PROJECT MANUAL

QUIETWATER BEACH FERRY LANDING LANDSIDE FEATURES

ESCAMBIA COUNTY, FLORIDA

PREPARED FOR

Issued for Construction

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PUBLIC WORKS DEPARTMENT

ENGINEERING DIVISION

General Paving and Drainage Technical Specifications

GENERAL EXCEPTIONS: Any reference to FDOT *Standard Specifications for Road and Bridge Construction, Latest Edition, Division I General Requirements & Covenants* shall be excluded and not applicable to any specification referred herein or otherwise listed in this document.

County Engineer
Joy D. Blackmon, P.E.

Revision 5
Revision Date: 06/30/11

Effective Date: 10/01/11

SECTION 04060 - MAINTENANCE OF TRAFFIC

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Specifications Sections, apply to work of this section.

B. Unless otherwise specified on the plan sheets or in other sections of the specifications, all materials and work shall conform to the applicable requirements in the following documents:

1. *Florida Department of Transportation Design Standards*, *Latest Edition*.

2. *Florida Department of Transportation Standard Specifications for Road and Bridge Construction*, Section 102, *Latest Edition*.

3. USDOT, Federal Highway Administration *Manual on Uniform Traffic Control Devices for Streets and Highways*, *Latest Edition*, Part 6 Temporary Traffic Controls.

4. *FDOT Minimum Specifications for Traffic control and Devices*, *Latest Edition*.

C. GENERAL EXCEPTIONS: Any reference to *FDOT Standard Specifications for Road and Bridge Construction, Latest Edition*, *Division I General Requirements & Covenants* shall be excluded and not applicable to any specification referred herein or otherwise listed in this document.

1.2 SUMMARY OF WORK

The work under this section includes the maintenance of traffic within the limits of the project for the duration of construction.

PART 2 – PRODUCTS - Not Used.

PART 3 - EXECUTION

3.1 RESPONSIBILITIES OF CONTRACTOR

A. Control and maintain traffic and provide for the safety of the work area in accordance with Maintenance of Traffic (MOT) Plan included in the contract documents. In the event no MOT plan is included in the contract documents, Contractor shall provide such plan designed by a certified MOT designer for the County Engineer's/ Traffic Division review and upon

acceptance, Contractor shall comply with all aspects of said plan. Conduct operations in a manner that will not interrupt pedestrian and vehicle traffic except as approved by the County Engineer/Traffic Division. Confine the work area to the smallest area practical to allow the maximum use of the street and sidewalk and to reduce any hazard to vehicles and pedestrians to a minimum.

B. Maintain access to properties that adjoin the work. Contact property owners and assure that access is coordinated prior to commencing work that may block access.

C. Furnish all labor, materials, tools, supplies, equipment, and machinery needed to fully comply with the specifications described on the plan sheets and in this Section. At all times, the Contractor shall use workers and traffic control devices necessary to comply with all applicable provisions contained in the reference documents listed in Section 1.1.

D. The Contractor shall notify the agencies and media listed below in writing, 48 hours in advance, of any work within the road right-of-way that may interfere with vehicle and/or pedestrian traffic.

1. WCOA Radio – Tel: 478-6011; Fax: 478-3971

2. Pensacola News Journal Tel: 435-8500; Fax: 435-8633; Email: news@pensacolanewsjournal.com

3. Escambia County Emergency Management Tel: 471-6315; Fax: 471-6322; Email: bob_boschen@co.escambia.fl.us

4. Escambia County Engineering Tel: 595-3440

5. Escambia County Sheriff Tel: 436-9630; Fax: 436-9128; Email: traffic@escambiaso.com

6. Florida Highway Patrol Tel: 484-5000; Fax: 393-3405; Email: stevepreston@flhsmv.gov

7. Escambia County School District Tel: 469-5591; Fax: 469-5661; Email: transportation@escambia.k12.fl.us and rdoss@escambia.k12.fl.us

8. Escambia County Administration Tel: 595-4900; Fax: 595-4908; Email: Cheryl_Lively@co.escambia.fl.us

9. Escambia County Area Transit Tel: 595-3228; Fax: 595-3222; Email: Ted_Woolcock@co.escambia.fl.us

3.2 PENALTIES AND SUSPENSION OF WORK

The County Engineer, or Designee, may verbally direct the Contractor to immediately suspend work if appearance of violation of safety regulations is found. In such an event, Contractor shall immediately stop work and secure any potential hazards from the public until the potential violation is confirmed and/or corrected to satisfaction of the County Engineer. Law enforcement officers may be called to assist the County Engineer and/or Designee in suspending work if the Contractor is not responsive. Suspension of work for violation of safety regulations shall not be grounds for a contract time extension or additional payment.

PART 4 - MEASUREMENT/PAYMENT

4.1 METHOD OF MEASUREMENT

A. Maintenance of Traffic: Where the plans require the use of trucks and truck mounted impact attenuators, these items will not be paid for separately but shall be included in the cost of Maintenance of Traffic. Only use those attenuators that have been tested by a facility approved by the Engineer and certified as meeting the requirements as specified in NCHRP 350 and that have been properly maintained.

B. Law Enforcement Services: The quantity to be paid for will be at the Contract unit price per hour for the actual number of officers on the project site. Payment will be made only for those off-duty law enforcement officers specified in the MOT and authorized by the County Engineer or Designee and/or CEI.

C. When the plans show more than one detour facility is included in the proposal, payment will be made under Maintenance of Traffic.

D. Materials for Driveway Maintenance: The quantity to be paid for will be, in square yards, of all materials authorized by the County Engineer or Designee, acceptably placed and maintained for driveway maintenance. The quantity will be determined by in place measurement.

4.2 BASIS OF PAYMENT

A. MAINTENANCE OF TRAFFIC (GENERAL WORK): Price and payment will be full compensation for all work and costs specified under this Section except as may be specifically covered for payment under other items.

B. LAW ENFORECEMENT: Prices and payment will be considered full compensation for the services of the off-duty law enforcement officer, including a marked law enforcement vehicle and all other direct and indirect costs.

C. SPECIAL DETOURS: Price and payment will be full compensation for providing all detour facilities shown on the plans and all costs incurred in carrying our all requirements of this Section for general maintenance of traffic within the limits of the detour, as shown on the plans.

END OF SECTION 04060

DIVISION 1 – GENERAL REQUIREMENTS
SECTION 01 33 00 – SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. This section includes administrative and procedural requirements for submittals, including shop drawings, product data, samples, and other submittals.

B. Related Requirements:

1. Required submittals are identified in each of the individual Technical Specification sections.

1.2 RELATED SECTIONS

A. All Technical Specification sections relate to this section.

1.3 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

A. Processing time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Owner's receipt of submittal. No extension of the Contract time will be authorized due to failure to transmit submittals with enough lead time in advance of the work to allow for processing, including resubmittals.

1. Initial review: Allow ten (10) working days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Owner will advise Contractor when a submittal being processed must be delayed for coordination.

2. Intermediate review: If intermediate submittal is necessary, process it in same manner as initial submittal.

3. Resubmittal review: Allow five (5) working days for review of each resubmittal.

B. Submittals: Place a permanent label or title block on each submittal item for identification.

1. Indicate name of firm or entity that prepared each submittal on label or title block.

2. Include the following information for processing and recording action taken:

a. Project name.
b. Date.
c. Name of construction manager.
d. Name of Contractor.
e. Name of Subcontractor.
f. Name of supplier.
g. Name of manufacturer.

h. Submittal number or other unique identifier, including revision identifier.

i. Number and title of appropriate Technical Specification section.

j. Contract Drawing number and detail references, as appropriate.

k. Location(s) where product is to be installed, as appropriate.

l. Other necessary identification.

C. Electronic submittals: Submittals shall be transmitted electronically via email or sharepoint site. Owner will supply address of site after Contract Award.

D. Options: Identify options requiring selection by Owner.

E. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.

1. Note date and content of previous submittal.

2. Note date and content of revision in label or title block and clearly indicate extent of revision.

3. Resubmit submittals until they are marked with approval notation from Owner.

F. Distribution: Furnish copies of final submittals to manufacturers, Subcontractors, suppliers, fabricators, installers, and others as necessary for performance of construction activities. Show distribution on transmittal forms. The Contractor is responsible for furnishing copies to agencies from which Contractor has secured permits.

G. Use for construction: Retain complete copies of submittals on project site. Use only final submittals that are marked with approval notation from Owner.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

A. General submittal procedure requirements: Prepare and submit submittals required by individual Technical Specifications. Types of submittals are indicated in individual Technical Specification sections and may include, but not limited to the following:

B. Product data: Collect information into a single submittal for each element of construction and type of product or equipment.

1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as shop drawings, not as product data.

2. Mark each copy of each submittal to show which products and options are applicable.

3. Include the following information, as applicable:

a. Manufacturer's catalog cuts.

b. Manufacturer's product specifications.

c. Standard color charts.

d. Statement of compliance with specified referenced standards.

e. Testing by recognized testing agency.

f. Application of testing agency labels and seals.

g. Notation of coordination requirements.

h. Availability and delivery time information.

4. Submit product data before or concurrent with samples.

C. Shop drawings: Prepare project-specific information, drawn accurately to scale. Do not base shop drawings on reproductions of the Contract Drawings or standard printed data.

1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:

a. Identification of products.

b. Schedules.

c. Compliance with specified standards.

d. Notation of coordination requirements.

e. Notation of dimensions established by field measurement.

f. Relationship and attachment to adjoining construction clearly indicated.

g. Seal and signature of professional engineer if specified.

2. Sheet size (when hard copies required): Except for templates, patterns, and similar full-size drawings, submit shop drawings on sheets at least 8-1/2 by 11 inches, but no larger than 22 by 34 inches.

D. Samples: Submit samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.

1. Transmit samples that contain multiple, related components such as accessories together in one submittal package.

2. Identification: Attach label on unexposed side of samples that includes the following:

a. Generic description of sample.

b. Product name and name of manufacturer.

c. Sample source.

d. Number and title of applicable Technical Specification section.

e. Technical Specification paragraph number and generic name of each item.

3. For projects where electronic submittals are required, provide electronic sample transmittal, digital image file illustrating sample characteristics, and identification information for record.

4. Disposal: Maintain sets of approved samples at project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.

    a. Samples that may be incorporated into the work are indicated in individual Technical Specification sections. Such samples must be in an undamaged condition at time of use.

    b. Samples not incorporated into the work, or otherwise designated as Owner's property, are the property of Contractor.

5. Samples for initial selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available. Submit material sample for items such as aggregates, soil, and mulch.

E. Contractor's construction schedule: Comply with requirements specified in the Specific Requirements and Technical Specification Section 01 31 00 – Project Management and Coordination.

F. Test and inspection reports and schedule of tests and inspections submittals.

1. Pre-work test reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.

2. Field test reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.

G. Site condition reports: Immediately on discovery of a difference between site conditions and the Contract Documents, prepare and submit a detailed report. Include a detailed description of the differing conditions, together with recommendations for correcting the differing conditions. All Change Order requests must be submitted in accordance with the Contract Documents.

H. Closeout submittals: Project Record Drawings, and maintenance material submittals.

I. Qualification data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.

J. Manufacturer, product, and material certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer, its products, and/or its materials comply with requirements in the Contract Documents. Include evidence of manufacturing experience where required.

K. Material test reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.

L. Product test reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on

evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

A. Action and Informational Submittals: Review each submittal and check for coordination with other work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to the Owner.

B. Approval Stamp: Contractor shall stamp each submittal with a uniform, approval stamp. Include project name and location, submittal number, Technical Specification section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 OWNER’S ACTION

A. Action Submittals: The Owner Representative will review each submittal, make marks to indicate corrections or revisions required, and return it. The Owner Representative will forward each submittal to the Contractor.

B. Informational Submittals: The Owner Representative will review each submittal, make marks to indicate corrections or revisions required, and return it. The Owner Representative will forward each submittal to the Contractor.

C. Partial submittals prepared for a portion of the work will be reviewed when use of partial submittals has received prior approval from the Owner.

D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.

E. Submittals not required by the Contract Documents may be returned by the Owner without action.

F. Submittal response: The Owner will note the submittal status when responding to a submittal as follows:

1. Under Review.

2. Reviewed: If the review indicates that the submittal appears to be in conformance with the Contract Documents, the submittal will be marked "APPROVED" or “NO EXCEPTIONS”. The Contractor may begin implementing the work method or incorporating the material or equipment covered by the submittal.

3. Reviewed As Noted: If the review indicates that the submittal is insufficient or that limited corrections are required, the submittal will be marked "REVIWED AS NOTED". The Contractor may begin implementing the work method or incorporating the material or equipment covered by the submittal, in accordance with the noted corrections. Where submittal information will be incorporated in an operation and maintenance plan, a

corrected copy shall be provided within 30 days; otherwise, no further action will be required.

4. Revise and Resubmit: If the review reveals that the submittal is substantially insufficient or contains incorrect data to an extent that requires revision and re-review by the Owner prior to proceeding with the associated work, the submittal will be marked "RESUBMIT" and returned to the Contractor. This indicates that the Contractor should not proceed with the relevant portion of work, at-risk or otherwise, until a revised submittal has been submitted, reviewed, and accepted by the Owner as either “APPROVED”, or “APPROVED AS NOTED.”

5. Rejected.

6. N/A: If the review reveals that the submittal is not required by the Contract Documents, at the Owner’s discretion it may be returned by the Owner without action, marked “N/A”. This does not constitute review of the submittal, and is only communicating that Owner review of this submittal is not required by the Contract Documents. It is the Contractor’s responsibility to follow up with the Owner if the Contractor needs approval of information in a submittal that was marked “N/A.”

END OF SECTION 01 30 00 – SUBMITTAL PROCEDURES

DIVISION 5 – METALS
SECTION 05 50 00 – METAL FABRICATIONS

PART 1 - GENERAL

1.1 SUMMARY

A. This Technical Specification covers the detailing, supply, fabrication and installation of aluminum and steel metal components including all miscellaneous metal fabrication and connection components required to complete the work as required by the Contract Drawings and Technical Specifications. The work specified in this Technical Specification is incidental work and the cost shall be included in other associated bid items in the contract. Work included in this Technical Specification is as follows:

1. Walkway Hinges and Support Connections
2. Prefabricated Aluminum Grasp Bar (At Timber Landings)
3. Structural Steel
4. Bolts, nuts, threaded rod, and studs
5. Miscellaneous Fabricated Metal items

1.2 RELATED SECTIONS

A. Technical Specification Section 01 33 00 – Submittal Procedures

B. Technical Specification Section 31 62 16 – Steel Piles

C. Technical Specification Section 11 13 10 – Ferry Landing Float

D. Technical Specification Section 13 34 23 – Prefabricated Ticket Booth

1.3 APPLICABLE PUBLICATIONS

A. The publications listed below form a part of this Technical Specification to the extent referenced. Latest editions apply.

AWS

D1.1 Structural Welding Code – Steel

D1.2 Structural Welding Code - Aluminum

AISC

AISC 303 Code of Standard Practice for Steel Buildings and Bridges

AISC 360 Specifications for Structural Steel Buildings

ASTM

A36 Carbon Structural Steel

A123 Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products

A153 Zinc Coating (Hot-Dip) on Iron and Steel Hardware

A307 Carbon Steel Bolts, Studs, and Threaded Rod

A325 Structural Bolts, Steel, Heat Treated

A384 Standard Practice for Safeguarding Against Warpage and Distortion During Hot-Dip Galvanizing

A563 Carbon and Alloy Steel Nuts

A780 Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings

B308 Standard Specification for Aluminum Alloy 6061-T6 Standard Structural Profiles

B209 Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate

F593 Stainless Steel Bolts, Hex Cap Screws, and Studs

F594 Stainless Steel Nuts

AA

Aluminum Design Manual

FDOT (2016)

Section 962 – Steel and Other Ferrous Metals and Metal Items

SSPC

Good Painting Practices Vol. 1 & 2

1.4 GENERAL

A. Miscellaneous metals material specification requirements shall apply to all metal items unless otherwise identified or noted on the Contract Drawings.

B. Temporary construction. The Contractor is responsible for temporary bracing and support of all structures during construction and shall protect all exposed partially complete work against damage. The Contractor shall take precautions to assure that the structure is adequately braced to avoid damage from wave or wake action during construction. Any structural component damaged during construction shall be replaced by the Contractor at no cost to the Owner. The Contractor's proposed methods for providing temporary protection shall be included in the work plan submitted to the Owner for approval.

C. Alternative design. The Contractor may submit an alternative design. The alternative design shall bear the stamp and signature of a State of Florida Registered Professional Engineer. The alternative design shall clearly identify deviations from the original design intent and any associated cost savings. Substitutions and Change Orders resulting from alternative design will be addressed in accordance with the Specific Requirements and General Conditions, respectively.

1.5 QUALITY ASSURANCE

A. Fabricate and install steel components in accordance with AISC 303 and AISC 360.

B. Fabricate and install aluminum in accordance with the AA's Aluminum Design Manual.

C. Fabricator qualifications: The Contractor shall engage an experienced fabricator who has completed metal fabrication work similar in material, design, and extent to that indicated for this project and with a record of successful in-service performance.

D. Testing and Inspection Agency: Employ at contractor's expense, and independent testing and inspection agency to perform testing, inspect and evaluate connections, and prepare test reports.

1. Correct deficiencies in the structural steel work identified by the testing and inspection agency at no additional expense to the owner. Subsequent tests to confirm the adequacy of corrected work will be at the Contractor's expense.

1.6 MATERIAL TESTING

A. Miscellaneous metals and appurtenant materials shall be tested and certified by the manufacturer to meet the specified chemical, mechanical, and section property requirements prior to delivery to the site. Testing of miscellaneous metals for mechanical properties shall be performed after the completion of all rolling and forming operations. Testing of miscellaneous metals shall meet the requirement of ASTM A6.

1.7 SUBMITTALS

A. Action Submittals:

1. Shop drawings: Drawings and complete bills of material for metal fabrications, frame connection fabrications, attachments, and any other miscellaneous metal fabrications, and all fabricated assemblies. All connections shall be fully detailed and all welds shall be shown on the Shop drawings. Shop drawings shall be adequate for field-assembly.

2. Design drawings and supporting calculations for fabrication items designed by the Contractor's chosen fabricator. Such design documentation shall be submitted for review and approval by the Owner prior to fabrication.

3. Submit manufacturers' mill certificates and certificates of compliance for the following materials as applicable:

a. Steel

b. Fasteners

4. Placement drawings: Show location in the Project of all fabrications, cross-referenced to the shop drawings.

5. Fabrication work plan: Written description of plan for fabrication and installation including proposed schedule and procedures shall be submitted to the Owner.

6. Product data:

a. Installation instructions and general recommendations including warranties from manufacturers for all products used as part of the work and technical data sheets defining performance properties.

b. Manufacturer's literature and data for products used that demonstrates compliance with the applicable materials specifications.

c. Copy of the Materials Safety Data Sheets (MSDS) and Consumer Information Safety (CIS) sheets to the Owner.

7. Company data: The Contractor shall submit the proposed metal fabricator and galvanizing subcontractors' name, address, contact name, phone number and company information, verifying that the company is in compliance with the Technical Specifications, to the Owner for review.

8. Welder certificates: Provide for proposed welders showing that they have been qualified to AWS D1.1 and D1.2, as applicable.

9. Welding procedures: Contractor to submit welding procedures for approval of Owner. Welding variations on submitted welding procedures shall conform to weld filler metal manufacturer's recommendations unless a procedure is qualified by testing, in which case procedure qualification records should be submitted with the corresponding procedure. Preheat and interpass temperature shall be in accordance with AWS D1.1 Annex I.

10. All independent inspection reports required in this Section.

PART 2 - PRODUCTS

2.1 METAL MATERIALS

A. The Contractor shall supply miscellaneous metal connectors, and other metal items required to fabricate the project components. Miscellaneous structural steel materials shall be new, free from defects and imperfections, and shall, unless otherwise indicated, conform to the following:

1. 316 Stainless Steel: ASTM A484, ASTM A276, Fy=30 ksi

2. Steel W Shapes: ASTM A992 Gr. 50.

3. Steel HP Shapes: ASTM A572 Gr. 50.

4. Steel rectangular, round, and square HSS: ASTM A500 Gr. B (46ksi).

5. Steel plate, flatbar, channels, angles: ASTM A36.

6. Steel pipe: ASTM A53 Grade B, Type S.

7. Steel pipe pile: ASTM A252, Grade 3 (fy=50 ksi min.)

8. Aluminum shapes: Marine Grade 6061-T6 Aluminum extruded shapes.

9. Aluminum flatbar: Marine Grade 6061-T6 Aluminum flatbar

B. Bolts and Nuts:

1. Carbon Steel: ASTM A307, Grade A

2. High Strength Steel: ASTM A325, Type 1, plain (medium carbon steel)

3. Stainless Steel: ASTM F593, ASTM F594

4. AESS: Provide hexagonal bolt heads and nuts at all exposed connections.

C. Hardened Washers: ASTM F436, ASTM A240 (for stainless).

1. Dimensional requirements shall meet ANSI B18.22.1, Type A Plain

D. Material with laminar discontinuities may be rejected by the Owner if the discontinuities are perceived to decrease the connection quality or strength, at discretion of the Owner. Material with laminar discontinuities shall at a minimum be repaired with an Owner approved repair procedure. The Contractor shall notify the Owner immediately if laminar discontinuities are discovered.

E. Materials for proprietary system or contractor-supplied components shall meet manufacturer's recommendations/specifications, unless otherwise approved by the Owner.

F. Steel plate, bar and shapes shall be true to line and free from warp or twist.

G. Substitution of the metal grades specified shall not be performed without written approval from the Owner.

2.2 REQUIREMENTS FOR FASTENERS, HARDWARE, AND WELDMENTS

A. Bolt, anchor bolt, washer, and nut requirements vary depending on the materials being fastened.

B. Steel to steel:

1. Standard Connection: Regular hot-dip galvanized hexagon head type bolts shall be used in accordance with ASTM A325, with threads excluded from the shear plane unless otherwise noted. Hardened washers conforming to ASTM F436 shall be used under all nuts and bolt heads unless otherwise noted. Nuts shall be heavy hex nuts conforming to ASTM A563 and shall be lubricated. Lock nuts conforming to ASTM A563 shall be used if shown on the Contract Drawings.

2. Slip Critical Connections: Regular hot-dip galvanized hexagaon head type bolts shall be used in accordance with ASTM A325, with threads excluded from the shear plane unless otherwise noted. Hardened washers conforming to ASTM F436 shall be used under all nuts and bolt heads unless otherwise noted. Nuts shall be heavy hex nuts conforming to ASTM A563 and shall be lubricated. Standard direct tension indicating washers (DTIs) conforming to ASTM F959 shall be used in accordance with manufacturer's recommendations to facilitate proper bolt tensioning. Direct tension indicating washers shall be mechanically galvanized in accordance with ASTM B695.

C. Aluminum to steel (stainless hardware):

1. Hardware shall be type 316 stainless steel, with chemistry suitable for marine exposure; and nuts shall be type 304 stainless steel, with chemistry suitable for marine exposure.

Regular hexagon head type bolts shall be used in accordance with ASTM F593. Washers shall be used under all nuts and bolts heads unless otherwise noted. Heavy hex nuts and lock nuts conforming to ASTM A563 shall be used on all bolts and shall be lubricated.

D. Aluminum to steel material (stainless hardware):

1. Hardware shall be type 316 stainless steel, with chemistry suitable for marine exposure; and nuts shall be type 304 stainless steel, with chemistry suitable for marine exposure. Regular hexagon head type bolts shall be used in accordance with ASTM F593. Washers shall be used under all nuts and bolts heads unless otherwise noted. Heavy hex nuts and lock nuts conforming to ASTM A563 shall be used on all bolts and shall be lubricated.

E. Threaded rod. Hot-dip galvanized threaded rod shall be supplied in conformance with ASTM F1554, Grade 36 unless otherwise noted. Hardened washers conforming to ASTM F436 shall be used under all nuts bearing on steel and malleable iron washers conforming to ASTM A47 and lock nuts shall be used under all nuts bearing on timber. Lock nuts shall be provided on each end of threaded rod passing through timber. Nuts shall be heavy hex nuts and shall conform to ASTM A563 and shall be lubricated.

F. Econ Head Bolts: Hot-dip galvanized Econ head bolts shall be supplied in conformance with ASTM A307 Grade A unless otherwise noted. Hardened washers conforming to ASTM F436 shall be used under nuts. Nuts shall be heavy hex nuts conforming to ASTM A563 and shall be lubricated. Standard direct tension indicating washers (DTIs) conforming to ASTM F959 shall be used in accordance with manufacturer's recommendations to facilitate proper bolt tensioning.

G. Screws shall be type 316 stainless steel unless otherwise noted.

H. Nails shall be 3.5 inch 16d double hot-dip galvanized unless otherwise noted.

I. Beveled washer thickness is measured in the center of the washer.

J. Plate washers shall be 1/4 inch thick plate, with a diameter matching the equivalent malleable iron washer unless otherwise noted.

K. Make exposed fastenings of compatible materials, generally matching in color and finish, to which fastenings are applied.

2.3 METAL FABRICATION

A. Aluminum: Aluminum items shall be fabricated in accordance with AA's specifications for aluminum structures and AWS D1.2, Structural Welding Code Aluminum.

B. Steel: Fabrication of steel parts shall conform to the applicable provisions of the AISC – Specifications for the Design, Fabrication and Erection of Structural Steel for Buildings and AWS D1.1, Structural Welding Code Steel.

C. Items shall be shop fabricated to the extent practicable for transportation and handling. Splice details and locations shall be shown in the shop drawings.

D. Parts shall be match-marked to ensure accurate installation.

E. Tolerances. Items shall be fabricated to the tolerances indicated herein or on the Contract Drawings, or if not specified, to accepted industry standards.

F. Work points on beams, braces, columns, gusset plates, etc. shall be concentric unless otherwise noted.

G. Fabricated steel specified to be galvanized steel shall be galvanized in accordance with ASTM A123. Hot dip galvanization process shall be completed after fabrication unless otherwise specifically noted in the approved shop drawings. All intersecting components shall be seal welded at a minimum prior to galvanizing unless otherwise noted.

H. Repair of zinc-coated surfaces. Repair all galvanized surfaces removed or damaged during welding, or shipping in accordance with the Technical Specification Section 09 97 13 – Steel Coatings.

I. Repair of painted surfaces. Repair all damaged painted surfaces in accordance with the paint manufacturer's recommendations.

2.4 FABRICATION MARKING

A. Marking the weight. Mark the weight on sub-assemblies and individual members weighing over 200 pounds.

B. Marking piece marks and directional arrows. Provide piece marks and directional arrows on all members and sub-assemblies requiring on-site assembly. Shop drawings shall show all piece marks.

C. Marking bare or painted materials. Make all shop markings plainly visible with a non-corrosive waterproof paint stick that will not compromise marking after coating, if applicable. Marking with a Sharpie brand pens is prohibited.

D. Marking materials to be galvanized. Stamp piece marks or match marks in material to be galvanized with metal dies so that the marks are clearly legible after galvanizing.

PART 3 - EXECUTION

3.1 MATERIALS DELIVERY AND STORAGE

A. Materials delivered to the site shall be new and undamaged and shall be accompanied by certified test reports. The manufacturer's mill identification mark shall be provided on components for traceability as required by the referenced specifications. Components shall be stored and handled in the manner recommended by the manufacturer to prevent permanent deflection, distortion or damage. Any such permanent deflection, distortion, or damage shall be repaired by the Contractor at the Contractor's expense to the satisfaction of the Owner. Storage of metal materials and/or fabrications should also facilitate required inspection activities.

3.2 QUALITY ASSURANCE

A. Fabricate and install steel components in accordance with AISC 303 and AISC 360. Fabrication is to occur in accordance with the fabricator's quality program. Upon request, the fabricator may be asked to submit this quality program to the Owner for review.

3.3 FABRICATION

A. The Contractor shall obtain all field measurements required for proper and adequate fabrication and installation of the work. Exact field measurements are the Contractor's responsibility.

B. Metal preparation: All structural steel and miscellaneous metal fabrications shall be fabricated in strict accordance with the approved shop drawings and the referenced standards. Materials must be straight before being laid out or worked. If straightening is necessary it shall be done by methods that will not damage the metal. Sharp kinks or bends shall be cause for rejection of the material. Material with welds will not be accepted except where welding is definitely specified, indicated or otherwise approved. Bends shall be made by industry standard method such as dies, press brakes or bending rolls. Where heating is required, precautions shall be taken to avoid overheating the metal and it shall be allowed to cool in a manner that will not damage the metal. Proposed flame cutting of material shall be subject to approval and shall be indicated in the shop drawings. Shearing shall be accurate and all portions of the work shall be neatly finished.

C. Bolt holes shall be provided where required or specified and at the proper location or position. Holes in metals members shall be shop punched and reamed or drilled. Flame cutting or drilling of holes shall not be allowed. Unless otherwise indicated or specified, all bolt holes through metal members shall be standard size; 1/16 inch larger in diameter than the diameter of the fastener being installed. For steel assemblies to be galvanized after assembly, all holes shall be oversize; 1/8 inch larger in diameter than the diameter of the fastener being installed.

D. Metal may be cut by mechanically guided or hand-guided torches, provided an accurate profile with a surface that is smooth and free from cracks and notches is obtained. Surfaces and edges to be welded shall be prepared in accordance with AWS requirements. Where structural steel is not to be welded, chipping or grinding will not be required except as necessary to remove slag and sharp edges of mechanically guided or hand-guided cuts not exposed to view. Hand-guided cuts that are to be exposed or visible shall be chipped, ground or machined to sound metal.

E. Fit exposed connections accurately together to form tight hairline joints. Weld connections which are not to be left as exposed joints, but cannot be shop welded because of shipping size limitations. Do not weld, cut or abrade the surfaces of exterior components which have been hot-dip galvanized after fabrication, and are intended for bolted or screwed field connections.

F. Shop assembly: Structural unit furnished shall be assembled in the shop to determine the correctness of the fabrication and matching of the component parts unless otherwise specified. Tolerances shall not exceed those shown. Each unit assembled shall be closely checked to ensure that all necessary clearances have been provided. Errors or defects disclosed shall be immediately remedied by the Contractor without cost to the Owner. Before disassembly for shipment each piece of a structural unit shall be match-marked to facilitate erection in the field. The location of match-marks shall be indicated by circling with a ring of white paint after the shop coat of paint has been applied or as otherwise directed.

G. Metal fabrications shall be placed accurately in location, alignment and elevation, plumb, level, true and free of rack, measured from established lines and levels.

H. Dissimilar metals. Where dissimilar metals are in contact, such as in steel to aluminum connections, the surfaces shall be protected to prevent galvanic action. All bolted connections shall be isolated by using UHMW PE or fiberglass insulating washers a minimum of 1/16 inch

thick, spacers and nylon sleeves (ferrules) in the bolt holes to prevent steel bolts from coming in contact with aluminum. Isolating material shall cover the entire contact surface and shall be applied in conformance with the manufacturer's recommendations. Isolating material shall be shown on the shop drawings.

I. For assemblies to be galvanized after welding, the fabricator shall detail the assembly in accordance with ASTM A384 recommendations – see Technical Specification Section 09 97 13 – Steel Coatings.

3.4 GENERAL WELDING REQUIREMENTS

A. Welding shall be done in accordance with AWS procedures, including procedures for repair of defective welds.

B. All welds shall be visually inspected by a Contractor provided independent testing company. The components shall be inspected as statically loaded, non-tubular and tubular connections in accordance with AWS requirements.

C. All welds and edges that may be encountered by the public after construction shall be ground to remove all burrs and weld splatter to the satisfaction of the Owner.

D. The Owner, at his discretion, may non-destructively test welds in accordance with AWS criteria. Acceptance criteria shall be for non-cyclic loading. Welds failing shall be repaired at the Contractor's expense, which will also include all costs for retesting to achieve a passing inspection test.

3.5 STEEL WELDING

A. Qualifications. Steel welding shall be performed by welders certified as being qualified in accordance with AWS D1.1, Section 5, Parts C and D or WABO for steel welding. Welders shall be qualified to perform full penetration groove welding in all positions of the relevant type (plate, tube, etc.), using the procedures, materials, and equipment of the type required for the work. All welding shall conform to AWS D1.1. All welds shall be visually inspected by a Contractor provided independent testing company.

B. Weld filler metal. Weld filler metal shall meet Charpy requirements of 20 foot-pounds at -20 degrees Fahrenheit and shall have chemistry similar to the base metal. Filler metals shall only be used in welding positions recommended by the filler metal manufacturer, and any welds not conforming to manufacturer's recommendations shall be removed and replaced by the Contractor at the Contractor's expense. Welding consumables shall be stored in accordance with the manufacturer's recommendations and in accordance with AWS requirements and recommendations. Overmatching weld filler metals shall be avoided.

C. Preheat. Preheat shall be based on material grade and thickness in accordance with AWS requirements.

D. Inspection timeline. Prior to galvanizing, all required weld inspections and required repairs shall be performed.

E. Welding galvanized/metalized components. All welding shall be done prior to galvanizing if possible, unless otherwise required for field-assembly. Galvanizing/metalizing within one inch of the finished weld location shall be removed prior to welding.

F. Fillet weld soundness Test. Fillet weld procedures shall be qualified by a fillet soundness test in accordance with AWS requirements.

3.6 ALUMINUM WELDING

A. Aluminum items shall be fabricated in accordance with AA's specifications for aluminum structures and AWS D1.2, Structural Welding Code Aluminum.

B. Qualifications. Aluminum welding shall be performed by welders certified as being qualified in accordance with AWS D1.2 for full penetration groove welding in all positions, using the procedures, materials, and equipment of the type required for the work. All welding shall conform to AWS D1.2.

C. Weld filler metal. Weld filler metal shall be used in full conformance with the manufacturer's recommendations unless otherwise proven in a procedure qualification test.

D. All welding shall be done in conformance with a qualified welding procedure. All welding procedures shall be qualified in accordance with AWS D1.2 requirements.

E. The Contractor shall not use oxyfuel gas cutting, carbon arc cutting or gouging processes, or oxyfuel flames to preheat.

F. Mechanically remove the plasma arc and laser cut edges from 6xxx series alloys by removing a minimum of 1/8 inch of metal from the cut edge.

G. Prepare and clean the joint prior to assembly and degrease the surfaces with a solvent. Maintain surface cleanliness throughout the assembly and welding process.

H. Shop rags shall not be used to clean joints; instead use clean cloth or paper towels.

I. Joints shall not be cleaned by using compressed air.

J. Wire brushes can only be used for cleaning after a joint is solvent cleaned.

K. Tools and the work area shall be kept clean throughout the duration of the work.

3.7 SURFACE PREPARATION

A. Painting operations shall occur indoors in a controlled shop environment.

B. Paint products shall be used in full conformance with the manufacturer's recommendations.

C. Do not apply coatings in snow, rain, fog, or mist; when relative humidity exceeds 85% at temperatures less than 5° F above the dew point; or to damp or wet surfaces.

D. Steps for surface preparation prior to painting shall be as follows unless otherwise recommended by paint manufacturer or specified in other related Specifications:

1. SSPC SP-1 Solvent Cleaning

2. SSPC SP-10 Commercial Blast Cleaning with a minimum angular profile of 1.5 mils.

E. Prior to painting verify that surfaces to be coated are dry, clean and free of dust, dirt, oil, wax, grease or other contaminants.

F. Apply primer immediately after blast cleaning, adhering to manufacturer's recommendations for maximum lag time between blasting and painting.

3.8 INSTALLATION

A. General. All parts to be installed shall be thoroughly cleaned. Packing compounds, rust, dirt, grit and other foreign matter shall be removed. Holes and grooves for lubrication shall be cleaned. Enclosed chambers or passages shall be examined to make sure that they are free from damaging materials. Where units or items are shipped as assemblies they will be inspected prior to installation. Disassembly, cleaning and lubrication will not be required except where necessary to place the assembly in a clean and properly lubricated condition. Pipe wrenches, cold chisels or other tools likely to cause damage to the surfaces of rods, nuts or other parts shall not be used for assembling and tightening parts.

B. Alignment and settings. Each structural unit shall be accurately aligned by the use of steel shims or other approved methods so that no binding in any moving parts of distortion of any member occurs before it is fastened in place. The alignment of all parts with respect to each other shall be true within the respective tolerances required.

C. All galvanized steel hardware surfaces to be in contact with new treated lumber shall be covered with a layer of dielectric grease prior to installation. The Contractor shall take all required measures to ensure that dielectric grease is applied in a careful manner, and excess grease removed prior to hardware installation. Any grease that has been inadvertently applied to other components shall be immediately removed.

D. All bolts shall be installed at the proper location and set straight and square with connecting members. Bolt installation shall conform to the requirements of AISC specification for structural joints using ASTM A325 Bolts for steel and A276 for stainless steel.

E. Bolts, nuts, and screws shall be tight in accordance with industry standards. Carbon steel bolts shall be tightened with the turn-of-the-nut method unless otherwise noted. Bolts, nuts, and screws shall be tightened firmly and uniformly but care shall be taken not to overstress the threads. Care shall be exercised when tightening bolts passing through tubular members so as not to distort the member.

F. When a lock nut is used for a metal-to-metal connection, the lock nut shall be installed first at approximately half-tightness, followed by the full nut installed to full tightness. The lock nut shall be held in place while the full nut is tightened.

G. Driving or drifting bolts will not be permitted

H. Holes for concrete anchors shall be made using a steel plate template by either core drilling or hammer drilling with a tool adequate for the task. Diamond-tipped tools shall not be used. Holes shall be thoroughly cleaned with a wire brush and oil-free compressed air.

I. Concrete anchors shall be installed in accordance with the Manufacturers recommendations. Special inspection is required for all adhesive anchors.

J. Holes for anchors shall be inspected after final cleaning for conformance with the project requirements and manufacturer's installation instruction by an independent testing agency. Reports are to be submitted to the Owner for approval and shall be approved prior to making the anchors inaccessible.

3.9 HANDLING AND LIFTING

A. Means and methods are the full responsibility of the Contractor. Handling and lifting shall be done in a way so as to prevent damage. Care shall be taken to avoid damaging coatings during handling. The Contractor shall develop and use lifting and handling plans if required for safety reasons (such as overhead lifting), or to ensure that components of the work are protected from damage.

B. All lifting equipment shall comply with industry standards, and be appropriately labeled if required.

3.10 FIELD QUALITY CONTROL

A. Testing and Inspection:

1. General: Provide access to testing and inspection agency so that specified testing and inspection can be safely accomplished.

2. Field welded connections: Inspect and test field fabricated welds as follows:

a. Visually inspect all field welds.

END OF SECTION 05 50 00 – METAL FABRICATIONS

DIVISION 6 – WOODS, PLASTICS, AND COMPOSITES

SECTION 06 10 00 –ROUGH CARPENTRY

PART 1 - General

1.1 SUMMARY

A. This division covers that work necessary for furnishing and installing all rough carpentry and Timber Piling as described in these Technical Specifications and as shown on the Contract Drawings. Work included in this Technical Specification is as follows:

1. Timber Landings (Framing, Railing)
2. Composite / Grating
3. Timber piling

1.2 RELATED SECTIONS

A. Technical Specification Section 01 33 00 – Submittal Procedures

1.3 APPLICABLE PUBLICATIONS

A. U.S. Department of Commerce/National Institute of Standards and Technology - American Softwood Lumber Standard PS 20.

B. American National Standards Institute / American Forest and Paper Association (ANSI/AF&PA)

C. American Wood Council National Design Specifications – NDS for Wood Construction

D. FDOT (2016) Section 952, Section 470, Section 953.

1.4 SUBMITTALS

A. Shop Drawings showing details of carpentry including connections for Marine Platforms only.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Structural lumber shall be of the nominal dimensions shown on the Contract Drawings and shall not exceed 19 percent moisture content when installed. All pieces shall be Southern Pine No. 1 Dense grade or better unless otherwise specified on the Contract Drawings.

B. Lumber and other wood members shall meet requirements of FBC Section 2303, Minimum Standards and Quality.

C. Accessories including bolts with necessary nuts and washers, timber connectors, drift pins, dowels, nails, screws, spikes, and other metal fastenings shall A316 Stainless Steel. Bolts shall be provided with washers under nuts.

D. Nails shall be stainless steel round wire of standard form except ring shank or stainless steel screws shall be used for all deck attachments. Spikes shall be stainless button-head boat spikes.

E. Timber Treatment: The method of treatment for all such timber materials shall be in accordance with AASHTO M 133, or American Wood Protection Association (AWPA) Use Category Standard (USC) – U1, with the exceptions and additions as specified in FDOT Section 955 – Timber Treatment for Salt Water Environment.

F. Composite Decking: Anti-Slip composite decking shall be as specified by BearBoard (Commercial Use), or approved similar.

G. Composite Decking Fastening: Use Stainless Steel screws, #10 x 2.5" or 3" long, square drive stainless steel deck screws.

H. Timber Piling: Piles shall be cut from Southern Pine and shall contain at least 30% of summer wood. Timber piles shall meet the requirements of FDOT (2016) Standard Specification Sections 953 and 955 for additional specifications for Timber Piling.

PART 3 - EXECUTION

3.1 CONSTRUCTION

A. Timber Structures: See FDOT Section 470 – Timber Structures.

B. Timber Treatment: See FDOT Section 955 – Timber Treatment

C. Accurately cut and frame all lumber so that joints will have a close fit over entire contact surface. Secure lumber and piles in their proper alignment. No shimming will be permitted in making joints, nor will open joints be accepted. Bore holes in small timbers for boat or wire spikes with a bit of the same diameter or smallest dimension of the spikes, when necessary, to prevent splitting. Counterboring for counter-sinking shall be done wherever smooth faces are required.

D. Connectors and fasteners shall comply with the applicable provisions of FBC Sections 2304.9.1 through 2304.9.7. The number and size of fasteners connecting wood members shall not be less than that set forth in FBC Table 2304.9.1. Fabrications shall be installed as shown on the approved shop drawings. All members shall be accurately located and erected plumb and level.

END OF SECTION 06 10 00 – ROUGH CARPENTRY

DIVISION 13 – SPECIAL CONSTRUCTION
SECTION 13 34 23 – PREFABRICATED TICKET BOOTH

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK: The work herein includes the provision and installation of a prefabricated aluminum booth as shown herein and includes all accessories, HVAC and electrical systems. Unit shall be completely preassembled and pre-wired. Unit shall be Florida Product Approved. Unit shall comprise of components and coatings intended for Marine Environment.

1.2 RELATED DOCUMENTS:

A. Related Sections include the following;

1. Section 01 33 00 – Submittal Procedures

1.3 REFERENCES

A. ASTM B 209 – Aluminum and Aluminum Alloy Sheet and Plate

B. ASTM B 241 - Aluminum and Aluminum Alloy Seamless Pipe and Seamless Extruded Tube

C. ASTM B 429 - Aluminum Alloy Extruded Structural Pipe and Tube

D. ASTM B 483 - Aluminum and Aluminum Alloy drawn Tubes for General Purpose Applications

E. ASTM C 578 – Rigid, Cellular Polystyrene Thermal Insulation

F. ASTM C 1289 – Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board

G. High Pressure Decorative Laminates, ANSI/NEMA Standard LD3

H. NFPA 70 – National Electric Code

I. Underwriters' Laboratories

J. Florida Building Code, 5th Edition

1.4 SYSTEM PERFORMANCE REQUIREMENTS

A. General: Provide a complete, integrated prefabricated building system capable of withstanding structural and other loads, thermally induced movement, and exposure to weather without failure or infiltration of water into building interior. Include primary and secondary framing, roof and wall panels, and accessories complying with requirements indicated, including those in this Article.

1.5 PERFORMANCE REQUIREMENTS

A. Design Load Criteria: Design building structure and enclosure including but not limited to main frames, bracing, siding, roof system, louvers, doors and connections to withstand the following loads and environmental conditions in combinations that produce the maximum stresses in each member or component as prescribed by "Design Standards" listed herein.

1. All wind forces shall be determined according to the provisions of the Florida Building Code, 5TH Edition for the minimum wind criteria stated below. Include all appropriate shape, height, and gust factors for the main wind force resisting system and cladding. To calculate the maximum net roof uplift for wind, use 60% of the dead load only.

a.	Basic wind speed (ultimate):	150 mph.
b.	Risk Category:	II
c.	Exposure:	D
d.	Enclosure	Enclosed Building*

* To achieve enclosed classification, all glazed openings shall be impact resistant or protected with impact resisting covering.

2. Live load

a. Roof: 20 psf. (Reduction allowed in accordance with FBC)

b. Floor: 50 psf.

3. Collateral loads: Design for the following additional loads:

a. Uniform load: 5 psf.
b. Concentrated loads: Location and magnitude as shown on the drawings or as dictated by mechanical requirements.

B. Building Code- Comply with applicable requirements of:

1. Florida Building Code (FBC), 5th Edition.

1.6 SUBMITTALS

A. Product Data - Manufacturer's catalog description and cut sheets including standard and optional features.

B. Shop Drawings – Include plans, elevations, sections. Indicate standard and optional component features, dimensions, materials, anchoring details, and other items required for fabrication and installation. Provide Florida Product Approval and/or signed and sealed drawings and calculations from a registered professional engineer in the State of Florida.

1.7 MEASUREMENTS

A. Verify all dimensions by taking field measurements and from final accepted shop drawings; proper fit and attachment of all items is required.

B. Coordinate framing and electrical rough-in installations to properly conform to prefabricated unit.

1.8 QUALITY ASSURANCE

A. Source Limitations: Obtain prefabricated booths through one source from a single manufacturer.
B. Product Options: Do not modify intended aesthetic effects, as judged solely by Architect, except with Architect's approval.
C. Regulatory Requirements: Comply with the 2010 ADA Standard for Accessible Design and/or jurisdiction having authority.
D. Electrical Devices and Fittings: Listed and labeled as defined in NFPA 70, Article 100
E. Safety Glass: Category II materials complying with testing requirements in CPSC 16 CFR 1201.
F. Appliances: UL listed and labeled.

1.9 WARRANTIES

A. Manufacturer's standard 1-year warranty for workmanship

B. Manufacturer's standard warranty for installed components

1.10 DELIVERY, STORAGE AND HANDLING

A. Transport products/assemblies to avoid damage during shipment, with all tags and labels intact and legible, as applicable for timely application/installation.

B. Inspect for and note any and all damages to products on the carrier's bill of lading, and report damages immediately for proper compensation and reorder of product if necessary.

C. Handle materials and product assemblies to prevent damage from dropping, improper handling, damages, and careless storage.

PART 2 – PRODUCTS

2.1 PREFABRICATED UNIT REQUIREMENTS

A. Unit shall be shipped completely assembled and pre-wired. Coordinate electrical rough-in installations to properly conform to pre-fabricated unit.

B. As required, manufacturer must be approved by the State of Florida Building Commission as a certified manufacturer of prefabricated buildings in the State of Florida; State of Florida Building Commission-issued insignia shall be affixed to the prefabricated booths and have minimum 5 years of experience manufacture booths.

2.2 COMPONENTS

A. Frame: Frame comprising the structure shall be tubular aluminum frame, painted to Owner's specified color. Aluminum tubes shall be mechanically fastened into each panel for reinforcement as required for loading, including all necessary hardware. Hardware shall be of stainless steel, zinc plated, or aluminum.

   (Fiber glass, galvanized steel, or regular steel construction not acceptable for manufacturing of booth)

B. Prefinished Aluminum Wall panels: Impact resistant, moisture resistant and expansion resistant composite with smooth finish aluminum exterior sheets insulated with rigid insulation providing a minimum "R" factor of 13 and thermal barrier; Interior panels shall be painted to Owner's specified color aluminum composite material. Custom wall panel design as required per drawing. Exposed screws, rivets or other mechanical fasteners on wall panels are unacceptable.

   (Fiber glass, galvanized steel, or regular steel construction not acceptable for manufacturing of booth)

C. Roof: Roof panel shall be a minimum of 3 inch thick composite and shall have prefinished aluminum finish on top and bottom. Provide standard flat roof with 2ft offset overhang over ticket windows. Roof shall be sealed at all joints and seams for a complete weatherproof roof system using a Florida Building Commission approved or Miami Dade county accepted product.

D. Glazing: Glazing shall be Low E insulated laminated impact resistant safety glazing. Refer herein for location of glazed areas.

E. Doors: Swing door(s) with pre-installed lever type lock and keys, continuous aluminum geared hinge, and hydraulic closer. Door shall be manufactured from extruded aluminum sections, with a fixed impact window glazing to match ticket windows. Door panel shall match the exterior of the booth. Heavy duty hardware and manufacturer's standard commercial grade locking device including dead bolt lock for impact resistance to be factory installed.

F. Flooring: Aluminum treadplate floor covering over aluminum tube sub-floor supports. Supports to be spaced to minimize defection without failure, and welded to the booth frame as an integral part of the booth framing system. Required number of pre-engineered and pre-drilled anchor clips to be provided for uplift.

G. Counter: Unit shall be provided with plastic laminate over plywood counter as shown herein. Counter shall be mechanically fastened to reinforced rib sections of wall structure and include drawers and shelving. Provide access opening for electrical cords as required.

2.3 ELECTRICAL

A. Unit shall be pre-wired with interior grade plastic coated #12 THHN copper stranded wiring run through ½ inch EMT conduit. Unit shall be supplied with a 125-amp 120/240 volt, S.P. 8-circuit

load center. Manufacturer to supply branch circuit breakers for all factory supplied electrical equipment. Standard load center does not include main breaker.

B. Electrical rough-in to be coordinated by contractor for proper placement in slab to match prefabricated booth electrical access cut out in floor if required

C. Unit shall be equipped with a wall switch for lights and with minimum two double duplex electrical receptacles, located as shown on shop drawings.

D. Unit shall be equipped with a LED light fixture. Number, size and location of lights as maximum allowable by energy code.

E. Units shall be wired in accordance with National Electric Code (NEC). All components shall be UL listed or ETL listed.

F. HVAC: Unit shall provide sufficient BTU rating for the area where the project is located and size of prefabricated booth specified. Unit shall include an impact resistant louvered grille which must be a Florida Building Commission approved Miami Dade county accepted product. Unit shall be thermostatically controlled. Unit shall be pre-wired and UL/ETL listed.

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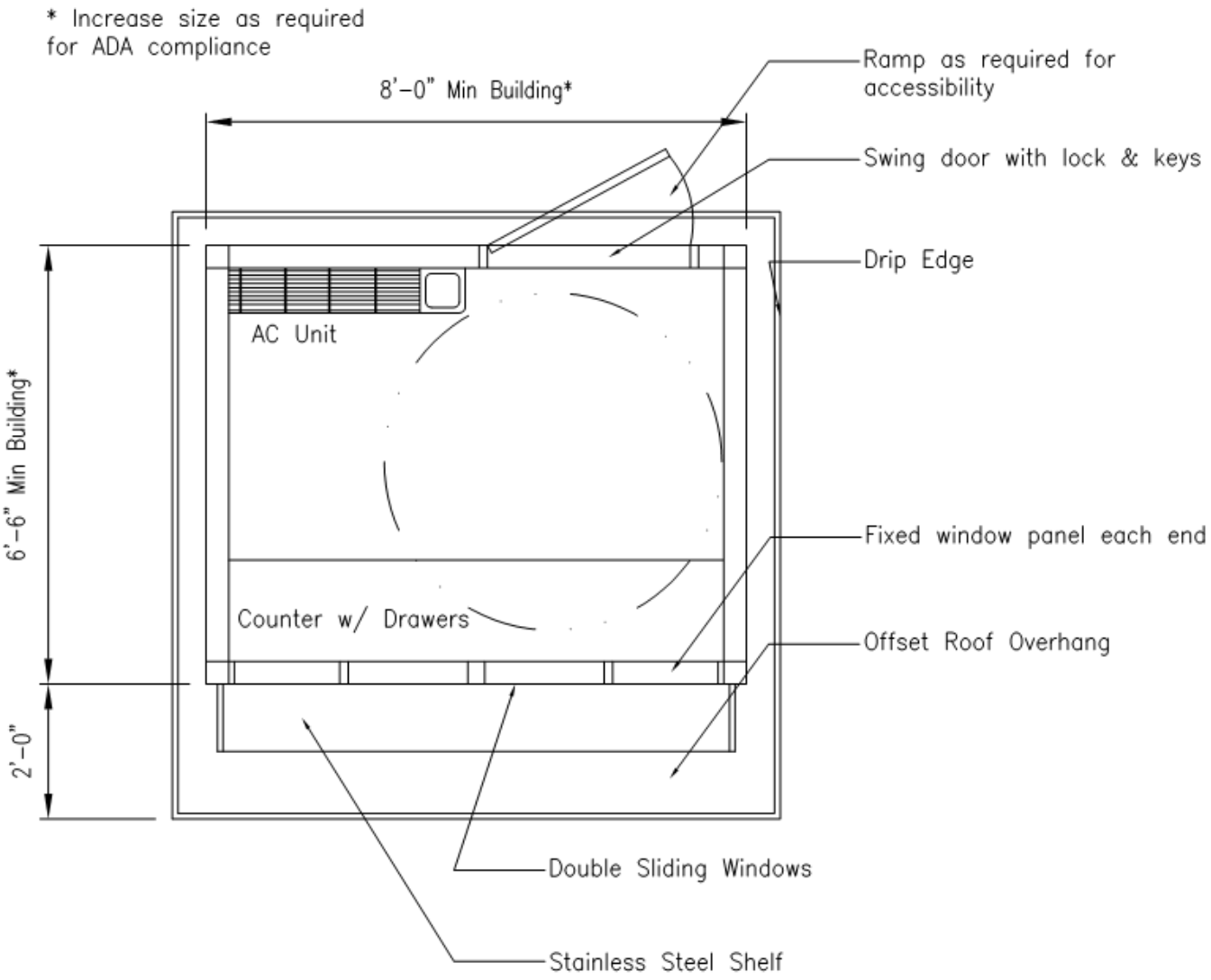
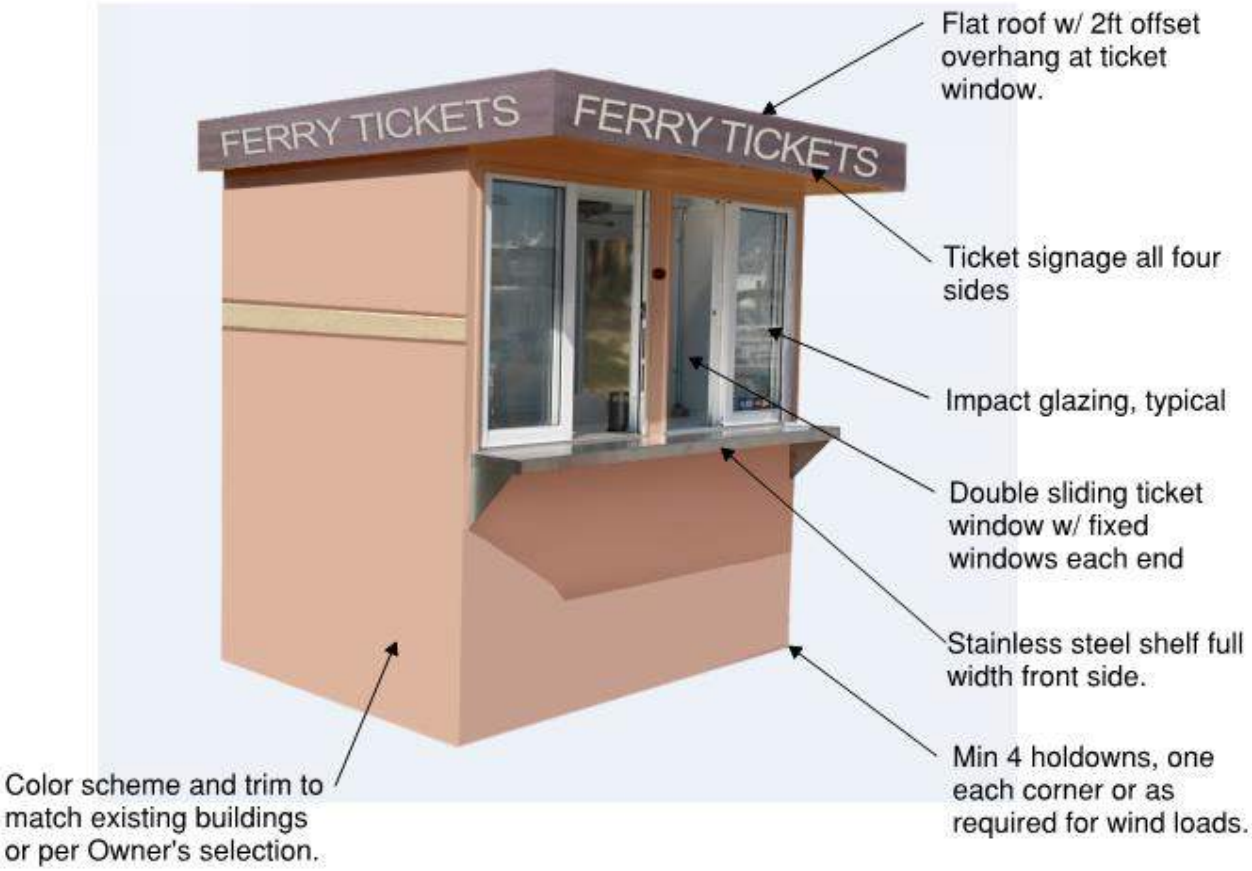
2.4 PLAN



ADA ACCESSIBLE TICKET BOOTH PLAN

2.5 ELEVATION



ADA ACCESSIBLE TICKET BOOTH ELEVATION

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions for compliance with requirements for installation tolerances and other conditions affecting performance.
B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Anchoring system complete per final accepted shop drawings and in full accordance with the manufacturer's specifications and instructions. Minor adjustments to the booth may be necessary at time of installation, due to possible variances and irregularities of support framing. Specifications and electrical rough-in to be coordinated with booth manufacturer.

B. Set booth plumb and aligned. Level true and ship as required.
C. Fasten with stainless steel threaded rods at anchor points. Coordinate anchor points with existing and new framing underneath booth.
D. Connection to electrical service shall be performed by a local licensed electrician, per electrical requirements.

3.3 ADJUSTING AND CLEANING

A. Adjust doors, operable windows, and hardware to operate smoothly, properly, and without binding. Confirm that locks engage easily without forcing or binding.
B. Lubricate hardware and other moving parts.

END OF SECTION 13 34 23 – PREFABRICATED TICKET BOOTH