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| Applicable Codes | IBC 2009 IECC 2009 NFPA 101/2009 Maine State Internal Plumbing Code (Ref. Uniform Plumbing Code 2009) | | |
| Primary Use | Two-Unit Residential with common egress (non-townhouse) | | |
| Secondary Use | Mixed Use Non-separated | | |
| Occupancy Classification | R-3 Residential Group (buildings that do not contain more than two dwelling units) NFPA 101: Residential Unit 2: Per table 1004.1.1: 2001 GSF / 200 Gross = 10 (Actual proposed/expected design load (owner occupied) = 2) Unit 1: 3 bedroom 1743 GSF / 200 Gross = 9 (Actual proposed/expected design load = 4) Basement: Exercise room: 199SF/50SF = 4 Storage, Closet & Mech areas: 388 SF/300 = 1.3 Basement total = 6 | | |
| Construction Type | VB | | |
| Allowable Height & Area | Max Height: 3 stories above grade plane. Area: Unlimited Grade Plane: 100.4 ft. (measured at slab corners) Basement = a story-above-grade plane: The floor above is > 12' above any point on the finished grade around the perimeter. | 3 Stories above grade plane provided | |
| Fire Separation | Fire Partition Locations: walls separating dwelling units in the same building, corridor walls excluding basement (per table 1018.1 occupancy load less than 10), common understair protection. Fire Partitions requirements: all locations listed above shall have a fire-resistance rating of not less than 1 hour (assuming a 13D sprinkler system) Fire Partition at Elevator Lobby: NOT required where elevator shaft enclosure connects more than three stories. Fire Barrier Locations: walls separating common egress stairs from all other interior spaces and shaft enclosures (ex:elevators & mechanical shafts) shall act as fire barriers Fire Barrier requirements: all locations listed above shall have a 1 hr fire rated rating. Continuity: Fire barriers shall extend from the top of the floor/ceiling assembly below to the underside of the floor or roof sheathing, slab or deck above and shall be securely attached thereto. Openings in a fire barrier shall be protected in accordance with IBC sections 707.6 and 715 Garage Separation: 5/8" GWB walls. 5/8" Type X GWB at ceiling. See Section details for 1hr assembly drawing | 13D System to be provided Unit 2 elevator connects 3 stories. Unit 1 elevator connects 2 stories only thus elevator lobby is not | IBC 420.2/709.1/1018.1 IBC 709.3/1018.1/903.3.1.3 IBC 708.14.1 |
| | | | IBC 707.5 |
| | | | IBC 707.5/ 707.6/ 715 |
| | | Workshop included in garage area | IBC 406.1.4 |
| | Door to remaining Group U occupancy (Basement): solid wood door solid or honeycomb core steel door not less than 1 3/8" thick or 1/3 hr fire rated door | | |
| | Fire-Resistance Rating Requirements for Building Elements (hours) | Type VB Construction | IBC Table 601 |
| | Primary structural frame 0 hrs | | |
| | Bearing walls: interior 0 hrs | | |
| | Nonbearing walls and partitions: Interior 0 hrs | | |
| | Floor construction and secondary members 0 hrs | | |
| | Roof construction and secondary members 0 hrs | | |
| | Bearing & nonbearing walls: exterior 0 hrs or required fire-resistance rating per per fire separation distance or 704.10; whichever is greater | | |
| | Exterior Wall Fire Separation Distance for VB Construction | | IBC Table 602 |
| | < 5' separation distance 1 hr | | |
| | 10' ≤ X < 30' 0 hrs | | |
| | X ≥ 30' 0 hrs | | |
| | Interior Fire Separation: R-3 / Utility: 1 hour | | IBC 302.3.2 |
| | Max. area of exterior wall openings based on fire separation distance and degree of opening protection: | | IBC Table 705.8 |
| | The area of unprotected and protected openings shall not be limited for R-3 occupancies, with a fire separation distance of 5 feet or greater | No limit. Minimum separation distance provided is, 10'-1.5" (west elevation) | |
| | Projections: Lesser of 1/3 dist. to lot line frm. protected openings, or more than 12" into areas where openings are prohibited | Eave protection not required. See roof plan. Eaves are less than 2ft | IBC 705.2 |
| | Vertical separation of openings: Does NOT apply to buildings that are three stories or less above grade plane. | | |
| | Horizontal separation: floor assemblies separating dwelling units in the same buildings... and floor assemblies separating dwelling or sleeping units from other occupancies contiguous to them in the same building shall be constructed as horizontal assemblies in accordance to 712. | | IBC 420.3 |
| Exit | Egress/shared corridor: separated from from other interior spaces by FR construction | | IBC 1002 |
| Egress Stair | Min. clear stair width = 36" (for occupant load<50) & 80" min clear headroom (4 3/4" max. projection into headroom allowed in R-3 and Group U that are accessory to R-3) Riser height & tread depth: Per IBC exception in Group R-3 and Group U occupancies that are accessory to a Group R-3 occupancy = 7 3/4" max. stair riser and 10" min. tread depth. (A nosing not less than 3/4" to 1 1/4" nosing shall be provided on stairs with solid risers where the tread depth is less than 11". | | IBC 1009.1 IBC 1009.4.2 |
| Egress Windows | Emergency escape and rescue windows to be provided at all sleeping rooms. Additionally an egress window has been added to basement area (see window schedule). Egress windows to have a min. net clear opening of 5.7 sf. Exception:min. net clear opening of 5.0 sf at grade-floor openings. Minimum dimensions: Min. net clear opening height = 24" / Min. net clear opening width = 20" Max. Height from floor: "Emergency escape and rescue openings shall have the bottom of the clear opening not greater than 44" measured from the floor" Exception: Per AHJ an egress pedestal or bench will be allowed to meet 44" max height from pedestal (in lieu of floor). See plan notes for more details. | | IBC 1029 |
| Accessibility | Fair Housing Act: Does NOT apply as this project as it consists of less than 4 single-story dwelling units and thus is not covered under the Act. | | FHA Part One:Scope |
| Sound Transmission | Air-borne sound: wall partitions and floor/ceiling assemblies separating dwelling units from each other or from public or service areas shall have an STC of not less than 50 (45 if field tested per ASTM E 90) Structure-borne sound: floor/ceiling assemblies separating dwelling units from each other or from public or service areas shall have an IIC rating of not less than 50 (45 if field tested per ASTM E 492) | | IBC 1207.2 IBC 1207.3 |
| Miscellaneous | Automatic garage door openers: shall be listed in accordance with UL 325 | | |