



**DESIGN &
CONSTRUCTION
GUIDELINES**

**APPENDIX C
STUDENT HOUSING
DESIGN GUIDELINES
(TAMPA CAMPUS)**

EDITION: **JANUARY 29, 2021**
USF HOUSING & RESIDENTIAL EDUCATION

APPENDIX C - STUDENT HOUSING DESIGN GUIDELINES

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	EXHIBIT 1	DOOR & HARDWARE FACILITY SPECIFICATION GUIDELINE	FEBRUARY 5, 2014

APPENDIX C - STUDENT HOUSING DESIGN GUIDELINES

DIVISION 01 GENERAL REQUIREMENTS

01101 ADA PREFERENCES

1. Frontal approach kitchens and bathroom sinks as opposed to side approach.
2. Stoves should have accessible (front mounted) knobs and at least one microwave per accessible kitchen should be at wheelchair height.
3. Door hardware/closures should accommodate slight touch activation, card access or proxy activation.
4. Auto door opening devices are required at each main entrance door operated with the Housing & Residential Life card access system, **CCure9000**.
5. Ample sized showers (roll in) to accommodate showering in the wheelchair.
6. Showers should have accessible wand type shower heads.
7. ADA apartment/room doors are to have kick plates on both sides of the doors.
8. ADA apartment/room doors should have peep holes at accessible height.
9. ADA room closets should have accessible height shelving.

01102 MAINTENANCE SPACE

1. Provide space for a maintenance shop for the building mechanic(s).
2. In a complex of buildings, provide shop space in a common building or in its own detached structure on site.
3. Overall area of the maintenance space should be a minimum five-hundred (500) square feet.
4. Location of the maintenance shop should be on a first floor level, near an elevator for access to entire building.
5. Location should also be near a direct entry point or service area and the building away from residential living space.
6. There should be a fenced in located inside the shop area to secure high cost parts/materials such as parts for AC, plumbing, electric, doors, extra thermostats, boxes of air filter, couplers, faucet sets, stems, switches/outlets, light fixtures, door hardware, and secured chemical stock.
7. Maintenance space should have an unfinished concrete floor.
8. One eye wash station, utility sink and a wall mounted first aid supply box should be supplied for each shop.
9. There should be ten (10) lockers furnished for personal items/tools.
10. Vehicle accessibility to the maintenance shop is also necessary.
11. Entry doors should be double-wide with no less than a six (6) feet opening with a door closure arms with a hold open feature.
12. Maintenance shop should be an air-conditioned space.
13. Standard **110 V** room/service outlets.
14. No less than one wall should be designated for workbench
15. Workbench size should be no less than six to eight (6 to 8) feet in length.
16. Two duplex outlets @ four (4) feet at each end of work bench area.
17. One (1) **208 V** outlet/service for testing equipment.
18. Water/Sewer-shop sinks with hot and cold water and drains.
19. One phone and two data ports and wireless access, with one desktop computer supplied.
20. Above the work bench should be a mirrored sized peg board mounted onto furring strips.
21. There should be tool storage (hand tools, hand power tools, sewer machine, etc.).
22. Maintenance shop should have exhaust hood to maintain adequate ventilation to the outside.
23. Vehicle (pickup, electric vehicle or electric golf cart; vehicle must have a storage/tool box attached) Parking for any vehicle must have a designated space within a secure area outside adjacent to the shop with exterior duplex **110 V GFI/WP** and lighting.
24. Toilet Facilities must be located in a convenient area within the complex for use by the mechanic/housekeeping staff. Location should not be near or within any residential living areas or accessible only through a residential living area.
25. Housing & Residential Education will provide furniture, and shop equipment.

01103 HOUSEKEEPING SPACE

1. Custodial closets should be no less than ninety-five (95) square feet.
2. There should be a custodial closet located within each “living unit depending upon the building design” (This space would support the common bathrooms, corridors, kitchens, lounges, lobbies, within this living space. These space locations are critical to have equipment/supplies within a relative close location to emergency needs such as bi-hazard spills, water leaks or sewage backups).
3. Custodial closets should be power vented to exhaust chemical scents.
4. Closets should have 1-piece (wall surround) mop sink units located at floor level, wall space for J-Fill dispensers and broom caddies/holder, small **2**-shelf shelving unit and space to accommodate a maid’s cart, vacuum, dehumidifier, wet vac equipment and a case of toilet paper.
5. Custodial closets should have multiple **110 V** outlets.
6. Custodial closets should be unfinished concrete flooring.
7. Custodial closets should have motion sensing lighting controls.
8. There need to be a Custodial Supervisor Office that is centrally located on the bottom floor, be no less than two-hundred-sixty (260) square feet and have a finished floor of laminate.
9. Location of the custodial office should be near an elevator for access to entire building and near a direct entry point or service area away from residential living space.
10. Custodial office should be an air-conditioned space with a finished drop ceiling tile with standard **110 V** room/service outlets.
11. Custodial office should have motion sensing lighting controls.
12. One phone and two data ports and wireless access, with one desktop computer supplied.
13. Within close proximity to the custodial supervisor office there should be a custodial break room of no less than four-hundred (400) square feet with furnished lockers for staff personal property, standard **110 V** room/service with multiple outlets, slop sink, one (1) eye wash station and a wall mounted first aid supply box should be supplied.
14. Custodial break room should have a unisex bathroom adjacent for staff use.
15. Custodial break room should have motion sensing lighting controls.
16. There will also be a need for housekeeping storage space on the bottom floor of the building with direct exterior access double doors that open up to six (6) feet and open up on a delivery space on the exterior of the doors for deliveries.
17. Storage areas should be no smaller than two-thousand (2,000) square feet and have two two-hundred (200) square feet fenced in areas with gate access to separate and secure supplies, materials and chemicals.
18. Storage room should have water/electric connections for commercial washer/dryer appliances to clean micro-cleaning pads/buffer pads.
19. Storage area should have an unfinished concrete floor and one set of six (6) feet interior doors for supplies and materials to be moved through and in to ten building.
20. Each building should have an additional one (1) designated custodial closet on the first floor of each individual residential building to store emergency supplies/equipment for access by the live-on staff during emergency situations that develop in the evening and weekend hours on.
21. Custodial closet doors should have a door closure arm with a hold open feature.

01104 COMMUNITY BUILDING

Services offered by a community building may vary depending on the program written for any particular complex, but can include the following types of spaces.

1. **Offices:**
 - a. Offices should have picture rail around the perimeter of the room at door/window height.
 - b. Depending upon lay-out of room may require more than one set of phone/data jacks for moving of work station or potential for two work stations.
2. **Front Desk:**
 - a. The front desk or service desk should be at standing height on customer side, with one lower ADA location and at sitting height on working side with counter depth to accommodate cash register, computer and such office equipment.

- b. The desk should contain at least two sets of phone/data jacks with two sets of four-plex- power outlets.
 - c. The working side of the desk must be in proximity of the back side of any mailroom mail boxes.
 - d. Depending upon community building design the desk may require locking doors and windows so it could be secured from other areas that may be “open” during hours the desk is “closed”.
 - e. A “panic button” alarm is required in a secured location behind the desk.
 - f. Cameras are required with coverage of the entire front desk operations for safety.
 - g. Key Cabinet to be provided to contain space for keys numbering three times the number of beds within the complex. Key cabinet is to be in a secure room or closet convenient to working side of “front desk”.
 - h. High secured keys will be stored in a Key Trak system for live-on staff security and access.
3. **Mail Room:**
- a. Number of mail boxes is to equal the number of beds in the complex plus five percent (5%) additional for expansion.
 - b. Size-nominal three by five inches (3” x 5”)
 - c. Combination locks.
 - d. Workers side of mail boxes to be placed in conjunction with workers side of front desk.
 - e. Workers side of mailboxes to be trim finished.
 - f. Box identification: Mailbox doors to have window for inserting box number tab. Box numbers will be assigned by post office. Box number tab to be supplied with boxes by contractor. Working side of mailboxes to have means of inserting box number tabs.
 - g. Number of mail boxes to be ten deep (Top to Bottom)
 - h. Number sequence to be top to bottom and left to right on customer side.
 - i. Customer side of mail boxes to be enclosed from weather, with lockable doors.
 - j. Storage Room: There is to be a storage room adjacent to the “front desk” and entry door. Storage room to be of approximate equivalent size of an office room within the community building.
 - k. Any mailroom that is installed must have a heavy duty gated lockable fenced area contained in the mailroom to secure packages.
 - l. Mailrooms must be provided large wall mounted shelving units for sorting and organizing throughout the space.
 - m. Mailrooms should have security cameras installed with views of front desk, main mailroom entry points and mail/package storage area.

01106 QUESTIONS

For questions or to view examples, contact the Department of Housing & Residential Education, Associate Director for Facilities Maintenance at (813) 974-3446.

DIVISION 02 SITE WORK

02601 DUMPSTER ENCLOSURES

1. There is to be two eight (8) yard dumpsters location to each fifty to seventy-five (50 to 75) beds.
2. Dumpster enclosures should be located on the residents path of travel as convenient to residents a possible but yet must be accessible to the large dumpster trucks.
3. Dumpsters enclosures to be designed to hold two dumpsters (1-Recycling, 1-Waste)
4. Enclosures are to be constructed of CMU surfaces to compliment the project.
5. Enclosures are to have adequate space around the enclosure to place temporary dumpsters during opening and closing events.
6. Single enclosure size **9' - 8" x 12' - 9"** (only if required by design limitations).
7. Double enclosure size **9' - 8" x 21' - 4"**
8. Eight inch steel bollards (three per dumpster) filled with concrete are to be at the inside rear of the enclosure to keep dumpsters from being shoved into the wall of the enclosure, located not less than **8"** off the inside wall. Bollards are to be painted traffic yellow.
9. Gates to be of heavy steel frame hung from steel-posts not attached to the CMU enclosure. Faces of enclosure gates have normally been covered with pressure treated lumber slates.

10. Enclosure gates are not to meet in the middle by three (3) feet to allow residents to enter enclosure to deposit trash.
11. Gate bars are to be set into holes in the pavement to keep the gates closed as well as to keep gates in open positions. Receiver holes are to be “over drilled” so as to insert metal pipe to receive the stake. Gates must swing past ninety (90) degrees in staked open position.
12. There needs to be a dedicated **110 V** outlet and keyed hose bib with remote shut-off required at each location or within fifty (50) feet of enclosure for cleaning and pressure washing.
13. Dumpster/compactor locations used in a trash system should be located close to the main collection point within the building.
14. Any roll type of compactor/shorty container should include a battery operated tow machine to maneuver the canister to the main compactor.

Note: If a trash chutes system built into a project it should be based on an exterior wall. The compactor should be located on the first floor with easy access in and out of the room from the exterior of the building. This will also aid in odors and noises penetrating residential living areas. Any trash chute access rooms located on the interior living spaces should have a sealed one by six (1” x 6”) inch wood sealed baseboard and epoxy finish applied to the walls and floors to assist in cleaning of waste and spills.

02602 BICYCLE RACKS

1. Due to the popularity in the past five years bicycle racks must be provided for at least fifty percent (50%) of building occupancy.
2. Bike rack hoops/loops are to meet USF specifications in residence hall area and match existing locations.
3. Hoops are to be thirty-six (36) inches O.C. as opposed to manufacturing specifications (36-inch allows more bikes per linear foot).

DIVISION 03 CONCRETE

DIVISION 04 MASONRY

DIVISION 05 METALS

Not Used

DIVISION 06 WOOD AND PLASTICS

06201 FINISHED CARPENTRY

1. Painted wooden baseboard is preferred, especially in corridors. One by four (1 x 4) inch, or one by six (1 x 6) inch chamfered board. It assists in the damaging of walls during move in and move out and high usage of handcarts/trucks.
2. Vinyl or ceramic base is acceptable elsewhere as appropriate. Vinyl base is to incorporate to form inside and outside corners.

06401 ARCHITECTURAL WOODWORK

1. Kitchen and Bath Cabinets – plywood in base cabinets and particleboard allowed in upper cabinets. Refer to Architectural Woodwork Institute (AWI). Architectural Woodwork Standards, First Edition. Section 400.
2. Common kitchen as in traditional halls, suite type halls, or community building kitchens are to have open cabinets without doors-fully laminated plywood casework similar to a “shadow box” look, unless otherwise approved.

DIVISION 07 THERMO AND MOISTURE PROTECTION

1. Attic spaces should be sealed, conditioned and insulated.

DIVISION 08 DOORS, WINDOWS AND GLAZING

Note: Please also refer to the Exhibit 1 (Door & Hardware Facility Specification Guideline) herein attached.

08201 DOORS

1. Residence Hall doors are normally six-feet eight-inches (6' - 8") (to keep residential proportions).
2. Main Entry doors may be seven-feet zero-inch (7' - 0") for architectural purposes, and provided with automatic openers.

Note: Conduit should be installed to all main entry doors for future ADA, and card access systems upgrades to allow for wiring runs.

3. Building entry/exit doors are to be three-feet six inches (3' - 6") wide (to ease the damage caused by the frequent mass move-in/move-out).
4. Doors from lobbies/stairs to living areas to be three-feet six inches (3' - 6") whenever possible.
5. All bedroom and service doors to be a minimum three-feet (3' - 0") clearance.
6. Electric strikes are to be used on card access doors. The strike to be used is the **HES Genesis**, surface mount series **9000**, model **9600-12/24/630**.

Note: Due to excessive door usage, a one-half-inch thick by two-inch wide by twelve-inch long (1/2" x 2" x 12") replaceable aluminum shim plate should be mounted between the electric strike and door frame to allow for future repairs upon mounting screw failures.

7. Interior wood doors are to be engineered composite lumber core, and wood laminates. NOTE The Residence **ServiAll** interior doors to have **Sargent** mortise lock sets.
8. Public or common (gang) non-latching toilet doors to have keyed dead bolt with thumb latch inside that can retract the deadbolt but not extend it.
9. Public toilet doors with privacy latching will have mortise lockset, keyed outside with thumb latch for privacy inside.
10. Fan coil closet doors, janitorial closet doors, electrical closet doors, mechanical closet doors, and elevator equipment rooms are to have storeroom function Sargent mortise lock set hardware.
11. Community building doors, mail rooms, laundry rooms and office annex entry designs & occupancy may dictate by code and type of hardware.

08501 WINDOWS

1. Residence Hall windows in living spaces and community kitchens shall be operable by the Resident.
2. Common spaces, (except community kitchens) i.e. lobby, lounges, community bathrooms, and laundry rooms are to be fixed windows.
3. Operable windows shall have screens on them. Ground floor windows, or any window with operable portion within ten (10) feet of finished grade, shall have operable security screens with the ability to open in a panic situation from the inside and self-latching from the outside when pushed closed from the outside. Kane security screens or equal.
4. Window Treatments- Window treatments may vary with space and window design. In general, vinyl vertical blinds are the window treatment of choice.
 - a. Windows that are fixed or have vertical sliders, the blinds are to be vertical.
 - b. Windows that are single hung horizontal, the blinds are to be horizontal.
5. Quality window treatments are of importance as they receive rough treatment. Architect, Facilities Planning and Residence Services must discuss window treatments for each individual project. Bedrooms, living rooms, community rooms, offices, and lobbies must all be individually consistent.

DIVISION 09 FINISHES**09601 FLOORING**

Note: Adhesives use for any carpet, etc. is to adhere under wet conditions and must be non-asbestos in nature or ingredient.

1. Corridors are to be carpet squares, porcelain or laminate.
2. Bedrooms are to be laminate only.
Note: Corridor and bedroom floor treatment is to be discussed with Housing & Residential Life for each individual project.
3. Bathrooms are to be ceramic or porcelain tile.
4. Apartment kitchens are to be laminate or porcelain.
5. Common use kitchens, as in traditional dormitory or suite halls, are to be carpeted, with thirty-six (36) inches of ceramic/porcelain tile in front of the kitchen counter space.
6. Multipurpose room kitchens are to be ceramic/porcelain tile.
7. Multipurpose room is to be laminate.
8. Lounges are to be carpet squares.
9. Lobbies are to be of ceramic/porcelain or laminate and carpet square areas as appropriate to size and design.
10. Janitorial, electrical, mechanical, communications closets; mechanical, maintenance, and housekeeping rooms to be clear sealed concrete.

09901 PAINT

1. Interior paint: Flat paint is not to be used. Satin finish is the minimum finish to be used and semi-gloss is preferred in corridors and student spaces.
2. Doors and door frames are to be semi-gloss or gloss finish paint.
Note: Majority of paint surfaces within the Housing & Residential Education inventory is of Sherman Williams brand yet we are currently moving towards and incorporating the **Valspar**® product line.
Note: Drawdowns with color formulas and manufacturer are to be provided to the owner with closeout documents.

DIVISION 10 SPECIALTIES

10101 TACK AND WHITE BOARDS

1. Tack board strips/bars in length of six (6) feet will be provided by contractor in each lobby across from entry to each elevator unit at a uniformed height off the floor to meet code compliance.
2. Tack board strips/bars in a length of one-inch by four-feet (1" x 4') will be located on the right side of all designated residence assistance room entry doors at a uniformed height off the floor to meet code compliance
Note: All tack board strips/bars are to be in a well-lighted area.

10401 SIGNAGE

1. Room signage is to be numerical and braille tactile.
2. Color, size and font shall conform to USF Housing & Residential Education standards.
3. Provide clear window for three by five inch (3" x 5") card.
4. Provide note clip (See PM and RSAD).

10801 TOILET ACCESSORIES

1. Public Restrooms dispensers/holders are to be uniformed to current housing standards.
 - a. All public restroom facilities must comply with current ADA requirements/codes, where applicable.
 - b. Toilet tissue: 9" Twin Jumbo Roll Tissue Dispensers, **Palmer Fixture**, model **R27TS**.
 - c. Tork RB600 Paper Towel dispenser: will touch-free **Amera-Products Inc.** model **71002**.
 - d. Hand soap dispenser: 1250 ml, **Buckeye Chemical Symmetry** model **390-9901100**
 - e. Hand Sanitizer: GremX 8071, Dispenser **Cintas Signature Series**
 - f. Finishes are to include garment hooks, shelves, standard mirror sizes, sanitary napkin disposals (Women bathroom only) and wall hung paper towel waste receptacles.

2. Residential Apartment Restroom (Student and Staff Apartments) will have robe hooks, shelves, mirrors, towel bars that reflex a standard residential style finish along with tissue paper holders.
3. Residential Suite Restrooms will have robe hooks, shelves, mirrors, and towel bars that reflex a standard residential style finish. Each residential suite restroom will have **9”** Twin Jumbo Roll Tissue Dispensers, **Palmer Fixture**, model **R27TS**.
4. Residential Shared “gang” Restrooms will have robe hooks, shelves, mirrors, towel bars that reflex a standard residential style finish.
 - a. Paper towels dispenser: Touch free **Amera-Products Inc.** model **71002**.
 - b. Hand soap dispenser: 1250 ml, **Buckeye Chemical Symmetry** model **390-9901100**.

Note: Castor and Beta: Georgis-Pacific Toilet Paper Roll, Pacific Blue Ultra (TM), Coreless, 2 Ply Dispenser **GEORGIA-PACIFIC**
5. Towel bars will be installed in all bathrooms. “Hinge-It” towel racks will be installed on the back of each bedroom door for additional towel storage. Model: **Commercial Rack** – code **#08001**, white epoxy.

Note: “Hinge-It” is a specific product that mounts on the door hinges. It can be found at **“Hingeit.com.”**
6. Medicine cabinets may be installed in staff apartments only, or open “architectural” shelving may be substituted.

Note: Sanitary napkin dispensers are not installed in any residence hall bathrooms.

DIVISION 11 EQUIPMENT

11101 APPLIANCES

1. Common area laundry room washers and dryers will be designated at a ratio of approximately thirty-five to forty (35 to 40) persons to one (1) washer and one and one-quarter (1.25) dryers. Dryers are double stacked and preferred to be gas.
2. Residential apartments should have no less than a standard thirty inch (30”) self-cleaning stove/oven, apartment sized refrigerator of no less than sixteen to seventeen (16 - 17) cubic feet.
3. Staff apartments should have an under counter dish washer, garbage disposal, and full sized stack washer dryer; or standard washer and dryer, if design and space allow.
4. Common area kitchens are to be provided a thirty inch (30”) stove with oven (self-cleaning), space and a full sized refrigerator.
5. Community room kitchens should be provided a thirty inch (30”) stove with oven (self-cleaning), full sized refrigerator nineteen to twenty (19 - 20) cubic feet and microwave.

Note: If code requires fire suppression system over stove in this type of community kitchen, discuss alternatives with Housing & Residential Education.

DIVISION 12 FURNISHINGS

12501 WINDOW TREATMENTS

1. Vertical blinds are preferred.
2. Slider windows are preferred.
3. Solar reflective window panes are preferred.
4. Inward tilting windows are also preferred on any floor above ground level to assist in cleaning.

Note: Consideration to double pane windows with interior blinds should be reviewed in new construction.

12601 FURNITURE

1. Furniture style and manufacturer will be determined by Housing & Residential Education in conjunction with Facilities Planning.

Note: Furniture with padded bottoms should be reviewed to protect floor surfaces.

Note: Common area or classroom furniture should be of a lighter weight for setups and breakdowns.

Note: Due to weight and size wardrobes or armoires should not be considered in student room locations.

DIVISION 13 SPECIAL CONSTRUCTIONS

Not Used

DIVISION 14 CONVEYING SYSTEMS

14201 ELEVATORS

1. **Design and installation specifications will require warrantied elevator manufacturers and not generic fabricated parts.**
2. The elevator manufacturer shall include a five year renewable maintenance contract.
3. Elevators shall NOT be installed in an exterior exposed space subject to excessive moisture, rain, flooding, or weather damage.
4. Elevators shall not be located at the lowest point of a floor, causing water from floor-washing to fall into the elevator shaft.
5. Elevators shall use vandal-resistant car stations and hall stations. Lighting and ceilings in elevator cab shall be resistant to abuse and/or unauthorized access and removal.
6. If, proprietary controls are accepted, training and computer software must be available to Housing & Residential Educations designated service contractor.
7. Possibility of a freight elevator in a larger facility should be considered upon planning.
8. Light fixtures/panels should secure bulbs to limit passenger access and vandalism.
9. Cab cameras should be considered during planning.

DIVISION 15 MECHANICAL

15401 PLUMBING

1. Commodes will be wall mounted with elongated Kohler, American Standard, Toto, or equal. Flush valves shall be of Sloan or Toto types. All components shall be of "name brand" so as to be readily available for maintenance replacement without having to re-plumb or having to install new wall hangers.
2. Floor mounted commodes are to be **Toto 744 series # CST744A-11** with elongated bowls for the main intent to obtain the commode with the enlarged freshwater inlet and enlarged waste discharge with siphon action.
3. Public toilets and shared "gang" toilets will have seats only. Apartments and suite toilets will have seats with lids.
4. Urinals are to be used only in men public toilets and shall be equipped with battery powered automatic flush valves, preferably the same manufacturer as the urinal.
5. A public toilet is defined as one for use by non-residents of the building, i.e. visitors, guests, or building staff. Each residence hall (traditional, suite or apartment) will have one unisex public toilet, typically in the lobby area. Design and capacity of the building may dictate separate men and women toilet or more than in just the lobby area.
6. Any gathering space within a residence hall or within a residence complex shall have public toilet/toilets and be equipped with battery powered automatic flush valves, preferably manufactured by the same company as the urinal, faucet and toilet.
7. All public restroom facilities must comply with current ADA requirements / codes, where applicable.
8. Domestic water meters shall be as per USF Physical Plant's specification along with the remote monitoring equipment. Conduit and wire shall run between the meter and the nearest communications closet containing the equipment necessary to get the data on the USF network.
9. There should be lockable hose bib connections located on the exterior entrances/exits of the building, and periodical around the perimeter of the building for access in pressure washing or water supply.

10. Shower enclosures with solid secure base foundations should be reviewed in new construction.
11. Shower units should have sink connections to allow for custodial shower cleaning with hand wands connections.
12. Showerheads should provide a dual low flow option for water savings.
13. Bathroom faucets should have water saving aerators installed.
14. Domestic water shut off valves should be installed wherever possible (entire floors, suites, stacks, individual rooms/apartments) to isolate specific equipment or locations and not affect adjacent residential units.
15. Hot water tanks/exchangers should be located for access to anode rod maintenance and away from residential living areas upon any tank failures/leaks.
16. Hot water tanks/exchangers are to be installed on the bottom floor of a residential building only.
17. Domestic water lines and valves should be labeled and tagged for identification over the length span.
18. Attic stock should be supplied at the turnover which includes flusher valves, commodes and fixtures.
19. Water lines should be of a scheduled thick copper gauge only.

15501 HVAC EQUIPMENT

1. Energy/utilities management control systems should be installed to individual room and common area units for monitoring which should be compatible with current housing inventory.
2. Owner will require independent commissioning.

Note: USF Physical Plant remotely monitors and reads BTU meters, domestic water meters and electrical meters but does not control the operation of residence hall air handlers.
3. BTU meters and associated equipment to allow monitoring and reading at USF's Physical Plant are to be of manufacture, design, and installation as instructed by physical plant's requirements.
4. Design of mechanical room space, pipe location and spacing will take into consideration the installation and maintenance of said devices and valves:
 - a. Floor drains.
 - b. Ball type shut off valves on all domestic, heating, chilled, hot and cold water lines.
 - c. Adequate access to change filter media.
 - d. Adequate lighting in all areas of the room.
 - e. Wall mounted fire extinguisher brackets.
 - f. Exhaust fans.
5. Rigid conduit and wire will be installed from the BTU equipment to the nearest communication room containing the equipment necessary to get the data on to the USF network.
6. Each apartment or bedroom (depending upon the building, i.e., apartment, suite, or traditional) needs to control its own environment. Simple and inexpensive thermostats are to be provided in the student spaces for their use and control of that space.
7. Common area thermostats are to be placed where the students and general public cannot access, i.e. in the local air handler closet and be equipped with temperature sensors tied to energy management control systems.
8. Residence Halls are occupied **24/7/365** days a year and the residents are to have control of their environment. Energy management systems are required for residence hall.
9. Programmable low profile thermostats, with set point bands, in bedrooms, suites and apartments and temperature sensors in all common areas.
10. All systems should be tied to one energy control system which is compatible with current systems within the Housing existing inventory.
11. HW & CW lines should have shut off valves installed wherever possible (entire floors, suites, stacks, individual rooms/apartments) to isolate specific equipment or locations and not affect adjacent residential units.
12. There should be attic stock leftover to include valves, controls and inline pumps.
13. HW & CW lines and valves should be labeled and tagged for identification purposes over the length span.

14. Water lines should be of a scheduled thick copper gauge only.
15. Exhaust fans should be wrapped and insulated when installed on rooftops.
16. Exhaust fan/ductwork in bathrooms must be located close to the shower assembly.
17. Ductwork insulation should not be wrapped too tight to decrease the R-factor on the duct.
18. Environmental control software systems should uniform existing systems within Housing currently.

15901 HEAT EXCHANGER

1. Provide re-circulating pump for entire domestic hot water system. Isolate copper piping for electrolysis.
2. Provide heat recovery and storage for domestic hot water from hot water system.

15902 TEST ADJUSTING AND BALANCE

1. Test and balance shall be conducted with bedroom doors closed.
2. System design shall take into consideration that door(s), (specifically bedroom doors) in an apartment or living unit will be closed at all times.

DIVISION 16 ELECTRICAL

16501 LIGHTING

1. Parking lot lighting will have test override switch on the contactor located on the site electrical room for lighting control.
2. Site lighting type shall be of twelve (12) feet poles conforming to (CPTED).
3. Residential and Common areas will have occupancy sensors and controls.
4. In Greek Village, all new exterior site lighting fixtures shall match the existing fixtures.

16701 FIRE ALARM AND SMOKE DETECTION SYSTEMS

1. Fire Alarms systems and components shall be of Notifier brand only.

16901 POWER

1. There should be electrical outlets installed on each stairwell floor interior in order to use cleaning equipment within the stairwell towers(s).
2. Rigid conduit and wire will be installed from the BTU equipment to the nearest communication room containing the equipment necessary to get the data on the USF network.
3. Electric meters shall be as per USF Physical Plant's specification along with the remote monitoring equipment.
4. Conduit for main entry/exit door future upgrades should be ran upon construction.
5. Residential breaker boxes should be oversized to allow for easier change out and additional switches to be installed.
6. Emergency generators should be securely placed away from main residential living areas due to noise during exercises. If possible generators should be located behind a wall structure to assist in noise reduction upon weekly exercising.

DIVISION 17 COMMUNICATIONS

17101 DATA

1. There will be one phone and two data ports for each bed in each bedroom.
2. In apartments there will be an additional phone and two data ports in the living room.
3. Community lounges, kitchens and lounge/kitchens will have one phone and two data ports.
4. Housekeeping offices and storage rooms will have one phone and two data ports; custodial closets will not.
5. Maintenance offices, shops, and storage rooms will have one phone and two data ports.
6. Maintenance and electrical rooms containing meters to be monitored by physical plant will have appropriate data lines and terminations to monitor water, electric and BTU meters.

7. Lobbies and **24** hour desk locations will have one phone and two data ports in an appropriate location for a possible night clerk monitoring station.
8. Offices and other such spaces will follow the USF IT specs for one phone and two data ports.
9. Conduit for data lines should be run during construction for all future entry/exit door upgrades and camera installation.

17201 TELEPHONES

1. There will be one phone and two data ports for each bed in each bedroom. Where design permits can use wireless connections instead of hardware.
2. In apartments there will be an additional phone and two data ports in the living room.
3. Community lounges, kitchens and lounge/kitchens will have one phone and two data ports.
4. Housekeeping offices and storage rooms (excluding janitorial closets) will have one phone and two data ports.
5. Maintenance offices, shops, and storage rooms will have one phone and two data ports.
6. Maintenance and electrical rooms containing meters to be monitored by physical plant will have appropriate data lines and terminations to monitor water, electric and BTU meters.
7. Lobbies will have one phone and two data ports in an appropriate location for any night clerk monitoring station.
8. Offices and other such spaces will follow the USF IT specs for one phone and two data ports.
9. Entry phones: each entry with card access shall have an entry phone. Entry phones to be used in accordance to USF IT specs.

17301 CABLE TELEVISION

Note: Housing and Residential Education contracts and operates its own in house CATV Service.

1. One CATV port per bed (residence hall, suite, and apartment), with wiring in conduit to corridor wire tray. Each port will be "homerun" no "daisy chaining". Sharing of lines/ports is not acceptable.
2. In apartments, each living room will have one "homerun" CATV port.
3. Offices, office lobbies, residence lobbies, lounges, kitchen/lounges, community laundry rooms, Maintenance shop/offices and housekeeping offices will have CATV ports.
4. Both termination ends will be labeled with room numbers.
5. Design of system is to be reviewed and approved by the Housing & Residential Education contracted CATV provider.

17401 HOUSING ACCESS CONTROL SYSTEM

1. The Housing & Residential Education Department has an access control system (**Current-CCure 9000**).
2. Security cameras should be tied in to the access control system at every entry/exit location wherever possible.
3. Card access systems should have backup power supply or connectivity upon power drops on campus.

Additional Comments:

USF Housing and Residential Education is committed to a positive partnership with all parties during the development, planning and construction in order to allow for the he best quality living complex/environment to be constructed on the campus. We continue to commit **100%** towards the "experience" our students undertake upon living on campus. In order to service and maintain any facility in the future we request that:

1. The University should consider hiring a company to photograph daily all plumbing, mechanical and electrical installation as a historical documentation and archive for future maintenance repairs/replacement.
2. Consideration for our department to come on site during construction to walk through and document systems, materials and structural components that are enclosed behind walls after construction.
3. Allow our hardware manufacture (Sargent) to come onsite to review and oversee all hardware installation for our department.

EXHIBIT 1- DOOR & HARDWARE FACILITY SPECIFICATION GUIDELINE

DOOR AND HARDWARE FACILITY SPECIFICATION GUIDELINE

- SECTION 08411
- SECTION 08110
- SECTION 08210
- SECTION 08710

The purpose of this document is to support the equivalence of door hardware specifications for University of South Florida. Products detailed herein are the standard of quality to be used on new projects and renovations. Exceptions would include owners request for continuations of existing systems: i.e. - Existing key system.

It is the intent of this document to provide guidelines for the architect's specification section 08710, for product groups and the hardware schedule. These items are to be coordinated to meet the requirements of life safety codes, ADA requirements and applicable building codes.

All aluminum door hardware shall be provided in compliance with this specification guideline, and such shall be noted in sections 08710 and 08410.

The door hardware section 08710 preamble is to include the following:

"Prior to installation of hardware, the project architect shall contact the manufacturers' representatives to arrange and hold a jobsite meeting to instruct the installing contractors' personnel on the proper installation of their respective products. Seminar shall be attended by installers of hardware (including electrical hardware) for aluminum, hollow metal and wood doors. Training will include the use of installation manuals, hardware schedule, templates and physical product samples." "The manufacturer's representative(s) for the life safety and security products shall inspect and approve the installation of the products they represent. Any identified installation or product issues shall be directed to the attention of the Architect for the purpose of generating the final punch list."

SECTION 08411 – Storefront Doors and Frames

Substitutions or Alternates not permitted unless noted below.

Item Description	Preferred Manufacturer and Catalog Series	Acceptable Alternative Manufacturers
ALUM DOORS	YKK AP 35H	None

Product Notes and Applications:

Florida Product Approval:	All products to have valid product approval tested with hardware specified in 08710
Interior Frames:	YHS50 at immediate doors jambs adapt down to YES45 in non impact applications for sidelites
Door Profile:	<ul style="list-style-type: none"> • 5" door stile, 1-3/4" thick • 5" top rail ~ 10" bottom rail
Welding:	Corner Construction: Fabricate door corners joined by concealed reinforcement secured with screws and sigma deep penetration welding.
Exterior Frames:	YHS50 at immediate doors frames, adapt down to YES45 in non impact applications for sidelites
Door Profile:	<ul style="list-style-type: none"> • 5" door stile, 1-3/4" thick • 5" top rail ~ 10" bottom rail
Welding:	Corner Construction: Fabricate door corners joined by concealed reinforcement secured with screws and sigma deep penetration welding
Extrusions:	ASTM B 221 (ASTM B 221M), 6063-T5 aluminum alloy
Anodized Finishing:	Prepare aluminum surfaces for specified finish; apply shop finish in accordance with the following:

Anodic Coating:	Electrolytic color coating followed by an organic seal applied in accordance with the requirements of AAMA 612-02. Aluminum extrusions shall be produced from quality controlled billets meeting AA-6063-T5. <ul style="list-style-type: none"> a. Exposed Surfaces shall be free of scratches and other serious blemishes. b. Extrusions shall be given a caustic etch followed by an anodic oxide treatment and then sealed with an organic coating applied with an electrodeposition process. c. The anodized coating shall comply with all of the requirements of AAMA 612-02: Voluntary Specifications, Performance Requirements and Test Procedures for Combined Coatings of Anodic Oxide and Transparent Organic Coatings on Architectural Aluminum. Testing shall demonstrate the ability of the finish to resist damage from mortar, salt spray, and chemicals commonly found on construction sites, and to resist the loss of color and gloss. d. Overall coating thickness for finishes shall be a minimum of 0.7 mils. High Performance Organic Coating Finish: Fluoropolymer Type: Factory applied two-coat 70% Kynar resin by Arkema or 70% Hylar resin by Solvay Solexis, fluoropolymer based coating system, Polyvinylidene Fluoride (PVF-2), applied in accordance with YKK AP procedures and meeting AAMA 2605 specifications.
Colors:	Selected by Architect from the following: <ul style="list-style-type: none"> a. Standard coating color charts. b. Custom coating color charts. c. Color Name and Number:
Finishes Testing:	Apply 0.5% solution NaOH, sodium hydroxide, to small area of finished sample area; leave in place for sixty minutes; lightly wipe off NaOH. Do not clean area further.
Samples:	Submit samples with test area noted on each sample.

SECTION 08110 – Hollow Metal

Substitutions or Alternates are permitted as a substituted equal.

Item Description	Preferred Manufacturer and Catalog Series	Acceptable Alternative Manufacturers
Hollow Metal Frames	Curries M Series	CECO SU Series

Product Notes and Applications:

Interior Frames:	
Profile:	Varies
Gauge:	<ul style="list-style-type: none"> • 16 @ openings up to and including 4'-0" wide • 14 @ openings over 4'-0" wide
Steel:	A60 galvanized
Welding:	Continuous face welded, dressed and ground smooth, full width hinge reinforcement on all top butt hinge preps, prime paint
Exterior Frames:	
Profile:	Varies
Gauge:	14
Steel:	A60 galvanized
Welding:	Continuous face welded, dressed and ground smooth, full width hinge reinforcement on all top butt hinge preps, prime paint.
Notes:	<ul style="list-style-type: none"> • Frames shall include shipping bar at bottom to insure frame integrity during shipping. All shipping bars shall be removed prior to frame installation. Install frames per manufacturers and SDI (Steel Door Institute) standards and instructions. • Fire rated frames require metal applied label indicating rating designation. • Reinforce frames for surface mounted hardware and cut-out, drilled and tapped to receive mortised hardware. • Electrified Openings: Doors shall be <u>pre-wired</u> with sufficient number of concealed wires to accommodate electric function of specified hardware. Provide <u>Molex</u> type standardized plug in connectors to accommodate up to twelve wires. • Hardware locations are to be Curries standard. No other hardware locations are acceptable from any manufacturer's supplied frames.

SECTION 08110 – Hollow Metal

Substitutions or Alternates not permitted unless noted below.

Item Description	Preferred Manufacturer and Catalog Series	Acceptable Alternative Manufacturers
Hollow Metal Doors	Curries 707 Series 747 Series Trio-E	CECO Legion Medallion Trio-E

Product Notes and Applications:**Interior Doors:**

Series:	707N Gauge: 18
Steel:	Cold-rolled
Edges:	Seamless - tack weld, grind smooth, fill and touch-up paint

Exterior Doors:

Series:	Trio-E Gauge: 16 gauge
Steel:	A60 galvanized
Edges:	Seamless - tack weld, grind smooth, fill and touch-up paint

Notes:

- Fire rated doors require metal applied label indicating rating designation.
- Doors shall be internally reinforced for surface mounted hardware and cut-out, drilled and tapped to receive mortised hardware.
- Electrified Openings: Doors shall be pre-wired with sufficient number of concealed wires to accommodate electric function of specified hardware. Provide Molex type standardized plug in connectors to accommodate up to twelve wires.
- Hardware locations are to be Curries standard. No other hardware locations are acceptable from any manufacturer's supplied doors.

SECTION 08210 – Wood Door

Substitutions or Alternates not permitted unless noted below.

Item Description	Preferred Manufacturer and Catalog Series	Acceptable Alternative Manufacturers
Wood Doors	Graham GPD PC Series GPD FD 45 GPD FD 60 GPD FD 90	Marshfield

Product Notes and Applications:

Construction:	Manufacturers Standard
Core:	engineered composite lumber core Mineral @ 45, 60 and 90-minute rated openings
Face veneer:	Wood veneer
Edges:	Wood veneer
Matching:	Pairs within the same opening
Warranty:	Lifetime of installation

Notes:

- Pre-fit for opening size and pre-machine for hardware as specified.
- Fire rated doors require metal applied label indicating rating designation.
- Doors shall be internally reinforced (Blocking) for attachment of hardware without the use of through bolts.
- Electrified Openings: Doors shall be pre-wired with sufficient number of concealed wires to accommodate electric function of specified hardware. Provide Molex type standardized plug in connectors to accommodate up to twelve wires.
- Hardware locations are to be Curries standard. No other hardware locations are acceptable from any manufacturer's supplied doors.

SECTION 08710 – Door Hardware

Substitutions or Alternates not permitted unless noted below.

Item Description	Preferred Manufacturer and Catalog Series	Acceptable Alternative Manufacturers
Butt Hinges	McKinney TA2714 TA2314 T4A3786 T4A3386	No Substitution

Product Notes and Applications:

- Notes:**
- Interior wood doors.
 - Interior and exterior hollow metal doors.
 - Out swinging lockable doors shall have NRP hinges.
 - Exterior lockable doors shall have NPR hinges.
 - Width of hinges shall be sufficient to clear trim and wall conditions as shown on the drawings.
 - Size: 4 ½" x 4" for doors up to 3'-0" in width, 5" x 4 ½" for doors over 3'-0" in width. Provide heavy weight hinges (.180) at high traffic doors.
 - *Electric Hinges: Provide sufficient number of concealed wires to accommodate electric function of specified hardware. Locate electric hinge at center location. Provide McKinney MG-16 mortar guard for each electric hinge specified. Provide Molex type standardized plug in connectors to accommodate up to twelve wires.

SECTION 08710 – Door Hardware

Substitutions or Alternates not permitted unless noted below.

Item Description	Preferred Manufacturer and Catalog Series	Acceptable Alternative Manufacturers
Pivots	None Accepted	None

Product notes and applications:

- Notes:**
- Permission to use door pivots must be submitted in writing by USF Housing in the event that they are required.

SECTION 08710 – Door Hardware

Substitutions or Alternates not permitted unless noted below.

Item Description	Preferred Manufacturer and Catalog Series	Acceptable Alternative Manufacturers
Continuous Hinges	McKinney MCK 25HD	No Substitution

Product notes and applications:

- Notes:**
- Hinges shall be full door height less ½" for clearance.
 - All hinges shall be Full Mortise "gear type".
 - Aluminum is the base for material of hinges.
 - *Electrified Hinge: Provide sufficient number of concealed wires to accommodate electric function of specified hardware. Provide Molex type standardized plug in connectors to accommodate up to twelve wires.

SECTION 08710 – Door Hardware

Substitutions or Alternates not permitted unless noted below.

Item Description	Preferred Manufacturer and Catalog Series	Acceptable Alternative Manufacturers
Power Transfers	NONE	

Product notes and applications:

- Notes:**
- No power transfers are required. Hinges will transfer all power to electrified hardware items.

SECTION 08710 – Door Hardware

Substitutions or Alternates not permitted unless noted below.

Item Description	Preferred Manufacturer and Catalog Series	Acceptable Alternative Manufacturers
Flush Bolts	McKinney FB M / FB W Series Manual DPS Series Dust Proof Strike	Rockwood 555 / 557 Series, Manual Flush Bolts 570 Series Dust, Proof Strike

Product notes and applications:

- Notes:**
- Manual or automatic flush bolts as necessary for code compliance. Install with dust proof strike.
 - Provide extended top rod for oversized doors when using manual flush bolts.

SECTION 08710 – Door Hardware

Substitutions or Alternates not permitted unless noted below.

Item Description	Preferred Manufacturer and Catalog Series	Acceptable Alternative Manufacturers
Cylinders and Keying	Sargent 6300 LFIC 10-6300 LFIC	Standard Signature NONE

Product notes and applications:

- Notes:**
- Cylinders shall be supplied as required Signature and Standard type as determined by USF.
 - Key blanks shall be supplied as per the requirements of USF Housing.
 - Key blanks and cut keys drop shipped directly to USF Housing from Sargent Manufacturing, New Haven, CT
 - All cylinders and cut keys shall be furnished as per the requirements of USF Housing.
 - Cylinders shall be an integral part of the locks as manufactured by specified lock supplier. Substitution of foreign made cylinders or components will not be allowed and also will be cause for rejection of supplier.

SECTION 08710 – Door Hardware

Substitutions or Alternates not permitted unless noted below.

Item Description	Preferred Manufacturer and Catalog Series	Acceptable Alternative Manufacturers
Locks and Latches	Mortise Locksets Sargent 8200 Series x LJ-32D trim design	NONE

Product notes and applications:

- Notes:**
- Each building will need to be verified to the existing locksets that will need to be matched.
 - Install custom strikes to match existing frame preparations when new lock is scheduled to be installed in existing frame. Existing frames to be modified to accept new custom strikes.
 - Locking Function Descriptions
Mortise Type
8215 LJ Passage Function
8265 LJ Privacy Function
8204 LJ Storeroom Function
8237 LJ Classroom Function
8255 LJ Entry Function

SECTION 08710 – Door Hardware

Substitutions or Alternates not permitted.

Item Description	Preferred Manufacturer and Catalog Series	Acceptable Alternative Manufacturers
Electric Strikes	HES 9500/9600 Series with Smart Pac III	None

Product notes and applications:

- Notes:**
- Provide sufficient number of concealed wires to accommodate electric function of specified hardware. Provide Molex type standardized plug in connectors to accommodate up to six wires.

SECTION 08710 – Door Hardware

Substitutions or Alternates not permitted unless noted below.

Item Description	Preferred Manufacturer and Catalog Series	Acceptable Alternative Manufacturers
Exit Devices	Sargent 80 Series x ETJ Trim Design Stainless Steel Lever	NONE

Product notes and applications:

- Notes:**
- Use 8800 Wide Stile rim exit devices for all openings possible. Functions will be determined by USF Housing on a door by door basis.
 - Single doors: Use rim exit device only.
 - Pairs of doors: Use rim exit devices with keyed removable mullion except where egress is required then use vertical rods or electrified functions are specified.
 - Cross corridor doors / Interior: Use vertical rod exit devices, less bottom rod as preferred securing device. Concealed rods on hollow metal doors, surface rods on wood doors.
 - 16- cylinder dogging as per USF Housing requirements
 - LD- (Less dogging) on all other Panic Rated Devices not requiring cylinder dogging.
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SECTION 08710 – Door Hardware

Substitutions or Alternates not permitted unless noted below.

Item Description	Preferred Manufacturer and Catalog Series	Acceptable Alternative Manufacturers
Removable Mullions	Sargent 980 Series	

Product notes and applications:

- Notes:**
- Types: Lockable, steel, key removable. Key is not required to reinstall the mullion.
 - Provide multi wire connectors when electric or monitor strikes are used. This allows mullion removal without damaging electrical connections.
 - Preferred method of securing exterior pairs of doors when using rim exit devices.
-

SECTION 08710 – Door Hardware

Substitutions or Alternates not permitted unless noted below.

Item Description	Preferred Manufacturer and Catalog Series	Acceptable Alternative Manufacturers
Push/Pulls	McKinney P053 Series Push Plates OP4514 Series Door Pulls PB812 Series Push/Pull Bars	Rockwood 70C Series Push Plates BF168 Series Door Pulls BF15847 Series Push/Pull Bars

Product notes and applications:

- Notes:**
- Mounting methods to be concealed type wherever possible.
 - Provide decorative thru bolts at free ends of push / pull bars and pulls when used with exit devices.
 - Push plate size: 4" x 16" minimum, except when limited by door stile.
 - Acceptable materials: Stainless Steel
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SECTION 08710 – Door Hardware

Substitutions or Alternates not permitted unless noted below.

Item Description	Preferred Manufacturer and Catalog Series	Acceptable Alternative Manufacturers
Coordinators	McKinney CSM Series Coordinator	Door Controls: International: 600 Series Rockwood: 1600 Series: Coordinator

Product notes and applications:

Notes:	<ul style="list-style-type: none"> • Provide filler bars for total opening width, closer mounting brackets, carry bars, and special preparation for top latches where applicable.
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SECTION 08710 – Door Hardware

Substitutions or Alternates not permitted unless noted below.

Item Description	Preferred Manufacturer and Catalog Series	Acceptable Alternative Manufacturers
Door Closers	Sargent 351 Series 1431 Series	NONE

Product notes and applications:

Notes:	<ul style="list-style-type: none"> • Closers shall have non-ferrous covers, heavy duty forged steel arms, and separate valves for adjusting backcheck, delayed action, closing and latching cycles and adjustable spring to provide sizes 1 through 6. • Provide non-sized closers, adjustable to meet maximum opening force requirements of ADA. • Provide drop plates, brackets, or adapters for arms as required to suit details. • Mount closers on room side of corridor doors and inside of exterior doors. Where possible install closers on door for optimum aesthetics. • Provide forged heavy duty parallel arms (P-10) on high traffic doors. Non-hold open types. • All closers are to have pressure relief valves.
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SECTION 08710 – Door Hardware

Substitutions or Alternates not permitted unless noted below.

Item Description	Preferred Manufacturer and Catalog Series	Acceptable Alternative Manufacturers
Low Energy Operators	Gyrotech GT Series	None

Product notes and applications:

Notes:	<ul style="list-style-type: none"> • Provide wall-mounted actuator switches by the same manufacturer as the operator. Provide weather-resistant types at exterior applications. Locate in accordance with ANSI A117.1. • Conform to ANSI/BHMA standard A156.19 and meet UL requirements for fire rated openings.
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SECTION 08710 – Door Hardware

Substitutions or Alternates not permitted unless noted below.

Item Description	Preferred Manufacturer and Catalog Series	Acceptable Alternative Manufacturers
Protection Plates	McKinney KP50 Series Protection Plates EG01 Series Edge Guards	Rockwood K1050 Series Protection Plates 300 Series Edge Guards

Product notes and applications:

Notes:	<ul style="list-style-type: none"> • Size: Kick plates 10" high, Mop plates 6" high, Armor plates 36" high. • Width: 2" less door width (LDW) at single doors when mounted on push side. • 1" LDW at pairs and when mounted on pull side. • Material: Stainless steel 0.050" thick with countersunk holes, beveled four edges (B4E).
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SECTION 08710 – Door Hardware

Substitutions or Alternates not permitted unless noted below.

Item Description	Preferred Manufacturer and Catalog Series	Acceptable Alternative Manufacturers
Overhead Stops / Holders	Sargent 590 Series 690 Series	None

Product notes and applications:

- Notes:
 - Install overhead stops where conditions limit the use of wall stops and floor stops would be a tripping hazard.
 - Use special template closers to allow offset arms for surface applied stops.

SECTION 08710 – Door Hardware

Substitutions or Alternates not permitted unless noted below.

Item Description	Preferred Manufacturer and Catalog Series	Acceptable Alternative Manufacturers
Wall and Floor	McKinney WS03 Series Wall Stop FS01 Series Floor Stop ADH01 Series Door Stop/Holder	Rockwood 400 Series Wall Stop 441 Series Floor Stop 490 Series Door Stop/Holder

Product notes and applications:

- Notes:
 - All stops shall be cast. Wrought stops are not acceptable

SECTION 08710 – Door Hardware

Substitutions or Alternates not permitted unless noted below.

Item Description	Preferred Manufacturer and Catalog Series	Acceptable Alternative Manufacturers
Magnetic Holders	Rixson FM-990 Series	None

Product notes and applications:

- Notes:
 - Wired to release upon activation of fire alarm. Verify required voltage.

SECTION 08710 – Door Hardware

Substitutions or Alternates not permitted unless noted below.

Item Description	Preferred Manufacturer and Catalog Series	Acceptable Alternative Manufacturers
Thresholds and Gasketing	McKinney MCK2005 Series Stop Threshold MCKS88 Series Smoke Gasket MCK18062 Series Door Sweep MCK346 Series Rain Drip	Pemko 2005_T Series Stop Threshold S88D Series Smoke Gasket 18062CNB Series Door Sweep 346C Series Rain Drip

SECTION 08710 – Door Hardware

Substitutions or Alternates not permitted unless noted below.

Item Description	Preferred Manufacturer and Catalog Series	Acceptable Alternative Manufacturers
Key Cabinet	Lund D-1140	None

Product notes and applications:

- Notes:
 - Provide floor standing key cabinet with one hook for each lock or cylinder plus an additional 50 percent expansion.
 - Key cabinet shall be set up and indexed ready for owner's use.

SECTION 08710 – Door Hardware

Substitutions or Alternates not permitted unless noted below.

Item Description	Preferred Manufacturer and Catalog Series	Acceptable Alternative Manufacturers
Card Access	Software House C-Cure 9000	NONE

Product notes and applications:

- Notes:
 - Specifications for access control to be provided by USF Housing.

SECTION 08710 – Door Hardware

Substitutions or Alternates not permitted unless noted below.

FINISHES AND BASE MATERIALS:

A. BASE METALS: Produce door hardware units of base metal, fabricated by forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness. Furnish metals of a quality equal to or greater than that of specified door hardware units and BHMA A156.18 for finishes.

B. FINISHES: Verify requirements for individual projects

1. Standard: Comply with BHMA A156.18.
2. BHMA Designations: Comply with base material and finish requirements indicated by the following:
 - a. BHMA 600 (USP): Primed for painting, over steel base metal.
 - b. BHMA 626 (US26D): Satin chromium plated over nickel, over brass or bronze base metal.
 - c. BHMA 628 (US28): Satin aluminum, clear anodized, over aluminum base metal.
 - d. BHMA 630 (US32D): Satin stainless steel, over stainless-steel base metal.
 - e. BHMA 652 (US26D): Satin chromium plated over nickel, over steel base metal.
 - f. BHMA 689 (ALUM): Aluminum painted, over any base metal.

C. FINISH SCHEDULE:

<u>HARDWARE ITEM</u>	<u>FINISH AND BASE MATERIAL</u>
1. Exterior Butt Hinges:	BHMA 630 (US32D)
2. Interior Butt Hinges:	BHMA 652 (US26D)
3. Continuous Gear Hinges:	BHMA 628 (US28)
4. Pivot Sets:	BHMA 626 (US26D)
5. Flush Bolts:	BHMA 626 (US26D)
6. Locks and Latches:	BHMA 630 (US32D)
7. Cylinders:	BHMA 626 (US26D)
8. Exit Devices	BHMA 630 (US32D)
9. Removable Mullions	BHMA 600 (USP)
10. Push / Pulls:	BHMA 630 (US32D)
11. Coordinators:	BHMA 600 (USP)
12. Closers:	BHMA 689 (ALUM)
13. Automatic Operators:	BHMA 689 (ALUM)
14. Protection Plates:	BHMA 630 (US32D)
15. Overhead Stops / Holders:	BHMA 626 (US26D)
16. Wall and Floor Stops:	BHMA 626 (US26D)
17. Magnetic Holders:	BHMA 628 (US28)
18. Thresholds and Gasketing:	BHMA 628 (US28)
19. Key Cabinet:	BHMA 600 (USP)
20. Electric Strikes:	BHMA 630 (US32D)
21. Magnetic Locks:	BHMA 630 (US32D)