



July 21, 2016

FS-1604A US 70 Improvements, Johnston County

VHB Engineering NC, P.C.



Agenda

- Project Description and Location
- Purpose and Need
- Background Transportation Plans
 - Adjacent TIP Projects
 - US 70 TIP Projects
 - NCDOT Functional Classification
- Existing Conditions
 - Environmental
 - Safety (Collisions)
 - Traffic
- Traffic Forecast and Capacity Analysis
- Typical Cross-Sections
- Alternatives to be Studied

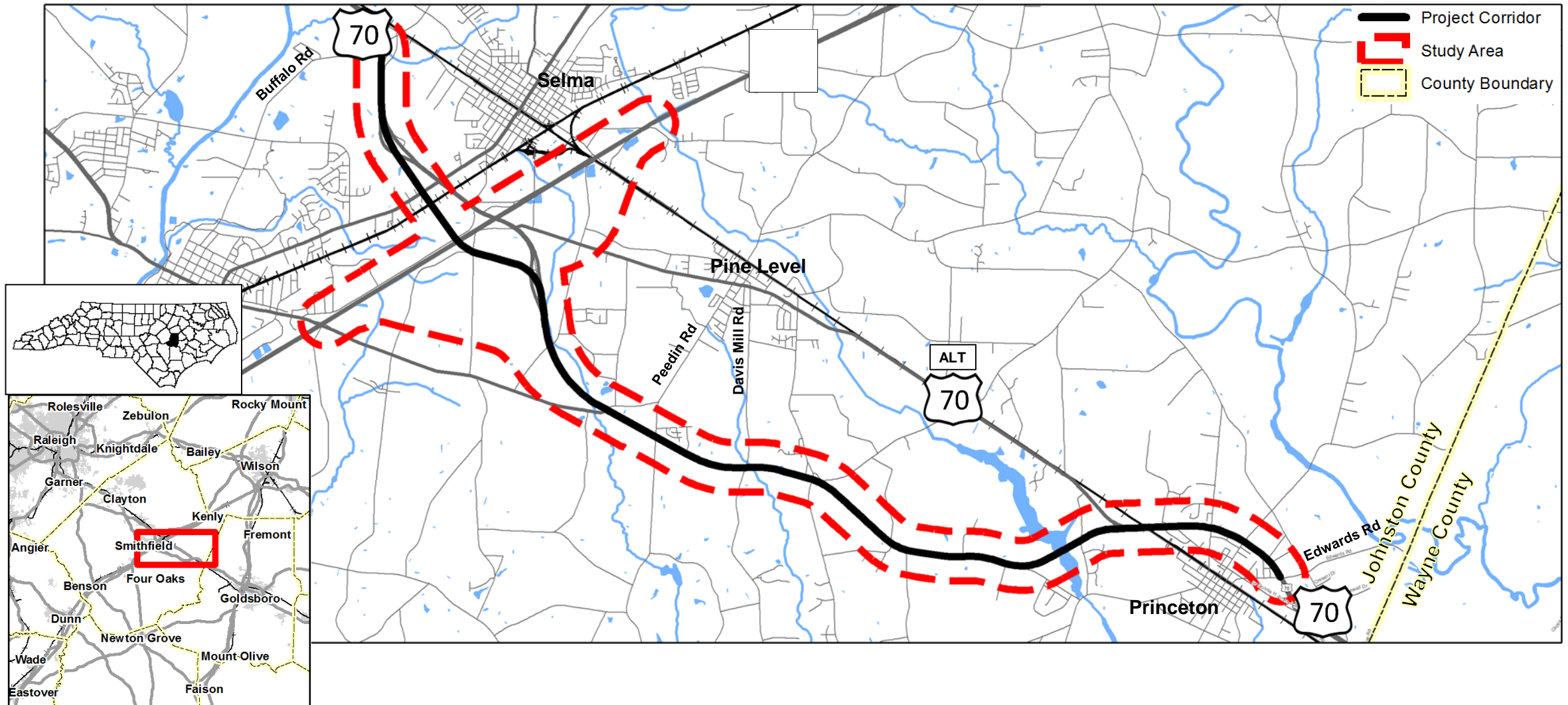


Project Description

- Feasibility Study
 - Provide an upgraded facility to meet interstate design standards from SR 1003 (Buffalo Rd.) near Selma to SR 2372 (Edwards Rd.) in Princeton
 - Upgrade facility on existing location
 - Conceptual design for interchanges at key cross streets (8)
 - Frontage road system for access considerations
 - Conceptual design for grade separate crossing locations (5)
 - Conceptual design for system interchange between US 70 and I-95



Project Location



Purpose and Need

- Mobility and Connectivity
 - Upgrade US 70 to interstate standards to improve regional mobility and provide better connectivity between Raleigh and Morehead City and improving safety along rural sections with uncontrolled access
 - Promote economic development for surrounding communities

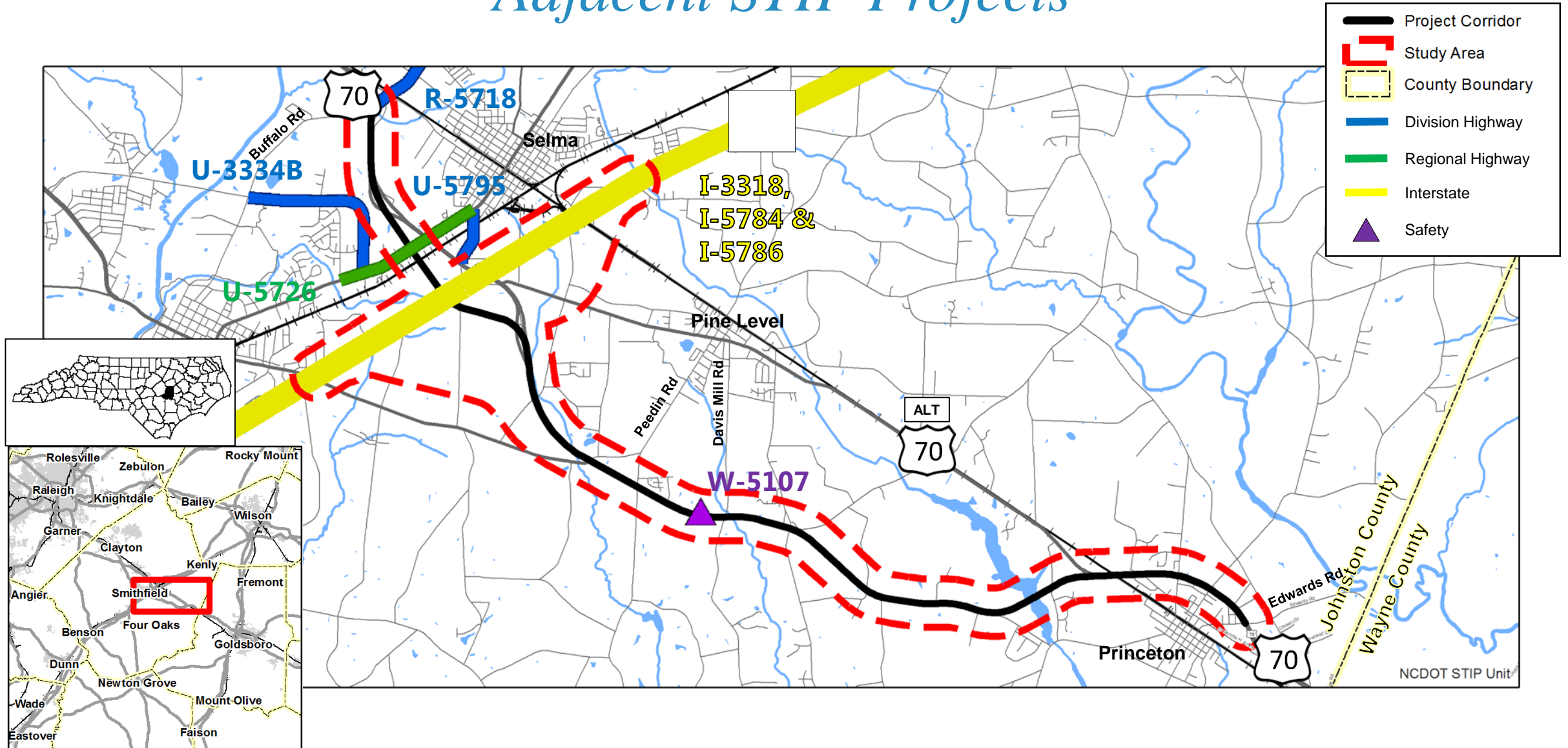


Background Transportation Plans

- All transportation plans are consistent with an upgraded future facility
- Most plans specify upgrade to a “freeway facility” or to implement “controlled access”
 - NCDOT Strategic Transportation Corridors – *upgrade to freeway standards*
 - Johnston County Comprehensive Transportation Plan – *convert US 70 to a 4-lane continuous freeway*
 - Town of Princeton Thoroughfare Plan – *widen to six lanes with controlled access with interchanges*
- Upper Coastal Plain Rural Planning Organization (UCPRPO) supports a feasibility study to improve the corridor (January 2016)
- Military Corridor Transportation Improvement Act of 2015 (HR 1844)
 - Bill introduced and signed into law in 2015 designating several eastern NC highways as “future interstates”
 - US 70 is among those designated for conversion to interstate



Adjacent STIP Projects



Adjacent STIP Projects

- R-5718
 - Division led project to widen Buffalo Road to three lanes from US 70 to Old Beulah Road
- U-3334
 - Division led project to extend SR 1923 (Booker Dairy Road) as a two-lane road
- U-5795
 - Division led project to widen SR 2302 (Ricks Road) to three lanes from US 70 to US 301
- U-5726
 - Regional project to implement access management improvements along US 301, between Booker Dairy Road and Ricks Road
- I-3318, I-5784, & I-5786
 - Improvement to I-95 through pavement and bridge rehabilitation
- W-5107
 - Safety improvement project along US 70 from Firetower Road to east of Davis Mill Road (2.7 mi); near Pine Level
 - Interchanges at SR 2308 (Peedin Road Extension) and SR 2310 (Davis Mill Road)
 - Median break closings



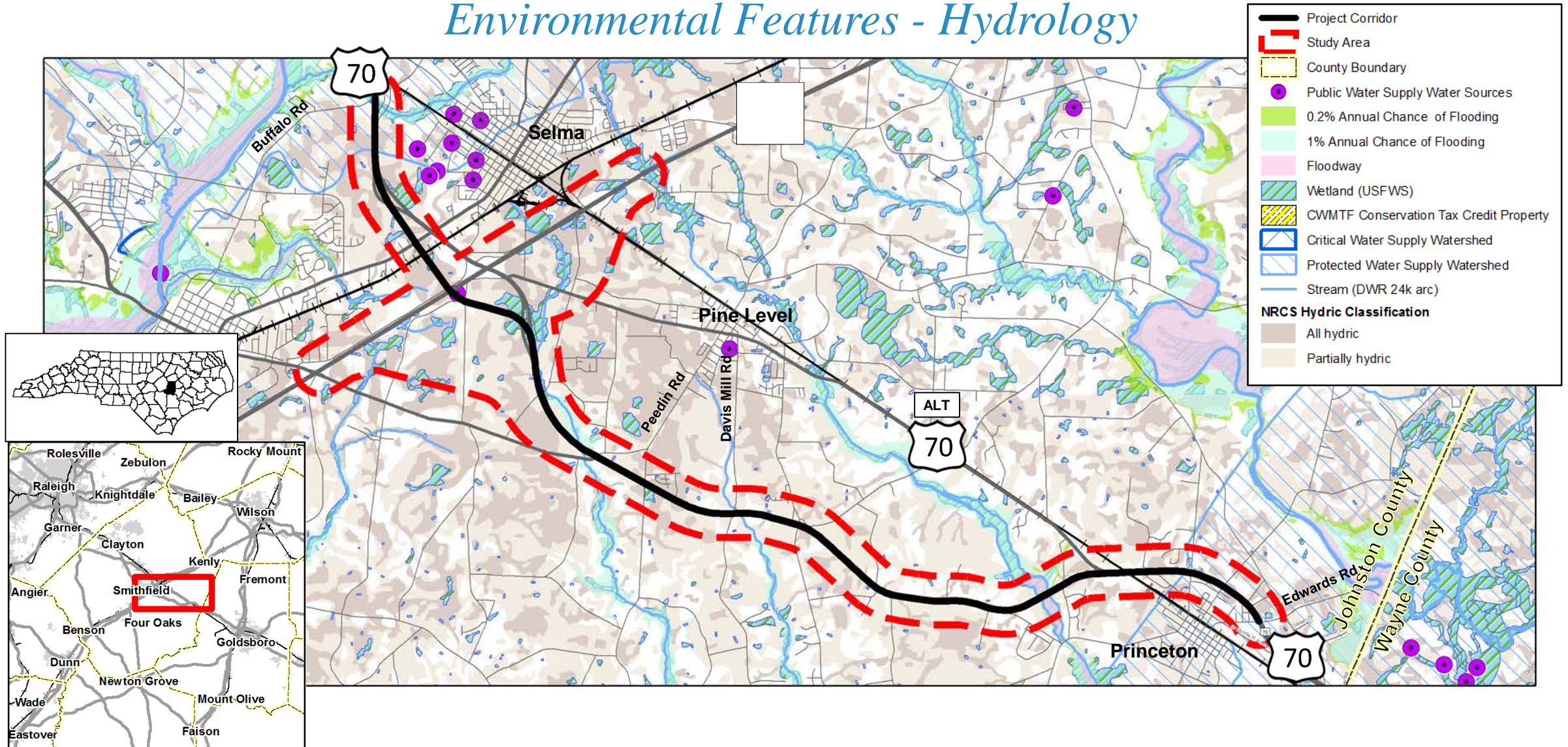
Existing Conditions

- Proposed Project Length
 - Approximately 12 miles
- Existing four-lane divided facility
- Existing median width – 30 ft to 46 ft
- Speed Limit – 55 mph
- Some areas with access control
 - Buffalo Road Interchange
 - US 70/US 70 Bypass convergence points
 - W-5107 interchange areas



Existing Conditions

Environmental Features - Hydrology



Existing Conditions

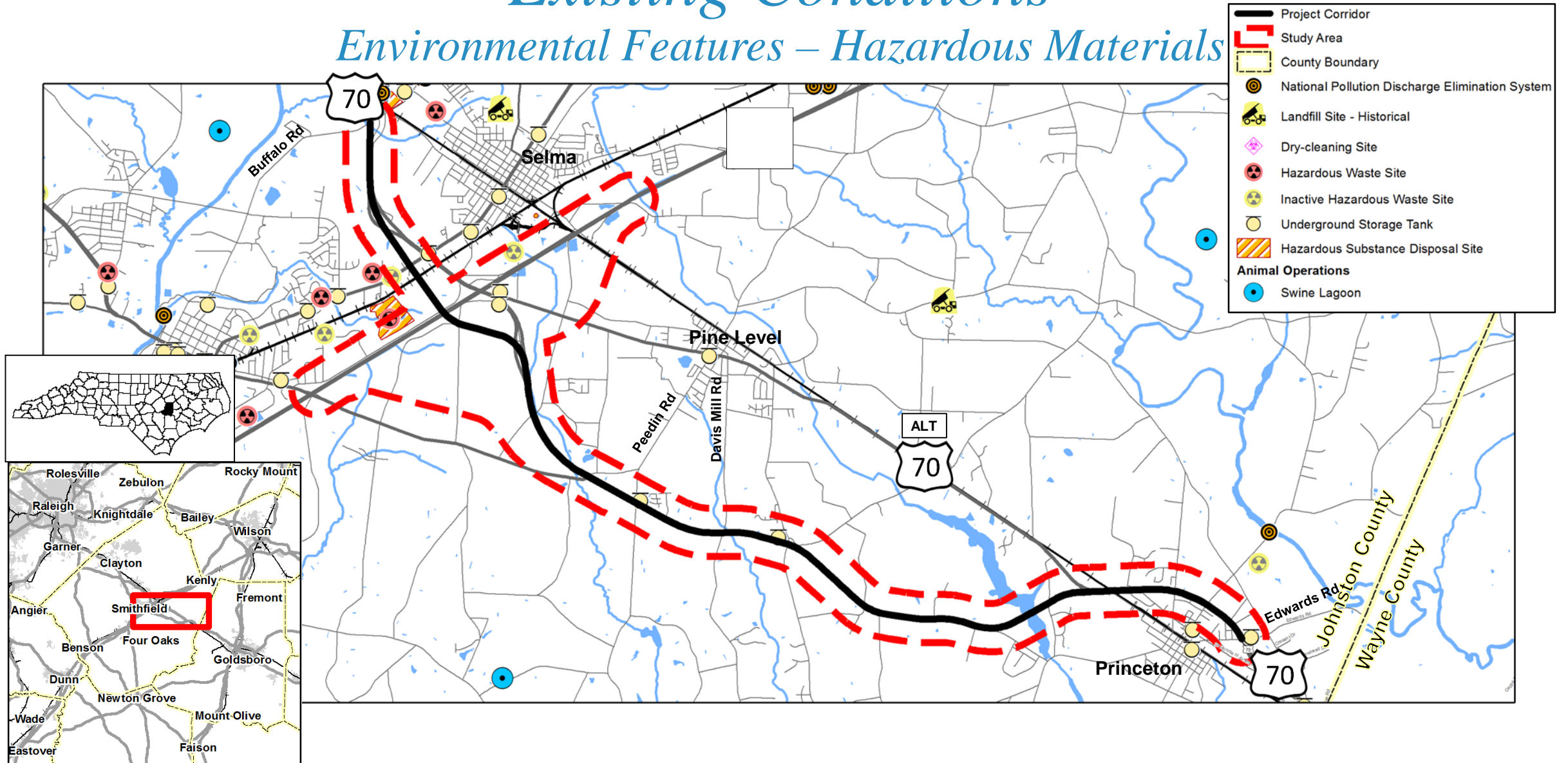
Environmental Features - Hydrology

- Stream Crossings (DWR)
 - Mill Creek (near Buffalo Road)
 - Bawdy Creek (near Peedin Street)
 - Quicosin Creek (near Davis Mill Road)
 - Moccasin Creek (near Pondfield Road) – 303(d) impaired stream
- Numerous areas of designated wetland (USFWS-NWI)
 - US 70/US 70 Bypass interchange south of I-95 (Bawdy Creek)
- One Pond
 - West of Princeton near Pondfield Drive (Holts Pond, from Moccasin Creek)
- Floodplains
 - 100-yr and 500-yr at Holts Pond/Moccasin Creek
 - 500-yr at Bawdy Creek and Mill Creek
- Public Water Supply Water Sources
 - Smithfield Moose Lodge



Existing Conditions

Environmental Features – Hazardous Materials



Existing Conditions

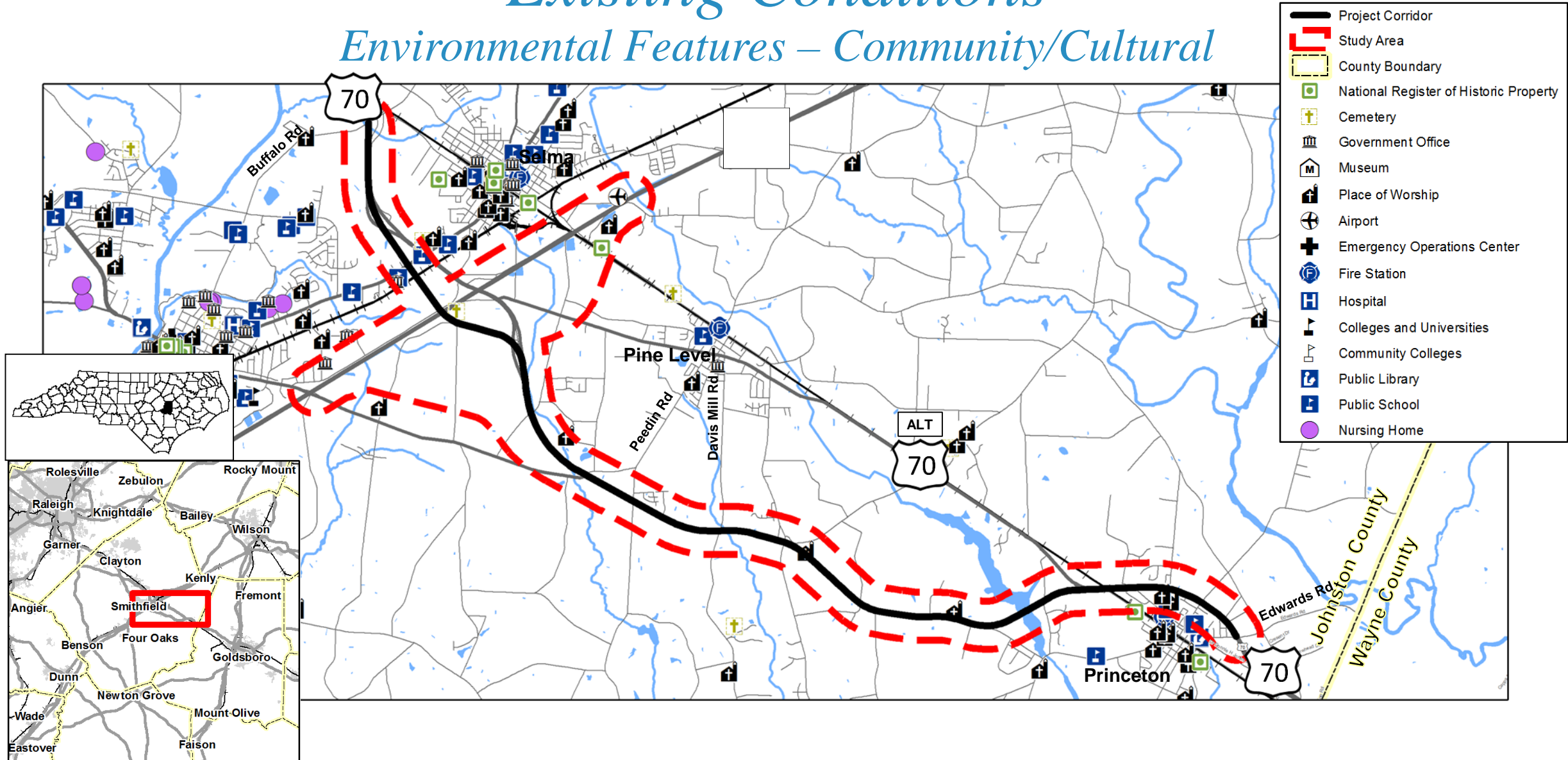
Environmental Features – Hazardous Materials

- No NPDES site locations in project study area
- Numerous gas stations with USTs within study area
 - BP at Peedin Road intersection
 - Citgo at Country Store Road
- Hazardous Materials Disposal Site
 - Skyware Global, located partially within study area, southwest of US 70, north of I-95
 - Archived superfund site, no longer of further interest



Existing Conditions

Environmental Features – Community/Cultural



Existing Conditions

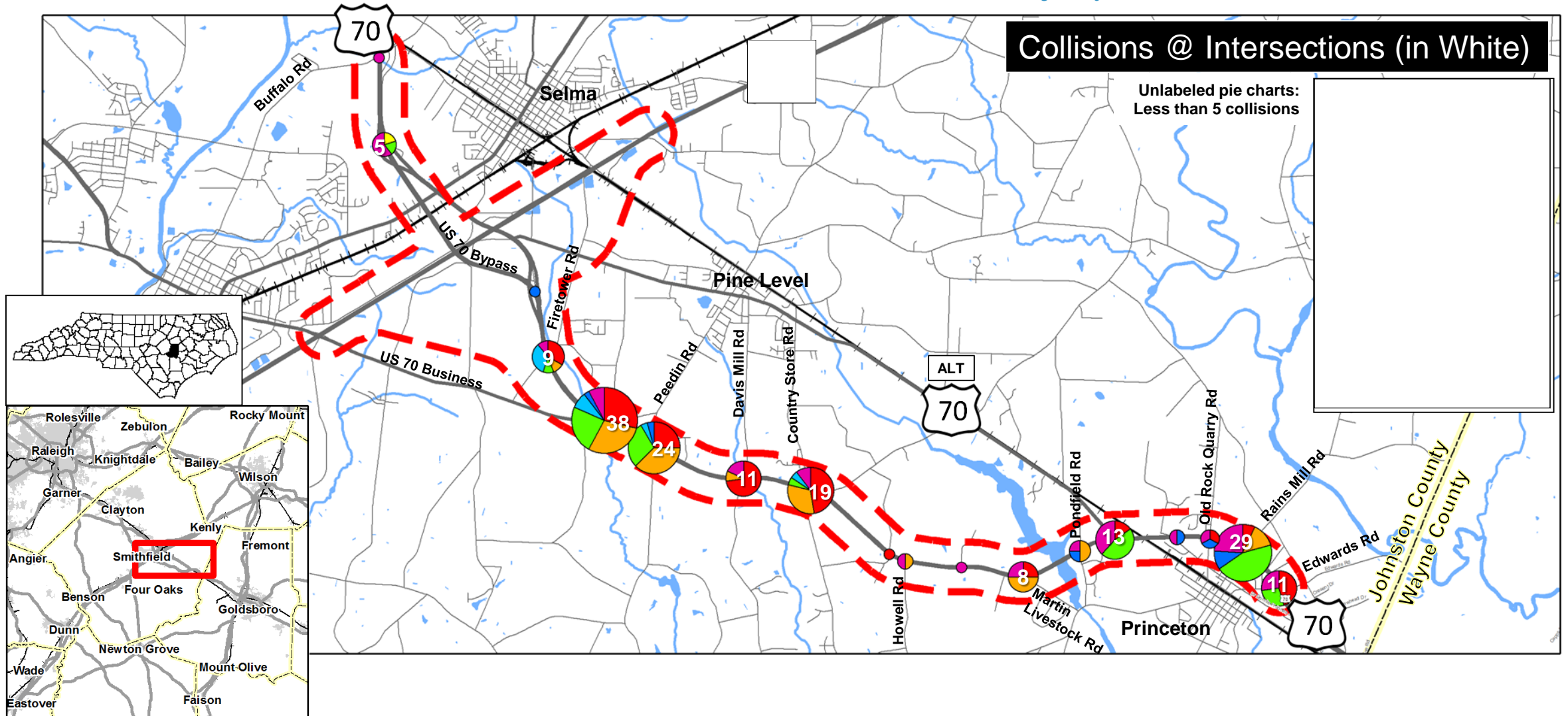
Environmental Features – Community/Cultural

- Two NRHP designated properties within study area
 - Waddell-Oliver House, Selma
 - Princeton Graded School, Princeton
- Schools
 - Princeton High School
 - 2 daycares
- Six churches
 - Hephzibah Baptist Church near Country Store Road
 - Princeton Church of God
- No hospitals or fire departments
- No parks
- One Cemetery, near I-95 overpass



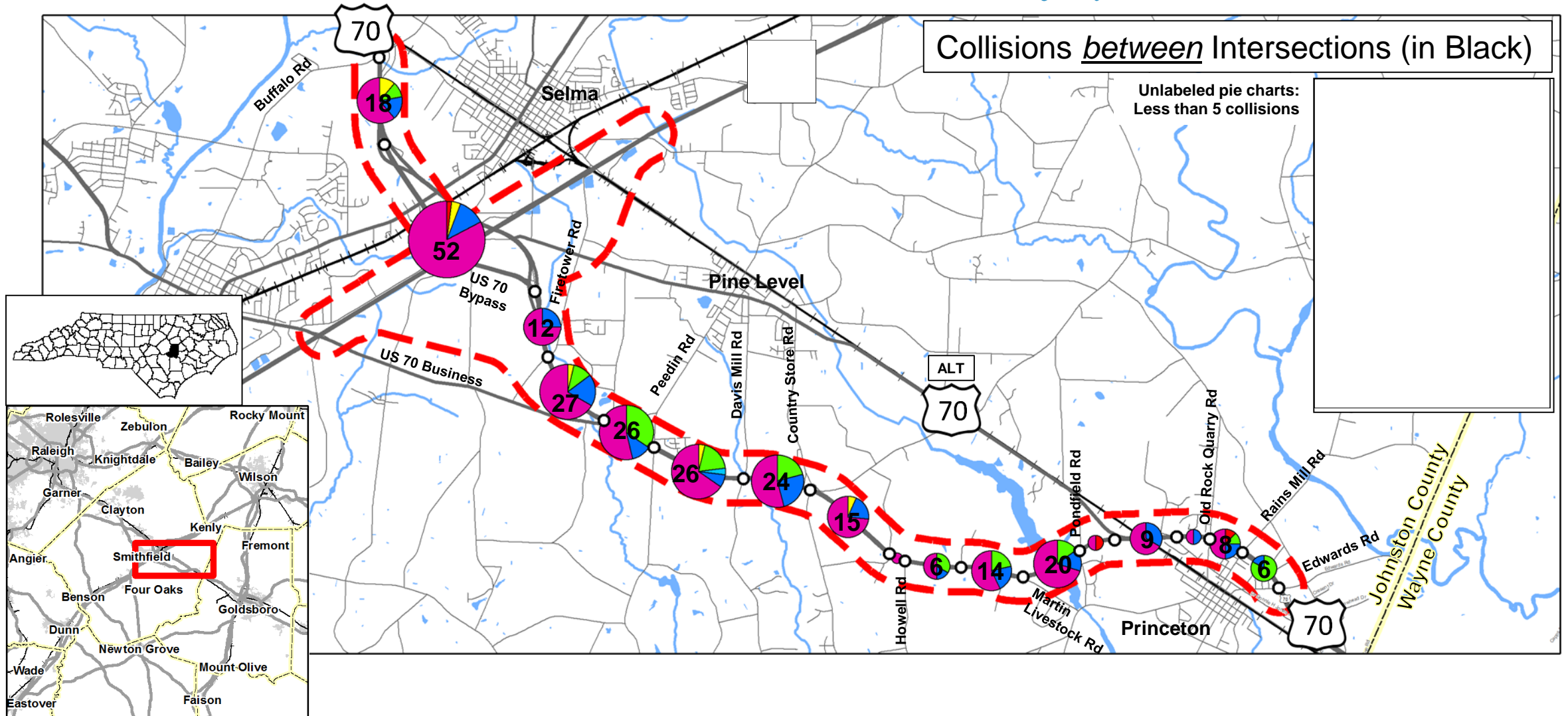
Existing Conditions

Environmental Features – Safety

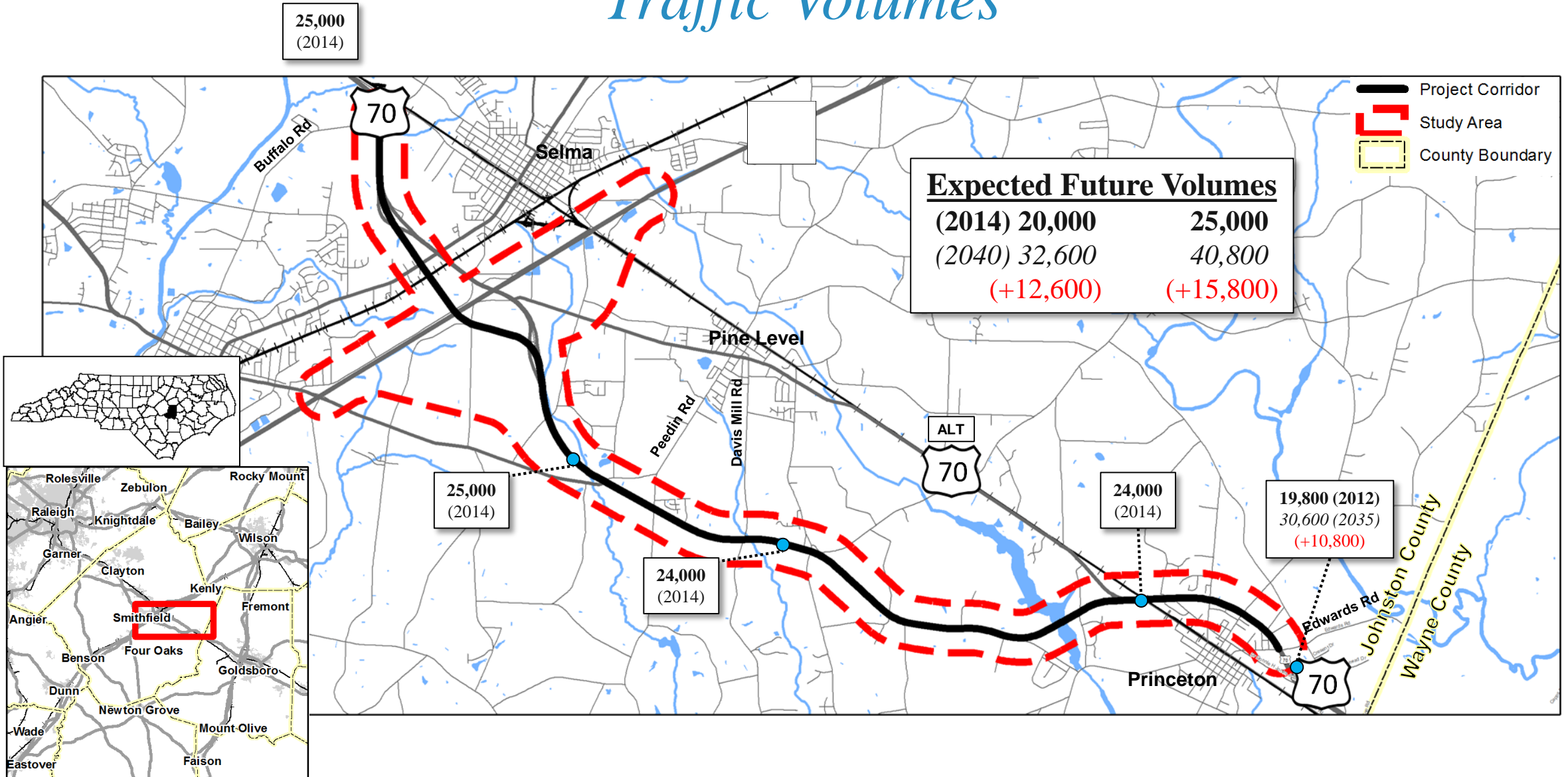


Existing Conditions

Environmental Features – Safety



Traffic Volumes

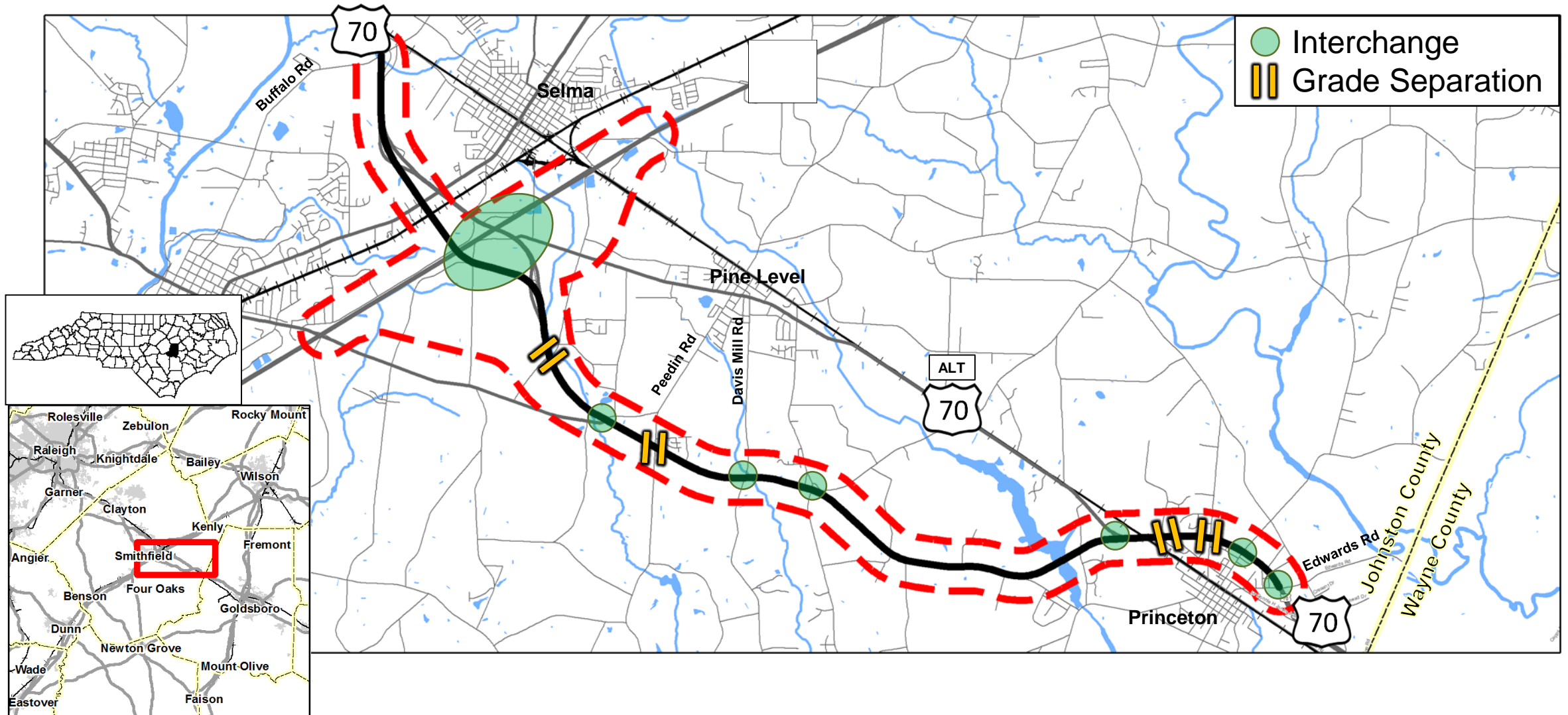


Alternative Development

- Upgrade to interstate design standards
- Consider eight interchange locations
 - US 70/US 70 Bypass/I-95 (two interchanges)
 - Combine into a single system interchange
 - Peedin Road Extension (W-5107)
 - Davis Mill Road (W-5107)
 - Country Store Road
 - US 70 Alt
 - Rains Mill Road
 - Edwards Road
- Consider five grade separation locations
 - Firetower Road
 - Creech's Mill Road
 - Dr. Donnie H Jones Jr. Boulevard
 - Old Rock Quarry Road/Barden Street
 - 1 undesignated
- Frontage road system for access considerations

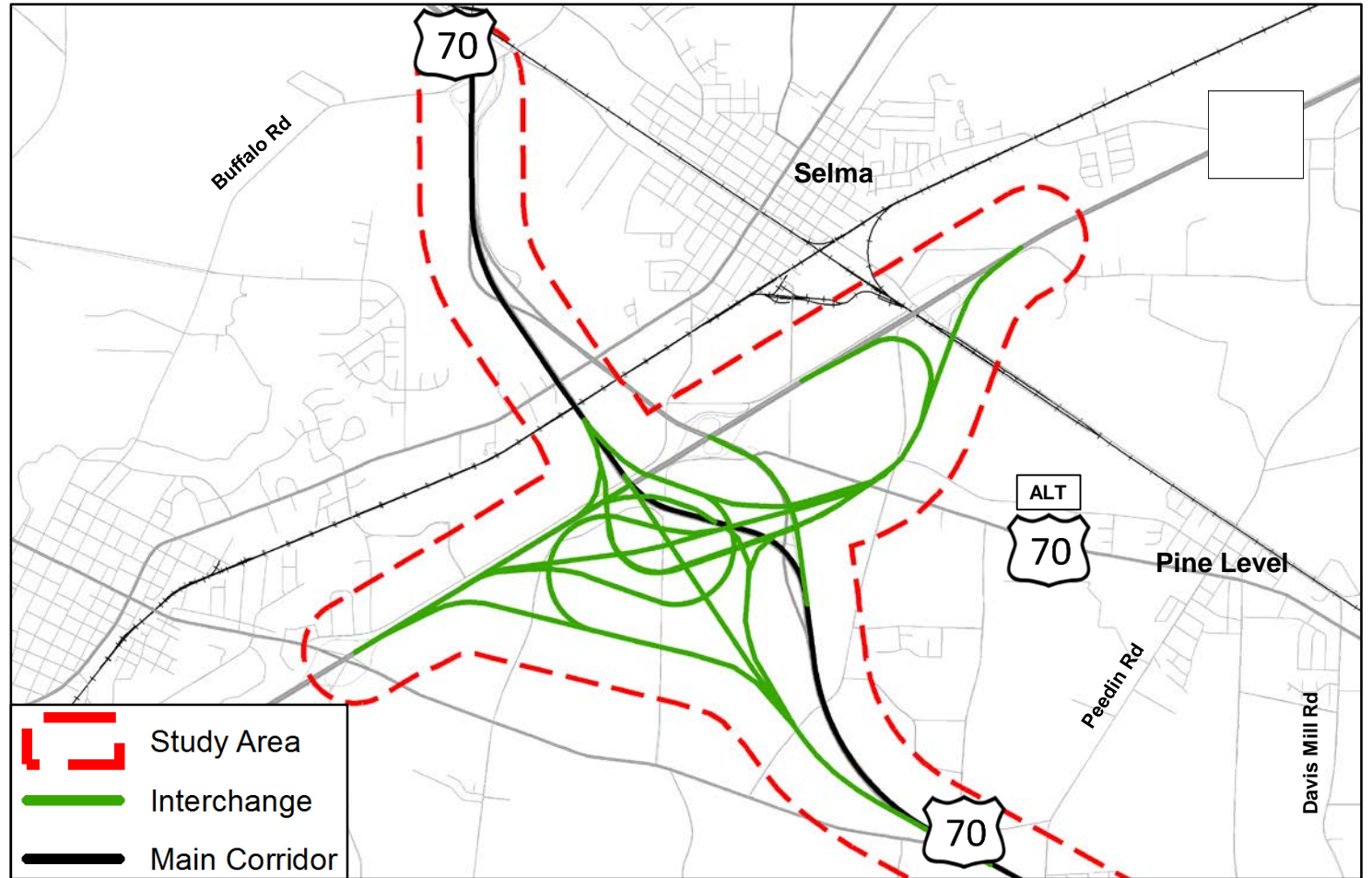


Alternative Development



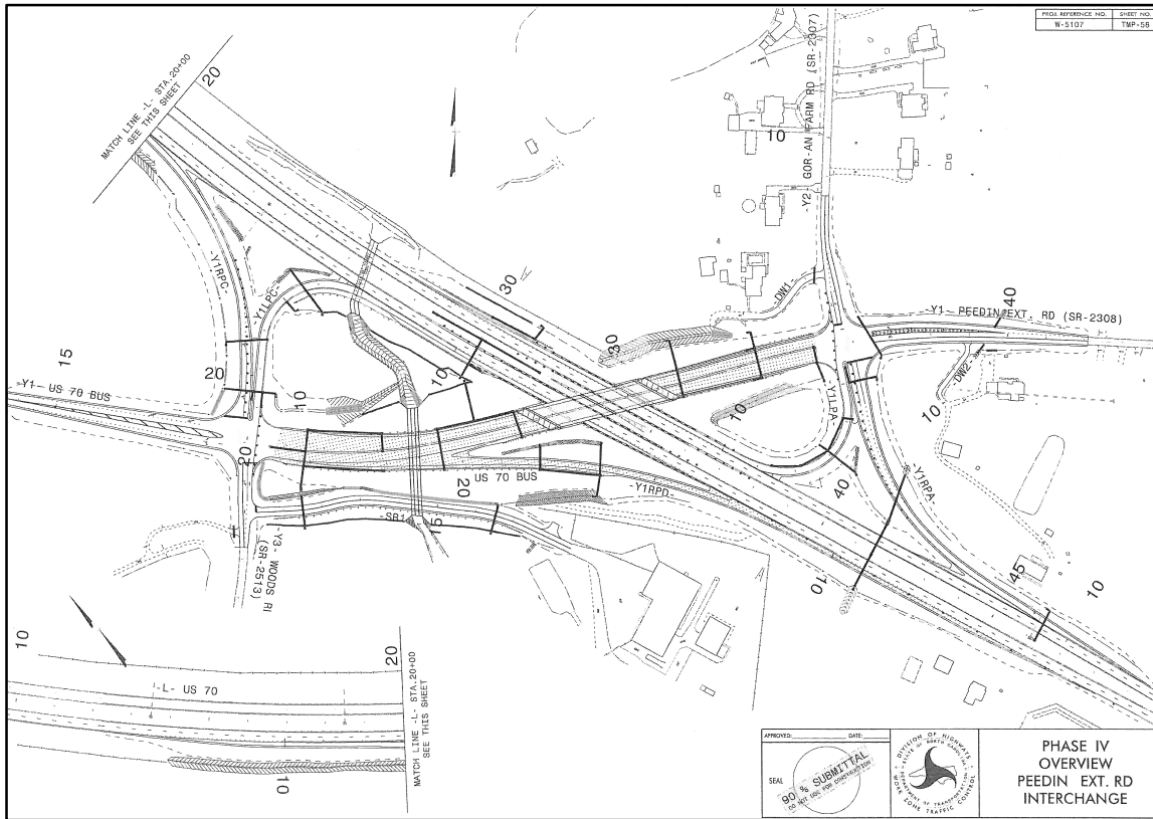
Alternative Development

- System Interchange
 - US 70/US 70 Bypass/I-95
 - Multi-level
 - High speed
 - No Weaving
 - Fully Directional

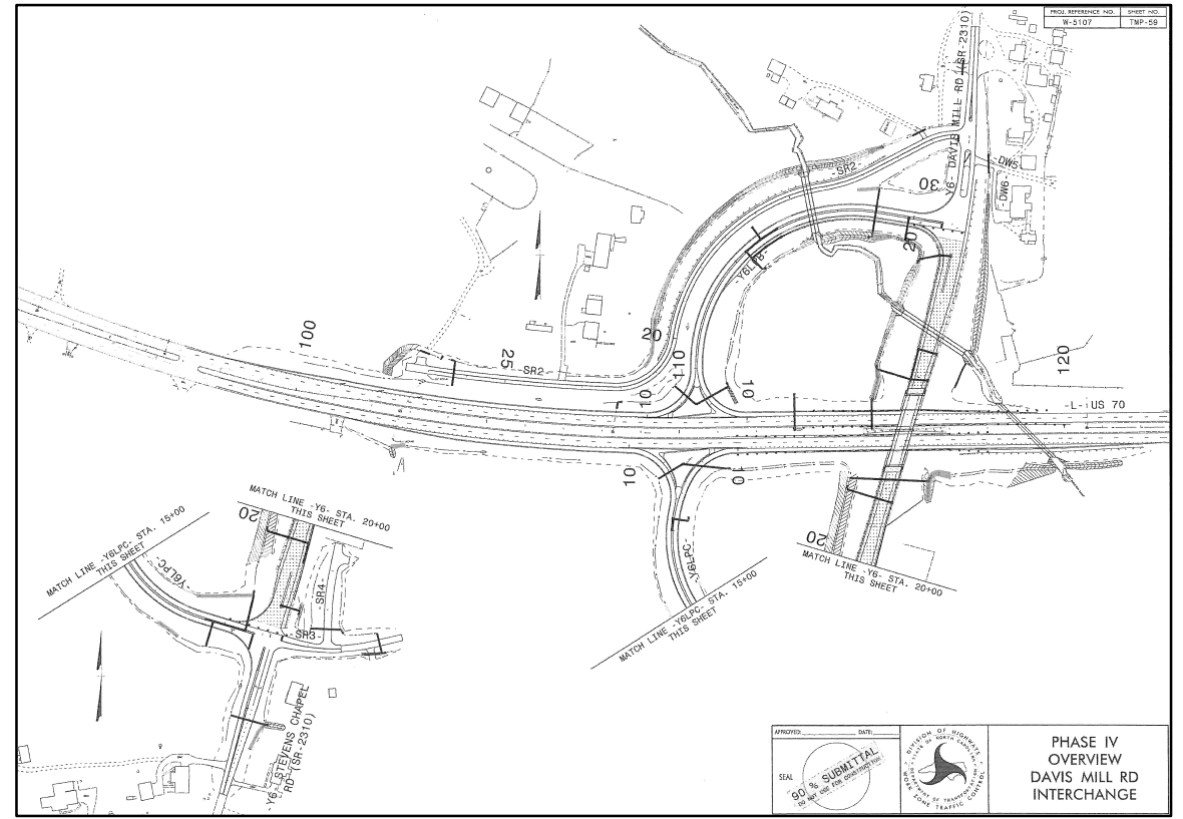


Alternative Development W-5107

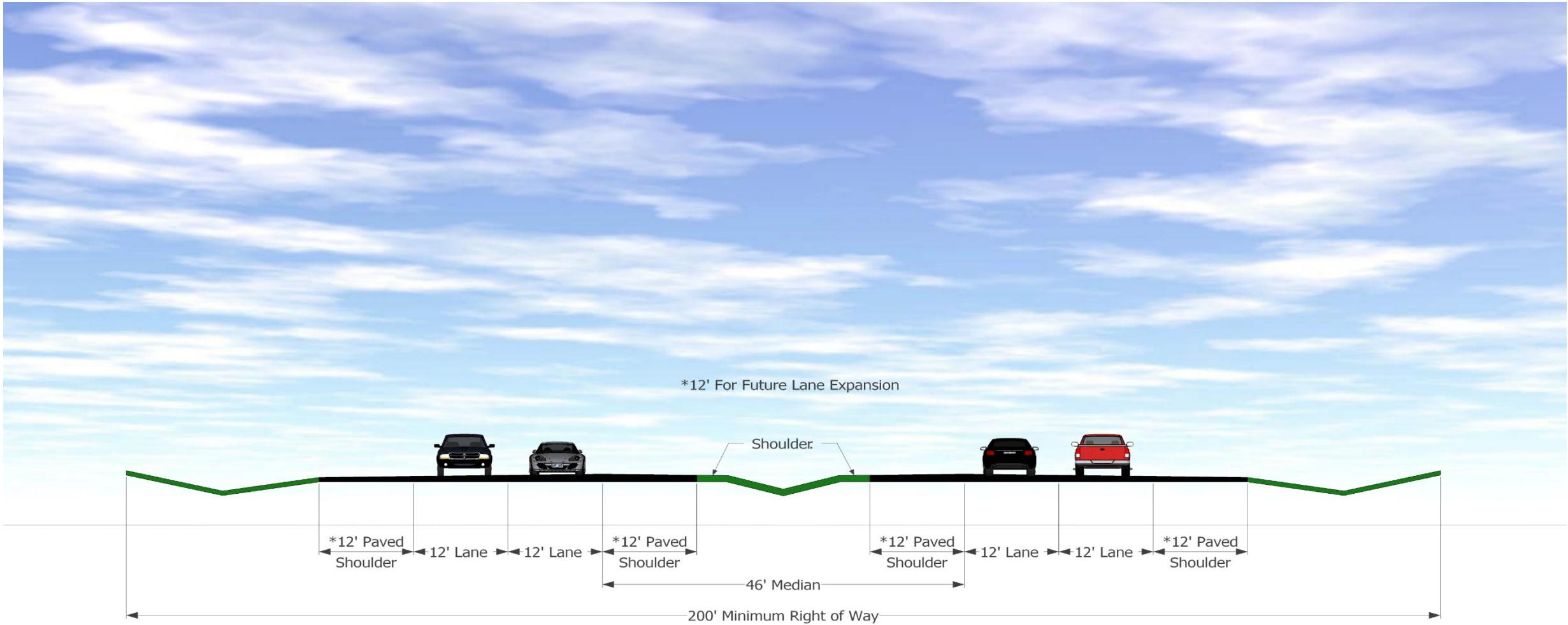
Peedin Road Extension



Davis Mill Road



Alternative Development Proposed Typical Section



*Preliminary – Typical Section Subject to Change

Project Schedule

- Traffic Forecast (from TPB) – Sept 2016
- Design Review Meeting – April 2017
- Draft Report – Oct 2017
- Final Report – Dec 2017



Questions/Comments

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