

Secondary Road Program



Joint Legislative Transportation Oversight Committee

October 5, 2012





Secondary Roads Program

The Big Picture

The Secondary Road System

Needs and Project Types

Paved and Unpaved

Looking Forward

Prioritization Considerations





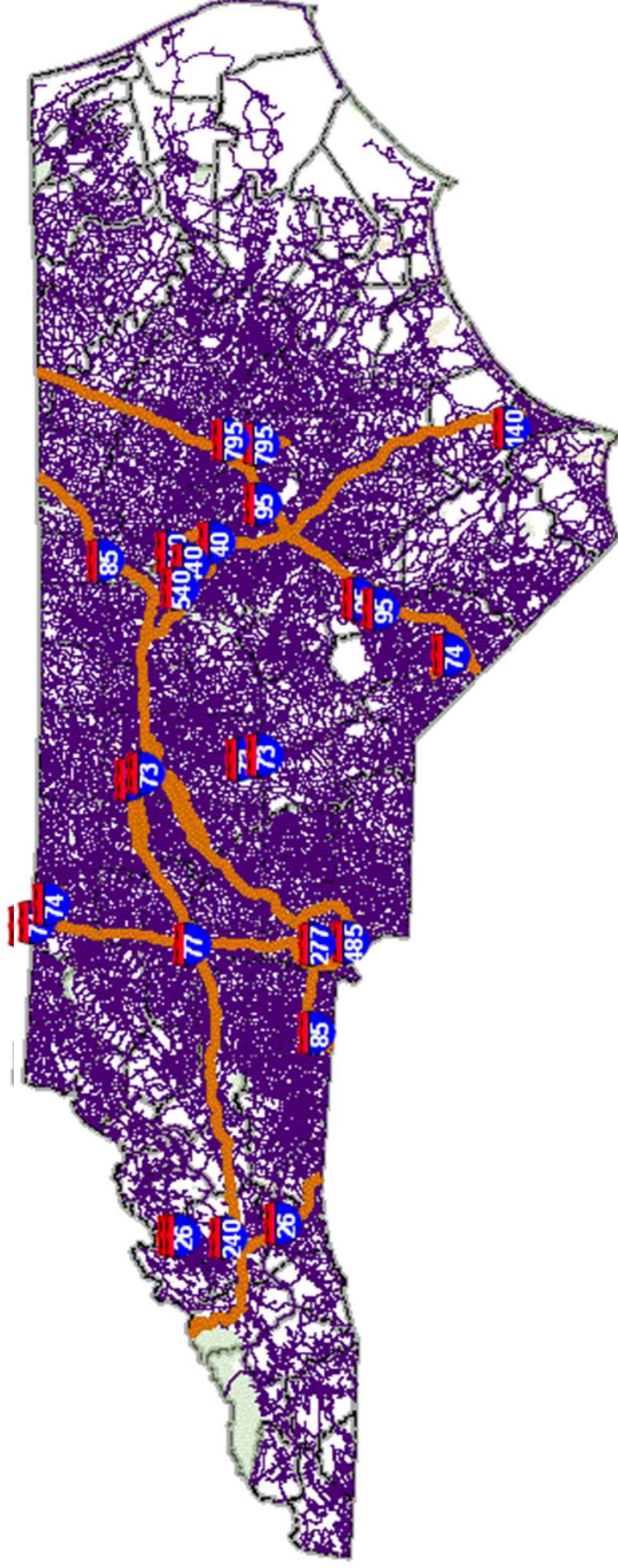
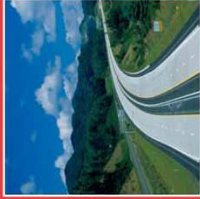
North Carolina State Highway System

NCDOT responsible for the Planning, Design, Construction, Maintenance and Operation of...

- 79,185 road miles
 - Approximately 15,000 miles of primary
 - Approximately **64,000 miles of secondary**
 - ~3,800 miles of unpaved roads

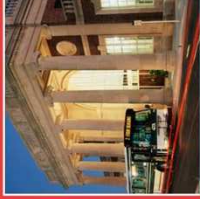
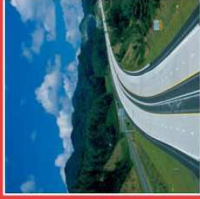


In accordance with Work Program, Principals Asset Management, Targeted Levels of Service

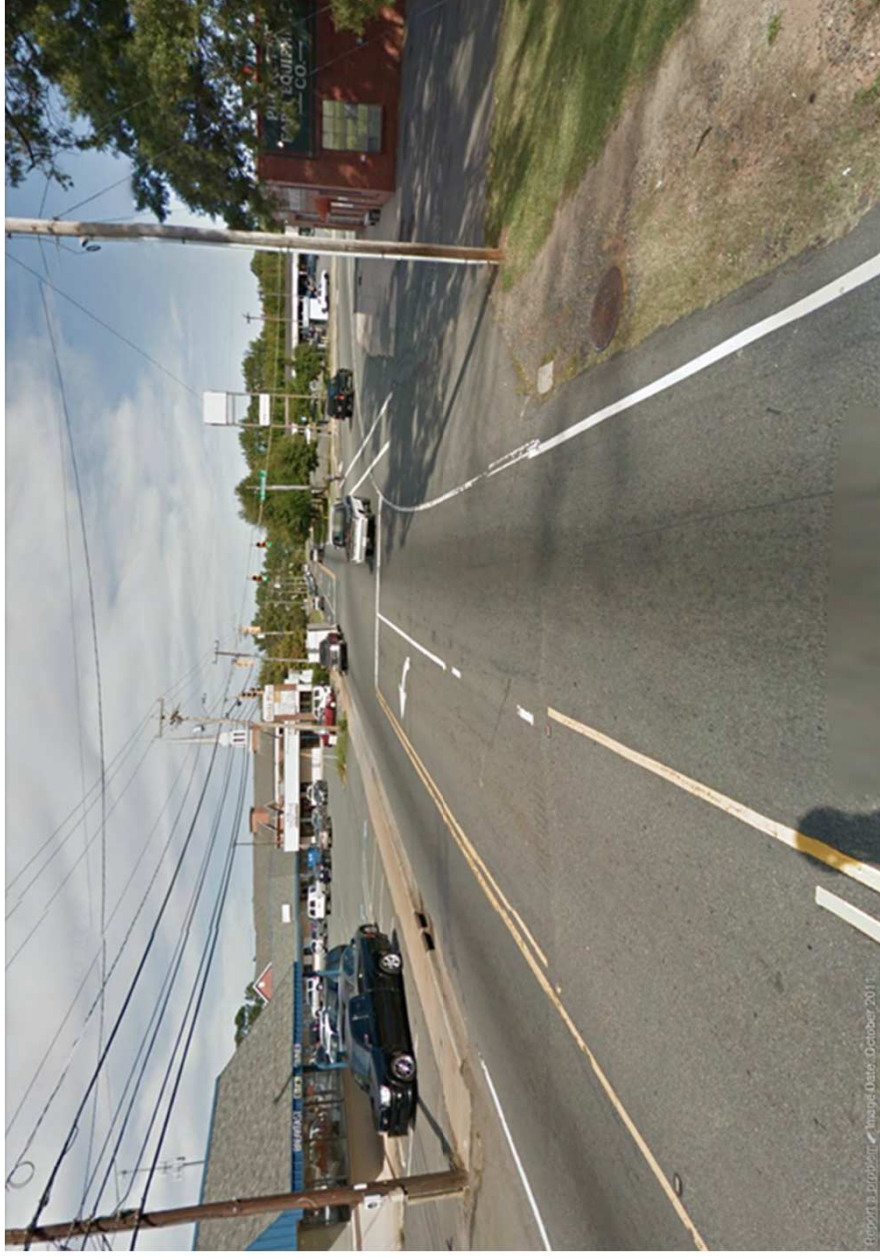


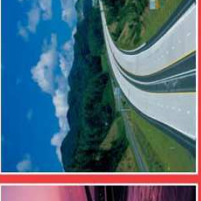
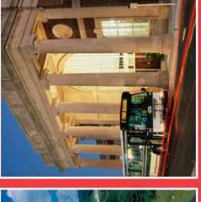
NC Secondary Road System ~64,000 mile Network





What is a Secondary Road?





Urban.....

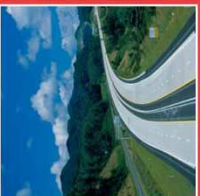
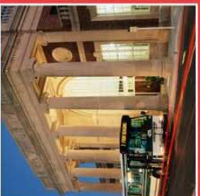
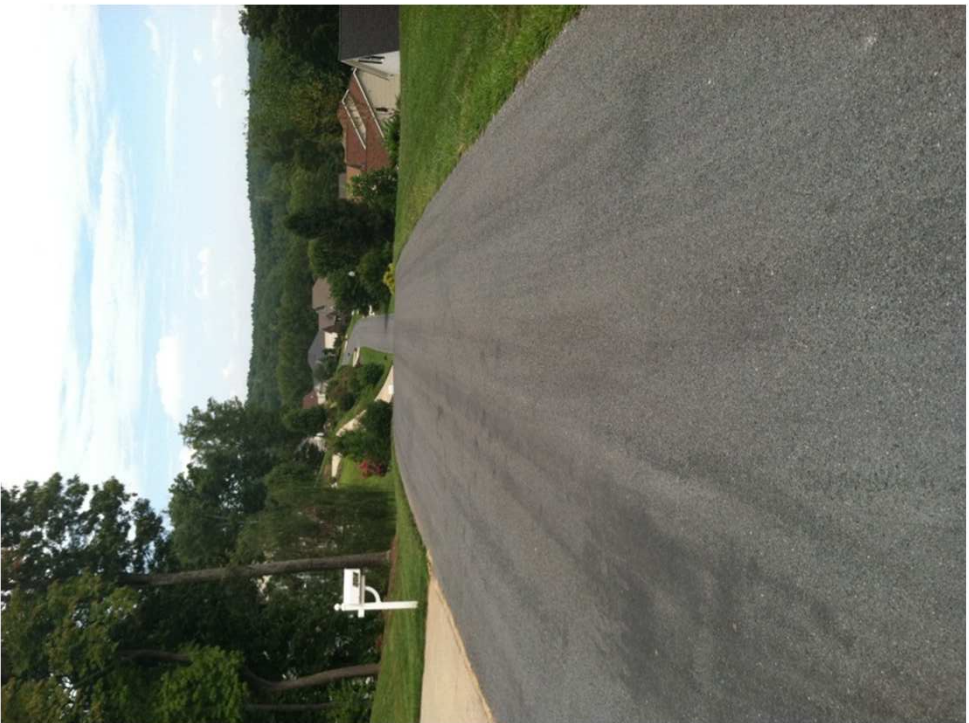


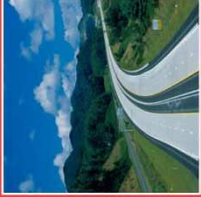


Rural



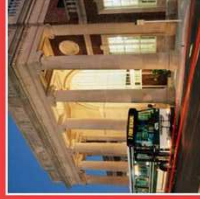
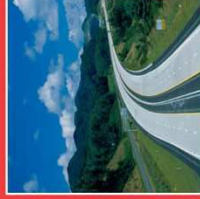
Suburban



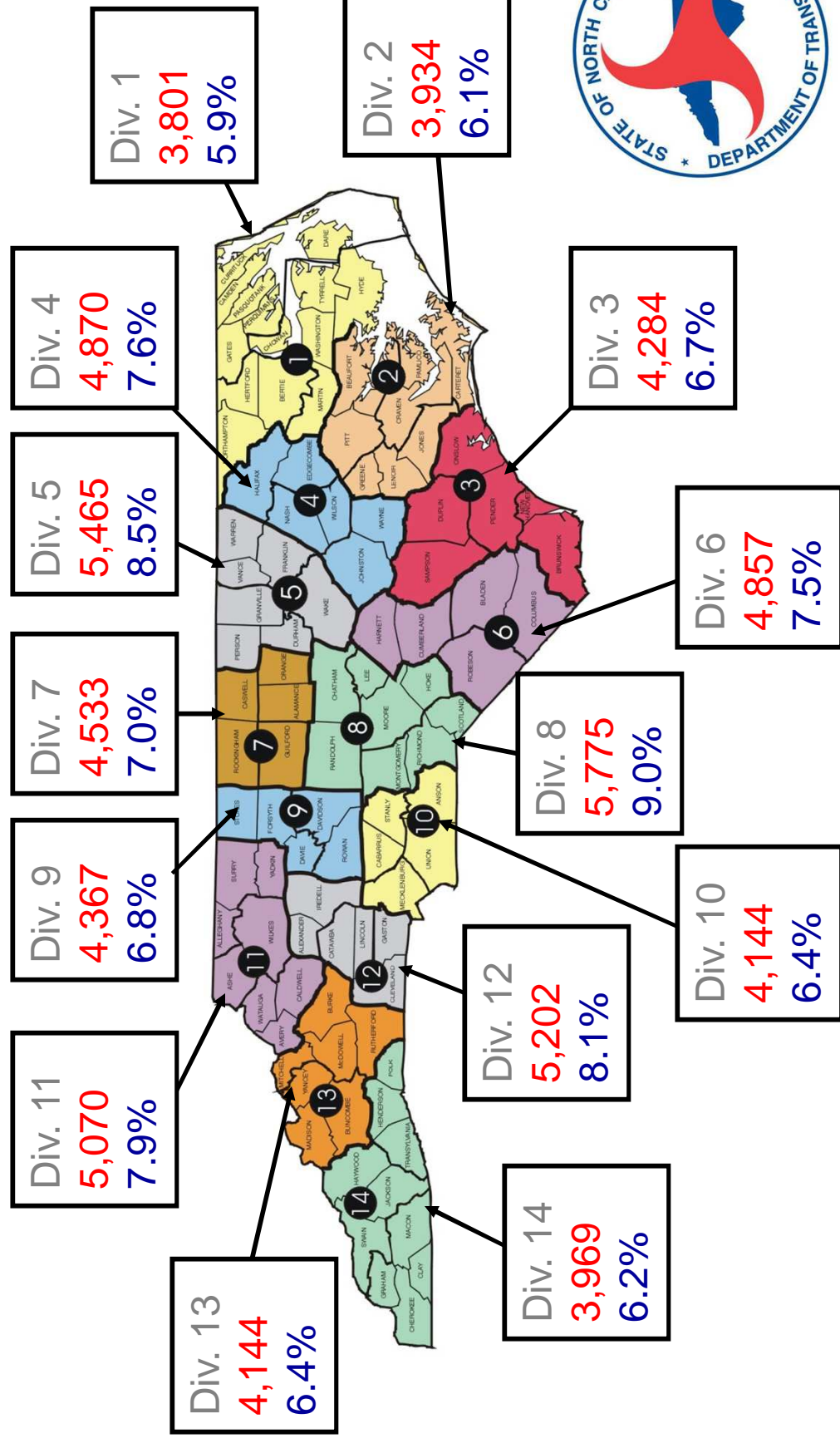


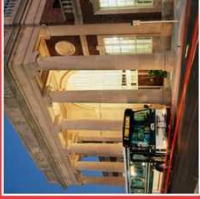
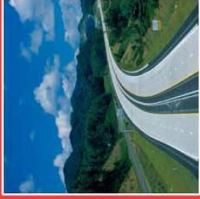
Wide Variety of Dirt Roads





Division Distribution of Secondary Roads





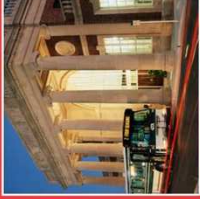
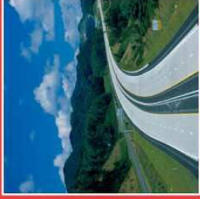
Secondary Road Funding

Routine Maintenance (Highway Fund)

Contract Resurfacing (Highway Fund)

System Preservation (Highway Fund)

Secondary Road Improvement Program
(Highway Fund & Highway Trust Fund)



Routine Maintenance

Highway Fund appropriations distributed for use within county boundaries:

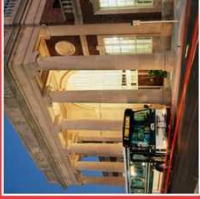
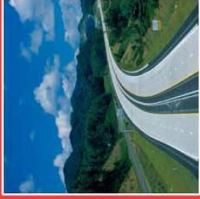
- \$50,000 Uniform Allocation
- 90% Based on county road miles compared to state road miles
- 10% based on county population compared to state population

General Maintenance Reserve fund distributed to Divisions based on pro-rata share of lane miles to help address maintenance needs identified by the Department's Maintenance Condition Assessment Program

Serves as primary funding source for all routine highway maintenance operations:

- Mowing
- Patching
- Drainage
- Snow Removal
- Operation of rest area and welcome centers
- Guardrail Repair
- Litter Pickup
- Shoulder Work

- Routine Bridge Maintenance and small pipe replacement



Contract Resurfacing

Highway Fund appropriations distributed for use within county boundaries:

- 50% Based on needs identified by the Department's Pavement Condition Survey Program
- 37.5% Based on lane miles
- 12.5% based on population

Serves as the primary fund source for pavement resurfacing needs:

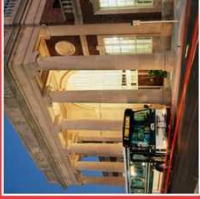
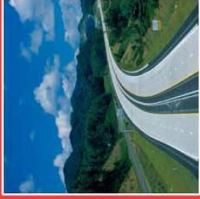
- Provide renewed driving surface
- Improves ride quality
- Reduces patching and frequent maintenance
- Performed by Contract



System Preservation

Revenue Source – Highway Fund

- Funds used for chip seals, crack sealing, pavement markings and markers, painting structural steel, replacing expansion joints and waterproofing bridge decks
- Portion allocated to Divisions based on pro-rata share of bridge deck area for bridge preservation activities
- Remainder allocated to Divisions based on pro-rata share of total paved lane miles
- **All System Preservation Funds allocated in this biennium were designated for bridge improvements**



Secondary Road Improvement Program

- Revenue Source – Highway and Highway Trust Fund
 - **Funds used to pave unpaved roads and modernize the paved secondary system**
 - Funds allocated for use within county boundaries in accordance with G.S. 136-44.2A and G.S. 136-44.5
 - NCDOT presents programs to county commissions annually for concurrence (G.S. 136-44.8)
 - NCDOT provides progress reports to county commissions annually (G.S. 136-44.8)
- Allocation Formula:

Total miles of secondary roads in County

Total miles of secondary roads in State



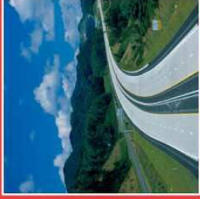
10 year look at Secondary Roads Expenditures (\$M)

10 year look at Secondary Roads Expenditures (\$M)						
Fiscal Year	Routine Maintenance	Contract Resurfacing	System Preservation	Secondary Improvement Program	TOTAL	
2003	249.94	61.59	-	132.23	443.76	
2004	256.23	79.92	-	154.19	490.34	
2005	270.99	69.67	-	142.44	483.11	
2006	355.60	72.72	-	78.02	506.34	
2007	289.73	111.06	35.24	171.28	607.31	
2008	301.53	132.61	56.19	185.90	676.25	
2009	279.32	96.05	60.86	143.79	580.02	
2010	291.79	137.81	52.60	65.65	547.85	
2011	341.56	159.07	96.79	114.68	712.10	
2012	325.69	223.75	56.84	150.87	757.15	
	2962.39	1144.27	358.53	1339.05	5804.24	
						17



State Maintained Unpaved Roads



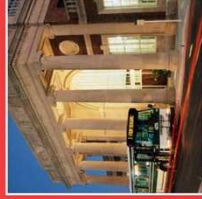
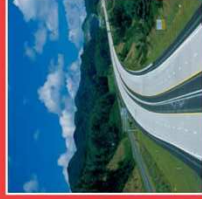


What is Left

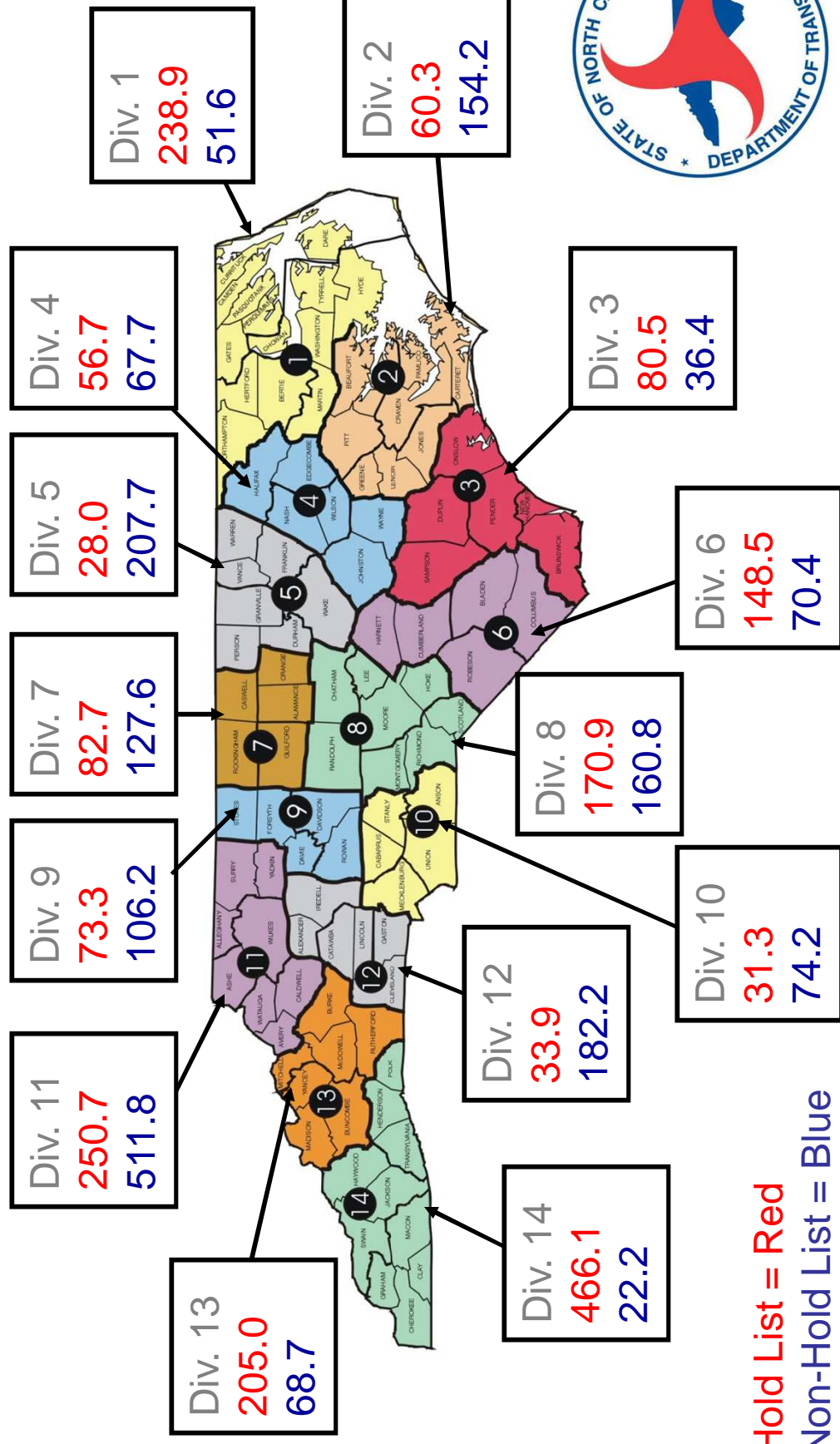


- ~ 3800 miles of Unpaved SR Routes
- Miles on Hold List: 1927
- Miles Eligible for Rating: 1842



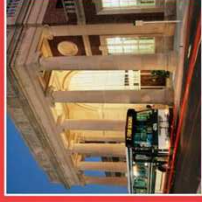
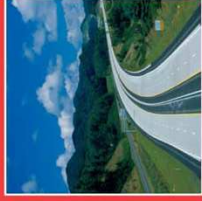


Distribution of UnPaved Secondary Roads Miles



Hold List = Red
Non-Hold List = Blue



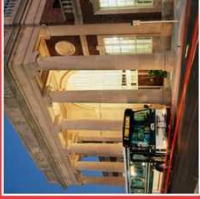
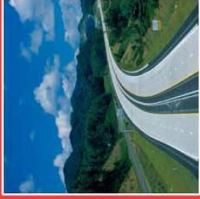


Paving Priority Selection

Un-paved Road Improvement Projects:

- Periodic Rating Cycle with point system
 - Land use Characteristics
 - Traffic Volume
 - Route Characteristics
- 100 County Specific Prioritization Lists





Paving Program Challenges

- Right-of-Way
- Constructability and environmental permitting issues
- Maintenance costs of paved vs. unpaved roads
- Increasing cost of construction versus homes served





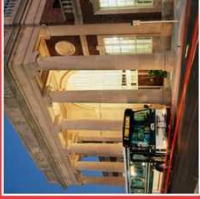
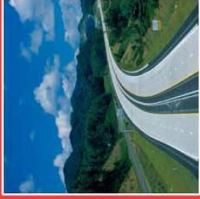
Statutory Changes 2005-2006

Began to transition to an Improvement Program to better address safety and mobility needs through modernization improvements on the secondary road system

Incorporate widening, resurfacing, safety, and bridge replacement projects on the Secondary Paved System (Modeled the NC Moving Ahead program)

Emphasis placed on completion of the paving program to the extent possible in counties where the unpaved mileage is significant.





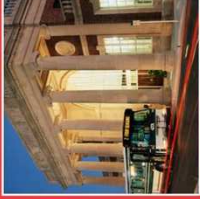
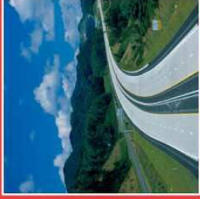
House Bill 950 (Fiscal Year 2012-13)

Statewide Prioritization

PRIORITIZE PAVING OF UNPAVED ROADS THROUGHOUT THE STATE **SECTION 24.15.**

For fiscal year 2012-2013, the Department of Transportation shall expend funds allocated to the paving of unpaved secondary roads for the paving of unpaved secondary roads based on a statewide prioritization. The Department shall pave the eligible unpaved secondary roads that receive the highest priority ranking within this statewide prioritization, notwithstanding the distribution formula in G.S. 136-17.2A or any other funding distribution formula in law. This section applies to funding for the paving of secondary roads from both the Highway Fund and the Highway Trust Fund.

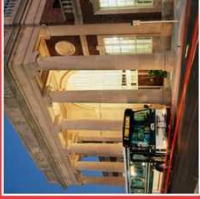
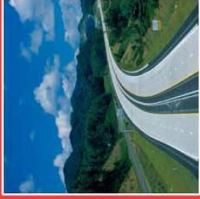




Executing One-Year Statutory Change

Requirements:

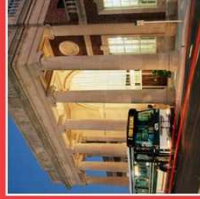
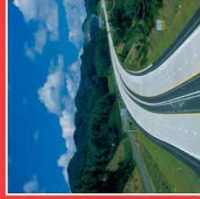
- Had to create a statewide priority list
- Had to fully fund prioritized projects with one year's allocation
- Had to determine anticipated expenditures for FY2012-2013 for paving unpaved roads



Executing One-Year Statutory Change

Approach:

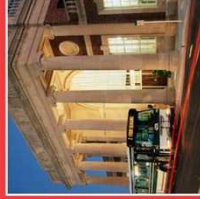
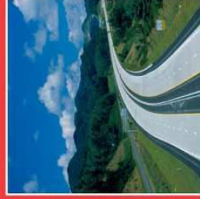
- Determined roads anticipated to be programmed with FY2012-2013 funds
 - 194 unpaved roads in 50 Counties
- Determined amount that could be funded and expended with FY2012-13 funds
 - \$12.3M
- Applied \$12.3 million to 194 eligible roads in statewide priority list
 - 20 counties
 - 47 roads
 - 18.89 miles



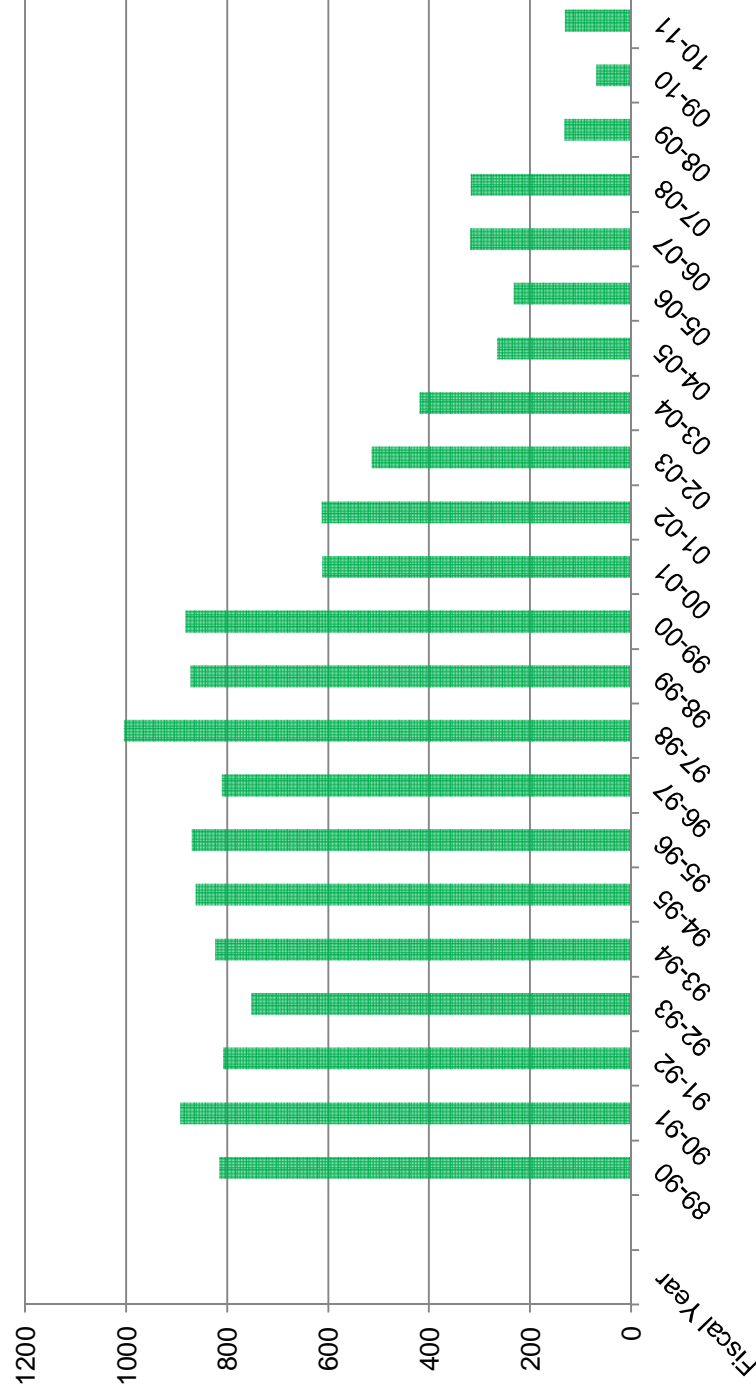
Distribution of Allocations for SW Priority List

<u>SUMMARY OF SW PRIORITY</u>								
Div	County	Total Dollars	# Roads	Total Length (mi)				
1	Dare	\$125,000	1	0.23				
2	Beaufort	\$200,000	1	0.35				
2	Pitt	\$100,000	1	0.22				
3	Sampson	\$50,000	1	0.41				
9	Davidson	\$475,000	1	0.32				
9	Rowan	\$440,000	3	0.58				
10	Cabarrus	\$990,825	3	1.48				
10	Mecklenburg	\$40,000	1	0.06				
11	Ashe	\$680,000	1	0.80				
11	Avery	\$300,000	1	0.37				
11	Caldwell	\$800,000	1	1.20				
11	Watauga	\$1,900,000	1	2.90				
11	Wilkes	\$1,200,000	1	1.80				
12	Alexander	\$400,000	1	0.45				
12	Catawba	\$1,570,500	13	2.83				
12	Iredell	\$1,377,778	2	1.70				
12	Lincoln	\$33,000	1	0.06				
13	Buncombe	\$901,000	10	1.64				
13	Mitchell	\$140,000	1	0.23				
14	Henderson	<u>\$550,000</u>	2	<u>1.26</u>				
		\$12,273,103	47	18.89				
20 Counties receive "off-the-top" allocations								



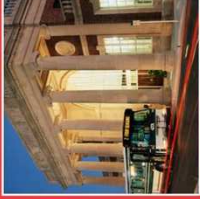
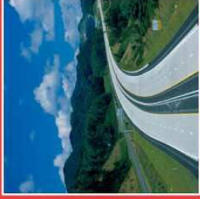


Miles of Dirt Road Paving



> 13,000 Miles Paved from 1989 to 2011





Paved Road Improvement Projects

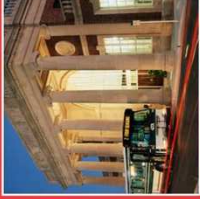
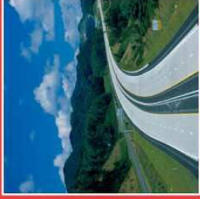
- Access & Mobility – Industrial road improvements, school bus access, small bridge and pipe replacement
- Safety – straighten curves, intersection alignment, lane widening, shoulders widening, turn lanes, sight distance improvements





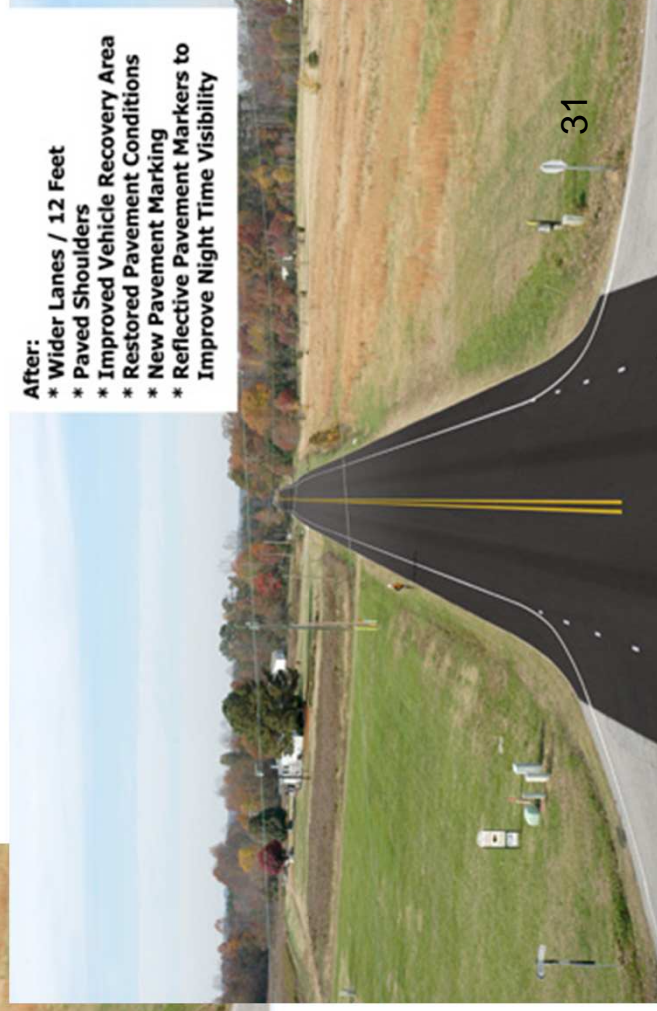
Project Selection Guidelines for Paved Road Improvements

- Traffic Volume > 1500 Average Daily Traffic
- Lane Width < 11 feet
- Shoulder Width (Vehicle Recovery Area)
- Crash Data
- Traffic Flow Assessment
- Minimal Right of Way Requirements
- Minimal Environmental Impacts



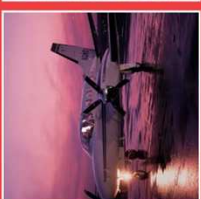
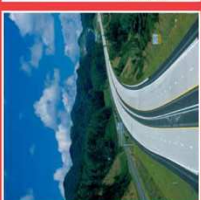
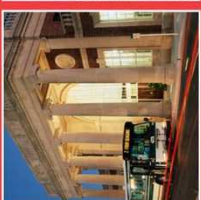
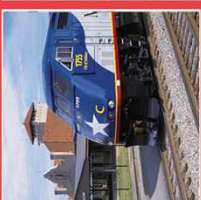
Before:

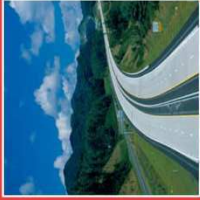
- * Narrow Lanes / 10 Feet
- * Low Shoulder Drop Offs/
Inadequate Vehicle Recovery
Area
- * Deteriorated Pavement Conditions
- * Worn Pavement Markings
- * No Reflective Markers



After:

- * Wider Lanes / 12 Feet
- * Paved Shoulders
- * Improved Vehicle Recovery Area
- * Restored Pavement Conditions
- * New Pavement Marking
- * Reflective Pavement Markers to
Improve Night Time Visibility





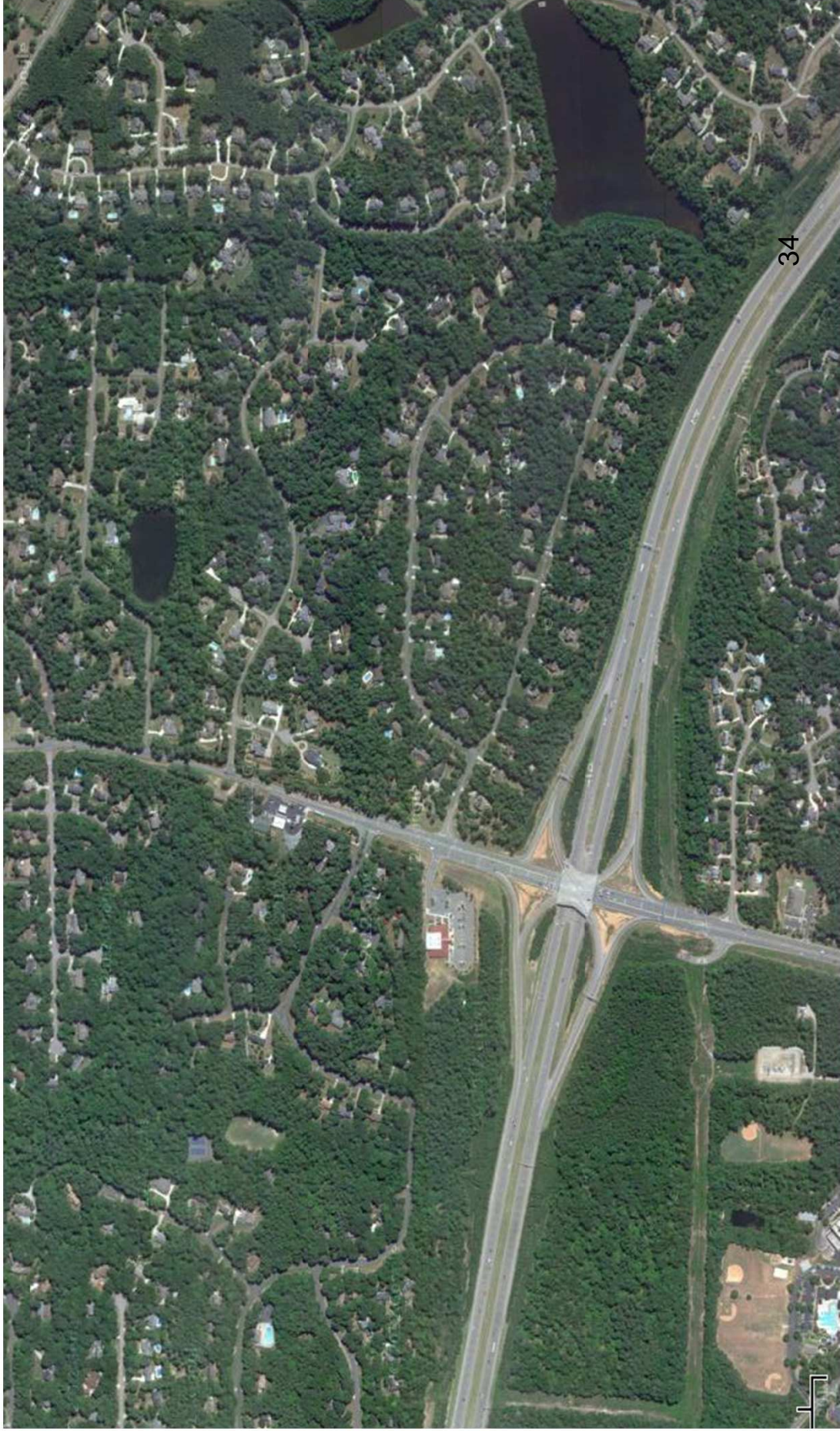
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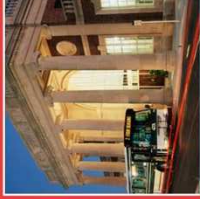
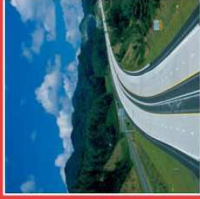
- * Rural Primary Highway
- * 55 MPH Speed Limit
- * Rapid Suburban Growth Area
- * Through Traffic Must Wait for Left Turns
- * Potential for Rear End Crashes



After:

- * New Left Turn Lanes Added
- * Through Traffic can Maintain Speed
- * Potential for Crashes Reduced
- * Signal can Operate More Efficiently



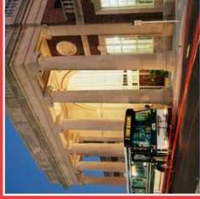
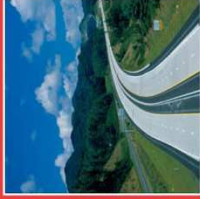


Looking Forward

Unpaved Roads and Paved Roads

- How does North Carolina address the needs of the secondary road system with limited resources and increasing demand and inventory?

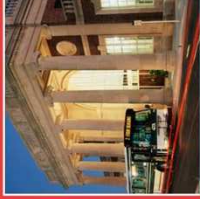
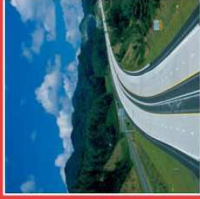




Looking Forward

Unpaved Roads

- Consider continuing the statewide paving priority system for unpaved roads
- Consider minimum threshold for paving unpaved roads
 - For example, minimum traffic volumes, land use density, etc...
- Consider designating a portion of secondary road program funds for paving prioritized unpaved roads



Looking Forward

Unpaved Roads

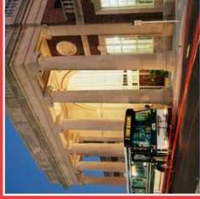
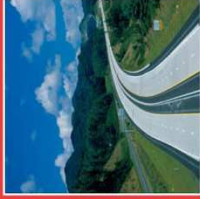
Potential benefits of prioritized system

- Increases confidence that funds are being expended on projects of greatest need
- Continues commitment to pave unpaved roads

Potential impacts of prioritized system

- Less local involvement
- Negative reaction from property owners

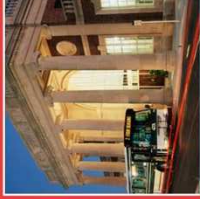
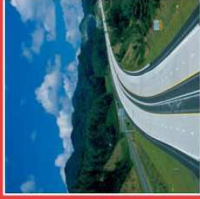




Looking Forward

Paved Roads

- Consider authorizing the development and use of a prioritization process for secondary road improvements based on safety, mobility and access criteria.
- Consider allocating remaining Secondary Road Improvement Program funds, not used for paving unpaved roads, to this new program.
- Consider refining funding allocation criteria to address corridor improvements and isolated problem areas



Looking Forward

Paved Roads

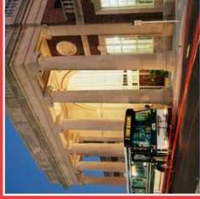
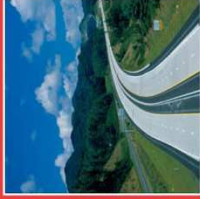
Benefits:

- Focuses resources on projects of greatest need
- Allows resources to be focused on congestion and access mitigation
- Allows for multi-year and regional planning
- Potential to modernize key roadways to better link business centers and residential areas
- Increases flexibility to address safety issues, resulting in lower accident rates and fatalities

Impacts:

- Funds following need, not inventory





Questions?