



**FINAL REPORT**  
OF THE  
**RAILROAD STUDY GROUP**

PRESENTED TO THE  
**ROCK HILL CITY COUNCIL**

AUGUST 22, 2011

## **BACKGROUND**

### **Introduction**

Addressing railroad issues in Old Town Rock Hill has a long history. The 2003 Pennies for Progress Program had included the closing of two crossings in the Aragon and Industrial Mill neighborhoods, in conjunction with the construction of a new crossing at Quantz Street. However, the issuance of a City letter of support for that project in January 2010 became controversial when this action was seen as the precursor to a separate program of track improvements in the neighborhood designed to help relieve a train blockage issue in Downtown. The final result was a vote by the City Council against sending the letter, casting a cloud over the future of the Pennies project and other discussed railroad improvements.

On June 14, 2010, the Rock Hill City Council approved the concept of creating a Railroad Study Group (RSG). On July 12, 2010, the Council approved the actual appointment of members to the RSG as follows:

Gary Williams – Textile Corridor Business Owner  
Lee Gardner – Textile Corridor and Community-wide Business Owner  
Leslie Moma – Aragon Mill Neighborhood Association  
Josh Gray – Industrial Mill Neighborhood Association  
Bryan Stater – Norfolk Southern Railroad \*  
Tom Hardin – Neighborhood Church Representative  
Sandra Oborokumo – City-at-large Neighborhood Representative  
Jim Reno – Rock Hill City Council (ex-officio)  
Chad Williams – York County Council (ex-officio)  
Tom Roper – Rock Hill Planning Commission (Chair –ex-officio)

\*Bryan Stater was replaced by Brian Gwin of Norfolk Southern.

The RSG was supported by the City professional staff including Bill Meyer, Planning and Development Director, Mary Foote, Old Town/Textile Corridor Redevelopment Supervisor and Mike Kropp, Neighborhood Empowerment Supervisor. Staff was assisted by HDR Engineering and Campco Engineering with technical support from York County and the South Carolina Department of Transportation (SCDOT).

## **Charge to the Group**

Several projects have been proposed over the years to address issues along the Norfolk Southern railroad tracks in the area running from Downtown Rock Hill to the east through the existing railroad yard and the Aragon Mill and Industrial Mill neighborhoods. This Railroad Study Group (RSG), a broad-based group of interested citizens, was convened to study alternatives and recommend solutions to address the following issues:

1. Overall safety at crossings in both Downtown and the neighborhoods;
2. Reducing train blockages of crossings, especially those at Main and White Streets in Downtown Rock Hill;
3. Instituting "Railroad Quiet Zones" in both Downtown and the neighborhoods, if possible.

The Group was charged to study these and other related issues through review of existing information, engaging the affected community, and seeking additional information. The goal was to develop a program that reasonably addresses the identified issues, while also addressing the greatest number of concerns of the affected parties as possible.

## **History**

Over the years, Rock Hill businesses and residents have dealt with the impacts of the Norfolk Southern railroad lines that bisect the City. This railroad provides a lifeline for local commerce and business, but also creates problems with traffic at grade crossings and noise for neighbors.

Even though there are two grade separated crossings on each side of Downtown Rock Hill, newspaper accounts show a history of frustration with blocked crossings at Main and White Streets back to the 1960's. Hundreds of workers came to this area everyday, and learned the schedules and routes to deal with getting around the trains. Now as the area is poised for redevelopment, the railroad blockage issue becomes an impediment for investors in a buyer's market of commercial real estate opportunities.

Similarly, the existing conditions that residents have lived with for decades in the neighborhoods are cast in a new light. Crossings lack modern safety equipment and include configurations that present potential hazards. Train whistles and other impacts are not as readily tolerated in a market where homebuyers and institutions have many additional location options.

The challenge becomes how to improve conditions for all of these parties, especially where improvements for one issue are perceived to negatively affect another.

## Meetings

The RSG met 12 times between August 2010 and July 2011 to study the issues, discuss options, conduct a public involvement process and craft a final recommendation. The RSG conducted two public information meetings on December 9, 2010 and May 17, 2011.

At the December meeting, the Group shared much of their initial research with the public and solicited ideas as to how a recommendation might be crafted to address its charge. As promised at that first meeting, the Group came back to the second public meeting in May to present its draft recommendation and get community feedback.

The Group considered that feedback and ultimately voted unanimously at its meeting of June 21, 2011 to send forward the recommendations in this report.

## Concerns Expressed

Based on the previous history and public meeting input, the following concerns were identified in relation to the RSG issues.

Crossing Safety – The two existing crossings have been identified by Norfolk Southern and the South Carolina Department of Transportation as significant safety concerns. While the accident history on these relatively low volume crossings has not been high, the inherent design problems are still there. Community/Curtis Streets and its five point intersection can not be effectively fitted with crossing gates, and Mill Street’s “hump” poses both a visibility problem and high-centering hazard for trucks and other larger vehicles.

Neighborhood connectivity and accessibility – There were many related appeals to not split the two neighborhoods and maintain access across the tracks to the neighborhood schools, parks and churches. The elimination of the Mill and Community crossings were seen as having a major impact on accessibility by requiring all foot and vehicle traffic to go one-half mile east to Quantz Street.

Cut-through traffic and traffic calming – While maintaining access was important, there was also a concern with the amount and speed of cut through traffic. The current Community Street crossing configuration allows higher speed through traffic to proceed without a stop motion.

Appearance of railroad facilities and right-of-way – A frequent refrain of residents is the concern that the area will “look like a rail yard” similar to the official yard one half mile to the west. In addition, the low level of maintenance in the railroad right-of-way was cited as an issue. It was felt that both of these problems would be made worse by the addition of tracks or storage of cars in the neighborhood.

Increased noise – While residents acknowledge that they live with the noise of the railroad today, there was concern that changes in operations would bring different types and levels of noise disruptions to the neighborhood.

Maximum accessibility Downtown – Property owners, businesses and economic development officials were seeking elimination or significant reductions in crossing blockages at White and Main Streets. This included clearing intersections for traffic, as well as allowing predictable pedestrian access between Downtown and the areas to the north.

Effect on Property Values – It is difficult issue to define how potential changes in railroad crossings and operations affect a neighborhood that already deals with railroad impacts, and how much do positive changes mitigate any impacts that there might be. This is an issue that needs to be evaluated by decision makers to make a fair subjective evaluation where an objective analysis is likely not possible.

## **Initial Research**

The RSG was provided with historical and technical documents on the issues, including newspaper accounts, correspondence, previous studies and regulatory information. The Group met in the field at an early meeting and toured the affected locations and surrounding areas. Consultants provided information on various ideas that had come from both the Group and the community at large.

Some of the concepts that were discussed included:

Move the Rock Hill rail yard – There are several logistical issues that would need to be overcome including a finding a suitable site on relatively flat land that is close enough to the current location to effectively serve existing customers. The cost of acquiring a site and constructing a new facility would run in the tens of millions of dollars.

Build additional bridges or tunnels – The Group explored the concept of building bridges or tunnels in either Downtown or the neighborhoods. On Main or White Street, any bridge or tunnel proposal would be extremely disruptive of traffic patterns and would require the taking of properties. In the neighborhood area, bridges or tunnels at the current locations would be similarly disruptive. One idea was to look at the area west of Community Street where the tracks are elevated, which would require construction of a new road connection. Any bridge or tunnel in the neighborhood would cost several millions of dollars, added to the additional measures to deal with downtown crossing blockage issues.

Provide additional crossings – As part of the mobility and accessibility concerns, it was suggested that new or relocated crossings be considered. Depending up the necessary connections to the existing road system, new crossings could be constructed in the range of \$1-2 million. However, unless crossings were moved to allow for modified train

operations, there would not be any relief provided to the blockage issue. Ultimately, a redesign of the Community Street crossing was investigated as a potential solution to many concerns.

Proposed sidetrack construction – The Group reviewed the previous study and plans to create two additional sidetracks between Community and Quantz Streets, and to move the current switch from north of Community to north of Quantz. The operation of the proposed tracks was discussed at length, including the time savings in standard operations and the impacts of temporary car storage on the neighborhood.

Potential landscape enhancements – The Group got information on Norfolk Southern standards for any landscaping proposed for the right-of-way areas. Screening of temporary storage areas and general enhancement of the right-of-way was considered a likely component of any track based solution.

## **THE RAILROAD STUDY GROUP RECOMMENDATION**

### **Overview**

After the research, public outreach and deliberations described above, the Railroad Study Group has put forth the following recommendation:

1. Construct the proposed Quantz Street crossing (with Quiet Zone measures) and eliminate the Mill Street crossing as originally proposed in the 2003 Pennies for Progress program.
2. Rebuild the crossing at Community Street, including Quiet Zone measures.
3. Implement the dual sidetrack proposal, including moving the main switch to east of Quantz Street.
4. Install landscaping along the railroad right-of-way adjacent to the Industrial Mill neighborhood.
5. Install sidewalks and bike paths through the two new crossings completing the network between the neighborhoods and connecting to Dave Lyle Boulevard.
6. Seek Quiet Zone designation in the neighborhoods and Downtown by installing necessary Supplementary Safety Measures (SSM's) with the new Community and Quantz Street crossings, and retrofitting SSM's at the White and Main Street crossings.

### **Construction of Quantz Street Crossing and Elimination of Mill Street Crossing**

As shown on the attached Exhibit A, the recommendation includes the construction of the Quantz Street crossing and elimination of the Mill Street crossing, as originally approved in the 2003 Pennies for Progress program. These improvements were widely embraced at the public meetings, even by those who were troubled by other proposals. There is almost universal recognition that the Mill Street “hump” crossing is undesirable, considering it’s function can be replaced at Quantz only about 1000 feet away.

### **Reconstruction of Community Street Crossing**

Exhibit A also depicts the reconstruction of the Community Street crossing and a configuration that addresses many issues (larger aerial in Appendix). As seen in the detailed concept drawings attached as Exhibit B, the reconstructed crossing eliminates the dangerous five points intersection and creates a single perpendicular crossing that can be fitted with crossing gates. The significant curve at the west end of Curtis and better defined intersection with Church Street will calm traffic which currently can hit high speeds on the through routes with more gentle curves. The southern portion of Community Street would become a dead-end fed by Poplar Street from Aragon, and the narrow portion of Poplar would be widened with this plan.



# Railroad Study Group Recommendations

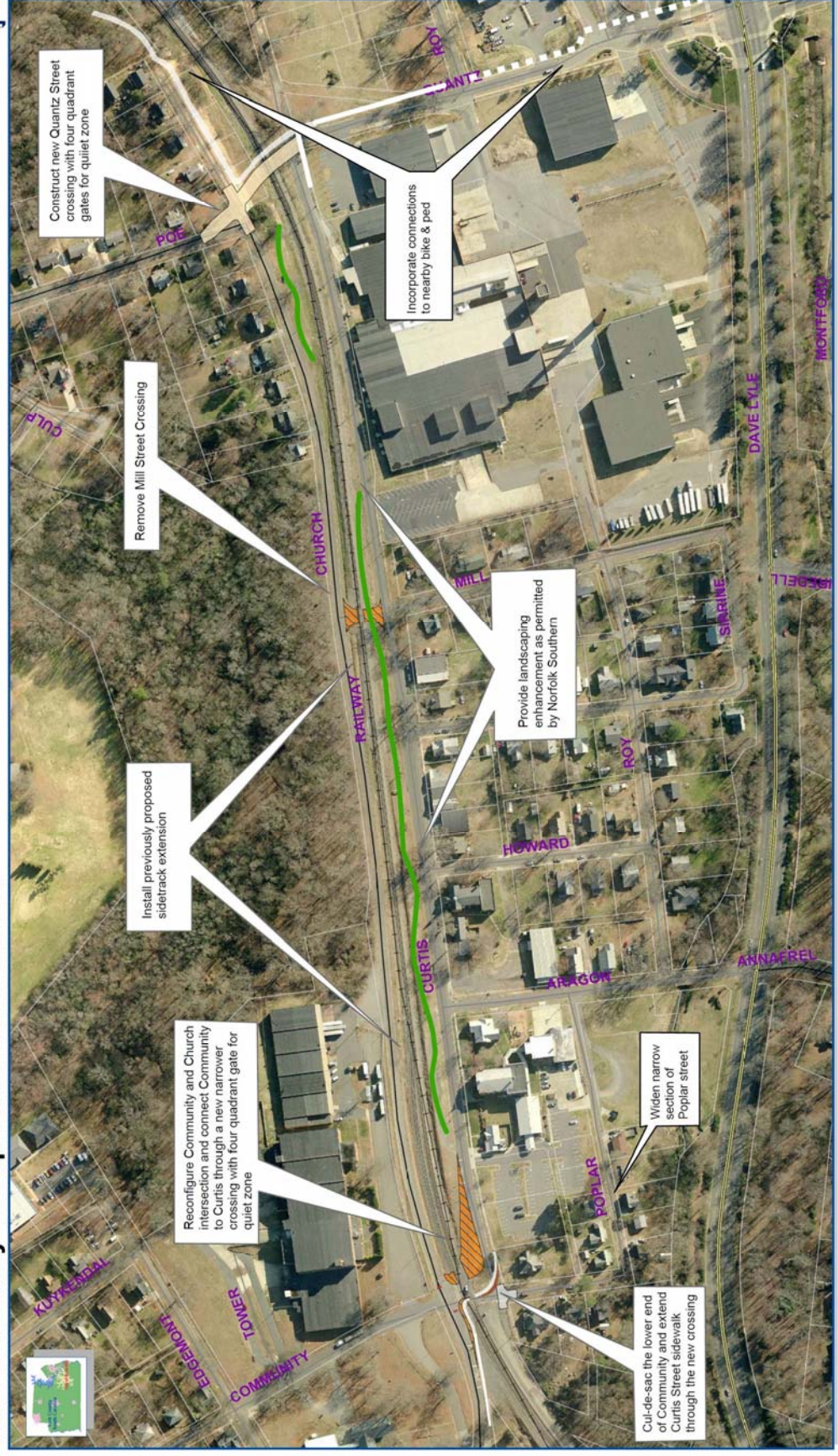
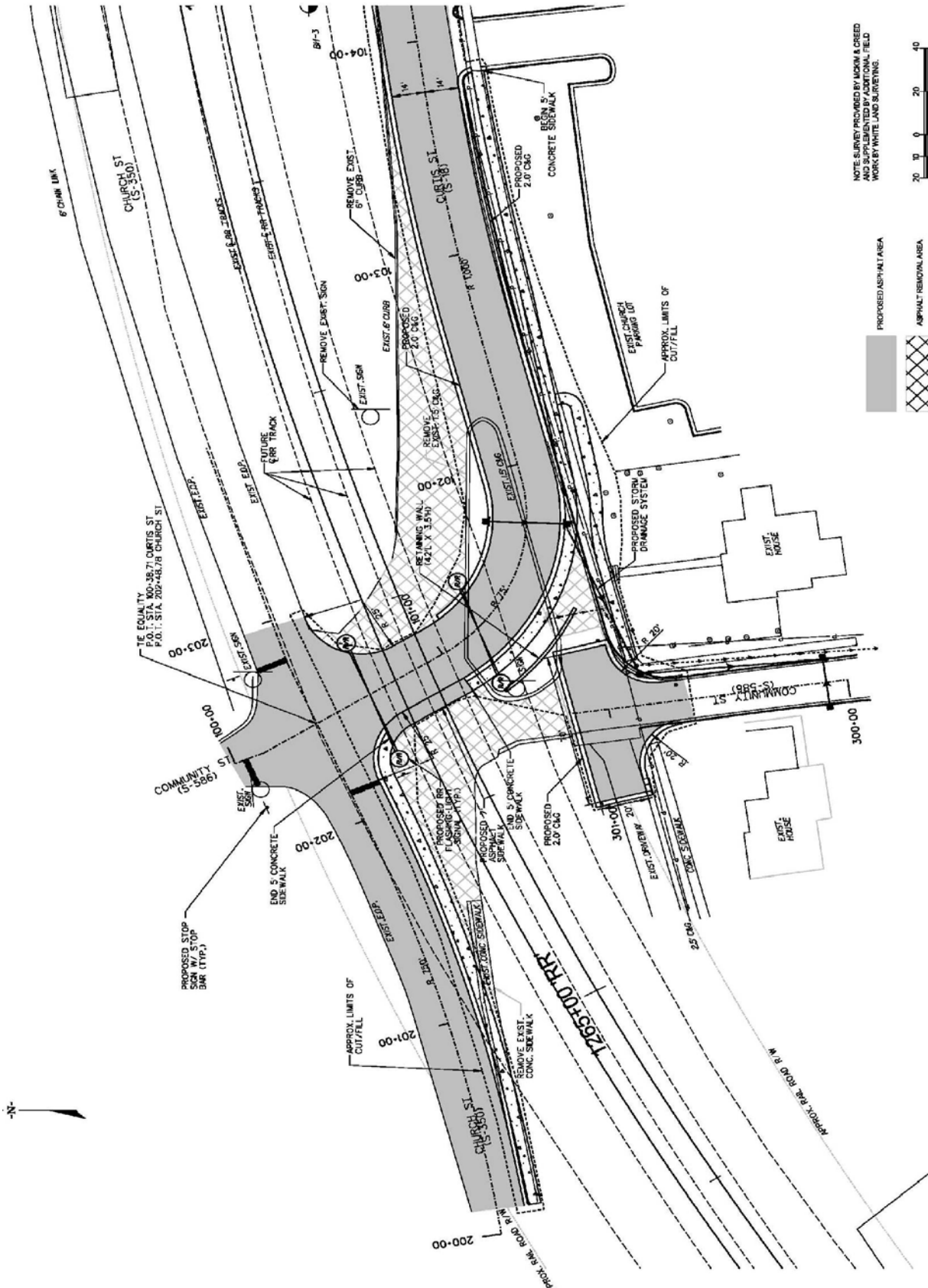


Exhibit A – Railroad Study Group Recommendation Overview



NOTE: SURVEY PROVIDED BY MOORE & CREED AND SUPPLEMENTED BY ADDITIONAL FIELD WORK BY WHITE LAND SURVEYING.

PROPOSED ASPHALT AREA  
 ASPHALT REMOVAL AREA

# Exhibit B - Proposed Crossing and Intersection Improvements at Community Street

2011 Campco Engineering, Inc.

## **Implement the Dual Sidetrack Proposal**

In studying the issue of Downtown crossing blockages, the dual sidetrack proposal is the most efficient solution to significantly cut down the number of blockages. This proposal moves the current switch that sits east of Community Street to a location east of Quantz Street. It allows for approximately one half mile of additional train length to clear White and Main Streets, which based on historical records, would reduce blockages at those crossings by over 80%.

It was apparent from many of the public comments that there was a widespread misconception about the function of the dual sidetracks. These two tracks are designed to accommodate the cars to be set off and picked up by the two northbound trains that stop in Rock Hill. Activities that already take place on either side of the existing switch east of Community Street (at the end of Aragon Street) would be moved approximately one half mile east and centered at a new switch east of Quantz Street. The location of these activities is depicted in Exhibit C.

With the existing operation, these cars must be pushed back into and pulled up from the yard over a quarter mile east of the switch, while the train waits. The proposed sidetracks allow the set off cars to be pushed back to just past the switch and pick up cars to be temporarily stored at the same location saving time in the transfer. The cars are moved into and out of the yard itself by the local crews before and after the train has stopped. The new operation moves trains further east reducing downtown blockages, and saves time in the two transfer operations each day, making any blockages shorter.

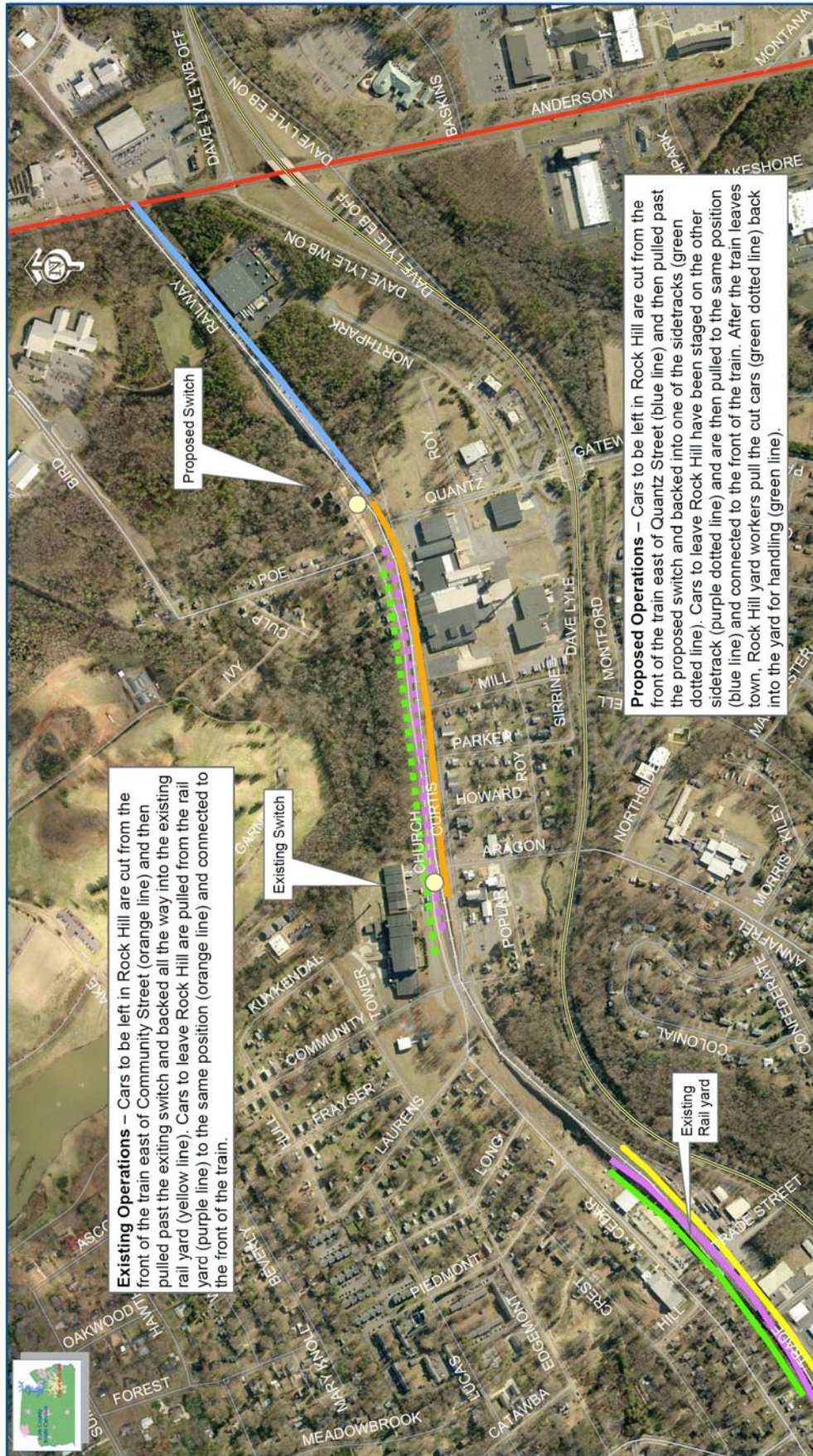
Cars are temporarily stored on the sidetracks awaiting pick up and then awaiting being pulled back into the yard for handling. This would generally result in cars on the sidetracks for an average of about 4 hours a day, in two blocks of time in the early morning and around noon. All breaking up of these cars and longer term storage would still take place in the rail yard to the west.

## **Install landscaping along the railroad right-of-way**

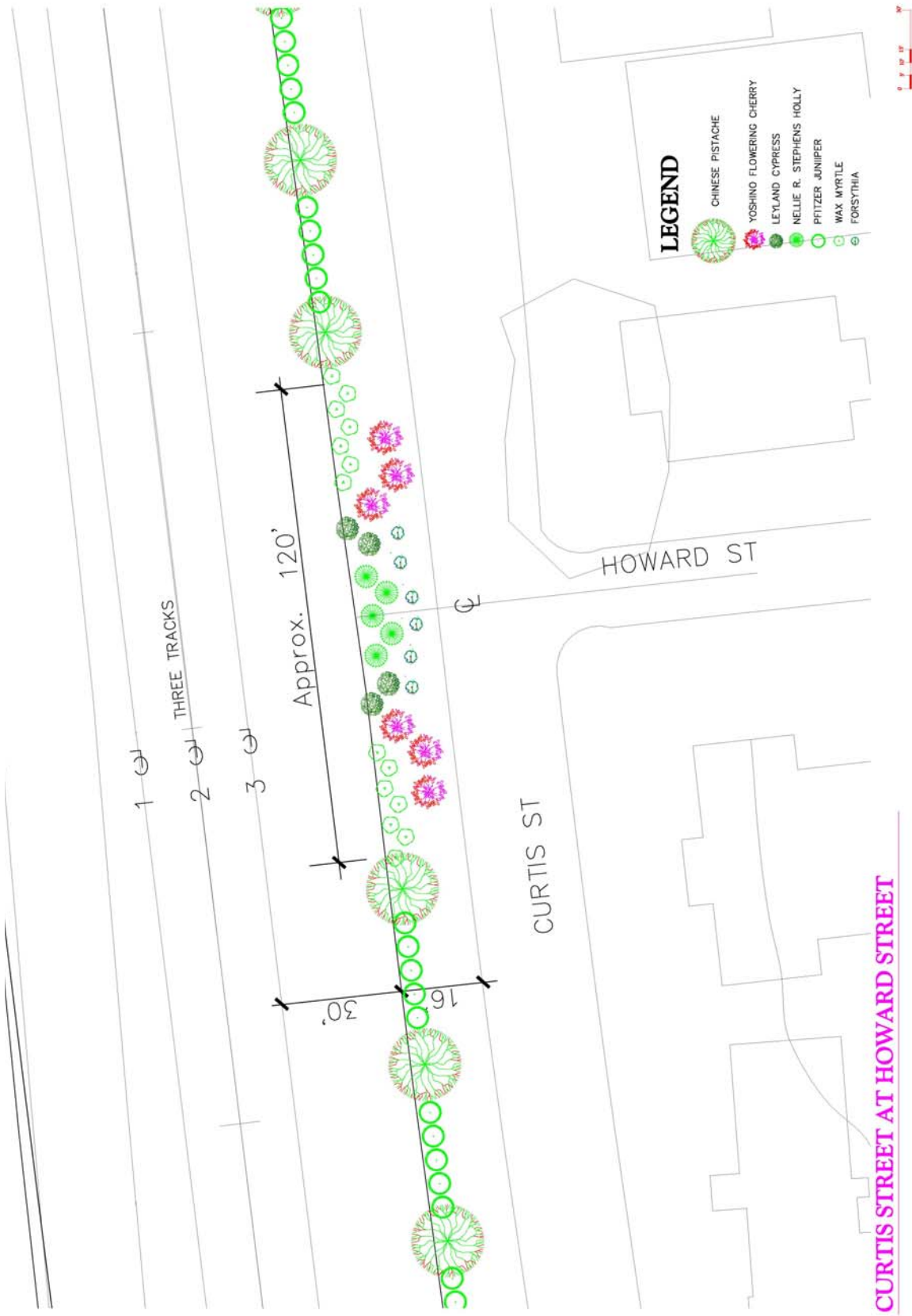
A clear understanding of the sidetrack program reveals that rail cars will only be visible in the neighborhoods for a few hours day more than experienced during current operations. However to mitigate this impact and address the concern regarding the current appearance of the right-of-way, a landscape program is proposed in conjunction with the sidetrack installation. This program is proposed mainly on the south side of the tracks where the Industrial Mill neighborhood lies across Curtis Street.

A combination of hearty canopy trees, evergreens and shrubs has been designed to provide screening along the right-of-way and focal plantings at intersections. The species have been proven to successfully thrive in similar growing conditions in the local environment. A plan of the typical landscape treatment is included as Exhibit D. The full plan and simulations of the landscape during grow in are attached as an appendix.

## Change in Operations - Proposed Dual Sidetrack



**Exhibit C – Change in Operations with Proposed Dual Sidetrack**



**Exhibit D - Typical Proposed Landscaping along Norfolk Southern Tracks**

## **Install sidewalks and bike paths to complete the area network**

To reinforce the expressed desire for connectivity, neighborhood representatives stressed the need for sidewalk and bike path connections to be part of the plan for the area. While the neighborhoods both benefit from sidewalks on most streets, both existing railroad crossings are unfriendly to bicycle and pedestrian traffic. The new crossings will allow for connected bike/ped facilities to be built into the overall design, including a complete connection between the existing sidewalk networks that connect at Church and Curtis Streets. The recommendation also includes connection of a Quantz Street bikepath/trail to the two existing facilities near Bird Street and Dave Lyle Boulevard.

## **Establishment of Quiet Zone**

A Quiet Zone is an integral part of this recommendation. The Quiet Zone provides significant relief of a major impact of all trains coming through Rock Hill, not just those that stop and cause blockage issues. While ultimate approval must be received from the Federal Railroad Administration, the Group has worked with its consultants to make sure that every step has been taken to comply with the federal requirements.

The new Quantz and rebuilt Community Street crossings should both be designed with four quadrant crossing gates, and the RSG also recommends the retrofitting of such gates at White and Main Streets to allow application for designation of a Quiet Zone through downtown and the neighborhoods to the east.

## **Agency and Railroad Review**

In order to insure that the RSG's recommendations would be feasible for implementation, appropriate portions of the proposal have been sent to appropriate organizations for review. In particular, the RSG has been able to work through member Brian Gwin to have key concepts run by the appropriate Norfolk Southern staff for feedback. Of particular concern with the railroad was the change to proposing two crossings rather than just one, and reaction to the landscape program. The attached letter (Exhibit E) from Mr. Gwin documents the ongoing communication with the railroad and Norfolk Southern's support of the design concepts in the Group's recommendations.

The reconfigured Community Street crossing has also been reviewed by South Carolina Department of Transportation staff, which provided some key input in intersection design and traffic control. Specifically they have recommended the proposed three-way stop configuration to make sure that crossing traffic can always clear the tracks.



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**Brian E. Gwin**  
Industrial Development Manager  
[beqwin@nscorp.com](mailto:beqwin@nscorp.com)

July 18, 2011

William D. Meyer, AICP  
Planning & Development Director  
City of Rock Hill  
155 Johnston Street  
Rock Hill, SC 29731

Dear Bill,

Norfolk Southern has been pleased to work with you and the Railroad Study Group in Rock Hill regarding current train operations in the area and how the impacts on the community could be reduced. The group has been very open minded to many different concepts but singularly focused on finding a win-win scenario for all those involved.

All of the conceptual plans presented publicly and to NS by the group, appear to achieve the goals Norfolk Southern and the group originally conceived. This new design will allow NS trains setting off and picking up cars at Rock Hill northbound to reduce the blockages of White and Main streets in the city's downtown district and will improve an existing crossing and replace a current humpback crossing with a modern crossing. Both new crossings will have active warning devices to increase safety in the area. The City has plans to apply for a FRA quiet zone for this area and these improvements will help the city get this designation from the FRA.

While Norfolk Southern is supportive of the goals of this plan and looks forward to working closely with the city as this plan progresses from a conceptual phase to one involving more detailed engineering and construction plans, any official approval of designs for rail, road and landscaping must come from a formal review of designs to be submitted. I look forward to working with you as this project moves forward to the next phase.

Thanks for your hard work.

Sincerely,

A handwritten signature in cursive script that reads "Brian E. Gwin".

Brian Gwin

## **Exhibit E – Letter from Norfolk Southern**

## ESTIMATED COSTS AND POTENTIAL FUNDING

There are approximately \$1,420,000 of additional costs generated by the Railroad Study Group's recommendations as follows:

Rebuilt Community Street Crossing (including Quiet Zone measures)	\$660,000
Widen Poplar Street	\$135,000
Landscaping Program	\$ 50,000
Sidewalk and bike path connections	\$ 75,000
Quiet zone measures for Quantz Street crossing	\$150,000
Quiet zone measures for White and Main Street crossings	\$350,000
	\$1,420,000

Funding for the construction of the Quantz Street crossing and the elimination of the Community and Mill Street crossings is included in the 2003 Pennies for Progress program. It is anticipated that some savings from the eliminated demolition at Community Street may yield funds that could be applied to the Quantz quiet zone measures.

The dual sidetrack proposal has been previously estimated to cost \$3.3 million. There has been just under \$2.4 million allocated in Congestion Mitigation/Air Quality (CMAQ) funds for this project. The City must provide a \$600,000 match to leverage these awarded funds. In addition, the City has made application for a \$1.5 Federal Railroad Administration grant to cover overall expenses of this project.

This results in the following overall financial picture for the railroad improvements discussed:

### Costs

Original Sidetrack proposal	\$3,300,000
2003 Pennies program– Quantz/Mill/Community	\$1,200,000
RSG proposal additional costs (detailed above)	<u>\$1,420,000</u>
	\$5,920,000

### Funding

2003 Pennies program - Quantz/Mill/Community	\$1,200,000
CMAQ – 2007	\$1,200,000
CMAQ – 2011	\$1,136,000
CMAQ – Local match (unbudgeted)	\$ 600,000
Federal Railroad Administration Grant	<u>\$1,500,000*</u>
	\$5,636,000

With \$4,136,000 in committed funding and the possibility of further grant funds, there is at least a good start to funding this entire program. Additional funds can be pursued from these existing sources, as well as other SCDOT funds that might be applicable to railroad or similar safety projects.

## **CONCLUSION**

After almost a year of research, outreach and discussion, The Railroad Study Group is pleased to present this proposal. While no one plan will satisfy all concerns completely, this unanimous recommendation represents a carefully considered set of improvements to address the greatest number of these somewhat competing goals.

It is important that all portions of the recommendation be fully implemented before or concurrent with the construction of the proposed sidetracks. While some of the crossing improvements may need to be constructed earlier due to separate funding sources, the quiet zone designation should be pursued as soon as suitable construction plans have been created to support the application. Likewise, it is crucial that the landscaping be funded and implemented simultaneously with the track modifications.

We wish to thank the residents, property owners and business people who came forward to share their ideas in this process, and the consultants and agencies that helped inform our work. And finally we wish to thank the staff team that so ably provided for our needs and supported our efforts.

## **Appendices**

1. Aerial of Existing Community Street Crossing
2. Overall Plan for Landscape Program
2. Photo Simulations of Proposed Landscaping Program



**Appendix 1 – Aerial of Existing Community Street Crossing**



**RAILROAD IMPROVEMENTS OVERALL SITE PLAN**

## Appendix 2 – Overall Landscaping Plan



**Appendix 3 – Landscape Simulation – Aragon at Curtis at Planting**



**Appendix 3 – Landscape Simulation – Aragon at Curtis after 8 Years**



**Appendix 3 – Landscape Simulation – Aragon at Curtis after 15 Years**



**Appendix 3 – Landscape Simulation – Along Curtis Street at Planting**



**Appendix 3 – Landscape Simulation – Along Curtis Street after 8 Years**



**Appendix 3 – Landscape Simulation – Along Curtis Street after 15 Years**