

OUTLINE SPECIFICATION

BUILDING CODE AND ZONING ISSUES - As evidenced by the issuance of a building permit, the project has been approved by all the appropriate departments within the city government. The project is located in an R3 zone and enjoys a use by right. Briefly, this means that the project conforms to the required set backs, provides at least 1.5 to 1 parking, provides 20% of landscaped open space, and does not exceed 3 times the area of the land. As to building construction, the project is a type V one hour construction with a mixed use occupancy type of R-1 (apartments) and S-3 (parking garage). Copies of the construction documents, the building code analysis, soil report, survey, environmental report, and any related correspondence are available upon written request from any buyer. During the construction process, each trade shall be inspected at the rough-in and completion stages by a licensed professional and / or a building inspector from the City and County of Denver. Additional inspections shall be conducted by the public utility company to verify compliance to their standards before the final connections / meters are put in service. Such inspections shall be a final certification that the work has been done properly and shall be indicated by the inspectors signature on the building inspection sign-off card.

WALL, FLOOR, AND ROOF ASSEMBLIES

1. typical roof construction -
 - a. flat roof areas shall be one hour per assembly GA RC 2601. Roofing material shall be modified bitumen with a granulated coating over 3/4" t/g osb over 2x10 joists at 16" oc with R30 fiberglass insulation with vapor barrier, of less than 1 perm facing the warm side, and a 5/8" type x drywall ceiling. Slope the structure 1/4" per foot minimum. Provide prefab attic vents, or other means of ventilation, of the type intended for flat roofs spaced at one 12x12 vent opening per each 300sf.
 - b. sloped roof areas shall be type A asphalt shingles over roofing felt with ice and water shield in the valleys and other exposed locations. The assembly shall be as per GA RC 2601 with 1/2" osb decking over 2x12 rafters at 16" oc, with resilient clips and a 5/8" x drywall ceiling finish. Provide R30 insulation with vapor barrier, of less than one perm, with continuous ridge venting at the peak of the roof by means of a prefab vent which allows 2" of free area per foot of ridge and that this vent shall not ventilate a one foot section of roof longer than 25 feet from each direction from the peak. Where a ridge vent is not possible, provide prefab attic vents, designed for a sloped roof, at the ratio of 1 sf per each 300 sf of ventilated area, but not less than two vents to provide cross ventilation. Where attic vents are not possible, provide equivalent ventilation which is designed to meet the above criteria.
 - c. the existing roof structure shall remain except that the old roofing and the plaster ceiling shall be removed and rigid insulation or blanket insulation, equivalent to R30 with vapor barrier as above, shall be inserted between rafters and finished with drywall the same as the new ceilings. This roof shall be new and vented as in 1b above unless existing vents satisfy the ratio of 1sf of vent opening to each 300 sf of vented attic space. Since this structure is existing, it is not exactly the same as that in 1b, but it is equivalent to the same GA assembly.
2. typical exterior wall and parapet wall construction shall be one hour per UL-U344- and surfaced with hardboard siding, (or, at the third floor "pop up" addition, a 10 mil coating of Tnemic plaster texture over a sealer/filler coat), over an outside layer of 15/32 structural grade osb over 5/8" type x drywall over 2x6 wood studs at 16" oc with R19 fiberglass insulation with vapor barrier and a 5/8" type x drywall wall surface. Where wall thickness is less than 2x6, use rigid insulation to satisfy the R19 requirement. Existing walls are constructed of brick with 3/4" metal lath and plaster overlaid with 3/8 inch drywall.
3. typical floor construction shall be one hour per assembly UL-L501- system no. 1, and shall be 3/4" hardwood over 3/4" cdx plywood over 2x10 joists at 16" oc and a 5/8" type x drywall ceiling. Where the floor is a demising separation between two different units, or units and the parking garage, provide a 50 STC floor per GA FC5120; 31/2" fiberglass insulation shall be added in the joist space and resilient channels shall be applied between the wood joist and the drywall. As a contractor's alternative, use 51/2" fiberglass insulation in lieu of resilient clips. Use suspended framing as required to provide a level ceiling in the parking garage. Where the floor structure is shown as attached to existing masonry walls with expansion bolts, provide Red Head sleeve anchors with 5" minimum penetration per ICBO report no. 2391. The interior finish at bathrooms shall be marble or ceramic tile. Where the floor is existing, the structure is also 2x10 wood joist at 16" oc, with an existing wood floor which will serve as a sub floor for new hardwood, with a new 5/8" drywall ceiling below.
4. typical interior bearing and non-bearing wall construction shall be one hour construction per UL-U333- 5/8" type x drywall both sides over 2x4 wood studs at 16" oc. Where interior walls are demising walls, provide a 50 STC wall per GA WP3260; add 31/2" of fiber glass insulation in the stud space and 1/2" sound deadening board on one side of the wall between the stud and the drywall. Typical existing interior walls shall have the existing plaster removed and replaced with drywall, the same as the new walls.
5. typical foundation, foundation wall or grade wall construction - 8" wide 4000 lb concrete grade beams with ht and spread footings per footing schedule and reinforcement as shown on the drawings. Provide gravel, damproofing, and perimeter drain material as per the soil report. Slope adjacent soil away from the new structure as per the soil report.
6. typical floor slab - 4" thick 4000 lb concrete reinforced with fibermesh or welded wire fabric as shown on the drawings. Provide expansion material between all slabs and foundation walls as per the enclosed soil report.
7. typical steel columns shall be 4" or 5" square structural steel tubing, with bolted connections, welded steel base plates and connection plates as shown on the drawings. Also refer to the structural drawings for steel beams, structural details and structural notes.

DOORS AND WINDOWS

1. typical new exterior window construction - shall be wood double hung, casement, or awning type, and double glazed. Refer to the window schedule. Windows shall match the existing windows to the greatest extent possible. Because of their architectural character, existing windows shall remain to the greatest extent possible.
2. typical interior doors shall be flush panel 13/8" solid core prehung mahogany veneer except those which open to closets, which shall be hollow core. Public hall way doors shall be 20 min, 450 degree rate of rise, mahogany veneer flush doors with approved spring hinges and smoke seals and with 2" solid wood or approved metal frames. Utility doors shall be flush solid core masonite faced 1 3/4" thick. Exterior patio doors shall be prehung fir full pane double glass doors 1 3/4" x 6'-8" high. All doors shall be prehung to the greatest extent practical. Hardware shall be Schlage residential quality with brite brass finish and Plymouth knobs. All doors into exit enclosures or exit corridors from public spaces shall be passage function with no locking device. Doors from exits to the building exterior shall have a storage function with a key always required to enter from the outside and the knob always free to open from the inside.

3. garage doors shall be metal clad with a factory painted finish. An automatic door opener and one control per unit shall be provided. The common garage door shall be 8 feet high x 14 feet wide and shall be equipped with an opener which closes automatically after an appropriate time delay for departing automobiles.
4. skylights shall be double glazed plastic bubbles with two clear layers. Curbs shall be alum finish by mfr and sizes as shown on the drawings.

INTERIOR FINISHES

1. finish carpentry for trim / built ins shall be poplar wood trim in the profiles shown and finished with cherry bark stain to match the cabinet doors and all other clear finished wood. All trim, doors, and cabinet doors shall receive three coats of clear satin varnish or laquer. Cabinet doors shall be cherry wood with european style invisible hinges. Cabinet fillers shall also be cherry wood. The cabinet boxes shall be medium density ¾" particle board with a low pressure almond colored laminate interior. Edges shall be cherry wood tape. Shelves shall be adjustable by means of the peg hole system. For closet rods and shelves, provide 1x pine cleats and particle board shelf with rounded edge. provide double height rods in large closets at more than half of possible locations.
2. interior stairs shall be made with oak treads and risers as produced by rw specialties. Provide 1 1/4" sq vertical balusters with a maximum clear opening of 4". Handrails and guardrails inside the units shall be 36" high. Handrails in public areas will be 36" high and guardrails will be 42" high. Handrails/guardrails shall resist 50lbs per ft horizontal load. Provide round poplar wall rails with brass brackets except in the entry hall.
3. drywall surfaces shall be slick finished, not textured, and receive two coats flat interior latex paint with p1508 anchor white ceilings and walls. Accent walls shall be Ben Moore 952.
4. except in bedrooms, flooring in the shall be ¾" red oak number 2 planks, 2 ¼" wide with felt underlayment. Flooring shall be stained to compliment the trim and coated with two coats of urethane varnish.
5. kitchen counters and backsplash shall be 1 x 1 granite tiles, IMG black and tan, laid with zero gap mortar joints which are colored to blend with the tile to the greatest extent possible. The counters shall be ¾" cdx plywood with a subsurface of ½" wonderboard or durarock screwed in place with nonferrous screws.
6. master bath counters, floor, and tub deck/bench shall be 1 x 1 marble tiles, IMG juperana columbo, and constructed in the same way as kitchen counters. The guest bathroom floors shall also be juperana.
7. the half bath walls shall be 1 x 1 travertine tiles, IMG rojo polished unfilled, and directly glued to the drywall substrate. Floors in these rooms, which are all on the main level of the condominium, shall be red oak.
8. ceramic tile shall be used in combination with the marble in the private bath areas and direct glued to the green board substrate the same as above and grouted with a complementary color. All tile shall be Dal Tile brand. The tile wainscot in master bath shall be 4x4 fawn 136. The shower walls in the master baths shall be 4 x 4 majorca 145 and the walls in the guest baths shall be white, dal 190.
9. the custom ceramic shower pans shall be a non-slip semi-mat finish 2 x 2 mesh innocent blush k163. The pans shall be constructed with a rubber membrane which laps 12" up the walls, and over the shower bench, over a ½" wonderboard subtrate over 1" of mortar and with 1" of mortar above, all pitched to a prefabricated shower drain with an adjustable collar.

TELEPHONE / TV / SECURITY / FIRE ALARM SYSTEMS

1. the telephone system panel board shall be located in the central control room adjacent to the parking garage. Each unit shall have one outlet in the kitchen, living room, and each bedroom. All outlets have multi line capacity.
2. the tv system panel board is also located in the control room. Each unit shall have an outlet in the living room and both bedrooms. In addition, outlets shall be provided with adjacent phone outlets for digital tv and a roof connection for private satellite dishes.
3. the security system panel board is also in the control room. Each unit shall be prewired for future security devices to monitor each exterior door and / or window which may be a possible point of entry. If selected as an option, the security system shall be installed and monitored on a 24 hour basis by Integrated Systems, the provider of the devices.
4. the entry access system shall be an exterior telephone panel with key pad wired for intercom and door access. The phone line required for this system shall also be used as a primary monitoring line for the fire alarm system.
5. the fire alarm panel board is also in the control room and is interlocked with the fire sprinkler system. The fire alarm system shall provide both audible alarms in each unit and an alarm to the 24 hour monitor, Integrated Systems. The alarm shall be triggered by a sprinkler head flowing water, a system smoke detector which is activated, tampering, or other detected causes for concern. The primary phone line shall be as listed above; the secondary phone line shall be the same as the president of hoa home phone line.

FIRE SUPPRESSION SYSTEMS

1. the fire sprinkler system has been designed by a fire protection engineer, reviewed by the fire department and city engineers, and shall be field inspected by the fire department. The residential portion of the systems conforms to NFPA 13R, which requires rapid response residential heads, and the garage portion conforms to NFPA 13.
2. the system shall be fed by a new 4" fire sprinkler line tapped directly from the city street and monitored for tamper or flow as described above.
3. as a protection against accidental discharge, each sprinkler head shall be individually activated by the heat of a fire directly below each head. In this way, a fire in one unit cannot set off sprinkler heads in another.
4. risers and heads shall be carefully located in warm or insulated areas inside the structure so as to prevent freezing.

ELECTRICAL SYSTEMS

1. the design for the electrical system for this project is not different from a similar new construction project. Even though the building structure is a mix of new and old, the electrical system shall be completely new.
2. each condominium unit shall have an electrical service of 125 amps. There shall be a separate electrical service of 125 amps for exterior lights, common hallways, and common garage. There shall also be a separate electrical service of 100 amps for the two private garages fronting on the alley.
3. inside each condominium unit, there shall be adequate power to service the kitchen and other electrical demands as per the requirements of the city electrical codes. Each unit shall have a fan type electrical ceiling box in the dining room and each bedroom. In addition, each unit shall have switched outlets in the living room and other areas as required by code.

4. the electrical system shall be adequate to provide separate circuit power for the following kitchen and other appliances including a 15 amp garbage disposal, a 20 amp dishwasher, a 20 amp refrigerator, a 20 amp furnace, a 30 amp electric hot water heater, a 20 amp washer dryer, and other kitchen counter outlets along with the GFI outlets required in wet areas.
5. inside the units, the electrical panel shall be centrally located in an accessible area, not in a closet or stairway, as required by code.
6. the exterior lights in the common grounds areas shall be served by the common panel and activated by light sensors. The electrical heater in the entry shall be on this panel and activated by a thermostat. The private garages shall provide their own exterior lighting activated by a motion detector or a light sensor.
7. the interior common hall lights and the common garage lights will remain on at all times, however the possibility for a timed switching of these lights can be accommodated. The electric common garage heaters are controlled by a line voltage thermostat and can be set at any temperature above freezing. Electrical power for car lifts is a part of the common use hydraulic lift system and cannot be apportioned by electric meters since it is already metered by a single private garage member of the HOA. Since this power is a relatively small cost, the developer suggests that the home owners work out a cost sharing system equitable to all. For information purposes, we suggest that this cost is less than \$3 per month per unit.
8. each condominium unit and the common area unit shall be served by an electrical system which has passed the city building inspection, excel, and fire department requirements for electrical lighting, power and fire alarm.

MECHANICAL SYSTEMS

1. each condominium unit shall be served by a 100,000 btu forced air heating unit in cold weather, with a 3 ton air cooled condensing unit for air conditioning in warm weather. These units shall be controlled by one thermostat per unit and shall be at least 80% efficient for units E,F,C,D and 90% efficient for units A,B. These hvac units shall be "Rheem" or better and shall carry all the normal warranties for units of this type. The thermostats shall be installed on an open space near the units and shall be a standard type compatible with each unit, and shall have the capability of replacement with an energy set back model.
2. each condominium unit shall be served by a galvanized sheet metal ductwork system which has passed the city building inspection requirements for forced air heating and cooling, toilet exhaust, dryer exhaust, and stove hood exhaust requirements.

PLUMBING SYSTEMS

1. each condominium unit shall be served by two bathrooms on the private level and a half bathroom on the living level. each kitchen shall have a sink, dishwasher connection, and refrigerator connection for an icemaker.
2. each condominium unit shall be served by a 40 gallon electric hot water heater which is located in the same mechanical room with the hvac unit. These mechanical rooms are generally accessed by a panel which can be opened by an electric or manual screwdriver. Each mechanical room shall be fitted with a pull chain electric light and an electrical outlet for service requirements.
3. each condominium unit shall be served by appropriately sized black iron gas lines which feed a gas stove, a gas dryer, a 100,000 btu gas furnace, and a gas fireplace line which is capped off below the floor. This fire place line can be opened and connected as a buyer option.
4. water supply piping shall be appropriately sized copper with soldered joints, and tested for inspection with air pressure. Waste piping shall be appropriately sized abs plastic with glued joints, and tested for inspection by water filling. No existing piping shall be used inside the condominiums.
5. the tubs in the EF master baths shall be white Kohler k850 Tea-for-two deck mounted cast iron soaking tubs. The tubs in the CD master baths shall be white Kohler k721 Memoirs cast iron soaking tubs. The AB units shall have custom ceramic soaking / gang shower tubs. The tubs in the guest baths of the EF units shall also be Kohler cast iron.
6. all the master bath lavatories shall be a white vitreous china self rimming oval design 25"x17" with 4" integral faucet openings and set into the marble counter, Eljer Murray 051-0124-00 or better. The kitchen sinks shall be self rimming 20 gage stainless steel double bowl 22"x33" with sound deadening material sprayed on the underside. The sink openings shall be 8 1/4" deep and shall have one of the openings the full height of the sink, Elkay Signature fltf-250 or better. The corner lavs in the half baths and some of the guest baths shall be white American Standard corner minette 0451.021. Wall hung lavatories shall be white pedestal type vitreous china Kohler Wellworth 12181-d-cp / 2296-4-0. The toilets shall be white 1.6 gallon flush tank type, Briggs or better.
7. the kitchen faucet shall be a chrome single handle type with a pull-out sprayer, Delta 470. The lavatory faucets shall be all chrome two handle design with integral 4" spacing, Price Fister h431210. The shower valves shall be all chrome single handle control with pressure balancing and scald guard features, Delta Monitor 1400 series. Tub valves shall be all chrome, Delta 1400 series.

APPLIANCES

1. the dishwashers shall be Kitchen Aid KUDI24SE with a stainless steel front panel (4378989). This dishwasher comes with a stainless interior, 3 washing cycles, a delay wash feature, and quiet scrub sound insulation system.
2. the ranges shall be Kitchen Aid KGST307G with a stainless steel front panel. This range is a gas slide-in type, with sealed gas burners, a thermal convection oven, and a self cleaning feature.
3. the range hood shall be a GE JV347X stainless steel hood. As an option, this hood can be replaced with a buyer selected microwave oven. The designer suggests a stainless steel model GE JVM1190SY. This model will fit directly in the cabinet opening, has an integral hood and several convenient features.
4. although the refrigerator will not be a part of the sales package, the kitchens are designed for a 70" high x 36" wide side by side refrigerator. If a refrigerator is added as a buyer option, the designer suggests an Amana ARS9107AS, which is a stainless contemporary style.
5. although the washer - dryer will not be a part of the sales package, the laundry closets are designed for a front loading stackable washer - dryer combination such as the GE WSXH208V and GEDSXH43 EV/GV.

CAR LIFTS

1. If selected as a buyer option, these mechanical lifts will fit in four of the six car parking bays, assigned at present to the CDEF units. Essentially, these lifts mechanically raise a mid-sized passenger car high enough to allow a second mid-sized car or suv to park below. In order to access the raised car, drivers will need to pull out of the lower space to lower the raised car.
2. the lifts are manufactured by Harding Steel, located in Denver, Co. Drawings and detailed specifications for this lift are available upon request. Although the lift bays are designed for the standard model TW or 2301-2302, other types are available for adaptation through the engineers at Harding Steel. The lift designs can be viewed on the web at www.hardingsteel.com.

GARAGES

1. There are four garage door openings onto the alley which serve to access the "garage-only" condominiums in the complex. (condos G and H). the 14' wide x 8' high center garage door serves the six-vehicle, common garage. Only four of these spaces will accommodate mechanical lifts for "stacking" of cars or other such elevated storage.
2. The common garage has been reviewed in detail and approved by the city traffic engineering department and the city zoning department. The suggested width for standard common parking configurations, such as this one, is 58 feet. Since the lot is 58.1 feet wide, we appear to meet this guideline. However, since the wall thickness must be subtracted, and the parking surface is on a slope, good design judgment suggests that this garage only be used by cars or suv's not longer than 15.5 feet. This length will not accommodate full sized American cars or pickups. However, most mid-sized cars will fit. The typical parking stall is 8.5 feet wide by 16.8 feet deep and the maneuvering aisle space is 23 feet.