04

The Vision of the Campus Master Plan

Listening meetings and feedback from stakeholders guided the University of Houston Campus Master Plan toward:

Arts and Athletics that Bridge the University to the Community

Medical Care that Provides for the Underserved

A Commuter Campus that Becomes A Destination Campus,

Social Hubs that Serve Innovation,

From these, the vision of the Campus Master Plan Centennial Plan 2027 emerged:

1 A Campus Greenbelt to Beautify and Define Edges

2 A Reforested Campus Interior to Enhance Outdoor Gathering

3 A System of 20’ Signature Pedestrian Pathways to Improve Orientation, Wayfinding and to Reduce Pedestrian/Vehicle Conflicts

4 A Perimeter Position for Garage Parking to Shift Vehicles out of the Campus Core

5 An Investment in the Bayou Amenity with a Recognized Increase in Resilience

6 A Projection of Growth that Follows Infrastructure

7 An Integration of Three Parcels into One Campus

Student Center South, EYP with WTW, redevelopment of existing building for student gathering and collaboration, 2015

Alternative Transportation, BCycle Locations

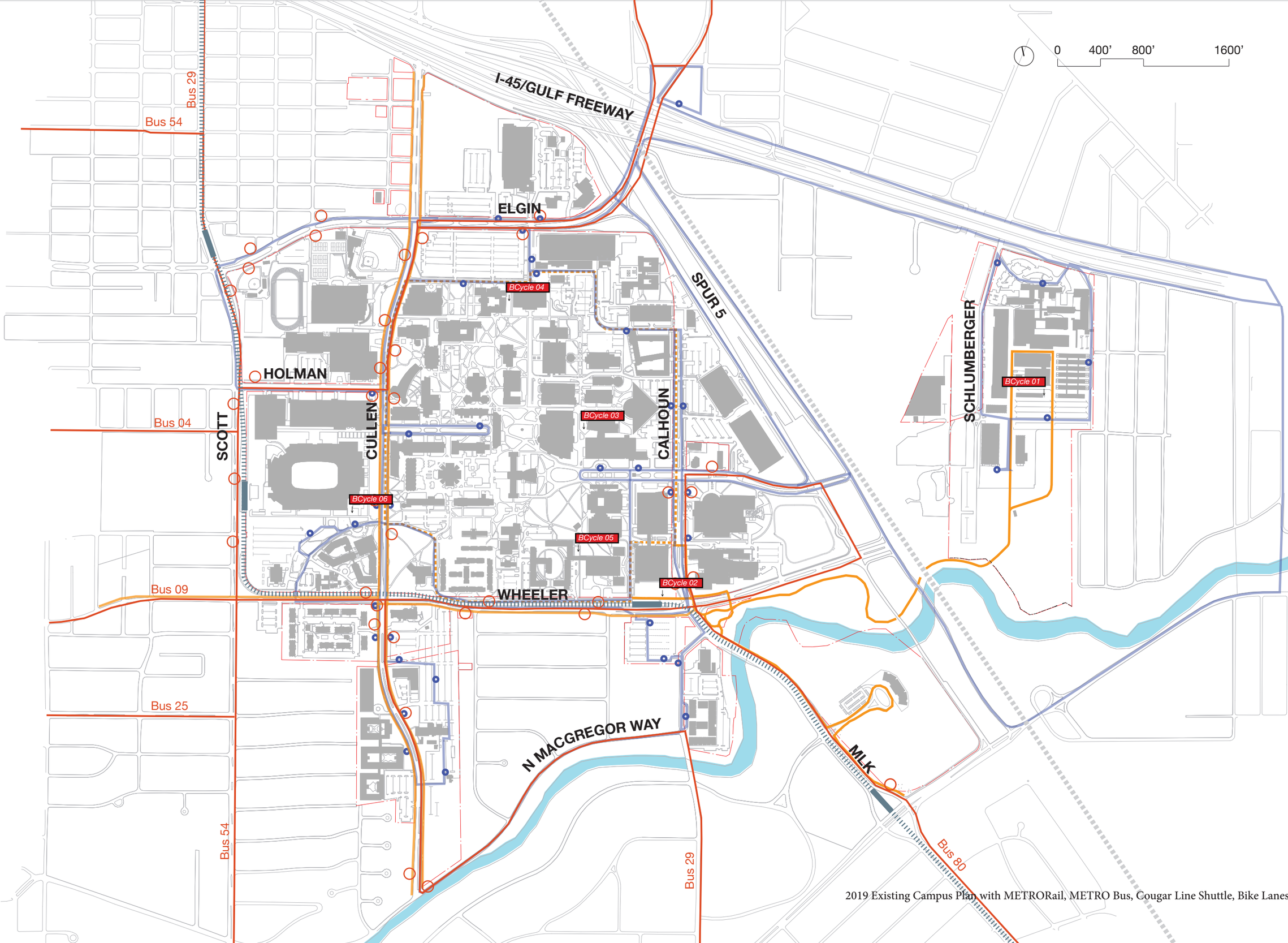
In addition to offering easy vehicle access via local streets, thoroughfares, and freeways, the UH campus is also well connected via public and alternative modes of transportation. Since 2015, METRO has operated the Purple light rail line (gray) that provides service to UH through three stations on the campus perimeter and a fourth at the College of Medicine location. METRO also serves the campus with six local bus routes (red); 04: Beechnut, 09: Gulfton/Holman, 25: Richmond, 29: Cullen/Hirsch, 54: Scott, 80: MLK/Lockwood. The Eastwood Transit Center lies immediately accross I-45 at Lockwood.

To bend down the parking demand curve that inevitably accompanies the university's steady 2.5% growth, in 2016 UH Parking and Transportation Services launched COAST (Coogs On Alternative and Sustainable Transportation), an award-winning incentive program to encourage the use of alternative transportation modes such as shuttles, car and van pools, transit, car shares, and bicycling.

UH Parking and Transportation Services operates nine free Cougar Line Shuttle routes (lavender) for UH students, faculty, staff and visitors. Shuttles are wi-fi-equipped, air conditioned buses the routes of which are tracked in real time via the Cougar Trax smartphone application. A tenth route connects the UH campus with the UH at Sugar Land learning site.

There are five Zipcars located on campus to provide car share mobility options. These are stationed at University Lofts, Cougar Place, Bayou Oaks and Cougar Village 1 (two).

Six BCycle bike share docks exist on campus with future stations planned to be added as demand dictates. These are located at Student Center North, Cougar Place, Fine Arts Buidling, Technology Bridge, Cougar Village, and Welcome Center Student Garage/METRO. Bicycles, scooters, utility carts, and private vehicles all create dangerous conflicts with pedestrians, a concern which will grow as the pedestrians and cyclists become more numerous. Planning is under way toward limiting the inner campus to pedestrians and human-powered vehicles to reduce these conflicts further while the construction of 20' signature pedestrian paths will build greater sidewalk capacity and improved connectivity.



2019 Existing Campus Plan with METRORail, METRO Bus, Cougar Line Shuttle, Bike Lanes, BCycle

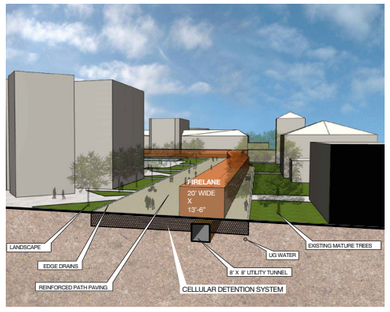
DaVinci Woods with *Contemplation*, Tom Sayre, 1976 (now resited), Public Art of the University of Houston System

Constraints on Development

Upon acquisistion, the low-lying and boggy 110 acres along St. Bernard Street required draining before any building could commence. The fact that the Reflecting Pool preceded the construction of the first buildings in 1938 may have been linked to the Works Progress Administration site drainage work that was the first act of occupying the site. As the campus expanded in each direction, it incorporated lower elevation properties along the Brays Bayou edge to the south and along what appears to be a natural drainage course to the north in the area of the Arts District today. Greater concern for storm water detention regulations, more frequent local and regional flooding events, and interest in improving campus resiliency unscore the relevance of these subtle topographic features. Recent flood damage has demonstrated the vulnerability of building below grade and future buildings will be shifting toward higher finished floor elevations. After Tropical Storm Allison in 2001, those existing structures with occupiable spaces underground have been hardened with flood gates and other mitigation features. Those properites at the campus perimeter, especially those adjacent to Brays Bayou, while having a lower value as building sites, can in the future serve an important role as a green buffer to flood vulnerability where flood waters can rise and fall with little impact on capital investments. Further improvement to these as urban woodlands could expand their recreational, ecological and hydrological functions.

The location of existing trees, buildings, utilities and other infrastructure provide another valuable tool for determing future building sites. Few open building sites remain available within the campus as surface parking lots have been replaced by buildings and garages. Campus density may continue to increase by replacing lower, less productive buildings with taller, more high-performing structures. With the exception of the legacy buildings in the campus core, the fabric of the campus is shifting from two and three story buildings to four story buildings with even taller buildings concentrated in the Residential and Health Districts. Futher, acquiring the few remaining properties of outside ownership within the campus perimeter will advance progress toward integrating all properties.

Flooding - FEMA Flood Plains



detention below paths, designLAB, 2014

The University of Houston can no longer ignore the fact of its location along the banks of Brays Bayou. Much of the university's stormwater infrastructure dates from the middle of the twentieth century including its primary drainage asset, a 10'x 15' box culvert. This culvert collects stormwater from City of Houston storm sewers on Cullen Boulevard at Entrance 14 and passes through the center of campus, under Philip G. Hoffman Hall breezeway, through Butler Plaza and drains into Brays Bayou at a large outfall near the intersection of Wheeler Avenue and Martin Luther King Jr. Boulevard.

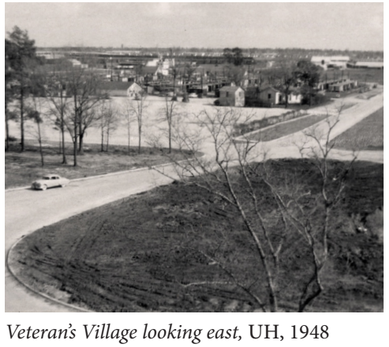
During storm events in the recent past, including Tropical Storm Allison (2001), Hurricane Ike (2008), and Hurricane Harvey (2017), rain water-generated surface flow and bayou overtopping have caused significant building damage and on-campus flooding at the University of Houston. A renewed commitment to providing distributed, integrated, and comprehensive stormwater infrastructure is essential to better protect the university from future events.

Through cooperation with leadership from Harris County Precinct One Commissioner Rodney Ellis, major underground storm water infrastructure is being added and expanded along Cullen Boulevard. The use of underground rain tanks and permiable pavers in the project will allow for observation and testing of the effectiveness of these technologies over time. In addition, bioremediation combined with detention through rain gardens and wet swales assure that stormwater detention infrastructure creates inviting landscape amentities while also making the campus more resilient to increasingly frequent stormwater impacts.

2017 Existing Campus Axonometric with predevelopment site drainage features

Historic Property Lines

Veteran's Village Trailers, UH, 1948

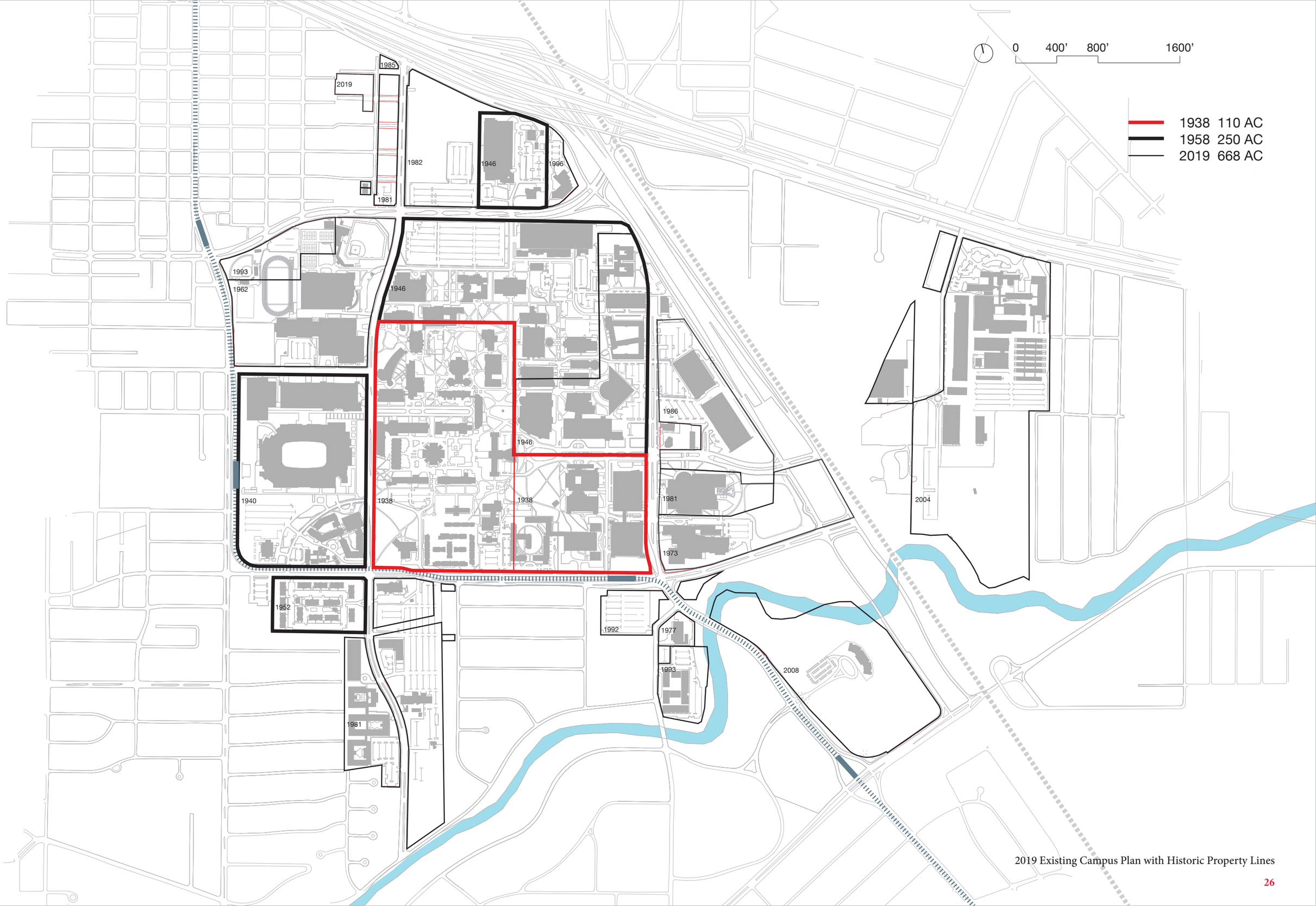


Veteran's Village looking east, UH, 1948

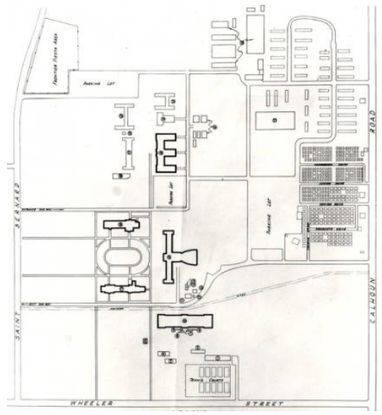
In 1938, the 110 acre campus property was bounded by city streets on its east (Calhoun), west (formerly St. Bernard, now Cullen), and south (Wheeler), while on the north it was bounded by open woodlands with an uncertain future.

By 1946, these wooded parcels to the north had been acquired and became sites of hastily relocated buildings to meet the burgeoning demand of veterans returning to civilian society. One section of the newly acquired property was populated with repurposed industrial steel sheds, trailers, and cottages, many relocated from Camp Wallace, and was commonly known as Veteran's Village. By 1958, the campus had more than doubled in area to 250 acres and included properties lying well beyond the formerly bounding city strests.

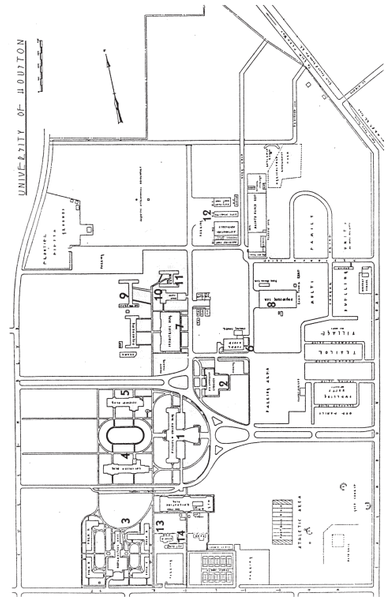
Today, the campus encompasses 668 acres. Many of the properties acquired in the last 60 years are large parcels which had no existing interior street grid or development subdivisions compatible with university purposes. Among these were the sites of a former sewage treatment plant and a stockyards and an abattoir. The challenge inherent in this incremental practice of property acquistion is the integrating of dissimilar development patterns across property lines to achieve a cohesive university environment. Essential to meeting this challenge is a coordinated network of consistently designed and landscaped pathway corridors and outdoor places.



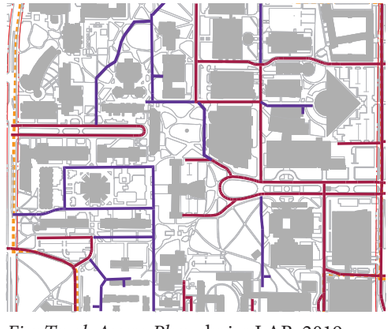
2019 Existing Campus Plan with Historic Property Lines



Campus Map, UH Facilities, ca. 1949



Campus Map, UH Facilities, ca. 1951



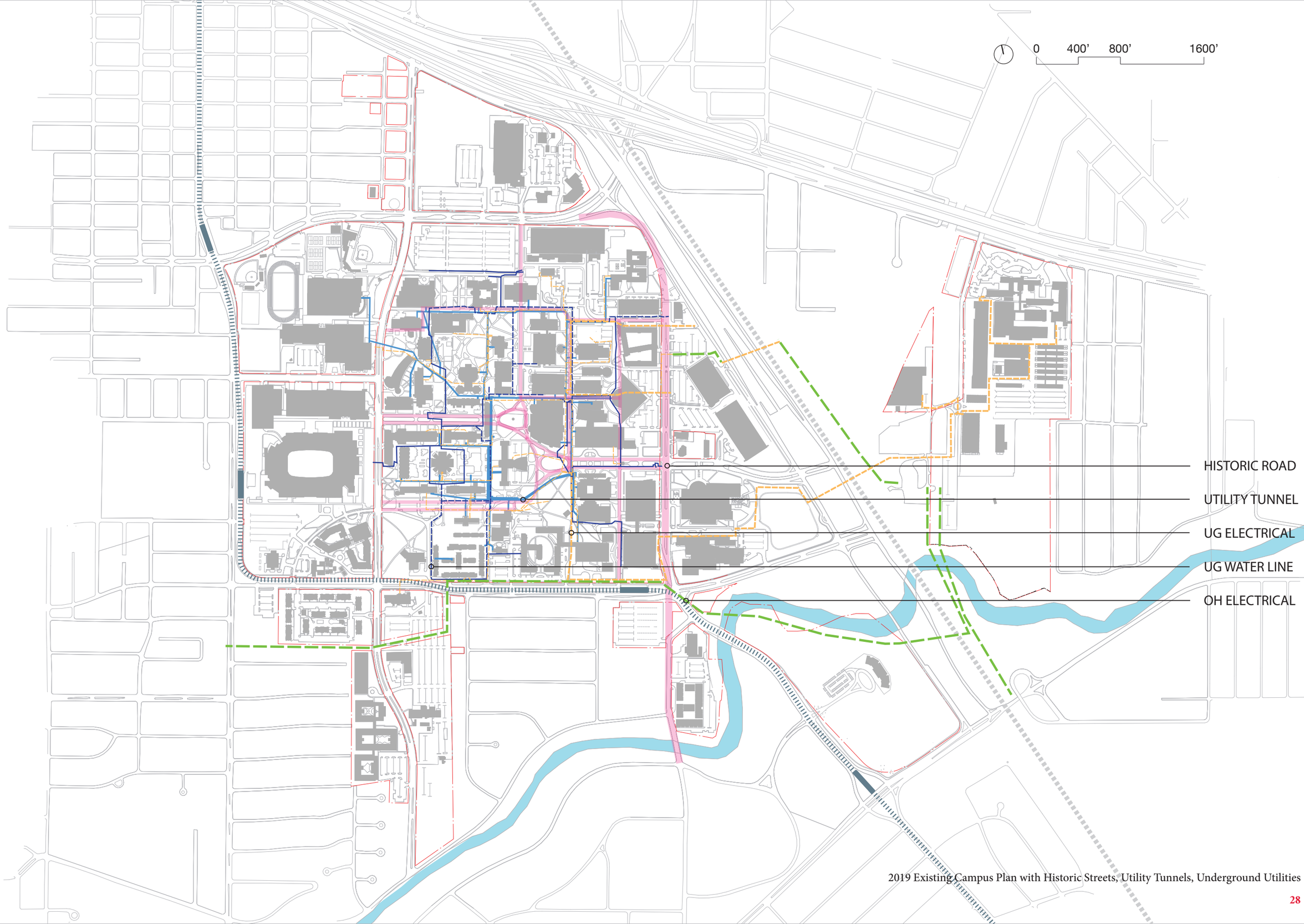
Fire Truck Access Plan, designLAB, 2019

Historic Roads and Utilities

Given the ad hoc and incremental evolution of campus property expansion and campus building in reponse to its rapid growth from 1946 to 2006, a pattern of "blocks" and streets did not precede this development. However, via an examination of past plans and aerial photographs, the location of prior roads and drives reveals the logic of building locations and unbuilt "corridors." The locations of underground utility tunnels, underground electrical duct banks, water lines, and storm and sanitary sewers further reinforce these "corridors" and provides a logical basis for the pathway plan that is the backbone of the *Centennial Plan*.

By addressing the incomplete fire truck access routes which require not only weight-bearing pavement but also a 20' wide by 13.5' tall barrier-free access corridor, the potential locations for future 20' wide signature pedestrian pathways emerge.

Among the greatest challenges is the integration of outlying parcels into the character of the central campus and the connecting of views, paths, and access essential in contributing to this integration.



2019 Existing Campus Plan with Historic Streets, Utility Tunnels, Underground Utilities