

SPECIFICATION

CITY SEXTON'S HOUSE

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PROJECT NO. 1203

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DIVISION 1: GENERAL REQUIREMENTS

1. **SCOPE OF WORK:** The work consists of the demolition of the existing Key West Sexton's House at the Key West Cemetery and the construction of a new Sexton's House at the same site.
2. **ALTERNATES:** The following alternates shall be bid on. See drawings and specifications under the appropriate section for specific requirements.
 - a. **NO. 1: DELETE METAL SHINGLE ROOF, ADD SLATE ROOF.**
See drawings and Division 7B SLATE ROOF.
 - b. **NO. 2: DELETE VINYL TILE IN FAMILY ROOM AND ADD WOOD FLOORING.** See drawings and DIVISION 9 G Wood Floor.
3. **OWNER:** The Owner shall be the City of Key West.
4. **OWNER'S REPRESENTATIVE:** The City of key West shall appoint a project representative to be called the Owner's Representative. All communication to and from the General Contractor shall flow to and from the Owner's Representative. All communication to and from the General Contractor from any other source, unless approved in writing by the Owner's Representative shall be deemed improper and shall be discarded. The Contractor shall bear all costs connected to removing work undertaken at the instruction of someone other than the Owner's Representative.
5. **CONTRACTOR:** Wherever the term, "Contractor", or, "contractor", it shall mean the General Contractor. Contractor shall be currently licensed in the state of Florida.
6. **APPROVAL OF SUBCONTRACTORS:** The Owner, through his representative reserves the right to approve all subcontractors hired by the General Contractor. The General Contractor is to submit a list of the subcontractors he proposes to use with his bid, or as an attachment to his contract to the Owner's Representative. If the General Contractor wishes to change subcontractors after commencing the work he must submit the name of the contractor to the Owner's Representative for approval. Acceptance by the Owner's Representative does not absolve the General Contractor of the subcontractor's performance.
7. **BUILDING PERMITS:** The Contractor and his subcontractors shall be responsible for procuring all necessary construction permits. The Owner shall pay all permit and impact fees.
8. **BUILDING CODES:** All work shall be in conformity with the Florida Building Code, 2010 Edition, and with all applicable laws, codes, and ordinances of the State of Florida, Monroe County, and the City of Key West.

9. CITY BUILDING DEPARTMENT REQUIREMENTS

- a. Construction shall not commence until the contractor has received a building permit.
- b. The General Contractor shall make timely requests for inspections and shall endeavor to establish a cooperative and productive relationship with city building inspectors.

10. BUILDING INSPECTOR'S INTERPRETATION OF THE BUILDING CODE

- a. The Building Inspector's interpretation of the building code shall govern the work unless it is at conflict with the construction documents. If a situation arises where the Building Inspector's interpretation of the Building code conflicts with the construction documents the General Contractor shall stop work on the issue in question and immediately contact the Owner's Representative, who will then confer with the Architect and City Building Official in order to resolve the conflict. If the General Contractor undertakes the building official's order without the Owner's Representative approval he may be held liable to remove the work at his expense.

11. SURVEYS AND ELEVATION CERTIFICATES: The Owner shall be responsible for all surveys and elevation certificates prior to signing the construction contract. After commencement of work the contractor shall be responsible for the elevation certificates required in fulfillment of city requirements for certificate of occupancy.

12. CONTRACT LIMIT LINE: See drawings C1 and C2 for contract limit lines. Where the contract limit line is along the public right-of-way the General Contractor shall erect a chain link barrier fence. Within the cemetery erect barricades along contract limit line. See Division 2A DEMOLITION, Section 6 for fence and barricade requirements.

13. STAGING AREAS: The contractor shall use only the areas indicated on the drawings for storage of materials, equipment, spoils, toilet, dumpster, vehicles, etc. All areas within the existing house to remain may be used by the contractor but must be restored and finished by the completion of the job.

14. ARCHEOLOGICAL CONSIDERATIONS: The site is part of an historic burial ground and may or may not have important artifacts below the existing house. Thus, before commencing demolition of the old sexton's house the contractor must review his demolition plans with the Owner's representative. If during demolition an artifact is unearthed the demolition work shall cease immediately and the Owner's representative notified. Work may not again commence until approved by the owner's representative. See Division 2A DEMOLITION for additional requirements.

15. **ACCESS FOR FUNERALS:** The city shall give the General Contractor a minimum of three (3) working days notice of a funeral and the General Contractor shall remove all equipment, materials, spoils, barricades and other items under his control that the Sexton deems an impediment to his conducting the funeral in his customary manner. All such equipment, materials, barricades and like items necessary for meeting the contract for construction must be returned to their proper place in a timely manner by the General Contractor.
16. **SAFETY:** Contractor shall provide for the safety, prevention of injury, and loss of property at the job site to all persons employed on the work, persons visiting the Work, property residents, and the general public and shall save the Owner and Architect harmless from all claims arising from the use of public streets, sidewalks, and adjoining premises for construction purposes. Contractor shall construct temporary barricades and fences as indicated on the drawings.
17. **PROTECTION OF PROPERTY:** Contractor shall be wholly responsible for protecting the Work under construction, construction materials stored on site, and the Owner's property, the City Right-Of-Way, including trees, adjacent to or in the path of Work, and shall insure him for any losses, damages, or injuries related herein.
18. **CONSTRUCTION SCHEDULE:** The contractor shall submit to the Owner's Representative for their review his construction schedule broken down by trade, or in a form approved by the architect as a condition of drawing his mobilization (first) payment. If the project falls behind this schedule the Owner's Representative shall require the General Contractor to submit updated schedules as a condition of receiving payment. Construction schedules must be submitted in bar graph form, showing floats and overlaps.
19. **CONSTRUCTION RECYCLING:** The Contractor shall provide the Owner's representative a waste management plan to recycle 25% of all construction waste, including demolition and land clearing waste. Do not commence Work without the Owner's Representative's approval of the plan.
20. **FURNISH AND INSTALL:** The term "Furnish and Install" herein, means the contractor shall provide all labor, materials, equipment, services, and transportation required to complete all work specified herein or as shown on the drawings.
21. **SCHEDULE OF VALUES:** The General Contractor shall submit a schedule of values with his bid for the Owner's Representative's approval. It shall be broken down by trade and type of work and shall be used as a basis of progress payments to be submitted with each pay application.

22. SUBMITTALS:

- a. The General Contractor is responsible for procuring all submittals and submitting them to the Owner's Representative for approval and shall not allow Subcontractors or suppliers to send their submittals directly to the Owner's Representative. The General Contractor shall check all shop drawings and submittals before submitting them to the Owner's representative for approval. He shall not submit shop drawings or submittals that are incomplete, inaccurate, or unacceptable for any other reason.
- b. All submittals specified herein shall be submitted to the Owner's representative within twenty-eight working days of the notice to proceed. Failure to do this could result in delay to approval of payment certificates.

23. SUBSTITUTIONS: No substitutions of materials or finishes will be allowed without the Owner's Representative written approval. The Contractor may propose substitutions but he will be responsible for paying the Owner all administrative costs, if any, associated with them, including the Owner's, Architect's or Engineer's time in research, design, meetings, preparation of change orders, and other expenses in connection with approving the change.

24. COORDINATION: Contractor shall check and coordinate work of all trades and Suppliers, as follows:

- a. The General Contractor is responsible for delivering the specifications and drawings to the trades and suppliers prior to bidding the project, then after work commences, prior to ordering work or fabrication. He shall keep the trades and suppliers abreast of all changes to the work, delivering revised drawings and specifications in a manner that will not delay or confuse the work.
- b. The General Contractor is wholly responsible for scheduling the work of subcontractors and trades to prevent conflicts of work and to assure timely delivery of material and timely completion of work. Failure of a Subcontractor to procure materials or complete work on time will not relieve the General Contractor of this responsibility or to relieve him of the resulting burden of costs associated with special orders, air shipments, hiring of additional men or new contractors to immediately custom fabricate or otherwise procure missing materials, and all associated administrative costs incurred by the owner and Architect.

25. FIELD OFFICE: The General Contractor shall install a temporary covered field office for the duration of the project. It shall consist of a rigid desk surface at least 30"x40" in size and 36 to 48" high, and shall have affixed to it an up-to-date set of plans and specifications, shall contain all construction sketches, revisions, letters,

submittals, and other relevant documents, and shall have secure storage space for these documents when unattended, and shall be available to be used by the Owner's Representative, Building Inspector, and consultants as designated by the Owner's Representative at all times during regular business hours. It shall be locked at the end of every business day. It shall have an operating telephone at all times and a permanently affixed list of office and emergency telephone numbers for all key General Contractor's men and all subcontractors. It cannot be used for storage of tools or supplies, which must be accommodated elsewhere. Failure to install or maintain this office will result in delayed payment to the contractor.

26. TEMPORARY UTILITIES AND FACILITIES:

- a. TEMPORARY WATER: Contractor shall provide temporary water and pay for such until final acceptance of the work. Contractor may use Owner's existing city water connection prior to installation of the new system and afterwards with written permission of the Owner's Representative, provided he be responsible for all damage to these systems during the course of the construction. Contractor shall provide potable water for construction purposes and drinking for all trades.
- b. TEMPORARY ELECTRICITY: The Contractor shall make arrangements with the local electric company for temporary electric service, pay all expenses in connection with its installation, operation, and removal, and pay for the energy consumed by all trades. When permanent electrical power and lighting systems are in operating condition they may be used for temporary power for lighting and construction purposes, provided that the Contractor obtains written permission from the owner and assumes full responsibility for the entire power and lighting system and pays for any operation and restoration of the system, and provide new lamps for all fixtures before final acceptance of the work. See DIVISION 16 ELECTRICAL for additional requirements.
- c. TEMPORARY TOILETS: Contractor shall provide code-compliant chemical toilet facilities for contractor's staff workmen and all trades during entire course of construction. Contractor shall locate the toilet within the project limit lines away from the public sidewalk but where instructed by the Owner's Representative.
- d. TEMPORARY TELEPHONE: Contractor shall at all times have a telephone on the jobsite that will be answered on the jobsite by the superintendent or foreman. A cell phone will be acceptable only if it remains on the jobsite and is maintained in working order. This requirement is part of the requirement for a jobsite office (See Paragraph 27, below).

27. TEMPORARY FENCING AND BARRICADES: Provide a temporary six foot high

chain link fence across the front of the property as shown on drawings for use during the duration of the construction.

a. FENCING

- 1) Fencing shall be 12.5 GA.; mesh shall be 2 3/8" or 2 1/4"; all components shall be galvanized and PVC coated, COLOR DARK GREEN. Rails and posts shall be 17 GA. Top rail shall be 1-3/8" Dia. Line Posts shall be 1-5/8" Dia. and Terminal Posts shall be 1-7/8" Dia. Fittings shall meet ASTM F626-96. Posts shall be anchored in 16" of concrete. Refer to drawings for location of contract limit lines.

b. BARRICADES WITHIN THE CEMETERY:

- 1) Provide 48" high barricades of orange polyethylene fencing to direct visitors and public away from construction work. Barricades shall be supported by 4x4 posts set in concrete in 16" x 16" concrete blocks not more than 8' on center and shall be maintained in a taut and erect condition at all times during construction. Refer to drawings for locations.
28. TEMPORARY SHORING: Provide all temporary bracing and shoring necessary to withstand wind loads during construction and until all field connections are completed and shear walls and framing are in place.
 29. PUBLIC PROPERTY: Keep public sidewalks and streets adjacent to the property clear of debris, materials, and construction equipment during the work. Repair all public property where disturbed or damaged during construction and leave them in as good condition after the completion of the work as before operations started.
 30. SITE CLEANLINESS: Contractor shall keep site free of rubbish and debris and in a neat and orderly condition at all times.
 31. SCAFFOLDING: Furnish, install, and maintain all scaffolding, staging, and planking for the use of all trades, except as otherwise stipulated.
 32. TEMPORARY STAIRS: Provide temporary stairs during construction, and provide access to all levels.
 33. MEASUREMENTS: The General Contractor shall take all building and site measurements and be responsible for their accuracy.
 34. CUTTING AND PATCHING: The Contractor shall be responsible for cutting, fitting, and patching of both new and existing work as required to carry out the work under this contract. Cutting, fitting and patching shall not endanger or damage work under

this contract or existing construction.

35. **FIRE EXTINGUISHERS:** Provide for duration of work at 5' height in a conspicuous location within the house, one on each floor, one 10 LB ABC fire extinguisher ready for instant use. These shall remain mounted at 5' height at all times during the project, even if moved to different locations. Failure to adhere to this requirement can result in approval of payment certificates and delay in payment to the General Contractor.
36. **ENTRANCES TO THE BUILDING:** At any exterior gateway or other opening into the building which is accessible from the sidewalk or ground floor and not otherwise closed, provide temporary weather tight or lockable doors as required, complete with frames, and equipped with suitable hinges, hasps, staples, and padlocks with keys.
37. **WEATHER PROTECTION:** Contractor shall provide all necessary means to weather-proof interior of the entire building once dried in for the duration the construction period.
38. **INSPECTIONS BY THE OWNER'S REPRESENTATIVE:** The jobsite and office shall be open to the Owner's Representative at all times during business hours for the purpose of inspecting and observing the work.
39. **WORKING HOURS:** Work shall be undertaken during hours specified by the local building department or, if not specified, only during weekdays, from 8AM until 5 PM, or as allowed by the city. Contractor may be required to stop work during special events and holidays.
40. **CONTRACT DOCUMENT CONFLICTS:** In cases of conflict or discrepancies among the contract documents, the documents shall be construed according to the following priorities:
 - a. Highest Priority: Change Orders
 - b. Second Priority Agreement
 - c. Third Priority Most recent addenda
 - d. Fourth Priority Supplementary General Conditions
 - e. Fifth Priority General Conditions
 - f. Sixth Priority Specifications*
 - g. Seventh Priority Drawings

In case of conflicts between drawings as to the extent or locations of materials, the following order of precedence shall be followed:

- h. Large scale drawings (e.g., 1-1/2"= 1'-0" scale)
- i. Small scale drawings (e.g., 1/4"= 1'-0" scale)
- j. Schedules

***IN CASES OF CONFLICT BETWEEN DRAWINGS AND SPECIFICATIONS REGARDING THE QUALITY OF MATERIALS TO BE SUPPLIED, THE SPECIFICATIONS SHALL GOVERN.**

DIVISION 2A: DEMOLITION

1. GENERAL REQUIREMENTS
 - a. Include GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS as part of this section.
 - b. Examine all other Sections of the Specifications for requirements that affect the work of this Section whether or not such work is specifically mentioned in this section.
 - c. Coordinate work with that of all other trades affecting or affected by the work of this section. Cooperate with such trades to assure the steady progress of all work under the contract.
2. SUPERVISION OF DEMOLITION: Supervision of demolition shall be administered by the Owner's Representative.
3. SCOPE: Remove existing structures to limits as indicated on drawings, including but not limited to the existing house, fence, sub grade drainage system (if necessary by code), tree stumps, trees, and shrubs as indicated on the drawings. Protect or save and store for Owner's future use existing fencing and landscape elements as described on the drawings. Stockpile materials for future use. Legally dispose of materials.
4. ARCHEOLOGICAL CONSIDERATIONS: See Division 1 GENERAL REQUIREMENT, Paragraph 14.
5. DISCOVERED ARTIFACTS AND MATERIALS: All material discovered during demolition, both above grade and below is the property of the City of Key West. This applies to not only demolition work but subsequent excavations for new foundations, utility excavations etc.
6. RELATED SECTIONS: Division 2B SITE PREPARATION; Division 2C SITE IMPROVEMENTS; Division 2D Landscaping; Division 4 CONCRETE MASONRY UNITS; Division 15B PLUMBING; Division 16 ELECTRICAL.
7. PUBLIC AND PROPERTY PROTECTION
 - a. Provide all measures required by federal, state, and municipal ordinances, laws, and regulations for the protection of surrounding property, sidewalks,

curbs, fencing, cemetery structures, including grave sites and monuments; the public, workmen, and Owner's employees during demolition operations. Measures taken shall include fencing, barricades, warning lights, and sign, etc. and shall in accordance with all applicable codes and ordinances specified above and as follows:

8. TEMPORARY FENCING AND BARRICADES: See Division 1 GENERAL REQUIREMENTS, Paragraph 27.
9. PROTECTION AND REMOVAL OF TREES AND PLANT MATERIAL:
 - a. Before commencing with other demolition work under this Section, provide protection for trees and plants which are to remain. Refer to the drawings and arrange a conference on the site with the Owner's Representative to identify and mark trees and shrubs which are to remain. Do no clearing without full understanding of existing conditions to be preserved.
 - b. Items which are selected to remain, certain trees, in particular the Sausage Tree, shrubs, and areas of same, shall be protected by the erection of sturdy wood boxing 4'-0" high, or other fencing approved by the architect. Fencing shall be placed at least 4'-0" out from the trunks of the trees to be saved, and shall be erected prior to any construction or excavation work on site. Fencing and boxing shall be maintained during the full time of construction work on the site and removed only when directed by the Owner or Architect.
 - c. Exercise extreme care during excavation to prevent damage to roots of trees which are to remain. When excavating or auguring the branch spread of trees to remain, do so in a manner which will cause minimum damage to root systems. When excavating utility trenches within branch spread of trees to remain, all work shall be done by hand. Open such trenches only when the utility can be installed immediately. Prune injured roots cleanly and backfill as soon as possible.
 - d. Existing trees that have been damaged, in the opinion of the owner's Representative, shall be replaced by the Contractor at no expense to the Owner with trees of the same size and species as those damaged. No tree is to be removed without permission of the Owner's Representative, in writing.
 - e. Trees which will remain shall not be used for crane stays or guy anchors, or other fastenings. Vehicles shall not be parked, nor debris stored where damage may result to such trees. Do not stockpile fill around the bases of trees to remain.
 - f. Where trees must be pruned or removed in order to facilitate construction the

contractor is to notify the Owner's Representative. The Owner's Representative will determine who is qualified to do the work.

10. **REMOVAL AND STORAGE OF FENCING:** Fencing may not be removed until the city has removed all plaques and the Owner's Representative has approved commencement of the work. Remove panels, posts, post foundations and concrete edging at the sidewalk. Coordinate the moving and storing of the panels. Storage space for all fence materials shall be made available to the contractor by the city, however it is the contractor's responsibility to move and stack the fence materials without damage to them.
11. **REMOVAL OF UTILITIES:** Before demolishing and removing any parts of the existing house having electrical wiring, water, and sewer pipes or other utilities notify the Owner's Representative and City departments having jurisdiction, and utility companies, and confirm that these items are out of service and can be removed without danger. Water lines in structure to be demolished shall be disconnected and capped by the contractor. Abandoned sewer lines shall be plugged with concrete. Utilities to remain shall be capped in place.
12. **COMBUSTIBLES:** Combustible material and rubbish shall not be allowed to accumulate on the site but shall be hauled away daily.
13. **REMOVAL OF THE EXISTING SLAB AND BUILDING FOUNDATIONS:** Before removing and demolishing the existing building foundations the contractor shall meet the Owner's Representative on site to discuss the City's preferred procedures and to coordinate the work with all trades. The Contractor may not remove the slab or foundations without the Owner's Representative' **WRITTEN** approval to proceed. Upon approval the contractor shall remove the existing slab and building foundations completely below grade. **No removal work may be undertaken without the Owner's Representative present.** In the event that the Owner's representative must leave the job site the foundation removal work must cease.
14. **DEMOLITION METHODS**
 - a. Demolition shall be carried on in a manner that will insure the safety of adjacent property, property which is occupied, and persons occupying such property. Contractor shall protect against all damages and injuries which could occur from falling debris or other causes, and so not to interfere with the use of adjacent structures or the free and safe passage to and from these areas.
 - b. Methods of cutting and removal of walls, roofs, partitions, etc. must have the approval of authorities having jurisdiction. As the site is in a residential neighborhood the use of air or electric hammers must be held to a minimum.

DIVISION 2B: SITE PREPARATION

1. GENERAL REQUIREMENTS

- a. Include GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS as part of this section.
- b. Examine all other Sections of the Specifications for requirements that affect the work of this Section whether or not such work is specifically mentioned in this section.
- c. Coordinate work with that of all other trades affecting or affected by the work of this section. Cooperate with such trades to assure the steady progress of all work under the contract.

2. RELATED SECTIONS: Division 2A DEMOLITION; Division 2D LANDSCAPING; Division 3 CONCRETE; Division 4 CONCRETE MASONRY UNITS; Division 15B PLUMBING; Division 16 ELECTRICAL.

3. SITE DRAINAGE:

- a. The Contractor shall assume responsibility for normal (non hurricane) site and subsurface drainage and shall maintain such drainage during the life of his contract.
- b. Legally remove by pumping, draining, or bailing all water which may accumulate or be found on the site within the contract limits during the life of the contract.
- c. Under no circumstances place concrete, pour fill, lay piping, or install appurtenances in excavations containing free water. Keep utility trenches free from water until pipe joint material has hardened.

3. CLEARING AND GRUBBING

- a. **SCOPE:** Clear areas as required of all trees, plants, stumps, branches, and other debris and rubbish. Remove completely stumps, foliage, roots, brush, and trees from areas to be occupied by buildings, driveway, parking areas, terraces and paths, paved or not, and other finished areas.
- b. **DRIVEWAY:** Prior to starting site clearing operations, stake out driveway, parking areas, pathways, limits of cut and fill, and new building area.
- c. **GRUBBING:** Grub-up and remove, for a depth of no more than 6" below

ground level, all stumps and roots more than 1-1/2" in diameter, unless instructed by the Owner otherwise. All depressions excavated below the original ground surface, or caused by the removal of stumps and roots, shall be refilled with suitable material compacted to the density, grade, and contour of the surrounding earth. Grub to for a distance of 5 feet outside building walls, unless otherwise indicated on the plans.

- d. **STUMPS:** Remove stumps and roots to a clear depth of not less than 18" below sub grade.

4. EXCAVATION AND FILL

- a. **SCOPE:** Excavate to elevations and dimensions specified herein or indicated on the drawings or required to do the work. Do all necessary excavation, including but not limited to excavation for foundations, slabs, utility lines, mechanical work, and drainage structures.
- b. **PERMITS:** All permits, fees, and other municipal costs related to such work shall be borne by the contractor.
- c. **SURPLUS:** Surplus materials not required to fulfill the requirements of the contract shall become to property of the Contractor and shall be removed from the site and legally disposed of.
- d. **UTILITIES:** Excavate as necessary for all pipes, storm and sanitary drainage, electrical, gas, and water lines, and for related structures and appurtenances. Unless otherwise indicated, provide separate trench for each utility.
- e. **TRENCHING:** The bottoms of trenches in earth for sanitary piping shall be carried six (6) inches below pipe invert and the entire trench backfilled with drainage fill up to the third point of the pipe. Grade bottoms of trenches evenly to ensure uniform bearing for the full length of all pipes. Pitch trenches as required for drainage pipe. Utilities shall be placed in separate trenches.
- f. **BACKFILLING:**
 - 1) Backfill and compact excavations in 6" lifts using hand or mechanical tamps. Rock may not be used for backfill.
 - 2) Coordinate all trench backfilling with mechanical and other trades involved.
 - 3) No fill shall be placed, spread, or rolled during rainy weather, conditions.
 - 4) Fill shall be compacted according to the following densities:
 - a) Ordinary Fill: Not less than 90% dry density.
 - b) Structural Fill: Not less than 95% dry density

- c) Drainage Fill: Per county standard.
- 5) Do not commence backfilling utility trenches until all piping, conduit, etc., has been installed and tested and the locations of all pipe and appurtenances have been recorded. Backfill carefully around pipe using ordinary fill material sized less than 3/4" in diameter.

g. **FILL MATERIALS**

- 1) Structural Fill: Structural fill for foundations, grade beams and slabs on grade shall be sound graded durable crushed lime rock from off-site completely free of organic matter and compacted to within 95% of maximum dry density, grades as follows 10% no. 200 size; 50% 1/4" size, 30% 3/4", 10% 1". Thickness shall be 5".
- 2) Ordinary Fill: Ordinary Fill shall be graded native soil, free of organic compressible matter, with no stone larger than four (4) inches in diameter, compacted to 90% dry density.
- 3) Gravel: Gravel shall be white 3/8" pea gravel 4" in depth upon compacted sub grade.
- 4) Rice Rock: Rice rock shall be used for all domestic water trenching. See Division 15A for more information.

DIVISION 2C SITE IMPROVEMENTS

a. **CONCRETE WALKS:**

- 1) Slab shall be four inches (4") thick and the strength of the concrete shall be 3000 psi. Compacted sub grade must meet compaction criteria specified under BACKFILLING, Division 2B.
- 2) Finish: Broom finish on sidewalks.
- 3) Color: Portland Cement grey.
- 5) Curing: Water
- 6) Joints: Tooled. See drawings for locations.

b. **LOW SIDEWALK WALL:** Stucco finished concrete. Color: Natural Portland Cement.

c. **NEW ENTRANCE GATES: ALTERNATE NO. 2:** New entrance gates shall be manufactured by the same company that provided the existing fence and gate. Color and all details shall match the existing fence. See Division 9A Paint. Existing gate hardware shall remain in place to the existing concrete columns and shall be re-used. Refer to drawing for the new shape of the gate doors.

DIVISION 2D LANDSCAPING--NIC

DIVISION 3: CONCRETE

1. GENERAL REQUIREMENTS

- a. Include GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS as part of this section.
- b. Examine all other Sections of the Specifications for requirements that affect the work of this Section whether or not such work is specifically mentioned in this section.
- c. Coordinate work with that of all other trades affecting or affected by the work of this section. Cooperate with such trades to assure the steady progress of all work under the contract.
- d. SCOPE: Provide concrete for foundations, grade beams, stairs, and slabs.
- e. RELATED SECTIONS: Division 2B SITE PREPARATION; Division 2D LANDSCAPING; Division 4 CONCRETE MASONRY UNITS; Division 5, STRUCTURAL STEEL AND MISCELLANEOUS IRON; Division 15B PLUMBING; Division 16 ELECTRICAL.
- f. CODES: All concrete work shall conform to the Florida Building Code 2007 or latest edition, Chapters under "Concrete Construction". All concrete work and reinforcement detailing shall be in accordance with ACI Building Code 318-89. Mixing, placing, and curing of all concrete shall conform to ACI Building Code 305R-89, Hot Weather Concreting.
- g. SHEET NOTES: See Structural Engineer's drawings for additional requirements.
- h. DETAILS: See drawings for locations and details.

2. MATERIALS:

- a. CONCRETE: Cement for foundations shall be of Type 1 Portland Cement ASTM C-150, fine and coarse aggregate, proportioned and mixed to meet a 28 day compressive strength of not lower than 3,000 psi and not more than 4,000 psi. Max slump shall be 5" and place within 90 minutes of batch time.
- b. COLOR ADDITIVE FOR FRONT PORCH: Owner's Representative will specify. Do not mix concrete for front porch until receiving specification.

- c. WATER: Water shall be potable.
 - d. AGGREGATE: Aggregate for concrete shall be clean and free from oils, salt, alkali, organic matter, and other deleterious materials. Sand shall be natural and washed with potable water.
 - e. REINFORCING STEEL: All reinforcing steel shall be high strength deformed bars conforming to ASTM A615-89 Grade 60, except ties, stirrups, and plate anchors, which shall be deformed bars, ASTM designation A615-89, Grade Reinforcing steel shall be clean and free of rust at the time of pouring of concrete. In the event reinforcing steel is delivered to the jobsite with evidence of rusting bars all rust must be treated with a solution of 75% phosphoric acid such as The Skybrite Company's Ospho.
 - f. VAPOR BARRIER UNDER SLAB: Vapor Barrier shall be 35 lb/msf Cross Tuff Black Poultry House Vapor Barrier as manufactured by MPD Inc., Palmer Lake, CO. or as approved by the architect.
3. EXECUTION
- a. PLACING AND FINISHING CONCRETE SLAB
 - 1) Provide proper curing, control joints, and steel coverage.
 - 2) Provide block outs (drop slab) for marble tile and wood floor (Alternate No. 2) as indicated on drawings.
 - b. FINISHING OF SLAB
 - 1) Slab shall be hard wet troweled or as required by the vinyl tile manufacturer (See Division 9E VINYL FLOORING).
 - 2) Alternate No. 2 block out shall be trowel finished to provide a smooth surface for the vapor barrier. .
 - c. REINFORCING STEEL COVERAGE: Reinforcing steel coverage shall be as follows:
 - 1) Concrete poured against earth: 3"
 - 2) Concrete poured against forms: 2-1/2"
 - 3) Columns and Beams: 2-1/2"

Lap splices shall not be less than 30 diameters, unless otherwise called out on the drawings.

- d. **IMBEDDED ITEMS:** Contractor shall properly set all anchor bolts and other imbedded items furnished under other sections for building into concrete.

DIVISION 4A: CONCRETE MASONRY UNITS

A. GENERAL

1. Include **GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS** as part of this section.
2. Examine all other Sections of the Specifications for requirements that affect the work of this Section whether or not such work is specifically mentioned in this section.
3. Coordinate work with that of all other trades affecting or affected by the work of this section. Cooperate with such trades to assure the steady progress of all work under the contract.
4. **SCOPE:** Provide all labor, materials, equipment, services, and transportation required to complete all concrete masonry work.
5. **RELATED SECTIONS:** Division 3, **CONCRETE**; Division 5, **STEEL**; Division 6A and 6B, **ROUGH and FINISH CARPENTRY**; Division 9C, **STUCCO**.
6. **GUARANTEE**
 - a. Attention is directed to provisions in the **GENERAL CONDITIONS** regarding guarantees and warranties for work under this Contract.
 - b. Manufacturers shall provide their standard guarantees for work under this Section. However such guarantees shall be in addition to, not in lieu of all other liabilities which manufacturers and the Contractor may have by law or by other provisions of the Contract Documents.

B. MATERIALS

1. Concrete masonry units shall conform to ASTM C90 standards for Type II with minimum masonry compressive strength of F=2000 PSI strength.
2. **MORTAR:** Mortar shall be Type M or S, 1800 PSI strength and shall

conform to ASTM C476. No type admixture shall be used.

3. **COARSE GROUT:** Coarse grout shall conform to ASTM C476, with 2500 psi at 28 days, maximum aggregate of 1/4", and an 8" to 10" slump.
4. **REINFORCING:** Provide vertical bar and horizontal joint reinforcing as called out on the structural drawings.

C. INSTALLATION

1. Concrete blocks shall be laid dry and grouted full.
2. Place blocks in a running bond with 3/8" mortar joints. Joints shall be struck flush where receiving stucco.
3. **Grouting:** All reinforcing cells shall be clean and free of foreign material and debris. Fill cells with coarse grout as specified. Provide ACI 90 degree standard hooks into footing and roof tie beam (if applicable).
4. Vertical bars shall be held in position at the top and bottom of bar and at 8'-0" maximum between connections, with a minimum clearance of 1/2" from sides of masonry void. The clear distance between bars shall be not less than one bar diameter.
5. Vertical and horizontal reinforcing shall be called out on the drawings.
6. Reinforcing bars shall be straight except for bends around corners and where bends or hooks are called for on the drawings.
7. Tops of partially constructed walls and plinths shall be covered with visqueen at the end of the work day, and when occurs.

DIVISION 4B CAST STONE WINDOW SILLS

A. GENERAL

1. Include GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS as part of this section.
2. Examine all other Sections of the Specifications for requirements that affect the work of this Section whether or not such work is specifically mentioned in this section.
3. Coordinate work with that of all other trades affecting or affected by the work

of this section. Cooperate with such trades to assure the steady progress of all work under the contract.

4. SCOPE: Provide all labor, materials, equipment, services, and transportation required to supply and install cast stone window sills.
 - a. See drawings for details.
5. RELATED SECTIONS: Division 3, CONCRETE; Division 7C, CAULKING AND SEALANTS; Division 8E, WINDOWS; Division 9A PAINT; Division 9C, STUCCO.
6. SUBMITTALS: Submit for the Owner's representative's approval one color sample, one full scale profile drawing, and data sheets including anchoring method.
7. MANUFACTURER: Cast stone sills shall be manufactured by Cast Stone Systems, 532 N Main St. Warrenton, NC 27589, (252) 257-1599.
8. DELIVERY, STORAGE, AND PROTECTION OF MATERIALS
 - 1) All materials shall be brought to the site in manufacturer's original unbroken factory-sealed containers bearing the manufacturer's standard label indicating product, brand name, manufacturer, weight, product type, and color.
 - 2) Handle and protect material from rain and moisture and contamination in transit and after arrival on the job.
 - 3) The General Contractor shall receive, check against owner's list all items, and store them at a secure location until ready to install. The General Contractor shall be solely responsible for all items after delivery.
9. GUARANTEE
 - a. Attention is directed to provisions in the GENERAL CONDITIONS regarding guarantees and warranties for work under this Contract.
 - b. Manufacturers shall provide their standard guarantees for work under this Section. However such guarantees shall be in addition to, not in lieu of all other liabilities which manufacturers and the Contractor may have by law or by other provisions of the Contract Documents.
- B. MATERIALS: Materials shall conform to Cast Stone Systems' Specification, Section 04720, for General, Products, and Execution requirements put forth on its website as

of the date of this specification.

1. Part No.: S5
2. All cast stone sills shall be one piece. Joints will not be allowed.
3. Color: CSS Core 1 Color Group "Natural Sand".
4. Installation Mortar: Type N Mortar. See Division 4A CONCRETE MASONRY UNITS.

C. INSTALLATION

1. EXAMINATION: Contractor shall check Cast Stone materials for quantities, size, model and finish prior to installation. Non-conforming materials will be rejected.
2. SETTING
 - a) Drenching: Drench units with clean water prior to setting.
 - b.) Prime ends of units, insert properly sized backing rod and install required sealant.
 - b) Fill dowel holes and anchor slots (if used) full with mortar.
 - c) Set units in full bed of mortar.
 - d) Horizontal Joint atop CMU: 3/8".
 - e) Rake mortar joints to accept stucco.
 - f) Tolerances: Set stone sills 1/8" or less within fir of window. Vertical tolerance shall allow return of stucco.
 - g) Interface With Window Frame: Allow for 1/8" for gun grade sealant. See Division 7-----Caulking and Sealants.
3. FIELD: Repair chips with touchup materials furnished exclusively from manufacturer. Consult with manufacturer for appropriate cleaners.

DIVISION 5 STRUCTURAL STEEL AND MISCELLANEOUS IRON

A. GENERAL

1. Include GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS as part of this section.
2. RELATED SECTIONS: Division 3, CONCRETE; Division 4, MASONRY; Division 6, CARPENTRY AND MILLWORK; Division 7, THERMAL AND MOISTURE PROTECTION.
3. Examine all other Sections of the Specifications for requirements that affect the work of this Section whether or not such work is specifically mentioned in this section.
4. Coordinate work with that of all other trades affecting or affected by the work of this section. Cooperate with such trades to assure the steady progress of all work under the contract.
5. SCOPE: Provide all labor, materials, equipment, services, and transportation required to complete all metals work as specified herein.
6. STANDARDS: AISC "Specifications For The Design, Fabrication, and Erection of Structural Steel for Buildings" and AWS – D.1-92 Structural Welding Specifications.
7. CODES; All steel work shall conform to the Florida Building Code 2010 or latest edition, "Steel Construction".
8. GUARANTEE
 - a. Attention is directed to provisions in the GENERAL CONDITIONS regarding guarantees and warranties for work under this Contract.
 - b. Manufacturers shall provide their standard guarantees for work under this Section. However such guarantees shall be in addition to, not in lieu of all other liabilities which manufacturers and the Contractor may have by law or by other provisions of the Contract Documents.

B. MATERIALS:

1. STRUCTURAL STEEL: All structural steel shall be free from defects impairing strength, durability, or appearance and shall be the best commercial quality for each intended purpose and shall meet the following ASTM Grades.
 - a. Tube Columns: A500 Grade B $F_y=46\text{ksi}$

- b. Wide Flange Shapes: A992-50
 - c. Pipe Columns: A53 Grade B, Type E or S, Schedule 40.
 - d. Other Shapes, Plates: A36
 - e. Bolts: A325; Anchor Bolts: A307.
- 2. WELDING ELECTRODES: E70XX Series.
 - 3. PAINT: Approved Primer, See DIVISION 9 FINISHES, 2 mils thick.

C. EXECUTION

- 1. FABRICATION:
 - a. Shop fabricate to the greatest extent possible by welding. Provide all beam stiffeners, column caps, bases, holes, and connections.
 - b. All work shall be executed by experienced mechanics and shall conform to details, be clean and straight with sharply defined profiles. Finished surfaces shall have smooth finishes.
 - c. Welding shall be continuous unless otherwise specified and shall conform to requirements of AISC and AWS standards.
 - d. All structural steel members shall be shop primed.
 - e. All steel bolts, clips, nails, and other steel fasteners for exterior use or attached to preserved wood shall be hot-dipped galvanized or stainless steel.
- 2. ERECTION:
 - a. Provide anchor bolts, leveling plates and all necessary hardware to erect steel plumb and square.
 - b. Provide temporary bracing and precautions necessary to withstand all construction loading and wind loads until all field connections are completed and shear walls and sheathing are in place.
 - c. Welding shall be continuous unless otherwise specified and shall conform to AISC and AWS standards. Tack welding will not be permitted on exposed surfaces. All exposed welds shall be ground smooth.

- d. Contractor shall field touch up all abrasions, burns, and other defects in primer.
- e. Provide holes and connections as required to accommodate the work of other trades and for site assembly of metal work. Holes shall be drilled or punched and reamed in the shop.
- f. Do not cut or alter members in the field without Owner's approval. Do not enlarge unfair holes by burning and forcing, but correct by reaming.
- g. All work shall be properly aligned, plumb, level, and true, and be in the correct location. All work shall be accurately set to established lines and elevations and rigidly fastened in place with suitable attachments to the construction of the building.
- h. Sleeve anchors shall be ITW (Ramset), or as approved by the Owner's to sizes indicated on plans.

DIVISION 6A: ROUGH CARPENTRY

1. GENERAL REQUIREMENTS

- a. Include GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS as part of this section.
 - b. RELATED SECTIONS: Division 3, CONCRETE; Division 4, MASONRY; Division 5, STEEL; Division 6B PRE-ENGINEERED TRUSSES; Division 6C FINISH CARPENTRY; Division 7, THERMAL AND MOISTURE PROTECTION; Division 8, DOORS, WINDOWS AND GLASS; Division 9, FINISHES; Division 10, SPECIALTIES; Division 16, ELECTRICAL.
 - b. Examine all other Sections of the Specifications for requirements that affect the work of this Section whether or not such work is specifically mentioned in this section.
 - c. Coordinate work with that of all other trades affecting or affected by the work of this section. Cooperate with such trades to assure the steady progress of all work under the contract.
2. SCOPE: Provide all necessary wood framing, blocking, nailing strips, furring strips, nailing inserts, rough door bucks, sheathing, underlayment, and other rough wood items and usual items of similar nature shown or implied by the drawings and as required to frame the building and to allow the proper installation of trades.

4. **STRUCTURAL SPECIFICATIONS:** See Structural Engineer's drawings for additional requirements, supplemental to this section.
5. **CODES:** All carpentry work shall conform to the Florida Building Code, 2010, "Wood Construction".
6. **PRESSURE TREATMENT:** All framing lumber specified herein to be pressure treated shall be dry Southern Yellow Pine (SYP), pressure treated by ACQ method OR "EcoLife" method as specified herein. It is the responsibility of the General Contractor to protect workers engaged in handling and cutting pressure treated wood that contains harmful substances. All pressure treated wood that is to be painted shall be kiln-dried to maximum 19% moisture content. Contractor shall provide the architect with an affidavit bearing the name of the treatment and kiln provider and proof that the lumber delivered is 19% MC or less. Lumber scheduled to be painted that does not meet this requirement will be rejected.
7. **HANDLING AND STORAGE:** All lumber specified herein shall be stored on site in a dry, ventilated location, off the ground, with a tarp covering at day's end. Wood specified to be air dried shall be stacked with a minimum of 1" sticking between individual pieces. Hardie products must be stored flat and kept dry and covered prior to installation. Planks can only be carried on edge. Protect corners and edges from brackage.
8. **KILN-DRIED LUMBER:** Kiln-dried lumber is to be primed, all sides, immediately upon delivery unless specified otherwise.
9. **SCAFFOLDS:** Furnish, install, and maintain for all the trades all necessary scaffolding, staging, and planking except as otherwise stipulated.
10. **PROTECTION:** Protect all work against damage during construction. Provide and lay all building paper required to protect finished floors.
11. **QUALITY OF LUMBER:** All lumber and timber used in load-bearing members shall be sound, free from rot and large or loose knots, damaging diagonal or spiral grain, and shall be at least equal in quality to the grades specified. Rough lumber shall be dressed four (4) sides, air dried, well seasoned, sound and free from splits, cracks, shakes, and waness, loose or unsound knots, decay, and be free of twist, or camber.
12. **MATERIALS SCHEDULE**
 - a. Framing Lumber
 - 1) Roof and Floor Joists, Exterior Wall Studs, Nailers and Blocking: No.2 SYP P.T. to sizes on plans.
 - 2) Non-Load Bearing Studs and Plates: No. 1 Spruce or Standard Hem-

Fir to sizes indicated on plans or as otherwise required by code.

- b. Plywood
 - 1) Roof Sheathing: APA Exterior Exposure 1 P.T. 3/4 (5/8" if allowed by local jurisdiction) thick.
 - 2) Floor Sheathing: APA Exterior Exposure Underlayment 3/4" thick, tongue and groove.
- c. Exterior Trim: Cement Fiber Board (CFB) See Division 6C FINISH CARPENTRY for full specification
- d. Continuous Soffit Vents Insect Screen: Continuous rolled stainless steel 20/20 fine mesh
- e. Prefabricated Columns: See Division 6E PREFABRICATED COLUMNS
- f. Porch Soffit
 - 1) Georgia Pacific Fire-Rated Fiberglass Mat Gypsum Panel (FMGP) Type X. Thickness: 5/8 inch.
- g. Rough Hardware
 - 1) Connectors shall be "Z-Max by Simpson Strong-Tie Co., Pleasant, CA. See connector schedule on plans.
 - 2) All loose miscellaneous iron connectors shall be double hot-dip galvanized to sizes indicated on plans.
 - 3) All sheet metal connectors are to be galvanized; all miscellaneous iron shall be factory primed.
- h. Fasteners
 - 1) All nails, screws, bolts, and other fasteners that will be in direct contact with ACQ lumber must be double hot-dipped galvanized, stainless steel, or as approved by the architect.
 - 2) Fasteners that must be in contact with ACQ lumber but which are not double dipped galvanized or stainless steel must be separated from the ACQ lumber with an impermeable barrier approved by the architect.
- i. Soffit Vents
 - 1) Continuous insect-screened galvanized steel or solid zinc. See drawings for details.
- j. Pre-engineered Wood Trusses
 - 1) SYP per pre-engineered engineer's specifications. See also Division 6B PRE-ENGINEERED TRUSSES.

- k. Structural Glues
 - 1) For gluing T&G porch decking, splicing columns, and other structural items: Loctite PL Premium Advanced Polyurethane Construction Adhesive.
 - 2) For gluing subfloors and sheathing: Loctite 400 Polyurethane Construction Adhesive.
 - l. Glue for Finish Carpentry:
 - 1) Glue for wood moldings and other wood finish items shall be Tite-Bond Type 2.
 - 2) Glue for PVC items shall be Polyseamseal adhesive, or as approved by the architect.
13. ROUGH CARPENTRY INSTALLATION
- a. See Connection Schedule on the drawings for sizes and locations of connectors.
 - b. Strictly follow the Florida Building Code with reference to all nailing requirements and patterns to meet the requirements of Coastal Construction.
 - c. Walls shall be plumb and square.
 - d. All timber beams and posts to be exposed to view shall be sanded before erection in order to remove visible mill defacements such as chatter marks, saw kerf, and raised knots.
 - e. Sill Connections: In no case shall there be less than two (2) bolts per length in any member.
 - f. Apply solid bridging at the mid-point of the span of floor joist. Offset each successive bridge (if applicable).
 - g. Install fire stops in frame walls strictly according to state and local code.
 - h. Install all blocking and grounds needed for hanging plumbing and other fixtures.
 - i. Mortise nailers into framing wherever moldings are called for.
 - j. Subfloor sheathing shall be continuously glued to floor joists.
 - k. Headers shall be packed with plywood solid to width of stud wall.

- l. Wood floor joists shall lap a minimum over interior supports and be spiked together.
- m. Where rafters are to expose to view they shall be connected to their supporting members with 3/8" lag bolts with a minimum of 3" penetration, unless otherwise drawn or specified. Sheet metal connectors may not be exposed to view.
- n. At roof overhangs furnish and install a continuous insect screen or as shown on the drawings. Fastened with stainless steel staples at 2" O.C.
- o. Apply soffits in long lengths to minimize joints.
- p. Fine mesh insect screen shall be continuous and q. Glues shall be waterproof and non-staining.
- q. Siding and trim nails shall not penetrate the surface more than 1/32" and shall be caulked smooth by the painter. Hardie board shall be nailed pneumatically with a flush mount attachment.
- r. Install Hardie system product strictly Hardie Installation Requirements. PROVIDE JOINT FLASHING BEHIND FIELD BUTT JOINTS per Hardie installation requirements.

DIVISION 6B PRE-ENGINEERED TRUSSES

1. GENERAL REQUIREMENTS

- a. Include GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS as part of this section.
- b. RELATED SECTIONS: Division 3, CONCRETE; Division 4, MASONRY; Division 5, STEEL; Division 6B PRE-ENGINEERED TRUSSES; Division 6C FINISH CARPENTRY; Division 7, THERMAL AND MOISTURE PROTECTION; Division 8, DOORS, WINDOWS AND GLASS; Division 9, FINISHES; Division 10, SPECIALTIES; Division 16, ELECTRICAL.
- b. Examine all other Sections of the Specifications for requirements that affect the work of this Section whether or not such work is specifically mentioned in this section.
- c. Coordinate work with that of all other trades affecting or affected by the work of this section. Cooperate with such trades to assure the steady progress of all work under the contract.

2. **SCOPE:** Furnish and install pre-engineered floor trusses. See structural drawings. Furnish and install all necessary blocking, nailing strips, strongbacks, and all other accessory components needed as shown or implied by the drawings and as required to frame the attic floor and to allow the proper installation of trades.
3. **CODES:** All carpentry work shall conform to the Florida Building Code, 2010, "Wood Construction".
4. **HANDLING AND STORAGE:** All lumber specified herein shall be stored on site in a dry, ventilated location, off the ground, with a tarp covering at day's end. Wood specified to be air dried shall be stacked with a minimum of 1" sticking between individual pieces.
5. **SCAFFOLDS:** Furnish, install, and maintain for all the trades all necessary scaffolding, staging, and planking except as otherwise stipulated.
6. **PROTECTION:** Protect all work against damage during construction.
7. **MANUFACTURER:** Pre-engineered trusses shall be designed, fabricated, and delivered to the jobsite as follows. The general contractor shall furnish the truss manufacturer with a set of the most up-to-date architectural and structural drawings.
 - a. Wood trusses shall be designed and fabricated in accordance with the "Design Specification for Metal Plate Connected Wood Trusses" published by the Truss Plate Institute (TPI), and applicable building codes.
 - b. The wood truss manufacturer must participate in a code-approved third party quality assurance program such as the Truss Plate Institute's "Quality Control Inspection Program.
 - c. Wood truss members and connections must be designed for 125 psf live load. Duration for floor live and dead loads shall be 1.00.
 - d. Prior to fabrication the contractor shall require the truss manufacturer to produce shop drawings for his and the Owner's approval that provide the following information:
 - 1) Span length and spacing of members.
 - 2) All design loads and their points of application.
 - 3) Adjustments to allowable values (duration of load factors).
 - 4) Reactive forces and their locations.

- 5) Bearing type and minimum bearing length.
 - 6) Deflections, span, and reaction.
 - 7) Metal connector plate, gauge, size and location.
 - 8) Lumber size, species, grade and moisture content.
 - 9) Location and connection design of required continuous lateral bracing.
 - 10) Truss splice detailing (if any).
 - 11) Connection details: truss to bearing, truss to truss, truss to truss girder, piggy back to truss, etc.
 - 12) Truss erection plan with permanent bridging and bracing details.
 - 13) Wood truss design calculations for each type of truss fabricated, sealed by a Florida licensed structural engineer.
- e. The shop drawings must bear the embossed seal of a licensed Florida structural engineer.
- f. The General Contractor shall provide the truss fabricator with an up-to-date set of architectural and structural drawings with the order for the trusses.
- g. Deflection limitations:
- 1) Floor Live load: $L/480$.
 - 2) Floor Total load: $L/360$
- h. Continuous bottom chord lateral bracing is required at a minimum spacing of 10'- 0" O.C. and shall be continuous from one end of the building to the other. Overlaps shall be no less than one truss space.
- i. The truss erector is responsible for all temporary bracing of truss system during erection.
- j. All trusses shall be attached to their supports as indicated on the drawings or approved by the architect.
- k. Piling and storing of plywood flooring on trusses is not allowed.
- l. Reinforcing of trusses with plywood is not allowed without the architect's approval.

- m. Field alteration of the trusses for any reason or of any kind is not allowed without the written and sealed approval of the truss manufacturer's structural engineer.
- n. General Contractor shall coordinate all electrical, plumbing, and air-conditioning pipes, conduits, wiring, recessed lights and ducts with the provision of chase space within the ducts and shall verify that this provision has been made by the truss fabricator.

DIVISION 6C: FINISH CARPENTRY

1. GENERAL REQUIREMENTS

- a. Include GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS as part of this section.
 - b. RELATED SECTIONS: Division 4, MASONRY; Division 5, STEEL; Division 6A, Rough Carpentry; Division 7, THERMAL AND MOISTURE PROTECTION; Division 8, DOORS, WINDOWS AND GLASS; Division 9, FINISHES; Division 10, SPECIALTIES; Division 16, ELECTRICAL.
 - c. Examine all other Sections of the Specifications for requirements that affect the work of this Section whether or not such work is specifically mentioned in this section.
 - d. Coordinate work with that of all other trades affecting or affected by the work of this section. Cooperate with such trades to assure the steady progress of all work under the contract.
2. SCOPE: Furnish and/or install all finish carpentry items including but not limited to window and door installation, decorative columns, casework, interior and exterior moldings, interior stairs and balustrades, and interior trim.
3. CODES: All carpentry work shall conform to the Florida Building Code, 2010, "Wood Construction".
4. QUALITY STANDARDS: Finish carpentry shall be installed by master finish carpenter and their helpers only. Framing carpenters may not install finish carpentry unless directly and full time supervised by a master finish carpenter. Where AWI standard apply, work shall conform to AWI Custom standards.
5. HANDLING AND STORAGE: All wood, plastic moldings, and other items specified herein shall be stored on site in a dry, ventilated location, off the ground,

- with a tarp covering at day's end. Wood specified to be air dried shall be stacked with a minimum of 1" sticking between individual pieces. Interior millwork shall be accepted only when delivered dry, when the building is dried in, and when a suitably dry and protected area is available for storing it. All finish wood specified herein shall be stored on site in a dry, ventilated location, off the ground, with a tarp covering at day's end. Wood specified to be air dried shall be stacked with a minimum of 3/4" sticking between individual pieces. Protect all work against damage during construction.
6. SUBMITTALS: Submit sample and/or manufacturer's data of all components of moldings, and other items specified herein.
 7. SCAFFOLDS: Furnish, install, and maintain for all the trades all necessary scaffolding, staging, and planking except as otherwise stipulated.
 8. MATERIALS SCHEDULE
 - a. Interior Pocket Door
 - 1) See Division 8A DOORS AND WINDOWS
 - b. Finish Hardware:
 - 2) See Division 8: DOORS AND WINDOWS, and Division 10, SPECIALTIES.
 - c. Exterior Trim: Consisting of bay window trim and casings, frieze boards, corners, fascias, belt trim, etc. shall be cement fiber board (CFB) as follows:
 - 1) HZ5 Fiber Cement Board by Hardie Systems or Composite Trim by Miratek to sizes and thicknesses indicated on plans.
 - 2) Finish shall be smooth, both sides and ends; factory primed.
 - d. Prefabricated Columns: See Division 6E PREFABRICATED COLUMNS.
 - e. Moldings: See Division 6D MOLDINGS.
 - f. Interior Door and Window Trim
 - 1) Bay Windows: 1 X Poplar.
 - 2) Other Windows: None (drywall returns)
 - 3) All doors EXCEPT Vestibule and Family Room: 1X4 Poplar with poplar jamb extenders.
 - g. Interior Stair Treads: 5/4 Red Oak with full bullnose.
 - h. Interior Stair Risers: 3/4 Poplar
 - i. Casework: See Division 6F CASEWORK.

- j) Glue for Finish Carpentry:
 - 1) Glue for wood moldings and other wood finish items shall be Tite-Bond Type 2.
 - 2) Glue for PVC items shall be Polyseamseal adhesive, or as approved by the Owner's Representative.

9. INSTALLATION

- a) Finish woodwork shall be dressed and sanded, free from machine and tool marks, abrasion, raised grain, splice marks, and other defects on surfaces exposed to view.
- b) Attach interior trim with 8d finish nails, set.
- c) Joints shall be tight and so formed as to conceal shrinkage.
- d) All nail heads in finished work shall be sunken 1/16" with nail set.
- e) Woodwork shall be properly framed, closely fitted, and accurately set to the required lines and levels and shall be rigidly secured in place.
- f) Fitting of doors and frames shall be done carefully. Sandpaper carefully, by hand, and leave finish free from all marks, roughness and imperfections. Remove and replace hardware as required for painting.
- g) Install all weather-stripping and thresholds specified under DIVISION 10 FINISH HARDWARE.
- h) Obtain from finish hardware supplier all hardware schedules, templates, and hardware samples for the correct installation of hardware.
- i) Eave vents shall be securely fastened to achieve an unbroken insect barrier.

DIVISION 6D: MOLDINGS

1. GENERAL REQUIREMENTS

- a. Include GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS as part of this section.
- b. RELATED SECTIONS: Division 6C Finish Carpentry; Division 9, FINISHES.

- c. Examine all other Sections of the Specifications for requirements that affect the work of this Section whether or not such work is specifically mentioned in this section.
 - d. Coordinate work with that of all other trades affecting or affected by the work of this section. Cooperate with such trades to assure the steady progress of all work under the contract.
- 2. SCOPE: Furnish and install all exterior and interior moldings and trim. See drawings for locations and sizes.
- 3. QUALITY STANDARDS: Finish carpentry shall be installed by master finish carpenter and their helpers only. Framing carpenters may not install finish carpentry unless directly and full time supervised by a master finish carpenter. Where AWI standard apply, work shall conform to AWI Custom standards.
- 4. HANDLING AND STORAGE: All moldings, and other items specified herein shall be stored on site in a dry, ventilated location, off the ground, on a perfectly flat surface, with a tarp covering at day's end. Protect all work against damage during construction. Moldings shall be delivered to the jobsite in rigid packaging with the manufacturer's name and address clearly marked on each package. Moldings shall be inspected upon delivery and, if free of warp, checking, knots, splits or other defects, shall be returned to their original packaging and stored in a dry air conditioned space off the floor time of installation. Moldings shall be handled by finish carpenters only.
- 5. SUBMITTALS: Submit 4" samples of all moldings, and data sheets for glues to be used for Owner's Representative's approval prior to ordering. Include matching manufacturer's installation data sheets.
- 6. LENGTHS: Contractor shall order lengths of moldings to minimize waste.
- 7. SCAFFOLDS: Furnish, install, and maintain for all the trades all necessary scaffolding, staging, and planking except as otherwise stipulated.
- 8. MATERIAL LIST:
 - a. Moldings and Casings: Consisting of exterior cornice crowns, belt trim water table, and bay window drip caps, and interior ceiling crowns, chair rail, bases, and door casings.
 - 1) Exterior Moldings shall be manufactured by Azek Building Products provided by Manley DeBoor Lumber (MDB). See drawings for numbers and locations.
 - 2) Interior Moldings: Shall be solid pine manufactured by WoodGrain

Distribution Inc., Titusville, Florida, provided by manly DeBoor Lumber (MDB) and shall be as follows:

- a) Crowns
Type E: 9/16"X 4-1/4" No. 48 (MDB Item Number 464-16)
Type F: 9/16"X 5-1/4" No. 45 (MDB Item Number 465-16)
 - b) Bases
Type A (Family Room, and Vestibule): 1X4 Poplar with No. 166 11/16"X 1-1/4" (MDB Item Number 419-16 base Cap
Type B (Sexton's Office, Archives, Storeroom, and Bathrrom): 1X4 Poplar (WITHOUT CAP).
 - c) Chair Rail (Family Room Only): 1-1/8"X 2-1/4" No. 392 (Special Order from MDB).
 - d) Family Room Door Casings (Each Side): 7/16" X 1-1/4" No. 937 Stop atop 1X4 poplar. See drawings for details.
 - e) Archives and Sexton's Office Door Casings (Vestibule Side Only) 1X4 Poplar with applied Shingle No. 210 (Special Order from MDB). See drawings for detail.
 - f) Front Door Casings: Interior and Exterior: By door manufacturer. See Division 8A DOORS.
- b. Fasteners
 - 1) Nails
 - a) Interior Wood Moldings: 16 or 18 GA. galvanized steel pin nails allowing 1" imbedment into substrate..
 - b) Exterior Azek moldings: 18 GA stainless steel pin nails allowing 1-1/2" into blocking.
 - c. Glue
 - 1) Interior Wood Moldings: Titebond II.
 - 2) Exterior Azek Moldings: Water based Azek Adhesive Cement.

8. INSTALLATION

- a. Moldings may be installed only by experienced finish carpenters in possession of their own molding installation tools (coping saws, etc.). Carpenter helpers or framing carpenters may not install moldings but may assist the finish carpenter.
- b. Moldings may not be installed until acclimated to air conditioned space.
- c. Moldings shall be installed with a hand held pneumatic or electric finish nailer with a bootied nose to prevent marring. Only master finish carpenters may

hand nail moldings. Hammer bruises will result in rejection of the installation.

- d. Fastening:
 - 1) Wood Moldings: Nails shall be 16 gauge galvanized pin nails set below surface of the molding and penetrating at least 1" into blocking or framing All unset nails must be hand set.
 - 2) Azek Moldings: Nails shall be 16 gauge stainless steel pin nails set below surface of the molding and penetrating at least 1-1/2" into blocking or framing All unset nails must be hand set.
- e. Attach continuous wood blocking to wall studs behind all interior crowns.
- f. Exterior crowns shall be backed by continuous pressure treated wood blocking cut to the exact angle of the crown molding and screwed to wood or concrete substrate. See drawings for details.
- g. Outside molding corners shall be mitered and glued. Inside miters shall be coped and glued. All cuts shall be smooth; cover uniformly with glue. PVC molding must be cut with carbide tip saws and miters (if applicable).
- h. Butt joints shall be biased and glued. Unbiased butt joints will be rejected.

DIVISION 6E: PREFABRICATED COLUMNS

- 1. GENERAL REQUIREMENTS
 - a. Include GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS as part of this section.
 - b. RELATED SECTIONS: Division 4, MASONRY; Division 5, STEEL; Division 6A, Rough Carpentry; Division 6B FINISH CARPENTRY; Division 9, FINISHES.
 - c. Examine all other Sections of the Specifications for requirements that affect the work of this Section whether or not such work is specifically mentioned in this section.
 - d. Coordinate work with that of all other trades affecting or affected by the work of this section. Cooperate with such trades to assure the steady progress of all work under the contract.

2. SCOPE: Furnish and install prefabricator columns as indicated on the drawings
3. QUALITY STANDARDS: Prefabricated columns shall be installed by master finish carpenter and their helpers only. Framing carpenters may not install finish carpentry unless directly and full time supervised by a master finish carpenter.
4. HANDLING AND STORAGE: Prefabricated columns shall be stored on site in a dry, ventilated location, off the ground, with a tarp covering at day's end. Protect columns against damage during construction.
5. SUBMITTALS: Submit manufacturer's data of all components of columns and glues for Owner's Representative's approval.
6. SCAFFOLDS: Furnish, install, and maintain for all the trades all necessary scaffolding, staging, and planking except as otherwise stipulated.
7. MANUFACTURER: Prefabricated columns shall be "Polystone I" by Chatsworth's Columns, Wilmington, NC (1 800 COLUMNS). to the following specifications:
 - a. Style shall be Roman Doric, plain.
 - b. Base diameter shall be nominal 14" (13-5/8"). Neck diameter shall be 12". Overall length of column shall be 9'-0", delivered.
 - c. Column shaft shall be smooth, plain and tapered. Bottom third of the shaft shall be straight with the remaining 2/3 tapering to the neck.
 - d. Column Capital and Base molding, shall be constructed of reinforced polyester resin and marble dust fiberglass, per Polystone specifications.
 - e. Columns shall be splits and will be delivered in six pieces per column, consisting of split base, shaft, and capital.
9. SUBMITTALS: Submit catalog cuts to the Owner's Representative for approval prior to ordering.
10. HANDLING AND STORAGE: Columns shall be delivered to the jobsite in rigid packaging with the manufacturer's name and address clearly marked on each package. Moldings shall be inspected upon delivery and, if free of warp, cracks, or other defects, shall be returned to their original packaging and stored in a dry air conditioned space off the floor until time of installation. Columns shall be handled by finish carpenters only.

11. INSTALLATION

- a. Columns shall be installed within two weeks of delivery and shall be installed according to the manufacturer's instructions. Please note that columns left stacked and uninstalled can deform and warp over time. The general contractor shall be responsible for installing the columns before defects occur. IF COLUMNS WARP BEFORE INSTALLATION THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO REORDER COLUMNS AT HIS EXPENSE.
- b. Shafts will be cut to length to meet drawing requirements and site conditions. Before cutting lengths
- c. Columns as splits must allow installation around a steel tube column and shall be joined and attached top and bottom strictly to Chatworth specifications.
- d. Joining, Gluing and Finishing Columns: Strictly follow manufacture's installation instructions. The contractor may use the manufacturer's Split Kit, which includes bands, brackets and Duo-sil glue, or may use Loctite PL Premium Advanced Polyurethane Construction Adhesive.

DIVISION 6F CASEWORK

A. GENERAL

1. Include GENERAL CONDITIONS, GENERAL REQUIREMENTS as part of this section.
2. Examine all other Sections of the Specifications for requirements that affect the work of this Section whether or not such work is specifically mentioned in this section.
3. CORDINATION: Coordinate work with that of all other trades affecting or affected by the work of this section. Cooperate with such trades to assure the steady progress of all work under the contract.
4. SCOPE: Furnish and install all cabinetry. See drawings for layouts and details.
5. RELATED SECTIONS: Division 6 CARPENTRY AND MILLWORK, Division 9, FINISHES; Division 10, SPECIALTIES; Division 16, ELECTRICAL.

6. GUARANTEE

- a. Attention is directed to provisions in the GENERAL CONDITIONS regarding guarantees and warranties for work under this Contract.
- b. Manufacturers shall provide their standard guarantees for work under this Section. However such guarantees shall be in addition to, not in lieu of all other liabilities which manufacturers and the Contractor may have by law or by other provisions of the Contract Documents.
- c. GUARANTEE: Casework contractor shall guarantee casework and installation to be free of defects in materials and workmanship for a period of one year from the date of the city's Certificate of Occupancy of the house.

7. SUBMITTALS: The contractor shall provide the following samples for the Owner's Representative's approval:

- 1) Shop drawings for all casework. Shop drawings shall be prepared to scale by qualified and experienced draftsmen and shall be to scale, $\frac{1}{2}''=1'-0''$ and shall show all details required by the architect for approval.
- 2) Samples: Finished cabinet doors, and cabinet hardware.
- 3) Data Sheets: Cabinet manufacturer's specifications, hardware and lighting hardware sheets.

8. PROTECTION: Protect all work against damage during construction. Provide and lay all building paper required to protect finished floors.

9. QUALITY STANDARDS: Finish carpentry shall be installed by master finish carpenter and their helpers only. Framing carpenters may not install finish carpentry unless directly and full time supervised by a master finish carpenter. Where AWI standard apply, work shall conform to AWI Custom standards.

10. HANDLING AND STORAGE:

- a. Casework shall be accepted only when delivered dry, when the building is dried in, and when a suitably dry and protected area is available for storing it. All finish wood specified herein shall be stored on site in a dry, ventilated location, off the ground, with a tarp covering at day's end. Protect all work against damage during construction.

- b. All materials shall be delivered to site in sizes that can be passed through a 3'-0"x 6'-8" opening. Delivery and storage of all materials shall be done under dry conditions. Material is to be stored on site, within a protected air conditioned space, and covered with furniture blankets until ready for installation. All casework shall be inspected upon delivery and shall not be accepted unless free from mars, scratches, damages and other defects.

- 11. **FIELD DIMENSIONS:** The casework contractor is responsible for taking all field dimensions necessary to assure a true and proper fit of all casework to field conditions.
- 12. **TEMPLATES:** The General Contractor shall provide the casework fabricator with all necessary templates and data sheets to be able to install all appliances and plumbing fixtures.
- 13. **FILLERS:** Provide filler pieces and scribe molds for closures against all walls where cabinets do not abut tightly.

B. MATERIALS:

- 1. **CONSTRUCTION:** All cabinetry shall be face frame style with 1-1/2" stile and rail framing with full overlay doors and drawer fronts. All cabinet carcass components including cabinet ends, bottoms, tops, shelves, stretchers, toe kicks, and backs shall be 3/4" thick, Maple veneer Plywood. All cabinet trims shall be Northern Hard maple. Drawer boxes shall be built with 5/8" thick hardwood with dovetailed corner joints to be mounted on full extension under mount drawer glides. End panels of base cabinets shall stop 3-1/2" above the floor.
- 3. **SHELVES:** Provide two shelves for all base cabinets and three half-shelves at wall cabinets.
- 2. **DOORS AND DRAWER FRONTS:** Door and drawer fronts shall be Conastoga 3/4" MDF with raised panels.
- 3. **CABINET INTERIORS:** All cabinet interiors shall have a roll coat clear finish.
- 4. **EXTERIOR VISIBLE SURFACES:** All exterior surfaces shall have a pigmented conversion varnish with two clear, 15% sheen top coats for durability.
Color shall be:

5. **HARDWARE:** Provide the following hardware:
 - a. Hinges: Blum 33
 - b. Drawer Glides: Blum Full Extension Under Mount
 - c. Drawer Pulls: Top Knob
 - d. Door Handles: Top Knob
6. **COUNTERTOP AND BACKSPLASH:**
 - a. Substrate: 3/4" plywood with 1-1/2" nosing. Back side of substrate shall be laminated with liner grade laminate to equalize veneer stresses. Finish top and front.
 - b. Backsplash shall be 3/4"X4" plywood and shall be fabricated integrally with the countertop. Finish top and front.
 - c. Countertop Finish: Plastic Laminate: Formica Faux Gauze, Matte Finish with Formica Ideal Bullnose Edge.
 - d. Back Splash: Formica Faux Gauze, Matte Finish.

C. **INSTALLATION:**

1. **CABINETS**
 - a. Verify layout
 - 1) Plumbing
 - 2) Structural
 - 3) Window and door clearances.
 - 4) Bring errors to the designer's attention immediately.
 - b. Verify Level and Plumb:
 - 1) Ceilings and floors out beyond 1/4" in 10' should be adjusted prior to installation; Walls out beyond 1/4" in 8' .
 - 2) Verify structural members cabinets must be attached to.
 - c. Install backs and grounds securely.
 - d. Verify studs and furring relative to cabinet widths.

- e. Open boxes; Inspect cabinets for damage and correct order per layout.
- f. Install cabinets consistent plumb, level, true and straight with no distortions. Shims are to be concealed.
- g. Install base cabinets level so that all shimming is done at floor and covered by kick. Do not shim at countertop. Level base cabinets with shims. In no event, however, are the cabinets to be shimmed greater than 5/8".
- h. Base and Uppers must be attached through structural skeleton of the cabinet. No attachments may be made through cabinet back sheathing. Cabinets shall be secured to walls with wood screws provided with wood 1X4 wood grounds secured to CMU walls with tapcons. Cabinets shall be through bolted together with 5/16" diameter bolts, 1-1/4" diameter washers, lock washers, and nuts. All securing hardware shall be placed no greater than 12" on center.
- i. Also read manufacturers spec for attachment for screw size and placement, but generally no further from corners than 4".
- j. Scribe and cut in order to fit with other finished work. Secure to grounds and blocking with countersunk concealed fasteners.
- k. Provide chases and holes as necessary to allow installation of plumbing fixtures.
- l. f. Install toe kick base after shimming.
- m. Adjust and lubricate all hardware so that the doors and drawers operate quietly and smoothly and that sightlines are even, straight and plumb.
- n. Following installation casework shall be carefully cleaned and buffed. All tapes, labels, and markings shall be removed.

2. COUNTERTOP AND BACKSPLASH

- a. Inspect materials and location of installation for conditions affecting performance of work in accordance with shop drawings.
- b. Proceed with installation only after unsatisfactory conditions have been corrected.

- c. Cure laminate countertops for 24 hours, minimum, before installation.
- d. Field cut countertop and backsplash as required for plumbing fixtures. Scribe to end walls.
- e. Screw countertop to base cabinet from below with wood screws 12" o.c.
- f. Seal the seam between the backsplash and the wall with silicone caulk matching the color of the backsplash.
- g. Remove adhesives, sealants and other stains.
- h. Protect installed wall from damage. Repair or replace damaged work, to Owner's Representative's satisfaction.

DIVISION 7A: METAL SHINGLE ROOF – BASE BID

A. GENERAL REQUIREMENTS

- 1. Include GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS as part of this section.
- 2. RELATED SECTIONS: Division 2, DEMOLITION. .
- 3. Examine all other Sections of the Specifications for requirements that affect the work of this Section whether or nor such work is specifically mentioned in this section.
- 4. Coordinate work with that of all other trades affecting or affected by the work of this section. Cooperate with such trades to assure proper sequencing and the steady progress of all work under the contract.
- 5. SCOPE: Provide all labor, materials, equipment services, and transportation required to complete all metal shingle roofing as specified herein and indicated on the drawings.
- 6. QUALITY ASSURANCE:
 - a. Roofing and Sheet Metal materials and installation shall conform to the 2010 Florida Building Code latest edition, in particular to "Installation of Roof Coverings", and to SMCA standards of Construction..

- b. Roof work is to be done by roofing Contractors with ten (10) years minimum experience installing metal shingle roofs.
- c. Provide materials of standard factory fabrication as much as possible. Fabrication shall be for waterproof and weather resistant performance, with expansion provisions for running work, sufficient to permanently prevent leakage, damage.

7. SUBMITTALS:

- a. Contractor shall submit to the Owner's representative for his approval, data sheets and samples of the roof shingles, fasteners, and membrane.

8. DELIVERY, STORAGE AND HANDLING

- a. Products shall be delivered in original, unbroken packages, containers, or bundles bearing the name of the manufacturer.
- b. Upon receipt of shingles and other materials, contractor shall examine the shipment for damage and completeness.
- c. All materials shall be stored in a clean dry location. Shingles shall have one end elevated to allow moisture to run off. Edges shall be protected. Shingles showing edge rust will be rejected.
- d. Stack all materials to prevent damage and allow for adequate ventilation.

9. GUARANTEE

- a) Attention is directed to provisions in the GENERAL CONDITIONS regarding guarantees and warranties for work under this Contract.
- b) Manufacturers shall provide their standard guarantees for work under this Section. However such guarantees shall be in addition to, not in lieu of all other liabilities which manufacturers and the Contractor may have by law or by other provisions of the Contract Documents.
- c) Roof shall be bonded for 20 years from time of Substantial Completion.

B. MATERIALS

1. SHINGLES:

- a. Shingles shall be preformed, prefinished 24 gauge steel, Class A Fire Rated Galvalume shingles, ASTM 792-86 AZ-55, manufactured by Berridge Manufacturing Company, Houston, Texas.
- b. Style shall be "Victorian".
- c. Shingles shall have strippable film applied to the top side of the shingle during fabrication.
- d. Each shingle shall have 9"x12" exposure to weather.
- e. Shingles shall be of overlapping interlocking design, fastened to solid substrate with concealed fasteners.

2. FLASHING: All flashing details are either exactly from the Berridge detail sheets or are adapted from them. See the drawings for these details.

- a. Metal flashing shall be 26 Ga. Galvalume and shall match the shingles in finish and shall consist of eave flashing, edge trim, wall flashing, ridge flashing to the following sizes, or as indicated on the drawings:
 - 1) Eave Flashing and Edge Trim: 6" under shingle, with 1-1/2" drip, except at turret steeples where roofer is to consult architect regarding historic accuracy.
 - 2) Wall Flashing: 8" min. under shingle and to closest masonry joint but not less than 3" nor more than 6" to weather and to a 2" deep reglet. Cut reglet into concrete if necessary to meet this requirement.
 - 3) Ridge and Hip Flashing: 12" flat 24 GA. per drawings.
 - 4) Flashing is to be protected while in storage to keep it dry at all times.
 - 5) Rusted metal flashing will not be accepted under any circumstances.

3. FASTENERS

- a. Unless otherwise indicated all fasteners shall be hot-dipped galvanized

steel. Screws shall be 1-1/2" in length unless the plywood alternate is accepted in which case they shall be 2-1/2 inches in length.

4. MEMBRANE UNDERLAYMENT
 - a. Underlayment shall be 30 LB Grace Water and Ice Shield "Peel and Seal" OR GAF Everguard Freedom TPO.
 5. SEALANTS:
 - a. At Roof Flashing and Gutters: Dap Premium Polyurethane Roof and Flashing Sealant.
 - b. Epoxy Seam Sealer: Non corrosive metal seam cementing compound recommended by gutter manufacturer for non-moving parts including riveted joints.
 - c. Mastic Sealant; SSPC-paint 12, solvent type bituminous mastic nominally free of sulfur, compounded for 15 mil dry film thickness per coat.
 6. ROOFING CEMENT: ASTM D2822, asphaltic.
 7. FLASHING BARRIER: Furnish and install flashing barrier between opposing metals and/or between metals and ACQ lumber to prevent galvanic reactive corrosion. Flashing barrier shall be "Deck Flash" by Cofair Products, Inc., Glenview, IL. Install according to manufacturer's instructions.
- C. INSTALLATION
1. SUBSTRATE:
 - a. Examine existing roof sheathing for damage, projections, soft spots, and other conditions requiring attention in the preparation for underlayment application, and repair and prepare accordingly. Report to Owner's Representative all areas requiring repair under the SF allowance. Upon the Owner's Representative's approval commence repair work on these areas.
 - b. Where applicable, verify roof openings, curbs, pipes, sleeves, ducts and vents through roof are solidly set, cant strips and reglets in place and nailing strips located.

2. UNDERLAYMENT

- a. Underlayment shall be installed strictly to membrane manufacturer's recommendation.

3. SHINGLES:

a. General:

- 1) Comply with shingle manufacturer's installation instructions and recommendations and with all standards set forth in the Architectural Sheet Metal Manual published by SMACNA, in order to achieve a watertight installation.
- 2) Roof shall meet ASCE 7-05 Category C 150 mph wind load.
- 3) Furnish Key West Building Department with manufacturer's NOAs as required for roof permit.
- b. Install shingles in such a manner that horizontal lines are true and level and vertical lines are plumb.
- c. Install starter and edge trim, and gutter straps before installing shingles.
- d. Remove protective strippable film prior to installation of roof shingles.
- e. Attach shingles using manufacturer's standard clips and fasteners, spaced according to manufacturer's recommendations.
- f. Do not allow shingles to come into contact with dissimilar materials.
- g. Do not allow traffic on completed roof.
- h. Remove and replace any shingles or components that are damaged beyond successful repair.
- i. Cleaning: Clean all grease, finger marks, stains or other marring of shingles before submitting for final payment. Metal roof insulation shall not be considered finished until all hand, foot, and other smudges, and other defacements are 100% removed.

DIVISION 7B SLATE ROOF -- ALTERNATE NO. 1

A. GENERAL REQUIREMENTS

1. Include GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS as part of this section.
2. RELATED SECTIONS: Division 2, DEMOLITION. .
3. Examine all other Sections of the Specifications for requirements that affect the work of this Section whether or nor such work is specifically mentioned in this section.
4. Coordinate work with that of all other trades affecting or affected by the work of this section. Cooperate with such trades to assure proper sequencing and the steady progress of all work under the contract.
5. SCOPE: Provide all labor, materials, equipment services, and transportation required to Furnish and install slate roof, underlayment and ice and water shield and all accessories and flashing. The entire roof shall be covered with slate in a proper and watertight manner. See drawings for details and locations.
6. SUBMITTALS:
 - a. Contractor shall submit to the Owner's representative for his approval within twenty (20) working days of notice to proceed the following:
 - 1) A list of his completed slate roof projects with names and addresses of the building owner and architect.
 - 2) A list of the craftsmen who will be working on this project.
 - 3) Two (2) control slate shingles showing the color range of the specified material.
 - 4) Two (2) 4"X 6" samples of felt.
 - 5) Two (2) 4"X 6" samples of the ice and water shield with attached manufacturer's data sheets.
 - 6) Three samples of each length and gauge nail to be used.
7. DELIVERY, STORAGE AND HANDLING
 - a. Products shall be delivered in original, unbroken packages, containers, or bundles bearing the name of the manufacturer.
 - b. Upon receipt of shingles and other materials, contractor shall examine the shipment for damage and completeness.

- c. All materials shall be stored in a clean dry location. Shingles shall have one end elevated to allow moisture to run off. Edges shall be protected. Shingles showing edge rust will be rejected.
 - d. Stack all materials to prevent damage and allow for adequate ventilation.
- 8. ROOFING CONTRACTOR: Unless otherwise approved by the Owner's Representative the roofing contractor will be Rich Williams Roofing, Big Pine, FL. (305) 797-0985.
- 9. QUALITY ASSURANCE:
 - a. The slate roof shall meet or exceed all applicable recommendations by the National Slate Association (NSA), the Slate Roofing Contractors Association (SRCA), and the National Roofing Contractors Association (NRCA).
 - b. The slate roof contractor shall have no less than 20 years experience in successfully installing slate roofing.
 - c. The roofer shall use skilled workmen who are trained in laying and nailing slate and who are completely familiar with the specified requirements and methods needed for proper performance of the work in this section.
 - d. Roofing materials and installation shall conform to the Florida Building Code latest edition as applicable, in particular to "Installation of Roof Coverings".
- 10. GUARANTEE
 - a) Attention is directed to provisions in the GENERAL CONDITIONS regarding guarantees and warranties for work under this Contract.
 - b) Manufacturers shall provide their standard guarantees for work under this Section. However such guarantees shall be in addition to, not in lieu of all other liabilities which manufacturers and the Contractor may have by law or by other provisions of the Contract Documents.
 - c) Roof shall be bonded for 20 years from time of Substantial Completion.

B. MATERIALS

1. SLATE SUPPLIERS

- a. Slate shall be supplied by the following companies:
 - 1) Buckingham Slate Co.
 - 2) Evergreen Slate Company.

2. MATERIALS

- a. Slate Shingles:
 - 1) Quality: Slate shingles shall be ASTM C406-89 Grade A, Unfading, machine punched for two (2) nails each except where hand punching of holes in fitting hips and valleys are necessary.
 - 2) Size:
 - a) Field: Uniform, 16"X9" of standard thickness (1/4") with a variation of not more than 1/8" in length and width and 1/16" in thickness.
 - b) Starter: 10"
 - 3) Color: Slate shall be one color, CHARCOAL GRAY .
- b. Cant Strip: Wood or metal to match the thickness of the field slate.
- c. Ice and Water Shield: W.R. Grace & Co., 40 mils.
- d. Roofing Felt: 30 LB ASDTM D226 asphalt-saturated organic felt.
- e. Sealant: Red Slater's Cement ASTM D-4586 Type I asbestos free.
- f. Nails: All slate shall be fastened with two large-head 10 gauge solid copper slating nails, 1-1/2" for field and "2" for hips and ridges.
- g. Pop Rivets: 1/8" copper.
- h. Flashing:
 - 1) Ridge cap and hip cap: 16" 20 oz. copper sheet.
 - 2) Valley: 18" 20 oz. copper sheet.
 - 3) Drip Edge: 8" 16 oz. copper sheet.
- i. Cleats and Straps: 20 oz. copper
- j. Plumbing Vents Through Roof: Lead.

C. EXECUTION

1. SUBSTRATE PREPARATION

- a. Contractor shall examine existing roof sheathing for damage, projections, soft spots, and other conditions requiring attention in the preparation for underlayment application, and repair and prepare accordingly. Report to Owner's Representative all areas requiring repair or further preparation for slate. Upon the Owner's Representative's approval commence repair work on these areas.
- b. Verify with General Contractor that all pipes, sleeves, ducts and vents, etc. through roof are solidly set.
- c. Unless provided by the General Contractor to the roofer's satisfaction, furnish, install, and maintain all scaffolding, staging, and planking for the use of roofers exclusively.

2. UNDERLAYMENT

- a. Ice and Water Shield:
 - 1) Install ice and water shield around the entire perimeter of the building, extending from the eaves up three feet (2').
 - 2) Install ice and water shield in all valleys, centering a full width roll from low point upwards.
 - 3) Side laps shall be a minimum of 3-1/2" and end laps 6".
 - 4) Underlayment shall be installed strictly to membrane manufacturer's recommendations.
- b. 30 LB Felts
 - 1) Felts shall be mechanically fastened in horizontal layers with joints lapped toward eaves with at least 2" overlaps, 6" at ends.
 - 2) Lap felt over hips and ridges at least 12"

3. SLATE SHINGLES

- 1) Field:
 - a) Install cant strip first, sizing for proper field slate size and head lap.
 - b) Starter slate shall project 1-1/2" at eaves.
 - c) Head lap shall be 4".

- d) Organize slates so any irregularity of color will be minimized. A noticeable difference in color between one slate and another viewed from the street will result in the offending slate to be replaced.
 - d) Feather slates toward ridge so the the finished coursing appears uniform
 - d) Care must be taken to avoid exposing nails under eave of bay window.
 - e) Nails shall not be “driven home” or to produce a strain on the slate in any way.
 - f) Cover all exposed nail heads with approved sealant.
 - g) Hip and ridge slates shall be laid in sealant spread evenly over the unexposed surfaces and nailed securely in place.
 - h) Neatly fit slate around all roof penetrations.
 - i) Slates overlapping sheet metal work shall have nails placed so to avoid puncturing the sheet metal.
 - j) If extra nail holes must be punched on site they must be punched from the back side of the slate so to provide the proper beveled orientation for nails. The only exception to this rule is in the starter slate.
 - k) Cutting Slate in the Field: All slate must be cut from the back side.
- 2) Ridges
- a) Finishing shingle shall aligned with roof substrate with shiming shingle.
 - b) Install copper straps as indicated on the drawings, drilling holes through the copper strap and finishing shingle for roofing nails that follow.
 - c) Lay ridge cap and bend copper strap over ridge cap. Cut excess strap to allow the remaining strap to form a reglet over the seam. Drive 1/8” copper pop rivets through strap and cap.
- 3) Hips
- a) Install hips with slates cut accurately to form tight joints.
 - b. Nail holes of each slate must fall directly under the succeeding hip slate.
4. COMPLETION
- a) Complete roof must be sound, whole, clean, and in every respect tight and neat and the example of fine workmanship.
 - b) Any slate with a broken corner larger than 1-1/2” X 1-1/2” shall be replaced.

DIVISION 7C CAULKING AND SEALANTS

1. GENERAL REQUIREMENTS

1. **SCOPE:** Furnish and install caulking and sealants as required by all trades and good industry practice.
2. **DEFINITIONS:** For the purpose of this specification the terms caulking and sealant shall be used interchangeably.
3. **QUALITY ASSURANCE:** Manufacturers shall be as specified herein, or as accepted by the Architect, subject to compliance with project requirements.
4. **RELATED SECTIONS:** 6A and 6B ROUGH AND FINISH CARPENTRY, Division 7A METAL ROOFING; Division 7C BUILDING FLASHING; All of Division 8 and Division 9, Division 15A PLUMBING, and Division 15B HVAC.
5. **SUBMITTALS:**
 - a. Provide manufacturer's data sheets for all caulking and sealants including catalog cuts and application instructions.
 - b. Submit a detailed list of all locations where materials will be used.
6. **WARRANTY**
 - a. Attention is directed to provisions in the **GENERAL CONDITIONS** regarding guarantees and warranties for work under this Contract.
 - b. Manufacturers shall provide their standard guarantees for work under this Section. However such guarantees shall be in addition to, not in lieu of all other liabilities which manufacturers and the Contractor may have by law or by other provisions of the Contract Documents.
7. **STORAGE AND PROTECTION:** Products shall be delivered in original, unbroken packages, containers, or bundles bearing the name of the manufacturer. Caulking and Sealants shall be carefully stored and completely protected while in storage and during application to keep it dry at all times.

B. MATERIALS

1. All sealants and caulking shall be gun grade.
2. Products shall be recommended by the manufacturer for the application indicated.
3. EXTERIOR SEALANT
 - a. At Windows and Doors, around Bay Window Eave Rafters : DAP Premium Polyurethane Adhesive Sealant. Color to match Window, Door Frame, and color of Eave Rafters
 - b. At Roof Flashing: Dap Premium Polyurethane Roof and Flashing Sealant. Color to match Flashing.
 - c. At Reglet above Bay Window: DAP Premium Polyurethane Adhesive Sealant. Color to match Stucco Color.
4. INTERIOR CAULKING
 - a. At all Trim, Casings and Moldings and Interiors Generally: DAP Dynaflex 230 Premium Elastomeric Sealant
 - b. In Bathrooms Generally: DAP Kwik Seal Plus Premium Kitchen and Bath Adhesive Caulk with Microban, color to be selected by the Owner's Representative..
5. PRIMER FOR ELASTOMERIC SEALANTS DURING WET OR HUMID CONDITIONS: Quick drying type according to sealant manufacturer's written instructions.
6. BOND BREAKERS: Of the type and consistency recommended by the caulk or sealant manufacturer.
7. JOINT BACKER AND PREFORMED JOINT FILLERS: Fiberglass roving, neoprene, butyl, polyurethane, vinyl, or polyethylene foams free of oil or other staining elements.
8. CAULK AND SEALANT COLOR: Where caulk and/or sealant cannot be painted provide colored caulk to match adjoining surfaces as approved by the Owner's Representative.
9. CLEAN-UP AND CLEAN-UP SOLVENTS: As recommended by sealant or

caulking manufacturer, such as DAP Caulk-Be-Gone.

C. INSTALLATION

1. See installation provisions under other Divisions.
2. Caulking and sealants shall be applied strictly to the manufacturer's instructions or recommendations for the application specified...
3. Joints and spaces to be caulked shall be clean, dry, and free from dust. Clean surfaces with solvent to remove all surface oils as required.
4. Caulking compounds shall generally be applied by means of a hand gun. Exercise care to prevent smearing of adjacent surfaces. Use sufficient pressure to fill all voids and joints solidly.
5. Provide joint backing rod in all joints wider than 3/8". Failure of caulking or sealants to hold because of the absence of joint backing will result in the caulking being removed, the joint being thoroughly cleaned and prepared, backing installed and re-caulking at the Contractor's expense.
6. Caulk joints before final coat of stain or paint is applied to adjacent surfaces. Allow to cure per manufacturer's instruction before painting.
7. Allow caulk to dry fully before exposing to weather. Contractor shall plan accordingly.
8. Thresholds of exterior doors shall be set in a bed of exterior sealant not less than 3/8" thick. Clean off excess compound after installing.
9. Use clean-up compound recommended by the manufacturer of the compound being used.
10. Tool joints or apply sealant so that exposed sealants are free of wrinkles and sags and are left slightly convex. Completely fill joints.

DIVISION 7D BUILDING INSULATION

A. GENERAL REQUIREMENTS

1. SCOPE: Furnish and install building insulation at entire building envelope and interior partitions.
2. DEFINITIONS: For the purpose of this specification the terms caulking and

sealant shall be used interchangeably.

3. QUALITY ASSURANCE: Manufacturers shall be as specified herein, or as accepted by the Architect, subject to compliance with project requirements.
4. RELATED SECTIONS: 6A and 6B ROUGH AND FINISH CARPENTRY, Division 7A METAL ROOFING; Division 7B SINGLE PLY ROOF; Division 7C BUILDING FLASHING; All of Division 8 and Division 9, Division 15A PLUMBING, and Division 15B HVAC.
5. SUBMITTALS:
 - a. Provide manufacturer's data sheets for all insulation for architect's approval prior to ordering.
6. WARRANTY
 - a. Attention is directed to provisions in the GENERAL CONDITIONS regarding guarantees and warranties for work under this Contract.
 - b. Manufacturers shall provide their standard guarantees for work under this Section. However such guarantees shall be in addition to, not in lieu of all other liabilities which manufacturers and the Contractor may have by law or by other provisions of the Contract Documents.
7. STORAGE AND PROTECTION:
 - a. Products shall be delivered in original, unbroken packages, containers, or bundles bearing the name of the manufacturer. Caulking and Sealants shall be carefully stored and completely protected while in storage and during application to keep it dry at all times.
 - b. Insulation shall be completely protected while in storage and during application to keep it dry at all times. Insulation shall be stacked on pallets at least 4" above the existing slab. Wet, damp, or damaged insulation may not be installed under any circumstances.

B. MATERIALS

1. Batt Insulation: Batt insulation in attic and exterior walls. See plans for R Values.
2. Sound Attenuation Batt Insulation in Partitions: Sound attenuation batts shall be thickness of partition and shall be Owens Corning Sound Attenuation Batt

Insulation. See plans for locations.

3. Rigid Insulation: Rigid insulation shall be thick Owens Corning polyisocyanurate, foil-faced, foil to outside, to thickness required.

C. INSTALLATION:

1. Batt Insulation:
 - a. Scope: Install thermal; batt insulation at roof and sound batts at interior partitions
 - b. Insulation shall be installed solely by an experienced insulation contractor. Insulation installed by carpenters will be subject to rejection.
 - c. Roof: Batt insulation shall be loosely laid between ceiling joists with foil side up (toward attic space). Use double layers if preferred. Lap joints in adjacent layers. Do not pack down.
 - d. Thickness shall be determined by the R values indicated on the drawings unless otherwise indicated.
2. RIGID INSULATION
 - a. Scope: Install rigid insulation at exterior walls.
 - b. Rigid insulation shall be cut to snugly fit between furring members. The reflective side shall face the weather side of the house.

DIVISION 8A: WOOD DOORS

1. GENERAL REQUIREMENTS
 - a. Include GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS as part of this section.
 - b. RELATED SECTIONS: Division 3, Concrete; Division 4, Masonry; Division 6, CARPENTRY AND MILLWORK; Division 7, INSULATION; Division 9, GYPSUM WALLBOARD, STEEL STUDS, PAINTING.
 - c. Examine all other Sections of the Specifications for requirements that affect the work of this Section whether or not such work is specifically mentioned in this section.

- d. Coordinate work with that of all other trades affecting or affected by the work of this section. Cooperate with such trades to assure the steady progress of all work under the contract.
 - e. SCOPE: Provide solid mahogany paneled front door, threshold, and weather stripping. See drawings for details.
 - f. SUBMITTALS: Submit door data sheets, shop drawings, and color samples for doors and hardware for Owner's Representative's approval.
 - g. SHIPPING AND HANDLING AND STORAGE: All materials shall be delivered to site in original packages or containers bearing manufacturer's brand name, type of material, and applicable standard designation. Delivery and storage of doors shall be done under dry conditions. Handle unfinished doors with clean hands or gloves. Doors stored at the job site must be sealed.
2. MATERIALS
- a. MAHOGANY FRONT DOOR, FRAME AND TRANSOM
 - a. Materials: Mahogany shall be paint grade Sapele Honduran Mahogany.
 - b. Design: See drawings for design.
 - c. Quality Standards: Components must meet AWI Quality Standards for Custom construction.
 - d. Construction
 - 1) Door shall be of raised panel construction to proportions shown on the drawings, conforming to AWI Custom standards or better. See drawings for profile of panel, sticking, and sizes of rails and stiles.
 - 2) Rails and stiles shall be blind doveled. Glue shall be Resorcinal 150 g including hardener (Pencolite Adhesive G-1131) or as approved by the architect.
 - 3) Panels shall float between sticking.
 - 4) Sticking shall be back sanded to prevent "white lining".
 - 5) Door shall be 1 3/4" thick, beveled 3/32" at strike side.
 - 7) Frames shall include Schelegel Q-Lon model QEBD-650. Weather stripping or as approved by the owner's representative. Color shall be black.
 - 8) Door shall be constructed without predrilled lock bores.

- 9) Doors shall be pre-hung. Frames shall be constructed of 6/4 paint grade (FAS) Honduran Mahogany. Frames shall have fully rebated strikes and be fully kerfed for weathers tipping.
- 10) See also Division 8C HARDWARE.

b. **INTERIOR WOOD DOORS AND FRAMES**

- a. Manufacturer: Interior wood doors shall be manufactured by Rogue Valley Doors and sold by Manley DeBoor lumberyard.
- b. Models and sizes: See door schedule for sizes, thicknesses, and design.
- c. Doors shall be paint grade pine. Frames shall be 5/4 solid pine (no finger joints).
- d. Doors shall be procured pre hung. Hinges shall be square cornered oil rubbed bronze 4"X 4" fully mortised, three per door.
- e. Doors shall be constructed without predrilled lock bores.

3. **INSTALLATION:** See Division 6B, FINISH CARPENTRY.

4. **FINISHING:** Doors shall be painted according to the paint specification herein and the architect's color schedule. Doors shall be removed by carpenters for preparation and painting by the painting contractor (See Division 9, PAINTING), and shall be re-hung by carpenters only after paint has cured properly. Doors may not be painted while hung.

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DIVISION 8B: HOLLOW METAL DOORS AND FRAMES

1. **GENERAL REQUIREMENTS**

- a. Include GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS as part of this section.
- b. RELATED SECTIONS: Division 3, Concrete; Division 4, Masonry; Division 6, CARPENTRY AND MILLWORK; Division 7, INSULATION; Division 9, GYPSUM WALLBOARD, STEEL STUDS, PAINTING.
- c. Examine all other Sections of the Specifications for requirements that affect the work of this Section whether or not such work is specifically mentioned in this section.
- d. Coordinate work with that of all other trades affecting or affected by the work

of this section. Cooperate with such trades to assure the steady progress of all work under the contract.

- e. SCOPE: Provide hollow metal doors and frames. See drawings for locations and details.
 - f. SUBMITTALS: Submit door data sheets, shop drawings for doors and hardware for Owner's Representative's approval.
 - g. SHIPPING AND HANDLING AND STORAGE: All materials shall be delivered to site in original packages or containers bearing manufacturer's brand name, type of material, and applicable standard designation. Delivery and storage of doors shall be done under dry conditions. Store all materials on planks or dunnage in a dry location in a vertical position, allowing air circulation between units. Cover to protect. Doors stored at the job site must be sealed.
 - h. STANDARDS OF PERFORMANCE AND REFERENCES: HMMA 820, 830, 831, 840, 850, and 861; ANSI A250.
 - i) SUBMITTALS: Furnish manufacturers data for all doors.
 - j) WARRANTY: Doors and frames shall be warranted from defects in workmanship and quality for a period of one year.
2. MATERIALS
- a. DESIGN: Work in this section is based on systems provided by Curries Doors and Frames (Regional Distributor is American Door and hardware, Crystal River, FL , See drawings for specific door types.
 - b. FABRICATION:
 - 1) General: Assemble work using all welded construction.
 - 2) Materials: All Materials shall be constructed from formed sheet shapes or structural shapes and bars, commercial quality, cold-rolled steel conforming to ASTM A366. Steel shapes shall comply with ASTM A36, and bars with ASTM A108. Frames shall be sized to partitions. Doors shall be solid core full flush pre-hung metal doors with cold-rolled 18 gauge outer sheets, with edges welded and finished flush, with internal steel reinforcing and mineral wool filler. Frames shall be cold-rolled, stretcher-leveled sheet metal, standard size and profile, 18 gauge. All corner joints shall be mitered. Joints shall be closed tight, continuously welded, and ground smooth and flush.

- 3) Design: Doors shall be constructed with panel faces with no visible seams. See drawings for details. Frames shall be welded units with integral stops and trim conforming to configurations indicated on the drawings. Knock down frames are not accepted without Owner's Representative's written approval. All field welds must be made by certified welders meeting AWS D1.1. See drawings for details.
- 4) Hardware Reinforcement: Factory mortise, reinforce, drill, and tap doors and frames for all mortise hardware. Provide hinges to ASTM standards for fire and sound retardant doors. Provide reinforcing plates for surface-type hardware. All drilling and tapping shall be done in the field. Provide dust cove boxes on frame mortises.
- 5) Painting and Cleaning: After fabrication all tool marks and surface imperfections shall be removed and exposed faces of all welded joints dressed smooth. Chemically treat all surfaces to insure maximum paint adhesion and coat with a rust-inhibitive primer compatible with finish paint specified under Division 9, Painting.

3. INSTALLATION

a. GENERAL:

- 1) Install doors and frames in accordance with approved shop drawings and recommended installation instructions of the manufacturer.
- 2) Floor and Jamb Anchors: Provide suitable anchors for particular application, per HMMA 861.
- 3) Obtain from Finish Hardware supplier all required schedules, templates, and hardware samples to permit correct installation of hardware.

b. SETTING FRAMES

- 1) Set all frames in accordance with SDI 105-92.
- 2) Set welded frames in position prior to beginning partition work. Brace frames until permanent anchors are set.
- 3) Set anchors for frames as work progresses. Install anchors at hinge and strike levels. Anchors shall be as follows:
 - a) Wall anchors for frame attachment to masonry construction: Masonry anchors, adjustable, flat, corrugated or perforated "T"

shaped anchors with leg not less than 2 inches(50) wide by 10 inches (254)long or masonry "wire" type not less than 3/16 inch (5) diameter.

- b) Wall anchors for attachment to drywall partitions: Jamb anchors to be provided; one each jamb per 30 inches of frame height or fraction thereof, two min. per jamb.
 - c) Floor anchors: Angle clip type, 16 ga. (1.4) minimum welded to the bottom of each jamb.
- 4) Install frames in prepared openings in wood or masonry walls using countersunk bolts and expansion shields: 3/8 inch (9.5) countersunk flat head stove bolt and expansion shields. Weld pipe spacers or other type of spacers per manufacturer's standard design in back of frame soffit to protect frame profile during tightening of bolts and anchors.
 - 5) Jambs must be plumb and square.
 - 6) Frames shall be sized to partitions or as otherwise indicated on the plans.
 - 7) Use temporary setting spreaders at all locations. Use intermediate spreaders to assure proper door clearances and header braces for grouted frames.
 - 8) Set sill members and exterior trim members in and/or against a bed of exterior sealant.

c. DOOR INSTALLATION

- 1) The General Contractor shall comply with the Door Manufacturer's recommended installation instructions.
- 2) Install hollow metal doors in frames. Set units plumb, level and true to line, without warp or rack of jamb/frame, sash or glazing. Clearances at edge of doors shall be 1/8 inch. Set at sills without thresholds: 5/8 inch (15.9) maximum above finish floor.
- 3) Obtain from Finish Hardware supplier all required schedules, templates, and hardware samples to permit correct installation of hardware.
- 4) Fasteners, sealants and other materials required to successfully complete the door installation that are not specified and supplied by the Door Manufacturer, shall be the responsibility of the General Contractor.

- 5) Hardware shall be installed by skilled mechanics and shall be accurately fitted and adjusted using hardware specified in Division 8D FINISH HARDWARE.
- 6) Adjustment and Cleaning:
 - a) Remove dirt and excess sealants, mortar or glazing compounds from exposed surfaces.
 - b) Adjust moving parts for smooth operation. Use shims if necessary to allow for proper closing.
 - c) Fill all dents, holes, etc. with metal filler, sand smooth and flush with adjacent surfaces - Re-prime/paint to match finish.
- d. FINISHING: Doors shall be painted according to the paint specification herein and the architect's color schedule. Doors shall be removed by carpenters for preparation and painting by the painting contractor (See Division 9, PAINTING), and shall be re-hung by carpenters only after paint has cured properly. Doors may not be painted while hung.

DIVISION 8C FINISH HARDWARE

1. GENERAL REQUIREMENTS

- a. Include GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS as part of this section.
- b. RELATED SECTIONS: Division 6C FINISH CARPENTRY; Division 8A MAHOGANY FRONT DOOR; Division 8B HOLLOW METAL DOORS; Division 8C WOOD DOORS; Division 9A PAINT.
- c. Examine all other Sections of the Specifications for requirements that affect the work of this Section whether or not such work is specifically mentioned in this section.
- d. Coordinate work with that of all other trades affecting or affected by the work of this section. Cooperate with such trades to assure the steady progress of all work under the contract.
- e. SCOPE: General Contractor is solely responsible for coordinating purchasing and installing finish hardware. See door schedule and drawings for locations.

- f. **MATERIALS AND MANUFACTURERS:** All finish hardware except front door finish hardware shall be manufactured by Hager Companies. This includes all hinges, locks, privacies, deadbolts, levers, knobs, closers, stops, trim, and other auxiliary components. All materials shall be finished in as indicated on the outline hardware schedule.
 - 1) All hinges shall be architectural grade. Exterior doors shall have security studs.
 - 2) All locks, deadbolts and door closers shall be Grade 2 Standard duty commercial.
 - 3) All locks and deadbolts shall be bored type.
- g. **SUBMITTALS:** The general Contractor shall provide the Owner's Representative with finish hardware submittals for approval prior to ordering materials. Submittals shall consist of the following:
 - 1) Door Hardware Schedule: Organized into door hardware sets indicating type, style, function, size, label, hand, keying, manufacturer, fasteners, location, and finish of each door hardware item, complete for ordering purposes.
 - 2) Catalog photographs or actual samples and model numbers of all items, and a list of items that the owner is to provide.
 - 3) Samples: For each exposed finish.
 - 4) Master Keying Schedule: Detail Owner's final keying instructions using the Hager Master keying Instruction sheet.
- h. **GUARANTEE AND WARRANTIES**
 - 1) Attention is directed to provisions in the GENERAL CONDITIONS regarding guarantees and warranties for work under this Division.
 - 2) Manufacturers shall provide their standard guarantees for work under this Section. However such guarantees shall be in addition to, not in Lieu of all other liabilities which manufacturers and the Contractor may have by law or by other provisions of the Contract Documents
 - 3) **Warranty Period:** Three (3) years from date of Substantial Completion, unless otherwise indicated including but not limited to:
 - 1) Structural failures including excessive deflection, cracking or

breakage

- 2) Faulty operation of operators and door hardware.
- 3) Deterioration of metals, metal finishes, and other materials beyond normal weathering.

i. DELIVERY, STORAGE, AND PROTECTION OF MATERIALS

- 1) All materials shall be brought to the site in manufacturer's original unbroken factory-sealed containers bearing the manufacturer's standard label indicating product, brand name, manufacturer, weight, product type, and color.
- 2) Handle and protect material from rain and moisture and contamination in transit and after arrival on the job.
- 3) The General Contractor shall receive, check against owner's list all items, and store them at a secure location until ready to install. The General Contractor shall be solely responsible for all items of hardware after receipt from manufacturer.

j. QUALITY ASSURANCE

- 1) Supplier Qualifications: Supplier must be or employs a qualified Door and Hardware Institute Architectural Hardware Consultant (DHI) or as approved by the Owner's Representative.

k. MASTER KEY SYSTEM

- 1) Keys: Provide nickel-silver keys, with one extra blank key for each lock, and three change keys and three master keys.
- 2) Key Control System: Include key-holding hooks, labels, key tags, self-locking key holders, envelopes, and markers.
- 3) Manufacturers: Key Control Systems, Inc. (KCS), or as approved by the Owner.

2. OUTLINE HARDWARE SCHEDULE: The following is provides the Hardware Supplier with the designers intent and finish concept:

a. Door No. 1

Hinges (4): By door manufacturer. Lifetime Nickel finish.

Lockset with lever: Multipoint by door manufacturer. Lifetime Nickel Finish.
outside /Satin Bronze inside.

Deadbolt: (1) Split: Nickel Finish outside/Satin Bronze inside.

Closer with Holder (1): Satin Bronze.

b. Door No. 2

Hinges (3): 4-1/2" X 4-1/2" Butts. Satin Bronze.

Privacy with lever (1): Satin Bronze

Deadbolt (1): Satin Bronze

Floor Stop and Holder (1): Satin Bronze

c. Door No. 3

Hinges (3): 4-1/2" X 4-1/2" Butts. Oil Rubbed Bronze.

Lockset with knob (1): Split: Oil Rubbed Bronze outside /Satin Bronze inside.

Deadbolt (1): Split: Oil Rubbed Bronze outside/Satin Bronze inside.

Closer with Holder (1): Satin Bronze.

Threshold (Type A/ADA): Pemko 158D with Pemko Door Shoe 222VD

d. Door No. 4

Hinges (3): 4-1/2" X 4-1/2" Butts. Satin Bronze.

Privacy with lever (1): Satin Bronze

Deadbolt (1): Satin Bronze

Floor Stop and Holder (1): Satin Bronze

Closer with holder: Satin Bronze

e. Door No. 5

Hinges (3): 3-1/2" X 3-1/2" Butts. Satin Bronze.

Passage with lever (1): Satin Bronze

Deadbolt (1): Satin Bronze

Closer with holder: Satin Bronze

f. Door No. 6

Hinges: (3) 3-1/2" X 3-1/2" Butts: Satin Bronze.

Privacy with lever (1): Satin Bronze

Wall Stop (1): Satin Bronze

Closer: Satin Bronze.

- g. Door No. 7

Hinges: (3) 4-1/2"X 4-1/2" Butts. Oil Rubbed Bronze.
Privacy with knob (1): Oil Rubbed Bronze.
Deadbolt (1): Oil Rubbed Bronze.
Closer with Holder (1): Oil Rubbed Bronze.
 - h. Door No. 8 (Pair)

Hinges (3): 4-1/2"X 4-1/2" Butts. Oil Rubbed Bronze.
Privacy with knob (1): Oil Rubbed Bronze.
Deadbolt (1): Oil Rubbed Bronze.
Surface Bolts (2): Oil Rubbed Bronze.
Door Holder (2): Oil Rubbed Bronze
Threshold (Type C): Pemko1875D with Pemko Door Bottom 222VD
Astragal
 - j. DOOR NO.9 (Pair)

Tracks (2): Heavy Duty
Guides (2):
Pulls (2): Satin Bronze
Lock (1): Satin Bronze
 - k. Door No.10

Hinges (3): Satin Bronze.
Store Room Lock with lever (1):.Satin Bronze
Wall Stop (1): Satin Bronze.
 - l. DOOR NO. 11 Pair

Hinges (2): 3-1/2" X 3-1/2": Satin bronze.
Passage with knob (1): Satin Bronze
Surface bolt
Astragal
3. **INSTALLATION**
- a. Examine doors and frames for compliance with requirements for installation tolerances, wall and floor construction, and other conditions affecting performance.

- b. Steel Door and Frame Preparation: Comply with DHI A115 series. Drill and tap doors and frames for surface-applied hardware according to SDI 107.
- c. Mounting Heights: Comply with DHI "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
- d. Adjust and reinforce attachment substrates as necessary for proper installation and operation. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.
- f. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with accessibility requirements.
- g. Door Closers: Adjust sweep period so that from an open position of 70 degrees, the door will take at least three seconds to move to a point 3 inches (75 mm) from the latch, measured to the leading edge of the door.
- h. Thresholds: Contractor shall construct slab block-outs to accept the specified thresholds. See drawings for details.

DIVISION 8E WINDOWS

1. GENERAL REQUIREMENTS

- a. Include GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS as part of this section.
- b. RELATED SECTIONS: Division 3, Concrete; Division 4, Masonry; Division 6A ROUGH CARPENTRY; Division 6B FINISH CARPENTRY; Division 7B BUILDING FLASHING; Division 7C CAULKING AND SEALANTS Division 9A PAINTING; Division 9B GYPSUM WALLBOARD.
- c. Examine all other Sections of the Specifications for requirements that affect the work of this Section whether or not such work is specifically mentioned in this section.
- d. Coordinate work with that of all other trades affecting or affected by the work of this section. Cooperate with such trades to assure the steady progress of all work under the contract.
- e. SCOPE: Furnish and install windows and window flashing. See drawings for locations and sizes.

- f. SUBMITTALS: Submit window data sheets, shop drawings, and color sample for Owner's Representative's approval. Shop drawings must include muntin and mullion layouts as indicated on the elevation drawings.
 - g. SHIPPING AND HANDLING AND STORAGE: All materials shall be delivered to site in original packages or containers bearing manufacturer's brand name, type of material, and applicable standard designation. Delivery and storage of windows shall be done under dry conditions. Handle unfinished windows with clean hands or gloves. Windows stored at the job site must be sealed.
 - h. WARRANTY: Doors shall carry the manufacturer's warranty, which includes but is not limited to all parts and labor for a period of one year and three years parts and components against manufacturer's defects excepting finish for three years; three years parts and components for weather-stripping; five years parts and components against delaminating or color change of laminated glass; and five years parts and components against sealant adhesive failure.
2. MATERIALS
- a. MANUFACTURER: All exterior windows shall be manufactured by PGT Industries, North Venice, Florida.
 - b. STANDARDS: Windows shall meet all requirements of current State of Florida Building code for Large Missile Impact Resistant windows.
 - c. MODELS
 - a. All windows shall be PGT WinGuard. See window schedule for types and sizes.
 - d. COLOR: Color shall be factory white.
 - e. GLAZING: Glass shall be clear impact glass
 - f. MUNTINS AND MUNTINS: Double extruded mullions and muntins to match sightlines on drawings.
 - g. INSTALLATION: Install windows strictly to PGT installation requirements for hurricane loading required by code and to conform to the details on the architectural drawings. Fasteners shall be stainless steel

DIVISION 9A PAINT

1. GENERAL REQUIREMENTS

- a. Include GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS as part of this section.
- b. Examine all other Sections of the Specifications for requirements that affect the work of this Section whether or not such work is specifically mentioned in this section.
- c. Coordinate work with that of all other trades affecting or affected by the work of this section. Cooperate with such trades to assure the steady progress of all work under the contract.
- d. SCOPE: All new construction shall be painted, inside and out.
- b. RELATED SECTIONS: Division 6B FINISH CARPENTRY; Division 7C CAULKING AND SEALANTS; Division 8A MAHOGANY DOOR; Division 8B HOLLOW METAL DOORS; Division 8C WOOD DOORS; Division 8D FINISH HARDWARE; Division 8E WINDOWS; Division 9B GYPSUM WALLBOARD; Division 9C TILE; Division 9D STUCCO;.
- c. SUBMITTALS: Provide for the Owner's Representative's approval the following:
 - 1) Manufacturer's Data Sheets: For all paints. Indicate surfaces that apply.
 - 2) Control Samples: 6"X 12" Masonite color samples of all paint applications, one prime coats and two finish coats.
- d. SHIPPING AND HANDLING AND STORAGE: All materials shall be delivered and stored under dry conditions. Follow specifications for Doors and Windows for delivery, site storage, protection and installation.
- e. STANDARD: Unless otherwise indicated in schedule or drawings, all surfaces shall be painted with not less than one (1) shop or prime coat and two (2) finish coats of an appropriate paint.
- f. MANUFACTURER: All paints and finishes used for the project shall be manufactured by Sherwin Williams Paint Company. See Paint Schedule for specific types, locations and colors.
- i. GENERAL: Mechanical Subcontractors or the General Contractor will

remove and replace where necessary, accessories, plates, hardware, lighting fixtures, heating units, and all other finished items to allow painting of obstructed materials. In no case shall this Subcontractor attempt to paint around finish hardware of other removable items that are already fitted into place.

- j. CLEAN-UP: At completion of work in each area, remove all paint spots, oil, and stain from all surfaces, including finish hardware.
- l. SPRAY PAINTING: Spray painting of finish coats will not be accepted.
- m. KNOT SEALING: All visible knots lumber or woodwork to be painted shall be spot primed with at least two coats pigmented shellac. Bleed through will require refinishing of affected areas.
- n. WEATHER: Exterior painting is not to be done immediately following wet weather or during windy or threatening weather.
- o. PAINT SCHEDULE
 - 1) The following paint material list is based on products of Sherwin Williams Paint Company. Submit Manufacturer's data sheet for Owner's Representative's approval prior to purchasing paint.
 - a) Exterior Stucco

One primer coat: Loxon Primer A24 series.

Two finish coats: A100 Exterior FLAT A6 series.

Color: SW BLONDE, SW6128.
 - b) Ferrous Metals and Metal Doors (Factory Primed)

Two finish coats: SuperPaint Ext HIGH GLOSS A85 series.

Color: SW WESTHIGHLAND WHITE SW 7566.
 - c) Exterior Wood Trim, Fascias, Soffits, and Bay Window Paneling

One prime coat: Multi Purpose Primer B51 series.

Two finish coats: SuperPaint Ext HIGH GLOSS A85 series.

Color: SW WESTHIGHLAND WHITE SW 7566.

d) Fiberglass-Cement Prefabricated Porch Columns

One prime coat: Multi Purpose Primer B51 series.

Two finish coats: SuperPaint Ext HIGH GLOSS A85 series.

Color: SW WESTHIGHLAND WHITE SW 7566.

e) Exterior PVC Moldings

One prime coat: Multi Purpose Primer B51 series.

Two finish coats: SuperPaint Ext HIGH GLOSS A85 series.

Color: SW WESTHIGHLAND WHITE SW 7566.

f) Exterior of Front Door

One prime coat: Multi Purpose Primer B51 series

Two (BLACK) finish coats: SuperPaint Ext HIGH GLOSS A85 series.

Color: SW TRICORN BLACK, SW 6258

g) Interior Side of Front Door

One prime coat: Multi Purpose Primer B51 series.

Two finish coats: ProMar 200 INTERIOR GLOSS B21 series.

Color: TRICORN BLACK SW 6258.

h) Interior Side of Wood Bay Window Casings and all other Interior Wood Trim and Wood Moldings

One prime coat: Multi Purpose Primer B51 series.

Two finish coats: ProMar 200 INTERIOR GLOSS B21 series.

Color: SW PURE WHITE SW 7005

i) Interior Gypsum Board Walls and Ceilings

One prime coat: Multi Purpose Primer B51 series.

Two Washable finish coats: Promar 200 Interior Zero VOC B20 series, MATTE.

Color: KILIM BEIGE SW 6106.

j) Store Room and Bathroom Gypsum Wall Board (Washable)

One prime coat: Multi Purpose Primer B51 series.

Two finish coats: Super Paint Interior SATIN A87 series.

Color: SW KILIM BEIGE SW 6106.

k) Stair Treads and Landing (Oak)

Three Varnish coats: Wood Classics Interior Oil Varnish, SEMI-GLOSS.

l) Stair Risers (Poplar)

One prime coat: Multi Purpose Primer B51 series.

Two finish coats: ProMar 200 INTERIOR GLOSS B21 series.

Color: PURE WHITE SW 7005.

m) Interior Concrete Block Walls (Washable)

One primer coat: Loxon Primer A24 series.

Two finish coats: A100 Exterior High Gloss

Color: SW BLONDE, SW6128.

n) Handicapped Parking Lot Stripes

One Coat Heavy Duty: DTM GLOSS B66 series

C. EXECUTION

1. **PAINTER RESPONSIBILITY FOR INSPECTION:** Starting of work under this Section will be construed an acceptance of such surfaces as being satisfactory. Defects in work resulting from such accepted surfaces shall be corrected by the Painting Subcontractor at his own expense.
2. **PREPARATION:**
 - a. All spaces shall be broom-clean and all surfaces dry before painting is started. All dust, dirt, plaster, grease, and other extraneous matter, affecting finish work shall be removed. The respective trades shall remove foreign matter on surfaces left by other trades.
 - b. All nail holes and cracks on both exterior and interior work shall be carefully putty stopped or plugged. Natural or stained wood finishes shall be done after prime coat or sealer has been applied.
 - c. Metal surfaces shall be properly cleaned of all scale, rust, grease, oil, dirt, and other foreign matter, the properly washed with an appropriate solvent or cleaning agent. Puttying shall be done after application of prime coat.
 - d. Remove blisters and other imperfections in previous coats caused by foreign substances or paint skins from all painted surfaces before the subsequent coat is applied. All wood and metal surfaces shall be rubbed down before finishing and between coats with)) or finer sandpaper or steel wool, leaving a perfectly clean surface. Smoot finished surfaces shall be sanded before finishing and between coats as required to smooth out rough area and to assure a smooth, even surface.
 - e. All surfaces to receive paint shall be smooth and free of sandpaper scratches, mill marks, and other imperfections.
 - f. Stained and natural finished woodwork shall be back sealed with one coat of clears sealer or one coat of approved house paint primer.
 - g. All visible knots shall be spot primed with at least two coats pigmented shellac before applying first coat of paint. Bleed through will require refinishing of affected areas.
 - h. All trim shall be caulked with the specified interior or exterior caulk.

3. PAINTING

- a. PROTECTION: Furnish and lay suitable drop cloths in all areas where painting is being done to protect floors and all other surfaces from damage during the work.
- b. WEATHER: Exterior painting is not to be done immediately following wet weather or during windy or threatening weather.
- c. SCAFFOLDING: Furnish, erect, maintain, and remove all scaffolds, staging, and rigging required for the work.
- d. SPRAY PAINTING: Spray painting of paint will not be accepted under any circumstances unless approved by the Owner's representative. Any spraying of finish coats, if approved, must be back-brushed.
- e. SEQUENCE: No painters finish shall be applied until the preceding coat is thoroughly dry and in no case less than seven (7) days for exterior work and forty-eight (48) hours for interior work.
- f. COORDINATION: Mechanical Subcontractors or the General Contractor will remove and replace where necessary, accessories, plates, hardware, lighting fixtures, heating units, and all other finished items to allow painting of obstructed materials. In no case shall this Subcontractor attempt to paint around finish hardware of other removable items that are already fitted into place.
- g. TOUCH UP: Touch-up finish coats of factory finished items that become damaged before the completion of the building. Sand damaged areas smooth and apply the specified primer before applying finished coat. Where spot touch-up cannot be done neatly and blended smoothly with other finish material, repaint the entire surface as approved by the Owner's Representative.
- h. CLEAN-UP: At completion of work in each area, remove all paint spots, oil, and stain from all surfaces, including finish hardware.

DIVISION 9B GYPSUM WALLBOARD

1. GENERAL REQUIREMENTS

- a. Include GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS as part of this section.

- b. Examine all other Sections of the Specifications for requirements that affect the work of this Section whether or not such work is specifically mentioned in this section.
- c. Coordinate work with that of all other trades affecting or affected by the work of this section. Cooperate with such trades to assure the steady progress of all work under the contract.
- d. **SCOPE:** Furnish and install all gypsum wallboard. All walls and ceilings of the project shall be finished with gypsum wallboard except for those where other materials are indicated on the room finish schedule.
- b. **RELATED SECTIONS:** Division 6A ROUGH CARPENTRY; Division 6B FINISH CARPENTRY; Division 7C CAULKING AND SEALANTS; Division 9A PAINTING; Division 9C TILE; Division 9D STUCCO,;
- d. **SHIPPING AND HANDLING AND STORAGE:** All materials shall be delivered and stored under dry conditions.
- c. **SHIPPING AND HANDLING AND STORAGE:** All materials shall be delivered and stored under dry conditions. Store gypsum board inside horizontally and above ground slab. Protect board and all materials from damage by moisture, weather, and all other causes. Provide adequate ventilation to prevent condensation. Stack boards flat; do not allow sagging or damage to the edges, ends, and surfaces. Storage supports should be at least 4" width.
- d. **MATERIALS**
 - 1) Regular Board: Unless otherwise indicated, all site-installed wallboard shall be Georgia Pacific Glass-Mat, Mold and Mildew Resistant Interior Wall Panels: ASTM 1177, coated inorganic glass mat-faced back and paper-faced front, enhanced mold and mildew-resistant gypsum core wallboard. Long edges shall be tapered. Size \
 - shall be 5/8" thick and 48" wide. In lengths to eliminate end-joint conditions.
 - 2) Moisture Resistant Board: Where indicated on the room finish schedule install Georgia Pacific Glass-Mat, Water Resistant, Mold and Mildew Resistant interior wall panels per ASTM 1177, coated inorganic glass mat-faced, water-resistant treated gypsum core wallboard. Long edges shall be tapered.

- 3) Porch Soffit: Front porch soffit shall be Georgia Pacific "Dens glass" 5/8" thick..
- 4) Corner Bead: 1-1/8"x1-1/8" vinyl with perforated flanges for all outside corners.
- 5) Casing Beads: shall be vinyl with perforated flanges for all outside corners.
- 6) Fasteners for gypsum board to wood members: Type W bugle head screws; for wallboard to metal channel use Type S. Penetration should be at least 3/8" beyond the gypsum board surface.
- 7) Joint treatment: Regular perforated tape, joint compound and topping compound as recommended by wallboard manufacturer.

e. INSTALLATION

- 1) Do not commence installation until the building is closed-in.
- 2) Ceilings: Install ceilings first. Apply ceiling board of maximum practical length with the long dimension at right angles to the furring. Center end joints over furring; fir joints neatly and accurately; stagger end joints from those in adjacent panel rows and from base layer in 2-layer construction. At acoustically isolated ceiling construction apply resilient channels not over 24" o.k. at right angles to the joists using type S Hi-Lo screws. Install gypsum board as specified above.
- 3) Walls: Except as otherwise specified herein, all gypsum wallboard shall be installed vertically and all edges and joints shall be centered over studs or blocking. Joints shall not occur within 12 inches of door or window frame on opposite sides of partition be allowed over same stud or post, unless specifically indicated. Stagger vertical joints with respect to base layer when applying finish layer of double board walls.
- 4) Screws: Fasten all wallboard by means of power-driven metal screws, located not over 12" on center at all edge and in the field. Stagger screws in adjacent sheets on opposite sides of joints. Depress screw heads slightly below surface of the wallboard. Do not drive screws closer than 3/8" from edges and ends of the board.
- 5) Taping, Compounding, and Sanding: At internal corners, fold tape lengthwise through the middle, and fit neatly into corner. Dimples at

screw heads shall receive three (3) coats of compound. Allow 24 hours drying time between applications. Flanges of metal corner and casing bead shall be concealed by at least two (2) coats of compound which, when finished, shall extend approximately 8" from exposed nosing. Each coat shall be sanded as necessary after compound has dried. Use topping compound for finishing coats. Final coat after sanding shall leave the gypsum wallboard and treated areas smooth with joints concealed from view in the finished work. Care shall be taken not to scuff the paper surface of the board when sanding.

DIVISION 9C STUCCO

1. GENERAL REQUIREMENTS

- a. Include GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS as part of this section.
- b. Examine all other Sections of the Specifications for requirements that affect the work of this Section whether or not such work is specifically mentioned in this section.
- c. Coordinate work with that of all other trades affecting or affected by the work of this section. Cooperate with such trades to assure the steady progress of all work under the contract.
- d. SCOPE: Furnish and install a two-coat stucco system atop concrete masonry units and concrete beams and columns prepared with a bonding agent. See drawings for locations.
- e. RELATED SECTIONS: Division 3 CONCRETE; Division 4, CONCRETE MASONRY UNITS; Division 6B FINISH CARPENTRY.
- e. SUBMITTALS: Provide manufacturer's data sheets for all materials.
- f. SCAFFOLDING: Furnish scaffolding under PAINTING section.
- g. DELIVERY, STORAGE, AND PROTECTION OF MATERIALS:
 - 1) All materials shall be brought to the sight manufacturer's original unbroken factory-sealed containers bearing the manufacturer's standard label indicating product, brand name, manufacturer, weight, product type, and color.
 - 2) Handle and protect material from rain and moisture and contamination in transit and after arrival on the job.

2. MATERIALS

- a. Cement: Portland Type I or IA (if with air-entraining agent).
- b. Lime: Containing not more than 8% by weight of unhydrated oxide.
- c. Sand: Clean, sound, and graded uniformly.
- d. Water: Potable, from public main.
- e. Bonding Agent: Bond-It manufactured by Associated Paint, Inc.

f. EXECUTION

- a. Surface Preparation: All surfaces to receive stucco shall be free of dirt, grease, oil, dust, paint, protrusions, build-out, or deficiencies so the wall varies more than 1/4" from flatness, and shall be cured for 30 days.
- b. Commencement of installation of stucco means acceptance of substrate conditions by stucco applier.
- c. Bonding Agent: All surfaces to receive stucco shall be prepared with the application of the specified bonding agent. Preparation shall conform to the bonding manufacturer's surface preparation requirement. All form release and curing agents must be removed.
- d. Mixing: Proportion and mix all Portland cement plaster in accordance with prevailing conditions on the jobsite. Do not apply stucco if ambient air temperature exceeds 80 degrees without using a proper admixture. Admixtures shall be proportioned-mixed and applied in accordance with the printed directions of the manufacturer. Prepare all stucco coats in a mechanical mixer for at least ten (10) minutes using sufficient water to produce a workable consistency and uniform color. Moisten surface evenly to reduce excessive suction.
- f. Base coat: Apply a 3/8" base coat to the entire wall without interruptions to avoid cold joints. Float surface uniformly to promote densification of the coat and provide a surface receptive to bonding the finish coat.
- g. Curing time between Coats: Base coat shall be cured by fogging the surface with water at least once a day, depending upon ambient air humidity. Allow sufficient time between coats to permit each coat to cure or develop enough rigidity to resist cracking or other physical damage when finish coat is applied.

- h. Finish Coat: Moisten entire base coat. Apply finish coat with sufficient material and pressure to ensure tight contact with, and complete coverage of the basecoat to a minimum thickness of 1/8". Finish shall be fine float finish. Application shall be unbroken to avoid cold joints.
- i Curing Finish Coat: Except during damp weather surface shall be dampened slightly every twelve (12) hours after completion until it hardens.

DIVISION 9D VINYL FLOORING

1. GENERAL

- a. Include GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS as part of this section.
- b. Examine all other Sections of the Specifications for requirements that affect the work of this Section whether or not such work is specifically mentioned in this section.
- c. Coordinate work with that of all other trades affecting or affected by the work of this section. Cooperate with such trades to assure the steady progress of all work under the contract.
- d. SCOPE: Provide and install resilient flooring and base where called for on drawings and finish schedule.
- e. RELATED SECTIONS: Division 4, MASONRY; Division 6, CARPENTRY AND MILLWORK; Division 8, DOORS AND WINDOWS; Division 9, METAL SCREW STUDS, PAINTING; Division 15, PLUMBING.
- f. SHIPPING AND HANDLING AND STORAGE: All materials are to be delivered to the installation location within 48 hours of installation in its original packaging with labels intact. Store products in a dry area protected from the weather with temperatures maintained between 65°F (19°C) and 85°F (30°C). Do not stack pallets. Remove the tile from the cartons and stack evenly on a smooth dry surface with each stack no more than 18"

high at least 48 hours prior to installation in order to acclimate.

The installation area, substrate, tile, and adhesive are to be maintained between 65°F (19°C) and 85°F (30°C) for at least 48 hours before, during and after installation. Maintain room temperatures between 65°F (19°C) and 85°F (30°C) thereafter to prevent adhesive failure and to prevent distortion or destruction

of the tile.

Store boxes of tile above the ground slab. Protect boxes and all materials from damage by moisture, weather, and all other causes. Provide adequate ventilation to prevent condensation. Stack boxes without crushing. Contractor shall inspect all tile before installation and shall reject all chipped, cracked, discolored, defaced, or otherwise damaged tile.

- g. SUBMITTALS: Contractor shall submit samples of all specified tile, and grout and shall submit manufacturer's data sheets for all sealer proposed.
 - h. WARRANTY: In addition to the standard warranties and guaranties of the material manufacturer, all tile.
 - 1) Attention is directed to provisions in the GENERAL CONDITIONS regarding guarantees and warranties for work under this Division.
 - 2) Applicable manufacturers shall provide their standard guarantees for work under this Section. However such guarantees shall be in addition to, not in lieu of all other liabilities which manufacturers and the Contractor may have by law or by other provisions of the Contract Documents.
2. MATERIALS
- a. VINYL TILE: Vinyl floor tile shall be SafeTcork solid vinyl tile manufactured by Roppe Corporation, Fostoria, Ohio.
 - 1) Guage: .080"
 - 2) Size: 24" X 24"
 - 3) Colors: Ivory, Sahara, and Moss in random patterns.
 - b. ADHESIVE
 - 1) Adhesive shall be Rop 535 "Universal" Urethane Enhanced Epoxy Two-Part Adhesive. For stair tread adhesive shall be Roppe 360 Acrylic Tile and Stair Tread Adhesive.
3. INSTALLATION: Concrete slab shall have a wet trowel finish properly prepared according to Roppe specifications.

DIVISION 9F MARBLE TILE FLOOR

1. GENERAL

- a. Include GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS as part of this section.
- b. Examine all other Sections of the Specifications for requirements that affect the work of this Section whether or not such work is specifically mentioned in this section.
- c. Coordinate work with that of all other trades affecting or affected by the work of this section. Cooperate with such trades to assure the steady progress of all work under the contract.
- d. SCOPE: Provide and install stone tile floor in Vestibule.
- e. RELATED SECTIONS: Division 3 CONCRETE; Division 4A, CONCRETE MASONRY UNITS; Division 8A, DOORS AND WINDOWS.
- f. SHIPPING AND HANDLING AND STORAGE: All materials shall be delivered and stored under dry conditions. Store boxes of tile and grout above the ground slab. Protect boxes and all materials from damage by moisture, weather, and all other causes. Provide adequate ventilation to prevent condensation. Stack boxes without crushing. Contractor shall inspect all tile before installation and shall reject all chipped, cracked, discolored, defaced, or otherwise damaged tile.
- g. SUBMITTALS: Contractor shall submit samples of all specified tile, and grout and shall submit manufacturer's data sheets for all sealer proposed.
- h. QUALITY STANDARDS: Installation of all tile shall be in accordance with TILE council of America (TCA) handbook for the particular installation.
- i. WARRANTY: In addition to the standard warranties and guaranties of the material manufacturer, all tile.
 - 1) Attention is directed to provisions in the GENERAL CONDITIONS regarding guarantees and warranties for work under this Division.
 - 2) Applicable manufacturers shall provide their standard guarantees for work under this Section. However such guarantees shall be in addition to, not in lieu of all other liabilities which manufacturers and the Contractor may have by law or by other provisions of the Contract Documents.

2. MATERIALS:

- a. TILE: Field tiles shall be "Diana Royal" 18"X18" provided by Island City Tile, Key West. Border tiles shall be six inches (6") wide cut from field tiles.
- b. GROUT: Grout shall be latex, color to match lightest tone of color in tile.
- c. THIN SET: Thin set shall be high strength latex fortified such as made by Laticrete, Jomo, or as approved by Owner's Representative. Latex additive may be used.
- d. DRY PACK: Natural aggregate, high strength, non-shrink material designed specifically for mixing and placing at a damp pack consistency. Mix with a minimum of water, and place into voids and spaces to provide a level surface for thin set.

3. INSTALLATION

- a. STANDARDS: Installation of all tile shall be in accordance with TCA Handbook.
- b. LIGHTING CONDITIONS: Install all tile using lighting conditions that will closely approximate the proposed lighting in the areas involved in order to achieve uniformity in finished work.
- c. TILE LAYOUT: As far as possible, lay out tiles so that no less than half sizes occur. Work from middle of vestibule out and butt all joints. Joints shall be perfectly aligned. Field shall be placed at 45 degrees to walls and border tile. Border tiles shall surround the vestibule.
- d. TILE COLORATION: All tile shall be inspected for damage, chipped edges, etc, and color before installation. Mis-colored, cracked, stained, or tile with chipped edges shall be discarded. Contractor shall lay out tile prior to commencing installation. Tile shall be laid out so that gradation in color and pattern is minimized.
- e. DOOR THRESHOLDS AND DOORWAYS: Tile shall align with adjacent vinyl tile flooring at center of door when closed, so as to be unseen when doors are closed.
- f. GROUT: Do not commence grouting for at least 24 hours after placing of tile. Follow specific instructions of listed standards. Do not grout until sealant has set up.

- h. CURING: Cure grout joints by maintaining damp condition for three (3) days by sponging down, fog-spraying or other methods approved by the Architect. Allow floors to set 48 hours before permitting ordinary foot traffic. Cleaning: After tile has thoroughly set, sponge and wash tile thoroughly and diagonally across joints. remove all surface cement and take care not to damage tile or adjacent materials. Do not use acid cleaners.
- i. CLEANING: After tile has thoroughly set, sponge and wash tile thoroughly and diagonally across joints. remove all surface cement and take care not to damage tile or adjacent materials. Do not use acid cleaners.
- j. SEALING: Tile sealer shall be either that provided by Aqua Mix Company or Miracle Sealants Company using the product and application procedure recommended by the manufacturer for the particular stone or grout specified. Seal tile strictly according to sealer manufacturer's instruction, leaving the required curing time between coats. General Contractor shall coordinate all work in the vicinity of tile work so that newly sealed tile will not be walked upon until the time required by the sealer manufacturer has passed. No claims for delay of job will be considered in fulfilling this requirement.
- k. PROTECTION: Protect tile after cleaning with non-staining heavy kraft paper or other approved coverage until acceptance of the building.

DIVISION 9G HEART PINE FLOOR (ALTERNATE NO. 2)

- 1. SCOPE: Furnish and install heart pine flooring at Family Room.
- 2. COORDINATION WITH CONCRETE SLAB WORK AND VESTIBULE TILE FLOOR: The General Contractor shall be responsible for locating and overseeing the drooping of the slab to receive the wood floor vapor barrier, furring, and new flooring and shall assure that when the floor is in place that it aligns with the vestibule floor.
- 3. SHIPPING AND HANDLING: All materials shall be delivered to site in original packages or containers bearing manufacturer's brand name, type of material, and applicable standard designation. Delivery and storage of flooring shall be done under dry conditions. Flooring must be covered with a tarpaulin at all times during shipment to the jobsite. Flooring shall not be unloaded in the rain and must be stored either in an air-conditioned warehouse or, if at the jobsite, only after the building's air-conditioned system is operational and the permanent ambient air temperature and humidity has been achieved. Buckled, warped, or cupped stock will not be accepted and shall be discarded or returned to the manufacturer at the time of sticking.
- 4. SUBMITTALS: Contractor shall submit three pine planks eighteen inches (18") in

- length indicating the full range of grain configuration to be installed. Planks shall be finished exactly to the varnish specifications herein, and shall be use as control samples during the actual installation.
5. **WARRANTY:** Contractor shall warrant the pine floor for labor and materials against cupping, bowing, checking, splitting, squeaking, and finish failure, including discoloration and alligating for a period of five (5) years from its completion. \
6. **MATERIALS:**
- a. **PINE FLOORING:** Pine flooring shall be River Recovered Heart Pine Select as milled by Goodwin Heart Pine Co., Micanopy, FL. Boards shall be 3-1/4" wide graded tongue and groove delivered at not more than 12% moisture content. Lengths shall be from two feet to twelve feet (6'-12'), average length, with not more than 15% of the planks being from two to five feet in length.
 - b. **UNDERLAYMENT:** 3/4" B-C pine plywood or 3/4" A-C Douglas fir plywood. Underlayment shall not be pressure treated.
 - c. **VAPOR BARRIER:**
 - 1) On Top Of Concrete Under Underlayment: 8 mil polyethelene with taped seams (if any).
 - 2) On Top Of Underlayment Under Wood Flooring: Vapor barrier shall be "Aquabar B" as manufactured by Fortifiber Building Systems and available through Goodwin Heart Pine or the manufacturer, or as approved by the Architect.
 - d. **FASTENERS:** Stainless steel.
 - e. **ACCESSORIES:** Contractor is responsible for providing all accessories necessary to install flooring.
7. **INSTALLATION**
- a. **VAPOR BARRIER:** There shall be two (2) vapor barriers: On top of the slab under the underlayment and under the floor itself (two layers total).
 - 1) On Top of Slab: Roll out polyethelene flattening it to the slab
 - 2) On Top of Underlayment: Read manufacturer's instructions that come with the product.

Roll out, dimples down, allowing 1/4" opening from walls, stairs, pipe columns and other structures. Cut and overlap per instructions. Apply elastomeric caulking at all penetrations and joints.

- b. UNDERLAYMENT: Underlayment shall be mechanically fastened to the slab 24" O.C. and 24" O.C. around perimeter.
- b. PINE FLOORING: Before commencing installation of pine flooring the building must have acclimated to the air conditioning a point where the average moisture content of the framing members and underlayment is 14% or lower. The underlayment must be clean and thoroughly dry. Prepare boards as follows:
 - 1) Seal back surfaces of all planks with a wood sealer.
 - 2) Re-nail any loose areas of the underlayment and sweep clean.
 - 3) Cut back boards up to 10" to remove prominent knots.
- 3) Use oldest flooring on jobsite first. Use long strips at entrances and doorways. Short pieces must be used at random and not be grouped.
- 4) Install to pattern provided by manufacturer or as approved by the architect and in the East-West direction. Use a slip-tongue at any change of direction.
- 5) Attachment shall be blind, six inches (6") on center using 1- 1/2" barbed stainless steel flooring cleats, with one at each end of individual boards.
- 6) Provide 1/2"– 3/4" expansion space at walls. Floor shall be laid before installing base and shoe molding.
- 7) Conspicuous dark boards in prominent locations will be rejected.
- k. FINISHING
 - 1) Sanding:
 - a) Floor shall be swept immediately before sanding.
 - b) Sanding Grit Standards:
 - Very Coarse: 20, 24, and 30
 - Coarse: 36 and 40
 - Medium: 50, 60, and 80
 - Fine: 80, 100, and 120
 - Very Fine: 120 and 150
 - Extremely Fine: 220
 - c) Floor shall be finished by a professional floor finisher with not less than ten years experience with finishing plank pine floors and shall be equipped with his own sanders, vacuums, buffers, scrapers, nailers, saws, machine parts, and accessories. At no time shall trainees or laborers be allowed to work

unsupervised.

- c) The sanding operation shall remove no more than 1/32" of wood.
- d) Swirl scratches will not be accepted.
- e) Hand sand perimeter and scraped areas. Hand scrape corners and areas inaccessible to machines.

2) Varnishing

- a) Preparation of Floor: Inspect the floor, spot fill missed cracks, and nail holes with commercial flooring filler. When dry, hand sand with fine sandpaper with the same grit as final sanding. Completely sweep and vacuum the floor. Wipe and/or vacuum all dust on walls, ceiling, windows, sills, doors, doorframes, and baseboards.
- b) **The finishing process shall begin immediately after sanding and cleaning is completed.**
- c) Varnishing shall be done as follows unless approved otherwise by the Architect:
 - a) First Coat: ZAR 32813 High Gloss Oil-based Interior Fast-Dry Polyurethane for Floors cut 50% with mineral spirits.
Let dry 24 hours.
 - b) Sand lightly with 220 grit.
 - c) Second Coat: ZAR 32813 High Gloss Oil-based Interior Fast-Dry Polyurethane cut 25% with mineral spirits.
Let dry 24 hours.
 - d) b) Sand lightly with 220 grit.
 - e) Third (last) Coat: ZAR 32912 Satin Gloss Interior Oil-based Fast-Dry Polyurethane for Floors cut 10% with mineral spirits. Let dry 24 hours before covering with kraft paper.
- e) Safety Considerations: If recommended by varnish manufacturer turn off the air-conditioning system and all gas flames. Open all windows to maximize ventilation but do not apply on a windy day or wet day. Always follow ALL of the manufacturer's safety precaution recommendations, including, but not limited to, skin contact, ventilation, breathing apparatus, fire hazards, and disposal. Open doors or use fans to exhaust moisture-laden air when finish films over and is dust-

free to facilitate curing. If recommended, buff all rough raised grain after first coat.

- f) Application: Follow manufacturer's instructions regarding coverage figures and open time. Use catalyst, if required, stir in and let stand if recommended. Use non-metal trays and buckets. Follow buffing directions and use fiber pads or screens, or as specified herein.

DIVISION 10A BATHROOM ACCESSORIES

1. GENERAL REQUIREMENTS

- a. Include GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS as part of this section.
- b. Examine all other Sections of the Specifications for requirements that affect the work of this Section whether or not such work is specifically mentioned in this section.
- c. Coordinate work with that of all other trades affecting or affected by the work of this section. Cooperate with such trades to assure the steady progress of all work under contract.
- d. SCOPE: Furnish and install all toilet accessories, including towel bars, rings, and hooks; paper dispensers, soap dishes, etc.
- e. GROUNDS; Provide all necessary wall grounds for screw attachment per manufacturer's specifications. Gypsum fasteners will not be accepted.
- f. RELATED SECTIONS: Division 4, MASONRY; Division 9, METAL STUDS, GYPSUM WALLBOARD, CERAMIC TILE; Division 16, ELECTRICAL.
- g. DELIVERY, STORAGE, AND PROTECTION OF MATERIALS
 - 1) All materials shall be brought to the site in manufacturer's original unbroken factory-sealed containers bearing the manufacturer's standard label indicating product, brand name, manufacturer, weight, product type, and color.
 - 2) Handle and protect material from rain and moisture and contamination in transit and after arrival on the job.
- h. WARRANTY: In addition to the standard warranties and guaranties of the

material manufacturer, all tile.

- 1) Attention is directed to provisions in the GENERAL CONDITIONS regarding guarantees and warranties for work under this Division.
- 2) Applicable manufacturers shall provide their standard guarantees for work under this Section. However such guarantees shall be in addition to, not in lieu of all other liabilities which manufacturers and the

Contractor may have by law or by other provisions of the Contract Documents.

- i. **MODELS:** All Bathroom Accessories shall be stainless steel and manufactured by Bobrick Green, as follows:
 - 1) Paper Towel Dispenser: (1) B-253; (1) B262.
 - 2) Toilet Tissue Dispenser: (2) B-685.
 - 3) Grab Bars: (1) B-5806 X 42; (1) B-5806 X 36
 - 4) Mirrors: (2) B-166 1830
 - 5) Soap Dispenser: (2) B155
- j. **FINISH:** Satin.
- k. **FASTENERS:** Use Bobrick fasteners only in installation.
- l. **SUBMITTALS:** Provide manufacturer's cut sheets to Owner's Representative for all items, identifying location and rough-out requirements.
- m. **COORDINATION:** General contractor is to provide construction of all rough-outs, blocking, and grounds. Grab bars are to mounted at 36" A.F.F. or per FBC height. See drawings for locations.

DIVISION 10B: FRONT PORCH DOOR MAT

1. **GENERAL REQUIREMENTS**
 - a. Include GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS as part of this section.
 - b. Examine all other Sections of the Specifications for requirements that affect the work of this Section whether or not such work is specifically mentioned in this section.
 - c.. **SCOPE:** Furnish and install exterior and interior floor mats.

- d. DELIVERY, STORAGE, AND PROTECTION OF MATERIALS
 - 1) All materials shall be brought to the site in manufacturer's original unbroken factory-sealed containers bearing the manufacturer's standard label indicating product, brand name, manufacturer, weight, product type, and color.
 - 2) Handle and protect material from rain and moisture and contamination in transit and after arrival on the job.
- e. WARRANTY: In addition to the standard warranties and guaranties of the material manufacturer, all tile.
 - 1) Attention is directed to provisions in the GENERAL CONDITIONS regarding guarantees and warranties for work under this Division.
 - 2) Applicable manufacturers shall provide their standard guarantees for work under this Section. However such guarantees shall be in addition to, not in lieu of all other liabilities which manufacturers and the Contractor may have by law or by other provisions of the Contract Documents.
- F. MATERIALS:
 - 1) Majestic Half-Oval Mat, Aquasorb Swirl, Black 71"X40".

DIVISION 11: EQUIPMENT: NA

DIVISION 12: BICYCLE RACKS—N.I.C.

- 1. GENERAL REQUIREMENTS
 - a. Include GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS as part of this section.
 - b. Examine all other Sections of the Specifications for requirements that affect the work of this Section whether or not such work is specifically mentioned in this section.
 - c. Coordinate work with that of all other trades affecting or affected by the work of this section. Cooperate with such trades to assure the steady progress of all work under the contract.

- d. SCOPE: Furnish and install three (3) cast aluminum bicycle racks upon a concrete slab at location indicated on the site plan.
 - e. RELATED SECTIONS: Division 2A DEMOLITION; Division 2B SITE PREPARATION; Division 2D LANDSCAPING; Division 3 CONCRETE;
 - f. DELIVERY, STORAGE, AND PROTECTION OF MATERIALS
 - 1) All materials shall be brought to the site in manufacturer's original unbroken factory-sealed containers bearing the manufacturer's standard label indicating product, brand name, manufacturer, weight, product type, and color.
 - 2) Handle and protect material from rain and moisture and contamination in transit and after arrival on the job.
 - g. SUBMITTALS: Provide the following for approval:
 - 1) Manufacturer's product literature.
 - 2) Installation instructions.
 - 3) Maintenance instructions.
 - 4) Color samples.
 - h. WARRANTY: In addition to the standard warranties and guaranties of the material manufacturer, all tile.
 - 1) Attention is directed to provisions in the GENERAL CONDITIONS regarding guarantees and warranties for work under this Division.
 - 2) Applicable manufacturers shall provide their standard guarantees for work under this Section. However such guarantees shall be in addition to, not in lieu of all other liabilities which manufacturers and the Contractor may have by law or by other provisions of the Contract Documents.
5. PRODUCTS
- a. MANUFACTURER
 - 1) Manufacturer: Bicycles Racks shall be manufactured by Forms and Surfaces, Pittsburgh, PN (800-451-0410) and shall be as follows:
 - a) Model: Olympia

- b) Finish: polyester powdercoat "Forms+Surfaces Aluminum Texture".
- c) Dimensions: 7" long X 3" wide X 35" high.
- d) Mounting: Surface mount. Provide stainless steel hardware.

b. EXECUTION

- 1) Examination
 - a) Verify that the concrete slab that the bicycle racks are to be mounted on is stable and capable of supporting the structural stresses from impact of bicycles and riders.
- 2) Installation
 - a) Install according to manufacturer's instructions.
 - b) Install to conform to ADA guidelines and City's established accessibility policies.

DIVISION 13: SPECIAL CONSTRUCTION: NA

DIVISION 14: CONVEYING SYSTEMS: NA

DIVISION 15A PLUMBING

1. GENERAL REQUIREMENTS

- a. Include GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS as part of this section.
- b. Examine all other Sections of the Specifications for requirements that affect the work of this Section whether or not such work is specifically mentioned in this section.
- c. Coordinate work with that of all other trades affecting or affected by the work of this section. Cooperate with such trades to assure the steady progress of all work under the contract.

2.. PLUMBING

- a. SCOPE OF WORK: Furnish and install a complete plumbing system. Furnish and install complete hot and cold water supply systems to service all fixtures and equipment indicated on the drawings, or specified as requiring cold water. Furnish and install complete system of vent and waste piping to vent all stacks, fixtures, traps, and appliances, as indicated on drawings and/or required to meet the Plumbing Code.
- b. RELATED SECTIONS: Division 2, SITEWORK; Division 3, CONCRETE;

Division 4, MASONRY; Division 6, CARPENTRY AND MILLWORK;
Division 7, ROOFING; Division 9, FINISHES; Division 11, EQUIPMENT;
Division 16, ELECTRICAL.

c. DELIVERY, STORAGE, AND PROTECTION OF MATERIALS

- 1) All materials shall be brought to the site in manufacturer's original unbroken factory-sealed containers bearing the manufacturer's standard label indicating product, brand name, manufacturer, weight, product type, and color.
- 2) Handle and protect material from rain and moisture and contamination in transit and after arrival on the job.
- 3) Materials stored on site must be stored under roof and shall not be removed from their shipping boxes until ready to install.

d. PERMITS: Contractor shall obtain and pay for all permits, inspection, licenses, and certificates required for work under this Section.

e. CODES: Comply with laws, ordinances, rules and regulations of all Local, State, and Federal authorities having jurisdiction, the rules and regulations of the National Board of Fire Underwriters and of the Public Utility Companies serving the building.

f. GUARANTY: Plumbing Subcontractor shall guarantee that all elements of the systems are of sufficient capacity to meet the specified performance requirements as set forth herein or as indicated.

g. SUBMITTALS: Provide manufacturers data sheets for the Owner's Representative's approval for all fixtures specified.

h. DRAWINGS: It is not intended that the drawings shall show every pipe, fitting, and appliance, but the Plumbing Subcontractor shall furnish and install all such parts as may be necessary to complete the systems in accordance with the best trade practice and to the satisfaction of the Architect. Drawings are generally diagrammatic and indicative of work to be installed. Runs and arrangements of piping shall be approximately as indicated, subject to modification as required to suit conditions at building, to avoid interference with work of other trades, or for proper, convenient and accessible location of all parts of piping systems.

i. COORDINATION: Keep other Subcontractors fully informed as to the shape, size, and position of all openings required for plumbing apparatus and give full information to the General Contractor and other Subcontractors

sufficiently in advance of the work so that all openings may be built in advance. Furnish and install all sleeves, supports, etc., hereinafter specified or required.

j. MATERIALS:

- 1) Piping: Domestic cold and hot water piping and instant water heater piping: Copper tube type "K" or "L" with solder joints, minimum 125 lbs with WGO bronze valves.
- 2) Sanitary Waste and Vent: PVC plastic pipe. See riser diagrams for sizing.
- 3) Air Conditioning Condensate: Copper DWV and fittings or PVC pipe schedule 40.
- 4) Rough Hardware: Provide Simpson Z-max nail Stoppers at all stud walls where nails or screws from other trades can pierce water or sanitary piping.

k. INSULATION: All sanitary waste lines within walls shall be insulated for sound.

l. BELOW GRADE DOMESTIC WATER LINE PROTECTION: Provide 1/2" foam insulation around underground domestic water lines. Trenches for domestic water lines shall covered on all sides with a minimum of 4" rice rock.

l. POINT-OF-USE HOT WATER HEATERS: Point-Of-Use Hot water heaters shall be installed by the plumbing contractor, and wired by the electrical contractor as follows.

- 1) Bathroom Room 7: Rheem RTE13.
- 2) Bathroom Room 8: Rheem RTE 9
- 3) Storeroom Room 6: Rheem RTE 9

n. FIXTURES LIST:

1) Toilets

- a) ADA Bathroom (Room 7): American Standard Cadet 3 Right-Height. 2589.101. Right side trip lever: 1.28 gpm.
- b) Employee's Bathroom (Room 8): American Standard Yorkville Pressure-Assisted Elongated Toilet. 1.6 gpm. 2878.016.

2) Lavatories

- a) ADA Bathroom (Room 7): American Standard Wheel Chair Users Wall-Mount Sink. O436.008. Faucet: Moen Two-Handle

- b) Lavatory Faucet Model 8228F15 (1.5 gpm) Brushed Chrome. Employee's Bathroom 9 (Room 8): American Standard All Purpose Sink. 0356.015. Faucet: Moen Two-Handle Lavatory Faucet Model 8228F15 (1.5 gpm) Brushed Chrome.
- c) Store Room (Room 6): Moen 222127 with 22037 basket Strainer. Faucet: Moen 8289 Chrome.

DIVISION 15B HEATING, VENTILATION, AND AIR CONDITIONING

1. GENERAL REQUIREMENTS

- a. Include GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS as part of this section.
- b. Examine all other Sections of the Specifications for requirements that affect the work of this Section whether or not such work is specifically mentioned in this section.
- c. Coordinate work with that of all other trades affecting or affected by the work of this section. Cooperate with such trades to assure the steady progress of all work under the contract.
- d. DESIGN OF SYSTEM: The HVAC subcontractor shall size the unit, ducts, registers and all components, and shall balance the system so as to obtain even comfort conditions without draft in all areas and deliver adequate air quantities without audible air noise.
- e. SCOPE OF WORK: Furnish and install one ducted central air conditioning. See drawings for schematic distribution system.
- f. RELATED SECTIONS: Division 4, MASONRY; Division 6, CARPENTRY AND MILLWORK; Division 7, ROOFING; Division 9, FINISHES; Division 11, EQUIPMENT; Division 16, ELECTRICAL.
- g. DELIVERY, STORAGE, AND PROTECTION OF MATERIALS
 - 1) All materials shall be brought to the site in manufacturer's original unbroken factory-sealed containers bearing the manufacturer's standard label indicating product, brand name, manufacturer, weight, product type, and color.
- h. COORDINATION: Coordinate work with that of all other trades affecting, or affected by work of this Section. Cooperate with such trades to assure steady progress of all work under the Contract.

- i. **WIRING:** Power wiring, starters, disconnect switches and electric interlock wiring not specified herein shall be furnished and installed under **ELECTRICAL** Section except starters which are an integral part of heating and air conditioning equipment.
 - j. **SUBMITTALS:** Submit catalog cuts for the following:
 - 1) Compressor Unit
 - 2) Air Handling Unit
 - 3) All air registers
 - 4) Filters
 - 5) Ductwork
 - 6) Thermostat
 - 7) Exhaust Fans
 - k. **DRAWINGS:** It is not intended that the Drawings shall show every pipe, fitting and appliance, but the HVAC Subcontractor shall furnish and install all such parts as may be necessary to complete the systems in accordance with the best trade practice and to the satisfaction of the Owner's Representative and Mechanical Engineer.
2. **MATERIALS**
- a. **COMPRESSOR:** Compressor shall be of the welded-hermetic type specified with internal vibration isolation and be covered with a shield to muffle operating sound. Compressor motor power inputs shall not exceed the manufacturer's specified operating conditions. New system shall have a SEER of 16. The units shall contain sufficient refrigerant charge for complete system. System shall be equipped with refrigerant line fittings which permit mechanical or sweat connections. Brass service valves with fittings and gage ports shall be located on exterior of units. Compressors shall be mounted on a level elevated stand (see below).
 - b. **AIR HANDLER:** Air Handling Unit shall have electric heating coils to meet heating requirements of spaces served. Air handlers shall be mounted atop vibration dampers.
 - c. **AIR FILTRATION:** The HVAC system shall be equipped with air filtration rating of MERV 13 or better. Contractor shall provide six (6) spare filters at project closeout.
 - c. **REFRIGERANT LINES:** Refrigerant lines shall be Type L Copper or as indicated on the drawings. Joints shall be silver soldered. Refrigerant lines shall be as short as possible to minimize heat gain and pressure drop, but not

more than 50 feet in length with a vertical length of less than 20 feet. Refrigerant lines shall be pitched and trapped according to manufacturer's requirements. Bends and elbow shall have a radius of not less than twice the pipe diameter. Lines shall be supported with hangers that avoid cutting the line or its insulation. Suction lines shall be insulated with a minimum of one-half inch (1/2") thick closed cell elastomeric foam pipe insulation to prevent condensation and heat gain. Refrigerant line insulation located outside must have a waterproof covering and must be protected from ultraviolet radiation. Building penetrations for refrigerant lines must be caulked (color to match surrounding material); Entry holes into indoor units must be sealed.

- d. CONDENSATE DRAIN LINES: Provide condensate drain lines to the outside. Provide a P-trap at discharge.
- e. DUCTS
 - a. Air conditioning trunk ductwork shall be constructed of one and one half inch thick R-6 min. fiberglass duct board with reinforced aluminum foil faced covering fabricated and installed per S.M.A.C.N.A. recommendations. Use R-4.2 in conditioned spaces.
 - b. All duct elbows greater than 45 degrees shall be fitted with turning vanes.
 - c. Flexible duct, when approved by the Owner's Representative shall be factory fabricated round ducts composed of corrosion resistant reinforcing wire helix permanently bonded and enclosed in polyester film, then covered with 1-1/2" 3/4 PCF (R-6) density fiber glass insulation blanket sheathed in a vapor barrier of aluminum metalized polyester film laminated to wire mesh, elastomeric back coated.
 - d. Duct Turns: Air turns shall be quiet and free from vibration. Offsets shall be made in a gradual manner.
- f. EXHAUST FANS:
 - a. Remote fans are to be ducted to the outside, discharged from walls or the roof, as indicated on the plans. Fans are to be switched from wall switches in each space, connected to room lights.
 - b. See light fixture schedule for model.
 - c. Provide all accessories such as ducts, inlet registers, and other system components. Coordinate location of all visible components with the Architect. Refer to the reflected ceiling plan. Provide complete

submittals.

- g. **LOW VOLTAGE WIRING:** Provide all low voltage wiring for HVAC system
- h. **JOINTS AND SEAMS:** Joints and seams in all supply ductwork shall be sealed. All adhesive and mastic shall be a fire resistant type and meet the Florida energy code requirements.
- i. **THERMOSTAT:** Digital, programmable, hardwired, with advanced installer settings by Jackson Systems.
- j. **CONTROLS:** Controls shall be factory wired and located in a readily accessible location
- k. **PAD AND ATTACHMENT:** Condensing units shall be securely bolted to a steel stand outside the building that is bolted to a concrete pad to prevent movement and vibration and to withstand winds as required by law. The bottom of the compressor shall be at or above flood level. See plans for location.
- l. **DIFFUSERS:** All wall and ceiling diffusers, grilles, and registers shall be manufactured by Titus or as approved by the architect. Contractor shall submit catalog cuts of all diffusers for the architect's and engineer's approval.
- m. **SLEEVES:** Furnish and install all sleeves, supports, etc., hereinafter specified or required.
- n. **STRUCTURAL CUTTING:** All structural cutting is to be done by General Contractor.
- o. **NAIL STOPPERS:** Provide Simpson Z-max nail Stoppers at all stud walls where nails or screws from other trades can pierce HVAC lines.
- p. **TESTING:** The contractor, through his subcontractors, shall be responsible for his work and equipment until finally inspected, tested, and accepted. Carefully store materials and equipment that are not immediately installed after delivery to site. Close open ends of work with temporary covers or plugs during construction to prevent entry of obstructing material.

SECTION 16: ELECTRICAL

1. GENERAL REQUIREMENTS

- a. Include GENERAL CONDITIONS, SUPPLEMENTARY GENERAL

CONDITIONS as part of this section.

- b. Examine all other Sections of the Specifications for requirements that affect the work of this Section whether or not such work is specifically mentioned in this section.
- c. Coordinate work with that of all other trades affecting or affected by the work of this section. Cooperate with such trades to assure the steady progress of all work under the contract.
- d. RELATED SECTIONS: Division 2, SITEWORK; Division 3, CONCRETE; Division 4, MASONRY; Division 6, CARPENTRY AND MILLWORK; Division 9, FINISHES; Division 11, EQUIPMENT; Division 15B, HVAC.
- e. DELIVERY, STORAGE, AND PROTECTION OF MATERIALS: All materials shall be brought to the site in manufacturer's original unbroken factory-sealed containers bearing the manufacturer's standard label indicating product, brand name, manufacturer, weight, product type, and color.
- f. SHEET NOTES: Refer to drawings for additional requirements.
- g. COORDINATION WITH OTHER TRADES: The General Contractor shall be responsible for coordinating the work of the electrical contractor with other trades. Subcontractor shall keep other Subcontractors fully informed as to the shape, size, and position of all openings required for electrical conduit and apparatus and give full information to the General Contractor sufficiently in advance of the work so that all openings may be built in advance. Furnish and install all sleeves, supports, etc., hereinafter specified or required.
- h. SCOPE OF WORK: Provide all labor, material equipment, appurtenances, and services necessary for an incidental to the completion of all work in this Division, as indicated on the Drawings and as specified, unless specifically accepted. The following items are a partial outline of the work of this Division.
 - 1) Load centers.
 - 2) Over current protection.
 - 3) Branch wiring.
 - 4) Conduit and cable trays.
 - 5) Lighting fixtures and lamps.

- 6) Wiring devices.
 - 7) Grounding and bonding.
 - 8) Temporary wiring.
 - 9) Cutting and drilling for concealed wiring and boxes.
 - 10) Testing.
-
- i. PERMITS: Contractor shall pay for all permits, inspection, licenses, and certificates required for work under this section.
 - j. CODES: Comply with laws, ordinances, rules, and regulations of the Florida Building Code, the City of Key West Ordinance. The rules and regulations of the National Board of Fire Underwriters, the Life Safety Code, NFPA, UL, NEMA, and OSHA and the National Electric Code will be referred to as authority, as required.
 - k. INSPECTIONS: Electrical contractor shall not call for his inspections without the approval of the general contractor.
 - l. GUARANTEE: All materials and workmanship are to be guaranteed against defects for a period of one (1) year from date of acceptance.
 - m. TEMPORARY POWER: Upon commencement of work, Electrical Contractor shall provide temporary establish an electrical service to provide power to the jobsite. It shall be mounted on a pole, meeting all code requirements for the application. The power must come from a separate outlets, as necessary to service construction work, using new wiring (Romex Cable permitted). Outlets shall be GFI. Provide temporary lighting according to code. In the event that the contractor wishes to use the Owner's power, he must have the owner's permission in writing.
 - n. MANUFACTURER'S INSTRUCTIONS: Install all products in strict accordance with manufacturer's recommendations. Provide complete owner's manuals for all equipment.
 - o. WIRING METHODS: Without limiting the requirements of work to be performed, the basic wiring methods and materials to be employed in this Section are as follows:
 - 1) Hollow partitions, and other dry voids: Conduit

- 2) Branch circuits: EMT
 - 3) Feeder and/or sub feeders: New raceway in conformance with National Electric Code.
 - 4) Masonry and concrete construction: Use EMT where furred, PVC schedule 40 where imbedded.
 - 5) Outdoor: Schedule 40 PVC heavy wall underground, under floor slabs and walkways to depth per NEC.
 - 6) Insulated ground shall be installed with phase conductors.
 - 7) Panel boards shall be of the same manufacturer throughout, supplied by a single manufacturer, Westinghouse, Square D, or General Electric.
- p. **PANEL SCHEDULES:** The electrical contractor's work shall not be complete until complete panel schedules are permanently affixed the panel doors. Schedules must be typed, legible, indelible, and suitable for use by the owner. All breakers shall be clearly numbered and correspond to the schedule. legend. Provide a copy of each schedule with the project close-out documents.
- q. **TESTING:** Test all equipment before turning over completed work to Owner.
- r. **CLOSE-OUT DOCUMENTS:** Close-out documents shall consist of, but not be limited to:
- 1) Warranties
 - 2) Panel Schedules
 - 3) Owner Manuals
- s. **GROUNDING:** Verify grounding continuity at each receptacle outlet and fixture.
- t. **CLEANING:** Panels, disconnects, starters, and similar items shall be cleaned and left in a neat manner, and painted where finish material has been removed.
- u. **NAIL STOPPERS:** Provide Simpson Z-max nail Stoppers at all stud walls where nails or screws from other trades can pierce electrical lines.
- v. **DEVICES:** Devices shall be commercial grade Leviton of a color and style

selected by the Architect.

- w. **LIGHTING FIXTURES:** Provide lighting fixtures and lamps as indicated on fixture schedule. Provide six spares for type of lamp specified.
- x. **TELEPHONE LINES:** Furnish and install all communication lines.
 - 1) Communication cable shall be four pair unshielded, twisted pair (CAT 6), twisted unless otherwise indicated.
 - 2) Provide dedicated lines as indicated on plans.
 - 3) All communication wiring shall be run in conduit.
 - 4) All underground and television shall be run in Schedule 40 PVC conduit.
 - 5) Underground cable should be specified as "flooded," meaning filled with gel, where it is subject to water.
 - 6) Coordination with Bellsouth, KES etc responsibility of GC.
 - 7) Coordinate Voice Over IP System with City of Key West IT department.
- y. **SMOKE DETECTORS:**
 - 1) Provide First Alert SA302CN hard-wired, interconnected smoke detectors as indicated on the drawings. Refer to the architectural reflected ceiling plan for locations of smoke detectors.
 - 2) If the building inspector requires smoke detectors other than those shown on the drawings they must, for appearance, be placed in line with adjacent lights or diffusers as indicated by the Owner's Representative. See Division 1, GENERAL REQUIREMENTS for instructions regarding changes to the design ordered by the building official.

End of Specifications