STREETS, DRIVEWAYS, SIDEWALKS AND BICYCLE NETWORK

Priority of Pedestrian Traffic: Through the Campus Master Plan campus has instituted the following mission for transportation facilities: To better accommodate pedestrian, bicycle, transit, and vehicle movements in a more user-friendly environment. These are listed in priority order; therefore, the safety and convenience of pedestrian traffic shall be maintained as a priority over other forms of traffic during the design and construction of any traffic (or non-traffic) facility on campus. In keeping with these priorities, "traffic calming" principles shall be applied to the design of U of I streets.

Emergency Vehicle Access: When laying out streets, service drives, sidewalks and bicycle paths, priority consideration shall also be given to providing adequate access for emergency vehicles to all buildings/areas.

Complete Streets: The streets on campus shall be developed as Complete Streets, which are designed to enable safe access for all users. Pedestrians, bicyclists, buses, and motor vehicles can all safely cross and move along a complete street.

Coordination with Non - U of I Agencies: Not all streets and associated rights-of-way on campus are owned by the U of I. In some cases, the City of Champaign, the City of Urbana, the Illinois Department of Transportation (IDOT), or other units of government own rights-of-way within the campus. Large-scale transportation projects on the Urbana campus are reviewed by the Champaign-Urbana Urbanized Area Transportation Study (CUUATS), the transportation arm of the Champaign County Regional Planning Commission, which is the Metropolitan Planning Organization (MPO) for Champaign County. F&S Transportation Demand Management is the liaison between the U of I and CUUATS.

Ownership of Right-of-Way/Easements: Some streets and rights-of-way that are owned by the U of I may be encumbered with utility or other easements that may affect project sites and construction. PSC shall consult U of I records (for example, those available through Facilities Information Resources) and any appropriate non - U of I records to determine ownership of right-of-way.

Non-U of I Land Use Negotiation: Each project that impacts a non – U of I owned right-of-way requires that negotiations take place with the respective jurisdiction in order to achieve the necessary licensing agreement(s). A construction permit from each jurisdiction is also required prior to commencement of construction activities. Projects that involve streets that are also state routes require the involvement of IDOT.

Reference Design Manuals: The design and construction of U of I streets, sidewalks and bicycle paths must comply with the current revision of the *Standard Specifications for Road and Bridge Construction*, published by IDOT. Access points from university streets shall comply with the *Access Management Guidelines for the Urbanized Area* established Champaign Urbana Urbanized Area Transportation Study (CUUATS). Crosswalk signage and markings shall comply with the *University District Crosswalk Markings and Signage* guidelines established by CUUATS. All other signage and markings shall comply with the current revision of the Federal Highway Administration's (FHWA) *Manual of Uniform Traffic Control Devices (MUTCD) including the Illinois Supplement*. This publication is included by reference in the Illinois Compiled Statutes and therefore holds legal authority.

Construction: U of I streets, driveways, pavers, sidewalks and bicycle paths shall be constructed of reinforced concrete of 8 in. minimum thickness, to accommodate service vehicle traffic. Non-permeable paver areas shall be constructed with an 8" concrete base. In some cases, streets and driveways may be asphalt or other construction. Occasionally, higher quality composite construction of both concrete and asphalt are deemed most appropriate. The most appropriate street construction type for a specific project is governed by location on campus and traffic usage and shall be discussed with the F&S Transportation Demand Management via the U of I Project Representative.

Service Life: All streets shall be designed and constructed so as to provide a minimum service life of 50 years.

Curbs: Streets on the Urbana campus shall incorporate concrete curbs. At intersections and mid-block crossings, curbs shall be designed with "bump-outs" such that the curbs project out at intersections as far as the width of the adjacent parking lanes in order to minimize the exposure of pedestrians to vehicular traffic. This also adds a traffic calming feature, as the vehicles approach the bottle-neck at crosswalks. Curbing may be reduced or eliminated when associated with green stormwater infrastructure design improvements.

Turning Radius: Streets and driveways shall be designed for a the greater of the intended design vehicle turning radius or 20 ft. Street intersections shall follow radius recommendations from the *Standard Specifications for Road and Bridge Construction*, as well as the appropriate city standards for curb bump-outs.

Drainage: Adequate drainage shall be provided for all traffic facilities. In the past, this has often been overlooked and/or violated. Each such facility shall be constructed so as to direct water away from the paved surface without ponding. Sidewalks and off-street bicycle paths shall be pitched appropriately and streets shall be appropriately crowned. Curb inlets or other drainage devices/systems shall be provided as required by the current revision of the *Standard Specifications for Road and Bridge Construction*. Inlet structures shall be safe for bicycles as well as pedestrians of all ages. The university's preference is for the use of green stormwater infrastructure, which shall be prioritized over the use of conventional piping systems.

Original Condition: When existing paved surfaces are modified or damaged they must be returned to their original condition using materials that are equal to or better than the original. It is recommended that they are returned so as to meet current standards.

Sidewalks: Sidewalks shall be a minimum of 6 ft. wide with a maximum cross slope of 2% and shall comply with the requirements of the *Illinois Accessibility Code*. Sidewalk ramps shall comply with the requirements of the *Illinois Accessibility Code*.

Paver Areas: Paver areas shall be constructed with an 8" thick concrete base with 2" weep holes, 4' on center or better. CA16 to be used as a leveling course, in lieu of sand. With permeable paver types, jointing material to be ASTM D448 #8 or CA16 chip aggregate. With non permeable paver types, polymeric sand is preferred. Concrete base shall have 18" long dowels at 12" on center, when adjacent to concrete walks. Most areas are likely to be driven over by construction equipment, so pavers will meet ASTM C1272. In some instances where this type of activity is unlikely, paver specification may be reduced to meet ASTM C902 as directed by the university landscape architect. This overall style of installation allows for some quick water infiltration for smaller rain events, while protecting against vehicular damage. Permeable clay pavers are always the preferred paver material, in lieu of non permeable pavers and concrete pavers. In areas of full permeable paver installation, the preferred section should be 2" of CA16 or ASTM D448 #89, over 4" of ASTM D448 #57, over 12" of ASTM D448 #2 stone.

Bicycle Network: Bicycle path facilities shall be constructed according to the *Campus Bicycle Plan*, available through F&S Transportation Demand Management and also a*vailable at: 2014 Campus Bicycle Plan*. All new bicycle paths shall be a connected part of the campus bicycle network as well as the community bicycle networks, and shall follow the *Champaign County Greenways and Trails Design Guidelines*, developed by CUUATS.

Bicycle Paths: Bicycle paths shall use design geometry, striping, symbols, and signage as described in the *2014 Campus Bicycle Plan.*

Bicycle Parking: Bicycle parking areas can be constructed with Non-Permeable Pavers (as outlined in this document), permeable pavers, permeable pavement or concrete. All bicycle parking areas shall be designed and constructed so as to provide a minimum service life of 50 years. The most appropriate construction type for a specific project is governed by location on campus and shall be discussed with the F&S Transportation Demand Management (via the U of I Project Representative, if applicable).

For any new construction project, any addition in square footage, or any renovation project encompassing more than 50% of the building, bicycle parking must be evaluated. The ratio of bike parking capacity should be based on the maximum code calculated occupant load for the building

- For any building with 50% or more of its area dedicated to classroom space, must have a bicycle capacity of 1:10, i.e. for every 10 occupants of the building, there has to be 1 bicycle parking spot available.
- For any building with multi-use space, which is open to those affiliated with the university as well as those non-affiliated, must have a bicycle capacity of 1:10, i.e. for every 10 occupants of the building, there has to be 1 bicycle parking spot available. These buildings may include, all Libraries, Illini Union, Activities and Recreation Center (ARC), Campus Recreation Center East (CRCE), stadiums, and other similar buildings.
- For resident halls, dining halls, and student residence, there must be a bicycle capacity of 1:5, i.e. for every 5 occupants of the building, there has to be 1 bicycle parking spot available.
- For any building with 50% or more its area dedicated to office space, must have a bicycle capacity of 1:25, i.e. for every 25 occupants of the building, there has to be 1 bicycle parking spot available.

For any building that does not fall in the categories listed above, contact the F&S Transportation Demand Management team. The most appropriate construction type for a specific project is governed by location on campus and must be discussed with the F&S Transportation Demand Management (via the U of I Project Representative, if applicable).

Refer to *Drawing 12 93 13-01, Bicycle Rack Installation* and *Drawing 32 17 23-01, Bicycle Parking Dimensional Guidelines* for the standardized bicycle racks and installation thereof.

Additional Information: For additional information regarding any of the items addressed above, the *American Association of State Highway and Transportation Officials (AASHTO)* can be contacted. The F&S Transportation Demand Management department may also be contacted via the U of I Project Representative.

Documentation and Submittals: The PSC shall review the project specific *Required Phases & Minimum List of Deliverables* and the *Project Submittal Requirement.*