GENERAL PROJECT DESIGN & INSTALLATION GUIDELINES

SECTION 1 – GENERAL (Division 01 in 2004 Edition (CSI) Master Format)

Consultants working at RIT must be pre-qualified and entered into the Approved Vendor List at Facilities Management Services (FMS). Application/information forms are available in hard copy or electronic format and will be sent to interested vendors upon request.

This guideline is for both new construction and renovation work. Please review the renovation projects in GREAT detail before you provide a proposal. The upfront field work required needs to be addressed.

While many parties may be involved in RIT construction projects, RIT FMS is the authoritative client for all projects. Suggestions, directions, needs, etc. which are raised by others during design phase work or construction phase work are not to be acted upon without approval of the designated Project Manager assigned by FMS to the job.

Contractors are required to review and understand the sections of this document related to their work.

RIT Owner-Architect Agreement and RIT General Conditions of the Contract:

1. These requirements do not supersede any requirements put forth in the standard contract language or general conditions.

2. A/E firm is responsible to review this document in detail, and discuss any concerns with FMS.

3. Contractors should raise any questions or concerns before work is bid.

4. Successful bidders shall confirm that their proposed methods meet these guidelines prior to installation.

Meetings:

1. During the project design phase, plan on a minimal of 4 review meetings per project – stakeholders meeting, SD design review, DD design review and CD design review. The DD review meeting requires additional documentation as follows:

    a. A/E firm submits one set of documents – drawings and specifications to RIT.
    b. RIT makes comments on drawings and specs within an agreed upon time frame.
    c. There is a review meeting at RIT to discuss each comment and determine what will be included in final Construction Documents. RIT will provide one set of comments.

2. A/E firm is responsible for documenting meeting minutes and distributing within 4 days of the meeting.

Drawings/ Specifications:

1. A/E is required to follow the RIT CAD standards available on the FMS web site.

2. A/E is required to work directly with the temperature control group and:

    a. Provide a detailed points list using the RIT points list template.
    b. The temperature control specifications must be incorporated in the project specifications. FMS controls shall provide their latest version of the TC specification.
    c. Complete set of the sequences of operation must be developed for the project.
    d. Design team shall include all ACAD drawings developed by the FMS Controls Department, as pertinent to the project.
    e. Section 4 (scope) of the TC specification shall be revised for each project.

3. RIT is working on standard specifications and details. A/E firm is required to meet with FMS to understand the latest specific requirements. RIT requires the record drawings and specs to be delivered to RIT electronically following the RIT CAD standard format.

4. Before A/E progresses with construction drawings and specifications, room names/numbers and equipment numbers and nomenclature must be reviewed with and approved by RIT's Design, Engineering and Electrical Departments.

Mechanical Drawings

1. The following drawings are required for NEW construction:

    a. Full plumbing isometric drawings for sanitary, storm and domestic water, with a fixture count table.
    b. Air flow diagrams for supply and exhaust systems.
    c. Hydronic flow schematics.

2. The following drawings are required for RENOVATION projects:

    a. Provide separate drawings for removals and new work. Show all existing equipment on the removal set.
    b. For the new work, show partial plumbing isometrics drawings (starting at point of connection) for the sanitary, storm and domestic water, with a fixture count table of new fixtures.
    c. For the new work, show partial air flow diagrams (starting at point of connection) for supply and exhaust systems.
    d. Show full (remaining existing with new work) hydronic flow schematics.

Elect, FP & Fire Alarm Drawings in Black and White only.

SECTION 2 - SITE (Division 32 in 2004 Edition (CSI) Master Format)

RIT Campus Restoration Standard – Installing Underground Utilities

All underground excavation operations performed on Campus to install, repair, upgrade or remove a utility structure (i.e. gas, water, storm sewer, sanitary sewer or drain pipe, tank, hydrant, heating conduit or telecommunication duct), shall not be deemed complete until restoration of the disturbed area is completed per this standard.

Restoration under this standard shall consist of the following items or steps as a minimum:

1. Backfill excavated area in a manner designed specifically to protect any underground utility structure in the area from possible damage incurred by the type of backfill material being used. (i.e. sand padding, blocking, pea gravel or cement encasement may be required to protect underground utility structures).
2. Tamp all backfill material in 12" lifts to minimize subsequent settling of excavated area.
3. Under roadways and sidewalks, final 24" of backfill material shall be tamped "crusher-run" stone, tamped in 12" lifts.
4. Roadway and sidewalk asphalt surfaces shall be paved with a hot-mix asphalt material of equal quality and density to that material removed during excavation, with the surface rolled and smoothed to minimize surface irregularities where new surface adjoins other paved surfaces. Installation shall achieve maximum bonding with the vertical edges of adjoining paved surfaces.
5. Concrete surfaces shall be formed and poured with material to match as nearly as possible the adjoining concrete surfaces in alignment, thickness, texture and color.
6. All curbing units shall be reinstalled in the same manner and alignment as the adjoining units. Replacement units shall match adjoining units in material, size, shape and color.
7. In lawn areas, final 8" of fill material shall be topsoil, racked and hydro-seeded using perennial rye grass mix to blend smoothly into the surrounding grassed areas.
8. All spoil, rock, construction materials and unused backfill material shall be removed from the Campus and disposed of in an appropriate manner.

Contractor shall be responsible for repair of any settlement occurring over excavation site for a maximum of eighteen (18) months after restoration completed.

General Standard for Outdoor Amenities

1. Where possible, avoid the construction of Confined Spaces (i.e. pump in manhole for water feature).

2. Provide refuse and recycling dumpster locations in proximity to service areas of building.

Bike Racks:

UpBeat Incorporated – High Style Bike Rack – Plastic Coat Finish – 9 Bike Capacity – Black – In ground or surface mount are acceptable, depending on application. This is commonly known as the "Wave" bike rack.

- Part # - 6BFSC-LBR9PVCSURF (surface mount)
- Part # - 6BFSC-LBR9PVCING (in ground mount)

Waste Baskets:

Landscape Forms – SCARBOROUGH LITTER RECEPTACLE – with liner 25 inch x 40 inch high, side opening, vertical strap panel, freestanding. Powder coat: Grotto (Black).

Landscape Tables:

Parkitects – 4 seat tables – plastisol finish – black perforated metal.

- Part # - 64-959-3 UMB (handicap accessible)
- Part # - 64-959-4UMB

Park Benches:

Columbia Cascade – TimberForm – 2600 series bench – black cast metal – purple heartwood slats.

RIT Parking Lot Design Standards:

The following notes and specifications need to be included in engineering packages:

1. Contractor to have approved drawings.

2. Contractor to provide schedule of work.

3. Contractor to call for utility stakeout.

4. Contractor to provide survey/stakeout based on RIT datum.

5. Contractor to provide erosion control as noted on plan prior to start.

6. Provide proper signage during construction to maintain traffic flow.

7. Provide required maintenance and protection of traffic.

8. Strip and stockpile topsoil on site per RIT location.

9. Excess non topsoil to be determined by RIT if left on site or removed from site.

10. Contractor to provide and install required temporary and permanent signage.

Full Depth Pavement for Roadways/Parking:

- Well compacted sub-grade
- Geotextile Fabric- Mirafi 500x or as directed by Engineer
- 12 inch #2 Crusher Run stone sub-base, NYSDOT Item 304.12
- 3 inch asphalt concrete binder course NYSDOT item 403.13 Type 3
- 1 ½ inch asphalt concrete top course NYSDOT Item 403.19 Type 7
- Under drain as determined by Engineer
- Compaction testing
- Existing pavement to be saw cut and tack coat cuts as required. NYSDOT item 407.01
- Asphalt concrete truing and leveling course NYSDOT item 403.2.1

Curbing:

- Granite 4 inch wide x 16 inch deep with 6 inch reveal

Striping:

- Parking spaces to be 9 feet 0 inch wide center to center with 4 inch solid yellow painted lines.
- Handicapped spaces and signage to be per Town of Henrietta code.

Asphalt Sidewalk:

- Well compacted sub-grade
- Geotextile fabric-Mirafi 500X or as directed by Engineer
- 12 inch #2 crusher run stone sub-base, NYSDOT item 304.12
- 2 inch asphalt concrete binder course NYSDOT item 403.13 type 3
- 1 inch asphalt concrete top course NYSDOT item 403.19

Concrete Sidewalk:

- Well compacted sub-grade
- Geotextile fabric-Mirafi 500X or as directed by Engineer
- 6 inch #2 crusher run stone sub-base, NYSDOT item 304.12 type 2
- 6 inch concrete, minimum 4000 psi (broom finish) including 6x6x6 WWM. Expansion joint every 50 feet.
- Concrete to receive 2 coats of a membrane finish sealer applied at rates specified by product manufacturer.
- Control joints to be 1 1/8 inch wide saw cut, 1/3 slab depth thickness.

SECTION 3 – CONCRETE (Division 03 in 2004 Edition (CSI) Master Format)

- No RIT-specific standards yet established. "Best Standards of the trade".
- If exposed exterior concrete is used, the Designer must include preventative measures to address potential efflorescence.

SECTION 4 – MASONRY (Division 04 in 2004 Edition (CSI) Master Format)

1. RIT Belden Brick supplied by Weckesser - Number 470-479 Dark A RIT Iron Spot.

2. RIT mortar mix for brick- C-2 ESS ROC/RIVERTON-FLAMINGO.

3. RIT caulk for brick areas – "Redwood Tan".

SECTION 5 – METALS (Division 05 in 2004 Edition (CSI) Master Format)

Exterior architectural metal work is to be powder coated semi-gloss in color, exceptions on a case by case basis approved by the Director of Campus Planning, Design and Construction Services.

SECTION 6 – WOOD PLASTICS (Division 06 in 2004 Edition (CSI) Master Format)

Office shelving is ¾ inch red oak veneered (both sides) plywood banded on three sides, 8 feet long by 12 inch wide or per direction by Project Manager. Support shelving 16 inch OC.

SECTION 7 – THERMAL/MOISTURE PROTECTION (Division 07 in 2004 Edition (CSI) Master Format)

No RIT-specific standards yet established. "Best Standards of the trade".

SECTION 8 – DOORS/WINDOWS (Division 08 in 2004 Edition (CSI) Master Format)

New building - window glass color and profile to approved by the Director of Campus Planning, Design and Construction Services.

Renovation work – match existing glass color with Owner approved insulated glass profiles.
(Approved by the Director of Campus Planning, Design and Construction Services).

A power door operator shall be provided on one leaf at each entrance.

One card reader to be provided at the primary building entrance.

Two "Knox" lock boxes shall be installed:

1. A Knox box for a building key card shall be placed at the designated entrance for use by the Fire Department.

2. A Knox box for building keys (fire panel, mechanical rooms, etc) shall be mounted above the Fire Alarm Annunciator Panel or main Fire Alarm Control Panel.

Note – Card swipe electronic access to certain interior spaces may be required on a project and program specific basis; design for electric strike, coordinate electric strike and hardware with access system provider.

(See door frame paint comments under Section 9-Finishes)

Hardware Sets:

Locking and latching hardware is subject to ADA Technical Requirements concerning access for disabled persons. Conformance to such requirements, as well as other building code or life safety regulations, is required.

Interior doors: All Hardware - Brush Chrome, All Lever Type - Heavy Duty

- Hinges: Ives 5BB1HW-NRP, 4.5 x 4.5 (non-removable pins NRP when exposed)
- Door stop (wall): Ives WS407CVX.
- Rubber door silencers: Ives SR64.
- Smoke seals: NGP 5020 (when required)
- Closer: LCN 4011 for inside of door (HD arm is std.)
  LCN 4111 for outside of door (HD arm is std.)

Function:

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1. Set #1 (office):
    - Lockset: Schlage, ND53BD x RHO, for 7 pin small format interchangeable core, US26D finish, office function, key on outside - push and turn button

2. Set #2 (classroom):
    - Lockset: Schlage, ND70BD x RHO, for 7 pin small format interchangeable core, US26D finish, classroom function, lock/unlock - key only

3. Set #3 (store room):
    - Lockset: Schlage, ND80BD x RHO, for 7 pin small format interchangeable core, US26D finish, store room function, always locked – operated by key only

4. Set #4 (passage):
    - Lockset: Schlage, ND10S x RHO, US26D finish, passage set, no lock

5. Set #5 (unisex toilet)
    - Lockset: Schlage, ND50D x RHO, US26D, Entrance/Office - push bottom, 7 pin small format interchangeable core.

Exterior doors:

- Exterior Doors: new buildings - review finish on a case by case basis with the Director of Campus Planning, Design and Construction Services.
- Renovation work: bronze finish (to match existing).
- Exit Devices: VonDuprin (function to suit situation)
- Pulls: Cipco #97-103
- Hinge: Roton #780-224 HD Bronze finish
- Closers: LCN #4114H Cush-n-Stop bronze

For specification assistance contact:
Andy Lindenberg, AHC
Specification Consultant
585-248-1524
Andy_lindenberg@irco.com

SECTION 9 – FINISHES (Division 09 in 2004 Edition (CSI) Master Format)

Acoustic Ceilings: Design to minimize hard ceilings.

Ceiling Height:

Classrooms, Labs, Conference Rooms, and Seminar Rooms are 10 feet 0 inch, but are not to exceed 11 feet 0 inch with the following exceptions:

- Classrooms, Conference Rooms, and Seminar Rooms under 30 seats can be reduced to 9 feet 6 inch.
- Classrooms and Auditoriums of over 65 seats should be considered an exception and the height should be raised as sight line and considerations dictate.
- Offices and Corridors should have a ceiling height of 9 feet 0 inch except for large office spaces and special corridors which may be taller.

MATERIAL

Standard Tile:

New installations in academic areas, classrooms, labs and offices: use non-directional fissured, 2 feet x 4 feet x 5/8 inch, white panels:

Armstrong Cortega Minaboard #769
USG, Omni 90 (SQ-edge)

Standard Grid System:

15/16 inch exposed tee system, heavy-duty service, white:

Armstrong Prelude MX
USG DX System

Special Areas:

For public areas and circulation spaces use ceilings described below; for areas of special consideration review with the Director of Campus Planning, Design and Construction Services.

Custom Ceiling #1: Tile with Standard Grid
Non-directional fissured, 2 feet x 4 feet x 5/8 inch, angled tegular, white panels:

Armstrong Cortega Second Look I, II or IV
USG, Omni 90 (ILT-edge), Illusion Two/24, Eight/12 or Thirty-two/6

Custom Ceiling #2: Tile with Standard Grid

Armstrong Cirrus Open Plan (15/16 inch square lay-in or angled tegular)
2 feet x 4 feet white panel or Armstrong Cirrus Second Look I & II (beveled tegular)
USG Frost (15/16 inch square lay in or fineline bevel) in 2 feet x 4 feet white panel or
Frost Chex/4, Chex/6 or Chex/36

Kitchens (Basis of Design): Armstrong Ceramaguard with white heavy duty 15/16 inch grid
Toilet Rooms (Basis of Design): Armstrong Armatuff with standard 15/16 inch grid

Replacement Work:

Patch back: match existing tile, when possible, provide standard tile and grid.

Carpeting:

1. Stain resistance warranty of 20 years or more. Solution dyed nylon and dyed yarn are acceptable as long as warranty meets standard.

2. Wear warranty of 20 years or more.

3. High performance backing with lifetime warranty for edge ravel and delaminating.

Hard Floors:

1. Quartz tile minimum, VCT if Owner approved.

Stairs:

1. Stair stringers should not have exposed metal nosing that is part of the horizontal section of step.

2. All stair nosings in Assembly areas shall be finished so that adequate visual feedback is provided, via color contrast per code. A significant number of RIT students have Usher's Syndrome, a condition affecting visual discrimination.

Mechanical Room Floors:

1. If mechanical rooms are located above occupied space, provide water proof floor system. Material is called Florock by Crawford Laboratories, 4165 South Emerald Ave, Chicago, IL 60609. 1-800-356-7625.

Entrances:

1. If pedi-grid is installed, must have drain line in pit and no vinyl or stainless steel grids.

2. If Entrance matting is used, must be High performance backing material with nylon fiber, not olefin.

3. Thresholds should have anti-slip characteristics, not 6 inch brass, creates trip hazard in winter.

4. Include hydronic ice melt system at main entry.

Paint Colors:

RIT has standard paint colors. Consultants may vary from these standards only with specific prior permission from RIT FMS. RIT has a preferred contract with Sherwin Williams.

Interior metal door frames scheduled to be painted are, typically, to be painted as appropriate for metal finishing and to match the adjacent wall color. Variations from this standard are only with specific prior permission from RIT FMS.

Interior Paint:

Use Sherwin Williams Promar 200 paint in eggshell finish for interior walls.
Use semi-gloss acrylic enamel. (Coronado Ceramagard / Muralo Ultra) for trim.

The following are standard interior paint colors selected from Sherwin Williams paints.

WALL COLORS:
#SW6119
#SW6385
#SW7011 Natural Choice
#SW7012 Creamy
#SW7003 Toque White
#SW7004 Snow Bound
Supplier: Sherwin Williams Paints

TRIM COLORS:
RIT Brown - brown mix is: (R2 17/32)(W1 2/32)(Y3 52/32)(B1 2oz. 57/32).
#SW6244 Naval
#SW6272 Plum Brown
#SW6230 Rainstorm
#SW0064 Blue Peacock
#SW0016 Billiard Green

ACCENT COLORS:
#SW6197 Aloof Gray
#SW6093 Familiar Beige
#SW6335 Fired Brick
#SW0031 Dutch Tile Blue
#SW0015 Gallery Green
#SW6109 Hopsack
#SW6106 Kilim Beige

#SW0032 Needle Point Navy
#SW6156 Ramie
#SW6240 Windy Blue

SECTION 10 – SPECIALTIES (Division 10 in 2004 Edition (CSI) Master Format)

Signs and Wayfinding:

RIT has standards for interior and exterior signs including approved typefaces, colors and text. Consultants should consult with Project Managers for the latest approved edition of RIT sign standards before designing these elements.

Existing buildings with wood sign plaques:

1. Sign plaques shall be made to the detail and dimensions shown in figure #1 of ¾" thick, flat solid red oak and finished with three coats of clear lacquer.
2. Plaques shall be set with the top edge at 5'-5" above the finish floor, see figure #2.
3. In long hallways, the tops shall be set from the ceiling height down to avoid reflecting an uneven floor line.
4. Plaques are to be installed 1" away from the doorframe on the latch side of the door. In case of interference or obstruction the plaque can be cut to no more than ½ its height and/or moved to 1" from the obstruction, or moved to the hinge side of the door.
5. In locations having double doors, plaques shall be mounted to the right of the right hand door.
6. For alcove doors the plaque shall be placed outside the alcove on the latch side as above.
7. RIT standard black, plastic laminate signs are to be mounted over the plaque mounting holes.

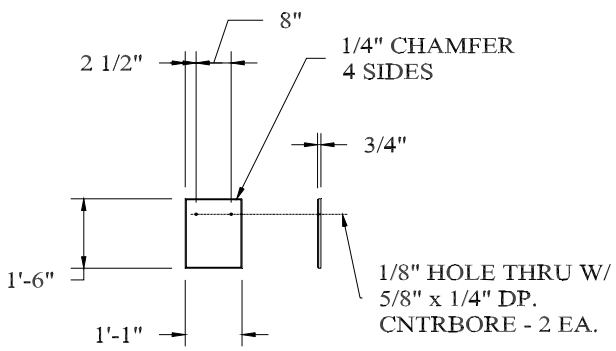

FIGURE #1
PLAQUE DETAIL

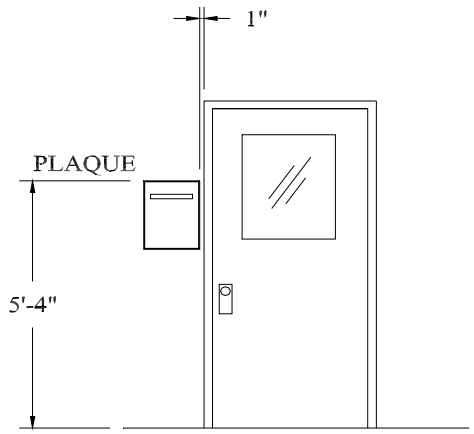

FIGURE #2
ELEVATION

New Buildings:

1. Interior sign systems are acceptable if they are able to be maintained by the RIT sign shop (contact the Sign Shop for capabilities) and they follow the Interior Building Signage sample located in the "Details" Section of the Facilities Management website.
2. Room ID and occupant name signs are to be installed with the top at 5'4" above the finish floor in a similar manner to the wood plaques described above.
3. Building evacuation signs are produced and installed by the RIT Sign Shop.

SECTION 11 – EQUIPMENT (Division 11 in 2004 Edition (CSI) Master Format)

Owner will provide Fire Extinguishers. Contractor to provide Fire Extinguisher cabinets by JL Industries or Owner approved equal.

TRIM & DOOR & SERIES #		TUB I.D.			FRAME O.D.		WALL OPENING: NON-RATED		
Aluminum	**Trim Style**	**W**	**H**	**D**	**W**	**H**	**W**	**H**	**D**
2025	Flat Trim	12”	27”	7 ¾”	15 3/8”	30 3/8”	13”	28”	7 7/8”

SECTION 12 – FURNISHINGS (Division 12 in 2004 Edition Master Format)

The building must include proper pathways for telecom and data. This is addressed in Section 16. The design team must contact the Project Manager.

RIT has arranged preferential furniture pricing with certain national manufacturers and has established standard packages for faculty offices, etc. Details on these standards may be obtained from the Project Manager and he/she will coordinate with Marcia Barilla at RIT Purchasing; 585-475-6925; mjbpur@rit.edu.

Architect/engineer, furnishings provider, RIT Project Manager and end user to coordinate furniture types and locations with building areas and services for fit and serviceability (i.e. power requirements and receptacle locations etc.).

SECTION 13 – SPECIAL CONSTRUCTION (Division 13 in 2004 Edition (CSI) Master Format)

Provide building service space to accommodate custodial needs on each floor proximate to rest rooms.

Provide a separate service entry with loading and unloading area and in multistory buildings located proximate to a service elevator. Include a collection room for Universal Waste and storage/marshalling area for building refuse and recycling waste collection.

SECTION 14 – CONVEYING (Division 14 in 2004 Edition (CSI) Master Format)

1. Division 16 to connect electrical power and wiring to elevator controllers and car lights with appropriate lockable disconnects.

2. Definition: Defective Elevator Work: Operation or control system failures; performances below specified ratings; excessive wear; unusual deterioration or aging of materials or finishes; unsafe conditions; the need for excessive maintenance; abnormal noise or vibration; and similar unusual, unexpected, and unsatisfactory conditions.

3. Submittals: Product Data: Include capacities, sizes, performances, operations, safety features, finishes, and similar information.

4. Shop Drawings: Show plans, elevations, sections, and large-scale details indicating service at each landing, machine room layout, COP drawing with Best brand key switches with their model number and mechanical operation, cut sheet for sump pump with oil sensing switch detail, hall fixture drawings, coordination with building structure, relationships with other construction, and locations of equipment and signals. Indicate variations from specified requirements, maximum dynamic and static loads imposed on building structure at points of support, motor horsepower, motor duty rating, and maximum and average power demand.

5. Manufacturer Certificates: Signed by elevator manufacturer certifying that hoistway, pit, and machine room layout and dimensions, as shown on Drawings, and electrical service, including emergency generator, as shown and specified, are adequate for elevator system being provided.

6. Maintenance and Programming Manuals: Include Operation, Programming, and Maintenance manuals, parts listing with sources indicated, recommended parts inventory listing, emergency instructions, and similar information. Include diagnostic and repair information available to manufacturer's and Installer's maintenance personnel. Submit for Owner's information at Project closeout as specified in Division 1.

7. Inspection and Acceptance Certificates and Operating Permits: As required by authorities having jurisdiction for normal, unrestricted elevator use.

8. Accessibility Requirements: In addition to local governing regulations, comply with the latest Section 4.10 in the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA), Accessibility Guidelines (ADAAG)." Section 407 in ICC A117.1.

9. Maintenance Service:

   Initial Maintenance Service: Beginning at Substantial Completion, provide 12 months full maintenance service by skilled employees of the elevator Installer.

   Include monthly preventive maintenance, repair or replacement of worn or defective components, lubrication, cleaning, and adjusting as required for proper elevator operation at rated speed and capacity. Provide parts and supplies as used in the manufacture and installation of original equipment. Copies of all monthly maintenance, repair call, and callback slips are to be signed by personnel at the FMS Operation Center. A copy must be left with the Operation Center.

   a. Perform maintenance, including emergency callback service, during normal working hours.
   b. Include 24-hour-per-day, 7-day-per-week emergency callback service.
      i. Response Time: Two hours or less.

10. Continuing Maintenance Proposal: Provide a continuing maintenance proposal from Installer to Owner, in the form of a standard yearly maintenance agreement, starting on date initial maintenance service is concluded. State services, obligations, conditions, and terms for agreement period and for future renewal options. Also provide a quote for a five year maintenance agreement

11. Warranty Period: 12 months from date of Substantial Completion.

12. Pump Units: Positive-displacement type with a maximum of 10 percent variation between no load and full load and with minimum pulsations. Provide motor with soft start solid-state starting.

13. Hydraulic Silencers: Provide hydraulic silencer containing pulsation-absorbing material in a blowout-proof housing at pump unit.

14. Casing for Underground Piping (do not use underground piping unless approved by Owner): PVC pipe complying with ASTM D 1785 joined with PVC fittings complying with ASTM D 2466 and solvent cement complying with ASTM D 2564.

15. Protective Cylinder Casings: PVC pipe casings complying with ASME A17.1, of sufficient size to provide not less than 1 inch clearance from cylinder, and extending above pit floor.

16. Corrosion Protective Filler: A solvent-less, petroleum-based gel formulated for filling the space between hydraulic cylinders and protective casings. Filler is heavier than water, electrically non-conductive, and liquefies at approximately 150 deg F (Pacific Standard Chemical Co.; Union-Gard 160).

17. Car Frame and Platform: Welded steel units.

18. Provide Motion Control Engineering (MCE) microprocessor operation system.

19. Emergency Lowering: On failure of building power, cars that are at a floor are lowered to the lowest terminal floor, open their doors, and shut down. Cars that are between floors are lowered to the lowest terminal floor, open their doors, and shut down.

20. Key Switches: All key switch cylinders shall be by Best (except Yale 3502 for Fire Service). Cores shall be supplied by Owner.

21. Provide a Door Hold feature that holds car at floor with doors open and all other buttons and calls inactive except Fire Service and Fire Service Recall. Door Hold keyswitch to be on COP.

22. Provide Phase I and Phase II fire emergency service per ANSI/ASME A17.1 and any other requirements in accordance with local laws and ordinances. Fire Service key shall be Yale 3502. Emergency operation shall be actuated by the operation of three-position (Reset, Normal, Firemen Service) key operated switches located at the Lobby Floor. Fire Service Recall (Phase I): By activation of Fire Alarm System, the elevator will enter into Fire Service Recall and go to the first floor lobby (known as the Designated floor) if any of the elevator lobby smoke detectors on any floor (except the first floor elevator lobby) or any hoistway or elevator machine room smoke detectors are activated. If the first floor lobby smoke detector is activated, the elevator will enter Fire Service Recall and travel to the second floor (known as the Alternate floor). All other smoke detector or fire alarm activations will not affect elevator service (except hoistway or machine room detectors). Upon Fire Service Recall, the Fire buzzer and display lamp in the cab will be activated. If a hoistway or machine room smoke detector is activated, the "Fire" light in the COP and designated floor hall fixture lobby will flash. When Fire Service Recall is activated by the building fire alarm system panel, Fire Service Recall must be manually reset at the first floor lobby after the fire alarm system has been reset. This is accomplished by inserting the Yale 3502 key into the Fire Service key switch at the first floor lobby and turning the switch to the "Reset" position and then back to the "Normal" position. The car will then return to normal service, if and only if, the fire alarm system has been fully reset.

23. Fire Alarm Shunt Trip: If a heat detector in the elevator machine room or hoistway is activated, or if the flow switch for the fire sprinkler line to the hoistway or elevator machine room is activated, the shunt trip breaker supplying electrical power to the elevator system shall be tripped removing power from the elevator system (including Emergency Lowering).

24. COP layout drawing to be approved by Owner before COP is released for production.

25. Emergency Communication System: Provide system that complies with ASME A17.1 and the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA), Accessibility Guidelines (ADAAG)." On activation, system dials preprogrammed number of monitoring station. System provides two-way voice communication without using a handset and provides visible signals that indicate when system has been activated and when monitoring station has responded. System is contained in COP with identification, instructions for use, and is powered by the telephone line without a battery.

26. Door Edge Device: Provide electronic safe edge on elevator entrance doors that cause doors to stop and reopen upon detecting an obstruction. Include photoelectric curtain with timed cutout that projects beams across car entrance. The beams, when interrupted, cause doors to stop and reopen. Include Nudging Feature: After car doors are prevented from closing for a predetermined adjustable time, through activating door reopening device, a loud buzzer shall sound and doors shall begin to close at reduced kinetic energy.

27. Floor finish is Noraplan or Owner approved rubber floor tile.

28. Luminous Ceiling: Fluorescent light fixtures using 4 foot T-8 lamps and ceiling panels of translucent acrylic or other permanent rigid plastic complying with flammability requirements.

29. Piping: Provide size, type, and weight piping recommended by manufacturer, and provide flexible connectors to minimize sound and vibration transmissions from power unit.

30. Provide dielectric couplings at plunger/cylinder units.

31. Provide vandal resistant signal equipment for elevator with vandal resistant Braille that use LED lamps. Fabricate lighted elements of acrylic or other permanent, non-yellowing translucent plastic.

32. Engrave Fireman’s Service instructions into COP above Fire Service key switch.

33. Integrate emergency phone into COP.

34. Elevator unit number to be engraved at top of COP above CPI.

35. Fire Department Communication System (if required): Provide jack in COP and required conductors in traveling cable for fire department communication system specified in Division 16 Sections (if required).

36. Provide waterproof well casings to retain walls of well hole.

37. Install cylinders in well casings. Before installing cylinders, remove water and debris from well casing and provide permanent waterproof seal at bottom of casing.

38. Install cylinders plumb and accurately centered for elevator car position and travel. Anchor securely in place, supported at pit floor. Seal between protective casing and pit floor with 4 inch of non-shrink, non-metallic grout.

39. Elevator shall have a minimum posted capacity of 3,000 pounds.

40. Elevator depth from inside doors to rail on rear wall shall be no less than 60 inches.

SECTION 15 – MECHANICAL (Division 22 & 23 in 2004 Edition (CSI) Master Format)

1. Equipment shall not be hung from the ceiling.

2. Refrigerant (aka Freon) lines shall not exceed 30 foot length (leaks oil and return issues).

3. Butterfly valves shall not be used, except for flow control.

4. Cooling towers shall be dry whenever possible to avoid having to use pesticides and chemicals, as when using a wet tower.

5. Adjustable sheaves are only for balancing and shall be replaced with fixed sheaves after balancing by the mechanical contractor or installer. Fixed sheave information shall be forwarded to Owner.

6. Dielectric unions shall have isolation valves near by on each side for replacing gasket and washer when they fail.

7. Units shall not be placed on the roof (except exhaust fans). If necessary, they should be factory finished, the color to be selected by the architect with Owner approval.

8. All air filters shall be 24x24xXX or 12x24xXX.

9. All VAV boxes shall be purchased and installed with a reheat coil.

10. In line circulator pumps shall be Grundfos or Taco cartridge type. B&G series 60 type pumps, or similar style pumps shall not be used.

11. Base mounted pumps may be Taco, B&G, or Armstrong. Pumps shall be mounted level on contractor provided concrete base pad such that there is no strain on the pump base. Pump shall be aligned for both vertical and angular shaft alignment. Base shall be filled with grout. Alignment shall be again checked after grout sets and shall have a tolerance of +/- .003 inch.

12. On large air handlers, ductwork connections should always be on the end or top, not the bottom (safety issue).

13. No trap Primers (if code allows), or use external valve type.

14. Minimum floor drains, use deep seal floor drains.

15. For new construction or building exterior renovations- hose bib outside on each face of building (coordinate location with RIT).

16. Roof scuppers – secondary system pipe to daylight.

17. Use the RIT specification for gas, electric, and water meters. Contact RIT FMS directly for these specifications.

18. Standard HVAC design includes VAV with reheat coils, DA sensor, and motion sensor input for scheduling.

19. For all the external wall assigned occupied spaces provide fin tube radiation with OA reset. Provide means to adjust individual heat output (dampers or local "Braukman" valve).

20. Include branch dampers on ductwork for balancing, using quadrant locking dampers only.

21. Cabinet unit heaters and/or fan coil units shall be wall mounted (no higher than 48 inch AFF), not in ceilings.

22. All interior lined ductwork shall have stainless steel perforated interior liner.

23. Use of linear supply diffusers is discouraged.

24. Use drench hose for emergency eyewash/shower stations (Fisher A112.18.1M).

25. Pipe labeling and valve tagging, use RIT guidelines located in the RIT FMS website.

26. Where possible, avoid the construction of Confined Spaces.

27. Water and gas meter piping must be sketched and approved by owner before installation.

28. Fire Protection Sprinklers - DO NOT use concealed sprinkler heads.

29. Fire Protection Sprinklers - Refer to Sprinkler System Guidelines on the RIT FMS website.

SECTION 16 – ELECTRICAL (Division 26 in 2004 Edition (CSI) Master Format)

Switching of lighting, and lighting controls, shall be designed with flexibility of operation and energy conservation as primary goals. Constant operation lighting should be minimized per Code requirement and safety needs.

Building Entrance:

1. At least one entrance should be prepared for card access (see Owner).

2. ADA door operator push button and card reader shall be mounted in a 4 inch X 4 inch and 50 inch total height pedestal (powder coat black finish) at the main entrance of the building (see Devices in this section for device heights).

3. If Code or local building department regulations require unlocked roof access exits, then any such exits shall be normally held electrically locked, have a by-pass key switch, and be released by the fire alarm system during an activation. The doors shall be posted indicating exit for emergency use only.

4. At least two lamps at each building entrance shall be powered by the Life Safety (Emergency) power circuit.

Low Voltage – Class 2 (0-50 volts including Fire Alarm Systems):

- Use plenum rated wiring for all low voltage applications.

Fire Alarm:

1. Fire Alarm Systems – Refer to Fire Alarm System Guidelines in the RIT FMS website.

2. Fire Protection Sprinklers – Refer to Sprinkler System Guidelines in the RIT FMS website.

3. Place Fire Alarm systems on separate dedicated sheets in drawing set (not on the "Systems" sheets with the rest of the systems i.e. tele/data). As-built Fire Alarm drawings to show conduit routing, devices, address for each device, battery calculations, panel information, conductor quantity, types, and sizes. Drawings to be black and white only, no color.

4. Smoke detectors shall be 3 feet from HVAC Diffusers.

5. Smoke detectors shall be installed in all rooms designated for student occupancy.

Low Voltage – Class 1 (50-600 volts):

1. No shared neutrals (unless in plug mold and approved by Owner).

2. Properly sized grounding conductor shall be run with power conductors in all conduits.

3. No conduit less than ¾ inch without Owner approval.

4. No cast fittings for conduit.

5. Use acceptable Manufacturers list for electrical products (Contact RIT for latest list).

6. MC cable shall not be used in new or renovation work except for light fixture whips.

7. For new building projects install:

    a. Square-D power logic electric meter (tie-in with Square-D loop)
    b. Water meter with register and pulse output and with bypass
    c. Gas meter with register and pulse output and with bypass.

8. No secondary switchboards shall be placed against building walls, minimum spacing from wall shall be 18 inch.

9. Provide at least one 120v duplex outlet on e-power in each mechanical, electrical, and boiler room.

10. Use stranded wire on #14 and larger.

11. Use terminals on #14 wire when used for low voltage (Class II) control work.

Conduits and Boxes (in Buildings):

1. Do not run conduits in or under concrete slabs or floors.

2. Junction box and panel covers on Back Up and/or Life Safety Power circuits shall be painted Green.

3. Junction box and panel covers on Fire Alarm circuits shall be painted Red.

4. Junction box covers on 277/480 volt circuits shall be painted Orange.

5. Junction box covers on 120/208 volt circuits shall be painted Blue.

6. Include 120 volt circuits for HVAC control panels and to each VAV box with a toggle switch (regular light switch) in a single gang box mounted at each panel and VAV box.

7. Include ¾ inch EMT conduit and single gang box in wall for HVAC temperature sensor.

8. Use only Scotch 33+ tape.

9. Use Ideal or 3M Scotch lock wire nuts.

10. In areas where free air wiring (Telecom/Data) pass over non-accessible ceiling (GWB), install those wires in conduit pathway so that future wires may be added or deleted.

11. No horizontal hardwired conduit runs in walls. All equipment shall have a local disconnect (for LOTO) regardless of panelboard location.

12. Install toggle switch in single gang handy box at each 120 VAC operated smoke damper. This makes for a means disconnect when changing a damper motor.

13. Hand dryers in restrooms require dedicated 120 volt 20A circuit to each dryer.

14. Coordinate 120 volt duplex outlets with furniture layout. Advise Owner of any problems.

15. Pitch pockets shall NOT be used for roof penetrations for conduit or piping. Cones or "Witches Hats" with a stainless steel "radiator hose" style clamp (with stainless steel worm screw) shall be used. For multiple or large conduits, a "dog house" box shall be used with conduits exiting the side wall of the box.

16. Telecom pathways:

    a. 1 inch EMT conduit from double gang boxes with single gang raised cover mud ring to be stubbed up above ceiling.
    b. Use a minimum of 1 inch sleeved pathways into spaces from main hallways.
    c. Review electrical contractor responsibility for Telecom with RIT Project Manager.

17. All conduits (Telecom, low voltage (600v) or medium voltage (12Kv)) entering a building shall be pitched away from the building and shall immediately enter a pullbox in the building. Conduits leaving the pull box shall be higher so that any water entering the pull box via the exterior conduits cannot flow to conduits or equipment inside the building.

18. Include ¾ inch EMT conduit and single gang box for card reader at building entrance.

Motor Controls and Variable Speed Drives (VSD):

1. Do not mount any disconnects or motor starters above the ceiling unless approved by Owner.

2. Motor controls shall use LED lamps.

3. Start up of new VSDs shall be performed by the drive manufacturer or his designated representative.

4. A list of values (other than default) programmed into a VSD shall be supplied to the Owner.

Panelboards:

1. Panelboard schedules shall include loads in terms of Horse Power and Amps with total load for the panel indicated per phase.

2. Design firm shall include fuse coordination study and Arc Flash study information in close out documents to Owner in both hardcopy and electronic form.

3. Use only bolt-in breakers in panel boards (plug in breakers require approval from Owner).

4. Use lockable door in door type covers on panel boards.

5. No panelboards shall be directly surface mounted to concrete walls in mechanical or electrical rooms. Panelboards shall be spaced from the wall using Kindorf such that water running down wall will not affect panel.

6. Installing contractor shall provide Owner with panelboard directories in MS Word format on a CD.

7. Rotation shall be clockwise at main distribution panel and at all panelboards.

Devices:

1. Device covers shall be unbreakable nylon in white unless otherwise approved by Owner.

2. Construction of new buildings shall include an exterior 120VAC GFCI duplex outlet at each entrance and one outlet on each face of the exterior.

3. Device and Equipment mounting heights (AFF measured from finished floor to device centerline unless noted as otherwise:

    a. Toggle switches (up is "on") 46 inch.
    b. Receptacles (ground pin up or to the left) 18 inch.
    c. Receptacles above counters 8 inch.
    d. Receptacles above hot water baseboard heat 30 inch.
    e. Receptacles in hazardous areas, or for refrigerators 48 inch.
    f. Receptacles, weatherproof, above grade 24 inch.
    g. Telephone/data outlets 18 inch.
    h. Telephone outlets, wall mounted 46 inch.
    i. Fire Alarm Pull Stations 46 inch.
    j. Fire Alarm horns and strobes (match existing or) 80 inch to bottom of device
    k. Distribution Panels (to top of back box) 72 inch.
    l. Terminal cabinets (to top of back box) 72 inch.
    m. Disconnect switches, motor starters, enclosed breakers 48 inch.
    n. Temperature sensors 54 inch.
    o. ADA door operator push buttons 40 inch.
    p. Card reader 40 inch.
    q. Outdoor pedestal for card reader and ADA door button 50 inch total height.

4. Provide circuit information (panel number and breaker number) on the rear of all outlet and switch covers in finished areas, on the front of cover for devices in unfinished spaces.

5. Duplex outlets on 120 volt circuit shall be 20A and equal to Pass and Seymour Industrial Spec. Grade #5362 (Warning: Device manufacturers do not use the same terms to describe similar device grades).

6. Duplex outlets that are included with furniture shall comply with the device requirements in these guidelines.

Lighting:

1. No batteries in exit lights or emergency lights (except for emergency light by emergency genset).

2. Install occupancy sensors in corridors for corridor lighting control along with wall switches.

3. Install timer switches on light switches for all closets.

4. For larger mechanical, electrical, or boiler rooms, provide lighted toggle switches (lit up when room is dark) for lighting circuits.

5. Do not use fluorescent lighting fixtures requiring U-tubes or T-12 lamps.

6. Ensure contract language contains disposal information for waste lamps and ballasts.

    a. Lamps removed from existing fixtures are to be placed in boxes supplied by Owner. Apply tape to the bottom of the boxes to protect from opening. Boxes must be labeled with "Universal Waste - Lamps" (labels supplied by Owner) and dated by writing on the preprinted label. Also indicate lamp type - fluorescent, HID, incandescent. Pack different lamp types (fluorescent, HID, incandescent) in separate boxes. When a box of waste lamps is full, close the flaps and seal with tape. Labeled and sealed boxes of used/waste lamps shall be delivered to Building 99 (call Project Manager to make arrangements).
    b. Old ballasts with cloth covered wires or old ballasts that do not have "No PCBs" on the label are to be boxed only with like kind and returned to Owner at Building 99 (call Project Manager to make arrangements). Boxes are to be labeled with RIT Project Number, RIT building number, and Contractor Name. Magnetic ballasts marked with "No PCBs" on the label are to be boxed only with like kind (no PCBs) and will be picked up by the Owner (call Project Manager to make arrangements). Ballasts labeled "Electronic" are to be boxed only with like kind (Electronic) and returned to Owner at Building 99 (call Project Manager to make arrangements). Boxes are to be labeled with RIT Project Number, RIT building number, and Contractor Name.

7. New fluorescent light ballasts shall be rapid start type.

8. Lighting fixtures using lamps longer than 4 feet must be approved by Owner.

9. Do not mount light fixtures in high areas where lamp replacement requires more than an 8 foot step ladder. Any fixtures that must be higher require Owner approval.

10. Classroom lighting to include:

    a. Light switches near teaching station and entry. Dimmer(s) at teaching station only.
    b. Center lamps on switch and dimmer. Outboard lamps on switch.
    c. Appropriate window covering for redirection of ambient light when needed.
    d. See RIT Classroom Lighting Layout sketch on the RIT FMS website.

11. Classroom Podium information:

    a. Location and installation by ETC (after telecom and AV integrator completed).
    b. Needs 3 conduits from podium to projector (through floor, up wall, above ceiling):
    c.
        i. One 1 inch conduit for power to feed a 20 amp duplex outlet, same leg as projector, on floor under podium.
        ii. One 2 inch conduit for Telecom** – 2 live Ethernet, 1 classroom voice line, and 1 CATV line at standard signal level (terminated in standard telecom box with jack and labels).
        iii. One 2 inch for AV cables to/from projector and wall speakers – will be terminated in RIT standard patch plate/panel box on floor by AV integrator.
        **projector coordinates with telecom – must be wired terminated, labeled, and activated before podium installation.

12. Provide some lights connected to emergency power genset in every mechanical and boiler room.

13. Occupancy sensors shall be Watt Stopper DT-300 (24v w/switch pack) or DT-355 (line voltage). Use of any other occupancy sensor requires Owner approval.

14. Provide an HVAC set of contacts on each Occupancy Sensor (OS). Temperature Controls Contractor to tie-in (provide wiring and programming) HVAC OS contacts with VAV for the area served.

15. MC cable may only be used in accessible areas on whips for light fixtures and may not exceed 6 feet in length.

16. Blue light phone light fixture shall be RAB Lighting VX1F26-3/4, VX100D6, or VBR200DG/F26277.

Medium Voltage – (15Kv):

1. Use liquid filled transformers on all 12kv service.

2. Use single-phase liquid filled transformers on 12kv service of 150kva and higher.

3. Transformers to have HV connections on rear side, LV on top.

4. Transformers to have oil sample port, oil fill port, oil level indicator, oil temperature (with max) indicator, oil vac/pressure indicator, and removable top or hand hole on top.

5. Use type SM-4, SM-5, or SMU-20 type in 15kv switchgear.

6. 12kv cable shall be Kerite, Perelli (Prysmian), or Oakinite and shall be 500MCM between manholes.

7. Use only Elastimold bolt-together tee type splices in 12kv manholes.

8. For underground conduits, use Schedule 40 PVC conduit. Transition to RGS sweeping elbow when rising above grade or entering building. Encase with 6 inch of concrete on all four sides. Provide 3 feet of cover by backfilling in 12 inch lifts with compaction between lifts. Provide 8 inch of top soil in lawn areas.

9. No medium voltage equipment is to be placed against building walls, minimum spacing from wall shall be 18 inch.

10. All medium voltage wiring used for connections between transformers (feeds and interconnections) and switchgear shall be a shielded type.

Site Electrical Systems: (Division 33 in 2004 Edition (CSI) Master Format)

1. Utility line depth (also see drawing details):

    a. Conduit for roadway or walkway lighting – 18 inch cover.
    b. Conduit for 12KV – concrete encased 6 inch all sides, 5 feet cover over concrete.
    c. Conduit for Telecom/Data – concrete cap 12 inch above conduit, 3 feet total cover.
    d. HDPE gas line – 6 inch of sand around gas line, 3 feet total cover.
    e. Ductile iron water line – 12 inch of sand around water line, 5 feet total cover.

2. Use Kistner Uni-bases for outdoor light poles – expose only 4 inch with 8 inch of top soil as shown on RIT detail – do not use leveling nuts to true poles (use washers or shims).

3. Use Schedule 40 PVC conduit for underground use. Transition to RGS sweeping elbow when rising above grade.

4. All light poles shall be powder coated black finish unless stated and approved otherwise.

5. Always install double the number of conduits needed for 12kv service (if 4 are required, install 8 conduits).

6. Use type USE, RHN, RHH wire for low voltage class 1 (600v) electric service in underground conduits.

7. Concrete cap over underground telecom conduits.

8. Use only fiberglass and stainless steel hardware on 12kv wire racking materials in manholes.

9. No small round hand holes are to be installed. Quartzite or equal (subject to Owner approval) are to be used.

10. Use only scotch 33+ tape on class 1 and 2 systems.

11. Use ideal or 3M scotch lock wire nuts.

12. For lawn repairs due to trenching, boring, or other digging, include top soil, dressing, and seeding to restore lawn to original conditions with 1 year warranty against settling.

13. For walk or road repairs due to trenching, boring, or other digging, include any pavement repair to original conditions with 1 year warranty against settling.

14. For site power with wire sizes #10awg and #12awg use 480/277 volt colors or 208/120 colors as needed.

15. For site power, splices are only permitted in poles or existing hand holes.

16. Outdoor Blue light information:

    a. Blue cubes from Laird Plastics (585-254-8110).
       12 inch square used on building mounted Blue Lights 16 inch square used on all other locations
       ¼ inch (.250) thick Blue plastic - color #2051
       9 inch diameter hole.
    b. Light fixture for top of pole (4 inch square) is a Pemco CRY2-X-70MH-120/277 top cap assembly without cube.
    c. Light fixture on wall mount bracket is a Pemco S410-A/125 - Powder Coat Black finish used with a Pemco CRY2-X-70MH-120/277 top cap assembly with out cube.
    d. If mounting to a existing round pole, a back panel/bracket must be installed on pole prior to mounting phone and or light mounting bracket.
    e. Use Kistner Uni-base, and 10 feet tall 4 inch square pole (power coated Black) by Flagpoles Inc.
    f. Contact RIT for cut sheets.

17. Decorative site poles use AAL SP1 fixtures with 150 watt MH lamps. Handhole in pole shall be 12 inch above base so that decorative base cover may be installed. A GFCI duplex outlet shall be 18 inch above base on all poles. Contact RIT for spec sheets.

18. All light pole bases to be installed with 4 inch of base exposed, and a minimum of 8 inch of top soil. Shims are to be used to level poles. Leveling nuts shall NOT be used.

19. Photo cells (with by-pass switch) shall be used for exterior lighting control. Time clocks shall not be used.

Site Telecom Systems

1. Use Schedule 40 PVC conduit for underground use. Transition to RGS sweeping elbow when rising above grade. Provide 3 feet of cover consisting of 12 inch of fill, 3 inch of concrete (cap), 12 inch of fill, and 9 inch of top soil (or pavement).

2. Pull in a tracer wire of single conductor #10AWG solid copper insulated (THHN) wire in all conduits.

SECTION 17 – DATA TELECOM (Division 27 in 2004 Edition Master Format)

1. Reference Communication Cabling Guidelines on RIT FMS website.

2. Blue Light phones are Ramtel Model RR 734 (Dial Pad & optional Red 2 inch E-Button) or RR 733 (with optional Red 2 inch E-Button only) with Model 906 Flush Mount Box.

SECTION 18 –ROOM DESIGN GUIDELINES

Classroom Educational Technology Standards:

Screen:
- Size based on room size/need (8 feet or 10 feet common)
- Located on center of front wall
- Mounted at ceiling or above/through ceiling or in ceiling pocket
- Mounted (with projector) by vendor/integrator

Projector:
- Sized to fit room/need
- Centered on screen
- Mounted by vendor/integrator
- Mounted to concrete deck and through hung ceiling tile
- Mounted "tight" to ceiling (nothing in "cone")
- Mounted 12 feet (+3 feet) from screen
- Needs power – 20 amp circuit (duplex on whip mounted to projector pole, on same power leg as podium circuit)
- Nothing hanging from ceiling in the projector "cone"

Podium:
- Location and installation by ETC (after telecom and AV integrator completed)
- Needs 3 conduits (through floor, up wall, above ceiling, see Division 16 Electrical Guidelines)

Speakers:
- Will be installed on either side of screen by AV integrator and wired to podium AV box through 2 inch conduit

*provided by project funding
**projector coordinates with telecom – must be wired terminated, labeled, and activated before podium installation

Restrooms-Men, Woman and Unisex:

1. Flush valves for closets and urinals: Battery operated auto flush valves (must have manual push button override, no exceptions)

2. Faucets: push button self closing faucets with separate hot & cold controls

3. Ceramic tile floor with epoxy grout.

4. No recessed or wall mount waste containers.

5. Floor drain with floor properly sloped for drains (for clean machine touch less cleaning operations)

6. All bathrooms have floor drains and bibs.

7. Phenolic partitions preferred, (absolutely no stainless steel partitions) Floor mounted stiles preferred. Owner must approve exceptions.

8. RIT will provide toilet tissue dispensers, construction contractor to install.

9. RIT will provide soap dispensers, construction contractor to install.

10. Hand dryers: XLERATOR by Excel Dryer, Inc. only. Two per restroom, or 1 for every 2 sinks if restroom has more than 2 sinks.

11. Women's RR stalls equipped with a feminine hygiene product disposal bin per stall (plastic or SS).

12. No recessed Sanitary Napkin Disposal Units.

13. No recessed Sanitary Napkin Vending Units.

See Owner for the following room requirements:

1. Custodial Closets: Closets shall have no less than 60 sf in floor area.

2. Duty/Break Rooms (Custodial, Engineering, Electricians, or Maintenance)

3. Custodial Equipment/Storage Rooms

4. Trade Equipment/Supply Storage Rooms

5. Vending Rooms/Areas

6. Recycling and Trash Management Rooms/Areas (Interior and Exterior)

    a. Collection points on each floor.
    b. Central place in building.
    c. No trash compactors

7. Universal Waste Storage

Main Entrance – New Building

- Exposed metal structural elements: basis of design is extruded aluminum anodized dark bronze color, heavy duty profile, change to be approved by the Director of Campus Planning Design & Construction

- Doors to be heavy duty high use rating with continuous hinges (see Section 8 – Exterior Doors for hardware).

- Glazing, in addition to code requirements for doors and openings, glazing is to be clear, ¾" insulated (see Section 8 for window glass and frame profile instructions).

- In addition to being ADA compliant in design each main entrance shall have door opener actuators accessible on approach and exit (see Section 16 – Building Entrances).

- Entrances to have hydronic snow melt systems and walk-off mats (see Section 9 – Entrances for more detail).

- See fire alarm and fire protection sections for other requirements at main entrance.

- Cigarette butt receptacles of matching finish to the building metal elements to be installed no less than 8 feet from entry adjacent to the route of travel.

- See Section 16 – Electrical for fire alarm and lighting information at main entrances.

- The building main entrance to have building name above doors in 4 inch high universe condensed bold font per sketch (no building number on sign; as prescribed by code place building numbers on building surface at corners facing fire lanes or roadways).