

SECTION 061325 – TIMBER CONSTRUCTION

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Furnish all labor, materials, transportation, and services to complete the timber frame system.
- B. Related Work:
 - 1. Section 061000 - Rough Carpentry
 - 2. Section 061200 - Structural Insulated Panels
 - 3. Section 061719 – Cross-Laminated Timber
 - 4. Section 061800 – Glued-Laminated Construction

1.3 SUBMITTALS

- A. Product data: submit product data for proprietary timber connectors.
- B. Shop Drawings: submit detailed shop drawings of the timber frame including timber sizes, dimensions, grades, edge treatment, surface treatment, finishes, and connection joinery details. Shop drawings may take the form of paper drawings, electronic Computer Aided Drafting (CAD) files or a Building Information Model (BIM).
- C. Shop drawings shall be prepared under the supervision and direction of a Professional Engineer licensed in the jurisdiction where the project is located. Drawings submitted for approval shall be signed and sealed by the engineer.
- D. Samples: submit samples and mock-ups of timber materials, including surface treatment and finishes.

1.4 QUALITY ASSURANCE

- A. The timber frame contractor shall be a company member of the Timber Framers Guild.
- B. Work shall be in conformance with the ***TFEC 2-2018 Code of Standard Practice for Timber Frame Structures***.
- C. All timbers shall be graded by a grader certified by an approved lumber grading agency or a qualified individual who has completed a timber grading training course. Timbers shall bear a grade stamp or a certificate of grade from the lumber grader.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Keep timbers dry during delivery and storage. Store timbers off of the ground and covered.
- B. Cut and stack timbers so as not to encourage the growth of sap-stain fungi, mold or mildew. Stack timbers with stickers and spacers between bundles to allow air circulation.
- C. Provide reasonable protection during transportation, storage, handling and erection of the timbers to avoid marring, staining, or the accumulation of excess moisture, dirt and foreign matter.

PART 2 – PRODUCTS

2.1 TIMBER

- A. Timber species: [Douglas fir] [eastern white pine] [red oak] [white oak] [southern pine] [Alaska yellow cedar].
- B. Timber grade: [select structural] [No. 1] [No. 2].
- C. [Moisture content: timbers shall be dried in a radio frequency kiln to a maximum moisture content of 19%]
- D. Timbers 8x12 and smaller shall be free of heart center (FOHC). Timbers larger than 8x12 shall be boxed heart.
- E. Dressing: timbers shall be surfaced four sides (S4S) [rough sawn] [hewn]. Timber sizes are [nominal] [actual] dimensions.

2.2 TIMBER CONNECTORS

- A. Wood pegs: straight grained white oak conforming to ASTM D8023. If tapered pegs are used, pegs shall be tapered for at least 1/3 of their length and at least four inches longer than the thickness of the timber in which they are driven so that the tapered section protrudes from the timber.
- B. Bolts and lag screws: ASTM A307 hot-dip galvanized.
- C. Screws: TimberLok by FastenMaster [RSS structural screws by GRK] [SDS screws by Simpson Strong-tie] [SWG ASSY SK by Wurth].
- D. Post base anchors: Timberlinx A475.
- E. Steel connection plates, straps, and bars: ASTM A36.

2.3 FINISHES

- A. Penetrating sealer: Heritage Natural Finishes – Original finish [exterior finish].

2.4 FABRICATION

- A. Timbers shall be fabricated in strict conformance to approved shop drawings. Fabrication prior to receipt of approved shop drawings shall be at the Contractor's risk.
- B. Connection Joinery: Timbers shall be fabricated to join tightly and in proper alignment at the time of assembly. Small (1/8" or less) variations where the faces of joints come together (in alignment or separation) are acceptable. Provisions shall be made in the detailing of joinery to allow for dimensional changes (joint separation and alignment) associated with timber drying shrinkage.
- C. Chamfers: Exposed edges of posts and beams shall be chamfered with ski tip stops.

PART 3 – EXECUTION

3.1 ERECTION

- D. Field measure and verifying that the foundations and any structural framing that supports the timber framing are in the correct location, alignment, and at the proper elevation. The Contractor shall not proceed with work until unsatisfactory conditions have been corrected in an acceptable manner. Commencement of erection implies acceptance of conditions.
- E. The Contractor shall be responsible for all temporary shoring and bracing necessary to maintain the stability of the timber frame during erection of the timber frame.
- F. Timbers shall be stored off of the ground and protected prior to erection.
- G. Protruding pegs shall be sawn off flush.

3.2 FINAL CLEAN UP

- A. Repair any marred or damaged surfaces, clean soiled or stained timbers, and apply one coat of penetrating sealer to all exposed surfaces.

END OF SECTION 061325