

Transportation, Parking & Roads

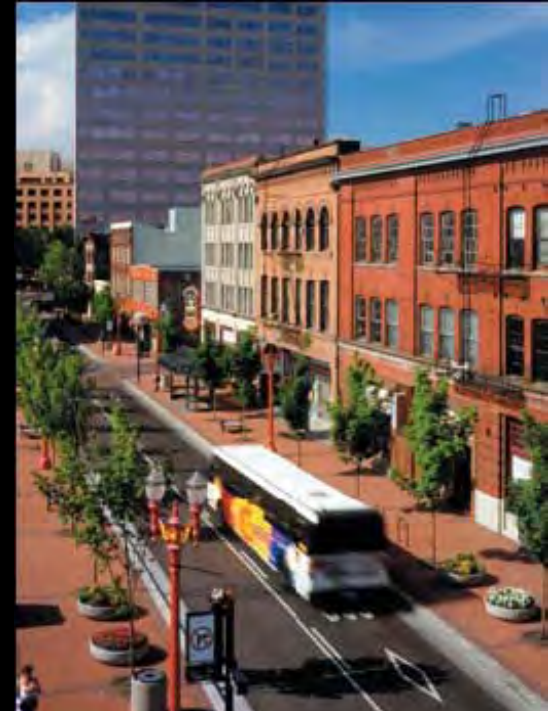


CAROLINA NORTH

The UNIVERSITY of NORTH CAROLINA *at* CHAPEL HILL

Possible Goals – Internal Travel (1)

- Design site to encourage non-carbon based transportation (walking, biking, etc.) as the primary means of travel within Carolina North
- Design site to maximize opportunities to travel by transit from outset
- Design site for efficient transit movement as a priority element
- Focus most intensive development around transit nodes



WHAT IS TRANSIT-ORIENTED DEVELOPMENT



PRINCIPLE 1
Compact and Efficient Land Use



PRINCIPLE 2
Diversity and Mix of Uses



PRINCIPLE 3
Pedestrian-Friendly Physical Design

Characteristics of Successful TOD's



Compact Land Use

- Makes walking and biking convenient options
- Allows land uses to support one another
- Enhances pedestrian environment and transit ridership
- Consolidates trips



Varied and Complementary Land Uses

- Makes the transit trip more convenient
- Supports market and financial feasibility
- When civic components are included, builds a community focal point
- Balances ridership



Mixed-Use Development

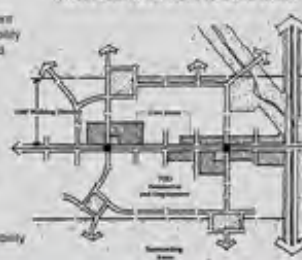
- Supports increased densities
- Provides a transition to adjacent neighborhoods
- Encourages walking and bicycling
- Integrates mutually compatible land uses
- Extends the hours of activity
- Enhances market and financial feasibility



Access by All Modes of Transportation

- Promotes transit ridership
- Connects the Transit Core to surrounding areas
- Increases transportation efficiency
- Links uses and activities

SAMPLE TOD ALONG BUS LINE



A Pleasant Pedestrian Environment

- Makes increased density more acceptable
- Encourages street activity and walking
- Enhances flow toward transit
- Provides a safe and secure walking experience



A Safe and Attractive Bicycling Environment

- Promotes an alternative to driving
- Helps achieve concentrated development
- Provides a low-cost, non-polluting alternative to the automobile



On-Street Parking

- Increases the safety of pedestrians by establishing a buffer between cars and pedestrians
- Provides convenient parking
- Reduces parking lot requirements



Structured Parking

- Decreases the amount of land required for parking
- Makes parking more convenient
- Improves the pedestrian environment
- Allows for land redevelopment



Pedestrian Friendly Design



POTENTIAL BENEFITS

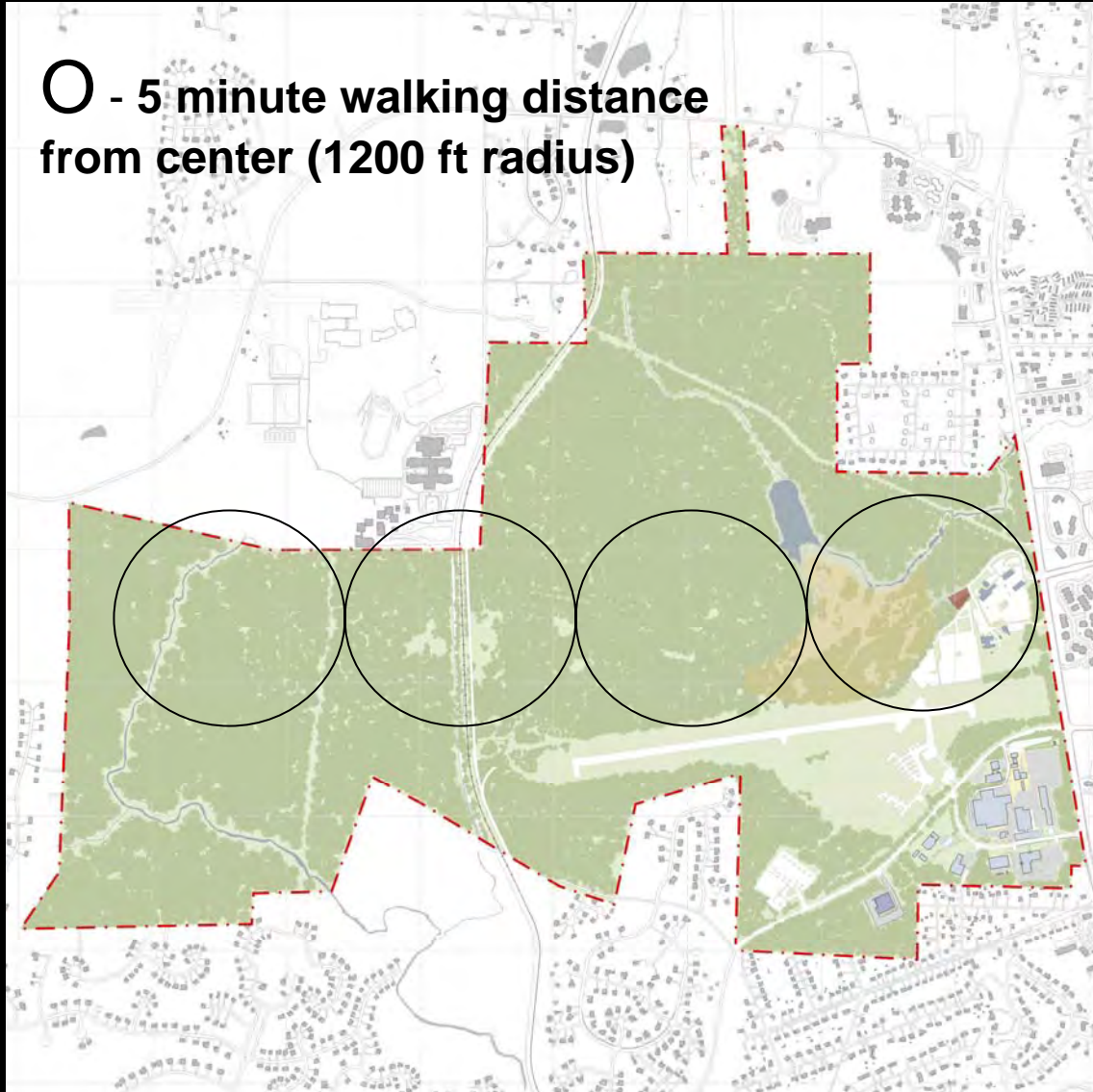
- Increased System Ridership
- Increased Property Values
- Increased Property Tax Revenues
- Alternatives to Auto-Oriented Development
- Support for Urban Revitalization
- Greater Consumer Choice
- Improved Environmental Quality
- Enhanced Retail Opportunities

Mixed Uses



Carolina North Site

**O - 5 minute walking distance
from center (1200 ft radius)**



Development Patterns



Transitways/Hubs

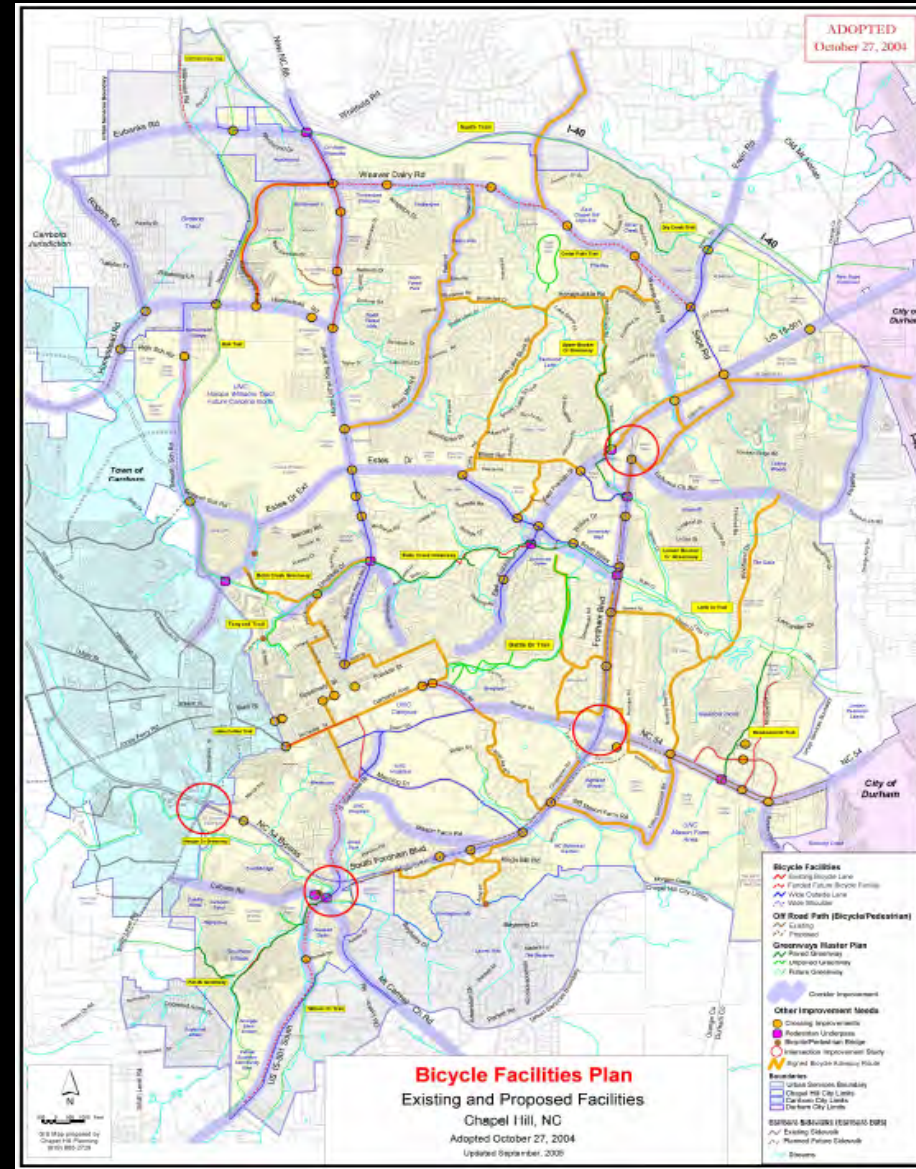


Rail Transit



Possible Goals – Internal Travel (2)

- Integrate site bike and pedestrian facilities with existing and planned facilities around the site
- Minimize conflicts between pedestrian and vehicles
- Create vehicle-free zones



Pedestrian Conflicts



Possible Goals – Internal Travel (3)

- Minimize amount of impervious surface
- *Provide minimum amount of needed parking*
- *Maximize opportunities for shared use of parking*



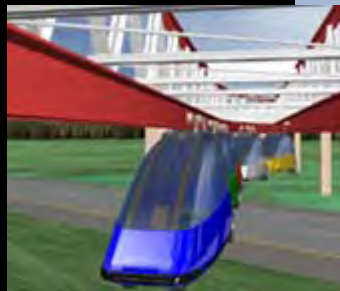
Possible Goals – Internal Travel (4)

- Design site and individual phases to minimize impacts of construction, delivery, and service traffic
- Design site and transportation system with the flexibility to adapt to a variety of future transportation scenarios



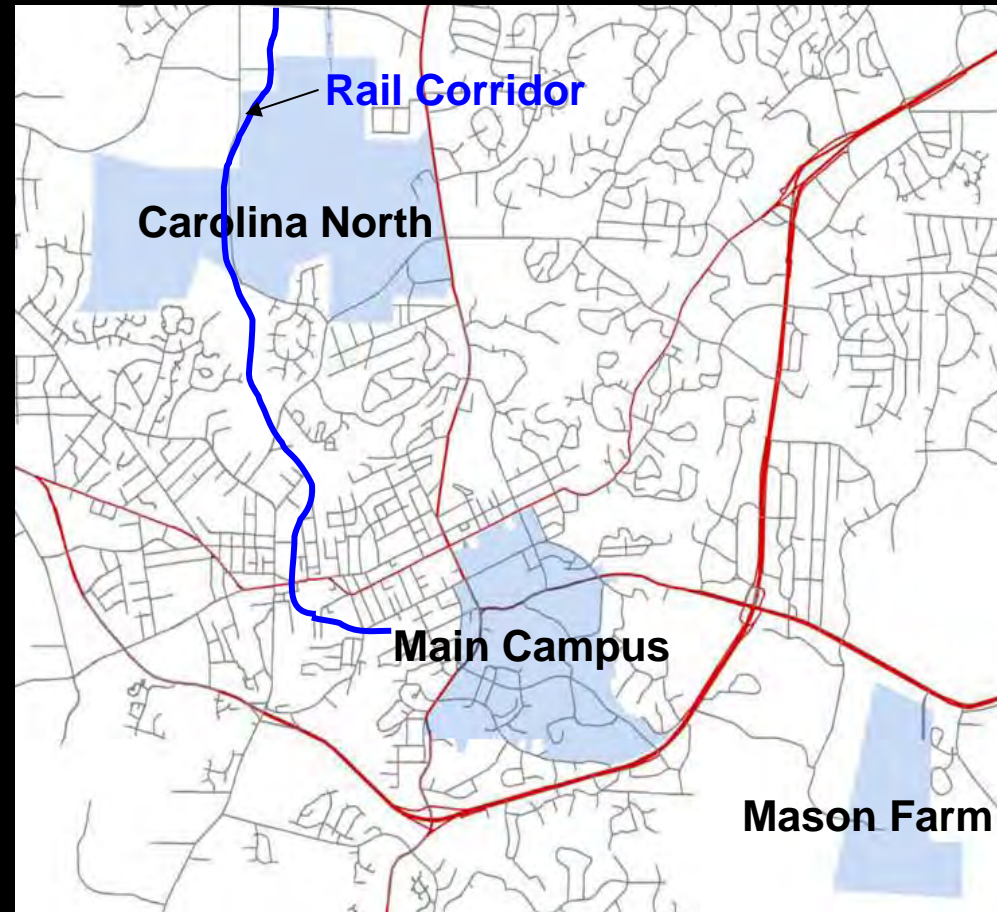
Flexibility

How to do the Long March in half the time



Possible Goals – External Travel (1)

- Maximize use of non-carbon based transportation modes
- Identify and preserve corridors for future transportation needs
- Provide strong connections to Main Campus
- Use rail corridor for high speed transit to extent feasible
- Plan transportation system to increasingly rely on non-SOV travel over time
- Include land uses that minimize need to leave site for services

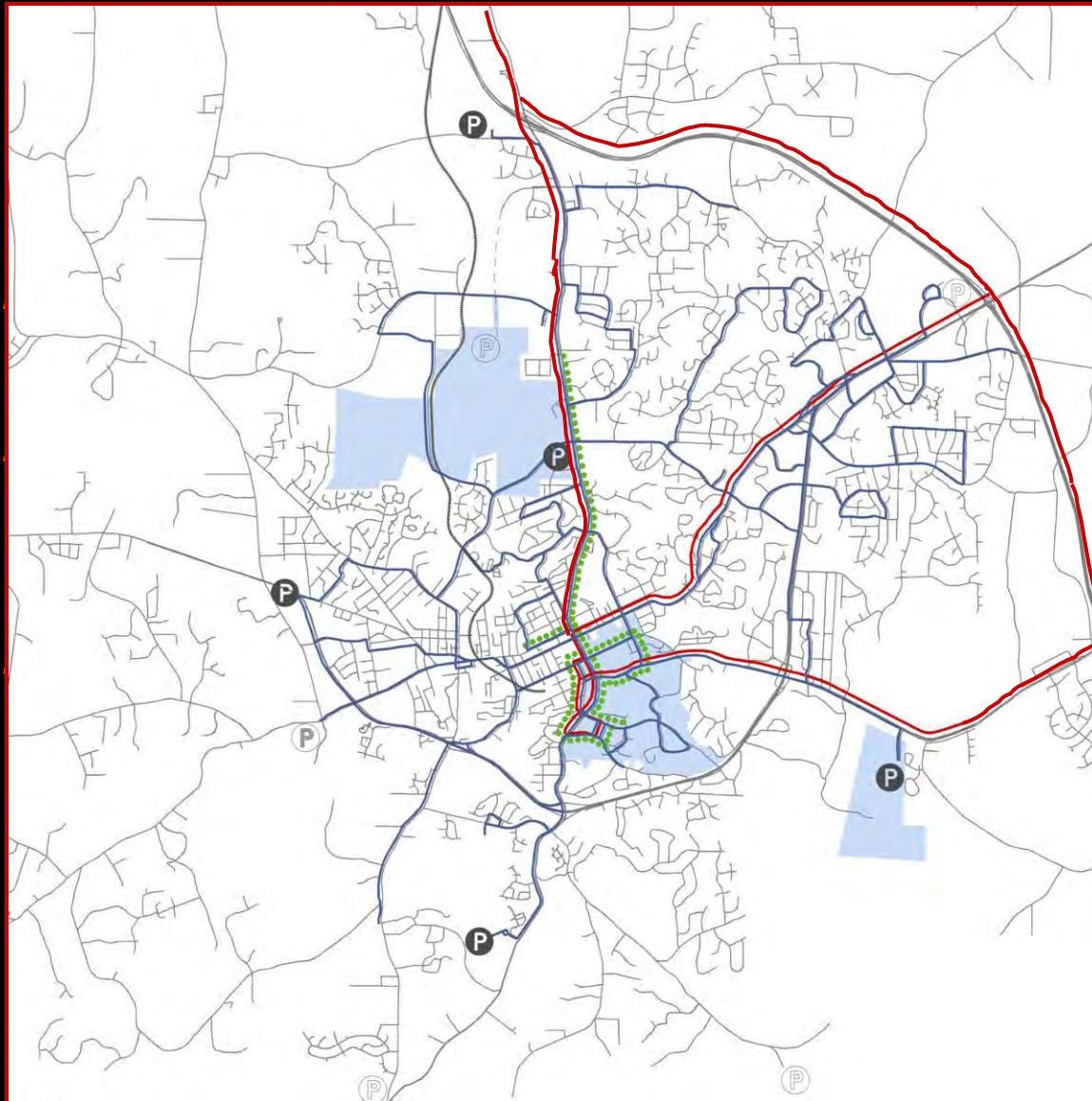


Existing Transit System

CAROLINA
NORTH

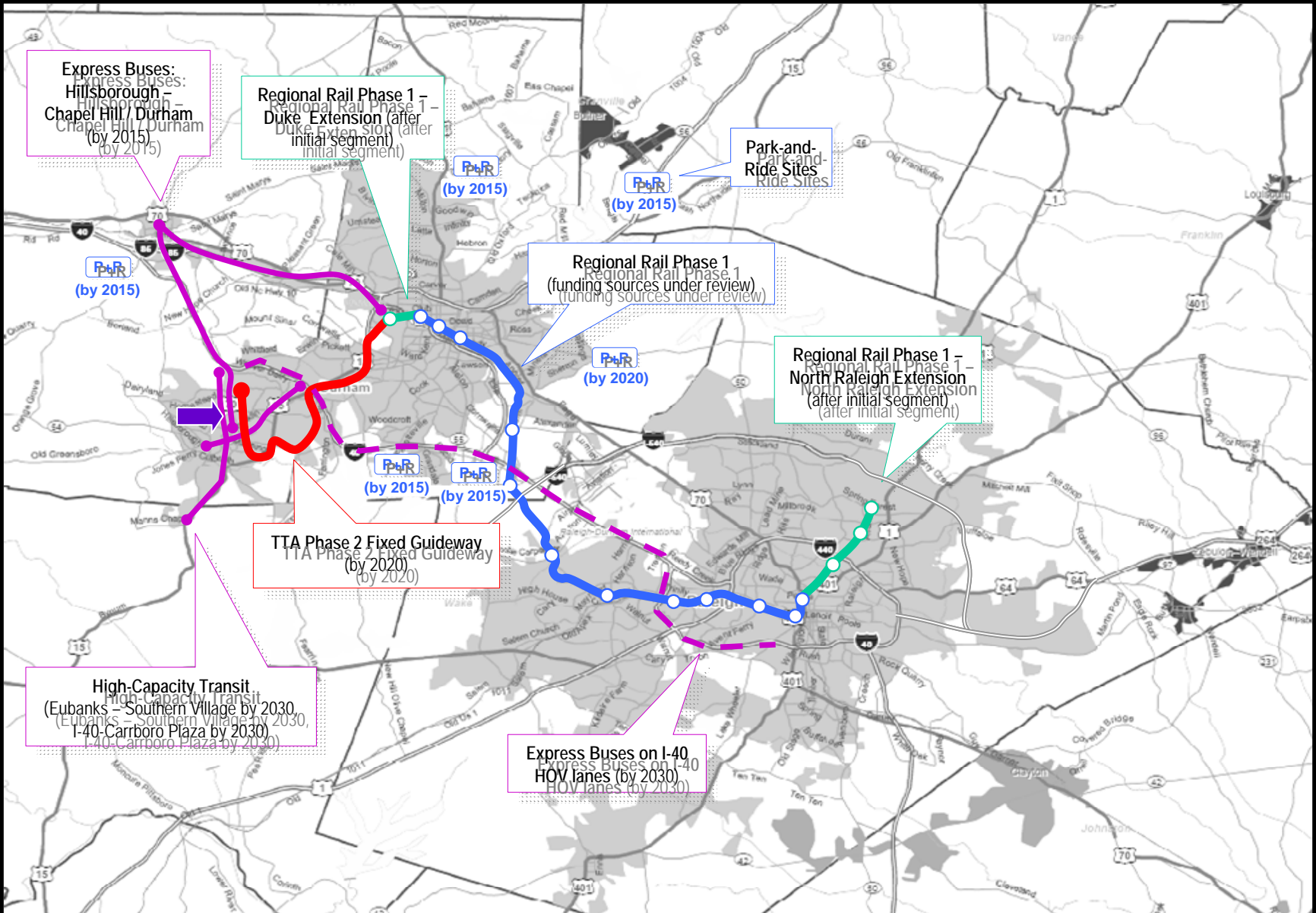
FRANKLIN &
COLUMBIA

UNC
MAIN CAMPUS



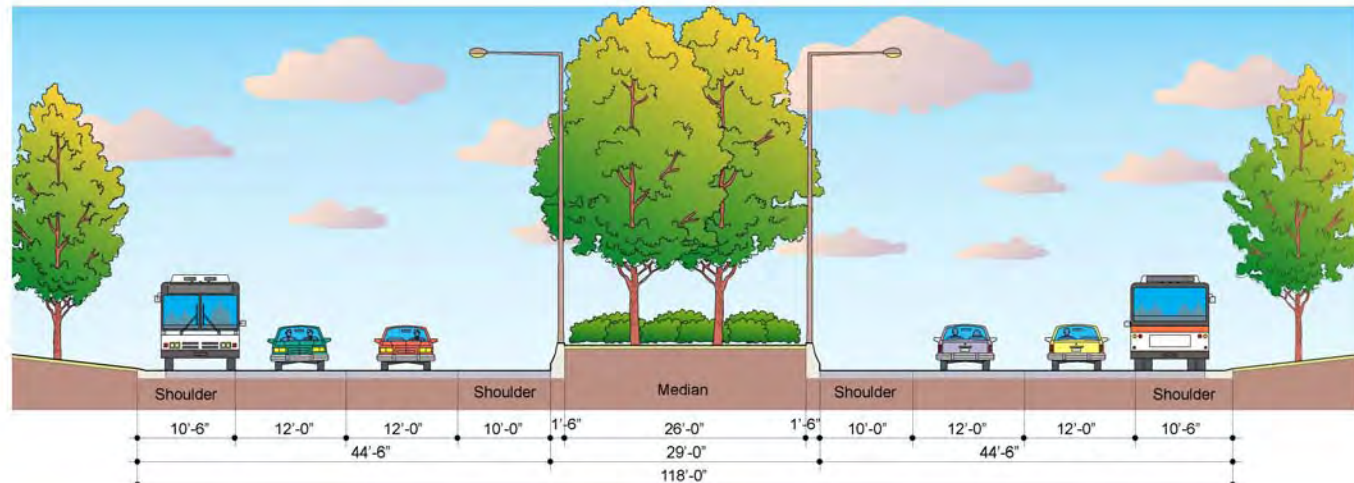
- CHT
BUS ROUTES
- TTA REGIONAL
BUS ROUTES
- PTP
FIXED ROUTES

DCHC Long-Range Transit Plan



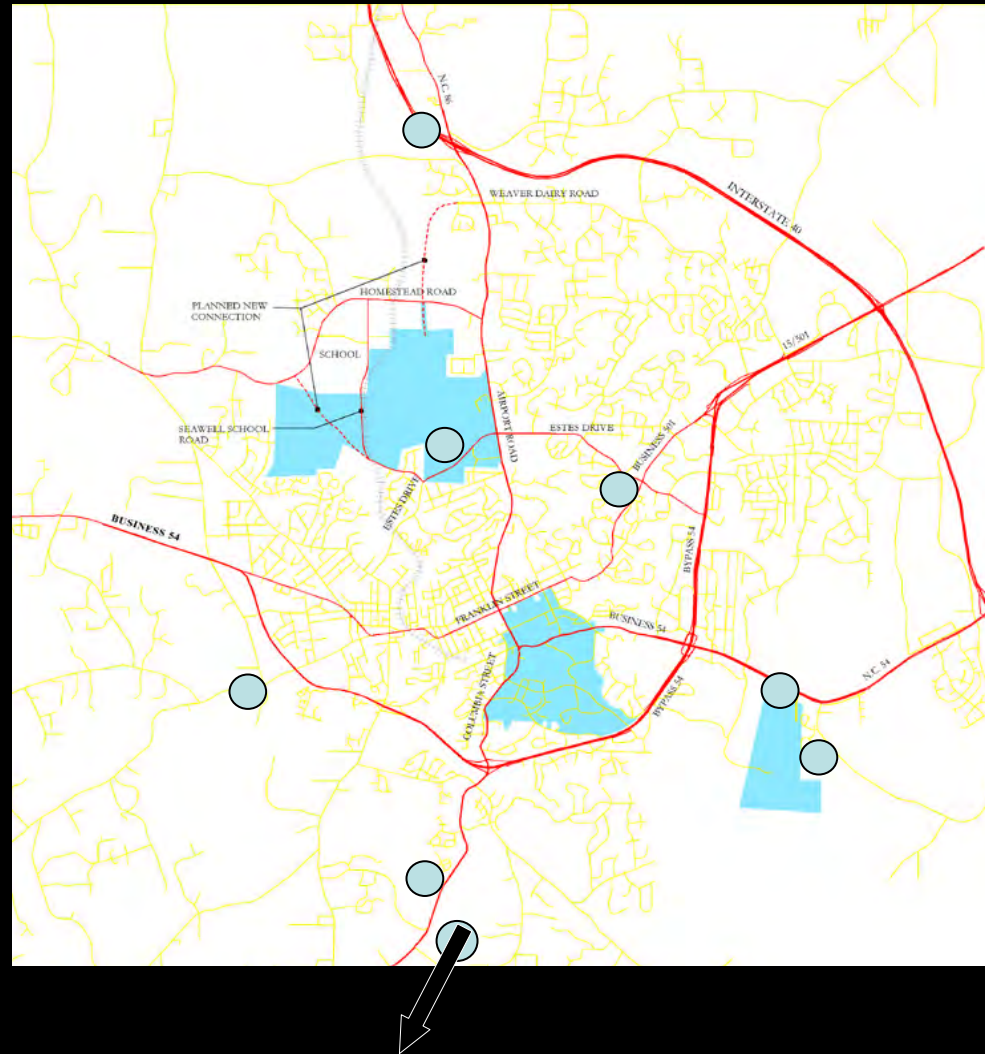
Based on DCHC MPO and CAMPO 2005 Long Range Transportation Plans. Alignments shown are indicative. Programmed completion dates shown in parentheses.

Bus Transit



Possible Goals – External Travel (2)

- Maximize use of satellite parking for those who choose to drive
- Apply travel demand management experience from Main Campus to minimize single-occupant vehicle use



Remote Parking

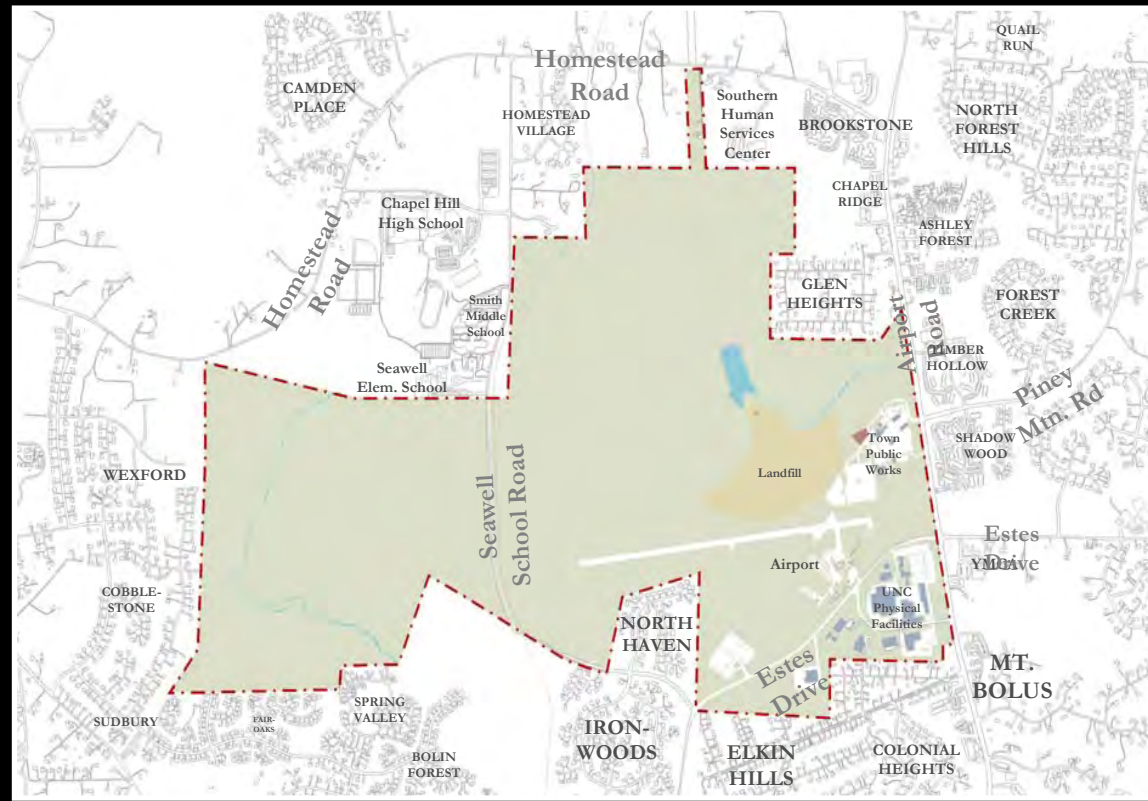


Main Campus TDM Strategies

- Fare free transit for CHT
- Free TTA passes
- Free park-and-ride, with express bus service to main lots
- Measures to encourage ridesharing (car/vanpooling):
 - vanpool subsidy (doubled this year)
 - preferential parking
 - reserved space and free parking permit for vans
 - carpool matching service www.SharetheRideNC.com
- Emergency rides home or to park-and-ride lots
- Access to 9 occasional parker permits
- Zipcars
- Variable work hours, telecommuting (departmental option)
- Website, press releases
- Commuter Alternatives Program (CAP) registrants eligible for contests and item give-away programs
- TDM and Marketing specialist

Possible Goals – External Travel (3)

- Partner with local, regional and state transportation agencies to obtain and leverage outside funding for transportation improvements
- *Minimize undesirable transportation impacts on surrounding neighborhoods*



Opportunities and Challenges/Barriers

Opportunities:

- Sustainability principles
- Widespread support for multi-modal solutions, and minimizing carbon-based transportation use
- Main campus TDM successes
- High quality, local transit system
- High density, mixed-use
- Many examples, resources, accepted state-of-the-art practices
- “Clean slate”

Challenges/Barriers:

- Site environmental constraints
- Neighborhoods
- Auto-oriented region
- Future of regional transit
- Future transportation costs
- Funding

Potential Conflicts

- Other Goals:
 - Need for transportation corridors through ecologically sensitive areas
 - Stormwater from impervious surfaces (roads, parking)
- Transportation/transportation:
 - Pedestrian conflicts with traffic
 - Bike conflicts with traffic
 - Pedestrian conflicts with bikes
 - Transit operations impeded by traffic

