

Passenger Rail Task Force

RALEIGH CITY COUNCIL

March 22, 2012

Summary Report regarding West Raleigh grade separations

BACKGROUND

In 2010 The Passenger Rail Task Force (PRTF) was directed by the Raleigh City Council to evaluate possible closures of rail crossings in West Raleigh and impacts on Transit Oriented Development planning. In its January 18, 2011 and February 25, 2011 meetings, the PRTF discussed this issue at length. To learn more, PRTF members conducted a two-hour, in-depth bus tour of the entire West Raleigh rail corridor from the Boylan Wye to the Raleigh city limits at I-40, accompanied by Eric Lamb (Transportation Planning) and Roberta Fox (Urban Design Center), including stops and discussions in these areas:

- North and south of the rail corridor at Corporate Center Drive and Bashford Road;
- North and South of the rail line where Edwards Mill Road is planned to traverse the NCRR corridor;
- North and south sides of the at-grade intersection of Nowell Road;
- The areas adjacent to the intersection of Hillsborough and Western Boulevard where Jones Franklin Road might one day be extended north of the railroad (so-called “Dysfunction Junction”);
- The existing Hillsborough Street railroad underpass;
- North and south sides of the at-grade intersection of Powell Drive (Burke Brothers Hardware is located on the northeast side of this crossing);
- Blue Ridge Road intersection (grade separation project underway);
- The existing I-440 bridge over the NCRR corridor;
- The at-grade intersection of Beryl Road;
- Beryl Road where it might be extended east to connect to Royal Street and/or Gorman Street;
- North and south sides of the at-grade intersection of Royal Street;
- The neighborhood street grid between Royal and Gorman on the south side of the rail tracks; and
- North and south sides of the existing Gorman Street bridge.

The existing bridges over the rail corridor at Dan Allen, Pullen, and Ashe were also discussed, as was the city’s old plans for a bridge over the rail tracks at West Morgan (the former Blair-Hunt-Morgan Connector project).

A PRTF Co-chair attended the Capital Area MPO (CAMPO) meeting held January 26, 2011, the subject of which was to determine whether rail-highway grade separation projects in West Raleigh, Cary, and Morrisville should be studied together or separately by individual city.

At the invitation of Patrick Simmons, Director of NCDOT-Rail Division, a PRTF Co-chair attended a presentation by Paul Worley of the NCDOT-Rail Division on February 3, 2011 to learn about and to understand grade separation projects, including Traffic Separation Studies (TSS) that provide objective

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data for prioritizing and authorizing funds for grade separation projects. At the same briefing the PRTF learned that the 1999 operating agreement between the North Carolina Railroad (NCR, lessor) and the Norfolk Southern Railway (NS, lessee) limits all trains running over the NCR corridor to a maximum speed of 90 MPH, including passenger trains operating between Raleigh and Charlotte.

The PRTF was made aware of the fact that the Federal Railway Administration (FRA) requires closing or grade-separating all rail-highway level crossings in passenger train corridors, including High Speed Rail (HSR), in which trains will operate above 110 MPH (<http://www.fra.dot.gov/Pages/217.shtml>). However, Federal and State transportation policies encourage the consolidation and elimination of at-grade crossings considering that while at-grade crossing devices warn, they cannot necessarily protect motorists.

Since passenger trains in the NCR corridor between Raleigh and Charlotte will not operate above 90 MPH, rail-highway at-grade intersections are not subject to the FRA mandate. However, even without a legal requirement to close West Raleigh rail-highway at-grade crossings, the PRTF recognized the moral imperative to ensure public safety in HSR corridors by either closing or grade-separating all rail crossings at grade.

In its March 21, 2011 recommendation to the Raleigh City Council, the PRTF reported that existing West Raleigh grade separations at Ashe, Pullen, Dan Allen, Gorman, I-440, Hillsborough, and I-40 are considered essential and will remain important north-south connectors across the rail corridor. In the same recommendation, the PRTF stated that the Blue Ridge grade separation project to construct a tunnel under the rail corridor is essential to enabling Transit-Oriented Development project opportunities adjacent to the nearby Fairgrounds TTA rail transit station and is an important north-south connector across the rail corridor.

The PRTF divided future possible West Raleigh grade separation projects into two groups:

- Four existing rail-highway at-grade crossings (Royal, Beryl, Powell, and Nowell); and
- Three potential new rail-highway grade-separated crossings (Jones Franklin, Edwards Mill, and the Corporate Center Drive/Bashford area).

At that time (March, 2011), the PRTF was informed of strong neighborhood and community desire to maintain local street connectivity for pedestrians, bicyclists, and vehicular traffic at existing rail-highway at-grade crossings (Royal, Beryl, Powell, and Nowell), whether by grade separating those intersections or by constructing nearby equivalent grade crossings. The PRTF noted that if equivalent local street connectivity solutions are developed to replace Royal, Beryl, Powell, and/or Nowell, the replacement streets should be at least as convenient and accessible as the streets they replace and scaled appropriately to the streets they replace. The PRTF observed that thoroughfare and heavy collector streets such as Gorman, Blue Ridge, and Edwards Mills are not in these respects equivalent connector solutions to closing Royal, Beryl, Powell, and/or Nowell.

The PRTF recommended in March, 2011 that a comprehensive, systematic, well-planned-and-executed public outreach program, including public listening sessions, is essential to better understand the desire of neighborhoods adjacent to the rail crossings and of the greater community who use and depend upon the rail crossings before making final decisions to leave open, to close, or to build equivalent new West Raleigh grade crossings. We noted that the City of Raleigh is working with CAMPO to develop a

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study which would include monies to fund public listening sessions which could be attended by the PRTF when the time came.

The task force stated that north-south connectivity over the rail corridor should be maintained at distance intervals not greater than a half mile to assure opportunities for bicycle and pedestrian connectivity and for economic development, with an emphasis on Transit-Oriented Development (TOD) projects within a quarter mile radius of rail public transit stations.

Traffic count data for each of the five existing rail-highway at-grade crossings were reported to be:

- Royal – 942 in 2007;
- Beryl – 8,614 in 2007 (2009 traffic volume map for NCDOT shows 5,000);
- Powell Dr – 2,300 in 2005 (rounded) (2009 traffic volume map for NCDOT shows 2,500 at count station south of Carolina Av);
- Nowell Rd – 3,150 in 2005 (rounded) (2009 traffic volume map for City of Raleigh shows 3,500 at the intersection with Germantown Rd); and
- Blue Ridge Road – approximately 19,000

In its March 21, 2011 recommendation, the PRTF encouraged that these principles should be adopted to guide the City Council in making decisions about West Raleigh grade separation projects:

- Economic growth is spurred by good access to interconnected transportation networks, including railways, highways, bicycle lanes, and pedestrian walkways;
- Safe, convenient, and walkable interconnectivity should be maintained in order to encourage opportunities for economic development in the areas both north and south of the rail corridor and to encourage TOD projects adjacent to stations along the West Raleigh rail line;
- Narrow, calm, and walkable streets with multiple outlets to traverse a community minimize congestion and are essential to Raleigh's long-term future growth and high quality of life;
- A fine grain, walkable grid network of local connector roads with pedestrian accommodations such as Royal, Beryl, Powell, and Nowell, or their equivalent, which safely cross the tracks at locations convenient for local neighborhood and event traffic should be maintained;
- Thoroughfares such as Blue Ridge and Edwards Mill and parallel collectors such as Beryl and Hillsborough are not equivalent substitutes to local connector roads across the rail corridor; and
- Increasing connectivity by constructing new grade separations where none presently cross rail lines in West Raleigh (including Jones Franklin, Edwards Mill, and vicinity of Corporate Center Drive-Bashford) will encourage nearby economic development.

Finally, the Passenger Rail Task Force recommended in its March 21, 2011 letter to City Council:

- A comprehensive, systematic, public outreach program, including public listening sessions, be planned and executed as soon as feasible and be completed not later than the end of 2011;
- The City of Raleigh, CAMPO, and NCDOT-Rail Division partner to develop such a public outreach program;
- The task force be directed to attend the public sessions, as member schedules allow, and to report to the City Council on the results of the sessions;

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- The City of Raleigh, CAMPO, and NCDOT-Rail Division partner to conduct Traffic Separation Studies (TSS), including new vehicle traffic counts, at each of the existing at-grade rail crossings (Royal, Beryl, Powell, and Nowell), and estimated pedestrian use to provide objective data;
- In order to provide comprehensive and objective data to analyze existing rail crossings (Royal, Beryl, Powell, Hillsborough, and Nowell) and potential new crossings, the TSS use new peak hour and special event vehicle and pedestrian counts in conjunction with computer modeling projections of peak hour and special event traffic and pedestrian counts based on:
 - Future TOD maximum density build-outs at the proposed Gorman, Blue Ridge, Jones Franklin, and West Raleigh transit stations,
 - Build-out densities currently being proposed in the most current master plans for N.C. State Fairgrounds, Meredith College, N.C. Museum of Art, NCSU, and other state-owned properties north of the rail corridor, and
 - Recommended Southwest Raleigh densities in the 2030 Future Land Use Map on both sides of the rail corridor;
- TSS partnership methodology for prospective West Raleigh grade separation projects be expanded to include holistic analysis of factors such as:
 - Residential neighborhood and commercial area contexts and impacts,
 - Multi-modal impacts (rail, bus, bicycle, and pedestrian traffic),
 - Street grid network standards that adhere to nationally-recognized urban and TOD best practices for multi-modal (transit, vehicle, bicycle, and pedestrian) fluidity and rapid emergency (fire, police, and EMS) response time,
 - Walkability measured using criteria equally weighted to vehicular traffic, and
 - The types of grade separation (overpass or underpass) specified by FHWA and FRA policies and allowed or preferred by NCRRTD (rail corridor owner);
- Decisions to close, to keep open, or to develop equivalent replacement connectivity for the at-grade rail crossings at Royal, Beryl, Powell, and Nowell be delayed until the results of the public listening sessions have been reported and the Traffic Separation Study is complete;
- Decisions to proceed with grade separation projects at potential new crossings be delayed until the results of the public listening sessions have been reported and the Traffic Separation Study is complete;
- CAMPO be tasked with developing a prioritization of West Raleigh grade separation projects in conjunction with those of Cary and Morrisville, to be guided in part by the results of the Traffic Separation Study, with the understanding that Raleigh will decide which crossings it wishes to pursue for grade separation projects;
- The City of Raleigh's and CAMPO's methods and guidelines for prioritization shall not conflict with the principles stated above; and
- The City Council make final decisions about which West Raleigh crossings it wishes to pursue

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for grade separation projects in accord with the principles stated above after reviewing reports from the PRTF on the public outreach sessions and after reviewing detailed data analysis summaries derived from the joint Raleigh/CAMPO/NCDOT-Rail Traffic Separation Study, CAMPO prioritization of grade separation projects, and in accord with documented Federal, State, and railroad policies and procedures.

STATUS UPDATE AS OF MARCH, 2012

At its March 19, 2012 meeting, the PRTF asked Paul Worley of NCDOT-Rail Division and Ed Johnson of CAMPO to provide us with an update on the status of the West Raleigh grade separation projects, specifically:

- What the process is;
- Who the decision-makers are;
- Where we are in the process;
- When and how the PRTF will get engaged; and
- When the PRTF is likely to get engaged.

We recall the five existing West Raleigh level crossings in question to be (east to west):

- Royal Street
- Beryl Road
- Blue Ridge Road (solution pending)
- Powell Street
- Nowell Drive

These crossings have long been on an NCDOT-Rail Division list of crossings along the NCRR that they would like to study for further safety improvement, including closure, particularly if and when the Blue Ridge underpass is completed and roadway network improvements can be made to accommodate routes alternate to the crossings. However, as noted in 2011, the speed of passenger trains through the area will be limited to 90 MPH because of the contractual agreement in place between the NS and the NCRR that dictates 90 MPH as a max speed, and therefore the federal closure requirement will not apply (the federal closure requirement only applies to trains operating at speeds higher than 110 MPH where an impenetrable barrier cannot be installed; see <http://www.fra.dot.gov/Pages/217.shtml>). Therefore, none of the three crossings would be required to be closed in order to comply with that federal program.*

Despite that fact, there are other compelling reasons to close one or more of the crossings, and paramount among them is safety. The Passenger Rail Task Force (PRTF) recognized in its March, 2011 recommendation the moral imperative to ensure public safety in HSR corridors by either closing or grade-separating all rail crossings at grade. Furthermore, the PRTF has established a record of making all decisions and recommendations to the City Council strictly on the basis of fact-based criteria, and we will be guided by such facts in this case as well.

TRAFFIC SEPARATION STUDY PROCESS

Paul Worley of NCDOT-Rail confirmed at the March 19, 2012 PRTF meeting that Traffic Separation Studies (TSS) will be conducted to provide objective data for prioritizing and authorizing funds for

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grade separation projects.

CAMPO recommended that the NCDOT Rail Division be the lead agency for procuring the consulting resources needed to carry out the crossing studies (TSS) as is now the case in Durham.

In addition to CAMPO, active stakeholder participation will be solicited from Raleigh staff, Cary, NCR, NS, CSX, and TTA. This will take the form of a Stakeholder Committee to serve for the duration of the TSS projects. If the City of Raleigh recommends the PRTF to be one of the stakeholders, the task force will also participate.

CAMPO, the City of Raleigh, and every other stakeholder agree that the crossing studies will have a very strong public involvement component. This is always a part of TSS projects.

TSS SCOPE

Traffic Separation Studies have been launched already for the area between West Maynard Road in Cary to west of McCrimmon Parkway in Morrisville, including the at-grade highway-rail crossings in Morrisville.

Raleigh TSS projects will include the area between East Maynard Road in Cary east to downtown Raleigh. That will encompass the West Raleigh level crossings at Nowell, Powell, Beryl, and Royal. (A project to grade-separate the Blue Ridge crossing is already underway.)

POOLING

TSS data from the analysis of the West Raleigh level crossings will be used for pooling scores and for prioritizing by CAMPO. Candidate West Raleigh level crossing projects will be pooled for analysis together with the candidate Cary and Morrisville level crossing projects explained above in TSS SCOPE.

Once a final report is produced, candidate projects in this 15-20 mile area can be scored by CAMPO for comparative analysis.

SCORING

As part of CAMPO's prioritization process, each candidate project in the TSS can be technically scored, and the "most competitive" projects will be prioritized for funding ahead of less competitive projects in the final report of all TSS projects.

CAMPO will determine which grade separation projects go first according to their respective scores.

The technical scores from each TSS candidate project have two primary components:

- Roadway Driver – Evaluates travel time savings for motorists based on the traffic counts derived from each TSS for each level crossing. Savings are currently calculated at the rate of \$22/hour.
- Rail Corridor Driver – Evaluates safety improvements based on projected reductions in fatalities and injuries; also measures mobility, that is, how a grade separation at that level crossing will help to maintain fluid rail corridors for both freight and passenger service, as well

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as planning for projected rail corridor future capacity needs for passenger and freight.

- Economic Development Driver – No current measures, but may be added later.

TIMING

An organizational and scoping meeting has been scheduled by NCDOT-Rail Division for April 23 to begin this process.

TSS consultant procurement work is scheduled to begin after July 1, 2012 (the beginning of FY 2013).

TSS work will commence in January, 2013 and be completed by June, 2014.

Federal ARRA funds (known as the Recovery Act) must be spent by September 30, 2010, and the only CAMPO grade separation funded through this source is Morrisville Parkway in Cary.

HOW DOES THIS SYNCHRONIZE WITH THE BLUE RIDGE CORRIDOR PLAN?

The Blue Ridge Corridor Plan engineering consultants addressed the street grid needs south of the railroad track between Powell and Pylon in their final plan. Royal Street was outside the scope of the corridor study and not addressed.

Without alternative replacement connectivity, the closure of all three level crossings at Royal, Beryl, and Powell would certainly impact auto, bike, and pedestrian north-south interconnectivity across the rail lines. A strong grid network across the rail lines for both transportation and economic development purposes is everyone's goal, and we on the PRTF is on record according this strategem.

Deferring to the TSS, Royal, Beryl, and Powell are not proposed for closure in the Blue Ridge Corridor draft plan, but the street grid developed west of Pylon allows closures to be more feasible to maintain good connectivity in the future. The Blue Ridge Corridor draft plan also solved the problem of Beryl Road's current location inside of the NCRR right-of-way by providing connectivity via the proposed westward extension of Pylon and a supportive grid of streets.

Sincerely,

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* The link shown is FRA's HSR crossing strategy. These are the absolute minimum requirements. Engineering decisions drive what can be built to protect and maintain. For example, an at-grade crossing in 110 MPH territory raises the issue of maintaining a highly complex signal approach circuit that accommodates signal preemption for both 110 MPH passenger trains and for 50-90 MPH freight trains.