Heights Venture
ARCHITECTURE DESIGN

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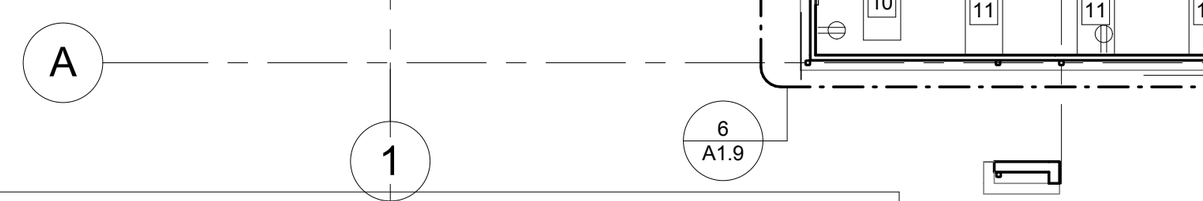
Bid RFI 05
Response January 9, 2017

1. 00 21 00-4: Item D-How many copies of the bid submission are to be included? **One copy, signed in blue ink, marked "Original"**
2. Due to the existing site being vacant, will any background checks be required? (SB-9) No
3. What is the contractor's warranty period on the project? **One Year General Contractor Warranty**
4. Please provide a demolition plan for the existing office mezzanine. **The only demo is the restroom partition layout. Scope for mezzanine is outlined in Addenda 3.**
5. Please verify the quantities listed on the equipment schedule. The quantity column is spaced slightly off from the other columns. **Don't understand spacing issue, but here is the equipment schedule. However it is still GC's responsibility to verify quantities.**
6. Please provide a structural guard rail design and details. **See 12/G3.1 and meet section 1607.7.1 requirements. Section of IBC attached.**
7. Please confirm note 11 on sheet A1.01 that is pointing at the stairs is to be note 12. **Correct.**
8. Please provide existing grades at perimeter of building for pricing concrete ramps. **Not available, no civil for this project. Will have to be field verified.**
9. Sheet A6.1-please provide finish note 4. **10 millimeter thickness for the flooring.**
10. Sheet A6.1- please be aware that the McLennan County Health Department typically does not allow exposed concrete within kitchen prep areas. Typically, any kitchen areas are required to have non-slip tile or epoxy flooring. **Revise floor in prep and storage areas to be VCT, same as the rest of the cafeteria.**



EQUIPMENT SCHEDULE					
NO.	DESCRIPTION	QUANTITY	PROVIDED BY	SIZE	EQUIPMENT NOTES
		1			
01	BASE CABINET	3	OWNER	36"W x 24"D x 35"H	G.C. INSTALL
02	BASE CABINET - 4 DRAWERS	2	OWNER	36"W x 24"D x 35"H	G.C. INSTALL
03	OVERHEAD PROJECTOR	26	OWNER		G.C. INSTALL
04	ABOVE COUNTERTOP CABINET	5	OWNER	36"W x 12"D x 30"H	G.C. INSTALL
05	BIOMEDICAL LAB WALL SERVICE BENCH	4	OWNER	108"W x 24"D x 36"H	G.C. INSTALL
06	PULL DOWN OUTLET	9	G.C.		G.C. INSTALL
07	CABINET	2	OWNER	36"W x 22"D x 84"H	G.C. INSTALL
08	CABINET	22	OWNER	36"W x 22"D x 84"H	G.C. INSTALL
09	CLEAN UP SINK	4	OWNER	55 1/2"W x 28"D x 36 1/2"H	G.C. INSTALL
10	TEACHER'S DESK	7	OWNER	60"W x 30"Dx 30"H	G.C. INSTALL
11	STUDENT LAB DESK	24	OWNER	30"W x 72"D x 36"H	G.C. INSTALL
12	BIOLOGY SKELETON CABINET	1	OWNER	24"W x 22"D x 84"H	G.C. INSTALL
13	LABRATORY EXHAUST SYSTEM	3	G.C.		G.C. INSTALL
14	SHOWER AND EYEWASH	5	OWNER		G.C. INSTALL
15	CHEMISTRY LAB FUME HOOD AND EXHAUST FAN	1	OWNER		G.C. INSTALL
16	LAB WORKSTATION	12	OWNER		G.C. INSTALL
17	DRY ERASE WHITEBOARD	26	OWNER		G.C. INSTALL
18	CAFETERIA TABLE	16	OWNER		G.C. INSTALL
19	CPU LAB PREFAB WORKSTATION	1	G.C.		G.C. INSTALL
20	2-TIER STUDENT LOCKER	303	OWNER		G.C. INSTALL
21	3-COMPARTMENT SINK	1	G.C.		G.C. INSTALL
22	MOP SINK	1	G.C.		G.C. INSTALL
23	PROJECTOR SCREEN	26	OWNER		G.C. INSTALL
24	WIRELESS SCOREBOARD	1	G.C.		G.C. INSTALL

TABLE 1607.1-continued
MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS, L_o, AND MINIMUM CONCENTRATED LIVE LOADS9

OCCUPANCY OR USE	UNIFORM (pst)	CONCENTRATED (lbs.)
34. Stadiums and arenas Bleachers Fixed seats (fastened to floor)	 100[e] 60[e]	-
35. Stairs and exits One- and two-family dwellings All other	 40 100	Note f
36. Storage warehouses (shall be designed for heavier loads if required for anticipated storage) Heavy Light	 250 125	
37. Stores Retail First floor Upper floors Wholesale, all floors	 100 75 125	 1,000 1,000 1,000
38. Vehicle barrier systems	See Section 1607.7.3	
39. Walkways and elevated platforms (other than exitways)	60	-
40. Yards and terraces, pedestrians	100	-

For SI: 1 inch = 25.4 mm, 1 square inch = 645.16 mm^2.
1 square foot = 0.0929 m^2.
1 pound per square foot = 0.0479 kN/m^2. 1 pound = 0.004448 kN,
1 pound per cubic foot = 16 kg/m^3

a. Floors in garages or portions of buildings used for the storage of motor vehicles shall be designed for the uniformly distributed live loads of Table 1607.1 or the following concentrated loads: (1) for garages restricted to passenger vehicles accommodating not more than nine passengers, 3,000 pounds acting on an area of 4.5 inches by 4.5 inches; (2) for mechanical parking structures without slab or deck which are used for storing passenger vehicles only, 2,250 pounds per wheel.

b. The loading applies to stack room floors that support nonmobile, double-faced library bookstacks, subject to the following limitations:
   1. The nominal bookstack unit height shall not exceed 90 inches;
   2. The nominal shelf depth shall not exceed 12 inches for each face; and
   3. Parallel rows of double-faced bookstacks shall be separated by aisles not less than 36 inches wide.

c. Design in accordance with the ICC 300.

d. Other uniform loads in accordance with an approved method which contains provisions for truck loadings shall also be considered where appropriate.

e. The concentrated wheel load shall be applied on an area of 4.5 inches by 4.5 inches.

f. Minimum concentrated load on stair treads (on area of 4 square inches) is 300 pounds.

g. Where snow loads occur that are in excess of the design conditions, the structure shall be designed to support the loads due to the increased loads caused by drift buildup or a greater snow design determined by the building official (see Section 1608). For special-purpose roofs, see Section 1607.11.2.2.

h. See Section 1604.8.3 for decks attached to exterior walls.
   Attics without storage are those where the maximum clear height between the joist and rafter is less than 42 inches, or where there are not two or more adjacent trusses with the same web configuration capable of containing a rectangle 42 inches high by 2 feet wide, or greater, located within the plane of the truss. For attics without storage, this live load need not be assumed to act concurrently with any other live load requirements.

j. For attics with limited storage and constructed with trusses, this live load need only be applied to those portions of the bottom chord where there are two or more adjacent trusses with the same web configuration capable of containing a rectangle 42 inches high by 2 feet wide or greater, located within the plane of the truss. The rectangle shall fit between the top of the bottom chord and the bottom of any other truss member, provided that each of the following criteria is met:
   i. The attic area is accessible by a pull-down stairway or framed opening in accordance with Section 1209.2, and
   ii. The truss shall have a bottom chord pitch less than 2:12.
   iii. Bottom chords of trusses shall be designed for the greater of actual imposed dead load or 10 psf, uniformly distributed over the entire span.

k. Attic spaces served by a fixed stair shall be designed to support the minimum live load specified for habitable attics and sleeping rooms.

l. Roofs used for other special purposes shall be designed for appropriate loads as approved by the building official.

1607.6 Truck and bus garages. Minimum live loads for garages having trucks or buses shall be as specified in Table 1607.6, but shall not be less than 50 psf (2.40 kN/m^2), unless other loads are specifically justified and *approved by the building official.* Actual loads shall be used where they are greater than the loads specified in the table.

1607.6.1 Truck and bus garage live load application. The concentrated load and uniform load shall be uniformly distributed over a 10-foot (3048 mm) width on a line normal to the centerline of the lane placed within a 12-foot-wide (3658 mm) lane. The loads shall be placed within their individual lanes so as to produce the maximum stress in each structural member. Single spans shall be designed for the uniform load in Table 1607.6 and one simultaneous concentrated load positioned to produce the maximum effect. Multiple spans shall be designed for the uniform load in Table 1607.6 on the spans and two simultaneous concentrated loads in two spans positioned to produce the maximum negative moment effect. Multiple span design loads, for other effects, shall be the same as for single spans.

TABLE 1607.6
UNIFORM AND CONCENTRATED LOADS

LOADING CLASS[a]	UNIFORM LOAD (pounds/linear foot of lane)	CONCENTRATED LOAD (pounds)b	
		For moment design	For shear design
H20-44 and HS20-44	640	18,000	26,000
H15-44 and HS15-44	480	13,500	19,500

For SI: 1 pound per linear foot = 0.01459 *kNlm,* 1 pound = 0.004448 kN,
1 ton = 8.90 kN.

a. An H loading class designates a two-axle truck with a semitrailer. An HS loading class designates a tractor truck with a semitrailer. The numbers following the letter classification indicate the gross weight in tons of the standard truck and the year the loadings were instituted.

b. See Section 1607.6.1 for the loading of multiple spans.

1607.7 Loads on handrails, guards, grab bars, seats and vehicle barrier systems. Handrails, *guards,* grab bars, accessible seats, accessible benches and vehicle barrier systems shall be designed and constructed to the structural loading conditions set forth in this section.

1607.7.1 Handrails and guards. Handrails and *guards* shall be designed to resist a load of 50 pounds per linear foot (plf) (0.73 kN/m) applied in any direction at the top and to transfer this load through the supports to the structure. Glass handrail assemblies and *guards* shall also comply with Section 2407.

Exceptions:

1. For one- and two-family dwellings, only the single concentrated load required by Section 1607.7.1.1 shall be applied.
2. In Group 1-3, F, H and S occupancies, for areas that are not accessible to the general public and that have an *occupant load* less than 50, the minimum load shall be 20 pounds per foot (0.29 kN/m).

1607.7.1.1 Concentrated load. Handrails and *guards* shall be able to resist a single concentrated load of 200 pounds (0.89 kN), applied in any direction at any point

along the top, and to transfer this load through the supports to the structure. This load need not be assumed to act concurrently with the loads specified in Section 1607.7.1.

1607.7.1.2 Components. Intermediate rails (all those except the handrail), balusters and panel fillers shall be designed to withstand a horizontally applied normal load of 50 pounds (0.22 kN) on an area equal to 1 square foot (0.093 m^2), including openings and space between rails. Reactions due to this loading are not required to be superimposed with those of Section 1607.7.1 or 1607.7.1.1.

1607.7.2 Grab bars, shower seats and dressing room bench seats. Grab bars, shower seats and dressing room bench seat systems shall be designed to resist a single concentrated load of 250 pounds (1.11 kN) applied in any direction at any point.

1607.7.3 Vehicle barrier systems. Vehicle barrier systems for passenger vehicles shall be designed to resist a single load of 6,000 pounds (26.70 kN) applied horizontally in any direction to the barrier system and shall have anchorage or attachment capable of transmitting this load to the structure. For design of the system, two loading conditions shall be analyzed. The first condition shall apply the load at a height of 1 foot, 6 inches (457 mm) above the floor or ramp surface. The second loading condition shall apply the load at 2 feet, 3 inches (686 mm) above the floor or ramp surface. The more severe load condition shall govern the design of the barrier restraint system. The load shall be assumed to act on an area not to exceed 1 square foot (0.0929 m^2), and is not required to be assumed to act concurrently with any handrail or *guard* loadings specified in Section 1607.7.1. Garages accommodating trucks and buses shall be designed in accordance with an *approved* method that contains provisions for traffic railings.

1607.8 Impact loads. The live loads specified in Section 1607.3 include allowance for impact conditions. Provisions shall be made in the structural design for uses and loads that involve unusual vibration and impact forces.

1607.8.1 Elevators. Elevator loads shall be increased by 100 percent for impact and the structural supports shall be designed within the limits of deflection prescribed by ASME A17.1.

1607.8.2 Machinery. For the purpose of design, the weight of machinery and moving loads shall be increased as follows to allow for impact: (1) elevator machinery, 100 percent; (2) light machinery, shaft-or motor-driven, 20 percent; (3) reciprocating machinery or power-driven units, 50 percent; (4) hangers for floors or balconies, 33 percent. Percentages shall be increased where specified by the manufacturer.

1607.9 Reduction in live loads. Except for uniform live loads at roofs, all other minimum uniformly distributed live loads, L_a, in Table 1607.1 are permitted to be reduced in accordance with Section 1607.9.1 or 1607.9.2. Roof uniform live loads, other than special purpose roofs of Section 1607.11.2.2, are permitted to be reduced in accordance with Section 1607.11.2. Roof uniform live loads of special purpose roofs are permitted to be reduced in accordance with Section 1607.9.1 or 1607.9.2.

1607.9.1 General. Subject to the limitations of Sections 1607.9.1.1 through 1607.9.1.4, members for which a value of $K_{LL}A_T$ is 400 square feet (37.16 m^2) or more are permitted to be designed for a reduced live load in accordance with the following equation:

$$L = L_o\left[0.25 + \frac{15}{\sqrt{K_{LL}A_T}}\right] \qquad \text{(Equation 16-22)}$$

For SI: $L = L_a\left(0.25 + \frac{4.57}{\sqrt{K_{LL}A_T}}\right)$

where:

L = Reduced design live load per square foot (meter) of area supported by the member.

L_a = Unreduced design live load per square foot (meter) of area supported by the member (see Table 1607.1).

K_{LL} = Live load element factor (see Table 1607.9.1).

A_T = Tributary area, in square feet (square meters).

L shall not be less than $0.50L_o$ for members supporting one floor and L shall not be less than $0.40L_o$ for members supporting two or more floors.

TABLE 1607.9.1
LIVE LOAD ELEMENT FACTOR, K_{LL}

ELEMENT	K_{LL}
Interior columns	4
Exterior columns without cantilever slabs	4
Edge columns with cantilever slabs	3
Corner columns with cantilever slabs	2
Edge beams without cantilever slabs	2
Interior beams	2
All other members not identified above including: Edge beams with cantilever slabs Cantilever beams One-way slabs Two-way slabs Members without provisions for continuous shear transfer normal to their span	1

1607.9.1.1 One-way slabs. The tributary area, A_T, for use in Equation 16-22 for one-way slabs shall not exceed an area defined by the slab span times a width normal to the span of 1.5 times the slab span.

1607.9.1.2 Heavy live loads. Live loads that exceed 100 psf (4.79 kN/m^2) shall not be reduced.

Exceptions:

1. The live loads for members supporting two or more floors are permitted to be reduced by a maximum of 20 percent, but the live load shall