

Division 2 - Sitework

02000 - Sitework

Surveys

1. Has the Architect/Engineer consulted with the FAU Facilities Planning Project Manager to determine if a survey of the project site is available and if it is not available has the A/E furnished the scope of work needed as detailed in the Professional Services Guide? (Specific drawing sheet #/specification page # _____)

Geotechnical Report

2. Has the A/E advised the FAU Facilities Planning Project Manager when geotechnical testing and report(s) will be necessary and has the A/E determined the scope of work required? (The Owner typically contracts directly with a geotechnical firm for these reports based on the A/E's scope.) (Specific drawing sheet #/specification page # _____)
3. Has the A/E reviewed plans of existing underground utilities and located borings to avoid these utilities? (The Owner will make available maps showing underground installations.) (Specific drawing sheet #/specification page # _____.)

Information to be included in Contract Documents

4. Has a copy of the Geotechnical Testing and Report been included in the construction documents? (Specific drawing sheet #/specification page # _____)
5. Do the specifications contain a statement that the Owner shall in no way be held responsible for the accuracy of the information? (Specific drawing sheet #/specification page # _____)

02100 - Site Preparation

Structure Removal

1. Is the structure removal included in the demolition package? (Specific drawing sheet #/specification page # _____.)

Clearing the Site

2. Are instructions included in the Construction Documents that indicate debris resulting from stripping and demolition operations shall be removed from University property at frequent intervals so as to prevent this material from accumulating on the site? (Specific drawing sheet #/specification page # _____.)

Grubbing

3. Do the specifications require removal of trees and shrubs and the removal of stumps and roots to the extent that no root greater than three inches in diameter remains within five feet of an underground structure or utility line or under footings or paved areas? Grubbing in open areas shall include removal of stumps and three-inch roots to two feet below finish grade elevations.
 (Specific drawing sheet #/specification page # _____)

Tree Relocation

4. Are instructions included in the Construction Documents for relocation of existing trees or other major landscaping and ground coverings?
 (Specific drawing sheet #/specification page # _____)

Tree Location

5. Has a survey of existing trees been done to save trees greater than 3 inches in diameter and 10 feet or more from the new construction? Have these trees been identified in the landscape plans and have provisions been made to keep damage and stress from occurring to the trees due to construction activity?
 (Specific drawing sheet #/specification page # _____.)

02120 - Structure Removal

1. Where new structures will replace existing structures, has the extent of foundation removal been shown on the drawings? In open areas, is it clear that foundations of structures shall be removed to a minimum of three feet below finish grade elevation? Is it clear that no existing slabs shall remain under fill for new structures? Hazardous material removal shall be conducted prior to structural removal as required by federal, state and local requirements.
 (Specific drawing sheet #/specification page # _____)
2. Is it clearly stated that disposal of existing buildings and structures, trees, dismantled equipment, etc., is the responsibility of the Contractor?
 (Specific drawing sheet #/specification page # _____)

02200 - Earthwork

This area should address excavation, filling and grading for the new structure as required to suit site appurtenances. Grading and filling will be performed to lines and grades required by civil engineering. These grade lines will be integrated with the new paving and surfacing as well as landscaped areas. Removal of the unsatisfactory or deleterious materials from the premises will be done as required for the work. Disposal of debris and waste material, temporary protection of work, barricades, rerouting requirement, signage, etc. will also be included. Storm water drainage will be controlled during construction of the project and will also be included. Has the A/E described and included in the contract documents the following earthwork items?

- a. Excavating, filling, backfilling, grading and compaction.

- (Specific drawing sheet #/specification page # _____)
- b. Dewatering of excavations and work areas, as required.
(Specific drawing sheet #/specification page # _____)
- c. Shoring and bracing, as required.
(Specific drawing sheet #/specification page # _____)
- d. Disposal of excess and unsuitable excavated materials.
(Specific drawing sheet #/specification page # _____)
- e. Preparation of sub-grade for building slabs, walks, decks and pavements.
(Specific drawing sheet #/specification page # _____)
- f. Backfilling of trenches within contract limit lines.
(Specific drawing sheet #/specification page # _____)
- g. Excavation and backfill required in conjunction with underground mechanical and electrical utilities, and buried mechanical and electrical appurtenances is included as work of this section.
(Specific drawing sheet #/specification page # _____)
- h. "Excavation" consists of removal of all material encountered to subgrade elevations indicated and subsequent disposal of materials removed.
(Specific drawing sheet #/specification page # _____)
- i. Has the A/E created an Erosion and Sedimentation Control Plan conforming to the requirements of the 2003 United States Environmental Protection Agency (EPA) Construction General Permit or local erosion and sedimentation control standards and codes, whichever is more stringent? This includes Phase I and Phase II of the National Pollutant Discharge Elimination System (NPDES) program.
(Specific drawing sheet #/specification page # _____)

02201 - Earthwork for Buildings

The site for the new building will be stripped and the area around the existing buildings graded to suit the architectural requirements. Excavation and removal of materials from the premises will be done as required for the building and structures. This will include disposal of debris and waste material, foundation drainage, backfill, compaction, shoring, sheathing, temporary protection and barricades. Storm water drainage will be controlled during construction of the project. Fill as required for rough grading elevation. Site preparation for building according to Geotechnical Engineer's recommendations. Has the A/E included this in the description of the work?
(Specific drawing sheet #/specification page # _____)

02211 - Rough Grading

Has the A/E specified that slopes shall not be greater than one vertical to six horizontal in grassed areas? Steeper slopes may be considered in unique circumstances and shall be reviewed and approved by the Owner.
(Specific drawing sheet #/specification page # _____)

02218 - Landscape Grading

1. Has the A/E coordinated the specification for fill materials to conform with the Geotechnical Testing and Report?
(Specific drawing sheet #/specification page # _____)

Topsoil

2. Has the A/E specified that existing stockpiled topsoil shall be free from sticks, stones, roots, clods and any extraneous material?
(Specific drawing sheet #/specification page # _____)
3. Has the A/E specified that imported topsoil shall be a fertile, friable, natural topsoil of loamy character obtained from a well-drained, arable site free from sticks, stones, roots, clods and extraneous matter? Topsoil shall be a black loam, indigenous to the general area in which the project is located and shall be suitable for planting and seeding.
(Specific drawing sheet #/specification page # _____)
4. Has a six-inch depth of topsoil for seeded areas and 12-inch depth for planting areas been specified?
(Specific drawing sheet #/specification page # _____)

02222 - Excavating

1. The excavation and backfilling of trenches, etc., for piping, manholes, pull boxes, etc., in the mechanical trades is considered better placed under those divisions than under this general division. Has the Architect/Engineer ensured that the compaction of backfill in trenches is covered and that the soil type is the same and that restoration has occurred?
(Specific drawing sheet #/specification page # _____)
2. Has the A/E specified that topsoil and other excavated soils shall not be removed from the campus? If such materials are not required for the project, the Contractor shall consult with the FAU Facilities Planning Project Manager who will advise the Contractor regarding a disposal location.
(Specific drawing sheet #/specification page # _____)
3. Where topsoil is removed and grading is accomplished on the site, or where the existing ground surface is otherwise disturbed, has the A/E specified that care shall be taken to prevent soil erosion? If soil is needed, is it specified that the Contractor will have to obtain it from private sources at the Contractor's expense?
(Specific drawing sheet #/specification page # _____)
4. When necessary to hold large piles of excavated earth on the job site, has the A/E specified that the contractor is required to provide cover or adequate means of water sprinkling to keep the sand particles wet and prevent them from being wind-blown about the campus?
(Specific drawing sheet #/specification page # _____)

02223 - Backfilling

Backfilling is required at building perimeter and site structures up to subgrade elevation. Has the A/E specified that fill under interior and exterior slabs-on-grade or pavement, and fill under landscaped areas shall meet applicable ANSI/ASTM standards?
 (Specific drawing sheet#/specification page # _____)

02225 - Trenching

When excavating and backfilling for the mechanical and electrical trades is covered in this portion of the specifications, has the A/E specified that the compaction of back-fill meets applicable ANSI/ASTM standards and the requirements of Section 553.60, F.S., the Trench Safety Act?
 (Specific drawing sheet #/specification page # _____)

02251 - Termite Control

1. Has the A/E specified the following? Termite treatment is required for every building. The Subcontractor for soil poisoning must furnish a service agreement stating the work performed will be guaranteed for a period of 5 years from the date of Substantial Completion. In addition, the guarantee must state that the structure will be inspected yearly for infestation and treatment provided as necessary during the 5-year guarantee period. The Subcontractor shall offer an optional renewal of the service on the same terms. The type of chemical treatment must be specified, including the amount of application per unit area. The service agreement shall state that in the event of damage during the guarantee period, the Contractor shall make repairs to structurally damaged surfaces to a dollar value based on the size of the building. An independent testing laboratory shall certify that the treatment meets the requirements of the Specifications.
 (Specific drawing sheet #/specification page # _____)
2. Termite treatment is typically provided prior to substantial completion. Has the A/E specified that the University is not to be billed more than 90% prior to acceptance of the building and receipt of the guarantee?
 (Specific drawing sheet #/specification page # _____)
3. Has the A/E specified that chemicals and application shall conform to EPA's Federal Insecticide, Fungicide and Rodenticide Acts?
 (Specific drawing sheet #/specification page # _____)

02490 - Trees, Plants, and Ground Cover

Has the A/E specified that trees, plants, and ground cover work includes planting, backfilling, guying, watering, pruning, as well as replacements of unacceptable materials and guarantees?
 (Specific drawing sheet #/specification page # _____)

02500 - Paving and Surfacing

02513 - Asphaltic Concrete Paving

Do the specifications comply with requirements of the Florida Department of Transportation and as determined by the civil engineer? Minimum installation shall consist of 1" plant-mixed type S-1 asphaltic concrete surface course over 6" compact base over 10" stabilized base, unless the civil engineer determines otherwise.
 (Specific drawing sheet #/specification page # _____)

02514 - Concrete Paving

1. Is it specified that concrete shall be Class A with a minimum compressive strength of 3000 psi in 28 days and all products, materials, and execution shall comply with applicable ANSI and ASTM Standards?
 (Specific drawing sheet #/specification page # _____)

Expansion Joints

2. Are expansion joints specified using pre-molded type 1/2" thick, full depth of concrete, spaced maximum 30'-0" o.c. and at all junctions with vertical surfaces?
 (Specific drawing sheet #/specification page # _____)

3. Are the expansion joints specified and shown on the drawings?
 (Specific drawing sheet #/specification page # _____)

Control Joints

4. Are control joints specified to be saw-cut to squared relief, e.g., 6'0" wide sidewalk, 6'0" space between? Do they line up so that new stress points do not occur and cause more cracking of the concrete surface?
 (Specific drawing sheet #/specification page # _____)

Finish

5. Are the finishes floated, troweled, and medium broom finished?
 (Specific drawing sheet #/specification page # _____)

Utility Cuts

6. Are utilities cuts required to cross existing paved areas? Discuss with the FAU Project Manager whether to saw-cut through or directional bore at existing road/sidewalk surfaces. If concrete walks must be cut, has it been specified to replace from joint to joint, doweled to the remaining slab?
 (Specific drawing sheet #/specification page # _____)

Walks

7. Are concrete sidewalks specified to be a minimum of 6 inches thick with 6 x 6 #10/10 wire mesh reinforcement, and edge thickness increased a minimum of 2 inches? All sidewalks may be subjected to heavy vehicular traffic.
 (Specific drawing sheet #/specification page # _____)

Pedestrian walks

8. Are walks used as vehicular drives shown at a minimum of 6" thick with edges increased to a minimum of 2 additional inches thick and 10'-0" wide, steel reinforced? Secondary sidewalk width should be a minimum of 6 feet, and should match surrounding walk patterns. Care must be taken to prevent slick finishes and to avoid the possibility of marking or vandalism while the concrete is curing. Expansion joints must be properly designed and indicated on contract drawings. Medium broom finish on all sidewalk work is required. Do the specifications call for the Contractor to protect concrete from defacement by fencing or providing appropriate personnel to maintain and secure the area until the concrete has properly cured?
 (Specific drawing sheet #/specification page # _____)
9. Has golf cart parking been provided?
 (Specific drawing sheet #/specification page # _____)
10. Has adequate space been designed at sidewalk intersections to allow golf cart turning? (Golf carts will cut the corners and kill the grass otherwise.)
 (Specific drawing sheet #/specification page # _____)

02660 - Water Service System

Have the following been specified? Water service piping shall be ductile iron pressure water pipe or PVC pressure pipe. Other piping allowed by the Florida Building Code for Plumbing may be permitted if pre-approved by the A/E and FAU's Engineering & Utilities Dept. Provide gate valves at all new branches, fire hydrants, backflow prevention devices and meters. Discuss valve location and installation details such as valve boxes, direct burial, and ground level access to valve operator with the University. Water lines shall be disinfected according to AWWA Standard C-601. All pipes shall be tested for leakage. Detectable plastic marking tape shall be installed underground above buried utility lines to facilitate the location of the lines (to prevent damage to the lines during future excavation).
 (Specific drawing sheet #/specification page # _____)

02720 - Storm Drainage System

Are catch basins and inlets precast or cast-in-place concrete? Are grates and frames cast iron or galvanized steel? Is storm drainage piping concrete, corrugated metal pipe or Helicoidal metal pipe (bituminous coated or aluminum)? Other piping allowed by the Florida Building Code for Plumbing may be permitted if pre-approved by the A/E and FAU's Engineering & Utilities Dept.
 (Specific drawing sheet #/specification page # _____)

02730 - Sanitary Sewer System

Is sanitary sewer piping PVC with joints as recommended by the pipe manufacturer? Other piping allowed by the Florida Building Code for Plumbing may be permitted if pre-approved by the A/E and FAU's Engineering & Utilities Dept. Are sanitary manholes precast concrete or cast-in-place concrete? Are covers and frames cast iron or galvanized steel? Are cleanouts commercially-manufactured wye branches?
(Specific drawing sheet #/specification page # _____)

02780 - Unit Pavers

1. Has the following FAU Paver Policy been followed: If pavers are specified on paths, walkways, and road crossings where deemed appropriate, they shall be used only as accent or trim; a clear surface free of pavers shall exist in the direct path of travel. This clear surface shall be at least 3 feet wide. The pavers shall not cross the clear path of travel. (It has been determined in consultation with FAU's ADA Accessibility Committee that while the installed pavers can meet code requirements for accessibility that meeting the minimum criteria may still allow a condition which is difficult or uncomfortable for some persons to use.)
 - a. Example 1: A 5-foot wide sidewalk is proposed. It may have a concrete center section 3 feet wide with bands of pavers on bother edges 1 foot wide.
 - b. Example 2: A 6-foot wide sidewalk is proposed. It may be split in half with a 3 foot wide paver section and a 3 foot wide concrete section.
 - c. Example 3: An 8-foot wide sidewalk is proposed. It may have 3 foot concrete walks on either side of a 2-foot wide strip of pavers. The center strip could be further detailed to provide 2-foot square paver panels spaced 2 or 3-feet apart with concrete in between them.
 - d. Other designs that meet the intent are encouraged.
(Specific drawing sheet #/specification page # _____)

2. Where pavers are used has the following been specified?
 - Manufacturer: U.S. Brick & Block, Inc.
 - Paver style: "Crown Stone" in field, "Brick 4 x 8" border (in 2 or 3 rows).
 - Colors: E-11 Red-Tan-Charcoal (3-color mix)
 - Thickness: 2 3/8" for standard use
 - Sizes: Nominal 6" x 9" and 6" x 6", (borders 4" x 8").
 - Pattern: Staggered Joint mix of rectangular & square pavers.
 - Texture: Smooth, non-skid surface
 (Specific drawing sheet #/specification page # _____)

02800 - Site Improvements

02811 - Landscape Irrigation

1. Are all landscaped and sodded areas irrigated? The irrigation system shall be designed so as to eliminate water spray on pedestrian walkways and buildings.
(Specific drawing sheet #/specification page # _____)
2. Are sprinkler heads for the Boca Raton Campus specified to be "Toro" only?

(Specific drawing sheet #/specification page # _____)

3. For irrigation work on other FAU campuses and partner campuses, has the Architect/Engineer verified in writing the sprinkler specification to ensure compatibility?
 (Specific drawing sheet #/specification page # _____)

Are all landscaped areas adequately irrigated based on the following criteria:

4. Has an automatic landscape irrigation system for all landscaped areas been provided? Have air relief valves at the end of the system been specified?
 (Specific drawing sheet #/specification page # _____)
5. Is a rain-sensing device to automatically and temporarily override the controller during wet conditions included?
 (Specific drawing sheet #/specification page # _____)
6. Has the irrigation system been designed and specified to prevent or minimize runoff of irrigation water onto roadways, driveways, walks, etc.?
 (Specific drawing sheet #/specification page # _____)
7. Has reclaimed water been utilized for landscape irrigation?
 (Specific drawing sheet #/specification page # _____)

02825 – Fencing

Has permanent (not construction) chain link fence been specified to be black vinyl coated, including posts, etc? Where visual blocking is required, have black slats been specified? If additional visual blocking is required, has black fabric been specified?
 (Specific drawing sheet #/specification page # _____)

02870 – Site Furnishings

Bike Racks

1. Are bike racks of a design similar to Bike-Stanchions from The Bike Security Racks Company or The Ribbon Rack by Brandir International, Inc. specified?
 (Specific drawing sheet #/specification page # _____)

Site Benches, Tables, Trash Receptacles

2. Has the A/E specified either the FAU-approved metal or concrete site furnishings as listed below? Verify the preferred material with FAU’s Project Manager.
Metal – Victor Stanley, Inc., Steelsites Series, powder-coated steel, standard black color.
- a. 6-foot bench with back NRB-6.
 - b. 6-foot bench with no back FRB-6.
 - c. 4-foot square table with 3 backless seats CRPR-3-4.
 - d. Trash receptacle 36-gallon side opening NSDC-36.

Concrete – Wausau Tile, Inc.,

- e. Bench 72" x 20" x 18" Weatherstone Finish B4 Buff TF1223.
- f. Picnic Table 66" dia x 30" standard terrazzo finish TF 3125 (4 seats) or TF3128 (3 seats - HC accessible).
- g. Trash receptacle 42-gallon 29" dia x 39" Weatherstone finish B4 Buff.
(Specific drawing sheet #/specification page # _____)

02875 – Bus Stop Shelter

Is a bus stop shelter specified equal to Mardan Fabricators, Inc., Vista Shelter Style A (open front), nominal 6 foot x 12 foot with 3 inch overhang, paint finish to be silver aluminum color, polycarbonate tinted wall glazing, and two acrylic domes? Has shelter been specified to comply with Florida Building Code requirements? Has a 6-foot bench (see 02870 bench spec) been specified to be installed inside?
(Specific drawing sheet #/specification page # _____)

02938 – Sodding

1. Are all areas not otherwise landscaped sodded with sod appropriate to the local area? (Refer to ASPA (American Sod Producers Association) - Guideline Specifications to Sodding.)
(Specific drawing sheet #/specification page # _____)
2. Has Floratam St. Augustine sod been specified for sodded irrigated areas?
(Specific drawing sheet #/specification page # _____)
3. Has Argentine Bahia sod been specified for sodded non-irrigated areas?
(Specific drawing sheet #/specification page # _____)
4. Has sod been specified to be top dressed and rolled?
(Specific drawing sheet #/specification page # _____)
5. Has sod been specified to be installed with the solid earth base level with adjacent sidewalks?
(Specific drawing sheet #/specification page # _____)
6. Has it been specified that grassed areas shall be cut at least weekly by the contractor and a minimum of twice prior to turn over to the University's Physical Plant Department?
(Specific drawing sheet #/specification page # _____)

02950 - Landscaping Plant Materials

Trees, Plants, and Ground Cover

1. Are trees, plants and ground covers in a schedule contained in the drawings? The schedule should include plant name and botanical identification, nominal size of trunk or spread of branches, height or other identifiable criteria. Have these plants been specified as "Florida Grade" and selected for the specific climactic conditions of the project site?

(Specific drawing sheet #/specification page # _____)

2. Is it specified, where appropriate, to scarify subsoil to a depth of six inches where topsoil is to be placed? Repeat cultivation in areas where equipment, used for hauling and spreading topsoil, has compacted subsoil.
- (Specific drawing sheet #/specification page # _____)

Placing Topsoil

3. Is topsoil specified at a minimum of two inches over area to be sodded?
- (Specific drawing sheet #/specification page # _____)
4. Has the Architect/Engineer reviewed these requirements with the University Facilities Planning Project Manager and FAU Physical Plant Dept. to ensure appropriate coordination and incorporation in the contract and future grounds maintenance?
- (Specific drawing sheet #/specification page # _____)
5. Has the selection of plant material been based on water-conservation principles?
- (Specific drawing sheet #/specification page # _____)
6. Has recycled mulch been specified? Has it been specified that cypress mulch is prohibited?
- (Specific drawing sheet #/specification page # _____)

End of Division 2 – Sitework.