

PICKLEBALL COURTS, RESTROOMS, ROADWAY AND PARKING LOT IMPROVEMENTS

INVITATION TO BID – REQUISITION NO. 2025-0313

ADDENDUM NO. FIVE (5) – DATED MARCH 12, 2025

- 1.) Add 23 concrete bumper stops to the parking spaces north of and adjacent to the Pickleball Courts. See revised Site Plan B attached;
- 2.) Structural drawings were amended. See attached;
- 3.) The architectural drawings were amended to reflect split face cmu block. See attached;
- 4.) The door specifications were amended. See attached.

END OF ADDENDUM FIVE

Receipt of this addendum must be acknowledged on the last page of the Bid Form and a copy of this addendum must be included with the Bidder's proposal.

By: *Chris D. Pappas*
Chris D. Pappas, PE
City Engineer

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GENERAL:

- 1. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE JOB SITE PRIOR TO STARTING CONSTRUCTION AND SHALL NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEERS OF ANY DISCREPANCIES OR INCONSISTENCIES WITH ANY WORK INVOLVED.
- 2. ALL PHASES OF THE WORK SHALL CONFORM TO THE MINIMUM STANDARDS AND REQUIREMENTS OF THE REFERENCE INTERNATIONAL BUILDING CODE AND ITS RELATED REFERENCES.
- 3. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. UNLESS NOTED OTHERWISE, THIS DOES NOT INDICATE THE BEAMS AND METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKERS AND OTHER PERSONNEL DURING CONSTRUCTION.
- 4. ALL ASTM SPECIFICATIONS NOTED ON THESE DRAWINGS SHALL BE OF THE LATEST EDITIONS OR REVISIONS.
- 5. IN THE EVENT CERTAIN FEATURES OF THE CONSTRUCTION ARE NOT FULLY SHOWN ON THE CONTRACT DRAWINGS OR CALLED FOR IN THE NOTES OR SPECIFICATIONS, THEN THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS FOR SMALLER CONDITIONS THAT ARE SHOWN OR IN SIMILAR CONDITIONS ARE NOT SHOWN, THEN CONTACT THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO START OF WORK FOR CLARIFICATIONS.
- 6. EXISTING CONDITIONS DEPICTED ON THESE DRAWINGS ARE TO BE FIELD VERIFIED BY THE CONTRACTOR, AS THEY ARE UNCOVERED DURING THE CONSTRUCTION. IN THE EVENT EXISTING CONDITIONS ARE DIFFERENT THAN SHOWN, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEER IMMEDIATELY AND WAIT FURTHER INSTRUCTION BEFORE PROCEEDING WITH CONSTRUCTION.
- 7. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR VERIFYING THAT ALL DIMENSIONS AND ELEVATIONS ON THE STRUCTURAL DRAWINGS ARE THE SAME OR EQUIVALENT TO THOSE ON THE ARCHITECTURAL DRAWINGS. NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING CONSTRUCTION.
- 8. VERIFY ALL OPENINGS IN FOUNDATIONS, FLOORS, WALLS, AND ROOF WITH MECHANICAL AND ELECTRICAL REQUIREMENTS BEFORE PROCEEDING WITH CONSTRUCTION.
- 9. SITE WORK AND DRAINAGE DESIGN SHALL BE BY OTHERS.

FOUNDATIONS:

- 1. NO SOILS REPORT HAS BEEN PREPARED FOR THIS PROJECT. UNLESS NOTED OTHERWISE, THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ADEQUATE SOIL SUPPORT FOR THE FOUNDATION DESIGN, AND SHALL REPORT UNEXPECTED CONDITIONS TO THE ENGINEER, SUCH AS EXPANSIVE, COMPRESSIBLE, OR SHIFTING SOILS, OR SOILS WITH QUESTIONABLE CHARACTERISTICS.
- 2. ALLOWABLE SOIL BEARING = 1500 PSF. THIS PRESUMPTIVE CAPACITY IS BASED ON THE ASSUMPTION THAT THE EXISTING SOILS ARE AS DESCRIBED IN SECTION 1806 AND TABLE 1806.2 OF THE INTERNATIONAL BUILDING CODE. THE ENGINEER OF RECORD MAKES NO WARRANTY OR GUARANTEE OF FUTURE SETTLEMENT OF THE EXISTING SOILS. THE TOP 12 INCHES OF EXISTING SOIL SHALL BE COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY AT OPTIMUM MOISTURE CONTENT.
- 3. ALL FOOTINGS OR PORTIONS THEREOF BELOW GRADE MAY BE EARTH-FORMED BY NEAT EXCAVATIONS.
- 4. FOOTINGS TO BE CENTERED ON WALLS OR COLUMNS UNLESS NOTED OTHERWISE.
- 5. SURFACE DRAINAGE SHALL BE DIVERTED TO A STORM SEWER CONVEYANCE OR OTHER APPROVED POINTS OF COLLECTION THAT DOES NOT CREATE A HAZARD. LOTS SHALL BE GRADED TO DRAIN SURFACE WATER AWAY FROM FOUNDATIONS OR FOUNDATION WALLS. THE GRADE SHALL FALL A MINIMUM OF 6 INCHES WITHIN THE 10 FT FOOT.
- 6. STRUCTURES REQUIRED BY THE PERMITTING AGENCY TO BE FLOOD RESISTANT SHALL COMPLY WITH THE INTERNATIONAL BUILDING CODE. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER REGARDING THE DESIRED TOP OF FOUNDATION ELEVATION.

CONCRETE WORK:

- 1. CONCRETE (NORMAL WEIGHT) COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE 3000 PSI, UNLESS NOTED OTHERWISE.
- 2. PORTLAND CEMENT SHALL CONFORM TO ASTM C150, TYPE I OR II.
- 3. ALL AGGREGATE FOR NORMAL WEIGHT CONCRETE SHALL MEET ASTM C33.
- 4. ALL REINFORCING SHALL CONFORM TO ASTM A618, GRADE 60. ALL WELDED WIRE FABRIC (W/F) SHALL CONFORM TO ASTM A185.
- 5. MINIMUM W/P LAP SHALL BE THE GREATER OF ONE CROSS WIRE SPACING PLUS 2 INCHES OR MINIMUM OF 6 INCHES.
- 6. ALL CONCRETE CONSTRUCTION SHALL CONFORM TO THE LATEST ADOPTED EDITION OF THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318) AND ITS REVISIONS AND THE ACI MANUAL OF CONCRETE PLACEMENT.
- 7. ALL REINFORCING SHALL BE DETAILER/FABRICATED AND PLACED IN ACCORDANCE WITH ACI STANDARDS. NO WELDING OF REINFORCEMENT SHALL BE ALLOWED UNLESS NOTED OTHERWISE OR APPROVED BY ENGINEER.
- 8. NO SPACING OF REINFORCEMENT SHALL BE MADE EXCEPT AS NOTED, DETAILED, OR AUTHORIZED BY THE STRUCTURAL ENGINEER. LAP SPACES WHERE PERMITTED SHALL BE CLASS B TENSION LAP SPACES, UNLESS NOTED OTHERWISE. MAKE ALL BARS CONTINUOUS AROUND CORNERS.
- 9. STAGGER SPACES A MINIMUM OF 4" FOR CONTINUOUS BARS IN ALL CONCRETE WORK, UNLESS NOTED OTHERWISE.
- 10. PROVIDE TWO (2) #5 BARS (1 EACH FACE) WITH MINIMUM 2" PROJECTION AROUND ALL OPENINGS IN CONCRETE UNLESS NOTED OTHERWISE.
- 11. SLABS, WALLS, AND PILE CAPS SHALL NOT HAVE JOINTS IN HORIZONTAL PLANE.
- 12. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCED CAST-IN-PLACE CONCRETE:
 - 12.1. CONCRETE PLACED AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3 INCHES
 - 12.2. FORMED CONCRETE EXPOSED TO EARTH OR WEATHER:
 - #5 - #8 BARS: 2 INCHES
 - #9 BARS AND SMALLER: 1.5 INCHES
 - 12.3. SLABS, WALLS, AND JOISTS:
 - #4 AND #8 BARS: 1.5 INCHES
 - #1 AND #3 BARS: 1 INCH
 - 12.4. BEAMS, COLUMNS, AND WALL JOISTS:
 - PRIMARY REINFORCEMENT: 1ES, STRAPS, AND SPRINGS: 1.5 INCHES
 - #4 AND #8 BARS: 2.0 INCHES
 - #1 BARS AND SMALLER: 1.5 INCHES
- 13. PROVIDE REINFORCING BAR PLACING ACCESSORIES NECESSARY TO SUPPORT REINFORCEMENT IN ACCORDANCE WITH ACI MANUAL OF STANDARD PRACTICE.
- 14. IT IS REQUIRED TO PROVIDE SAW JOINTS IN THE CONCRETE SLAB TO MINIMIZE TEMPERATURE & SHRINKAGE CRACKING. ALL SAW JOINTS SHALL BE 1" MIN. AND 14' OF THE DEPTH OF THE SLAB. THE JOINT SPACING SHALL HAVE A MAXIMUM SPACING OF 12 FEET EACH WAY, WITH A MAXIMUM ASPECT RATIO OF 1:1, HOWEVER A RATIO OF 1:1 IS PREFERRED. THE SAWCUT SHOULD BE COMPLETED WITHIN 24 HOURS OF THE INITIAL CONCRETE POUR. THE JOINTS SHALL BE CAULKED WITH URETHANE CAULKING OR A BACKER ROD AND JOINT SEALANT.
- 15. ALL FIELD BENDING OF REINFORCING BARS SHALL BE MADE COLD OR AT 800 BARS AND SMALLER, #10 AND #11 BARS UPON APPROVAL MAY BE PREHEATED UNIFORMLY AND CAREFULLY BENT OR STRAIGHTENED PER DSI'S RECOMMENDATION.
- 16. ALL REINFORCING BAR ANCHOR BOLTS AND OTHER CONCRETE INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE.
- 17. PROJECTING CORNERS OF BEAMS, COLUMNS, ETC. SHALL BE FORMED WITH 3/4" CHAMFER UNLESS NOTED OTHERWISE.
- 18. TERMINITE PROTECTORS SHALL BE INSTALLED TO COMPLY WITH THE INTERNATIONAL BUILDING CODE.
- 19. THE CONTRACTOR SHALL PASS ALL REQUIRED LOCAL INSPECTIONS PRIOR TO PLACING CONCRETE.

MASONRY:

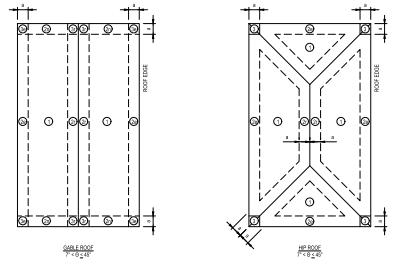
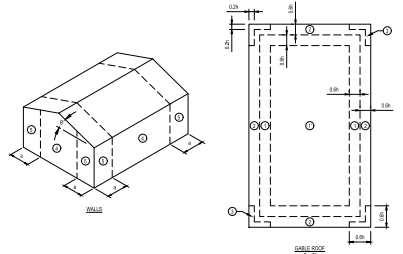
- 1. HOLLOW CONCRETE BLOCK (MASONRY) UNITS SHALL CONFORM TO ASTM C90 SPECIFICATIONS, NORMAL WEIGHT, TYPE I, GRADE N.
- 2. COMPOSITION, QUALITY, STORAGE, HANDLING, PREPARATION AND PLACEMENT OF MATERIALS, QUALITY ASSURANCE FOR MATERIALS AND MASONRY, AND CONSTRUCTION OF MASONRY SHALL COMPLY WITH THE ABOVE ISSUES AS A QUALITY ASSURANCE PROGRAM SHALL BE USED TO ENSURE THAT THE CONSTRUCTED MASONRY IS IN CONFORMANCE WITH THE CONTRACT DOCUMENTS.
- 3. SPECIFIC COMPRESSIVE STRENGTH OF MASONRY SHALL BE A MINIMUM OF FN = 1500 PSI.
- 4. MINIMUM NET AREA COMPRESSIVE STRENGTH OF CONCRETE MASONRY UNITS SHALL BE 1600 PSI.
- 5. ALL MORTAR USED IN MASONRY SHALL CONFORM TO ASTM C770 TYPE M OR S. THE MASONRY CEMENT MORTAR IS NOT ACCEPTABLE. MASONRY FOR FOUNDATION WALLS SHALL BE IN ACCORDANCE WITH INTERNATIONAL BUILDING CODE SECTIONS 1807 AND 2104.
- 6. ALL REINFORCING IN MASONRY WALLS SHALL BE FULLY ENCLOSED WITH GROUT. GROUT MIX SHALL CONFORM TO ASTM C476 WITH MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2000 PSI. USE GROUT TYPE OR COARSE THAT WILL COMPLY WITH TABLE 7 (GROUT SPACE REQUIREMENTS) OF ACI 308 SPECIFICATION OF MASONRY STRUCTURES FOR DIMENSIONS OF GROUT SPACES AND FOUR BARS. PROVIDE A MINIMUM OF 1" GROUT BETWEEN MASONRY REINFORCING AND MASONRY UNITS.
- 7. ALL REINFORCING FOR USE IN MASONRY CONSTRUCTION SHALL CONFORM TO ASTM A618, GRADE 60.
- 8. ALL DEFORMED WIRE HORIZONTAL REINFORCEMENT IN CMU WALLS SHALL CONFORM TO ASTM A647. PROVIDE #8 TRUSS TYPE JOINT REINFORCEMENT @ 16" O.C. FOR TYPICAL HORIZONTAL REINFORCING AND @ 8" O.C. FOR TYPICAL HORIZONTAL REINFORCING AT PARAPET WALLS.
- 9. ALL PLAN WIRE HORIZONTAL REINFORCEMENT IN CMU WALLS SHALL CONFORM TO ASTM A647 OR ASTM A185.
- 10. MAKE ALL REINFORCING CONTINUOUS BY LAPPING AND PROVIDING CORNER BARS FOR ALL REINFORCEMENT. VERTICAL AND HORIZONTAL REINFORCEMENT IS TO BE CONTINUOUS AND LAPPED A MINIMUM OF 48 BAR DIAMETERS.
- 11. VERTICAL REINFORCEMENT FOR CMU WALLS TO BE PLACED IN CENTER OF WALL, UNLESS INDICATED OTHERWISE ON THE DRAWINGS. PROVIDE ALL ACCESSORIES AS REQUIRED TO SUPPORT BARS AT LOCATIONS INDICATED.
- 12. MASONRY IS TO BE Laid IN ACCORDANCE WITH LATEST ADOPTED EDITION OF THE INTERNATIONAL BUILDING CODE OR APPLICABLE LOCAL GOVERNING CODES. ALL CONCRETE MASONRY UNITS SHALL BE Laid IN RUNNING BOND IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE.
- 13. MASONRY WALLS SHALL BE ADEQUATELY BRACED DURING CONSTRUCTION TO WITHSTAND WIND LOADS. BRACING SHALL REMAIN IN PLACE UNTIL ROOF FRAMING IS COMPLETELY INSTALLED AND CAPABLE OF PROVIDING LATERAL SUPPORT.

STRUCTURAL LUMBER:

- 1. WOOD FRAMING AND COLUMNS 4" THICK AND LARGER SHALL BE NO. 2 STRESS RATED SOUTHERN PINE OR BETTER WITH THE MINIMUM FOLLOWING CHARACTERISTICS:
 - F_b = 1500 PSI F_c = 375 PSI F_v = 425 PSI F_v = 165 PSI E = 1,500,000 PSI
- 2. WOOD FRAMING AND COLUMNS 2" THICK AND 2" WIDE SHALL BE NO. 2 STRESS RATED SOUTHERN PINE OR BETTER WITH THE MINIMUM FOLLOWING CHARACTERISTICS:
 - F_b = 1100 PSI F_c = 365 PSI F_v = 1450 PSI F_v = 175 PSI E = 1,400,000 PSI
- 3. WOOD FRAMING AND COLUMNS 2" THICK AND 5/4" WIDE SHALL BE NO. 2 STRESS RATED SOUTHERN PINE OR BETTER WITH THE MINIMUM FOLLOWING CHARACTERISTICS:
 - F_b = 1000 PSI F_c = 365 PSI F_v = 1400 PSI F_v = 175 PSI E = 1,400,000 PSI
- 4. WOOD FRAMING AND COLUMNS 2" THICK AND 2" WIDE SHALL BE NO. 2 STRESS RATED SOUTHERN PINE OR BETTER WITH THE MINIMUM FOLLOWING CHARACTERISTICS:
 - F_b = 1000 PSI F_c = 365 PSI F_v = 1400 PSI F_v = 175 PSI E = 1,400,000 PSI
- 5. WOOD FRAMING AND COLUMNS 2" THICK AND 1 1/2" WIDE SHALL BE NO. 2 STRESS RATED SOUTHERN PINE OR BETTER WITH THE MINIMUM FOLLOWING CHARACTERISTICS:
 - F_b = 1000 PSI F_c = 365 PSI F_v = 1400 PSI F_v = 175 PSI E = 1,400,000 PSI
- 6. WOOD FRAMING AND COLUMNS 2" THICK AND 1 1/2" WIDE SHALL BE NO. 2 STRESS RATED SOUTHERN PINE OR BETTER WITH THE MINIMUM FOLLOWING CHARACTERISTICS:
 - F_b = 750 PSI F_c = 365 PSI F_v = 1250 PSI F_v = 175 PSI E = 1,400,000 PSI
- 7. 2x4 WALL STUDS AND PLATES SHALL BE SPRUCE-PINE-FIR IN STUD GRADE WITH THE MINIMUM FOLLOWING CHARACTERISTICS:
 - E = 1,200,000 PSI
- 8. 2x4 WALL STUDS AND PLATES SHALL BE SPRUCE-PINE-FIR IN STUD GRADE WITH THE MINIMUM FOLLOWING CHARACTERISTICS:
 - F_b = 675 PSI F_c = 1200 PSI E = 1,200,000 PSI
- 9. ALL LVL BEAMS SHALL BE VESSEL LAM AS MANUFACTURED BY BOISE CASCADE, OR AN APPROVED EQUAL WITH THE MINIMUM FOLLOWING CHARACTERISTICS:
 - F_b = 3100 PSI F_c = 750 PSI F_v = 3000 PSI F_v = 285 PSI E = 2,100,000 PSI
- 10. ALL GLULAM BEAMS SHALL BE POWER PRESERVED GLULAM BEAMS BY ANOTHER FOREST PRODUCTS, OR AN APPROVED EQUAL WITH THE MINIMUM FOLLOWING CHARACTERISTICS:
 - F_b = 1400 PSI F_c = 740 PSI F_v = 300 PSI E = 1,800,000 PSI
- 11. ALL WOOD JOISTS SHALL BE AS MANUFACTURED BY BOISE CASCADE, OR AN APPROVED EQUAL.
- 12. PLYWOOD DECKING AS FOLLOWS:
 - 12.A. ALL WALL SHEATHING AND ROOF DECKING SHALL BE APA RATED SHEATHING, STRUCTURAL I OR II, EXTERIOR PLYWOOD.
 - 12.B. ROOF SHEATHING THICKNESS SHALL BE AS SHOWN ON THE ROOF FRAMING PLAN. LONG DIMENSION OF PANEL PERPENDICULAR TO SUPPORTS.
 - 12.C. WALL SHEATHING THICKNESS SHALL BE AS SHOWN ON THE SHEAR WALL PLAN.
 - 12.D. STAGGERED ENDS OF SHEETS LAYING HORIZONTALLY.
 - 12.E. PROVIDE BLOCKING AT EDGES OF ALL SHEAR WALL PANELS.
 - 12.F. ROOF SHEATHING NAILING: (N/A) ON PLANS.
 - O.C. MAXIMUM SPACING PANEL EDGES
 - O.C. MAXIMUM SPACING INTERMEDIATE SUPPORTS
 - 12.G. USE MINIMUM 115 #2 ZIP NAILS SHANK NAILS (8 INGS SHANK) (U.N.O.)
 - 12.H. ROOF DECK EDGE SUPPORT SHALL COMPLY WITH TABLE 2204.8(3).
 - 12.I. PANELS SHALL BE SPACED 1/4" END TO END PER MANUFACTURER'S RECOMMENDATION.
- 13. TRUSSES SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST SPECIFICATIONS & RECOMMENDATIONS OF TP1-12014 & BC3-2013 BY THE TRUSS PLATE INSTITUTE (TP).
- 14. TRUSS MANUFACTURER SHALL SUBMIT FOR APPROVAL CALCULATIONS & SHOP DRAWINGS FOR DETAILS, FABRICATION & ERECTION OF WOOD TRUSSES. DRAWINGS SHALL INCLUDE LAYOUT, SPACING, MATERIAL, MEMBER PROPERTIES, A DETAILS OF CONNECTIONS FOR ALL TIMBER FRAMING INDICATED ON THE DRAWINGS. TRUSSES SHALL BE DESIGNED TO RESIST THE FORCES AS INDICATED BY THE FABRICATOR, UNDER THE DIRECT SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED.
- 15. TRUSS MANUFACTURER SHALL SUBMIT FOR APPROVAL CALCULATIONS & SHOP DRAWINGS FOR DETAILS, FABRICATION & ERECTION OF WOOD TRUSSES. DRAWINGS SHALL INCLUDE LAYOUT, SPACING, MATERIAL, MEMBER PROPERTIES, A DETAILS OF CONNECTIONS FOR ALL TIMBER FRAMING INDICATED ON THE DRAWINGS. TRUSSES SHALL BE DESIGNED TO RESIST THE FORCES AS INDICATED BY THE FABRICATOR, UNDER THE DIRECT SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED.

STRUCTURAL LUMBER (CONT'D):

- 15. SOLID 2x4 BLOORING OR DIAGONAL 1x4 BLOORING SHALL BE PLACED BETWEEN FLOOR JOISTS AT INTERVALS NOT EXCEEDING 8 FT. UNDER LOAD BEARING WALLS.
- 16. STRUCTURAL MEMBERS SHALL NOT BE OUT, BORED, OR NOTCHED IN EXCESS OF THE LIMITATIONS OF THE MANUFACTURER'S PUBLISHED LITERATURE OR THE INTERNATIONAL BUILDING CODE.
- 17. WHERE A LOAD-BEARING WALL THAT BEARS ON WOOD JOISTS IS STACKED OVER A LOAD-BEARING WALL BELOW, 2x4 SQUASH BLOCKS OR JOIST BLOORING IS REQUIRED BETWEEN THE JOISTS. IS FLOORING PLAN.



COMPONENTS & CLADDING WIND PRESSURES (psf) (ALLOWABLE STRESS DESIGN) (CONT'D.)

WINDS	ZONE	EFF. WIND AREA (SF)	WIND SPEED								
			130 MPH		140 MPH		150 MPH		160 MPH		
			POS	NEG	POS	NEG	POS	NEG	POS	NEG	
1	10	16.0	-16.7	17.4	-18.8	19.9	-21.6	22.7	-24.6	25.8	-27.8
4	20	14.3	-14.7	15.6	-16.6	18.0	-19.7	21.6	-23.6	24.4	-26.6
4	30	13.4	-14.7	15.6	-17.0	17.8	-19.5	20.3	-22.2	22.9	-25.1
4	100	12.7	-14.0	14.8	-16.2	16.9	-18.6	19.3	-21.2	21.8	-23.9
4	200	12.0	-13.3	14.0	-15.4	16.0	-17.7	18.3	-20.2	20.8	-22.8
5	10	15.0	-20.0	17.4	-23.2	19.9	-26.7	22.7	-30.4	25.6	-34.3
5	20	14.3	-18.7	16.6	-21.7	19.0	-24.9	21.6	-28.3	24.4	-32.0
5	30	13.4	-16.8	15.6	-19.6	17.8	-22.5	20.3	-25.6	22.9	-29.9
5	100	12.7	-15.6	14.8	-18.4	17.8	-20.7	19.3	-23.6	21.8	-26.6
5	200	12.0	-14.2	14.0	-16.5	16.0	-18.9	18.3	-21.6	20.8	-24.3

SHEET INDEX

- S-0.0 GENERAL NOTES
- S-0.1 FOUNDATION PLAN
- S-1.0 FOUNDATION SECTIONS & DETAILS
- S-2.0 FIRST FLOOR CEILING FRAMING PLAN / SECOND FLOOR FRAMING PLAN
- S-3.0 SECOND FLOOR CEILING FRAMING PLAN
- S-4.0 ROOF FRAMING PLAN
- S-5.0 FIRST FLOOR SHEAR WALL PLAN
- S-6.0 SECOND FLOOR SHEAR WALL PLAN
- S-7.0 FRAMING SECTIONS & DETAILS
- S-7.1 FRAMING SECTIONS & DETAILS
- S-7.2 FRAMING SECTIONS & DETAILS
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- S-7.9 FRAMING SECTIONS & DETAILS
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- S-8.9 FRAMING SECTIONS & DETAILS
- S-9.0 FRAMING SECTIONS & DETAILS
- S-9.1 FRAMING SECTIONS & DETAILS
- S-9.2 FRAMING SECTIONS & DETAILS
- S-9.3 FRAMING SECTIONS & DETAILS
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- S-9.6 FRAMING SECTIONS & DETAILS
- S-9.7 FRAMING SECTIONS & DETAILS
- S-9.8 FRAMING SECTIONS & DETAILS
- S-9.9 FRAMING SECTIONS & DETAILS

CODES:

- LOCAL CODES, ORDINANCES AND AMENDMENTS
- GENERAL BUILDING CODE
- 2018 INTERNATIONAL BUILDING CODE
- ASCE 7-16
- CONCRETE CODES
- BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-14)
- ACI 308 (MINIMUM PERMISSIBLE CURVES AND RADIUS) (ACI 308R-14)
- MASONRY CODE
- BUILDING CODE REQUIREMENTS AND SPECIFICATIONS FOR MASONRY STRUCTURES (TMS 402-13ACI 530-13ACI 530-13)
- WOOD CODES
- AIRC MANUAL FOR ENGINEERED WOOD CONSTRUCTION (2018)
- AIRC NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION (2018)
- AIRC SPECIAL DESIGN PROVISIONS FOR WIND & SEISMIC (SDPWS) (2015)
- AIRC NATIONAL DESIGN SPECIFICATIONS FOR WOOD SUPPLEMENT (2018)
- AIRC WOOD FRAMING CONSTRUCTION MANUAL, (WFCM) (2018)

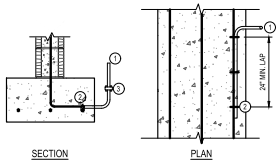
DESIGN LOADS:

- FLOOR LOADS:
 - DEAD LOAD 10 PSF
 - LIVE LOAD 100 PSF
- CEILING LOADS:
 - DEAD LOAD 10 PSF
 - LIVE LOAD 10 PSF (UNHABITABLE ATTIC AND LIMITED STORAGE)
 - 20 PSF (HABITABLE ATTIC AND LIMITED STORAGE)
 - 30 PSF (HABITABLE ATTIC AND ATTICS w/ FIXED STAIRS)
- ROOF LOADS:
 - DEAD LOAD 10 PSF
 - LIVE LOAD 20 PSF
- WIND LOADS:
 - WIND SPEED = 160 MPH
 - EXPOSURE = B
 - WIND ROOF HEIGHT = 15 FEET
- RISK CATEGORY II
- WIND DIRECTIONALITY FACTOR, K_d = 0.85
- TOPOGRAPHY FACTOR, K_t = 1.0
- GROUND ELEVATION FACTOR, K_e = 1.0
- GUST EFFECT FACTOR, G = 0.85
- ENCLOSURE CLASSIFICATION: UN-ENCLOSED BUILDING
- INTERNAL PRESSURE COEFFICIENT = +/- 0.18
- H = 4 FEET

COMPONENTS & CLADDING WIND PRESSURES (psf) (ALLOWABLE STRESS DESIGN)

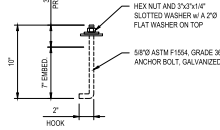
WINDS	ZONE	EFF. WIND AREA (SF)	WIND SPEED									
			130 MPH		140 MPH		150 MPH		160 MPH			
			POS	NEG	POS	NEG	POS	NEG	POS	NEG		
GABLE ROOF - GROUND (0-15 FT) (U.N.O.) (W/O OVERHANG)	1	10	6.1	-23.8	7.1	-27.6	8.1	-31.7	9.2	-36.1	10.4	-40.8
	1	10	6.1	-20.2	7.1	-22.2	8.1	-26.7	9.2	-30.4	10.4	-34.3
	2	10	6.1	-21.4	7.1	-25.6	8.1	-29.9	9.2	-34.7	10.4	-38.8
GABLE ROOF - 15 FT TO 20 FT (U.N.O.) (W/O OVERHANG)	3	10	6.1	-42.9	7.1	-49.7	8.1	-57.1	9.2	-64.9	10.4	-73.3
	1	10	6.1	-23.8	7.1	-27.6	8.1	-31.7	9.2	-36.1	10.4	-40.8
	2	10	6.1	-21.4	7.1	-25.6	8.1	-29.9	9.2	-34.7	10.4	-38.8
GABLE ROOF - 20 FT TO 25 FT (U.N.O.) (W/O OVERHANG)	1	10	6.1	-23.8	7.1	-27.6	8.1	-31.7	9.2	-36.1	10.4	-40.8
	1	10	6.1	-23.8	7.1	-27.6	8.1	-31.7	9.2	-36.1	10.4	-40.8
	2	10	6.1	-21.4	7.1	-25.6	8.1	-29.9	9.2	-34.7	10.4	-38.8
GABLE ROOF - 25 FT TO 30 FT (U.N.O.) (W/O OVERHANG)	1	10	6.1	-42.9	7.1	-49.7	8.1	-57.1	9.2	-64.9	10.4	-73.3
	1	10	6.1	-23.8	7.1	-27.6	8.1	-31.7	9.2	-36.1	10.4	-40.8
	2	10	6.1	-21.4	7.1	-25.6	8.1	-29.9	9.2	-34.7	10.4	-38.8
GABLE ROOF - 30 FT TO 35 FT (U.N.O.) (W/O OVERHANG)	1	10	6.1	-42.9	7.1	-49.7	8.1	-57.1	9.2	-64.9	10.4	-73.3
	1	10	6.1	-23.8	7.1	-27.6	8.1	-31.7	9.2	-36.1	10.4	-40.8
	2	10	6.1	-21.4	7.1	-25.6	8.1	-29.9	9.2	-34.7	10.4	-38.8
GABLE ROOF - 35 FT TO 40 FT (U.N.O.) (W/O OVERHANG)	1	10	6.1	-42.9	7.1	-49.7	8.1	-57.1	9.2	-64.9	10.4	-73.3
	1	10	6.1	-23.8	7.1	-27.6	8.1	-31.7	9.2	-36.1	10.4	-40.8
	2	10	6.1	-21.4	7.1	-25.6	8.1	-29.9	9.2	-34.7	10.4	-38.8
GABLE ROOF - 40 FT TO 45 FT (U.N.O.) (W/O OVERHANG)	1	10	6.1	-42.9	7.1	-49.7	8.1	-57.1	9.2	-64.9	10.4	-73.3
	1	10	6.1	-23.8	7.1	-27.6	8.1	-31.7	9.2	-36.1	10.4	-40.8
	2	10	6.1	-21.4	7.1	-25.6	8.1	-29.9	9.2	-34.7	10.4	-38.8
GABLE ROOF - 45 FT TO 50 FT (U.N.O.) (W/O OVERHANG)	1	10	6.1	-42.9	7.1	-49.7	8.1	-57.1	9.2	-64.9	10.4	-73.3
	1	10	6.1	-23.8	7.1	-27.6	8.1	-31.7	9.2	-36.1	10.4	-40.8
	2	10	6.1	-21.4	7.1	-25.6	8.1	-29.9	9.2	-34.7	10.4	-38.8
GABLE ROOF - 50 FT TO 55 FT (U.N.O.) (W/O OVERHANG)	1	10	6.1	-42.9	7.1	-49.7	8.1	-57.1	9.2	-64.9	10.4	-73.3
	1	10	6.1	-23.8	7.1	-27.6	8.1	-31.7	9.2	-36.1	10.4	-40.8
	2	10	6.1	-21.4	7.1	-25.6	8.1	-29.9	9.2	-34.7	10.4	-38.8
GABLE ROOF - 55 FT TO 60 FT (U.N.O.) (W/O OVERHANG)	1	10	6.1	-42.9	7.1	-49.7	8.1	-57.1	9.2	-64.9	10.4	

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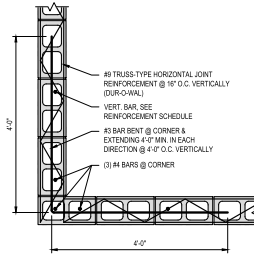


- SECTION**
- STANDARD GROUNDING ELECTRODE LOCATED CLOSE TO SERVICE ENTRANCE, ABOVE GRADE.
 - ELECTRODE TIED (MIN. 3 TIES) TO OUTER TENSION ROD IN FOOTING - MIN. 24" LAP.
 - ELECTRICIAN TO INSTALL GROUND CLAMP BELOW GRADE, CUT ELECTRODE BELOW GRADE AND INSTALL GROUND SERVICE ENTRANCE.

TYPICAL GROUNDING DETAIL
SCALE: 3/4" = 1'-0"

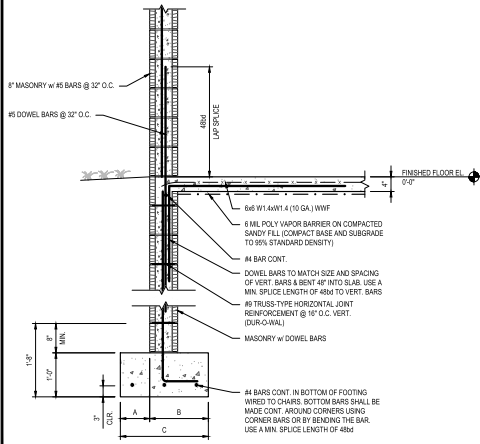


TYPICAL ANCHOR BOLT DETAIL
SCALE: 1 1/2" = 1'-0"

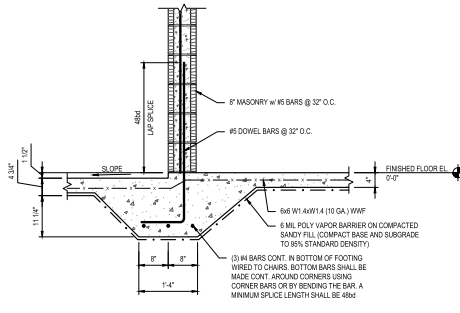


TYP. CMU CORNER REINFORCEMENT DETAIL
SCALE: 3/4" = 1'-0"

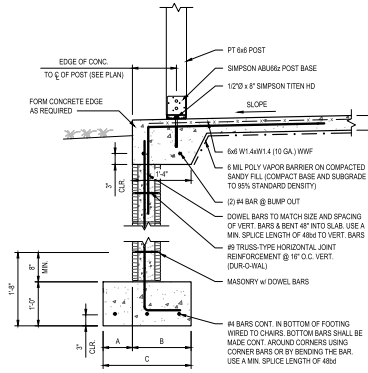
STEMWALL SCHEDULE						
WALL HEIGHT	WALL THICKNESS	A	B	C	WALL REINFORCEMENT	LONGITUDINAL FOOTING REINFORCEMENT
5-BLOCKS OR LESS	8"	8"	1'-4"	2'-0"	#4 BARS @ 32" O.C.	(3) #4 BARS CONT.
6-8-BLOCKS	8"	1'-0"	1'-8"	2'-4"	#4 BARS @ 24" O.C.	(4) #4 BARS CONT.
9-10-BLOCKS	8"	1'-2"	1'-10"	3'-0"	#5 BARS @ 18" O.C.	(4) #4 BARS CONT.
11-12-BLOCKS	12"	1'-8"	2'-4"	4'-0"	#5 BARS @ 8" O.C.	(5) #4 BARS CONT.



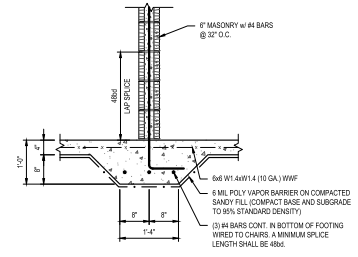
A SECTION
SCALE: 3/4" = 1'-0"



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



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



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

B/E ENGINEERING CO., L.P.
 2225 HUNTERS HILL ROAD
 HOUSTON, TEXAS 77056
 281-461-5472
 info@bethegroup.com



PROPOSED NEW CONSTRUCTION FOR
CITY OF ORANGE BEACH
 4960 WALKER LANE
 ORANGE BEACH, AL 36561

NO.	DATE	BY	DESCRIPTION

PROJECT NUMBER: 082408-078
 DRAWN BY: SG
 CHECKED BY: VDL
 ISSUE DATE: 11-14-2024

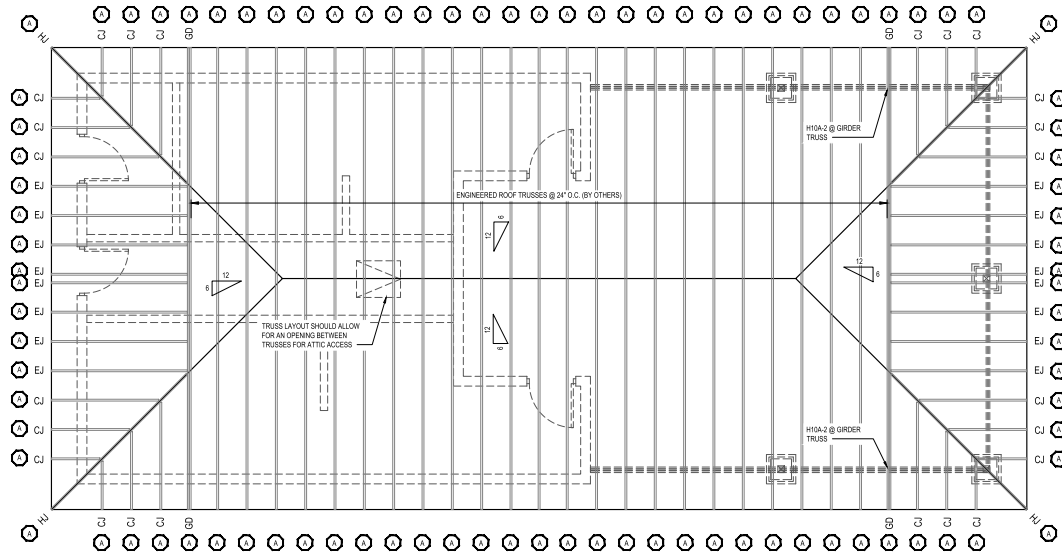


SHEET TITLE & NUMBER:
 FOUNDATION SECTIONS & DETAILS

S-1.1

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TRUSS STRAPPING REQUIREMENTS				
KEY	QUANTITY	SIMPSON TIE TO TOP PLATE	NOTES	SIMPSON TIE TO BOTTOM PLATE
⊙	94	H10A		



- NOTES:**
- ALL TRUSSES SHALL BE BY OTHERS @ 24" O.C. U.N.O.
 - ALL ROOFS SHALL HAVE 19/32" NOMINAL APA RATED PLYWOOD OR OSB SHEATHING WITH 10d RING SHANK NAILS AT 4" O.C. EDGE AND 4" O.C. FIELD SPACING. THE SELECTED SUBSTRATE SHALL MEET THE REQUIREMENTS OF THE CERTIFIED REPORT FROM THE METAL ROOF MANUFACTURER. SEE METAL ROOF NOTES THIS SHEET.
 - INSTALL 1x4 PURLINS ON TOP OF ROOF DECKING @ 24" O.C. AND ATTACH WITH (3) 10d RING SHANK NAILS

ROOF FRAMING PLAN
SCALE: 1/4" = 1'-0"

METAL ROOF NOTES:

THE DESIGN PRESSURE RATINGS FOR THE SELECTED METAL ROOF SHALL MEET OR EXCEED THE REQUIRED DESIGN UPLIFT PRESSURES SHOWN ON SHEET S-0.

IF A FORTIFIED RATING IS DESIRED, THE CONTRACTOR SHALL SUBMIT THE METAL ROOF MANUFACTURER DOCUMENTATION (AS DESCRIBED BELOW) TO fortified@bethel-eng.com PRIOR TO INSTALLATION.

DP RATINGS FROM THE SELECTED METAL ROOF SHALL HAVE A CERTIFIED REPORT FROM ONE OF THE FOLLOWING ORGANIZATIONS, OR INCORPORATE A 2.0 SAFETY FACTOR:

- FLORIDA BUILDING CODE PRODUCT APPROVAL
- INTERNATIONAL CODE COUNCIL EVALUATION SERVICE (ICC-ES) REPORT
- MIAMI-DADE NOTICE OF ACCEPTANCE (NOA)
- TEXAS DEPARTMENT OF INSURANCE (TDI) PRODUCT EVALUATION

THE SUBSTRATE THAT IS INSTALLED SHALL BE PER THE CERTIFIED REPORT FROM THE METAL ROOF MANUFACTURER.

ATTENTION BUILDING DEPARTMENT:

THIS GENERIC TRUSS LAYOUT SHOWN IS FOR ILLUSTRATIVE PURPOSES ONLY. TRUSS DESIGN AND LAYOUT SHALL BE BY OTHERS. IF THIS NOTE IS STILL PRESENT AT THE TIME OF INSPECTION, THEN BETHEL HAS NOT RECEIVED NOR REVIEWED A TRUSS DESIGN BY OTHERS, AND THIS GENERIC LAYOUT MAY OR MAY NOT BE ACCURATE.

THE CONTRACTOR SHALL PROVIDE ENGINEER A TRUSS LAYOUT & TRUSS REACTIONS PRIOR TO CONSTRUCTION SO THAT TRUSS CONNECTIONS AND LOAD PATHS MAY BE VERIFIED.

LEGEND:

⊙	TRUSS HOLDOWN
CJ	CORNER JACK TRUSS
EJ	END JACK TRUSS
GD	GIRDER TRUSS
HJ	HIP JACK TRUSS

B/E ENGINEERING CO., LLC
3228 Bismarck Blvd., Suite 100
Jacksonville, FL 32216
904-481-2472
www.bethel-engineering.com



PROPOSED NEW CONSTRUCTION FOR
CITY OF ORANGE BEACH
4960 WALKER LANE
ORANGE BEACH, AL 36561

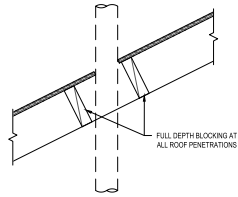
NO.	DATE	BY	DESCRIPTION

PROJECT NUMBER: 082408-078
DRAWN BY: SG
CHECKED BY: VDL
ISSUE DATE: 11-14-2024



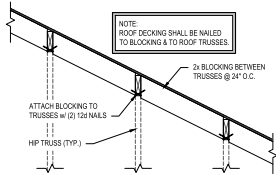
SHEET TITLE & NUMBER
ROOF FRAMING PLAN

LAST SAVED, DRAFTED OR PRINTED BY: SHERIE GIBNEY 11/14/24 10:52:05 AM 443 Structural Engineering & Engineering, Inc. 2228 Peachtree Park Drive, Suite 100, Atlanta, GA 30329. ALL RIGHTS RESERVED. THIS DRAWING IS THE PROPERTY OF B/E ENGINEERING CO., L.P. AND THEIR CLIENT, & MAY NOT BE REPRODUCED, COPIED, EITHER WHOLLY OR PARTIALLY, IN ANY MANNER, WITHOUT PERMISSION. DO NOT SCALE FROM DRAWINGS.



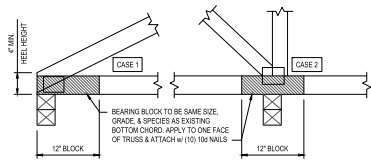
BLOCKING AT ROOF PENETRATIONS

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



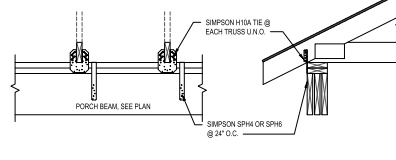
TYPICAL HIP TRUSS TOP CHORD BLOCKING DETAIL

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



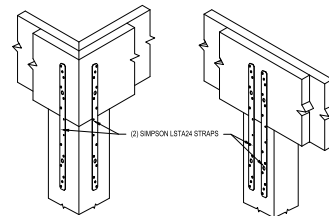
BEARING BLOCK DETAIL

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



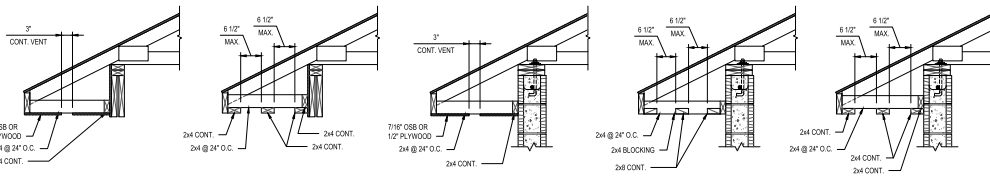
TYPICAL PORCH BEAM STRAPPING DETAIL

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



POST TO BEAM CONNECTION DETAIL

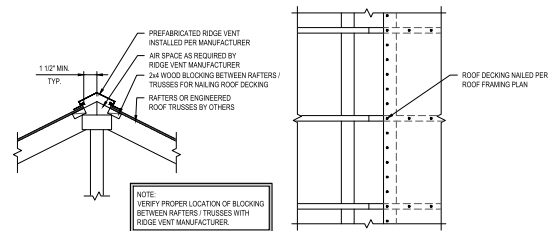
SCALE: N.T.S.



ALUMINUM / VINYL SOFFIT NAILING DETAILS

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

- NOTES:
1. DETAILS SHOWN ARE LISTED AS OPTIONS. CONTRACTOR MAY SELECT ANY OPTION.
 2. IF AN ALTERNATE WAY OF FRAMING IS DESIRED, CONTRACTOR SHALL CONTACT ENGINEER OF RECORD TO VERIFY CONFORMABILITY TO LOCAL STANDARDS OR CODES.



RIDGE VENT BLOCKING DETAIL

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

B/E ENGINEERING CO., LLC
 2228 Peachtree Park Drive, Suite 100
 Atlanta, GA 30329
 404-481-4242
 info@be-engineering.com



PROPOSED NEW CONSTRUCTION FOR
CITY OF ORANGE BEACH
 4960 WALKER LANE
 ORANGE BEACH, AL 36561

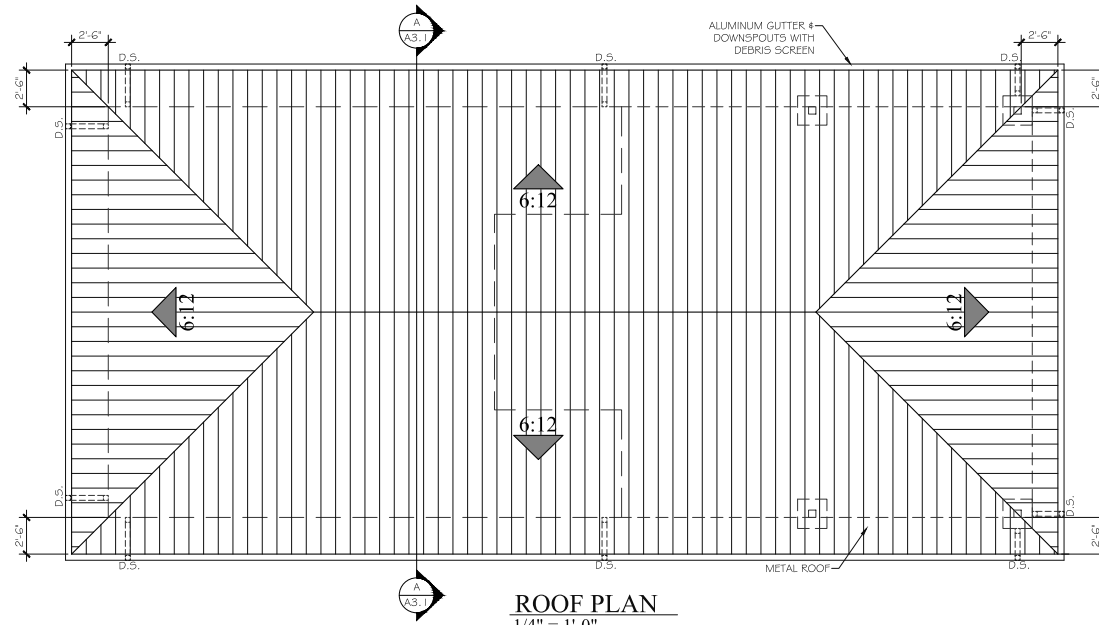
REV. DATE	BY	DESCRIPTION

PROJECT NUMBER: 082408-078
 DRAWN BY: SG
 CHECKED BY: VDL
 ISSUE DATE: 11-14-2024



SHEET TITLE & NUMBER:
FRAMING SECTIONS & DETAILS

S-4.0



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

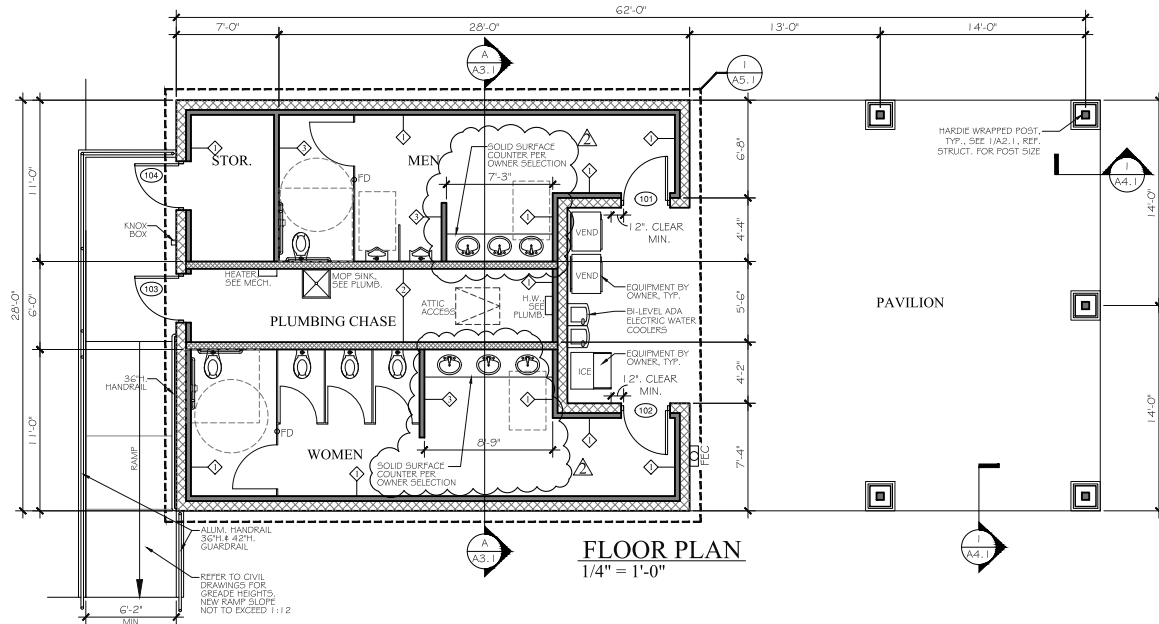
WALL LEGEND

-
-
-

McColough ARCHITECTURE, INC.
 P.O. BOX 4310
 GULF SHORES, ALABAMA
 36547-4310
 PHONE: 251-964-7322



A NEW RESTROOM BUILDING
 FOR THE
ORANGE BEACH PICKLEBALL COURT
 ORANGE BEACH, ALABAMA

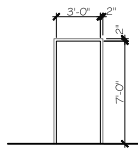


FLOOR PLAN
1/4" = 1'-0"

JOB NO.: JAG
 DRAWN: SBM
 CHECKED: SBM
 DATE: 2025.01.29
 REVISION:
 2025.03.10
 2025.03.11

SCALE: 1/4" = 1'-0"
 SHEET NO.:
A1.1
 FLOOR PLAN

- ALL DOORS TO BE RATED LARGE MISSILE IMPACT.



① EXTERIOR FRP/ALUM HYBRID DOOR IN AN ALUMINUM FRAME

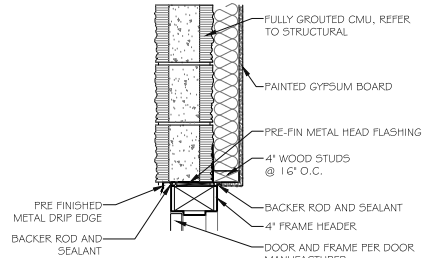
DOOR FRAME TYPES
SCALE: 1/4" = 1'-0"

DOOR SCHEDULE									
DOOR NO.	DOOR SIZE	DOOR TYPE	DOOR MATERIAL	DOOR FINISH	FRAME TYPE	RATING	PANIC/HIDE	DOOR CLOSURE	REMARKS
101	3'0" x 8'0"	1	FRP/ALUM	PAINT	1	-	-	YES	ALUM. FRAME
102	3'0" x 8'0"	1	FRP/ALUM	PAINT	1	-	-	YES	ALUM. FRAME
103	3'0" x 8'0"	1	FRP/ALUM	PAINT	1	-	-	-	ALUM. FRAME
104	3'0" x 8'0"	1	FRP/ALUM	PAINT	1	-	-	-	ALUM. FRAME

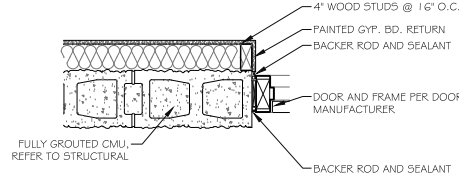
ROOM FINISH SCHEDULE							
ROOM NAME	FLOOR	BASE	WALLS	FINISH	MATERIAL	CEILING	HEIGHT
PAVILION	CONC.	-	CMU	PAINT	M.R. GYP. BD.	HARDIE PANEL	10'-0"
FLUMBING CHASE	CONC.	-	CMU	PAINT	M.R. GYP. BD.	HARDIE PANEL	10'-0"
WOMENS	(1)	(2)	CMU/GYP	PAINT	M.R. GYP. BD.	HARDIE PANEL	10'-0"
MENS	(1)	(2)	CMU/GYP	PAINT	M.R. GYP. BD.	HARDIE PANEL	10'-0"
STORAGE	CONC.	-	CMU/GYP	PAINT	M.R. GYP. BD.	HARDIE PANEL	10'-0"

ABBREVIATION: CONC. CONCRETE, CPT. CARPET, VCT VINYL COMPOSITE TILE, GYP. BD. GYPSUM BOARD, M.R. GYP. BD. MOISTURE RESISTANT GYPSUM BOARD, FIT F.I.P., FIBERGLASS REINFORCED PLASTIC PANEL SYSTEM

NOTES
(1) DECORFLAKE SHERWIN WILLIAMS ORBIT
(2) TARKETT JOHNSONITE WALL BASE; TAG BEDROCK CG

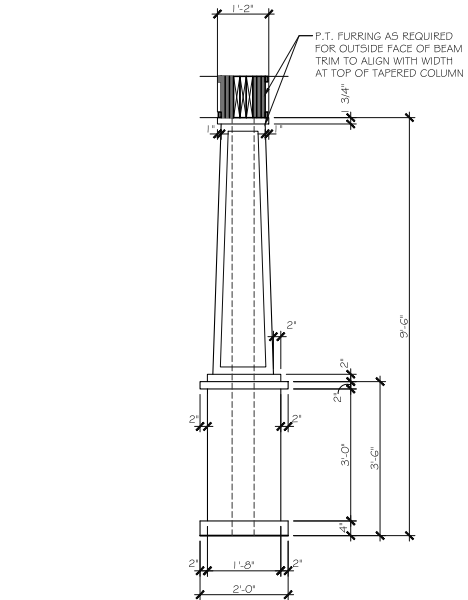
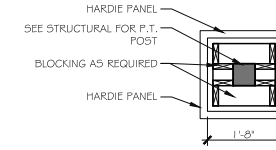


HEAD DETAIL - FRP/ALUM DOOR @ CMU
SCALE: 1-1/2" = 1'-0"

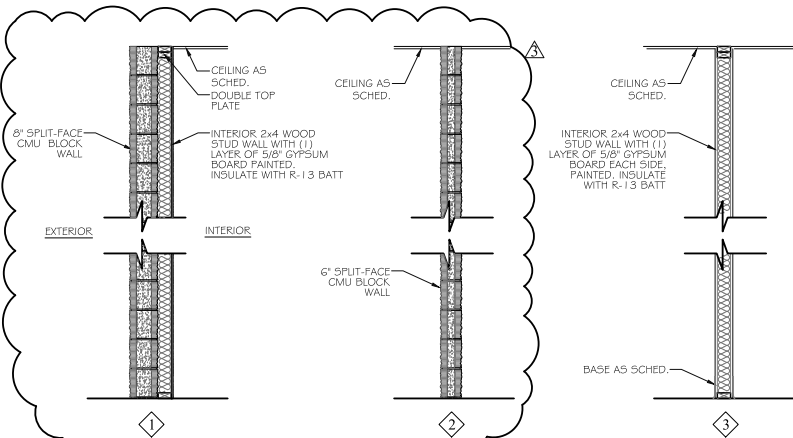


JAMB DETAIL - FRP/ALUM DOOR @ CMU
SCALE: 1-1/2" = 1'-0"

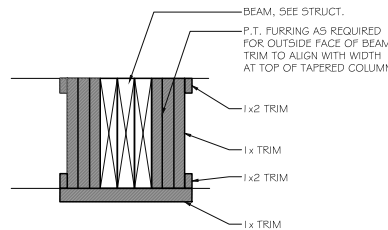
4 DOOR DETAILS
1 1/2" = 1'-0"



① COLUMN DETAIL
1/2" = 1'-0"



3 WALL TYPES
NTS



2 BEAM WRAP DETAIL
NTS



A NEW RESTROOM BUILDING
FOR THE
ORANGE BEACH PICKLEBALL COURT
ORANGE BEACH, ALABAMA

JOB NO.:
DRAWN: JAG
CHECKED: SBM
DATE: 2025.01.29
REVISION:
① 2025.03.11

SCALE: 1/4" = 1'-0"
SHEET NO.:

A2.1
FINISH SCHEDULE
WALL TYPES & DETAILS



A NEW RESTROOM BUILDING FOR THE
ORANGE BEACH PICKLEBALL COURT
 ORANGE BEACH, ALABAMA

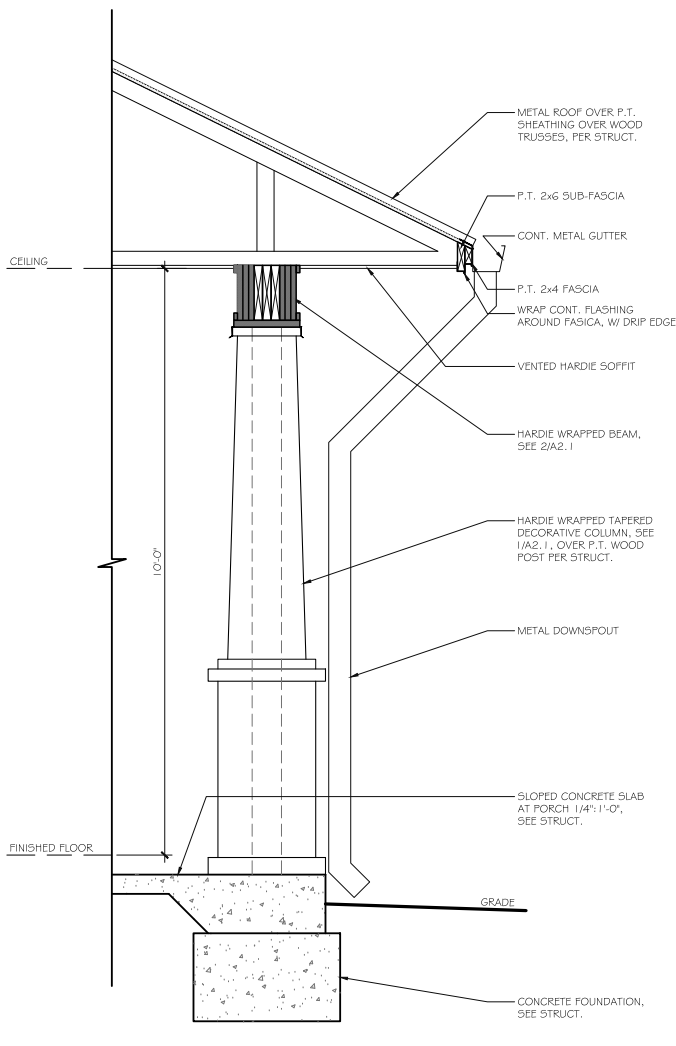
JOB NO.:
 DRAWN: JAG
 CHECKED: SBM
 DATE: 2025.01.29
 REVISION:
 2025.03.11

SCALE: AS NOTED

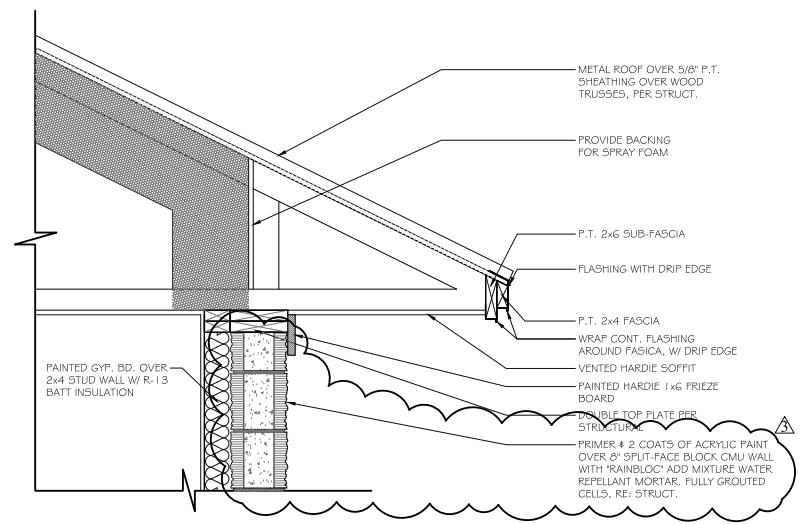
SHEET NO.:

A4.1

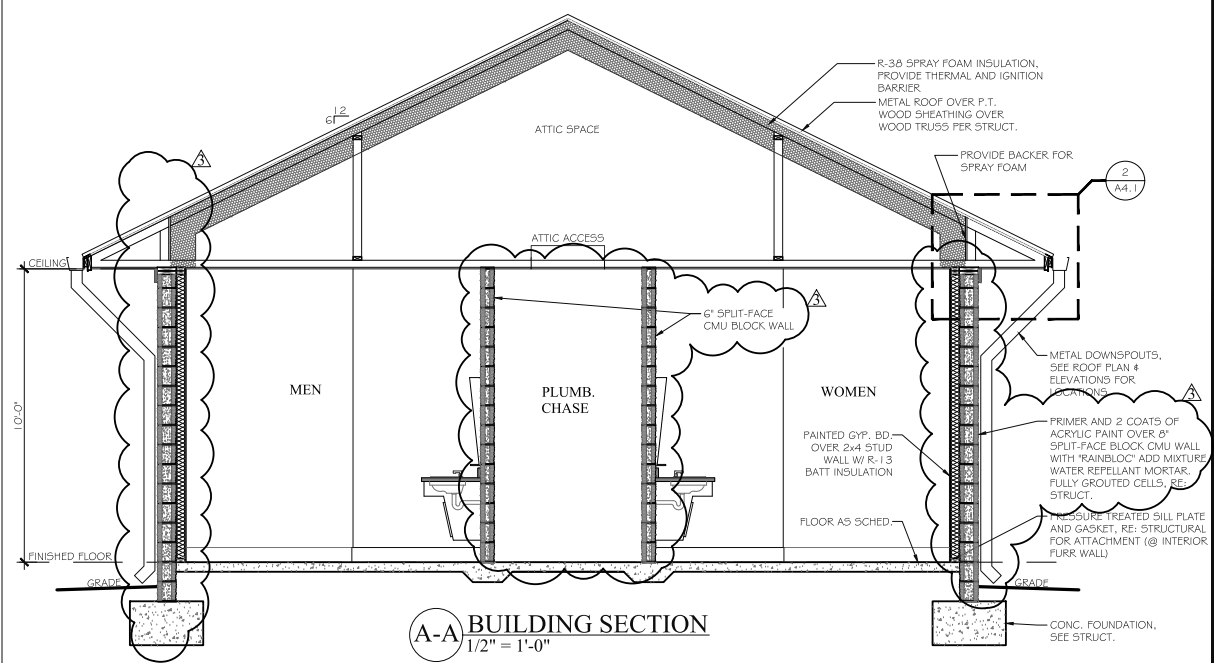
WALL SECTION AND DETAILS



1 WALL SECTION
1/2" = 1'-0"



2 DETAIL
1 1/2" = 1'-0"



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

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. SL-20 Sandstone Texture FRP/ Aluminum Hybrid Door.
- B. SL-20 Sandstone Texture FRP/ Aluminum Hybrid Door installed in Aluminum Framing.
- C. SL-20 Sandstone Texture FRP/ Aluminum Hybrid Door installed in Thermally Broken Aluminum Framing.
- D. SL-20 Sandstone Texture FRP/ Aluminum Hybrid Door installed in Retrofit Aluminum Framing.

1.02 RELATED SECTIONS

- A. Section 08 01 17 – Operation and Maintenance of Integrated Door Opening Assemblies.
- B. Section 08 06 71 – Door Hardware Schedule.
- C. Section 08 06 80 – Glazing Schedule.
- D. Section 08 10 00 – Doors and Frames.
- E. Section 08 12 16 – Aluminum Frames.
- F. Section 08 42 13 – Aluminum-Framed Entrances.
- G. Section 08 71 00 – Door Hardware.
- H. Section 08 91 26 – Door Louvers.

1.03 REFERENCES

- A. AAMA 1304 – Voluntary Specification for Forced Entry Resistance of Side-Hinged Door Systems.
- B. ASTM-B209 – Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
- C. ASTM-B221 – Standard Specification for Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
- D. ASTM-C518 – Standard test Method for Steady-State Thermal Transmission Properties by Means of Heat Flow Meter Apparatus.
- E. ASTM-D256 – Standard Test Methods for Determining the Pendulum Impact Resistance of Plastics.
- F. ASTM-D570 – Standard Test Method for Water Absorption of Plastics.
- G. ASTM-D638 – Standard Test Method for Tensile Properties of Plastics.
- H. ASTM-D790 – Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
- I. ASTM-D1621 – Standard Test Method for Compressive Properties of Rigid Cellular Plastics.
- J. ASTM-D1622 – Standard Test Method for Apparent Density of Rigid Cellular Plastics.
- K. ASTM-D1623 – Standard Test Method for Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics.
- L. ASTM-D2126 – Standard Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging.
- M. ASTM-D2583 – Standard Test Method for Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor.
- N. ASTM-D3029 – Test Methods for Impact Resistance of Flat Rigid Plastic Specimens by Means of a Tup (Falling Weight) (Withdrawn 1995) (Replaced by ASTM-D5420).
- O. ASTM-D5116 - Standard Guide for Small-Scale Environmental Chamber Determinations of Organic Emissions from Indoor Materials/ Products.
- P. ASTM-D6670 – Standard Practice for Full-Scale Chamber Determination of Volatile Organic Emissions from Indoor Materials/ Products.
- Q. ASTM-E84 – Standard Test Method for Surface Burning Characteristics of Building Materials.
- R. ASTM-E283 – Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
- S. ASTM-E330 – Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
- T. NFRC 100 – Procedure for Determining Fenestration Products U-Factors.

- U. NFRC 400 – Procedure for Determining Fenestration Products Air Leakage.
- V. TAS 201 – Impact Test Procedures.
- W. TAS 202 – Criteria for Testing Impact & Nonimpact Resistant Building Envelope Components Using Uniform Static Air Pressure.
- X. TAS 203 – Criteria for Testing Products Subject to Cyclic Wind Pressure Loading.

1.04 SUBMITTALS

- A. Must comply with Section 01 33 00 – Submittal Procedures.
- B. Action Submittals/ Informational Submittals.
 - 1. Product Data.
 - a. Submit manufacturer’s product data sheets, catalog pages illustrating the products, description of materials, components, fabrication, finishes, installation instructions, and applicable test reports.
 - 2. Shop Drawings.
 - a. Submit manufacturer’s shop drawings, including elevations, sections, and details indicating dimensions, tolerances, materials, fabrication, doors, panels, framing, hardware schedule, and finish.
 - 3. Samples.
 - a. Submit manufacturer’s door sample composed of door face sheet, core, framing and finish.
 - b. Submit manufacturer’s sample of standard colors for door face and frame.
 - 4. Testing and Evaluation Reports.
 - a. Submit testing reports and evaluations provided by manufacturer conducted by and accredited independent testing agency certifying doors and frames comply with specified performance requirements listed in Section 2.04.
 - 5. Manufacturer Reports.
 - a. Manufacturer’s Project References.
 - 1. Submit list of successfully completed projects including project name, location, name of architect, type, and quantity of doors manufactured.
- C. Closeout Submittals.
 - 1. Operation and Maintenance Manual.
 - a. Submit manufacturer’s maintenance and cleaning instructions for doors and frames, including maintenance and operating instructions for hardware.
 - 2. Warranty Documentation.
 - a. Submit manufacturer’s standard warranty.

1.05 QUALITY ASSURANCE

- A. Manufacturer’s Qualifications.
 - 1. Continuously engaged in manufacturing of doors of similar type to that specified, with a minimum of 25 years concurrent successful experience.
 - 2. Door and frame components must be fabricated by same manufacturer.
 - 3. Evidence of a documented complaint resolution quality management system.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Delivery.
 - 1. Deliver materials to site in manufacturer’s original, unopened, containers and packaging.
 - 2. Labels clearly identifying opening, door mark, and manufacturer.
- B. Storage.
 - 1. Store materials in a clean, dry area, indoors in accordance with manufacturer’s instructions.
- C. Handling.
 - 1. Protect materials and finish from damage during handling and installation.

1.07 WARRANTY

- A. Warrant doors, frames, and factory installed hardware against failure in materials and workmanship, including excessive deflection, faulty operation, defects in hardware installation, and deterioration of finish or construction in excess of normal weathering.
- B. Standard Period.
 - 1. Ten years starting on date of shipment.
- C. Limited lifetime
 - 1. Covers failure of corner joinery, core deterioration, and delamination or bubbling of door skin and corrosion of all-fiberglass products while the door is in its specified application in its original installation.
- D. Finish
 - 1. Kynar painted aluminum: 10 years.
 - 2. Painted SL-17, SL-18, SL-19, SL-20 face sheets: 5 years.
 - 3. Painted AF-100, AF-200, AF-150 frames, AF-250 frames: 3 years.
 - 4. Painted FR doors: 3 years.
 - 5. Stained SL-18 and SL-9 face sheets: 5 years.
 - 6. Anodized, aluminum: 10 years.
 - 7. Thresholds do not have a finish warranty.

PART 2 PRODUCTS

2.01 FRP/ALUMINUM HYBRID DOORS

- A. Manufacturer.
 - 1. Special-Lite, Inc.
 - a. PO Box 6, Decatur, Michigan 49045.
 - b. Toll Free (800) 821-6531, Phone (269) 423-7068, Fax (800) 423-7610.
 - c. Web Site www.special-lite.com.
 - d. E-Mail info@special-lite.com.

2.02 DESCRIPTION

- A. Model.
 - 1. SL-17 (H) Texture FRP/ Aluminum Hybrid Door.
- B. Door Opening Size.
 - 1. See Schedule.
- C. Construction.
 - 1. Door Thickness.
 - a. 1-3/4".
 - 2. Stiles & Rails.
 - a. Aluminum extrusions made from 6063 aluminum alloys with a minimum temper of T5.
 - b. Minimum 2-5/16" deep one-piece extrusion with have integral reglets to accept face sheet on both interior and exterior side of door which secure face sheet into place and permit flush appearance.
 - c. Screw or snap in place applied caps are not acceptable.
 - d. Top rails must have integral legs for interlocking continuous extruded aluminum flush cap.

- e. Bottom rails must have integral legs for interlocking continuous weather bar with single nylon brush weather stripping or manually adjustable SL-301 door bottom with two nylon brush weather stripping.
 - f. Meeting stiles to include integral pocket to accept pile brush weather seal.
3. Corners.
- a. Mitered.
 - b. Secured with 3/8" diameter full-width steel tie rod through extruded splines top and bottom which are integral to standard tubular shaped rails.
 - c. 1-1/4" x 1-1/4" x 3/16" 6061 aluminum angle reinforcement at corner to give strong, flat surface for locking hex nut to bear on.
 - d. Weld, glue, or other methods of corner joinery are not acceptable.
4. Core.
- a. Poured-in-place polyurethane foam.
 - b. Laid in foam cores are not acceptable.
 - c. Foam Plastic Insulated Doors: IBC 2603.4.
 - 1. Foam plastic shall be separated from the interior of a building by an approved thermal barrier.
 - 2. Approved thermal barrier must meet the acceptance criteria of the Temperature Transmission Fire Test and Integrity Fire Test as stated in NFPA 275.
 - 3. IBC 2603.4.1.7 foam plastic insulation, having a flame spread index less than 75 and a smoke developed index of not more than 450 shall be permitted as a door core when the face is metal minimum 0.032" aluminum or 0.016" steel.
 - 4. Standard door assembly can be tested to show it meets these requirements without the use of thermal barrier. If no independent testing conducted all doors with foam plastic core must have a thermal barrier.
5. Face Sheet.
- a. Exterior
 - 1. 0.120" thick, texture, through color FRP sheet as selected by Architect from full color range.
 - 2. Optional painted finish consult manufacturer.
 - 3. Class C standard.
 - b. Interior
 - 1. 0.120" thick, texture, through color FRP sheet.
 - 2. Optional painted finish consult manufacturer.
 - 3. Class C standard optional Class A available consult manufacturer.
 - c. Attachment of face sheet.
 - 1. Extruded stiles and rails to have integral reglets to accept face sheet on both interior and exterior side of door which secure face sheet into place and permit flush appearance.
 - 2. Use of glue to bond face sheet to core or extrusions is not acceptable.
6. Cutouts.
- a. Manufacture doors with cutouts for required vision lites, louvers, and panels.
7. Hardware.
- a. Pre-machine doors in accordance with templates from specified hardware manufacturers.
 - b. Surface mounted closures will be reinforced for but not prepped or installed at factory.
 - c. Factory install door hardware.
8. Reinforcements.
- a. Aluminum extrusions made from 6061 or 6063 aluminum alloys.
 - b. Sheet and plate to conform to ASTM-B209.

- c. Alloy and temper to be selected by manufacturer for strength, corrosion resistance, and application of required finish, and control of color.
- d. Bars and tubes to meet ASTM-B221.

D. Sustainability Characteristics.

1. LEED Declaration.

- a. Entrance Products contribute to point calculations for the following credits:
 - 1. MR Credit 4.1 Recycled Content 10% (post-consumer = ½ pre-consumer) 1 point.
 - 2. MR Credit 4.2 Recycled Content 20% (post-consumer = ½ pre-consumer) 1 point.
- b. All aluminum extrusions are produced using prime-equivalent billet produced from 100% reprocessed 6063-T6 alloy recovered from industrial processes. The USGBC classifies these extrusions as pre-consumer recycled material.
- c. Manufacturing facility located within 500 miles of major components and materials, including aluminum extrusions.
- d. The point of recovery and smelting of pre-consumer recycled material within 500 miles of the manufacturing facility.

2.03 FRAMING

A. Framing

1. Aluminum Tube Framing with Applied Stops.

- a. Model.
 - 1. SL-260.
- b. Materials.
 - 1. See 2.05.A.
- c. Perimeter Frame Members.
 - 1. Box type with 4 enclosed sides.
 - 2. Factory fabricated.
 - 3. Open-back framing is not acceptable.
- d. Applied Door Stops.
 - 1. 5/8" x 1-1/4" or 5/8" x 1-3/4", 0.125" wall thickness, with screws and weather-stripping.
 - 2. Provide solid ½" aluminum bar behind door stop for closer shoe attachment.
 - 3. Pressure gasketing for weathering seal.
 - 4. Counterpunch fastener holes in door stop to preserve full-metal thickness under fastener head.
- e. Caulking.
 - 1. Caulk joints before assembling frame members.
- f. Frame Member to Member Connections.
 - 1. Secure joints with fasteners.
 - 2. Provide hairline butt joint appearance.
- g. Hardware
 - 1. Pre-machine and reinforce frame members for hardware in accordance with manufacturer's standards and door hardware schedule.
 - 2. Surface mounted closures will be reinforced for but not prepped or installed at factory.
 - 3. Factory install door hardware.
- h. Anchors:
 - 1. Anchors appropriate for wall conditions to anchor framing to wall materials.
 - 2. Door Jamb and Header Mounting Holes: Maximum of 24-inch centers.

3. Secure head and sill members of transom, side lites, and similar conditions.
2. Capping.
 - a. Model.
 1. SL-70
 - b. Materials.
 1. See 2.05.A.
 2. Size as indicated on drawings.
3. AF-250.
 - a. Jamb Depth.
 1. 5-3/4".
 - b. Materials.
 1. See 2.05.A.
 - c. Perimeter Frame Members.
 1. 3/16" thick pultruded fiberglass open throat with return.
 2. Factory fabricated.
 3. 2" or 4" face available for frame headers.
 - d. Integral Door Stops.
 1. 5/8" x 2-1/4".
 - e. Frame Assembly.
 1. Standard knock down.
 2. Optional chemically welded consult factory for details.
 - f. Frame Member to Member Connections.
 1. Corners mitered with 2" x 2" x 1/4" pultruded FRP angle reinforcement with interlocking pultruded FRP brackets.
 2. All member to member connections knocked down at factory unless chemically welded at factory requested.
 3. Provide hairline butt joint appearance.
 - g. Reinforcements.
 1. 1/4" thick pultruded FRP chemically welded to frame at all hinge, strike, and closer locations.
 - h. Hardware
 1. Pre-machine and reinforce frame members for hardware in accordance with manufacturer's standards and door hardware schedule.
 2. Surface mounted closures will be reinforced for but not prepped or installed at factory.
 - i. Anchors:
 1. Masonry.
 - a. Existing concrete or block punch and dimple.
 - b. Sill anchor.
 - c. Concealed existing masonry anchor.
 - d. Fiberglass masonry t anchor.
 2. Drywall.
 - a. Punch and dimple for metal or wood studs.

2.04 PERFORMANCE

A. Face Sheet.

1. Standard Interior and Exterior Class C 0.120" thick, Sandstone texture, through color FRP sheet.
 - a. Flexural Strength, ASTM-D790: 27×10^3 psi.
 - b. Flexural Modulus, ASTM-D790: 0.7×10^6 psi.

- c. Tensile Strength, ASTM-D638: 18×10^3 psi.
- d. Tensile Modulus, ASTM-D638: 1.0×10^6 psi.
- e. Barcol Hardness, ASTM-D2583: 40.
- f. Izod Impact, ASTM-D256: 7.0 ft-lb/in.
- g. Gardner Impact Strength, ASTM-D5420: 30 in-lb.
- h. Water Absorption, ASTM-D570: 0.16%/24hrs at 77°F.
- i. Surface Burning, ASTM-E84: Flame Spread ≤ 200 , Smoke Developed ≤ 450 .

- j. Chemical Resistance.
 1. Excellent Rating.
 - a. Acetic Acid, Concentrated.
 - b. Acetic Acid, 5%.
 - c. Bleach Solution.
 - d. Detergent Solution.
 - e. Distilled Water.
 - f. Ethyl Acetate.
 - g. Formaldehyde.
 - h. Heptane.
 - i. Hydrochloric Acid, 10%.
 - j. Hydrogen Peroxide, 3%.
 - k. Isooctane.
 - l. Lactic Acid, 10%.
 - k. USDA/FSIS Requirements.
 1. FRP face sheet with surfaseal is a finished outer surface material that is rigid; durable; non-toxic; non-corrosive; moisture resistant; a light, solid color such as white; easily inspected; smooth or an easily cleaned texture.
 2. FRP face sheet with surfaseal does not contain any known carcinogen, mutagen, or teratogen classified as hazardous substances; heavy metals or toxic substances; antimicrobials; pesticides or substances with pesticidal characteristics.
2. Optional Interior Face Only Class A 0.120" thick, Sandstone texture, through color FRP sheet.
 - a. Flexural Strength, ASTM-D790: 14×10^3 psi.
 - b. Flexural Modulus, ASTM-D790: 0.4×10^6 psi.
 - c. Tensile Strength, ASTM-D638: 7×10^3 psi.
 - d. Tensile Modulus, ASTM-D638: 0.8×10^6 psi.
 - e. Barcol Hardness, ASTM-D2583: 45.
 - f. Izod Impact, ASTM-D256: 4.0 ft-lb/in notched.
 - g. Water Absorption, ASTM-D570: 0.16%/24hrs at 77°F.
 - h. Surface Burning, ASTM-E84: Flame Spread ≤ 25 , Smoke Developed ≤ 450 .
 - i. Taber Abrasion Resistance, Taber Test: 0.036% Max Wt. Loss, cs-17 wheels, 1000g. Wt., 25 cycles.
- B. Door Core.
 1. Density, ASTM-D1622: ≤ 5.0 pcf.
 2. Compressive Properties, ASTM-D1621: Compressive Strength ≥ 60 psi, Compressive Modulus ≥ 1948 psi.
 3. Tensile and Tensile Adhesion Properties, ASTM-D1623: Tensile Adhesion, 3" x 3" FRP Facers ≥ 53 psi, Tensile Adhesion, 1" x 1" Foam ≥ 104 psi.
 4. Thermal and Humid Aging, ASTM-D2126: Volume Change at 158 °F, 100% humidity, 14 days $\leq 13\%$.
 5. Thermal Conductivity, ASTM-C518, Thermal Resistance ≥ 0.10 m²K/W.

- C. Door Panel.
 - 1. Indoor Air Quality, ASTM-D5116, ASTM-D6607: GreenGuard, GreenGuard Gold.
- D. Door and Aluminum Tube Frame Assembly.
 - 1. Structural Performance, ASTM E-330.
 - a. Single or Pair of Doors, 6'4" x 7'2" overall size, single point latching.
 - 1. ± 90 psf design pressure, pass.
- E. Door and Thermally Broken Aluminum Frame Assembly.
 - 1. Thermal Transmittance, NFRC 100.
 - a. Opaque Swinging Door (< than 50% glass)
 - 1. U-Factor = 0.33 Btu/hr·ft²·°F.
 - b. Commercially Glazed Swinging Entrance Door (> than 50% glass)
 - 1. U-Factor = 0.62 Btu/hr·ft²·°F.
 - 2. Air Leakage, NFRC 400, ASTM-E283.
 - a. Opaque Swinging Door (< than 50% glass)
 - 1. 0.02 cfm/sqft @ 1.57 psf.
 - 2. 0.02 cfm/sqft @ 6.24 psf.
 - b. Commercially Glazed Swinging Entrance Door (> than 50% glass)
 - 1. 0.22 cfm/sqft @ 1.57 psf.
 - 2. 0.42 cfm/sqft @ 6.24 psf.
 - 3. Sound Transmission, ASTM-E90: STC = 30, OITC = 30.
- F. Door and AF-150 Frame Assembly.
 - 1. Thermal Transmittance, NFRC 100.
 - a. Opaque Swinging Door (< than 50% glass)
 - 1. U-Factor = 0.33 Btu/hr·ft²·°F.
 - b. Commercially Glazed Swinging Entrance Door (> than 50% glass)
 - 1. U-Factor = 0.58 Btu/hr·ft²·°F.
 - 2. Air Leakage, NFRC 400, ASTM-E283.
 - a. Opaque Swinging Door (< than 50% glass)
 - 1. 0.11 cfm/sqft @ 1.57 psf.
 - 2. 0.07 cfm/sqft @ 6.24 psf.
 - b. Commercially Glazed Swinging Entrance Door (> than 50% glass)
 - 1. 0.03 cfm/sqft @ 1.57 psf.
 - 2. 0.04 cfm/sqft @ 6.24 psf.
- G. AF-150 Framing.
 - 1. Tensile Strength, ASTM-D638: 15,900 psi.
 - 2. Tensile Modulus of Elasticity, ASTM-D638: 1.58 x 10⁶ psi.
 - 3. Maximum Compressive Strength, ASTM-D695: 15,500 psi.
 - 4. Compressive Modulus of Elasticity, ASTM-D695: 6.7 x 10⁵ psi.
 - 5. Flexural Strength, ASTM-D790: 39.3 x 10³ psi.
 - 6. Flexural Modulus, ASTM-D790: 1.23 x 10⁶ psi.
 - 7. Izod Impact, ASTM-D256: 8.1 ft-lb/in.
 - 8. Barcol Hardness, ASTM-D2583: 57.
 - 9. Specific Gravity, ASTM-D792: 1.45 @ 23 °C.
 - 10. Density, ASTM-D792: 1445.6 kg.m³ @ 23 °C.
 - 11. Coefficient of Linear Expansion, ASTM-D696: 1.26 x 10⁻⁵ in/in/°F.
 - 12. Short Beam Strength, ASTM-D2344: 3,980 psi.
 - 13. Fastener Withdrawal, ASTM-D1761: 924 lbs.
 - 14. Percent Fiberglass: 60%.

2.05 MATERIALS

- A. Aluminum Members.
 - 1. Aluminum extrusions made 6061 or 6063 aluminum alloys.
 - 2. Sheet and plate to conform to ASTM-B209.
 - 3. Alloy and temper to be selected by manufacturer for strength, corrosion resistance, and application of required finish, and control of color.
- B. Fiberglass.
 - 1. See 2.02.C.5.
- C. Fasteners.
 - 1. All exposed fasteners will have a finish to match material being fastened.
 - 2. 410 stainless steel or other non-corrosive metal.
 - 3. Must be compatible with items being fastened.

2.06 FABRICATION

- A. Factory Assembly.
 - 1. Door and frame components from the same manufacturer.
 - 2. Required size for door and frame units, shall be as indicated on the drawings.
 - 3. Complete cutting, fitting, forming, drilling, and grinding of metal before assembly.
 - 4. All cut edges to be free of burs.
 - 5. Welding of doors or frames is not acceptable.
 - 6. Maintain continuity of line and accurate relation of planes and angles.
 - 7. Secure attachments and support at mechanical joints with hairline fit at contact surfaces.
- B. Shop Fabrication
 - 1. All shop fabrication to be completed in accordance with manufactures process work instructions.
 - 2. Quality control to be performed before leaving each department.

2.07 FINISHES

- A. Door.
 - 1. Aluminum.
 - a. Paint.
 - 1. Aluminum.
 - a. KYNAR®.
 - 1. Topcoat.
 - a. 70% KYNAR® or HYLAR® 5000 Coating, meets or exceeds all AAMA 2605 specifications, 2.5 to 4.0 wet mils, 1.00 to 1.20 dry mils.
 - 2. Color.
 - a. As Selected by Architect.
 - 2. FRP Face Sheets
 - a. Through color.
 - 1. Color as Selected by Architect..
- B. Frame
 - 1. Aluminum.
 - 1. Aluminum.
 - a. KYNAR®.
 - 1. Topcoat.
 - a. 70% KYNAR® or HYLAR® 5000 Coating, meets or exceeds all AAMA 2605 specifications, 2.5 to 4.0 wet mils, 1.00 to 1.20 dry mils.
 - 2. Color.
 - a. As Selected by Architect.

2.09 ACCESSORIES

- A. Vision Lites.
 - 1. Factory Glazing.
 - a. Model.
 - 1. FL-SecureLite.
 - b. Glazing Thickness.
 - 1. 1".
 - c. Finish as Selected by Architect.
 - d. Laminated and insulated glazing to meet Large Missile Impact rating for Exterior doors.
- B. Hardware.
 - 1. Pre-machine doors in accordance with templates from specified hardware manufactures and hardware schedule.
 - 2. Factory install hardware.
 - 3. Hardware Schedule per Hardware Specifications.
 - 1. Thresholds.
 - a. Aluminum threshold by Special-Lite.
- C. Architectural Panels.
 - 1. FRP Panels.
 - a. SL-17 (H).
 - 1. Size, as indicated on drawings.
 - 2. Thickness.
 - a. Choose an item.
 - 3. Face Sheet.
 - a. Material.
 - 1. Standard exterior and interior face, Class C 0.120" thick, Sandstone texture, through color FRP sheet.
 - 2. Optional interior face only, Class A 0.120" thick, Sandstone texture, through color FRP sheet.
 - b. Color.
 - 4. Performance.
 - a. Face Sheet.
 - 1. See 2.04.A.
 - b. 1" Thick Panel.
 - 1. Polyurethane foam core.
 - 2. Impervious to water.
 - 3. Thermal Performance, AAMA 1503-98.
 - a. U-Factor = 0.23 Btu/hr·ft²·°F.
 - b. CRFp = 81.
 - c. 1-3/4" Thick Panel.
 - 1. Wood or aluminum frame perimeter.
 - 2. Poured-in-place Polyurethane Foam Core.
 - 3. Thermal Performance, AAMA 1503-98.
 - a. U-Factor = 0.10 Btu/hr·ft²·°F.
 - b. CRFp = 87.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine areas to receive doors.
- B. Notify architect of conditions that would adversely affect installation or subsequent use.
- C. Do not proceed with installation until unsatisfactory conditions are corrected.

3.02 PREPARATION

- A. Ensure openings to receive frames are plumb, level, square, and in tolerance.

3.03 ERECTION

- A. Install doors in accordance with manufacturer's instructions.
- B. Install doors plumb, level, square, true to line, and without warp or rack.
- C. Anchor frames securely in place.
- D. Separate aluminum from other metal surfaces with bituminous coatings or other means approved by architect.
- E. Set thresholds in bed of mastic and back seal.
- F. Install exterior doors to be weathertight in closed position.
- G. Repair minor damages to finish in accordance with manufacturer's instructions and as approved by architect.
- H. Remove and replace damaged components that cannot be successfully repaired as determined by architect.

3.04 FIELD QUALITY CONTROL

- A. Manufacturer's Field Services.
 - 1. Manufacturer's representative shall provide technical assistance and guidance for installation of doors.

3.05 ADJUSTING

- A. Adjust doors, hinges, and locksets for smooth operation without binding.

3.06 CLEANING

- A. Clean doors promptly after installation in accordance with manufacturer's instructions.
- B. Do not use harsh cleaning materials or methods that would damage finish.

3.07 PROTECTION

- A. Protect installed doors to ensure that, except for normal weathering, doors will be without damage or deterioration at time of substantial completion.

END OF SECTION 08 1743