

EXHIBIT B – Scope of Work

Intent:

In general, this Bid Package is comprehensive to specific CSI Division Work and related Work as referenced, indicated on, or implied by the Project Drawings, Specifications and Project Manual. Subcontractor acknowledges that the following Scope of Work detail is provided as a courtesy and must be used in conjunction with **all** Project Documents. Scope of Work detail listed is not intended to describe a complete and final work scope. It is provided as a summary overview only.

Document Inclusions:

- Sample subcontract agreement with special provisions and exhibits
- Owner contract
- Exhibit B - this scope of work
- Schedule
- Logistics plan
- Soils Report
- March 29, 2019 75% CD drawings and specifications

Scope of Work Summary:

Furnish all **STRUCTURAL AND MISC STEEL** submittals and shop drawings, fabrication, materials, safety, quality control, labor, equipment and tools, competent supervision, hoisting, scaffolding, campus traffic control measures, and transportation required for a complete installation of all **STRUCTURAL AND MISC STEEL** as outlined in the contract documents.

- ✓ **Include all elevator hoistway steel**
- ✓ **Include all stair railings**
- ✓ **Include all bollards**
- ✓ **Include all masonry top of wall clip anchors**
- ✓ **Include all Vehicular pipe guards**

Trade Specific Scope of Work Items:

The following is a general outline of items specifically included, but not limited to, under this agreement:

1. Provide cleaning of all exposed surfaces furnished under this package prior to final turnover.
2. Subcontractor shall obtain and pay for any required permits, bonds, or fees as required to complete scope of work under this agreement including any required re-inspection fees / costs are responsibility of Subcontractor. It is the responsibility of this Subcontractor to anticipate inspection delays in the installation durations and sequence such work ahead of others as not to impose delays in the schedule.
3. Subcontractor is responsible for all penetrations/block-outs, templates and sleeves in or through concrete, precast concrete, gypsum wall board, ceilings, slabs, roofs or foundations, or any other material or structure necessary to complete this work.

4. Subcontractor understands that multiple areas will be occurring simultaneously and said Subcontractor shall provide required supervision and manpower to maintain multiple work areas. Schedule is not constrained which allows the Drywall and Concrete trades to proceed ahead of schedule, or work floors than anticipated in the schedule. Subcontractor agrees to adjust manpower and supervision requirements to meet acceleration potential of the building structure at no additional cost to Contractor (i.e. electrical rough-ins shall not be constraint on masonry, concrete, installations).
5. Subcontractor understands the schedule and has included multiple crews in order to achieve the required dates.
6. All testing, certification tests, etc. under direction of Owner, Engineer, Inspectors, and governmental authority(s) having jurisdiction. This includes but is not limited to all seismic qualification certifications and/or calculations as required in various elevator specification sections. Certifications/calculations shall be signed and sealed by a qualified professional engineer.
7. This Subcontractor shall make deliveries by trailer truck. Storage space at the jobsite is extremely limited and will only be available as allowed by the CM. Include all necessary equipment, etc. to unload all deliveries.
8. All welding machines shall be gas/diesel type and no electrical power will be made available for this operation on site.
9. Subcontractor shall include 2% of the total contract value for participation in composite clean-up crew. Balfour Beatty will be responsible for managing this crew.
10. Cleaning of streets if soiled by this subcontractor is included immediately upon occurrence before Owner contracts BBC.
11. Flaggers at site entrance are included for your scope of work entering and existing site
12. All Special inspections will be provided by the CMAR. It is the responsibility of this package to review the statement of special inspections, provide all required information/documentation as well as actively participate in the stated inspections. It is the responsibility of this package to coordinate a request for inspections through Balfour Beatty Construction no later than 72 hours in advance of the inspection needed. All costs for failed inspections and/or re-inspections will be the responsibility of this package.
13. All steel products shall be field measured and field verified to prevent rework in field, and to limit field welds
14. Subcontractor shall furnish and install all structural steel columns and beams, including all anchor bolts, bearing plates and base plates.
15. Subcontractor shall furnish and install all **Elevator Hoistway** misc. steel including:

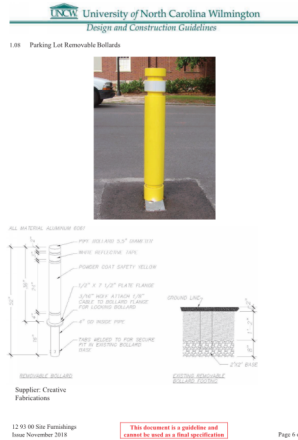
- a. Galvanized Sump pit frames and grated covers. Field anchoring frame to concrete pit, and field cutting of grate around plumbing pipe is included

16. Subcontractor shall furnish and install all **Stairs Railings**.

- a. All material is to be galvanized. Field grind all burrs from galvanizing. Limit cold galvanizing to field welds only, and not field fabrication repairs. Field fabrication repairs shall send railings back to galvanizer.
 - i. See Alternate #5 for stainless steel
- b. Removal and disposal to CM's dumpster all stair temporary wood handrails is included herein that were installed by the precast subcontractor.
- c. Provide locations of any precast embed requirements
- d. Core drilling or anchoring to precast stairs and landings is included with grouting.

17. Subcontractor provide all **Galvanized Bollards** located **per details on S-550**:

- ~~a. Furnish and install at elevated precast deck locations with tops capped, through bolting, and underslab steel full plate washer. Include drilling of slab without spawling precast.~~
 - ~~i. At stair towers~~
- ~~b. Furnish only to the concrete subcontractor all galvanized bollards at the parking deck slab on grade level locations which are to be concrete filled by others.~~
 - ~~i. At stair towers~~
- c. Furnish only to the concrete **and site** subcontractor all galvanized bollards at the parking deck south entry islands (x2) for raised curb area, **slab on grade, and site landscape area** which are to be concrete filled by others.
 - i. At southeast island per 2/AG401
 - ii. At southwest island per 3/AG401
- d. Furnish only to the ~~concrete~~ **site** subcontractor all "removable" galvanized bollards at the parking deck west entry per 3/AG401, **and at south middle deck sidewalk entry (grid D/5.5) shown on AG101** ~~at parking lot, and at building slab edge.~~



- e. Furnish only to the concrete subcontractor all galvanized bollards at the parking lot dumpster area location per detail 3 on civil drawing CS503 which are to be concrete filled by others.
- f. Furnish and install factory prefinished yellow PVC full covers for all bollards vs. field painting yellow (on all bollards per items a-e above)

18. Subcontractor shall furnish and install all **masonry top of wall anchors** shown on structural details on S-560

- a. Field verify conditions at electrical room, IT Room, Security Room, and both elevator machine rooms
- b. All anchorages included

19. Subcontractor shall field measure, furnish and install all galvanized pipe and conduit **Vehicular Guards**.

- a. Field Verify locations will MEP drawings.
- b. Field verify sizes, shapes, and anchorage details to field conditions of columns and walls vs. piping configurations
- c. Do not block cleanout covers or junction boxes required by code for access
- d. Assume 20 locations per floor for total of 100 each.
- e. Detail shall be expansion anchored to precast, 3/8" plate steel, width of MEP item, and length of 36"

20. All steel on this project shall be assumed to be hot dipped galvanized.

21. Subcontractor shall be solely responsible for all equipment and labor necessary for hoisting, unloading, distribution, and installation of his materials.

22. Subcontractor shall provide qualified licensed operators for all equipment required and certified riggers

23. Subcontractor acknowledges that the site has very limited storage space and coordination of deliveries with the Contractor's Superintendent and the project schedule will be critical.

24. Subcontractor to include multiple mobilizations.

25. Project award includes erection times **(fill in durations)**:

Shop Drawing Time: _____ weeks

Fabrication Time: _____ weeks

Estimated duration of erection: _____ weeks

EXCLUSIONS:

1. Cable rail system (by precast subcontractor)
2. Installation of bollards at grade only (by concrete subcontractor)
3. Hoistway elevator beams (by precast subcontractor)
4. Elevator pit ladder (by elevator subcontractor)
5. Dumpster gate (by general trades)

ALTERNATES:

1. **Alternate #5** - Stainless Steel stair railings vs. base bid galvanized steel