



West Charlotte

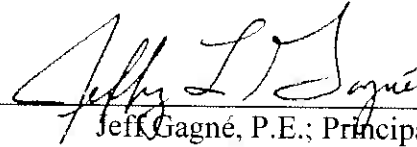
CORRIDOR STUDY



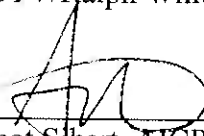
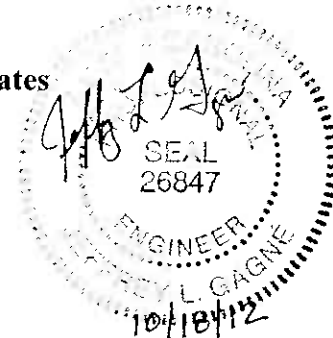
**WEST CHARLOTTE CORRIDOR STUDY
for the
CITY OF CHARLOTTE, NC**

October 2012

Documentation Prepared by STV/Ralph Whitehead Associates



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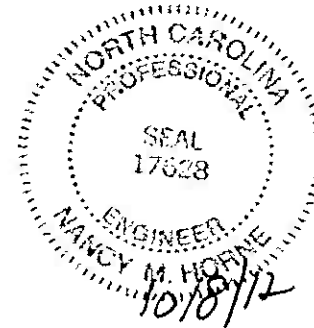


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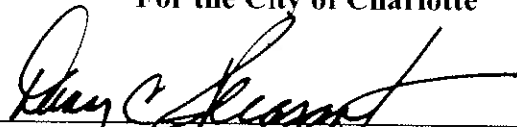
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EXECUTIVE SUMMARY

In a joint cooperative effort with the City of Charlotte and Norfolk Southern Railway (NS), the North Carolina Department of Transportation (NCDOT) has completed the West Charlotte Corridor Study, focusing on three existing at-grade roadway-railroad crossings: Donald Ross Road, Berryhill Road and West Summit Avenue. The consultants evaluated the Norfolk Southern rail line in downtown Charlotte that crosses these three streets, as well as any planned or programmed railroad and roadway improvements within the study area. The study area consisted of the existing Norfolk Southern rail line from Trade Street to Donald Ross Road. Figure 1 defines the study area of the project.

While the study focused only on three crossings, it also supports the larger goals of the Charlotte Railroad Improvement and Safety Program (CRISP). CRISP is a multi-project plan to improve operating conditions for freight and passenger rail (standard and high-speed rail) and quality of life impacts (crossing safety, noise, air quality) for rail-adjacent communities.

The process involved public input and involved a series of meetings to gather information and receive public comments on proposed recommendations. These recommendations include safety improvements and possible closures at existing street/rail grade crossings in the City of Charlotte, North Carolina.

A Stakeholder Committee was established in order to provide critical input in reaching consensus on grade crossing recommendations. The Stakeholder Committee met three times during the course of this study. Additionally, the Public Involvement program included two Citizens Informational

Workshops (CIWs). These meetings are summarized below. The City of Charlotte also submitted a letter with recommendations to the NCDOT Rail Division, and highlights from the letter are included in this Executive Summary.

Citizens Informational Workshop #1

The first CIW was held on February 16, 2012 at the STV/Ralph Whitehead Associates office. Study team members were available to introduce the West Charlotte Corridor Study, to answer questions related to the study, and to receive comments to aid in developing recommendations for improving the rail crossings at Donald Ross Road, Berryhill Road and West Summit Avenue.

Residents of area neighborhoods were primarily concerned with safety, noise, and air pollution, particularly due to anticipated increases in train traffic and the proposed maintenance facility operations.

According to the residents, Wilmore is a family-friendly neighborhood with substantial pedestrian and vehicular traffic. There is concern that a closure of the rail crossing at West Summit Avenue may lead to increased traffic on other neighborhood streets such as Merriman Avenue and Wilmore Drive, an increase in air pollution, and a decrease in pedestrian safety. They believe that the level of noise associated with existing train traffic (whistles, horns, etc.) is already high, and would likely increase with additional tracks and trains that are planned for the proposed maintenance facility; plus a proposed third main line Norfolk Southern rail track.

Enhancements identified by the residents to help minimize impacts include sound and/or barrier walls, alert systems at the crossing (instead of on the trains), establishment of quiet

zones, increased set-backs and vegetation barriers, and speed control measures on area streets. Additionally, a grade separated crossing may reduce multimodal conflicts and noise. A study was previously conducted to determine the feasibility of grade separating West Summit Avenue. The results showed that a grade separation would be extremely costly, have great impacts to the surrounding land uses, and have geometric issues due to the close proximity to the I-77/I-277/Wilkinson Blvd/Freedom Dr interchange.

Citizens Informational Workshop #2

The second CIW was held on June 7, 2012 at the Greater Mount Sinai Baptist Church Enrichment Center. Study team members were available to answer questions related to the study, and to receive comments on the improvements proposed for the three rail crossings. The study team developed two scenarios: short term and long term improvements. The short term improvements recommended for all three crossings were to remain open and active as at-grade crossings. The initial long term improvements recommended were for all three crossings to close based on implementation of future local and state projects. These projects are not currently funded. For the West Summit Avenue and Berryhill Road at-grade crossings, further studies would need to be conducted to determine mitigation measures and bike/pedestrian connections, if the crossings close.

Residents were in favor of the proposed project(s), and concerns were primarily related to potential adverse effects on homes and the community.

The closure of Donald Ross Road brought up connectivity questions. Residents questioned how to travel between residential areas and West Boulevard, and indicated that if the Clanton Road extension is constructed, it would be beneficial

to include bicycle lanes and sidewalks. Residents near Berryhill Road expressed concern about how the addition of new tracks and trains could possibly create more noise, vibrations and shaking of homes, leading to potential structural issues in homes and affecting quality of life.

According to the residents, the closure of West Summit Avenue between Clarkson Street and Merriman Avenue will preserve property values in the Wilmore neighborhood by separating residences from the pipe factory and proposed maintenance facility, and by eliminating the numerous horn blasts at the at-grade crossing.

City of Charlotte Comments

The City of Charlotte submitted a letter dated July 18, 2012 to the NCDOT Rail Division. While supportive of the proposed NCDOT Locomotive & Railcar Maintenance Facility project, the City expressed concern for potential impacts related to the transportation network in Center City Charlotte, particularly as it pertains to the potential closure of West Summit Avenue. The City stressed the importance of maintaining the dense grid of streets in Uptown, and the Wilmore and Wesley Heights neighborhoods, especially since the railroad track, I-77 and I-277 preclude other means of providing connectivity if West Summit Avenue is closed.

The City of Charlotte Fire Department feels that closing the West Summit Avenue crossing would have a significant negative impact on assembling an effective fire fighting force to perform basic fire ground functions.

City staff have collaborated with NCDOT in the design of the Locomotive and Railcar Maintenance Facility, and are aware of the need to ensure this is a viable project; however, with only one additional track funded in the first phase of

construction, the City's recommendation is to keep the crossing at West Summit Avenue open. When and if subsequent phases of the facility's construction are funded, there would need to be further analysis about the future of the West Summit Avenue crossing.

Final Recommendations

A. *West Summit Avenue (Crossing # 716 172N)*

1. Short-Term

The existing Norfolk Southern two (2) track at-grade crossing would continue to operate as is, with an additional one (1) track at-grade crossing at the proposed single-track crossing of NCDOT Locomotive & Railcar Maintenance Facility.

2. Long-Term

When funding for the full build-out of the NCDOT Locomotive & Railcar Maintenance Facility is identified, further evaluation of a full-closure of West Summit Avenue would be required. Full build-out includes up to seven (7) railroad tracks crossing West Summit Avenue; (three (3) tracks would be the Norfolk Southern main line tracks, four (4) additional vehicle maintenance facility tracks would be located approximately 300 feet south). This future study would investigate impacts of closing West Summit Avenue as well as analyze mitigation improvements to determine how the full build-out scenario would operate and how to account for the need to provide multi-modal connectivity within the study area.

B. *Berryhill Road (Crossing # 716 176R)*

1. Short-Term

Continue to operate the crossing as an at-grade crossing.

2. Long-Term

The long-term recommendation is contingent on how NCDOT will be turning their passenger trains around in order to head back east to Raleigh. There are currently three options being studied, with no preferred recommendation at this point. One of the options would impact the current vehicular operations along Berryhill Ave, and further analysis would be required. If the location chosen is at Berryhill, the long-term recommendation would be to close the existing at-grade crossing, with the requirement to conduct a mitigation study to determine how to provide access to properties along the southern side of Wilkinson Boulevard.

C. *Donald Ross Road (Crossing # 716 178E)*

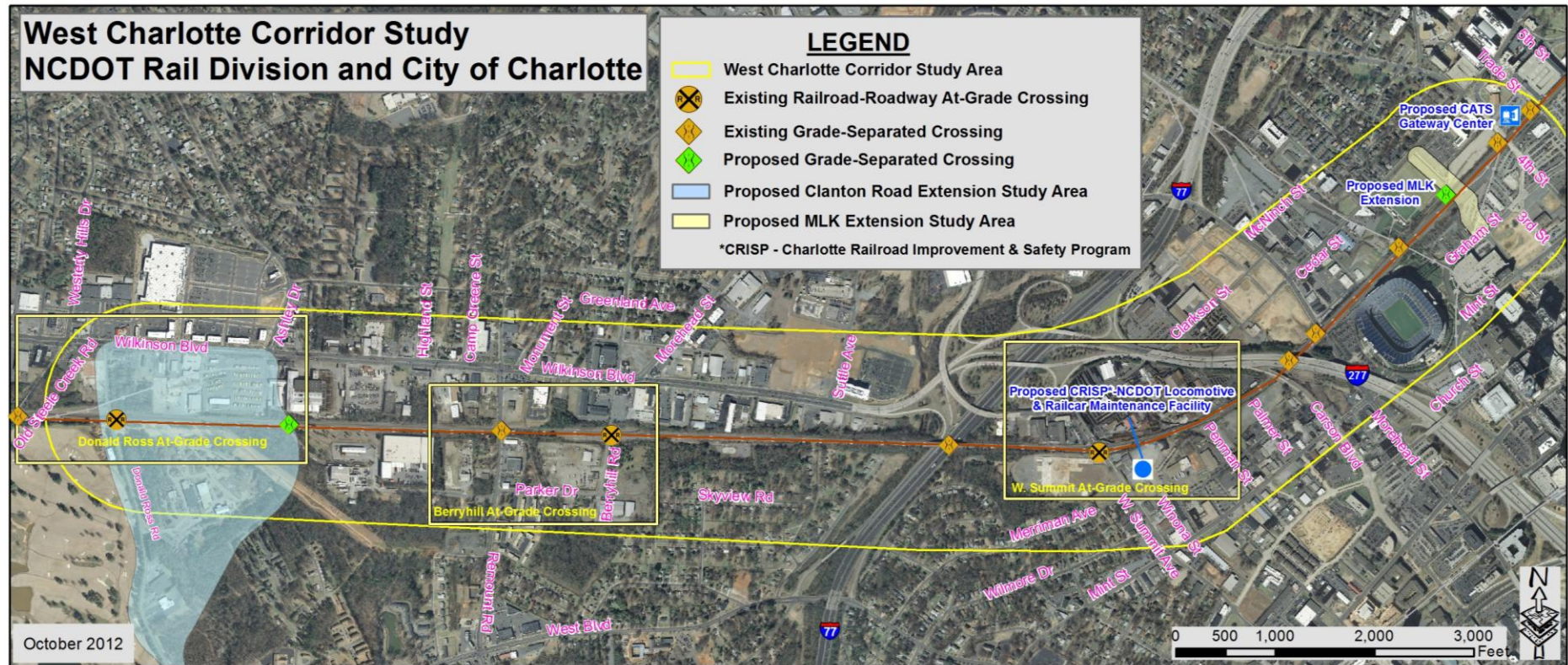
1. Short-Term

Continue to operate the crossing as an at-grade crossing.

2. Long-Term

Create a full-closure at Donald Ross Road when the Clanton Road Extension is built. The Clanton Road bridge would connect West and Wilkinson Boulevards via a grade separation over the NS tracks.

Figure 1 - West Charlotte Corridor Study Project Limits



A. INTRODUCTION

Every year more than 450 persons are killed and nearly 500 injured nationwide as a result of crashes between vehicles and trains. According to statistics from the Federal Railroad Administration (FRA), there are 4,006 public crossings in North Carolina. In the last three years (2009-2011), the number of street-rail incidents in North Carolina ranged from 43 to 55 per year. The number of fatalities ranged from one to eight, and the number of nonfatal conditions ranged from 20 to 37.

Traditionally, The North Carolina Department of Transportation (NCDOT) uses a Traffic Separation Study (TSS) to systematically review crossing safety. Traffic Separation Studies comprehensively evaluate traffic patterns and road usage for an entire municipality or region, determining the need for improving and/or eliminating public grade crossings. This study is a smaller version of a TSS concentrated along a corridor.

NCDOT entered into an agreement with the City of Charlotte and Norfolk Southern Railway (NS) to prepare this Corridor Study, focusing on three existing at-grade roadway-railroad crossings: Donald Ross Road, Berryhill Road and West Summit Avenue. The consultants evaluated the Norfolk Southern rail line in downtown Charlotte that crosses these three streets, as well as any planned or programmed railroad and roadway improvements within the study area. The study area consisted of the existing Norfolk Southern rail line from Trade Street to Donald Ross Road.

The Traffic Separation Study process has three phases:

1. Preliminary Phase

The NCDOT and the City of Charlotte contractually agreed to make a “best” effort to approve and implement improvements identified by the study. An engineering consultant was then selected by NCDOT.

2. Study Phase

The engineering consultant evaluated the existing crossing conditions, average daily traffic (both trains and vehicles) and socioeconomic impact of potential closings for all public crossings within the study area, and prepared recommendations for NCDOT and local officials to review. Recommendations would be broken into two categories, Short-term and Long-term based on possible improvements. Below describes the possible recommended improvements and timeframes.

Short-term recommendations (within two to five years) include improvements such as installation of flashing lights and gates, enhanced devices such as four-quadrant gates and longer gate arms, installation of concrete or rubber crossings, crossing closures, median barrier installation, pavement markings, roadway approach modifications and crossings realignments, connector roads, roadway realignments, crossing closures, relocations of existing crossings to safer locations and feasibility studies to evaluate potential grade separation locations.

Long-term recommendations (more than 5 years) include improvements such as grade separations, connector roads and crossing closures.

Recommendations were presented to the public for comment.

3. Implementation Process

If applicable, funding sources for improvements are identified, project agreements are developed between funding partners, which identify responsibilities for project design, crossing closure coordination with railroad and state highway and local officials, and oversight of project implementation. City staff typically assists with project development, utility relocation and right of way acquisition, if needed.

B. DATA COLLECTION

The information included in Table C-1 was gathered for each grade crossing in order to evaluate the crossing conditions in terms of traffic and safety.

The data summary sheets for each crossing are located in Figures C-1a, C-2a, and C-3a. Photographs for each crossing are found with the corresponding data summary sheets, and are labeled Figures C-1b, C-2b, and C-3b.

Average Daily Traffic data was collected in the Fall of 2011 in order to gauge the level of traffic on Donald Ross Road, Berryhill Road and West Summit Avenue. The traffic data was broken down into the number of trips heading northbound and southbound, as well as percentage of dual axle vehicles and Truck Tractor Semi-Trailer (TTST).

For Donald Ross Road, the Average Daily Traffic for 2011 was 5,679 vehicles per day (vpd), with a truck percentage of 17.7%. For Berryhill Road, the Average Daily Traffic for 2011 was 166 vpd, with a truck percentage of 37.3%. For West Summit Avenue, the Average Daily Traffic for 2011 was 3,265 vpd, with a truck percentage of 41.7%.

TABLE B-1

Data Item	Source
Crossing Number	NCDOT Rail
Street or Route	NCDOT Rail
Railroad Company	NCDOT Rail
Railroad Milepost	NCDOT Rail
Existing Warning Devices	Site Inspection
Vehicle Traffic	STV/RWA
24 hour train volumes	FRA Inventory Forms
Accident History	Accident Reports (NCDOT & FRA)
Truck Route	NA
Transit Route	CATS
School Bus Route (Yes/No)	Charlotte-Mecklenburg County School
Crossing Surface and Condition	Site Inspection
Land Use	Site Inspection
Redundant Crossing (Yes/No)	Site Inspection
Humped Crossing	Site Inspection
Crossing Geometry	Site Inspection
Need for Enhanced Warning devices	Site Inspection and accident history
Feasibility of Roadway Improvements	Site Inspection and engineering judgment

*CATS (Charlotte Area Transit System)

Figure 2 – West Summit Avenue, Crossing Inventory

Crossing Number		Milepost	Railroad	Street Name		Street Classification	Warning Device		Land Use
716 172H		NS 378.74	NS	West Summit Road		Local	CB, Gates		Industrial
24 Hour ADT		24 Hour Train Volume		Accident History	Transit Route	School Bus Route	Truck Route		
3,265		34		1 FA, 2 PD	No	Yes	NA		
Preemption	Humped Crossing		Crossing Condition Geometry		Crossing Surface Condition		Crossing Condition Sight		Redundant Crossing
No	Yes		Good		Good		Poor		No
Economic Impact if Closed		Feasibility of Roadway Improvements			Grade Separation Investigation		Need for Enhanced Warning Devices		
Low		Low			High		Yes		

Aerials

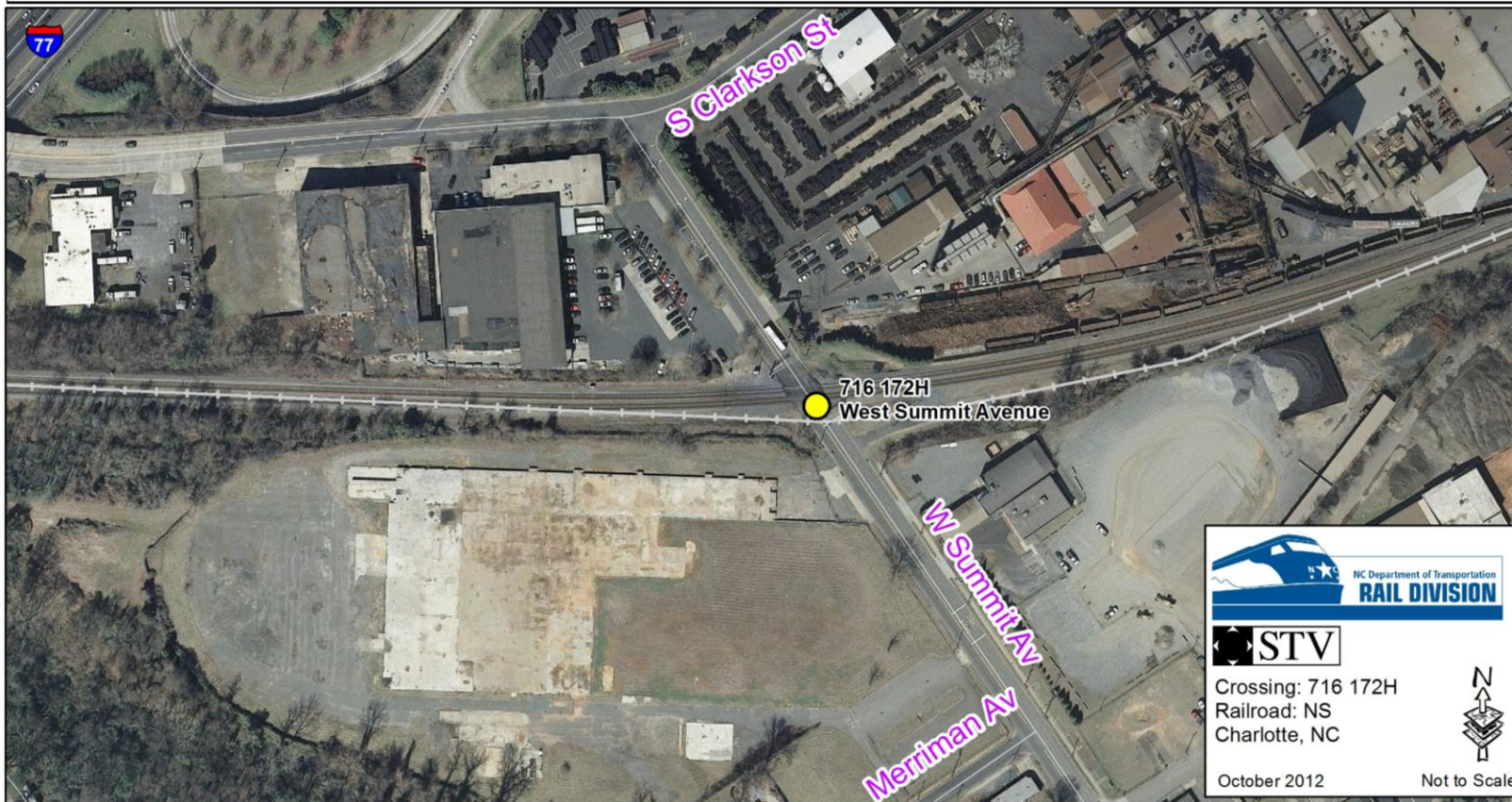


Figure 3 – West Summit Avenue, Photos of Directional Views



Looking North



Looking South



Looking East



Looking West

Figure 4 – Berryhill Road, Crossing Inventory

Crossing Number		Milepost	Railroad	Street Name		Street Classification	Warning Device		Land Use
716 172R		NS 379.70	NS	Berryhill Road		Local	CB, Gates		Industrial
24 Hour ADT		24 Hour Train Volume		Accident History	Transit Route	School Bus Route	Truck Route		
166		34		4 IN, 2 PD	No	Yes	NA		
Preemption	Humped Crossing		Crossing Condition Geometry		Crossing Surface Condition		Crossing Condition Sight		Redundant Crossing
No	Yes		Good		Poor		Poor		Yes
Economic Impact if Closed		Feasibility of Roadway Improvements			Grade Separation Investigation			Need for Enhanced Warning Devices	
Low		High			Low			No	

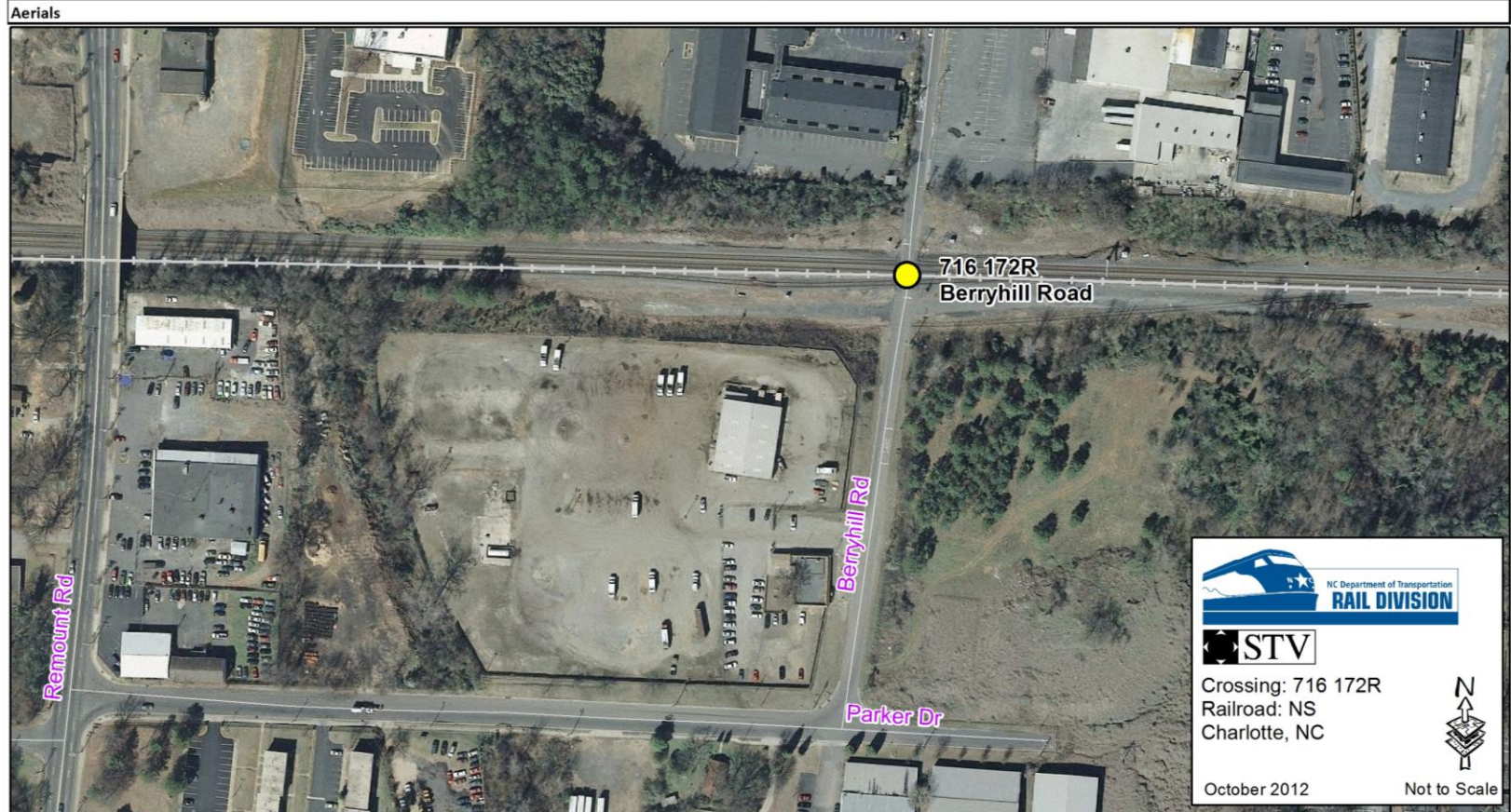


Figure 5 – Berryhill Road, Photos of Directional Views



Looking North



Looking South



Looking East



Looking West

Figure 6 – Donald Ross Road, Crossing Inventory

Crossing Number		Milepost	Railroad	Street Name		Street Classification	Warning Device	Land Use
716 178E		NS 380.64	NS	Donald Ross Road		Collector	CB, Gates	Commercial
24 Hour ADT	24 Hour Train Volume		Accident History	Transit Route	School Bus Route	Truck Route		
5,679	34		3 PD	No	No	NA		
Preemption	Humped Crossing		Crossing Condition Geometry		Crossing Surface Condition	Crossing Condition Sight		Redundant Crossing
No	No		Good		Poor	Poor		No
Economic Impact if Closed		Feasibility of Roadway Improvements			Grade Separation Investigation		Need for Enhanced Warning Devices	
Low		Low			High		No	

Aerials

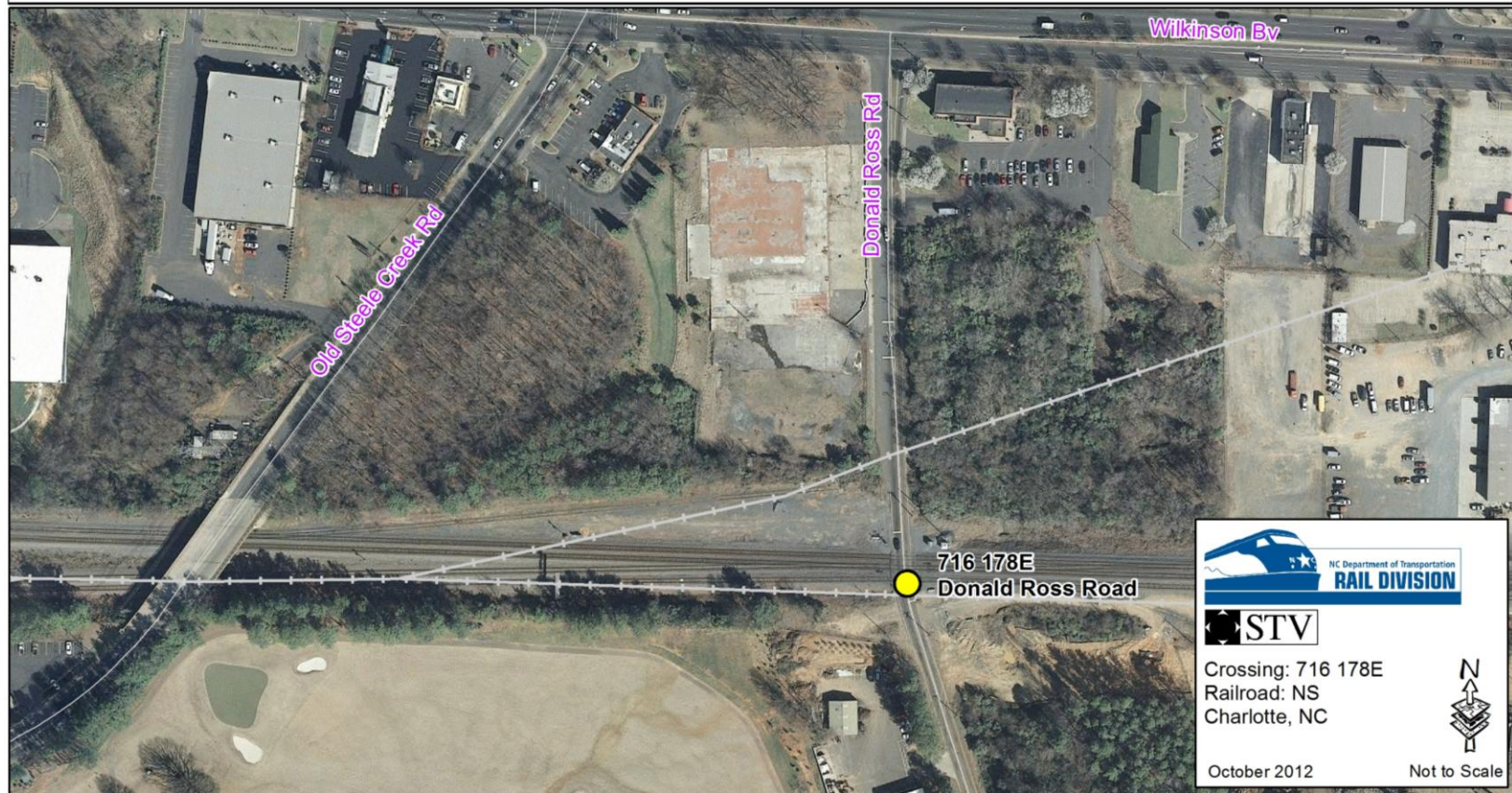


Figure 7 – Donald Ross Road, Photos of Directional Views



Looking North



Looking South



Looking East



Looking West

C. CROSSING ANALYSIS

1. Exposure Index

NCDOT uses an exposure index as one indicator to determine if a grade separation structure is warranted at street/rail grade crossings. The exposure index is calculated by multiplying the number of trains per day by the number of vehicles per day that use the crossing. As a general rule, grade separations should be considered in RURAL areas when the exposure index is 15,000 or more. In URBAN areas grade separations should be considered when the exposure index is 30,000 or more. Other factors that need to be considered in the feasibility of grade separations are:

- Accident history
- Topography
- Adjacent land use
- Geometric designs
- Construction impacts
- Costs

The exposure index was calculated for each of the three crossings (see Table D-1).

**TABLE C-1 – Exposure Index
Norfolk Southern Crossings**

Crossing No.	Street Name	Trains per Day	ADT	Exposure Index
716 172N	W. Summit Ave	36	3,265	117,540
716 176R	Berryhill Rd	36	166	5,976
716 178E	Donald Ross Rd	36	5,679	204,444

Two of the three crossings (Donald Ross Road and West Summit Avenue) exceeded the exposure index of 30,000.

2. Delay Analysis

Level of Service is a measure of the operational efficiency of the street/rail grade crossing. It is determined using procedures from the *Highway Capacity Manual* procedures. Level of service is expressed as a letter ranging from A (free flowing) to F (severely congested) and is determined using the average delay for all vehicles. Table D-2 summarizes the average delay and corresponding level of service.

TABLE C-2 - LOS

Level of Service	Avg. Delay/Vehicle (seconds)
A	10.0
B	>10.0 to 15.0
C	>15.0 to 25.0
D	>25.0 to 35.0
E	>35.0 to 50.0
F	>50.0

The delay calculations are based on the methodology developed for the Proposed Conrail Acquisition Draft Environmental Impact Statement (DEIS) by the Surface Transportation Board's Sections of Environmental Analysis (SEA) and modified as needed for this project.

The following values were calculated for existing and future conditions.

- Blocked crossing time per train
- Event time
- Average delay per day
- Maximum vehicle queue
- Total stopped vehicle delay per day

- Average delay for all vehicles
- Traffic level of service (LOS)

The level of service (LOS) for each crossing was determined based on these computed values and the Highway Capacity Manual procedures. Table D-3 summarizes the delay and LOS results for the existing conditions.

TABLE C-3 – Delay and LOS

NS Crossings																
Crossing #	Street Name	No. Lanes (one-way direction)	ADT	Arrival Rate (Veh/Min) 2x uniform	Departure Rate	Trains per day	Train Speed (miles/hr)	Train Length (feet)	Crossing Blockage Time (min) T_c	Event (Queue) Time (min) T_e	Total Stopped Vehicle Delay Per Day (min/day) D_T	Number Vehicles Delayed/Day V_D	Max. Peak Hr. Queue (veh/lane) Q	Average Delay /Stopped Veh. (mins) D_{avg}	Avg. Delay/Veh. In Secs. (All Vehicles) D_V	LOS
716 172N	Summit Avenue	1	3,265	4.53	30.00	36	45.00	9,000	2.27	2.68	292.57	219	7	1.34	10.75	B
716 176R	Berryhill Road	1	166	0.23	30.00	36	45.00	9,000	2.27	2.29	10.88	10	0	1.15	7.87	A
716 178E	Donald Ross Road	1	5,679	7.89	30.00	36	45.00	9,000	2.27	3.08	674.91	438	13	1.54	14.26	B

3. Accident Analysis

At-Grade Crossings

One accident has occurred over the past ten years at Donald Ross Road. No accidents have been reported involving train/vehicle collisions at the West Summit Avenue or Berryhill Road crossings within the past ten years.

Accidents are summarized using the following classifications:

- Fatality
- Injury
- PDO – property damage only

Table D-4 summarizes the accident data for the past ten years.

**TABLE C-4 – Accident Summary
Norfolk Southern Crossings**

Crossing Number	Street Name	Total # of Accidents	# Fatalities	# injuries	Remarks
716178E	Donald Ross Road	1	2	0	

D. SAFETY AND MOBILITY ISSUES

There are several methods available to enhance railroad-crossing safety. This chapter discusses some of these methods in more detail.

1. Vehicles Queuing across Railroad Tracks

The presence of nearby traffic signals, intersections, or parallel roadways can result in queues of stopped vehicles extending onto or across a street/rail crossing. During the site inspections, neither of the crossings experienced queuing of vehicles across the tracks when trains were present since the closest stop controlled intersection (West Summit Avenue and Clarkson Street is approximately 400 feet north of the street/rail crossing.

2. Traffic Signal Preemption

Standard practice (based on *The Manual on Uniform Traffic Control Devices*) requires that traffic signals located within 200 feet of a street/rail at-grade crossing be coordinated with the crossing's train detection and warning system to preempt normal operations of the traffic signal. None of the street intersections with NS rail line are signalized. However, if a traffic signal is warranted at any of these intersections, signal preemption would be required.

3. Humped Crossings

A "humped" crossing exists where the elevation of the railroad is significantly higher than the crossing roadway, causing vehicles to ascend on one side of the tracks and descend on the other. The severity of this condition can range from discomfort at normal speeds, to "bottoming out" of vehicles with long wheelbases or low clearances. This dragging can

damage vehicles, or cause them to become stuck on the crossing, creating a serious hazard. Routine track maintenance tends to exacerbate the problem over time, as track ballast work typically adds about three inches per occurrence. Over a ten-year period, the railroad may rise as much as one foot as a result of this routine maintenance.

Crest vertical curves across the tracks that do not create a need for the driver to reduce speed are not considered to be a humped profile. The combination of short crest and sag vertical curves caused by a buildup of the ballast and raising of the track create a need to reduce speed across the crossing. The following crossing has a slight humped profile:

- Berryhill Road (Crossing # 716 176R)

4. Grade Crossing Condition

A poor grade crossing surface can result in a rough, uneven ride. This can increase wear and tear on vehicles, potentially create a traffic safety hazard, and may add to congestion by reducing travel speeds. The crossing materials used on these grade crossings include asphalt, concrete slab, and rubber. Even though some materials provide a slightly improved ride and longer term maintenance, the main safety issue is the condition of the crossing. None of the crossings have surfaces that are deemed to be in poor condition.

5. Vehicles Driving Around Automated Gates

Several situations can lead to the circumvention of automated gates by motorists:

- Gates are lowered, but no train is visible
- Gates fail, and remain in the lowered position
- Gates are lowered and train is visible, but motorist is too impatient to wait

During the field analysis, there were no signs of vehicles circumventing the gates when a train was approaching. There were also no signs showing of vehicles (tire tracks, disturbed ground) circumventing the gates.

The City of Charlotte Fire Department analyzed response times to the West Summit Avenue from nearby stations, concluding that response times from Station 2 (which would normally be the first responder) could double. The Fire Department staff feels that closing the West Summit Avenue crossing would have a significant negative impact on assembling an effective fire fighting force, which means getting three companies and a chief on the scene of a structure fire. This is the minimum force needed to perform basic fire ground functions.

E. SYSTEM ENHANCEMENT OPTIONS

1. Grade Separation Structures

Many factors must be considered before suggesting grade separation, including:

- Traffic volumes (both vehicle and train)
- Accident history
- Topography
- Adjacent land use
- Construction impacts
- Costs

For the analysis of these crossings some of these factors apply to considering a grade separated crossing for West Summit Avenue (requested by City of Charlotte), while existing and proposed grade-separated crossings in close proximity to Berryhill Road and Donald Ross Road would permit their closure.

The NCDOT has previously looked at a grade separation at West Summit Avenue. A grade separation bridge for West Summit Ave. would result in impacts to the surrounding properties, land uses and the existing street network due to the close proximity to Mint Street and the I-77/I-277/Wilkinson Blvd/Freedom Dr. interchange.

2. Crossing Protection Device Upgrades

The most common, and cost-effective, way to increase the safety at a railway crossing is to upgrade existing warning devices at the crossing. Typical warning devices include signs, gate arms, flashing lights and bells. *Passive* devices,

such as advanced warning signs and crossbucks, merely warn the motorist of the existence of a railroad crossing. These devices are most suitable where train and traffic volumes and speeds are low, and where sight distance is adequate.

Active devices that warn motorists of approaching trains include flashing lights, bells, and automated gates. Such devices are usually employed at locations exhibiting higher volumes or speeds, or greater potential for accidents. The hierarchy of standard warning treatments, from least to most protected are:

1. Unmarked;
2. Railroad crossbucks;
3. Standard STOP signs (limited sight distance) and crossbucks;
4. Flashing signals and bells;
5. Flashing signals, bells and gates.

a. Advanced Crossing Protection Devices

NCDOT Rail and Norfolk Southern Railway have been using advanced crossing protection devices on the main line from Raleigh to Charlotte since 1995. These devices are most appropriate where high-volume multi-lane roadways cross railroad main lines, and where significant numbers of motorists are ignoring or circumventing existing warning devices. The advanced warning devices are described below.



Example of gates, signs and flashing lights

b. Median Barriers

Median barriers consist of markers mounted on raised islands along the roadway centerline to discourage motorists from driving in opposing travel lanes to "go around" lowered gate arms. Median



Example of Median Barriers

treatments typically extend 70 feet to 100 feet back from the gates, but may be precluded by driveways or intersecting roads within this distance.

c. Four-Quadrant Gates

This crossing treatment requires an additional gate on each approach, completely "sealing" the crossing. Several measures are employed to prevent vehicles from becoming "trapped" inside the gates, including careful timing of the gates to



Example of 4 Quadrant Gate

allow traffic to clear; providing 16 feet of clearance between track center and gates; leaving adequate space between gate tips for a vehicle to "squeeze" out; and use of breakaway arms. In tests at the Sugar Creek Road crossing in Charlotte, four-quadrant gates alone reduced

violations by 86%; in combination with median barriers, the reduction in violations rose to 98%.

d. Long Gate Arms

Extra-long arms cover at least ¾ of the crossing width. When tested at the Orr Road crossing in Charlotte, the installation of long gate arms reduced crossing violations by 67%.

e. Articulated Gates

Articulated gates are hinged arms that unfold to cover at least ¾ of crossing width. They are typically warranted where overhead obstructions prevent the use of long gate arms. Articulated gates installed at Orr Road in Charlotte reduced crossing violations by 78%.

f. Remote Video Detection

The Crossing Law Enforcement and Research of (CLEAR) Violations program employs video cameras to monitor selected crossings. The recordings provide information on crossing operations, violations, and accidents for both enforcement and research purposes.

g. Crossing Consolidation & Elimination

Many low-volume crossings are unnecessary due to the availability of alternative access across the tracks. These alternative crossings can often be made safer, since many low-volume crossings lack adequate warning devices. Resources are not available to upgrade warning devices on all existing crossings, and grade separation would be even less feasible. Therefore, consolidation and closure of these minor crossings is an effective strategy in terms of both costs and safety benefits. Typically, a crossing is considered redundant (and therefore a candidate for

elimination) if it is within a reasonable distance of another crossing connected to the same street network.

Crossing consolidations eliminate the potential for train/vehicle collisions. Crossing-related installation and maintenance costs are reduced, and by concentrating traffic at fewer, higher-volume crossings, more expensive active warning treatments and roadway improvements can be justified.

Crossings with high potential for elimination include:

- Redundant crossings near parallel crossings or grade separations, or where traffic can be safely and efficiently diverted to another crossing;
- Skewed crossings, or those where sight distance is limited by horizontal/vertical curvature, vegetation, or permanent obstructions;
- Crossings with a history of accidents;
- Crossings adjacent to a newly constructed crossing or grade separation;
- Private crossings with no identifiable owner, or where the owner is unwilling or unable to fund crossing upgrades (and where alternative access is reasonably available); Since NCDOT does not currently have jurisdiction over private crossings; closing of these crossings is determined by the railroad and property owner if identified.
- Complex crossings that cannot be effectively served by warning devices due to multiple tracks, extensive switching operations, etc.

h. Roadway Improvements

Roadway improvements can reduce both accident potential and traffic delay at railroad crossings. Realignment and re-grading can improve visibility and reduce the time required to traverse a crossing. Additional lanes significantly increase capacity, reducing the residual delay following a crossing event. New roadways can provide alternative routes, allowing crossings to occur at more desirable locations, and potentially eliminate the number of crossing trips.

i. Traffic Signals

Traffic signals are not specifically intended as warning devices at railroad crossings. However, when a street/rail grade crossing is located near a signalized intersection (typically within 200 feet), special steps should be taken to insure that vehicles do not get trapped on the tracks due to queues resulting from an adjacent street intersection's red signal. The normal sequence of traffic signal indications should be preempted by the approach of a train, eliminating the possibility of entrapment due to conflicting traffic and railroad crossing signals. Ideally, the preempted signal phasing should be designed to allow non-conflicting movements to proceed during a train crossing, thereby minimizing overall traffic delay.

F. PUBLIC INVOLVEMENT

A Public Involvement program was established as part of this study. The program involved:

- Three Stakeholder Committee Meetings
- Two Citizens Informational Workshops (CIWs)

The stakeholders committee was established in order to provide critical input in reaching consensus on grade crossing recommendations. Stakeholders included the following:

- NCDOT Rail Division
- NCDOT Division 10
- Mecklenburg-Union MPO (MUMPO)
- Mecklenburg EMS Agency
- City of Charlotte Department of Transportation (CDOT)
- City of Charlotte Engineering & Property Management
- City of Charlotte Fire Department
- City of Charlotte Neighborhood & Business Services
- City of Charlotte Solid Waste Services
- Charlotte Area Transit (CATS)
- Charlotte Douglas International Airport
- Charlotte-Mecklenburg Planning Commission
- Charlotte-Mecklenburg Police Department
- Charlotte-Mecklenburg School District
- Charlotte-Mecklenburg Utilities
- Carolina Panthers
- Charlotte Center City Partners
- Johnson & Wales University
- Norfolk Southern

Stakeholder Committee Meeting #1

The first stakeholder committee meeting was held on November 8, 2011 to review and discuss the scope of the project, data collection and next steps. Additionally, stakeholders discussed on-going transportation projects in the area, including several roadway extensions and rail projects, and a proposed rail vehicle maintenance facility and balloon track.

Citizens Informational Workshop #1

The first CIW was held on February 16, 2012 at the STV/Ralph Whitehead Associates office. Study team members were available to introduce the West Charlotte Corridor Study, to answer questions related to the study, and to receive comments to aid in developing recommendations for improving the rail crossings at Donald Ross Road, Berryhill Road and West Summit Avenue.

Twelve citizens signed in at the CIW. During the CIW, business owners raised concerns about access to the properties that front the southern side of Wilkinson Boulevard in the Berryhill Road area. Travelers are required to utilize Berryhill Road to access their properties, if heading from the north or east.

Residents raised concerns for the potential increased at-grade roadway-railroad crossings due to the third freight track and additional maintenance facility tracks at West Summit Avenue. Comments also revolved around the potential increase in noise due to the increased number of trains and sounding of the horns, as well as vehicular traffic within the Wilmore neighborhood. Residents requested that some level of safety improvements at the at-grade crossing be recommended (such as sound walls or a quiet zone) or a potential closure.

Four written comments were submitted to the NCDOT Rail Division and NCDOT Human Environment Section. All four comments came from residents of the Wilmore neighborhood, and related to the rail crossing at West Summit Avenue. The residents were primarily concerned with safety, noise, and air pollution, particularly due to anticipated increases in train traffic and the proposed maintenance facility.

According to the residents, Wilmore is a family-friendly neighborhood with substantial pedestrian and vehicular traffic. They voiced concern that a closure of the rail crossing at West Summit Avenue may lead to increased traffic on other neighborhood streets such as Merriman Avenue and Wilmore Drive, an increase in air pollution, and a decrease in pedestrian safety. They felt that the level of noise associated with existing train traffic (whistles, horns, etc.) is already high, and will likely increase with additional tracks and trains.

Enhancements identified by the residents to help minimize impacts include sound and/or barrier walls, alert systems at the crossing (instead of on the trains), establishment of quiet zones, increased set-backs and vegetation barriers, and speed control measures on area streets. Additionally, they felt that a grade separated crossing may reduce multimodal conflicts and noise. A previous study was conducted to determine the feasibility of grade separating West Summit Avenue. The results indicated that a grade separation would be extremely costly and have greater impacts to the surrounding land uses, as well as geometric issues due to the close proximity to the I-77/I-277/Wilkinson Blvd/Freedom Dr interchange.

Stakeholder Committee Meeting #2

The second stakeholder committee meeting was held on May 7, 2012 to review and discuss the information gathered at the

first CIW, recommendations for each of the three rail crossings, and next steps. The stakeholders discussed each crossing and potential scenarios related to traffic and design. Issues discussed included:

- **Street Connectivity:** The City of Charlotte stated that it did not support the full-closure of West Summit Avenue. Charlotte City Center Partners also raised questions about connectivity/access for the Wilmore neighborhood, citing over 10 multi-family residential projects under development in the immediate area. The stakeholder group concluded that these projects, and the larger Wilmore neighborhood, have adequate access via Mint Street, routing east to Morehead Street or south to West Boulevard. The group however, agreed that a long term recommendation for closure of West Summit Avenue should be taken to the next CIW for public comment.
- **Grade-Separation:** The stakeholder group noted that the full-closure of Donald Ross Rd. is contingent on the completion of the Clanton Road Extension (currently unfunded by City of Charlotte). The group also discussed Federal Railroad Administration (FRA) Quiet Zones, areas where trains silence their horns after extensive safety measures are implemented at crossings and in the immediate track approaches to crossings. A Norfolk Southern representative noted they would begin assessing the feasibility (design and cost considerations) for implementing a four-quadrant at-grade crossing, which would cost approximately \$400,000.
- **Real Estate:** The group concluded that the full build-out of the Vehicle Maintenance Facility would require acquisition and relocation of Charlotte Pipe & Foundry's south of the railroad line.

Citizens Informational Workshop #2

The second CIW was held on June 7, 2012 at the Greater Sinai Baptist Church Enrichment Center. Study team members were available to answer questions related to the study, and to receive comments on the improvements proposed for the three rail crossings. The study team developed two scenarios: short term and long term improvements. The short term improvements recommended for all three crossings were to remain open as at-grade crossings. The long term improvements recommended were for all three crossings to close based on implementation of future local and state projects. These projects are not currently funded. However, for the West Summit Avenue and Berryhill Road at-grade crossings, further studies would need to be conducted to determine mitigation measures and bike/pedestrian connections, if the crossings close.

Fourteen citizens signed in at the CIW, and six written comments were submitted to the NCDOT Rail Division and NCDOT Human Environment Section. Some of the residents who commented were in favor of the proposed project(s), and concerns were primarily related to potential adverse effects on homes and the community.

The closure of Donald Ross Road brought up connectivity questions. Residents questioned how to travel between residential areas and West Boulevard, and indicated that if the Clanton Road extension is constructed, it would be beneficial to include bicycle lanes and sidewalks. Residents near Berryhill Road expressed concern about how the addition of new tracks and trains could possibly create more noise, vibrations and shaking of homes, leading to possible structural issues in homes and affecting quality of life.

According to the residents, the closure of West Summit Avenue between Clarkson Street and Merriman Avenue will preserve property values in the Wilmore neighborhood by separation residences from the pipe factory and proposed maintenance facility, and by eliminating the numerous horn blasts that the at-grade crossing requires.

Enhancements identified by the residents to help minimize impacts include bicycle and pedestrian amenities, sound and/or barrier walls, and compensation for damage to structural damage to homes.

City of Charlotte Comments

The City of Charlotte submitted a letter dated July 18, 2012 to the NCDOT Rail Division. In this letter, the City expressed support for the proposed Locomotive and Railcar Maintenance Facility project, but remained concerned about potential impacts related to the transportation network in Center City Charlotte, particularly as it pertains to the closure of West Summit Avenue. The City indicated that approximately 3000 vehicles per day use Summit Avenue between the railroad and South Mint Street, the majority of which are through traffic. They stressed the importance of maintaining the dense grid of streets in Uptown, and the Wilmore and Wesley Heights neighborhoods, especially since the railroad track, I-77 and I-277 preclude other means of providing connectivity if West Summit Avenue is closed.

The City of Charlotte Fire Department also analyzed response times to the West Summit area from nearby stations, concluding that response times from Station 2 (which would normally be the first responder) could double. The Fire Department staff feels that closing the West Summit Avenue crossing would have a significant negative impact on assembling an effective fire fighting force, which means getting

three companies and a chief on the scene of a structure fire. This is the minimum force needed to perform basic fire ground functions.

City staff has collaborated with NCDOT in the design of the Locomotive and Railcar Maintenance Facility, and is aware of the need to ensure this is a viable project; however, with only one additional track funded in the first phase of construction, the City's recommendation is to keep the crossing at West Summit Avenue open. When and if subsequent phases of the facility's construction are funded, there would need to be further analysis regarding the future of the West Summit Avenue crossing.

Stakeholder Committee Meeting #3

The third and final stakeholder committee meeting was held on August 17, 2012 to review and discuss the information gathered at the second CIW, present the recommendations for each of the three rail crossings, and define the next steps. The stakeholders discussed each crossing and potential scenarios relating to traffic and design. Issues discussed included:

- Street Connectivity: The City of Charlotte restated that it did not support the full-closure of West Summit Avenue. The stakeholder group agreed on the full-closure of the Berryhill Road and Donald Ross Road crossings, contingent on mitigation measures and further study to determine those measures once a future project (such as the Clanton Road extension) is funded. Immediately south the Berryhill Road crossing, unrelated to this study, the City of Charlotte will study creating an east-west pedestrian connection linking Parker Road (west) to Skyview Road (east).

- Existing Conditions at Crossings: Stakeholder members inquired if existing conditions such as pavement markings and traffic control devices at crossings would be recorded in the final report. It was determined that since these were maintenance issues, if deficiencies were identified they would be reported to the agency having road authority.
- Train Operations: The Locomotive and Railcar Maintenance Facility will require train turnaround tracks. There are three options being studied, with no known recommendation at this point. If the area immediately east of the Berryhill Road crossing is chosen, this will likely require a full-closure of Berryhill Road. If this alternative is chosen and at such time as funding is identified, further study to identify mitigation projects will be required.

G. RECOMMENDATIONS

Street/Rail Grade Crossing Recommendations

This section describes the recommendations (short-term and long-term) for the three at-grade crossings. The primary objective of these improvements is to provide guidance to the local and state agencies on the mechanisms that could trigger the need for further evaluation and design. Figure 2 illustrates the phasing of short-term and long-term recommendations.

A. *West Summit Avenue (Crossing # 716 172N)*

Under the existing conditions, West Summit Avenue would continue to operate as a railroad-roadway at-grade crossing (with two existing NS freight tracks). Figure 3 depicts the existing conditions along West Summit Avenue. This roadway carries a high volume of truck traffic, specifically relating to the operations of the Charlotte Pipe and Foundry. They currently utilize facilities on both sides of the NS corridor and require transferring of materials across the freight tracks through the at-grade crossing. The truck percentages currently experienced at the West Summit Avenue crossing are a direct result of this transfer of materials. These volumes are expected to decrease more once the foundry moves their business.

1. Short-Term

Build gates at a new single-track crossing of NCDOT Locomotive & Railcar Maintenance Facility, Phase I, while keeping the current Norfolk Southern double track at-grade

crossing at West Summit Avenue open as an at-grade crossing. Figure 4 depicts what the short-term recommended improvements would be from a profile view. Crossing improvements would be implemented with the development of the railyard.

2. Long-Term

The long-term recommendation is dependent upon when the NCDOT Locomotive & Railcar Maintenance Facility is fully built-out. As funding is secured, and the final phases are scheduled for completion, a further evaluation of treatments including the full-closure of West Summit Avenue would be required. Full build-out includes up to seven (7) railroad tracks crossing West Summit Avenue. As Figure 4 depicts from a profile perspective, three (3) of those tracks would be the Norfolk Southern main line tracks, while approximately 300 feet south, four (4) additional vehicle maintenance facility tracks would be located approximately 300 feet south). Train operations at the maintenance facility would have the trains traveling at speeds between 5mph to 10mph, while the train speeds at the main line tracks operating between 30mph and 40 mph.

Further analysis would be required to determine how the full build-out scenario would operate and how to account for the need to provide multi-modal connectivity within the study area.

Figure 8 - West Summit Avenue Recommendations

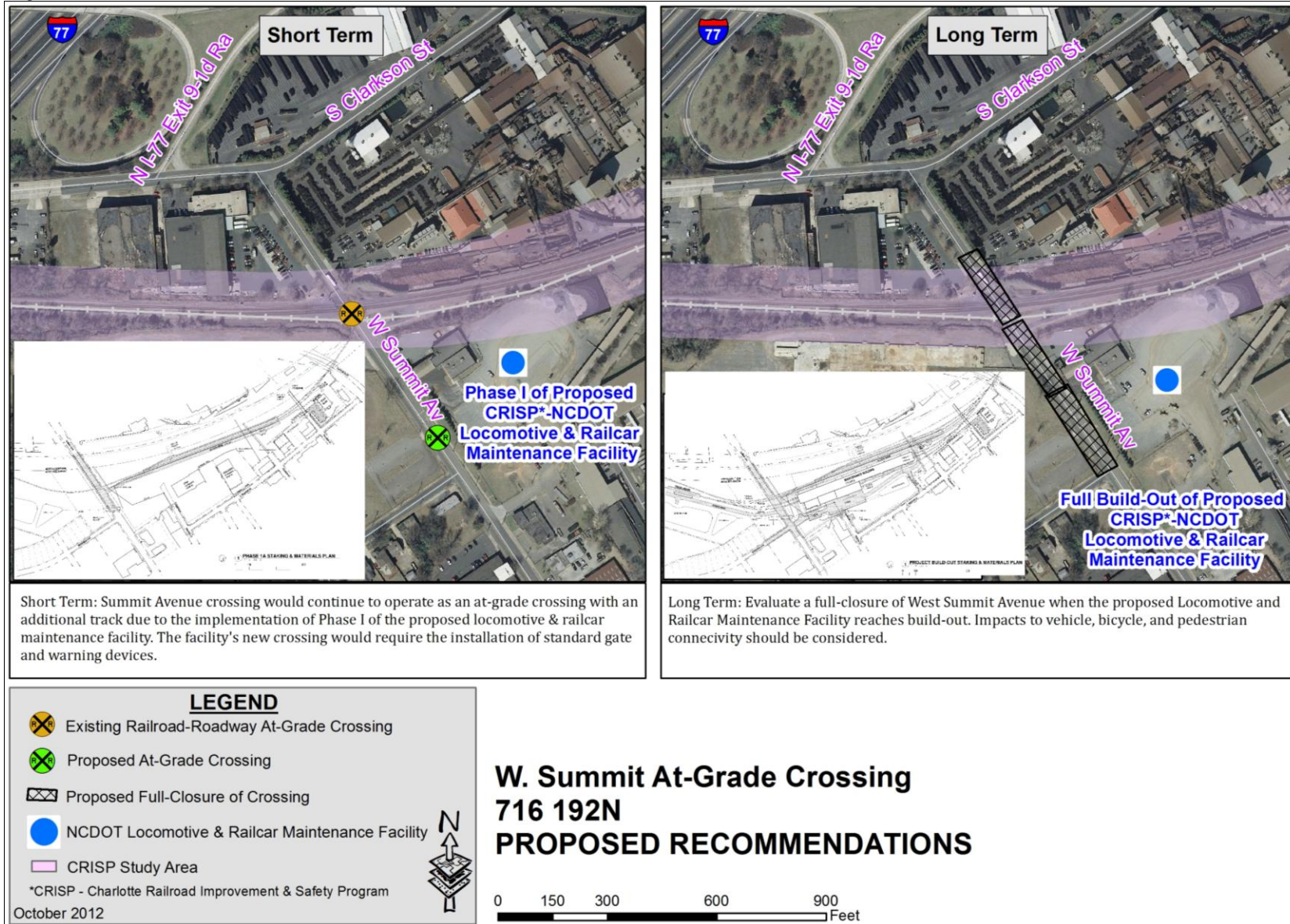


Figure 9 – Design Scenario – Existing Conditions

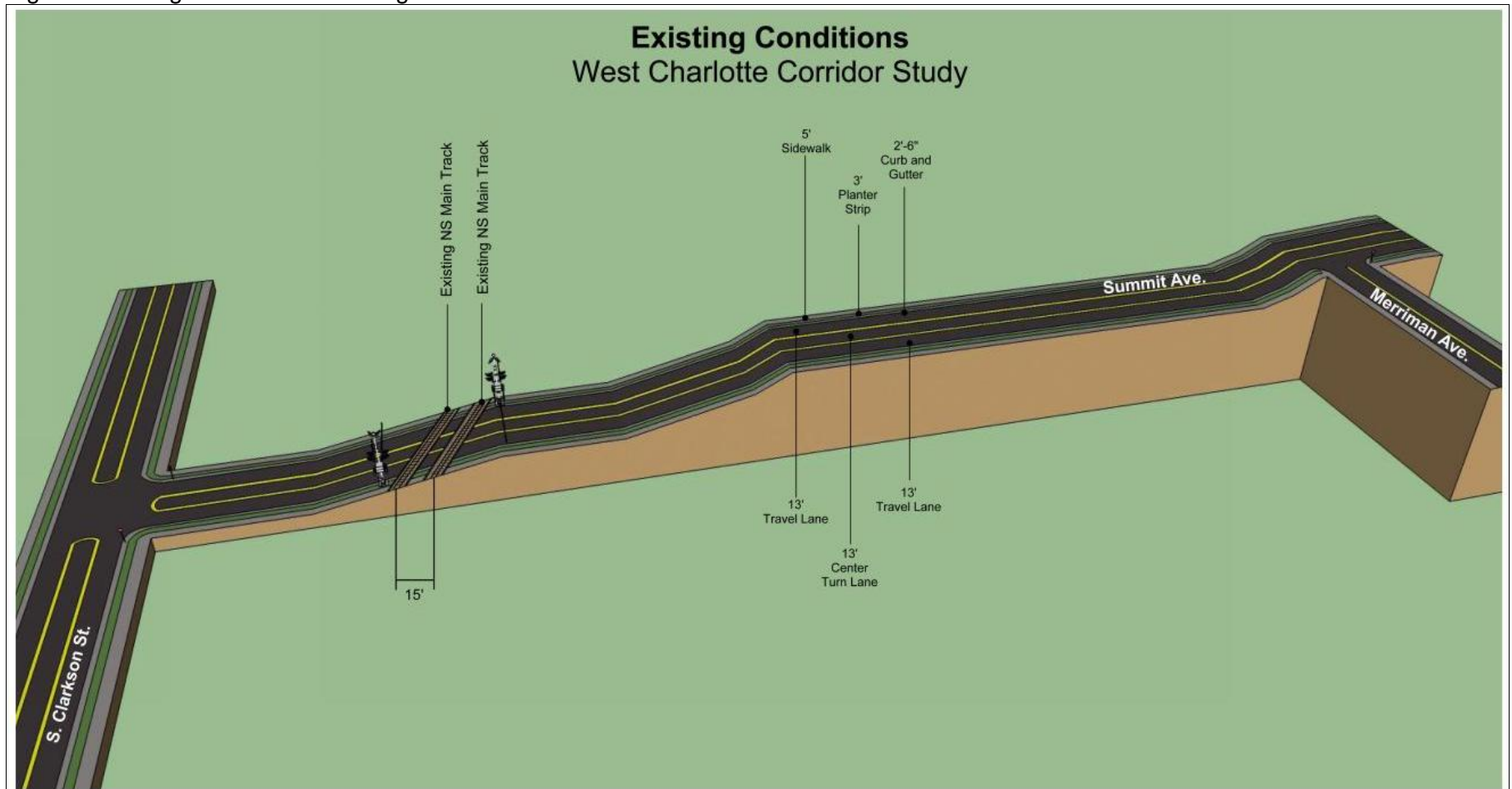


Figure 10 – Design Scenario – Short-Term

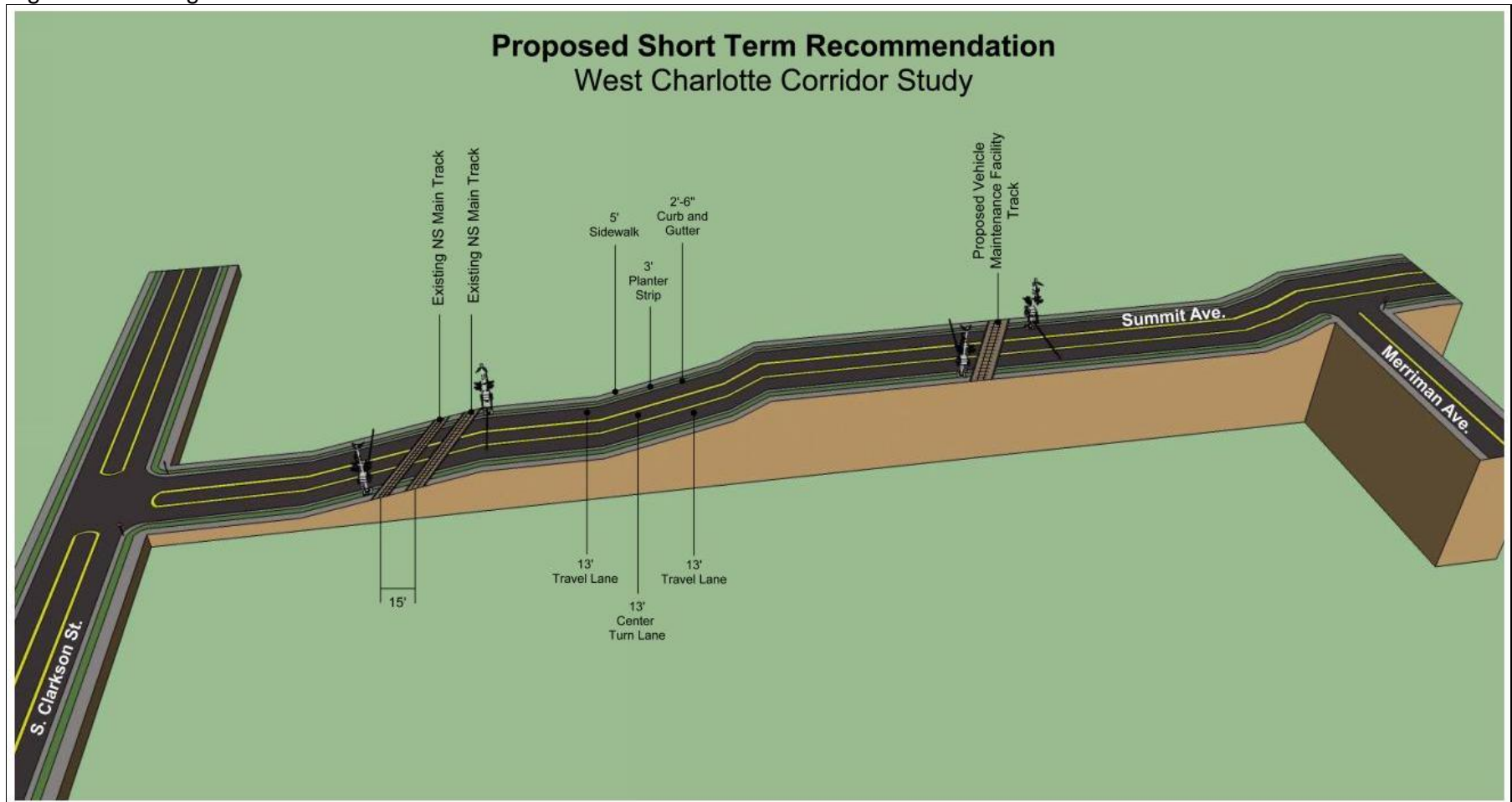
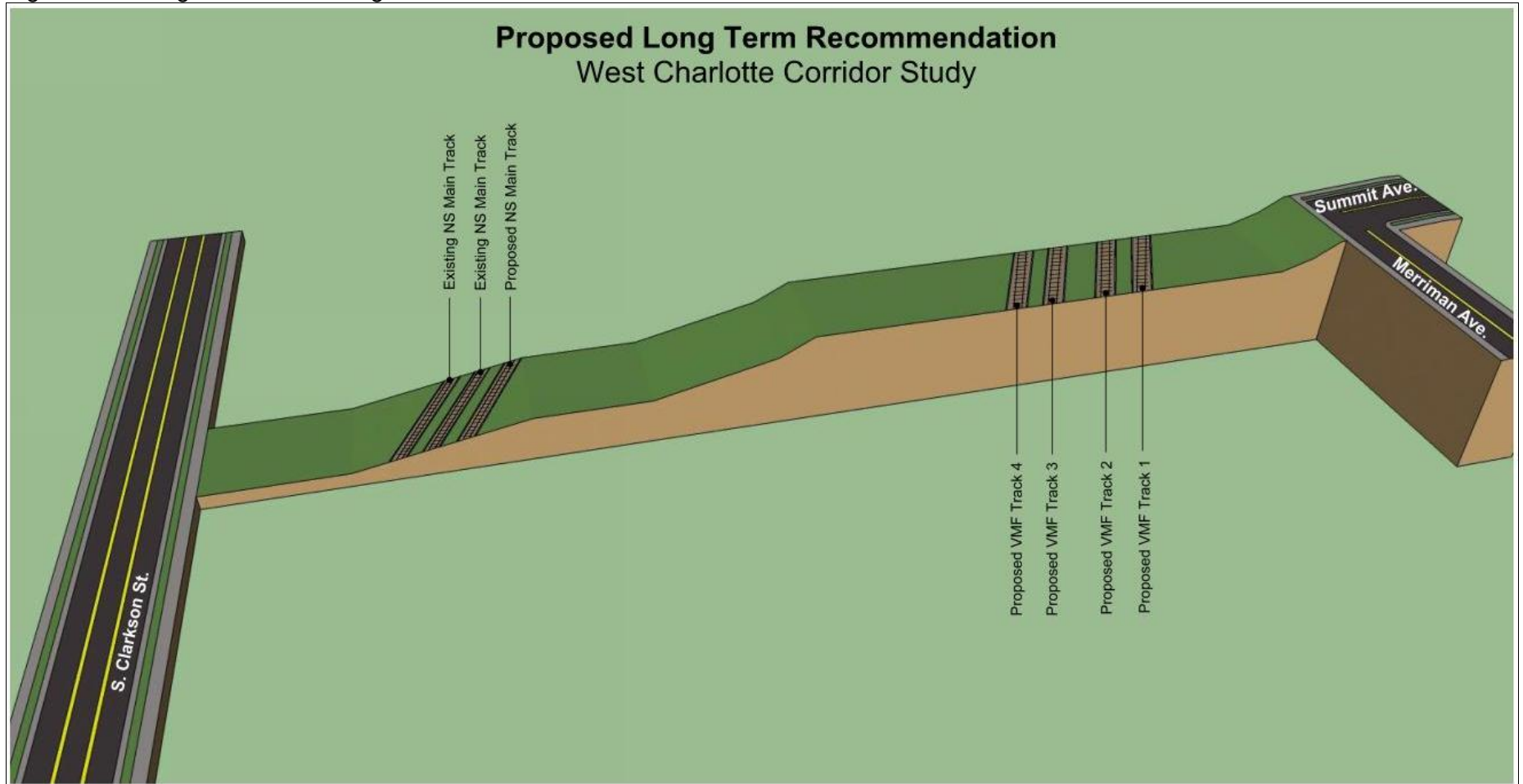


Figure 11 - Design Scenario – Long-Term



B. *Berryhill Road (Crossing # 716 176R)*

Under the existing conditions, Berryhill Road would continue to operate as a railroad-roadway at-grade crossing (with two existing NS freight tracks). This roadway carries a high volume of truck traffic, specifically relating to the operations of an ARAMARK Uniform Services facility. They currently utilize Berryhill Road to access their facility since their trucks are unable to make a left turn off of Wilkinson Boulevard (heading from the east), nor make a left turn onto Wilkinson Boulevard to head west since there is a concrete median separating the east/west travel lanes of Wilkinson Boulevard.

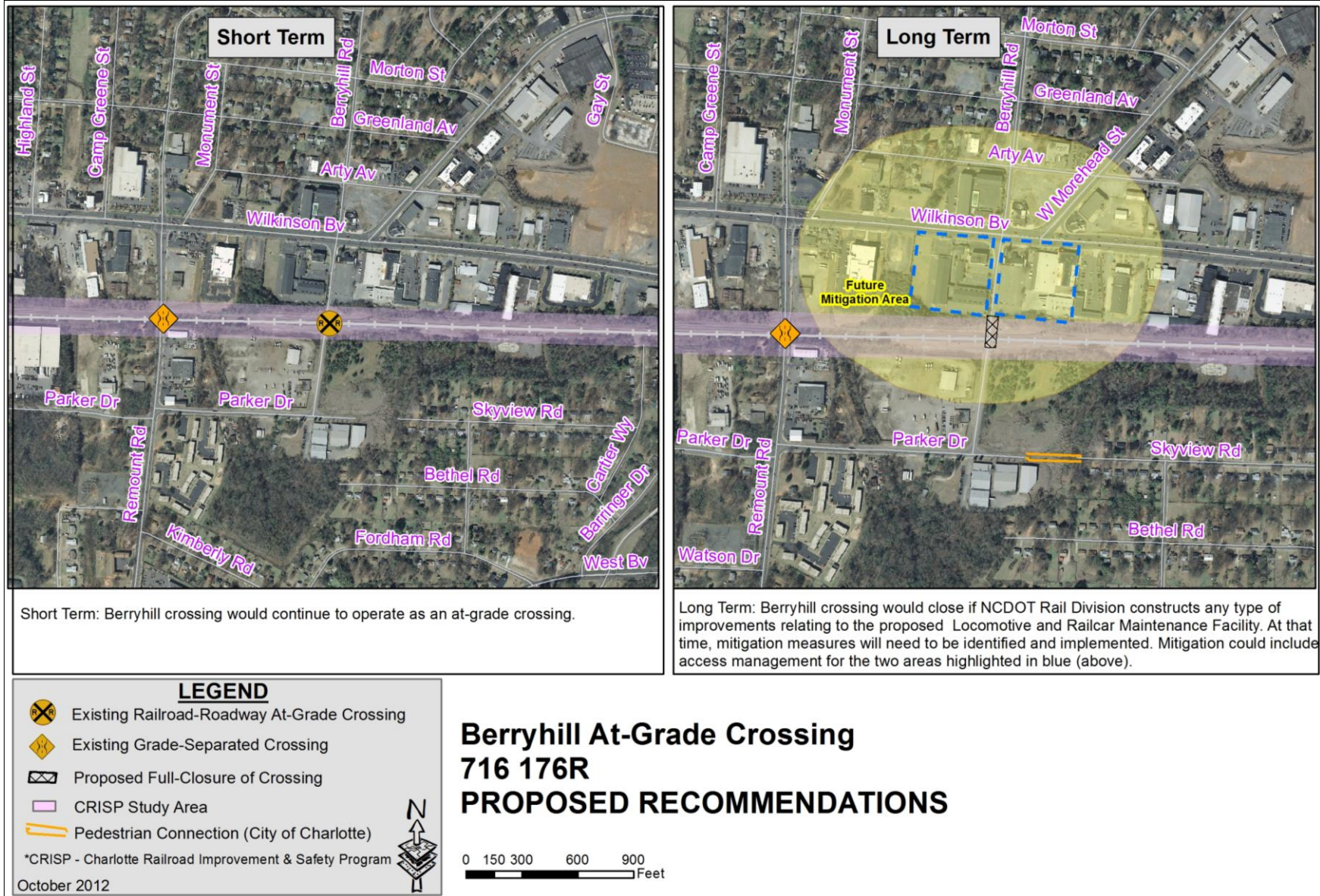
1. Short-Term

Continue to operate the crossing as an at-grade crossing.

2. Long-Term

The long-term recommendation is contingent on where NCDOT will be turning their passenger trains around in order to head back west to Raleigh. There are three options being studied, with no known recommendation at this time. Depending on which site is selected, current vehicular operations along Berryhill Ave could be impacted, and further analysis would be required. If the location selected is at Berryhill, the long-term recommendation would be to close the existing at-grade crossing, with the requirement to conduct a study to identify mitigation measures in order to provide multi-directional access to properties along the south side of Wilkinson Blvd. (i.e. ARAMARK Uniform Services).

Figure 12 – Berryhill Road Recommendations



C. Donald Ross Road (Crossing # 716 178E)

Under the existing conditions, Donald Ross Road would continue to operate as a railroad-roadway at-grade crossing (with two existing NS freight tracks).

The Mecklenburg-Union Metropolitan Planning Organization's Long Range Transportation Plan (LRTP) identifies a future Clanton Road Extension. This proposed road would connect Clanton Road at the intersection with Wilkinson Boulevard and continue to the south across the NS rail corridor, via a grade separation, and eventually tie into Donald Ross Road. Once

the Clanton Road Extension is constructed, the City of Charlotte plans on closing the existing railroad-roadway at-grade crossing at Donald Ross Road.

1. Short-Term
Continue to operate the crossing as an at-grade crossing.
2. Long-Term
Create a full-closure at Donald Ross Road if/when the Clanton Road Extension is built. The Clanton Road bridge would connect to Wilkinson Boulevard via grade separation over the NS tracks.

Figure 13 – Donald Ross Road Recommendations

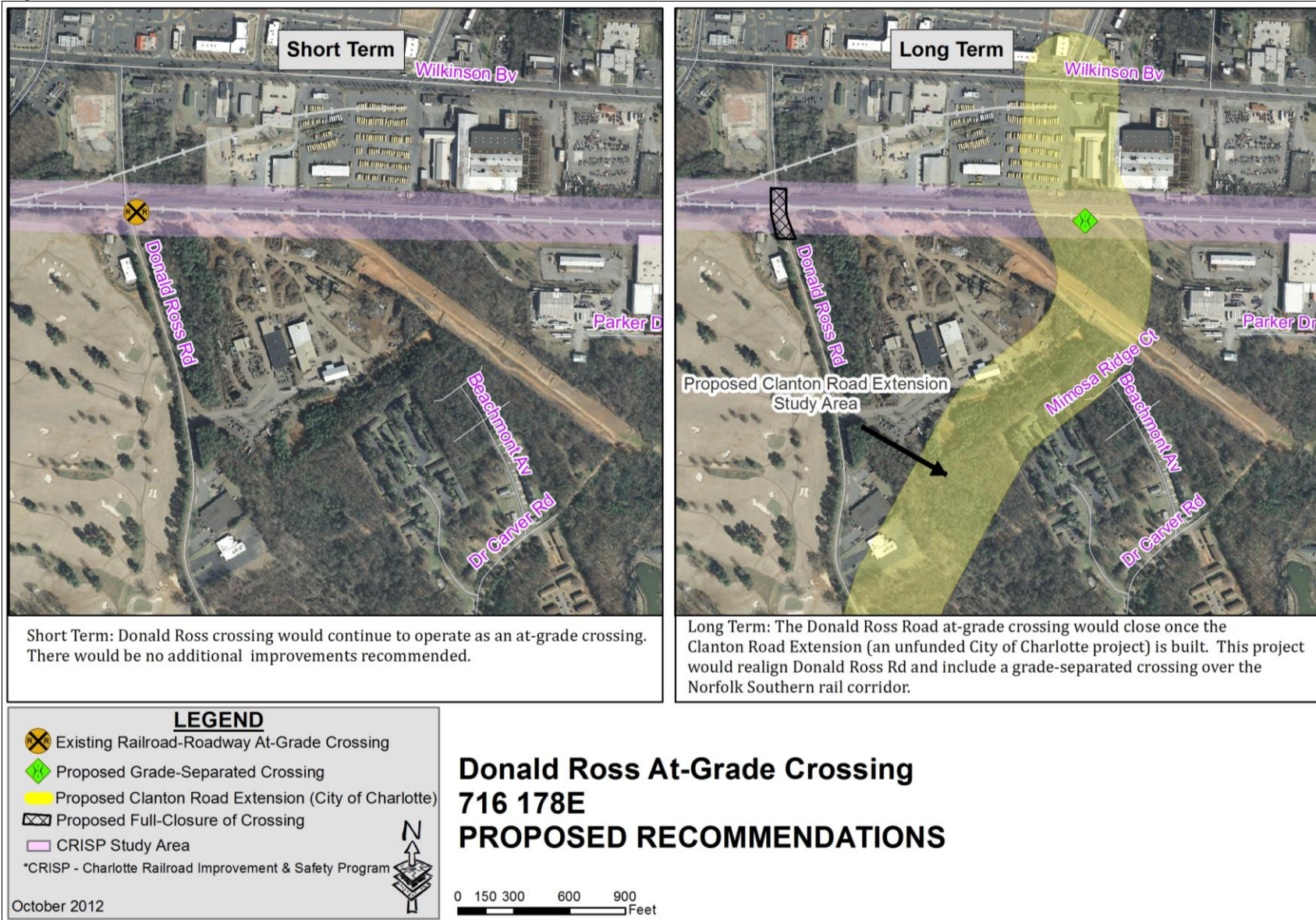


TABLE G-1 – Recommendations

Crossing Number	Street Name	Short-Term Recommendation	Est. Short-Term Cost	Long-Term Recommendation	Est. Long-Term Cost
716 192N	West Summit Ave.	Build gates at new single-track crossing of NCDOT maintenance facility. (cost of crossing apparatus is associated with construction of Vehicle Maintenance Facility).	n/a	Evaluate full-closure, looking at impacts to vehicle, bicycle, and pedestrian connectivity.	\$25,000 for basic closure.
716 176R	Berryhill Rd.	No action.	n/a	Full-closure.	\$25,000 for basic closure.
716 178E	Donald Ross Rd.	No action.	n/a	Full-closure, in conjunction with Clanton Rd. Extension	\$25,000 for basic closure.

Note: Estimated costs do not include costs associated with necessary mitigation projects nor right of way or utility relocations costs.

Appendix A

PUBLIC WORKSHOP SUMMARIES



West Charlotte Corridor Study Public Workshop Comment Report February 16, 2012

The following is a compilation of the comments received from the February 16, 2012 West Charlotte Corridor Study Public Workshop. The comments are a summary of the written comments submitted to NCDOT Rail Division and the NCDOT Human Environment Unit.

- Summit Avenue
 - Resident of Wilmore neighborhood is concerned about safety relating to the proposed project, in particular the proposed 3rd freight track and associated lines for the proposed maintenance facility:
 - The level of noise associated with the train tracks is already high. The resident is concerned about the potential increased level of noise and would like considering sound walls.
 - Wilmore neighborhood is a pedestrian-friendly neighborhood with constant foot traffic on all streets. The amount of proposed crossings at Summit Ave poses significant hazard to pedestrians.
 - The proposed facility backs up to a residential street with many children and families, and are concerned that the proposed plan lacks sufficient set-backs and walls to protect these families from the facility.
 - Resident of Wilmore neighborhood submitted comments relating to the proposal to enhance the rail crossing and add tracks at Summit Ave:
 - As a resident, fully support enhancements of and growth in public transportation infrastructure.
 - Am concerned about neighborhood safety, noise pollution and air pollution.
 - With the proposal of seven tracks at Summit Avenue (including the proposed train facility directly behind my house), concerned about ho car and pedestrian traffic will cross Summit Avenue. Since Summit Avenue quickly ends at Clarkson, it seem unlikely that NCDOT will be able to build a bridge for vehicles over the tracks as well as being unfeasible to construct a bridge to span 7 tracks. On the other hand, having vehicles cross 7 tracks seems very unsafe.
 - Is it truly possible to close Summit Avenue before the rail crossing and if so, if access to Freedom Drive and Clarkson Street will be provided from some other point between Summit and Morehead Street. If Summit Avenue is closed, I would be concerned about the increase in traffic down Merriman Avenue and Wilmore Drive, two neighborhood streets rarely used as cut-through and speed limits of 25mph.
 - With the current number of trains per day, 36, at Summit Avenue, with three 15-20 second whistles per trains, the Wilmore neighborhood experiences a large amount of train noise. Concerned that the increase in train traffic will bring an increase in noise pollution. I am adamant that the plan includes proposals that at the very least do not increase noise levels and possibly reduce the amount of noise from the trains and hope that you consider the following:
 - A railway crossing design that allows trains to cross Summit Avenue without blaring the horns, ie using bridges or closing Summit Avenue
 - Changing the alert system from a train-based horn to a sound alert directly at the crossing
 - Establishing a quiet zone, build sound barriers around the service facility and near the tracks, including brick walls that fit with the style of the historic district and vegetation like trees and tall bushes.
 - With an increase in train traffic, anticipate a potential increase in air pollution. Concerned about trains idling at the service station and giving off even more pollutants and would like to learn more about the types of trains that will be utilizing the tracks and how much

- air pollution they emit. Would like to see plans that include the planting of plenty of trees and vegetation to combat the CO2 emissions.
- Resident of Wilmore neighborhood is concerned about noise and street traffic from the existing rail activity through Summit Avenue within the Wilmore neighborhood.
 - The neighborhood stands to be more impacted than most by some of the rail projects proposed in the area.
 - Besides the noise levels and crossing design, would like to request consideration of the potential for more street traffic through the neighborhood roads connecting to Summit Ave. Many families with children live along Merriman Avenue and Wilmore Avenue. Speed bumps or additional controls on these streets may be necessary if changes on Summit Avenue result in additional crossing delays or traffic reduction.
- Resident of Wilmore neighborhood provided concerns relating to:
 - Summit Avenue is used by many as the quickest route to Morehead, 277, 77, Freedom, 85 and Wilkinson. Adding a significant number of trains to that crossing would block a major throughway for 1000s of people per day. A solution if project moves forward, albeit an expensive one, is to build a bridge so that both Summit Avenue and the railroad crossing can co-exist without further interrupting traffic on either. This would also be a positive move towards eliminating the train horns that currently wake up Wilmore residents throughout the night.
 - The train horns are already a major deterrent to living in Wilmore, and as such are preventing further development and keeping property values low. Adding more trains would only add to this problem and would be unacceptable to the residents and property owners of Wilmore. Building a bridge, as mentioned above, would be one solution. An alternative, and cheaper solution, would be to recognize Wilmore as a primary residential area and turn Summit Avenue into a FRA quiet zone. This solution should be pursued regardless of the outcome of the project.
- Berryhill Road
 - No comments were received regarding this at-grade crossing
- Donald Ross Road
 - No comments were received regarding this at-grade crossing

Appendix B

STAKEHOLDER MEETING MINUTES



1000 W. Morehead St., Ste. 200
Post Office Box 35624
Charlotte, NC 28235-5624
(704) 372-1885
(704) 372-3393 FAX

STV/RALPH WHITEHEAD ASSOCIATES, INC.

MINUTES OF MEETING:

PROJECT: West Charlotte Corridor Study

LOCATION: Metrolina Transportation Management System Building

MTG. DATE: November 8, 2011

ATTENDING:

Nancy Horne.....NCDOT Rail Division
Sandra StepneyNCDOT Rail Division
Jahmal Pullen.....NCDOT Rail Division
Scot Sibert..... STV
Jesse Hite.....Gannett Fleming
Tim GibbsCharlotte Department of Transportation
Tom SorrentinoCharlotte Department of Transportation
Vivian ColemanCharlotte Department of Transportation
Keith HinesCharlotte Department of Transportation
Dennis RorieCharlotte Department of Transportation
Stuart Basham.....MUMPO
George Bryant..... Charlotte-Mecklenburg Utilities
Barry MooseNCDOT Division 10
Louis Mitchell.....NCDOT Division 10
Reid SimonsNCDOT Division 10
Theresa Watley City of Charlotte EPMD
Monroe HicksEmergency Response
Pete Key Charlotte Fire Department
Richard Thigpen Carolina Panthers
Dennis LaCariaCharlotte-Mecklenburg School District
Veronica Wallace.....Charlotte Department of Transportation
Allison Billings Charlotte Center City Partners

MINUTES:

This meeting served as the Stakeholder kickoff for the West Charlotte Corridor Study. The meeting began at approximately 1:30 PM with introductions.

Mr. Sibert began the meeting by reviewing the scope of the project as well as the project limits. The project limits for the study area extend along the Norfolk Southern Railway/NCRR corridor between Trade Street and Donald Ross Road.

On-going projects, as well as identified projects that the City and NCDOT Rail anticipate, were discussed. Those projects are:

- Martin Luther King Jr. Extension – Gannett Fleming will be conducting a concurrent study for this project for the City of Charlotte. The anticipated timeline is similar to this project.
- CATS: North Line/Gateway Center
- City of Charlotte: Clanton Road Extension
- City of Charlotte: I-77/277 Interchange Analysis
- NCDOT: U-3850
- NCDOT Rail: Vehicle Maintenance Facility (VMF) and Balloon Track
- Norfolk Southern/NCDOT Rail: CRISP projects - third freight track

The project descriptions and goals were discussed in order for the Team to understand the complexity of this corridor study. Further understanding of these projects will provide additional contribution throughout the study process.

Additional discussion revolving around these projects occurred. The City of Charlotte, through their Land Development process, has conducted an internal review of the VMF project and has requested that all comments be submitted to Morris Berg (Lead consultant on the VMF project) by November 11, 2011. The VMF will not only include a maintenance facility for the passenger rail service, but also a train wash facility and additional freight tracks crossing Summit Avenue. Future capacity improvements are also planned, which include constructing a third freight rail track within the existing freight rail corridor. Currently 30-40 trains operate along the freight rail corridor. There are also plans for adding additional high speed train tracks within the freight rail corridor.

At Summit Avenue, the existing surrounding property owner, Charlotte Pipe and Foundry, generate a large number of truck traffic. An average daily volume of traffic is approximately 3,200 vpd, crossing the existing roadway-railroad at-grade crossing, with a truck percentage of 44.9%.

The Berryhill Road at-grade crossing was analyzed for closure in 2007 and there were concerns about stormwater and flooding if the crossing was closed, as well as providing a vehicular connection to the Aramark property that fronts Wilkinson Boulevard.

With the proposed Clayton Road Extension, the Donald Ross at-grade crossing would be closed once the extension is built. The City of Charlotte has conducted a feasibility study for the Clanton Road Extension and there has been interest from a development standpoint along the corridor.

The project schedule was then discussed, providing an outline of the next steps and schedule. A public workshop is to be held at the beginning of the year to gather input from the public. During the workshop, the corridor map will be presented, showing planned projects within the study area, a typical section of Summit Avenue and the additional tracks relating to the VMF, traffic volume data, any other relevant information to assist the public in understanding the complexity of this study.

ACTION ITEMS

- City of Charlotte will provide Clanton Road Extension and MLK Extension alignment in order to be placed on the Public Workshop figure.
- STV/RWA will contact the City of Charlotte Bike and Pedestrian coordinators.
- NCDOT Division 10 will provide any subsequent information relating to their initial operational analysis for the I-277/I-77 interchange loop.
- NCDOT Rail Division and the City of Charlotte will provide any relevant studies.

The meeting ended at approximately 3:00 PM. These minutes serve as a formal record of the meeting.

Sincerely,

STV/RALPH WHITEHEAD ASSOCIATES, INC.

(submitted via e-mail)

Scot Sibert

cc: All in attendance



1000 W. Morehead St., Ste. 200
Post Office Box 35624
Charlotte, NC 28235-5624
(704) 372-1885
(704) 372-3393 FAX

STV/RALPH WHITEHEAD ASSOCIATES, INC.

MINUTES OF MEETING:

PROJECT: West Charlotte Corridor Study

LOCATION: Government Center Charlotte, NC

MTG. DATE: May 7, 2012

ATTENDING:

Nancy Horne.....NCDOT Rail Division
Sandra StepneyNCDOT Rail Division
Scot Sibert..... STV
Katie Curry STV
Jesse Hite.....Gannett Fleming
Tim GibbsCharlotte Department of Transportation
Tom Sorrentino.....Charlotte Department of Transportation
Stuart Basham.....MUMPO
George Bryant..... Charlotte-Mecklenburg Utilities
Keith Morris..... Morris Borg Architects
William Barringer.....Norfolk Southern
Pete Key Charlotte Fire Department
Dennis LaCaria.....Charlotte-Mecklenburg School District

MINUTES:

This meeting served as the project overview for Stakeholders of the West Charlotte Corridor Study. The meeting began at approximately 1:30 PM with introductions.

Mr. Sibert began the meeting by reviewing the scope of the project as well as the April public workshop. Five written comments were submitted, while numerous verbal comments were heard but additional written comments were received.

Mr. Sibert introduced each crossing and each of the scenarios associated with the crossings. Ms. Horne expressed that they plan on taking the recommendations to the June 2012 public workshop.

Summit Avenue crossing was discussed first. Mr. Sibert presented the overview of the crossing and the two scenarios created. Mr. Gibbs mentioned that the city was taking the position of not supporting scenario 2, but agreed that it should still be presented at the public workshop to see what the response would be.

Additional discussion revolving around traffic issues and crossing design occurred. It was noted that the maintenance facility cannot be built without the Pipe and Foundry relocating. Crossing design issues and FRA's quiet zone requirements were brought up; Mr. Barringer volunteered to look into gate design options and get estimates on those designs.

The Center City Partners brought up a concern with the connectivity of the Wilmore neighborhood. They stated that there is significant growth in the area, noting that there are currently over 10 multi-family developments under construction and access and connection are important as the area grows. Discussion over the closing and traffic delays ensued and most stakeholders agreed that there is not a huge conflict in terms of traffic routes; residents of Wilmore can take Mint Street to West Boulevard or Mint Street to Morehead Street.

The next discussion was on the Berryhill Road at-grade crossing. Mr. Sibert stated that a further study would need to be conducted to look into the realigning of Morehead Street with Berryhill Road as a mitigation measure if future rail improvements occur at the crossing. If and when those improvements occur, it would be recommended that the at-grade crossing be closed. Stakeholders understand that there is a low volume of traffic at this crossing and most of the traffic is truck traffic.

Mr. Sibert moved on to discuss the Donald Ross crossing. He stated that in scenario 2, the Donald Ross crossing would be closed once the proposed Clanton Road Extension is built. The Clanton Road Extension is an unfunded city project.

Mr. Sibert asked if there were any final comments or questions and it was asked if there was an updated Rail Maintenance design. Ms. Horne answered saying that the design will be included so Wilmore residents can see what is being planned on the site at Summit Avenue. If there is an updated plan, it will be included in the figures.

The project schedule was then discussed, providing an outline of the next steps and schedule. A public workshop is to be held in June to present the crossings and scenarios to the public. During the workshop, the individual crossing maps will be presented, showing each scenario, a typical section of Summit Avenue, any updated information and/or design of the Rail Maintenance Facility, and any other relevant information to assist the public in understanding the study.

ACTION ITEMS

- A note will be added to the Donald Ross figure stating that the Clanton Road Extension project is an unfunded city project.
- Bill Barringer will look into gate design and gather estimates
- MLK extension will be included on the figures
- STV will send Mr. Barrington electronic copies of the figures and word documents.

The meeting ended at approximately 2:45 PM. These minutes serve as a formal record of the meeting.

Sincerely,

STV/RALPH WHITEHEAD ASSOCIATES, INC.

(submitted via e-mail)

Scot Sibert

cc: All in attendance



1000 W. Morehead St., Ste. 200
Post Office Box 35624
Charlotte, NC 28235-5624
(704) 372-1885
(704) 372-3393 FAX

STV/RALPH WHITEHEAD ASSOCIATES, INC.

MINUTES OF MEETING:

PROJECT: West Charlotte Corridor Study

LOCATION: CDOT Large Conference Room, Char-Meck Govt. Center

MTG. DATE: August 17, 2012

ATTENDING:

Nancy Horne..... NCDOT Rail Division (via phone)
Sandra Stepney NCDOT Rail Division (via phone)
Jahmal Pullen..... NCDOT Rail Division (via phone)
Scot Sibert..... STV
Scott Adams STV
Tim GibbsCharlotte Department of Transportation
Vivian ColemanCharlotte Department of Transportation
Keith HinesCharlotte Department of Transportation
Veronica Wallace.....Charlotte Department of Transportation
Stuart Basham.....MUMPO
Keith Morris.....Morris-Berg Architects
Pete Key Charlotte Fire Department
Darlene Heater Charlotte City Center Partners
Ted Boyd..... Charlotte City Center Partners

MINUTES:

This meeting served as the third and final Stakeholder meeting for the West Charlotte Corridor Study. The meeting began at approximately 10:00 AM with introductions.

Scot Sibert, STV, began the meeting with an overview of the second public outreach meeting (June 7, 2012), noting there were approximately 15 attendees, who cited the following concerns:

- Summit Ave. – Concerns about train-horn noise and vibration from proposed additional tracks.
- Berryhill Rd. – Concerns about train-horn noise and vibration from proposed additional tracks. Additional concern with Berryhill Rd. closure attracting illegal dumping.
- Donald Ross Rd. – No major concerns relating to this crossing.

Following the public meeting summary, Mr. Sibert presented each crossing's map (handouts) and described short-term and long-term recommendation for each one.

Summit Ave.

- Short-term: Build gates at new single-track crossing of NCDOT Locomotive & Railcar Maintenance Facility, Phase I.
- Long-term: Full-closure of Summit Ave., given seven tracks (2 existing Norfolk Southern tracks and 1 future track, 4 NCDOT facility tracks) planned for this crossing area.

Mr. Gibbs noted that the City of Charlotte would like to request that the long term recommendation include reevaluating the crossing closure, when/if, the Vehicle Maintenance Facility's full build-out is constructed. Not knowing the schedule for the full build-out of the facility, it is unknown how this area will change from a traffic operations and re-development standpoint. The City believes it will be important to reevaluate the crossing in the future to ensure that the proposed recommendation is the preferred. After some brief discussion, Mr. Sibert offered to amend the map figure and final report to include "Recommendation; further study." CDOT and NCDOT agreed to the addition of this language. Ms. Coleman, CDOT Planning, also noted that this crossing falls within the *I-277 / I-77 Strategic Plan* study area and that bicycle/pedestrian connectivity is preferred at Summit Ave. under both short and long term recommendations.

Ted Boyd, Charlotte City Center Partners, asked for clarification on the definitions of "short-term" and "long-term." Mr. Sibert replied that "short-term" typically means 0-3 years, but in this project, the range is likely 0-5 years. Mr. Sibert also noted that "long-term" is harder to define for this project, given uncertainty about the timing and availability of funding for the complete build out of the maintenance facility.

Berryhill Ave.

- Short-term: Berryhill Rd. crossing continues to operate as an at-grade crossing.
- Long-term: Potential full-closure of Berryhill Rd. depending on the location and type of facility NCDOT will construct for the passenger trains to turn around. Once the location and type is identified, and the location is at Berryhill Rd, the long term recommendation would be to close the at-grade crossing along with further analysis on mitigation efforts to provide access to the properties along Wilkinson Blvd., on the south side.

Mr. Gibbs noted that area residents have requested an east-west pedestrian connection between Parker Dr. and Skyview Rd. Mr. Gibbs noted that this will be further evaluated by CDOT, and requested that STV include dashed-line symbology on the project map figures to reflect this opportunity.

Mr. Sibert then discussed the concept of a train turnaround yard, which may further necessitate the full-closure of the Berryhill Rd. crossing. Mr. Sibert noted that Arramark Uniform Services is the primary user of Berryhill Rd. north of the crossing, and that with any long-term closures, access management will need consideration in order to ensure Aramark's continued access to Wilkinson Blvd.

Mr. Gibbs asked about the location(s) of the planned train turnaround yard. Mr. Sibert noted three locations under consideration by NCDOT:

- A new wye connection near Morris Field Dr/Old Steele Creek Rd
- A "balloon track" area near Berryhill Road at-grade crossing

- A junction near Arrowood Rd.

Donald Ross Rd.

- Short-term: Donald Ross Rd. crossing continues to operate as at-grade crossing.
- Long-term: Full-closure of Donald Ross Rd. crossing, when Clanton Road Extension (City of Charlotte project) is constructed, connecting to Wilkinson Blvd. via grade separation over NS tracks.

After Mr. Sibert presented the recommendations, the stakeholders indicated their approval of these recommendations.

In a general question for all three crossings, Ms. Wallace, CDOT, asked if the report would note existing conditions at each crossing, including pavement marking and traffic control device conditions.

NCDOT noted that signals/markings are maintenance issues, separate from the Traffic Separation Study (TSS) process. Mr. Sibert noted that each crossing did have a detailed written/ photo inventory of existing conditions.

Mr. Sibert concluded the meeting with a discussion of the project schedule and key next steps.

ACTION ITEMS

- NCDOT Rail Division will provide City of Charlotte with samples of resolutions from other NC cities in order for CDOT to present a resolution of intent for City Council approval.
- City of Charlotte will consult City Manager's office for process on how to get City Council approval for this project.
- STV will prepare a draft report and submit to NCDOT Rail Division by August 31. NCDOT Rail Division will review draft report, then send onto stakeholder group for review.
- City of Charlotte will plan to have the West Charlotte TSS on the October 8, 2012 City Council agenda for approval. STV is willing to meet with City Council for an information workshop sometime before October 8, if CDOT/City Council desires this.
- STV will update map legends to include and concepts pedestrian connections (Parker Dr. to Skyview Rd.) and removal of crossings.

The meeting ended at approximately 11:00 AM. These minutes serve as a formal record of the meeting.

Sincerely,

STV/RALPH WHITEHEAD ASSOCIATES, INC.

(submitted via e-mail)
Scot Sibert

cc: All in attendance

Appendix C
NEWSLETTER



LEGEND

- ◆ Proposed Grade-Separated Crossing
- ◆ Existing Railroad-Roadway At-Grade Crossing
- ◆ Existing Grade-Separated Crossing
- Proposed Clanton Road Extension Study Area
- Proposed MLK Extension Study Area
- Proposed CRISP Study Area

February 2012 1 inch equals 500 feet

Donald Ross At-Grade Crossing 716 178E

Looking North on Donald Ross Road



Looking East along NS Tracks



2011

Donald Ross Rd	Northbound	Southbound	Total
ADT (vpd)	2,441	3,238	5,679
TTST (%)	1.4%	1.3%	1.3%
Duals (%)	16%	19%	17.7%

Average number of Trains per Day: 36
 Number of Train/Vehicle Crashes over past 5 Years: 3
 Average Train Speed at Crossing: 25 - 45 mph

CONTACT INFORMATION

If you have additional questions or would like to be included on the study mailing list, please contact Nancy Horne or Scot Sibert as per the information below.

Nancy Horne, PE
 Project Engineer
 NCDOT Rail Division Engineering & Safety Branch
 1556 Mail Service Center
 Raleigh, NC 27699-1556
 Phone: (919) 715-3686
 E-MAIL: nhorne@ncdot.gov

Scot Sibert, AICP
 STV/Ralph Whitehead Associates
 1000 W. Morehead Street
 Suite 200
 Charlotte, NC 28208
 Phone: (704) 372-1885

PROJECT BACKGROUND

The North Carolina Department of Transportation (NCDOT) Rail Division, in cooperation with the City of Charlotte and Norfolk Southern Railroad (NS) has retained the firm of STV/Ralph Whitehead Associates, Inc. (Charlotte, North Carolina) to conduct a Corridor Study for the West Charlotte Area Rail Corridor within the Norfolk Southern railroad corridor. The corridor includes the area from Donald Ross Road eastward to Martin Luther King Boulevard Extension. The study will evaluate three (3) existing at-grade roadway-railroad crossings, Summit Avenue, Berryhill Road and Donald Ross Road; and two (2) proposed grade separations, Clanton Road Extension and Martin Luther King Boulevard Extension.

WEST CHARLOTTE CORRIDOR STUDY



WHAT IS A CORRIDOR STUDY?

A Corridor Study is a smaller version of NCDOT Rail Division's Traffic Separation Study (TSS), a comprehensive evaluation of traffic patterns at existing roadway-railroad at-grade crossings; that assesses existing safety conditions and determines the need for improvements. To improve railroad crossing safety across the state, the NCDOT Rail Division and NS works with communities to study how to best separate railroad and highway traffic.

Using comprehensive evaluations of rail and roadway traffic patterns for the entire municipality or region, the NCDOT and NS along with the communities involved determine the need for improvements and/or elimination of public at-grade crossings to improve the safety of motorists, rail passengers and train crews. These improvements may include crossing closures and consolidations, adding or upgrading warning devices, roadway improvements, elimination of sight obstructions and grade separations (bridges over or under the track).

CORRIDOR STUDY PROCESS

The evaluation involves utilizing quantitative and qualitative measures to analyze each existing roadway-highway at-grade crossing. The process involves qualitative community outreach in order to

understand the community sense of "what could be done" as well as utilizing a quantitative process through planning and engineering methods. Community outreach includes working with local stakeholders in identifying existing travel patterns, land use development patterns, and planned infrastructure projects; as well as hearing from the local community with regard to their perspective on issues and needs surrounding the roadway-railroad at-grade crossings.

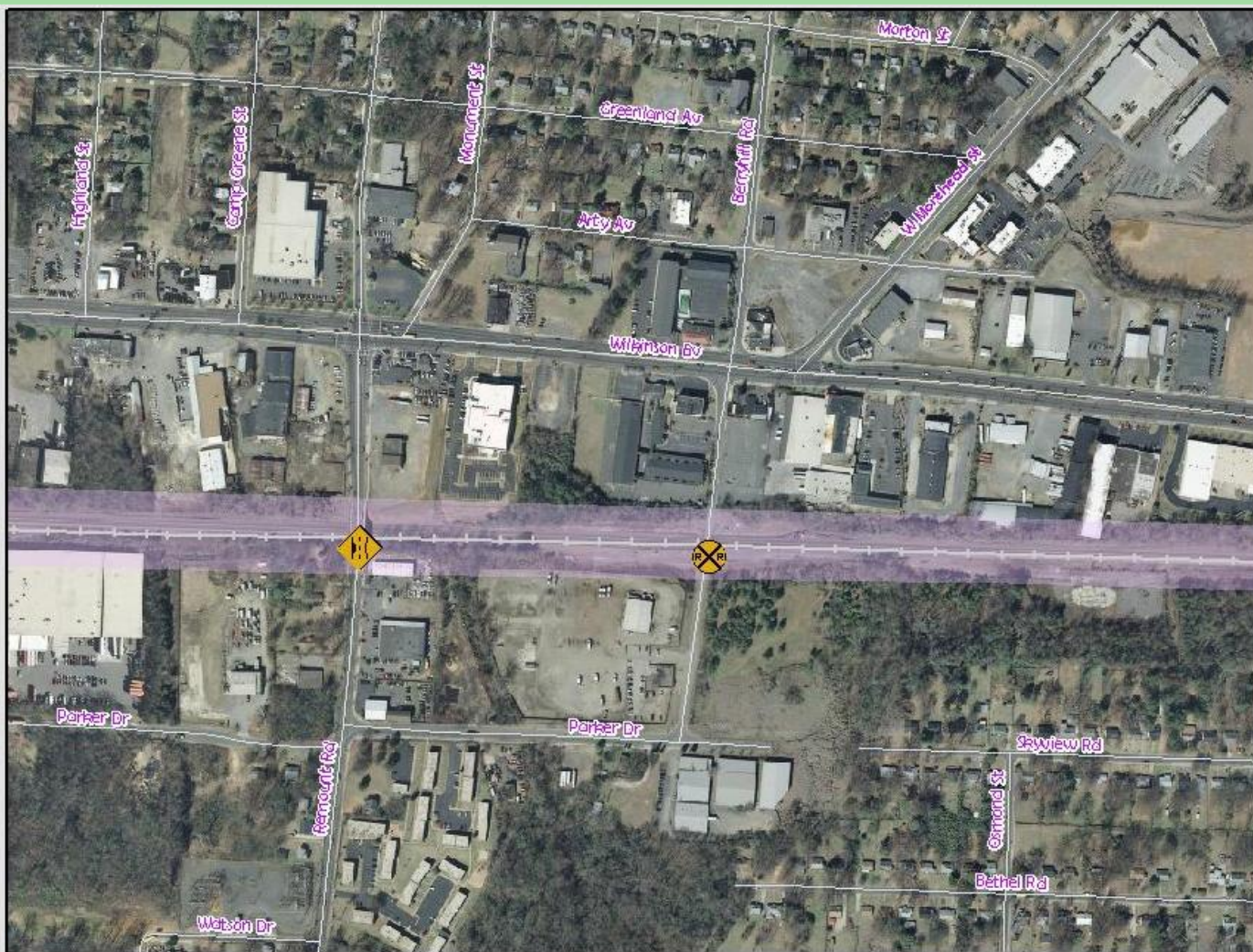
The quantitative process includes collecting traffic volumes and understanding the local traffic patterns, train traffic, existing conditions of the at-grade crossings, surrounding property uses, emergency routes, school bus routes, and planned roadway improvements. Through the evaluation, a cost-benefit analysis is conducted along with identifying near-term, mid-term, and long-term improvements.

Since 1995, the NCDOT has completed Traffic Separation Studies (TSS) and/or Corridor Studies in 17 communities. STV/Ralph Whitehead Associates is currently evaluating the existing at-grade crossing conditions at Summit Avenue, Berryhill Road and Donald Ross Road, collecting average daily traffic data (both trains and vehicles) and socioeconomic

impacts for the three at-grade crossings, and gathering information of any future plans for the two proposed grade separations/road extensions, and other railroad improvements and public transportation improvements. Those improvements relate to the NCDOT Rail Division's initiative for the Charlotte Railroad Improvement and Safety Program (CRISP) and Charlotte Area Transit System (CATS) Gateway Transit Center.

PUBLIC OUTREACH

As an integral part of this study, we are soliciting input from public officials and local citizens concerning the existing conditions along the three at-grade crossings being evaluated, travel patterns, and potential ideas for improvements. You are invited to view the project displays, ask questions, share your opinions on the study, or offer information that may help us assess any impacts this project may have on the social, economic, cultural, physical or biological conditions in the area. Representatives from Charlotte, NCDOT and STV/Ralph Whitehead Associates will be available to discuss the project with you. Additional Public Workshops will be held once preliminary recommendations for improvements have been determined.



LEGEND

- Proposed Grade-Separated Crossing
- Existing Railroad-Roadway At-Grade Crossing
- Existing Grade-Separated Crossing
- Proposed Clanton Road Extension Study Area
- Proposed MLK Extension Study Area
- Proposed CRISP Study Area

February 2012 1 inch equals 500 feet

Berryhill At-Grade Crossing 716 176R

Looking North on Berryhill Road



Looking West along NS Tracks



2011

Berryhill Rd	Northbound	Southbound	Total
ADT (vpd)	113	53	166
TTST (%)	16.9%	9.5%	14.5%
Duals (%)	35.4%	41.5%	37.3%

Average number of Trains per Day: 36
 Number of Train/Vehicle Crashes over past 5 Years: 5
 Average Train Speed at Crossing: 25 - 45 mph



LEGEND

- Proposed Grade-Separated Crossing
- Existing Railroad-Roadway At-Grade Crossing
- Existing Grade-Separated Crossing
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Looking East along NS Tracks



2011

Donald Ross Rd	Northbound	Southbound	Total
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TTST (%)	1.4%	1.3%	1.3%
Duals (%)	16%	19%	17.7%

Average number of Trains per Day: 36
 Number of Train/Vehicle Crashes over past 5 Years: 3
 Average Train Speed at Crossing: 25 - 45 mph

Appendix D

**PUBLIC MEETING COMMENTS
& SIGN-IN SHEETS**

COMMENT SHEET
CORRIDOR STUDY/ RAILROAD CROSSING ANALYSIS
WEST CHARLOTTE
TIP PROJECT P-3309K



June 7, 2012

(Please Print)

NAME: CAROL HOLSEY
MAILING ADDRESS: 1144 SKYVIEW RD
CITY: CHARLOTTE STATE: NC ZIP CODE: 282086544

Please take the time to fill out this comment sheet and insert it in the box labeled "COMMENTS" near the sign in table. If you do not have a chance to fill it out tonight, please mail in your comments by July 7, 2012

AS A HOME OWNER AND TAX PAYER I AM NOT happy with the PLANS FOR the West Charlotte Tip Project P-3309K. The west side of the city seems to be a dumping ground for the state and city for this and other projects. I am very concerned about the adverse effects this project will have on ~~my~~ my home and community. My home is very near this rail line. With the addition of another rail line there will be more noise and shaking of our homes, and will effect our quality of life, and may lead to possible structure issues in our homes. There should be some whereⁱⁿ the plans for compensation for those that are adversely affected by this project.

Comments may be mailed to: Ms. Kimberly Hinton,
NCDOT-HUMAN ENVIRONMENT UNIT
1598 MAIL SERVICE CENTER
RALEIGH, NC 27699-1598
PHONE: (919) 707-6072
EMAIL: KHINTON@NCDOT.GOV

COMMENT SHEET
CORRIDOR STUDY/ RAILROAD CROSSING ANALYSIS
WEST CHARLOTTE
TIP PROJECT P-3309K



June 7, 2012

(Please Print)

NAME: FRANK COLEY
MAILING ADDRESS: 1118 BETHEL ROAD
CITY: CHARLOTTE STATE: N.C. ZIP CODE: 28208
704.372.7320

Please take the time to fill out this comment sheet and insert it in the box labeled "COMMENTS" near the sign in table. If you do not have a chance to fill it out tonight, please mail in your comments by July 7, 2012

THE DONALD ROSS CROSSING DISCUSSION WAS
MOSE INFORMATIVE. THE PREPARED, FRANKLY
HONEST, FRIENDLY PRESENTERS. WE ASKED SOME
HARD, DIRECT QUESTIONS AND AM OF THE PERSONAL
BELIEF THAT ALL WERE "BEST" ANSWERED. THANKS.
AN ADMINISTRATIVE QUESTION. READING YOUR
TITLE VI [SIX] INVOLVEMENT FORM, HEARING OUR
PRESENTERS TALK ABOUT DESIRING TO BE AS KIND TO
PERSONS AND ENVIRONMENTS AS POSSIBLE, TOWARDS NCDOT
OBJECTIVES — WHY HAS NOT SOME UPDATED ATTENTIONS
BEEN GIVEN THE RACE/ETHNICITY AND NATIONAL ORIGIN
SECTIONS OF THE FORM? WHY HAVE THOSE SECTIONS NOT
BEEN ALPHABETIZED? BLACK/AFRICAN AMERICAN, I
BELIEVE THE AMERICAN INDIAN OUGHT TO STAND ALONE AS
NATIVE AMERICAN. PERIOD. THEN, ALL OTHERS ALPHABETIZED.

Comments may be mailed to: Ms. KIMBERLY HINTON,
NCDOT-HUMAN ENVIRONMENT UNIT
1598 MAIL SERVICE CENTER
RALEIGH, NC 27699-1598
PHONE: (919) 707-6072
EMAIL: KHINTON@NCDOT.GOV

THANKS FOR YOUR TIME/ATTENTION TO THIS CONCERN. PLEASE
WRITE OR E-MAIL: ifitold@yahoo.com

COMMENT SHEET
CORRIDOR STUDY/RAILROAD CROSSING ANALYSIS
WEST CHARLOTTE
TIP PROJECT P-3309K

June 7, 2012

(Please Print)

NAME: Sandy Miller 704.394.7406

MAILING ADDRESS: _____

CITY: Charlotte STATE: NC ZIP CODE: _____

Please take the time to fill out this comment sheet and insert it in the box labeled "COMMENTS" near the sign in table. If you do not have a chance to fill it out tonight, please mail in your comments by July 7, 2012

IF Donald Zass closes how to get to West Blvd. If Clanton
Rd Extension built would like to see bike lanes and
Side walks

Comments may be mailed to: MS. KIMBERLY HINTON,
NCDOT-HUMAN ENVIRONMENT UNIT
1598 MAIL SERVICE CENTER
RALEIGH, NC 27699-1598
PHONE: (919) 707-6072
EMAIL: KHINTON@NCDOT.GOV

COMMENT SHEET
CORRIDOR STUDY/RAILROAD CROSSING ANALYSIS
WEST CHARLOTTE
TIP PROJECT P-3309K

June 7, 2012

(Please Print)

NAME: Nathan Gray
MAILING ADDRESS: 1557 Wilmore Dr
CITY: Charlotte STATE: NC ZIP CODE: 28203

Please take the time to fill out this comment sheet and insert it in the box labeled "COMMENTS" near the sign in table. If you do not have a chance to fill it out tonight, please mail in your comments by July 7, 2012

As a resident of Wilmore historic neighborhood, I do use Summit Ave as a "short cut" to Wilkinson, 277, 77, and Freedom Dr.

However, I am STRONGLY in favor of closing Summit Ave between Clarkson and Merriman. In the interest of preserving property values in Wilmore by adding a "buffer zone" to separate Wilmore residences from the pipe factory and proposed maintenance facility; and ② eliminating the 40+ per day horn blasts that the crossing requires.

Comments may be mailed to: Ms. KIMBERLY HINTON,
NCDOT-HUMAN ENVIRONMENT UNIT
1598 MAIL SERVICE CENTER
RALEIGH, NC 27699-1598
PHONE: (919) 707-6072
EMAIL: KHINTON@NCDOT.GOV

TIP P-3309K Corridor Study/Railroad Crossing Analysis in West Charlotte



Citizens Informational Workshop SIGN IN SHEET

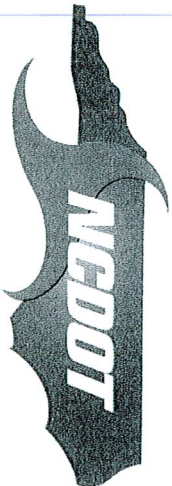
NAME	ADDRESS	PHONE	NCDOT
1 Kanna Rogers	PLW 1144 Skyview Rd	704 342 3084	<input checked="" type="checkbox"/>
2 Carol Holders	1233 Bethel	704 395 4156	
3 Heaters Stewart	201 S. Hoskins Rd	704 930-5571	
4 Colleen Emery	600 S. Tryon	704-358-5641	
5 Terrell Neal	118 Barbera Rd, Charlotte 28208	704-732-7320	
6 Franze Coey	2459 Wilkinson Blvd, Charlotte	(704) 971-6529	
7 Rob Pressley	mailing → 1815 S. Tryon St., Charlotte, NC 28203	" "	
8	7503 Little Fox Ln Charlotte, NC 28227	704.983-0400	<input checked="" type="checkbox"/>
9 Tim Brand	680 E 4th St Charlotte, NC 28202		
10 Cassandra Leona Mays	1557 Wilmore Dr, Charlotte 28203	336-545-7327	
11 Nathan Gray	600 E 4th St, Charlotte 28202	704-578-1395	
12 Tom Sorrentino	1300 South Blvd #C - Charlotte 28203	704-926-6000	
13 Carol Embell	1604 Merriam Ave Charlotte 28203	704 650-2632	
14 Erik Mulzet	Gannett Fleming (Consultant)		
15 Travis Folke			

West Charlotte, Mecklenburg County

PLEASE PRINT

June 7, 2012

TIP P-3309K Corridor Study/Railroad Crossing Analysis in West Charlotte



**Citizens Informational Workshop
SIGN IN SHEET**

NAME	ADDRESS	PHONE	NCDOT <input checked="" type="checkbox"/>
1 JAMES, BRACKETT	3400 MARY EMMA LN. CHARLOTTE NC	704-617-3171	
2 Alpha Arnett	1243 West Blvd, 28208	704-332-2163	
3 Keith Morris	6101 CARNEGIE BLVD 28209	704- 552 52-5800	consultant
4 Tim Gibbs	City of Charlotte		
5 Kimberly Hinton	NCDOT - Public Involvement		✓
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

TITLE VI PUBLIC INVOLVEMENT FORM



Completing this form is **completely** voluntary. You are not required to provide the information requested in order to participate in this meeting.

Meeting Type: Citizens' Informational Workshop	Date: June 7, 2012
Location: Greater Mount Sinai Baptist Church	
TIP No.: P-3309K	
Project Description: West Charlotte Corridor Analysis (Railroad)	

In accordance with Title VI of the Civil Rights Act of 1964 and related authorities, the North Carolina Department of Transportation (NCDOT) assures that no person(s) shall be excluded from participation in, denied the benefits of, or subjected to discrimination under any of the Department's programs, policies, or activities, based on their race, color, national origin, disability, age, income, or gender.

Completing this form helps meet our data collection and public involvement obligations under Title VI and NEPA, and will improve how we serve the public. Please place the completed form in the designated box on the sign-in table, hand it to an NCDOT official or mail it to the NCDOT Office of Civil Rights, Title VI Section at 1511 Mail Service Center, Raleigh, NC 27699-1511.

All forms will remain on file at the NCDOT as part of the public record.

Zip Code: <u>28208</u>	Gender: <input checked="" type="checkbox"/> Male <input type="checkbox"/> Female
Street Name: (i.e. Main Street) <u>WEST BLVD</u>	Age: <input type="checkbox"/> Less than 18 <input type="checkbox"/> 45-64 <input type="checkbox"/> 18-29 <input type="checkbox"/> 65 and older <input type="checkbox"/> 30-44
Total Household Income: <input type="checkbox"/> Less than \$12,000 <input type="checkbox"/> \$47,000 – \$69,999 <input type="checkbox"/> \$12,000 – \$19,999 <input type="checkbox"/> \$70,000 – \$93,999 <input type="checkbox"/> \$20,000 – \$30,999 <input type="checkbox"/> \$94,000 – \$117,999 <input type="checkbox"/> \$31,000 – \$46,999 <input type="checkbox"/> \$118,000 or greater	Have a Disability: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Race/Ethnicity: <input type="checkbox"/> White <input checked="" type="checkbox"/> Black/African American <input type="checkbox"/> Asian <input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Native Hawaiian/Pacific Islander <input type="checkbox"/> Hispanic/Latino <input type="checkbox"/> Other (please specify): _____	National Origin: (if born outside the U.S.) <input type="checkbox"/> Mexican <input type="checkbox"/> Central American: _____ <input type="checkbox"/> South American: _____ <input type="checkbox"/> Puerto Rican <input type="checkbox"/> Chinese <input type="checkbox"/> Vietnamese <input type="checkbox"/> Korean <input type="checkbox"/> Other (please specify): _____

For more information regarding Title VI or this request, please contact the NCDOT Title VI Section at (919) 508-1808 or toll free at 1-800-522-0453, or by email at slipscomb@ncdot.gov.

Thank you for your participation!

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All forms will remain on file at the NCDOT as part of the public record.

Zip Code: <u>28203</u>	Gender: <input checked="" type="checkbox"/> Male <input type="checkbox"/> Female
Street Name: (i.e. Main Street) <u>Wilmore Dr</u>	Age: <input type="checkbox"/> Less than 18 <input type="checkbox"/> 45-64 <input type="checkbox"/> 18-29 <input type="checkbox"/> 65 and older <input checked="" type="checkbox"/> 30-44
Total Household Income: <input type="checkbox"/> Less than \$12,000 <input type="checkbox"/> \$47,000 – \$69,999 <input type="checkbox"/> \$12,000 – \$19,999 <input type="checkbox"/> \$70,000 – \$93,999 <input type="checkbox"/> \$20,000 – \$30,999 <input type="checkbox"/> \$94,000 – \$117,999 <input type="checkbox"/> \$31,000 – \$46,999 <input checked="" type="checkbox"/> \$118,000 or greater	Have a Disability: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Race/Ethnicity: <input checked="" type="checkbox"/> White <input type="checkbox"/> Black/African American <input type="checkbox"/> Asian <input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Native Hawaiian/Pacific Islander <input type="checkbox"/> Hispanic/Latino <input type="checkbox"/> Other (please specify): _____	National Origin: (if born outside the U.S.) <input type="checkbox"/> Mexican <input type="checkbox"/> Central American: _____ <input type="checkbox"/> South American: _____ <input type="checkbox"/> Puerto Rican <input type="checkbox"/> Chinese <input type="checkbox"/> Vietnamese <input type="checkbox"/> Korean <input type="checkbox"/> Other (please specify): _____

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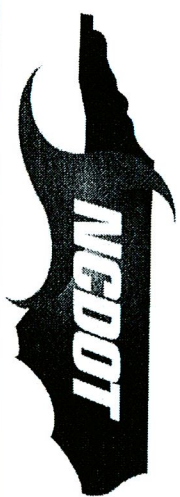
All forms will remain on file at the NCDOT as part of the public record.

Zip Code: <u>28208</u>	Gender: <input type="checkbox"/> Male <input checked="" type="checkbox"/> Female
Street Name: <u>SKYVIEW RD</u> (i.e. Main Street)	Age: <input type="checkbox"/> Less than 18 <input checked="" type="checkbox"/> 45-64 <input type="checkbox"/> 18-29 <input type="checkbox"/> 65 and older <input type="checkbox"/> 30-44
Total Household Income: <input type="checkbox"/> Less than \$12,000 <input type="checkbox"/> \$47,000 – \$69,999 <input type="checkbox"/> \$12,000 – \$19,999 <input type="checkbox"/> \$70,000 – \$93,999 <input type="checkbox"/> \$20,000 – \$30,999 <input type="checkbox"/> \$94,000 – \$117,999 <input type="checkbox"/> \$31,000 – \$46,999 <input type="checkbox"/> \$118,000 or greater	Have a Disability: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Race/Ethnicity: <input type="checkbox"/> White <input checked="" type="checkbox"/> Black/African American <input type="checkbox"/> Asian <input type="checkbox"/> American Indian/Alaskan Native <input type="checkbox"/> Native Hawaiian/Pacific Islander <input type="checkbox"/> Hispanic/Latino <input type="checkbox"/> Other (please specify): _____	National Origin: (if born outside the U.S.) <input type="checkbox"/> Mexican <input type="checkbox"/> Central American: _____ <input type="checkbox"/> South American: _____ <input type="checkbox"/> Puerto Rican <input type="checkbox"/> Chinese <input type="checkbox"/> Vietnamese <input type="checkbox"/> Korean <input type="checkbox"/> Other (please specify): _____

For more information regarding Title VI or this request, please contact the NCDOT Title VI Section at (919) 508-1808 or toll free at 1-800-522-0453, or by email at slipscomb@ncdot.gov.

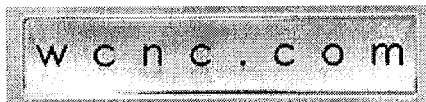
Thank you for your participation!

TIP P-3309K CORRIDOR STUDY/ RAILROAD CROSSING ANALYSIS IN WEST CHARLOTTE

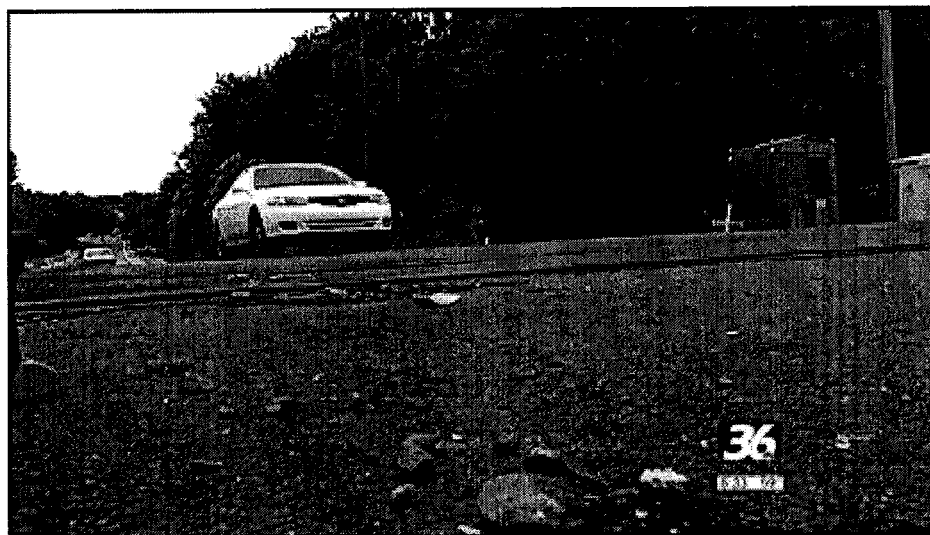


Citizens Informational Workshop SIGN IN SHEET

NAME	ADDRESS	PHONE	NCDOT <input checked="" type="checkbox"/>
1 MAX JUSTICE	401 S. Tryon St. Ste 3000 Charlotte 28202	704-335-8010	
2 BOB CURRIE	1335 S CAROLAN ST CLK 28208	704-378-5703	
3 DAVID COBURN	913 Roman Rd. Charlotte, N.C. 28203	704-589-2716	
4 Keith Morris	6101 Carnegie Blvd, CLT, 28209	704-557-5800	
5 JESSIE HITE	301 S. McDowell St, Charlotte 28208	704-378-2438	
6 JOE CAOIEU	1605 Scott Blvd Charlotte 28203	704-333-5743	
7 Scott Lundgren	310 South Summit Ave Charlotte 28208	704-877-0441	
8 STUART BASHAM	600 E FAUETH ST. CHARLOTTE NC 28207	704-330-4695	
9 James Chester	1900 Remount Road Charlotte NC 28208	704-372-6400	
10 Kathy White	1900 Remount Rd Charlotte NC 28208	704-376-8400	
11 Barbara Tucker	2901 Wilkinson Blvd CLT NC 28208	704-534-4423	
12 J.D. DORR	8632 Wilkinson Blvd Clt NC 28214	704-810-6622	
13 Gary Sullivan	2229 Blakelock Ter W. Coln SC 29169	803-605-7444	
14 Mike Bell	6830 Diverston Dr. Charlotte NC 28226	704-864-7043	
15 Eric Mulzet	1664 Merriman Ave 28203		



NC DOT looks to close 3 railroad crossings due to safety issues



NC DOT looks to close 3 railroad crossings due to safety issues

by NewsChannel 36 Staff

WCNC.com

Posted on June 7, 2012 at 6:13 AM

Updated yesterday at 6:49 AM

CHARLOTTE, N.C. -- The North Carolina Department of Transportation is talking about closing three railroad crossings that a lot of people cross over every day in west Charlotte because of safety issues.

All three are heavily used by both foot and vehicular traffic, but the problem at these locations is that trains have to slow down while traveling through the intersections, and so do tractor trailers and larger trucks.

The DOT says that has led to stalled trucks -- and wrecks. In fact, NewsChannel 36 checked and since 1977 there have been 11 accidents at these locations with three of them being fatal.

The possible changes will be discussed tonight at the greater Mount Sinai Baptist Church on 1243 West Boulevard tonight from 5-7 p.m.

The meeting is open to the public.

Despite the discussion of closing these crossings, DOT officials say it could take some time before anything happens.

Local News Video



Local News

Student says teacher ordered him to crawl under table



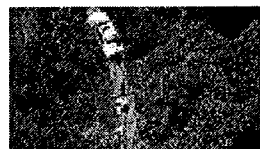
Local News

FBI raids Hells Angels bike club



Local News

'Zombie Apocalypse Survival Class' being offered in Conover



Local News

Body found in rural part of Catawba County



Local News

Recruit Military group holds job fair for veterans and spouses