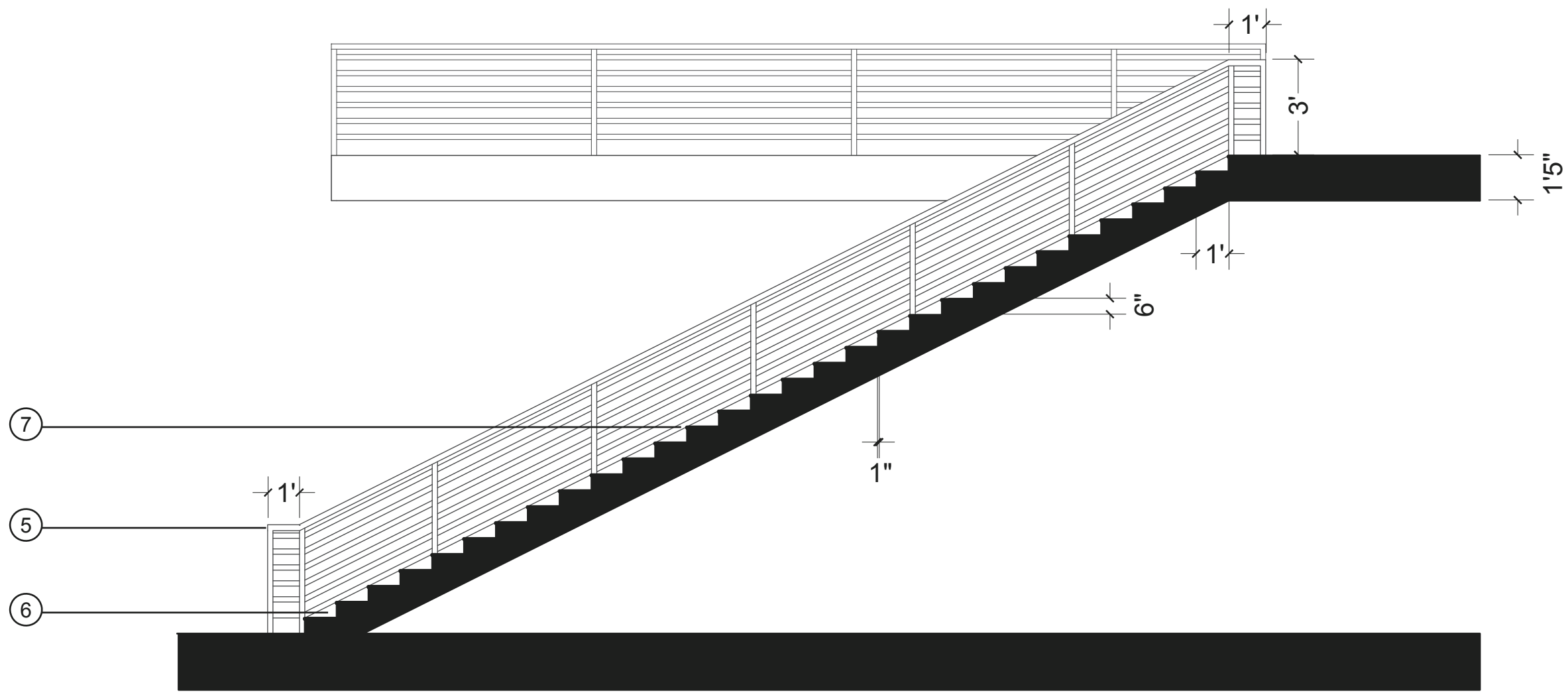


GROUND FLOOR PLAN  
SCALE 1/32" = 1'



CROSS SECTION  
SCALE 1/32" = 1'



STAIR SECTION DETAIL  
MEANS OF EGRESS E  
SCALE 1/4" = 1'

CODE REVIEW

IBC 1015.1 & IBC 1019.1: According to Table 1015.1 Spaces With One Means Of Egress and the occupancy load of the floors of the building, each floor needed additional means of egress. According to Table 1019.1 Minimum Number of Exits for Occupant Load, the minimum number of exits per story is as follows; Floor 1=2 exits, Floor 2 = 4 exits, Floor 3 = 3 exits. The new means of egress exits for the entire building now complies with Table 1015.1 and Table 1019.1.

IBC 1016.1: Exits are so located on each story such that the length of travel does not exceed distances according to Table 1016.1 Exit Access Travel Distance [200 ft for occupancies A, F1, S1, B: 300 ft for S2].

IBC 1017.1: According to Table 1017.1, the corridor on the first floor has a required fire-resistance rating of at least 1 hour [see code annotation 3].

CODE ANNOTATION KEY:

- ③ Corridor serves an occupant load greater than 30, which requires a 1 hour minimum fire-resistance rating. Corridor also results in a dead end and a length of 73' (1017.3), requiring a means of egress arranged adjacent to the dance floor.
- ④ 1020.1.7 & 1020.1.7.1: According to this section, 50% of interior means of egress stairways are required to be enclosed because of the occupancy number for the floors it serves. The smokeproof enclosure stairway shall exit into a public way.
- ⑤ 1012: According to this section, handrails must be changed to comply:
  - Height must be between 34"-38"; is now 36".
  - Perimeter dimension of at least 4"-6.25" with a max cross section of 2.23"; is now 6"x2".
  - Handrail must extend horizontally at least 12" beyond the slope.
- ⑥ 1013: According to this section, handrails must be changed to comply:
  - Opening limitations: open guards shall have balusters such that an 8" diameter sphere cannot pass through any opening.
  - A sphere of 6" cannot pass through the opening of triangular openings formed by the riser, treat and bottom rail of a stairway.
- ⑦ 1009: Nosings are required on stairways and shall not project more than 1.25"

OCCUPANCY LOADS [OCCUPIABLE AREAS ONLY]

- 01. ORCHID HOUSE: U, ASSEMBLY STANDING  
AREA: 268 sf OCCUPANCY: 54
- 02. AQUARIUM: A3, ASSEMBLY STANDING  
AREA: 693 sf OCCUPANCY: 139
- 03. SNAKES/POND: A3, ASSEMBLY UNCONCENTRATED  
AREA: 8268 sf OCCUPANCY: 552
- 04. OUTDOOR EXHIBITION: A3, ASSEMBLY STANDING  
AREA: 9010 sf OCCUPANCY: 1802
- 05. BIRD HOUSE: U, ASSEMBLY STANDING  
AREA: 729 sf OCCUPANCY: 146
- 06. DANCE FLOOR: A2, STAGES AND PLATFORMS  
AREA: 367 sf OCCUPANCY: 25
- 07. RESTAURANT: A2, ASSEMBLY UNCONCENTRATED  
AREA: 1077 sf OCCUPANCY: 72
- 08. KITCHEN: F1, KITCHENS, COMMERCIAL  
AREA: 532 sf OCCUPANCY: 3
- 09. STORAGE: S2, MERCANTILE  
AREA: 469 sf OCCUPANCY: 2
- 10. COFFEE EXHIBIT: A3, ASSEMBLY STANDING  
AREA: 677 sf OCCUPANCY: 136
- 11. COFFEE BAR: A2, KITCHENS, COMMERCIAL  
AREA: 191 sf OCCUPANCY: 1
- 12. INFO DESK: A3, EDUCATIONAL [SHOPS AND OTHER]  
AREA: 75 sf OCCUPANCY: 2

MEANS OF EGRESS  
(STAIRS & RAMPS)

ASSIGNMENT 2  
PAGE: 2 OF 5

48-215 MATERIALS & ASSEMBLY  
SPRING 2017

INSTRUCTOR: DAMIANI

SELENA ZHEN