SAXER AVENUE SCHEME

GENERAL SCOPE SUMMARY

These documents describe a phased construction Scheme of a New High School at the northeastern corner of the site, on existing Practice Fields, nearest to Saxer Avenue. Aside from the Phasing of major sitework, the new structure can be completed prior to the start of the High School Demolition. Project includes the closure of Rolling Road and realignment of the site entrance/curb cut at Leamy Avenue.

PHASING NOTES

SUMMARY OF PROJECT PHASES

After the construction of the new District Administration Offices and the new Facilities Maintenance and Grounds Building, the Existing District Administration Wing will be demolished to create space for temporary Parking and Loading Dock Access. Construction is anticipated to take 2 years. For the first year, construction will occupy the least amount of land, so the disruption to the campus can be minimized. The following Phase calls for the installation of the new wellfield, track and field and parking areas on an accelerated scheduled so that these site components can be ready for use as soon as possible. After the New school is complete, demolition activities can occur completely independently from the school operations.

PROJECT DESCRIPTION ATTACHMENTS

The following attachments outline the project scope :

- Preliminary project Description [PPD] - Saxer
- Phasing Plans – Saxer
- Conceptual Schedule Planning – Saxer
- Gantt Chart Schedule – Saxer

LEAMY AVENUE SCHEME

GENERAL SCOPE SUMMARY

These documents describe a phased construction of a New High School at the southern corner of the site, requiring partial site and building demolition steps to create available site room for the new building. The overlap of the new and existing building footprint create conditions which involve partial closing and opening of the respective structures. Existing Building utility services need to be re-worked temporarily to make space for the new construction project.

SUMMARY OF PROJECT PHASES

After the construction of the new District Administration Offices and the new Facilities Maintenance and Grounds Building, the Existing District Administration Wing will be demolished to create Utilities connections and a temporary boiler installation for the Existing School as it is demolished in Phases. Since the footprint of the New School and the Existing occupy the same area, the new HS would be constructed in two phases, allowing for shared Program between existing and new in the interim Phase.

MAJOR DEMOLITION SITE BARRIERS EACH PHASE

The timing of the phases for Demolition will be dictated by the requirement that the removal of the ACM roof deck needs to occur in the summer months. In addition, preparation for each of the Demolition Phases will require the installation of Phase wall Barriers to protect the students and facility adjacent to the construction activities.

PROJECT DESCRIPTION ATTACHMENTS

The following attachments outline the project scope :

- Preliminary project Description [PPD] - Leamy
- Phasing Plans – Leamy
- Conceptual Schedule Planning – Leamy
- Gantt Chart Schedule – Leamy

A1010 Standard Foundations

A1010.01 Wall and Column Foundations

A. Description: Continuous concrete spread footings at exterior walls and piers at columns.

B. Functional Requirements:

1. Standard practices for Forming, Reinforcing and Concrete Installation.

C. Characteristics:

1. Concrete, minimum 3,000 psi.

D. Components:

1. Form Materials: Softwood plywood.

1. Reinforcing Steel: galvanized finish.

A1030 Special Foundations

A1030.01 Standard Slab On Grade

A. Description: Concrete slab on grade.

B. Functional Requirements:

1. Standard practices for Forming, Reinforcing and Concrete Installation.

C. Characteristics:

1. Concrete, minimum 3,000 psi.

2. Assume sloped floor at auditorium and stepped flooring at Music and Large Group Instruction Rooms

D. Components:

1. Form Materials: at discretion of Contractor or Softwood plywood.

2. Slab Reinforcing: At discretion of Contractor : welded wire mesh or fiberglass admixture

3. Vapor Retarder: Type 1, Class A, minimum 15 mil thick, plastic sheet membrane, with asphaltic paper trim at edges of slab and sealant.

A1030.05 Pits and Bases

A. Description: Elevator pit to be C.I.P. walls and base

A1030.06 Subdrainage Systems

A. Description:

1. Drainage system at perimeter of foundation walls.

B. Functional Requirements:

1. Drainage system designed to promote drainage in conjunction with footings, walls, and slabs-on-grade.

C. Characteristics:

1. Pipe Materials: Polyvinyl chloride pipe 6 inch diameter, perforated and non-perforated types.

D. Components:

1. Filter Aggregate and Bedding Materials: Fill Type A1.

2. Filter Fabric: Water pervious type, black [polyolefin] [polyester].

A1030.07 Perimeter Insulation

A. Description: Thermal board insulation located at perimeter of foundations and under 24" at edge of slab on grade.

B. Characteristics:

1. 2" : Thermal Resistance: R of 5.0 per inch thickness, minimum at 75 degrees F.

2. Compressive Strength: Minimum 25 psi.

3. Water Absorption: Maximum 0.1 percent by volume.

C. Components:

1. Board Insulation: Type IV extruded polystyrene.

A20 Basement – not applicable

B10 SUPERSTRUCTURE

B1010 Floor Construction

B1010.01 Floor Structural Frame - Steel

A. Description: Structural elements required for support of floor construction above grade. Steel framed systems.

B. Functional Requirements:

1. Perform steel work in accordance with the following:
   a. Structural Steel: AISC 303, ASIC 314 and AISC 360.
   b. High Strength Bolted Connections: RCSC Specification for Structural Joints Using ASTM A 325 or A 490 Bolts.

C. Characteristic Requirements:

1. Structural Steel rolled sections to support flooring.

2. Steel Joists at roof, except rolled steel to support rooftop equipment.

B1010.03 Floor Decks, Slabs, and Toppings

D. Description: Structural slab and deck construction at intermediate floors of basement construction and above grade. Steel, cast in place concrete, and cementitious decks and toppings.

E. Functional Requirements:

1. Design floor live and dead load according to code with deflection limited to 1/360 of span.

F. Components:

1. Concrete Materials; 3000 psi

1. Metal Deck:
   a. Sheet Steel: Grade Structural Quality with galvanized coating.

B1010.05 Mezzanine Construction (if required for Mechanical Penthouse)

A. Description: Structural frames and decks and slabs for mezzanine construction. Dual-slab, sloped to drain with perimeter curbs, as appropriate.

1. Description: Sheet or continuous film materials installed separately in floor assemblies to provide waterproof layer.

B1010.09 Floor Construction Fireproofing

A. Description: Materials installed in cavities, around pipe penetrations, and other openings in floors to prevent spread of fire. Spray fireproofing not required.

B. Components:

1. Formulated Firestopping compound of incombustible fibers and foam firestopping compounds

B1020 Roof Construction

B1020.01 Roof Structural Frame

A. Description: Structural elements required for support of roof construction. Steel joists and select use of rolled steel. Structure sloped to form drainage planes (in lieu of extensive tapered insulation usage);

B1020.03 Roof Decks, Slabs, and Sheathing

A. Description: Structural roof deck and slab construction. Steel, cast-in-place concrete in select areas below mechanical units for acoustic control.

B1020.04 Canopies

A. Description: Structural frame and decks, and slabs for canopy construction.

B20 EXTERIOR ENCLOSURE

B2010 Exterior Walls

B2010.01 **Exterior Wall Exterior Cladding** [assume 50-50 mix of A and B]

A. Masonry cavity wall veneer on structural masonry ties with rigid insulation (vented wall system);

B. Rainscreen metal panel cladding system insulated with mineral wool panels;

B2010.02 **Exterior Wall Construction** [A and B coordinates with A and B above respectively]

A. Unit masonry backup wall system ; CMU at grade for cavity wall

B. Metal framed wall –systems with exterior gyp bd. Mineral wool insulation at slab edges only;

B2010.03 **Exterior Moisture and Air Barriers**

A. Description: continuous membrane or fluid applied air and moisture barrier in cavity; To be integrated with self-stick membrane flashing at envelope openings (windows/doors/louvers)

B2010.04 **Exterior Wall - Interior Skin**

A. Gypsum board interior finish on metal furring at all wall systems, except at gymnasiums, stairwells and mechanical rooms.

B2010.05 **Parapets**

A. Exterior wall construction above the plane of the roof – continuous air barrier with roof assembly.

B2010.06 **Exterior Louvers, Grilles, and Screens**

A. Architectural louvers : extruded aluminum, draining, prefinished custom color;

B. Rooftop equipment screens : extruded aluminum on galvanized rolled steel frame; assume 8' tall, 100 linear feet;

B2010.07 **Exterior Protection Devices for Openings**

A. Description: Manufactured sun shading devices (fixed aluminum extrusions) anchored and supported by exterior wall backup assemblies;

B2010.09 Exterior Soffits

A. Assemblies for exterior soffit canopies, balconies, and other exposed exterior ceilings to be vented/finished exterior drywall on reinforced framing (wind loads)

B2020 Exterior Windows

B2020.01 Exterior Standard Windows

A. Description: Fixed and operable windows. Glazing, operating hardware, screens, and other accessories.

B2020.03 Glazed Curtain Wall

A. Description: Standard and custom fabricated curtain wall systems consisting of framing members, sash, glazing and infill panels.

1. Extruded Aluminum: thermally broken, fully drained system.

2. Steel Sections: shaped to suit mullion sections, galvanized (where req'd for structural support);

3. Glazing Materials: double glazed, low-e, low thermal transmittance, high light transmittance

4. Infill Panels:
   a. Insulated Panels: Manufacturer's standard prefinished insulated panel construction with aluminum outer and inner faces and special insulating core.

B2030 Exterior Doors

B2030.01 Exterior Entrance Doors

A. Description: Aluminum entrance systems at main entrance, metal framed glass, integrated with curtainwall system; Automatic-operators at main entrance.

B2030.02 Exterior Utility & Egress/Access Doors

A. Description: Exterior personnel doors : Insulated HM doors and frames with thermally broken double-glazed lite assemblies other than the main entrances.

B30 ROOFING

B3010 Roof Coverings

B3010.01 Deck Vapor Retarder and Insulation

A. Vapor retarder membrane below insulation

B. Rigid Board Poly-iso insulation on sloping roof decks; tapered insulation at valleys;

B3010.04 Membrane Roofing

A. Description: mechanically attached white thermoplastic single-ply roofing systems, roll; composition and elastomeric flashing, walk boards, and other items integral with the roofing membrane are included. White or Low albedo roof

B3010.07 Sheet Metal Roofing

A. Assume 15% of roof surface to be Shop and field formed (pre-finished custom color) aluminum sheet metal roofing with waterproof joints such as flat and standing seams and battens. Sheet metal flashing and accessories are included.

B3010.08 Flashing and Sheet Metal

A. Description: Shop and field formed aluminum sheet metal flashing (pre-finished custom color), accessories, and trim for roof and waterproofed deck construction such as gutters, downspouts, scuppers, gravel stops, copings, expansion joint covers, pitch pans, and diverters.

B3020 Roof Openings

B3020.02 Other Roof Openings

A. Roof access hatches : Insulated curbs;

B. Smoke release hatches over stage;

C10 INTERIOR CONSTRUCTION

C1010 Partitions

C1010.01 Interior Fixed Partitions

A. GWB on metal studs

1. Deflection tracks throughout
2. Acoustical rating at all instructional spaces
3. Abuse-resistant GWB at all public areas and at P.E. areas.

C1010.03 Folding Panel Partitions

A. Solid panel gymnasium divider – motor driven – person-doors at each end; fabric finish; 25' high;

C1010.04 Interior Railings

A. Stainless steel handrails at small ramps or stairs (aside from egress stair towers);

C1010.05 Interior Windows

A. Painted Hollow metal frames with laminated safety glazing at borrowed lights in P.E. areas, as well as at Industrial Arts and side lights at classrooms;

C1010.06 Interior Glazed Partitions and Storefront

A. All other interior glazed partitions to be aluminum storefront glazing and door frames;

C1010.07 Interior Partition Firestopping

A. Description: Materials installed in cavities, around pipe penetrations, and other openings in walls to prevent spread of fire and or smoke;

B. Components: Formulated Firestopping compound of incombustible fibers and foam firestopping compounds;

C1020 Interior Doors

C1020.01 Interior Swinging Doors

A. Description: Solid core wood veneer, flush and glazed;

C1020.02 Interior Fire Doors

A. Description: Solid core wood veneer, flush and glazed with fire rating glass;

B. Hollow metal rated doors with fire rated glazing – at service areas;

C1020.03 Interior Gates

A. Assume (2) overhead coiling aluminum security gates, for securing hallways; motor operated;

C1030.04 Walls and Corner Guards

A. Assume "No-Coat" hard fiberglass tape able cornerguards throughout.

C1030.04 Interior Identifying Devices

A. ADA compliant signage and wayfinding throughout; assume multi-color laminated plastic fastened to wall; inserts at admin and faculty areas;

C1030.05 Pedestrian Control Devices

A. Learning Media Center : book and media security control equipment at entry;

C1030.06 Lockers

A. P.E./Athletic Lockers : triple tier, vented (perforated), surface-mounted sheet steel stretcher mounted, pad-lock ready;

1. Locker Benches: Stationary type; bench top of laminated birch, pedestals of chrome steel;

B. Student Lockers : single tier, vented (louver top and bottom) recessed lockers; quiet-type-hardware with combination locks;

C1030.07 Toilet, Bath Accessories

A. Public Restrooms Locker Rooms and Private Bathrooms (faculty & staff): grab bars, paper, napkin, seat cover & soap dispensers, waste receptacles

B. : grab bars, paper, napkin, seat cover & soap dispensers, waste receptacles

C20 STAIRS

C2010 Stair Construction

C2010.01 Metal Stair Construction

A. Concrete filled steel pan stair treads, channel support and landings; steel picket

C2020 Stair Finishes

C2020.01 Resilient Stair Finishes

A. Description: Resilient tile and sheet materials for stair treads, nosings, risers, skirts, and landings.

C2020.02 Stair Railings and Balustrades

C30 INTERIOR FINISHES

C3010 Wall Finishes

C3010.01 Tile Wall Finishes

A. Full height wall tile in bathrooms and locker Room shower areas

1. 4"X4" wall tile, multi color

C3010.02 Acoustical Wall Treatment

A. Fabric wrapped high-density fiberglass in auditorium (25% of side walls and 50% of rear wall)

C3020 Floor Finishes

C3020.01 Concrete Floor Finishes

A. Crystalline concrete sealer at mechanical, maintenance and industrial arts areas;

C3020.02 Tile Floor Finishes

A. Large format Porcelain Tile in Lobby and Entrance areas.

B. Mosaic nonslip ceramic tile in restrooms

C3020.03 Wood Flooring

A. Sprung athletic floor on pads in Gymnasium

B. Sprung Dance floor for stage.

C3020.04 Resilient Flooring and base

A. Description: Resilient tile and sheet flooring; applied wall bases.

B. Components:

1. Sheet and Tile Flooring:
   a. Linoleum with heat welded joints;

2. Base:
   a. Rubber base : 4"

C3020.05 Carpet Flooring

A. Broadloom and Carpet tile applications

C3030.01 Gypsum Board Ceiling Finishes

A. Standard GWB throughout except :

1. moisture resistant GWB in locker rooms, toilet rooms and central kitchen

2. abuse resistant GWB in all P.E. spaces

B. Painted finish throughout

C3030.02 Acoustical Ceiling Treatment

A. Acoustical tile ceiling tile moisture-resistant, standard finish and semi-recessed reveal-type throughout, except as noted :

1. wind uplift clips required near entrances

2. washable tile and grid required at P.E. locker room areas and at kitchen.

D10 CONVEYING

D1010 Elevators

D1010.01 MRL Elevators

A. Description: Machine-Room-Less Elevators; assume two shafts 3500lb; 3 stops;

B. Functional Requirements: 350 fpm;

C. Characteristics: Standard Cab finishes and lighting package; custom floor finish;

E10 EQUIPMENT

E1020 Institutional Equipment

E1020.01 Library Equipment

A. Description: Library Circulation desks. Assume solid wood millwork and quartz composite countertops;

B. Library Equipment : shelving, computer carrels / tables to be estimated under furniture scope;

E1020.02 Theater and Stage Equipment

A. Theater Rigging : assume full fly-loft rigging for stage 30' deep;

B. Sound System : full auditorium sound system components (sound boards, amplifiers and speaker components) to support speech, voice, stage and instrumental presentations and recording;

C. Lighting and Dimming : full stage lighting, dimming and controls system (appropriate for music and stage productions)

E1020.03 Instrumental Equipment

A. Description: Instrument storage cabinetry will be required : locking, vented plastic laminate on particle board cabinet bodies and plywood doors. Assume one wall, full height and 50' long;

E1020.04 Audiovisual Equipment

A. Projection Screens : assume two large format motorized screens (auditorium and large group instruction); assume 5 instructional sized motorized screens (recessed ceiling-mounted);

B. Smart Boards : marker-board-type networked instructional smart boards for each academic space; suitable for projection;

C. Marker and Tack Boards : assume 20-linear feet of marker boards in each academic space and an additional 12-linear feet of cork tack boards;

E1020.05 Laboratory Equipment

A. Description: For each science lab, assume plumbed and gas fed laboratory worksurfaces (perimeter and peninsula) with integral sinks, black epoxy countertops and hardwood base cabinets and drawers; assume similar cabinetry in Prep Rooms, 40-linear feet each;; assume fume hoods in 4 of the science labs/prep rooms;

E1030 Miscellaneous Equipment

E1030.01 Loading Dock Equipment

A. Description: dock leveler and bumpers : embedded angle edges at all concrete edges and retaining walls : continuous polymer trench drains formed into concrete;

E1030.02 Solid Waste Handling Equipment

A. Trash and Recycling equipment : assume by vendor/contract;

E1030.03 Food Service Equipment

A. Description: Full commercial kitchen fit-out for programmed kitchen.

E1030.04 Residential Equipment

A. Description: Assume three small kitchenettes, with refrigerator, microwave and food disposal in SS sink;

E1030.05 Darkroom Equipment

A. Description: Assume photographic equipment for one small lab serving 10 students

E20 FURNISHINGS

E2010 Fixed Furnishings

E2010.01 Fixed Casework

A. Assume the following :

1. In each of the following, academic classrooms, music rooms, SGI, LGI, teacher prep, Green Room : provide 6-lin feet of p.lam. casework, base wall cabinet and including on full height storage unit;

2. IN each of the art and industrial arts rooms, assume 30-lin feet of wall base and full height cabinets;

E2010.02 Window Treatments

A. Mini-blinds : assume aluminum string operated mini-blinds throughout building except as noted below;

B. Roller Shades: Assume translucent woven polyester roller shades; assume motor operated, light cell controlled at two story main lobby and library spaces;

E2010.03 Fixed Floor Grilles and Mats

A. Description: Assume at 3 main entrances, recessed, framed carpet walk-off mats for full size of vestibule;

E2010.04 Fixed Multiple Seating

A. Description: Auditorium seating to be folding, fabric upholstered, polymer backed laminate side panels and tablet arms

E2020 Movable Furniture

E2020.01 Furniture and Accessories

A. Description: Assume pricing for all new furniture for academic and administrative uses, all priced separately from construction budget (see spreadsheet format)

E2020.02 Movable Multiple Seating

A. Description: fully retractable, motorized aluminum bleachers in main gym (see plans) as well as manually operated @ auxiliary gym space;

F1010 Special Structures

F1010.02 Pre-Engineered Structures

A. Description: New District Maintenance and Ground Building (size varies per scheme, new or existing) :

1. One story, slab on grade (see Shell definition), pre-engineered steel frame, shed roof with insulated metal roof

2. Roof : insulated metal roof over metal roof deck (manufacturer standard assembly);

3. Exterior Envelop : assume insulated metal panel over CMU for three sides, and brick cavity wall for the elevation facing the SE;

4. Interior Partitions : painted CMU throughout;

5. Doors and frames : painted hollow metal;

F20 SELECTIVE BUILDING DEMOLTION

F2010 Building Elements Demolition

F2010.01 Construction Area Protections - Site

A. For all Phases : Perimeter of construction areas shall provide security for site activities, and disincentive for students to access site; continuous E&S controls required; including gravel vehicle wash-down areas and closing/locking entry gates at vehicular access points;

B. Pedestrian Protections : provide allowances for access and protection measures related to the activities of each phase;

F2010.02 Construction Area Boundary - Building

A. For Renovation and Leamy Schemes : Where project phasing lines cross through areas of the existing building, assume new full height temporary exterior walls will be required, which will allow the renovation to occur with no danger or compromise to the safety of the occupants of the adjacent school in session. Phase boundary wall to provide thermal, moisture and acoustical separation; Contractor will need to take measures to control moisture penetration and thermal separation at the crawl space level as well;

F2010.03 Selective Demolition – for District Administration

A. Common to all schemes, the existing District Administration use/space will be vacated at the start of work and relocated to a renovation/addition project of 15,000 GSF on two floors: The existing True Jesus structure [located offsite at 300 West Woodland Avenue] shall be gutted and prepared for a new two-story addition; assume replacement of one stairwell within existing shaft; partial removal of existing exterior wall system to allow for attachment of new structure; existing partitions and doors to be removed and all existing MPE components to be removed (new elect service to street) except plumbing service and sanitary drainage systems to be re-incorporated into new layout; all windows to be replaced; existing roof and insulation to be replaced;

F2010.03 Building Removal – Leamy & Saxer Schemes

A. Description : In addition to the remediation requirements outlined in the section below, building scope to include the removal of all associated paving and hardscape, building envelope, building contents and structure, down to and including footings;

F2010.04 Selective Demolition - for High School Renovation Scheme

A. Description: In addition to the remediation requirements outlined in the section below, selective demolition of the existing building will include removal all windows, outer building envelope layers [insulation and cladding, not including wall backup]; roof and insulation; doors and frames, stairwell glazed partitions; all MPE components; all casework or other built-in building components; interior finishes;

F2020 Hazardous Components Abatement

F2020.01 Fuel Oil Tanks – all Schemes

A. Description: Existing in-ground fuel oils storage tanks (in court outside existing Central Plan) shall be removed in entirety; Phase for each removal outlined in Conceptual Planning charts;

F2020.02 ACM Roof Deck – all Schemes

A. Roof Deck Removal : Significant portions of the existing roof deck [see roof plan included in the Renovation Scheme Documents] are ACM cementitious deck material, supported by bar joists; all roofing, insulation, deck and contaminated ceilings will need to be removed in their entirety;

F2020.02 Asbestos Ceiling Removal – all Schemes

A. Existing H.S. Auditorium Ceiling : concurrent with the ACM Roof Deck removal, the existing ACM plaster ceiling at the Auditorium shall be removed (sloped floor and ceiling plane challenges included in this scope);

G10 SITE PREPARATION

G1010 Site Clearing

G1010.01 Site Preparation

A. Description: Assume entire site, will be cleared of existing site finishes : softscape and hardscape. Shall include : Sod Stripping Clearing and Grubbing Shrub and Tree Removal and Trimming

G1030 Site Earthwork

G1030.01 Grading

A. Description: Significant grading required at existing school site and along berm at Leamy. Majority of post construction site assumed to be nearly level, with enough slope for simple sheet drainage as applicable;

G1030.02 Excavating, Backfilling, and Compacting

A. Description: As required for new structure, and post demolition of existing basements and crawl spaces;

G1030.04 Slope Protection and Erosion Control

A. Description: As required by local soils control district/county;

G20 SITE IMPROVEMENTS

G2010 Roadways

G2010.01 Roadway and Parking Surfaces

A. Description: New asphalt roadway required for all parking and drive surfaces; add reinforced base course at vehicular paths anticipating bus or loading dock/truck traffic;

G2010.03 Roadway Unit Pavers

A. Description: Assume grass paver fire lane.

1. At Leamy Scheme assume full perimeter of building edge facing athletic fields.

2. At Saxer Scheme assume length of building along property line and behind bleachers;

G2010.04 Paving Related Concrete

A. Description: Concrete for roads, parking areas, sidewalks, integral curbs, gutters and drainage structures;

G2030 Pedestrian Paving

G2030.01 Pedestrian Pavement Base Courses

G2030.03 Pedestrian Unit Pavers

A. Description: Assume approximately 10,000 SF of concrete pavers set over a concrete base course and sand, adjacent to entrance and in School Courtyards;

G2030.04 Pedestrian Pavement

A. Description: Sidewalk network throughout campus

G2030.06 Exterior Steps and Ramps

A. Description: Assume 3 sets of small pedestrian concrete stairways (4' grade change or less) within campus landscape (and at loading dock) to accommodate concentrations of grade between fields or at site perimeter; assume each is accompanied by an HC ramp as well;

G2040 Site Development

G2040.02 Fences and Gates

A. Description: Assume 6' and 4' high powder coated estate fence;

B. For an allowance, include an estimate for 2,000 linear feet for each height/type, including (6) gates.

G2040.03 Athletic and Recreational Surfaces

A. Description: Assume new 'astroturf'-type field for space within new track limits, and for nominal 20' perimeter depth around track;

B. Assume resilient Track surface: granular recycled rubber material with integral color treatment;

G2040.04 Athletic and Recreational Equipment

A. Description: Assume District will derive cost assumption for this line-item;

G2040.05 Site and Street Furnishings

A. Description: Include allowance for site benches – wood an powder coat (20), trash and recycling receptacles - cast concrete (4 locations); flagpoles - aluminum (2);

G2040.06 Exterior Signs

A. Description: Include allowance for parking signage, vehicular directional signage and way finding signage;

G2040.065 Scoreboard

A. Description: assume new 200 sf full color scoreboard display;

G2040.11 Retaining Walls

A. Description: No significant retaining walls anticipated in new developments;

G2050 Landscaping

G2050.01 Irrigation Systems

A. Description: Assume irrigations systems for all athletic practice fields;

B. Assume also one year temporary irrigation for enhanced plantings adjacent to building (until established);

G2050.03 Soil Preparation

A. Description: Use of engineered soil at rain gardens adjacent to building;

G2050.04 Plantings

A. Description: Lawns and Grasses Lawns and Grasses

B. Enhanced Landscaping Features : For 20% of landscaped area nearest building, aside from track and fields, assume 'enhanced' landscaping treatment to include native drought-resistant plant materials for use in rain gardens and entry sequence features;

G2050.04 Artificial Turf and Track surface

G2050.05 Lawns and Grasses

A. Description: Athletic fields to be natural , drought resistant lawn material;

G30 SITE CIVIL/MECHANICAL UTILITIES

G3030 Storm Sewer

G3030.03 Storm Water Ponds and Reservoirs

A. Description: In addition to stormwater structures and piping, site design will include (where available land permits) sustainable landscape MMP features, such as bioswales and rain gardens to promote natural infiltration and

B. Include allowance to address a naturally-occurring alluvial spring, which occurs on the site near the NW corner of the existing Track.

G40 SITE ELECTRICAL

G4020 Site Lighting

G4020.01 Campus Lighting

A. Description: All lighting to be engineered and focused to control cutoff and spillover to adjacent properties; lighting controls to be programmable system integrating calendar, clock and light cell inputs ; All lighting to be LED or other low-power lamp technology;

B. Pedestrian pole and bollard mounted lighting throughout pedestrian network;

C. Building mounted lighting to provide appropriate security light levels at building perimeter

D. Parking and roadway lighting to be pole mounted;

G4020.02 Field Lighting

A. Description: pole mounted fixtures incorporating shielding to control light cutoff;

NEW BUILDING

SITE UTILITIES

Utilities including the electric, domestic water service, fire protection water service, storm and sanitary sewer laterals and the natural gas service will be from West Leamy Avenue or South Rolling Road for the new building.

FIRE PROTECTION

FIRE PROTECTION SYSTEM

An 8" fire line will be routed from the exterior of the building into a new fire service room. Fire lines will connect to standpipes located in the exit stair towers of the building. A 2 ½" fire department valve with 2 ½" x 1 ½" reducer will be installed at each intermediate landing. Heated areas of the building will be protected by automatic wet sprinkler systems that are extended from the standpipes. A supervised butterfly zone control valve, water flow switch, and inspector's test station will be installed in each stair tower at every floor landing.

Double interlock preaction sprinkler systems will be installed to protect computer sever rooms that are located throughout the building. The preaction valves will be located in close proximity to the rooms that they serve. The preaction systems will be installed in these spaces to prevent the damage of the computer equipment due to accidental discharge of the sprinkler systems.

FIRE PUMP

A 1,000 gpm electric motor driven fire pump will be installed in a pump room. The fire pump will feed the standpipe systems as described above. The fire pump room will be a two-hour fire rated enclosure, and will house the fire pump and jockey pump, and the fire pump controllers. The fire pump will be interfaced with the building fire alarm system. The fire pump will be installed to meet all NFPA and local code requirements.

PLUMBING

STORM SEWER SYSTEM

Cast iron rainwater conductors will be connected to the new building roof drains and conveyed down through the building. The cast iron leaders will be routed to the exterior of the building. Roof scuppers will be installed through the roof parapets to allow for secondary roof drainage, if the primary roof drain system becomes clogged for any reason.

SANITARY SEWER AND VENT SYSTEM

Cast iron sanitary and vent stacks will be located throughout the building to accommodate toilet room and other miscellaneous plumbing fixtures. "Wet stacks" will be installed throughout the building to

accommodate remote coffee station sinks or other plumbing fixtures. The cast iron soil stacks will be extended down through the building and extended to the exterior. Vent stacks will be extended through the roof of the building to allow air admittance into the drainage system.

Due to the layout of the project site, the new sanitary sewer should be able to gravity feed to the exterior sanitary sewer distribution system. Interior sewage ejector pumps are not anticipated for this project.

DOMESTIC COLD WATER SYSTEM

A domestic water service consisting of reduced pressure zone backflow preventer and a water meter will be installed in the water service room.

Cold water distribution piping will be extended from the water service to water risers located throughout the building. The domestic cold water distribution piping and riser system will be Type "L" copper piping that is covered with fiberglass insulation. Ball valve shut-offs will be installed at the base of each riser to allow for riser isolation.

DOMESTIC HOT WATER SYSTEM

Domestic hot water will be generated by the geothermal system and supplemented by a gas-fired domestic hot water boiler and hot water storage tank. An in-line hot water circulation pump and domestic hot water recirculation system will be installed to assure that hot water is supplied to remote plumbing fixtures in a timely manner.

NATURAL GAS

Natural gas piping will be extended from the exterior gas service and routed to serve the kitchen and the domestic water heating boiler.

PLUMBING FIXTURES

Plumbing fixtures including vitreous china wall mounted flush valve water closets and urinals, and self-rimming countertop lavatories will be installed throughout gang toilet rooms located on each floor. Flush valves and faucets will be battery operated sensor type fixtures. All plumbing fixtures will be installed to meet ADA requirements for handicap accessibility.

Shower stalls shall be installed as part of the general construction in the locker rooms. Pressure balancing type shower mixing valves will be provided.

All water closet flush valves will incorporate dual flush technology, urinals will be low flow half gallon per flush fixtures, sinks will be installed with 0.5 GPM aerators and shower heads will be water conserving 2.0 GPM fixtures to meet water reduction goals.

HVAC

HEATING AND COOLING SYSTEM

The primary heating and cooling system will be a ground-coupled heat pump system. The well field will consist of 124-130 wells at 500 feet deep with a cooling capacity of approximately 500 tons. The system will include variable speed "zone" pumps as part of ten non-pressurized flow centers feeding the heat pumps throughout the building. The heat pumps will be horizontal, vertical and high-rise models depending on location. Water-to-water heat pumps will be used to produce chilled or hot water for larger air systems required for assembly spaces, auditorium, library and gymnasiums where multiple individual units are not appropriate due to capacity, physical issues, noise and conditioning limitations for that particular space. These units will also serve the dedicated outdoor air systems. The system will likely include glycol to avoid potential freezing issues due to loop return temperatures near the end of winter.

DEDICATED OUTDOOR AIR SYSTEMS

Multiple energy recovery units will be located throughout the building to provide energy savings by transferring sensible and latent energy between the relief/exhaust and outdoor air streams. The use of multiple units will allow for efficient zone usage throughout the calendar year.

AIR SYSTEMS

As noted above, the gymnasium, auditorium, library, and other assembly spaces will require air systems to meet their unique space requirements for varying volumes of outdoor air, dehumidification and acoustics. All units will include chilled water coils, hot water reheat coils, supply and relief fans, filters and an energy recovery wheel. Sound attenuation will be required for the auditorium unit and possibly for others depending on conditions required and system configuration.

MISCELLANEOUS SYSTEMS

1. Entries and stair towers will be provided with supplemental heat using either cabinet unit heaters and/or radiant floor system.
2. The elevator machine room and tele/data closets will be cooled by heat pumps.
3. Mechanical spaces will be provided with heat from unit heaters.

ELECTRICAL

ELECTRICAL SERVICE

The electric service would be rated for 480Y/277V, 2000A and be served from a utility pad mounted transformer. The 480V panelboards would be located to serve the distributed HVAC systems. Lighting would be fed from 277V circuits. General power would be provided via step-down transformers located on each floor and wing of the facility.

BRANCH CIRCUIT DISTRIBUTION

Branch circuits would be provided throughout the facility for general power.

LIGHTING

Fluorescent and LED lighting would be provided throughout the facility. The design will be limited to 1 watt per square foot. Classroom will be provided with multilevel switching and possibly day lighting control.

FIRE ALARM

An addressable fire alarm system will be provided.

NEW BUILDING

SITE UTILITIES

Utilities including the electric, domestic water service, fire protection water service, storm and sanitary sewer laterals and the natural gas service will be from Saxer Ave or South Rolling Road for the new building.

FIRE PROTECTION

FIRE PROTECTION SYSTEM

An 8" fire line will be routed from the exterior of the building into a new fire service room. Fire lines will connect to standpipes located in the exit stair towers of the building. A 2 ½" fire department valve with 2 ½" x 1 ½" reducer will be installed at each intermediate landing. Heated areas of the building will be protected by automatic wet sprinkler systems that are extended from the standpipes. A supervised butterfly zone control valve, water flow switch, and inspector's test station will be installed in each stair tower at every floor landing.

Double interlock preaction sprinkler systems will be installed to protect computer sever rooms that are located throughout the building. The preaction valves will be located in close proximity to the rooms that they serve. The preaction systems will be installed in these spaces to prevent the damage of the computer equipment due to accidental discharge of the sprinkler systems.

FIRE PUMP

A 1,000 gpm electric motor driven fire pump will be installed in a pump room. The fire pump will feed the standpipe systems as described above. The fire pump room will be a two-hour fire rated enclosure, and will house the fire pump and jockey pump, and the fire pump controllers. The fire pump will be interfaced with the building fire alarm system. The fire pump will be installed to meet all NFPA and local code requirements.

PLUMBING

STORM SEWER SYSTEM

Cast iron rainwater conductors will be connected to the new building roof drains and conveyed down through the building. The cast iron leaders will be routed to the exterior of the building. Roof scuppers will be installed through the roof parapets to allow for secondary roof drainage, if the primary roof drain system becomes clogged for any reason.

SANITARY SEWER AND VENT SYSTEM

Cast iron sanitary and vent stacks will be located throughout the building to accommodate toilet room and other miscellaneous plumbing fixtures. "Wet stacks" will be installed throughout the building to

accommodate remote coffee station sinks or other plumbing fixtures. The cast iron soil stacks will be extended down through the building and extended to the exterior. Vent stacks will be extended through the roof of the building to allow air admittance into the drainage system.

Due to the layout of the project site, the new sanitary sewer should be able to gravity feed to the exterior sanitary sewer distribution system. Interior sewage ejector pumps are not anticipated for this project.

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