

## **GENERAL DESIGN REQUIREMENTS**

September 8, 2015

### **1. SITE AND COMMON AREAS**

- A. New facilities and additions to existing facilities are required to meet emergency shelter requirements unless specifically exempted.
- B. Provide landscaping and irrigation in accordance with SDHC standards. Plants must be placed so as to maintain at least 2' clear distance between the mature plants and the buildings. New oak trees are not to be planted within 40' of new pavement. Salvage existing trees to the extent possible.
- C. Provide reclaimed water to serve the irrigation system, or provide an irrigation well if reclaimed water is unavailable.
- D. A total depth of 2' of fill in the footprint of new facilities is considered normal, and the cost is included in the project budget. Fill may be obtained from on-site excavations or imported as required to meet minimum finish floor elevations. Import fill is to be tested for radon prior to placement.
- E. Sites are to be graded so as to have no steeper than a 4:1 slope.
- F. All retention areas are to be designed so as to be normally dry unless otherwise approved. Ponds are to be the minimum depth required for stormwater retention. Overexcavation is not allowed. All retention ponds are to be fenced.
- G. Newly constructed wetlands require monitoring and maintenance until agency acceptance is achieved. The specification is to require sitework bidders to provide a separate bid for the monitoring/maintenance service for the required duration, and to enter into contract with SDHC upon substantial completion of the project.
- H. Playfields are to be designed so as to be free of obstructions or hazards, such area drains and other structures.
- I. If required, provide an on-site sewer treatment facility and domestic water well(s).
- J. Provide site design to meet the requirements of all local environmental permitting agencies.
- K. Provide 6' high chain link perimeter fencing to enclose all student occupied areas of the campus and to enclose all mechanical equipment, transformers, and elsewhere as required herein.
- L. Provide a bus drive and drop-off canopy. The minimum bus canopy length is 80 feet. The concrete curb is to extend a minimum of 24" past the edge of the canopy roof to protect the canopy from vehicle damage. Provide gutters and downspouts to divert roof drainage away from the pick up area. Provide a curb ramp to allow deliveries to be made from the bus drive.
- M. Provide a one-way parent drop-off drive at the front of the school, designed to allow for future use by buses. Provide 1000' of stacking length on site for parent cars, with bypass lane. A canopy which serves normal student circulation should be located so as to be useable for staging pick-up on rainy days.

- N. Provide service drives as required herein. The dumpster area and mechanical service area(s) are to be concrete paved. The dumpster enclosure is to be designed for 3 dumpsters unless otherwise directed, complete with screen wall, gates and bollards. The dumpster enclosure is to be located near the kitchen receiving door.
- O. Provide designated parking areas for staff, buses, visitors and students (high school). Provide traffic signs and pavement markings as required. Visitor parking is to be located in front of the school, outside of the perimeter security fence. Bus parking at high schools is to be located on the drivers ed range, with diagonally stripped parking stalls.
- P. Provide 1-way traffic flow in parking areas unless otherwise directed. All driveways and aisles are to be 24' wide minimum.
- Q. At Elementary and Middle Schools provide parking for 110 staff/faculty members and 25 visitors. At High Schools provide student parking for 25% of the student capacity, plus 140 staff/faculty members and 30 visitors.
- R. Provide traffic gates to allow parking lots to be secured against unauthorized visitors during the school day, while maintaining access to visitor parking. In addition, provide traffic gates to secure the visitor parking lot after hours, if so directed.
- S. Provide bicycle rack(s) and concrete pad(s) for 50 bicycles, in accordance with SDHC standards. Provide fencing to enclose the bicycle area if directed.
- T. Provide shading devices to screen south and west facing windows from direct solar gain or provide equivalent means of sun control.
- U. Provide a sidewalk along the public road frontage, from property line to property line, and also provide sidewalks leading from the public sidewalk to the bicycle rack and to the main entry of the school.
- V. Provide the appropriate number of group and staff toilet rooms as required by code for the number of occupants, and additional toilet rooms as required herein. Group toilet rooms require a key-lockable door and a means of holding the door open during school hours. Entry vestibules are to be designed so as to serve as visual baffles while the toilet room doors are open.
- W. Provide conduit and pull string from the closest electrical panel to the visitor entry drive, for future digital message sign.
- X. Unless otherwise directed, double-loaded corridors are to be 10' wide from wall to wall at Middle and High Schools, regardless of whether student lockers are provided. When student lockers are provided, they are to be located on one side of the corridor only.
- Y. At new school sites, provide a temporary office trailer compound to house school staff for up to 6 months prior to substantial completion. At Elementary schools, provide (1) trailer for 3 staff. At Middle and High Schools, provide (2) trailers for 6 staff. Provide utilities, data, power, and telephone service. Compound is to include stabilized parking area for 10 cars. Provide fencing to allow after-hours access to the compound without compromising the security of the construction site.

**2. WALLS, CEILINGS, FLOORS, ROOFS, STAIRS**

- A. Exterior walls are to be cavity wall construction with a minimum 2" clear cavity space to ensure adequate drainage. Double wythe masonry is preferred. The design team may propose equivalent alternate systems for consideration.
- B. Partitions in student occupied areas are to be painted masonry or cement plaster finished. The design team may propose equivalent alternate systems for consideration.
- C. Tackable wall surfaces, where required herein, are to be located on interior partitions. Where a tackable wall surface must be located on an exterior wall, provide an air space behind the tackable surface to prevent condensation.
- D. All plaster, interior and exterior, is to have a light to moderate texture.
- E. Provide solid ceilings in all Toilet Rooms.
- F. Provide a standard acoustical ceiling system throughout, except where otherwise noted herein. Minimum ceiling height is to be 9'-0" above finished floor except where otherwise noted herein.
- G. Provide floor finishes as follows, unless otherwise noted herein. Floor materials are to be heavy duty and intended for K-12 use:
  - 1. Elementary Schools: Instructional Spaces, Teacher Planning Areas, Work Rooms, Storage Rooms – carpet tile.
  - 2. Middle and High Schools: Instructional Spaces, Teacher Planning Areas, Work Rooms, Storage Rooms – vinyl composition tile.
  - 3. All schools:
    - a. Media Center and related spaces, Music Classrooms, Offices, Secretarial Areas and Conference Rooms – carpet tile. Provide integral walk-off mats where rooms open to the exterior.
    - b. Student and Faculty Dining Rooms, Multi-Purpose Room – polished stained concrete.
    - c. Interior Corridors – polished stained concrete or other low-maintenance surface
    - d. Toilet Rooms and water cooler areas – hard tile
    - e. Art Classrooms – vinyl composition tile
    - f. Mechanical and Electrical Rooms, Custodial Closets – sealed concrete.
    - g. Elsewhere as required herein.
- H. All interior walls and partitions are to be finished with semi-gloss paint unless otherwise required herein. Satin finish and flat paints are not acceptable.
- I. Interior wall finish in custodial closets is to be painted masonry or other impervious material such as fiber reinforced wall panels (FRP).
- J. Avoid use of high-maintenance exterior materials, such as painted steel.
- K. Roof drainage is to be accomplished using interior roof drains which discharge directly into the storm sewer system. Avoid the use of parapet walls, gutters and downspouts unless specifically approved.
- L. Avoid rooftop mounted equipment unless specifically approved. Minimize roof penetrations.
- M. Provide a roof access hatch where the edge of the roof is higher than 24' above the ground. Provide a roof hatch and interior ships ladder where the roof is higher than 12' above grade only if HVAC equipment is located on the roof.

- N. Open stairs are preferred over enclosed stairs. Precast concrete or poured-in-place stair construction is preferred. Galvanized steel stringers with precast concrete treads are acceptable where the steel is coated with a high quality paint system. Steel pans or other components which may trap water are disallowed.

### **3. DOORS AND WINDOWS**

- A. Interior doors are to be solid core wood, paint or stain grade. Exterior doors are to be hollow metal or other approved material.
- B. All doors to be 3' wide x 7' high except as otherwise required herein. Non-standard door sizes are not acceptable. Doors swings are to meet district standards.
- C. Exterior windows are required in all offices and instructional spaces, unless otherwise noted herein. Do not provide exterior windows in storage rooms, custodial areas, clinics, corridors or gymnasiums.
- D. Unless otherwise directed, provide vertical blinds at all exterior windows except in Student Dining Rooms, Multi-Purpose Rooms and Reception Areas. Vertical blinds are to be mounted within the window opening.
- E. Windows are to be heavy duty, commercial grade, and operable where required.
- F. At Elementary Schools, provide passage hardware on all single-occupant Student Toilet Room doors. At Middle and High Schools, provide passage hardware only on Student Toilet Rooms opening directly onto ESE Classrooms.
- G. Exterior doors are to be covered by a walkway canopy or building overhang OR recessed a minimum of 3' from the exterior face of the building. Alternately, eyebrow canopies that extend a minimum of 3' from the face of the building are acceptable only where one of the above options is not possible.
- H. A standard-size view window is to be provided in doors leading into instructional spaces, and elsewhere as required herein.

### **4. EQUIPMENT AND SPECIALTIES**

- A. All lockers are to be provided with sloped tops and a hasp for an owner-provided padlock unless otherwise noted herein. At Middle and High Schools, provide one (1) locker per student, 12" wide x 24" high x 12" deep, triple-tier, bottom mounted 8" above the floor.
- B. Provide a 30' high aluminum flagpole (non-tiltable type) in front of the school, and additional flagpoles as required herein.
- C. Provide toilet accessories as required. Provide electric hand dryers in lieu of paper towel dispensers in each group toilet room. Provide a single full-height mirror in each group toilet room and in each staff toilet room, and elsewhere as required herein. Additional mirrors mounted over lavatories are not to be provided. Provide soap and paper towel dispensers at each sink and lavatory throughout the facility.
- D. Elevators are to be provided with both key and pushbutton operation.

- E. Instructional aids are to be provided as required herein, mounted on interior partitions only. Where existing conditions require marker/tackboards to be mounted on exterior walls, an air space is required between the unit and the wall surface to prevent condensation.
- F. Casework is to be provided as required herein, located on interior partitions only. Where conditions require casework to be placed against exterior walls, an air space is required between the casework and the wall surface to prevent condensation.
- G. Toilet partitions are to be solid homogenous plastic, floor mounted, with a minimum 1 ½" anti-grip head rail.
- H. Provide a cast metal plaque near the main Administration entrance in accordance with SDHC standards.
- I. Install the Owner-provided key vault near the main Administration entrance, for after hours access by emergency responders.
- J. Provide the school name on the exterior of the Administration building in a location visible from the visitor parking area. In smaller font, provide the street number under the school name. Freestanding school name signs are to be provided only where approved due to site-specific conditions.
- K. Provide one building number sign at each building, located so as to be visible from the primary circulation path.
- L. Provide site and room signage in accordance with SDHC standards and applicable codes.
- M. Guardrails and handrails are to be unpainted aluminum.

## **5. HVAC AND PLUMBING**

- A. Provide HVAC systems in accordance with SDHC standards. System design must take into account additional loads generated by Owner-furnished equipment, such as computers.
- B. Plumbing fixtures are to be provided in accordance with SDHC standards.
- C. Provide water supply, drainage, gas supply, and exhaust as required for all equipment listed herein and on the SDHC Furniture and Equipment list.
- D. Provide electric water coolers in common areas, number as required by code.
- E. The domestic water system is to allow for building isolation. In addition, provide individual valves at each plumbing fixture to allow for servicing of fixtures.
- F. Exterior, non-recessed, keyed-type hose bibbs are required approximately every 150' along building exteriors. Hose bibbs are not to be located adjacent to sidewalks unless otherwise approved.
- G. Where required, provide handicapped accessible sinks, lavatories, electric water coolers, toilets and bathtubs.
- H. Provide hose bibbs and floor drains in all group toilet rooms, air handler rooms, and elsewhere as required herein. Do not provide hose bibbs and floor drains in single occupant toilet rooms unless otherwise required herein.

- I. Any gas installation must be provided with a lockable cut-off valve inside a fenced enclosure.
- J. Avoid supplying conditioned air directly into interior corridors which open directly to the exterior. Doors will be open for extended periods during class changes. The preferred solution is to transfer air into the corridors from adjacent spaces.
- K. Avoid plumbing vents through the roof. Sidewall vents and above-ceiling air admittance valves are acceptable.
- L. Urinals are to be the waterless type.
- M. Provide an energy management system in accordance with SDHC standards.

**6. LIGHTING, POWER AND LOW VOLTAGE SYSTEMS**

- A. Provide new transformer(s) in locations that are accessible from paved driveways and in locations that have been **coordinated with and expressly approved** by Tampa Electric Company in accordance with SDHC standards. It is the design professional's responsibility to obtain approval as described in SDHC standards.
- B. Provide an interior lighting system throughout, automatically controlled with manual override switches, in accordance with SDHC standards.
- C. Provide lighting in the parking areas for after-hours activities. Driveways are to be lit only where required by code. The minimum level of lighting necessary for safety is to be provided.
- D. Provide exterior building and walkway lighting where required, automatically controlled in accordance with SDHC standards. Exterior lights which need to remain on during the school day, as in exterior corridors or other sheltered areas, shall be separately controlled from other exterior lights.
- E. Provide a concrete pad with tie-downs for a future generator at EHPA compliant facilities. The transfer switch is to be permanently installed within a hardened building. The generator is to serve only the systems required by the SDHC emergency generator standard. At non-EHPA buildings, provide battery back-up to serve emergency systems in lieu of a generator.
- F. Provide emergency generator connections elsewhere as required herein.
- G. Provide an IP type clock in each space where required herein.
- H. Provide an AV projector and mounting bracket in each instructional space, Conference Room, Media Center and elsewhere as noted herein, unless specifically directed otherwise.
- I. Provide a data network system in accordance with SDHC standards. Data outlets are not to be located under windows except where any other placement would interfere with the use of a tackable wall. In no case should computers block emergency egress. The plans are to establish the location of data and associated power outlets to provide consistency from room-to-room and to avoid conflicts.

- J. Provide the following quantity of data, power and AV outlets, except where otherwise noted herein:

Instructional Spaces (Classrooms, Labs, Resource Rooms)

Provide six (6) data outlets for student use, with three (3) adjacent quadraplex power outlets, located so as to accommodate six (6) side-by-side 30" wide workstations.

Provide a duplex data outlet to serve the teacher computer, with an adjacent duplex power outlet, located as directed on the teaching wall.

Provide a duplex data outlet to serve the AV projector and IP clock, with an adjacent duplex power outlet, located over the markerboard.

Provide audio/video connections for local communication between the projector and the teacher computer, located adjacent to the projector data outlet and the teacher data outlet.

Offices, Teacher Planning Areas, Workrooms, and Planning/Material Storage Rooms

Provide one (1) quadraplex voice/data outlet (1 voice and 3 data jacks) and an adjacent quadraplex power outlet.

Secretarial areas

Provide one (1) duplex voice/data outlet and adjacent quadraplex power outlet for each staff member.

In addition to the above, provide a wireless access point in every Classroom and Lab. Provide additional wireless access points located so as to provide full coverage in all other spaces, including common areas.

- K. Provide appropriate power for equipment listed herein and on the SDHC Furniture and Equipment list. The plans are to establish the location of outlets.
- L. Provide convenience outlets evenly distributed around each room. Do not provide outlets in toilet rooms, corridors or exterior spaces unless specifically required herein or elsewhere within SDHC standards.
- M. Provide a duplex outlet above each countertop.
- N. Provide a duplex outlet at each built-in workstation.
- O. Provide a VoIP telephone system unless otherwise directed.
- P. Provide a security system in accordance with SDHC standards.
- Q. Provide a fire alarm system in accordance with SDHC standards. Strobes are to be placed so as to be within direct line of sight from every location in the room, including interior passageways connecting two rooms.
- R. Provide an intercom system in accordance with SDHC standards. Provide speakers to cover all common areas and exterior walkways. Intercom handsets in instructional spaces are to be located adjacent to the markerboard.
- S. Provide a security camera system if directed, in accordance with SDHC standards.
- T. Provide lightning protection systems only where specifically requested.
- U. All new conduit and wiring is to be concealed except where specifically approved. Use of wiremold or similar raceways requires specific approval.