

REQUEST FOR BOARD ACTION

HENDERSON COUNTY BOARD OF COMMISSIONERS

MEETING DATE: February 7, 2005

SUBJECT: Preliminary Highway Map – Comprehensive Transportation Plan, Phase I

ATTACHMENTS:

1. Staff Memorandum
2. Materials Presented to the Henderson County Transportation Advisory Committee on January 27, 2005 by Beverly Williams
 - a. PowerPoint Presentation Slides
 - b. Highway Recommendations Sheet
 - c. Highway Category Descriptions Sheet
 - d. Preliminary Highway Map
3. Preliminary Map of the Proposed Balfour Parkway

SUMMARY OF REQUEST:

On January 27, 2005, Beverly Williams, of the North Carolina Department of Transportation, presented to the Henderson County Transportation Advisory Committee (TAC) a Preliminary Highway Map for Phase I of the Henderson County Comprehensive Transportation Plan (CTP). The TAC is requesting that each governing board in the county review and provide comments on the Preliminary Highway Map. The TAC plans to initiate a public input process on the Map after receiving comments from the governing boards.

The Preliminary Highway Map, a staff memorandum and other materials are attached for the Board's consideration. Staff will also provide the Board with an overview of NCDOT's recommendations during the February 7, 2005 meeting. The Board will find a large copy of the Preliminary Highway Map in the Assistant County Manager's office

COUNTY MANAGER'S RECOMMENDATION/BOARD ACTION REQUESTED:

After reviewing the attached materials and discussing the recommendations from NCDOT, the Board should consider what comments it would like to send to the TAC on the Preliminary Highway Map.



**HENDERSON COUNTY
OFFICE OF THE COUNTY MANAGER**

100 NORTH KING STREET
HENDERSONVILLE, NC 28792-5097
PHONE (828) 697-4809 FAX (828) 698-6014
www.hendersoncountync.org

David E. Nicholson
County Manager
davidn@hendersoncountync.org

Justin B. Hembree
Assistant County Manager
jhembree@hendersoncountync.org

Selena D. Coffey
Budget & Management Director
selenac@hendersoncountync.org

Avalina Merrill
Administrative Assistant
avalina@hendersoncountync.org

MEMORANDUM

February 2, 2005

To: Board of Commissioners

From: Justin Hembree, Assistant County Manager
Karen Smith, Planning Director

Subject: Preliminary Highway Map – Comprehensive Transportation Plan, Phase I

Overview

As the Board is aware, the Transportation Advisory Committee (TAC) and County Staff have been working with the Planning Branch of the North Carolina Department of Transportation (NCDOT) to complete the Henderson County Comprehensive Transportation Plan (CTP). On January 27 Beverly Williams, a transportation planner with the NCDOT, presented the Preliminary Highway Map for Phase I of the Henderson County CTP. The TAC has requested that each of the County's governing boards review and comment on the Preliminary Map. Once the TAC has received all comments, a public input process will be initiated. County Staff has reviewed the Preliminary Map and took particular care to ensure that it abides by the principles set forth in the Henderson County 2020 Comprehensive Plan (CCP).

Project Description

The Preliminary Highway Map is one component of the overall CTP for Henderson County. The CTP will consist of a series of maps that show the transportation infrastructure (including improvements to existing infrastructure) that will be needed to manage travel demand in the study area during the life of the CTP (in this case, through 2030). The CTP will be a multi-modal plan, meaning it will include recommendations for public transportation and rail, bicycles, and pedestrians, as well as for roads. NCDOT is still working on its recommendations for the other transportation modes.

The CTP is being prepared by NCDOT in phases. Phase I, which has been in progress for several years, encompasses a study area that is concentrated on the transportation network serving the central core of Henderson County (see attached Preliminary Highway Map). Phase II will include areas of the county that fall outside of the Phase I study area but are within the French Broad River Metropolitan Planning Organization (FBMPO) planning area.

A travel demand model developed by NCDOT, with assistance from a consulting firm, forms the basis for the recommendations shown on the Preliminary Highway Map. The model takes into account current and future population and employment statistics for the study area. Using the model, NCDOT identified deficiencies in the existing road system and anticipated where future problems might occur. The model also allows NCDOT to see the impact of changes or improvements to the transportation network, such as those due to planned road projects. NCDOT and the community can also test examine alternative growth scenarios and solutions to transportation needs through the model.

The CTP will eventually have to be adopted by the FBMPO as well as NCDOT. Because it is a long-range plan that identifies priorities for transportation improvements in Henderson County, it will help justify projects proposed for the NCDOT Transportation Improvement Program (TIP) in the coming years. The CTP must be updated every five years.

NCDOT Findings

As the Board reviews the Preliminary Highway Map, the following NCDOT recommendations should be noted:

Current TIP Projects – The projects currently identified in the TIP as funded projects are considered constructed by 2030 for the Plan analysis. NCDOT staff has noted that these projects will offer much needed improvement to the highway system and will need local support to advance.

Inner Loop – Improvements in lane width, alignment, and traffic operations on several local streets will facilitate traffic movement around downtown Hendersonville. Many of these improvements can be accomplished at the NCDOT Division level and may not require TIP funding.

Corridor Improvements – US 25 North, US 176, and Four Seasons Boulevard should be given a more detailed study in an effort to identify any access management techniques and land use considerations that can maintain mobility in these areas. US 25 North currently has sufficient capacity to act as the primary entrance to Hendersonville. Following the completion of the current US 25 North project, I-26 signage changes are recommended to divert traffic from the north to downtown Hendersonville along this corridor rather than continue to the US 64 interchange.

Howard Gap Road – As development increases on the eastern side of the planning area, Howard Gap Road will become a major north-south corridor. In order to maintain the mobility on this corridor, special consideration must be given to control of access to adjacent development. Improvements in alignment, addition of turn lanes, limited driveway cuts, use of service roads, and limited signalized intersections are recommended as strategies to maintain capacity. For protection of future needed right-of-way, a four-lane median-divided cross-section is recommended. This corridor will be given additional study in Phase II.

Northern Connection – An additional I-26 interchange north of US 64 offers the most relief in future traffic volumes for Four Seasons Boulevard. Several interchange locations were studied. However, the Balfour Parkway alignment is preferred by the TAC. This new location facility allows a limited access roadway that can be implemented in stages to provide connections to US 25, NC 191, and US 64. In addition to a new interchange at I-26, this alignment will require an interchange at US 25 North to allow a railroad crossing. This facility will require major TIP funding and in-depth environmental and design considerations.

Staff Comments

County Staff has reviewed the Preliminary Highway Map in terms of its relationship and/or impact on current plans and projects of Henderson County Government (“the County”) and offers the comments that follow.

Relationship to the CCP

Staff has found that the improvements and new road construction projects proposed on the Preliminary Highway Map support the principles of the CCP. The Transportation Element of the CCP has one recommendation (Recommendation T-01): “*Develop and maintain a high quality transportation network, and continue to provide leadership at every level in transportation planning.*” The first action strategy (Action Strategy A) under CCP Recommendation T-01 is: “*Adopt and Implement a Multi-modal Transportation Plan.*” This action strategy acknowledges that the CTP is under development by NCDOT (but does not assume that the CTP is the plan that will be adopted by Henderson County).

The Phase I study area for the CTP is similar to the Urban Services Area identified in the Growth Management Strategy of the CCP. Through the Growth Management Strategy, the County has determined that it wants to focus growth, including investments in infrastructure, within the Urban Services Area. The proposed projects on the Preliminary Highway Map will help accommodate such additional growth. Three of the next four small area plans proposed in the CCP are in areas where road improvements are proposed (East Flat Rock/Upward Road, NC 191 South/Mills River East and Howard Gap Road). When funding is provided and planning begins for specific road projects, the County will need to review such projects at a more detailed level and in light of other planning efforts, such as the small area plans. Coordinating land use and transportation planning will be critical as the County implements the CCP and develops the small area plans.

The recommendations accompanying the Preliminary Highway Map state that certain road corridors should be studied in more detail to identify if there are access and land use management techniques that would maintain mobility on the roads. Action Strategy B of Recommendation T-01 in the CCP is: *"Identify and incorporate access management standards and requirements into County land development ordinances."* The Board will recall from its Strategic Plan discussions that staff intends to examine access management standards in developing the Land Development Code. The Land Development Code should also provide the County with a greater ability to manage land uses in and around major road corridors.

Relationship to Other Plans and Projects

As noted above, the "Balfour Parkway" shown on the Preliminary Highway Map could ultimately provide connections between I-26, US 25, NC 191 and US 64. It is intended that the project be constructed in stages. A conceptual alignment for the project is shown on the attached map prepared by Laughter, Austin and Associates. That map shows the proposed road section between US 25 and NC 191 spanning portions of several County properties, including those containing (or to contain) the landfill, Stoney Mountain Activity Center and the future animal shelter. The proposed road is also shown as crossing the Henderson County Public Schools bus garage site and the old prison camp property owned by NCDOT. The CTP recommendations indicate that substantial funding as well as detailed environmental and design work would be needed if the project were to be constructed.

Staff will review the Preliminary Highway Map and other NCDOT recommendations at the February 7, 2005 Board of Commissioners meeting and will try to answer any questions Board members may have.

HENDERSON COUNTY PHASE I

Comprehensive Transportation Plan

Highway Map

January 27, 2005

MARTIN
ALEXIOU
BRYSON

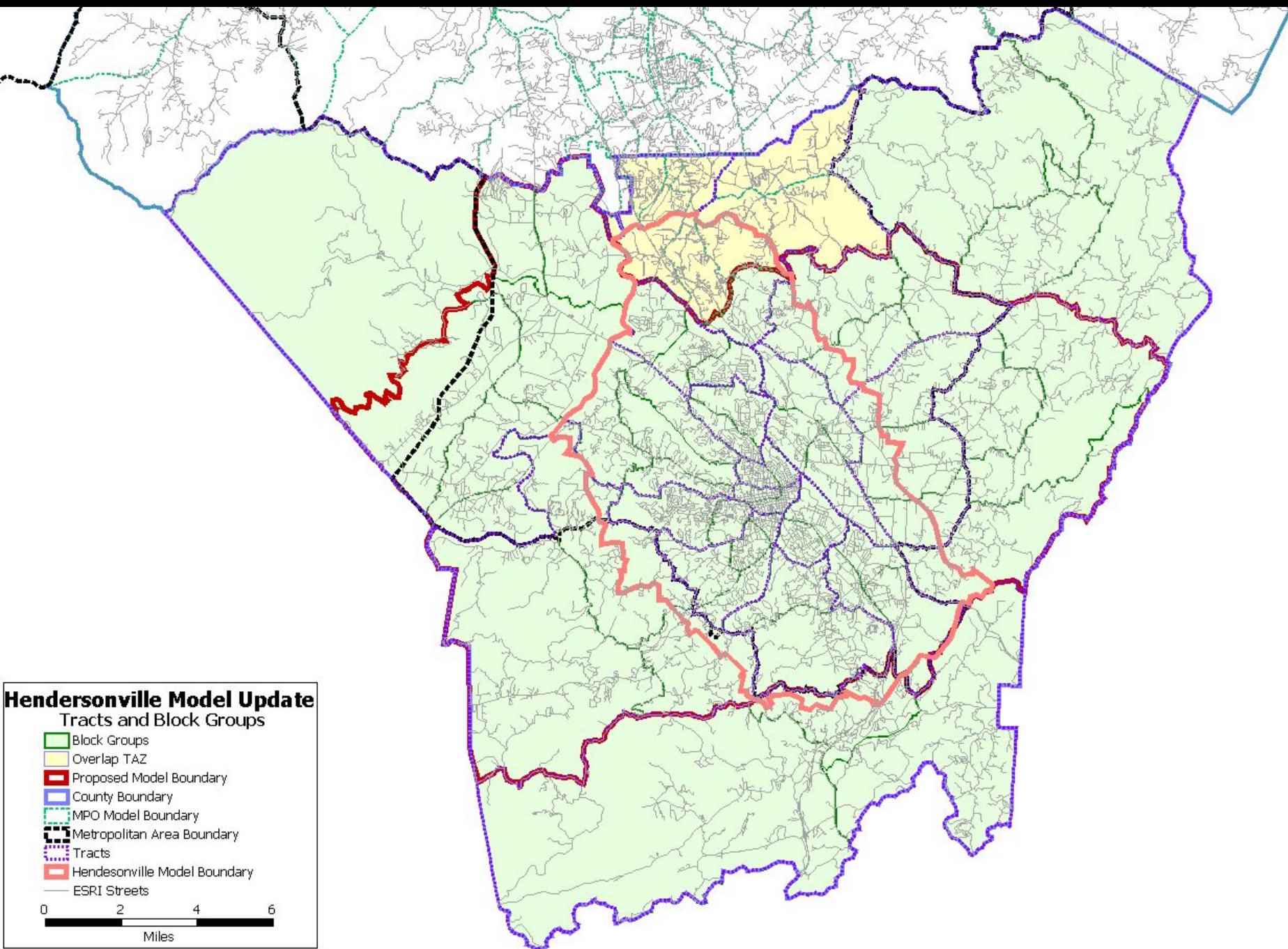


Purpose of Study

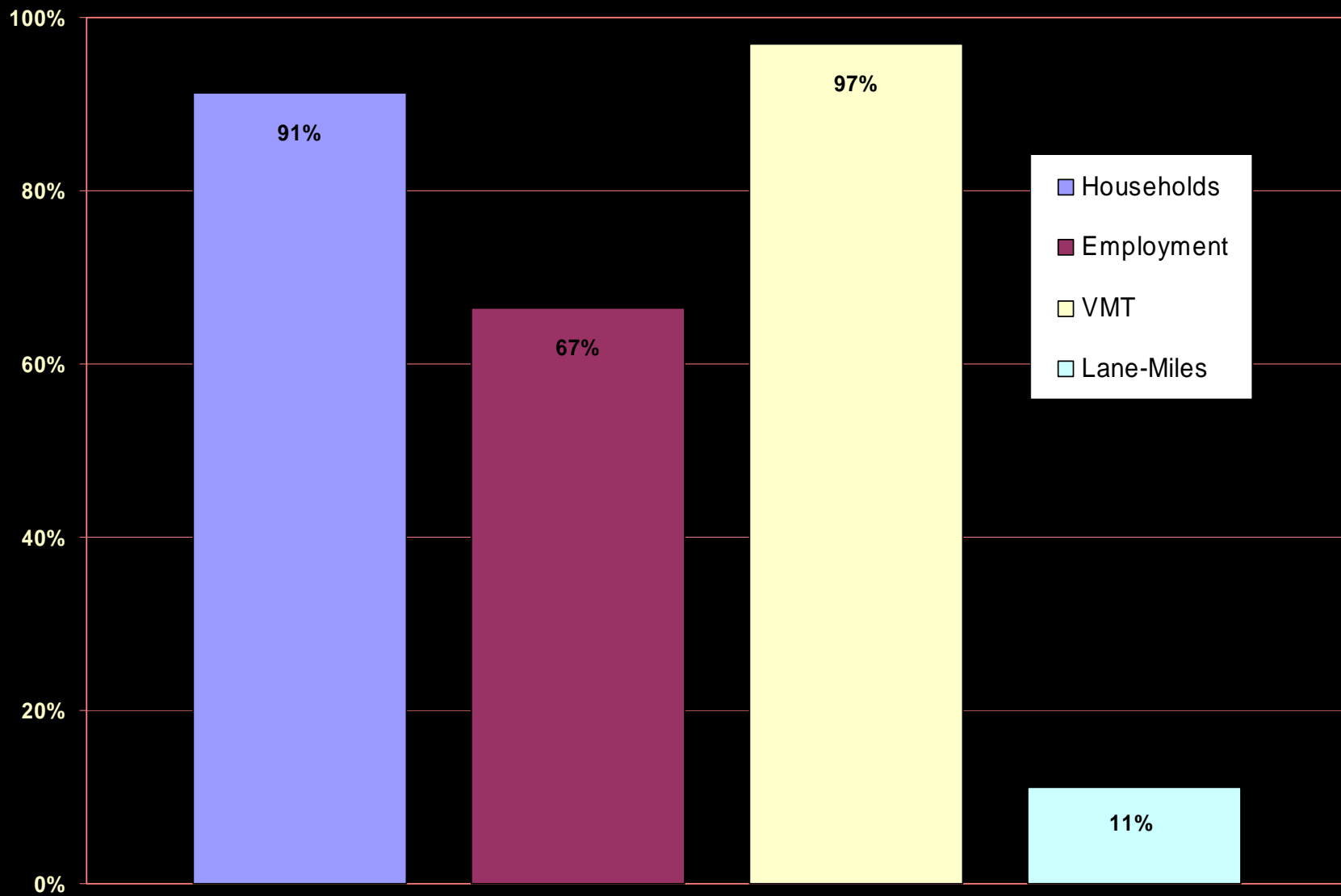
To provide transportation planning in support of *this community's vision* for continuing growth. This vision is to be reflected in the *Transportation Plan*, the *Comprehensive Plan*, and other future planning documents.

Today's Presentation

- Background
 - Planning data
 - Comprehensive Plan
- Travel Demand Model
 - System deficiencies
 - Alternative analysis
 - Project considerations
- Recommendations
 - Local considerations
 - Transition areas
 - Improvement Priorities
- Comprehensive Transportation Plan Adoption

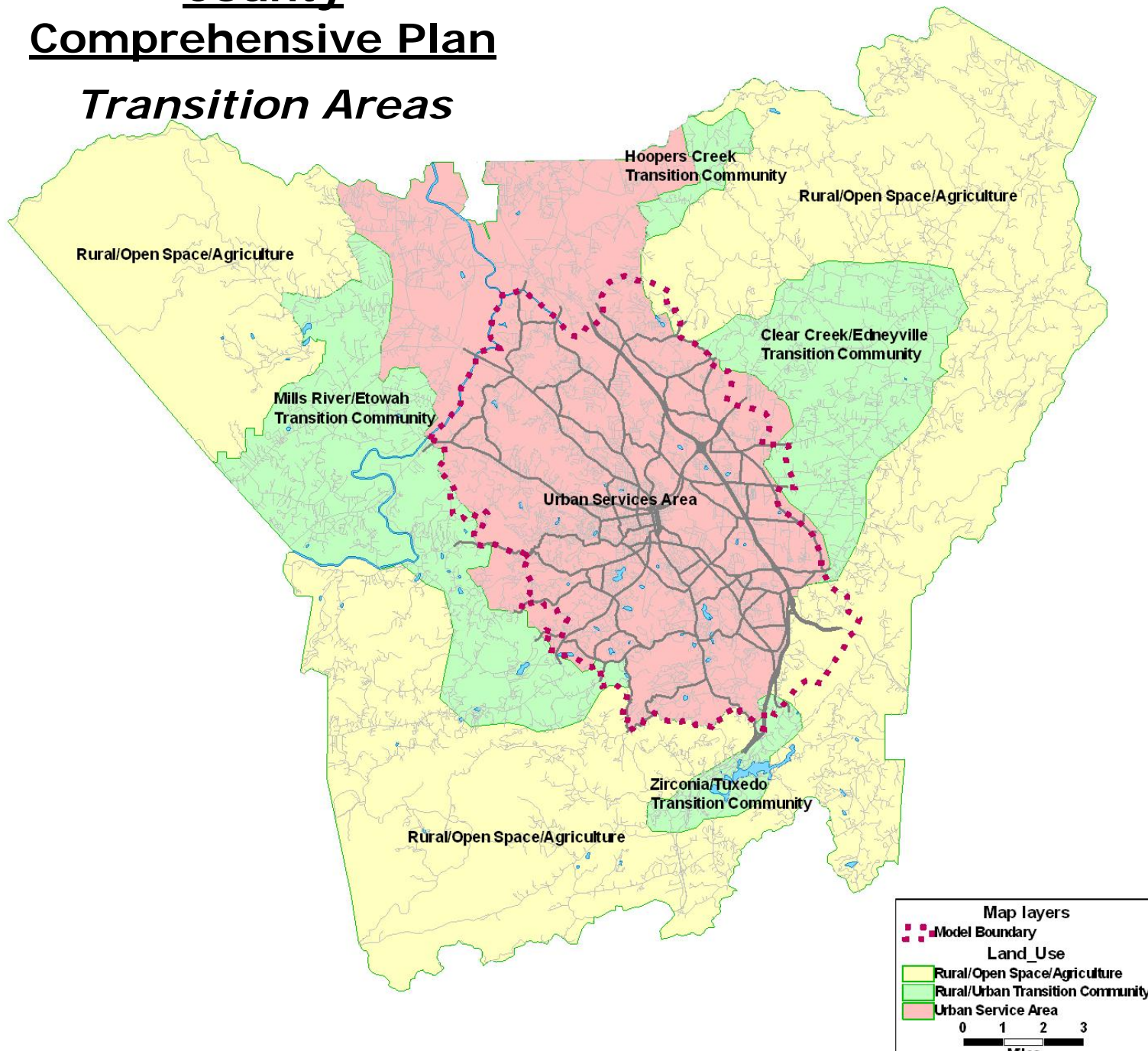


Relative Growth, 2000-2030

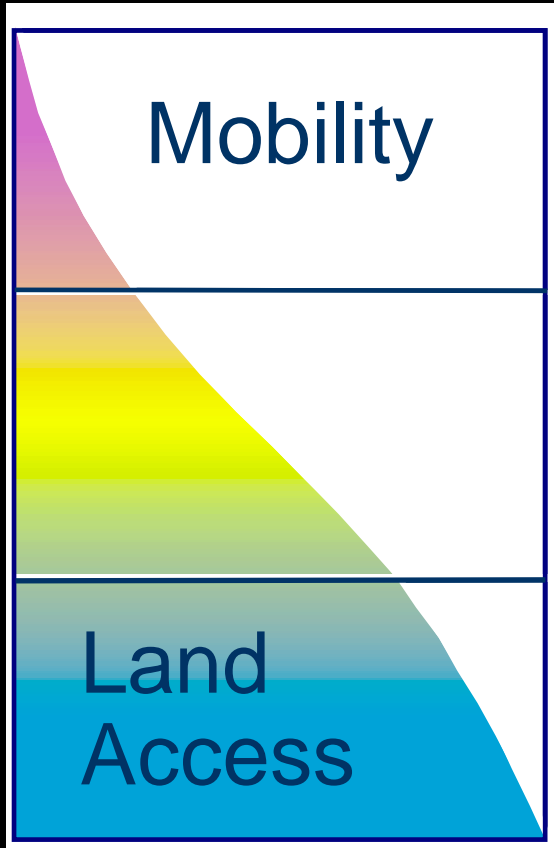


County Comprehensive Plan

Transition Areas



The Land Use Connection



Freeway

- high mobility, lower access

Expressway

- balance between mobility and access

Boulevard

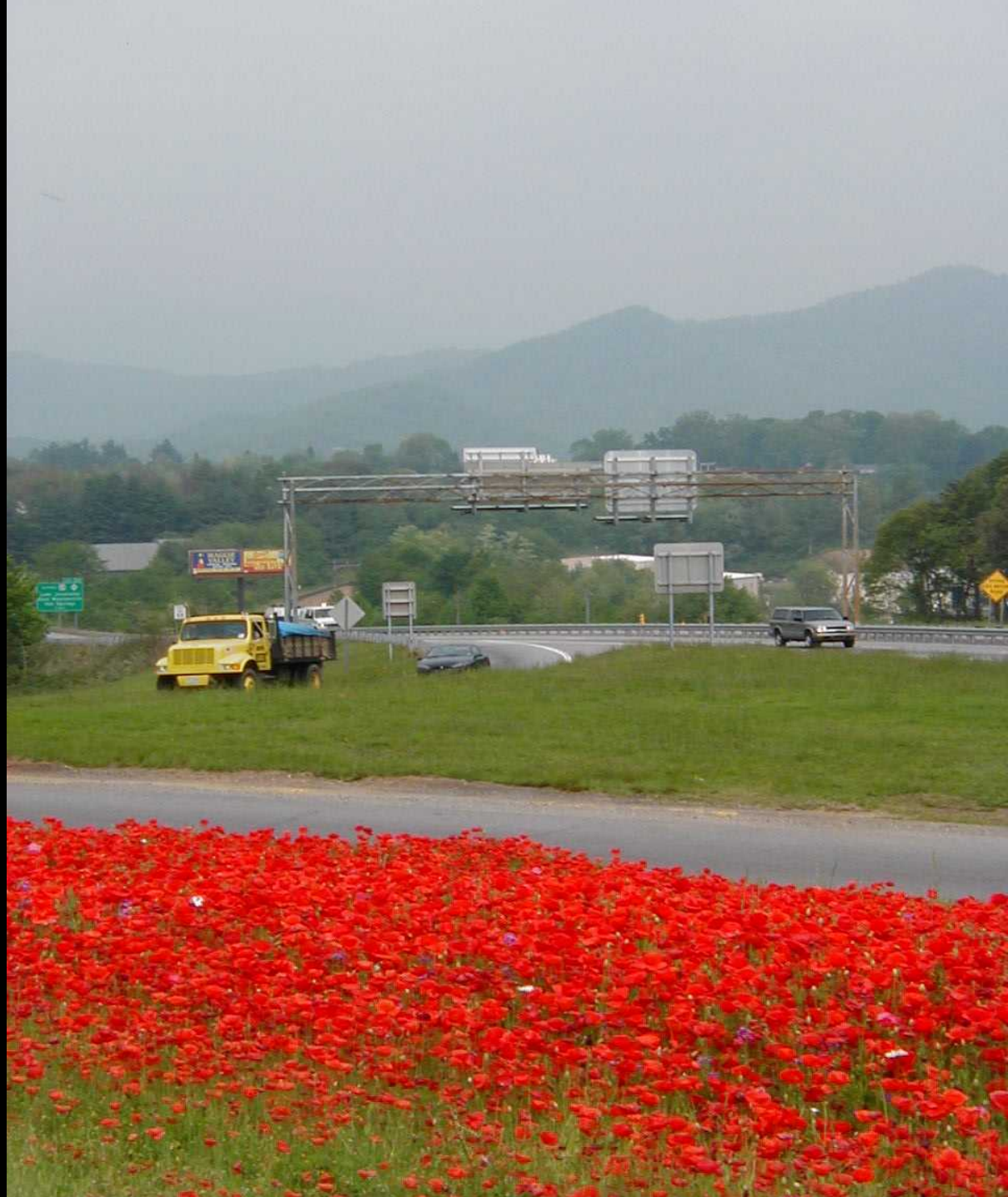
- lower mobility, high access

Major and Minor Thoroughfares

- access to local streets

Freeway

- Interchanges
- High speed limits
- Full access control



Expressway

- 45 - 60 mph speed limit
- No signals
- Right in, right out
- Partial control of access



Boulevard

- 35 - 50 mph speed limit
- Limited access control
- median breaks more often



Major Thoroughfare

- All US and NC Routes
- More than three travel lanes
- Full access to adjacent land



Minor Thoroughfare



Projects In E+C

- **R-2214**: Widen US 25, Fletcher to Brookside Camp Rd.
- **R-2588**: Widen NC 191, NC 280 to Kinsington Rd.
- **R-4430**: Widen Upward Rd, US 176 to Howard Gap Rd.
- **U-4428**: Widen US 64 to 3 lanes, Blythe St to US 25S.
- **R-505**: Widen US 225/US 25 to I-26 Connector to 4 lane expressway.
- **I-4400**: Widen I-26 to 6 lanes.

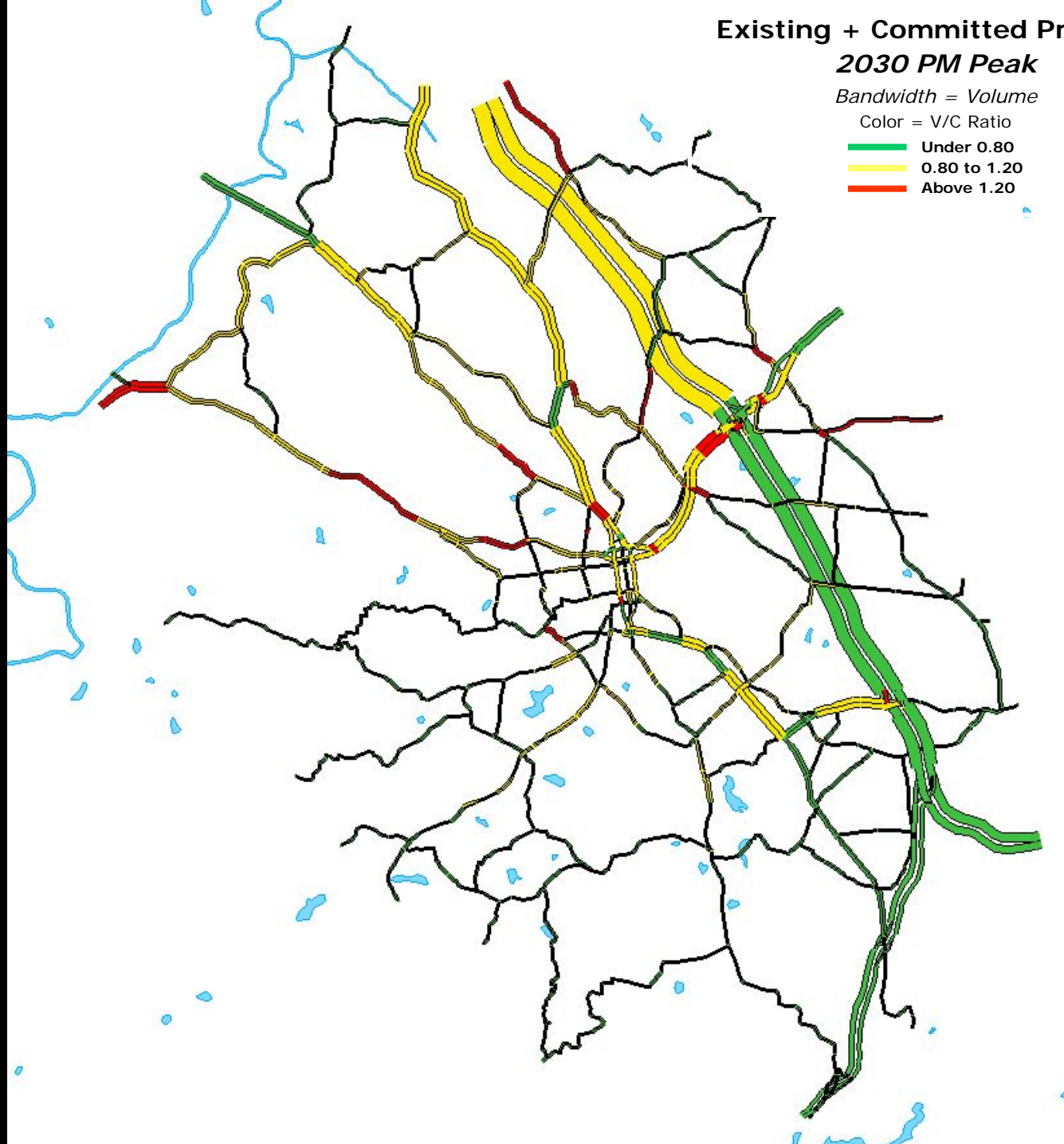
Existing + Committed Projects

2030 PM Peak

Bandwidth = Volume

Color = V/C Ratio

- Under 0.80
- 0.80 to 1.20
- Above 1.20



Types of Traffic Problems

- Congested Radial Corridors
- Local Circumferential Traffic
- Crossing I-26
- Hot Spots & Bottlenecks

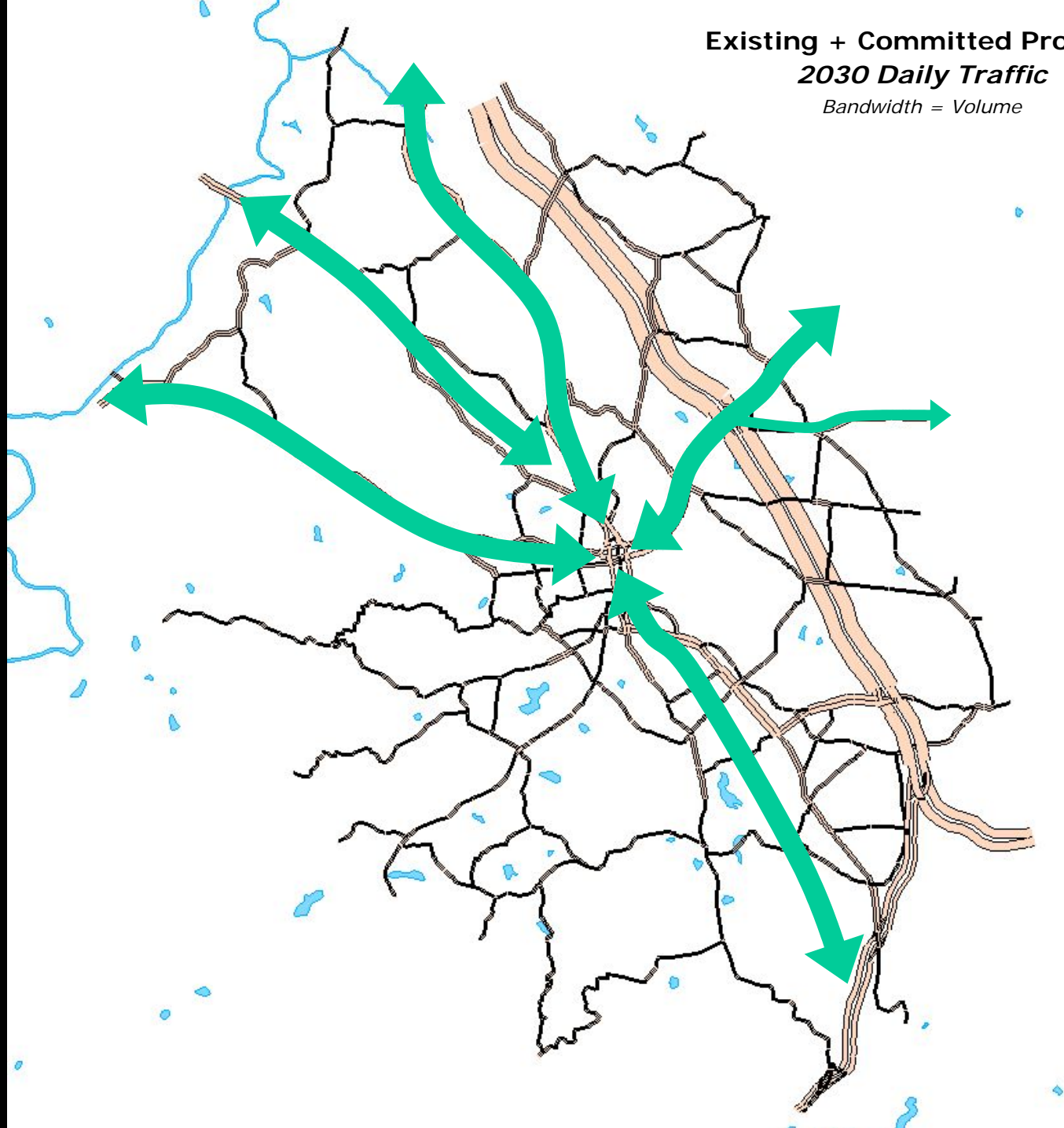
Congested Radial Corridors

- US 64 east/Sugarloaf Road
- US 64 /7th Avenue
- US 64 west
- US 25 north
- NC 191
- US 176/Old Spartanburg Hwy

Existing + Committed Projects

2030 Daily Traffic

Bandwidth = Volume



Circumferential Traffic

“Inner Loop”

- Blythe St./Lake St./Hebron St./State St.
- Erkwood Dr./Shepard St./Airport Rd.
- Tracey Grove Rd./Duncan Hill Rd./Berkeley Rd.

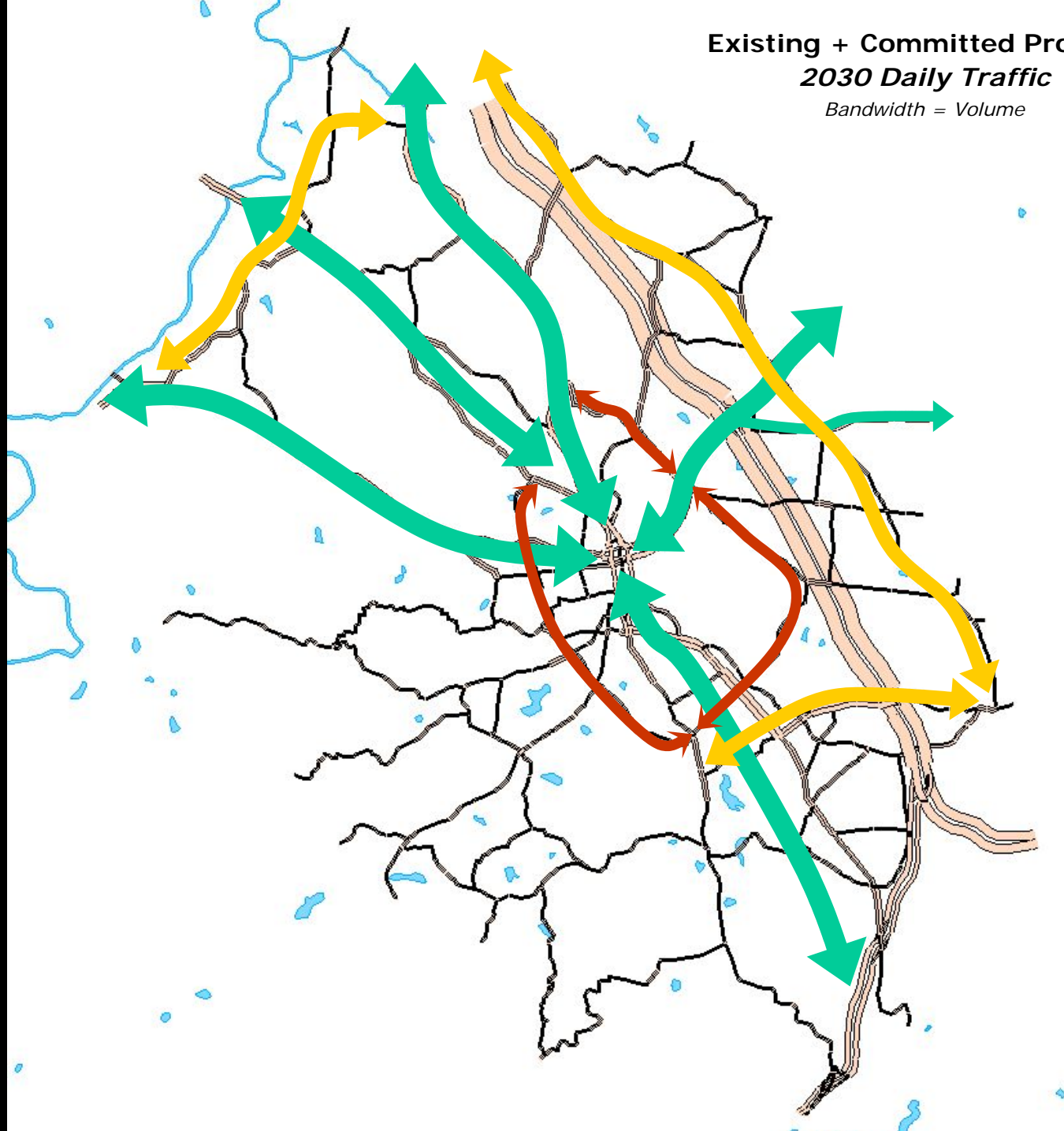
“Outer Loop”

- North and South Rugby
- Upward Road
- Howard Gap Road

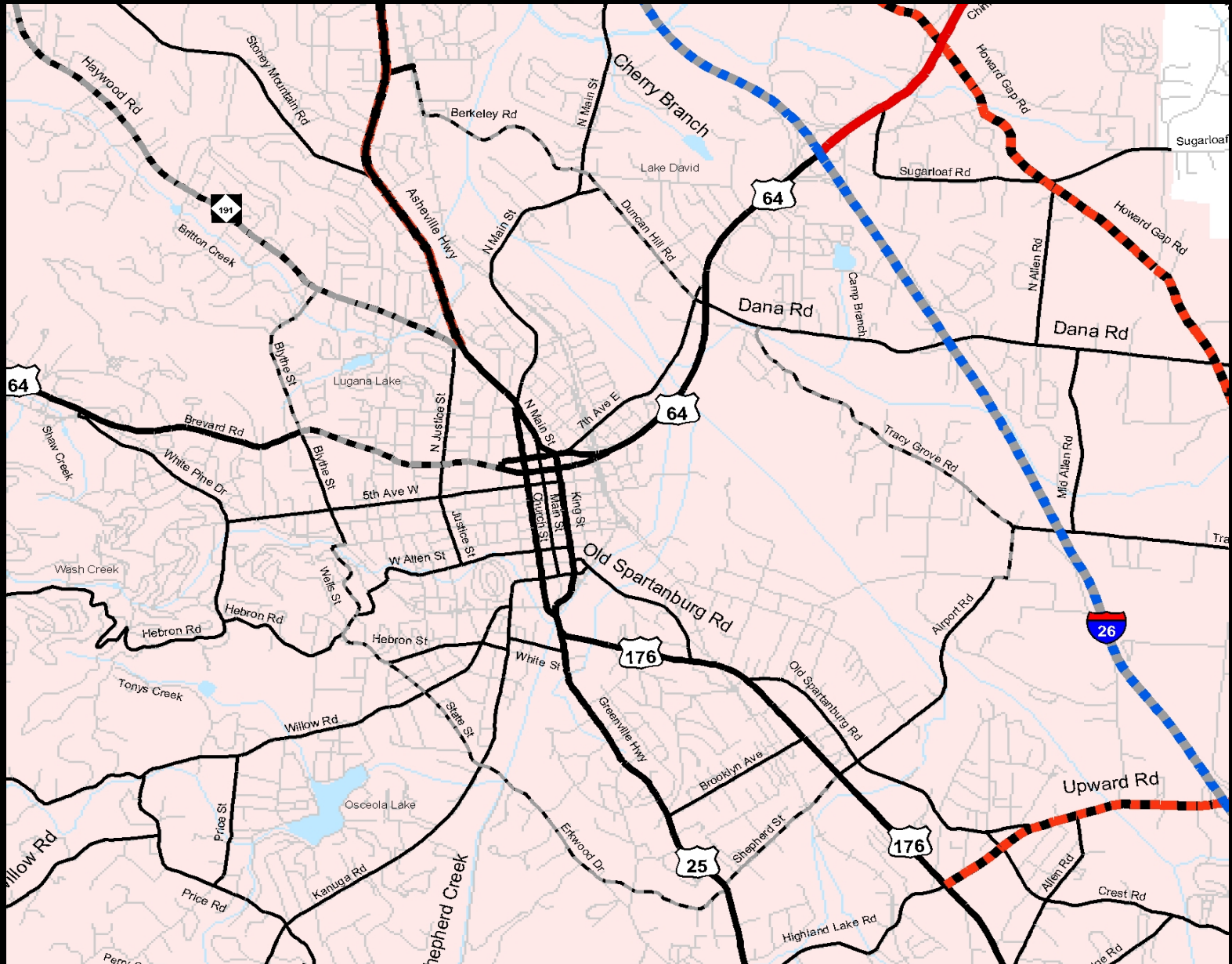
Existing + Committed Projects

2030 Daily Traffic

Bandwidth = Volume



Loop with Existing Roads



This is a detailed street map of the Spartanburg, South Carolina area. The map shows a network of roads including major highways like US-64, US-176, and US-25, as well as local streets such as Main St, Market St, and Cherry Branch. Key landmarks include Lake David, Lugana Lake, and Osceola Lake. The map also shows the intersection of I-26 and I-85 on the right side.

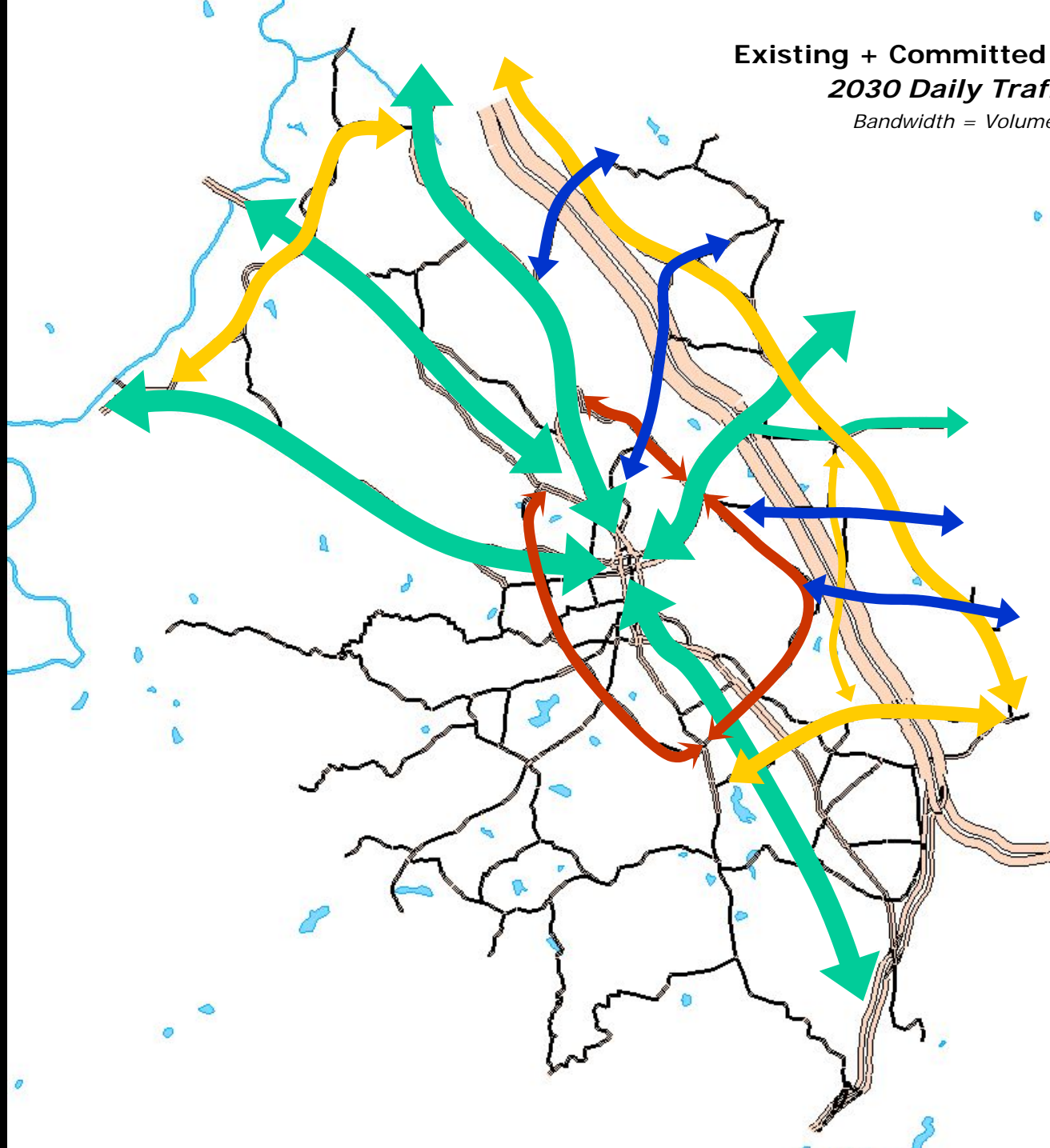
Crossing I-26

- US 25 North
- Brookside Camp Road
- Clear Creek Road
- US 64
- Dana Road
- Tracey Grove Road
- Upward Road

Existing + Committed Projects

2030 Daily Traffic

Bandwidth = Volume



Hot Spots & Bottlenecks

- US 64 from Sugarloaf Rd. to Dana Rd.
- US 64 at RR & Maple St.
- US 25 between N. Main St. & NC 191
- US 25 & Berkeley St.
- NC 191 north of Blythe St.
- US 64 west of Blythe St.
- US 64 through Horseshoe area

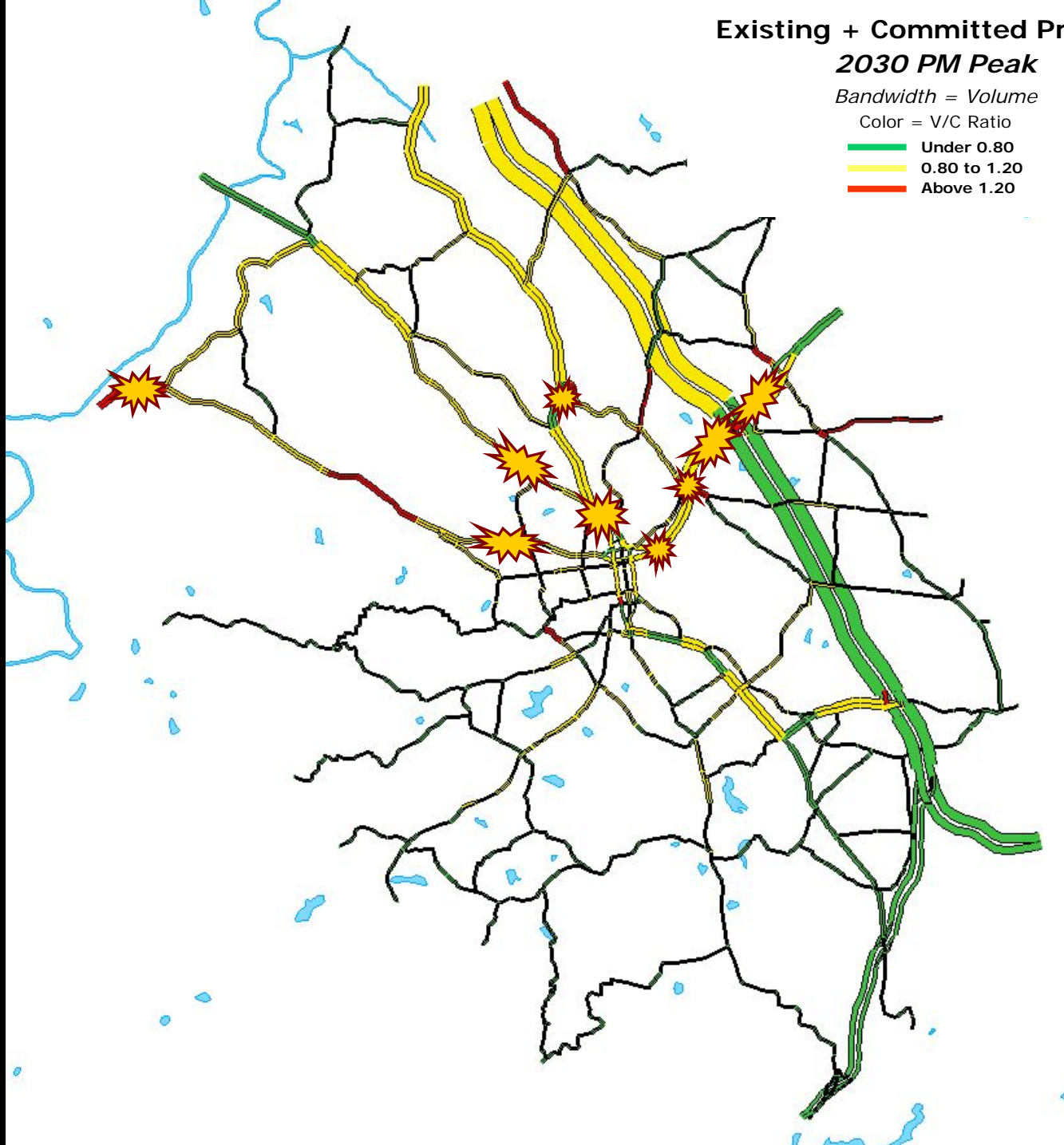
Existing + Committed Projects

2030 PM Peak

Bandwidth = Volume

Color = V/C Ratio

- Under 0.80
- 0.80 to 1.20
- Above 1.20



Alternatives Analysis for Future Northern Connector

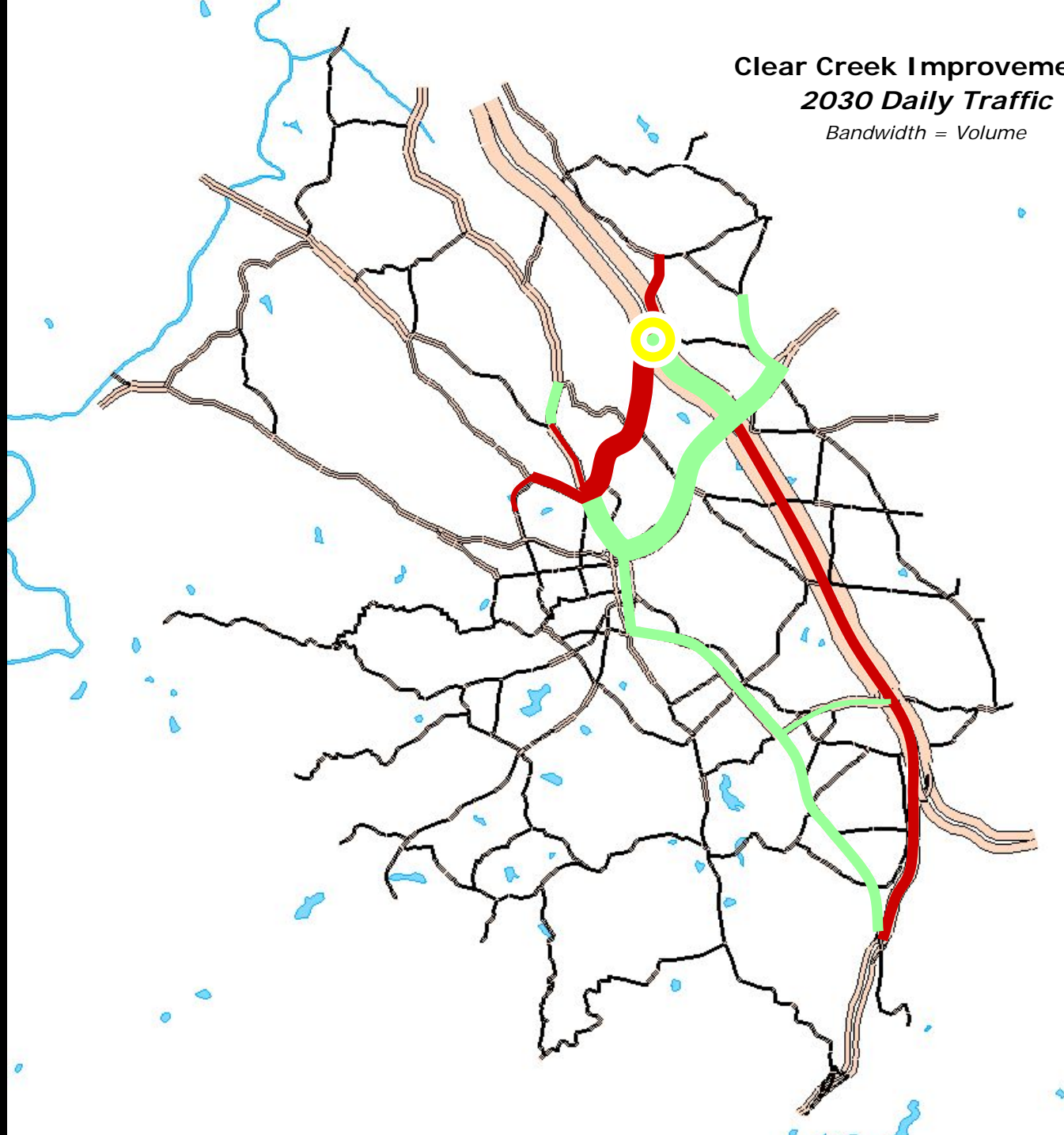
Linking I-26 and US 25

- Clear Creek Connector
- Brookside Camp Road
- Balfour Parkway
- Other

Clear Creek Improvements

2030 Daily Traffic

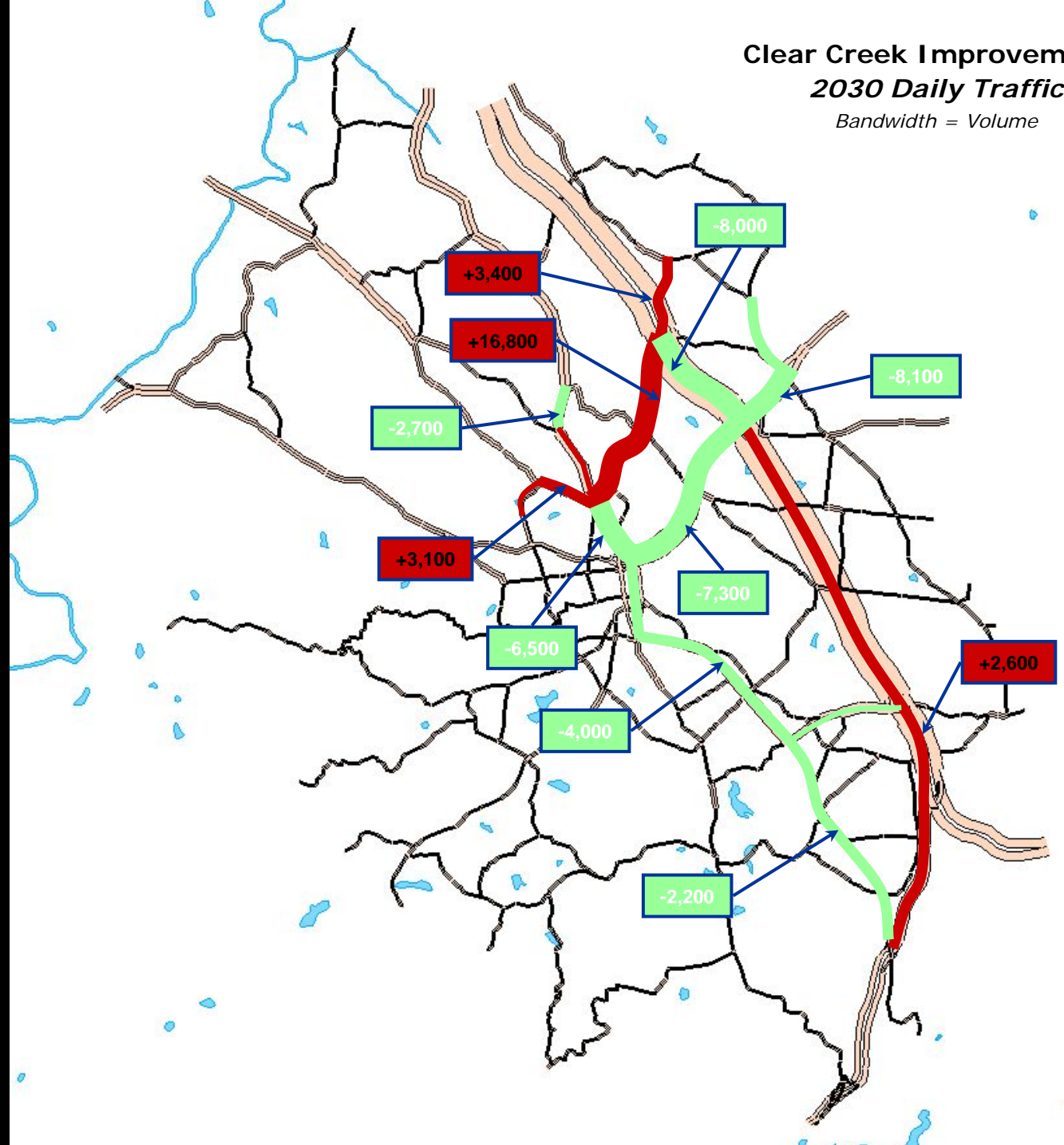
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Clear Creek Improvements

2030 Daily Traffic

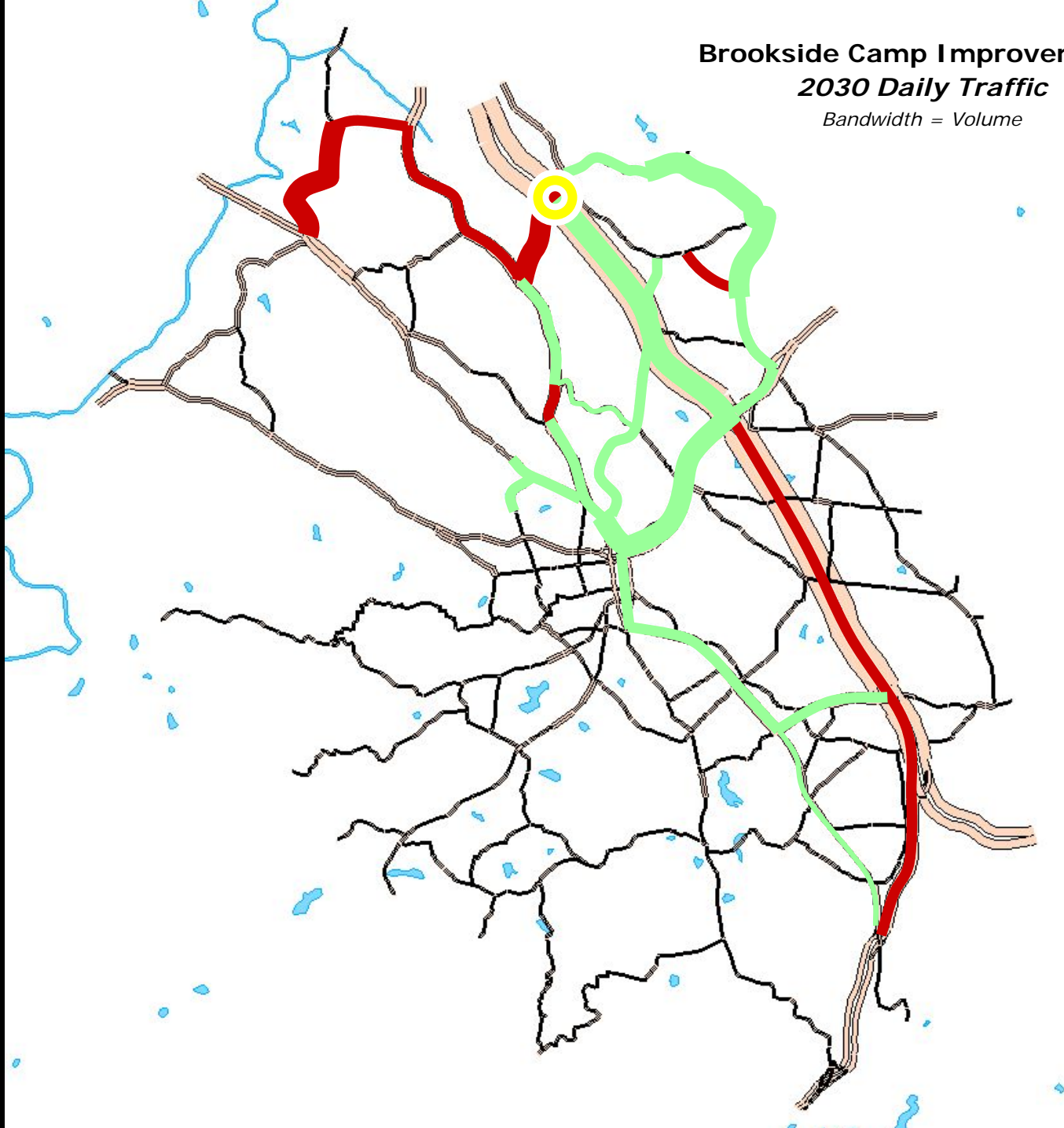
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Brookside Camp Improvements

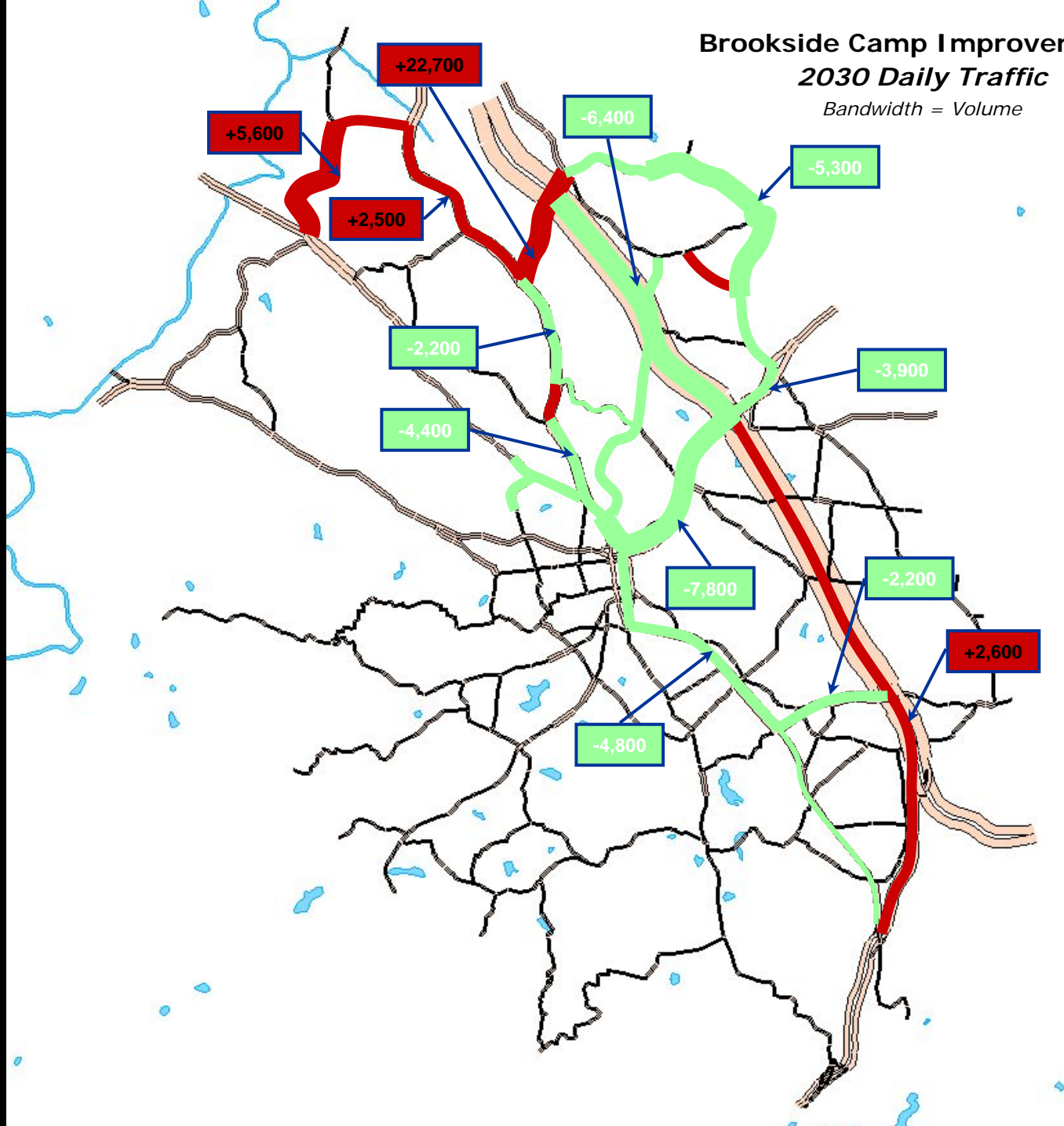
2030 Daily Traffic

Bandwidth = Volume



Brookside Camp Improvements 2030 Daily Traffic

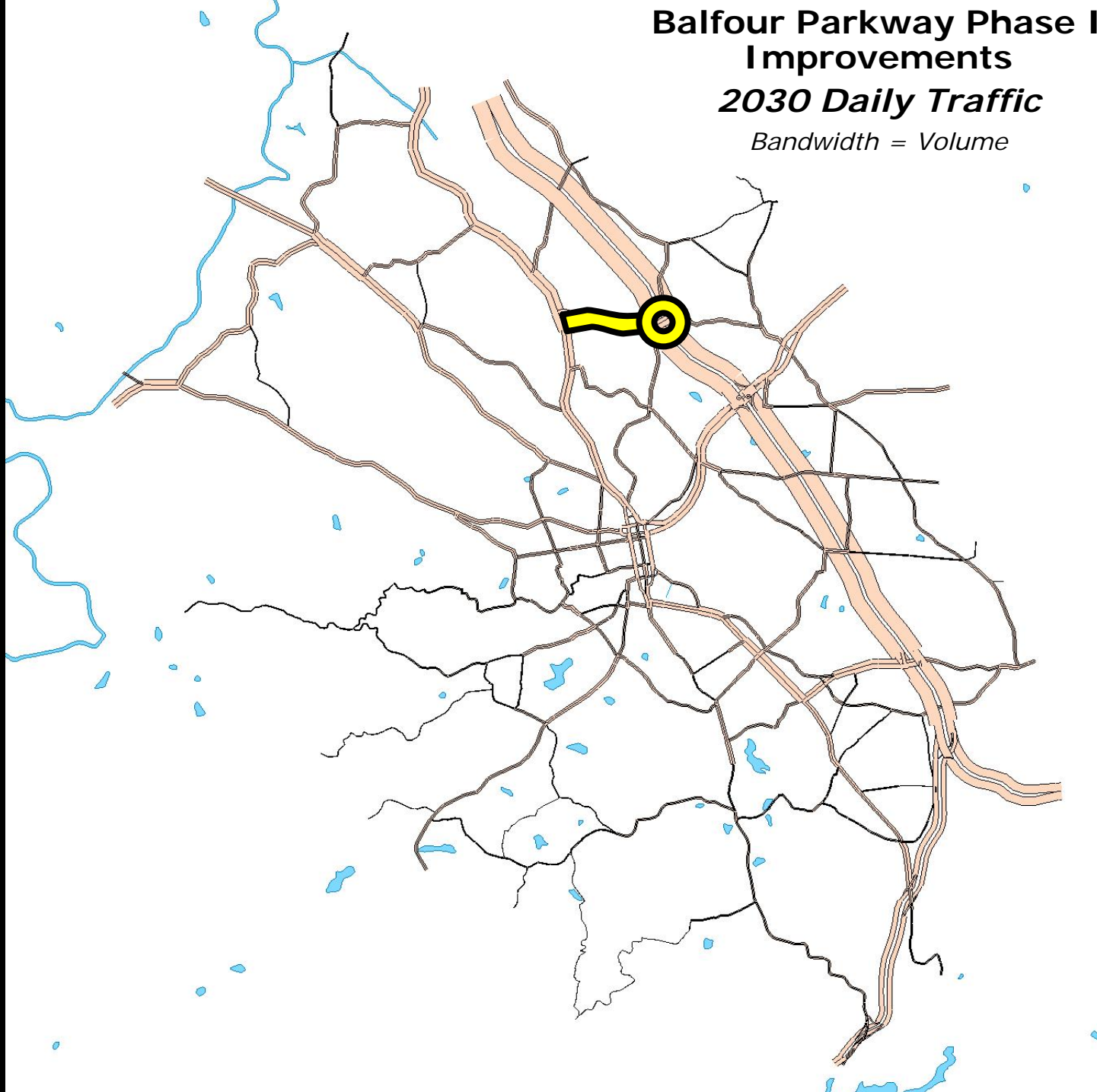
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Balfour Parkway Phase I Improvements

2030 Daily Traffic

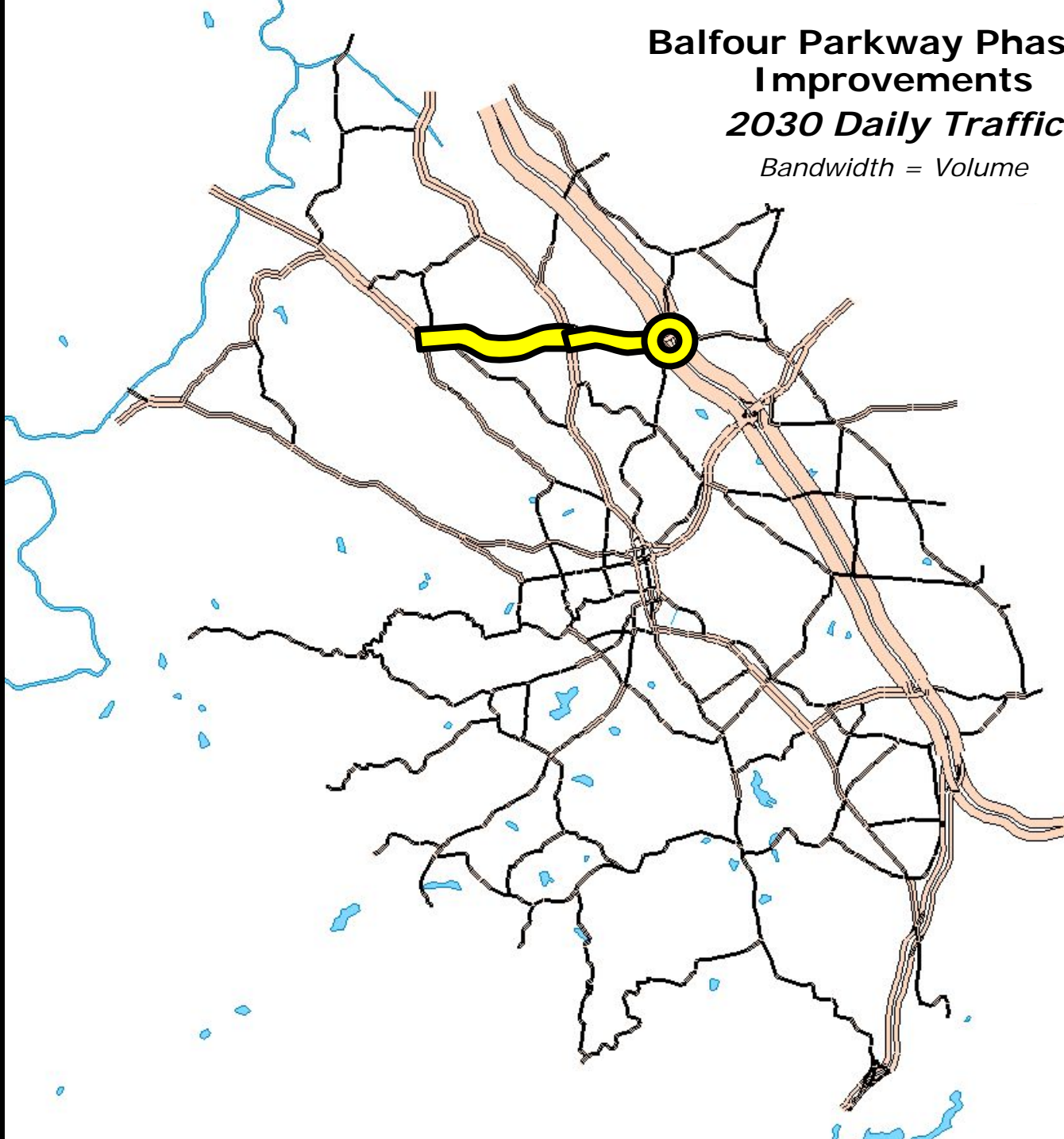
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Balfour Parkway Phase II Improvements

2030 Daily Traffic

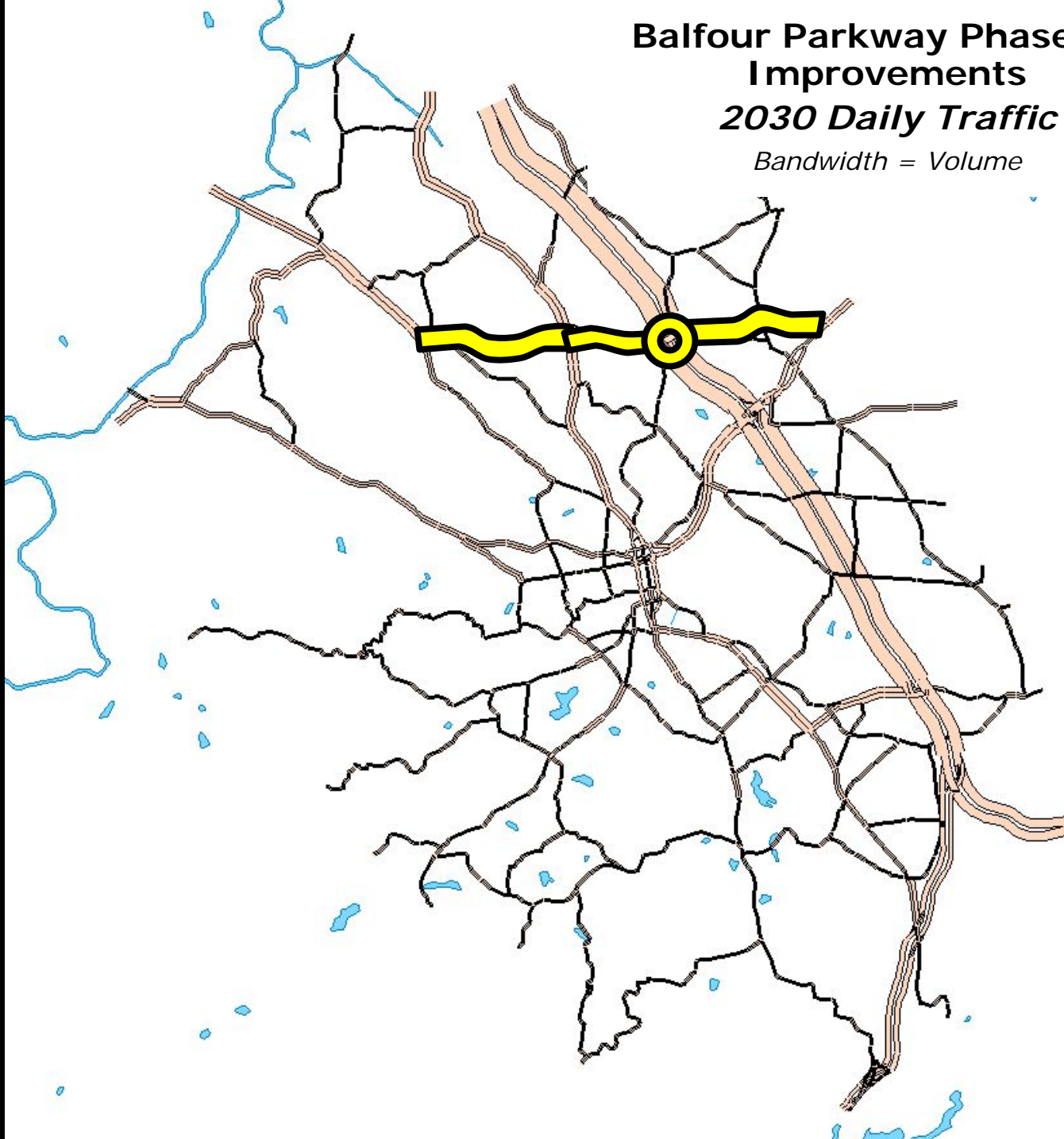
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Balfour Parkway Phase III Improvements

2030 Daily Traffic

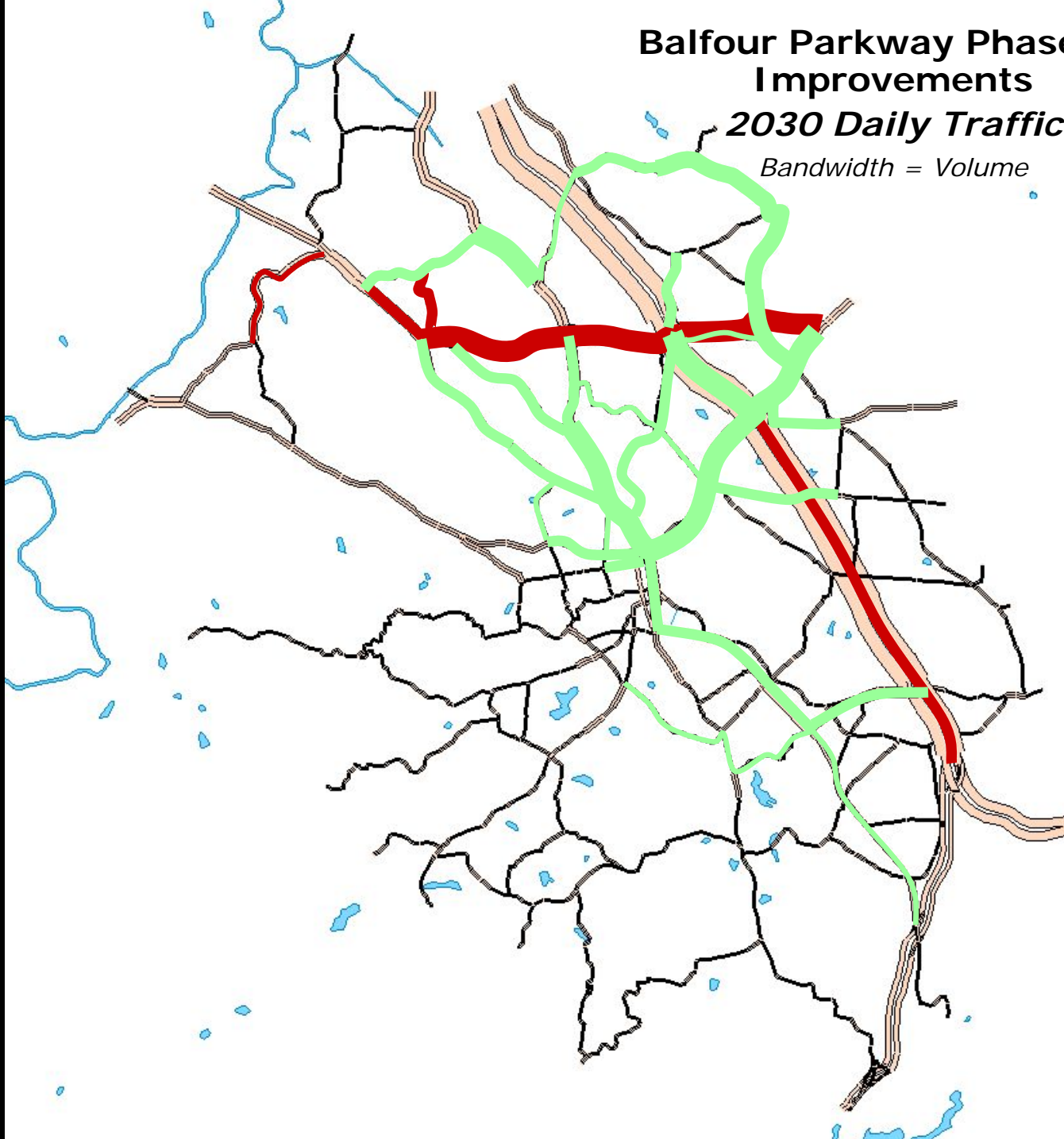
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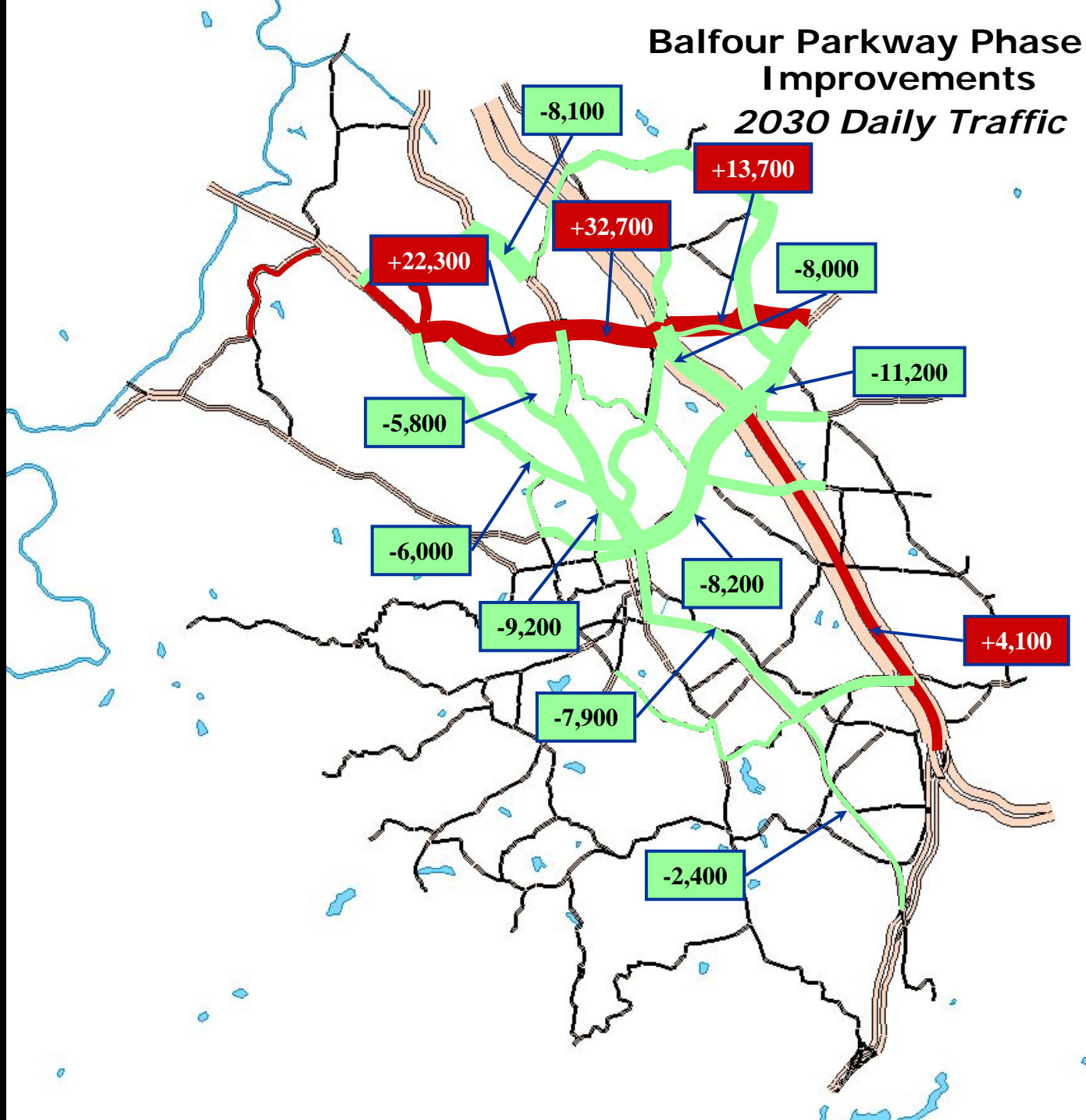
Balfour Parkway Phase III Improvements

2030 Daily Traffic

Bandwidth = Volume



Balfour Parkway Phase III Improvements 2030 Daily Traffic



Recommendations

- Local support for current TIP projects
- Access management for US 25 North, US 176 and Four Seasons Blvd
- Efficient “Loop” operations
- Howard Gap Road improvements
- I-26 Northern Connector

Access Management

- Recommended for US 25 North, US 176 and Four Seasons Blvd
- Consistent with Statewide Multi-modal Plan and Comprehensive Plan
- Preserve mobility and safety on “gateway” corridors
- Operational improvements at relatively low cost without a “one size fits all” approach

Inner “Loop”

- Local impacts only
- Opportunities to protect corridors for future connections (*Maple Road?*)
- Relatively low-cost, easy-to-implement in stages
- Key is *managing* traffic
 - Don’t make it too attractive
 - Maintain steady, moderate speeds
 - Promote pedestrian & vehicular safety

Howard Gap Road

- Critical to eastern growth
 - Distributes traffic to I-26 crossings & interchanges
 - Complements I-26 & US 64
 - Serves new development
- Long term goal: widen to 4 lanes with median
 - Staged improvements to precede development
 - Protect right of way for future cross section
- Effective access management & land use coordination will be critical to preserve capacity & performance.



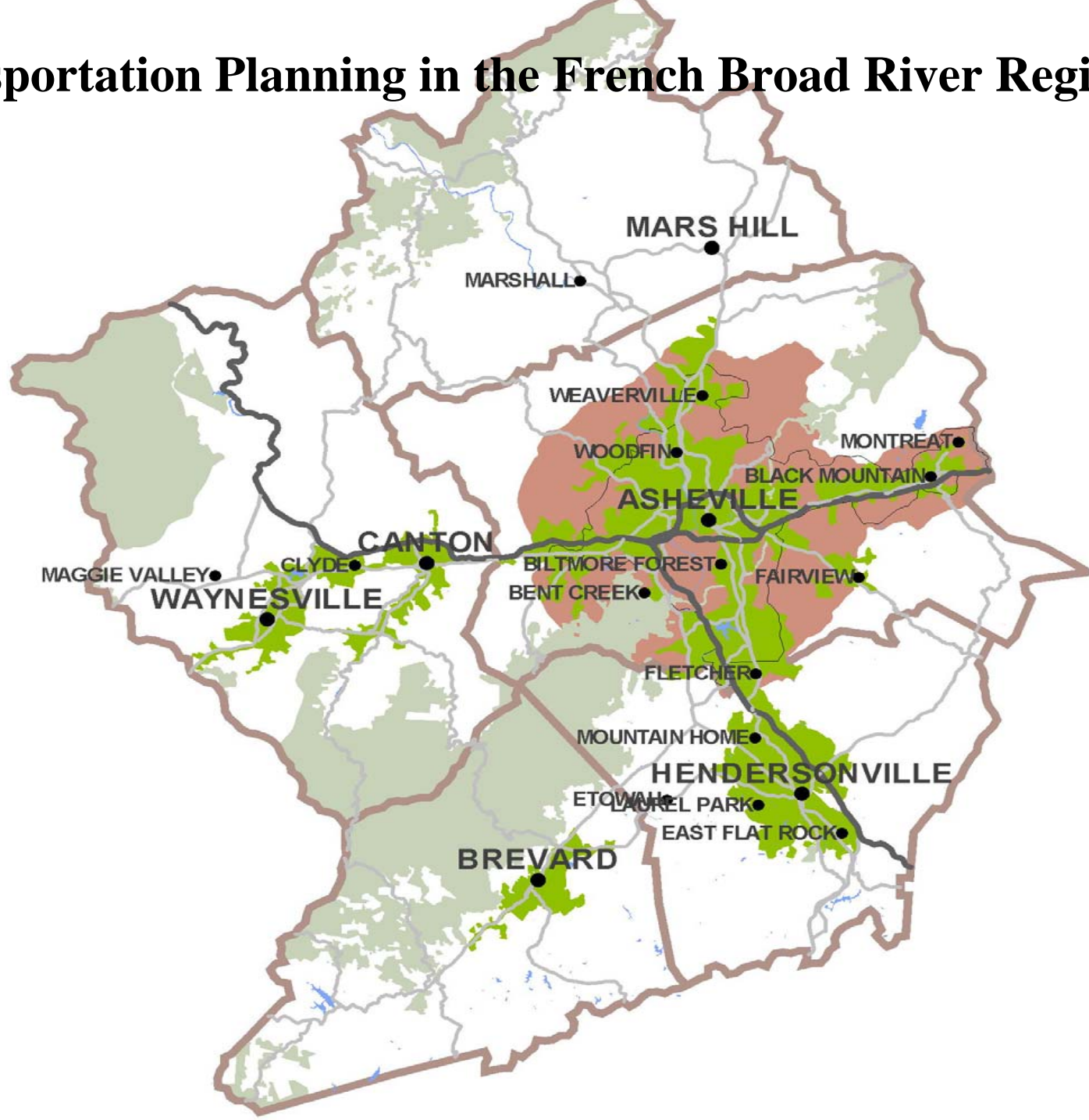
Balfour Parkway

- Uses new alignments instead of existing roads
- Three phases
 - Phase I: New interchange at Clear Creek location connection to US 25
 - Phase II: West to NC 191, north of Stoney Mountain Rd.
 - Phase III: East to US 64, north of Nix Rd.
- Opportunity for limited access facility increases mobility

Next Steps

- **Local TAC adoption**
- **Public Involvement**
- **Local endorsement of Transportation Plan**
- **MPO adoption**
- **Inclusion in French Broad River MPO
*Long Range Transportation Plan***
- **Continuing development of other modes**

Transportation Planning in the French Broad River Region



Comprehensive Transportation Plan

Henderson County Phase I

Highway Recommendations

Current TIP Projects

The projects currently identified in the TIP as funded projects are considered constructed by 2030 for the Plan analysis. These projects offer much needed improvement to the highway system and will need local support to advance.

Inner Loop

Improvements in lane width, alignment, and traffic operations on the streets identified will facilitate local traffic around the Downtown congestion. Without the use of new roadways to complete this Loop, this type of improvement can be accomplished at the Division level and should not require TIP funding.

Corridor Improvements

US 25 North, US 176, and Four Seasons Boulevard should be given a more detailed study in an effort to identify any access management techniques and land use considerations that can maintain mobility in these areas. US 25 North currently has sufficient capacity to act as the primary entrance to Hendersonville. Following the completion of the current project, I-26 signage changes are recommended to divert traffic from the north to downtown Hendersonville along this corridor rather than continue to the US 64 interchange.

Howard Gap Road

As development increases on the eastern side of the planning area, Howard Gap Road becomes a major north-south corridor. In order to maintain the mobility on this corridor, special consideration must be given to control of access to adjacent development. Improvements can be staged to follow development beginning at the intersection with US 64 and continuing to the north and south. Improvements in alignment, addition of turn lanes, limited driveway cuts, use of service roads, limited signalized intersections are recommended as strategies to maintain the capacity. For protection of future needed right of way, the four-lane median-divided cross-section is recommended. This corridor will be given additional study in Phase II.

Northern Connection

An additional I-26 interchange north of US 64 offers the most relief in future traffic volumes for Four Seasons Boulevard. Several interchange locations were studied, however the Balfour Parkway alignment is preferred by the local area. This new location facility allows a limited access roadway that can be implemented in stages to provide connections to US 25, NC 191, and US 64 East. In addition to a new interchange at I-26, this alignment will require an interchange at US 25 North to allow railroad crossing. This facility will require major TIP funding and in-depth environmental and design considerations.

**North Carolina Department of Transportation
Comprehensive Transportation Plan**

Highway Category Descriptions

The following categories are divided highways with a median section.

FREEWAY

This roadway has high traffic volumes moving at high speeds. The intent is to move people and goods over longer distances without interruption caused by traffic signals. Access to this roadway is allowed only at interchanges.

Examples: I-26, I-40, I-240

EXPRESSWAY

This roadway has high traffic volumes moving at medium to high speeds (45-60 mph). Access is allowed to the highway at limited locations, but only right-in, right-out. There are no signalized intersections, and breaks in the median are limited. There may be accommodation for U-turns at some locations.

Examples: Sections of US 25-70 in Madison County, US 221 in Marion

BOULEVARD

This roadway moves traffic at lower speeds (30-55 mph) to allow access to land development. Signalized intersections are allowed. Driveway access is allowed as right-in, right-out, and median breaks are more common.

Examples: US 64 west of Brevard, NC 280 west of NC 191

The following categories are undivided highways.

OTHER MAJOR THOROUGHFARE

Roadways that do not contain median barriers and have more than three lanes for travel are in this category. All US and NC routes, regardless of number of lanes, are also included. The roads in this category are intended for the purpose of accessing local development, and for this reason traffic may move more slowly or be subject to delays.

Examples: US 25, US 176, Four Seasons Boulevard

MINOR THOROUGHFARE

Undivided roadways that have three lanes or less for travel and do not meet the criteria for Major Thoroughfare are included in this category. In urban areas these are primarily lower traffic volumes and lower speeds.

Examples: Upward Road, Howard Gap Road

PRELIMINARY

Highway Map

French Broad River MPO

Comprehensive Transportation Plan

Henderson County Phase I

Freeways

- Existing
- Needs Improvement
- Recommended

Expressways

- Existing
- Needs Improvement
- Recommended

Boulevards

- Existing
- Needs Improvement
- Recommended

Other Major Thoroughfares

- Existing
- Needs Improvement
- Recommended

Minor Thoroughfares

- Existing
- Needs Improvement
- Recommended

- Existing Interchange
- Proposed Interchange
- Existing Grade Separation
- Proposed Grade Separation

0 0.25 0.5 1 1.5 2 Miles

PREPARED BY THE
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PLANNING BRANCH

IN COOPERATION WITH
US DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

Sheet 2 of 5

Base map date: February 21, 2004

Refer to CTP document for more details

