

323000 Site Improvements

The March 2024 revision of this standard was a major rewrite. No highlights for changes were added to the body of the standard due to the breadth of the rewrite. All aspects of the standard should be reviewed by design professionals and contractors and assumed to be new.

Sections Included In This Standard:

- 1.1 Bicycle Facilities
- 1.2 Guardrails
- 1.3 Parking Bumpers
- 1.4 Traffic Signage
- 1.5 Traffic Signals
- 1.6 Traffic Impact Studies
- 1.7 Vision Triangle
- 1.8 Bus Stop Shelters

1.1 BICYCLE FACILITIES

- A. DESIGN GUIDE FOR BICYCLE FACILITIES: Bicycle facilities should be designed in accord with "Chapter 8, Pedestrian, Bicycle, and Public Transit Facilities of the Plans Preparation Manual, Volume 1," and "Section 223, Bicycle Facilities from the FDOT Design Manual," issued by the Florida Department of Transportation (FDOT); the "Urban Bikeway Design Guide" published by the National Association of City Transportation Officials (NACTO); and the "Guide for the Development of Bicycle Facilities" published by the American Association of State Highway Officials (AASHTO).
- B. DEFINITIONS:
 - 1. Refer to Florida Statutes, most current version, for definitions of "Bicycle," "Bicycle Lane," "Bicycle Path," and "Electric Bicycle."
 - 2. Bicycle Parking/Storage
 - i. **Short-term bicycle storage:** non-enclosed bicycle parking typically used by visitors for a period of two hours or less.
 - ii. **Long-term bicycle storage:** bicycle storage that is easily accessible to residents and employees and covered to protect bicycles from sun and rain.
- C. REQUIREMENT FOR PROVIDING BICYCLE LANES AND PATHS: The requirement for providing lighted bicycle lanes and paths with all new road construction, and major reconstruction of existing roads, is given in the Landscape Master Plan and Section 321000 of these Standards.
- E. BICYCLE PARKING AREAS - LIGHTING: Areas designated for bicycle parking should be adequately lit. Consult with Facilities Services, the Landscape Master Plan Design Standards, Section 3, Lighting, and Section 265000 within these Standards regarding lighting design.
- F. BICYCLE PARKING SPACES - QUANTITIES
The following standards are intended to provide guidance for the quantity of bike racks and shelters based on building usage. These quantities may be increased or reduced based on specific project conditions. Deviations to quantities and/or quantity of long-term storage (covered spaces) may be acceptable for specific locations with approval through the

submission of a Standards Project Deviation Request Form. Such deviations shall be coordinated with and approved by UF Transportation and Parking, Facilities Services, and Planning, Design and Construction.

As shown in the table below, for residential and non-residential building uses, the number of bike parking spaces is determined by percentage of building occupancy, and the number of long-term versus short-term spaces is a percentage of the total spaces needed. For parking garages, the number of spaces is determined by the percentage of total vehicular spaces. Because the bike parking spaces are assumed to be under the cover of the garage, there is no need to quantify long-term versus and short-term spaces.

Building Use	Number of Bike Parking Spaces	Quantity of Long-Term Bike Parking Spaces	Quantity of Short-Term Bike Parking Spaces
Residential	60% of Occupancy	40%	60%
Non-Residential	25% of Occupancy	20%	80%
Parking Garages	15% of Total Vehicular Spaces	n/a	n/a

1. **Sustainability Certifications:** Follow all applicable sustainability certification requirements, including bike rack quantities for short-term and long-term bicycle parking. Refer to the current standards provided by the United States Green Building Council (USGBC), Florida Green Building Council (FGBC), Green Globes, Sustainable SITES, or other certification pursued by the project team. Between the sustainability certification requirements and the UF requirements shown in the table above, project team should provide whichever is greater, unless otherwise approved by UF Transportation and Parking, Facilities Services, and Planning, Design and Construction.

D. BICYCLE RACKS

1. The standard short-term and long-term bike parking structures used by the University of Florida for supporting and securing a bicycle are specified in the Landscape Master Plan Design Manual, Section 2.7, Bike Accessories and Section 2.13 Bike Shelters. Other styles of racks and shelters may be acceptable for specific locations with approval through a Deviation to Standards request.
2. In the event that bicycle racks and shelters are impacted by construction activities, temporary racks may be necessary. Temporary bicycle racks and shelters must be approved in writing by Transportation and Parking, Facilities Services, and Planning, Design and Construction.
3. Dimensions and locations (or as-built drawings) of new bicycle parking facilities should be given to UF BATS for updating of Campus maps.

F. PLACEMENT AND ARRANGEMENT OF BICYCLE RACKS

1. Bicycle storage must be located to be easily accessible to all building users. Short-term bicycle storage must be within 100 feet (30 meters) walking distance of any main entrance. Long-term bicycle storage must be within 100 feet (30 meters) walking distance of any functional entry. It must be easily accessible to all building users.
2. Sustainability certification requirements for placement and accessibility may supercede these requirements where applicable.

3. Consult manufacturer specifications for spacing requirements of specific racks and shelters.

G. OTHER BICYCLE AMENITIES

1. Guidance for bicycle paths, signage, bridges and other appurtenances can be found in the Landscape Master Plan, Section 321000 of these Standards, and in the references cited in this section.

1.2 GUARDRAILS

Guardrails shall meet Florida Department of Transportation standards.

1.3 PARKING BUMPERS

Parking bumpers shall meet Florida Department of Transportation standards or be an approved equal.

1.4 TRAFFIC SIGNAGE

A. STREET NAME SIGNS: Consult with the Project Manager concerning the need for such signage and financial responsibility.

1. All new street signs on campus shall be White lettering on a Blue background. The blue background shall be 3M™ HIP Reflective Sheeting Series 3930, blue color or equivalent.
2. All reflective signs shall meet FHWA recommended minimum retro reflectivity rating.
 - a. The signs reflective lines shall be horizontal for horizontal format signs.
3. All reflective signs shall have a clear gloss DOT approved laminate such as Clear 3M™ Series 1170 ElectroCut Film.
4. All signs shall comply with the Manual on Uniform Traffic Devices (MUTCD) and its companion Standard Highway Signs publication (latest editions).
5. The font shall be Highway Gothic.
6. All signs shall be double sided except in the locations where the back side is not visible, such as attached to horizontal mast arms.
7. Signs hung above the roadway at intersections shall ...
 - a. Be a minimum of 9 foot wide by 2 foot high
 - b. Have Initial Uppercase letter that is 12" tall. All other lettering will follow MUTCD standard based on this size.
 - a. Have a maximum of 15" overall height of text.
 - b. Have text be evenly spaced between sign edges.
 - c. Be reflective or back lit.
 - d. Have a white border with a width of 0.5" extended to the sign edge and corner radius shall be 1.5".
8. Signs mounted to posts at the corners of intersection shall...
 - c. Be a minimum of 24" width by 6" height without a border.
 - d. Have Initial Uppercase letter that is 4" tall. All other lettering will follow MUTCD standard based on this size.
 - e. Have a maximum of 5" overall height of text.
 - f. Have text be evenly spaced between sign edges.
 - g. Be reflective only.
9. Contractor shall provide shop drawings of all signage to Project Manager for review and approval prior to fabrication and installation.

- B. **PARKING SIGNS:** Parking signs for University of Florida parking are procured and installed by Transportation and Parking. Consult with the Project Manager concerning the need for such signage and financial responsibility.
- C. **TRAFFIC SIGNS:**
 - 1. Traffic signage shall be designed in accordance with the latest edition of the "Manual on Uniform Traffic Control Devices (MUTCD)", U.S. Department of Transportation.
 - 2. Placement and use of these signs shall be in accordance with FDOT guidelines.

1.5 TRAFFIC SIGNALS

Traffic signals shall be designed in accordance with the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways," U.S. Department of Transportation. Consult with the Project Manager concerning the need for signalization and financial responsibility. Audible pedestrian signals are required per MUTCD standards. Where feasible, it is recommended that intersection signal cycles include a phase for a "pedestrian scramble" or all-way pedestrian crossing.

1.6 TRAFFIC IMPACT STUDIES

Traffic impact studies shall be conducted for all new or redeveloped parking structures to add more than 300 spaces and may be required for other types of construction deemed to have the potential of impacting transportation facilities in the vicinity. When required, such studies shall be coordinated with the Director of Transportation and Parking Services and the Director of Planning. The steps for this process are outlined below:

- 1. Approval of the study area, which shall be not less than ¼ mile area around the site.
- 2. Approval of study parameters including traffic count procedures.
- 3. Approval of the trip generation and trip distribution parameters
- 4. Analysis of the intersection level of service using the Highway Capacity Software (2000 or latest version). Results of the traffic impact study shall address peak hour conditions and include roadway capacity, intersection level of service, and access for bicycles, pedestrians and transit. The results shall include recommendations for any necessary modifications to traffic signals and other transportation system management techniques.

1.7 VISION TRIANGLE

The vision triangle is a portion of land on the corner of intersecting roads and/or driveways where nothing is permitted to be built, placed, or grown that would limit or obstruct the sight distance of motorist entering or leaving the intersection. The purpose of the vision triangle is to ensure that there is adequate and safe visibility at intersections. The American Association of State Highway and Transportation Officials (AASHTO) Standards (most recent version) shall govern the vision triangle definition. The university shall prohibit the construction, erection, placement, growth, maintenance or allowance of any building, structure, fence, wall, sign, canopy, vegetation, or obstruction of any kind within the vision triangle that impede views in the vertical plane between two-feet from ground level and eight-feet from the ground level. Diagrams of vision triangle dimensions can be found in the AASHTO Standards and also in the Florida Department of Transportation (FDOT) Roadway and Traffic Design Standards, current edition, Standards Index 546.

1.8 BUS STOP SHELTERS

Refer to the Landscape Master Plan for bus stop shelter standards. All Bus Stop Shelters shall have lightning protection.

END OF SECTION