



Jackson City Wide Transportation Plan

January 2018



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Jackson Citywide Transportation Plan

Presentation to
Mayor and Board of Aldermen
January 8, 2018



Introduction

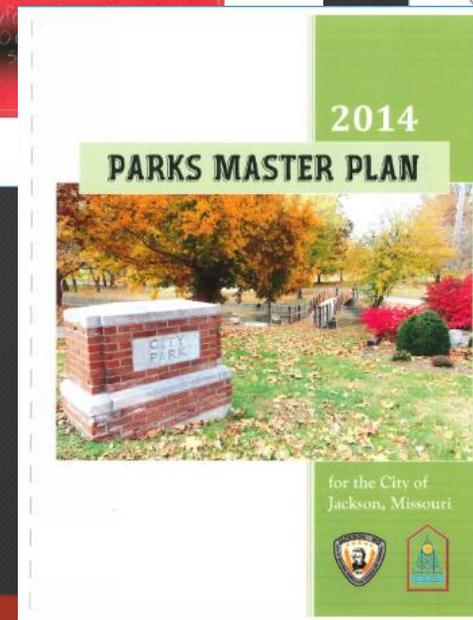
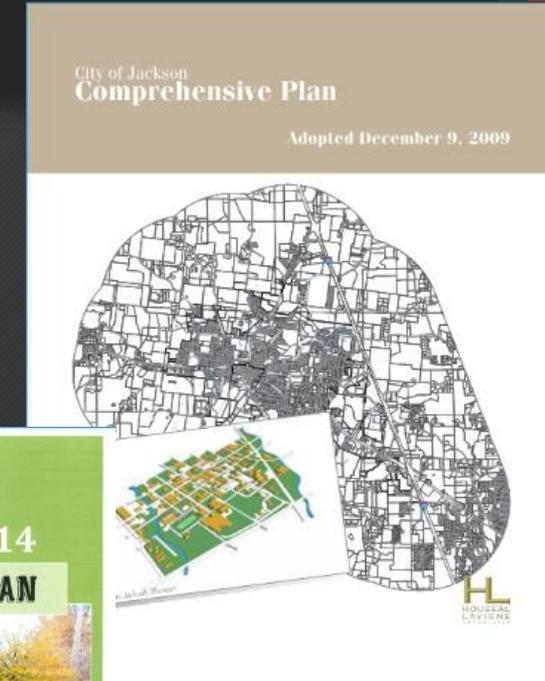
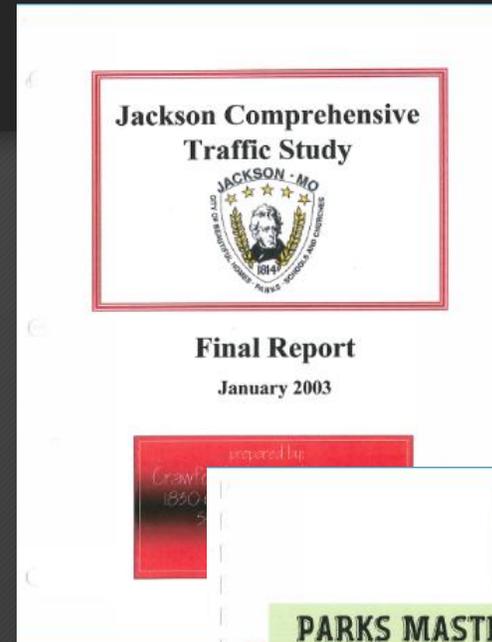
- Last citywide transportation study performed in 2003
- Significant strides since then:
 - Partnering with MoDOT on Route 34/72 widening
 - US 61 improvements through Uptown Jackson including roundabout
 - E. Main Street Extension to I-55
 - Various spot improvements along Jackson Boulevard





Planning History

- Current Plans
 - Jackson Comprehensive Traffic Study (2003)
 - City of Jackson Comprehensive Plan (2009)
 - Parks Master Plan (2014)





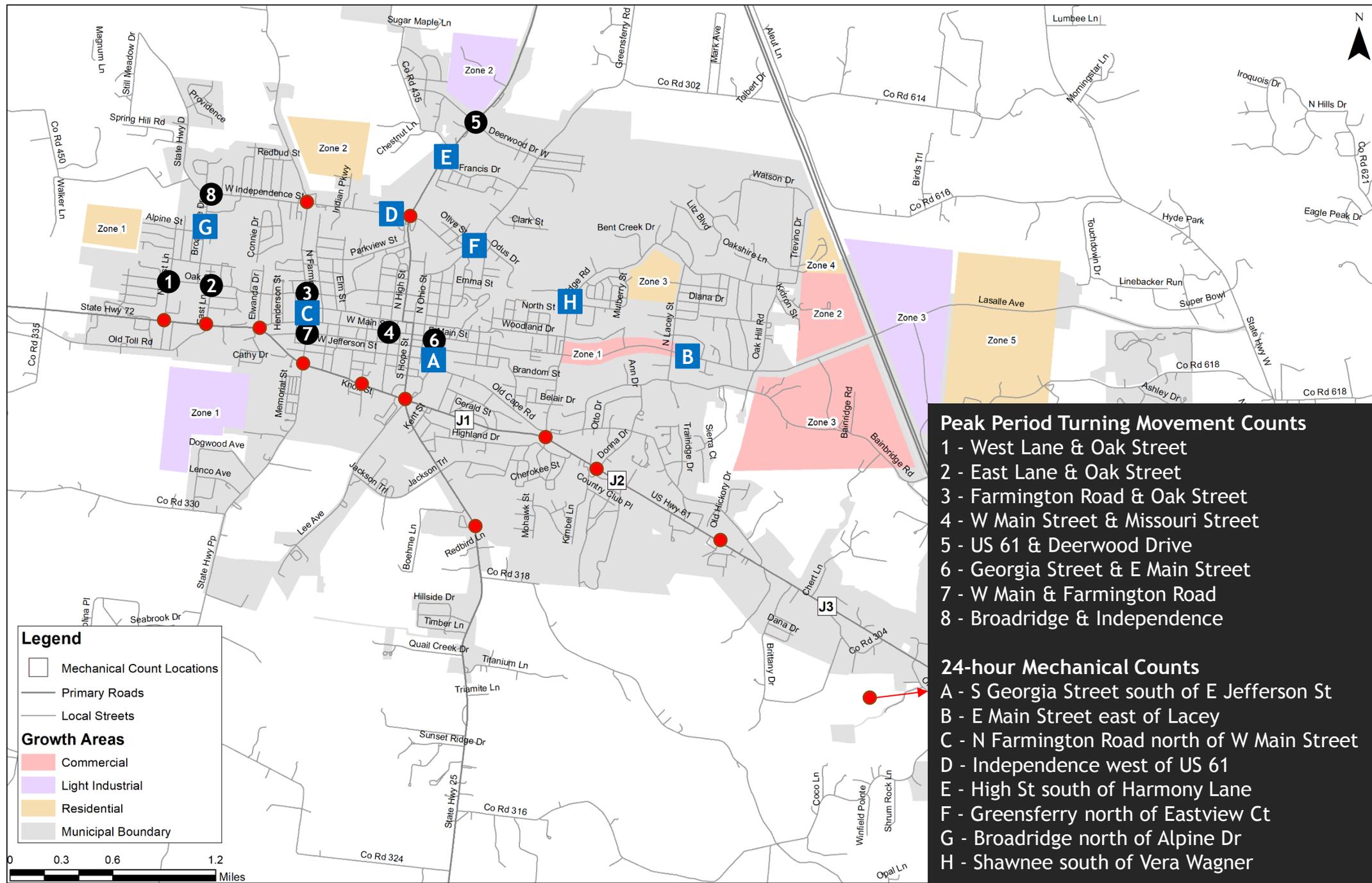
Planning History

- Study Goals
 - Update on efforts since 2003
 - Address existing traffic issues and concerns
 - Review long-range transportation plan to match anticipated growth pattern
 - Revisit the City's engineering guidelines to include current best practices



Existing Conditions Analysis

- Traffic Volumes
- Street Network
- Inventory
- Safety



Peak Period Turning Movement Counts

- 1 - West Lane & Oak Street
- 2 - East Lane & Oak Street
- 3 - Farmington Road & Oak Street
- 4 - W Main Street & Missouri Street
- 5 - US 61 & Deerwood Drive
- 6 - Georgia Street & E Main Street
- 7 - W Main & Farmington Road
- 8 - Broadridge & Independence

24-hour Mechanical Counts

- A - S Georgia Street south of E Jefferson St
- B - E Main Street east of Lacey
- C - N Farmington Road north of W Main Street
- D - Independence west of US 61
- E - High St south of Harmony Lane
- F - Greensferry north of Eastview Ct
- G - Broadridge north of Alpine Dr
- H - Shawnee south of Vera Wagner

**Traffic Volumes:
Count Locations:**



Traffic Volumes

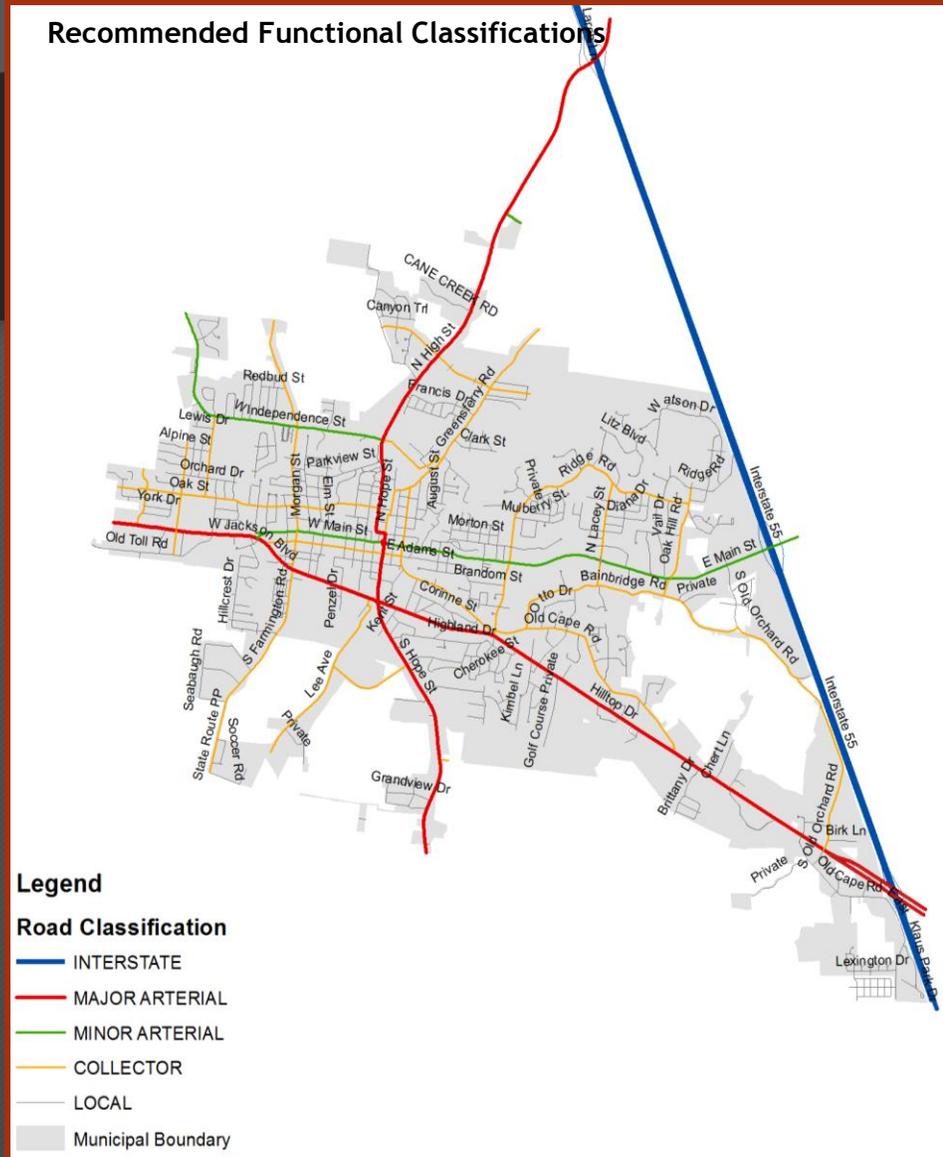
| Intersection or Segment | Annual Growth Rate |
|--------------------------------|--------------------|
| E. Main St east of Lacey St | 12.32% |
| SR D west of US 61 | 0.24% |
| US 61 & SR D | -0.96% |
| E. Main St & Georgia St | 1.80% |
| W. Jackson Blvd & SR PP | -0.53% |
| US 61 & Jackson Blvd | -0.44% |
| E. Jackson Blvd & Shawnee Blvd | 0.20% |
| E. Jackson Blvd & Walton Dr | -0.18% |
| US 61 & Main St | -0.97% |

- Average annual population growth rate is 1.44% per year (22% since 2003)
- Mostly low or no traffic growth, sometimes negative
- Except Main Street!



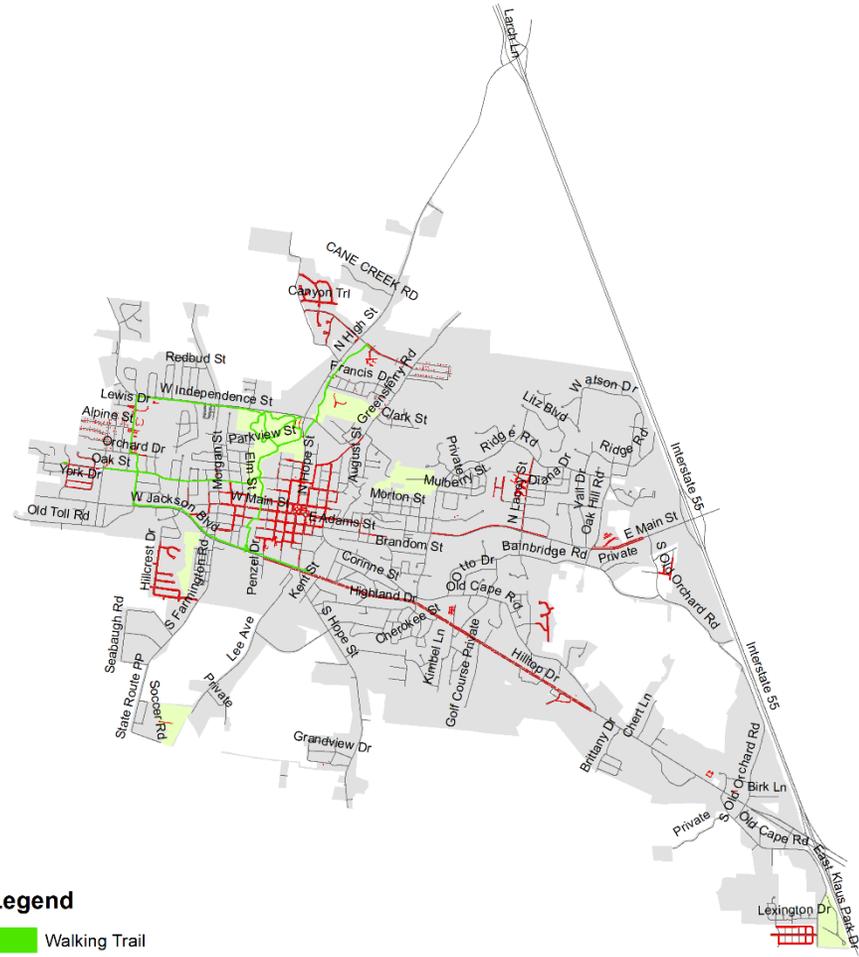
Inventory: Functional Classification

- Discrepancies (SEMPO, MoDOT, City Planning) identified
- Changes suggested based on traffic levels and recommended accessibility





Existing Trails and Sidewalks



Legend

- Walking Trail
- Sidewalks
- City Parks
- Streets
- Municipal Boundary

Inventory: Multi-modal Network

- Several trails constructed in recent years; goal is connectivity
- Sidewalks are severely lacking
 - Could exacerbate school dismissal vehicular delays
- No marked bicycle routes; Bicyclists legally share the road and are allowed on trails



Safety

- No crash rates higher than the statewide average
- Constant number and severity of crashes
 - 76% on MoDOT routes
 - 30% on Jackson Blvd

| Year | Fatal | Injury | PDO | Total |
|-------|-------|--------|-------|-------|
| 2012 | 1 | 54 | 313 | 368 |
| 2013 | 1 | 58 | 339 | 398 |
| 2014 | 0 | 46 | 333 | 379 |
| 2015 | 1 | 68 | 298 | 367 |
| 2016 | 2 | 58 | 332 | 392 |
| Total | 5 | 284 | 1,615 | 1,904 |



Identified Issues and Concerns



Identified Issues and Concerns

1. Parking on arterials and collectors
 2. W Main St & Farmington Rd
 3. Farmington Rd & Oak St
 4. US 61 & Independence
 5. Oak St near Elementary and Junior High Schools *
 6. Middle School on Independence *
 7. Elementary School on Orchard Dr *
 8. E Jackson Blvd and Donna Dr
 9. US 61 & Deerwood Dr
 10. S Georgia & E Adams St
 11. US 61 & Mary St
 12. Circulation in City Park (closure of Cascade Drive at US 61)
 13. E Main St sidewalk between Traveler's Way and Oak Hill Rd
 - Coordinates with TEAP Study Recommendations
 14. Right-of-way Procurement
 15. W Main Street Roughness
- * General school planning issues at multiple campuses



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Parking on arterial and collectors

- Recommendation:
 - Prohibit on-street parking on all arterials except Main Street through Uptown
 - Allow on collector roads on a case-by-case basis
 - Consider vehicular speeds, volume, Right-Of-Way, land use characteristics of surrounding properties
- Use curb extensions when on-street parallel parking is allowed



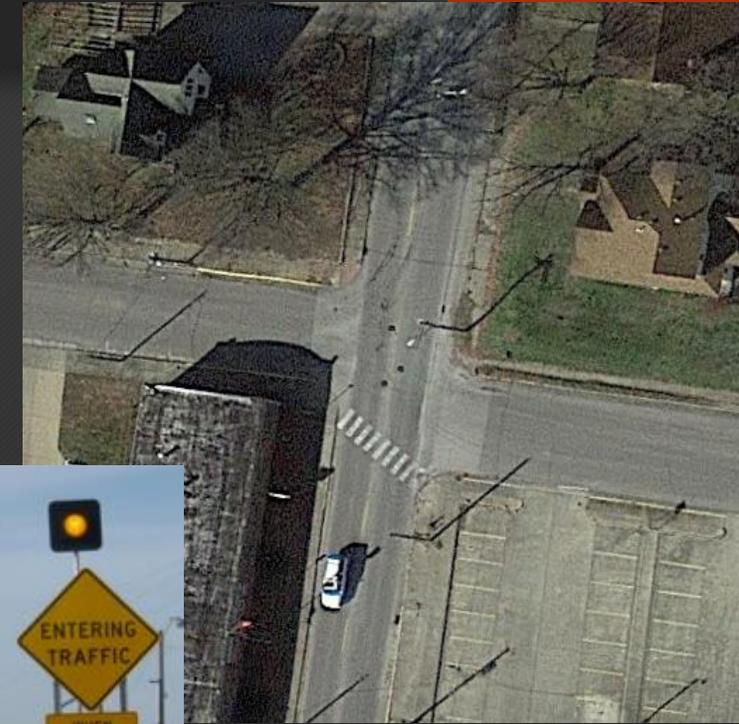
US 61 & Deerwood Drive Recommendations

- Morning peak worse than afternoon
 - Overall LOS D (US 61 LOS A, Deerwood LOS F)
- Signal Feasibility
 - Signal not quite warranted yet
 - Warranted if Deerwood is extended west or additional development occurs
- Potential Intermediate Improvements
 - Restripe eastbound/westbound to 3 lanes
 - Install high-visibility crosswalk
 - Consider a HAWK signal to assist pedestrians



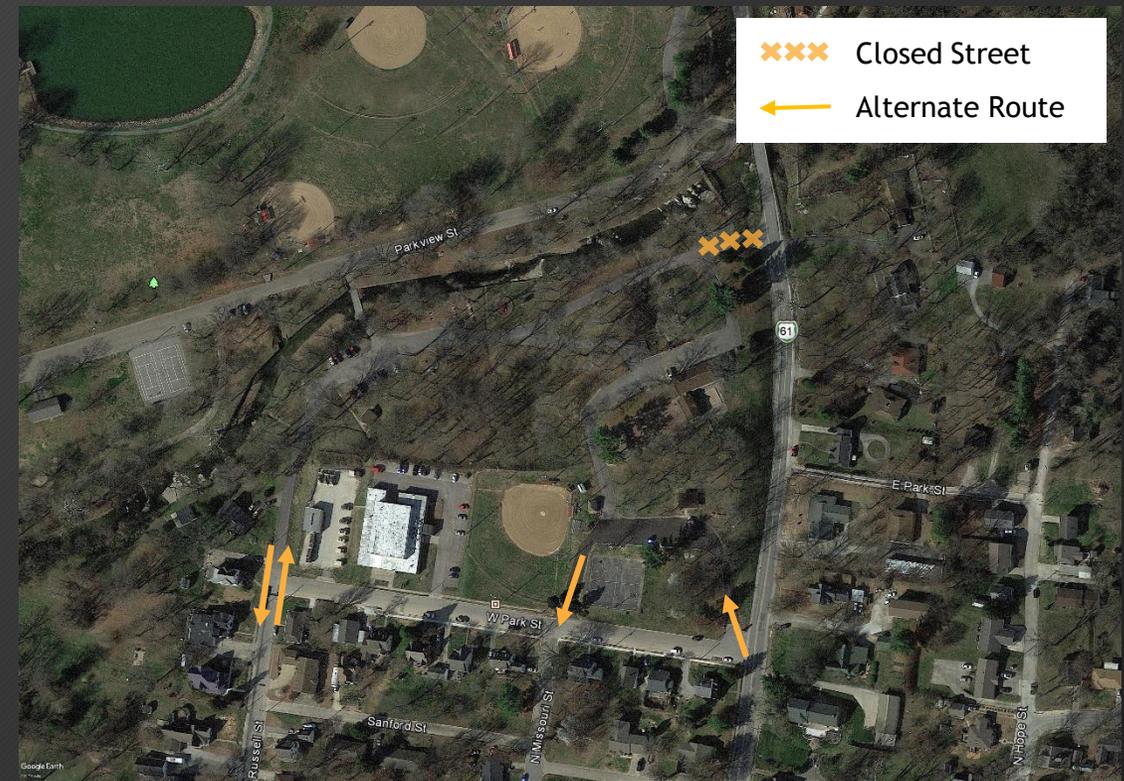
US 61 & Mary Street Recommendations

- Perform a speed study to determine if a relocation of the speed limit sign is justified
- Consider alternative safety measures
 - Overhead warning lights at the intersection, or
 - Intersection Conflict Warning Signal (ICWS)
- Long term solution:
 - Realign the east leg of the intersection to the north to remove the east-west offset

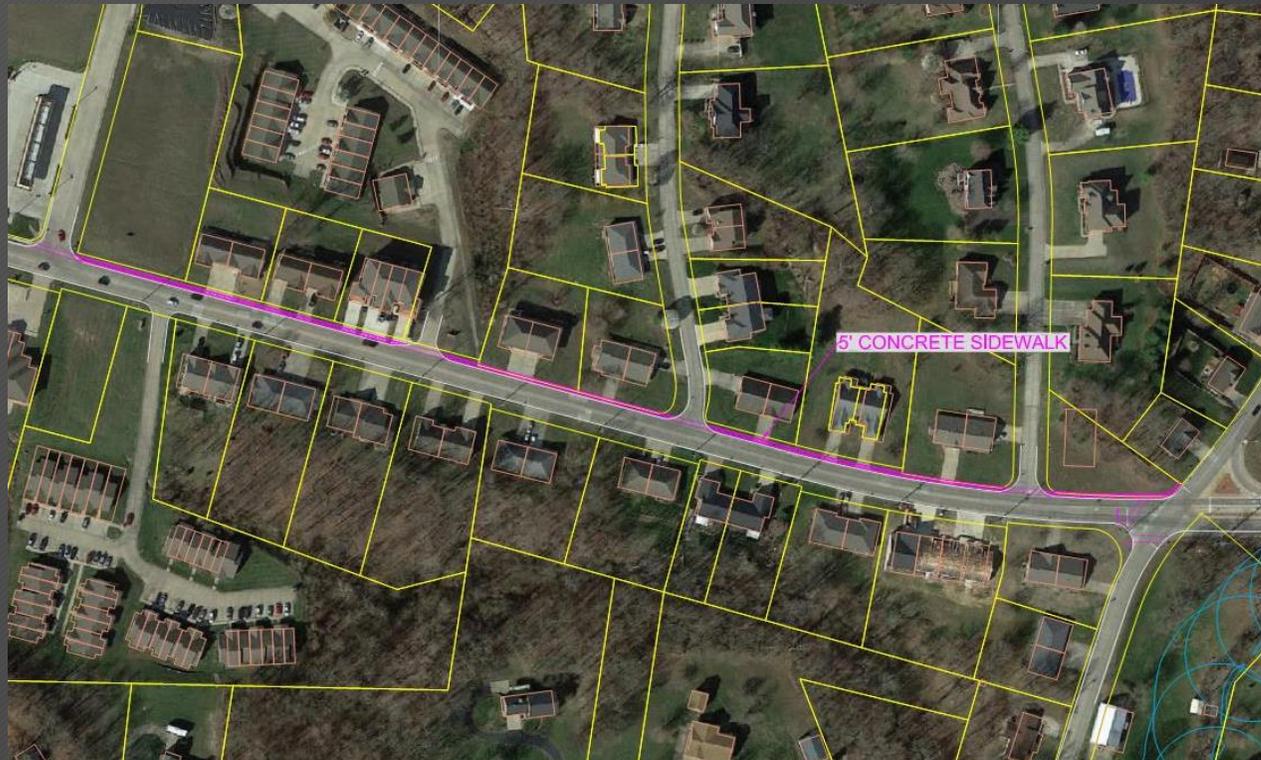


Circulation in City Park with closure of Cascade Drive at US 61

- Issues:
 - Safety concerns (speeding, trail bridge too close to intersection)
 - Lack of sidewalks along Cascade Dr
 - Sightline concerns due to retaining wall
- Closure is recommended:
 - Reduces cut-through traffic and speeding through park
 - Increases safety for bikes/peds
 - Access through neighborhood, negligible impact on circulation



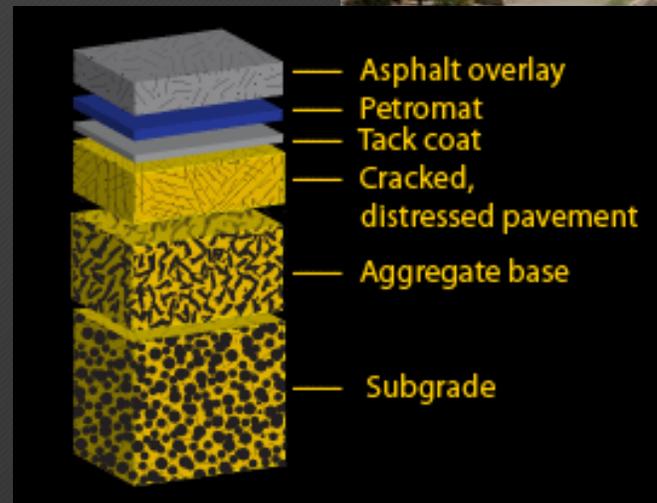
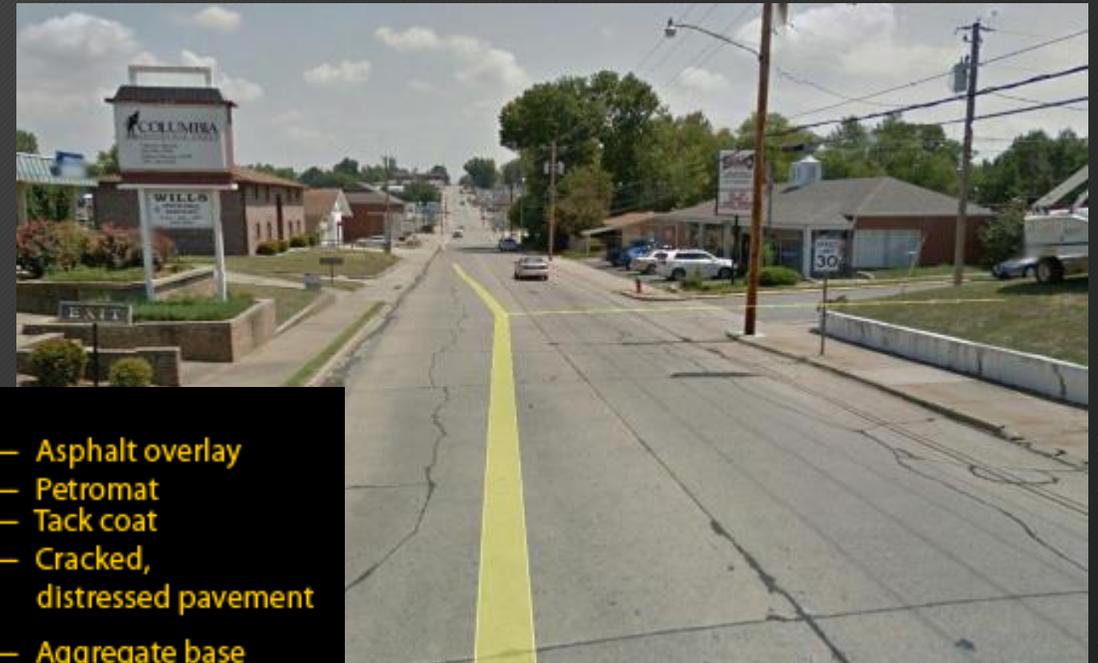
E Main Street sidewalk between Traveler's Way and Oak Hill Road



- Provide pedestrian facilities on north side
- Recommend:
 - 5' concrete sidewalk with a 2' separation from curb
- Signal at Oak Hill slated for construction in 2018

West Main Street Roughness

- Potential Improvement Strategies
 - Asphalt Overlay (1-2")
 - Pavement Reinforcing Fabric
 - Pavement Reinforcing Grid
 - Microsurface Treatment
 - Slab Replacements
 - Reconstruction





Engineering Guidelines

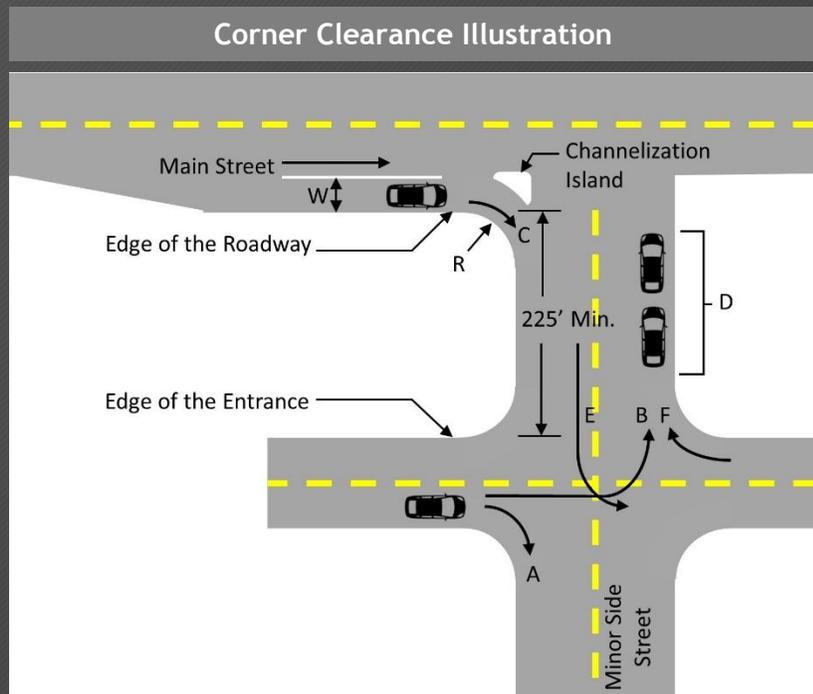




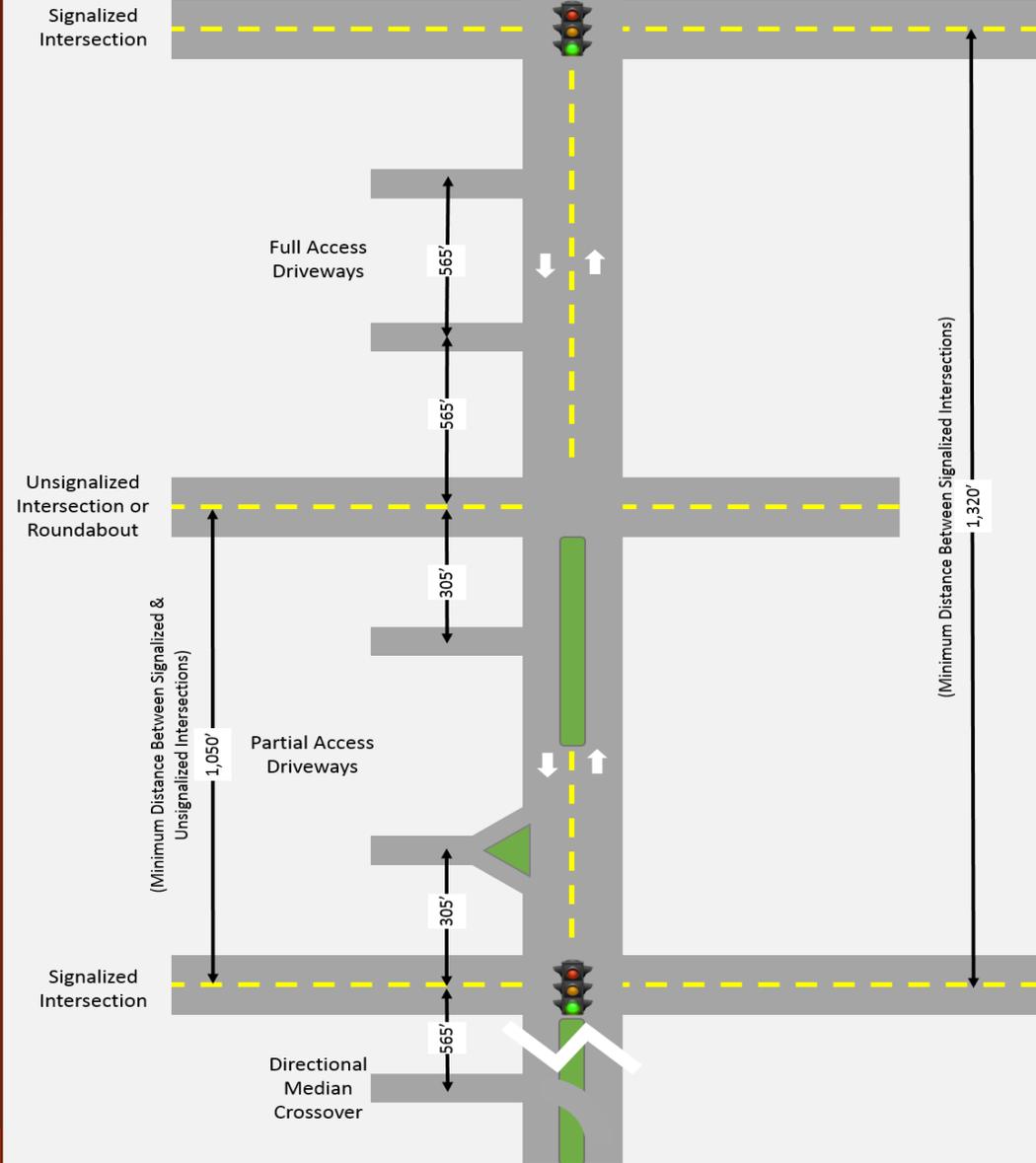
Engineering Guidelines

- Street Design Guidelines
- Bicycle and Pedestrian Systems
- Signals and Roundabouts
 - Flashing Yellow Arrows
- Access Management

Access Management



Example: Principal Arterial with 35 to 45 mph Speed Limit





Traffic Forecasting

- Trip Generation
- Directional Distribution
- Forecasted Volumes
- LOS

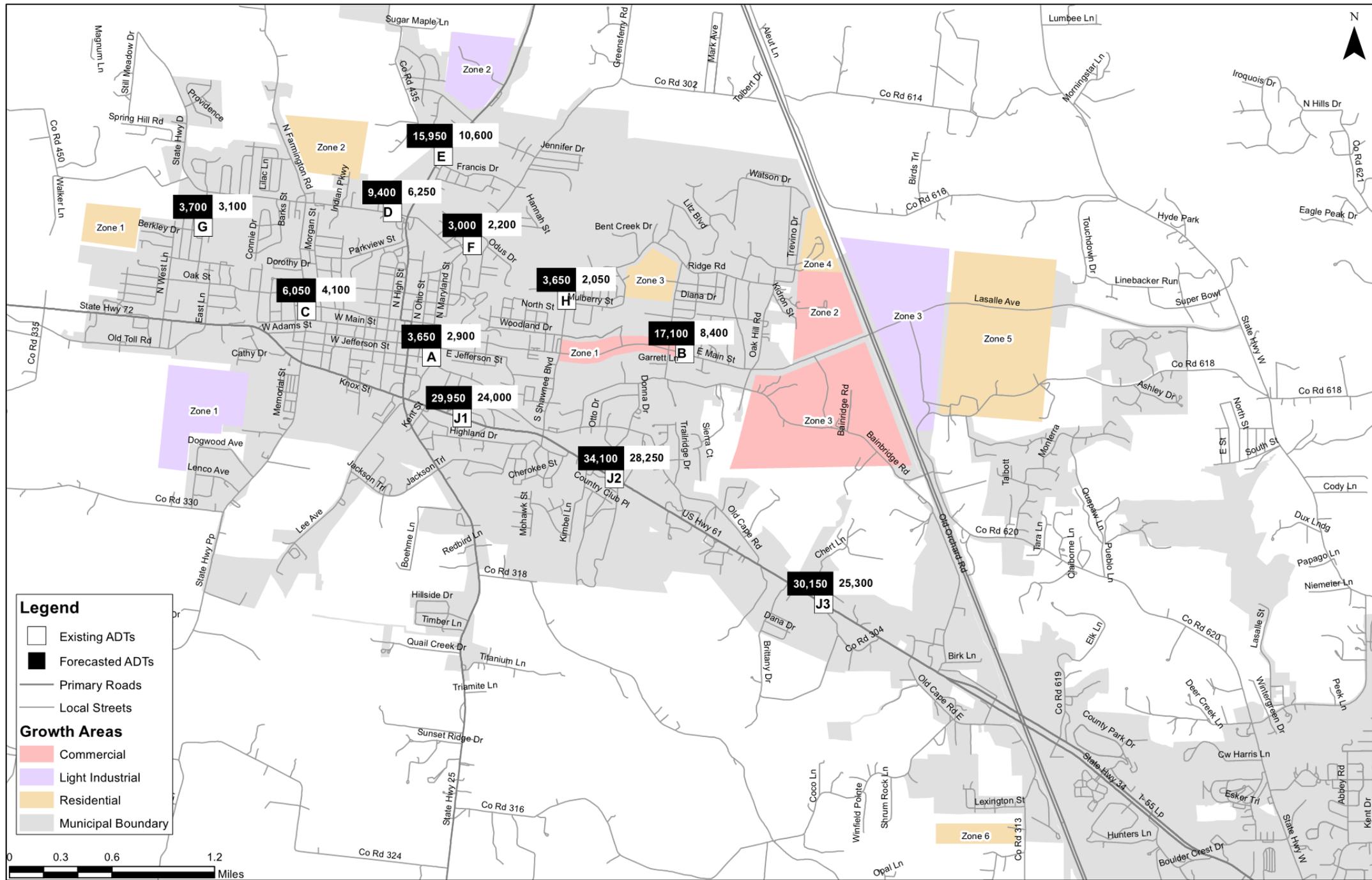


Trip Generation

- SEMPO Sustained Growth Plan was used as a probable future land use scenario
- Anticipates growth under three land uses:
 - low-density residential
 - commercial
 - light industrial
- Trip generation forecasted using the ITE Trip Generation Manual, Ninth Edition

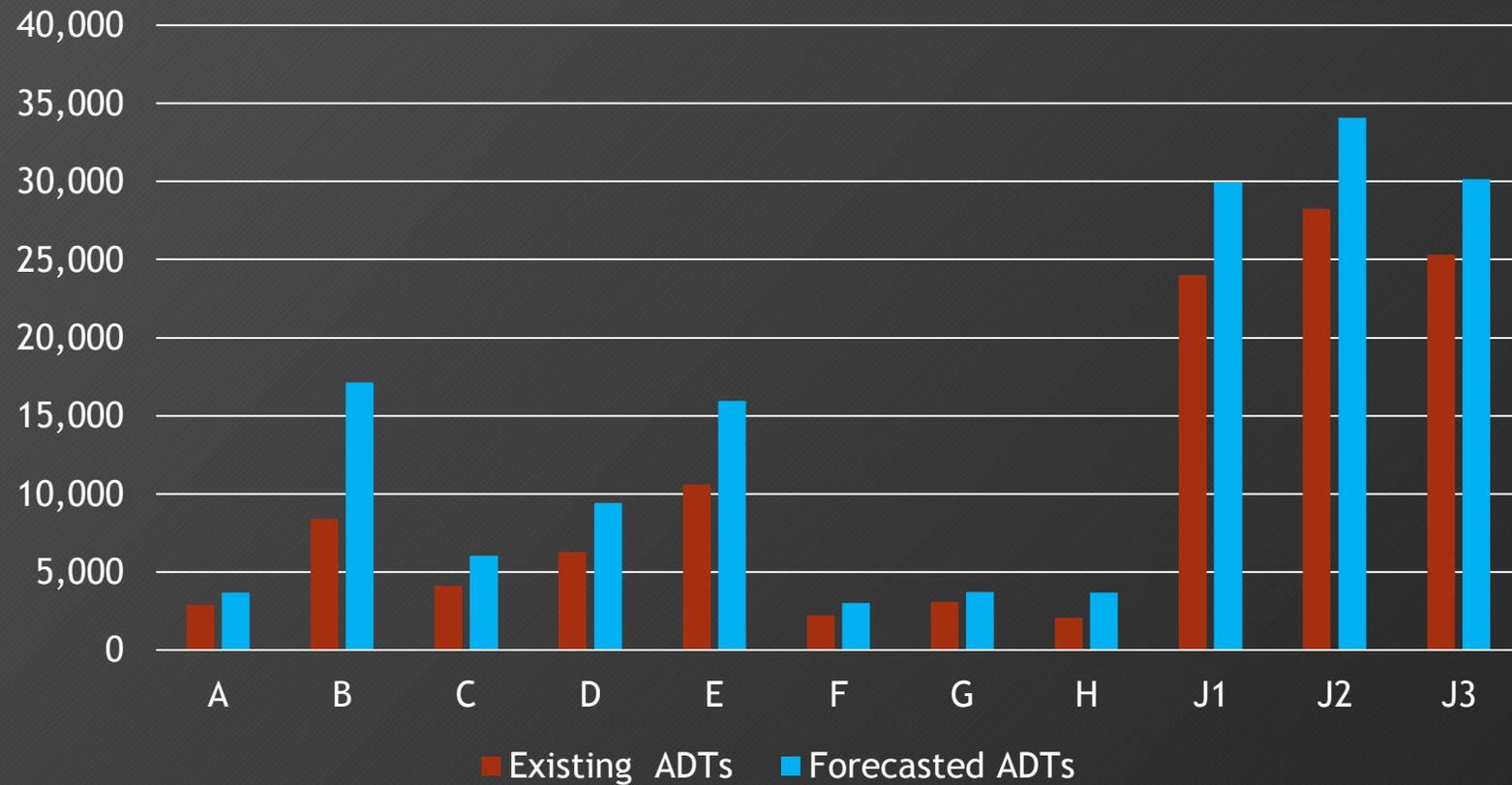


Forecasted Volumes



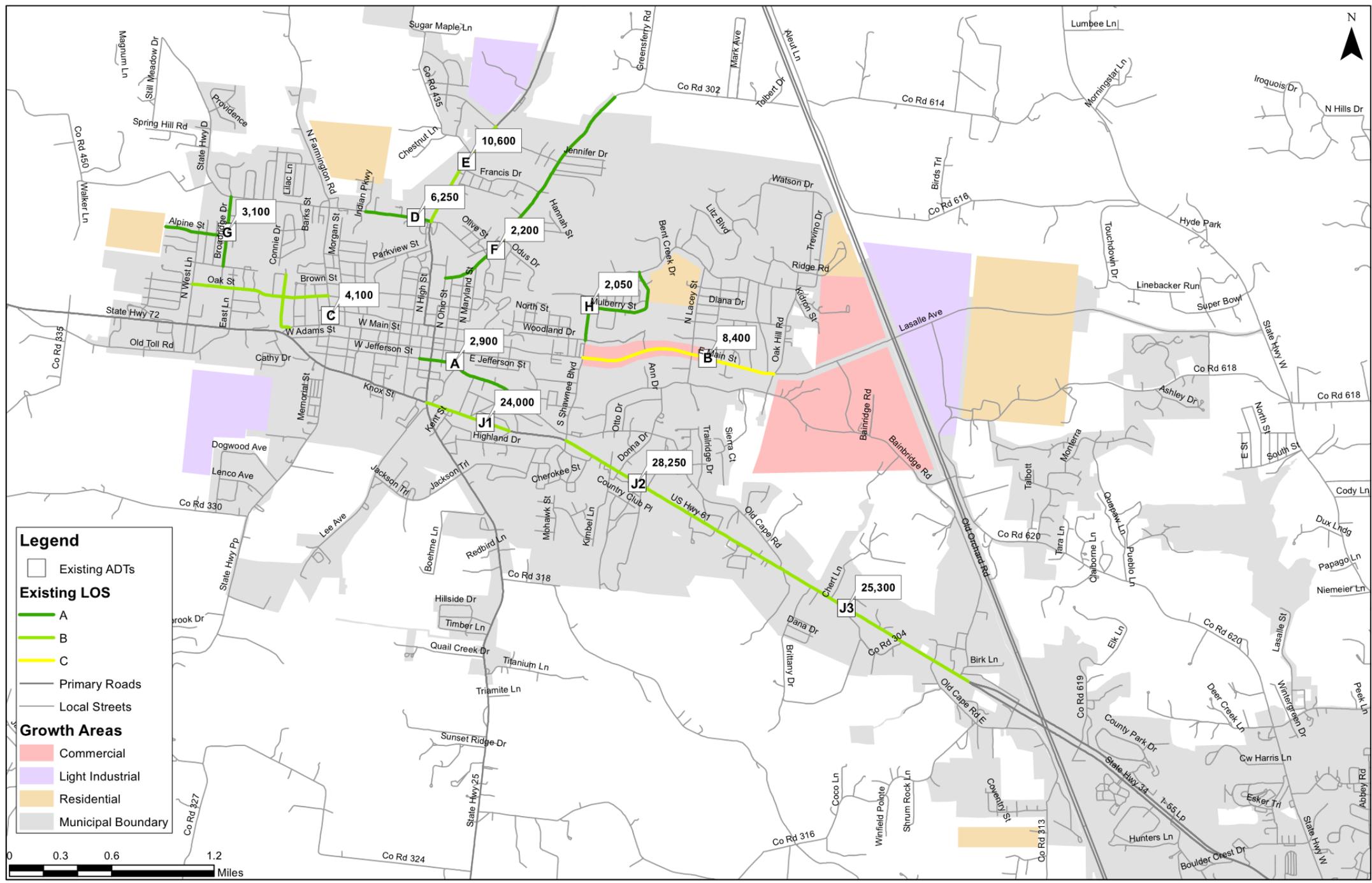


Forecasted Volumes



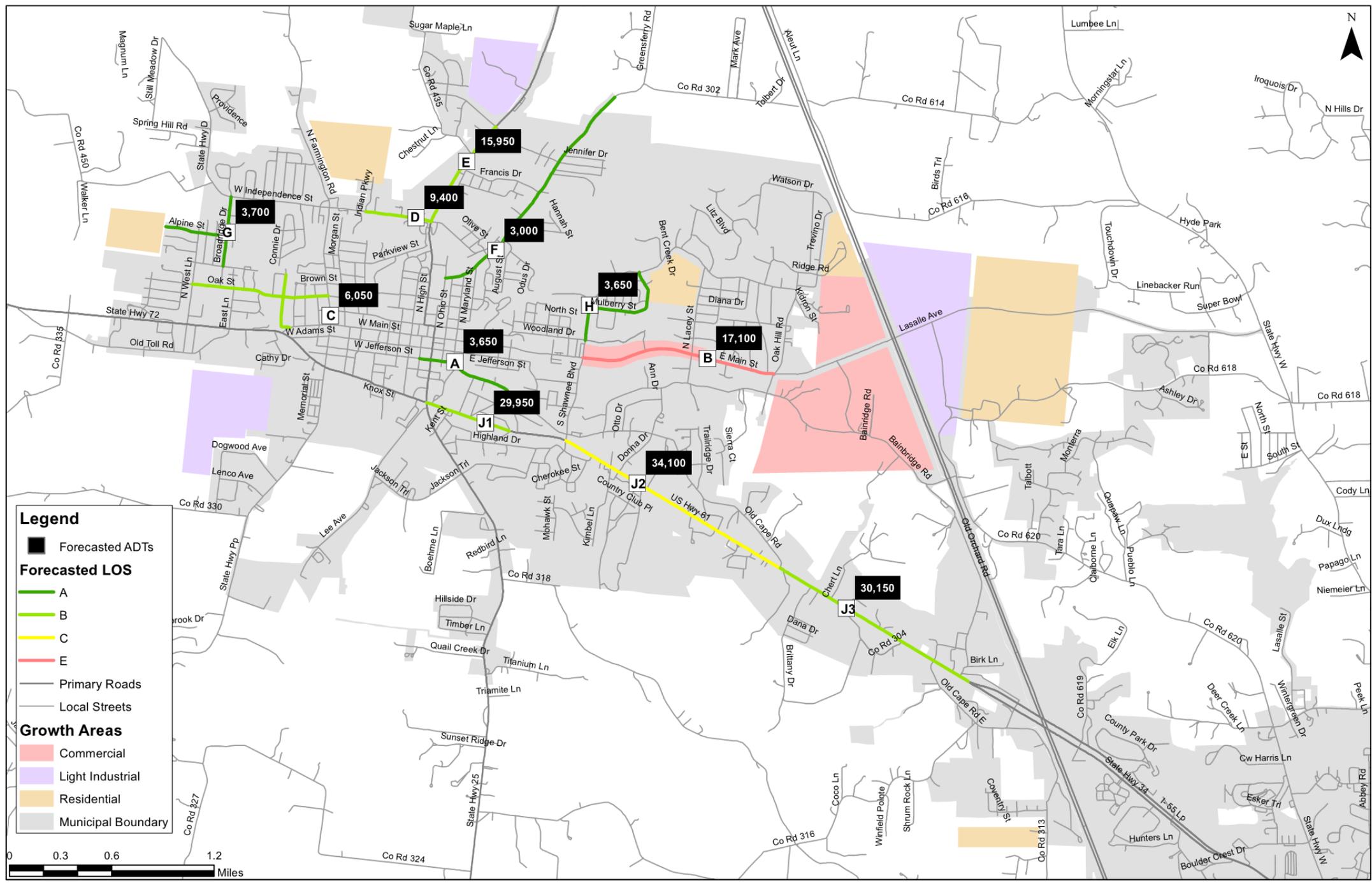


Existing Levels of Service





Forecasted Levels of Service





Proposals

- Major Street Plan
- Proposed (New) Streets
- Roads to be downgraded
- Project Prioritization (Table)



Major Street Plan

- Goals when evaluating Plan:
 1. Provide circumferential connectivity via a new system of arterial roadways;
 2. Extend existing collector roadways to logical endpoints to provide better connectivity through the City and adjacent areas;
 3. Provide access to areas that are likely to see new development within the next 20 to 25 years;



Major Street Plan

- Goals when evaluating Plan:
 4. Remove redundant collectors or those that do not provide appropriate connectivity to allow for traffic calming and other improvements to improve bicycle and pedestrian infrastructure;
 5. Address existing traffic and environmental constraints and barriers to provide more direct travel paths through the City; and
 6. Provide an appropriate scale of planned roadways that are more in line with growth areas in the City's Comprehensive Plan and SEMPO identified growth areas.

CITY of JACKSON AND SURROUNDING AREA

MAJOR STREET PLAN

2014

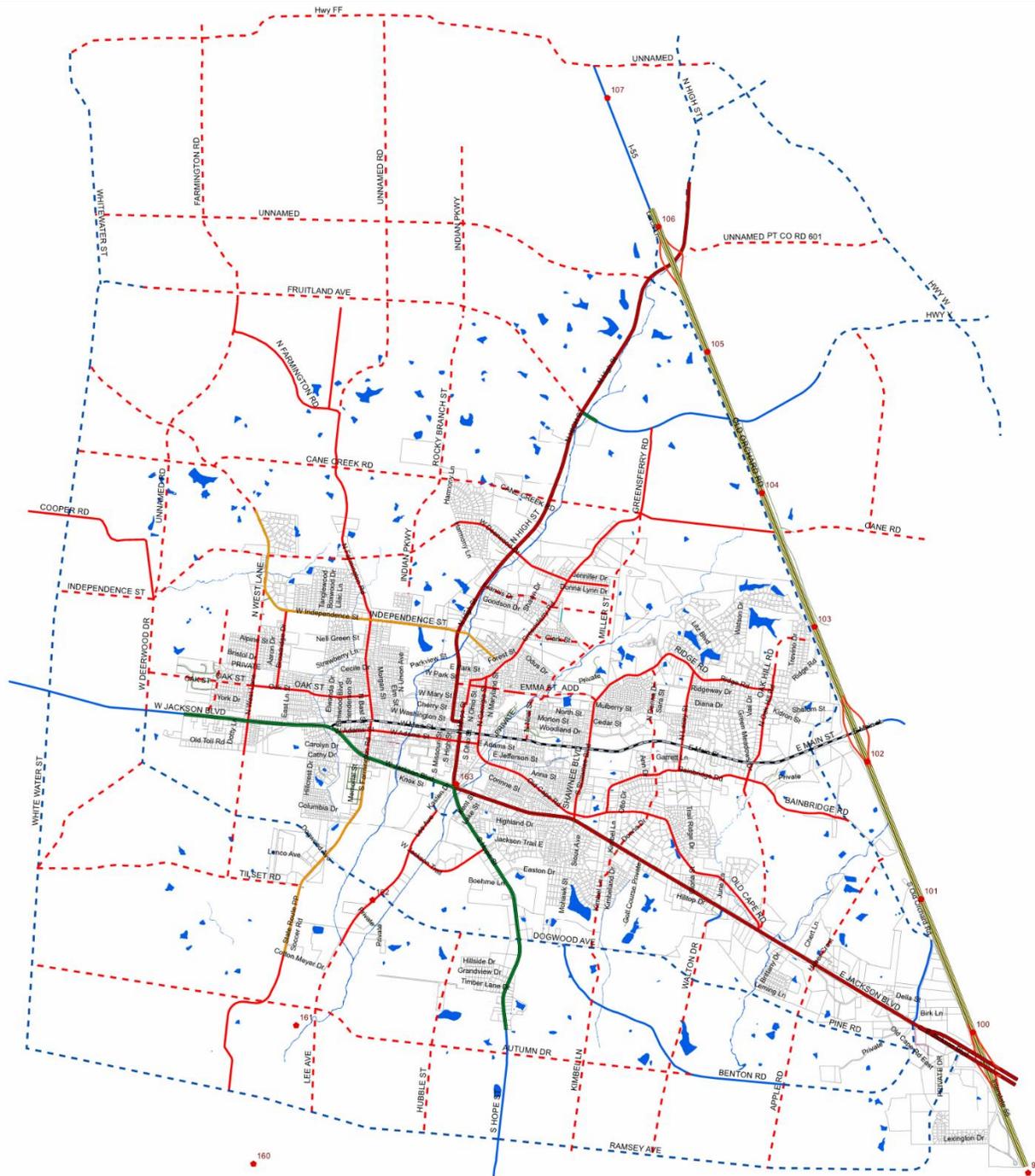


Legend

- Mile_Markers
- StreetMst**
- I do hereby attest that this plan has been approved by the Planning and Zoning Commission of the City of Jackson in accordance with 89.360 RSMo on December 1, 2004 and as of that date is the official Major Street Plan of the City of Jackson
- ID**
- E Main St
- W Main St
- RAMP
- Interstate
- State Route
- <Null>
- Highway
- MO Highway
- Paper
- Roads
- Streets
- US Highway
- MAJOR_STREET**
- <all other values>
- TYPE**
- EXISTING_ARTERIAL
- EXISTING_COLLECTOR
- PROP_ARTERIAL
- PROP_COLLECTOR
- JacksonC_streams
- ParcelMst**
- <all other values>
- TYPE**
- CITY
- COUNTY



Jackson Building & Planning Dept
Prepared by: RE Kramer Sr. 1/2014



2014 Major Street Plan

Jackson Major Street Plan

Proposed Roadways

- Proposed Arterial
- Proposed Collector
- xxxxx Downgrade to Local Roadway

Potential Corridor Alignments

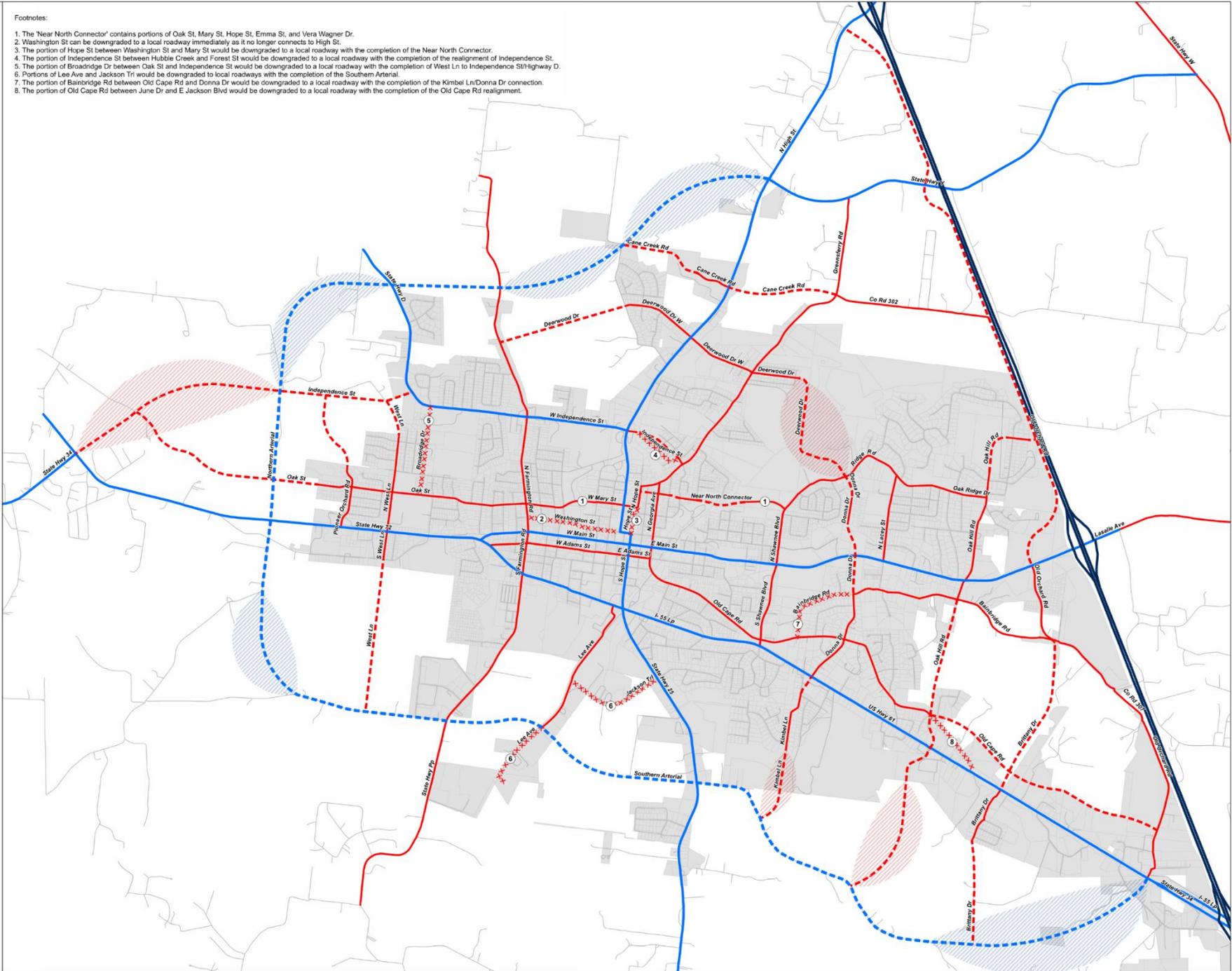
- Potential Arterial Alignment
- Potential Collector Alignment

Existing Roadways

- Arterial
- Collector
- Local
- Interstate 55
- Parcels
- City Boundary

Footnotes:

1. The 'Near North Connector' contains portions of Oak St, Mary St, Hope St, Emma St, and Vera Wagner Dr.
2. Washington St can be downgraded to a local roadway immediately as it no longer connects to High St.
3. The portion of Hope St between Washington St and Mary St would be downgraded to a local roadway with the completion of the Near North Connector.
4. The portion of Independence St between Hubble Creek and Forest St would be downgraded to a local roadway with the completion of the realignment of Independence St.
5. The portion of Broadridge Dr between Oak St and Independence St would be downgraded to a local roadway with the completion of West Ln to Independence St/Highway St.
6. Portions of Lee Ave and Jackson Trl would be downgraded to local roadways with the completion of the Southern Arterial.
7. The portion of Bainbridge Rd between Old Cape Rd and Donna Dr would be downgraded to a local roadway with the completion of the Kimbel Ln/Donna Dr connection.
8. The portion of Old Cape Rd between June Dr and E Jackson Blvd would be downgraded to a local roadway with the completion of the Old Cape Rd realignment.

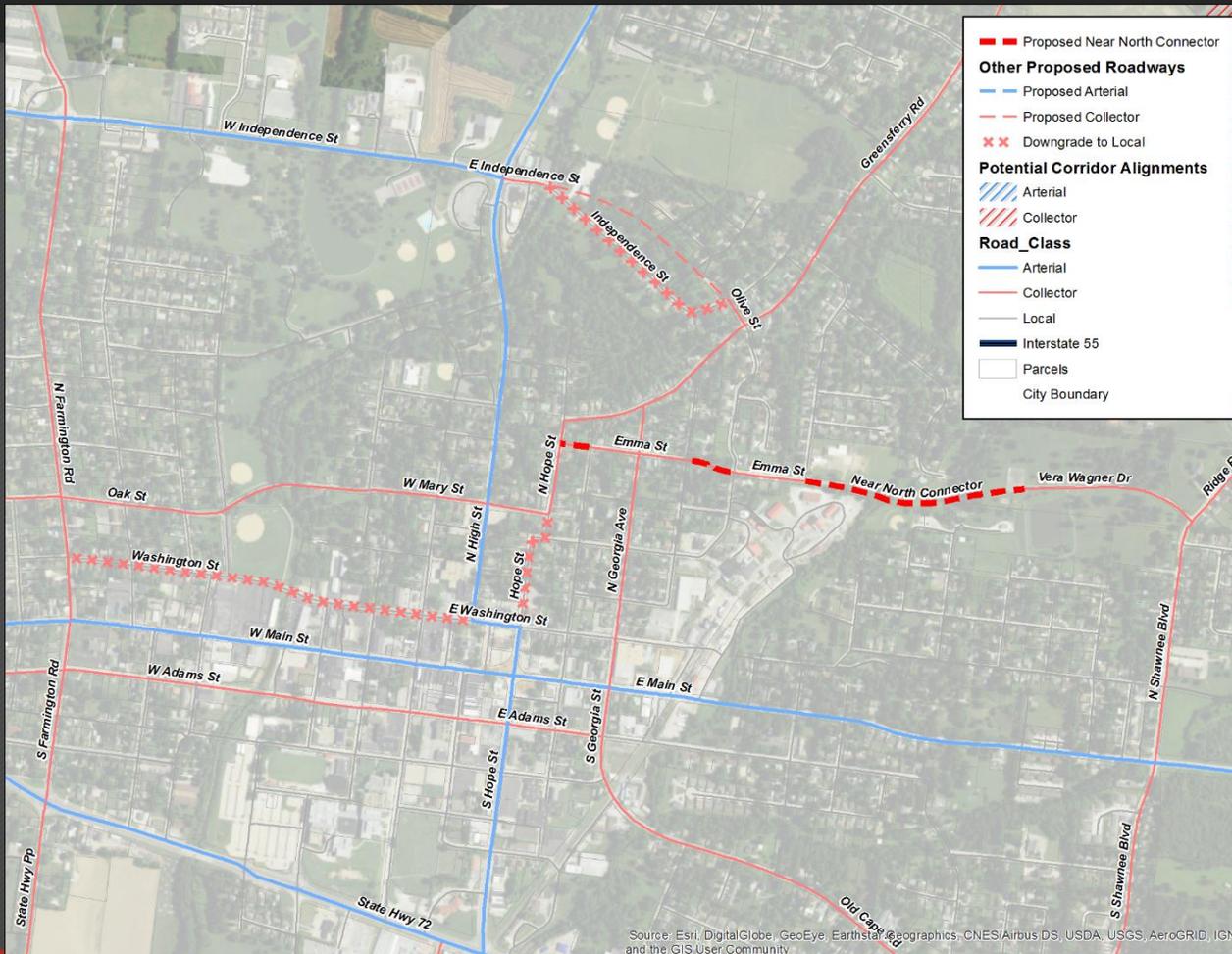


2018 Major Street Plan





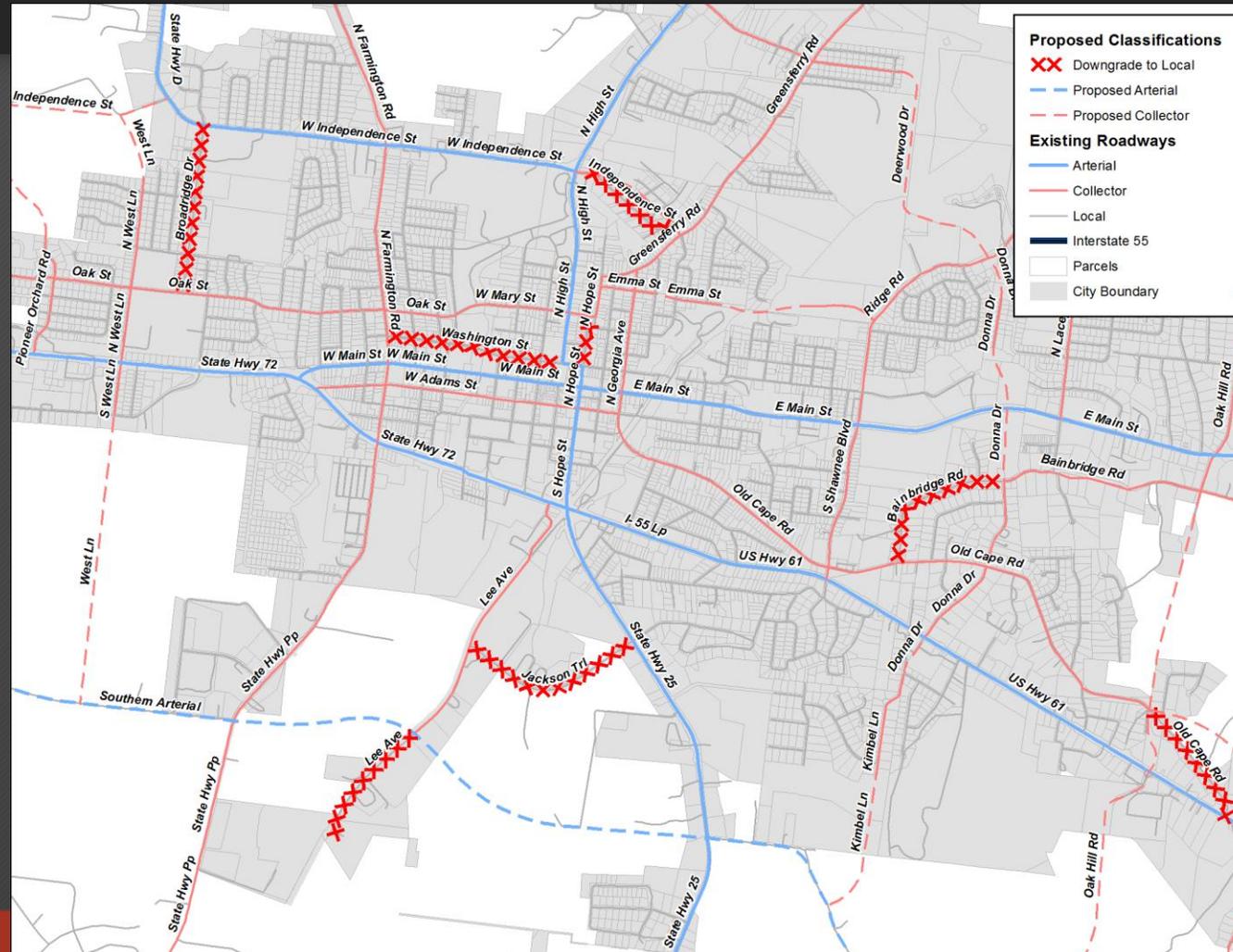
Proposed Near North Connector



- Provides another direct connection through central Jackson;
- Provides alternate route for East Main St; and
- Provides a new bridge over Goose Creek



Proposed Streets & Roads to be Downgraded





Project Prioritization

| Priority | Roadway | Cost | Notes |
|----------------------|----------------------------------|--------|--|
| High | Near North Connector | \$2.5M | Downgrade Hope (Mary to Washington) to Local Roadway |
| | Old Cape Road | \$7.0M | Downgrade remnant of Old Cape |
| | Oak Hill Road (South) | \$8.3M | - |
| | West Lane (South) | \$4.2M | - |
| Medium | Oak Hill Road (North) | \$1.6M | - |
| | Cane Creek Road | \$6.5M | - |
| | West Lane (North) | \$1.0M | Downgrade Broadridge to Local Roadway |
| | Independence Street (East) | \$1.4M | Downgrade remnant of Independence Street |
| | Deerwood Drive (West) | \$3.6M | - |
| Low | Brittany Drive | \$7.4M | - |
| | Independence Street (West) | \$9.7M | - |
| | Kimbel Lane/Donna Drive | \$5.2M | Downgrade remnant of Bainbridge Road |
| | Oak Street | \$5.6M | - |
| | Deerwood Drive (East) | \$3.7M | - |
| Top Study Priorities | Northern Arterial Corridor Study | - | Study would determine timeframe for further investment |
| | Southern Arterial Corridor Study | - | Study would determine timeframe for further investment |
| | Old Orchard Road (North) | - | Study would determine timeframe for further investment |

Jackson Major Street Plan

Proposed Roadways

- Proposed Arterial
- Proposed Collector
- xxxxx Downgrade to Local Roadway

Potential Corridor Alignments

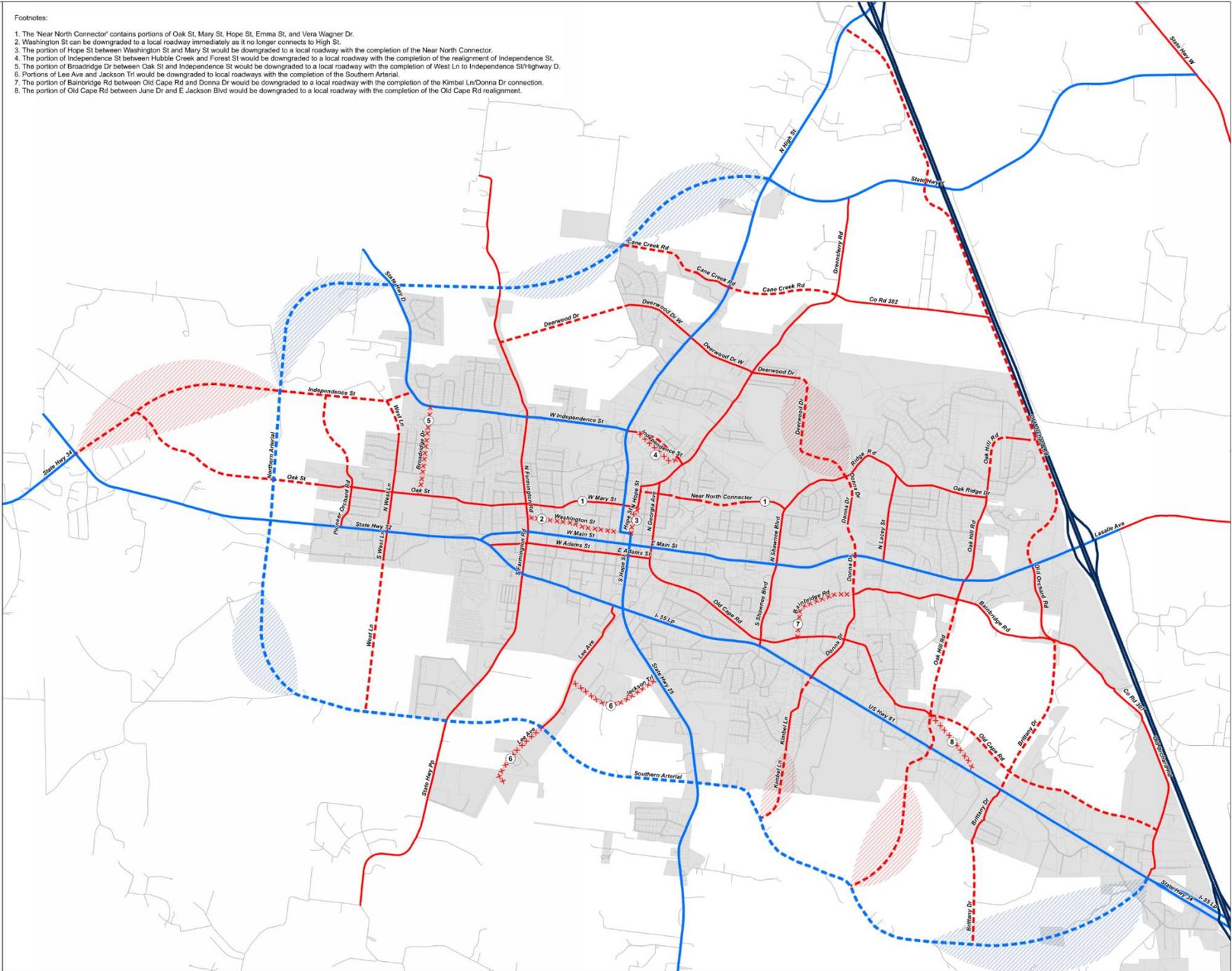
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2018 Major Street Plan





Thank you!