

I-275/North Central Street Corridor Study 2007



Prepared by the Knoxville-Knox County Metropolitan Planning Commission

for

The City of Knoxville

and

The Development Corporation of Knox County

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Proposal for Forest Park, Courtesy of Urban Design Associates

I-275 Corridor Vision

The year is 2015 and the redevelopment of the old I-275 industrial district is virtually complete. The Sysco Corporation, which became the pioneer in revitalizing the old rail yards, continues to serve the Southern Appalachian region in food distribution. Additional firms have been attracted to the corridor because of its economic advantages: improved interstate access, availability of rail, high visibility and a pool of talented employees. The corridor—once a blighted hodge-podge of underutilized land—has been transformed into one of Knoxville’s most successful business parks.

The new frontage roads have solved access problems and provide an attractive entrance for the corporations which call I-275 home. Well-designed and nicely landscaped buildings form an attractive gateway into Downtown. (See the foldout on page 5.)

Lonsdale, Lincoln Park and Old North Knoxville residents find the Second Creek Greenway a good place to jog and bike as they head to World’s Fair Park and the waterfront. Aquatic life thrives in Second Creek again because the city’s water quality programs have proven to be very effective.

The economic development has stimulated improvements in nearby neighborhoods and along Central Avenue. Employees and neighborhood folks frequent the same restaurants and shops.

Private investment has surpassed several hundred million dollars in the last decade. The transformation of this once obsolete industrial area is acclaimed to be remarkable. The I-275 Corridor has become a significant asset within the “Heart of Knoxville.”

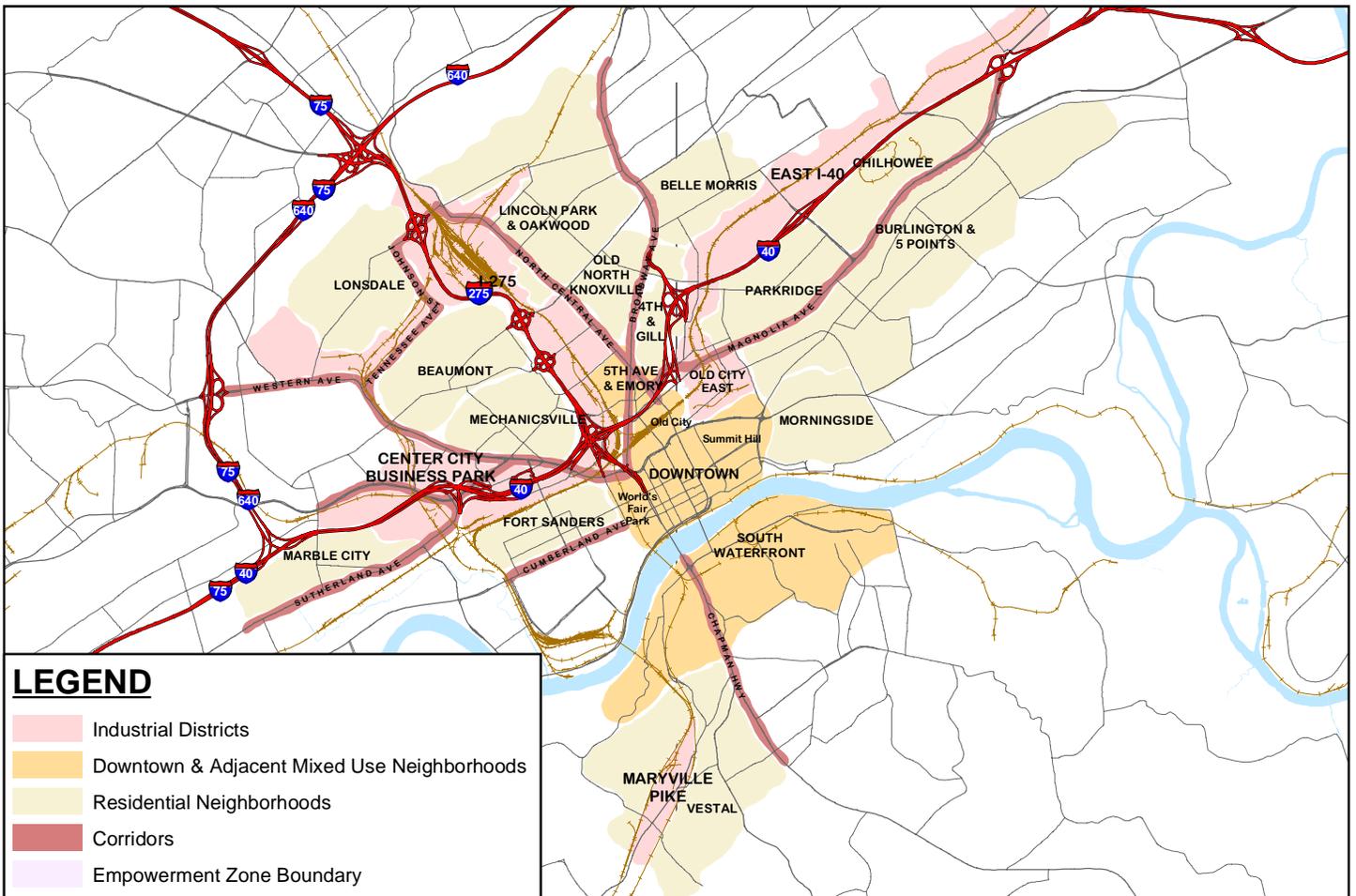


Introduction

The purposes of this study are to foster economic development and to reverse the environmental degradation in the I-275 corridor. In the late 1800s, this area became a cornerstone of Knoxville’s railroad and industrial development. That foundation has been undermined in recent decades as doors have closed at textile mills, railroad repair facilities and industrial buildings, leaving behind vacant land, antiquated buildings, unused industrial yards and several environmental problems. While the railroad once provided the necessary transportation, the street system was not improved as the nearby interstates were constructed, resulting in a discontinuous patchwork of local roads. Today, this corridor is a vastly underutilized resource in the “Heart of Knoxville.”

Last year, the city, the Development Corporation of Knox County, Knoxville’s Community Development Corporation and the Metropolitan Planning Commission developed an outline of improvement strategies for the neighborhoods, industrial districts and commercial corridors for the Heart of Knoxville (see Map 1). In doing so, they realized that the viability of the I-275 corridor and the surrounding community is interwoven (for instance, job creation in the corridor would likely lead to new employment opportunities for neighborhood residents). Similarly, improvements along Central Street would foster greater stability in the Lincoln Park, Oakwood and Old North Knoxville neighborhoods. It was seen that the entire I-275 corridor could be developed like a business park.

Map 1: Heart of Knoxville



An overview of the economic and land characteristics is presented in the next few pages. Thereafter, this document is divided into two sections:

- An infrastructure improvement program, including new roads to improve access, other modes of transportation and a greenway for recreation and water quality improvements
- Economic and land development recommendations, including phasing strategies for areas that are vastly underutilized

The final chapter includes “Project Sheets,” which form an action plan to realize the various recommendations.



The Coster shop, as evidenced in this 1923 photograph was once prominent in the railroad’s operations. (Photograph courtesy of the McClung collection)



Many areas along the railroad, like this one south of West 5th Avenue, are underutilized.

Condition and age of industrial property

While this study is primarily directed to the immediate corridor along I-275, MPC staff initially looked at the broader context of industrial development which surrounds both the CSX and Norfolk-Southern rail lines in central Knoxville. In doing so, both the condition and age of structures were examined. The findings, while pertaining to the larger area (depicted on the following maps), are telling: 51% of the buildings are rated below average (fair or poor condition).

The implications are worth noting. In looking at industrial properties across the county, MPC found significantly higher vacancies in older industrial buildings. Vacancies for structures older than 40 years run 14 percent. When MPC began to examine the greater area (2004), it became readily apparent that 40-year and older buildings had significantly higher vacancy rates; over 600,000 square feet were vacant at the time (source: Industrial Space Inventory, 2003)

Table 1:
2005 Commercial/Industrial Building Conditions

Overall Condition	Number of Structures	Sum Sq. Footage	Percent of Total SF
Very Good	0	0	0.00%
Good	17	155950	8.63%
Average	35	224063	12.40%
Fair	80	1149789	63.62%
Poor	34	277595	15.36%
Total	166	1,807,397	100.00%

Source: 2005 Knox County Assessors Department CAMA Data



An example of one of the older, underutilized properties.

I-275 Corridor Study: EXISTING COMMERCIAL/INDUSTRIAL BUILDING CONDITIONS

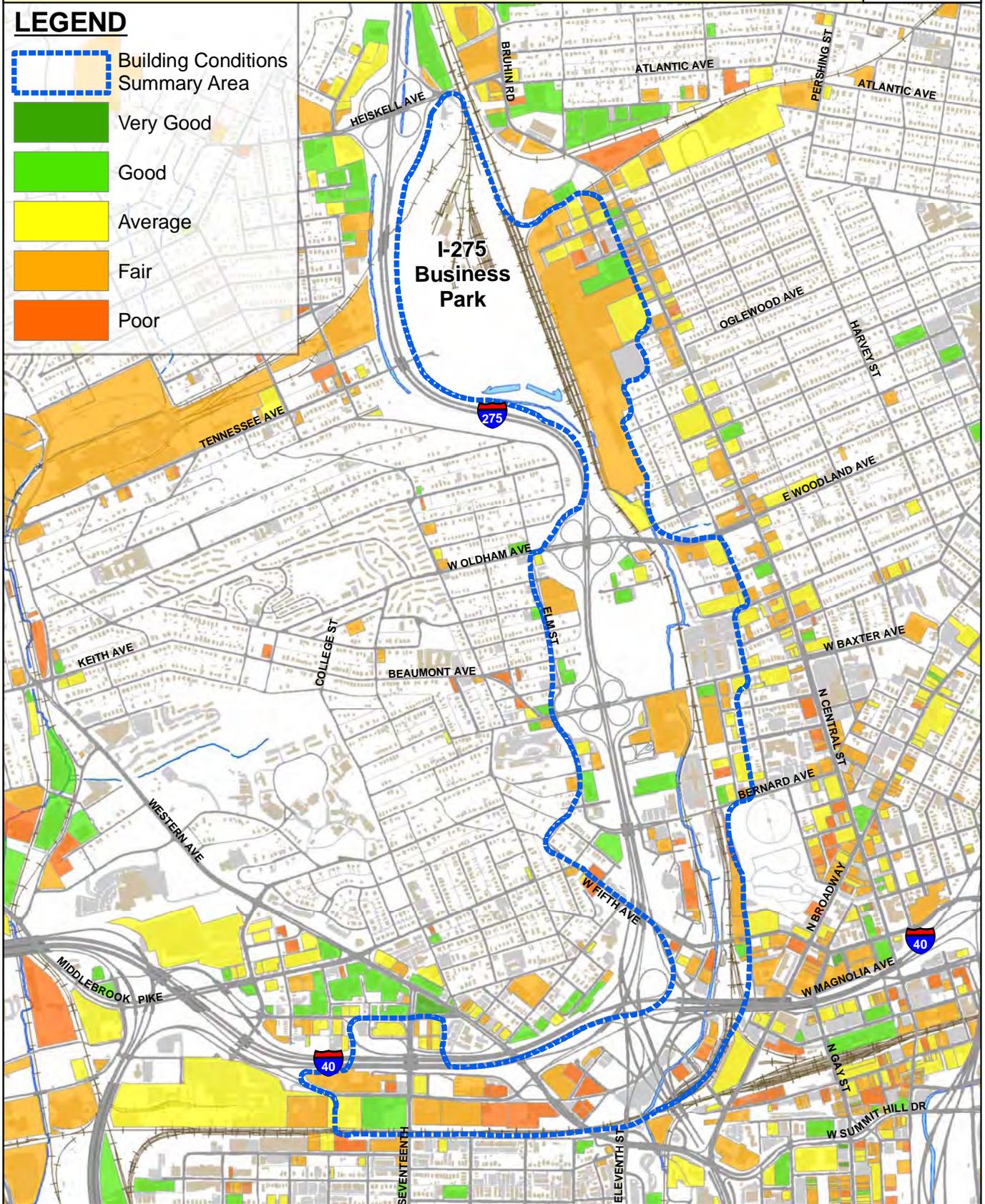


0 500 1,000 1,500 Feet

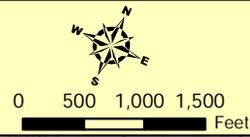


LEGEND

-  Building Conditions Summary Area
-  Very Good
-  Good
-  Average
-  Fair
-  Poor

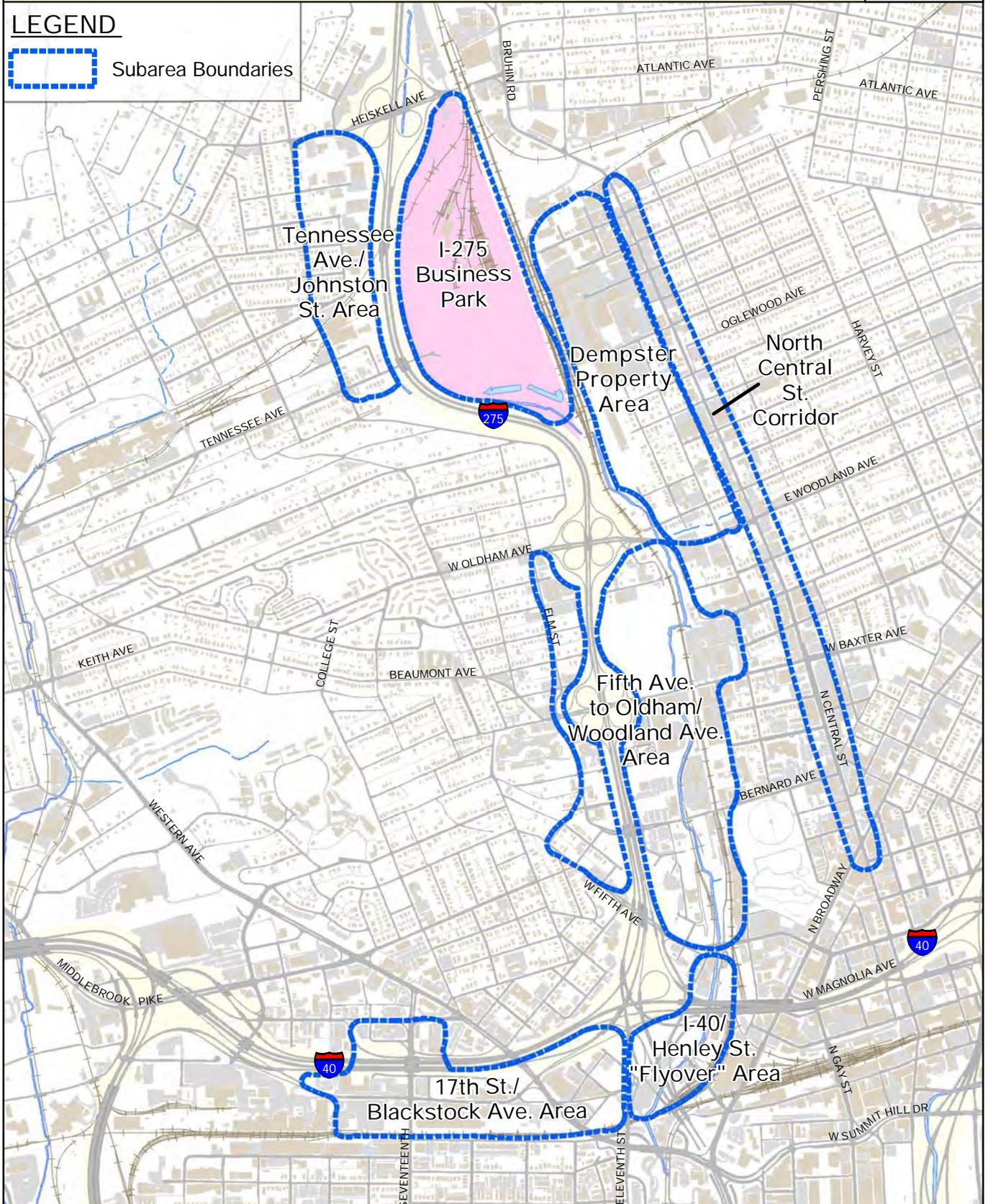


I-275 Corridor Study: SUBAREA CHARACTERISTICS



LEGEND

 Subarea Boundaries



I-275 Corridor Constraints

Representatives of the MPC, City Community Development Department, Development Corporation of Knox County and Knoxville's Community Development Corporation identified the basic constraints to the redevelopment of the I-275 corridor for business park, office and related economic improvements. The following points were significant considerations in developing improvement strategies outlined in the next section of this study. The areas that are discussed below are identified on the Subareas Map (see page 10).

Overall Constraints

- Lack of public and private investment
- Environmental constraints, including brownfields, potential environmental clean-up, water quality and a floodplain
- Pedestrian and transit limitations; the area is only accessible by trucks and automobiles
- A poorly designed road network

17th Street/Blackstock Avenue Area

- Excessive, underutilized rights-of-way
- Awkward parcel configuration
- An eyesore as a gateway to the I-275 corridor, university and downtown

I-40/Henley "Flyovers"

- Abandoned grid streets
- Perception issues (homeless camps; a no man's land)
- Limited potential development sites (due to rail and ramp locations)
- Adjacent to downtown and World's Fair Park (yet largely disconnected)



This aerial view, with its "crossroads" of Western Avenue and the Interstate, shows the large expanses of underutilized property, especially south of I-40.



The vacant land and unused rights-of-way are considerable in the Blackstock Avenue area.



The area under the interstate viaducts is an underutilized resource. Potential reuse of the land could include public maintenance facilities.

5th Avenue to Oldham/Woodland Avenues Area

- Discontinuous north-south road network
- Antiquated clover-leaves
- Topographic changes (particularly to either side of Woodland Avenue)
- Impacts of Phillips Metal Recycling
- Questions regarding Palm Beach and Brookside Mills (reuse/redevelopment possibilities)
- Pocket of houses and businesses near Woodland
- Small disaggregated parcels
- Public works and social service functions
 - County Health Department
 - County Engineering and Public Works Department



The Phillips metal site

Dempster Property Area

- Pre-World War II, densely sited industrial buildings
- Poor access (including vacated rights-of-way)
- Early 20th century neighborhood on hilly terrain (approximately 75 households and several churches)
- Railroad underpass inhibits truck access from Heiskell Avenue
- Storm drain system needs upgrading



The Woodland Avenue area (looking south): note the lack of road connectivity east of I-275.

I-275 Business Park

- Lack of access from Heiskell Avenue
- Three, unconsolidated parcels
- Obsolete rail yard infrastructure
- Separated from Central Street by railroad line



The site of the future I-275 Business Park.



Many of the older warehouses in the Dempster area are still in use.

Tennessee Avenue/Johnston Street Area

- Convoluted entrance to I-275 Business Park
- Negative aesthetic impressions as access way to I-275 Business Park
- Over 25 households on lots zoned for single-family residential uses (a constraint for redevelopment for non-residential uses)

North Central Street Corridor

- Railroad underpasses, particularly at Heiskell Avenue, are obstacles
- Some uses negatively impact neighborhoods (for example, recycling and trucking)
- Substantial variation in road width (overbuilt in some cases relative to traffic volume)
- Aesthetic value is typically poor (undermining the creation of “an address” for business park development and the strength of adjacent neighborhoods)
- Difficulty in marketing property than can complement neighborhoods to the east and potential business parks to the west
- Substantial number of vacant sites and buildings

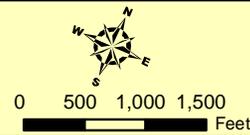


This area just south of Heiskell Avenue could provide better access to the I-275 Business Park.



Central Street, south of Baxter Avenue, is an example where the number of lanes is not justified, given the lack of traffic, following I-275 construction.

I-275 Corridor Study: ROAD CONNECTION PROPOSALS

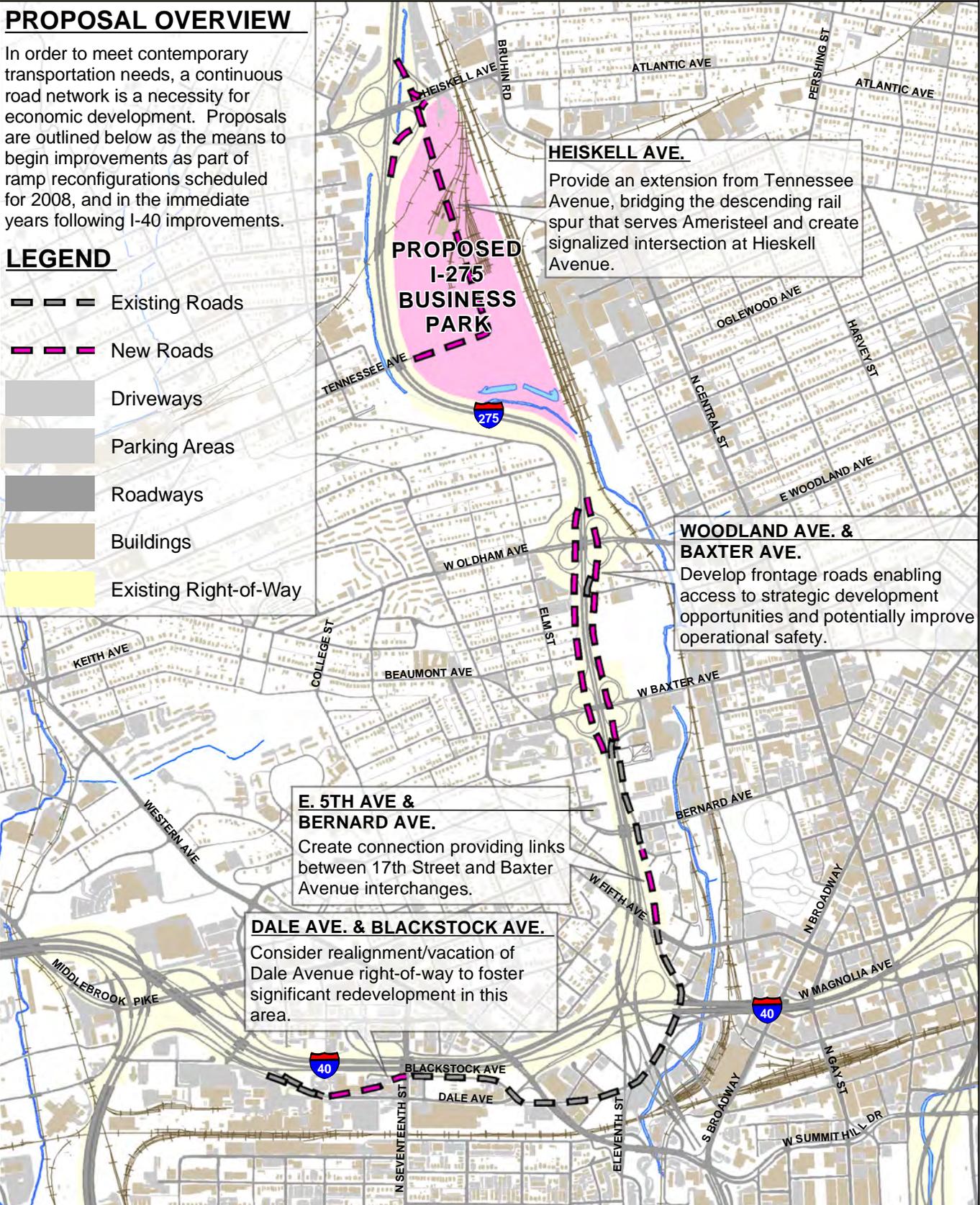


PROPOSAL OVERVIEW

In order to meet contemporary transportation needs, a continuous road network is a necessity for economic development. Proposals are outlined below as the means to begin improvements as part of ramp reconfigurations scheduled for 2008, and in the immediate years following I-40 improvements.

LEGEND

- Existing Roads
- New Roads
- Driveways
- Parking Areas
- Roadways
- Buildings
- Existing Right-of-Way



HEISKELL AVE.
Provide an extension from Tennessee Avenue, bridging the descending rail spur that serves Ameristeel and create signalized intersection at Hieskell Avenue.

WOODLAND AVE. & BAXTER AVE.
Develop frontage roads enabling access to strategic development opportunities and potentially improve operational safety.

E. 5TH AVE & BERNARD AVE.
Create connection providing links between 17th Street and Baxter Avenue interchanges.

DALE AVE. & BLACKSTOCK AVE.
Consider realignment/vacation of Dale Avenue right-of-way to foster significant redevelopment in this area.

Infrastructure Improvement Recommendations

Infrastructure traditionally includes the necessary streets and highways, sidewalks, and stormwater, electrical and other utilities. “Green infrastructure,” which is outlined on the following map, includes a Second Creek Greenway that should be set aside largely within the stream’s floodplain to provide water quality and flood protection. The greenway should also include a bicycle and pedestrian path leading to the neighborhoods, downtown and the waterfront.

Street, Highway and Related Infrastructure

In the next two years, I-275 interchange improvements will be made to facilitate traffic flow during I-40 construction. The cloverleaf designs will be temporarily renovated as diamond configurations. Building upon those short-term measures, the following permanent improvements are recommended:

1. A frontage road system that runs from 17th Street to Woodland Avenue (An upgraded Elm Street may be an alternative to a frontage road on the west side of I-275.)
2. Further renovation of the interchanges to solve the tight, awkward ramp designs
3. A new road and Heiskell Avenue-oriented access to serve the I-275 Business Park
4. Redevelopment of the road system at Dale Avenue and 17th Street to consolidate parcels for economic development purposes.



Marion Street, looking south at Bernard Avenue, should be extended to form a connection to Blackstock Avenue.

5. Consideration of improvements from Woodland Avenue to Scott Avenue to Davanna Street, providing a new access to the Dempster area.
6. An assessment of the water, sewer and stormwater utilities and the development of a capital improvement program to upgrade those systems.



After the completion of the I-40 project, the rehabilitation of I-275 should include such beautification as this landscaped median (set between two “Jersey barriers”) to create a more aesthetically pleasing gateway along the corridor.

The Second Creek Greenway and Trail

The Second Creek drainage basin includes the industrial corridor and adjacent neighborhoods. Because of its proximity to the rail line and century-old industrial operations, the natural environment near the creek has largely been destroyed.

Redevelopment of underutilized properties offers the potential to create streamside natural areas that can absorb and filter storm runoff and enhance water quality. Contaminated sites near the stream should be restored.

The Second Creek Greenway was proposed in the Knoxville Greenway Plan (1992) and has been slowly under development. Funding is available for the trail segment from the riverfront to the Old City.



One of the older rights-of-way, which could be reused for trail purposes.



Second Creek does not meet various state water quality standards.

The specific recommendations to realize the upper portion of the greenway and its associated multipurpose trail are:

1. Develop the greenway trail system for both recreational and transportation purposes, providing connections from neighborhoods to new businesses and to downtown. A secondary trail system is depicted to link Lonsdale to the bike lanes and sidewalks along the proposed access roads.
2. Establish a continuous natural buffer, including trees and ground cover, which extends at least 50 feet from the centerline of Second Creek. In addition, use the “no-fill area” along the creek as a portion of the greenway (i.e., one-half of the distance from the floodway to the edge of the 100-year flood fringe.)
3. Create a greenway system in conjunction with stormwater control programs. Stormwater detention and “best management” practices should be considered in establishing the greenway system.
4. Continue to set aside wetlands as an open space and hazard mitigation area in the Coster Shop Yards.
5. Link the trail system to the neighborhoods and proposed frontage roads with marked bicycle lanes and sidewalks.
6. Set aside open space and address water quality problems associated with the tributaries (for example, the drainage from east side near National Cemetery).
7. Create a green buffer along Davanna Street to protect the neighborhood from the proposed industrial access road.
8. Evaluate and remap the floodway and floodplain of Second Creek. The conditions have changed, particularly along I-275 between Lonsdale and the former Coster Shop yards.

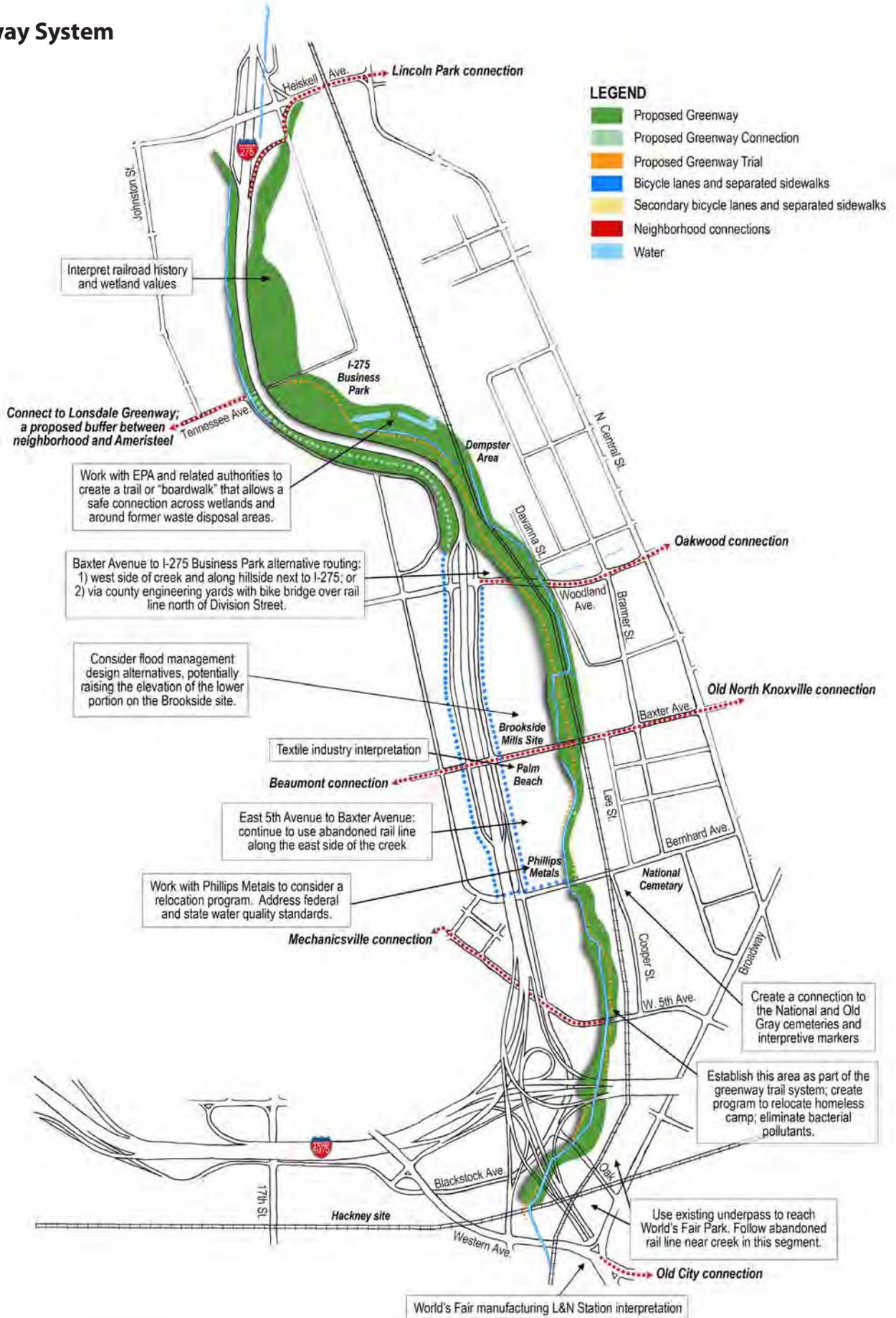


Some forested areas are found along the stream, although invasive plants like privet are common and should be removed. In addition to chemical and biological pollutants, discarded debris also needs to be cleaned up.

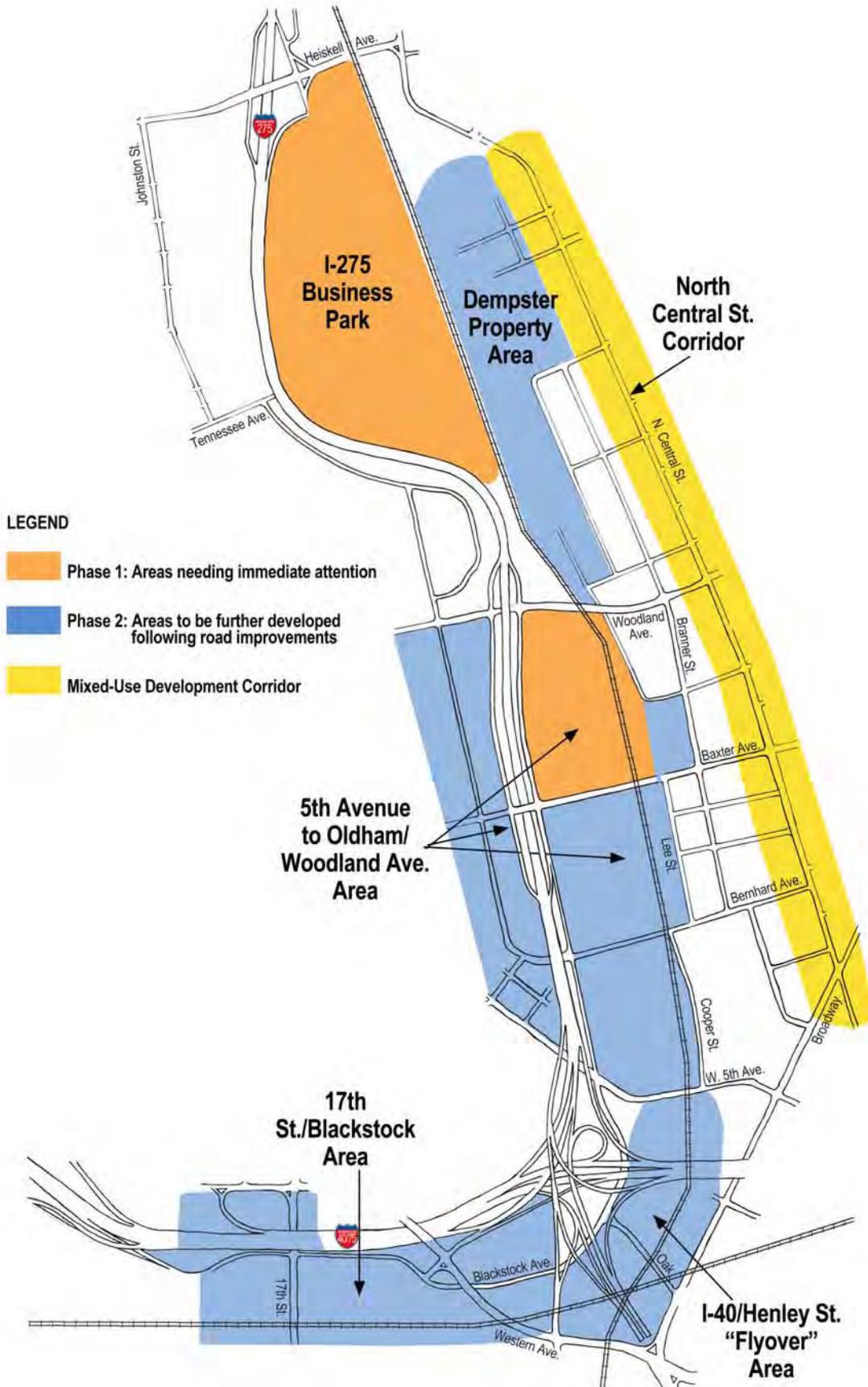


An abandoned rail line, which is adjacent to the creek, is the logical place for a greenway trail and leads directly to World's Fair Park.

Greenway System



Focus Areas for Economic and Mixed-Use Development



Economic and Land Development Recommendations

General Recommendations

The following programs and projects should be addressed to carry out corridor improvements:

- Create a continuous, functional road system running from 17th Street to Woodland Avenue and Tennessee Avenue to Heiskell Avenue. Use the \$5 million in federal funds to pursue these improvements.
- Combine and replat parcels which are marketable as contemporary business park, light industrial and office sites.
- Close abandoned rights-of-way for future development.
- Pursue environmental assessments and consequential clean-up resulting from the investigations.
- Develop master plans for Phase I areas (see opposite page), which address circulation, rail access, marketable parcel sizes, improvements to water quality and creation of the greenway trail.
- Establish performance standards for industrial uses, setting acceptable parameters regarding water pollution, noise, light and air quality concerns.
- Encourage a mix of uses in certain areas (for example, small light industrial, distribution and office uses) that are compatible with one another. Form-based zoning codes, which address height, architectural compatibility, consistency in setbacks and landscaping, should be a consideration.
- Establish overall marketing strategy, which is programmed to coincide with infrastructure improvements. Treat the overall corridor as if it were a business park.

I-275 Business Park

- Consolidate (or market concurrently) the existing Sysco/I-275 site and Norfolk Southern land.
- Develop a continuous business park collector road that runs from Tennessee Avenue to a new configured interchange at Heiskell Avenue.
- Create a site plan that has: (1) parcels of an appropriate size to accommodate Sysco and any other projected uses north of Sysco's operation, (2)

environmental protection areas (for example, the wetlands, flood areas and water detention facilities), and (3) a trail easement forming a link between the neighborhoods and the river.

The following sub-areas within the corridor have significant potential for economic development.

5th Avenue to Oldham/Woodland Avenues Area

- As the core of the Gateway, develop this area through a mixed use zoning classification that is focused on office, retail, distribution and light industrial uses.
- Pursue land consolidation, enabling marketing of adequately sized parcels relative to proposed frontage roads. Locate office uses and office components of industrial buildings adjacent to the frontage road.
- Create design standards and a redevelopment program for the Brookside property. Set aside the right-of-way for the proposed frontage road in creating the project. Consider a connection to the Palm Beach facilities (a "skywalk" over Baxter, for instance).
- Provide a neighborhood buffer as part of development program, particularly along the east edge of Elm Street.

I-40/Henley Street "Fly-overs"

- Close abandoned rights-of-way and consolidate parcels for redevelopment.
- Develop a master plan and aesthetic standards for reuse of the area.
- Pursue a public use (such as public works or fleet storage facility) that can be located under the interstate system.

Dempster Property Area

- Assess the buildings to determine which structures have long-term viability.
- Pursue an environmental assessment of the area.
- Develop a road improvement program which includes (1) a continuous, internal circulation system, and (2) improved access points, including an assessment of a

loop road from Woodland Avenue that is routed back under Woodland along an upgraded Davanna Street.

- Assess the need to replace galvanized pipe and other stormwater conduits in the area.

17th Street/Hackney Property

- Reconfigure road system to foster development.
- Consolidate land into marketable commercial or business park parcels.
- Create design guidelines for future redevelopment and as downtown gateway.

I-275 and I-40 Gateway Development

While the views of the skyline are impressive, the scenes along the corridor are often of derelict property and seedy buildings. Many of the properties along I-275 and I-40 are underutilized (often poorly maintained). As gateways to downtown, these corridors should be more attractive and their economic development potential should be more fully realized. The following program is recommended:

- Road connectivity, which facilitates traffic flow between 17th Street and Woodland Avenue, is the key to successful economic development in the corridor. These road connections should be undertaken in conjunction with interchange improvements.



The condition of Richards Street, the only connection in the area, is another reason for the new road system.

- Redevelopment is needed at specific locations, including the Brookside property, Phillips Metal and Hackney sites. Consolidation of the remnant small parcels into meaningful large redevelopment sites is also needed.
- A new zoning code should be created for the area, which would permit a variety of uses, including office, light manufacturing, public/quasi-public uses and commercial uses. Mixed use development, which includes medium density residential, office and retail uses, should be explored as part of the formula for redevelopment. In order for such uses to be compatible with one another, a form-based code should be considered, including design guidelines so that new projects are compatible in terms of appearance as well as uses. Such a code should include guidelines for the following:
 - Landscaping and sign standards
 - A setback (build-to) line in which structures would be built a similar distance from the streets/sidewalks.
 - Consistency in building materials
 - A mix of land of office and industrial uses: Office building and office components of industrial buildings should be closest to the new connector roads that are parallel to I-275 and along the east/west-oriented streets, such as Baxter, Woodland and Bernard. Industrial and warehouse distribution uses could be located toward the interior portion of the corridor where rail access is provided.
 - Minimum and maximum height regulations (with at least a portion of the structure being two stories and a maximum of four stories) to provide a consistent architectural form along this gateway.
 - A street design program, which includes tree-lined connector roads and separated sidewalks.

This program is further discussed under Project Sheets (see page 31).



The North Central Street Corridor

North Central Street is characterized by four distinct types of development:

- Late 19th and early 20th-century commercial areas: the commercial buildings in such places as Happy Hollow and Broadway/Central were always constructed next to the sidewalk and side-by-side. These were the places where grocery and drug stores, butcher shops and other neighborhood-serving establishments developed.



The Broadway and Central intersection in 1928.

- Early 20th-century residential and institutional development: In these areas, late Victorian-era and Craftsman-style houses and an occasional church were created. They were always set back from the street with an attractive lawn. Much of the intermediate areas between such places as Happy Hollow and Broadway were residential in character.



Emerald Avenue United Methodist Church is a good example of development that included lawn space. Photo courtesy of McClung collection.

- Early automobile-era development: When delivery trucks and the automobile became commonplace, commercial development along Central Street was created in new forms. Half-block-long, one and two-story brick buildings were typical. Some were built next to the sidewalk; others had a modest yard space.



Sanitary Laundry, just off Central along Broadway, was one of the early delivery services.

- Late 20th-century commercial development: As the trolley tracks were torn up and Central Street became an arterial of the federal highway system, gas stations, drive-in's and convenience stores started to replace the older uses and the strip commercial atmosphere became the major characteristic.

The road profiles of the street have six distinctly different characteristics:

- South of Broadway: a three-lane section (limited on-street parking)
- Broadway to Baxter: primarily, a four-lane cross-section (no on-street parking)
- Baxter to Oklahoma: a three-lane section (with north side on-street parking in Happy Hollow)
- Oklahoma to Woodland: predominantly a four-lane cross section (no on-street parking)
- Woodland to the railroad bridge: a three-lane section (no on-street parking)
- The road bridge to Heiskell: a three-lane section (with two southbound lanes and no on-street parking)

Recommended urban design and land use program

In addition to the varied street and development characteristics, there are considerable numbers of vacant parcels and buildings along the corridor. The resulting picture is one of significant disinvestment and a helter-skelter land use mix that detracts from the ongoing restoration of nearby neighborhoods.

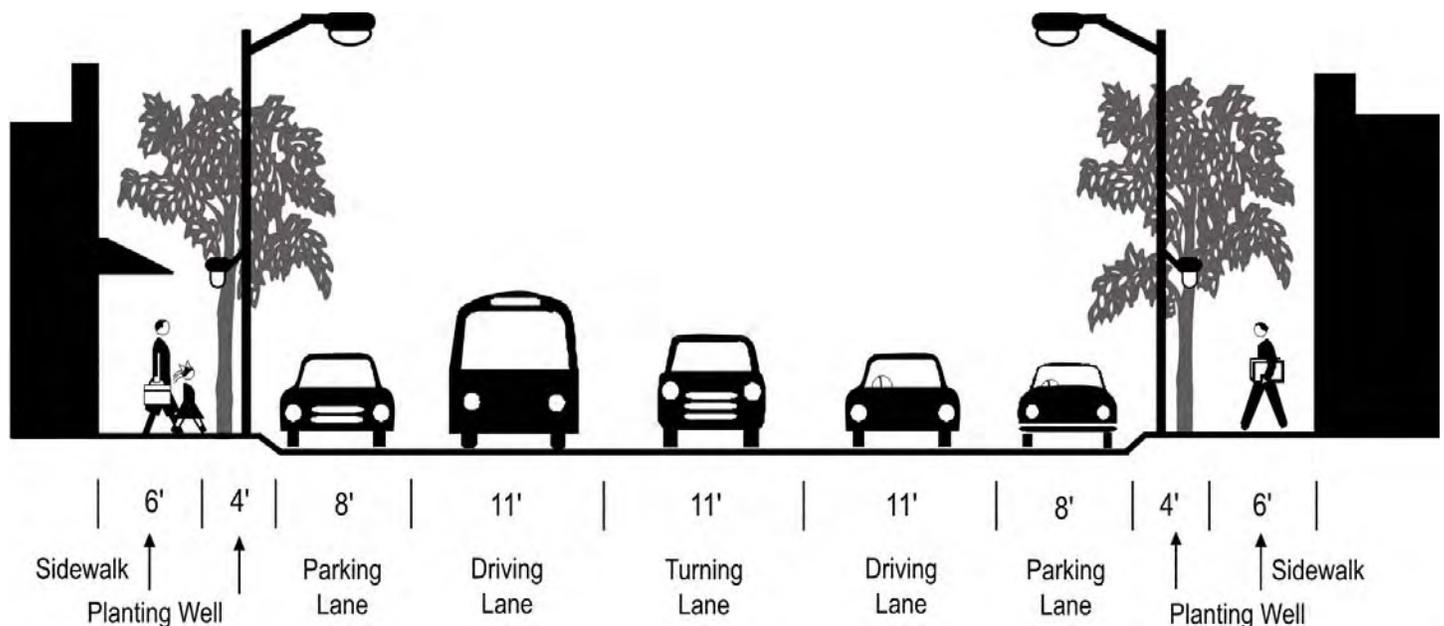
A two-point program which addresses street improvements, building rehabilitation and higher intensity land uses is recommended:

Create a pedestrian-friendly streetscape with the following program:

- Improved sidewalk separation from travel lanes
- A “skinny streets” program, reducing the road cross section to two lanes with a landscaped median and occasional on-street parking, especially in the area between Happy Hollow and Broadway
- A street tree planting program in the medians and along the sidewalks.

Focus on building rehabilitation, complementary architectural design and higher intensity land uses:

- Broadway/Central Area: Promote the façade improvement program (available through the city’s Community Development Department) and create guidelines for infill development, focusing upon the qualities of Emory Place and other historic assets. Encourage infill residential development in the adjacent area that complements the nearby historic districts.
- Happy Hollow: Preserve the historic qualities of this area by restoring the early 20th century buildings. Enhance the “main street” characteristics of the area between Baxter and Woodland Avenues by extending the consistently wide sidewalks, providing space for on-street parking and street trees, maintaining a consistent “build-to” line, and permitting a vertical mix of commercial and residential uses.
- Broadway to Baxter: Medium density residential development (up to 24 dwelling units per acre)



This design is a potential solution in making North Central Street more pedestrian-friendly.

should be considered. Guidelines should be created for such development that include parking behind structures, a minimal amount of front yard space, and a building form and materials component.

- Columbia Avenue to Morella Avenue: Redevelop as mixed use area allowing medium density residential, office or neighborhood commercial services on the east side of Central. This mix could be a vertical mix with shops at ground level. On the west side of the street, office and showroom development should be fostered along

Central as a transition to the industrial redevelopment in the “Dempster” area. Utilize the historic features of the corridor such as the distinct setbacks and scale of early buildings (Steamboat’s, for example) as a basis for the form of infill development.

- The rest of the corridor: Preserve or re-establish yard spaces; 15 to 25 feet of lawn area should be created between the sidewalk and buildings and at least 10 feet of landscape space between sidewalks and parking areas.



Courtesy of Urban Design Associates

North Central Street could be transformed with a combination of historic preservation and complementary infill development.



Happy Hollow was once the center of commercial activity for the employees and their families who worked in the textile mills or in the industries associated with the rail line. The two block area still contains a good collection of early 20th century buildings. Rehabilitation of some of the buildings, such as these, is underway.

Zoning and building improvement recommendations

New zoning: The foregoing program will not be realized without changes to the zoning code. A “formed-based code” should be considered whereby a mix of commercial, residential and office uses can co-exist in the redevelopment of the corridor. The code should address the height and mass of new buildings, setbacks, parking arrangements, and objective to create new development that complements the adjacent neighborhoods. A project sheet addresses this need (see page 31).

Facade improvement grants: This program should be extended to other places along Central Avenue. In addition to Broadway/Central and Happy Hollow the slot commercial buildings on the west side of Central, north of Columbia, should be included in the program.

Additional Corridor Recommendations

1. Work with Phillips Metals to explore alternatives to relocate their operation at 820 Richards Street.

2. As the corridor redevelops, evaluate the possibility of relocating the county engineering facilities to accommodate further economic development opportunities.
3. Examine the reuse of the area under the I-40 and Henley Street entrance ramps for economic development or public service facilities (for example, public vehicle storage and maintenance facilities).



With the long term redevelopment of the Dempster area, and as part of new zoning code for this area, promote the location of offices, showrooms, restaurants and other support uses along Central Street, while retaining the function of industrial operations westward to the railroad.



One potential area for a public works service center (city or county) is the area under the freeway overpasses.

Project Sheets: an Action Plan

Access Improvement Study

Project Location: Applies to the entire corridor

Background: Currently, there are over 100 acres of vacant and severely underutilized land immediately adjacent to the interstate system. In order to successfully revitalize these properties, access improvements need to be made. Currently, TDOT is in the process of designing the modifications for the three ramps on I-275 (Baxter Avenue, Woodland Avenue and Heiskell Avenue) as part of the traffic mitigation measures during the construction of the I-40 project.

Analysis: There is an opportunity to develop a frontage road system that is tied into the existing exits off of I-275. The new access would serve as a long-term solution that addresses safety on the interstate ramps, improves access to several redevelopment sites and enhances the appearance of this gateway into downtown. The study should be conducted to address various options to provide continuous access along the corridor. After the I-40 construction is completed in 2009, there is an opportunity to address permanent design solutions to the ramps on I-275.

Recommendations: The following scope can be the basis for the improvement program:

1. Engage the services of a consultant to investigate permanent access road and ramp improvements.
2. Conduct a design charrette to include MPC, TPO, KCDC, the Development Corporation and city staff as appropriate. The purpose of the charrette and discussion is to develop a full understanding of the redevelopment opportunities, goals and objectives, and especially to understand the transportation issues and deficiencies which must be overcome.
3. Conduct a field review of the area and then propose alignment alternatives for new and



This interchange and the others like it along I-275 will be converted to a diamond design to accommodate three lanes of traffic during I-40 construction; those conversions should be the start of an overall access improvement program.

upgraded facilities based on the understanding of the project area and a preliminary traffic review and analysis.

4. Convene a second group meeting to discuss the consultant's findings and preliminary alternatives, and create consensus on the improvement program.
5. Prepare a conceptual road plan including horizontal, vertical alignment and lane configuration.
6. Discuss proposed improvements with TDOT staff, especially as they relate to the interstate system.
7. Convene a third meeting to present the final plan and receive comments.
8. Revise the plan as needed and develop planning-level cost estimates for the recommended improvements.

Lead Agencies: The Development Corporation, Wilbur Smith and Associates, TPO, and City Engineering personnel.

Funding: Estimate \$25,000 - \$50,000

Brookside Mill Site

Project Location: Brookside Mill Site: 601 Baxter Avenue (19.40 acres). The site is situated on the north side of Baxter, located between I-275 and Second Creek/ railroad.

Background: The property has been considered for various uses in recent years, including a junkyard and student housing. Flooding along the east edge of the property has been a concern for many years. Adding to the flooding issue is the fact that the back portion of the property is a hillside and the flat portion of the property is paved, resulting in rapid runoff to the creek. Historically, this has been an area for homeless camps, illegal dumping, and other illegal activity.

Analysis: The proposed frontage road and Second Creek Greenway Trail would be located to either side of the site; proper site planning is needed to accommodate those improvements with redevelopment. The flood control and trail design should be addressed together. A decision has to be made whether it is economically feasible to incorporate the other smaller properties on the backside

of the hill on Cline Street and Scott Avenue into a unified site. At first glance, these businesses and houses seem viable if left alone. However, if a frontage road is created parallel to I-275, then the private sector would probably redevelop the Cline Street area.

Recommendations:

1. Proceed with redevelopment, utilizing the advice of the task force
2. Follow through with any recommended remediation, which is identified in the EPA Phase I/II analyses of site.
3. Develop flood control measures and set aside trail easement
4. Set aside right-of-way for a proposed frontage road and Second Creek Greenway.

Lead Agency: Development Corporation, Chamber, and City Industrial Development Board

Funding: Cost: Approximately \$2.2 million (Source: City/County/The Development Corporation)



Norfolk Southern Railroad Yard

Project Location:

Rail yard section: 224 Heiskell Avenue (49.98 acres) I-275
Business Park section: 900 Tennessee Avenue (43.95 acres)

Background: The I-275 Business Park, the first major brownfield redevelopment in Knoxville, comprises approximately 44 acres of industrial zone property. The site has been marketed since 2003.

The rail property has approximately 25 acres of developable land, due to the fact that there is a capped superfund site to the west side along the interstate. The rail property has seven small older structures on it relating to the wheel shop operations.

Analysis: The main impediment for redevelopment is poor road connections to the site. Currently, vehicles access the site from the interstate using Heiskell Avenue, Johnston Street and Tennessee Avenue. Additional transportation improvements are needed to address site line issues associated with the rail underpass and the interstate ramp at Heiskell Avenue for safety and accessibility.

The rail property contains rail spurs that could be removed from this property with the exception of the most northern spur that goes into AmeriSteel. This spur could be bridged over easily because the line is depressed behind the Rinker site.

Recommendations: The following recommendations include specific action steps that are need to make the Norfolk Southern yard and I-275 Business Park one site for economic development:

1. Continue to work Sysco in implementing a redevelopment plan for the property.
2. Acquire the Norfolk Southern Railroad yard and rehabilitate for redevelopment purposes.
3. Relocate the Rinker facilities.
4. Develop an internal road system that connects Tennessee Avenue to Heiskell Avenue.
5. Relocate the access road at Heiskell Avenue closer to I-275 to solve site distance problems associated with the road tunnel.
6. Set aside trail easements to connect the Second Creek Greenway to Lonsdale and Lincoln Park.

Lead Agencies: The City, Development Corporation of Knox County, and City Industrial Development Board

Funding: Acquisition: City/County
Relocation: City/County
Transportation: State Industrial Access program.



H. T. Hackney Site

Project Location: 338 Dale Avenue and surrounding parcels. The site is situated south of I-40 between Blackstock Avenue, Seventeenth Street, Western Avenue and the railroad.

Background: There are five vacant parcels on the south side of Dale Avenue. On the north side, there are such underutilized land uses such as a lumber yard.

Analysis: All the parcels north of Dale Avenue are “double-served” by the road system. There is a possibility of vacating one of these rights-of-way. If Dale Avenue was vacated, a 19.15-acre site could be developed by consolidating the 14 parcels found in this area. The site could also have rail access. In addition, the area is highly

visible from I-40, (heading east) and serves as a gateway into Knoxville and the University of Tennessee.

Recommendations:

1. Acquire the site
2. Develop a relocation plan for existing businesses
3. Vacate rights-of-way and develop road improvements to Blackstock Avenue.

Lead Agencies: The Development Corporation of Knox County, Chamber, and City Industrial Development Board

Funding: City, County, the Development Corporation and City Industrial Development Board



Formed Based Zoning along I-275 and North Central Street

Project Locations: Both sides of I-275 from 17th Street to Woodland Avenue; and Central Street from 5th Avenue to the Morelia Avenue area.

Background: The I-275/Downtown Gateway proposal (see page 20) calls for better urban design along these corridors. In other words, buildings that complement each other architecturally and a landscape that enhances the image of these gateways where tens of thousands of visitors and residents pass each day.

The North Central Street corridor (see page 21) is another area which could benefit from formed based zoning, providing uses and architectural forms that complement the neighborhoods and economic development.

Analysis: With ten different zoning districts, including various classifications of industrial, office, commercial and residential uses, a hodge-podge of buildings, storage and industrial yards line the fragmented surface streets in the area. The zoning districts have various dimensional and height regulations, such as different yard and setback requirements. This results in an inconsistency that undermines an attractive appearance.

The other issue associated with I-40 and I-275 zoning is that some of the zones are not conducive to long term economic development.

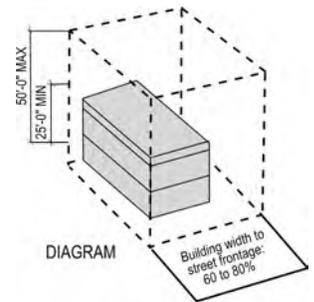
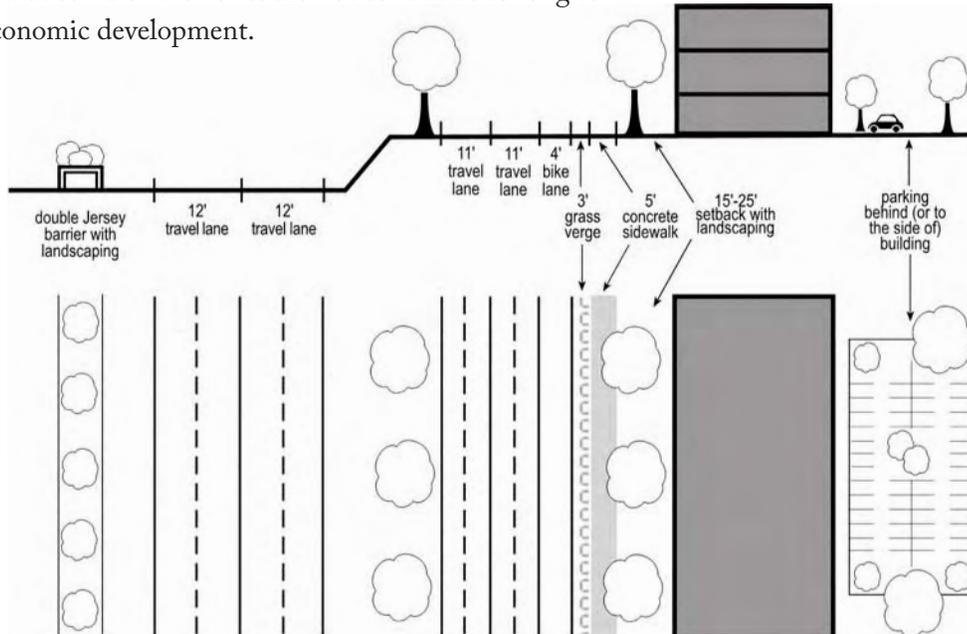
The Central Street corridor north of Broadway is zoned almost exclusively for commercial uses. Formed-based codes can address mixed use in buildings, such as shops or offices at ground level with housing above and the relationships of the buildings to the sidewalks, yards and transitional spaces.

Recommendations:

1. Develop new zoning and design standards for the downtown gateways. This could be a form-based code.
2. Create a new zoning code and improvement program for North Central Street which addresses a wider mix of uses and includes a form-based code. The improvement program should address the street width, sidewalks and landscaping, making the street more pedestrian-friendly.

Lead Agencies: City, Chamber, City Industrial Development Board, and MPC (I-40/275 Gateways); City and MPC (North Central Street), with design consulting services.

Funding: City, County, TDOT, Development Corporation funds, federal programs such as block grants

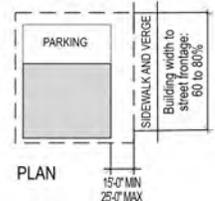


DIAGRAM

SITE PLAN ALTERNATIVE A



SITE PLAN ALTERNATIVE B



PLAN

Trail Project

Project Location: Starting to the north in the Lonsdale neighborhood, specifically at the terminus of Tennessee Avenue and following Second Creek south to World's Fair Park and downtown.

Background: For years, Second Creek has been Knoxville's most polluted creek. The immediate area around the creek is where some of Knoxville's first large industrial businesses were sited because of the water supply (specifically, for steam generation) and the proximity to the rail line. Today, the area remains blighted with brownfields and the creek has water quality problems.

Analysis: Establishing a greenway (that is, an open space, vegetated buffer next to the stream) and trail will improve water quality, enhance the transportation system, serve as an amenity for new development, and add a new recreational asset to the Heart of Knoxville.

Actions:

1. Develop a design solution for routing the trail along the east side of I-275 north of Woodland Avenue.



2. Create a Second Creek restoration program, including landscape conservation, strengthen stormwater programs and initiate additional creek clean-up measures (solving non-point runoff problems associated with metal recycling).
3. Pursue a rails-to-trails program by working with the railroad to reuse abandoned rail lines for trail purposes.
4. Ensure that new development along the corridor enhances the open space and trail system, including connections from new buildings to the trail, safety measures, such as windows looking over the trail, and environmental quality improvements (for example, site detention basins and water quality facilities adjacent to the greenway).

Lead Agency: City Parks and City Engineering

Funding: SAFETEA-LU, Rails-to-Trails, State and Federal park grants, the Legacy Park Foundation and the Tennessee Greenway Foundation

