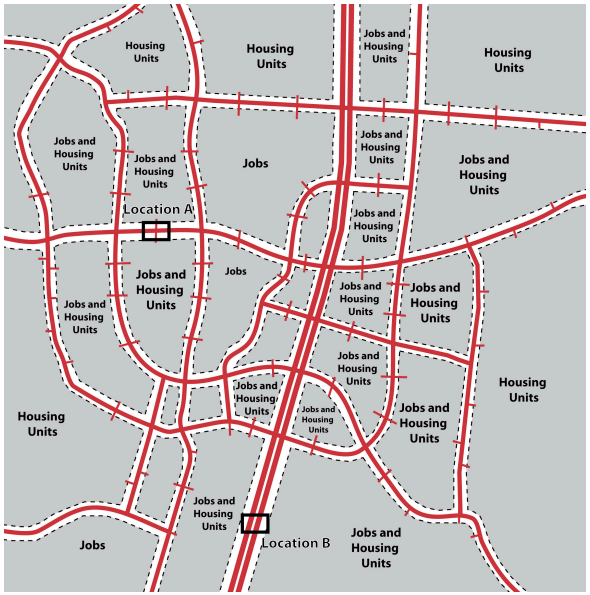
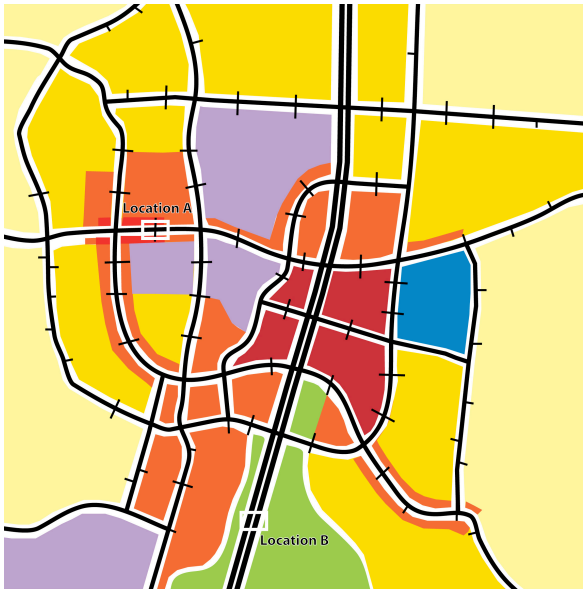
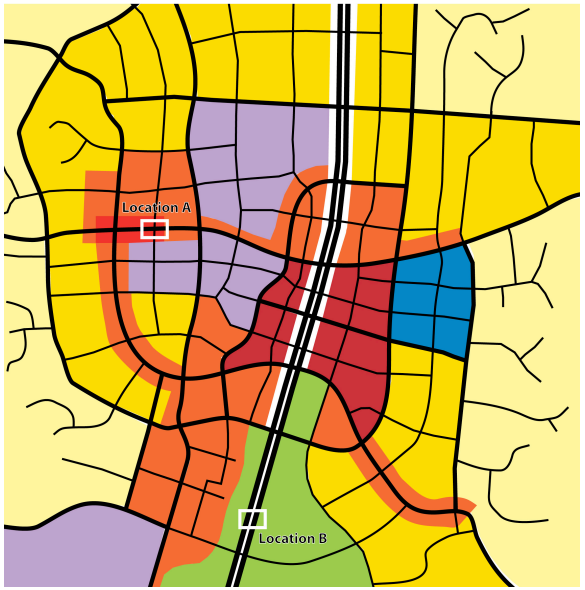
CONGRESS FOR THE NEW URBANISM | SUSTAINABLE TRANSPORTATION NETWORKS

Introduction to CNU's Initiative on Sustainable Transportation Networks

November 6, 2008







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Why should we focus on Transportation Networks?

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Because the quality of the Transportation Network:

- Determines the level and ease of Access and Mobility, but also
- Has a significant relationship to the location, type, and form of land development.

The Basic Problem

- Transportation Network based on multiple modes

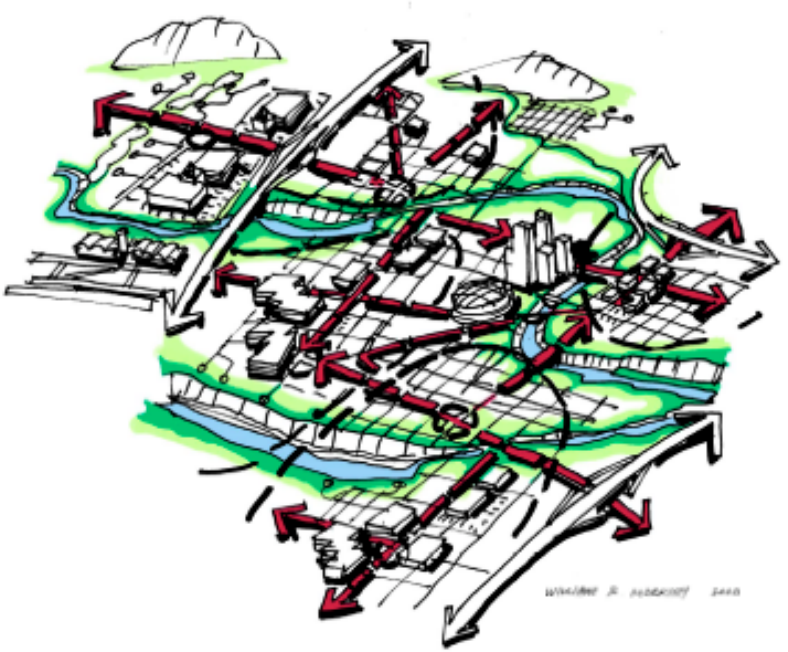
(Pre-WWII)

- Transportation Network based on unmitigated acceptance of the automobile as the single mode of transportation

(Post-WW II)

The Basic Problem

- Automobile-centric transportation network has led to patterns of dispersed land uses at the local, sub-regional, and regional levels
- These in turn create far flung travel patterns



Source: ***Design & Development Principles for Livable Suburban Arterials,*** **Design Center of the American Urban Landscape, 2001.**

The Basic Problem

Today transportation network is increasingly in a state of crisis:

- Since 1980 VMT outpaced population growth by 3:1
- Congestion
  - 4.2 billion lost hours
  - 2.9 billion gallons of wasted fuel
  - Amounting to a $78 billion annual drain
- With strained budgets it is becoming cost prohibitive to mitigate through adding capacity
- Ignores the network function of local streets
- Poorly accommodates trips by non-vehicular modes
- Transit accommodation is often just an afterthought

Source: TTI - 2007 Urban Mobility Report

New Approach Needed

We need a more comprehensive approach to Transportation Network Planning that:

- Supports a drastic reduction of VMT through increased mode choice
- Brings to the regional scale successful New Urbanist concepts

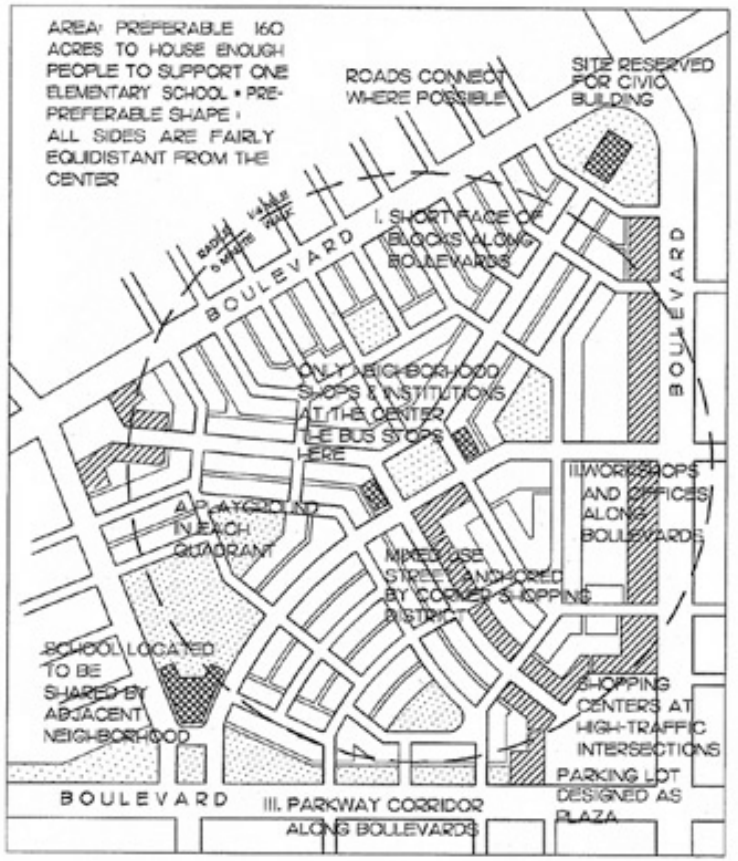
Principle Eight

The physical organization of the region should be supported by a framework of transportation alternatives. Transit, pedestrian, and bicycle systems should maximize access and mobility throughout the region while reducing dependence on the automobile.

Source: TTI - 2007 Urban Mobility Report

New Urbanist Concepts to Build From

- New Urban Neighborhoods and Thoroughfares
  - Compact, mixed-use neighborhoods.
  - Multi-modal corridors and pedestrian-friendly streets.



Urban Neighborhood Diagram
Source: Duany Plater-Zyberk

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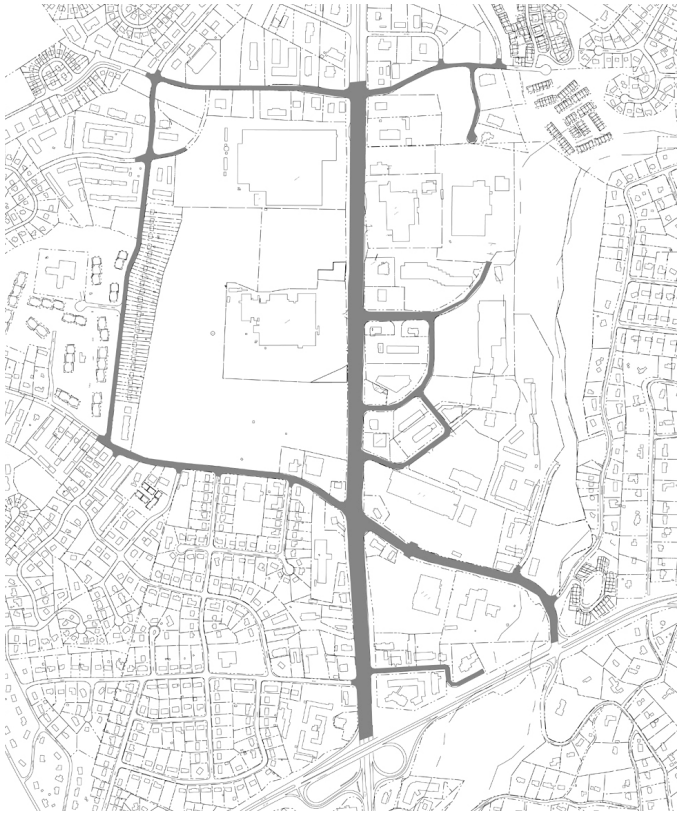
New Urbanist Concepts to Build From



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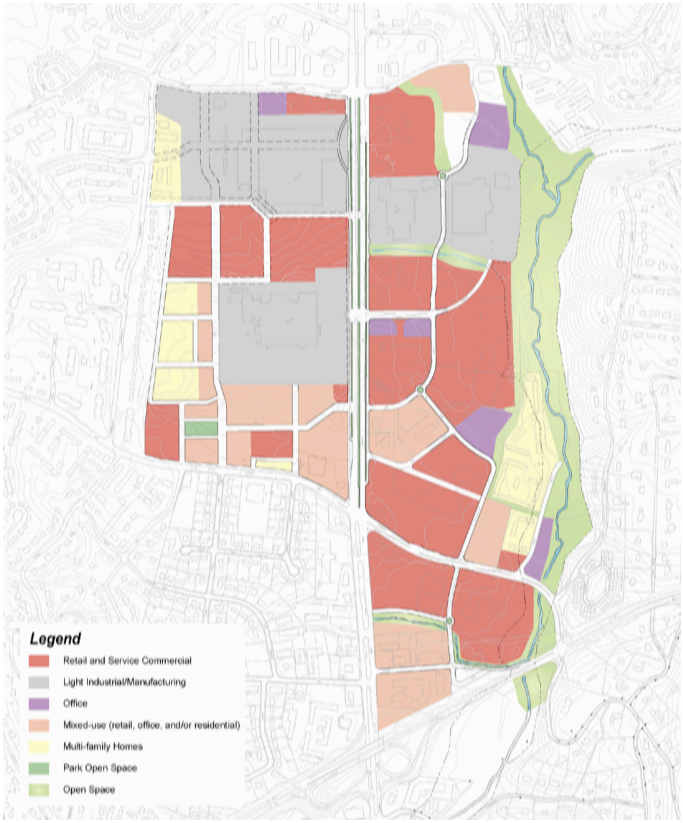
New Urbanist Concepts to Build From



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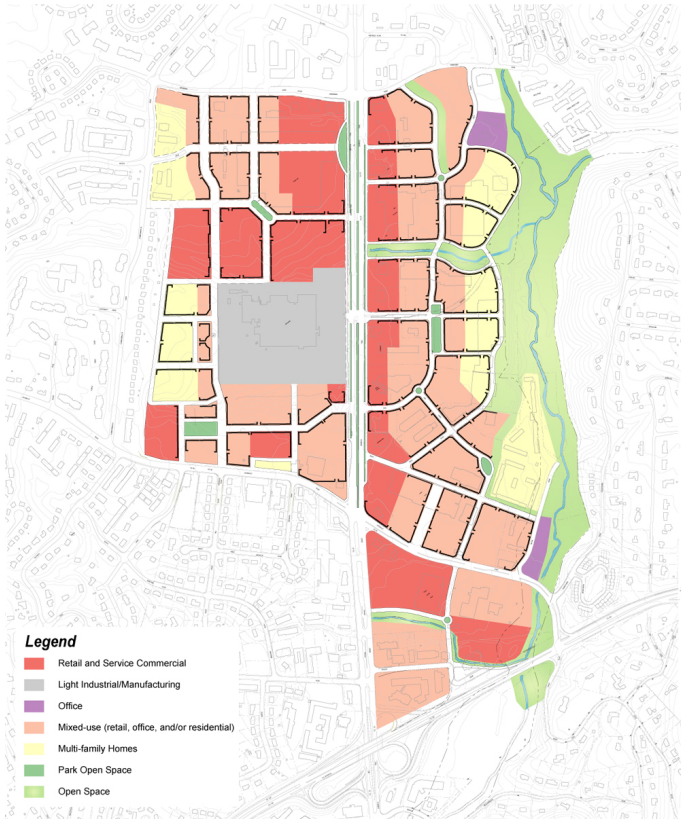
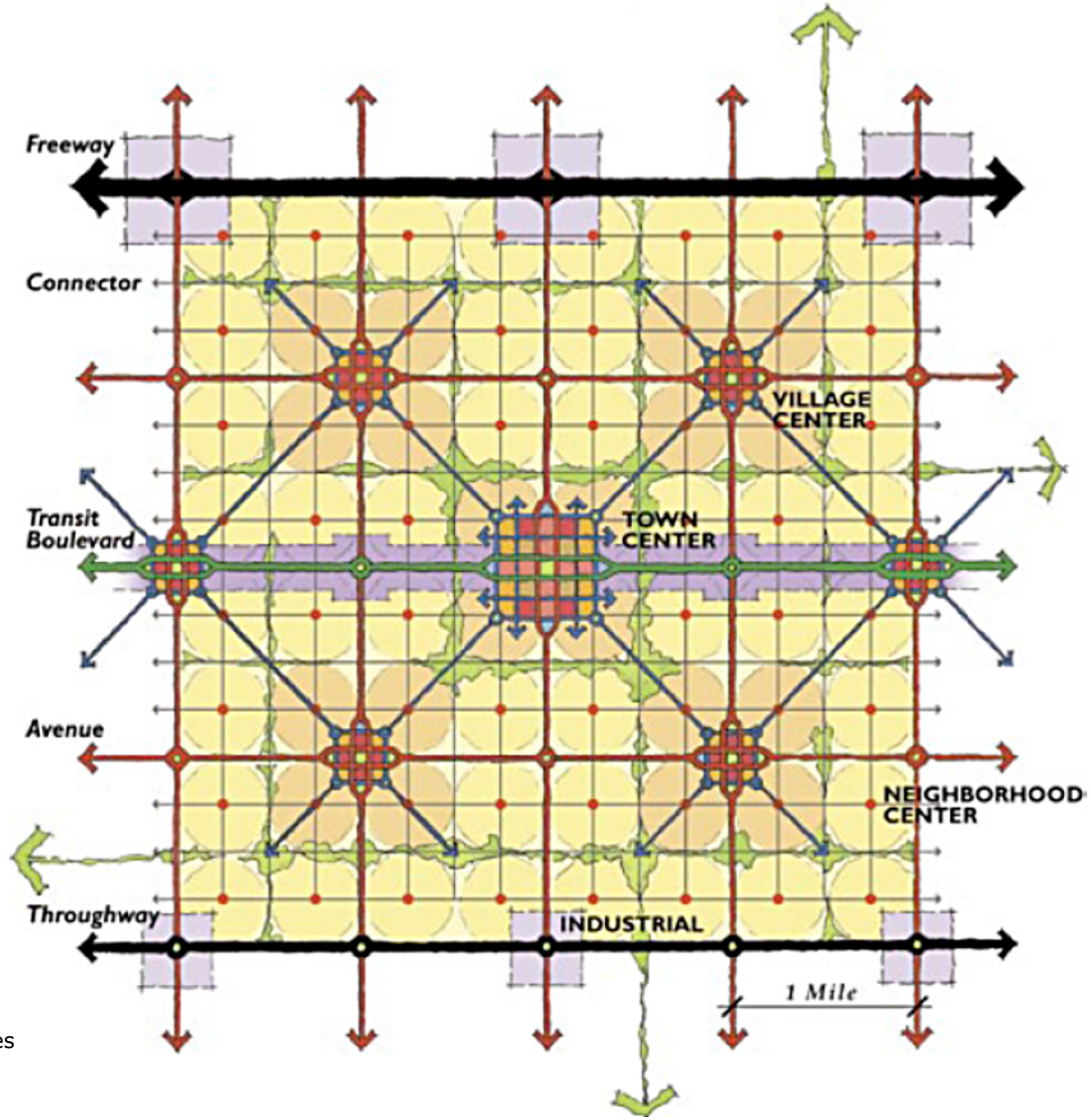
New Urbanist Concepts to Build From



A Brief History of Past Efforts

- Urban Network



Source: Calthorpe Associates

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A Brief History of Past Efforts

- Nashville Summit - Modern Network Design
  - Contrasting old and desired network characteristics

Modern Network Design	Conventional Roadway Networks
Highly Connected	Partially Connected
Multimodal	Auto-dependent
Accessible Destinations	Indirect Routes
More Public Streets	Fewer Public Streets
Detailed Streetscape	Few Streetscape Elements
Welcoming for Pedestrians	Dangerous and Unpleasant for Pedestrians
More Route Choices / Redundant	Fewer Route Choices / Prone to Break Down
Smaller/Narrower Streets	Wider Streets
Finer Grained	Coarser Grained
Lower Speeds but Faster Trips	Higher Seeds but Longer Trips
Focus on Quality of Place	Focus on Flow of Vehicles
Less Delay at Intersections	More Delay at Intersections
Simpler Turns	More Complicated Turns
Supports Activity on Sidewalks Adjacent to Streets	Sidewalk and Adjacent Activity Subservient to Traffic Flow

A Brief History of Past Efforts

- Nashville Summit - Modern Network Design
  - Connectivity
  - Continuity (for all Modes)
  - Street Density
  - Use of a full range of street types that are each compatible with their land use context
  - Balance of Access and Mobility

A Brief History of Past Efforts

- ITE/CNU Thoroughfare Design Manual on Network Planning:
  - Context Sensitive Solutions (CSS) has already proven successful in integration multiple planning disciplines and community interest within a single process
  - Calls for system-based approach (vs. common facility-based approach) of CSS approach

Source: ITE Draft Recommended Practice forContext Sensitive Solutions for Designing Major Urban Thoroughfares for Walkable Communities

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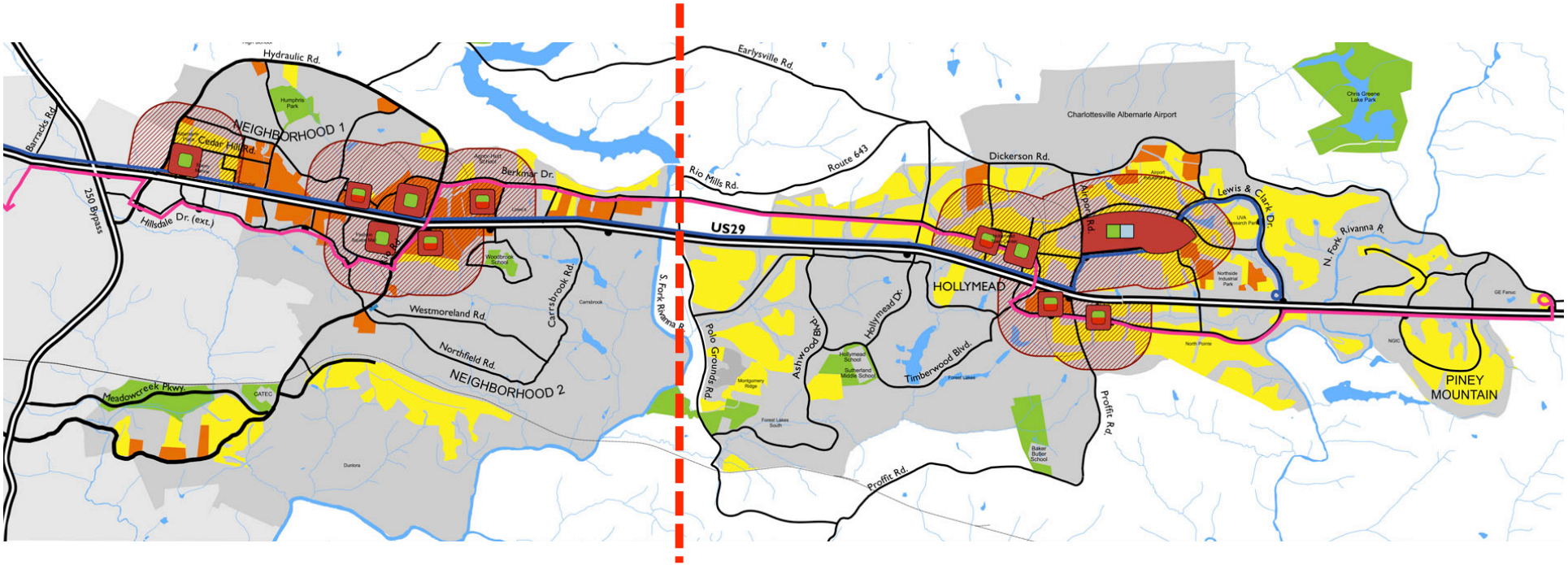
Smart Growth

Conventional Planning



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Why a CNU Summit on Sustainable Transportation Networks?

Charlotte Transportation Summit

…to take the next step in:

- Defining comprehensively what we mean by *"Sustainable Transportation Networks"*
- Define the tools by which to measure its performance:
  - Relative to mobility and access for a range of modes and trip purposes (short and long)
  - Relative to achieving climate goals (carbon reduction)
  - Relative to its capacity to support walkable, place-based development across all scales
- Understand and address implementation policies and barriers

Charlotte Transportation Summit

…to establish – with your help - a "Platform" on Sustainable Transportation Networks for CNU

- Day 2 (Friday)
  - Focused Work in Small Groups:
    - Measuring and Defining the Sustainable Transportation Network
    - Network and Places
    - Network and Modes
    - Implementation Policies and Barriers
- Day 3 (Saturday)
  - Crafting draft CNU Network Position Statements
  - Finding initial Consensus
  - Next Steps

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