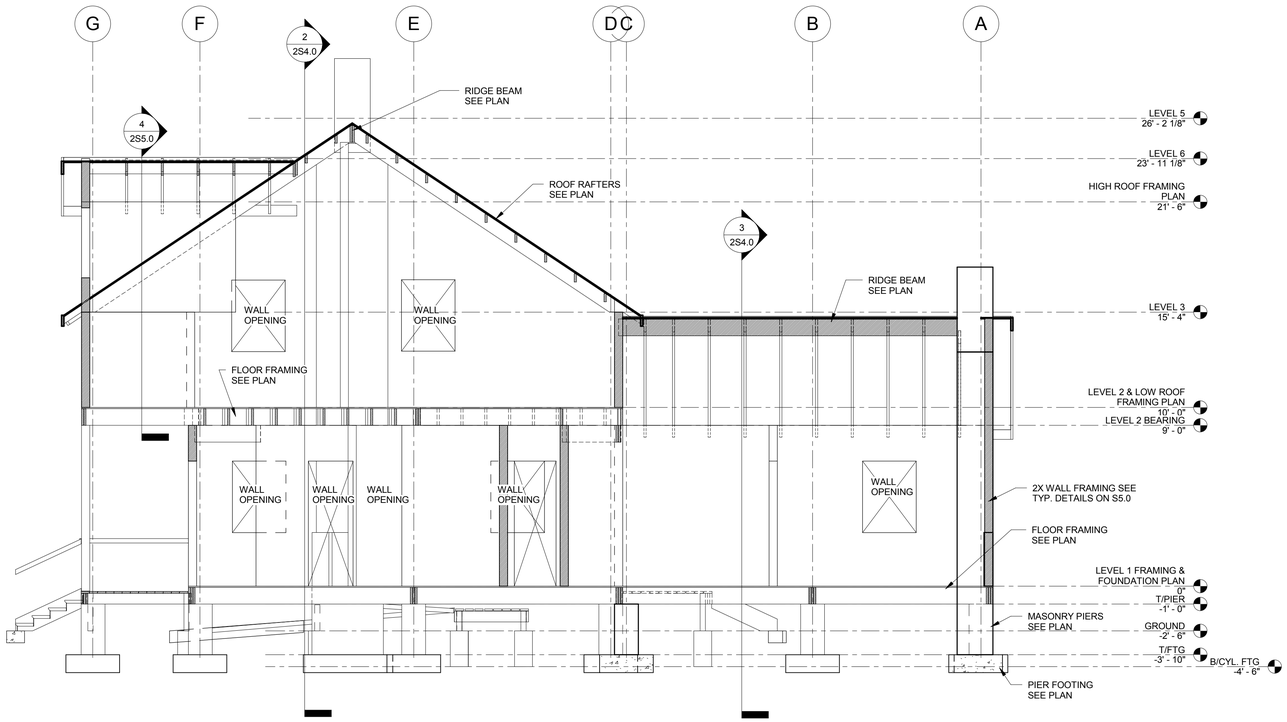
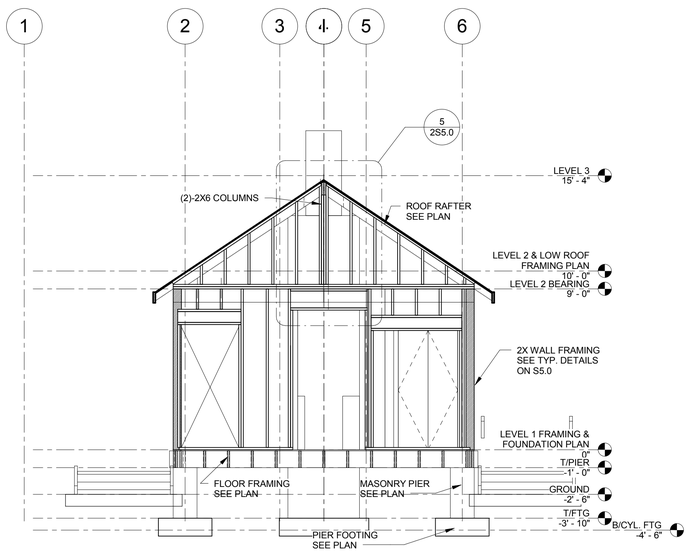
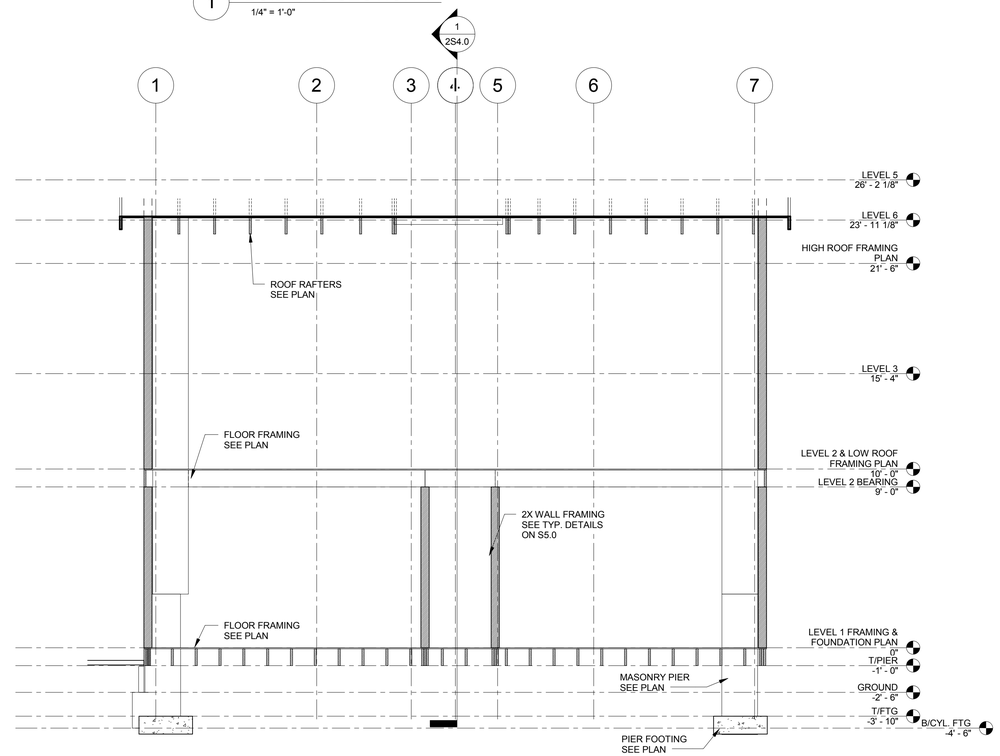


1 BUILDING SECTION 1
1/4" = 1'-0"



3 BUILDING SECTION 3
1/4" = 1'-0"



2 BUILDING SECTION 2
1/4" = 1'-0"

CONSTRUCTION ENGINEERING GROUP
consulting engineers
2651 west eau gallie, suite a
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ENGINEER OF RECORD
THOMAS L. ADAMS
LICENSE No. 55343
STATE OF FLORIDA
PROFESSIONAL ENGINEER
THOMAS L. ADAMS, PE
PE #55343

REVISIONS AND UPDATES

10/01/14		90% CONSTRUCTION DOCUMENTS
06/18/14		PROGRESS SET
03/21/14		DESIGN DEVELOPMENT SET
09/20/12		SCHEMATIC PLANS

CAPE CANAVERAL LIGHTHOUSE FOUNDATION

LIGHTHOUSE KEEPERS COTTAGES

LIGHTHOUSE RD — CAPE CANAVERAL AIRFOCE STATION, FL

BUILDING SECTIONS

drawn	checked	approved
CW	TLA	TLA

RZK
AA-C001568
JACK J. ROOD, ARCHITECT
FL. REG. #AR0007947

FOR REVIEW
NOT FOR
CONSTRUCTION

job no. 2012059

2S4.0

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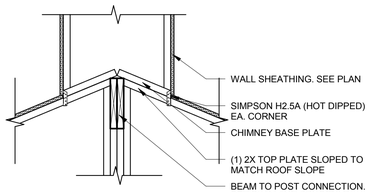
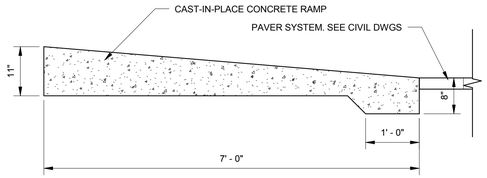
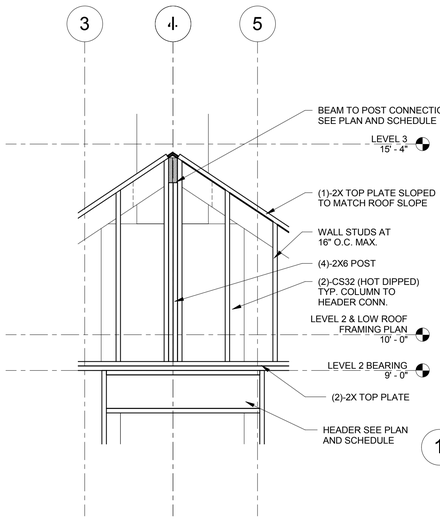


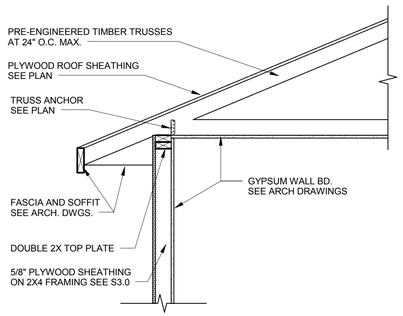
6 CHIMNEY DETAIL
3/4" = 1'-0"

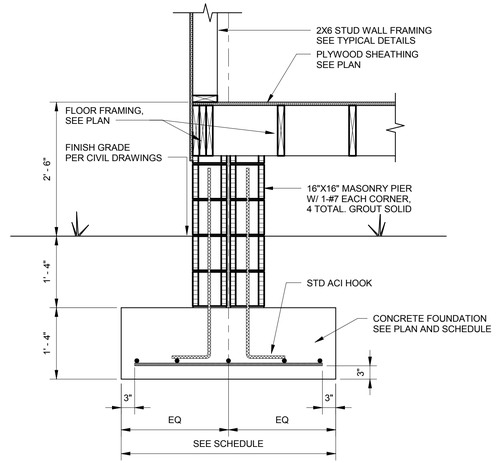


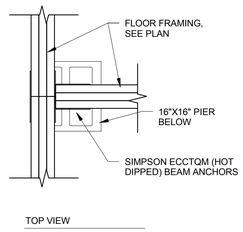
7 CONCRETE RAMP
3/4" = 1'-0"



1 TIMBER WALL (EXTERIOR, LOAD BEARING)
3/4" = 1'-0"



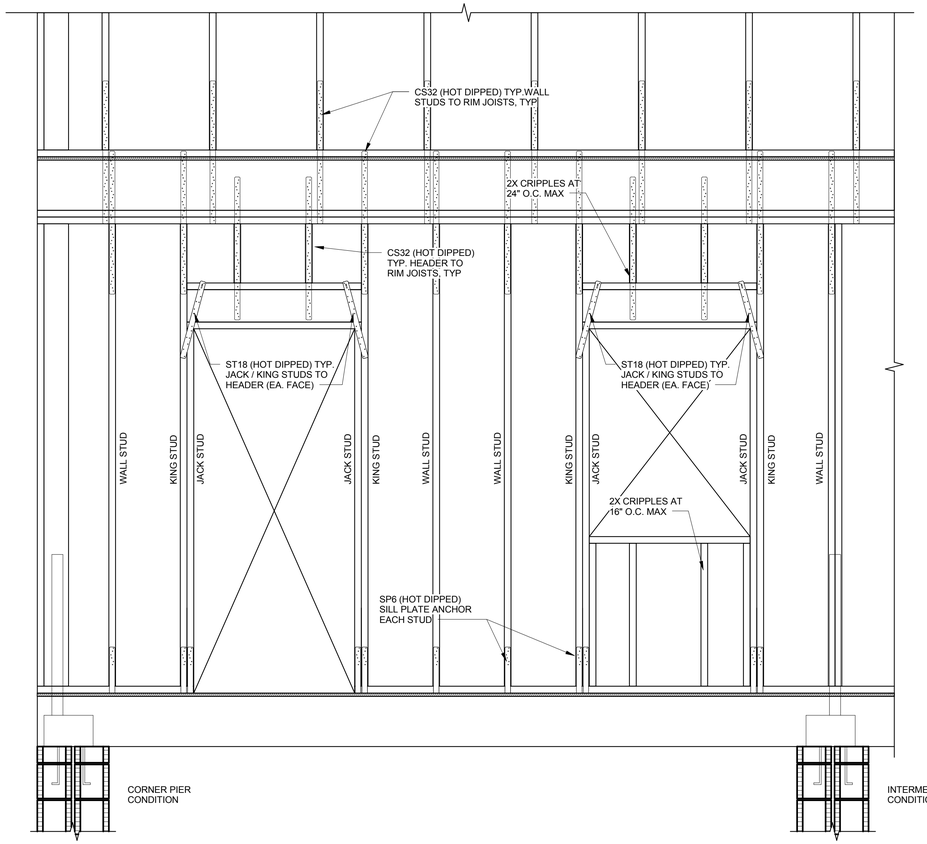




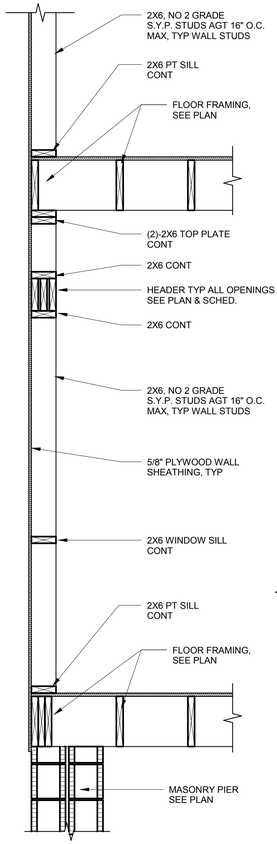
TOP VIEW

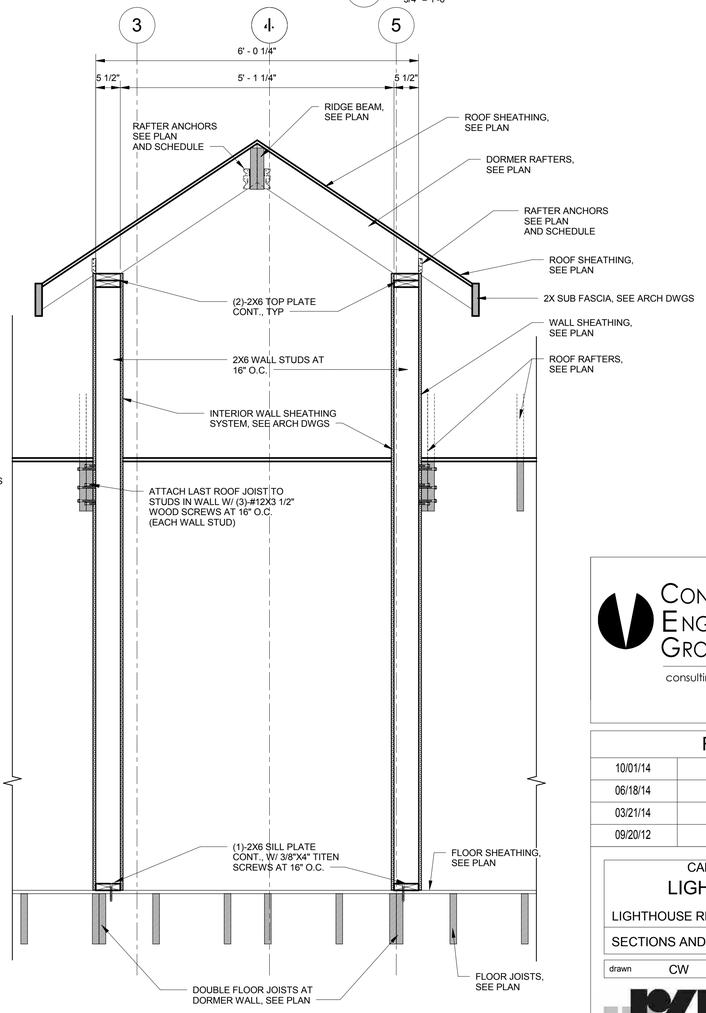
2 PIER AND FOUNDATION SECTION
3/4" = 1'-0"

5 DETAIL AT RIDGE BEAM SUPPORT
1/2" = 1'-0"



3 TYP TIMBER WALL FRAMING
3/4" = 1'-0"





4 DORMER SECTION
3/4" = 1'-0"

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DESIGN CRITERIA

ALL STRUCTURAL WORK FOR THIS PROJECT HAS BEEN ENGINEERED IN ACCORDANCE WITH: THE FLORIDA BUILDING CODE, 2010 AND ASCE-7 10 "MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES.

ALL CONSTRUCTION SHALL COMPLY WITH THE REQUIREMENTS AND SPECIFICATIONS OF THESE CODES AND THEIR REFERENCED STANDARDS, AND ALL OTHER APPLICABLE FEDERAL, STATE, AND LOCAL CODES, STANDARDS, REGULATIONS AND LAWS.

THIS STRUCTURE IS LOCATED IN A "WIND BORNE DEBRIS REGION" AS DEFINED BY THE FLORIDA BUILDING CODE AND THE STRUCTURE HAS BEEN DESIGNED AS AN "ENCLOSED" BUILDING. ALL EXTERIOR WALL OPENINGS SHALL HAVE EQUIPMENT OR COVERINGS WHICH MEET THE IMPACT RESISTANT REQUIREMENTS OF FBC "PROTECTION OF OPENINGS". CURRENT NOA'S (NOTICE OF ACCEPTANCE) CERTIFICATIONS SHALL BE SUBMITTED FOR ALL WINDOWS, DOORS AND COVERINGS.

THE GENERAL CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION SHOWN ON THE DRAWINGS WITH CIVIL, ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS. ANY QUESTIONS OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD BEFORE STARTING CONSTRUCTION.

ALL STRUCTURAL WORK SHALL BE INSPECTED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE AND ALL LOCAL ORDINANCES. THE OWNER SHALL ENGAGE AN EXPERIENCED, QUALIFIED INSPECTION AGENCY, SUBJECT TO THE REVIEW BY THE ARCHITECT OR ENGINEER TO PERFORM ALL INSPECTION WORK AS REQUIRED.

THE CONTRACTOR SHALL PROTECT ANY ADJACENT PROPERTY, HIS OWN WORK AND THE PUBLIC FROM HARM. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE CONSTRUCTION MEANS AND METHODS, AND JOB SITE SAFETY INCLUDING ALL OSHA REQUIREMENTS.

THE STRUCTURE IS DESIGNED TO BE STRUCTURALLY SOUND WHEN COMPLETED. PRIOR TO COMPLETION, THE CONTRACTOR IS RESPONSIBLE FOR STABILITY AND TEMPORARY BRACING, INCLUDING, BUT NOT LIMITED TO, LOAD BEARING CONCRETE AND MASONRY WALLS, STRUCTURAL STEEL FRAMES, FLOOR AND ROOF FRAMING, WHEREVER THE CONTRACTOR IS UNSURE OF THE REQUIREMENTS, THE CONTRACTOR SHALL RETAIN A FLORIDA LICENSED ENGINEER TO DESIGN AND INSPECT THE TEMPORARY BRACING AND STABILITY OF THE STRUCTURE DURING CONSTRUCTION

DESIGN GRAVITY LOADS

LOCATION	UNIFORM LIVE LOAD	CONCENTRATED LIVE LOAD	UNIFORM DEAD LOAD
ROOF	20 PSF	-	-
OFFICE	50 PSF	2000 LBS	-
STAIRS	100 PSF	300 LBS	-

DESIGN WIND LOADS

WIND SPEED: (3 SECOND GUST) (ULTIMATE)	V=160 MPH
RISK CATEGORY:	II
EXPOSURE:	D
MEAN ROOF HEIGHT:	25 FT.
INTERNAL PRESSURE COEFFICIENTS:	+/- 0.18

FOUNDATIONS AND SOIL PREP

FOUNDATIONS HAVE BEEN DESIGNED TO BEAR ON UNDISTRUBED SOILS OR BE PROPERLY COMPACTED FILL HAVING AN ALLOWABLE BEARING CAPACITY OF 2000 PSF.

THE CONTRACTOR SHALL OBSERVE WATER CONDITIONS AT THE SITE AND TAKE THE NECESSARY PRECAUTIONS TO INSURE THAT THE FOUNDATION EXCAVATIONS REMAIN DRY DURING CONSTRUCTION. PROVIDE FOR DEWATERING AS NECESSARY.

THE OWNER/CONTRACTOR SHALL RETAIN THE SERVICES OF A PROFESSIONAL GEOTECHNICAL ENGINEER, SUBJECT TO THE APPROVAL OF THE ARCHITECT, TO INSPECT THE FOUNDATIONS, BEARING LEVELS, ETC., AND VERIFY THAT THE MATERIAL ON WHICH FOUNDATIONS BEAR HAS AT LEAST THE ABOVE NOTED CAPACITY NOTED ABOVE.

AS A MINIMUM, ALL SOILS BELOW THE BUILDING SHALL BE COMPACTED TO WITHIN TWO FEET BELOW BEARING TO 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY.

TIMBER

ALL WOOD FRAMING CONSTRUCTION, WORKMANSHIP AND MATERIALS (INCLUDING TRUSSES) SHALL CONFORM WITH THE SPECIFICATIONS AND REQUIREMENTS OF THE REFERENCES LISTED BELOW:

"AMERICAN INSTITUTE OF TIMBER CONSTRUCTION"

"NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION"

ALL LUMBER SHALL BE FACTORY MARKED WITH GRADE STAMP OF INSPECTION AGENCY, SHOWING COMPLIANCE WITH GRADING RUL REQM.

GALVANIZED METAL HANGERS AND FRAMING ANCHORS SHALL BE USED AND SHALL BE FASTENED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.

ANCHORING AND NAILING NOT SPECIFIED SHALL COMPLY WITH THE NAILING SCHEDULE PER THE FBC.

ALL STRUCTURAL LUMBER SHALL BE AS A MINIMUM, NO. 2 GRADE SOUTHERN YELLOW PINE, AND SHALL HAVE AT LEAST THE FOLLOWING MINIMUM ALLOWABLE DESIGN STRESSES AND MODULUS OF ELASTICITY AT A MAXIMUM MOISTURE CONTENT OF 19%:

TIMBER DESIGN PROPERTIES

SIZE	Fb (BENDING)	Fv (SHEAR)	Fc (COMPR)	Ft (TENSION)	E
2X4	1500 PSI	90 PSI	1650 PSI	825 PSI	1,600,000
2X6	1250 PSI	90 PSI	1600 PSI	725 PSI	1,600,000
2X8	1200 PSI	90 PSI	1550 PSI	650 PSI	1,600,000
2X10	1050 PSI	90 PSI	1500 PSI	575 PSI	1,600,000
2X12	975 PSI	90 PSI	1450 PSI	550 PSI	1,600,000

CAST IN PLACE CONCRETE

ALL REINFORCED CONCRETE WORK SHALL BE IN CONFORMANCE WITH:
ACI 318, 08, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"
ACI 301, 08, "SPECIFICATIONS FOR STRUCTURAL CONCRETE"

PRIOR TO CONCRETE PLACEMENT, THE CONTRACTOR SHALL SUBMIT A CONCRETE MIX DESIGN PREPARED IN ACCORDANCE WITH THESE SPECIFICATIONS TO THE EOR FOR REVIEW.

SLAB ON GRADE CONSTRUCTION:
CONTRACTOR SHALL PROVIDE EITHER A CHEMICAL OR WET CURING PROCESS TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO STARTING WORK.

ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE, (145 PCF +/-)
ALL CEMENT SHALL CONFORM TO ASTM C150, TYPE 1.
MAXIMUM AGGREGATE SIZE SHALL BE 1 1/2" INCHES FOR FOOTINGS.
3/4" FOR ALL WALLS AND SLABS AND SHALL CONFORM TO ASTM C33.

ALL CONCRETE WORK SHALL BE EXECUTED IN STRICT ACCORDANCE WITH SECTIONS 5.7 THRU 5.13 OF ACI 318. THE CONTRACTOR SHALL OBTAIN AND READ THESE SECTIONS OF THE CODE PRIOR TO PLACING CONCRETE.

CONCRETE REINFORCING:
DEFORMED BARS: ASTM A615, GRADE 60
WELDED WIRE FABRIC: ASTM A185
(PROVIDE IN FLAT SHEETS) USE PLASTIC CHAIRS FOR SLAB ON GRADE
EPOXY COATED: ASTM A775

REINFORCING PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT EXCEPT AS SHOWN ON THE DRAWINGS OR PERMITTED BY THE EOR.

ALL CONCRETE REINFORCEMENT SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED AND SPACED IN FORMS AND SECURED IN PLACE IN ACCORDANCE WITH ACI 315, "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT"

REINFORCING LAPS LENGTHS SHALL BE DETAILED PER THE FOLLOWING:
CRSI DESIGN HANDBOOK 2002 OR LATER
TABLE A-1: "DEFINITIONS OF LAP CATEGORIES"
TABLE A-3 (a) THRU (f): "TENSION LAP SPLICE LENGTHS"

UNLESS NOTED OTHERWISE ON PLAN/SCHEDULE, ALL LAP SPLICE LENGTHS SHALL BE CLASS B FROM THE APPROPRIATE CATEGORY DEFINED IN TABLE A-1 NOTED ABOVE

SPLICES IN TOP REINFORCEMENT SHALL BE MADE AT MIDSPAN.
SPLICES IN BOTTOM REINFORCEMENT SHALL BE OVER SUPPORTS.
SPLICES IN WALL FOOTING REINF SHALL BE: CLASS "A" TENSION, CATEGORY 3 WELDED WIRE FABRIC: 8" LAP MIN.

TOP BARS IN BEAMS SHALL TERMINATE IN A STD ACI HOOK AT DISCONT.ENDS

ALL REINFORCING SHALL BE HELD SECURELY IN POSITION WITH STANDARD ACCESSORIES DURING PLACEMENT OF CONCRETE. REINFORCING SUPPORTS FOR ALL EXOSED CONCRETE SHALL BE GALVANIZED WITH PLASTIC COATED FEET.

ALL COLUMN TIES AND BEAM STIRRUPS SHALL HAVE 135 DEGREE HOOKS. SEE TYPICAL BEAM DIAGRAMS AND SCHEDULE.

CONTRACTOR SHALL VERIFY DIMENSIONS AND LOCATIONS OF ALL SLOTS, PIPE SLEEVES, ETC., AS REQUIRED FOR MECHANICAL TRADES BEFORE CONCRETE IS PLACED.

CALCIUM CHLORIDE SHALL NOT BE USED IN ANY FORM.

CONCRETE TESTING:

FOUR SETS OF TEST CYLINDERS SHALL BE MADE AND TESTED FOR EACH 50 YARDS OR LESS OF CONCRETE POURED IN ANY DAY FOR EACH DESIGN MIX. TESTS SHALL BE MADE FOR 7 DAYS, TWO AT 28 DAYS AND ONE HELD IN RESERVE. FIELD CURED CYLINDERS SHALL BE CURED UNDER FIELD CONDITIONS IN ACCORDANCE WITH ASTM C31.

THE SAMPLES USED TO FABRICATE TEST SPECIMENS SHALL BE OBTAINED IN ACCORDANCE WITH ASTM C172.

IF CONCRETE IS DEPOSITED ON THE JOB USING A PUMP, THEN SAMPLES SHALL BE TAKEN FROM THE END OF THE PUMP. DO NOT SAMPLE FROM THE MIXING TRUCK.

CONCRETE MIX DESIGNS

LOCATION	MIN f'c AT 28 DAYS	MAX W/C RATIO	SLUMP *	% OF AIR ENTRAIN.
FOOTINGS,	3000 PSI	0.50	5"	4.0
* - PLUS / MINUS 1"				

MASONRY

ALL MASONRY WORK SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" (ACI 530) AND THE "SPECIFICATIONS FOR MASONRY STRUCTURES" (ACI 530.1) OF THE AMERICAN CONCRETE INSTITUTE.

CONCRETE MASONRY UNITS SHALL BE NORMAL WEIGHT, HOLLOW, LOAD BEARING UNITS CONFORMING TO ASTM C90, TYPE N-II

MORTAR SHALL CONFORM TO ASTM C270, TYPE M OR S.
ALL PORTLAND CEMENT SHALL CONFORM TO ASTM C150 TYPE I.
LIME SHALL CONFORM TO ASTM C207.
ALL MASONRY CEMENT SHALL CONFORM TO ASTM C91.
THICKNESS OF MORTAR SHALL NOT EXCEED 5/8".
FULL BEAD AND HEAD JOINTS SHALL BE USED.

MASONRY GROUT SHALL CONFORM TO ASTM C476.
Fc OF GROUT SHALL BE 3000 PSI MIN.
THE MAXIMUM AGGREGATE SIZE SHALL BE 3/8" GRADED TO PRODUCE FINE GROUT IN CONFORMANCE WITH ASTM C476 AND C404.
SLUMP OF GROUT SHALL BE 8 TO 11 INCHES.

MINIMUM 28 DAY ULTIMATE COMPRESSIVE STRENGTH (fm=1500 PSI)

MASONRY REINFORCING SHALL CONFORM TO ASTM A615, GRADE 60.

EXTERIOR WALL OPENINGS (WOOD)

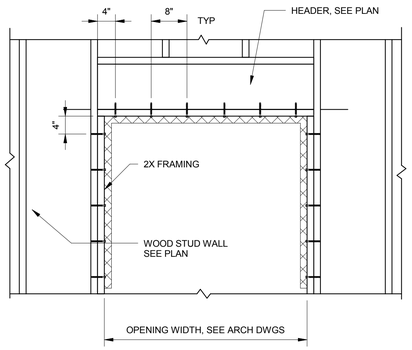
ALL EXTERIOR WALL OPENING ASSEMBLIES SHALL BE DESIGNED TO RESIST THE COMPONENT AND CLADDING WIND LOADS SHOWN ON THESE DRAWINGS.

ALL EXTERIOR WALL OPENING ASSEMBLIES SHALL BE TESTED BY AN APPROVED INDEPENDENT TESTING LABORATORY AND SHALL BE LABELED WITH AN APPROVED LABEL IDENTIFYING THE MANUFACTURER, PERFORMANCE CHARACTERISTICS, AND APPROVED PRODUCT CERTIFYING AGENCY, TESTING LABORATORY, EVALUATION ENTITY OR MIAMI DADE PRODUCT APPROVAL TO INDICATE COMPLIANCE WITH THE REQUIREMENTS OF ONE OF THE FOLLOWING SPECIFICATIONS:

ANSI / AAMA / NWWDA 101 /I.S 2 OR 101/I.S. 2.NAFS OR
AAMA / WDMA / CSA 101 / I.S. 2 / A440 OR
TAS 202 (HVHZ SHALL COMPLY WITH TAS 202 UTILIZING ASTM E1300-02 OR FBC SECTION 2404
ALL EXTERIOR WALL OPENING ASSEMBLIES SHALL BE ANCHORED TO THE STRUCTURE PER THE MANUFACTURER'S INSTALLATION REQUIREMENTS AND AS A MINIMUM THE REQUIREMENTS SHOWN BELOW, (WHICH EVER IS MORE STRINGENT)

BUCK ANCHORS SHALL BE: 1/4" DIA SDS SCREWS (SIZED TO PROVIDE 3" MIN PENETRATION INTO JAMB (SIMPSON STRONG TIE)

PROVIDE ANCHORS WITHIN 4" OF ALL CORNERS FOR BOTH VERTICAL AND HORIZONTAL BUCKS, AND AT 8" O.C. FOR THE LENGTH OF EACH BUCK.



EXCAVATION, BACKFILL AND DEWATERING

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING LOGGING, SHORING, AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL BUILDING DEPARTMENT AND OSHA REGULATIONS. DO NOT EXCAVATE WITHIN ONE FOOT OF THE ANGLE OF REPOSE OF ANY SOIL BEARING FOUNDATION UNLESS THE FOUNDATION IS PROPERLY PROTECTED AGAINST SETTLEMENT.

DO NOT BACKFILL AGAINST WALLS UNTIL 7 DAYS AFTER THE WALLS ARE BRACED BY THE STRUCTURE OR ARE TEMPORARILY BRACED. DO NOT BACKFILL UNTIL AFTER COMPLETION AND INSPECTION OF ANY WATERPROOFING.

THE CONTRACTOR IS RESPONSIBLE FOR THE DISPOSAL OF ALL ACCUMULATED WATER IN A MANNER THAT DOES NOT INCONVENIENCE OR DAMAGE THE WORK.

PRE-ENGINEERED TIMBER TRUSSES

PRE-ENGINEERED TIMBER TRUSSES SHALL CONFORM TO THE MOST CURRENT APPLICABLE VERSION OF THE DESIGN SPECIFICATIONS FOR LIGHT METAL PLATE CONNECTED WOOD ROOF TRUSSES, OF THE TRUSS PLATE INSTITUTE, INC. AND THE NATIONAL DESIGN SPECIFICATIONS FOR STRESS GRADE LUMBER AND ITS FASTENING, OF THE NATIONAL FOREST PRODUCTS ASSOCIATION.

THE DEFLECTION OF THE FLOOR AND ROOF TRUSSES UNDER THE INDICATED LOADS AND AT THE SPAN AND SPACINGS SHOWN ON THE CONTRACT DRAWINGS SHALL MEET THE FOLLOWING CRITERIA:
DEFLECTION DUE TO LIVE LOADS SHALL NOT EXCEED: L/360.
DEFLECTION DUE TO TOTAL LOADS SHALL NOT EXCEED: L/240

ALL TRUSS FRAMING MEMBERS SHALL BE AS A MINIMUM, NO. 3 GRADE SOUTHERN YELLOW PINE, 19% M.C.

THE WOOD TRUSS MANUFACTURER SHALL SPECIFY AND PROVIDE ALL BRACING AT TOP AND BOTTOM CHORDS REQUIRED TO STABILIZE THE FLOOR OR ROOF STRUCTURE DURING AND AFTER CONSTRUCTION, IN ADDITION TO THE BRACING INDICATED ON THE STRUCTURAL DRAWINGS.

THE WOOD TRUSS MANUFACTURER SHALL SUBMIT STRUCTURAL CALCULATIONS STAMPED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF FLORIDA FOR ALL TRUSS TYPES, WHICH INDICATE DESIGN LOADS, TRUSS CAPACITIES AND DEFLECTIONS.

THE CONTRACTOR SHALL FOLLOW ANSI/TPI "HIB-91" FOR ALL TEMPORARY BRACING REQUIRED TO ERECT AND STABILIZ THE TRUSSES DURING CONSTRUCTION.

PLYWOOD SHEATHING

ALL PLYWOOD SHALL CONFORM TO THE MOST CURRENT APPLICABLE SPECIFICATION AND SUPPLEMENTS OF THE AMERICAN PLYWOOD ASSOCIATION.

ALL PLYWOOD WALL AND ROOF SHEATHING SHALL BE XX INCH DOC PS1 OR PS2, "APA RATED SHEATHING", (WITH A TRADEMARK OF AN APPROVED TESTING AND GRADING AGENCY) 5 PLY, 32/16 SPAN RATING, EXTERIOR GRADE, EXPOSURE 1 GLUE.

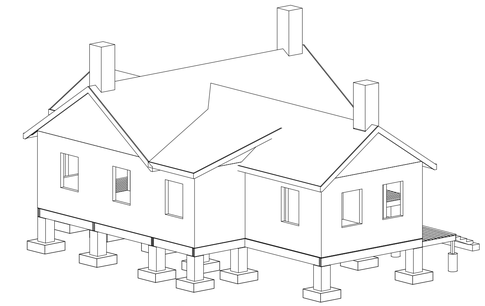
ALL PLYWOOD PANEL END JOINTS SHALL OCCUR OVER SUPPORTS AND SHALL BE STAGGERED ONE HALF PANEL LENGTH FROM ADJACENT PANELS.

ALL PLYWOOD DENOTED AS FIRE-REARDANT TREATED PLYWOOD SHALL BE PRESSURE IMPREGNATED TO COMPLY WITH AMERICAN WOOD PRESERVERS' ASSOCIATION (AWPA) C27 FOR INTERIOR TYPE A TREATMENT.

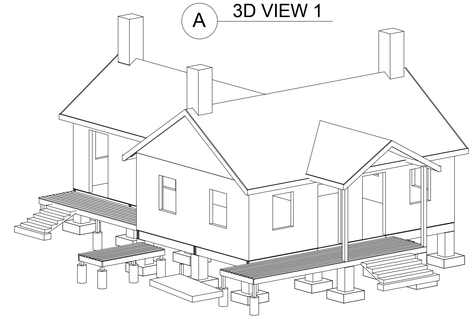
SEE PLANS FOR ATTACHMENT SCHEDULES AND DIAGRAMS.

COMPONENT AND CLADDING DESIGN WIND PRESSURES

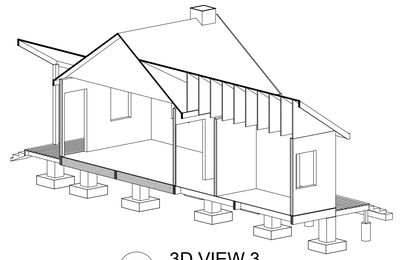
ZONE	AREA (FT2)	(+). PRESS. (PSF)	(-) PRESS. (PSF)
1	10	25.9	-41.1
1	20	23.6	-40.0
1	50	20.6	-38.5
1	100	18.3	-37.3
2	10	25.9	-71.6
2	20	23.6	-65.9
2	50	20.6	-58.3
2	100	18.3	-52.6
3	10	25.9	-105.9
3	20	23.6	-99.1
3	50	20.6	-89.9
3	100	18.3	-83.1
4	10	45.0	-48.8
4	20	43.1	-46.9
4	50	40.4	-44.2
4	100	33.1	-41.9
5	10	45.0	-60.2
5	20	43.1	-56.0
5	50	40.4	-50.7
5	100	33.1	-46.9



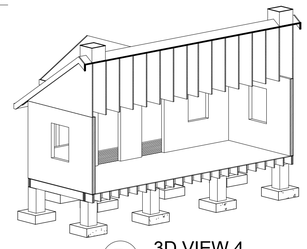
A 3D VIEW 1



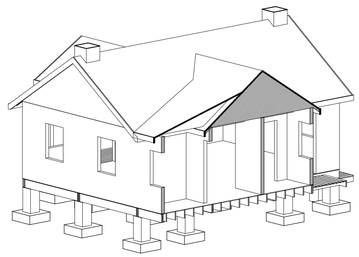
B 3D VIEW 2



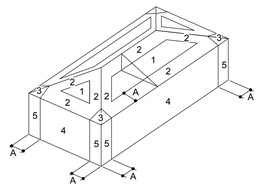
C 3D VIEW 3



D 3D VIEW 4



E 3D VIEW 5



HIPPED ROOFS

A=3 FT

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PE #55343

REVISIONS AND UPDATES

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CAPE CANAVERAL LIGHTHOUSE FOUNDATION

LIGHTHOUSE KEEPERS COTTAGES

LIGHTHOUSE RD — CAPE CANAVERAL AIRFOCE STATION, FL

GENERAL NOTES

drawn CWW | checked TLA | approved TLA

RZK AA-C001568

JACK J. ROOD, ARCHITECT
FL. REG. #AR0007947

FOR REVIEW
NOT FOR
CONSTRUCTION

job no. 2012059

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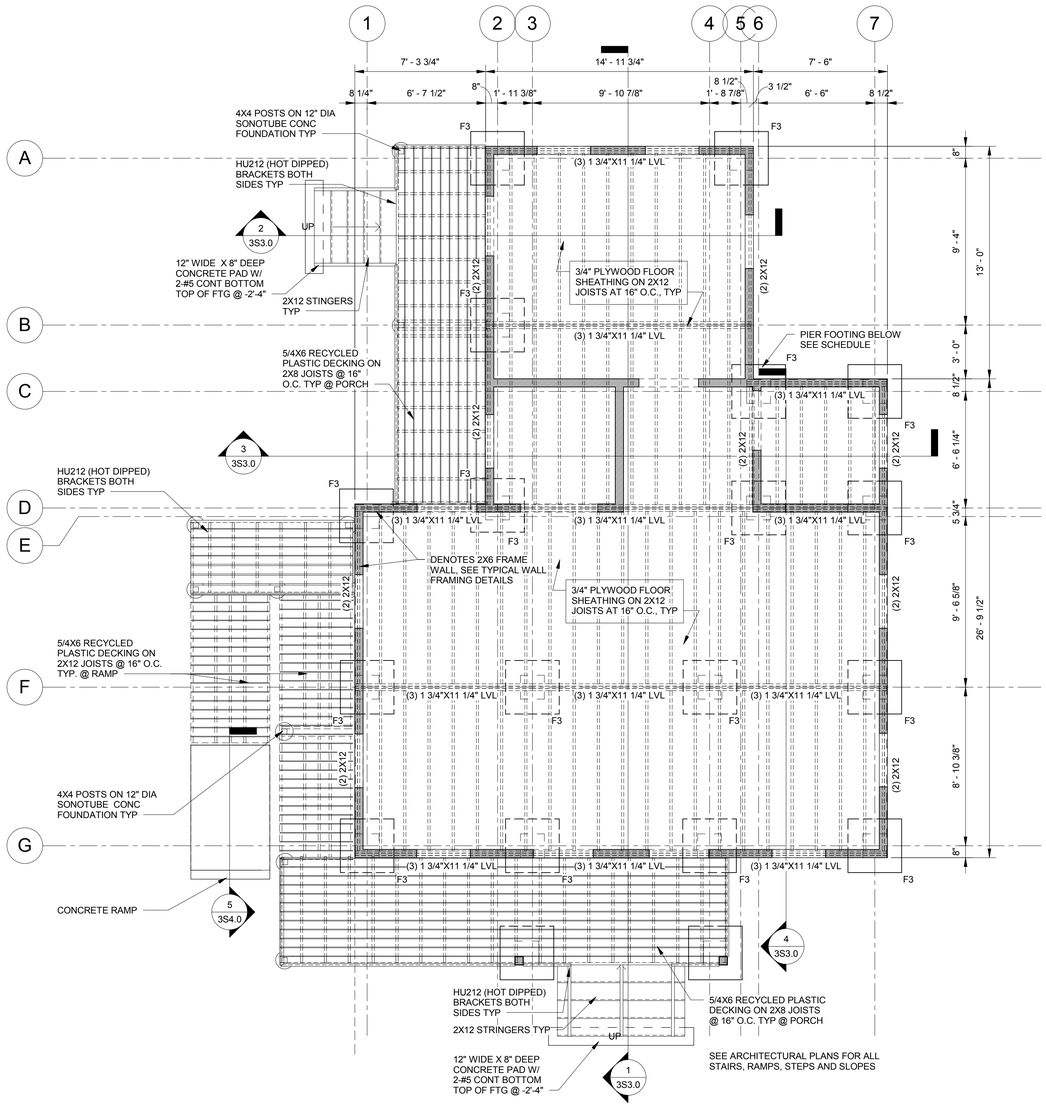

1 LEVEL 1 FRAMING & FOUNDATION PLAN

1/4" = 1'-0"

PLAN NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR ALL WALL OPENING DIMENSIONS
2. DENOTES 2x6 TIMBER FRAMED WALL W/ STUDS AT 16" O.C., TYP, SEE S3.0 FOR TYPICAL TIMBER WALL FRAMING DETAILS
3. ALL WINDOWS AND DOORS SHALL BE DESIGNED TO A MINIMUM DESIGN PRESSURE OF 56 psf.

PLYWOOD FLOOR SHEATHING NOTES:

ALL PLYWOOD FLOOR SHEATHING SHALL BE:
3/4" PLYWOOD SHEATHING, DOC PS-1 OR PS-2 APA RATED AND STAMPED, 24/16 SPAN RATED, EXPOSURE 1 GLUE, 7 PLY MINIMUM, ATTACHED PER THE SCHEDULE BELOW

FLOOR SHEATHING NAILING SCHEDULE

LOCATION	NAIL SIZE	TYP SPACING	PERIMETER
ALL SUPPORTS	10d COMMON	6" O.C.	3" O.C.

NOTE: ALL NAILS SHALL PENETRATE 1" MIN INTO TOP CHORD OF TRUSS

PIER FOOTING SCHEDULE

MARK	WIDTH X LENGTH	DEPTH	REINFORCEMENT
F3	3'-0" X 3'-0"	1'-4"	(4)-#5 CONT. E.W. BOTT.
F4	4'-0" X 4'-0"	1'-4"	(5)-#5 CONT. E.W. BOTT.
F5X3	5'-0" X 3'-0"	1'-4"	(6)-#5 CONT. S.W. BOTT. (4)-#5 CONT. L.W. BOTT.

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FRAMING & FOUNDATION PLAN

drawn CW | checked TLA | approved TLA

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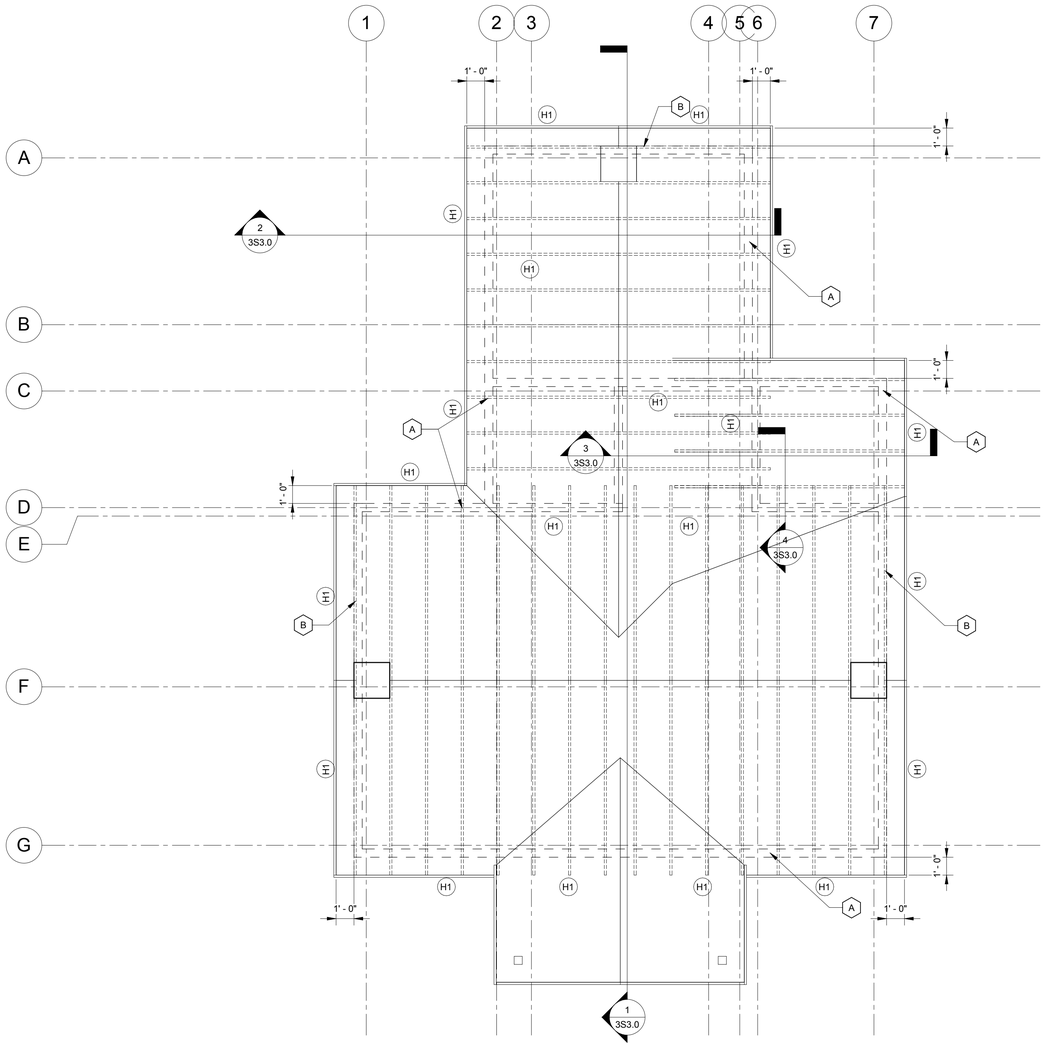


1 ROOF FRAMING PLAN

1/4" = 1'-0"

PLAN NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR ALL ROOF OVERHANGS AND SLOPES
2. (X) DENOTES TRUSS CONNECTION TYPE, SEE SCHEDULE
3. DENOTES 2X4 TIMBER FRAMED WALL W/ STUDS AT 16" O.C. MAX, SEE S3.0 FOR TYPICAL TIMBER WALL FRAMING DETAILS
4. (H1) DENOTES (3) 2X8 HEADER SEE S4.0

PLYWOOD ROOF SHEATHING NOTES:

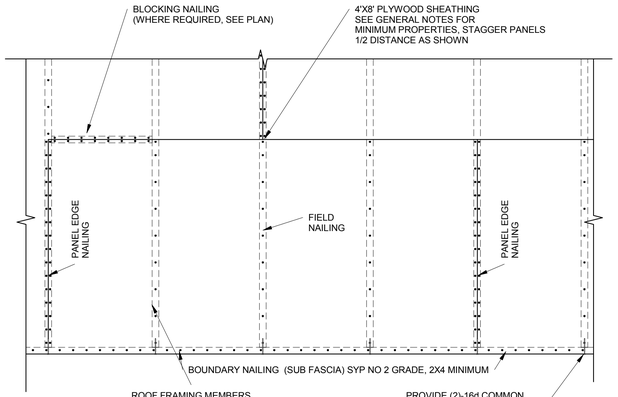
ALL ROOF AND WALL SHEATHING SHALL BE:
5/8" PLYWOOD SHEATHING, DOC PS-1 OR PS-2 APA RATED AND STAMPED, 48/24 SPAN RATED, EXPOSURE 1 GLUE, 5 PLY MINIMUM, ATTACHED PER THE SCHEDULE BELOW

LOW ROOF SHEATHING NAILING SCHEDULE

LOCATION	NAIL SIZE	SPACING
BOUNDARY	8d	2 1/2"
PANEL EDGE	8d	2 1/2"
FIELD	8d	4"
BLOCKING (WHERE REQD, SEE PLAN)	8d	3"

MINIMUM NAIL PROPERTIES:

8d RING SHANK NAILS:
0.113" NOMINAL SHANK DIAMETER
0.012" RING DIAMETER
16-20 RINGS PER INCH
0.28" FULL ROUND HEAD DIAMETER
2" MINIMUM NAIL LENGTH



TRUSS ANCHOR SCHEDULE

CONN. MARK	SIMPSON MODEL	FASTENER REQUIREMENTS		CAPACITY
		TRUSS	SUPPORT	(LBS)
(A)	H10A	(9)-10d X 1 1/2" NAILS	(9)-10d X 1 1/2" NAILS	1140
(B)	LRU210	(7)-SD #10 X 1 1/2"	(6)-SD #10 X 2 1/2"	1510

ALL ANCHORS SHALL BE INSTALLED TO MEET THE MANUFACTURER'S INSTALLATION REQUIREMENTS. PROVIDE SHIMS AS REQUIRED TO MEET TOLERANCES.

TRUSS ANCHORS INDICATED ARE PRELIMINARY AND NOT INTENDED TO BE FINAL. ANCHORS SHOWN ARE FOR PRELIMINARY PRICING ONLY. ALL FINAL UPLIFTS SHALL BE VERIFIED WITH APPROVED PRE-ENGINEERED WOOD TRUSS SHOP DRAWINGS PRIOR TO ORDERING MATERIALS OR SETTING OF TRUSS ANCHORS. CONTRACTOR TO COORDINATE FINAL TRUSS CONFIGURATION AND UPLIFT LOADS W/ ANCHORS SELECTED AND SHALL
SUBMIT FOR REVIEW AND APPROVAL TO ENGINEER OF RECORD IF ALTERNATE CONNECTORS ARE USED.

SEE TRUSS MANUFACTURER'S DRAWINGS FOR ALL TRUSS TO TRUSS CONNECTIONS

ALL ANCHORS TO RECEIVE 'HOT DIPPED' FINISH

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ROOF PLAN

drawn CW | checked TLA | approved TLA

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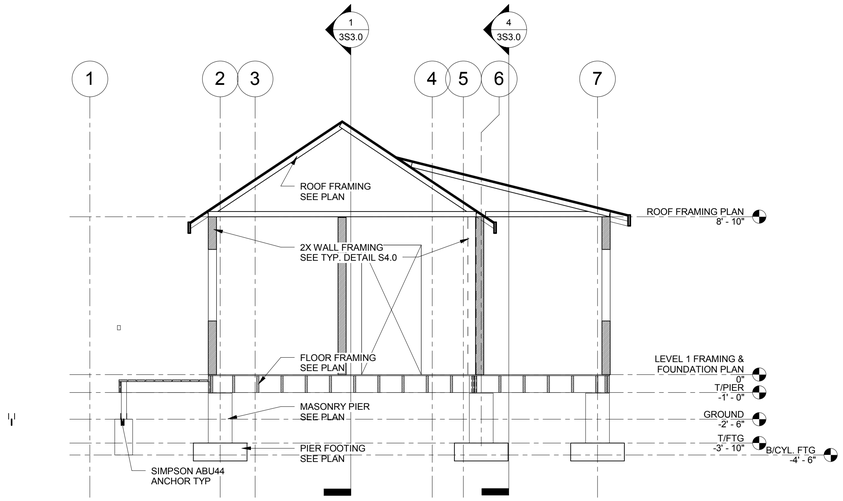
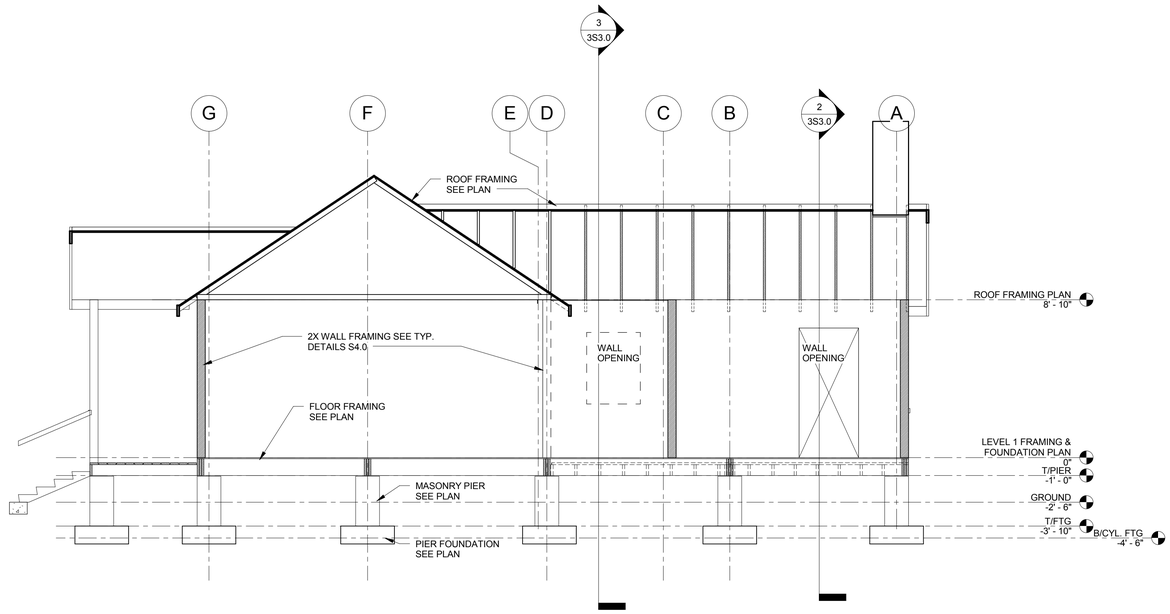


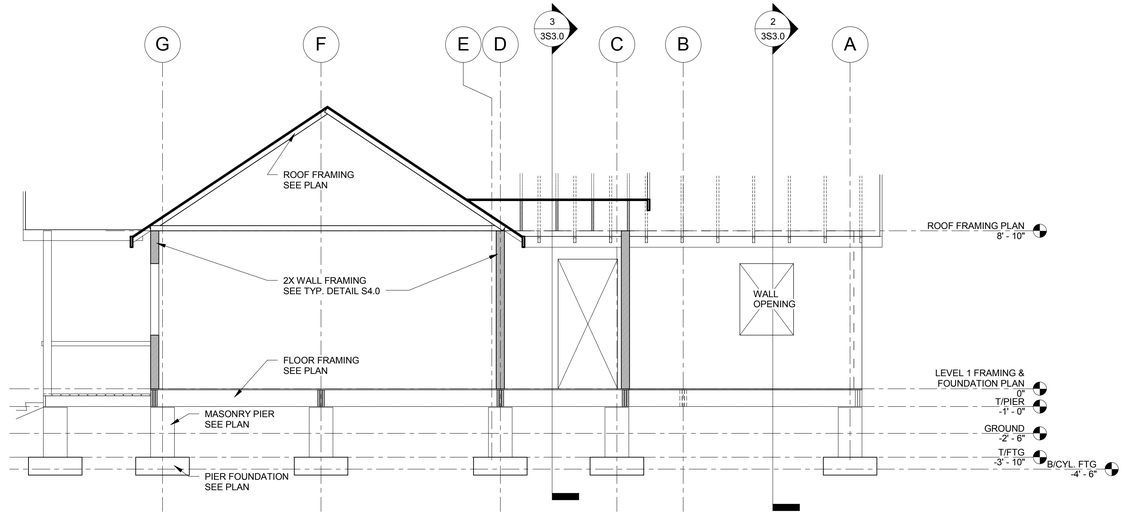
3 BUILDING SECTION 3

1/4" = 1'-0"



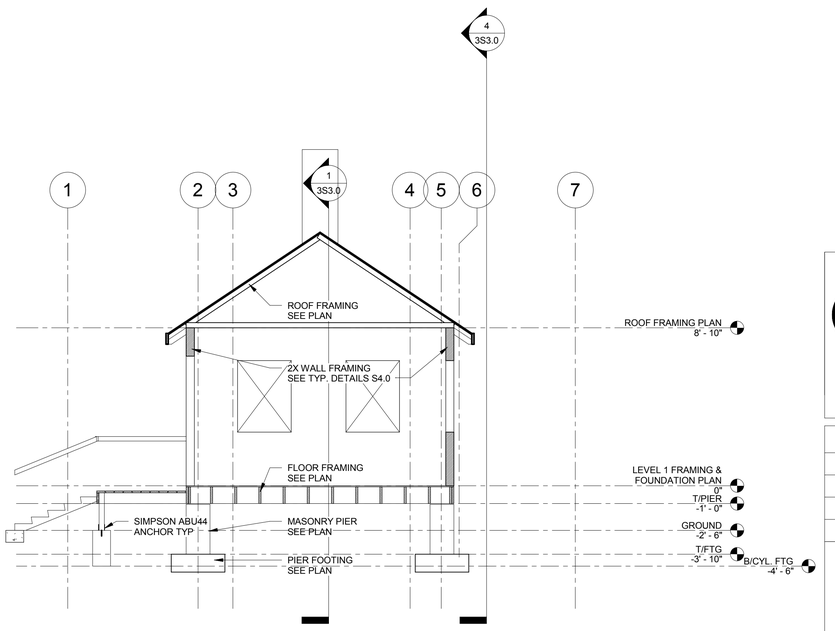
1 BUILDING SECTION 1

1/4" = 1'-0"



4 BUILDING SECTION 4

1/4" = 1'-0"



2 BUILDING SECTION 2

1/4" = 1'-0"

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LIGHTHOUSE RD — CAPE CANAVERAL AIRFOCE STATION, FL

BUILDING SECTIONS

drawn	checked	approved
CW	TLA	TLA

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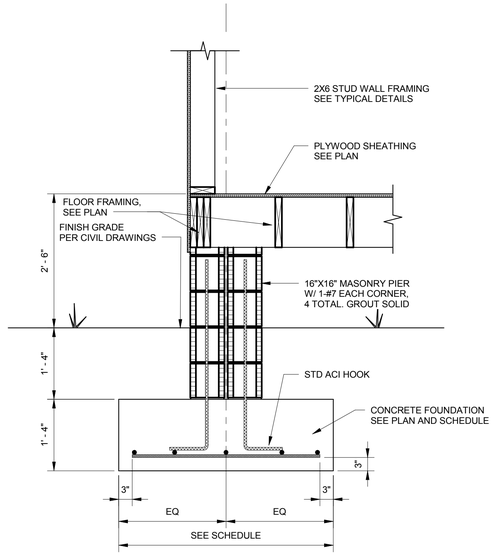
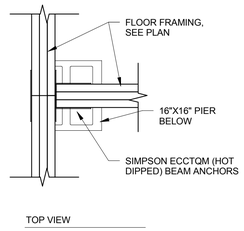
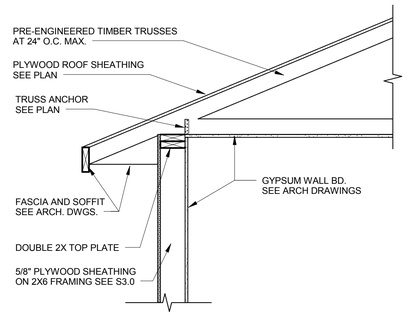


2 PIER AND FOUNDATION SECTION

3/4" = 1'-0"

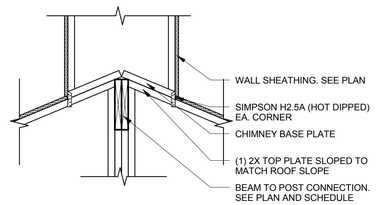


TOP VIEW



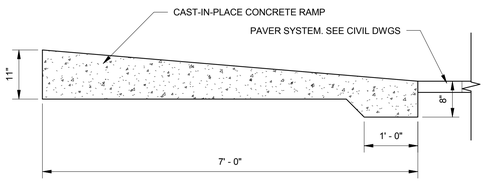
1 TIMBER WALL (EXTERIOR, LOAD BEARING)

3/4" = 1'-0"



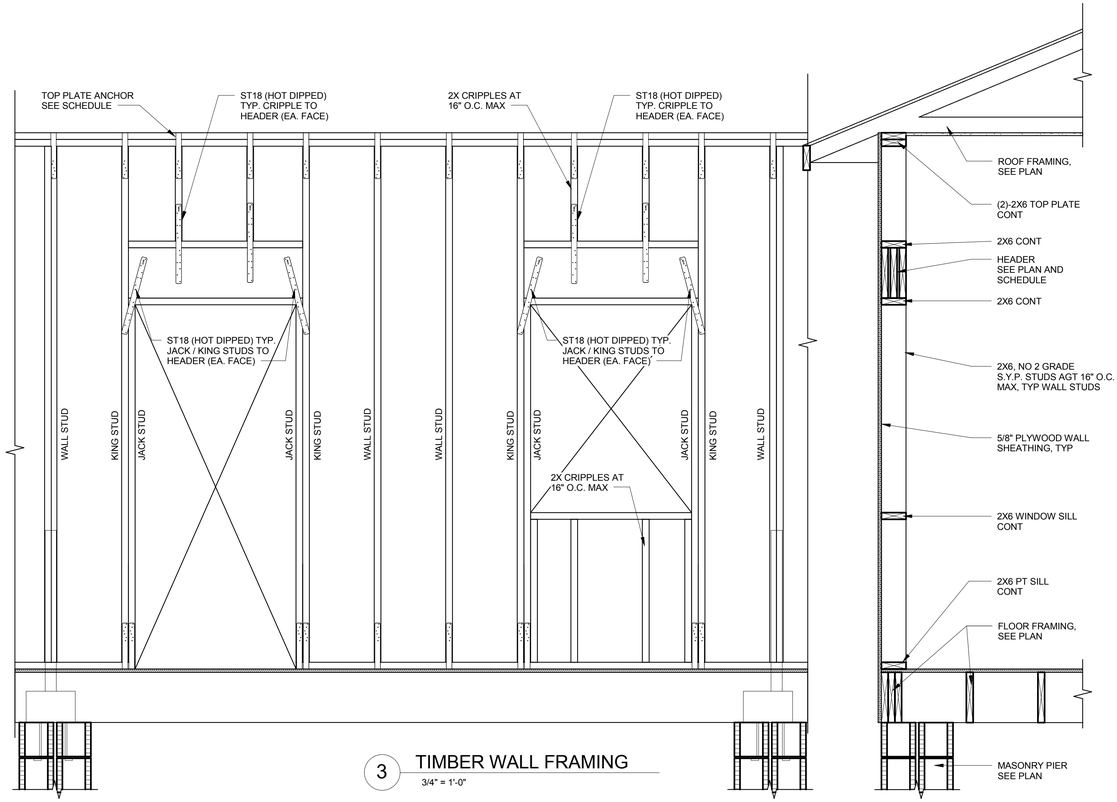
4 CHIMNEY DETAIL

3/4" = 1'-0"



5 CONCRETE RAMP

3/4" = 1'-0"



3 TIMBER WALL FRAMING

3/4" = 1'-0"

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SECTIONS & DETAILS

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CW	TLA	TLA

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DESIGN CRITERIA

ALL STRUCTURAL WORK FOR THIS PROJECT HAS BEEN ENGINEERED IN ACCORDANCE WITH: THE FLORIDA BUILDING CODE, 2010 AND ASCE-7 10 "MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES.

ALL CONSTRUCTION SHALL COMPLY WITH THE REQUIREMENTS AND SPECIFICATIONS OF THESE CODES AND THEIR REFERENCED STANDARDS, AND ALL OTHER APPLICABLE FEDERAL, STATE, AND LOCAL CODES, STANDARDS, REGULATIONS AND LAWS.

THIS STRUCTURE IS LOCATED IN A "WIND BORNE DEBRIS REGION" AS DEFINED BY THE FLORIDA BUILDING CODE AND THE STRUCTURE HAS BEEN DESIGNED AS AN "ENCLOSED" BUILDING. ALL EXTERIOR WALL OPENINGS SHALL HAVE EQUIPMENT OR COVERINGS WHICH MEET THE IMPACT RESISTANT REQUIREMENTS OF FBC "PROTECTION OF OPENINGS". CURRENT NOA'S (NOTICE OF ACCEPTANCE) CERTIFICATIONS SHALL BE SUBMITTED FOR ALL WINDOWS, DOORS AND COVERINGS.

THE GENERAL CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION SHOWN ON THE DRAWINGS WITH CIVIL, ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS. ANY QUESTIONS OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD BEFORE STARTING CONSTRUCTION.

ALL STRUCTURAL WORK SHALL BE INSPECTED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE AND ALL LOCAL ORDINANCES. THE OWNER SHALL ENGAGE AN EXPERIENCED, QUALIFIED INSPECTION AGENCY, SUBJECT TO THE REVIEW BY THE ARCHITECT OR ENGINEER TO PERFORM ALL INSPECTION WORK AS REQUIRED.

THE CONTRACTOR SHALL PROTECT ANY ADJACENT PROPERTY, HIS OWN WORK AND THE PUBLIC FROM HARM. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE CONSTRUCTION MEANS AND METHODS, AND JOB SITE SAFETY INCLUDING ALL OSHA REQUIREMENTS.

THE STRUCTURE IS DESIGNED TO BE STRUCTURALLY SOUND WHEN COMPLETED. PRIOR TO COMPLETION, THE CONTRACTOR IS RESPONSIBLE FOR STABILITY AND TEMPORARY BRACING, INCLUDING, BUT NOT LIMITED TO, LOAD BEARING CONCRETE AND MASONRY WALLS, STRUCTURAL STEEL FRAMES, FLOOR AND ROOF FRAMING. WHEREVER THE CONTRACTOR IS UNSURE OF THE REQUIREMENTS, THE CONTRACTOR SHALL RETAIN A FLORIDA LICENSED ENGINEER TO DESIGN AND INSPECT THE TEMPORARY BRACING AND STABILITY OF THE STRUCTURE DURING CONSTRUCTION

DESIGN GRAVITY LOADS

LOCATION	UNIFORM LIVE LOAD	CONCENTRATED LIVE LOAD	UNIFORM DEAD LOAD
ROOF	20 PSF	-	-
OFFICE	50 PSF	2000 LBS	-
STAIRS	100 PSF	300 LBS	-

DESIGN WIND LOADS

WIND SPEED: (3 SECOND GUST) (ULTIMATE)	V=160 MPH
RISK CATEGORY:	II
EXPOSURE:	D
MEAN ROOF HEIGHT:	25 FT.
INTERNAL PRESSURE COEFFICIENTS:	+/- 0.18

FOUNDATIONS AND SOIL PREP

FOUNDATIONS HAVE BEEN DESIGNED TO BEAR ON UNDISTRUBED SOILS OR BE PROPERLY COMPACTED FILL HAVING AN ALLOWABLE BEARING CAPACITY OF 2000 PSF.

THE CONTRACTOR SHALL OBSERVE WATER CONDITIONS AT THE SITE AND TAKE THE NECESSARY PRECAUTIONS TO INSURE THAT THE FOUNDATION EXCAVATIONS REMAIN DRY DURING CONSTRUCTION. PROVIDE FOR DEWATERING AS NECESSARY.

THE OWNER/CONTRACTOR SHALL RETAIN THE SERVICES OF A PROFESSIONAL GEOTECHNICAL ENGINEER, SUBJECT TO THE APPROVAL OF THE ARCHITECT, TO INSPECT THE FOUNDATIONS, BEARING LEVELS, ETC., AND VERIFY THAT THE MATERIAL ON WHICH FOUNDATIONS BEAR HAS AT LEAST THE ABOVE NOTED CAPACITY NOTED ABOVE:

AS A MINIMUM, ALL SOILS BELOW THE BUILDING SHALL BE COMPACTED TO WITHIN TWO FEET BELOW BEARING TO 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY.

TIMBER

ALL WOOD FRAMING CONSTRUCTION, WORKMANSHIP AND MATERIALS (INCLUDING TRUSSES) SHALL CONFORM WITH THE SPECIFICATIONS AND REQUIREMENTS OF THE REFERENCES LISTED BELOW:

"AMERICAN INSTITUTE OF TIMBER CONSTRUCTION"

"NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION"

ALL LUMBER SHALL BE FACTORY MARKED WITH GRADE STAMP OF INSPECTION AGENCY, SHOWING COMPLIANCE WITH GRADING RUL REQM.

GALVANIZED METAL HANGERS AND FRAMING ANCHORS SHALL BE USED AND SHALL BE FASTENED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.

ANCHORING AND NAILING NOT SPECIFIED SHALL COMPLY WITH THE NAILING SCHEDULE PER THE FBC.

ALL STRUCTURAL LUMBER SHALL BE AS A MINIMUM, NO. 2 GRADE SOUTHERN YELLOW PINE, AND SHALL HAVE AT LEAST THE FOLLOWING MINIMUM ALLOWABLE DESIGN STRESSES AND MODULUS OF ELASTICITY AT A MAXIMUM MOISTURE CONTENT OF 19%:

TIMBER DESIGN PROPERTIES

SIZE	Fb (BENDING)	Fv (SHEAR)	Fc (COMPR)	Ft (TENSION)	E
2X4	1500 PSI	90 PSI	1650 PSI	825 PSI	1,600,000
2X6	1250 PSI	90 PSI	1600 PSI	725 PSI	1,600,000
2X8	1200 PSI	90 PSI	1550 PSI	650 PSI	1,600,000
2X10	1050 PSI	90 PSI	1500 PSI	575 PSI	1,600,000
2X12	975 PSI	90 PSI	1450 PSI	550 PSI	1,600,000

CAST IN PLACE CONCRETE

ALL REINFORCED CONCRETE WORK SHALL BE IN CONFORMANCE WITH: ACI 318, 08, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" ACI 301, 08, "SPECIFICATIONS FOR STRUCTURAL CONCRETE"

PRIOR TO CONCRETE PLACEMENT, THE CONTRACTOR SHALL SUBMIT A CONCRETE MIX DESIGN PREPARED IN ACCORDANCE WITH THESE SPECIFICATIONS TO THE EOR FOR REVIEW.

SLAB ON GRADE CONSTRUCTION:
CONTRACTOR SHALL PROVIDE EITHER A CHEMICAL OR WET CURING PROCESS TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO STARTING WORK.

ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE, (145 PCF +/-)
ALL CEMENT SHALL CONFORM TO ASTM C150, TYPE 1.
MAXIMUM AGGREGATE SIZE SHALL BE 1 1/2" INCHES FOR FOOTINGS.
3/4" FOR ALL WALLS AND SLABS AND SHALL CONFORM TO ASTM C33.

ALL CONCRETE WORK SHALL BE EXECUTED IN STRICT ACCORDANCE WITH SECTIONS 5.7 THRU 5.13 OF ACI 318. THE CONTRACTOR SHALL OBTAIN AND READ THESE SECTIONS OF THE CODE PRIOR TO PLACING CONCRETE.

CONCRETE REINFORCING:
DEFORMED BARS: ASTM A615, GRADE 60
WELDED WIRE FABRIC: ASTM A185
(PROVIDE IN FLAT SHEETS) USE PLASTIC CHAIRS FOR SLAB ON GRADE
EPOXY COATED: ASTM A775

REINFORCING PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT EXCEPT AS SHOWN ON THE DRAWINGS OR PERMITTED BY THE EOR.

ALL CONCRETE REINFORCEMENT SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED AND SPACED IN FORMS AND SECURED IN PLACE IN ACCORDANCE WITH ACI 315, "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT"

REINFORCING LAPS LENGTHS SHALL BE DETAILED PER THE FOLLOWING:
CRSI DESIGN HANDBOOK 2002 OR LATER
TABLE A-1: "DEFINITIONS OF LAP CATEGORIES"
TABLE A-3 (a) THRU (f): "TENSION LAP SPLICE LENGTHS"

UNLESS NOTED OTHERWISE ON PLAN/SCHEDULE, ALL LAP SPLICE LENGTHS SHALL BE CLASS B FROM THE APPROPRIATE CATEGORY DEFINED IN TABLE A-1 NOTED ABOVE

SPLICES IN TOP REINFORCEMENT SHALL BE MADE AT MIDSPAN.
SPLICES IN BOTTOM REINFORCEMENT SHALL BE OVER SUPPORTS.
SPLICES IN WALL FOOTING REINF SHALL BE: CLASS "A" TENSION, CATEGORY 3 WELDED WIRE FABRIC: 8" LAP MIN.

TOP BARS IN BEAMS SHALL TERMINATE IN A STD ACI HOOK AT DISCONT.ENDS

ALL REINFORCING SHALL BE HELD SECURELY IN POSITION WITH STANDARD ACCESSORIES DURING PLACEMENT OF CONCRETE. REINFORCING SUPPORTS FOR ALL EXOSED CONCRETE SHALL BE GALVANIZED WITH PLASTIC COATED FEET.

ALL COLUMN TIES AND BEAM STIRRUPS SHALL HAVE 135 DEGREE HOOKS. SEE TYPICAL BEAM DIAGRAMS AND SCHEDULE.

CONTRACTOR SHALL VERIFY DIMENSIONS AND LOCATIONS OF ALL SLOTS, PIPE SLEEVES, ETC., AS REQUIRED FOR MECHANICAL TRADES BEFORE CONCRETE IS PLACED.

CALCIUM CHLORIDE SHALL NOT BE USED IN ANY FORM.

CONCRETE TESTING:

FOUR SETS OF TEST CYLINDERS SHALL BE MADE AND TESTED FOR EACH 50 YARDS OR LESS OF CONCRETE POURED IN ANY DAY FOR EACH DESIGN MIX. TESTS SHALL BE MADE FOR 7 DAYS, TWO AT 28 DAYS AND ONE HELD IN RESERVE. FIELD CURED CYLINDERS SHALL BE CURED UNDER FIELD CONDITIONS IN ACCORDANCE WITH ASTM C31.

THE SAMPLES USED TO FABRICATE TEST SPECIMENS SHALL BE OBTAINED IN ACCORDANCE WITH ASTM C172.

IF CONCRETE IS DEPOSITED ON THE JOB USING A PUMP, THEN SAMPLES SHALL BE TAKEN FROM THE END OF THE PUMP. DO NOT SAMPLE FROM THE MIXING TRUCK.

CONCRETE MIX DESIGNS

LOCATION	MIN f'c AT 28 DAYS	MAX W/C RATIO	SLUMP *	% OF AIR ENTRAIN.
FOOTINGS,	3000 PSI	0.50	5"	4.0
* - PLUS / MINUS 1"				

MASONRY

ALL MASONRY WORK SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" (ACI 530) AND THE "SPECIFICATIONS FOR MASONRY STRUCTURES" (ACI 530.1) OF THE AMERICAN CONCRETE INSTITUTE.

CONCRETE MASONRY UNITS SHALL BE NORMAL WEIGHT, HOLLOW, LOAD BEARING UNITS CONFORMING TO ASTM C90, TYPE N-II

MORTAR SHALL CONFORM TO ASTM C270, TYPE M OR S.
ALL PORTLAND CEMENT SHALL CONFORM TO ASTM C150 TYPE I.
LIME SHALL CONFORM TO ASTM C207.
ALL MASONRY CEMENT SHALL CONFORM TO ASTM C91.
THICKNESS OF MORTAR SHALL NOT EXCEED 5/8".
FULL BEAD AND HEAD JOINTS SHALL BE USED.

MASONRY GROUT SHALL CONFORM TO ASTM C476.
Fc OF GROUT SHALL BE 3000 PSI MIN.
THE MAXIMUM AGGREGATE SIZE SHALL BE 3/8" GRADED TO PRODUCE FINE GROUT IN CONFORMANCE WITH ASTM C476 AND C404.
SLUMP OF GROUT SHALL BE 8 TO 11 INCHES.

MINIMUM 28 DAY ULTIMATE COMPRESSIVE STRENGTH (fm=1500 PSI)

MASONRY REINFORCING SHALL CONFORM TO ASTM A615, GRADE 60.

EXTERIOR WALL OPENINGS (WOOD)

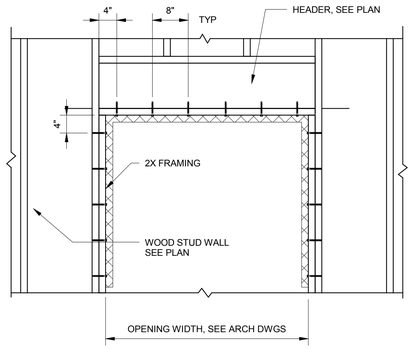
ALL EXTERIOR WALL OPENING ASSEMBLIES SHALL BE DESIGNED TO RESIST THE COMPONENT AND CLADDING WIND LOADS SHOWN ON THESE DRAWINGS.

ALL EXTERIOR WALL OPENING ASSEMBLIES SHALL BE TESTED BY AN APPROVED INDEPENDENT TESTING LABORATORY AND SHALL BE LABELED WITH AN APPROVED LABEL IDENTIFYING THE MANUFACTURER, PERFORMANCE CHARACTERISTICS, AND APPROVED PRODUCT CERTIFYING AGENCY, TESTING LABORATORY, EVALUATION ENTITY OR MIAMI DADE PRODUCT APPROVAL TO INDICATE COMPLIANCE WITH THE REQUIREMENTS OF ONE OF THE FOLLOWING SPECIFICATIONS:

ANSI / AAMA / NWWDA 101 /I.S 2 OR 101/I.S. 2.NAFS OR
AAMA / WDMA / CSA 101 / I.S. 2 / A440 OR
TAS 202 (HVHZ SHALL COMPLY WITH TAS 202 UTILIZING ASTM E1300-02 OR FBC SECTION 2404
ALL EXTERIOR WALL OPENING ASSEMBLIES SHALL BE ANCHORED TO THE STRUCTURE PER THE MANUFACTURER'S INSTALLATION REQUIREMENTS AND AS A MINIMUM THE REQUIREMENTS SHOWN BELOW, (WHICH EVER IS MORE STRINGENT)

BUCK ANCHORS SHALL BE: 1/4" DIA SDS SCREWS (SIZED TO PROVIDE 3" MIN PENETRATION INTO JAMB (SIMPSON STRONG TIE)

PROVIDE ANCHORS WITHIN 4" OF ALL CORNERS FOR BOTH VERTICAL AND HORIZONTAL BUCKS, AND AT 8" O.C. FOR THE LENGTH OF EACH BUCK.



EXCAVATION, BACKFILL AND DEWATERING

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING LOGGING, SHORING, AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL BUILDING DEPARTMENT AND OSHA REGULATIONS. DO NOT EXCAVATE WITHIN ONE FOOT OF THE ANGLE OF REPOSE OF ANY SOIL BEARING FOUNDATION UNLESS THE FOUNDATION IS PROPERLY PROTECTED AGAINST SETTLEMENT.

DO NOT BACKFILL AGAINST WALLS UNTIL 7 DAYS AFTER THE WALLS ARE BRACED BY THE STRUCTURE OR ARE TEMPORARILY BRACED. DO NOT BACKFILL UNTIL AFTER COMPLETION AND INSPECTION OF ANY WATERPROOFING.

THE CONTRACTOR IS RESPONSIBLE FOR THE DISPOSAL OF ALL ACCUMULATED WATER IN A MANNER THAT DOES NOT INCONVENIENCE OR DAMAGE THE WORK.

PRE-ENGINEERED TIMBER TRUSSES

PRE-ENGINEERED TIMBER TRUSSES SHALL CONFORM TO THE MOST CURRENT APPLICABLE VERSION OF THE DESIGN SPECIFICATIONS FOR LIGHT METAL PLATE CONNECTED WOOD ROOF TRUSSES, OF THE TRUSS PLATE INSTITUTE, INC. AND THE NATIONAL DESIGN SPECIFICATIONS FOR STRESS GRADE LUMBER AND ITS FASTENING, OF THE NATIONAL FOREST PRODUCTS ASSOCIATION.

THE DEFLECTION OF THE FLOOR AND ROOF TRUSSES UNDER THE INDICATED LOADS AND AT THE SPAN AND SPACINGS SHOWN ON THE CONTRACT DRAWINGS SHALL MEET THE FOLLOWING CRITERIA:
DEFLECTION DUE TO LIVE LOADS SHALL NOT EXCEED: L/360.
DEFLECTION DUE TO TOTAL LOADS SHALL NOT EXCEED: L/240

ALL TRUSS FRAMING MEMBERS SHALL BE AS A MINIMUM, NO. 3 GRADE SOUTHERN YELLOW PINE, 19% M.C.

THE WOOD TRUSS MANUFACTURER SHALL SPECIFY AND PROVIDE ALL BRACING AT TOP AND BOTTOM CHORDS REQUIRED TO STABILIZE THE FLOOR OR ROOF STRUCTURE DURING AND AFTER CONSTRUCTION, IN ADDITION TO THE BRACING INDICATED ON THE STRUCTURAL DRAWINGS.

THE WOOD TRUSS MANUFACTURER SHALL SUBMIT STRUCTURAL CALCULATIONS STAMPED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF FLORIDA FOR ALL TRUSS TYPES, WHICH INDICATE DESIGN LOADS, TRUSS CAPACITIES AND DEFLECTIONS.

THE CONTRACTOR SHALL FOLLOW ANSI/TPI "HIB-91" FOR ALL TEMPORARY BRACING REQUIRED TO ERECT AND STABILIZ THE TRUSSES DURING CONSTRUCTION.

PLYWOOD SHEATHING

ALL PLYWOOD SHALL CONFORM TO THE MOST CURRENT APPLICABLE SPECIFICATION AND SUPPLEMENTS OF THE AMERICAN PLYWOOD ASSOCIATION.

ALL PLYWOOD WALL AND ROOF SHEATHING SHALL BE XX INCH DOC PS1 OR PS2, "APA RATED SHEATHING", (WITH A TRADEMARK OF AN APPROVED TESTING AND GRADING AGENCY) 5 PLY, 32/16 SPAN RATING, EXTERIOR GRADE, EXPOSURE 1 GLUE.

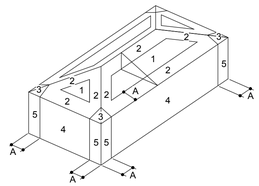
ALL PLYWOOD PANEL END JOINTS SHALL OCCUR OVER SUPPORTS AND SHALL BE STAGGERED ONE HALF PANEL LENGTH FROM ADJACENT PANELS.

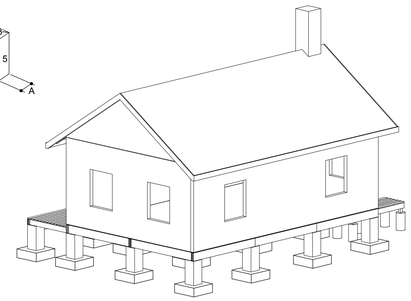
ALL PLYWOOD DENOTED AS FIRE-REARDANT TREATED PLYWOOD SHALL BE PRESSURE IMPREGNATED TO COMPLY WITH AMERICAN WOOD PRESERVERS' ASSOCIATION (AWPA) C27 FOR INTERIOR TYPE A TREATMENT.

SEE PLANS FOR ATTACHMENT SCHEDULES AND DIAGRAMS.

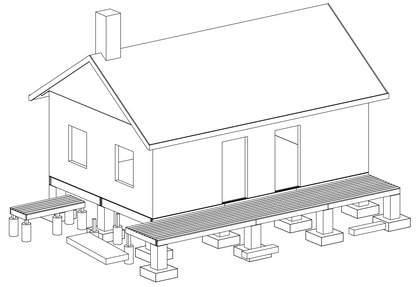
COMPONENT AND CLADDING DESIGN WIND PRESSURES

ZONE	AREA (FT2)	(+), PRESS. (PSF)	(-) PRESS. (PSF)
1	10	25.9	-41.1
1	20	23.6	-40.0
1	50	20.6	-38.5
1	100	18.3	-37.3
2	10	25.9	-71.6
2	20	23.6	-65.9
2	50	20.6	-58.3
2	100	18.3	-52.6
3	10	25.9	-105.9
3	20	23.6	-99.1
3	50	20.6	-89.9
3	100	18.3	-83.1
4	10	45.0	-48.8
4	20	43.1	-46.9
4	50	40.4	-44.2
4	100	33.1	-41.9
5	10	45.0	-60.2
5	20	43.1	-56.0
5	50	40.4	-50.7
5	100	33.1	-46.9

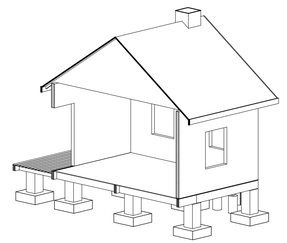




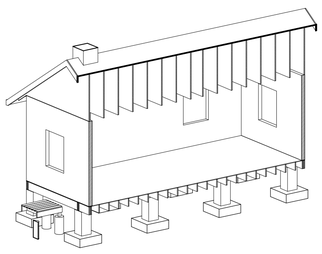
A 3D VIEW 1



B 3D VIEW 2



C 3D VIEW 3



D 3D VIEW 4

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THOMAS L. ADAMS, PE
PE #55343

REVISIONS AND UPDATES

10/01/14		90% CONSTRUCTION DOCUMENTS
06/18/14		PROGRESS SET
03/21/14		DESIGN DEVELOPMENT SET
09/20/12		SCHEMATIC PLANS

CAPE CANAVERAL LIGHTHOUSE FOUNDATION

LIGHTHOUSE KEEPERS COTTAGES

LIGHTHOUSE RD — CAPE CANAVERAL AIRFOCE STATION, FL

GENERAL NOTES

drawn CW | checked TLA | approved TLA

RZK AA-C001568
JACK J. ROOD, ARCHITECT
FL. REG. #AR0007947

FOR REVIEW
NOT FOR CONSTRUCTION

job no. 2012059

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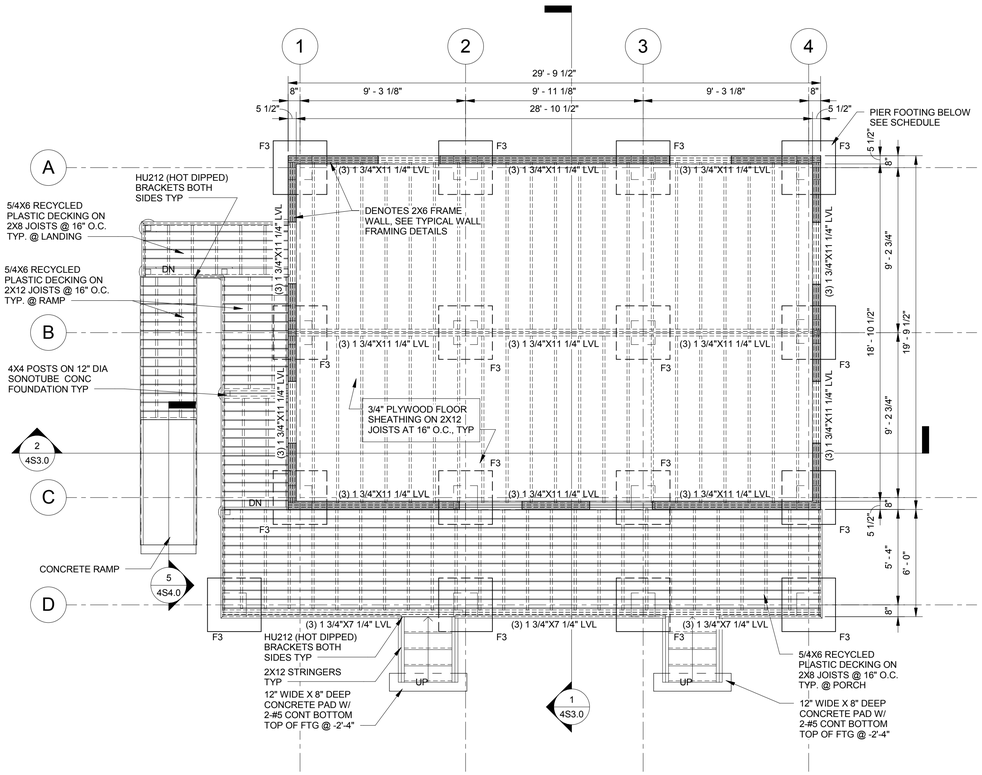

1 LEVEL 1 FRAMING & FOUNDATION PLAN

1/4" = 1'-0"

PLAN NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR ALL WALL OPENING DIMENSIONS
2. SEE TYPICAL WALL FRAMING DETAILS FOR HEADERS AND STRAP REQUIREMENTS
3. ALL WINDOWS AND DOORS SHALL BE DESIGNED TO A MINIMUM DESIGN PRESSURE OF 56 psf.

PIER FOOTING SCHEDULE

MARK	WIDTH X LENGTH	DEPTH	REINFORCEMENT
F3	3'-0" X 3'-0"	1'-4"	(4)-#5 CONT. E.W. BOTT.

PLYWOOD FLOOR SHEATHING NOTES:

ALL PLYWOOD FLOOR SHEATHING SHALL BE:
3/4" PLYWOOD SHEATHING, DOC PS-1 OR PS-2 APA RATED AND STAMPED, 24/16 SPAN RATED, EXPOSURE 1 GLUE, 7 PLY MINIMUM, ATTACHED PER THE SCHEDULE BELOW

FLOOR SHEATHING NAILING SCHEDULE

LOCATION	NAIL SIZE	TYP SPACING	PERIMETER
ALL SUPPORTS	10d COMMON	6" O.C.	3" O.C.

NOTE: ALL NAILS SHALL PENETRATE 1" MIN INTO TOP CHORD OF TRUSS

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LEVEL 1 FRAMING & FOUNDATION PLAN

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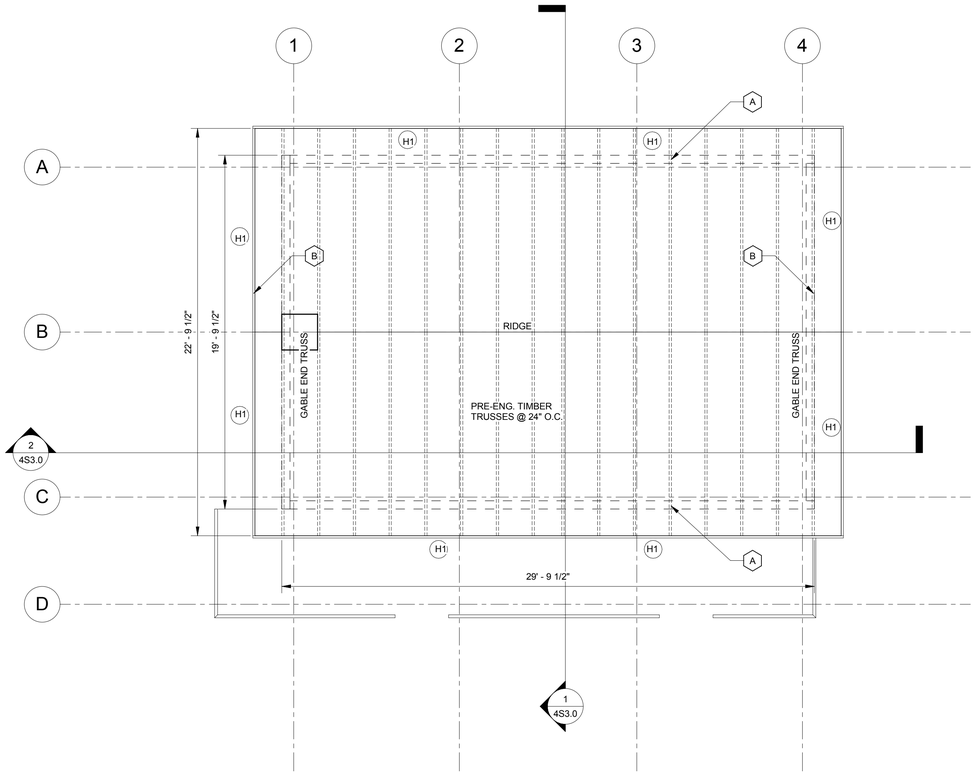


1 ROOF FRAMING PLAN

1/4" = 1'-0"

PLAN NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR ALL ROOF OVERHANGS AND SLOPES
2. (X) DENOTES TRUSS CONNECTION TYPE, SEE SCHEDULE
3. (H1) - DENOTES (3) 2X8 HEADER SEE 3/S5.0

PLYWOOD ROOF SHEATHING NOTES:

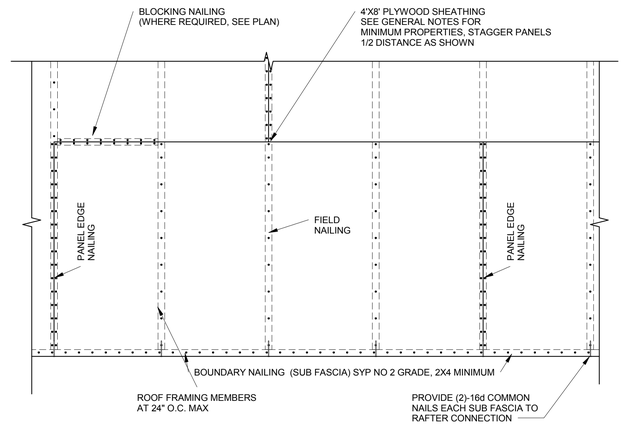
ALL ROOF AND WALL SHEATHING SHALL BE:
5/8" PLYWOOD SHEATHING, DOC PS-1 OR PS-2 APA RATED AND STAMPED, 48/24 SPAN RATED, EXPOSURE 1 GLUE, 5 PLY MINIMUM, ATTACHED PER THE SCHEDULE BELOW

ROOF SHEATHING NAILING SCHEDULE

LOCATION	NAIL SIZE	SPACING
BOUNDARY	8d	2 1/2"
PANEL EDGE	8d	2 1/2"
FIELD	8d	4"
BLOCKING (WHERE REQD, SEE PLAN)	8d	3"

MINIMUM NAIL PROPERTIES:

8d RING SHANK NAILS:
0.113" NOMINAL SHANK DIAMETER
0.012" RING DIAMETER
16-20 RINGS PER INCH
0.28" FULL ROUND HEAD DIAMETER
2" MINIMUM NAIL LENGTH



TRUSS ANCHOR SCHEDULE

CONN. MARK	SIMPSON MODEL	FASTENER REQUIREMENTS		CAPACITY (LBS)
		TRUSS	SUPPORT	
(A)	H10A	(9)-10d X 1 1/2" NAILS	(9)-10d X 1 1/2" NAILS	1140
(B)	HGA10	?	?	?

ALL ANCHORS TO RECEIVE 'HOT DIPPED' FINISH.

ALL ANCHORS SHALL BE INSTALLED TO MEET THE MANUFACTURER'S INSTALLATION REQUIREMENTS. PROVIDE SHIMS AS REQUIRED TO MEET TOLERANCES.

TRUSS ANCHORS INDICATED ARE PRELIMINARY AND NOT INTENDED TO BE FINAL. ANCHORS SHOWN ARE FOR PRELIMINARY PRICING ONLY. ALL FINAL UPLIFTS SHALL BE VERIFIED WITH APPROVED PRE-ENGINEERED WOOD TRUSS SHOP DRAWINGS PRIOR TO ORDERING MATERIALS OR SETTING OF TRUSS ANCHORS. CONTRACTOR TO COORDINATE FINAL TRUSS CONFIGURATION AND UPLIFT LOADS W/ ANCHORS SELECTED AND SHALL
SUBMIT FOR REVIEW AND APPROVAL TO ENGINEER OF RECORD IF ALTERNATE CONNECTORS ARE USED.

SEE TRUSS MANUFACTURER'S DRAWINGS FOR ALL TRUSS TO TRUSS CONNECTIONS

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ROOF FRAMING PLAN

drawn	checked	approved
CW	TLA	TLA

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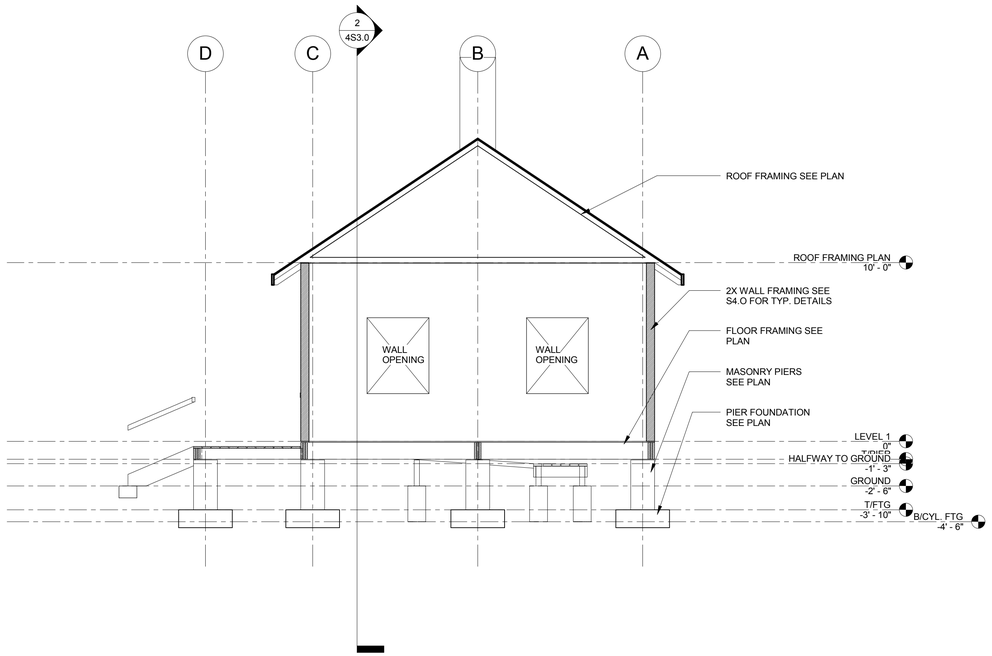
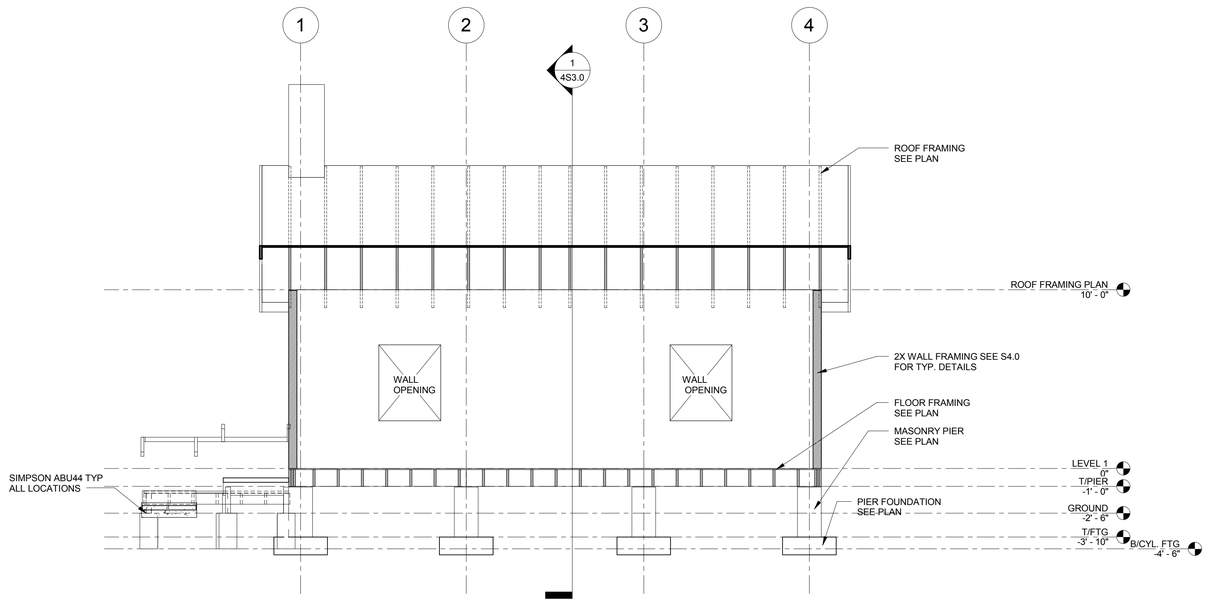


1 BUILDING SECTION 1

1/4" = 1'-0"



2 BUILDING SECTION 2

1/4" = 1'-0"

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BUILDING SECTIONS

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CW	TLA	TLA

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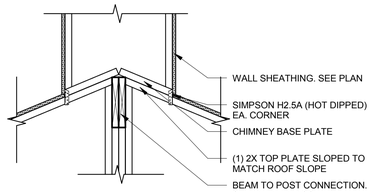
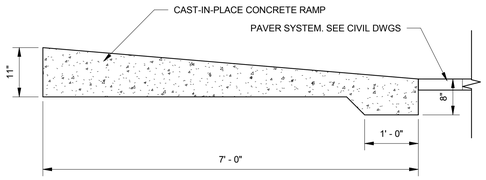
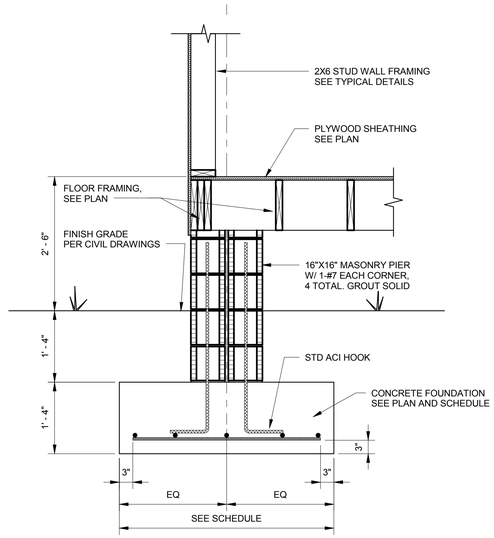


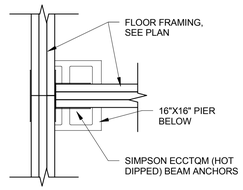
4 CHIMNEY DETAIL
3/4" = 1'-0"



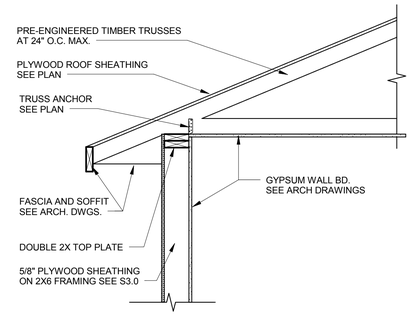
5 CONCRETE RAMP
3/4" = 1'-0"



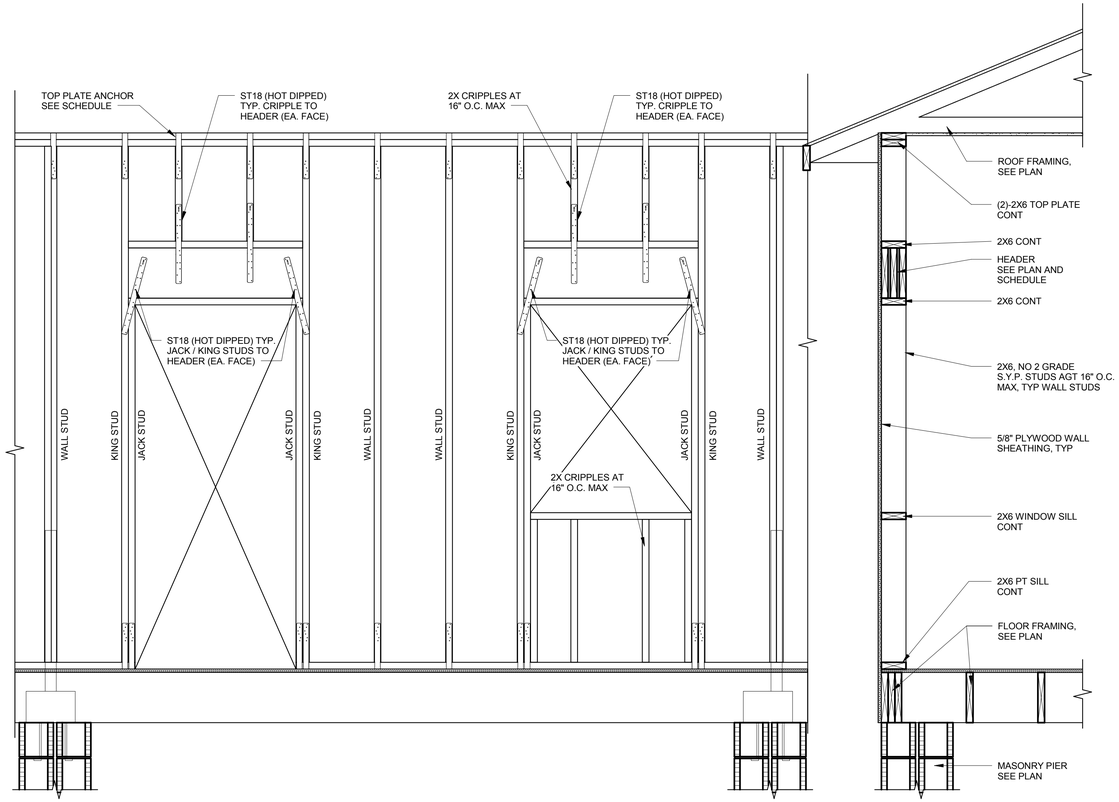
1 PIER AND FOUNDATION SECTION
3/4" = 1'-0"



TOP VIEW



2 TIMBER WALL (EXTERIOR, LOAD BEARING)
3/4" = 1'-0"



3 TIMBER WALL FRAMING
3/4" = 1'-0"

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SECTIONS AND DETAILS

drawn	checked	approved
CW	TLA	TLA

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PLUMBING GENERAL NOTES AND SPECIFICATIONS

1. PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, AND TOOLS TO PERFORM ALL WORK NECESSARY FOR THE COMPLETE EXECUTION OF THE PLUMBING WORK AS SHOWN ON THE DRAWINGS. PIPING SHALL ESSENTIALLY BE ROUTED AND LOCATED AS INDICATED ON THE DRAWINGS. HOWEVER, ACTUAL PLACEMENT SHALL BE VERIFIED BY CONFIRMING EXACT LOCATION OF STRUCTURES AND OTHER UTILITIES IN THE FIELD AND BY CAREFUL LAYOUT PRIOR TO EXECUTION OF THE WORK. PLUMBING DRAWINGS ARE GENERALLY DIAGRAMMATIC AND SHOULD NOT BE SCALED.

2. PROVIDE WORK NOT SPECIFICALLY SHOWN OR SPECIFIED, YET REQUIRED TO INSURE PROPER AND COMPLETE OPERATIONS OF ALL SYSTEMS AND TO SATISFY THE DESIGN INTENT IN THE WORK AND TO COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS.

3. LABOR FOR THE INSTALLATION OF MATERIALS AND EQUIPMENT FURNISHED UNDER THE PLUMBING CONTRACTORS' SCOPE OF WORK SHALL BE PERFORMED BY EXPERIENCED MECHANICS OF THE PROPER TRADE AND ALL WORKMANSHIP SHALL BE FIRST CLASS AND SHALL BE IN COMPLIANCE WITH THE SPECIFIC REQUIREMENTS OF THE CONTRACT DRAWINGS.

4. ALL DISCREPANCIES ON DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IN WRITING PRIOR TO SUBMISSION OF BIDS. SUBMISSION OF A BID CONSTITUTES ACCEPTANCE OF FIELD CONDITIONS.

5. ALL WORK SHALL BE IN ACCORDANCE WITH, BUT NOT LIMITED TO, THE LATEST ADOPTED EDITION OF THE FOLLOWING CODES AND STANDARDS:

   FLORIDA BUILDING CODE, (FBC);
   NATIONAL FIRE PROTECTION ASSOCIATION, (NFPA);
   AMERICANS WITH DISABILITIES ACT, (ADA);
   AMERICAN SOCIETY OF MECHANICAL ENGINEERS, (ASME);
   AMERICAN SOCIETY FOR TESTING AND MATERIALS, (ASTM);
   AMERICAN NATIONAL STANDARDS INSTITUTE, (ANSI);
   UNDERWRITERS LABORATORIES, (UL);
   ALL LOCAL CODES, ORDINANCES, REGULATIONS;
   THE AUTHORITY HAVING JURISDICTION.

6. ALL MATERIALS PROVIDED BY THE CONTRACTOR SHALL BE NEW AND FREE OF DEFECTS AND SHALL BE UL LISTED FOR THE INTENDED APPLICATION.

7. CONTRACTOR SHALL OBTAIN AND FURNISH ALL PERMITS, AND ARRANGE FOR ALL REQUIRED INSPECTIONS.

8. CONTRACTOR SHALL INSPECT THE SITE FOR FIELD VERIFICATION OF ALL ASPECTS OF THE PROJECT PRIOR TO BIDDING.

9. CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER TRADES.

10. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING FIRE RATING AND WEATHERPROOFING INTEGRITY OF ALL PIPING AND PENETRATIONS.

11. DO NOT PENETRATE WALL FOOTINGS WITH PIPING. COORDINATE WITH GENERAL CONTRACTOR TO DROP FOOTINGS AS REQUIRED TO CLEAR PLUMBING SERVICES. WHERE ABSOLUTELY NECESSARY, ALL PIPING PENETRATING BEARING WALL OR FOOTING MUST BE SLEEVED AND LOCATION APPROVED BY THE STRUCTURAL ENGINEER.

12. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY SUPPORTING DEVICES FOR ALL FIXTURES INCLUDED IN CONTRACT, OR HEREIN SPECIFIED, OR OTHERWISE.

13. WALL BRACKETS, HANGERS, SUPPORTS, ETC. SHALL BE PROVIDED WHERE REQUIRED IN ACCORDANCE WITH THE BEST STANDARD PRACTICE OF THE TRADE AND AS PER CODE. ADDITIONAL SUPPORTS SHALL BE PROVIDED TO TRANSMIT LOADS TO THE MAIN STRUCTURE WHERE REQUIRED. CPVC PIPING SUPPORTS SHALL BE 3'-0" ON CENTER FOR ½" THRU 1" AND 4'-0" ON CENTER FOR 1-½" AND LARGER. ALL EXPOSED SUPPORTS SHALL BE HOT DIPPED GALVANIZED OR FIBERGLASS REINFORCED "UNISTRUT" TYPE INCLUDING HARDWARE.

14. ROUTE ALL PIPING CONCEALED ABOVE CEILINGS, WITHIN WALLS, OR IN CHASES. PIPING EXPOSED SHALL BE SLOPED AND PAINTED TO MATCH ARCHITECTURAL FINISHES. PIPING IN MECHANICAL ROOMS MAY BE EXPOSED.

15. SEE ARCHITECTURAL DRAWINGS FOR EXACT PLUMBING FIXTURE LOCATIONS, MOUNTING HEIGHTS, DIMENSIONS AND ADDITIONAL REQUIREMENTS NOT COVERED ON THESE DRAWINGS.

16. STORM DRAIN, CONDENSATE DRAIN, SANITARY WASTE AND VENT PIPING SHALL BE COLLECTED AND TERMINATED AT A POINT SHOWN ON THE DRAWINGS. PIPING SHALL BE SCHEDULE 40 TYPE DWV PVC WITH SOLVENT WELD JOINTS, EXCEPT FOR RETURN AIR PLENUM AREAS WHERE SERVICE WEIGHT CAST IRON PIPE WITH HUB AND SPIGOT FITTINGS OR PVC PIPING WITH 1" THICK FIRE WRAP INSULATION SEALED TO PROVIDE FS/SD = 25/50 SHALL BE USED. FIRE WRAP INSULATION SHALL BE 5A FIRE BARRIER PLENUM WRAP BY 3M OR APPROVED EQUIVALENT.

17. ALL DRAINAGE PIPING 3" AND LARGER SHALL HAVE A MINIMUM SLOPE OF ⅛" PER FOOT, PIPING 2-½" AND SMALLER SHALL HAVE A MINIMUM SLOPE OF ¼" PER FOOT UNLESS OTHERWISE NOTED.

18. VENT PIPING SHOWN ON FLOOR PLANS IS ONLY INDICATIVE EXCEPT FOR VTR LOCATIONS.

19. HOT AND COLD WATER SUPPLY PIPING AND DRAIN PIPING UNDER HANDICAPPED LAVATORIES SHALL BE INSULATED PER AMERICANS WITH DISABILITIES ACT, WITH FACTORY FABRICATED SEAMLESS MICROBIAL PVC RESIN INSULATION.

20. CONTRACTOR SHALL INSTALL DIELECTRIC UNIONS AT CONNECTIONS OF DISSIMILAR METALS.

21. VALVES AND FITTINGS SHALL BE OF SAME SIZE AS LINE IN WHICH THEY ARE INSTALLED.

22. INSTALL WATER HAMMER ARRESTORS AT EACH FIXTURE, OR BATTERY OF FIXTURES WHERE REQUIRED. ARRESTORS SHALL BE FACTORY FABRICATED. INSTALL ARRESTORS AND SIZE PER PLUMBING AND DRAINAGE INSTITUTE STANDARD P.D.I. WH-201. AIR CHAMBERS SHALL NOT BE CONSIDERED AN EQUAL TO WATER HAMMER ARRESTORS AS SPECIFIED.

23. ALL WATER SUPPLY AND DRAINAGE LINES SHALL BE INSTALLED AS CLOSE TO PLANS AS POSSIBLE WITH NO CHANGE IN SIZING.

24. BALL VALVES ¾" THROUGH 2" SHALL BE TWO PIECE – 600 WOG, TEFLON SEATS, ANSI 316 STAINLESS STEEL BALL AND STEM (EXTENSION STEM ON INSULATED HOT WATER AND TEMPERED HOT WATER), BRONZE BODY WITH THREADED OR SOLDER ENDS.

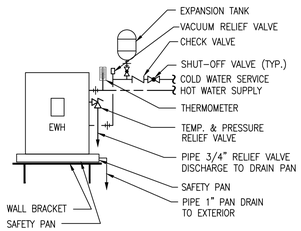
25. BUILDING DOMESTIC WATER PIPING (ABOVE FLOOR) SHALL BE CPVC PLASTIC PIPE AND FITTINGS. PROVIDE TRANSITION FITTINGS AS REQUIRED TO INSTALL VALVES, FIXTURE STOPS, EQUIPMENT AND OTHER COMPONENTS. PIPE AND FITTINGS SHALL CONFORM TO ASTM-1784. WATER PIPING IN RETURN AIR PLENUM AREAS SHALL BE TYPE L HARD COPPER TUBE OR CPVC PIPING WITH 1" THICK FIRE WRAP INSULATION SEALED TO PROVIDE FS/SD = 25/50. FIRE WRAP INSULATION SHALL BE 5A FIRE BARRIER PLENUM WRAP BY 3M OR APPROVED EQUIVALENT. ALL EXPOSED PIPING SHALL BE TYPE L HARD COPPER TUBE PAINTED TO MATCH. ALL HOT WATER, TEMPERED WATER AND HOT WATER RETURN PIPE AND FITTINGS SHALL BE COVERED IN ¾" THICK ELASTOMERIC INSULATION WITH ALL SEAMS AND JOINTS SEALED TIGHT.

ABBREVIATIONS:

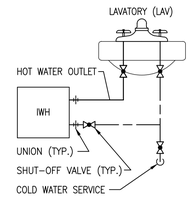
A/C	AIR CONDITIONING	GAL	GALLONS
A/E	ARCHITECT/ENGINEER	GPM	GALLONS PER MINUTE
AAV	AIR ADMITTANCE VALVE	HB	HOSE BIBB
ADA	AMERICANS WITH DISABILITIES ACT	HR	HOUR
		HW	HOT WATER
AHU	AIR HANDLING UNIT	I.E.	INVERT ELEVATION
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS	MAX	MAXIMUM
		MIN	MINIMUM
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
BHP	BRAKE HORSEPOWER	NTS	NOT TO SCALE
BTU	BRITISH THERMAL UNIT	PDI	PLUMBING DRAINAGE INSTITUTE
CD	CONDENSATE DRAIN		
CONN	CONNECTION	PSIG	POUNDS PER SQUARE INCH
CONT	CONTINUOUS	RM	ROOM
CW	COLD WATER	S.F.U.	SUPPLY FIXTURE UNITS
D.F.U.	DRAINAGE FIXTURE UNITS	SS	SANITARY SEWER
DIA	DIAMETER	T & P	TEMPERATURE & PRESSURE
DN	DOWN	TYP	TYPICAL
DWG	DRAWING	U/G	UNDERGROUND
ECO	EXTERIOR CLEAN OUT	W/	WITH
°F	DEGREES FAHRENHEIT	WCO	WALL CLEAN OUT
FBC	FLORIDA BUILDING CODE	V	VENT
FCO	FLOOR CLEAN OUT	VTR	VENT THRU ROOF
FD	FLOOR DRAIN		

PLUMBING LEGEND

- COLD WATER PIPING ABOVE GRADE
- COLD WATER PIPING BELOW GRADE
- 110° HOT WATER PIPING ABOVE GRADE
- SS — SANITARY WASTE PIPING ABOVE GRADE
- SS — SANITARY WASTE PIPING BELOW GRADE
- V — SANITARY VENT PIPING ABOVE GRADE
- RL — RAINWATER LEADER PIPING ABOVE GRADE
- ST — STORM DRAIN PIPING BELOW GRADE
- EXISTING COLD WATER PIPING ABOVE GRADE
- EXISTING COLD WATER PIPING BELOW GRADE
- EXISTING HOT WATER PIPING ABOVE GRADE
- SS — EXISTING SANITARY WASTE PIPING ABOVE GRADE
- SS — EXISTING SANITARY WASTE PIPING BELOW GRADE
- V — EXISTING SANITARY VENT PIPING ABOVE GRADE
- EXISTING PIPING TO BE REMOVED
- BALL TYPE SHUT-OFF VALVE
- WATER HAMMER ARRESTOR
- HB — HOSE BIBB
- BALL TYPE SHUT-OFF VALVE
- CHECK VALVE
- FCO, ECO — FLOOR, EXTERIOR CLEANOUT
- WCO — WALL CLEANOUT
- PIPE CAP
- POINT OF NEW CONNECTION TO EXISTING



WALL HUNG ELECTRIC WATER HEATER DETAIL
NTS



INSTANTANEOUS ELECTRIC WATER HEATER DETAIL
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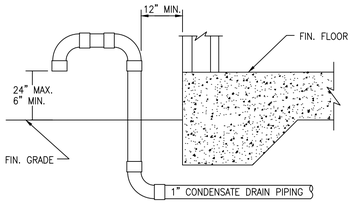

CONDENSATE DRAIN TERMINATION DETAIL
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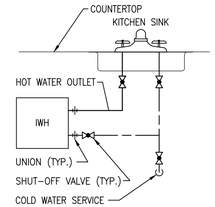

INSTANTANEOUS ELECTRIC WATER HEATER DETAIL
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PLUMBING FIXTURE SCHEDULE

MARK	DESCRIPTION	ROUGH-IN CONNECTIONS CW	110° HW	DIRECT WASTE	VENT	PLUMBING FIXTURE BASIS OF DESIGN	FAUCET/VALVE ASSEMBLY BASIS OF DESIGN	STRAINER, DRAIN & TRAP BASIS OF DESIGN	REMARKS
WC-1	HDC FLOOR MOUNT TANK TYPE WATER CLOSET	1/2"	--	3"	2"	AMERICAN STANDARD 2437.012	--	--	OPEN FRONT SEAT LESS COVER
WC-2	STD FLOOR MOUNT TANK TYPE WATER CLOSET	1/2"	--	3"	2"	AMERICAN STANDARD 2435.012	--	--	OPEN FRONT SEAT LESS COVER
WC-3	STD FLOOR MOUNT TANK TYPE WATER CLOSET	1/2"	--	3"	2"	X X	--	--	OPEN FRONT SEAT LESS COVER
UR	HDC HEIGHT WALL HUNG FLUSH VALVE URINAL	3/4"	--	2"	2"	AMERICAN STANDARD 6501.010	--	--	FLUSH VALVE – SLOAN #111 FLOOR MOUNTED CARRIER – WATTS #CA-321
L-1	HDC WALL HUNG LAVATORY	1/2"	1/2"	1 1/2"	1 1/2"	AMERICAN STANDARD 0355.012	AMERICAN STANDARD 7385.004	MCGUIRE 155WC/PW2125WC	FLOOR MOUNTED CARRIER – WATTS #CA-411
L-2	STD COUNTERTOP LAVATORY	1/2"	1/2"	1 1/2"	1 1/2"	AMERIICAN STANDARD 0355.012	AMERICAN STANDARD 7385.004	MCGUIRE 155A/8902	
L-3	STD COUNTERTOP LAVATORY	1/2"	1/2"	1 1/2"	1 1/2"	X X	X X	MCGUIRE 155A/8902	
SK	HDC COUNTERTOP 2-COMPARTMENT SINK	1/2"	1/2"	1 1/2"	1 1/2"	ELKAY LRAD3322-6 1/2"	ELKAY LKE4100	MCGUIRE 1151WC/PW2150WC	FLOOR MOUNTED CARRIER – WATTS #CA-411
SH	STD ANTIQUE SHOWER	1/2"	1/2"	2"	1 1/2"	X X	X X	--	
MS	MOP SINK	1/2"	1/2"	3"	1 1/2"	FIAT MSB2424	FIAT 830-AA	--	VINYL BUMPER GUARDS, HOSE AND BRACKET, GRID DRAIN.
EWC	BI-LEVEL ELECTRIC WATER COOLER	1/2"	--	1 1/2"	1 1/2"	ELKAY EZSTL8C	--	MCGUIRE 8902	FLOOR MOUNTED CARRIER – WATTS #CA-431-1
FD	FLOOR DRAIN	--	--	3"	1 1/2"	WATTS FD-100-A6-7	--	--	SQUARE HEELPROOF TYPE STRAINER, VANDAL PROOF, & TRAP PRIMER ASSEMBLY.
FS	FLOOR SINK	--	--	3"	1 1/2"	WATTS FS-500	--	--	
HB	EXTERIOR HOSE BIBB	1/2"	--	--	--	WATTS HY-430	--	--	
CO	CLEANOUT (ECO-EXTERIOR, FCO-FLOOR, WCO-WALL)	--	--	VARIES	--	WATTS CO SERIES	--	--	COVER TO MATCH SURROUNDING FINISH. HEAVY DUTY HOUSING & COVER FOR ECO.

PLUMBING ACCESSORY EQUIPMENT:

WATER HAMMER ARRESTOR – PDI:
WATTS – SG SERIES

TRAP PRIMER:
WATTS – A-200

NOTE: MANUFACTURER AND MODEL NUMBER INTENDED FOR LEVEL OF QUALITY. SUBSTITUTIONS MAY BE SUBMITTED IF QUALITY MEETS THIS LEVEL.

WATER HEATER SCHEDULE

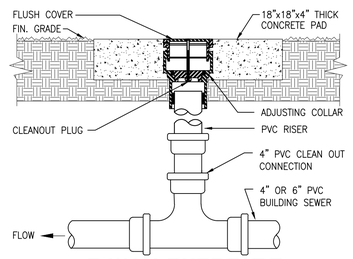
MARK	MFGR	MODEL NUMBER	STORAGE CAPACITY	TOTAL KW	VOLT/ PHASE	OUTLET WATER TEMP. DEG. F	RECOVERY IN GPH @ 100° RISE	REMARKS
EWH-1	A.O. SMITH	DEL-20	19	2.5	120/1	120	10	SINGLE ELEMENT OPERATION.
EWH-2	A.O. SMITH	DEL-20	19	2.5	120/1	120	10	SINGLE ELEMENT OPERATION.

TANKLESS WATER HEATER SCHEDULE

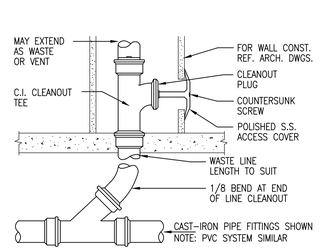
MARK	MFGR	MODEL NUMBER	TOTAL KW	VOLT/ PHASE	OUTLET WATER TEMP. DEG. F	TEMP. RISE/ GPM
IWH-1	EEMAX	EX3012T	3.0	120/1	111	41°/0.5
IWH-2	EEMAX	EX55T	5.5	240/1	108	38°/1.0

WATER HAMMER ARRESTOR SCHEDULE

MARK	PIPE SIZE	PDI STANDARD	FIXTURE UNIT CAP.
"A"	1/2"	A	1 TO 11
"B"	3/4"	B	12 TO 32
"C"	1"	C	33 TO 60
"D"	1-1/4"	D	61 TO 113



2-WAY EXTERIOR CLEANOUT DETAIL
NTS



WALL CLEANOUT DETAIL
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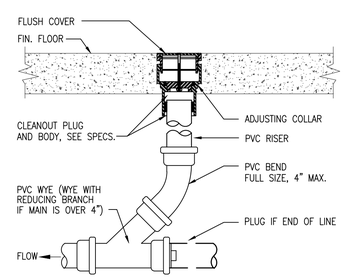

FLOOR CLEANOUT DETAIL
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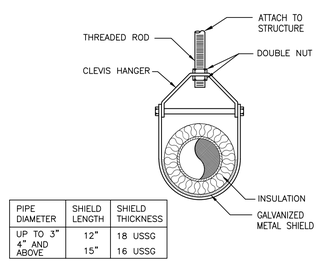

PIPE DIAMETER	SHIELD LENGTH	SHIELD THICKNESS
UP TO 3"	12"	18 USSG
4" AND ABOVE	15"	16 USSG

INSULATED PIPE SUPPORT DETAIL
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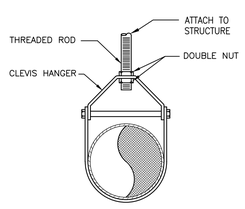

PIPE SUPPORT DETAIL
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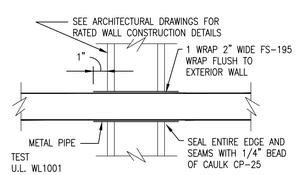

UNINSULATED PIPE/ WALL PENETRATION FIRESTOP DETAIL
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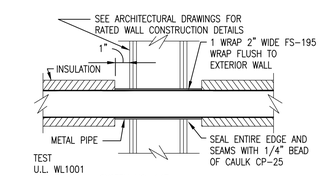

INSULATED PIPE/ WALL PENETRATION FIRESTOP DETAIL
N.T.S.

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ENGINEER OF RECORD

PRELIMINARY NOT FOR CONSTRUCTION

REVISIONS AND UPDATES

10/01/14		90% CONSTRUCTION DOCUMENTS
06/18/14		PROGRESS SET
03/21/14		DESIGN DEVELOPMENT SET
09/20/12		SCHEMATIC PLANS

CAPE CANAVERAL LIGHTHOUSE FOUNDATION
LIGHTHOUSE KEEPER'S COTTAGES
LIGHTHOUSE RD — CAPE CANAVERAL AFS, FL
PLUMBING NOTES, SCHEDULES AND DETAILS

drawn RPO | checked KJC | approved KJC

FOR REVIEW NOT FOR CONSTRUCTION

AA-C001568

job no. 2012.40
OP-1.0

ARCHITECTS RZK, INC.
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ABBREVIATIONS

(NOT ALL ARE USED)

AC	AIR CONDITIONING
AFF	ABOVE FINISHED FLOOR
AG	ABOVE GRADE
AHU	AIR HANDLING UNIT
AD	ACCESS DOOR
APPROX	APPROXIMATELY
BDD	BACK DRAFT DAMPER
BOD	BOTTOM OF DUCT
BTU	BRITISH THERMAL UNIT
CAP	CAPACITY
CD	CONDENSATE DRAIN
CFM	CUBIC FEET PER MINUTE
CMU	CONCRETE MASONRY UNIT
CONN	CONNECTION
CU	CONDENSING UNIT
DB	DRY BULB
DG	DOOR GRILLE
DI	DIGITAL INPUT
DN	DOWN
DO	DIGITAL OUTPUT
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EG	EXHAUST GRILLE
ELEC	ELECTRICAL
EMS	ENERGY MGMT. SYSTEM
EX	EXHAUST
ENT	ENTERING
ESP	EXTERNAL STATIC PRESSURE
F	FAHRENHEIT
FA	FILTER ACCESS
FACP	FIRE ALARM CONTROL PANEL
FCD	FLOW CONTROL DAMPER
FD	FIRE DAMPER
FLA	FULL LOAD AMPACITY
FPM	FEET PER MINUTE
FPMB	FAN POWER MIXING BOX
FS	FIRE STAT
HP	HORSEPOWER
HZ	HERTZ
IN-H2O	INCHES OF WATER
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LAT	LATENT
LD	LOUVERED DOOR
LRA	LOCKED ROTOR AMPS
LVG	LEAVING
MAX	MAXIMUM
MBH	1000xBTU
MCA	MINIMUM CIRCUIT AMPACITY
MISC	MISCELLANEOUS
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OAL	OUTSIDE AIR LOUVER
OC	ON CENTER
PD	PRESSURE DROP
PH	PHASE
PVC	POLYVINYLCHLORIDE
RA	RETURN AIR
REF	REFRIGERANT
RG	RETURN GRILLE
RLA	RUNNING LOAD AMPS
RTU	ROOFTOP A/C UNIT
SA	SUPPLY AIR
SD	SUPPLY DIFFUSER
SEN	SENSIBLE
SG	SUPPLY GRILLE
UON	UNLESS OTHERWISE NOTED
VFD	VARIABLE FREQUENCY DRIVE
WMS	WIRE MESH SCREEN

LEGEND

- SUPPLY DIFFUSER
- RETURN GRILLE
- EXHAUST GRILLE
- SUPPLY DUCT DOWN
- RETURN DUCT DOWN
- EXHAUST DUCT DOWN
- T — THERMOSTAT
- TS — REMOTE TEMPERATURE SENSOR
- SD — SMOKE DETECTOR
- M — MOTORIZED DAMPER
- MANUAL VOLUME DAMPER
- DUCTWORK
- FLEX DUCT
- BDD — BACKDRAFT DAMPER
- FD — FIRE DAMPER
- AIR FLOW DIRECTION
- 1" DOOR UNDERCUT
- POC — POINT OF CONNECTION
- R — RISE IN ELEVATION
- D — DROP IN ELEVATION
- AREA OF DEMOLITION

SPECIFICATIONS

1.0 BASIC MATERIAL AND METHODS

1.1 SCOPE OF WORK
PROVIDE LABOR AND MATERIALS AS REQUIRED TO PROVIDE A FULLY FUNCTIONING AND COMPLETE SYSTEM AS INDICATED ON DRAWINGS. THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND EQUIPMENT. FINAL LOCATIONS OF EQUIPMENT SHALL BE FIELD DETERMINED. ALL DISCREPANCIES ON DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IN WRITING PRIOR TO SUBMISSION OF BIDS.

1.2 GENERAL AND SPECIAL CONDITIONS
ALL DIVISION 1 SPECIFICATIONS AND ARCHITECTURAL GENERAL AND SPECIAL CONDITIONS OUTLINED IN THE CONTRACT DOCUMENTS APPLY TO MECHANICAL SYSTEMS. ADDITIONALLY, WORK SHALL COMPLY WITH FLORIDA BUILDING CODE AND REGULATIONS OF THE LOCAL AUTHORITY HAVING JURISDICTION, NATIONAL FIRE PROTECTION ASSOCIATION, AND NATIONAL ELECTRICAL CODE. ALL EQUIPMENT SHALL CARRY THE UNDERWRITER'S LABORATORIES (UL) SEAL WHERE APPLICABLE.

1.3 QUALITY CONTROL
UNLESS OTHERWISE NOTED, PROVIDE NEW MATERIALS FREE OF DEFECTS. WHERE NO SPECIFIC WEIGHTS OR GRADES ARE SPECIFIED PROVIDE MATERIALS OF AN ACCEPTED STANDARD WEIGHT AND GRADE ACCORDING TO CODE AND GOVERNING STANDARDS BY ASHRAE, SMACNA, NFPA, AND UL. INSTALL ALL EQUIPMENT, PIPING, DUCTWORK, AND CONTROLS IN ACCORDANCE WITH CODES, GOVERNING STANDARDS, AND MANUFACTURER'S RECOMMENDATIONS. FIRE PERFORMANCE CHARACTERISTICS OF INSTALLED MATERIALS SHALL BE RATED IN ACCORDANCE WITH ASTM E84. MAXIMUM FLAME SPREAD RATING SHALL BE 25 AND MAXIMUM SMOKE DEVELOPED RATING SHALL BE 50.

1.4 COORDINATION
COORDINATE ALL WORK FOR PROPER LOCATION, POWER, AND UTILITY REQUIREMENTS. SCHEDULE INSTALLATIONS TO AVOID CONFLICT AMONG TRADES. ADDITIONS TO THE CONTRACT FOR COORDINATION AMONG TRADES WILL NOT BE ALLOWED.

1.5 PENETRATIONS, CUTTING AND PATCHING
SEAL ALL PIPING AND DUCT PENETRATIONS OF WALLS IN ACCORDANCE WITH ARCHITECTURAL DRAWINGS AND SPECIFICATIONS. PIPING PENETRATIONS OF RATED FLOORS AND WALLS SHALL BE SEALED WITH FIRESTOPPING MATERIAL. FLASH ALL ROOF AND WALL PENETRATIONS IN ACCORDANCE WITH ARCHITECTURAL DRAWINGS. PROVIDE FIRE DAMPERS AT ALL RATED PENETRATIONS.

1.6 HANGERS AND SUPPORTS
PROVIDE HANGERS AND SUPPORTS FOR ALL PIPING, DUCTWORK, AND EQUIPMENT IN ACCORDANCE WITH SMACNA, MSS, ASME, AND ASHRAE STANDARDS. SUPPORT ALL ITEMS FROM INTEGRAL BUILDING STRUCTURAL MEMBERS. DO NOT HANG ITEMS FROM ROOF DECKING.

2.0 CONDENSATE PIPING AND REFRIGERANT CHASES
CONDENSATE PIPING AND REFRIGERANT CHASES SHALL BE SCH-40 PVC WITH SOLVENT WELDS, ROUTE TO THE CONDENSATE DRAIN. ALL INTERIOR PIPING SHALL BE INSULATED WITH 3/4" THICK ARMAFLEX INSULATION.

3.0 DUCTWORK AND ACCESSORIES

3.1 AIR DUCTS - SUPPLY AND RETURN
GALVANIZED SHEET METAL WITH LOCK-FORMING QUALITY ASTM A653, G90 COATING, MILL PHOSPHATIZED FINISH FOR DUCTS EXPOSED TO VIEW. CLASS DESIGNATION SHALL BE ADEQUATE FOR PRESSURE IN DUCT SYSTEM PER TOTAL PRESSURE AS SCHEDULED FROM EQUIPMENT SHOP DRAWINGS. INSULATE SUPPLY, RETURN AND OUTSIDE AIR DUCTS WITH MINERAL FIBERGLASS BLANKETS BONDED WITH A THERMOSETTING RESIN. ASTM C 553, TYPE II, WITHOUT FACING AND WITH ALL-SERVICE JACKET MANUFACTURED FROM KRAFT PAPER, REINFORCING SCRIM, ALUMINUM FOIL, VINYL FILM. DENSITY SHALL BE MIN. 1.5 LB/CUFT. THICKNESS TO MAINTAIN AN R VALUE OF 6.

3.2 DEDUCTIVE ALTERNATE
PROVIDE RIGID FIBERGLASS DUCTS FOR SUPPLY AND RETURN AIR ACCORDING TO THE FOLLOWING:
RIGID FIBERGLASS DUCTS WITH INTERIOR ACRYLIC COATING, CONFORMING TO SMACNA FOSDCS GUIDELINES. R BONDED WITH THERMOSETTING RESIN. FIRE-RESISTANT, REINFORCED, FOIL-SCRIM KRAFT PAPER FACE. UL-181, UL CLOSURE, EI LABEL ON FACE. VAPOR BARRIER WITH 0.02 PERMEANCE. NOISE REDUCTION OF 0.65 MIN COEFFICIENT. 250°F RATED. CLOSURE SHALL BE WITH PRESSURE SENSITIVE TAPE, PLASTIC STRAPS AND GASKETING CONFORMING TO ENERGY CODE. (OWENS CORNING ENDURACOAT OR EQUAL). FITTINGS ARE TO CONFORM TO NAIMA STANDARDS.

3.3 AIR DUCTS - OUTSIDE AIR AND EXHAUST AIR
24 GA GALVANIZED SHEET METAL DUCT SYSTEM WITH LOCK FORMING QUALITY. (SNAP-LOCK)

3.4 VOLUME CONTROL DAMPERS
PROVIDE VOLUME CONTROL DAMPERS AT EACH BRANCH DUCT AND AS NECESSARY FOR PROPER SYSTEM BALANCING. PROVIDE FACTORY FABRICATED VOLUME CONTROL DAMPERS COMPLETE WITH REQUIRED LOCKING HARDWARE AND ACCESSORIES.

3.5 FLEXIBLE CONNECTIONS
PROVIDE FLEXIBLE CONNECTIONS AT ALL EQUIPMENT CONNECTIONS.

3.6 OUTSIDE AIR DAMPERS
PROVIDE 24V MOTORIZED OUTSIDE AIR DAMPER INTERLOCKED TO OPEN UPON AHU FAN OPERATION, OTHERWISE DAMPER NORMALLY CLOSED.

4.0 TESTING, ADJUSTING AND BALANCING
BALANCE AIRFLOWS FOR EQUIPMENT, INLETS AND OUTLETS. TEST AND BALANCE ALL SYSTEMS INSTALLED TO MATCH INDICATED AIRFLOWS WITHIN ± 10% OF INDICATED VALUES. BALANCE AIR INLETS AND OUTLETS AS INDICATED. ADJUST SYSTEMS WHERE NECESSARY. PROVIDE TEST AND BALANCE REPORT INDICATING ALL INTERMEDIATE AND FINAL VALUES. NEBB OR AABC CERTIFICATION OF TEST AND BALANCE PERSONNEL AND REPORT IS REQUIRED ON THIS PROJECT.

5.0 SUBMITTALS
PROVIDE 6-SETS (EACH) OF MANUFACTURER'S DATA, O&M MANUALS, ELECTRICAL DATA, DIMENSIONAL DATA AND CLEARANCES, CONNECTION DATA, COLOR SAMPLES (IF REQUIRED), AND TEST DATA FOR THE FOLLOWING:

SPLIT SYSTEMS, EXHAUST FANS, AIR DISTRIBUTION, T&B REPORT.

SHOP DRAWINGS MUST BE SUBMITTED AND APPROVED PRIOR TO ORDERING OF EQUIPMENT. ENGINEER WILL REQUIRE 7 WORKING DAYS TO REVIEW DRAWINGS.

PROJECT GENERAL NOTES

1. SUPPORT DUCTS PER SMACNA FROM SUPPORT STRUCTURE.
2. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, 2010, SMACNA FGDCS & DCS, AND NFPA 90A.
3. ROUTE ALL DUCTWORK, PIPING, ACCESSORIES AS NECESSARY TO AVOID BUILDING STRUCTURE, COMPONENTS AND LIGHTING. COORDINATE ANY TRANSITIONS MADE TO DUCTWORK WITH MAXIMUM FAN PRESSURE DROP REQUIREMENTS FROM MANUFACTURER'S RECOMMENDATIONS.
4. ALL DIMENSIONS ARE APPROXIMATE. DO NOT SCALE DRAWINGS FOR CONSTRUCTION.
5. ALL FINISHED WORK SHALL BE FREE OF DEFECTS WITH EXISTING SURFACES MAINTAINED IN THE SAME CONDITION AS ORIGINAL.
6. ALL DEBRIS SHALL BE PROPERLY DISPOSED OF OFF-SITE.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING FIRE RATING AND WEATHERPROOFING INTEGRITY OF ALL PIPING AND PENETRATIONS.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY SUPPORTING DEVICES FOR ALL ACCESSORIES INCLUDED IN CONTRACT OR HEREIN SPECIFIED OR OTHERWISE.
9. CONDENSING UNITS SHALL BE SECURED TO A 4" THICK FIBERMESH REINFORCED CONCRETE PAD PER MANUFACTURERS INSTRUCTIONS TO MEET WIND LOADS PER CODE.
10. MECHANICAL CONTRACTOR SHALL PROVIDE A SUPPLY SMOKE DETECTOR PER FLORIDA BUILDING CODE (2010) AND NFPA-90A FOR ALL AIR HANDLING UNIT SYSTEMS > 2000 CFM OR AS APPLICABLE. ELECTRICAL CONTRACTOR TO WIRE SMOKE DETECTOR. PROVIDE A REMOTE INDICATING LIGHT AND AUDIBLE ALARM WITH A KEYED SWITCH IN THE GENERAL VICINITY OF THE SMOKE DETECTORS PER CODE REQUIREMENTS. COORDINATE WITH HVAC SCHEDULES, EXISTING DETECTORS AND EGRESS CORRIDORS.

DX SPLIT SYSTEM SCHEDULE

INDOOR UNIT DATA

TAG	SA (CFM)	OA (CFM)	DX COIL DATA ENT DB/WB (F)	DX COIL DATA LVG DB (F)	FAN DATA MAX ESP (IN-H2O)	FAN DATA MOTOR (HP)	HEATER KW-STEPS (@240V)	ELECTRICAL DATA (V/PH)	ELECTRICAL DATA MCA/MOCP	WEIGHT (LBS)	REMARKS	MANUFACTURER & MODEL No.
AHU-1	1880	330	80/67	55	0.6	1	9.6-1	208/1	50/50	163	1,2,3,4,5,6	TRANE TAM7A060
AHU-2	2000	0	80/67	55	0.6	1	9.6-1	208/1	50/50	163	1,2,3,4,5,6	TRANE TAM7A060
AHU-3	1850	255	80/67	55	0.6	1	9.6-1	208/1	50/50	163	1,2,3,4,5,6	TRANE TAM7A060
AHU-4	400	0	80/67	55	0.6	1/2	7.6-1	208/1	38/40	116	1,2,3,4,5,6	TRANE GAM5A0A18

OUTDOOR UNIT DATA

TAG	NOMINAL CAPACITY (TONS)	MIN. SEER	REF. TYPE	ELECTRICAL DATA (V/PH)	ELECTRICAL DATA COMPRESSOR (No. - RLA)	ELECTRICAL DATA COND. FAN (No. - FLA)	ELECTRICAL DATA (MCA/MOCP)	MANUFACTURER & MODEL No.	WEIGHT (LBS)	PROVIDE / INSTALL
CU-1	5.0	13	R410A	208/1	1-27.6	1-1.3	36/60	TRANE 4TTB3060A	251	AHU DISCONNECTS DIV-15
CU-2	5.0	13	R410A	208/1	1-27.6	1-1.3	36/60	TRANE 4TTB3060A	251	CU DISCONNECTS DIV-16
CU-3	5.0	13	R410A	208/1	1-27.6	1-1.3	36/60	TRANE 4TTB3060A	251	THERMOSTATS DIV-15
CU-4	1.5	13	R410A	208/1	1-6.4	1-0.7	9/15	TRANE 4TTB3018A	192	HUMIDISTAT NONE
										CONTROL WIRE DIV-15
										EXTERNAL POWER DIV-16
										SMOKE DETECTORS DIV-15*

* PROVIDED BY DIV. 15, WIRED BY DIV. 16.

REMARKS:
1. PROVIDE PROGRAMMABLE T-STAT.
2. PROVIDE (1) EXTRA SET OF FILTERS WHICH SHALL BE REPLACED 2 WEEKS AFTER CERTIFICATE OF OCCUPANCY IS SUBMITTED. FILTER REPLACEMENT SHALL BE INCLUDED WITHIN THIS PROJECT'S BID.
3. CONDENSER COIL GUARDS.
4. SEACOAST PROTECTION WITH "ADSIL" COATING OF CABINET AND COILS.
5. SIZE REFRIGERANT PIPING PER MANUFACTURER'S RECOMMENDATIONS.
6. AHU DISCONNECT FACTORY INSTALLED.
7. CONDENSATE PUMP: LITTLE GIANT MODEL VCMA20ULS OR EQUAL.
8. PROVIDE 5-YEAR COMPRESSOR WARRANTY.
9. ACCEPTABLE MFR'S: TRANE, YORK.

FAN SCHEDULE

TAG	SERVICE	CFM	SP (IN-H20)	TYPE	WATTS	VOLTAGE	DRIVE	MAX. SONES	MANUFACTURER & MODEL NUMBER	REMARKS
EF-1	TLT. EXHAUST	75	0.25	CLG. EXH.	59.4 W	115/1/60	DIRECT	5	COOK GC-144	1, 2, 3, 4
EF-2	TLT. EXHAUST	100	0.25	CLG. EXH.	68.6 W	115/1/60	DIRECT	5	COOK GC-162	1, 2, 3, 4
EF-3	TLT. EXHAUST	100	0.25	CLG. EXH.	68.6 W	115/1/60	DIRECT	5	COOK GC-162	1, 2, 3, 4
EF-4	TLT. EXHAUST	75	0.25	CLG. EXH.	59.4 W	115/1/60	DIRECT	5	COOK GC-144	1, 2, 3, 4
EF-5	TLT. EXHAUST	610	0.25	INLINE	251 W	115/1/60	DIRECT	5	COOK GN-720	1, 2, 3, 5

REMARKS:
1. PROVIDE GRILLE & WALL CAP.
2. PROVIDE WITH AUTOMATIC BACKDRAFT DAMPER.
3. PROVIDE A SPEED CONTROLLER ABOVE CEILING FOR BALANCING.
4. INTERLOCK FAN WITH LIGHT SWITCH.
5. INTERLOCK FAN WITH TIME CLOCK.

LOUVER SCHEDULE

TAG	SERVICE	AIRFLOW (CFM)	THROAT DIA. OR FREE AREA(SF)	W x H (IN.)	MAX. VELOCITY IN FPM	MAX. PRESS. DROP (IN H2O)	MANUFACTURER & MODEL NUMBER	REMARKS
L-1	OUTSIDE AIR	330	0.4125	16x8	800	0.10	RUSKIN ELF6375DXD	1
L-2	OUTSIDE AIR	270	0.3375	16x8	800	0.10	RUSKIN ELF6375DXD	1

REMARKS: 1. PROVIDE BIRDSCREEN.

VENTILATION AIR SCHEDULE

SYSTEM	AREA SERVED	AREA (SF)	CFM/SF	AREA OA RATE (CFM)	# OF OCCUPANTS	CFM/ PERSON	PEOPLE OA RATE CFM	TOTAL OA RATE (CFM)	OA RATE PROVIDED (CFM)
AHU-1	GIFT SHOP	1727	0.06	104	45	5	225	329	330
AHU-2	REPLICA HOUSE	1733	0.06	104	6	5	30	134	0
AHU-3	EDUCATION CNTR.	876	0.06	53	40	5	200	253	255
AHU-4	RESTROOMS	452	-	-	7	-	-	-	-

DESIGN DATA

SUMMER OUTSIDE - 91/79 F
WINTER OUTSIDE - 35 F
INSIDE TEMP/RH - 75F/50%

AIR DISTRIBUTION SCHEDULE

SR-1 SIDEWALL SUPPLY REGISTER, DOUBLE DEFLECTION, WHITE FINISH, ALUMINUM CONSTRUCTION. OPPOSED BLADE BALANCING DAMPER, ADJUSTABLE THROUGH FACE, BASIS OF DESIGN: METAL-AIRE MODEL V4004.

CFM	NECK SIZE
0-150	10x8
155-250	12x8
255-500	16x8

RG-1/ TG-1 24"x24" LOUVERED FACE RETURN GRILLE, WHITE FINISH, ALUMINUM CONSTRUCTION. BASIS OF DESIGN: METAL-AIRE MODEL RH.

0 - 100	CFM	- 6"ø
105 - 160	CFM	- 8"ø
165 - 280	CFM	- 10"ø
285 - 460	CFM	- 12"ø
465 - 700	CFM	- 14"ø
705 - 1000	CFM	- 16"ø
1005 - 1200	CFM	- 18"ø

EG-1 CEILING EXHAUST GRILLE, WHITE FINISH, ALUMINUM CONSTRUCTION. NECK SIZE AS SHOWN ON DWGS. BASIS OF DESIGN: METAL-AIRE MODEL RH.

DG DOOR MOUNTED NON-SEE-THRU TRANSFER GRILLE, ALUMINUM CONSTRUCTION. COORDINATE LOCATION AND MOUNTING PROCEDURE WITH DOOR MANUFACTURER.

BRANCH & FLEX DUCT SCHEDULE

0 - 100	CFM	- 6"ø
105 - 250	CFM	- 8"ø
255 - 380	CFM	- 10"ø
385 - 700	CFM	- 12"ø
705 - 900	CFM	- 14"ø
905 - 1100	CFM	- 16"ø

NOTE:
BRANCH RUNOUT SIZE REFLECTS SUPPLY DIFFUSER NECK SIZE UNLESS OTHERWISE NOTED.

IT IS THE RESPONSIBILITY OF ALL BIDDING CONTRACTORS TO ENSURE THAT EACH OF THEIR SUBCONTRACTORS RECEIVE THE NECESSARY DRAWINGS AND INFORMATION FOR BIDDING. MECHANICAL CONTRACTOR SHALL INDICATE TO ALL BIDDING VENDOR'S THAT EACH VENDOR SHALL REQUEST FROM THE BLUEPRINT COPY COMPANY FULL SIZE DRAWINGS PER MECHANICAL CONTRACTOR'S FOR WHICHEVER DRAWINGS HE/SHE DEEMS NECESSARY.

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REVISIONS AND UPDATES

10/01/14		90% CONSTRUCTION DOCUMENTS
06/18/14		PROGRESS SET
03/21/14		DESIGN DEVELOPMENT SET
09/20/12		SCHEMATIC PLANS

CAPE CANAVERAL LIGHTHOUSE FOUNDATION
LIGHTHOUSE KEEPER'S COTTAGES
LIGHTHOUSE RD CAPE CANAVERAL AFS, FL

MECHANICAL SPECIFICATIONS AND SCHEDULES

drawn	checked	approved
GOB	KJC	KJC

AA-C001568

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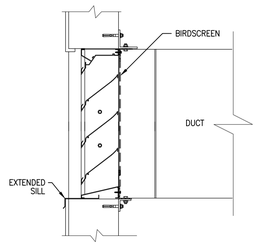
job no. 2012.40

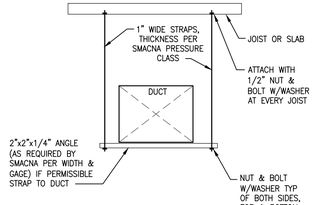
OM-1.0

ARCHITECTS RZK, INC.
600 FLORIDA AVENUE SUITE 202 COCOA, FLORIDA 32922 TELEPHONE (321) 631-8039



WALL LOUVER DETAIL

NTS



DUCT SUPPORT DETAIL

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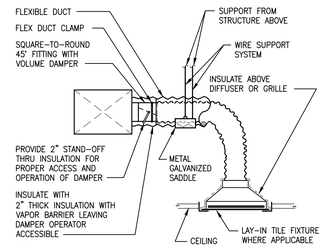
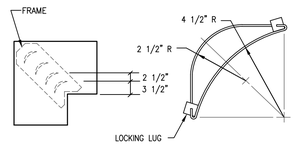


NOTE:
DAMPER ACTUATOR SHALL BE ACCESSIBLE AND PAINTED BRIGHT ORANGE BY DUCT INSTALLER

BRANCH DUCT DETAIL

NTS



(PROVIDE TURNING VANES AT ALL 90° ELBOWS)

TURNING VANE DETAIL

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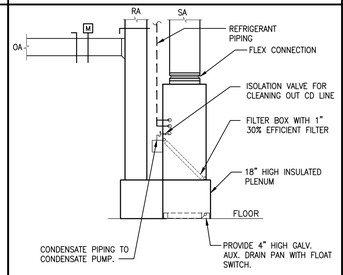

VERTICAL AHU DETAIL

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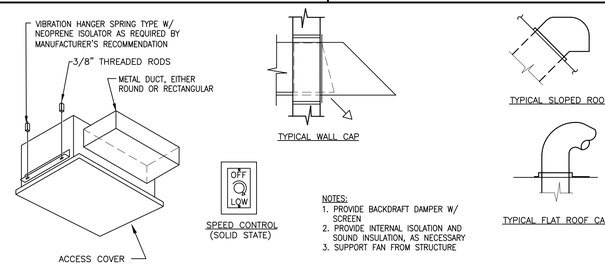

NOTES:
1. PROVIDE BACKDRAFT DAMPER W/ SCREEN
2. PROVIDE INTERNAL ISOLATION AND SOUND INSULATION, AS NECESSARY
3. SUPPORT FAN FROM STRUCTURE

INLINE FAN DETAIL

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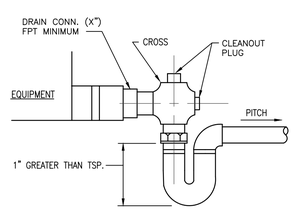

CONDENSATE TRAP

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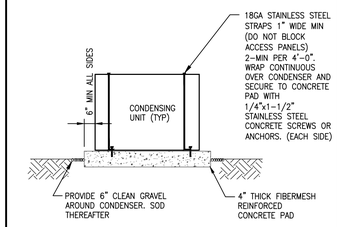

CONCRETE PAD-MOUNTED CONDENSING UNIT WITH TIE-DOWN DETAIL

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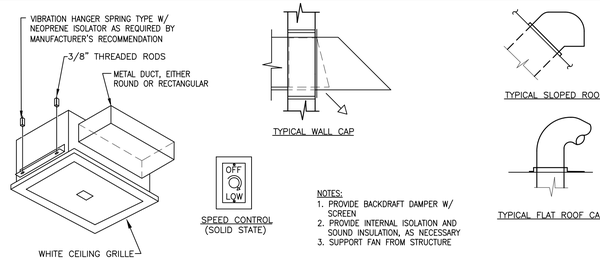

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3. SUPPORT FAN FROM STRUCTURE

CABINET CEILING FAN DETAIL

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CAPE CANAVERAL LIGHTHOUSE FOUNDATION

LIGHTHOUSE KEEPER'S COTTAGES

LIGHTHOUSE RD — CAPE CANAVERAL AFS, FL

MECHANICAL DEATILS

drawn	GOB	checked	KJC	approved	KJC

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job no. 1012.40

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