

# BID PACKAGE #5-5400

## LIGHT GAUGE STEEL BUILDING STRUCTURE

### **BID PACKAGE SUMMARY:**

Includes materials and installation labor for light gauge steel exterior and interior load bearing wall framing, interior non-load bearing wall framing, floor 'C' stud joisframing, roof trusses, exterior sheathing, floor sheathing, roof sheathing and all engineering including an Illinois structural engineer stamp on all load bearing (walls, floors and roof) elements. This bid package will be awarded to only one subcontractor who will be responsible for the structural integrity of the project' s structure.

### **BID PACKAGE SPECIFIC REQUIREMENTS:**

#### **Engineered Exterior Load Bearing Walls**

- 1) Exterior walls to be designed using L/600 deflection and 20 PSF wind load.
- 2) Exterior studs in the size as shown on the plans with the gauge, flange size and spacing determined by the successful provider of this Bid Package.
- 3) Mid-Point horizontal bridging in the stud spaces.
- 4) Exterior corners will be California corners (3 studs).
- 5) All headers are to be engineered to carry the transfer loads imposed on them from above.
- 6) All closed exterior headers are to be stuffed with batt insulation.
- 7) Exterior bearing wall shop drawings will indicate material gauge, stud spacing, header size, beam posts, and all attachments.
- 8) The successful provider of this Bid Package will provide shop drawings to be stamped by a Structural Engineer Licensed in the State of Illinois.

#### **Engineered Interior Load Bearing Walls**

- 1) Interior load bearing walls will be designed using L/600 deflection
- 2) Interior studs in the size as shown on the plans with the gauge and spacing determined by the successful provider of this Bid Package.
- 3) Mid-Point bridging is required in the stud space.
- 4) All headers are to be engineered to carry the transfer loads.
- 5) Interior bearing wall shop drawings will indicate material gauge, stud spacing, header size, beam posts, and attachments.
- 6) The successful provider of this Bid Package will provide shop drawings to be stamped by a Structural Engineer Licensed in the State of Illinois.

#### **Engineered Shear Walls**

- 1) The successful provider of this Bid Package will determine all interior and exterior shear wall locations. Shear wall locations may differ from the shear walls indicated (if so indicated) on the plans.
- 2) Shear walls will be constructed with multiple end studs and flat stock bracing attached to each side of the wall to create the shear X-Bracing. The successful provider of this Bid Package will determine the height and length of the shear walls.
- 3) Through floor hold down anchors and bolt connections to be provided at each end of the shear wall top and bottom.
- 4) Mid-Point bridging is required in the stud space.
- 5) Shear wall shop drawings will indicated material gauge, stud spacing, X-bracing size, attachments, and anchorage.
- 6) The successful provider of this Bid Package will provide shop drawings to be stamped by a Structural Engineer Licensed in the State of Illinois.

**Engineered C-Stud Floor Framing**

- 1) Floor loading is 40# L.L. and 15# D.L. in the units and 100# L.L. and 15# D.L. in the public areas and corridors. The total load deflection criteria is L/360 or unless otherwise shown differently on the plans and specification.
- 2) The depth of the floor joists and track is to be per plans or a depth which produces the most economical floor system as approved by the owner &/or architect.
- 3) Floor joist web stiffeners as required by the successful provider of this Bid Package.
- 4) Floor joist bridging as required by the successful provider of this Bid Package.
- 5) Metal deck termination at interior bearing walls will be handled with a 1 1/2" x 1 1/2" 20gauge metal angle. The angle will be held back 1/2" from the interior bearing wall to provide direct bearing of the wall to the "C" stud floor panel when a metal deck is used.
- 6) C-stud shop drawings will indicate material gauge, spacing, and attachments.
- 7) The successful provider of this Bid Package will provide shop drawings to be stamped by a Structural Engineer Licensed in the State of Illinois.

**Non-Load Bearing Interior Framing**

- 1) All non-load bearing interior walls will be field built using 25 gauge studs 16" OC., with a 1 1/4" bottom track and a slip track at the top of all full height walls.
- 2) All interior headers will have a single track at the rough opening with filler studs @ 16" OC. between the track and the header track.
- 3) Stud sizes for the interior walls will follow the sizes shown on the architectural drawings.
- 4) Interior backing for grab bars, cabinets, hand rails, and others will provide other wall-mounted items.
- 5) No drywall backing will be provided for intersecting walls. Intersecting walls will be held back 5/8" so drywall can be run behind the intersecting wall.

**Roof Trusses**

- 1) The design loads for the roof trusses are 30-10 live and 0-10 dead loads, 80-MPH wind load, and 40-psf load at the catwalk (if one).
- 2) The design and supply of the light gauge steel roof system will include the following services.
  - A. Light gauge steel trusses for gravity and lateral loads with sizes, gauges, and connections at the truss joints.
  - B. Design and stamped truss to truss connections and truss to bearing connections for gravity, lateral and uplift loads.
  - C. Design and stamp the top and bottom chords and web bracing locations.
  - D. Design and stamp the permanent and temporary bracing layout plans for the proper bracing of the roof trusses.
  - E. Design and stamp the roof deck shear transfer framing to transfer the roof deck shear loads from the deck to the building structure.
- 3) Provide the necessary labor, hoisting, equipment, tools, fasteners and materials to completely install the light gauge steel roof trusses including all of the following:
  - A. All truss to truss and truss to bearing attachment connections.
  - B. All permanent and temporary (construction) bracing as showed in the stamped bracing plans required above.
  - C. All shear transfer framing as shown in the stamped shear transfer framing above.
- 4) The successful provider of this Bid Package will provide shop drawings to be stamped by a Structural Engineer Licensed in the State of Illinois.
- 5) The successful provider of this Bid Package will provide a certified roof truss inspection report that trusses are installed per plans and shop drawings.

**Sheathing**

- 1) 5/8" exterior type "x" gypsum sheathing will be applied to exterior wall panels with selftapping screws (screws placed at 8" on the perimeter of the panel and 12" in the field).
- 2) 1 1/2" 25 gauge type b metal deck will be attached to the roof trusses with self tapping screws with the trusses are designed at 48" OC.; if trusses are designed at 24" OC, then one layer of 5/8" cdx plywood (untreated) will be attached directly to the trusses.
- 3) 1 1/2" 25 gauge type b metal deck will be attached to the floor joists with self tapping screws when specified 3/4" T&G cdx plywood or OSB will be used.

## **SUMMARY:**

To insure the structural integrity of the engineered component systems (walls, floors and roof) for this project, this bid package is required to be awarded to one subcontractor who will be responsible for all engineering, materials and installation requirements stated above for the project.

### **The awarded contractor will agree to the following:**

1. To furnish and install the described scope of work including all materials, labor, equipment, tools, engineering and services for the stated lump sum price.
2. To hold this bid open for sixty (60) calendar days after the bid opening date.
3. To accept the provisions of the contract documents.
4. To enter into and execute a contract with the general contractor (or the owner if the contract is written by the owner) if awarded on the following basis and in connection therewith to:
  - A. Furnish all certificates of insurance required by the contract documents.
  - B. Accomplish all work in accordance with the contract documents and as specified above for this bid package.
  - C. Complete the work within the contract time herein specified.
  - D. To complete all non-field prefabrication and field installation work with only union personnel who are in good standings with their respective unions.
  - E. Provide a performance bond and a labor and material payment bond in the full amount of the contract.