U.S. Department
of Transportation
**Federal Transit
Administration**

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Kentucky, Mississippi,
North Carolina, Puerto
Rico, South Carolina,
Tennessee, Virgin Islands

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FINDING OF NO SIGNIFICANT IMPACT (FONSI)

City of Winston Salem, NC
Union Station Rehabilitation & Bus Transfer Facility
City of Winston Salem, Forsyth County, N. Carolina

Based on the attached Environmental Assessment and in accordance with 23 CFR 771.119, it is the Federal Transit Administration's finding that there are no significant impacts on the environment associated with the development and operation of this proposed project.

By: _____ **Date: 08/12/2008**
Jamie Pfister, Acting Director
Office of Planning and Program Development (OPPD)

Winston-Salem Union Station Rehabilitation
Forsyth County, North Carolina

Environmental Assessment

North Carolina Department of Transportation,

Rail Division

City of Winston-Salem

June 2008

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1.0 Introduction

The City of Winston-Salem is proposing an inter-modal transportation facility in Winston-Salem, Forsyth County, North Carolina, using a restored former passenger rail station located near downtown (Union Station). The City envisions Union Station initially serving as a regional and local bus terminal and later expanding to include regional and long distance passenger rail service.

Winston-Salem's Union Station was constructed in 1926 to serve passengers on the Southern, Norfolk & Western, and Winston-Salem Southbound Railroads. At its peak in 1947, 18 daily trains traveled in and out of Union Station, bringing more than 500 passengers a day to and from Greensboro, Charlotte, Asheville, and other destinations in and beyond North Carolina.

In 1970 Union Station was closed during a period when long-distance passenger rail transportation had declined substantially. The station was later sold to Mr. Harvey Davis, who converted the building into an automobile repair facility in 1975. Mr. Davis has kept intact many of the original features of the building.

A feasibility study for restoration work was completed by the NCDOT Rail Division in February, 2002. That study examined the possibility and cost of rehabilitating the station. Subsequently, the City developed more detailed design plans and updated the cost estimate. This document evaluates the environmental impacts of the proposed action.

1.1 Summary of the Proposed Action

Union Station is located at 300 S. Martin Luther King Jr. Drive. This 1.63 acre site is located at the corner of S. Martin Luther King Jr. Drive and Excelsior Street and is southeast of Winston-Salem's central business district (Figures 1-1 and 1-2). It is close to several local attractions, including Winston-Salem State University (WSSU), the Piedmont Triad Research Park, Salem Academy and College, the Old Salem Historic District, the East Winston residential neighborhood, and the proposed East Winston Historic District. The proposed project includes a 0.21 acre median island, which Mr. Davis owns as part of the Union Station site. The proposed project also includes Mr.

Davis' adjoining parcel west of the station, which is 0.35 acres. Between the Union Station parcel and Mr. Davis' adjoining parcel, there is an existing 0.17 acre public right of way which has been used for many years as internal access to the Union Station property. This right of way would become part of the Union Station project. Including this right of way, total acreage for the proposed project is 2.36 acres (Figure 1-3).

Under the proposed rehabilitation plan, the station would function as a multi-modal transportation center. The station would have space devoted to transit-related uses and would also contain some offices and/or retail space, with the retail space intended primarily to serve users of the transit station. The City, PART, and NCDOT are among the proposed office tenants. Parking facilities would be provided on the Union Station property for park and ride users, and a bus loop would be provided in front of the station for buses to drop off and pick up passengers. The intersection of S. Martin Luther King Jr. Drive, Excelsior Street, and the eastbound US 421/I-40 Business ramps would be converted to a roundabout (see Figure 2-1).

The renovation of Union Station would restore each of the three floors. The top floor would be reserved for transit uses, while the middle and bottom floors would be used for retail, office space, or related uses. A reconstructed pedestrian bridge would extend from the top floor with an elevator and stairs leading down to the train platform and tracks. This bridge would resemble the original bridge, which was demolished by the railroad company in 1975. An additional pedestrian bridge over the railroad tracks (not included in this proposed project) may eventually be constructed to connect to the campus of Winston-Salem State University. Specific plans and funding for this additional bridge have not been completed or identified, and the bridge has been expressly excluded from consideration in this document.

The project would be financed by the City of Winston-Salem, the Federal Transit Administration (FTA), the Piedmont Authority for Regional Transportation (PART), the North Carolina Department of Transportation (NCDOT) Rail Division, the NCDOT Public Transportation Division, and possibly other sources.

1.2 Project Purpose

The primary purpose of this project is to provide a transportation facility in East Winston using a rehabilitated Union Station. The following items are components of the project purpose:

- Provide a setting for future regional, intra- and interstate, and high-speed passenger rail service,
- Provide a bus transit hub to serve Winston-Salem State University (WSSU) and the East Winston neighborhood, and
- Restore the historic Union Station building (National Register of Historic Places listing, December 24, 1998).

The initial transit service would be local and regional bus service provided by PART and the Winston-Salem Transit Authority (WSTA). In the future, train service provided by PART and/or Amtrak and NCDOT could be added, which would serve the Piedmont Triad area and other destinations in North Carolina. Eventually, trains running along Southeast High Speed Rail corridor would have the opportunity to utilize the restored Winston-Salem Union Station. Greyhound bus service would continue from its existing location at the main transportation center at 100 West Fifth Street.

Union Station primarily would serve transit users that have origins and destinations in East Winston and at Winston-Salem State University and would enhance access to both destinations. It would also serve as a transfer point for bus passengers switching from north/south bus routes to east/west routes.

Union Station would be rehabilitated and have its historical details restored. The project would also open this unique and historic passenger rail station to the public for the first time in over thirty-five years. The potential ancillary development associated with the transit center could bring employment, shops, and other amenities to the surrounding neighborhood.

1.3 Project Need

There is currently little regional transit service serving East Winston and Winston-Salem State University. Residential neighborhoods surrounding the site have a relatively high proportion of low-income people (43 percent). In general, low-income people are

primary users of local transit systems ("Socioeconomics of Urban Travel: Evidence from the 2001 NHTS," Pucher and Renne, *Transportation Quarterly*, 2003). Providing a transit hub with bus service increases transportation accessibility for neighborhood residents, providing greater access to jobs, education, and cultural events. Increasing transit service to Winston-Salem State University increases transportation options for students, faculty, staff, and visitors and can decrease congestion and emissions caused by single-occupant vehicles. It also relieves demand on some of WSSU's already-strained parking facilities.

Additionally, as PART plans a potential commuter rail network in the Triad and as Amtrak potentially plans passenger train service to Winston-Salem, a passenger station is needed in proximity to Winston-Salem's central business district. Historic Union Station is close to downtown Winston-Salem, Piedmont Triad Research Park, and Winston-Salem State University, and it is one of the few locations along the railroad corridor with adequate space to provide the necessary facilities associated with passenger trains.

The historical value of a re-opened Union Station would enhance the surrounding East Winston neighborhood and Winston-Salem State University campus. Along with the other associated development, the station could become a focal point in the community by encouraging additional investments that provide shops, restaurants, and/or other amenities that historically have been absent from East Winston. The station would also improve the linkage of Winston-Salem State University to the neighborhood and would allow more interaction between neighborhood residents and university students.

1.4 History of Union Station

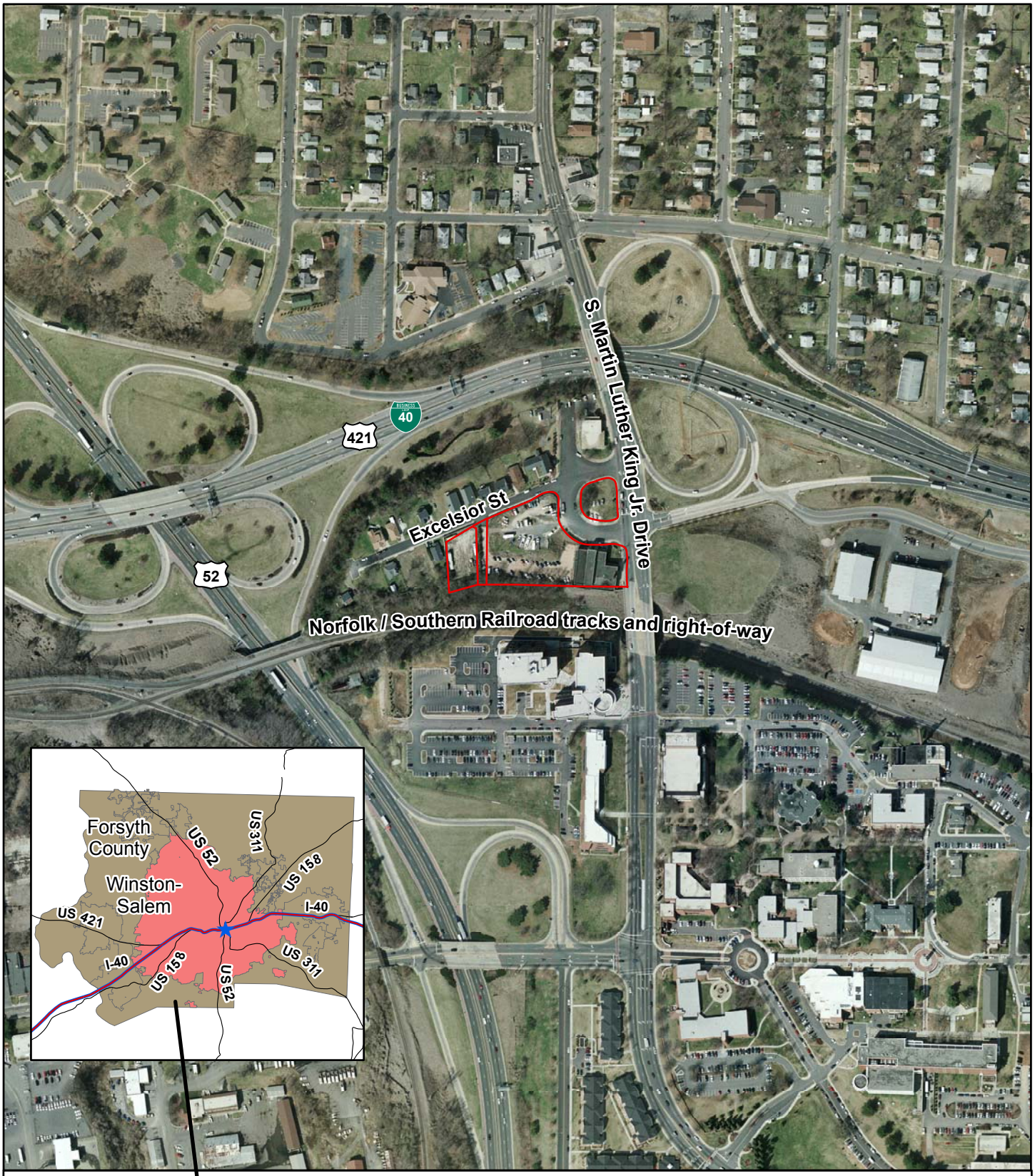
The history of the Union Station site is summarized in the *Existing Condition Survey* (David E. Gall, Architect, P.A., 2007) (appended by reference) and is discussed below.

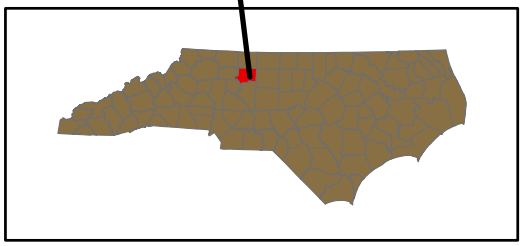
Winston-Salem's Union Station was constructed between 1924 and 1926 and was designed by the New York architectural firm of Fellheimer and Wagner. Constructed in a Beaux-Arts style, it replaced an earlier (1908) station that was located on Chestnut Street between Fourth and Third Streets in downtown Winston-Salem. Union Station was constructed by a corporation called the Winston-Salem Terminal Company. The

Winston-Salem Terminal Company was formed by the three railroad companies serving Winston-Salem in the early 1920's: the Southern Railroad, the Norfolk and Western Railroad, and the Winston-Salem Southbound Railroad. The general contractor was the Northwestern Construction Company, and the construction cost was $800,000.

Like other stations of its time, Union Station was constructed with separate public facilities for white and African American people. The white waiting room was located on the west side of the upper level and was accessed from the central lobby off of the circular entrance drive. The African American waiting room was located on the east side and was accessed from Wheeler Street, now S. Martin Luther King Jr. Drive. Common facilities such as the ticket office, lunch counter, and newsstand were located between the two waiting rooms. A concourse at the south side of the building connected the waiting rooms and provided a route for all passengers to reach the bridge concourse leading to stairs descending to the rail platforms two stories below.

Union Station served passengers from 1926 to 1970. From 1970 through 1975 the station was unoccupied. In 1975 the three railroads each sold their one-third interest in the station to Harvey and Bonnie Davis. Prior to the sale, the Southern Railway demolished the bridge concourse, removed the rail platforms, and removed many of the station's original light fixtures. During the period of disuse from 1970 to 1975 it appears that most of the interior door hardware sets were stolen by vandals. Since 1975, Harvey Davis has used the station as a location for his automobile repair business. Despite its current use, Mr. Davis has kept the building remarkably intact and many of the station's original fixtures and signs remain either in their original locations or have been stored on the lower levels of the building.





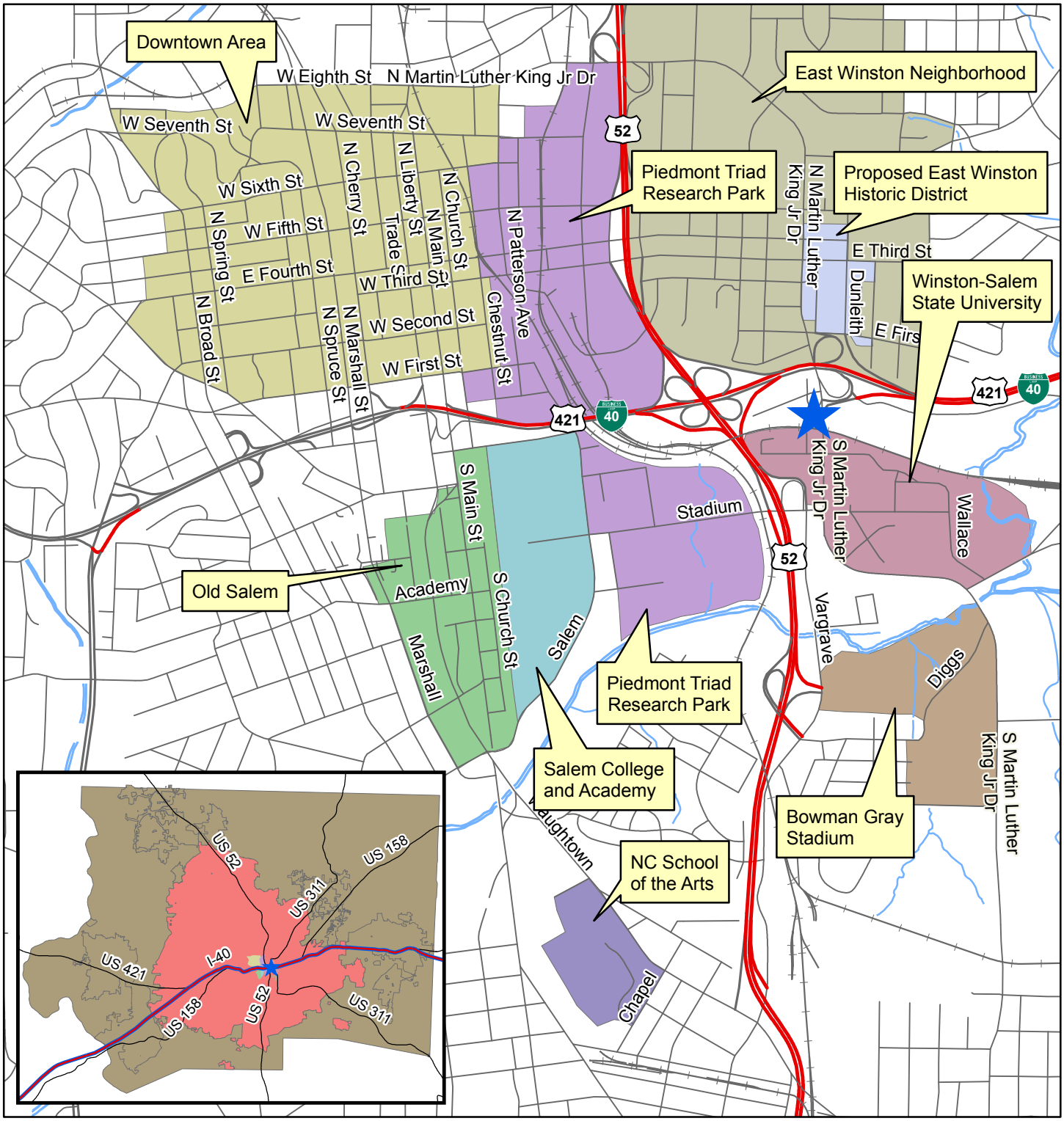
N

0 400 800 Feet

Figure 1-1
Site Location

Union Station
Winston-Salem, NC

Source: Forsyth County, NC Geo-Data Explorer, 2007.



N

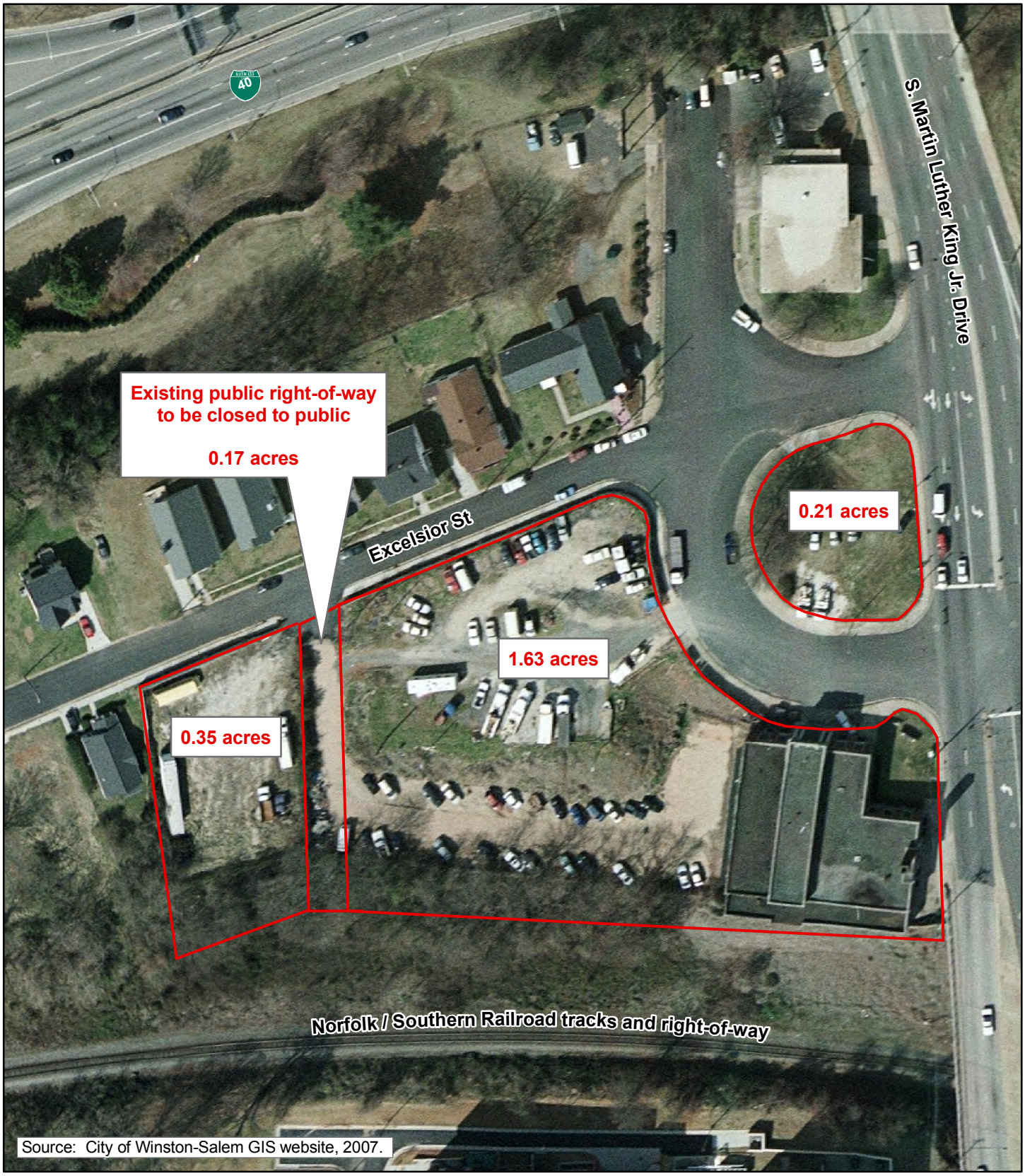
0 0.25 0.5 Miles

Legend

- Union Station Site
- Downtown Area
- Bowman Gray Stadium
- Proposed East Winston Historic District
- NC School of the Arts
- Old Salem
- Salem College and Academy
- Winston-Salem State Univ.
- Piedmont Triad Research Park
- Interstate
- Limited Access Highway
- Collector Street
- Local Road

Figure 1-2
Union Station Site and Nearby Destinations

Union Station
Winston-Salem, NC



N

Feet

0 100 200

Figure 1-3
Existing Union Station Site

Union Station
Winston-Salem, NC

2.0 Description of the Proposed Action

2.1 Proposed Improvements

The proposed project would rehabilitate the Union Station structure and convert its use from an automobile repair facility to its original purpose and use as a transit terminal. A bus loop and parking lot would be constructed on the site, and the intersection with S. Martin Luther King Jr. Drive, Excelsior Street, and the US 421/I-40 Business ramps would be converted from a signalized intersection to a roundabout. A bridge and train platform would be constructed on the south side of the station, to accommodate potential PART and Amtrak rail service (Figure 2-1).

2.2 Union Station Building Improvements

The following improvements to the station structure were recommended in the *Existing Condition Survey*:

- Conduct a comprehensive roof replacement regimen including new roofing, insulation, flashing, roof drains and rain water conductors, and reconstruction of all existing parapet walls. The regimen should also include removal and replacement of the existing chimney that is unstable and in danger of collapse. Further, the existing architraves at the east and north entrances should be disassembled and reconstructed.
- Repaint and clean all existing exterior masonry.
- Make repairs to all deteriorated concrete surfaces.
- Conduct full height intrusive investigation of the deteriorated portion of the south wall between the southeast corner and the first bay of windows and make repairs to deteriorated materials.
- If the project budget would permit, excavate the full length of the north and east walls and install new below grade waterproofing and footing drains.
- Obtain a paint conservator's report on original paint colors and repaint all existing painted surfaces using original color scheme.
- Remove all hazardous materials including concealed 8,000 gallon fuel tank at the lower level.
- Make repairs to interior finishes damaged by moisture intrusion.
- Install new steel column at lower level where existing column was removed and

patch/repair cracks in concrete decks caused by column removal. Make other repairs to structural members.

- Rehabilitate all original doors and windows. Reconstruct original vestibules at the upper level east and north entrances.
- Rehabilitate and reinstall original historic items such as millwork and fixtures currently stored at the middle and lower levels.
- Make modifications needed for accessibility by the disabled.
- Make any changes needed to bring the structure into compliance with the NC Building Code.

All work tasks should be conducted in accordance with *The Secretary of the Interior's Standards for Rehabilitation* (State Historic Preservation Office letter from Peter Sandbeck, June 19, 2008; see Appendix A). See Appendix B for preliminary conceptual design drawings.

2.3 Transportation and Site Improvements

2.3.1 Street and Intersection Improvements

The signalized intersection at S. Martin Luther King Jr. Drive, Excelsior Street, and the US 421/I-40 Business ramps would be replaced with a roundabout (*Union Station Intersection and Roundabout Analysis Memorandum*, Kimley-Horn and Associates, Inc., October, 2006) (appended by reference). The roundabout would contain two lanes for through movements on S. Martin Luther King Jr. Drive and a single lane for all other movements.

The intersection was analyzed under both signalized intersection and roundabout conditions with 2015 traffic volumes. The roundabout analysis was performed using SIDRA, while the traffic signal analysis used Synchro. The output of each analysis is included in the original memo as well as in Appendix C. The results of the PM peak hour analysis are summarized below in Table 2-1.

Table 2-1: Traffic Capacity Analysis		
	Delay (seconds/vehicle)	**Level of Service**
Traffic Signal	14.2	B
Roundabout	7.7	A

The analysis indicates that while a traffic signal would operate at an acceptable level of service during the PM peak hour in 2015, a roundabout would operate at a better level of service with less overall delay. NCDOT and the City of Winston-Salem have concurred with these conclusions. In addition, the roundabout would provide safer and more efficient traffic flow on-site and for site ingress and egress.

2.3.2 Bus Transit

A bus loop would be provided in front of Union Station. This loop would begin and end on Excelsior Street and would run one-way eastbound. The loop could accommodate up to four buses and would be wide enough to allow a bus at the rear of the queue to pass buses further ahead. Buses would be required to turn right onto Excelsior Street and then enter the roundabout to proceed to other destinations. The loop would be located adjacent to the front entrance to Union Station, allowing passengers to wait inside the building and meet buses with little walking required.

2.3.3 Parking

A surface parking area would be provided west of the station structure. This area would accommodate 124 vehicles, which is an increase over existing on-street capacity of the Union Station site of approximately 15 spaces. Bus passengers who wish to park and ride, patrons of businesses within the station, and employees of the businesses and transportation agencies would utilize this parking area.

The proposed project would not decrease parking capacity in the area.

2.4 Estimated Costs

Estimated costs for this project include the following:

- site acquisition;
- building rehabilitation costs;
- costs associated with roadway and sidewalk improvements, as well as with utilities improvements; and
- platform and bridge costs.

A summary of the cost estimates for these items are listed in Table 2-2, with more detailed cost estimates contained in Appendix D. Cost estimates for environmental remediation will be added to this document when they become available. These estimates are calculated based on the conceptual design phase of the project. Although final costs will likely differ from these estimates because of more detailed designs and because of changing construction costs, the estimates below provide a general idea of the cost of the project.

Table 2-2: Estimate of Probable Cost based on Schematic Design[1]	
Building Renovation Costs	$10,050,000
Site Costs (Roadways, Sidewalks, and Utilities)[2]	2,050,000
Structural Costs (Platform and Bridge)[3]	590,000
Total	**$12,690,000**

[1] Building renovation, site, and structural costs are as of 2007. These costs contain contingency fees of 20%.

[2] Site Costs do not include costs for permits, construction observation, or survey. Additional field survey of existing utilities is required.

[3] Structural Costs include an additional 15% for general construction costs.

Additionally, the cost estimates above do not include the cost of further efforts to investigate, characterize, remove, or treat contaminated soil or groundwater at the site. These costs will be developed separately based on subsequent soil and groundwater testing and other investigations undertaken in consultation with the Client and appropriate state agencies.

NOTES:

1. SURVEY INFORMATION PROVIDED BY THE CLIENT.
2. SITE AND TOPOGRAPHIC INFORMATION SUPPLEMENTED FROM CITY OF WINSTON-SALEM GIS.
3. LANDSCAPE PLANTERS IN FRONT OF BUILDING SHALL CONTAIN LOW LEVEL PLANTINGS IN ORDER NOT TO BLOCK VIEW OF BUILDING.

I-40 BUSINESS

MARTIN LUTHER KING JR. DR.

CONNECT TO EXISTING SIDEWALK

30" CURB AND GUTTER

YIELD

ONE WAY

TO DOWNTOWN

LANE LEFT

LOWERY STREET

EXCELSIOR STREET

VALLEY GUTTER

1 BUS SPACE

12' WALK

PLAZA

LANDSCAPE AREA

LANDSCAPING PLANTERS

RETAINING WALL

124 CAR SPACES

EXISTING UNION STATION BUILDING

PARKING SUMMARY:

REGULAR PARKING SPACES PROVIDED: 118

HANDICAP SPACES PROVIDED: 6

BUS PARKING: 4

PRELIMINARY
NOT FOR CONSTRUCTION

NOT TO SCALE

℄ TRACK (FREIGHT)

℄ TRACK (SHARED)

℄ PLATFORM

℄ TRACK (REGIONAL)

FUTURE NS TRACK

FUTURE SHARED NS/PART/NCDOT TRACK

EXISTING NS MAIN/FUTURE PART TRACK

14' MIN.

PLATFORM (EDGE OF STRUCTURE)

PLATFORM CANOPY

400' ISLAND PLATFORM (NCDOT/PART)

STAIRWAY

PEDESTRIAN BRIDGE

ELEVATOR

PLATFORM CANOPY

30'

PLATFORM (EDGE OF STRUCTURE)

N

Figure 2-1

Preliminary Site Plan

Union Station
Winston-Salem, NC

3.0 Alternatives to the Proposed Action

3.1 Preferred Alternative

The preferred alternative is to restore the station structure to serve bus transit passengers initially and later serve rail passengers. The top level of the station would be dedicated to transit uses, and the middle and lower levels dedicated to offices and transit related retail. A bus loop and parking area would be constructed on the remainder of the property, and a roundabout would be constructed at the Excelsior Street and S. Martin Luther King Jr. Drive intersection. All of the work would be constructed in accordance with the *Secretary of the Interior's Standards for Rehabilitation* and the *N.C. Building Code* including Volume IX.

This alternative would improve access to transit for East Winston residents and for students, faculty, staff, and visitors of WSSU. Increased transit service would provide potential economic and quality of life benefits by increasing the quantity and quality of available job sites, and it could help to relieve some of WSSU's existing on-campus parking demand. It could also have environmental benefits by reducing the number of single-passenger vehicle trips.

Additionally, the potential provision of regional, interstate, and high-speed rail service benefits all residents of Winston-Salem and surrounding communities by increasing non-automotive access to other areas of North Carolina and the country.

Restoration of the historic station could induce additional business and economic investments in the community by providing space for offices and possibly some retail. Its architectural features and its use as a transit facility could make it a focal point of the neighborhood, and the architectural features would add to the visual attractiveness of the City as a whole.

Impacts of this preferred alternative are discussed in detail in Chapter 4.

3.2 Build Alternative on Alternate Site

An additional Build Alternative would be to select another site and build a completely new facility. Other sites that would serve the purpose of this project should have at a minimum the following characteristics:

- Proximity to railroad tracks planned for use by PART and NCDOT Rail Division
- Proximity to Winston-Salem State University, downtown Winston-Salem, and to Piedmont Triad Research Park
- Proximity to the East Winston neighborhood or another neighborhood whose residents are likely to utilize public transportation
- Have few or no wetland or stream impacts
- Excellent street access to and across US 421/I-40 Business or US 52.
- Rehabilitate and restore an historic train station

No other sites are available that meet these criteria.

3.3 No Build Alternative

Under the No Build Alternative, the status quo would be maintained. The City of Winston-Salem would not acquire the property nor place a future rail stop, bus stop, or bus transfer station at the Union Station location. This Alternative would avoid the limited environmental impacts from the recommended alternative. However, it also would not provide the benefits of rehabilitating an historic structure, including potential investments in the neighborhood. It would not provide a place for regional, interstate, or high-speed rail in Winston-Salem, and it would not provide increased local or regional bus service to residents of the neighborhood.

As the impacts of this alternative do not change, they are not discussed in Chapter 4.

4.0 Affected Environment and Anticipated Environmental Impacts

The study area is the Union Station site as well as the immediate surrounding area. The impacts outlined below are the anticipated results of the Preferred Alternative. Impacts for the No Build Alternative were discussed in Section 3.3. Figures 1-1, 1-2, and 1-3 show the site location, while Figure 2-1 shows the proposed site plan.

4.1 Human Environment

4.1.1 Demographic and Socio-Economic Conditions

The city of Winston-Salem and the Piedmont Triad region of North Carolina have grown in population between 1990 and 2000. According to the US Census Bureau, Winston-Salem's population increased approximately 30 percent from 143,485 to 185,776 people. Approximately 19 percent of the population increase is a result of three annexations during the decade, while the remaining 11 percent is due to area growth. During this same period, population in the Triad Area (Winston-Salem, Greensboro, and High Point) increased 19 percent from 1,050,304 to 1,251,509.

According to the 2000 Census, 98 percent of the population within the census block group where Union Station is located are minority residents (Table 4-1; Figure 4-1). People included in the "Minority" category are ones who did not check "White" on the 2000 Census form. In North Carolina, 28 percent of all residents are minority, whereas in Forsyth County, 31 percent of residents are minority and in Winston-Salem, 44 percent of all residents are minority. The area surrounding Union Station contains a much larger portion of minority residents than the state, county, or city.

According to the 2000 Census, four percent of the residents within the census block group where Union Station is located have Hispanic or Latino origins (Table 1-1; Figure 4-2). People included in the "Hispanic/Latino" category are ones who checked "Yes" on the "Spanish/Hispanic/Latino" question on the 2000 Census form. The percentage of residents with Hispanic or Latino origins in North Carolina, Forsyth County, and Winston-Salem are five percent, six percent, and nine percent respectively. Therefore the population of the Union Station area has less than the average number of Hispanic or Latino persons than the state, county, and city.

Table 4-1: Population Diversity, 2000 Census				
Group	Percentage of Total Population			
	North Carolina	Forsyth County	City of Winston-Salem	Union Station Census Block Group
Approximate Percentage of Minority Residents [a]	28%	31%	44%	98%
Percent Hispanic/Latino	5%	6%	9%	4%

Source: US Census Bureau, 2000

[a] Minority = non "White"

Within the same census block group as Union Station, 43 percent of residents have household incomes below the poverty line (Table 4-2). In North Carolina, Forsyth County, and Winston-Salem, the percentage of residents below the poverty line are 9 percent, 8 percent, and 11 percent respectively. Therefore, the area surrounding Union Station has a substantially higher proportion of residents living below the poverty line than the larger political jurisdictions.

Table 4-2: Poverty Levels, 2000 Census				
Income Level (1999)	North Carolina	Forsyth County	City of Winston-Salem	Union Station Census Block Group
Below Poverty	9%	8%	11%	43%

Source: US Census Bureau, 2000

4.1.2 Environmental Justice

Executive Order 12898 requires federal agencies to identify and address disproportionately high and adverse effects of federally funded projects on minority and low-income populations as part of the environmental justice (EJ) analysis. For minority populations, potential EJ concerns exist if the percent minority for the Census block groups is at least 20 percent greater than (1.2 times) the percent minority at the county level. For low-income populations, a potential EJ concern would exist if the percent below the poverty level for the Census block groups were at least 20 percent greater than (1.2 times) the percentage at the county level. Table 4-3 shows that the Union Station site is subject to EJ analysis for both minority and low-income populations.

Table 4-3: Environmental Justice Threshold			
Group	Percentage of Total Population		
	Forsyth County	Environmental Justice Threshold	Union Station Census Block Group
Approximate Percentage of Minority Residents [a]	31%	37%	98%
Percent below Poverty Level	8%	10%	43%

Source: US Census Bureau, 2000

[a] Minority = non "White"

The Preferred Alternative increases access to local, and eventually, regional transportation. Increasing transportation options would increase access to workplaces, educational institutions, and training, as well as to cultural events. Rehabilitating Union Station also would spur neighborhood investments. **Thus, the consequences of the Preferred Alternative on the East Winston neighborhood would positively affect the residents of the surrounding neighborhoods. No Environmental Justice issues are therefore a concern.**

4.1.3 Simon Green Atkins Community Development Corporation

Winston-Salem State University supports the Simon Green Atkins Community Development Corporation (Atkins CDC). The Atkins CDC's mission is to "foster economic and business development initiatives servicing the needs of low and moderate income and otherwise disadvantaged people, particularly in the neighborhoods surrounding WSSU" (www.lisc.org/winston-salem/partners/partners_2180.shtml). The CDC's vision is to "develop and improve affordable housing and to foster infrastructure development within distressed and disadvantaged neighborhoods, and… to promote the preservation of buildings and sites important to the history of the African-American community" (www.lisc.org/winston-salem/partners/partners_2180.shtml). The Atkins CDC's target area is the Martin Luther King Jr. Drive corridor. The director of the Atkins CDC attended the second of the Winston-Salem stakeholder meetings.

Consistency with the CDC's Goals

The Preferred Alternative is consistent with the economic revitalization goals of the Atkins CDC. The proposed project could induce economic investment in the neighborhood via offices, retail, and restaurants. **The increased access to jobs aids the economic viability of the residents, and the restoration of the station**

preserves a site that is important to the history of the African American community in Winston-Salem and across the South.

4.1.4 Relocations

Under the Preferred Alternative one commercial business – the Davis Garage – would require acquisition and relocation. The City would provide financial assistance in the relocation of this business.

The relocation would be conducted in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646) (referred to as the "Uniform Act"), as amended in 1987, and the North Carolina Relocation Assistance Act (GS-133-5 through 133- 18). This program is designed to provide assistance to displaced persons relocating to a replacement site in which to live or do business. At least one relocation officer is assigned to each project for this purpose. The relocation officer would determine the needs of the displaced business without regard to race, color, religion, sex, or national origin. The relocation office would assist owners of displaced businesses in searching for and moving to replacement property. Relocation would be offered in areas not generally less desirable in regard to public utilities and commercial facilities. The City and/or NCDOT would provide for payment of actual moving expenses encountered in this relocation. Work on the property would be scheduled to allow ample time prior to displacement for negotiation and possession of a replacement business location. Mr. Davis would receive a 90-day written notice once the property was acquired by the City.

4.1.5 Public Facilities

4.1.5.1 Winston-Salem State University

Winston-Salem State University (WSSU) is the one of two public facilities within the vicinity for the proposed project. WSSU's campus is located on the southern side of the Norfolk Southern railroad tracks and primarily on the eastern side of S. Martin Luther King Jr. Drive. Additionally there are three buildings and two parking lots on the western side of S. Martin Luther King Jr. Drive. The portion of S. Martin Luther King Jr. Drive adjacent to the campus is two-lane, one-way couplet with one pedestrian crossing between Cromartie Street and Stadium Drive and two pedestrian crossings at Stadium Drive. There are sidewalks on both sides of S. Martin Luther King Jr. Drive. A four-lane bridge with a sidewalk on each side crosses the Norfolk Southern railroad tracks. To the

north of the campus and railroad tracks and adjacent to the proposed project, S. Martin Luther King Jr. Drive is a four-lane divided thoroughfare with sidewalks on both sides. There are no pedestrian crossings of S. Martin Luther King Jr. Drive in the vicinity of Union Station.

4.1.5.2 Fire Station Four

Fire Station Four, also known as the Lester E. Ervin Fire Station, is located at 290 S. Martin Luther King Jr. Drive and is the second of the public facilities within the study area. Although the station is the busiest engine company in Winston-Salem (www.ci.winston-salem.nc.us/Home/Departments/Fire/FireStations/Articles/Station04), the District Deputy Chief stated his opinion that the amount of increased pedestrian and vehicular traffic expected to be caused by this project would not affect the fire station's ability to respond to emergency situations (telephone conversation with Arlin Sechrist, November 12, 2007).

The proposed roundabout also would not affect fire station access. Since the roundabout would be south of the fire station, fire station vehicles would not travel through the roundabout when traveling north or when entering US 421 westbound. Fire station vehicles would use the roundabout to respond to calls south of the station or east on US 421/Business 40. The roundabout will be designed to accommodate the turning radii of fire trucks.

4.1.5.3 Parks and Recreation

There are no parks or recreational facilities adjacent to the proposed site. At approximately 0.25 miles to the northeast, Brushy Fork Park is the closest park. It is located on the north side of US 421/I-40 Business along First Street. North Cameron Avenue borders the park to the west. There is a basketball court and green space. Other parks – Skyland Park, Civitan Park, and Reynolds Park Golf Course – are approximately 0.75 miles, 0.8 miles, and 1.25 miles away from Union Station, respectively. Skyland Park is on the north side of US 421/I-40 Business and is bordered by E. Fifth Street, New Walkertown Road, and North Cameron Avenue. Civitan Park is on the southwest side of the Bowman Gray Stadium complex. Reynolds Park Golf Course is on the east side of Winston-Salem State University and is bisected by Reynolds Park Road (Figure 4-3).

Anticipated Impacts to Public Facilities

Because of the location of the railroad tracks and the lack of pedestrian facilities connecting the campus and the site of the proposed project, the proposed project would not adversely affect the Winston-Salem State University campus.

Continued operation of Fire Station Four would be ensured during construction.

There are no anticipated impacts to Parks and Recreations facilities.

4.1.6 Social Impacts.

The addition of a multi-modal transit center to a low-income residential neighborhood provides accessibility to jobs, education and training, services, and cultural resources in other parts of the city, as noted previously (Section 1.3). The implementation of a bus transfer station at the site would improve residents' city-wide mobility by increasing the number of connecting routes to which riders have access.

The increase in accessibility created by the bus transfer station would also increase the amount of access provided to students, faculty, staff, and visitors of WSSU. Greater use of buses in the area by non-residents could result in more foot traffic, which could support increased economic development, and thereby better integrate the residential neighborhood with its institutional neighbor. Though traffic and parking congestion in the area may increase, the alternative forms of transportation at the center could mitigate the effect.

The potential provision of commuter and/or long-distance rail access to Winston-Salem also could improve accessibility and mitigate an increase in traffic congestion, particularly in light of the site's proximity to Winston-Salem's central business district.

Finally, preserving an historic building such as Union Station provides Winston-Salem and North Carolina residents with physical reminders of the area's past tobacco-, furniture- and textile-led industrial strengths, as well as of the state's segregated past, all of which can be considered important chapters in North Carolina's history. The station's rich architectural details also provide visual interest that is rarely present in newly-constructed buildings.

4.2 Land Use and Transportation

4.2.1 Existing Land Use and Zoning

Existing land use on Excelsior Street includes residences, a church, and a fire station, in addition to the Davis Garage. Parcels on Excelsior Street are bounded by the freeways US 52 to the west and US 421/I-40 Business to the north, as well as by the Norfolk-Southern Railway to the south. While Excelsior Street contains a few residences, its immediate proximity to these major transportation routes hinders a thriving residential neighborhood. At the same time, WSSU's presence to the south supports a connection to transportation and retail infrastructure.

The site is located in the Highway Business (HB) District zone, which extends northward along Martin Luther King Jr. Drive (Figure 4-4). The purpose of the HB District is to accommodate retail service and distributive uses for establishments that require high visibility and good road access. The City would likely classify the proposed bus facility use as a "Bus or Taxi Terminal." With the issuance of a zoning or building permit, this use is allowed in the existing HB district. The potential office and/or retail uses could be considered accessory uses to the "Bus or Taxi Terminal" and would be allowed. If not considered accessory uses, these uses could be required to be permitted separately. Regardless, the likely use classifications for the potential office and/or retail uses are permitted in the HB district (Winston-Salem/Forsyth County Inspections Division letter from Scott Frye, June 19, 2008; see Appendix A).

The City currently does not have a use classification for the potential rail facility. The City could choose to use an existing use classification, such as "Public Airport," for the rail facility, or the City could create a new use classification specifically for rail service. The "Public Airport" use currently is not allowed in the HB zoning district. The City will make a use classification determination when rail service to Union Station is more definite. That decision will determine whether the property would need to be rezoned (Winston-Salem/Forsyth County Inspections Division letter from Scott Frye, June 19, 2008; see Appendix A).

Following are locations and descriptions of adjacent zoning districts, which are paraphrased from the Zoning section of the City's Unified Development Ordinance (UDO).

- The adjacent zoning district to the east is the General Industrial (GI) District, which is intended to accommodate a wide range of assembling, fabricating, and manufacturing activities.
- The adjacent zoning district to the south is the Campus (C) District, which is intended to accommodate medium- to large-sized public and semi-public institutional uses which have a major land use impact or traffic generation potential.
- The adjacent zoning district to the west is the Residential Multi-Family (RM-5) District, which allows a maximum of four dwelling units per parcel and an overall density of five dwelling units per acre. This district encompasses a few parcels south of US 421/I-40 Business, east of US 52, and north of the railroad tracks.
- The adjacent zoning districts to the north include the Residential Single-Family (RS-7), the Pedestrian Business Supplementary (PB-S), and the Residential Multi-Family Supplementary (RM5-S) districts.
    - RS-7 requires a minimum lot size of 7,000 square feet for the sole permitted use of single-family residences.
    - PB-S is intended to accommodate office, commercial, and institutional uses which usually serve community and business needs of smaller communities and urban nodes in the city and county. This district also is intended to accommodate high density residential uses. Overall, this district is intended to encourage the development of building patterns and designs that mimic pedestrian-friendly, small-town downtown areas.
    - RM5-S is an addendum to the RM-5 ordinance and limits the number of units per building to four.

The parcel is located in the Growth Management Area 1 (GMA1) zoning category, which includes the city center. As is stated in the "Growth Management Plan" chapter of the City's *Legacy Development Guide* plan and in the City's UDO, the city center is intended to be a densely-developed hub of office, retail, entertainment, residential, and cultural uses. It is also noted in the UDO that such uses may be mixed on the same tract or within the same structure.

4.2.2 Land Use Plans

4.2.2.1 *Legacy Development Guide*

The *Legacy Development Guide* (City-County Planning Board, December 2001), strongly supports increased transit opportunities, regional planning and development, more dense development in the city center area, and increased community character.

The *Guide* discusses the rate of commuting between Forsyth and Guilford counties, acknowledges that transportation in the metropolitan area is a "major issue" (p. 68), and has as one of its visions an effective regional transportation system that "makes commuting within the region more efficient, reduces traffic congestion and improves air quality" (p. 68). One of the objectives in the *Guide*'s "Transportation Alternatives" chapter is to develop a long-range plan to establish a commuter rail system. Another objective is to expand the local and regional non-rail public transportation system, while acknowledging that the "vast majority" of their bus transit users are people with low incomes or who are disabled or otherwise do not drive (p. 58).

The *Guide*'s "Community Character" chapter discusses the importance of historic preservation, historic resources, and attractive community gateways to the fabric of the City.

4.2.2.2 Draft *Northeast Area Plan*

The Draft *Northeast Area Plan* is the small area plan that includes the East Winston neighborhood. The plan lists the Union Station site as a strength and opportunity for the East Winston area and recommends designing it "as a multi-modal regional transportation center to include passenger rail, local, and regional bus systems" (p.72). The plan recommends rezoning both the Union Station site and the vacant tract on the east side of S. Martin Luther King Jr. Drive (between the railroad tracks and I-40 Business) to MU-S (Mixed Use-Special). It calls for these sites, and the area within one-quarter of a mile of Union Station, to develop with a mixture of residential, commercial, retail, and institutional uses. It recommends these uses occur at higher levels of intensity where appropriate, particularly retail and commercial uses that attract pedestrian traffic. In general, the plan anticipates that encouraging more retail, office, and entertainment developments will better serve existing neighborhoods and will better

integrate people from WSSU and the Piedmont Triad Research Park into the East Winston area.

Consistency with Existing Zoning and Land Use Plans

Rehabilitating Union Station as a multi-modal transit station with potential ancillary retail and office development is consistent with the *Legacy Development Guide's* visions, objectives, and policies. It is also consistent with the Draft *Northeast Area Plan*. The bus facility function is allowed in the existing HB zoning district with a zoning or building permit. Zoning consistency for the potential rail facility use would need to be determined at a future date.

4.2.3 Transportation

Union Station is located near two major freeways: US 421, also designated as Interstate 40 (I-40) Business, and US 52. Access to the local neighborhood is provided via interchanges with S. Martin Luther King Jr. Drive from both freeways. The interchange with US 421/I-40 Business is directly across S. Martin Luther King Jr. Drive from Excelsior Street and Union Station. Currently the intersection is signalized. The proximity of major freeways to Union Station provides very good automobile access to the neighborhood near Union Station. However, since low-income people rely on transit services more than the general population (as previously noted in Section 1.3), and since 43 percent of the residents in the site's census block group have incomes below the poverty line, it is likely that residents in the neighborhood are more reliant on transit services than Winston-Salem's overall population.

4.2.3.1 Winston-Salem Transit Authority (WSTA)

Transit services in Winston-Salem are provided by two transit authorities: Winston-Salem Transit Authority (WSTA) and Piedmont Authority for Regional Transportation (PART). Four WSTA bus routes – three daytime and one nighttime route – connect the S. Martin Luther King Jr. Drive and US 421/I-40 Business interchange with downtown Winston-Salem. Figure 4-5 shows the bus routes as of October 2007.

- Route 3 runs south on S. Martin Luther King Jr. Drive past Winston-Salem State University (WSSU) and terminates near the NC School of the Arts. It operates on one hour headways on weekdays and Saturdays and does not run at all on Sundays.

- Route 26 runs along S. Martin Luther King Jr. Drive from Third Street to Reynolds Park Drive. Headways for this weekday route are one hour. There is no weekend service.
- Route 25 runs east along Third Street and terminates east of the area on West Mountain Road. The closest that Route 25 comes to Union Station is the intersection of N. Jackson Avenue and E. First Street, which is approximately 0.25 miles away. This intersection is located on the other side of US 421/I-40 Business from Union Station. Weekday and Saturday headways for this route are one hour.
- Route 29 Night, which replaces Route 3 in the vicinity of the site and parts of Route 26 after 6:00PM on weekdays, runs every hour from 6:00pm until approximately midnight.

WSTA's short-term plans (within the next five years) include replacing aging buses, continuing to install bus shelters and information kiosks within shelters, and enhancing Intelligent Transportation System (ITS) functionality. Planned ITS improvements include a website with real-time bus information (scheduled availability is in 2007) and supporting the real-time Interactive Voice Response telephone system (currently available to the public). Additional plans involve adding weekend and weekend-night service between WSSU and downtown Winston-Salem (telephone conversation with Mr. Art Barnes, Manager, Winston-Salem Transit Authority, May 31, 2007).

4.2.3.2 Piedmont Authority for Regional Transportation (PART)

PART buses connect the Winston-Salem Transportation Center (100 W. 5th Street) to Kernersville and the PART Regional Hub near the Piedmont Triad International Airport (Figure 4-6a). At the regional hub, patrons can transfer to PART buses serving High Point and downtown Greensboro and to shuttles serving areas local to the hub and nearby airport. PART buses run every thirty minutes from 6:30am – 9:00am and 3:00pm – 6:30pm, and every hour from 9:00am – 3:00pm. Currently, getting to Union Station from a PART bus requires a transfer to the WSTA Bus Route 3 or Route 26 at the downtown transportation center. There is free parking for PART services near the Winston-Salem Transportation Center.

The PART Connections bus route provides transportation to the UNC-Chapel Hill Hospital, the Duke University Hospital, and nearby medical facilities. This route leaves from the Winston-Salem Transportation Center twice daily (Figure 4-6b).

The PART Amtrak Connector provides shuttle service between the Winston-Salem Transportation Center, Winston-Salem State University, and the High Point Amtrak Station. Passengers can travel the Carolinian (Charlotte – New York) and Piedmont (Charlotte – Raleigh) routes from High Point, with connecting service to New Orleans, Tampa, and Miami. The Connector leaves from the transportation center twice daily.

NCDOT and the cities that comprise PART also are studying the benefits of commuter rail or bus rapid transit (BRT) connecting Clemmons, Winston-Salem, Kernersville, High Point, the Piedmont Triad International Airport, Greensboro, and Burlington. Although these studies are still being completed, preliminary station locations have been designated. The tentative timeline for a functioning commuter rail route between Hanes Mall and NC A&T is 2015 (*2030 Winston-Salem Urban Area Long Range Transportation Plan*, City of Winston-Salem, 2005). Should the proposed project be built, Union Station could serve as a commuter rail or BRT station. If so, it would be considered a specialty station. Specialty stations are considered major destinations for special populations and events, including coliseums, colleges, universities, and hospitals (www.partnc.org, May 29, 2007). Attributes of specialty stations include the following:

- Shelter/platform, furniture, landscape amenities;
- No additional parking;
- Highest walk-up/bike-up traffic;
- Limited bus service; and
- High level of services and amenities.

4.2.3.3 High-Speed Rail

The Southeast High Speed Rail (SEHSR) project will connect Washington, DC, to Charlotte, with potential service extensions to South Carolina, Georgia, Alabama, and Florida. [High speed is defined in the approved Tier I Environmental Impact Statement (EIS) as 100 mph.] High speed passenger trains will provide service to all existing Amtrak Stations between Raleigh and Charlotte. The approved Tier I EIS also identified additional service from Greensboro to Winston-Salem and then to Lexington in the preferred study alternatives. This extension is supported by PART's commitment to

commuter rail along the same Triad corridor, and it is included in *Charting a New Direction for NCDOT: North Carolina's Long Range Statewide Multi-Modal Transportation Plan* (September 2004). Currently eight daily SEHSR round trips between these Raleigh and Charlotte are anticipated, with two of these round trips stopping in Winston-Salem when the final route is completed.

The SEHSR could be operational by 2015, based on the availability of federal funding. Until the opening of the Winston-Salem connection, passengers could use PART buses or the planned commuter rail to connect to the high speed route. Union Station is mentioned in the *Draft Implementation Plan for Southeast High Speed Rail: Washington, DC, to Charlotte, NC* (October 2002) because of its potential as a Winston-Salem Station location.

4.2.3.4 Automotive Transportation

The intersection of S. Martin Luther King Jr. Drive, Excelsior Street, and the US 421/I-40 Business ramps accommodate an average of 10,240 vehicles per weekday between 7:00am and 6:00pm, according to data provided by the City of Winston-Salem (June 28, 2006).

As discussed in the *Union Station Intersection and Roundabout Analysis Memorandum*, there is a prospective private development being planned by an independent private development company for the Union Station building and adjacent lots on Excelsior Street. This prospective private development, which is not part of the action proposed in this document, is slated to include 107 condominium units, 44,320 square feet of office space, and 58,550 square feet of specialty retail space in addition to the transit facility. The rehabilitation of the Union Station building combined with this prospective private development has the potential to generate 156 entering trips and 176 exiting trips during the PM peak hour. Following is a rendering of the prospective private development.

Source: Bill Cannon, Developer

The traffic generation potential of the Union Station development was determined using traffic generation rates published in *Trip Generation* (Institute of Transportation Engineers, Seventh Edition, 2003). Internal capture was assumed between the retail, residential, and office land uses. A three percent internal capture rate was used for the AM peak hour, and a 15 percent internal capture rate was used for the PM peak hour. In addition, a 10 percent transit capture rate was assumed, since some trips into and out of the development are likely to use the rail and bus transit options provided at Union Station. Other trips would be pedestrian trips associated with Winton-Salem State University.

Functional Classification of Surrounding Road Network

The street functional classification system groups streets into several "functional" categories according to the land use served (or to be served) and provides a general designation of the type of traffic each street is intended to serve. This system primarily defines the street in terms of roadway design and character, as well as operational features for the movement of vehicles. Categories include arterial roads, which is subdivided into freeways/expressways and thoroughfares, and local and collector streets. Functional classifications of the roads around the Union Station site were obtained from the *Winston-Salem Urban Area Collector Street Plan* (Winston-Salem Urban Area Metropolitan Planning Organization, September 2007).

Arterial Roads

The primary function of arterial roadways, including freeways/expressway and major and minor thoroughfares, is mobility. Arterials operate at higher speeds [45 miles per hour (mph) and above], provide significant roadway capacity, have a great degree of access control, and serve longer distance travel. An arterial is designed with the intent to carry more traffic than is generated within its corridor (i.e. higher speeds, higher volumes, longer distances). Arterials usually connect to one another or to collector streets. Very few arterials connect to local streets.

(a) Freeways/Expressways

Expressways and freeways provide the most mobility and least access, since access is only available at interchanges. Freeway/expressway facilities typically serve longer distance travel and support regional mobility. The state funds roadway improvement and maintenance on these facilities. Both US 421/I-40 Business and US 52 are classified as freeways/expressways.

(b) Major Thoroughfares

ajor thoroughfares typically have tightly controlled access and few, if any, individual site driveways. These facilities serve medium to longer distance travel and typically connect minor arterials and collector streets to freeways and other higher type roadway facilities. Generally, roadway improvements and maintenance on major arterials are funded by the state. North of US 421/I-40 Business, Martin Luther King Jr. Drive is classified as a four-lane undivided major thoroughfare.

(c) Minor Thoroughfares

Minor thoroughfares primarily serve a mobility function but often have more closely spaced intersections, some individual site driveways, and generally lower design and posted speeds compared to other arterials. The minor thoroughfare network primarily is intended to serve travel demand within the local area. Minor thoroughfares typically have lower traffic volumes than major thoroughfares or freeways/expressways. These roadways connect to other minor thoroughfares, to major thoroughfares, and to collector streets. For the most part, minor arterials are maintained by the state, but the cost of improvement may be the responsibility of local governments. South of US 421/I-40 Business, S. Martin Luther King Jr. Drive is classified as a four-lane minor thoroughfare. From Union Station to WSSU, the minor thoroughfare is four-lane divided; south of WSSU, its four lanes are undivided.

Collector Streets

The primary purpose of the collector street system is to collect traffic from neighborhoods and distribute it to the system of arterials throughout an area. In general, collector streets typically provide less overall mobility, operate at lower speeds (35 mph or less), have more frequent and greater access and flexibility with adjacent land uses, and serve shorter distance travel than arterials. Collectors provide critical connections in the roadway network by bridging the gap between arterials and locals. Thus, the majority of collector streets connect with one another, with local streets, and with non-freeway/expressway arterials. Collector streets are rarely constructed and funded by the state. Responsibility for collector streets usually falls to the local government and the development community for funding, design, and construction. Lowery Street, which parallels US 421/I-40 Business to the south, is a two-lane undivided collector street.

Local Streets

The primary function of local or neighborhood streets is to provide access. These streets are intended to serve localized areas or neighborhoods, including local commercial and mix-use land uses (i.e. low speeds, low volumes, short distances). Local streets are not intended for use by through traffic. Local facilities provide greater access and the least amount of mobility. These facilities typically connect to one another or to collector streets and provide a high level of access to adjacent land uses/development (i.e., frequent driveways). Locals serve short distance travel and have low posted speed limits (25 mph to 35 mph). Excelsior Street and WSSU's streets are two-lane, undivided local streets.

<u>Anticipated Impacts to Transit and Transportation</u>

WSTA buses run past the Union Station site hourly for approximately 12 hours every weekday. Boardings and alightings at the proposed station for these or any additional routes would occur on-site, out of the travel lanes. **The combination of the infrequent headways and the dedicated boarding/alighting areas means that even if several additional routes utilized Union Station, congestion along S. Martin Luther King Jr. Drive would not increase appreciably as a result of increased bus traffic. Additionally, automobile traffic attributable to WSSU students, faculty, staff, and visitors may decrease as they utilize the increased bus service.**

The increased traffic generated by the combination of the Preferred Alternative and a prospective private development is two percent of existing traffic volumes. As is noted in Section 2.3.1, Table 2-1, the intersection would operate at an acceptable level of service even given this increase and the 2015 forecasted traffic growth.

4.3 Historic and Cultural Resources

4.3.1 Archaeological Resources

There are no known archeological sites on or adjacent to the proposed site (State Historic Preservation Office letter from Peter Sandbeck, September 1, 2006; see Appendix A).

4.3.2 Architectural/Historic Resources

Union Station is an individually listed resource on the National Register of Historic Places and has been designated a Forsyth County Local Historic Landmark. The building remains unchanged since National Register listing (December 24, 1995) and local landmark designation (December 15, 1997). Subsequent studies including the *Historical Architecture Resources Survey Report: Phase II Intensive* (U-2826B, Edwards-Pitman Environmental, Inc., November 2005) for the proposed improvements to US 52 from Patterson Road to US 421/I-40 Business and the Union Station *Existing Condition Survey* affirm that the building retains integrity of location, design, setting, materials, workmanship, feeling, and association.

Anticipated Impacts to Architectural/Historic Resources

Per the review by the State Historic Preservation Office,

> **[i]t appears the overall scope of the proposed project** as described in the documents, including the rehabilitation of the historic Union Station following *The Secretary of the Interior's Standards for Rehabilitation*, and the reconstruction of the pedestrian bridge to access the tracks, **will not have an adverse effect on the National Register-listed property.** (Emphasis added. State Historic Preservation Office letter from Peter Sandbeck, June 19, 2008; see Appendix A.)

4.4 Section 4(f) Properties

Section 771.135 of Section 4(f) (49 U.S.C. 303) states: The Administration (FTA) may determine that Section 4(f) requirements do not apply to restoration, rehabilitation, or maintenance of transportation facilities that are on or eligible for the National Register when:

(1) Such work will not adversely affect the historic qualities of the facility that caused it to be on or eligible for the National Register, and

(2) The State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (ACHP) have been consulted and have not objected to the Administration finding in paragraph (f)(1) of this section.

This document, along with other pertinent materials, was reviewed by the SHPO (State Historic Preservation Office letter from Peter Sandbeck, June 19, 2008; see Appendix A). Based on the finding of No Adverse Effect from SHPO as noted in the previous section, it is anticipated that Section 4(f) requirements will not apply to this project.

4.5 Physical Environment

4.5.1 Existing Union Station Building

Existing conditions of the Union Station site are summarized in the *Existing Condition Survey* and are discussed below.

Union Station is an individually listed resource on the National Register of Historic Places and has been designated as a local landmark by Forsyth County. The structure retains a high degree of its original historic fabric and is structurally sound (Figure 4-7a).

The station is a three-story, 36,000 square foot structure constructed with exposed reinforced concrete walls at the two lower floors and exposed red brick masonry with limestone trim at the top floor. Limestone also was used to create monumental entrances at the north and east sides of the building. An original carved limestone eagle emblem of the Southern Railway Company remains as the keystone of the arched north entrance. Many of the original windows still exist; however, many of the exterior doors and frames have been removed and replaced, including the original ornate entry doors.

A bridge was originally located on the south side of the station connecting a concourse to the two train platforms. The bridge structure was fully enclosed and was supported by two concrete arches. The bridge, stairs, and platforms were demolished by the railroad company in 1975 prior to the sale of the building to Mr. and Ms. Davis. The opening in the side of the building was filled with masonry.

A brick paved driveway leads to the lower levels of the station from Excelsior Street. A stairway leads from the street down into the lower level loading area from Excelsior Street along the west side of the building.

The exterior walls of the station have weathered considerably, and there are no visible signs of cleaning or maintenance. Substantial growth of kudzu has occurred along the walls and had to be removed to allow inspection of the building structure.

A built-up roof covers the station lobby and the four entryways. The built-up roof contains asphalt fabric with a stone covering. The roof is mainly watertight; however the edge flashings have deteriorated. A chimney is located on the north edge of the vestibule roof. This chimney is structurally unsound and would need to be removed during the rehabilitation of the station.

The station contains three interior levels. The upper level is at grade with Excelsior Street and accommodated the primary public functions of the passenger rail station. A central lobby, ticketing area, passenger waiting areas, restrooms, dining facilities, baggage checking, a traveler's aid shop, and access to the concourse were available on this level. Various attractive and durable interior finishes, including terrazzo floors and hand-carved benches, are found throughout the inside of the upper level. Large windows surround the exterior of the upper level to provide ample natural light. Most of the interior features have been preserved, despite former abandonment of the building and its current use as an auto repair facility. Some surfaces, however, have become stained, cracked, or otherwise damaged.

The middle level formerly contained railroad company offices, a food preparation area, and storage rooms. The west and south walls contain windows. The floors and wall coverings are less ornate than in the upper level. Original marble window stools and

some wood storage shelves remain, and a storage room contains many of the original building fixtures.

The lower level is below grade on the north and east sides, and above grade on the west and south sides. A room on the lower level cannot be accessed, as it has been completely bricked over. This room allegedly contains an 8,000 gallon fuel tank. There is evidence of leaking fuel surrounding the 8,000 gallon storage tank. (See Section 4.6.6 for a discussion of potential hazardous materials.) The remainder of the lower level functioned as a mail and baggage transfer area and has a mostly utilitarian design. A loading dock is located on the west side of the lower level. Some of the original heating and boiler equipment remains on this level. This level is largely intact and in good condition. However, there are some hazardous materials stored on this level (Figure 4-7b), and a column was removed to facilitate vehicle access into the level.

4.5.2 Visual Quality

Union Station was constructed in a Beaux-Arts style with limestone trim and limestone monumental entrances contrasting with a exposed red brick masonry façade on the upper level. The original carved limestone eagle emblem of the Southern Railway Company remains as the keystone of the arched north entrance.

There is little evidence of cleaning or maintenance of the exterior structure. Kudzu has climbed the south-facing side of the building, potentially contributing to façade deterioration.

Tow trucks and damaged, repaired, and abandoned vehicles are parked on three sides of the building. The original ornate entry doors have been removed.

Anticipated Impacts to Visual Quality

The Preferred Alternative would improve the visual quality of the East Winston neighborhood as well as the City of Winston-Salem by restoring Union Station's historic architectural details. Restoration efforts would include cleaning, repairing, and maintaining both the interior and exterior architectural details. The site also would include landscaped exterior areas, modern parking lots, and visual enhancement of Martin Luther King Jr. Drive with the addition of the roundabout. An indirect benefit of the restoration and implementation of an inter-modal transportation facility would be the

potential induced investments – including offices, retail, and restaurants – on this site and/or nearby sites in the neighborhood, providing an overall positive visual effect.

4.5.3 Noise

This section provides a general assessment of noise impacts associated with the Preferred Alternative. The FTA's *Transit Noise and Vibration Impact Assessment* (April 1995) guidelines were used to inform the discussion below.

The FTA's Noise Impact Criteria are based on comparing existing noise levels to proposed project-related noise levels. The criteria designate different levels of project noise that result in "No Impact," "Impact," and "Severe Impact" conditions. According to the FTA, mitigation should be considered if impact thresholds are exceeded. Table 4-4 shows the land uses to which these criteria are applied.

Table 4-4: Land Use Categories for Transit Noise Impact Criteria

Land Use Category	Description
1	Tracts of land where quiet is an essential element in their intended purpose. Includes but is not limited to: lands set aside for serenity and quiet, outdoor amphitheaters and concert pavilions, National Historic Landmarks with significant outdoor use.
2	Residences and buildings where people normally sleep. Includes but is not limited to: homes, hospitals, hotels, and other places where a nighttime sensitivity to noise is assumed to be of utmost importance.
3	Institutional land uses with primarily daytime and evening use. Includes but is not limited to: schools; libraries; religious institutions; medical offices; conference rooms; recording studios; concert halls; places for meditation or study associated with cemeteries, monuments, and museums; certain historic sites; parks, recreational facilities.

Source: *Transit Noise and Vibration Impact Assessment*, US Department of Transportation, April 1995.

Based on the above table, the proposed site and immediate area contain land use categories Two (residences) and Three (the Ishi Pentecostal Temple).

No formal noise analysis was conducted. However, a qualitative listing of the existing noise generated by the automobile repair facility includes trucks towing automobiles, pick-up trucks, and tractor-trailer cabs; as well as the ingress and egress of repair customers for short- and long-term repairs. The *Transit Noise and Vibration Impact Assessment* lists the dominant components of noise for maintenance facilities as signal horns and PA systems (occurring throughout the facility); impact tools (occurring in the

shop); car/bus washers/driers (occurring in a wash facility); vehicle activity (occurring throughout the facility); and general noise (site specific; includes considerable activity throughout day and night, some outside).

Should the Preferred Alternative be chosen, noise generated by the automobile repair facility would cease. It would be replaced by noise generated by buses pulling in, buses idling, and buses pulling out of the site. In the future, the bus noises would be joined by rail-generated noises. The *Transit Noise and Vibration Impact Assessment* lists the dominant components of noise for stations as automobiles (occurring when patrons arrive or depart, especially in early morning); buses idling (occurring in the bus loading zone); PA systems (occurring in a platform area); locomotive idling (occurring at commuter rail stations); and general noise (site specific and has peak activity periods).

Although an operational plan does not yet exist, the bus transit service probably would be consistent with existing bus service provided by WSTA. Specifically, headways would probably be an hour, and buses would probably run most frequently between 6:00am and 7:00pm, with little service outside of these hours. Initially there would probably not be more than five routes utilizing the station, which means that either every 12 minutes a bus would arrive, stay for a few minutes, and depart; or once an hour four buses would arrive, stay for a few minutes, and depart. (The proposed improvements accommodate up to four buses at a time.) Bus service in Winston-Salem is generally reduced on weekend days, especially on Sunday.

The nearby sensitive land uses include residences and the Ishi Pentecostal Temple, Pentecostal Assemblies of the World (P.A.W.) Hours of bus service would not interfere with typical sleeping hours (10:00pm – 6:30am) for nearby residences. The Temple holds Sunday school (9:30am) and a worship service (11:00am) on Sunday mornings and Bible class on Thursday evenings (7:30pm). The bus routes that serve the area (3, 25, 26, and 29 Night) currently do not have Sunday service and would not interfere with the Temple's worship activities on Sunday. Weekday hours of service for routes 3, 25, and 26 end before 7:00pm, and Route 29 Night runs approximately once per hour from 6:00pm until midnight.

Based on the limited hours of service and long headways anticipated for bus transit routes using the facility, and the existing use as a vehicle repair facility and truck towing

center, noise generated by the proposed use is not anticipated to be substantially greater than the existing noise levels.

Anticipated Impacts to Noise

The proposed transit operations center would not generate an appreciably greater amount of noise than the existing use. The noise sensitive sites would not be adversely affected by noise from the transit operations center. Noise levels would increase in the area during construction, but these issues would be temporary.

4.5.4 Air Quality

In the Clean Air Act and Clean Air Act Amendments, the Environmental Protection Agency (EPA) requires that air quality in the United States conform to the standards set forth in the National Ambient Air Quality Standards (NAAQS). From 1987 to 1989, Forsyth County was designated as a "non-attainment" area for ozone. However, from the early 1990s until April of 2004, Forsyth County was re-designated as a "maintenance" area for air quality, indicating attainment of the standards. In the spring of 2004, the eight-hour ozone standard was finalized, moving the entire Triad area into non-attainment status for the eight-hour ozone standard. However, through an Early Action Compact approved by the EPA, the Triad region received a downgrade in classification from moderate to marginal. The area is expected to be in attainment for the eight-hour ozone standard no later than December 31, 2007. An updated attainment assessment has not been made as of June 2008. Forsyth County is designated as a "maintenance" area for the one-hour ozone and carbon monoxide standards (email from Edward Dancausse, FHWA, May 8, 2008).

The other pollutant of major concern in the Triad area is particulate matter. Guilford and Davidson Counties are in non-attainment for the PM 2.5 standard. However, Forsyth County was not designated for the PM 2.5 standard, so there are no conformity requirements or project level analysis for PM 2.5 (email from Edward Dancausse, FHWA, May 8, 2008).

To further improve air quality in the region, Forsyth County collaborated with other agencies in the Triad to develop a plan to show that transportation systems would not have a negative effect on the area. Documents include the *Particulate Matter*

Conformity Analysis and Determination Report and *Clean Air for the Triad: An Action Agenda*, prepared by the Southern Environmental Law Center.

Locomotive Emissions

In 1997, the EPA set certain emissions standards for locomotives. The purpose of the standards is to reduce nitrogen oxide (NOx) by more than 60 percent, beginning in 2005. NOx is a precursor to the formation of ground level ozone. In 2004, the EPA finalized new requirements for nonroad diesel fuel as part of the Clean Air Nonroad Diesel Rule. The purpose of these requirements is to decrease sulfer levels in nonroad diesel fuel by 99 percent. In March 2007, the EPA proposed new rules to reduce PM and NOx emissions by 90 and 80 percent, respectively. The proposal also sets standards for reducing engine idling. The effective dates for the various parts of this three-part program range from 2009 to 2015.

Anticipated Impacts to Air Quality

The Union Station project would not require a microscale air quality analysis. One of the objectives of the project is to encourage the increased use of mass transit in order to reduce traffic congestion and minimize negative impacts to air quality.

More information on the proposed rail transit operations would be needed in order to better assess locomotive emissions at Union Station. This information would include the number of stops at the Station per day, approximate idle time per stop, the manufacture date of locomotives, and whether the locomotives have been retrofitted for emissions controls. It is anticipated that this information would be provided in the environmental documentation for the rail system.

4.5.5 Floodplains

A review of the Federal Emergency Management Agency's (FEMA's) Flood Insurance Rate Map (FIRM Map Number 37067C0276H) revealed that the majority of the site is situated in Zone X. Zone X is defined as those areas outside the 100-year floodplain, the flood elevation that has a one percent chance of being equaled or exceeded each year. Flood insurance purchase is not required in Zone X. The floodplain map for the subject area is included in Appendix E of this document.

Anticipated Impacts to Floodplains

There are no anticipated impacts to floodplains.

4.5.6 Prime Farmland

The Farmland Protection Policy Act (FPPA) establishes criteria for identifying the effects of federal programs on the conversion of farmland to non-agricultural uses. It requires all federal agencies or their representatives to consider the impact of land acquisition and construction projects on U.S. Natural Resource Conservation Service-designated prime and important farmland soils. The presence of prime, unique, or state and locally important farmland is based on underlying soil types. Land that is developed or planned for development by the local governmental authority is exempt from the requirements of the Act.

Anticipated Impacts to Prime Farmland

The site of the former Union Station is an urbanized area; therefore, there is no impact on prime farmland soils.

4.5.7 Protected Lands

Protected lands include areas that are protected by state and/or federal government as natural resources. Such areas include state and national parks and gamelands, state-designated significant natural heritage areas, and wild and scenic rivers.

There are no streams or rivers within the study area; therefore, no streams or rivers are classified under the Wild and Scenic Rivers Act of 1986 or under the North Carolina Natural and Scenic Rivers Act, and none are designated as trout streams.

There are no state or national forests within the study area.

There are no federal gamelands or wildlife/vegetative preservation areas within the study area.

Forsyth County is not one of the 20 coastal counties required to abide by the Coastal Area Management Act.

Anticipated Impacts to Protected Lands

There are no anticipated impacts to protected lands.

4.5.8 Utilities

Utilities available in the study area include water, sanitary sewer, solid waste, telephone, electricity, and natural gas. The City provides water, sanitary sewer, and solid waste services. BellSouth is the primary provider of telephone service within the City. Duke Energy provides electricity, and Piedmont Natural Gas provides natural gas.

There are no water pump stations or power substations on or adjacent to the site.

Anticipated Impacts to Utilities

There are no impacts to the off-site water line. The proposed project would require improvements to the on-site gravity-based sanitary sewer infrastructure due to site filling. The extent of these improvements would not be known until a detailed construction survey is undertaken.

4.5.9 Stormwater

An existing underground storm drainage system currently serves the site and the adjacent street system. The system conveys stormwater south of the site to the railroad corridor. However, no discharge point was located in the survey provided by the client or in subsequent field visits. An additional survey will be required for full stormwater analysis.

Anticipated Impacts to Stormwater

Relocation and improvements of storm drainage infrastructure are proposed as part of the roundabout and site construction. Proposed improvements are to convert existing storm drainage infrastructure into drop inlets and use those in construction of the roundabout.

4.5.10 Hazardous Materials

4.5.10.1 Phase I Environmental Site Analysis

A Phase I Environmental Site Analysis (ESA) (Kimley-Horn and Associates, Inc., 2006) was performed as part of the "due diligence" work at the site. Recognized environmental conditions (RECs) were identified at the property. The term "recognized environmental condition" is defined in ASTM Practice E 1527-05 at Section 1.1.1 as:

> "the presence or likely presence of any *hazardous substances* or *petroleum products* on a *property* under conditions that indicate an

existing release, a past release, or a material threat of a release of any *hazardous substances* or *petroleum products* into structures on the *property* or into the ground, groundwater, or surface water of the *property*. The term includes *hazardous substances* or *petroleum products* even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies."

RECs noted during the site visit consisted of the following:

- Approximately fifty 55-gallon drums;
- Multiple five-gallon buckets and containers;
- Dumping/landfilling areas;
- Petroleum-stained soils;
- Approximately twenty above-ground storage tanks (ASTs);
- One existing 8,000-gallon diesel underground storage tank (UST) that is currently "in-use" located in the basement floor of the structure. A previous Phase II ESA and Addendum (Law, 1995) indicated that soils in the vicinity of the UST were saturated with petroleum and were above the reporting limit for the North Carolina Department of Environment and Natural Resources (NCDENR);
- One potential 10,000-gallon gasoline UST, reportedly not "in-use" and empty, identified in the street level parking area. Previous soil testing (Law, 1995) indicated that soils in the vicinity of this UST were not contaminated with petroleum products; and,
- One potential residential heating oil UST located on the western portion of the property (1308 Excelsior Street).

Contaminants associated with automotive repair/junk yards and USTs include, but are not limited to: solvents, metals, various organic compounds, paints, sludges, waste oil, gasoline and diesel range organics, benzene, toluene, ethyl benzene and xylenes.

Inert debris throughout the subject property was identified as *de minimis* conditions. The inert debris includes wood, metal parts/frames, tires, furniture and other solid waste

debris. Transformers were identified adjacent to the subject property; however, they appear in good condition and do not warrant environmental concern.

The Phase I ESA recommended a Phase II ESA to further characterize soil conditions on the site.

4.5.10.2 Phase II Environmental Site Analysis

Fieldwork for a Limited Phase II ESA (Kimley-Horn and Associates, Inc., 2008) was performed in March 2008, and the final report was issued in May 2008. The purpose of the Limited Phase II ESA was to assess the RECs identified in the Phase I ESA and to evaluate potential receptors and soil and groundwater quality conditions at the REC locations. The following conditions were evaluated:

- gasoline and diesel range compounds;
- volatiles compounds;
- semi-volatile compounds;
- 1,2 Dibromethane (EDB); and
- total Chromium and Lead.

Surface spills and underground releases of petroleum hydrocarbons are controlled by their physical and chemical properties as well as the environment into which they are released. The combination of these factors can cause hydrocarbon constituents to partition into four phases (free, vapor, adsorbed, and dissolved) in the subsurface environment. Metals can also be adsorbed onto soil particles and/or dissolved into the groundwater. Petroleum hydrocarbons and metals released into the environment typically migrate away from the point of the release. The Limited Phase II ESA was designed to investigate the four phases of petroleum hydrocarbons and the two phases of metals at the site.

Groundwater and soil samples were collected from thirteen borings at Phase I ESA suspect locations and/or stained soil areas. No evidence was found regarding the potential 10,000 gallon UST in the street-level parking area or the potential residential heating oil UST on the western portion of the property.

The existing UST located in the lower level of Union Station was used in the daily operation of the former transit facility. The tank is located inside the lower level of the

three story structure and is behind a brick wall located along and within the southeast corner of the structure. The fill port is located along the exterior of the upper level of the southeast corner of the structure, which leads down two floors to the tank. The tank is completely enclosed by the brick wall and is inaccessible. As a result, the tank construction, tank condition, burial status, and size of the tank are unknown, although the Limited Phase II ESA estimates it to hold 10,000 gallons.

Petroleum based lubricants used in the current automotive repair facility operations are primarily located within the three-story structure and were not an aspect of the Limited Phase II assessment.

As of March 2008, no apparent on-site abatement activities had been performed other than daily operational and maintenance duties of the Davis Garage.

Summary of Limited Phase II ESA

The subject property appears to be a low risk site for groundwater, surface water, and/or vapor impacts.

In consideration of the site's existing status as an automotive repair facility as well as the proposed renovation activities, it is recommended that the application of MSCC Industrial/Commercial soil cleanup levels be applied.

Petroleum hydrocarbon compounds and metals have impacted the environmental integrity of the site. These impacts include the following:

- Vapor, adsorbed, and dissolved phase hydrocarbons were detected during this investigation. Detected soil and groundwater concentrations are below the Maximum Soil Contaminant Concentrations (MSCC) for the Residential or Industrial/ Commercial cleanup levels and the Gross Contamination Levels (GCLs) for groundwater, respectively.
- The only detected Massachusetts Department of Environmental Protection (MADEP) Extractible Petroleum Hydrocarbons concentration is below the MSCC health based level.
- Detected volatile compounds, semi-volatile compounds and metals concentrations did not exceed the GCLs for groundwater.

- Volatile and semi-volatile compounds to include Total Lead and Chromium metals concentrations do not exceed the MSCC for the Residential or Industrial/Commercial cleanup levels.
- Only Lead and Chromium concentrations exceed the North Carolina Groundwater Quality Standards.

Free phase petroleum hydrocarbons were not detected, nor were MADEP volatile petroleum hydrocarbons concentrations.

Mitigation of Hazardous Materials

The following mitigation actions result from the recommendations made in the Limited Phase II ESA.

The Limited Phase II ESA would be reported to NCDENR. This action would be performed by the City, if not already completed by Mr. Davis. NCDENR would assign a risk value and determine if further assessment or corrective action is warranted. Corrective action requirements are site-specific and risk-based.

The petroleum hydrocarbon constituent concentrations found to be above the laboratory detection limit would be reported to NCDENR for further guidance. This action would be performed by the City, if not already completed by Mr. Davis.

The enclosed 10,000 gallon capacity tank should be closed and a tank Closure Report prepared and submitted to NCDENR. As part of closure, soil samples must be taken in order to determine if possible leakage from the tank has contaminated the soil or groundwater.

Once the Closure Report for the enclosed tank is submitted, the issuance of a "No Further Action" or "Case Closure" letter would be requested from NCDENR. NCDENR would not issue a "No Further Action" or "Case Closure" letter until the Closure Report for the enclosed tank is submitted. This action would be performed by the City, if not already completed by Mr. Davis.

The disposal of all tires, batteries, vehicles, and solid and liquid waste would be in accordance with the State of North Carolina Solid Waste Management

Regulations. Drums, containers with capacity greater than five gallons, and ASTs should be disposed by the current owner or by an environmental contractor. If any drums or containers have unknown material or liquid, the contents should be sampled and characterized by an environmental contractor prior to disposal. Following the proper characterization, the drums and containers in poor condition should then be over-packed for transportation to prevent spilling. Similar chemicals in smaller containers can be "lab packed" into a single drum for transportation and disposal.

An asbestos inspection would be performed prior to renovation.

4.6 Natural Environment

4.6.1 Topography and Soils

A review of the United States Geological Survey (USGS), 7.5-minute Quadrangle for Winston-Salem East, North Carolina revealed that the subject property has a change in elevation of approximately twenty feet. The northern portion of the property is approximately 870 feet above mean sea level (MSL) and drops to approximately 850 feet above MSL along the southern portion of the property. Surface drainage on this parcel flows south towards tributaries of Salem Creek.

A review of the U.S. Department of Agriculture, Natural Resources Conservation Services (NRCS) Soil Survey Geographic Database revealed that the soils located within the subject property are comprised of Pacolet clay loam. Pacolet soils are fine-grained, deep to moderately deep and well drained. Depth to water is reported greater than six feet.

<u>Anticipated Impacts to Topography and Soils</u>

The proposed project would require the removal of soils and the placement of fill. Additional drainage structures would be needed. No adverse long-term impacts to soils or topography are expected.

4.6.2 Water Resources

4.6.2.1 Ground Water

Based upon local surface topography, the direction of the shallow ground water flow in the vicinity of the subject property is estimated to move south towards Salem Creek. The shallow, unconfined aquifer in this area was interpreted to be approximately thirty-five (35) feet below surface grade (bsg). The depth to water was confirmed by NCDENR. At this site, ground water was not encountered during previous studies at a total depth of twenty feet bsg. This site is within the City of Winston-Salem, and it and surrounding properties are served by City water and sewer.

4.6.2.2 Water Quality

Salem Creek drains 59.2 square miles, including a heavily urbanized portion of Winston-Salem (*Basinwide Assessment Report: Yadkin River Basin*, NCDENR, April 2007). NCDENR lists this creek as a Class C water. Class C waters are "[f]reshwaters protected for secondary recreation, fishing, aquatic life including propagation and survival, and wildlife" (p. 38). Salem Creek's bioclassification is listed as Fair, and its water clarity is listed as "slightly turbid."

Anticipated Impacts to Water Resources

Due to the depth of the aquifer, there are no anticipated impacts to ground water. Due to the site's distance from Salem Creek, there are no anticipated impacts to water quality. However, an erosion and sediment control plan must be prepared and evaluated by the City prior to the start of any construction activities to avoid water quality issues.

The proposed development does not meet current thresholds for requiring detention or retention ponds, and none are proposed.

4.6.3 Terrestrial Communities

While there are no threatened or endangered species on or adjacent to the site (US Fish and Wildlife Service (USFWS) letter from Brian Cole, September 18, 2006; NCDENR Natural Heritage Program (NHP) letter from Harry LeGrand, August 17, 2006; see Appendix A), there is significant kudzu coverage on the site, and there is a natural area to the west of the site. Native, non-threatened birds, snakes, and squirrels could use these areas as habitat. Kudzu is an invasive plant and should be removed.

Anticipated Impacts to Terrestrial Communities

Impacts to plant communities associated with construction activities include the removal of vegetation, soil compaction, damaging and/or exposing root systems, as well as potential impacts associated with petroleum spills.

Temporary fluctuations in populations of animal species are anticipated during the course of construction. Slow-moving, burrowing, and/or subterranean organisms will be directly impacted by construction activities, while mobile organisms will be displaced to adjacent communities.

4.6.4 Aquatic Communities

There are no aquatic communities on or adjacent to the proposed site.

4.7 Jurisdictional Topics

4.7.1 Waters of the United States

Wetlands and surface waters fall under the broad category of "Waters of the United States" as defined in 33 CFR 328.3 and in accordance with provisions of Section 404 of the Clean Water Act. These waters are regulated by the U.S. Army Corps of Engineers. Any action that proposes to dredge or to place fill material into surface waters or wetlands falls under these provisions.

There should be no mitigation required due to lack of any proposed impacts to wetlands or open waters. However, an erosion and sediment control plan must be prepared and evaluated by the City prior to the start of any construction activities to avoid water quality issues.

4.7.1.1 Characteristics of Surface Waters

The proposed site contains no surface waters.

4.7.1.2 Characteristics of Wetlands

The National Wetlands Inventory (NWI) map for the site does not identify wetland features within the project area (see Appendix F). Kimley-Horn and Associates, Inc. conducted an on-site visual inspection of the property. This visual inspection included a

"wetlands assessment" and did not include formal wetland delineation. **No potential wetlands were identified on the site.**

Anticipated Impacts to Waters of the United States

Impacts to jurisdictional surface waters are not anticipated from the proposed project. Based on site visit, NWI map review and the urban location of the project site, wetlands are not expected to be impacted.

4.7.2 Permits Required

No 404 or 401 permits or certifications from state or federal agencies would be required prior to construction activities.

4.7.3 Rare and Protected Species

Federal law under the provisions of Section 7 of the Endangered Species Act (ESA) of 1973, as amended, requires that any action likely to adversely affect a federally protected species be subject to review by the USFWS. Other species may warrant protection under separate state laws.

According to the USFWS (letter from Brian Cole, September 18, 2006), there are no listed species or habitats on the site. This letter states that the USFWS believes the requirements under Section 7 of the ESA have been fulfilled.

According to NCDENR's Natural Heritage Program (letter from Harry LeGrand, August 17, 2006), there is no record of rare species, significant natural communities, or significant natural heritage areas at the site or within a mile of the project area.

Anticipated Impacts to Rare and Protected Species

There are no anticipated impacts to rare and protected species from the proposed project.

4.8 Construction and Operational Impacts

Short-term construction impacts are likely to occur in the areas of traffic, noise, air quality, and water quality.

Traffic

Traffic patterns will change during construction of the roundabout. At least one lane in each direction will be maintained on Martin Luther King Jr. Drive. Access will be maintained on Excelsior Street and on the ramps to and from US 421. Advance notice through the local news media will be made to alert the public of traffic restrictions and construction-related activities.

Noise

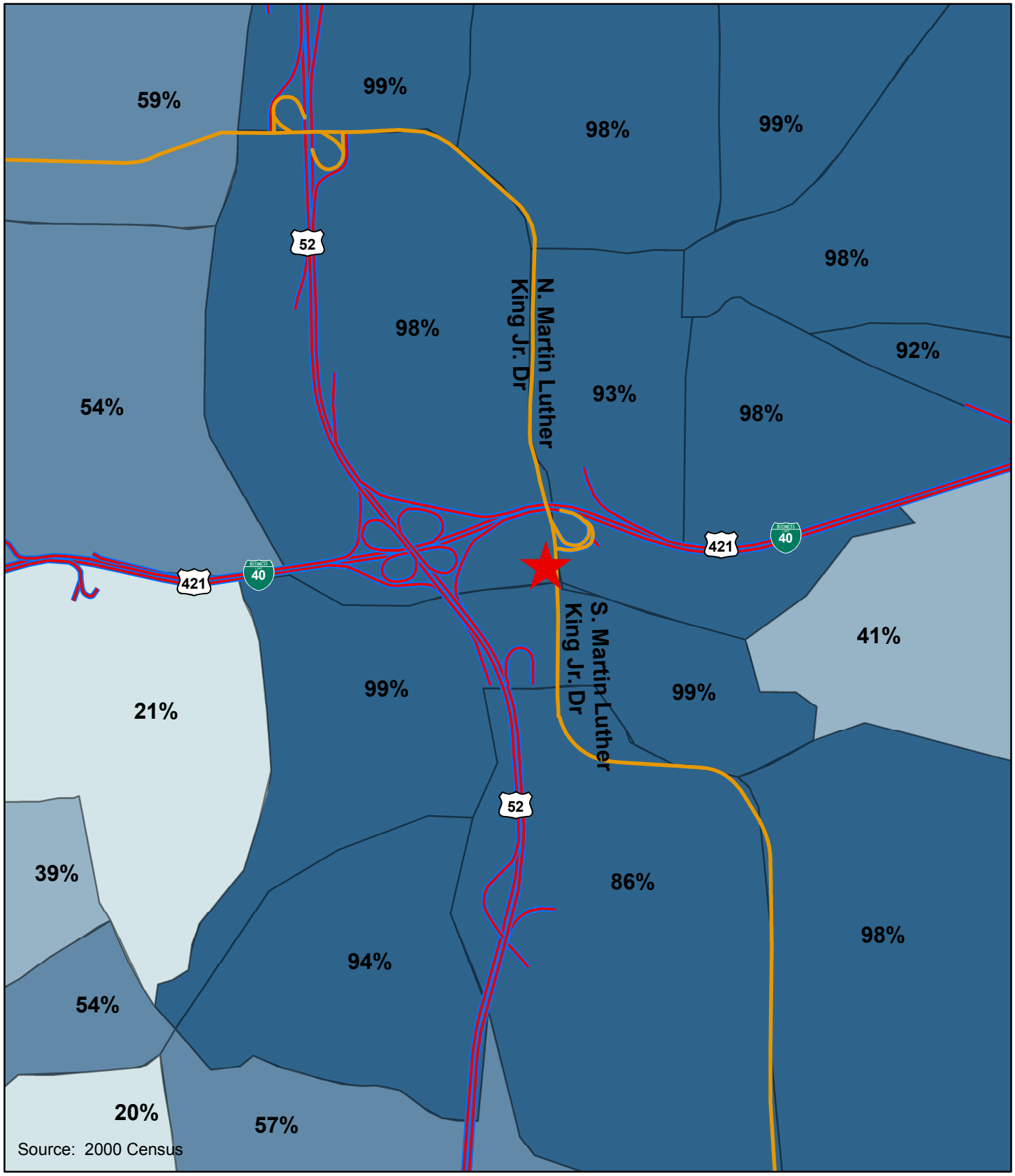
Construction noise will occur during the construction of the building, construction of road improvements, and during grading of the site. Noise impacts will take place primarily during daytime hours, and the contractor will comply with local noise regulations.

Air Quality

Temporary degradation of air quality in the project area would result from construction of this project. Measures to control dust, such as sprinkling water on newly graded surfaces and using temporary and permanent seeding and mulching, will be undertaken as required to minimize spread of dust outside the site.

Water Quality

The contractor will develop an erosion and sedimentation control plan to minimize runoff into surface waters or stormwater drainage. The plan will include such measures as silt fences, re-vegetation of graded areas, and other items required by state or local regulations.



N

0 0.125 0.25 Miles

Legend

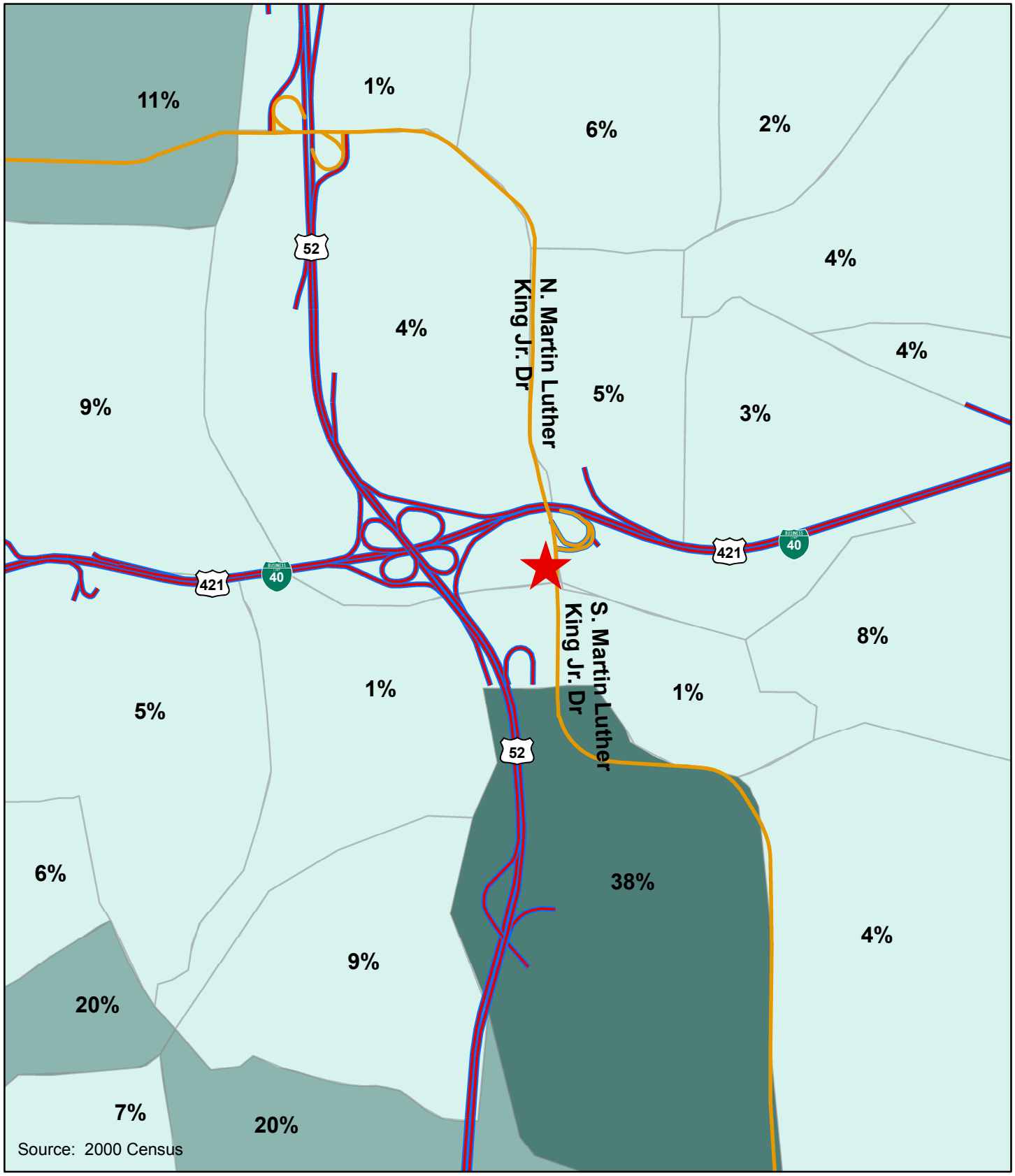
Percent Minority

- 0% - 30%
- 31% - 50%
- 51% - 75%
- 76% - 100%
- Census Block Group
- Union_Station
- Limited Access Hwy

Figure 4-1

Minority Population

Union Station
Winston-Salem, NC



N

0 0.125 0.25 Miles

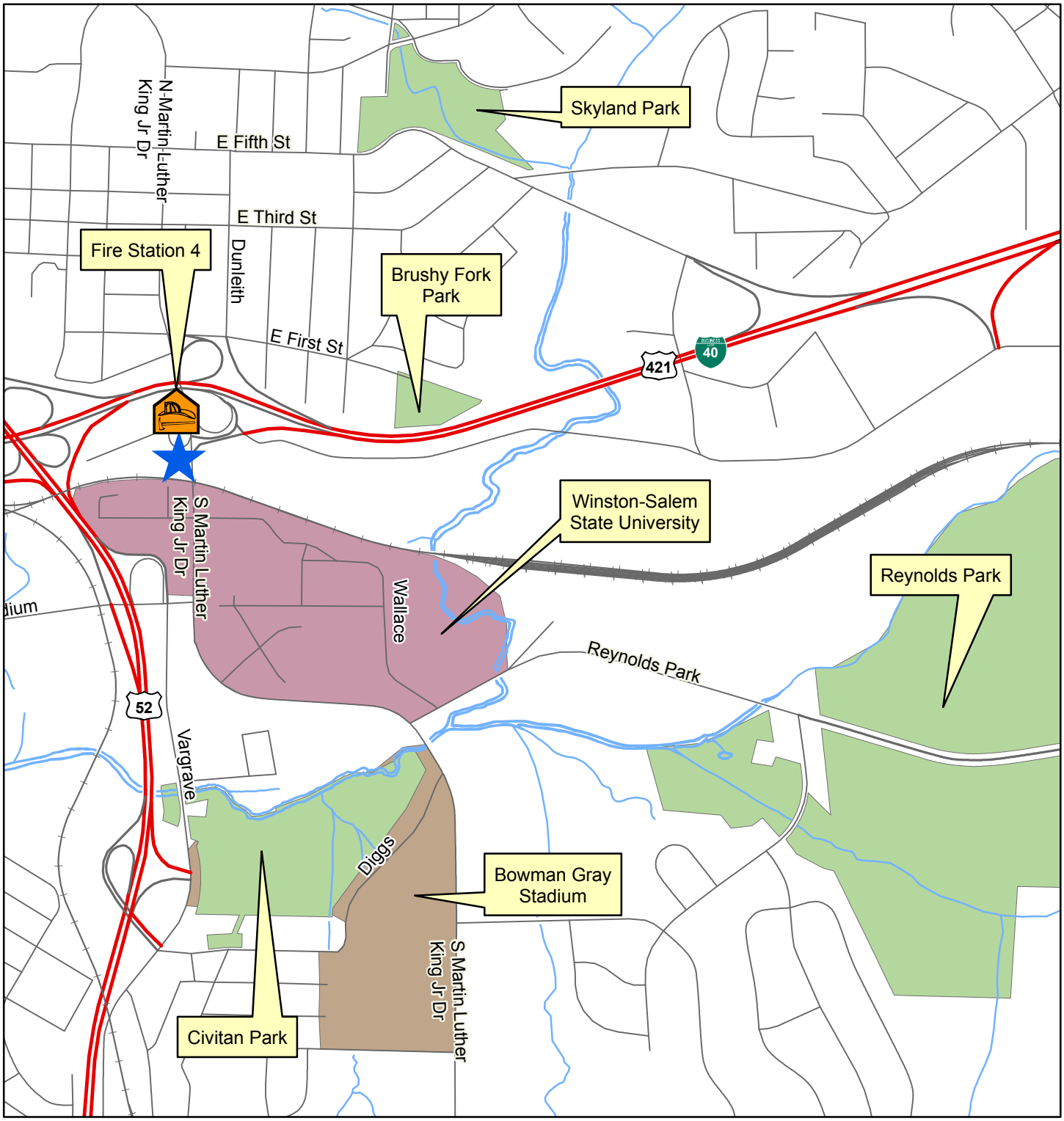
Legend

Percent Hispanic or Latino

- 0% - 10%
- 11% - 20%
- 21% - 40%
- 41% - 100%
- Census Block Group
- Union_Station
- Limited Access Hwy

Figure 4-2
Hispanic or Latino Population

Union Station
Winston-Salem, NC



N

0 0.2 0.4 Miles

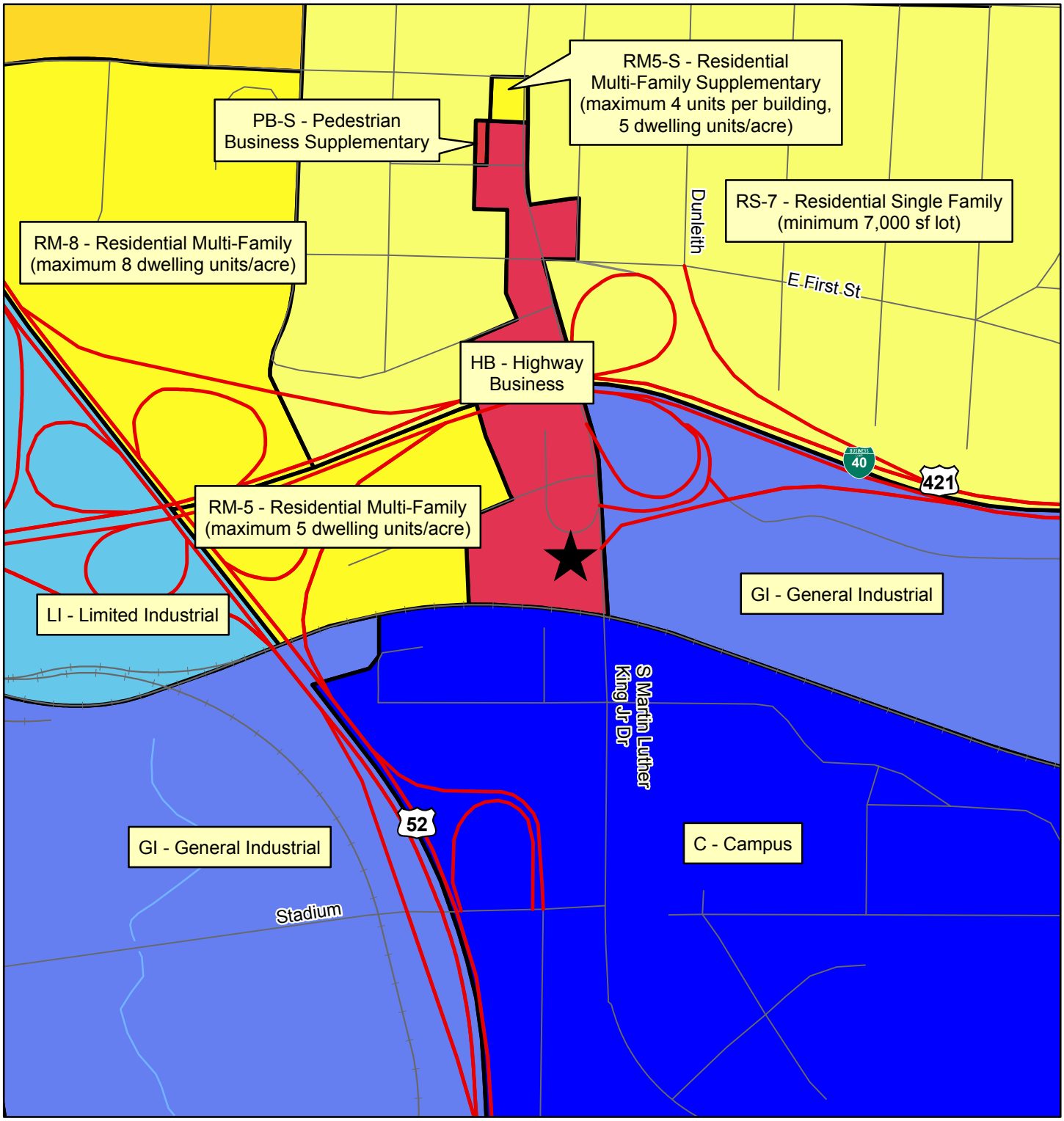
Legend

- Fire Station
- Union Station Site
- Park
- Bowman Gray Stadium
- Winston-Salem State Univ.
- Interstate
- Limited Access Highway
- Collector Street
- Local Road

Figure 4-3

Public Facilities

Union Station
Winston-Salem, NC



N

0 0.05 0.1 Miles

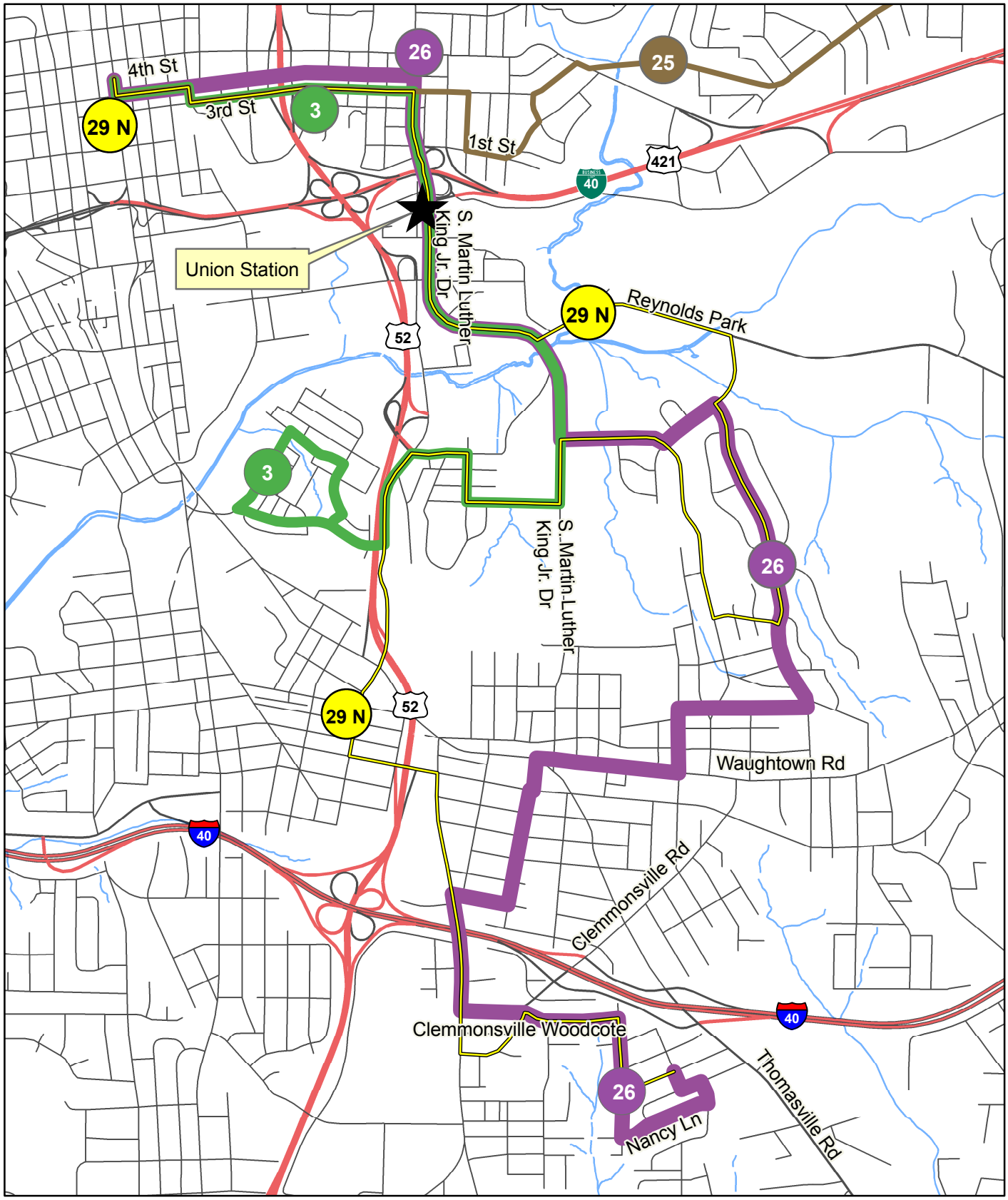
Legend

- Zoning District Boundary
- Interstate
- Limited Access Highway
- Collector Street
- Local Road

Figure 4-4

Zoning

Union Station
Winston-Salem, NC



N

0 0.25 0.5 Miles

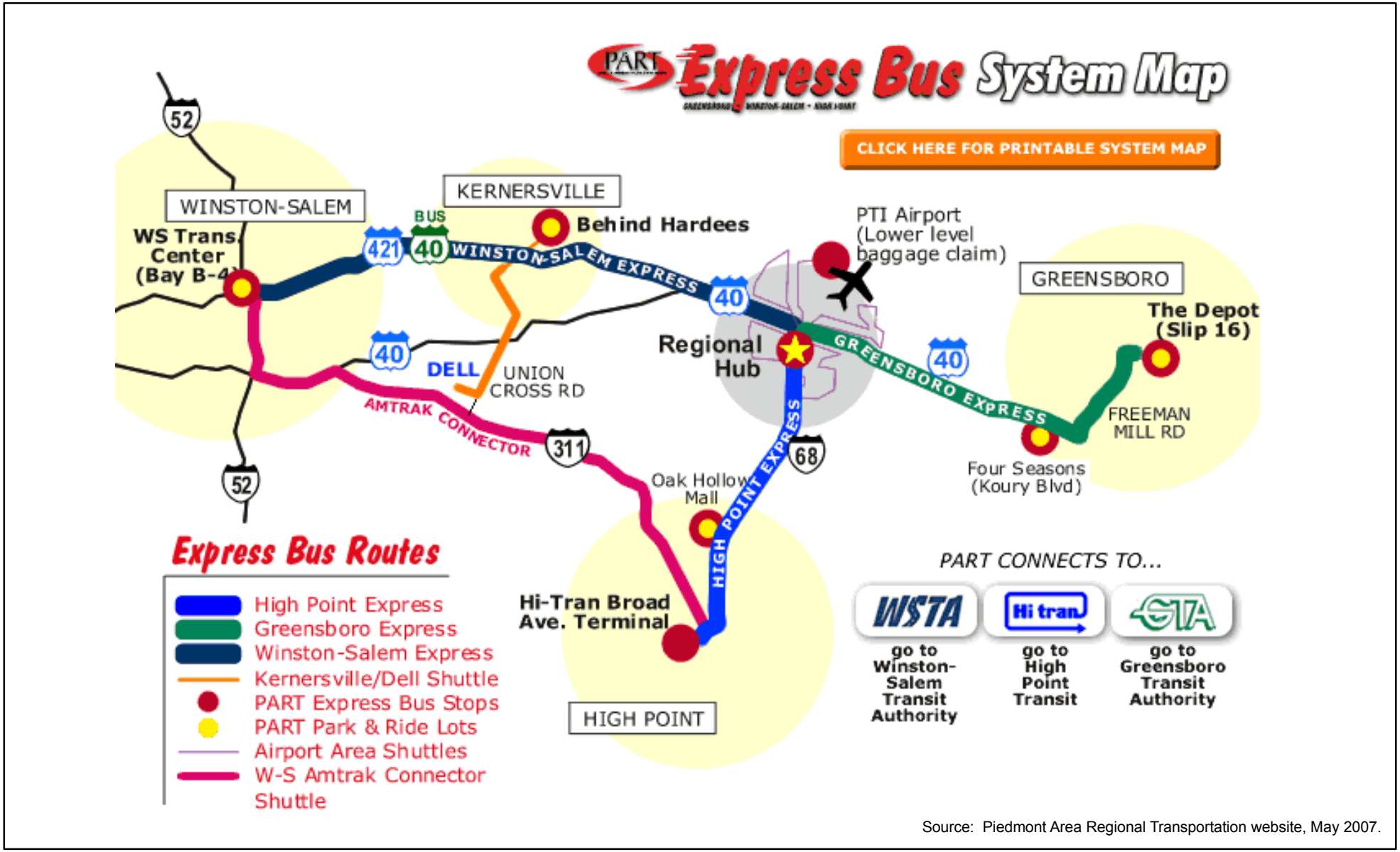
Legend

- Route 3
- Route 25
- Route 26
- Route 29 NIGHT
- Interstate
- Limited Access Highway
- Collector Street
- Local Road

Figure 4-5

WSTA Routes for S. Martin Luther King Jr. Drive

Union Station
Winston-Salem, NC



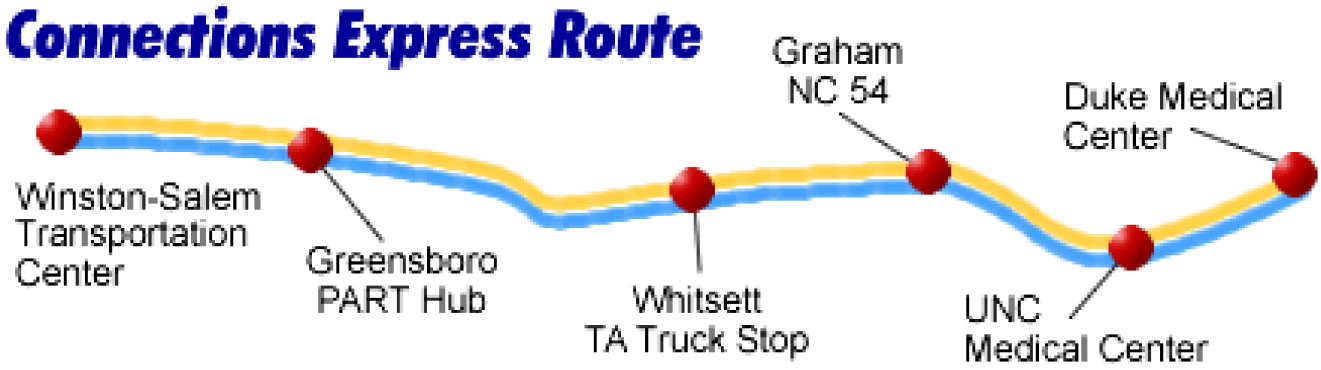
Source: Piedmont Area Regional Transportation website, May 2007.

N

NOT TO SCALE

Figure 4-6a
PART Express Bus and Shuttle Routes

Union Station
Winston-Salem, NC



DAILY SCHEDULE			
AM Route		PM Route	
W-S Transportation Ctr.	6:30 am	W-S Transportation Ctr.	11:30 am
PART Hub	7:00 am	PART Hub	12:00 pm
TA Truck Stop	7:30 am	TA Truck Stop	12:30 pm
NC 54	7:45 am	NC 54	1:00 pm
UNC Hospital	8:30 am	UNC Hospital	1:30 pm
Duke Hospital	9:10 am	Duke Hospital	2:10 pm
AM Route (Returns)		PM Route (Returns)	
Duke Hospital	11:45 am	Duke Hospital	4:15 pm
UNC Hospital	12:15 pm	UNC Hospital	5:05 pm
NC 54	12:40 pm	NC 54	5:30 pm
TA Truck Stop	1:00 pm	TA Truck Stop	5:50 pm
PART Hub	1:30 pm	PART Hub	6:30 pm
W-S Transportation Ctr	2:00 pm	W-S Transportation Ctr	7:00 pm

HOW MUCH DOES IT COST?

There is no charge to use this service if you are a client of your county transportation service. Call your local transportation services office for details.

If you are not a county transportation client, please see the chart below.

ONE WAY TRIP RATES		
Locations	General Public	Elderly (60 years), disabled and students*
W-S Transportation Ctr.	$14.00	$ 7.00
PART Hub	$12.00	$ 6.00
TA Truck Stop	$10.00	$ 5.00
NC 54	$ 8.00	$ 4.00

Source: Piedmont Area Regional Transportation website, May 2007.

N

NOT TO SCALE

Legend

Figure 4-6b

PART Medical Center Routes

Union Station
Winston-Salem, NC

Front of Union Station

Rear of Union Station and
Norfolk Southern RR right of way

West side of Union Station
Stairs show the steep slope

Figure 4-7a
Photographs

Union Station
Winston-Salem, NC

Photo taken from Excelsior Street looking at the off-ramp from westbound I-40. Southbound cars would exit into a roundabout.

Looking south along S. Martin Luther King Jr. Drive at Excelsior Street.

An example of potential hazardous waste at the site. Drums are stored on the west side of the building.

Figure 4-7b
Photographs

Union Station
Winston-Salem, NC

5.0 Public Involvement and Agency Coordination

Three stakeholder meetings have been held. The first meeting was held at the Winston-Salem City Hall South building on June 27, 2006, from 10:30am – 12:30pm. The purpose of the meeting was to provide the following information about the project:

- A brief background and the purpose of the project;
- Conceptual site plans; and
- Information about the scope of the project, including the environmental document and the Phase I Environmental Site Assessment.

Present were representatives of the following stakeholders: Davis Garage, the City of Winston-Salem, WSTA, City-County Planning, NCDOT Public Transportation, Allied Commercial Realty, Excelsior Street Development, Walter Robbs Callahan and Pierce, David E. Gall Architects, and Kimley-Horn and Associates.

The second stakeholder meeting occurred on June 30, 2006, from 11:00am – 12:10pm at the NCDOT Transportation Building in Raleigh. This meeting was held primarily for the benefit of the NCDOT Rail Division, a representative from which was unable to attend the first meeting. In addition to a representative from the Rail Division, a representative from the NCDOT Public Transportation Division also attended this meeting, which was conducted by Kimley-Horn and Associates, Inc. Meeting discussion included project background and information about the environmental document. The NCDOT Rail Division provided information about the Piedmont Triad Research Park (PTRP) and its impact on the rail system. PTRP includes approximately 200 acres of land just east of downtown Winston-Salem and west of US 52.

The third stakeholder meeting occurred at the Winston-Salem City Hall South building on August 22, 2006, from 10:30am – 12:00pm. The purpose of the meeting was to provide an update on the status of the project. Field work for the Existing Conditions report and for the Phase I Environmental Site Assessment (ESA) had been finished, and preliminary findings from the Phase I ESA were distributed. Much discussion centered around the alternative conceptual site plans that were provided, including the roundabout alternative.

Present were representatives of the following stakeholders: Davis Garage, the City of Winston-Salem, NCDOT Division 9, NCDOT Rail Division, Atkins Community Development Corporation, Winston-Salem State University, Excelsior Street Development, Walter Robbs Callahan and Pierce, David E. Gall Architects, and Kimley-Horn and Associates.

On August 28, 2006, a presentation of the project was made to church members and neighbors in the Excelsior street area. The presentation was held at the Ishi Pentecostal Temple. The City Council Member representing the area, Joycelyn Johnson, was there as were members of City staff and the press. Approximately 20-25 people attended. Response to the project was favorable.

On September 28, 2006, the project was presented at a Town Hall meeting held by City Council Member Johnson. The meeting was held at the Sedge Garden Recreation Center. Approximately 75-80 people attended, and members of the press attended. Response to the project was very favorable.

On November 16, 2006, the project was presented at a Community Meeting of residents from the Northeast Ward. The Council Member from that ward, Vivian Burke, was in attendance. Approximately 20 people attended the meeting. Response to the project was favorable.

On July 15, 2008, there will be an advertised public meeting as part of the Winston-Salem Public Works Committee Meeting. A presentation will be given summarizing the proposed project, the results of the Limited Phase II Environmental Site Assessment, and the relationship between this proposed project and the prospective private development.

On August 21, 2008, a similar presentation will be given to the Winston-Salem Urban Area Metropolitan Planning Organization (WSMPO), the WSMPO Transportation Advisory Committee, and the WSMPO Transportation Technical Committee.

6.0 References

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Appendix A
Agency Coordination Letters

Appendix B
Preliminary Conceptual Design Phase Drawings

Appendix C
Traffic Analysis

Appendix D
Construction Cost Estimates

Appendix E
Flood Insurance Rate Maps

Appendix F
National Wetlands Inventory Map

Appendix A

Agency Coordination Letters

North Carolina Department of Environment and Natural Resources – Natural Heritage Program
Mr. Harry E. LeGrand
August 17, 2006

North Carolina Department of Cultural Resources – State Historic Preservation Office
Mr. Peter Sandbeck
September 1, 2006

North Carolina Department of Cultural Resources – State Historic Preservation Office
Mr. Peter Sandbeck
June 19, 2008

United States Department of the Interior – Fish and Wildlife Service
Mr. Brian P. Cole
September 18, 2006

Winston-Salem/Forsyth County Inspections Division
Mr. Scott Frye
June 19, 2008

NCDENR

North Carolina Department of Environment and Natural Resources

Michael F. Easley, Governor

William G. Ross Jr., Secretary

Kimley-Horn & Associates, Inc
Chesapeake

August 17, 2006

AUG 2 1 2006

Ms. Mercedes Holland
Kimley-Horn and Associates, Inc.
501 Independence Parkway, Suite 300
Chesapeake, VA 23320

Subject: Union Station Project Site; 300 South Martin Luther King Junior Drive, Winston-Salem, Forsyth County, NC

Dear Ms. Holland:

The Natural Heritage Program has no record of rare species, significant natural communities, or significant natural heritage areas at the site nor within a mile of the project area. Although our maps do not show records of such natural heritage elements in the project area, it does not necessarily mean that they are not present. It may simply mean that the area has not been surveyed. The use of Natural Heritage Program data should not be substituted for actual field surveys, particularly if the project area contains suitable habitat for rare species, significant natural communities, or priority natural areas.

You may wish to check the Natural Heritage Program database website at www.ncnhp.org for a listing of rare plants and animals and significant natural communities in the county and on the topographic quad map. Alternatively, the NC Center for Geographic Information and Analysis (CGIA) provides digital Natural Heritage data online on a cost recovery basis. Subscribers can get site specific information on GIS layers with Natural Heritage Program rare species occurrences and Significant Natural Heritage Areas. The CGIA website provides Element Occurrence (EO) ID numbers (instead of species name), and the data user is then encouraged to contact the Natural Heritage Program for detailed information. This service allows the user to quickly and efficiently get site specific NHP data without visiting the NHP workroom or waiting for the Information Request to be answered by NHP staff. For more information about data formats, pricing structure and ordering procedures, visit http://www.cgia.state.nc.us/cgdb/datalist.html, or call CGIA Production Services at (919) 733-2090.

Please do not hesitate to contact me at 919-715-8697 if you have questions or need further information.

Sincerely,

Harry E. LeGrand, Jr.

Harry E. LeGrand, Jr., Zoologist
Natural Heritage Program

1601 Mail Service Center, Raleigh, North Carolina 27699-1601
Phone: 919-733-4984 • FAX: 919-715-3060 • Internet: www.enr.state.nc.us

North Carolina Department of Cultural Resources

State Historic Preservation Office

Peter B. Sandbeck, Administrator

Michael F. Easley, Governor
Lisbeth C. Evans, Secretary
Jeffrey J. Crow, Deputy Secretary

Office of Archives and History
Division of Historical Resources
David Brook, Director

September 1, 2006

Mercedes Holland
Kimley-Horn and Associates
Suite 300
510 Independence Parkway
Chesapeake, VA 23320

Re: 300 South Martin Luther King Drive, Winston-Salem, Forsyth County, ER 06-2258

Dear Ms. Holland:

Thank you for your letter of July 28, 2006, concerning the above project.

We have conducted a review of the proposed undertaking and are aware of no historic resources that would be affected by the project. Therefore, we have no comment on the undertaking as proposed.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763, ext. 246. In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

Peter B. Sandbeck by mpm

Peter Sandbeck

North Carolina Department of Cultural Resources

State Historic Preservation Office

Peter B. Sandbeck, Administrator

Michael F. Easley, Governor
Lisbeth C. Evans, Secretary
Jeffrey J. Crow, Deputy Secretary

Office of Archives and History
Division of Historical Resources
David Brook, Director

June 19, 2008

Pam Barth
Kimley-Horn and Associates, Inc.
PO Box 33068
Raleigh, NC 27636-3068

Re: (former) Union Station, 300 South Martin Luther King Jr. Drive, Winston-Salem, Forsyth County, ER 06-2258

Dear Ms. Barth:

As requested in your letter of May 28, 2008, we confirm that the (former) Union Station located at 300 South Martin Luther King Jr. Drive in Winston-Salem, NC is listed on the National Register of Historic Places. That listing occurred on December 24, 1995 and encompasses the block bounded by Martin Luther King Jr. Drive, Excelsior Street, Rosemond Street, and the railroad tracks to the south.

We reviewed the submitted material including the draft Environmental Assessment, the Existing Conditions Survey prepared by David E. Gall, Architect, and the site and pedestrian bridge reconstruction plans. It appears the overall scope of the proposed project as described in the documents, including the rehabilitation of the historic Union Station following *The Secretary of the Interior's Standards for Rehabilitation*, and the reconstruction of the pedestrian bridge to access the tracks, will not have an adverse effect on the National Register-listed property.

We do have a recommendation to make regarding the design of the reconstructed pedestrian bridge. Although the accurate reconstruction of the original design with it graceful arched spans and high degree of detailing would no doubt be prohibitive, we encourage consideration of incorporation of some level of detailing which would recreate a sense of the arched spans over the railroad tracks.

We look forward to offering additional comments for the rehabilitation of the station and the reconstruction of the pedestrian bridge as the plans are further developed and submitted to us for review.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919/807-6579. In all future communication concerning this project, please cite the above-referenced tracking number.

Sincerely,

Renee Gledhill-Earley

Peter Sandbeck

cc: Leanne Pegram, HPC
David Gall, AIA
Alan Pauls, NCDOT Rails

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Asheville Field Office
160 Zillicoa Street
Asheville, North Carolina 28801

September 18, 2006

Kimley-Horn & Associates, Inc.
Chesapeake

SEP 20 2006

Ms. Mercedes Holland
Environmental Scientist
Kimley-Horn and Associates, Inc.
501 Independence Parkway, Suite 300
Chesapeake, Virginia 23320

Dear Ms. Holland:

Subject: Site Assessment for 1.83-Acre Development Located at 300 South Martin Luther King Jr. Drive in Winston-Salem, Forsyth County, North Carolina

In your letter dated July 28, 2006, you requested our comments about the subject project. **(Please note that you sent the letter to our Raleigh Field Office. They forwarded it to us, and we received it August 23, 2006. In the future you would receive our responses in a more timely fashion if requests were sent to the appropriate office. To assist you with this, enclosed is a list of North Carolina's counties showing which ones are handled by our respective offices in North Carolina.)** We have reviewed the information you presented and are providing the following comments in accordance with the provisions of the Fish and Wildlife Coordination Act, as amended (16 U.S.C. 661-667e), and section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543) (Act).

Your letter did not include specific construction plans for the development of the subject site. Based on aerial photography provided by the Forsyth County GIS web site, the project site consists of a commercial building and parking area.

Endangered Species. According to our records and a review of the information provided, we concur with your conclusion that no listed species or their habitats occur on the site. Therefore, we believe the requirements under section 7 of the Act are fulfilled. However, obligations under section 7 of the Act must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not previously considered, (2) this action is subsequently modified in a manner that was not considered in this review, or (3) a new species is listed or critical habitat is determined that may be affected by the identified action.

We appreciate the opportunity to provide these comments. If we can be of assistance or if you have any questions, please do not hesitate to contact Mr. Bryan Tompkins of our staff at 828/258-3939, Ext. 240. In any future correspondence concerning this project, please reference our Log Number 4-2-06-424.

Sincerely,

Brian P. Cole
Field Supervisor

Enclosure

NORTH CAROLINA COUNTIES

ASHEVILLE FIELD OFFICE WORK AREA:

Alexander
Alleghany
Anson
Ashe
Avery
Buncombe
Burke
Cabarrus
Caldwell
Catawba
Cherokee
Clay
Cleveland
Davidson
Davie
Forsyth
Gaston
Graham
Haywood
Henderson
Iredell
Jackson
Lincoln
Macon
Madison
McDowell
Mecklenburg
Mitchell
Polk
Rowan
Rutherford
Stanly
Stokes
Surry
Swain
Transylvania
Union
Watauga
Wilkes
Yadkin
Yancey

Contact Information:
Asheville Field Office
U.S. Fish and Wildlife Service
160 Zillicoa Street
Asheville, North Carolina 28801
Phone: 828/258-3939
Fax: 828/258-5330

RALEIGH FIELD OFFICE WORK AREA:

Alamance
Beaufort
Bertie
Bladen
Brunswick
Camden
Carteret
Caswell
Chatham
Chowan
Columbus
Craven
Cumberland
Currituck
Dare
Duplin
Durham
Edgecombe
Franklin
Gates
Granville
Greene
Guilford
Halifax
Harnett
Hertford
Hoke
Hyde
Johnston
Jones
Lee
Lenoir
Martin
Montgomery
Moore
Nash
New Hanover
Northampton
Onslow
Orange
Pamlico
Pasquotank
Pender
Perquimans
Person
Pitt
Randolph
Richmond
Robeson
Rockingham
Sampson
Scotland
Tyrrell
Vance
Wake
Warren
Washington
Wayne
Wilson

Contact Information:
Raleigh Field Office
U.S. Fish and Wildlife Service
P.O. Box 33726
Raleigh, North Carolina 27636-3726
Phone: 919/856-4520
Fax: 919/856-4556

ADMINISTRATIVE LETTER # 124296

ZONING LETTER

100 East First Street
Winston-Salem, NC 27101
(336) 727-2628

Property Address: 300 S MARTIN LUTHER KING J DR
WINSTON-SALEM, NC

Tax Block: 0528
Tax Lot: 102C;105;102

Zoning District: HB

Map Page: 636854

Owner:
HLD PROPERTIES LLC
300 MARTIN LUTHER KING JR DR
WINSTON-SALEM, NC 27101-0000

Applicant:
KIMLEY-HORN AND ASSOCIATES, INC.
ATTN: LARRY MEISNER
3001 WESTON PARKWAY
CARY, NC 27513

To Whom It May Concern:

I am in receipt of a request from Pam Barth of your office for zoning information as to whether certain proposed uses for the property referenced above would be permitted under current zoning regulations. As of this date, the zoning maps in the Inspections Division show the subject property to be located in a HB (Highway Business) zoning district.

In the request for information, Ms. Barth indicated the following concerning what is known about the proposed uses of the property and I will try to address the short and long term proposals separately:

"Proposed Uses - Short Term
The primary proposed use is as a bus facility. There are approximately 27,600 SF total designated as lease space in the architect's plans. (These are 30% plans and are subject to change.) The expectation is that most of the lease space would be office/institutional use (e.g. WSDOT, PART, Amtrak, etc.) and that a small amount would be traveler-oriented retail, such as a newsstand and/or snack bar/restaurant, with possibly some other uses such as a bookstore, coffee shop, and/or cleaners.

Proposed Uses - Long Term
A possible future use includes rail. Possible services include commuter rail between Winston-Salem and Greensboro, a rail link to existing Amtrak lines that pass through Greensboro, and/or a rail link to the proposed Southeast High Speed Rail line that will also pass through Greensboro. Plans for rail service at Union Station have not been finalized and are not definite."

As for the short-term use of the property as a bus facility, this use would likely be classified as a "Bus or Taxi Terminal" for zoning purposes. This use is allowed in the existing HB district with the issuance of a zoning or building permit. It is also possible that the other uses you mention (offices, light retail, etc.) could be considered as accessory to the principal use of a Bus or Taxi Terminal, depending on certain factors, such as how the interior space is developed. Even if required to be permitted separately, each of the likely use classifications for these uses are also permitted in the HB district.

Classification of the long-term use for rail services is more problematic. The current zoning regulations do not have a use classification specifically for rail services, whether they be passenger or freight oriented. It is possible that such a use could be classified as an existing use that is most closely related, such as "Public Airport". That use is not permitted in the HB district. It is more likely that any future use for rail service would result in a new use being added to the zoning regulations, or the property being re-zoned, or both. It is impossible to speculate further with any degree of accuracy on that long-term proposal at this point, as the entire development proposal is currently in a conceptual stage.

Any future re-development of the subject property would, of course, require plans to be submitted for a comprehensive review. This letter does not attempt to address various problems or development obstacles inherent in the property that may surface during a review process, such as those relating to building code and parking requirements.

Please contact Scott Frye at (336) 727-2625 if further information is needed regarding this matter.

This document is provided by the Winston-Salem/Forsyth County Inspections Division in response to your request regarding the above described property, and serves as official confirmation of the information stated above, as of the date shown.

SCOTT FRYE

Processed By

Issue Date: 6/19/2008

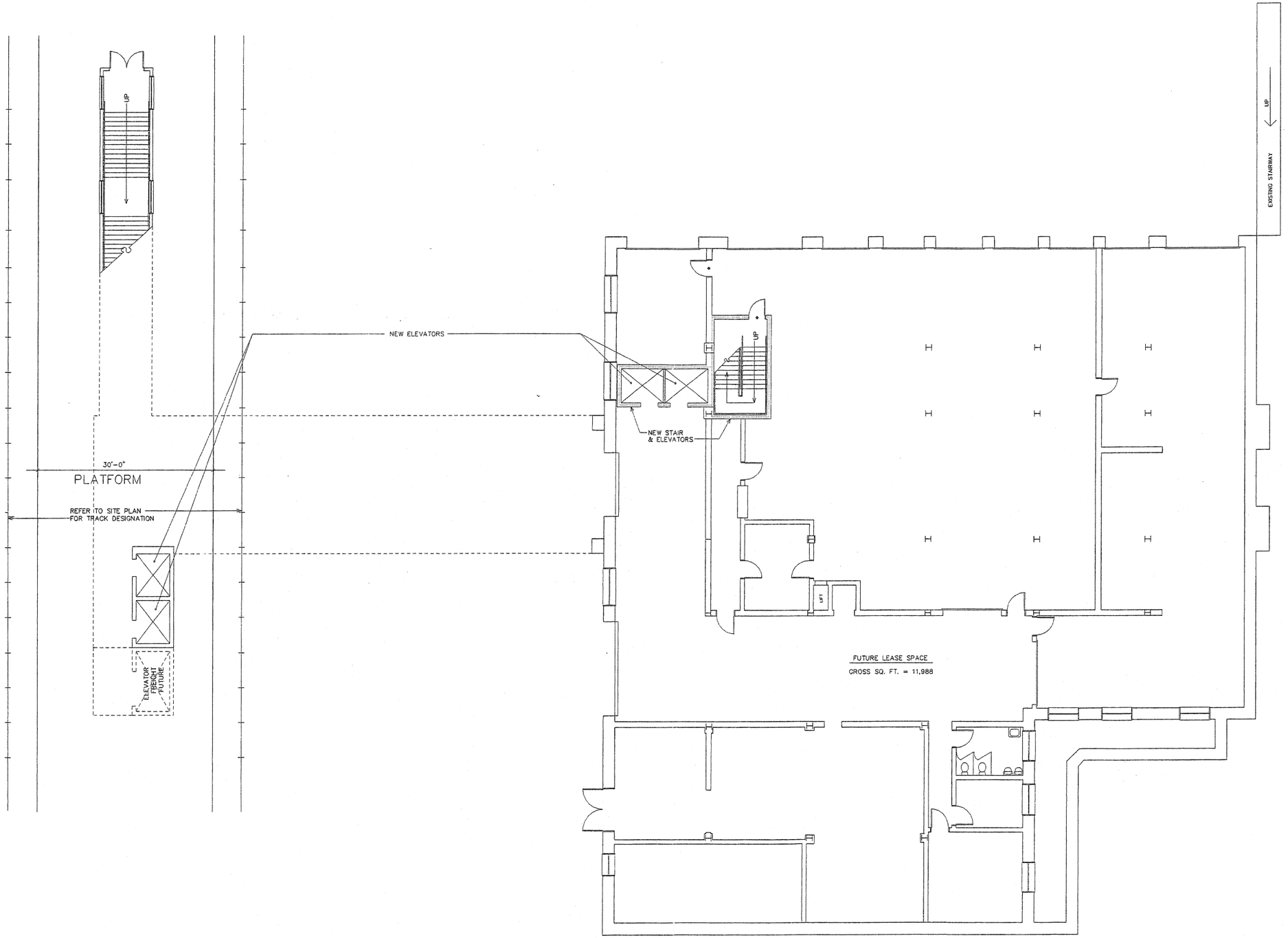
SCOTT FRYE

Issued By

Authorized Signature

Appendix B

Preliminary Conceptual Design Phase Drawings
David E. Gall, Architect, P.A.
April 23, 2007



PROPOSED LOWER FLOOR PLAN

SCALE: 1/8"=1'-0"

NORTH

David E. Gall, Architect, P.A.
918 West Fifth Street
Winston-Salem, NC 27101
Telephone (336) 773-1213
Facsimilie (336) 773-1298

Revisions

Preliminary Conceptual Design Phase
Union Station Rehabilitation
Winston-Salem, North Carolina

Project No.
2609

Date
April 24, 2007

Sheet
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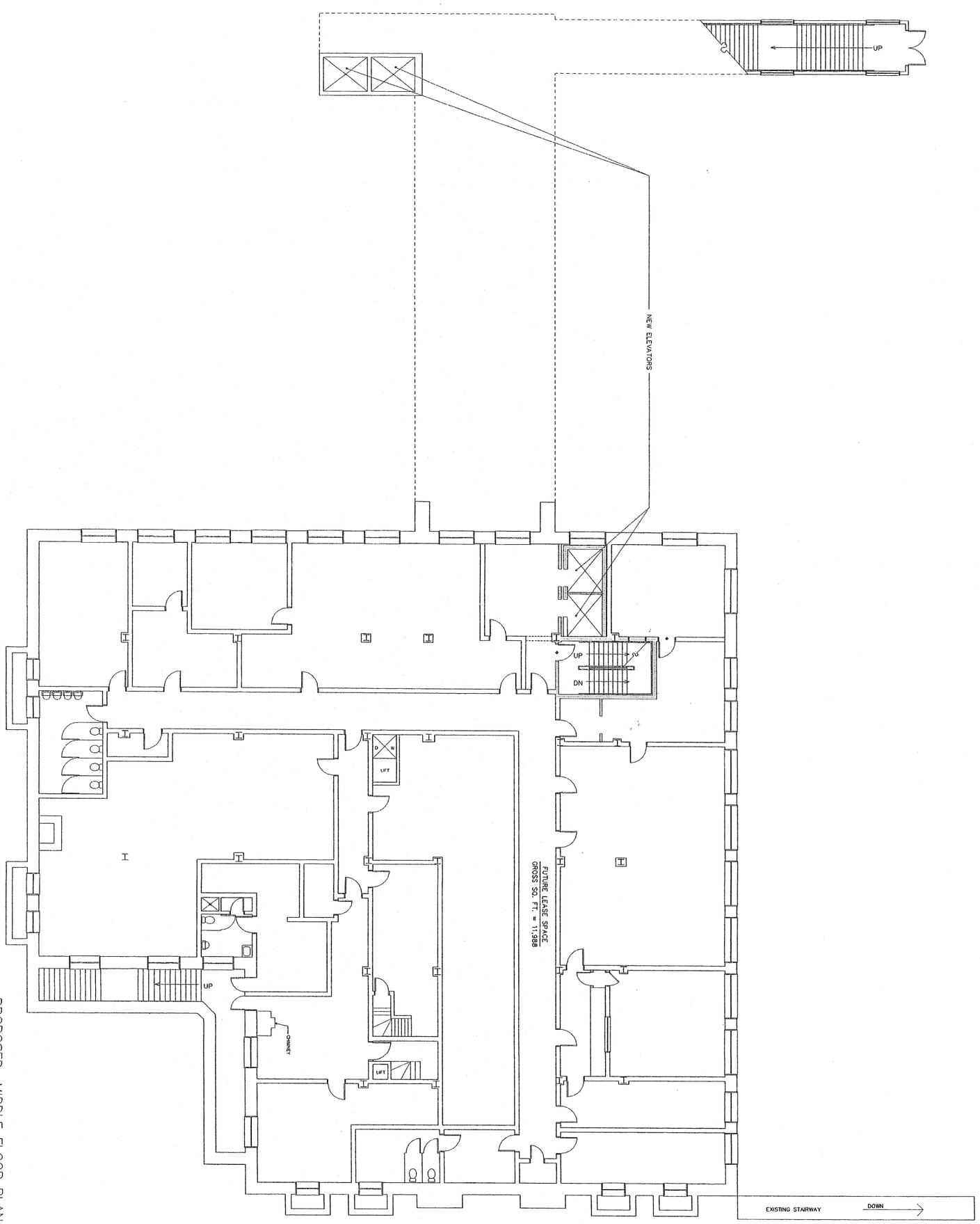
Of



PROPOSED: MIDDLE FLOOR PLAN

SCALE: 1/8"=1'-0"

NORTH

Sheet
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Of

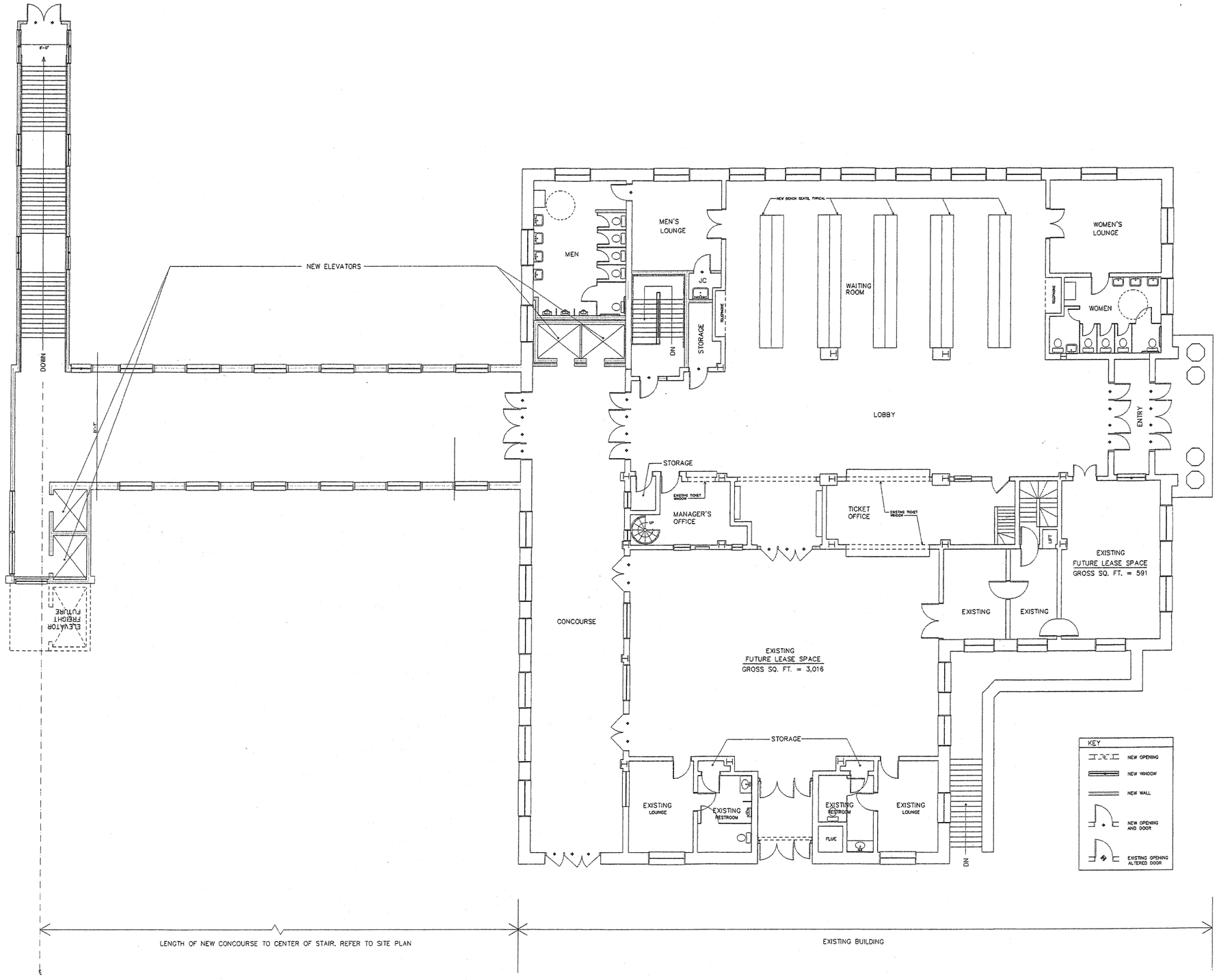
Date
April 24, 2007

Project No.
2609

Preliminary Conceptual Design Phase
Union Station Rehabilitation
Winston-Salem, North Carolina

Revisions

David E. Gall, Architect, P.A.
938 West Fifth Street
Winston-Salem, NC 27101
Telephone (336) 773-1213
Facsimilie (336) 773-1298



PROPOSED: UPPER FLOOR PLAN
WITH CONCOURSE

SCALE: 1/8"=1'-0"

NORTH

David E. Gall, Architect, P.A.
908 West Fifth Street
Winston-Salem, NC 27101
Telephone (336) 773-1213
Facsimile (336) 773-1298

Revisions

Preliminary Conceptual Design Phase
Union Station Rehabilitation
Winston-Salem, North Carolina

Project No.
2609

Date
April 23, 2007

Sheet
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Of

Appendix C

Traffic Analysis
Memorandum to Mr. Stan Polanis
October 20, 2006

Kimley-Horn
and Associates, Inc.

Memorandum

P.O. Box 33068
Raleigh, North Carolina
27636-3068

To: Stan Polanis

From: Larry Meisner

Date: October 20, 2006

Subject: Union Station Intersection and Roundabout Analysis

Union Station is located near the intersection of Martin Luther King Jr. Drive, Excelsior Street, and the I-40 business eastbound ramps in Winston-Salem, North Carolina. The intersection also provides access to Lowery Street, and provides primary access in and out of the site. Currently the intersection is signalized; however, a roundabout was proposed as part of the Union Station rehabilitation project. This memorandum evaluates the operation of the intersection under both signalized conditions and with a roundabout.

The Union Station project will involve converting the station building from its current use as an auto-repair facility to a transit terminal, and may also involve private development on the site. This development is proposed to include 107 condominium units, 44,320 square feet of office space, and 58,550 square feet of specialty retail space in addition to the transit facility.

The traffic generation potential of the Union Station development was determined using traffic generation rates published in *Trip Generation* (Institute of Transportation Engineers, Seventh Edition, 2003). Internal capture was assumed between the retail, residential, and office land uses. A 3 percent internal capture rate was used for the AM peak hour, and a 15 percent internal capture rate was used for the PM peak hour. In addition, a 10% transit capture rate was assumed since some trips into and out of the development are likely to use the

TEL 919 677 2000
FAX 919 677 2050

rail and bus transit options provided at Union Station, and other trips will be pedestrian trips associated with Winton-Salem State University. The trip generation potential for this development is shown in **Table 1**.

Table 1
ITE Traffic Generation
(Vehicles)

Land Use Code	Land Use	Daily		AM Peak Hour		PM Peak Hour	
		In	Out	In	Out	In	Out
232	High-Rise Condominium (107 d.u.)	314	314	11	49	32	20
710	General Office Space (44,320 s.f.)	357	357	86	12	11	55
814	Specialty Retail (58,550 s.f.)	1,271	1,271	26	16	71	91
93	Light Rail Transit Station (125 parking spaces)	157	157	107	27	90	65
Subtotal		**2,099**	**2,099**	**230**	**104**	**204**	**231**
Minus Internal Capture		262	262	7	3	31	35
Minus Transit Capture		183	183	22	10	17	20
Net New Trips		**1,654**	**1,654**	**201**	**91**	**156**	**176**

The proposed development has the potential to generate 156 entering trips and 176 exiting trips during the PM peak hour. These trips were distributed based on the existing traffic counts. It is estimated that 26% of site traffic will come from the north and 42% from the south on Martin Luther King Jr. Drive, and 16% from both the east and west on I-40 business. Therefore 16% of site traffic will utilize the eastbound ramps at the intersection. The 2015 background traffic volumes were obtained from a traffic study for improvements along Martin Luther King Jr. Drive, which take into account traffic growth and diversion

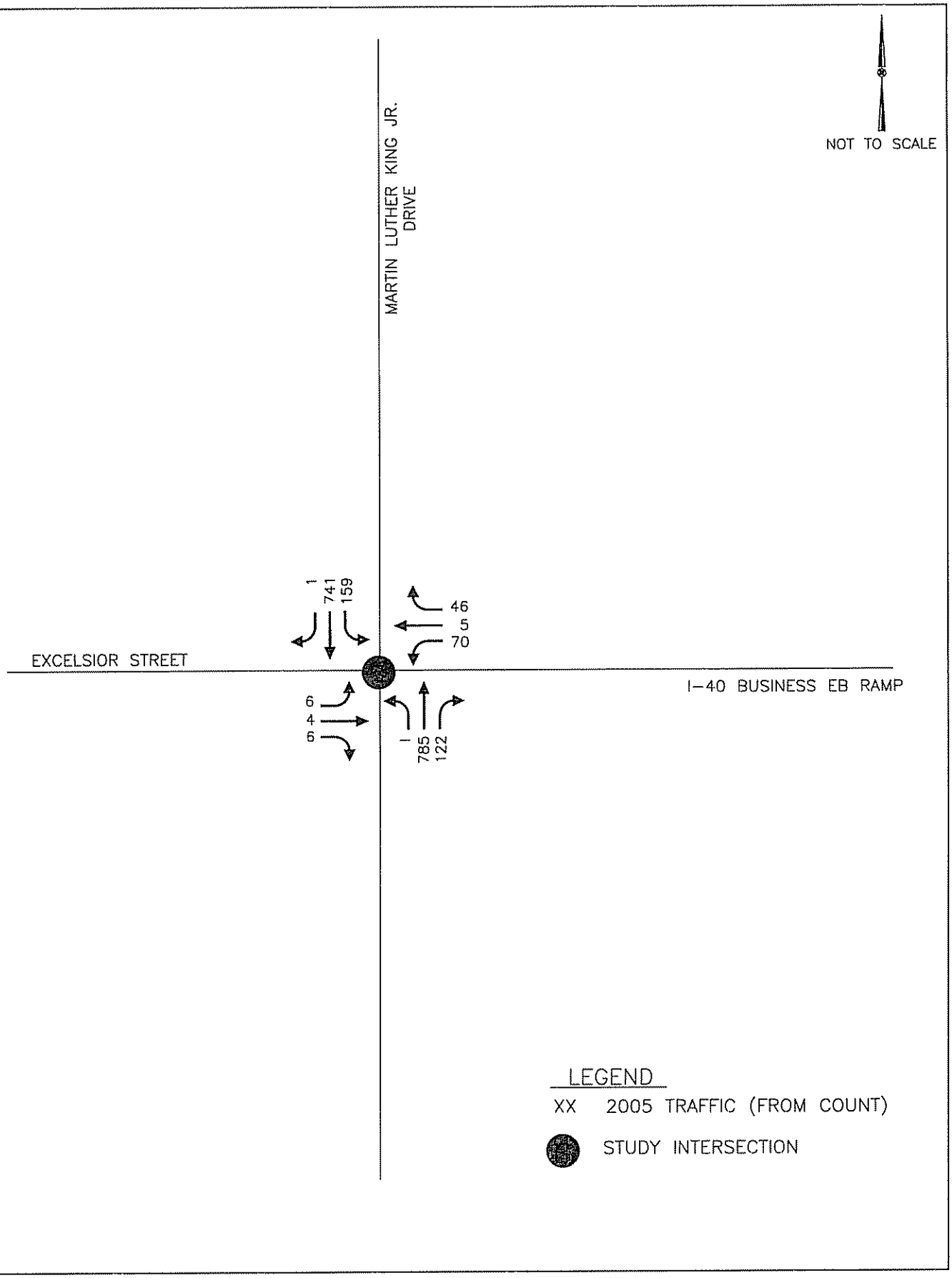
associated with ramp closures along US 52. The existing (2006) traffic is shown in **Figure 1**, while the projected 2015 traffic volumes with site traffic added are shown in **Figure 2**.

The intersection with 2015 traffic volumes was analyzed under both signalized intersection and roundabout conditions. The roundabout analysis assumed that two lanes would be provided through the roundabout for the through movements on Martin Luther King Jr. Drive, while the remainder of the circulating roadway would be a single lane. The roundabout analysis was performed using SIDRA, while the traffic signal analysis used Synchro. The results of the PM peak hour analysis are summarized below in **Table 2.** The output from SIDRA and Synchro are attached.

Table 2
Traffic Capacity Analysis

	Delay (sec/veh)	Level of Service
Traffic Signal	14.2	B
Roundabout	7.7	A

The analysis indicates that while a traffic signal would operate at an acceptable level of service during the PM peak hour in 2015, a roundabout would operate at a better level of service with less overall delay.



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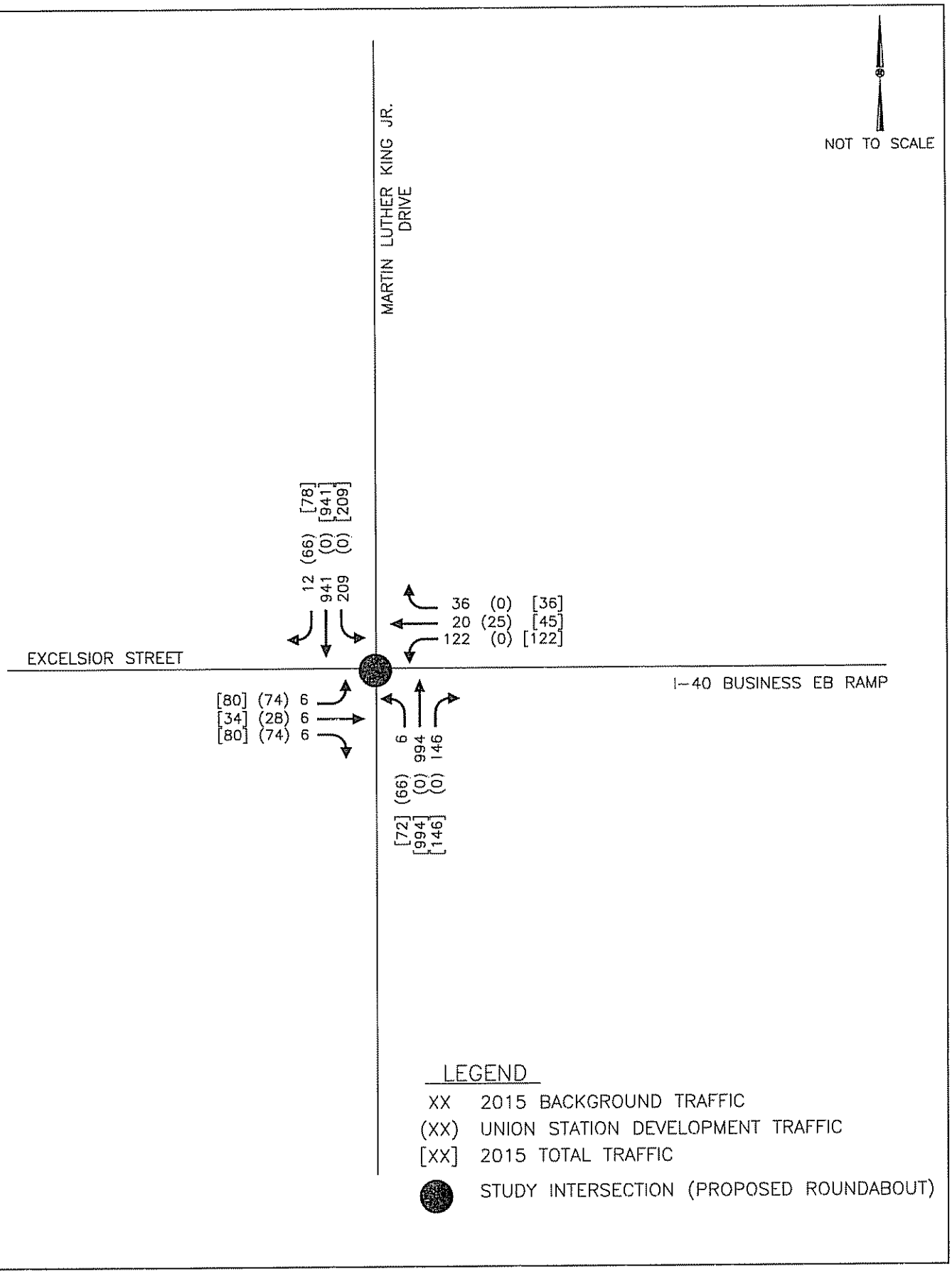
Kimley-Horn and Associates, Inc.

UNION STATION
WINSTON-SALEM, NC

2006 PM PEAK HOUR
TURNING MOVEMENT VOLUMES

FIGURE
1



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Kimley-Horn and Associates, Inc

UNION STATION
WINSTON-SALEM, NC

2015 PM PEAK HOUR
TURNING MOVEMENT VOLUMES

FIGURE
2

Movement Summary

Union Station Roundabout Analysis

2015 Build

Roundabout

Vehicle Movements

Mov No	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (ft)	Prop. Queued	Eff. Stop Rate	Aver Speed (mph)
ML King Blvd NB										
32	L	76	3.9	0.543	15.0	LOS B	138	0.69	0.77	29.0
31	T	1046	4.0	0.541	5.7	LOS A	141	0.68	0.52	32.7
33	R	154	3.9	0.542	7.1	LOS A	141	0.67	0.60	32.0
Approach		**1276**	**4.0**	**0.542**	**6.4**	**LOS A**	**141**	**0.68**	**0.55**	**32.4**
I-40 Bus East Ramps WB										
22	L	128	4.2	0.434	15.3	LOS B	73	0.78	0.95	29.0
22	T	47	4.2	0.434	15.3	LOS B	73	0.78	0.95	29.0
22	R	38	4.2	0.434	15.3	LOS B	73	0.78	0.95	29.0
Approach		**213**	**4.2**	**0.434**	**15.3**	**LOS B**	**73**	**0.78**	**0.95**	**29.0**
ML King Blvd SB										
42	L	220	4.1	0.513	14.1	LOS B	131	0.62	0.71	29.2
41	T	991	4.0	0.513	4.9	LOS A	136	0.60	0.45	33.2
43	R	82	3.7	0.512	6.5	LOS A	136	0.59	0.55	32.3
Approach		**1293**	**4.0**	**0.513**	**6.6**	**LOS A**	**136**	**0.60**	**0.50**	**32.3**
Excelsior Street EB										
12	L	84	3.4	0.432	14.7	LOS B	71	0.79	0.94	29.2
12	T	36	3.4	0.432	14.7	LOS B	71	0.79	0.94	29.2
12	R	84	3.4	0.432	14.7	LOS B	71	0.79	0.94	29.2
Approach		**203**	**3.4**	**0.432**	**14.7**	**LOS B**	**71**	**0.79**	**0.94**	**29.2**
All Vehicles		**2985**	**4.0**	**0.543**	**7.7**	**LOS A**	**141**	**0.66**	**0.58**	**31.8**

akcelik & associates
aaTraffic
aaSIDRA

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I-40 Bus East Ramps WB
ML King Blvd SB
Excelsior Street EB

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3 0		3 0	3.0		3 0	3.0		3 0	3.0	
Lane Util. Factor		1.00		1.00	1 00		1.00	0 95		1.00	0.95	
Frt		0 94		1.00	0 93		1.00	0 98		1 00	0.99	
Flt Protected		0.98		0.95	1.00		0.95	1 00		0 95	1.00	
Satd. Flow (prot)		1690		1736	1705		1736	3405		1736	3431	
Flt Permitted		0 83		0.51	1.00		0.20	1.00		0 12	1.00	
Satd. Flow (perm)		1439		940	1705		366	3405		213	3431	
Volume (vph)	80	34	80	122	45	36	72	994	146	209	941	78
Peak-hour factor, PHF	0 90	0 90	0 90	0 90	0 90	0 90	0.90	0 90	0 90	0 90	0 90	0 90
Adj. Flow (vph)	89	38	89	136	50	40	80	1104	162	232	1046	87
Lane Group Flow (vph)	0	216	0	136	90	0	80	1266	0	232	1133	0
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		14 2		14 2	14.2		46.4	41 1		55 2	45 5	
Effective Green, g (s)		16.2		16 2	16.2		50.4	43.1		57 8	47.5	
Actuated g/C Ratio		0 20		0.20	0 20		0 63	0 54		0.72	0 59	
Clearance Time (s)		5 0		5 0	5.0		5.0	5 0		5 0	5.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		291		190	345		356	1834		377	2037	
v/s Ratio Prot					0 05		0 02	c0 37		c0 09	0.33	
v/s Ratio Perm		c0 15		0 14			0 12			0 36		
v/c Ratio		0 74		0 72	0.26		0 22	0 69		0 62	0 56	
Uniform Delay, d1		29 9		29 8	26 9		6 3	13 5		11 7	9 9	
Progression Factor		1 00		1 00	1.00		0 78	0 75		1 17	0 68	
Incremental Delay, d2		9 8		12 1	0 4		0 3	1 9		2 2	0 8	
Delay (s)		39 7		41 8	27 3		5 2	12 1		15 8	7 5	
Level of Service		D		D	C		A	B		B	A	
Approach Delay (s)		39 7			36 0			11 7			8 9	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM Average Control Delay	14.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0 69		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9 0
Intersection Capacity Utilization	81 8%	ICU Level of Service	D

c Critical Lane Group

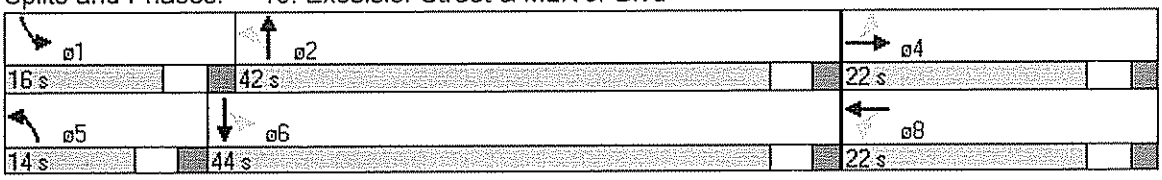
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	75		75	150		0
Storage Lanes	0		0	1		0	1		0	1		0
Total Lost Time (s)	3 0	3 0	3 0	3 0	3 0	3 0	3 0	3 0	3 0	3 0	3 0	3 0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1 00	1 00	1 00	1 00	1 00	1 00	1 00	0 95	0 95	1 00	0 95	0 95
Ped Bike Factor												
Frt		0 944			0 933			0 981			0 988	
Flt Protected		0 980		0 950			0 950			0 950		
Satd. Flow (prot)	0	1690	0	1736	1705	0	1736	3405	0	1736	3430	0
Flt Permitted		0 839		0 539			0 159			0 098		
Satd. Flow (perm)	0	1447	0	985	1705	0	290	3405	0	179	3430	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		41			40			28			16	
Headway Factor	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		526			621			1318			857	
Travel Time (s)		10 2			12 1			25 7			16 7	
Volume (vph)	80	34	80	122	45	36	72	994	146	209	941	78
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0 90	0 90	0 90	0 90	0 90	0 90	0 90	0 90	0 90	0 90	0 90	0 90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	89	38	89	136	50	40	80	1104	162	232	1046	87
Lane Group Flow (vph)	0	216	0	136	90	0	80	1266	0	232	1133	0
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phases	4	4		8	8		5	2		1	6	
Minimum Initial (s)	4 0	4 0		4 0	4 0		4 0	4 0		4 0	4 0	
Minimum Split (s)	17 0	17 0		17 0	17 0		14 0	17 0		14 0	17 0	
Total Split (s)	22 0	22 0	0 0	22 0	22 0	0 0	14 0	42 0	0 0	16 0	44 0	0 0
Total Split (%)	28%	28%	0%	28%	28%	0%	18%	53%	0%	20%	55%	0%
Yellow Time (s)	3 0	3 0		3 0	3 0		3 0	3 0		3 0	3 0	
All-Red Time (s)	2 0	2 0		2 0	2 0		2 0	2 0		2 0	2 0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Coord		None	Coord	
Act Effct Green (s)		16 2		16 2	16 2		51 6	43 2		57 8	48 6	
Actuated g/C Ratio		0 20		0 20	0 20		0 65	0 54		0 72	0 61	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.66		0.68	0.24		0.24	0.68		0.65	0.54	
Uniform Delay, d1		23.5		29.5	14.6		3.7	13.1		10.1	9.7	
Delay		23.3		29.7	15.7		3.5	10.9		14.7	7.3	
LOS		C		C	B		A	B		B	A	
Approach Delay		23.3			24.1			10.5			8.5	
Approach LOS		C			C			B			A	
Queue Length 50th (ft)		78		61	20		9	187		54	139	
Queue Length 95th (ft)		147		#124	57		m18	216		m123	m133	
Internal Link Dist (ft)		446			541			1238			777	
50th Up Block Time (%)												
95th Up Block Time (%)												
Turn Bay Length (ft)							75			150		
50th Bay Block Time %								26%			2%	
95th Bay Block Time %								30%			3%	
Queuing Penalty (veh)								22				

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 40 (50%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.68
Intersection Signal Delay: 11.5 Intersection LOS: B
Intersection Capacity Utilization 81.8% ICU Level of Service D
95th percentile volume exceeds capacity, queue may be longer
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Excelsior Street & MLK Jr Blvd



Appendix D

Construction Cost Estimates
Building Rehabilitation Cost Estimate
David E. Gall, Architect, P.A.
June 30, 2007

Site Cost Estimate
Kimley-Horn and Associates, Inc.
August 7, 2007

Structural Cost Estimate
Kimley-Horn and Associates, Inc.
August 20, 2007

Building Rehabilitation Cost Estimate
David E. Gall, Architect, P.A.
June 30, 2007

CAPITAL BUILDING CONSULTANTS
11040 OLD US 52
WINSTON-SALEM, NC 27107
PHONE: (336) 775-1904
FAX: (336) 775-1905

DRAFT

ESTIMATE OF PROBABLE COST
FOR
SCHEMATIC DESIGN PHASE
WINSTON-SALEM UNION STATION

CLIENT: David Gall Architecture
Winston-Salem, NC

ARCHITECT: David Gall Architecture
Winston-Salem, NC

Total Sq. Ftg.: 32,400 sf
No. of Floors: 3
Bldg. Height: +/-
No. of Bldgs: 1
Construction Level: Renovation
Site Size: Unknown

Bldg. Use: Commercial
Struct. System: Concrete/Steel
Extr. Walls: Msnry/Stone
Intr. Walls: Wood/Mtl/Plstr. Frm/Gyp
Floor: Concrete
Roof: Conc/Mod. Bitum.

PROJECTED DIVISIONAL COST

DIVISION #	QUANTITY	UNIT	UNIT COST	TOTAL	S/F COST
1. Gen Requirements					
	1	ls	875.000	875,000	0.04
2. Site/Demolition					
Masonry Chimney Demo	550	cf	28	15,125	2.14
Rmv Built-Up Roofing	10891	sf	2.40	26,138	1.24
Rmv Exist. Flashing	2000	sf	1.38	2,750	11.78
Rmv Roof Drainage System	1600	lf	1.65	2,640	12.27
Rmv Masonry Parapet	2304	cf	27.50	63,360	0.51
Rmv Limestone Coping & Flashing	770	lf	11.00	8,470	3.63
Rmv Existing Scuppers	22	ea	22.00	484	66.94
Rmv Architrave Tops, etc	412	sf	11.00	4,532	7.15
Rmv EPDM Roofing & Accessories	910	sf	1.65	1,502	21.58
Rmv Metal Stairs & Landings	12	vf	38.50	462	70.13
Rmv Guard Rails	1	ls	554.40	554	58.44
Rmv Auto Equipment	1	ls	1650.00	1,650	19.64
General Cleanup - Floors	1	ls	11,000	11,000	2.95
Rmv Equip Anchors	1	ls	825.00	825	39.27
Rmv Rubber Flooring	470	sf	1.38	646	50.14
Rmv. Vinyl Asbestos Flooring	345	sf	5.50	1,898	17.08
Cut & Remove Plaster Walls	84	sf	5.50	462	70.13
Rmv Rain Water Conductors	126	lf	2.75	347	93.51
Rmv Contemporary Walls	620	sf	1.38	853	38.01
1st & 2nd Lvl Clean Access Well	1	ls	1,650	1,650	19.64
Rmv 10K Gallon Fuel Tank	1	ls	3,850	3,850	8.42
Rmv Existing Dumbwaiter	1	ls	715	715	45.31
Clean Exterior Plant Growth	1	ls	1,100	1,100	29.45
Haul & Dump Fees	1	ls	15,000	15,000	2.16
3. Concrete					
Patch Conc. Wall Surfaces	685	fsf	30.00	20,550	1.58
Patch/Repair Conc Steps	245	sf	38.50	9,433	3.43
Patch/Repair Conc Floors	375	sf	27.50	10,313	3.14
Struct. Conc. Repairs	1	ls	35,000	35,000	0.93
(E) Lightwght Floor @ Bridge	2184	sf	4.50	9,828	3.30
(E) Lightwght Roof @ Bridge/Stairway	2984	sf	3.50	10,444	3.10

DIVISION #	QUANTITY	UNIT	UNIT COST	TOTAL	S/F COST
4. Masonry					
Rebuild Masonry Chimney	550	cf	99.00	54,450	0.60
Rebuild Masonry Parapet	2304	cf	44.00	101,376	0.32
Rebuild Limestn Parapet (50%/50%)	770	lf	120.00	92,400	0.35
Rebuild Architrave (50%/50%)	436	cf	165.00	71,940	0.45
Point & Patch Masonry/Stone	10500	sf	7.15	75,075	0.43
Caulk Stone Work	1500	lf	4.40	6,600	4.91
Repair/Rplc. Limestone Molding	155	lf	175.00	27,125	1.19
Elevator Shafts	2800	sf	30.00	84,000	0.39
(E) Masonry Elev. Tower	2784	sf	45.00	125,280	0.26
(E) Masonry facade @ Bridge	2884	sf	30.00	86,520	0.37
(E) Masonry Facade @ Stairway	1360	sf	35.00	47,600	0.68
(E) Limestone Cornice Molding	360	lf	105.00	37,800	0.86
5. Metals					
S.S. Roof Hatch	1	ea	3,850	3,850	8.42
New Metal Stairs & Landings	12	vl	1,100	13,200	2.45
Repair Stair Rails	55	lf	165	9,075	3.57
Install New Steel Col.	1	ls	16,500	16,500	1.96
Clean & Repair Struct. Steel	1	ls	27500	27,500	1.18
(E) Handrails	140	lf	35	4,900	6.61
6. Wood & Plastics					
Misc. Blk/Frm. etc.	15	kbf	2000.00	30,000	1.08
7. Thermal/Moist. Protection					
New Mod/Bitumen Roof	11801	sf	7.20	84,967	0.38
New Copper Flashing	2200	sf	22.00	48,400	0.67
New Roof Drainage System	1600	lf	22.00	35,200	0.92
New Parapet Flashing	2200	sf	11.00	24,200	1.34
New Copper Scuppers	22	ea	550.00	12,100	2.68
New Copper Roof & Accessories	112	sf	33.00	3,696	8.77
New Rainwater Conductor	84	lf	22.00	1,848	17.53
(E) Mod./Bitumen Roof	2984	sf	10.00	29,840	1.09
(E) Misc. Roof Flashing	1	ls	1500.00	1,500	21.60
(E) New Copper Flashing	340	lf	22.00	7,480	4.33
(E) Roof Drainage System	1	ls	8500.00	8,500	3.81
(E) Insulation	1	ls	7500.00	7,500	4.32
(E) Soffit Closure	2984	sf	7.50	22,380	1.45
8. Doors & Windows					
Refurbish Exterior Windows	4800	sf	39	184,800	0.18
Refurbish Exterior Doors	620	sf	61	37,510	0.86
New Wd/Brass Clad Dr. Units	392	sf	253	98,980	0.33
Rehab Main Level Doors	34	ea	1650.00	56,100	0.58
Wood Toilet Prtn. Doors	12	ea	370.00	4,440	7.30
New Dum Waiter Doors	3	sets	220.00	660	49.09
New Interior Glass @ Main Level	320	sf	49.50	15,840	2.05
Rehab Middle Level Doors	39	ea	1650.00	64,350	0.50
New Obscure Glass	52	sf	71.50	3,718	8.71
Rehab Lower Level Doors	13	ea	1650.00	21,450	1.51
Refurb/Rplc OH Doors	1	ls	61600.00	61,600	0.53
Refurbish all Exterior Glass/Windows	1	ls	77000.00	77,000	0.42
(E) New Double Doors @ Stairway	1	ls	1500.00	1,500	21.60
(E) New Windows @ Bridge/Stairway	526	sf	35.00	18,410	1.76
(E) Special Glass Wall	672	sf	55.00	36,960	0.88

DIVISION #	QUANTITY	UNIT	UNIT COST	TOTAL	S/F COST
9. Finishes					
Clean & Paint Ladders	24	vf	38.5	924	35.06
Clean & Paint Stair Rails	55	lf	94	5,143	6.30
Repair/Rplc. Marble	395	sf	165.00	65,175	0.50
Plaster Repair	3750	sf	33.00	123,750	0.26
Paint Walls & Doors, etc	32400	sf	7.15	231,660	0.14
Patch Plaster Ceilings	4300	sf	55.00	236,500	0.14
New Plaster Ceilings	2200	sf	38.50	84,700	0.38
Repair/Rplc Flr. Finishes	32400	sf	11.00	356,400	0.09
New Interior Walls	2900	sf	10.00	29,000	1.12
Specialty Interior Trim	1	ls	65000.00	65,000	0.50
(E) New M.S./Gyp Walls	4244	sf	10.00	42,440	0.76
(E) New Gyp Ceilings	2984	sf	6.50	19,396	1.67
(E) New Floor Covering	2184	sf	10.00	21,840	1.48
(E) New Stair/Landing Covering	720	sf	5.00	3,600	9.00
(E) Interior Trim	2984	sf	4.50	13,428	2.41
(E) Intr Wall/Clng. Finishes	8652	sf	1.50	12,978	2.50
(E) Exterior Painting	1	ls	15000.00	15,000	2.16
10. Specialties					
Rplc. Marble Pnls	205	sf	150	30,750	1.05
1st/2nd Flr Clr/Rpr Sign.(Main Level)	1	ls	27,500	27,500	1.18
New Train Schedule Board	1	ls	5,500	5,500	5.89
Install New Dumbwaiter	1	ea	16500.00	16,500	1.96
(E) Signage	1	allow	7500.00	7,500	4.32
(E) Tactile Strips	1600	sf	8.00	12,800	2.53
11. Equipment					
12. Furnishings					
1st/2nd/3rd Refurbish/Reinstall					
Exist. Furnishings	1	ls	55,000	55,000	0.59
(E) Benches/Planters, etc	1	allow	15,000	15,000	2.16
13. Special Construction					
New Sprinkler System	35000	sf	6.05	211,750	0.15
Asbestos Abatement Allowance	1	allow	165,000	165,000	0.20
(E) Sprinkler System	2984	sf	5	14,920	2.17
14. Elevators					
Elevators	6	stops	25,000	150,000	0.22
(E) Elevator	4	stops	25,000	100,000	0.32

DIVISION #	QUANTITY	UNIT	UNIT COST	TOTAL	S/F COST
15. Plumbing					
Service/Waste/Piping, etc	40	fxtrs	9,350	374,000	0 09
(E) Plumbing Fixtures	2	ea	3,500	7,000	4 63
15. HVAC					
Equip/Distr/Cntrls, etc.	35000	sf	28	962,500	0 03
Special Eulpment	1	ls	35,000	35,000	0 93
(E) Equip Distr/Cntrls, etc.	2984	sf	15	44,760	0.72
16. Electrical					
Equip/Wiring/Devices, etc.	35000	sf	16 50	577,500	0.06
Rehab & Replace Ext Lighting	1	is	15000 00	15,000	2 16
Refurbish/Replace Light Fixtures	1	ls	77000.00	77,000	0.42
Comm/Data/Fire/Security (CTV)	32400	sf	5 50	178,200	0.18
(E) Equip/Wiring/Devices, etc	2984	sf	10	29,840	1.09
(E) Lighting	2984	sf	4 50	13,428	2.41
(E) Comm/Security/Fire	2984	sf	2 50	7,460	4.34
			1,725,618	7,483,541	1,013
			CONTRACTORS OH&P @ 10.0%	748,354	
			BOND @ .0075%	61,739	
			BUILDING PERMIT	37,321	
			BUILDERS RISK INS.	41,655	
			SUBTOTAL	8,372,610	
			CONTINGENC\@ 20%	1,674,522	
			TOTAL	**$10,047,132**	**$310.10**

CAPITAL BUILDING CONSULTANTS
11040 OLD US 52
WINSTON-SALEM, NC 27107
PHONE: (336) 775-1904
FAX: (336) 775-1905

ESTIMATE OF PROBABLE COST
FOR
SCHEMATIC DESIGN PHASE
WINSTON-SALEM UNION STATION

CLIENT: David Gall Architecture
Winston-Salem, NC

ARCHITECT: David Gall Architecture
Winston-Salem, NC

Total Sq. Ftg.: 32,400 sf
No. of Floors: 3
Bldg. Height: +/-
No. of Bldgs: 1
Construction Level: Renovation
Site Size: Unknown

Bldg. Use: Commercial
Struct. System: Concrete/Steel
Extr. Walls: Msnry/Stone
Intr. Walls: Wood/Mtl/Plstr. Frm/Gyp
Floor: Concrete
Roof: Conc/Mod. Bitum.

ALTERNATE NO. 1

Repair & Waterproof Exterior Walls Below Grade @ North & East Side of Building	Add $220,000

ALTERNATE NO. 2

Add Awnings @ South and West Side of Building @ Upper & Middle Levels	Add $68,000

Site Cost Estimate
Kimley-Horn and Associates, Inc.
August 7, 2007

OPINION OF PROBABLE CONSTRUCTION COST			DATE PREPARED: 08/07/2007 DATE REVISED:		SHEET 1 OF 1
PROJECT NAME: **Union Station**			PROJECT NO: **011291015**		Basis for Estimate / x / Schematic Design / / Design Development / / Construction Drawings / / Other :90% plans
LOCATION: **Winston-Salem, NC**					
Kimley-Horn & Associates, Inc. **Raleigh, NC**					
DISCIPLINE: **Civil**			ESTIMATORS: **JGM**		CHECKED BY: **VJC/BJM**
OTHER:	QUANTITY		LABOR & MATERIALS		TOTAL COST
	NO. UNITS	UNIT MEAS.	PER UNIT	TOTAL COST	
Demo					
Mobilization	1	LS	102,123.00	102,123	$102,100
Traffic Control	1	LS	145,890.00	145,890	$145,900
Parking and Sidewalk	11,000	SY	10.00	110,000	$110,000
Stairs	1	LS	2,000.00	2,000	$2,000
Curb and Gutter	1,500	LF	4.00	6,000	$6,000
Storm Drainage Piping 15" RCP	200	LF	40.00	8,000	$8,000
Storm Drainage Excavation/Backfill	250	CY	5.00	1,250	$1,300
Catch Basins/Junction Boxes	6	EA	500.00	3,000	$3,000
Masonry Walls	1,000	CF	5.00	5,000	$5,000
Common Excavation/Grading	30,000	CY	5.00	150,000	$150,000
Erosion Control	1	LS	25,000.00	25,000	$25,000
Existing Traffic Signal	1	LS	20,000.00	20,000	$20,000
Subtotal =					$578,300
Roadways					
30" Curb and Gutter	6,600	LF	25.00	165,000	$165,000
4" ThermaSeal Striping	6,500	LF	1.00	6,500	$6,500
12" ThermaSeal Striping (120 mils)	200	LF	3.50	700	$700
Pavement Marking Symbol	12	EA	150.00	1,800	$1,800
Pavement Marking "Yield"	7	EA	750.00	5,250	$5,300
Handicap Stencil	6	LS	120.00	720	$700
Road Surface	3,200	Ton	55.00	176,000	$176,000
6" Crushed 1-1/12" stone base course	15,000	SY	10.00	150,000	$150,000
Signage	1	LS	2,000.00	2,000	$2,000
Subtotal =					$508,000
Sidewalk					
Landscape	1	LS	60,000.00	60,000	$60,000
Sidewalk	15,500	SF	10.00	155,000	$155,000
Retaining Walls	8,000	SF	35.00	280,000	$280,000
Subtotal =					$495,000

Utilities					
8" Fire Line	165	LF	41.00	6,765	$7,000
Fire Hydrants	1	EA	2,500.00	2,500	$3,000
Misc. connection, valves etc.	1	LS	10,000.00	10,000	$10,000
Excavation/Backfill	150	CY	5.00	750	$1,000
Subtotal =					$21,000
8" Ductile Iron Sewer (avg 8' deep)	125	LF	45.00	5,625	$6,000
Standard Manhole (avg. 8' deep)	1	EA	3,000.00	3,000	$10,000
Excavation/Backfill	150	CY	5.00	750	$1,000
Subtotal =					$17,000
Storm Drainage					
15" RCP	355	LF	30.00	10,650	$10,700
18" RCP	430	LF	35.00	15,050	$15,100
Excavation/Backfill	1,163	CY	5.00	5,815	$5,800
Storm Drainage Structure 4' ID (4' Deep)	8	EA	2,000.00	16,000	$16,000
Storm Drainage Structure 4' ID (6' Deep)	10	EA	2,500.00	25,000	$25,000
Storm Drainage Structure 4' ID (8' Deep)	3	EA	3,000.00	9,000	$9,000
Storm Drainage Structure 5' ID (25' Deep)	1	EA	6,000.00	6,000	$6,000
Subtotal =					$87,600
Combined Subtotal=					$1,706,900
10% Unknown Utility Contigency=					$170,690
10% General Contingency=					$170,690
TOTAL:					**$2,048,280**

Notes:

1. Grading estimate is based on Winston-Salem GIS and will vary based on actual field survey.
2. The above cost estimates do not contain costs for permits, construction observation, or survey.
3. More Field Survey of existing utilities is required.

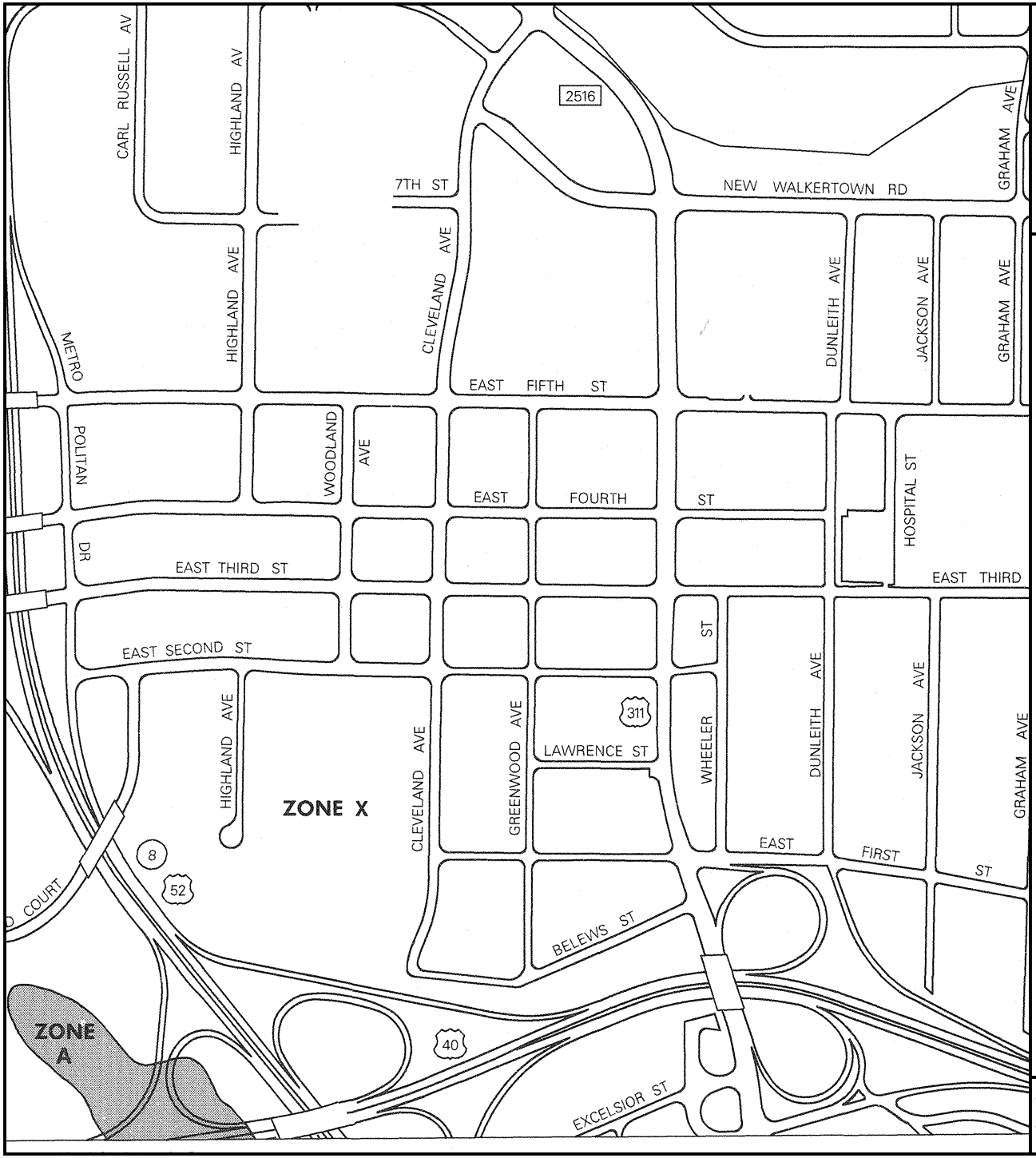
The Engineer has no control over the cost of labor, materials, or equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs, as provided here, are made on the basis of the Engineer's experience and qualifications and represent the Engineer's judgement as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from opinions of probable cost prepared for the Owner.

Structural Cost Estimate
Kimley-Horn and Associates, Inc.
August 20, 2007

	Kimley-Horn and Associates			
	Opinion of Probable Structural Costs			
	Project Name: **Union Station**		Date Prepared: **08/21/2007**	
	Project Location: **Winston-Salem, NC**		Prepared By: DG	
	Platform	$195,000		
	Bridge	$230,000		
	Subtotal	$425,000		
	Contingency (20%)	$85,000		
	Subtotal	$510,000		
	General Conditions, Project Coordination, Mobilization (15%)	$76,500		
	Total	**$586,500**		

Appendix E

Flood Insurance Rate Maps



APPROXIMATE SCALE

500 0 500 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

FORSYTH COUNTY,
NORTH CAROLINA
AND INCORPORATED AREAS

PANEL 276 OF 377

(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:

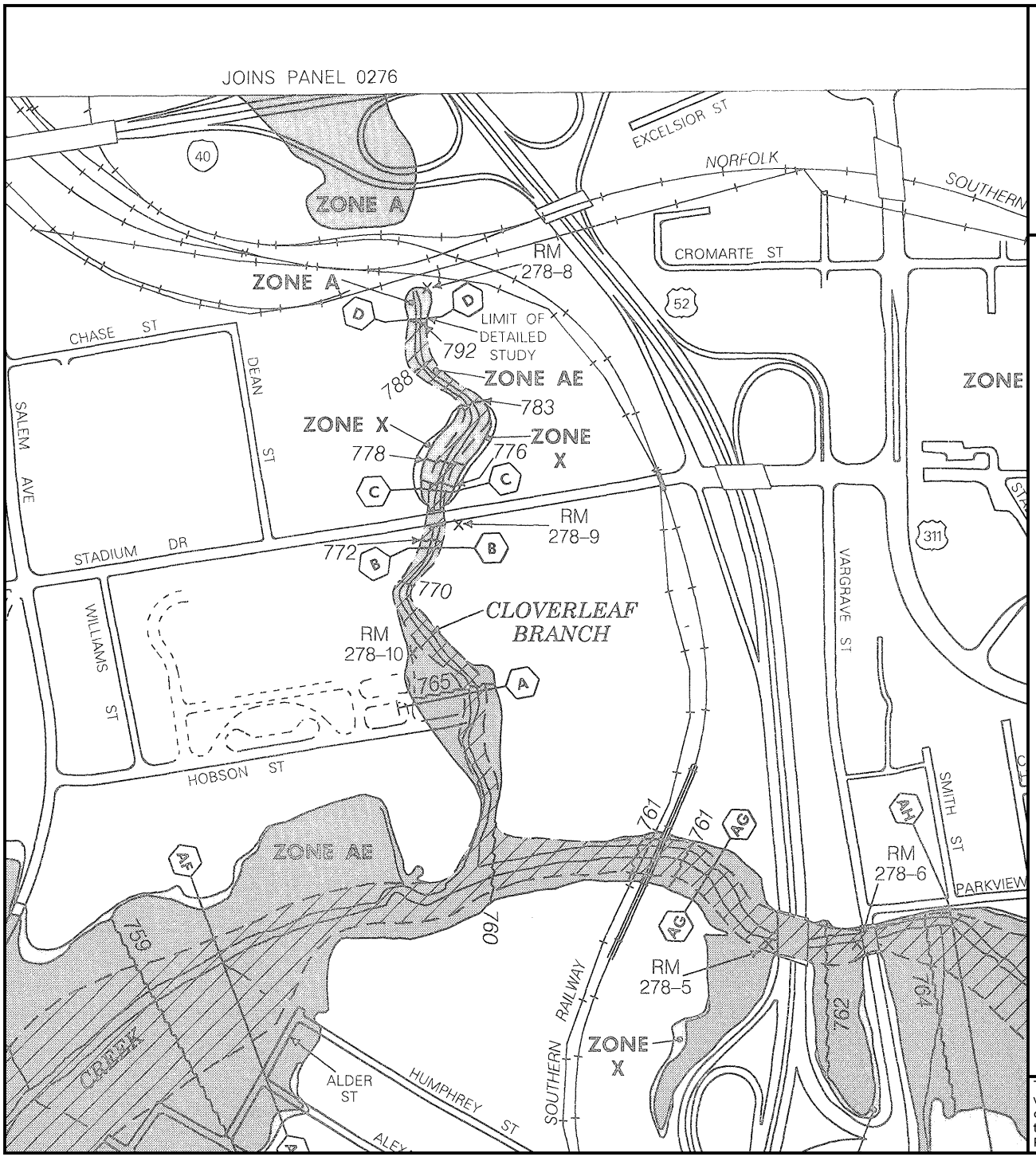
COMMUNITY	NUMBER	PANEL	SUFFIX
WINSTON-SALEM, CITY OF	375360	0276	H

Notice to User: The MAP NUMBER shown below should be used when placing map orders; the COMMUNITY NUMBER shown above should be used on insurance applications for the subject community.

MAP NUMBER
37067C0276 H

EFFECTIVE DATE:
OCTOBER 20, 1998

Federal Emergency Management Agency



APPROXIMATE SCALE

500 0 500 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

FORSYTH COUNTY, NORTH CAROLINA AND INCORPORATED AREAS

PANEL 278 OF 380

(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
WINSTON-SALEM, CITY OF	375360	0278	H

Notice to User: The MAP NUMBER shown below should be used when placing map orders; the COMMUNITY NUMBER shown above should be used on insurance applications for the subject community.

MAP NUMBER
37067C0278 H

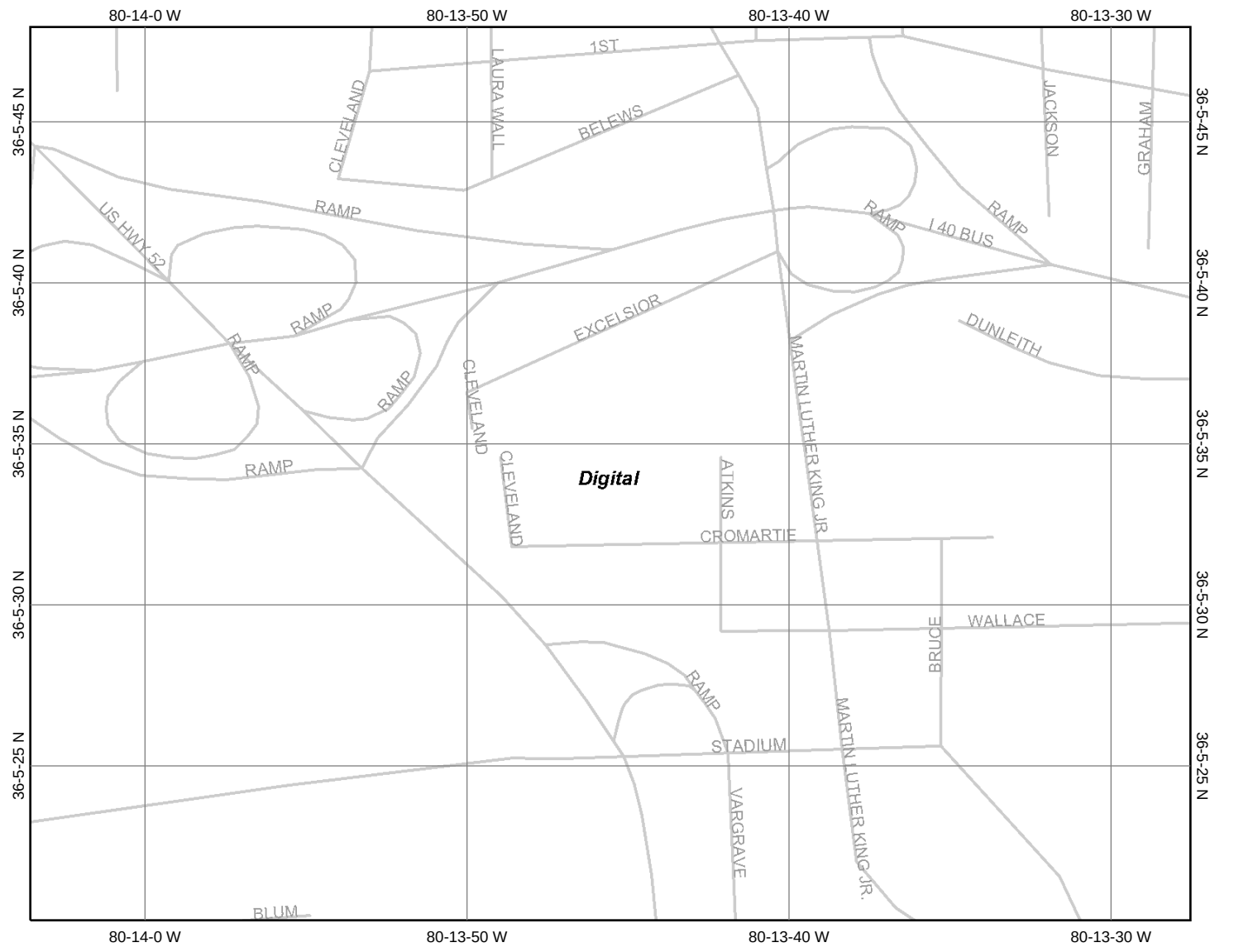
EFFECTIVE DATE:
OCTOBER 20, 1998

Federal Emergency Management Agency

Appendix F

National Wetlands Inventory Map

Union Station Wetlands



Map center: 36° 5' 34.0" N, 80° 13' 45.5" W

Legend

Ohio_wet_scan

- 0
- 1
- Out of range

Roads

Lower 48 Wetland Polygons

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

Lower 48 Available Wetland Data

- Non-Digital
- Digital
- No Data
- Scan

NHD Streams

South America

North America

Scale: 1:6,000