Comprehensive Transit Service Analysis

Public Meetings

January 2016

NELSON NYGAARD
ASG PLANNING

CRCOG
CAPITOL REGION
COUNCIL OF GOVERNMENTS

CTtransit

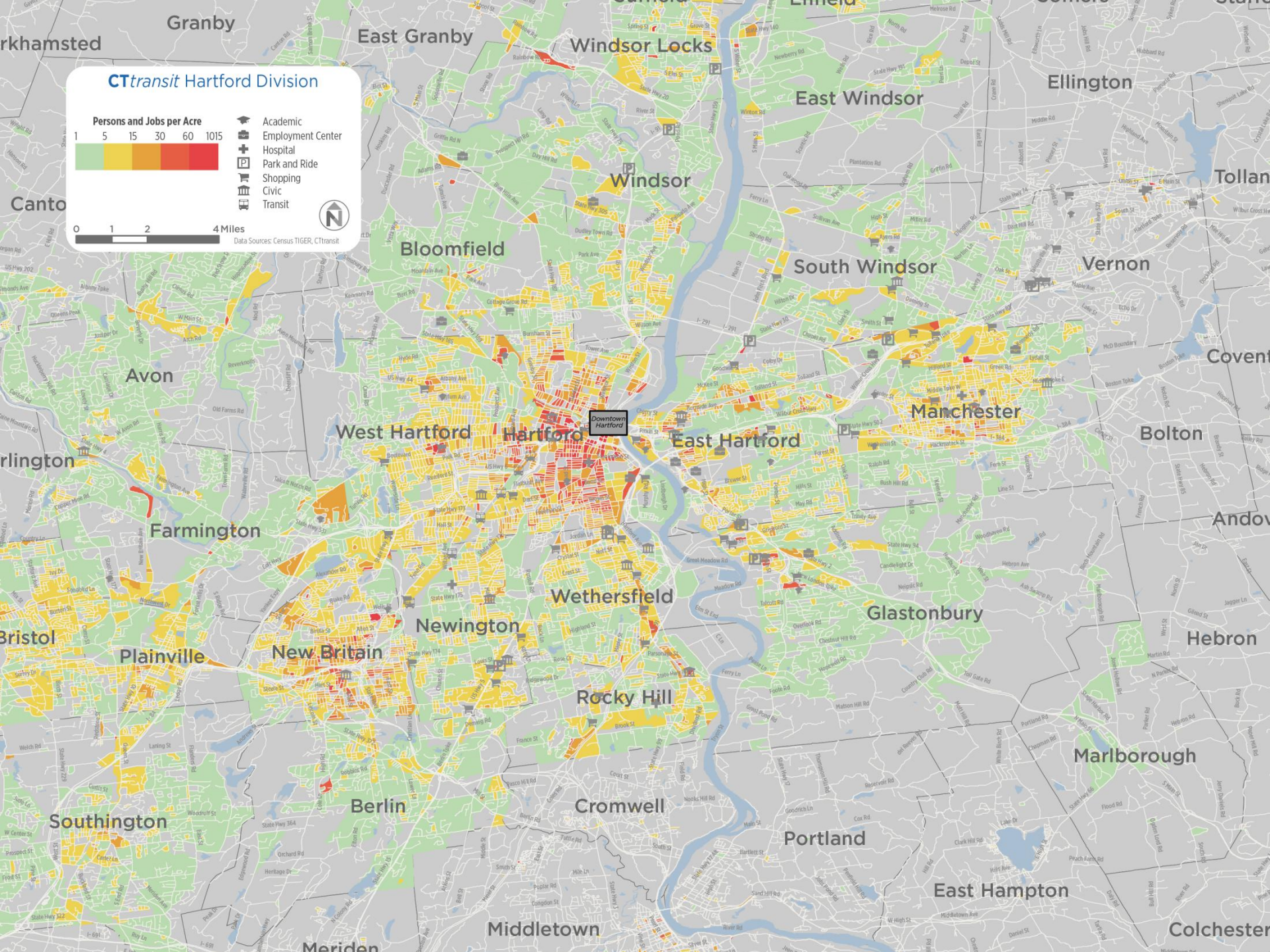
Comprehensive Service Analysis (CSA)

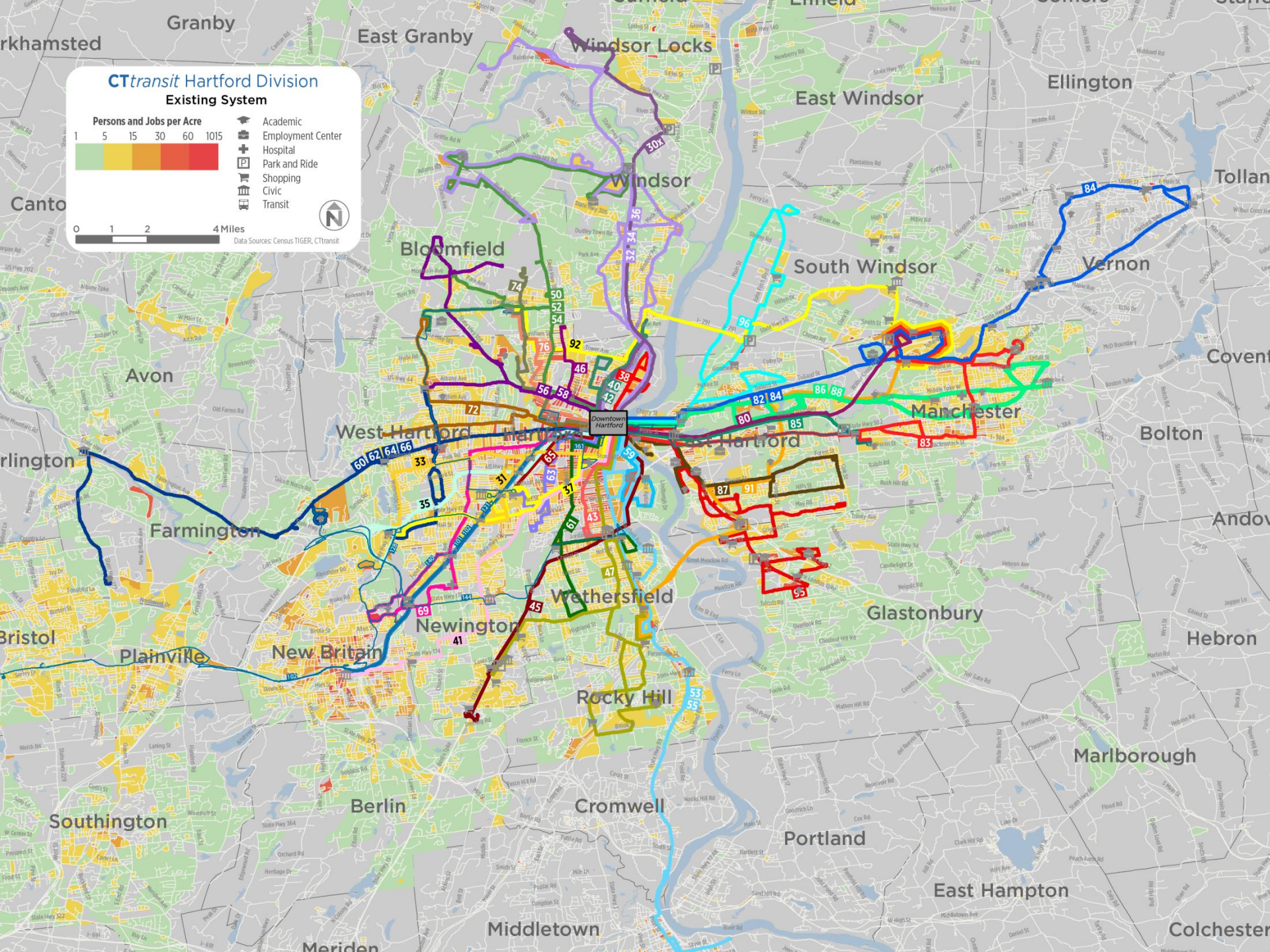
- **Identify strengths and weaknesses of existing system**
  - Review current and near-term travel patterns
  - Assess system efficiency
  - Identify unmet transit needs

- **Recommend service improvements**
  - Integrate with new system investments
  - Serve existing riders better
  - Attract new riders
  - Improve over-all system productivity

CSA Study Approach

- **What does the market say?**
  - Population and employment density
  - Population characteristics
  - Land-use characteristics
  - Regional travel patterns
- **What do the numbers say?**
  - Ridership
  - Productivity
  - On-time Performance
- **What do the people say?**
  - Riders
  - Non-riders
  - Staff
  - Stakeholders


CTtransit Hartford Division
Persons and Jobs per Acre
1 5 15 30 60 1015
Academic
Employment Center
Hospital
Park and Ride
Shopping
Civic
Transit
0 1 2 4 Miles
Data Sources: Census TIGER, CTtransit
Granby
East Granby
Windsor Locks
Ellington
East Windsor
Windsor
Bloomfield
South Windsor
Vernon
Avon
West Hartford
Hartford
Downtown Hartford
East Hartford
Manchester
Bolton
Farmington
Wethersfield
Glastonbury
Newington
New Britain
Plainville
Rocky Hill
Hebron
Marlborough
Berlin
Cromwell
Portland
Southington
East Hampton
Middletown


CTtransit Hartford Division
Existing System
Persons and Jobs per Acre
1 5 15 30 60 1015
Academic
Employment Center
Hospital
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Civic
Transit
0 1 2 4 Miles
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Glastonbury
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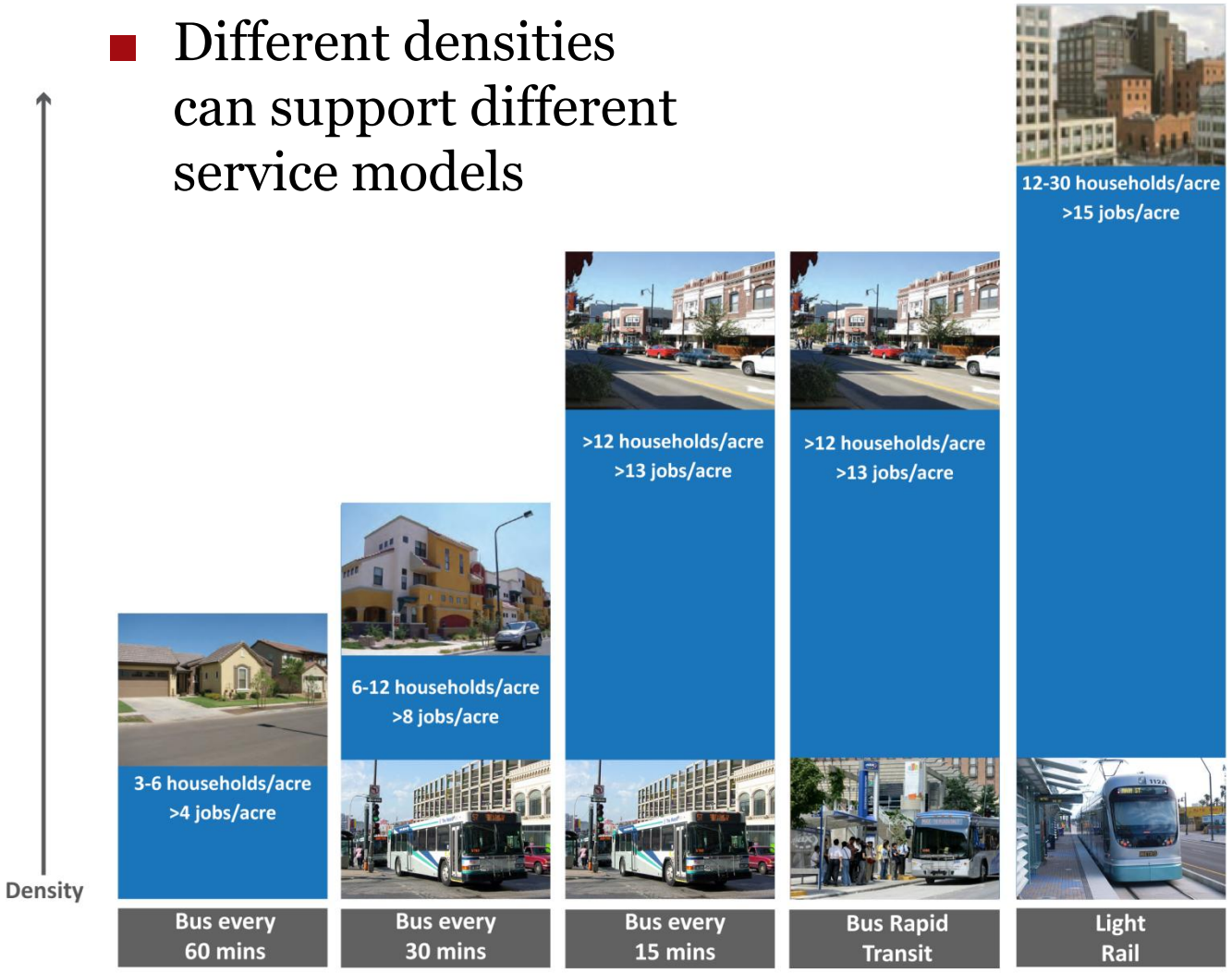
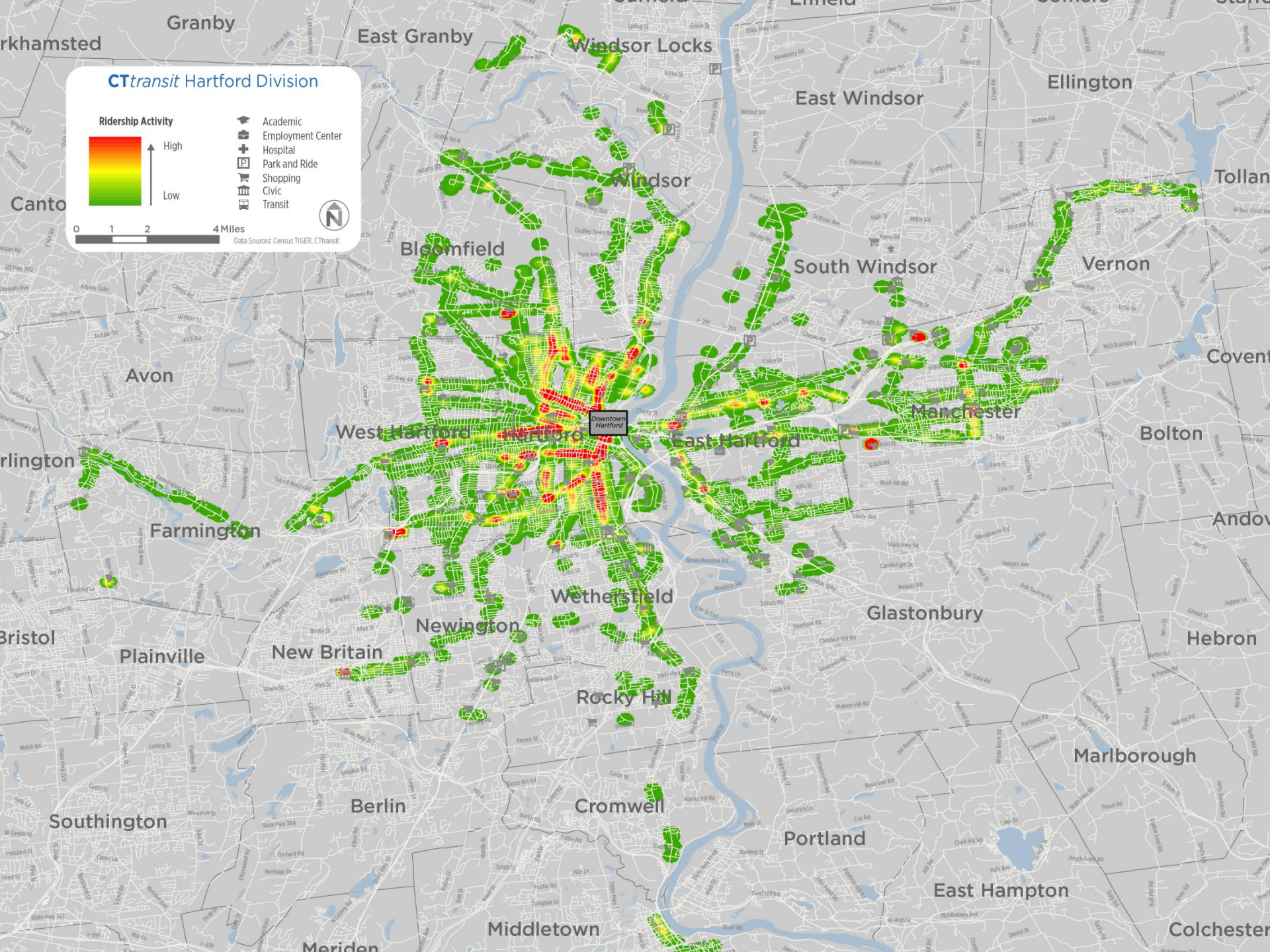
Berlin
Cromwell
Portland
Southington
East Hampton
Middletown
Meriden
Colchester

Service Design Guidelines

- Different densities can support different service models




CTtransit Hartford Division
Ridership Activity
High
Low
Academic
Employment Center
Hospital
Park and Ride
Shopping
Civic
Transit
0 1 2 4 Miles
Data Sources: Census TIGER, CTtransit
Granby
East Granby
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Marlborough
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Cromwell
Portland
Southington
East Hampton
Middletown
Meriden
Colchester

Service Design Principles

- **Service Should be Simple:**
  - For people to use transit, service should be designed so that it is easy to use and intuitive to understand

- Service Should Operate at Regular Intervals:
  - In general, people can easily remember repeating patterns, but have difficulty remembering irregular sequences.

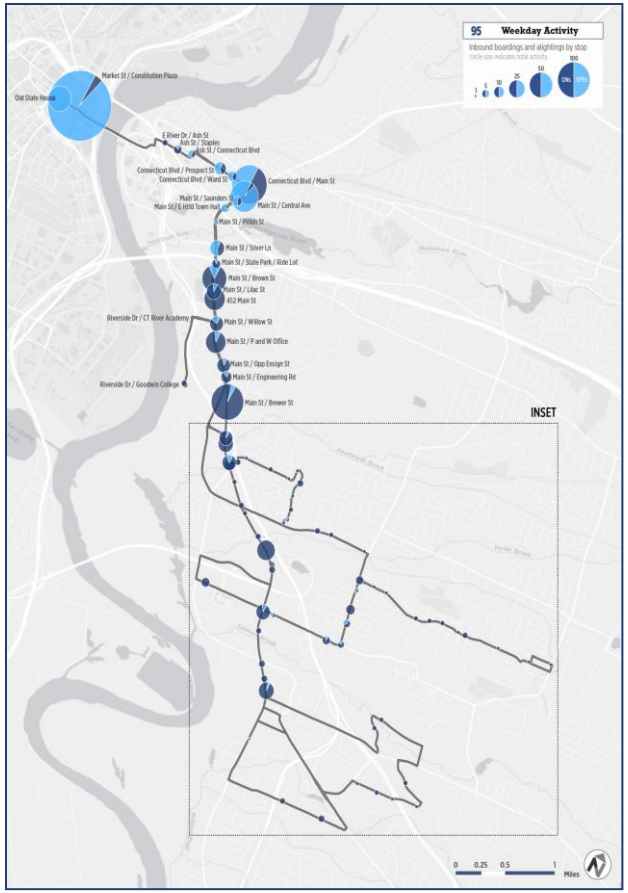
- Routes Should Operate Along a Direct Path:
  - The fewer directional changes a route makes, the easier it is to understand. Circuitous alignments are disorienting and difficult to remember.

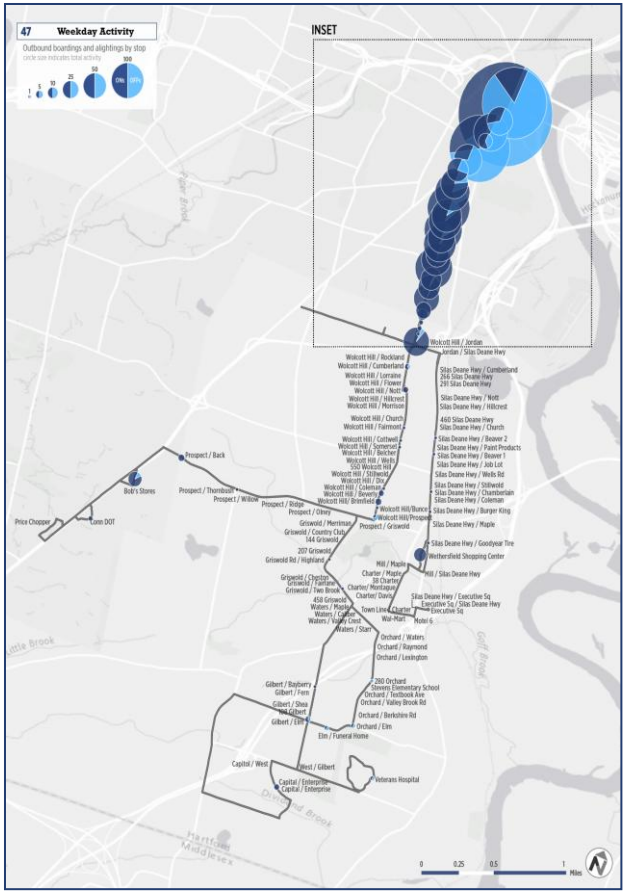
- Routes Should be Symmetrical:
  - Routes should operate along the same alignment in both directions to make it easy for riders to know how to get back to where they came from.

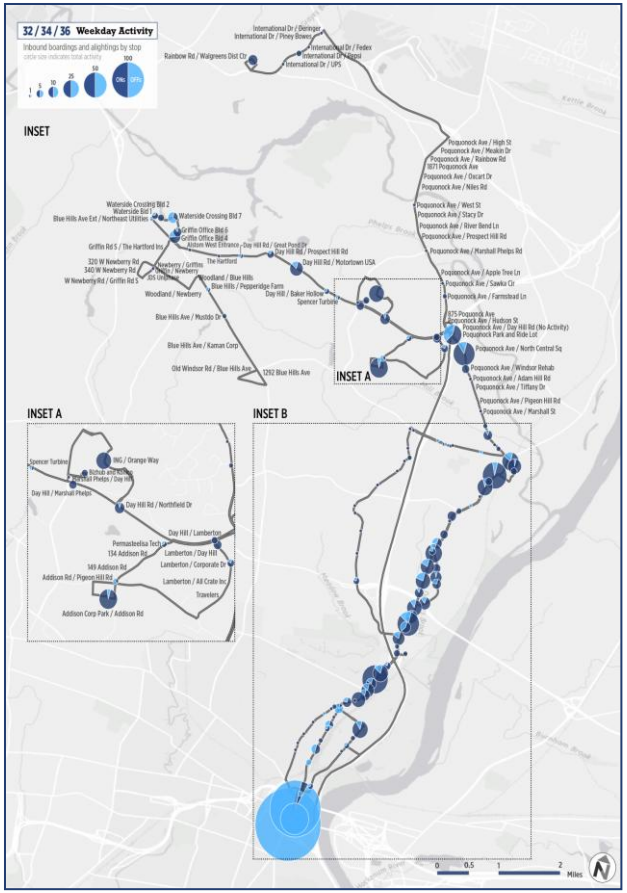
- Routes Should Serve Well Defined Markets:
  - Routes should include strong anchors, but should avoid unintended service duplication.

- Service Should be Well Coordinated:
  - At major transfer locations, schedules should be coordinated to the greatest extent possible to minimize connection times for the predominant transfer flows.

Service Design Principles







Service Design Concepts

- **Scenario I: Streamline Service –** Focuses on relatively minor improvements to individual routes to address opportunities identified through the Route Profile process

- **Scenario II: Regional BRT Network –** Provides a fundamentally different vision of transit service in the Hartford region by introducing Arterial BRT service and building on the success of **CT*fastrak***

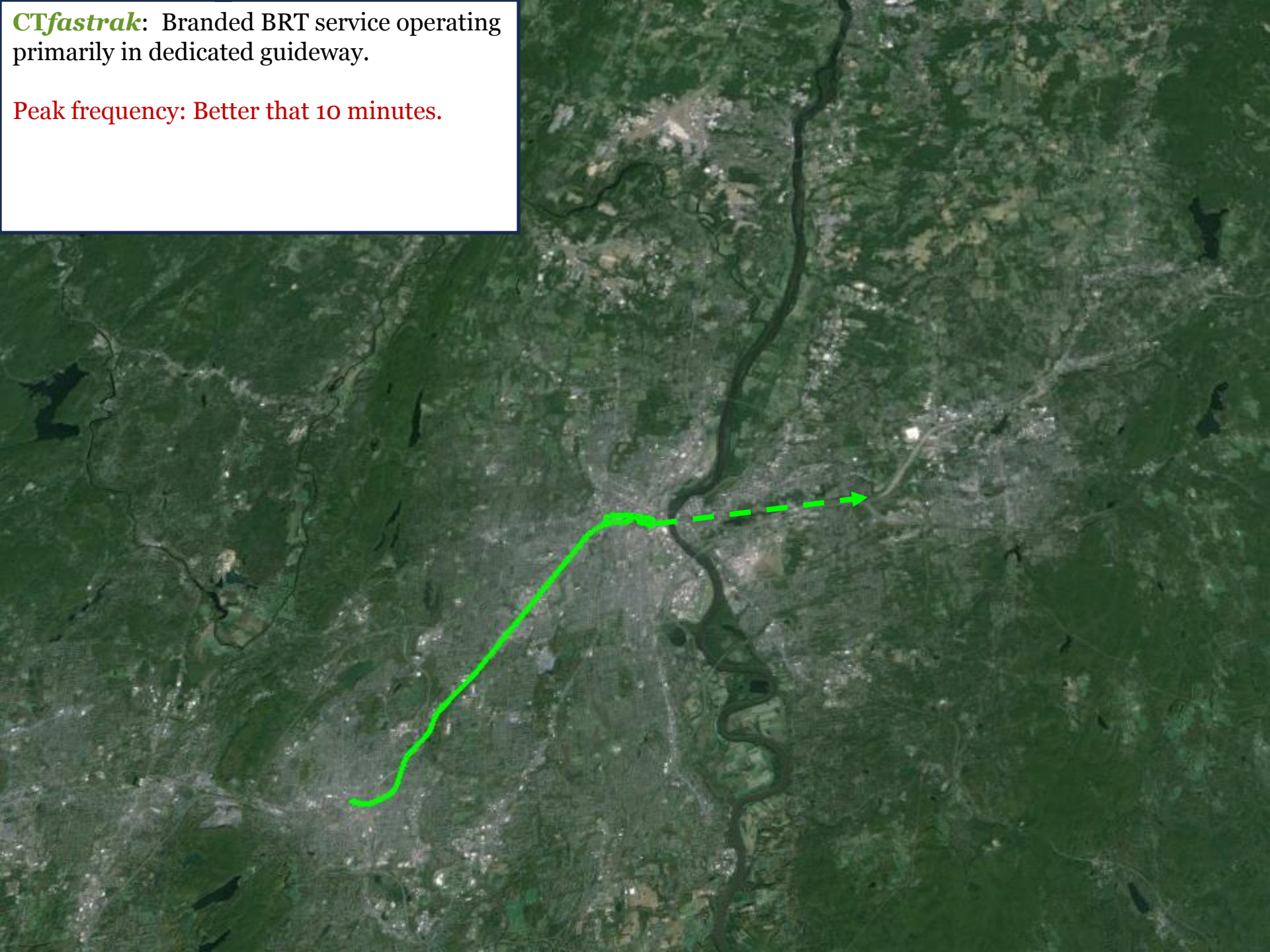
- **Scenario III: Hybrid Approach –** Strengthening key transit-supportive corridors in the Hartford area, and refocusing the bus network around these corridors

Service Design Concepts

- **Establish Family of Services**
  - **Bus Rapid Transit (BRT)**
    - **CT*fastrak***
    - **Arterial BRT**
  - **Flyer Service**
  - **Shuttles**
  - **Local Service - Tier I**
  - **Local Service - Tier II**
  - **Cross-Town Service**
  - **Circulators**
  - **Express Service**

CT*fastrak*: Branded BRT service operating primarily in dedicated guideway.

Peak frequency: Better that 10 minutes.



Arterial BRT: BRT service operating in mixed traffic, but with special corridor treatments such as signal prioritization, consolidated stops, and enhanced shelters.

Peak frequency: 10 minutes or better.

Copaco Center

Albany Ave. and Blue Hills Ave.

Windsor Shopping Center

Buckland Hills

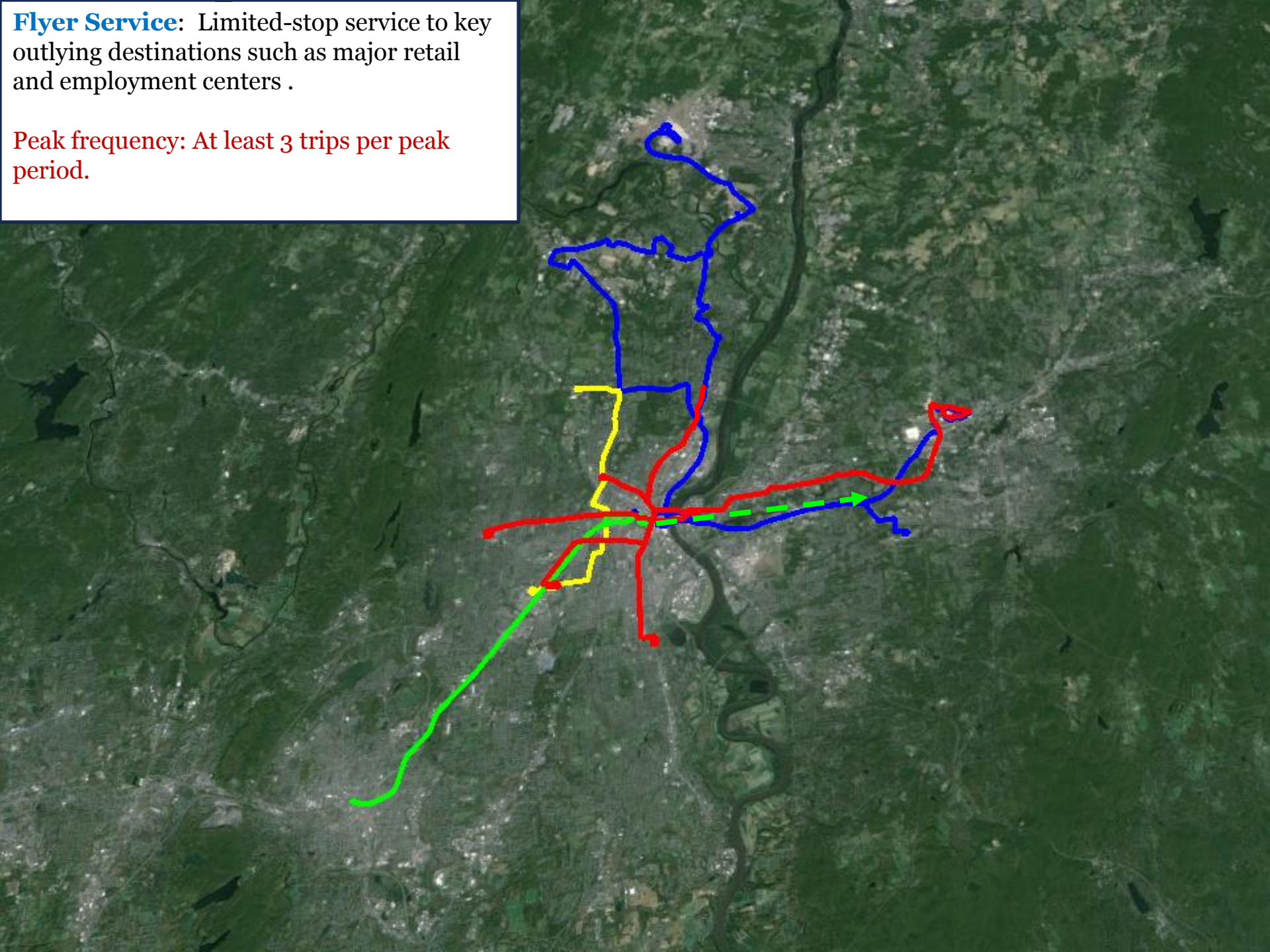
West Hartford Center

Jordan Ln. and Silas Deane

Flatbush Station

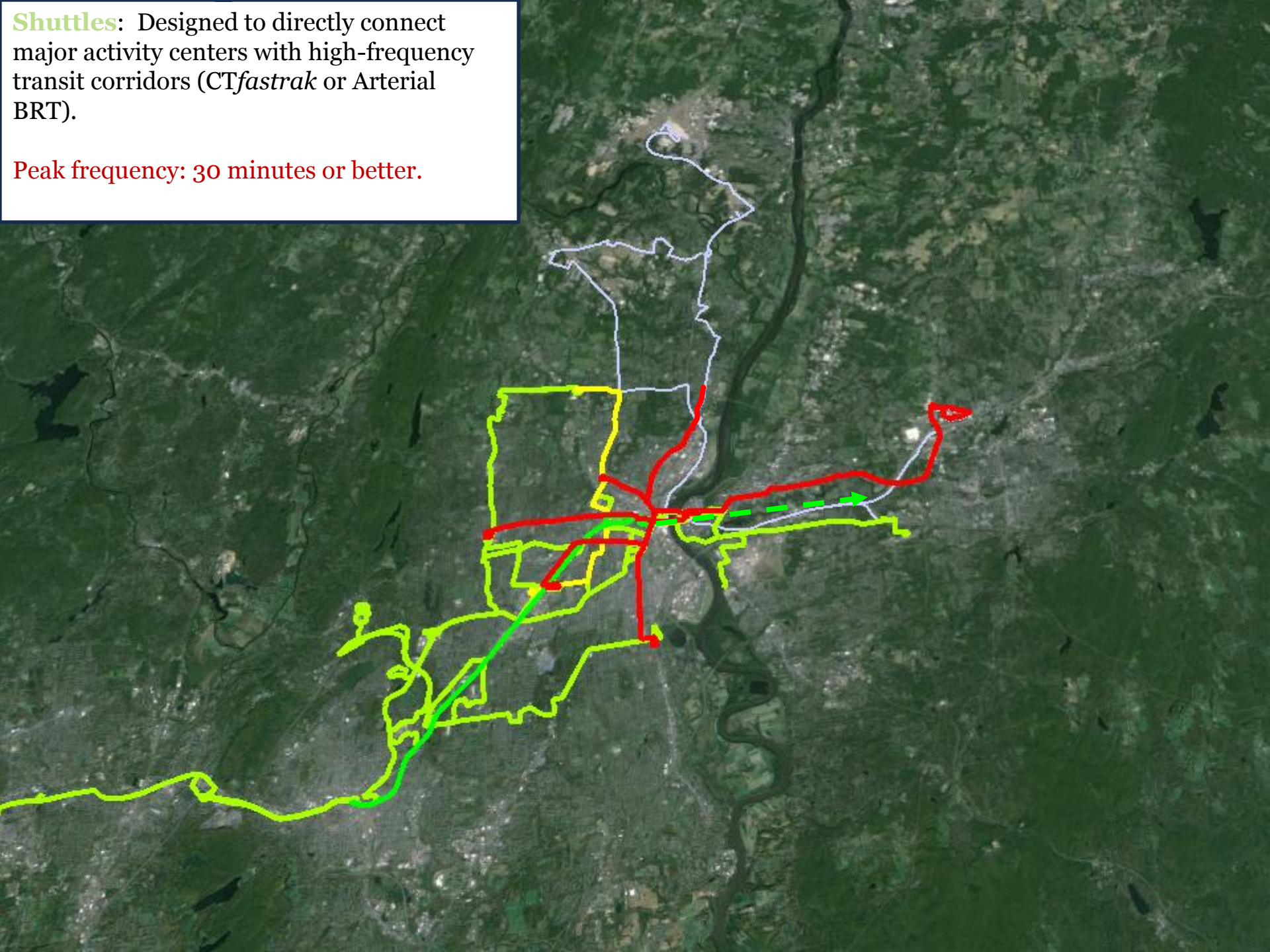
Flyer Service: Limited-stop service to key outlying destinations such as major retail and employment centers .

Peak frequency: At least 3 trips per peak period.



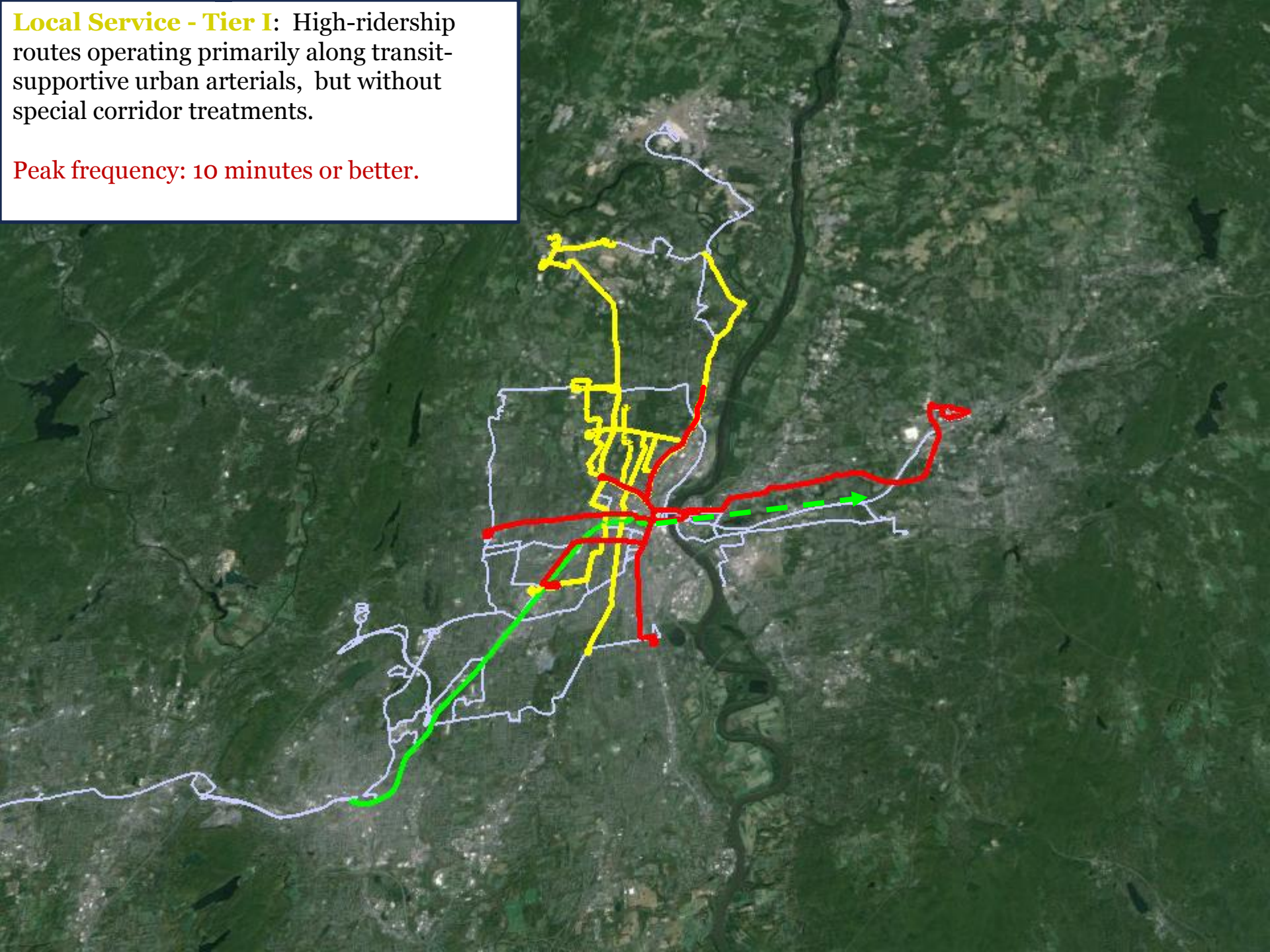
Shuttles: Designed to directly connect major activity centers with high-frequency transit corridors (CT*fastrak* or Arterial BRT).

Peak frequency: 30 minutes or better.



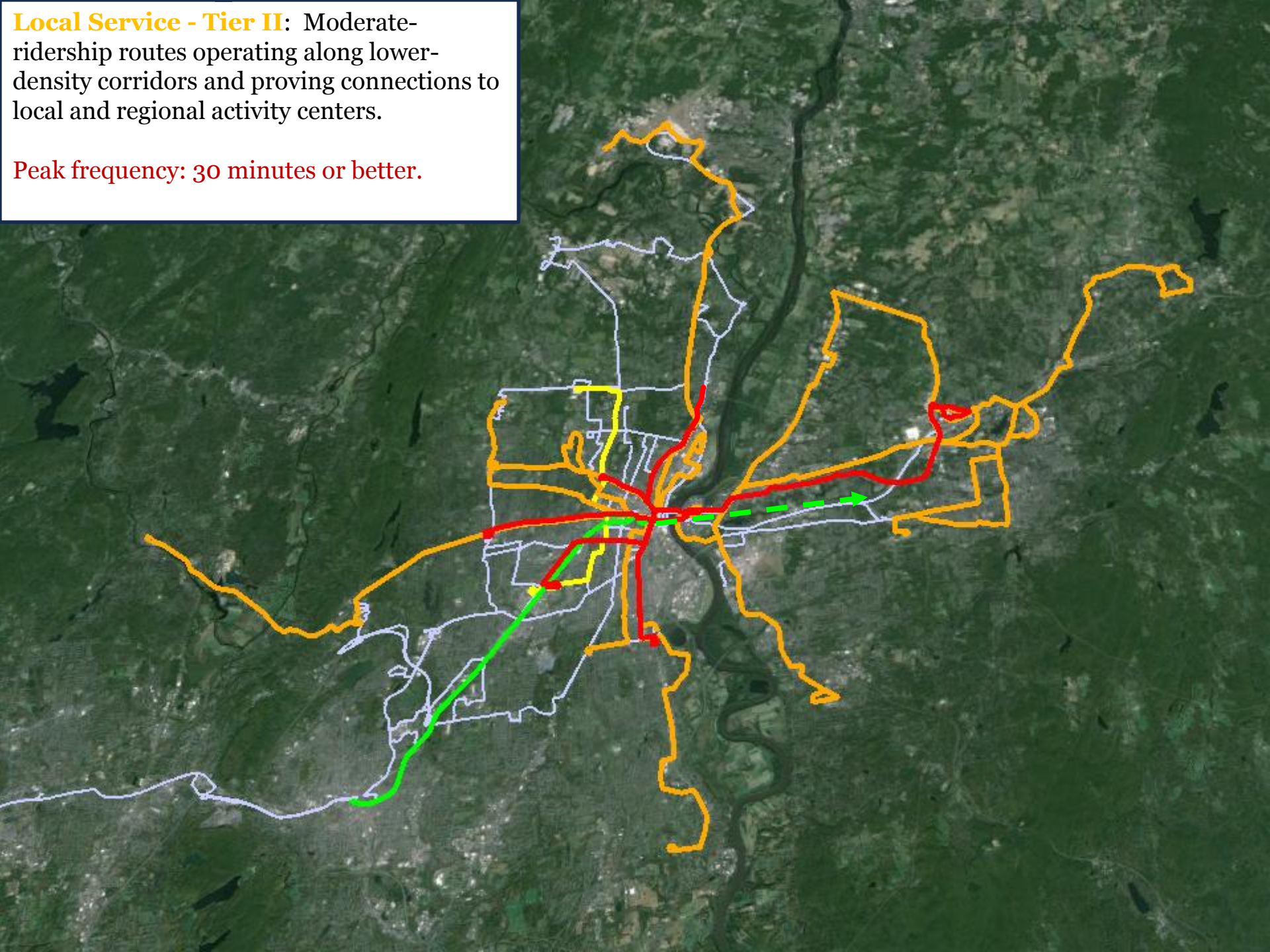
Local Service - Tier I: High-ridership routes operating primarily along transit-supportive urban arterials, but without special corridor treatments.

Peak frequency: 10 minutes or better.



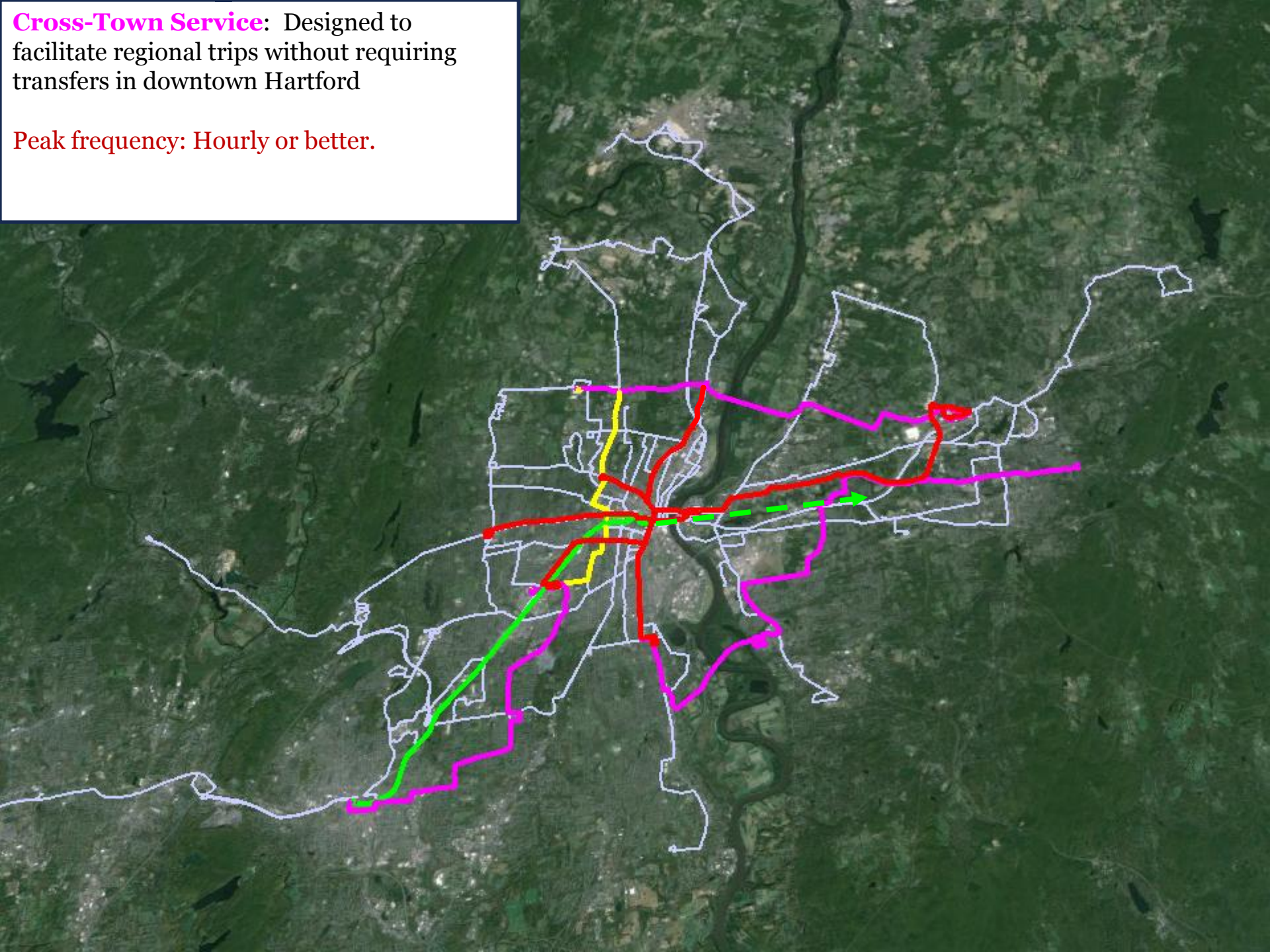
Local Service - Tier II: Moderate-ridership routes operating along lower-density corridors and proving connections to local and regional activity centers.

Peak frequency: 30 minutes or better.



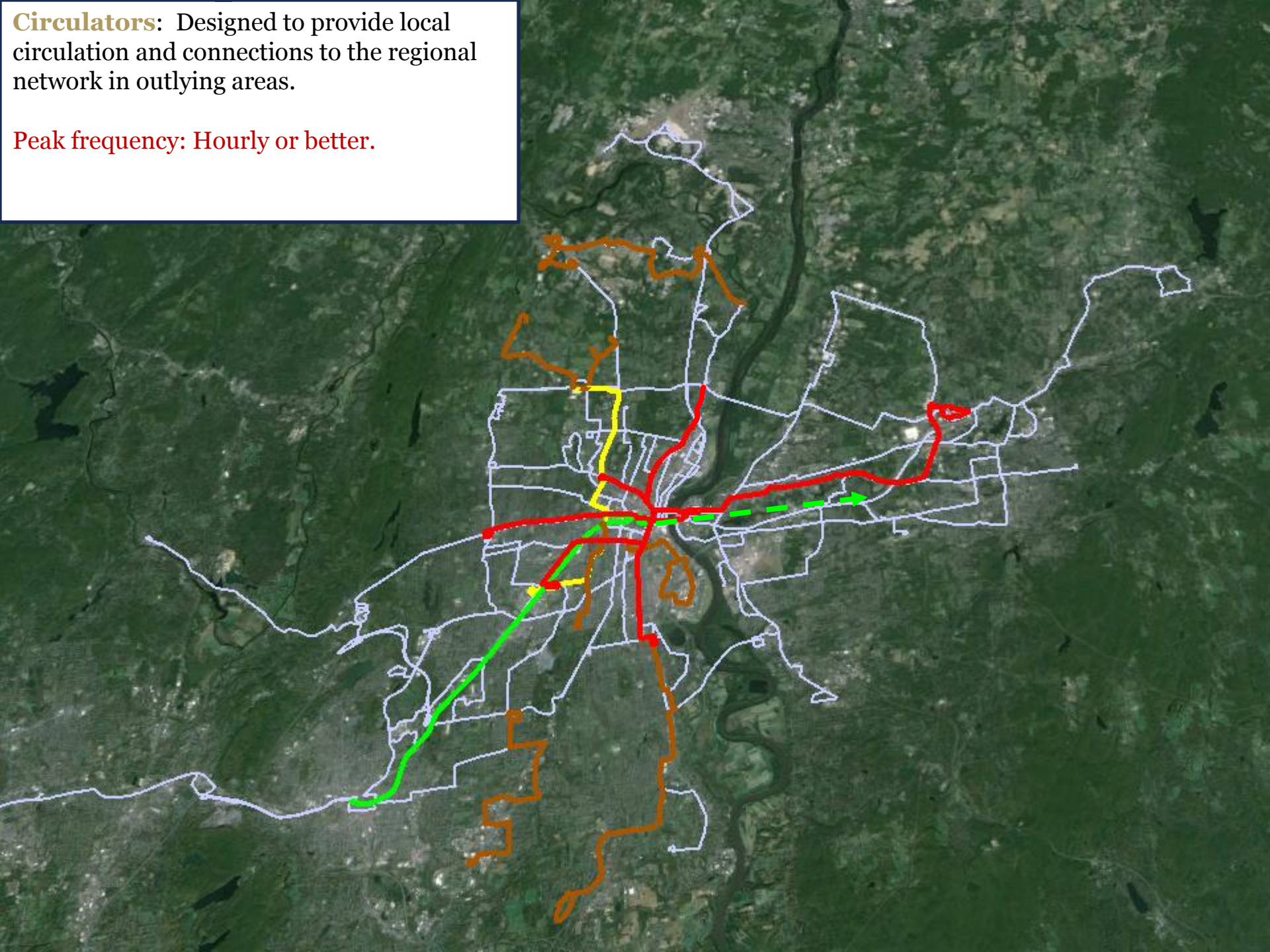
Cross-Town Service: Designed to facilitate regional trips without requiring transfers in downtown Hartford

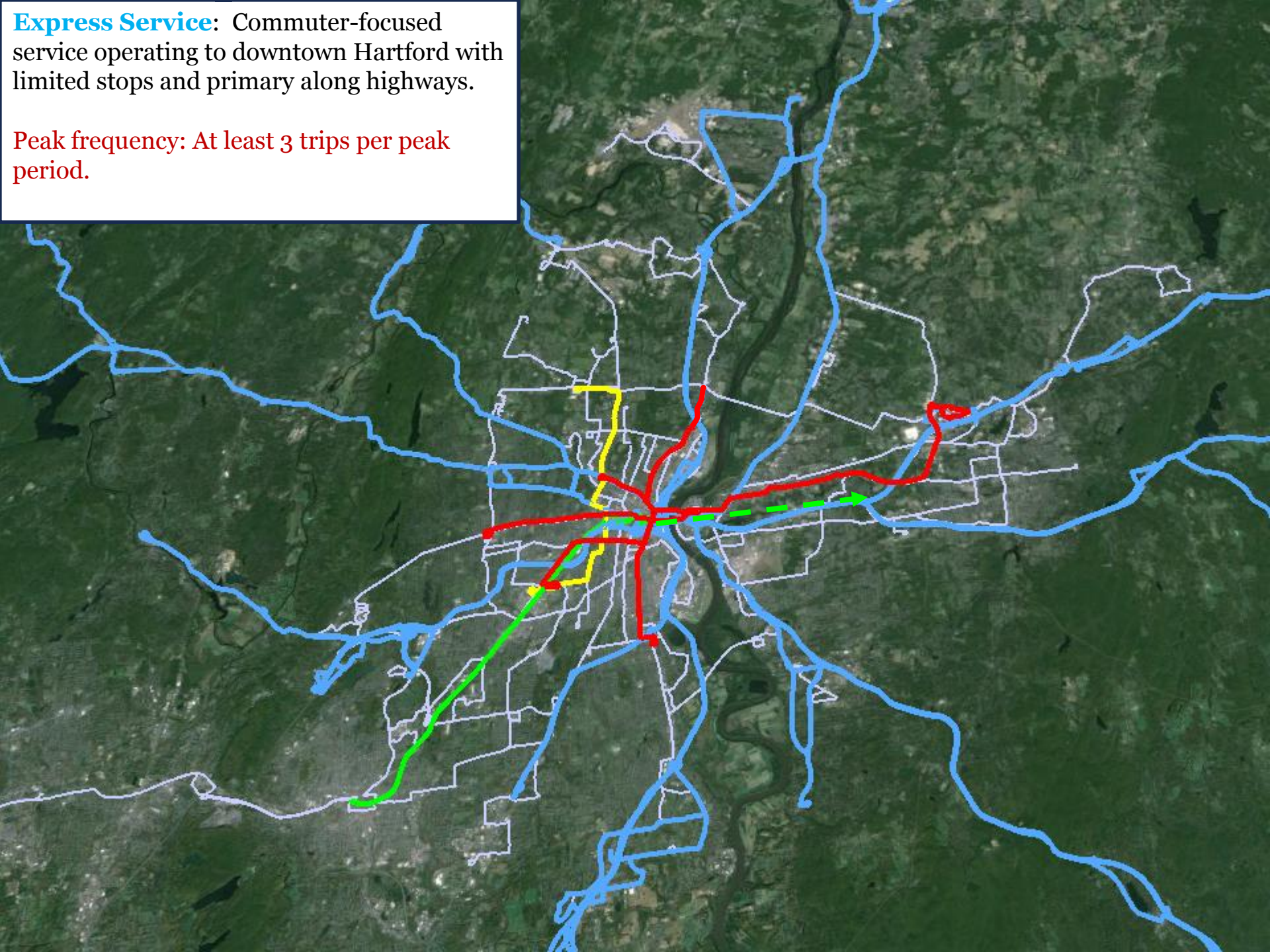
Peak frequency: Hourly or better.



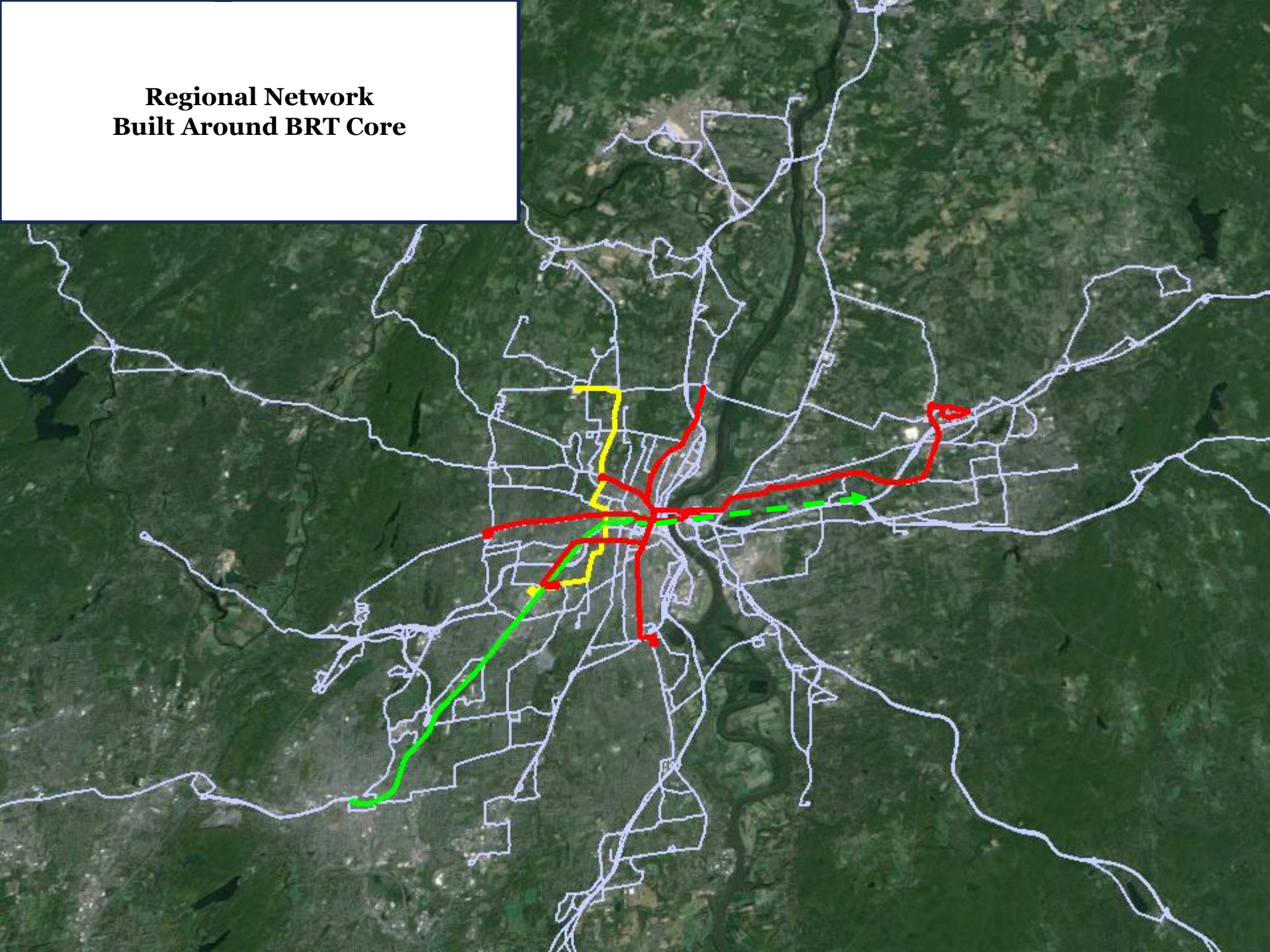
Circulators: Designed to provide local circulation and connections to the regional network in outlying areas.

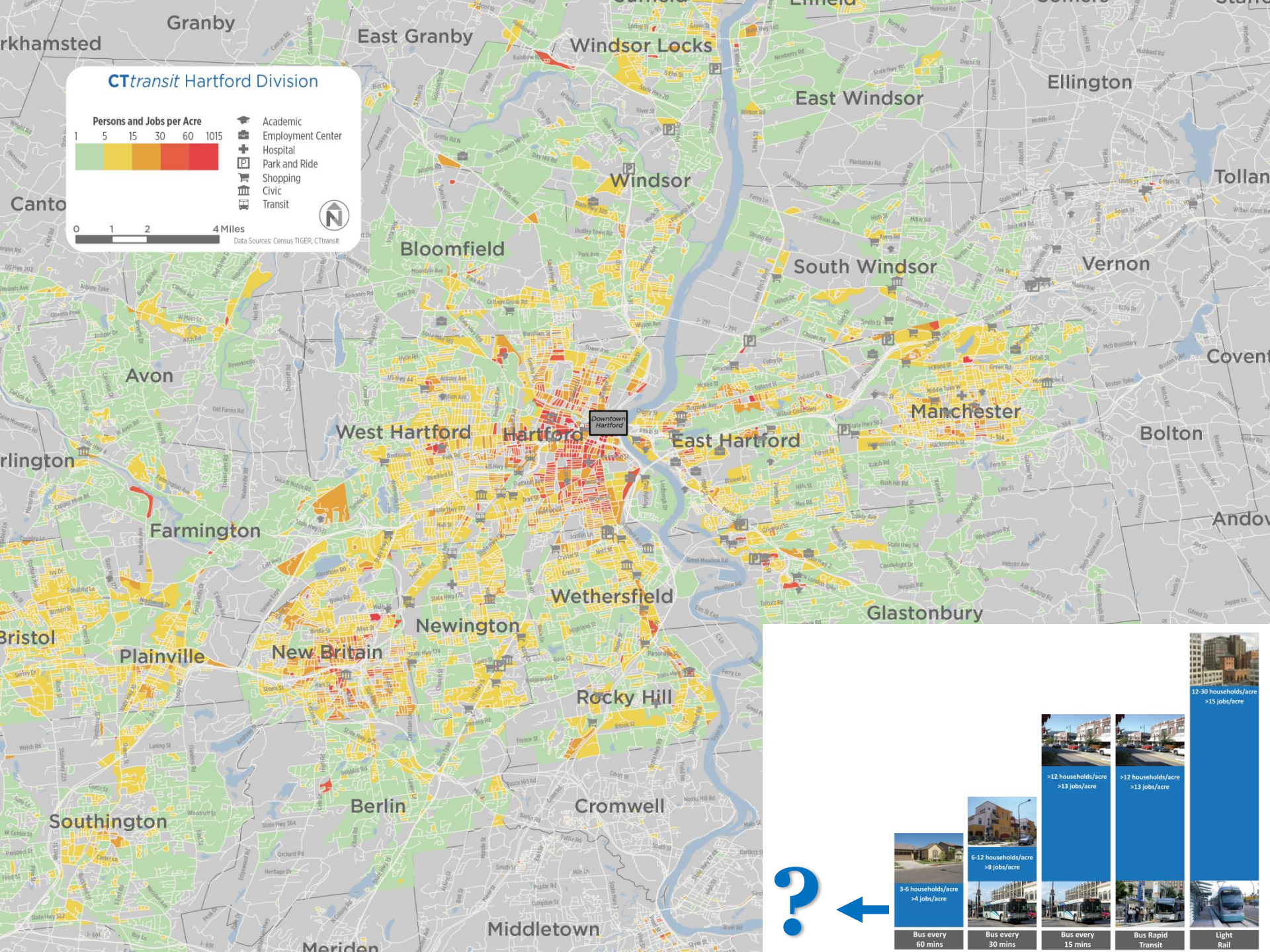
Peak frequency: Hourly or better.




Express Service: Commuter-focused service operating to downtown Hartford with limited stops and primary along highways.
Peak frequency: At least 3 trips per peak period.

Regional Network
Built Around BRT Core

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Ellington
Windsor
Bloomfield
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Vernon
Avon
West Hartford
Hartford
Downtown Hartford
East Hartford
Manchester
Bolton
Farmington
Wethersfield
Newington
Glastonbury
Plainville
New Britain
Rocky Hill
Berlin
Cromwell
Southington
Middletown
Meriden
3-6 households/acre
>4 jobs/acre
6-12 households/acre
>8 jobs/acre
>12 households/acre
>13 jobs/acre
>12 households/acre
>13 jobs/acre
12-30 households/acre
>15 jobs/acre
Bus every 60 mins
Bus every 30 mins
Bus every 15 mins
Bus Rapid Transit
Light Rail

Service Design Concepts

- **Consider "Flex" Services in lower-density areas**

Cobb County, GA (Atlanta region)

Rhode Island

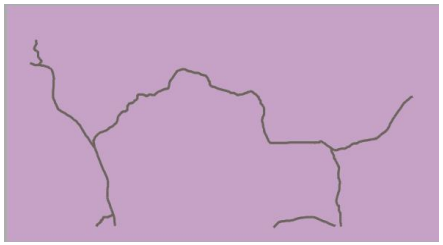
Tampa, FL

Dallas, TX

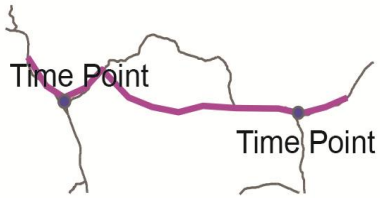
North County, CA (San Diego region)

Service Design Concepts

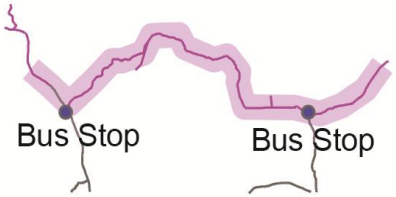
- **Consider "Flex" Services in lower-density areas**
  - Demand Response:



  - Anchored Flex Route:

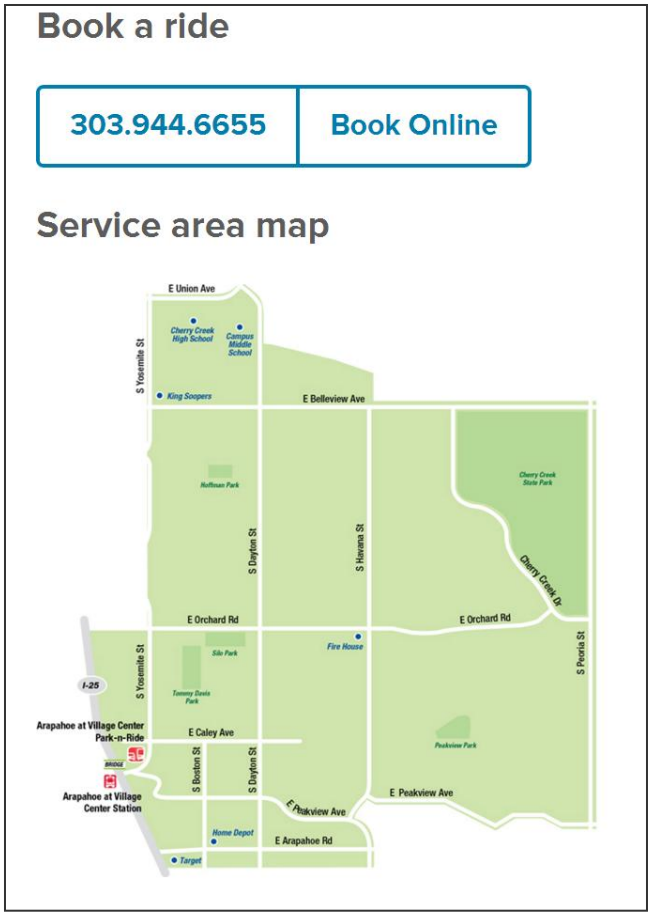


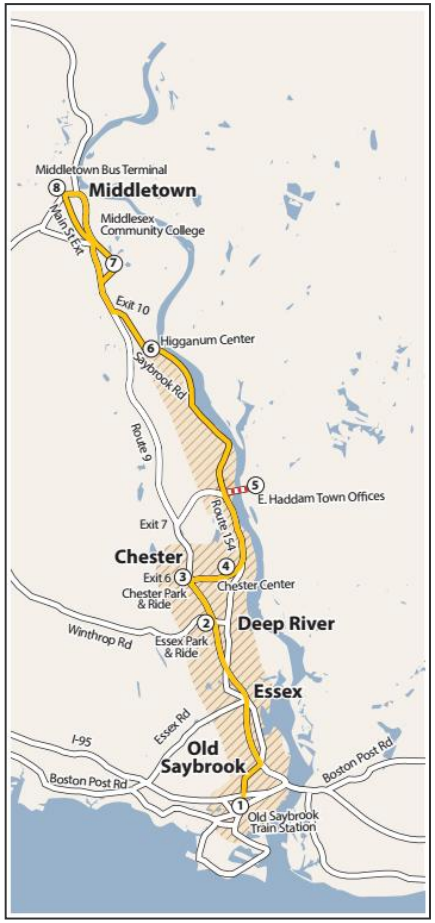
  - Deviated Fixed-Route:



Service Design Concepts

- **Consider "Flex" Services in lower-density areas**





ROUTE 33: PARK STREET - PARK ROAD

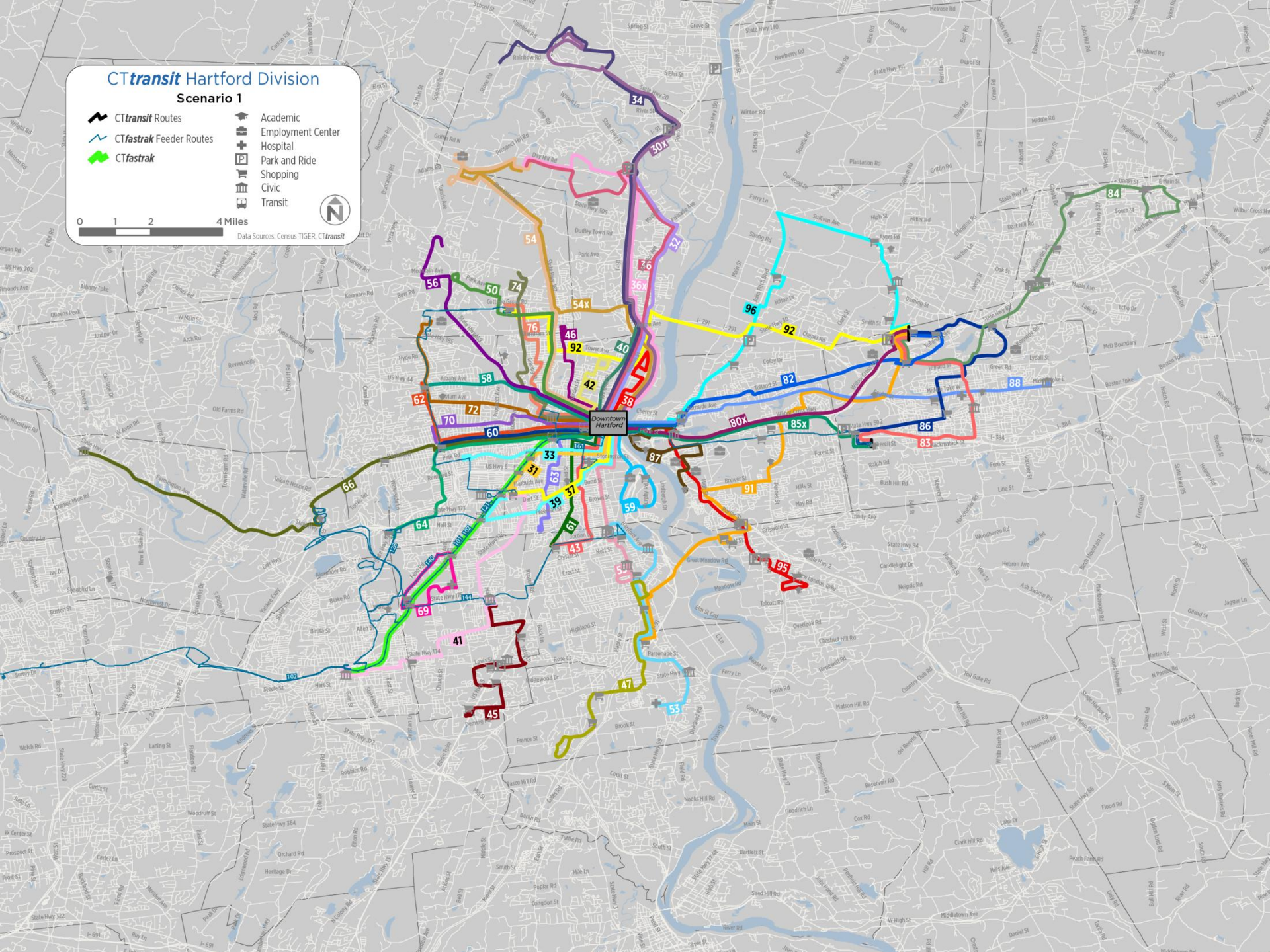
SCENARIO 1

- Truncate route at Quaker Lane (service to Westfarms Mall available via transfer to Routes 128 at Parkville Station)

SCENARIO 2

- Operate route between West Hartford Center and Parkville Station to connect to CT*fastrak* service and potential Arterial BRT service along Farmington corridor and Park/New Park corridor
- Service to Westfarms Mall available via transfer to Routes 128 at Parkville Station
- Frequent service to downtown Hartford available via transfers to CT*fastrak* or potential Arterial BRT along Farmington or Park/New Park corridors

The changes shown above represent ideas being considered to modify this route, but no specific changes are proposed at this time.


CTtransit Hartford Division
Scenario 1
CTtransit Routes
CTfastrak Feeder Routes
CTfastrak
Academic
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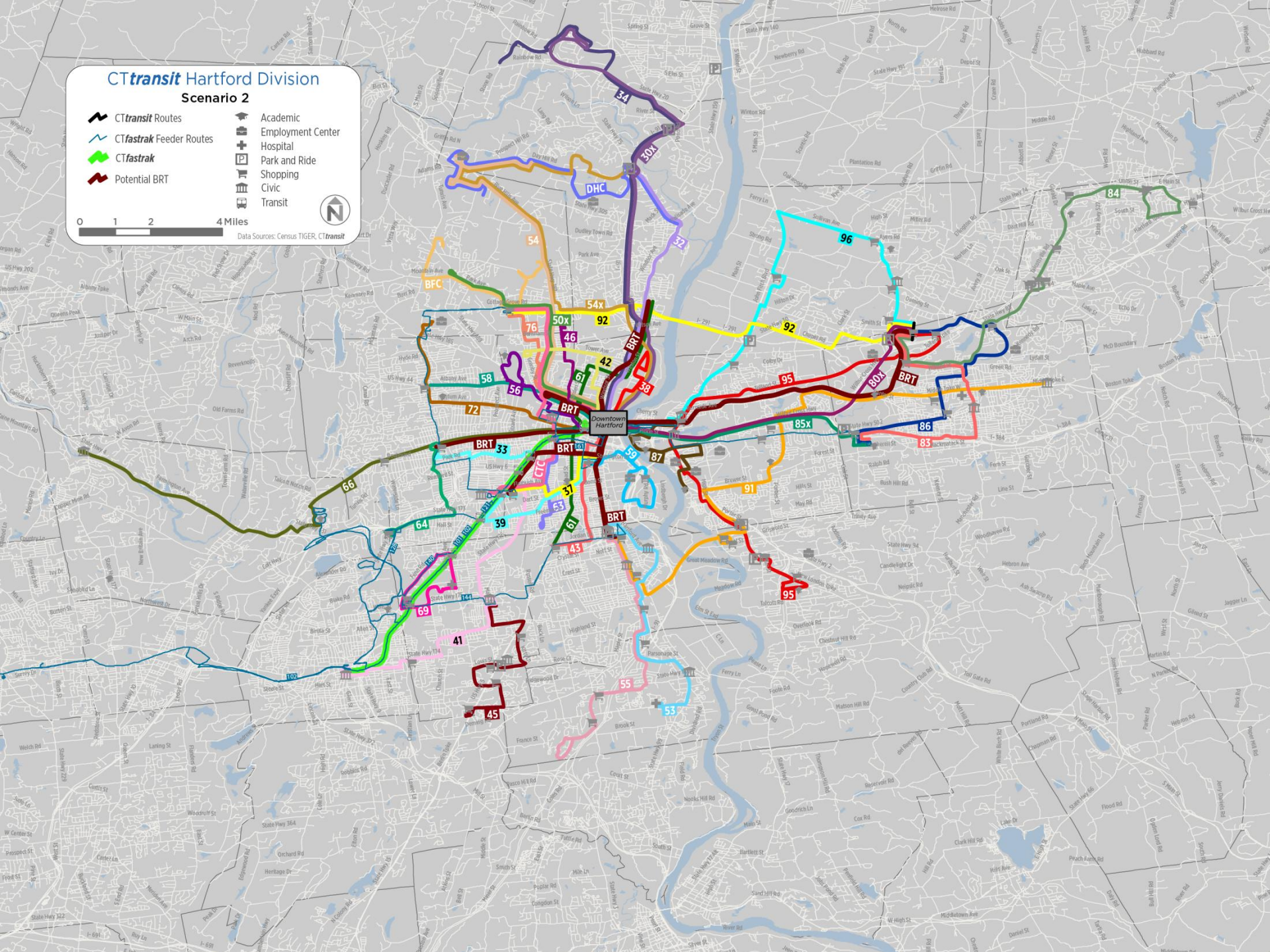
0 1 2 4 Miles
Data Sources: Census TIGER, CTtransit
Downtown Hartford


CTtransit Hartford Division
Scenario 2
CTtransit Routes
CTfastrak Feeder Routes
CTfastrak
Potential BRT
Academic
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0 1 2 4 Miles
Data Sources: Census TIGER, CTtransit
Downtown Hartford
BRT
DHC
BFC
CTC

Next Steps

- Consider public comments and input
- Develop hybrid alternative / recommendations for implementation
- Work with CT*transit*, CTDOT, and Advisory Committee to develop final plan
- Prepare Implementation Plan
- Public Meetings, Fall 2016