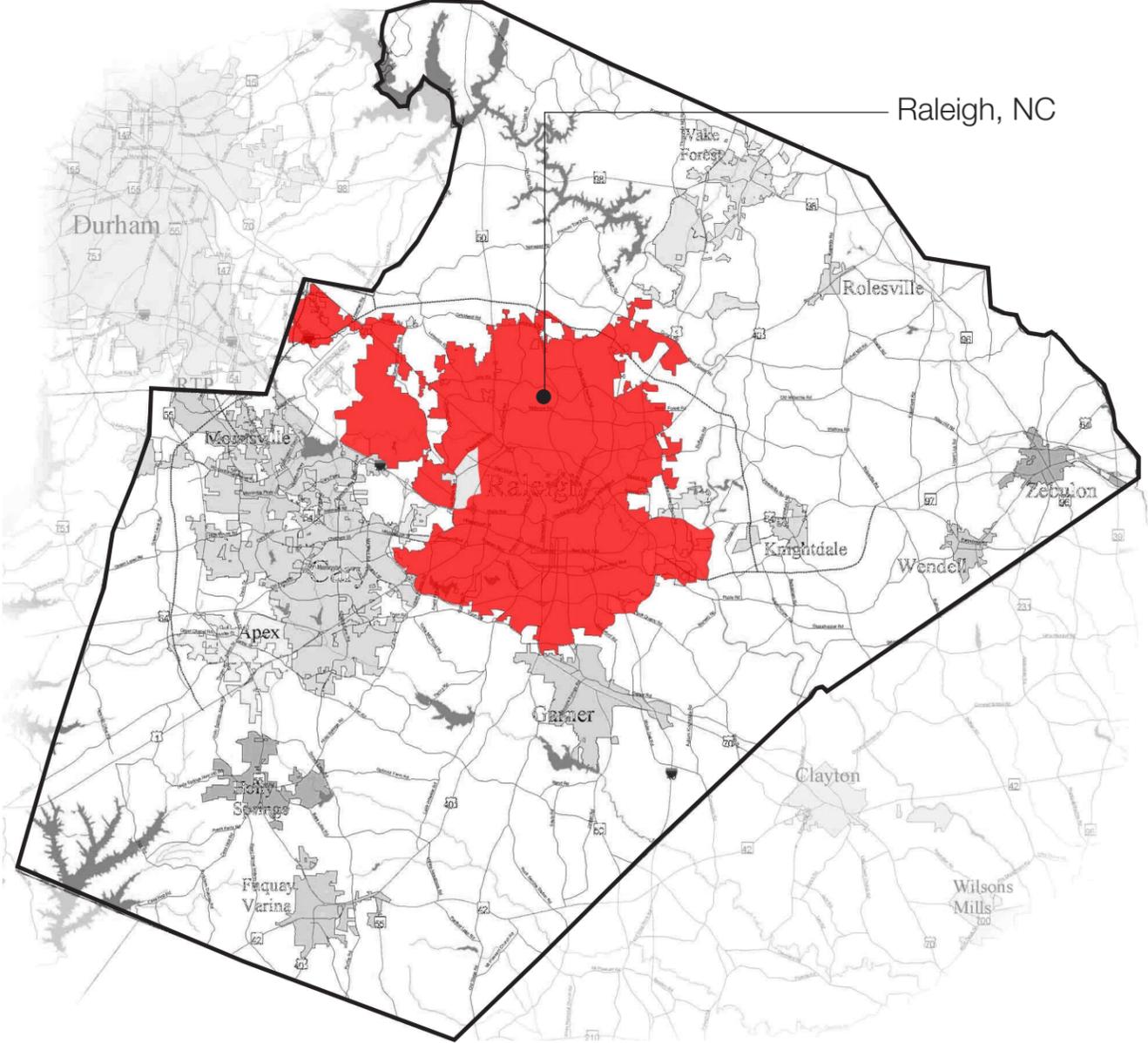
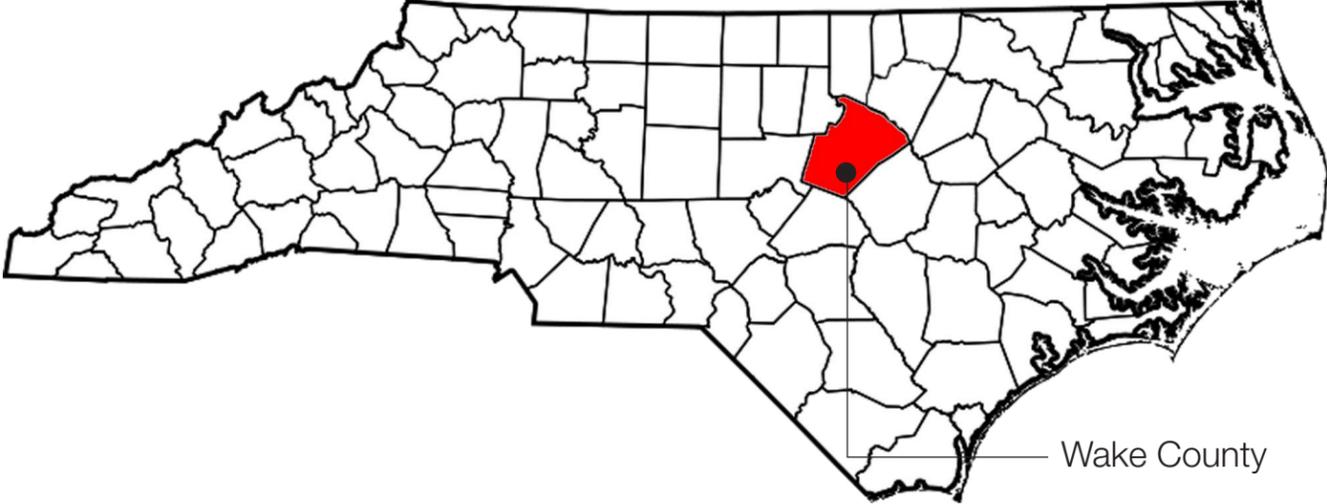




NC State Rapid Transit Center

Phillip Scott ——— 2012 Master's Project

North Carolina State University



Context - History

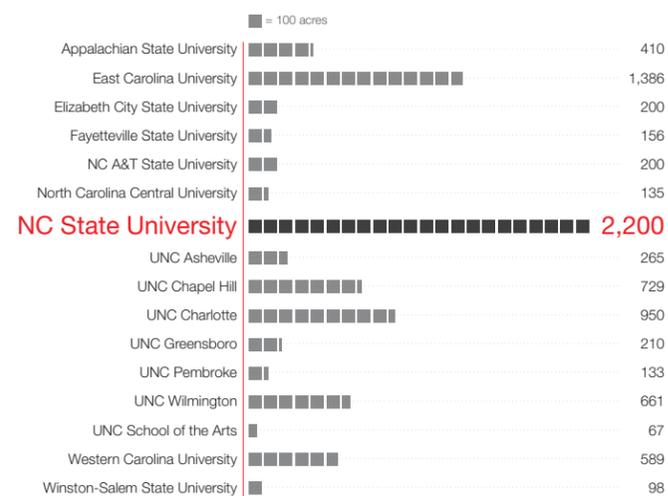


- 1850 Southern Railroad lays first tracks through the farmland destined to become NC State
- 1887 Founded as North Carolina College of Agriculture and Mechanic Arts - 72 students, 6 faculty
- 1901 First female student enrolls
- 1931 The College is consolidated into The University of North Carolina
- 1946 School of Architecture and Landscape Design is established
- 1949 For the first time there are 1,000 or more graduates in one school year
- 1956 First African-American students enroll
- 1965 Name changed to North Carolina State University at Raleigh
- 1966 Single year enrollment reaches 20,000 students
Carter-Finley football stadium opens on the new Stadium Campus
- 1969 26 NCSU graduates play a key role at NASA landing the first men on the moon
- 1974 Men's basketball team wins its first NCAA Championship
- 1980 Wolfline bus transit service begins
- 1981 College of Veterinary Medicine established
- 1983 Men's basketball team wins its second NCAA Championship
- 1984 University receives 780 acres of land from the State of North Carolina for "Centennial Campus"
- 1989 Wolfline expands to three daytime routes and one evening route
- 1999 The new NCSU Basketball arena opens on Stadium Campus
- 2010 City of Raleigh announces plans to construct a new multimodal Union Station

North Carolina State University is one of the leading land grant institutions and public research universities in the country. However, its rapidly growing **SIZE** and required *travel* distance in-between campuses necessitate drastically improved transit connections. Current plans are in place for the construction of a rapid transit corridor through campus along with commuter and light rail transit. The Master's Project will focus on the main multimodal center for this transportation network, the **North Carolina State University Rapid Transit Center...**

NC State has the **largest** campus in the state of North Carolina

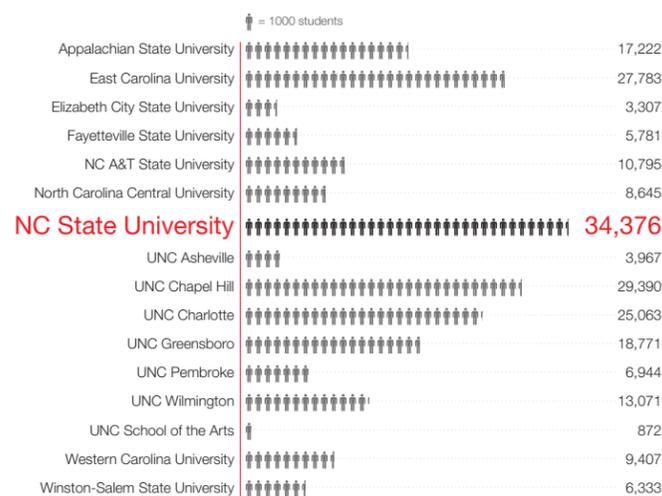
2,200 acres



Source: The University Of North Carolina 2010

NC State has the **largest** enrollment in the state of North Carolina

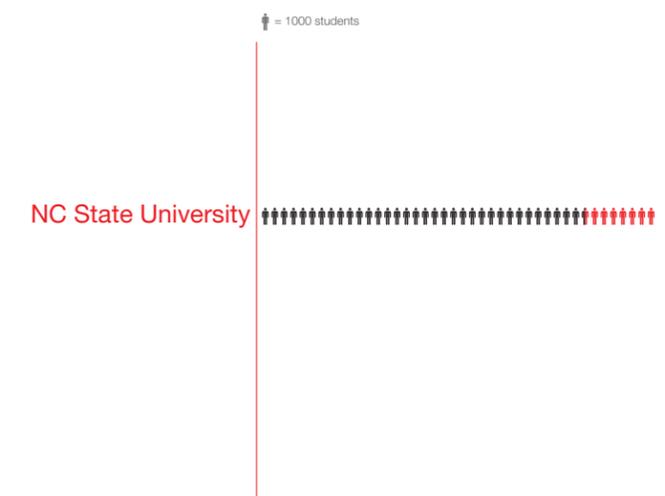
34,376 students



Source: The University Of North Carolina 2010

By **2020** NC State will have an enrollment of more than

42,000 students



Source: NC State University Planning & Analysis

Rapid Growth

NC State is located within the City of Raleigh, one of the fastest growing cities in the U.S., with a current population of

403,892 persons

Expected to grow by more than **30%** by **2020** to

528,337 persons

👤 = 10,000 persons



Source: April 2010 Census

NC State assigns **17,200** parking permits each year. Roughly 10,000 for students, 6,300 for employees, and 900 for service and departmental vehicles. In total, NC State has over

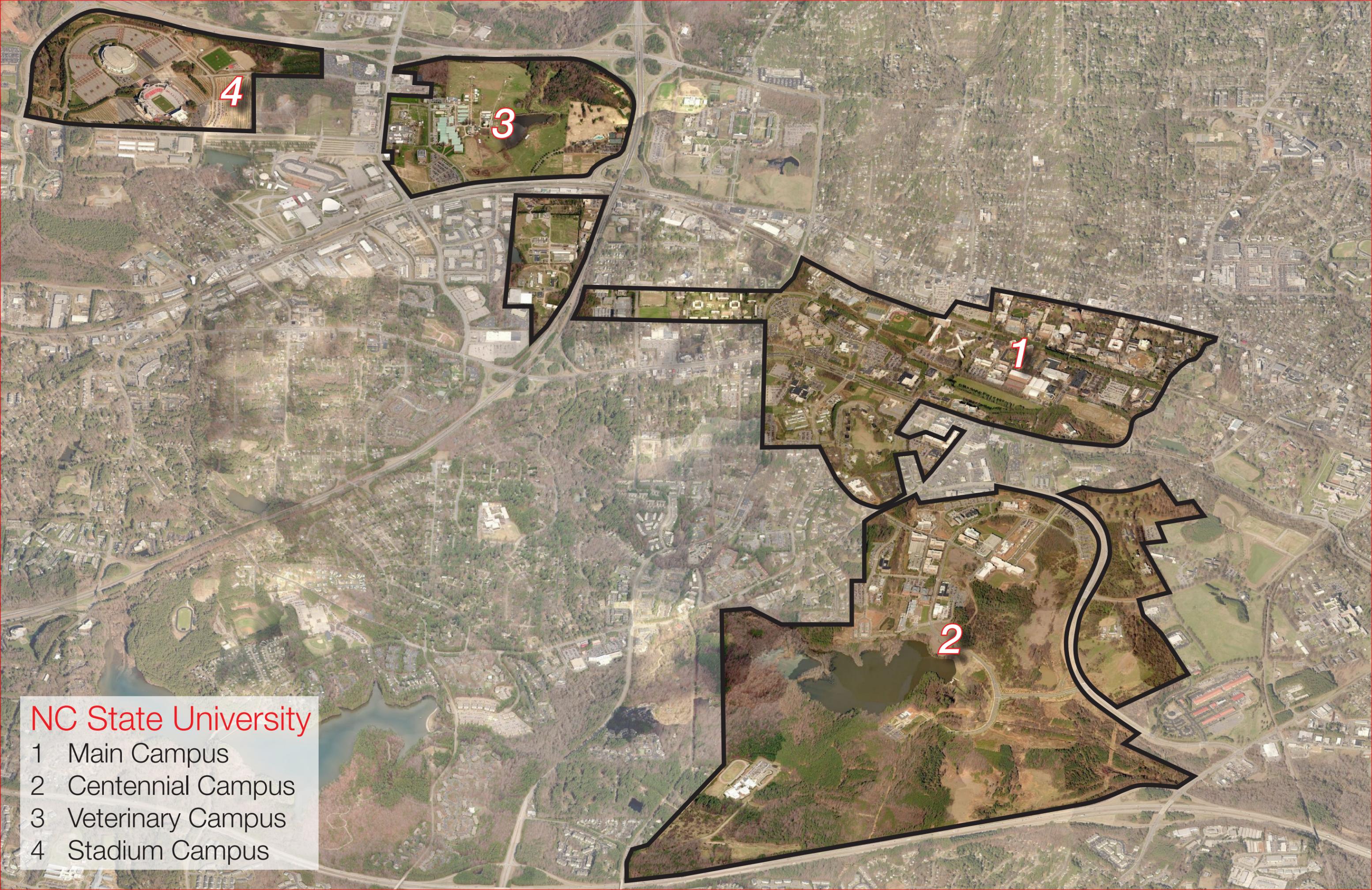
19,400 parking spaces

=

155 acres



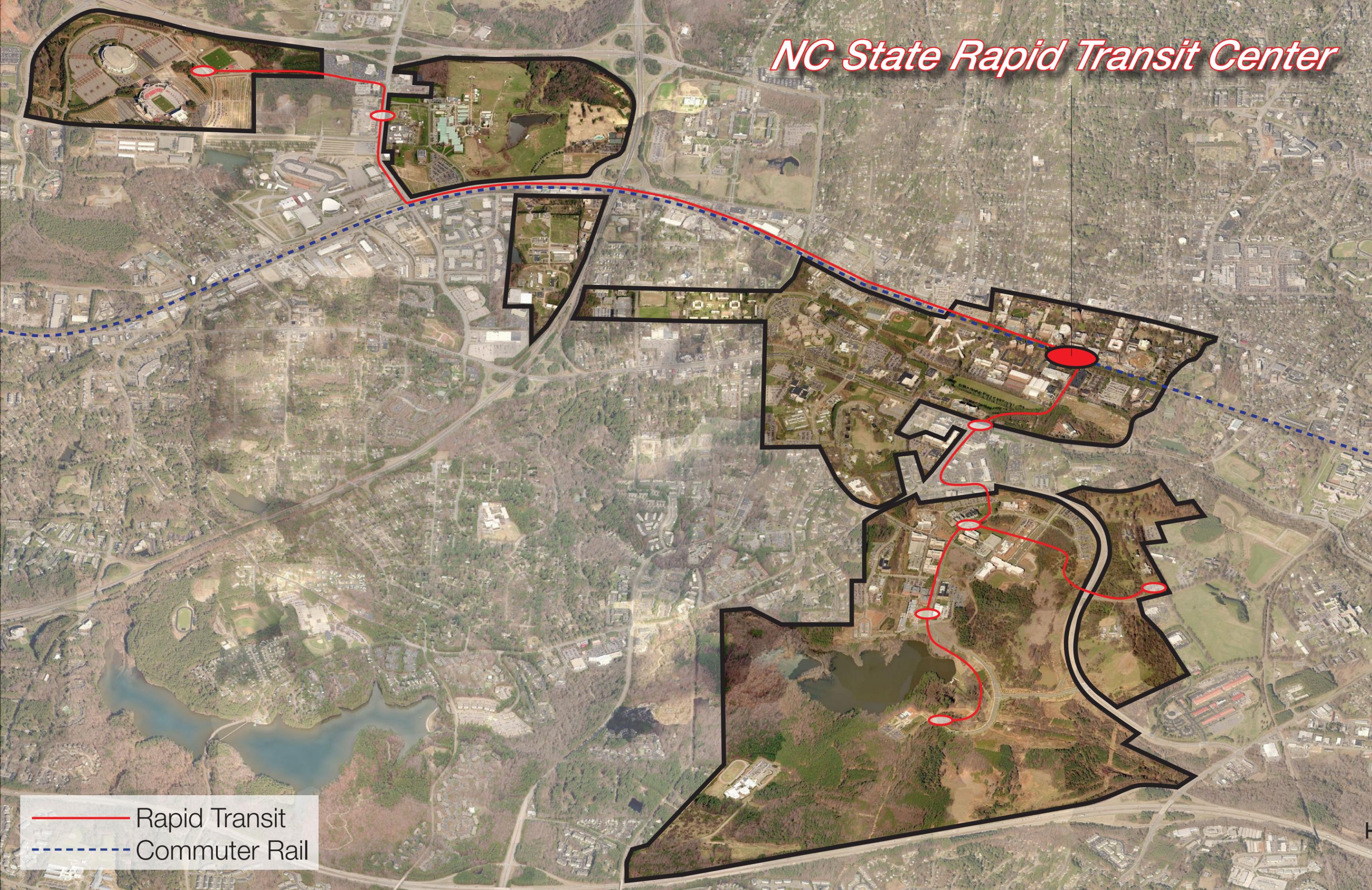
Source: NC State Transportation



NC State University

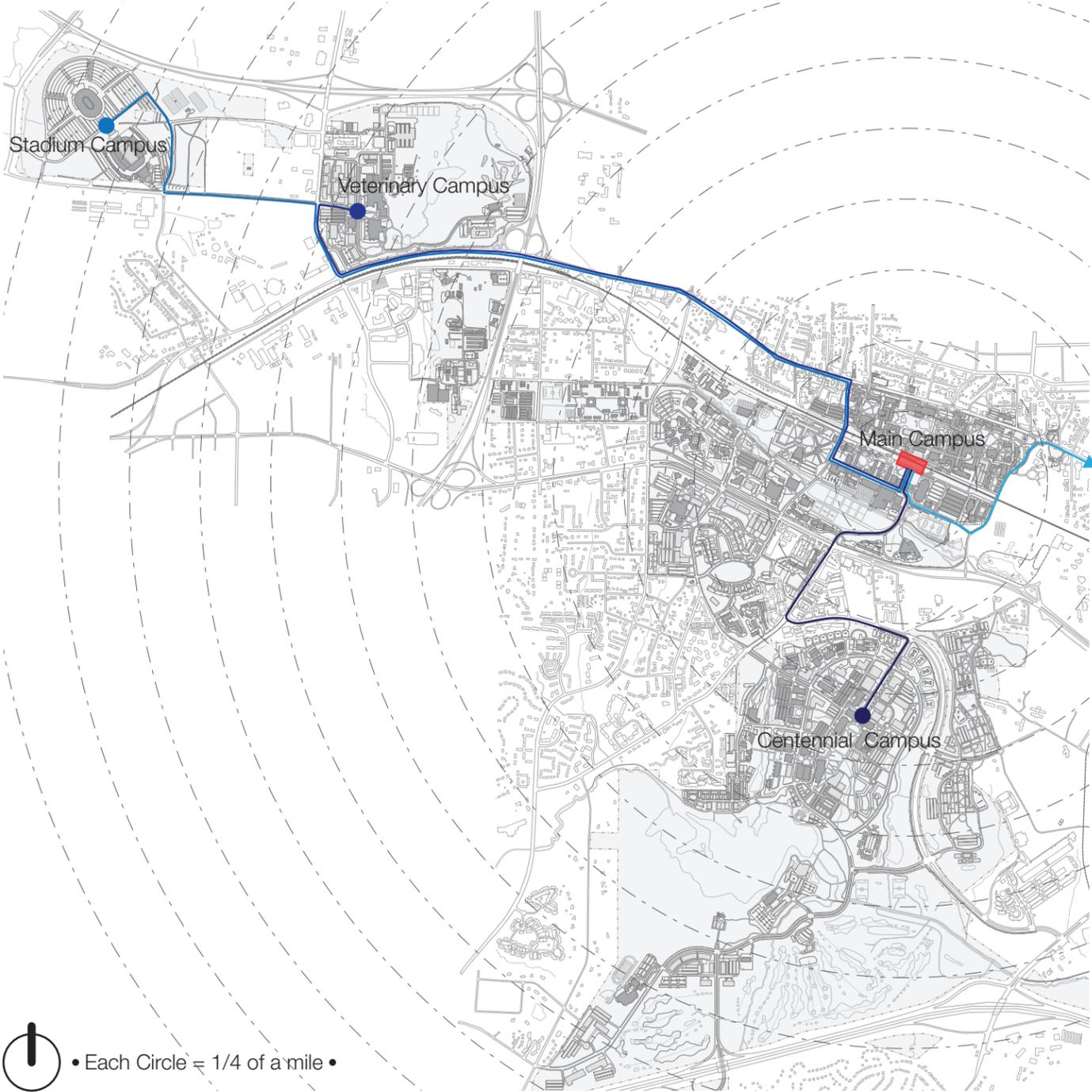
- 1 Main Campus
- 2 Centennial Campus
- 3 Veterinary Campus
- 4 Stadium Campus

NC State Rapid Transit Center



— Rapid Transit
- - - Commuter Rail

Campus Travel Distance



	Distance				
Centennial Campus	1.2 miles	7 min	14 min	10 min	25 min
Veterinary Campus	2.6 miles	9 min	28 min	20 min	54 min
Stadium Campus	3.7 miles	12 min	36 min	26 min	75 min
Downtown Raleigh	2.3 miles	8 min	25 min	18 min	50 min

“People experience distance more in hours than in miles... Time accelerates and becomes more valuable the greater distance one can travel in any given period”

-William Cronon-

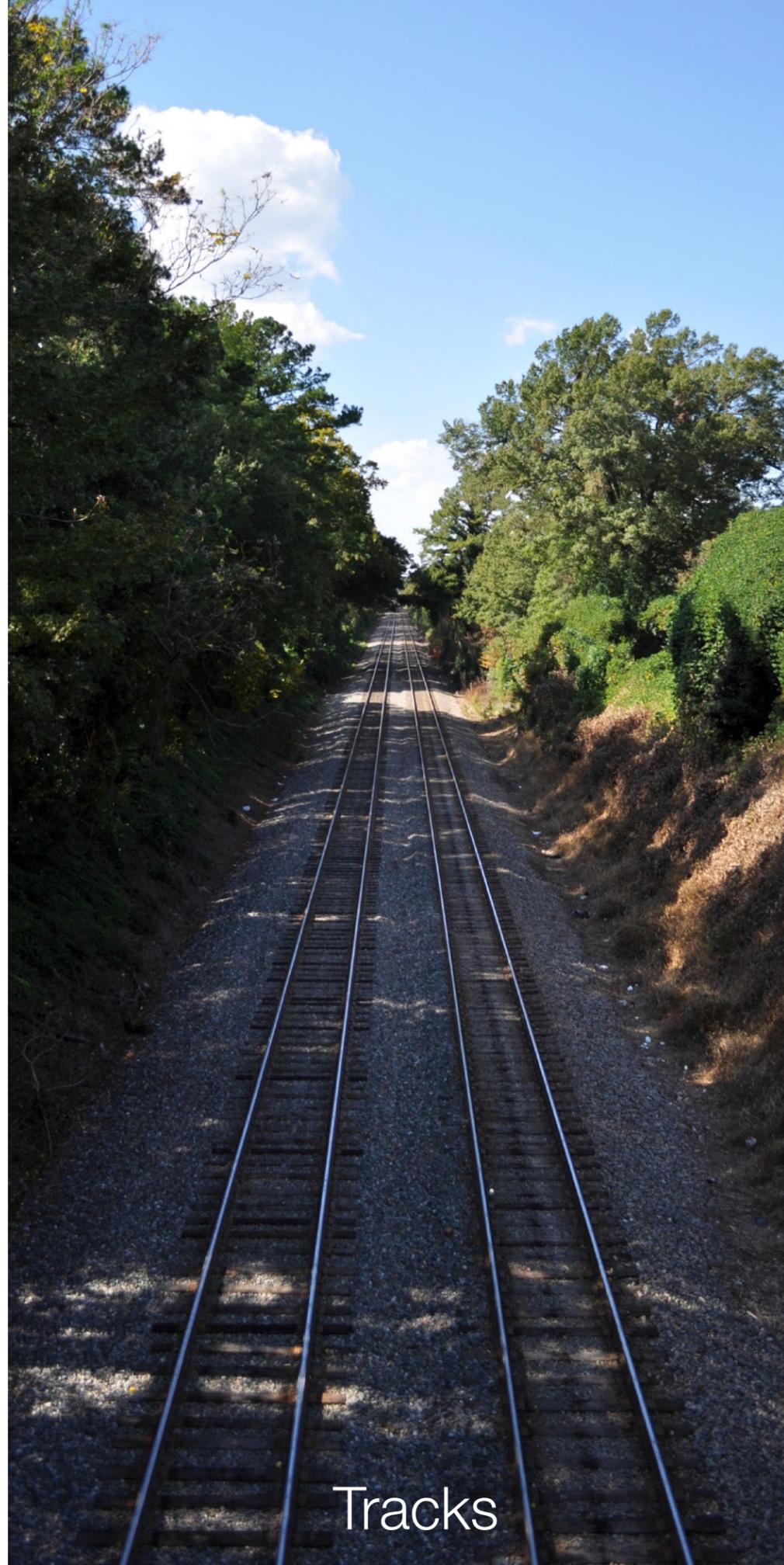
Source: Google Maps, & Rails and Water

Existing Site

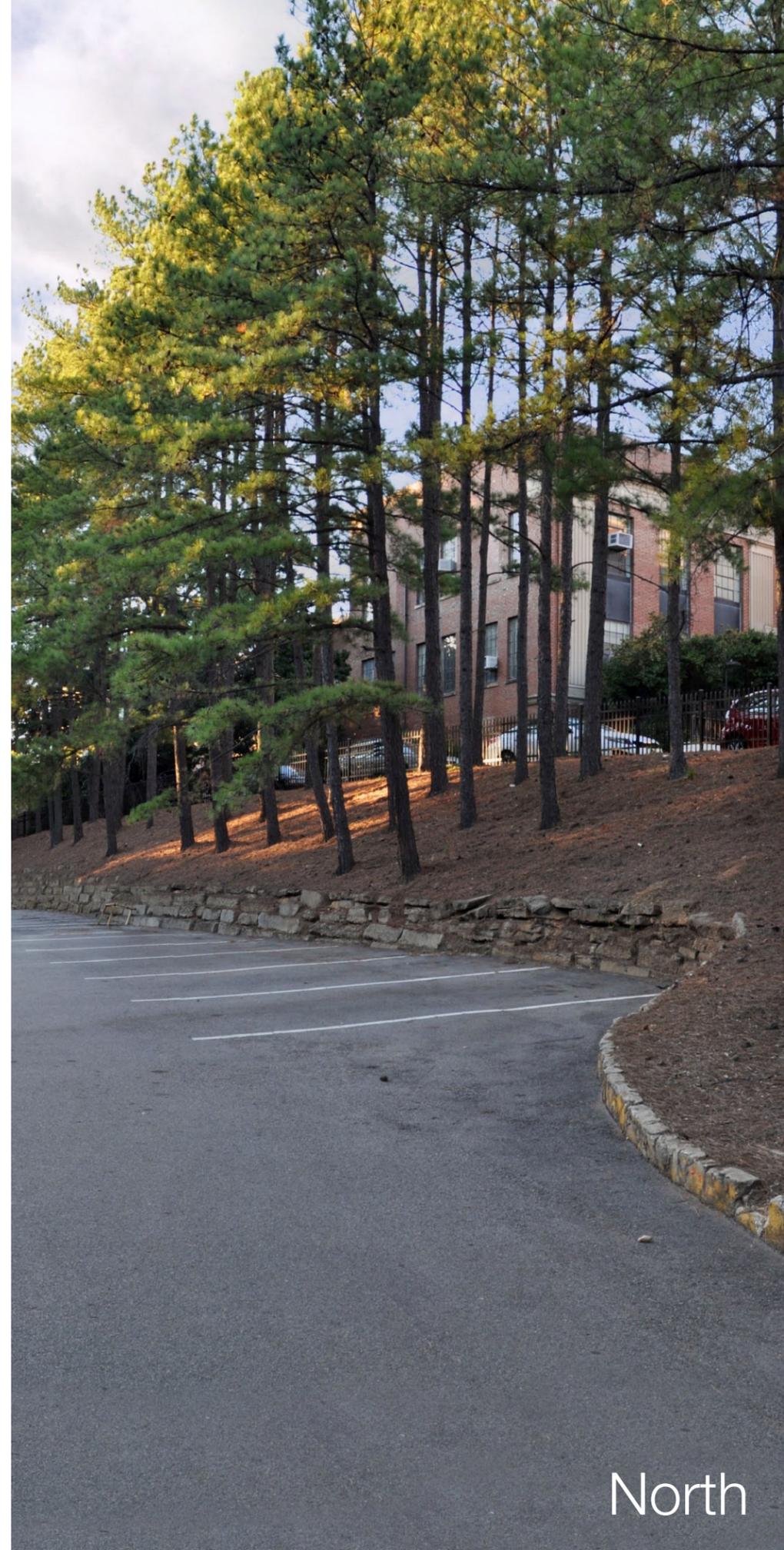




South

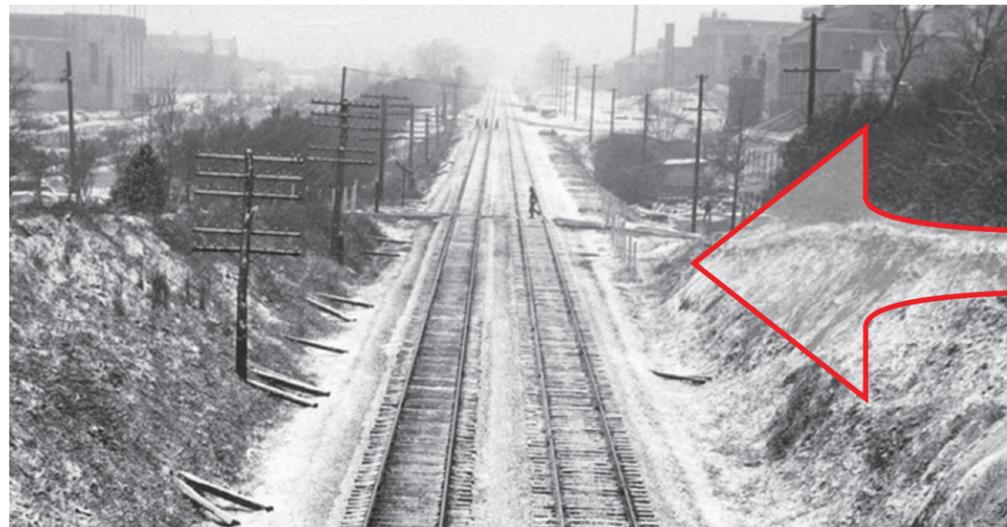


Tracks

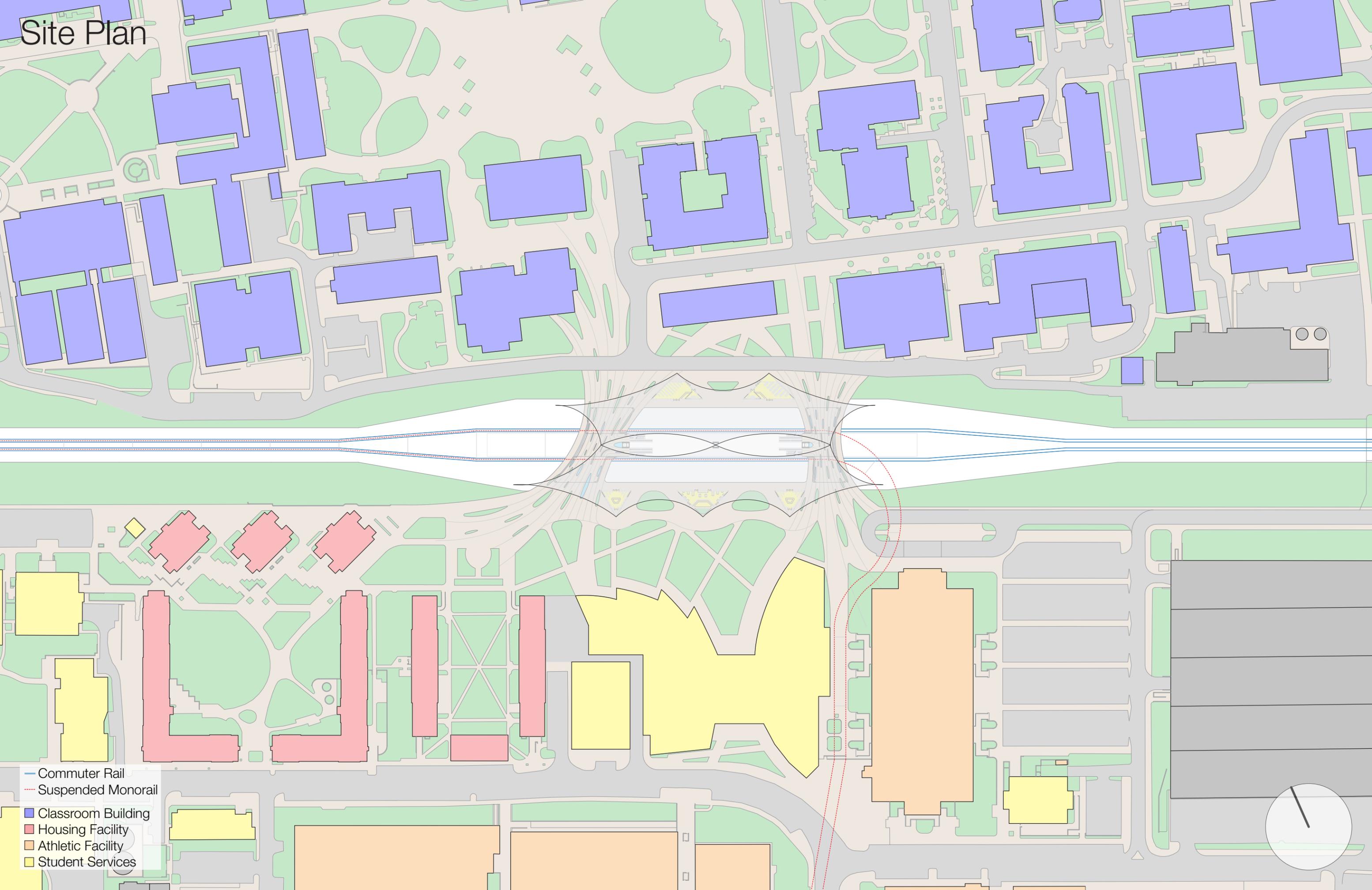


North

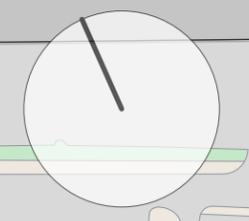
The NC State Rapid Transit Center **bridges** the past to the future by **connecting** historic rail lines that preceded the University with a new suspended monorail. The station **stretches** over the dividing tracks, **linking** the University's sprawling campuses and the surrounding region with commuter rail, monorail, buses, bicycles, and enhanced pedestrian access.



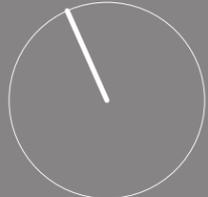
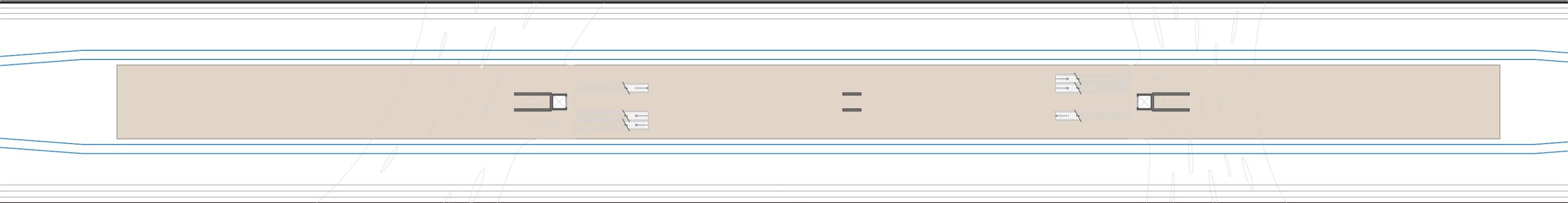
Site Plan



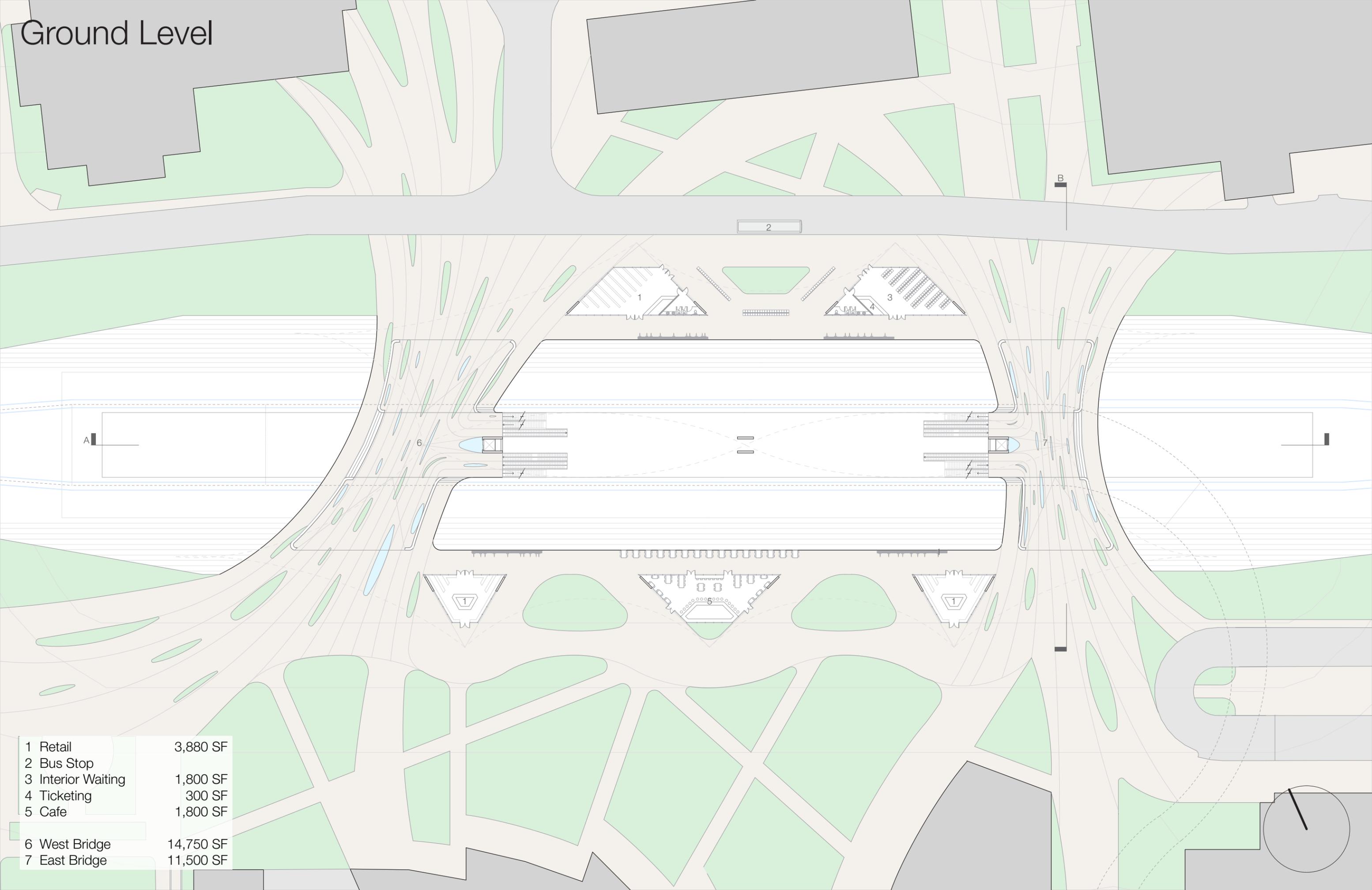
- Commuter Rail
- Suspended Monorail
- Classroom Building
- Housing Facility
- Athletic Facility
- Student Services



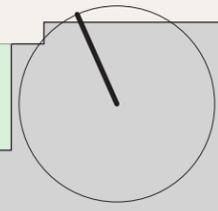
Below Grade



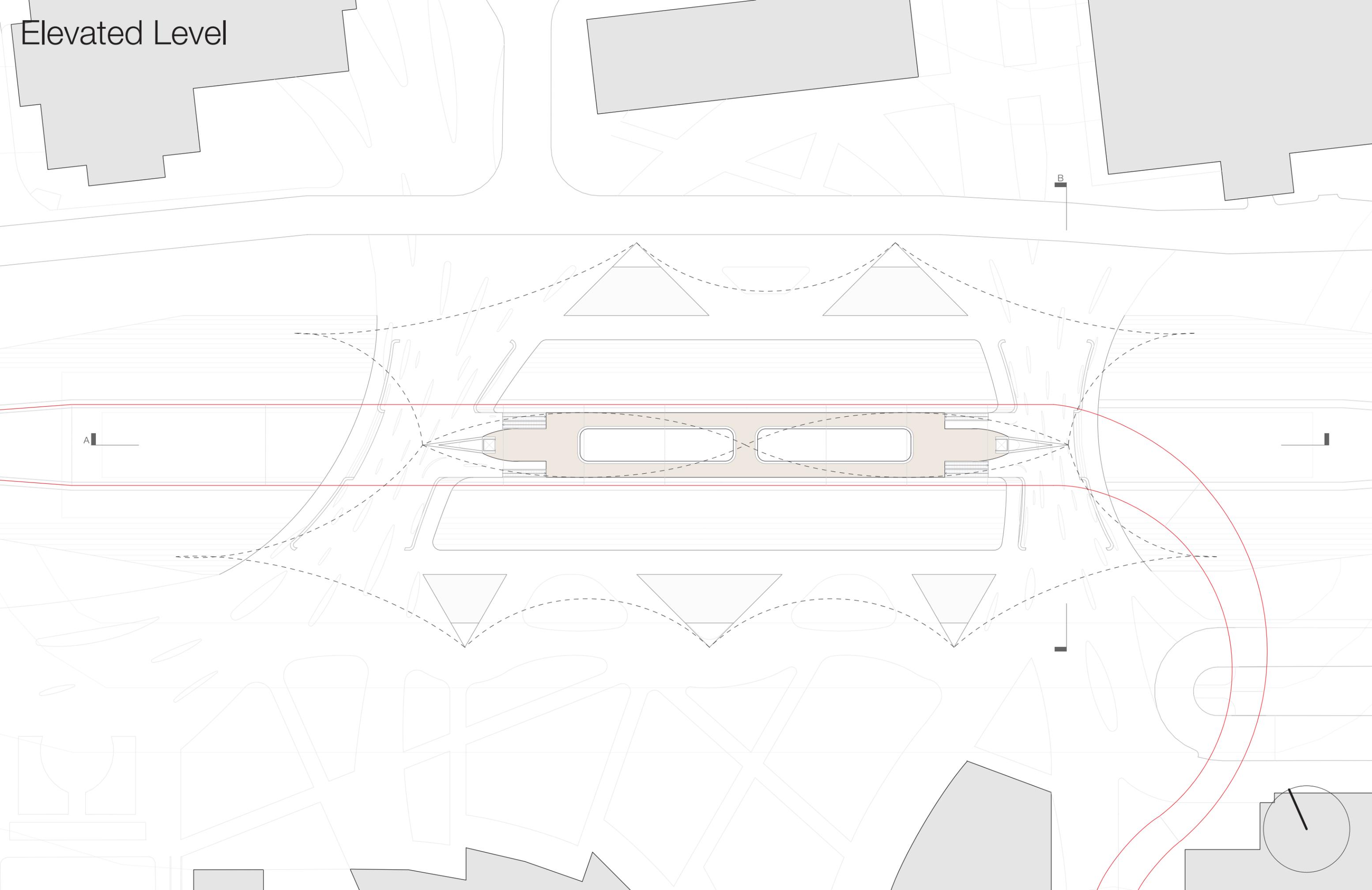
Ground Level

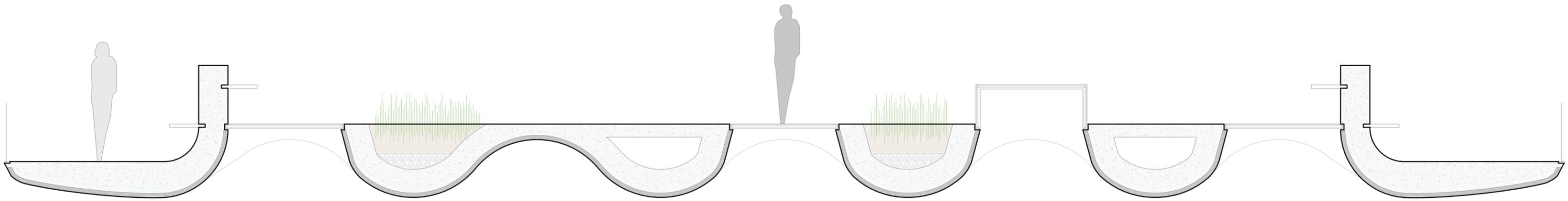


1 Retail	3,880 SF
2 Bus Stop	
3 Interior Waiting	1,800 SF
4 Ticketing	300 SF
5 Cafe	1,800 SF
6 West Bridge	14,750 SF
7 East Bridge	11,500 SF

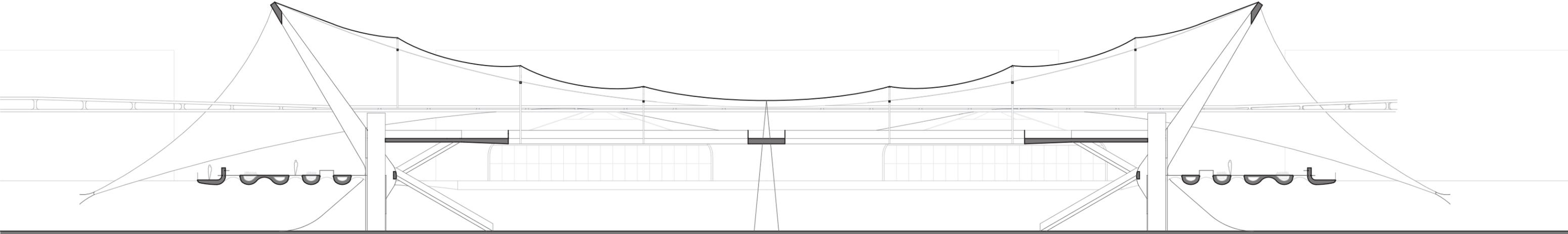


Elevated Level



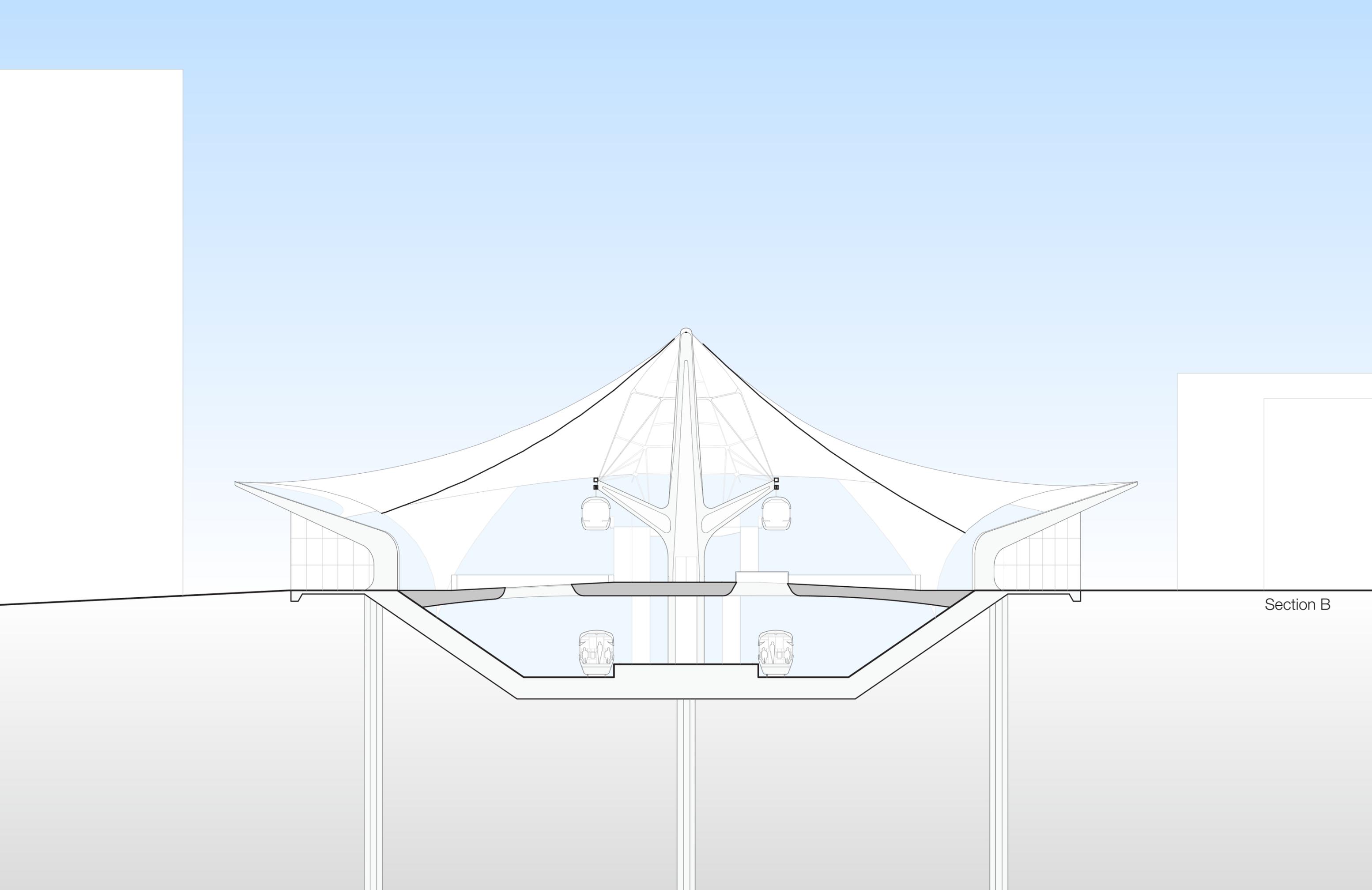


Bridge Detail



Section A





Section B

Span Virtual Depth

