2015-2025
USF System
Campus Master Plan Updates

Goals, Objectives and Policies

Tampa

USF
UNIVERSITY OF
SOUTH FLORIDA
SYSTEM

Goals, Objectives, and Policies

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Element 7:

Infrastructure and Utilities

Element 7 General Infrastructure and Utilities

The overarching goal of the General Infrastructure and Utilities Element is to implement systems that adequately meet the present and future needs of the University, without limiting long-term University growth. By increasing the efficiency of utility infrastructure and reducing the consumption and wasting of resources, the campus can better ensure these systems are adequate to support campus growth.

Proper management of campus resources yields specific benefits to the University. The University can create usable open space and protect natural areas by requiring new utilities to be placed within designated utility corridors, shown in Figure 7-1, Infrastructure and Utility Corridor. Stormwater systems can be modified to not only improve water quality, but also enhance the campus landscape. Reductions to energy consumption, wastewater, and solid waste generation directly reinforce the University's commitment to greenhouse gas reduction, support sustainability for the University and reduce costs. The sub-elements define specific goals, objectives, and policies that will be utilized by the University in fulfilling the 2015 Master Plan.

7.1 Stormwater Management Sub-Element

The 10-year plan for stormwater management focuses on increasing pervious area throughout the campus. In addition, the 10-year plan implements stormwater management Best Management Practices (BMPs) to improve water quality on campus and beyond in downstream waters off-campus.

Within the campus' West Basin, construction of pond 204B serves to provide additional water quality treatment prior to runoff entering Lake Behnke and serves to lower the peak stage elevation in Lake Behnke, the ditch south/east of Shriners (204C) and its future expansion. This will help reduce localized roadway flooding, currently occurring during certain storm events for areas draining to pond 204C.

In addition, a riparian way is proposed to the Central Quadrangle from MLK Plaza and the Marshall Center to a new pond southwest of Fine Arts Building, which will receive roof runoff and condensate from adjacent buildings. This feature will serve to divert runoff from entering pipe networks, lower the peak stage of Lake Behnke, improve water quality, and provide a resource for subsequent reuse while contributing aesthetic value to the Central Quad in a way that gives visibility to stormwater management and the hydrologic cycle.

Within the campus' East Basin, additional stormwater system components are to be added to address the changes in the land use. To complete the Greenway system, impervious pavement is proposed to be removed from within the Greenway and replaced with stormwater ponds and open space. Wet pond 104A-1 and future pond 104A will serve to provide the needed stormwater treatment, attenuation and flood prevention.

Goal

The Stormwater Management goal for the Tampa Campus Master Plan is to provide an adequate stormwater management system that accommodates current and future University stormwater needs.

Summary of Objectives and Policies

Objective 7.1.1: Provide a sufficient stormwater management system in a design that is consistent and enhances the overall Master Plan scheme, and strives to reduce stormwater outfall volumes.

Policy 7.1.1.1: The University shall identify the stormwater detention and greenway systems as a "no build" zone, except for recreation support facilities.

Policy 7.1.1.2: Stormwater facility improvements shall be constructed as identified on Figure 7.1-1.

Policy 7.1.1.3: The University shall coordinate through its capital improvement projects and building program to ensure that stormwater storage and conveyance pipes are located and constructed to avoid conflicts with future building programs.

Policy 7.1.1.4: The University, prior to the design and construction of any ponds within the stormwater system, shall thoroughly investigate issues including geotechnical information, regulations, and existing utilities.

Policy 7.1.1.5: The University shall continue to maintain a capacity tracking system to ensure capacity is available for the impacts of new construction.

Objective 7.1.2: Recognizing that natural drainage flows east and west from the central ridge line, appropriate considerations will be given for maintaining and protecting the natural drainage patterns and hydrological conditions.

Policy 7.1.2.1: The University shall enhance the stormwater facilities and greenway system with the following appropriate design features:

- Gradual and varied side slopes,
- Natural aquatic plant material as appropriate for the stormwater system utilized,
- Walkways/boardwalks,
- Seasonal hardwoods and native-understory plant materials, and
- Properly designed "feature" ponds that include retention liners and sufficient water volumes and aeration to maintain a healthy environment and habitat for wildlife.

Policy 7.1.2.2: Recognizing that increasing the tree canopy reduces the amount of runoff entering stormwater ponds, the University shall continue to implement an active tree planting program, making it a priority to plant areas adjacent to roadways, surface parking lots, and other paved

surface areas. To preserve the health of the University tree inventory, a Certified Arborist should be on staff for continued oversight monitoring and directives.

Objective 7.1.3: Prevent any further degradation and improve the quality of receiving waters.

Policy 7.1.3.1: The University shall implement an ongoing, regularly scheduled stormwater facility maintenance program to ensure adequate water quality and design capacity of the facilities.

Policy 7.1.3.2: The University shall continue to comply with the State's implementation of the EPA's National Pollutant Discharge Elimination System (NPDES) programs.

Policy 7.1.3.3: USF shall continue to construct on-site stormwater treatment systems that remove suspended solids and nutrients per Southwest Florida Water Management District standards.

Policy 7.1.3.4: The University shall mitigate University-generated stormwater impacts by minimizing or eliminating stormwater-borne pollutants through the implementation of a system of Best Management Practices (BMPs), which includes, but is not limited to:

- Incorporate stormwater management retention and detention features into the design of parks, trails, commons, and open spaces, where such features do not detract from the recreational or aesthetic value of a site.
- Use of slow release fertilizers and/or carefully managed fertilizer applications timed to ensure maximum root uptake and minimal surface water runoff or leaching to groundwater.
- Educate maintenance personnel about the need to maintain motor vehicles to prevent the accumulation of grease, oil and other fluids on impervious surfaces, where they might be conveyed to surface and ground waters by runoff.
- Regularly collect and dispose of yard debris to prevent the clogging of stormwater inlets and pipes.
- Avoid the widespread application of broad spectrum pesticides by involving only purposeful and minimal application of pesticides, aimed at identified target species.
- Coordinate pesticide application with irrigation practices to reduce runoff and leaching into groundwater.
- Use turf blocks and other pervious surface treatments to minimize impervious surface area and reduce the flow of runoff pollutants.
- Incorporate features into the design of fertilizer and pesticide storage, mixing and loading areas that are designed to prevent or minimize spillage.
- Pursue licensing for grounds superintendents and staff (or use of outside licensed contractors) to ensure proper handling and administering of restricted pesticides and to ensure that fertilizers will be selected and applied to minimize surface water runoff and leaching to ground water.

Policy 7.1.3.5: It shall be the policy of the University that increases in stormwater runoff shall not cause or contribute to a violation of water quality standards in waters of the State.

Objective 7.1.4: Coordinate and phase the increased stormwater facility capacity to meet the future needs of the University.

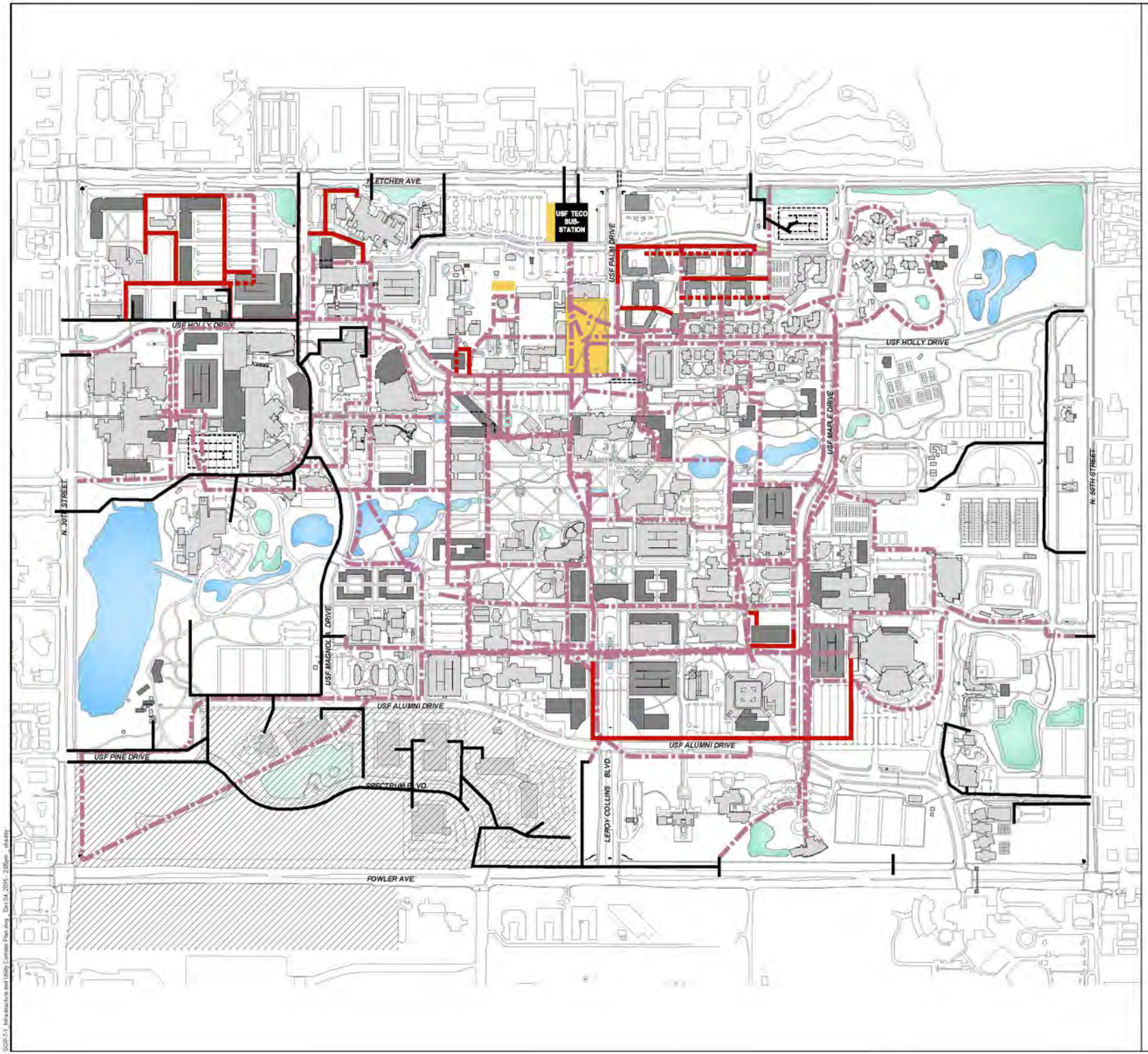
Policy 7.1.4.1: The University shall ensure that the detailed Stormwater Management Sub-Element will comply with the SWFWMD regulations for quantity and quality requirements established in Chapters 40D-4, 40D-40 and 40D-400 FAC.

Policy 7.1.4.2: Stormwater management facilities shall comply with the design criteria established in the USF Design and Construction Guidelines and shall be in place and operational, at established levels of service, prior to the construction of any new University improvement.

Policy 7.1.4.3: The University shall continue to evaluate and assess the existing and future system needs, as a result of proposed land redevelopment, transportation system improvements, reconfiguration of existing drainage conveyances, and improvements within the drainage basins. These engineering study efforts shall address the data and analysis requirements contained in Rules 6C-21.207(1) and (2) F.A.C., and shall also:

- Maintain that post-development rates of discharge shall not exceed pre-development rates.
- Establish priorities for replacement, correcting stormwater management facility deficiencies, and providing for future facility needs.
- Establish the timing and phasing requirements and identify the projected funding sources for stormwater management facility improvements to meet future USF needs.
- Classify existing utility corridors as no build zones. In the event the utility cannot be avoided, the Director of Facilities shall be notified.
- The University shall prioritize and correct identified stormwater system deficiencies. The University Stormwater Master Plan will be amended as needed.

Policy 7.1.4.4: The University shall annually review future construction programs and priorities for deficiency remediation as part of the capital improvements requirements and procedures to ensure capacity and capital improvements required to meet future University needs are provided when required, based on needs identified in other master plan elements.



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2015 - 2025 Tampa Campus Master Plan Update

- Utility Corridor
- Proposed/Relocated Utility Corridor
- Existing Utility Corridor To Be Removed
- Existing Portable Wellfield
- TECO Easement

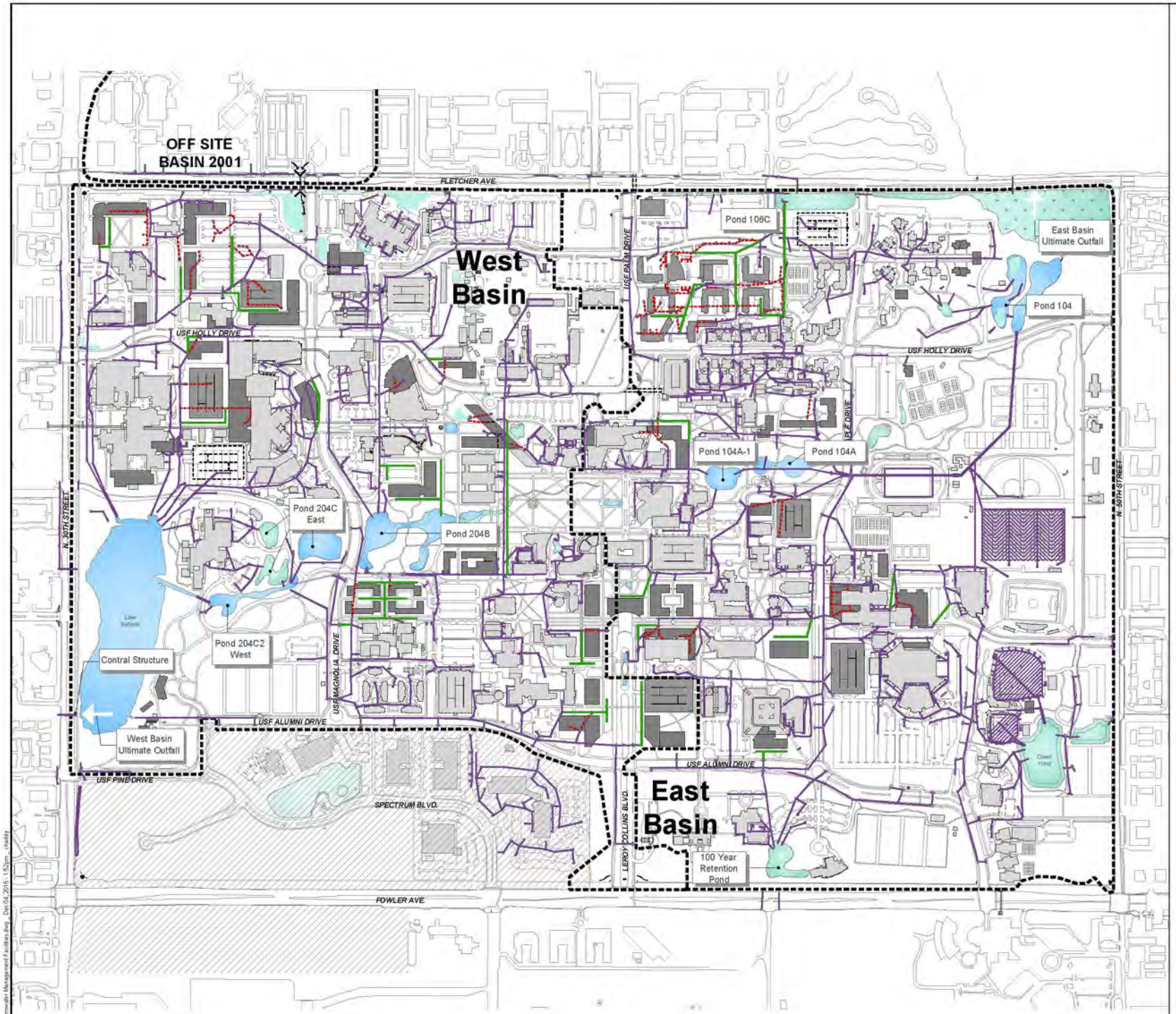
Area Not Included in Campus Master Plan

Element 7
General Infrastructure and Utilities

Figure 7-1
10 Year Infrastructure and Utility Corridor Plan

Date
12/03/2015

0 500 1000 ft.



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2015 - 2025 Tampa Campus Master Plan Update

- Stormwater Pipes
- Stormwater Pipes to be Removed
- New Stormwater Pipes
- Stormwater Collection Areas
- Wetland Area
- Stormbasin
- Existing Buildings
- 10 Yr Proposed Buildings

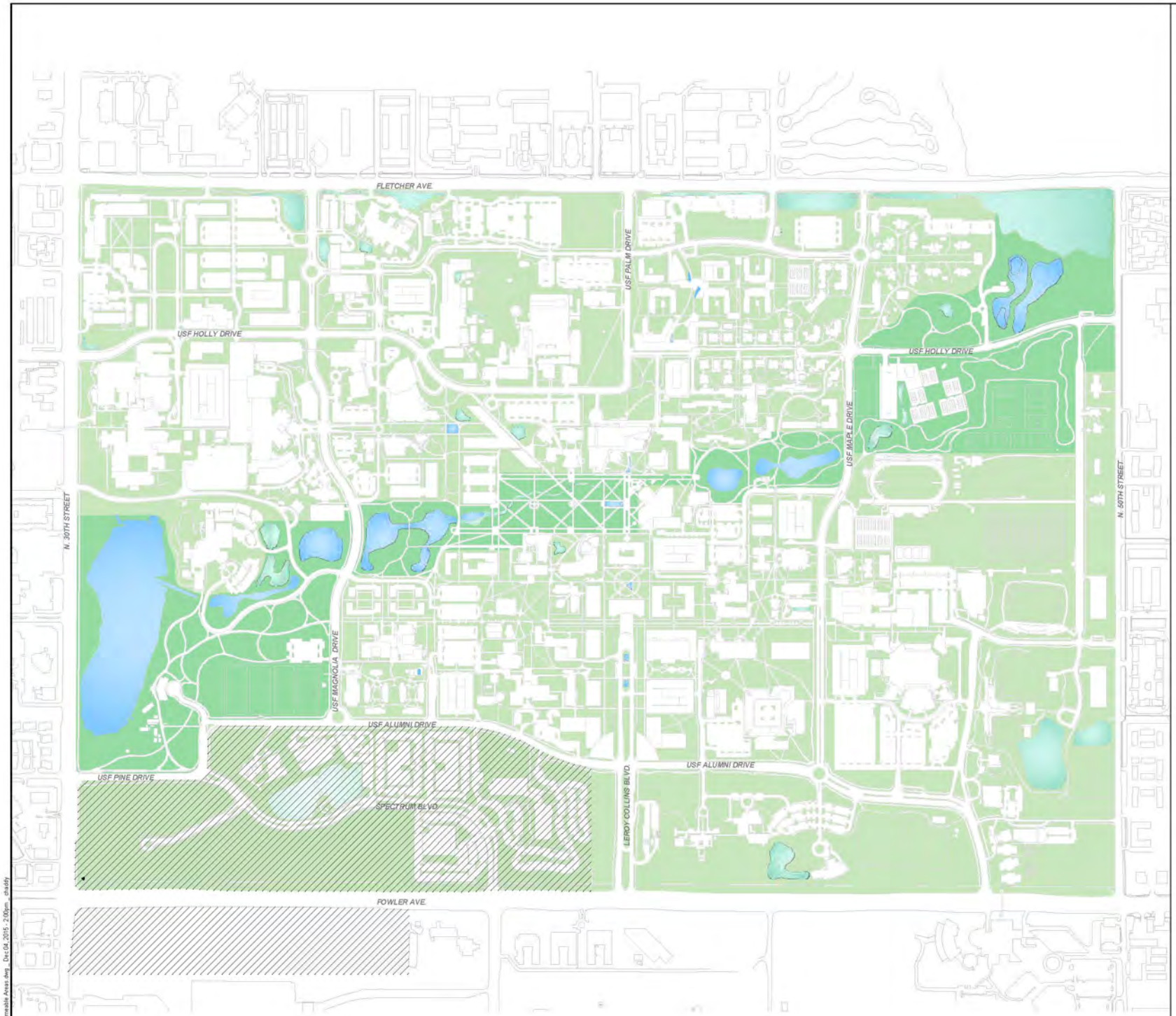
Area Not Included in Campus Master Plan

Element 7
General Infrastructure

Figure 7.1-1
10 Year Stormwater Management Plan

Date
12/03/2015

0 500 1000 ft.



UNIVERSITY OF SOUTH FLORIDA

2015 - 2025 Tampa Campus Master Plan Update

Permeable Area

Greenway

Notes

The USF Campus contains approximately 60% pervious surface, to 40% impervious surface.

Area Not Included in Campus Master Plan

Element 7
General Infrastructure

Figure 7.1-2
10 Year Permeable Areas

Date
12/03/2015

0 500 1000 ft.

GGR-7.1-2_10 Year Permeable Areas.dwg Dec 04, 2015 - 2:00pm dhaley