

2016

FRA Rail Program Delivery

Meeting

The Piedmont Improvement Program

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Piedmont Improvement Program Background

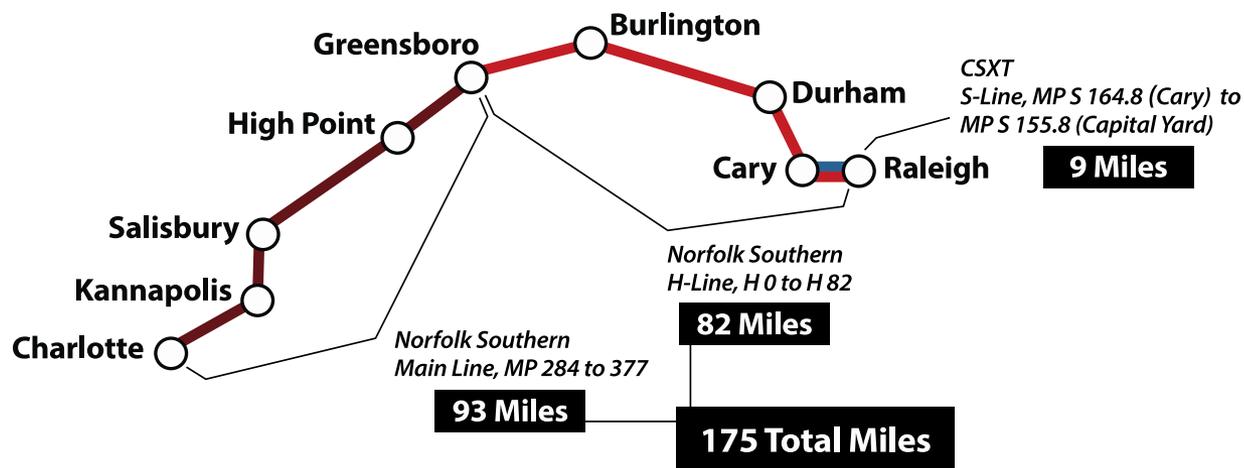


- ▶ 2009 – NCDOT applied for over \$5 Billion in ARRA grants
- ▶ 2010 – NCDOT awarded \$520 Million ARRA grant for the 3rd and 4th frequency of state-sponsored Piedmont service
- ▶ Rail capacity and safety projects targeted
- ▶ Largest single improvement to NC rail infrastructure in modern times
- ▶ All ARRA funds must be expended by September 30, 2017
- ▶ Unique delivery method – NCDOT managed all highway and railroad roadbed construction



About the Piedmont Corridor

- ▶ North Carolina Railroad Company (NCRR) owns the corridor
- ▶ Norfolk Southern is freight operator and maintains the railroad
- ▶ Traffic on the Corridor:
 - ▶ Freight trains (more than 30 per day)
 - ▶ NCDOT *Piedmont* – 2 round-trip trains per day (Charlotte-Raleigh Intrastate)
 - ▶ Amtrak *Carolinian* – 1 round-trip train per day (Charlotte-Raleigh-NYC)
 - ▶ Amtrak *Crescent* – 1 round-trip train per day (Charlotte-Greensboro-NYC)



PIP Goals

- ▶ Increase capacity to handle more passenger trains and growth of freight service
- ▶ Improve operating speeds and ride quality
- ▶ Improve schedule reliability and reduce trip times
- ▶ Add 3rd and 4th Raleigh-Charlotte corridor trains upon completion:
(3 *Piedmont* round-trip + 1 *Carolinian* round-trip = 4 trains daily)
- ▶ Improve safety – Significant number of grade crossing closures through NCDOT-led safety program
- ▶ Stimulate job creation – provide opportunities to NC regional businesses



PIP Track & Structures Projects



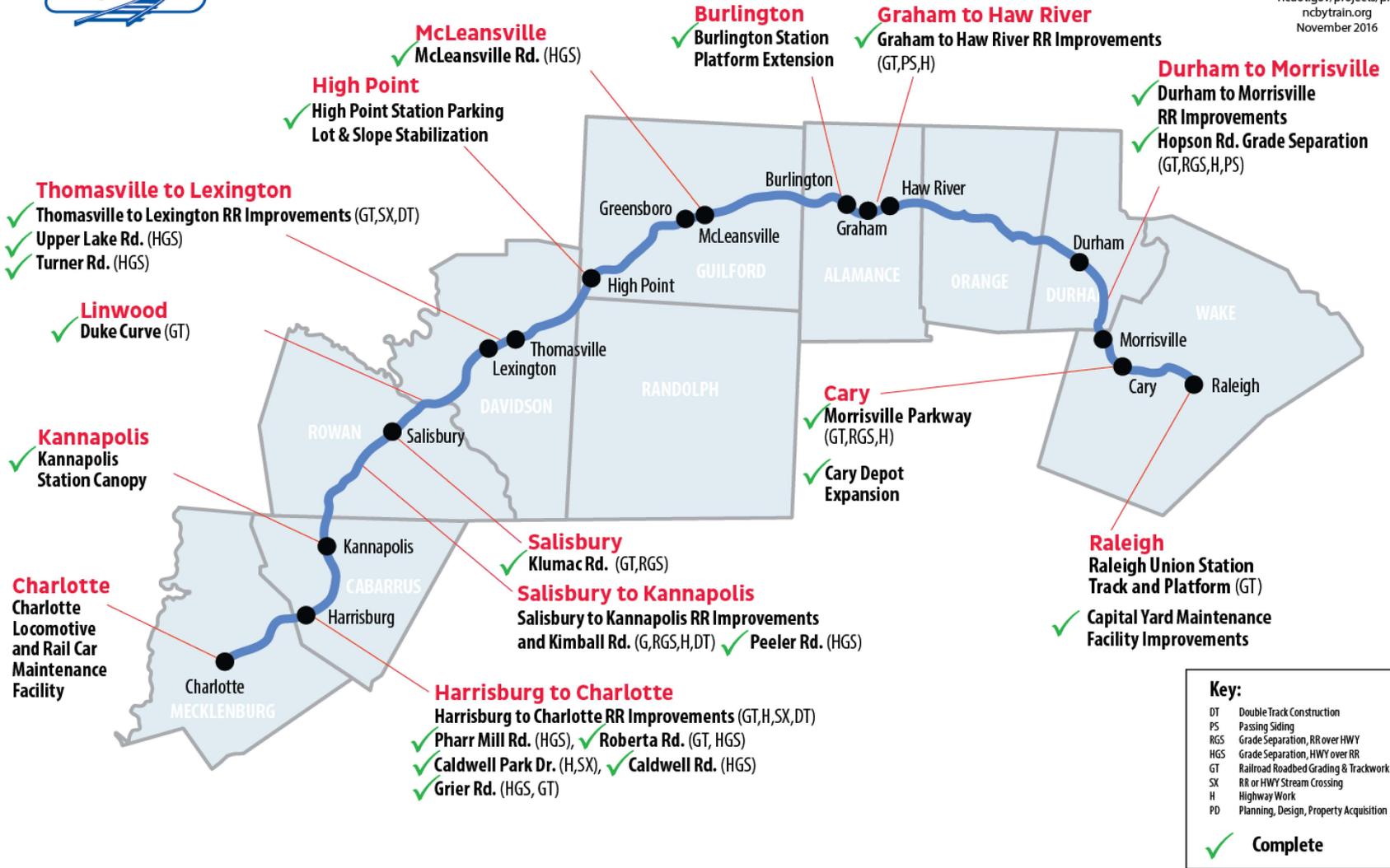
- ▶ 27 miles of second main track
- ▶ 5 new double crossover control points
 - ▶ 20 new tangential geometry turnouts
 - ▶ 60 mph vs. 45 mph diverging speed
 - ▶ Improved ride quality
- ▶ 5 miles of passing sidings
- ▶ 30 new railroad signal installations
- ▶ 12 new roadway grade separations
- ▶ Approximately 12 miles of roadway construction
- ▶ 5 railroad bridge improvements
- ▶ Curve improvements
- ▶ Closure of 23 public and 16 private at-grade crossings



Piedmont Improvement Program Projects



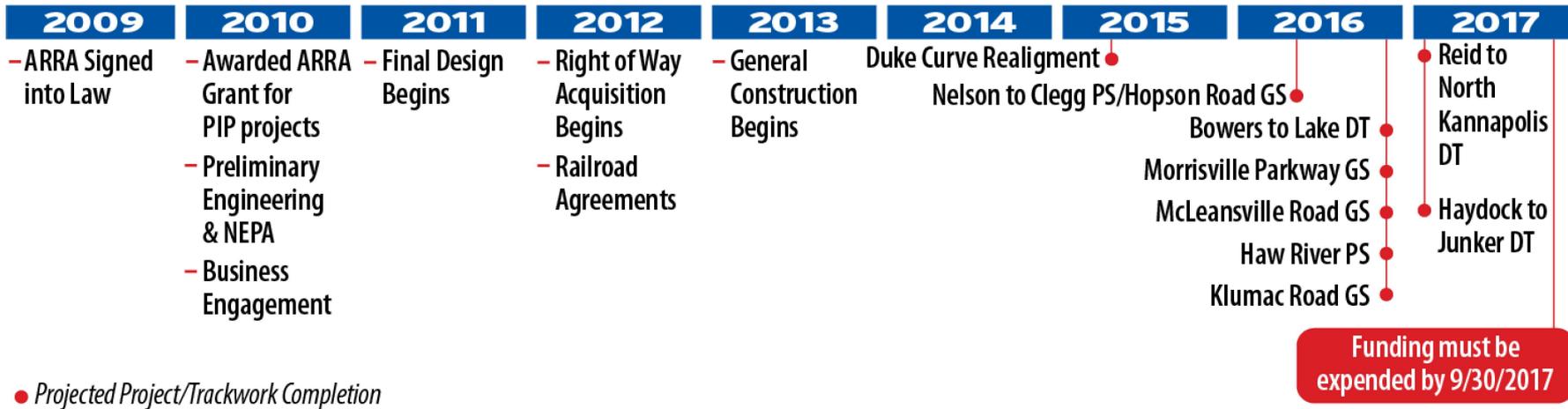
ncdot.gov/projects/pip
ncbytrain.org
November 2016



NC By Train – Piedmont Equipment – 7 Locomotives, 12 Railcars, 2 Cab Control Units



PIP Timeline



Other PIP Projects

Stations and Facilities

- ▶ Renovations at existing stations at Cary, Burlington, High Point, and Kannapolis
- ▶ Track and signal work for the new Raleigh Union Station
- ▶ Improvements to the locomotive and railcar maintenance facility in Raleigh
- ▶ Construction of a new locomotive and railcar maintenance facility in Charlotte

Passenger Equipment Rebuilds

7 locomotives, 12 railcars

5 cab control units (to convert to push-pull operation)



Project Administration



- ▶ NCDOT Rail Division is program lead
 - ▶ Program management, assisted by PEF
 - ▶ Design development and coordination
 - ▶ Oversight of all NCDOT and NS construction
- ▶ Division of Highways managed highway, roadbed grading and structures contract work
- ▶ NS managed track & signal construction
- ▶ NCRR provided field inspection
- ▶ FRA provided oversight through regional Project Manager



P-5208 Haydock to Junker Double Track

- ▶ Division 10; Cabarrus/Mecklenburg Counties
- ▶ 12 miles of double track
- ▶ 2 control points with Number 24 turnouts
- ▶ 8 crossing closures
- ▶ 4 highway bridges built
- ▶ Curve improvements
- ▶ Complete in early 2017



P-5206 Reid to North Kannapolis Double Track

- ▶ Division 9; Rowan County
- ▶ 10 miles of double track
- ▶ 2 control points with Number 24 turnouts
- ▶ 10 crossing closures
- ▶ 2 grade separations – 1 railroad bridge and 1 highway bridge
- ▶ Curve improvements
- ▶ Complete in early 2017



C-4901 Bowers to Lake Double Track

- ▶ Division 9; Davidson County
- ▶ 4 miles of double track
- ▶ Control point with Number 24 turnouts
- ▶ 3 public crossings eliminated
- ▶ 2 highway bridges built
- ▶ 3 railroad bridges improved
- ✓ Completed October 2016



U-3459 Klumac Road Grade Separation

- ▶ Division 9; Rowan County
- ▶ New railroad bridge over Klumac Road
- ▶ Culminates extensive program of crossing improvement and closure projects in Salisbury
- ✓ Completed Fall 2016



I-2304AE Duke Curve Realignment

- ▶ Division 9; Davidson County
- ▶ Increased operating speed from 45mph to 65mph
- ▶ Facilitated by previous project for longer I-85 span over railroad
- ✓ Completed Spring 2015



P-5204 McLeansville Road Grade Separation

- ▶ Division 7; Guilford County
- ▶ 1 highway bridge built
- ▶ Closed 2 public crossings and 1 private crossing
- ▶ Eliminated crossings from passing siding
- ✓ Completed Fall 2016



P-5205 Haw River Passing Siding and Curve Realignment

- ▶ Division 7; Alamance County
- ▶ 2-mile passing siding
- ▶ Breaks up 22-mile stretch of single track
- ▶ Half-mile 30-foot deep cut on new location
- ✓ Completed Fall 2016



U-4716 Nelson-Clegg Passing Siding

- ▶ Division 5; Wake/Durham Counties
- ▶ 3.3-mile passing siding
- ▶ Breaks up 14-mile stretch of single track
- ▶ New railroad bridge over Hopson Road
- ▶ 2 public crossings eliminated
- ✓ Completed Spring 2016



P-5201 Morrisville Parkway Grade Separation

- ▶ Division 5; Wake County
- ▶ 1.5-mile main line realignment
- ▶ New railroad bridge over Morrisville Parkway
- ▶ Eliminated major four-lane crossing
- ✓ Completed Fall 2016



Private Crossing Safety Initiative

Revolutionary program to remove safety issues related to private driveway crossings of the high volume, high speed rail corridor

- ▶ Over 20 private crossings closed in last 5 years
- ▶ Crossings typically have no active warning devices
- ▶ Treatments included:
 - ▶ Closures combined with alternate access
 - ▶ Locked gates to prevent unauthorized use



Conclusion

Delivering the PIP was a significant challenge due to the large scope of work, multiple parties and contracts, and the fixed funding schedule.

As a result of the program, the Piedmont Corridor between Charlotte and Raleigh is a steel-wheel interstate that will handle anticipated increases in freight and passenger services.



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Thank you!

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