ENVIRONMENTAL SCREENING TECHNICAL MEMORANDUM

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1 INTRODUCTION

1.1 Project Background

Winston-Salem is conducting this Alternatives Analysis (AA) to further investigate opportunities for the implementation of an Urban Circulator in downtown, building upon the Winston-Salem Streetcar Feasibility Study (completed in 2006) and recommendations developed as part of the Regional Transit Development Plan, Forsyth and Guilford Counties Transit Vision for 2025 (completed in 2010), the 2030 Legacy Comprehensive Plan Update (2012) and The Downtown Plan (completed in 2007). This AA will develop and evaluate transit alternatives to best meet project goals and will establish a Locally Preferred Alternative (LPA) describing the preferred transit route and technology.

The Urban Circulator Study is conducting more detailed planning analyses for a potential circulator project to connect the city’s most active educational, medical and employment destinations to the central bus hub. The study area is focused on an approximately 4-mile corridor that extends west to east through downtown Winston-Salem and surrounding neighborhoods, from Wake Forest Baptist Medical Center through downtown, Piedmont Triad Research Park and Winston-Salem State University, to East Winston.

At this stage of the study process, a “selected route”, which is shown in the figure below, has been advanced for further analysis.

![Figure 1: “Selected Route” Advanced for Further Analysis](image)

1.2 Purpose of Document

The purpose of the Environmental Screening is to review readily-available environmental (physical, natural, socio-economic, and regulatory) data to determine potential issues associated with an urban circulator in downtown Winston-Salem. This environmental review considers the proposed infrastructure (in-street service, boarding locations, and maintenance facility) associated with the alternatives analysis.
1.3 Methodology

In order to provide a cursory review of the proposed project’s environmental impacts, readily-available data such as GIS mapping and aerial photographs were reviewed. The environmental concerns reviewed included:

- Historic Resources
- Use of Public Lands
- Zoning
- Noise
- Hazardous Materials
- Wetland & Stream Impacts
- Floodplain Impacts
- Water Quality
- Protected Species & Natural Areas
- Residence/business displacements
- Community Disruption
- Safety & Security
- Construction disruption

1.4 Assumptions

The analyses included herein did not include any on-site reconnaissance or detailed regulatory investigation. This is meant to be an overview, with a goal of determining feasibility and broad constraints.

2 ROUTE SCREENING

The selected route, shown in Figure 1, was used to screen the environmental constraints included herein. The environmental concerns for the six potential maintenance facility sites are detailed separately in Section 3 of this document.

2.1 Physical Environment

The physical environment includes historic resources, public lands, zoning, noise, and hazardous materials.

2.1.1 Historic Resources

The selected route passes through three National Registry Historic Districts (West End, Downtown North, and Winston-Salem Tobacco), as shown in Figure 2. Additionally, there are likely to be a number of structures eligible for the National Register along the route, and at least one known National Register-listed property at Union Station on S. Martin Luther King Jr. Drive. Consultation with the State Historic Preservation Office would likely be required during the NEPA process to further ascertain any potential impacts.

2.1.2 Zoning

The selected route passes through an array of zoning districts (residential neighborhoods, light industrial, commercial, downtown business, government, institutional, campus), as shown in Figure 3. As the planning of the project moves forward, designers will need to be cognizant of the more sensitive districts (residential, downtown business, campus) in order to involve them as stakeholders in the process.
Figure 2: Historic Districts

LEGEND
- National Register Designation
- Determination of Eligibility
- Potential Alignment Alternative
- Possible Future Extension
Figure 3: Zoning

Legend
- Campus
- Institutional
- Residential
- Central Business
- Business
- Industrial
- Central Industrial
- Office
- Limited Office

West End Historic Overlay
Winston Overlay
MLK Overlay
2.1.3 Public Lands & Prime Farmlands
It does not appear the selected route would “use” public lands (parks, recreational open space) other than existing rights-of-way. With the selected route likely using existing roadways, there should be no use of public lands. There are no Prime or Unique Farmlands within the selected route alignment.

2.1.4 Noise
Noise concerns will need to be further analyzed at a later stage in the design process. The residential neighborhoods could potentially contain sensitive receptors that require detailed analysis. Additionally, some of the light industrial uses on the east side of downtown in/near the Piedmont Triad Research Park may be sensitive to noise and/or vibration due to the presence of certain types of laboratories.

2.1.5 Hazardous Materials
The selected route would use existing rights-of-way and minimize soil disturbance, thus minimizing the potential for encountering hazardous conditions. The most likely issue would involve soils that may contain dry-cleaning or petroleum contamination, and there are a number of known or potential sites along the route where that may be a concern. Sites of concern may include:

- Former Modern Chevrolet, corner of Broad and Fourth Streets
- Trade Street Cleaners, 426 North Trade Street
- North Liberty Street properties (Brownfields Assessment)
- R.J. Reynolds Tobacco properties
- Piedmont Triad Research Park properties (Brownfields Assessment)
- Stadium Drive properties north of City Yard (former landfill, City Fleet Services adjacent)

This screening did not uncover any definitive knowledge of contamination directly affecting the route, but the NEPA process discussed in Section 2.4 will need to address this in more detail.

2.2 Natural Environment
The natural environment includes wetlands, streams, floodplains, water quality, and protected species.

2.2.1 Wetlands & Streams
The selected route would follow existing streets, with no new alignment or road widening necessary. No wetland or stream impacts (fill, pipes, culverts) are anticipated.

2.2.2 Floodplains
As with wetlands and streams, floodplains are not likely to be affected since there would be no additional development footprint due to the selected route. The primary flooding concern along the route is at the intersection of Hawthorne Road and First Street, which lies in the 100-year floodplain of Peters Creek.

2.2.3 Water Quality
Water quality may generally be improved on a regional basis by instituting an urban circulator, thereby decreasing the need for additional automobile traffic and carrying capacity.

2.2.4 Protected Species
No protected species (federally-endangered and federally-threatened) have potential habitat in the vicinity of any of the potential improvements. Additionally, no state-protected natural areas occur in the vicinity.
2.3 Socio-Economic

Socio-economic concerns include residential/business displacement, community disruption, safety/security, and construction disruption. It is difficult at this stage in the process to determine socio-economic impacts of the proposal. It does not appear that many (if any) residential or business displacements would occur. The community disruption caused by this project would likely be fairly minimal, as one of the primary goals is to provide a complement to the existing downtown business and residential community. Safety and security will need to be analyzed further as the planning progresses, and construction disruption will be inevitable but minimized as the plans are further developed.

2.4 Other Regulatory Issues

As the project moves forward, the next step for environmental clearances would be approval of a National Environmental Policy Act (NEPA) document if any state or federal funds are involved. If any federal funding is provided for the project, it would likely come through the Federal Transit Administration (FTA), which would require a NEPA document in the form of a Categorical Exclusion, Environmental Assessment (EA), or Environmental Impact Statement (EIS). Which type of document gets completed depends on the FTA’s current policies for the three types.

3 MAINTENANCE FACILITY SITE SCREENING

Six potential sites have been selected for review. Each one is in close proximity to the route, in areas that have been previously disturbed by various types of development. The six primary sites are identified as follows:

1. Site under I-40 Business
2. Hawthorne Rd. Site
3. 1st St. Site
4. 3rd St. Site
5. PTRP Site
6. Union Station

Figure 4: Locations of Possible Vehicle Maintenance Facility Sites
3.1 Site under I-40 Business

This site is comprised of up to three parcels, totaling up to 2.52 acres. The site is partially under the I-40 Business bridge, and is currently used for surface parking by Wake Forest Baptist Medical Center (WFBMC). A stream flows west to east along the northern boundary of the site, toward Peters Creek, and WFBMC lies upgradient of the site. The northeast corner of the site lies in the 100-year and 500-year floodplain of Peters Creek.

Based on historic Sanborn mapping, these parcels have been used in the past for residential dwellings, commercial services, and parking areas. The 1950, ‘58 and ‘63 Sanborn mapping shows a dry cleaner operation on-site at the northwest corner of Beach and Hawthorne, with filling stations north of the site along what is now First Street. As with most large hospital complexes that handle large amounts of chemicals and hazardous substances, WFBMC has past reports of contamination, although most or all seem to have been addressed and closed out.

In addition to the nearby gas stations, both the upgradient WFBMC and the on-site former dry cleaner operation are of concern, but no contamination is known to currently exist on-site.

3.2 Hawthorne Road Site

This site is adjacent to I-40 Business, between Hawthorne Rd and the I-40 Business Ramp. This 1.1-acre site is owned by either NCDOT or the City as part of the I-40 Business right-of-way. A stream flows west to east along the northern boundary, and confluences with Peters Creek near the northeast corner of the site. The northern third of the site lies in the 100-year and 500-year floodplain of Peters Creek. The eastern portion of the site is likely underlain by a culvert conveying Peters Creek, which is flowing from north to south. The site’s historic uses include a dance school and restaurant. The other three corners of the Hawthorne Road / First Street intersection have been occupied by filling stations in the last 40-60 years, and WFBMC lies upgradient of the site.

The 1950, ‘58 and ‘63 Sanborn mapping shows a dry cleaner operation just across Hawthorne Road from the site, cross-gradient to the west. As with most large hospital complexes that handle large amounts of chemicals and hazardous substances, WFBMC has past reports of contamination, although most or all seem to have been addressed and closed out. In addition to the nearby gas stations, both the upgradient WFBMC and the cross-gradient former dry cleaner operation are of concern, but no contamination is known to currently exist on-site.

3.3 First Street Site

This site is located to the north of 1st St between 2nd St and Green St. This 1.5-acre site is currently a surface parking lot. Based on historic Sanborn mapping, these parcels have been used in the past for residential dwellings, used car sales, and parking areas. Adjacent uses are a larger influence on historical concerns. A filling station was located across Green Street (east of the site) in the 1950’s and 1960’s (likely the same structure that stood into the current decade). This filling station parcel lies cross-gradient from the site, thus having the potential to have caused contamination concerns. However, the EDR report indicates the West Salem Shell located at 815 W. First Street (likely the filling station in question) had its 30+ year-old underground tanks removed in 1976, with no contamination reported.

As the site is near the local ridgeline, a number of parcels are cross-gradient, including several with car dealership and car repair histories. Most of the past uses in the area appear to have been commercial or light industrial uses, but no other known causes of concern were found for this report.

3.4 Third Street Site

The 3rd Street site is under the parking deck structure for the Forsyth County office building. This property and vicinity has a long history of industrial uses, primarily for tobacco production dating back to the 1870’s
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(Sanborn mapping confirms this back to 1885). Its location along the rail made it a primary area for industrial development for the City. The site is also downgradient of much of downtown Winston-Salem, a commercial and industrial district dating back to the mid-1800’s.

Due to the potential inclusion of the maintenance facility into a previously-constructed, County-owned facility, the potential for environmental contamination concerns is minimal. Most, if not all, concerns have likely already been identified through the County’s development of the parcel.

3.5 Research Park Boulevard Site

This approximate 1-acre site is north of Stadium Drive, just west of the railroad and east of a tributary to Salem Creek. The property is part of the Piedmont Triad Research Park development, a “brownfield” redevelopment of a number of parcels north and south of Business I-40 and east of downtown. The portion of this parcel that’s been identified as a potential maintenance facility site is suspected of being a former landfill. As referenced in the Environmental Data Resources report, an old construction/demolition landfill was located in the vicinity. Based on the rolling terrain of the site and depressions that have formed in the various parking areas, there is a possibility this was the old landfill site. Further discussions with the City may reveal more information pertaining to this concern.

In addition, several contamination occurrences have been reported upgradient of the site along Martin Luther King Jr. Drive, near/within Winston-Salem State University. The Sanborn mapping shows a welding shop and foundry on-site in the 1950’s, which present concerns due to the heavy metals and chemicals used in those processes.

3.6 Union Station Site

This 2+ acre site is west of S. Martin Luther King Jr. Drive, just north of the railroad and south of Business 40. The property includes a 90-year-old train station building, formerly known as Union Station, which functioned as Davis Garage (an auto repair facility) from the 1970’s to 2012. Based on the past uses as both a train station/yard as well as auto repair facility, the likelihood is high for soil and/or groundwater contamination concerns. The property was reviewed by the City in 2008 and documented in a Draft Environmental Assessment (EA, available 05/09/13 at ci.winston-salem.nc.us/Home/Departments/Transportation/Planning/Articles/UnionStationRehabilitation). A number of mitigative measures for the potential contamination were recommended in the Draft EA based on Phase I and Phase II Environmental Site Assessments, and include significant coordination with the State to gain closure on the soil and groundwater investigations conducted during the Phase II. Further discussions with the City may reveal more information pertaining to this concern, as they recently acquired the property and may have performed additional investigations at that time.

4 RESULTS

The selected route will continue to be analyzed in more detail as the project planning progresses. It does not appear this screening uncovered any fatal flaws with the route.

The maintenance facility sites are in need of further due diligence and scrutiny. The concerns raised include constructability, flooding and contamination issues that should be addressed before moving forward with any one site.