Newton Streetscape Master Plan & North Newton Master Plan

The City of Newton, North Carolina

Allison Platt & Associates **The Wooten Company**

January 2016

Newton Streetscape Master Plan

North Newton Master Plan

January 2016

The City of Newton, North Carolina

401 North Main Avenue
Newton, NC 28658
828.695.4266
http://www.newtonnc.gov/

Consultants:

Allison Platt & Associates
Urban Design
Landscape Architecture
919.734.7542
http://www.allisonplattandassociates.com

The Wooten Company
Engineers
919.828.0531
http://www.thewootencompany.com

Newton Streetscape Master Plan & North Newton Master Plan

This report was prepared by:

Allison Platt & Associates
Allison Platt, Principal
203 N. Slocumb Street
Goldsboro, NC 27530
919-734-7542

http://www.allisonplattandassociates.com

with portions contributed by:

The Wooten Company
Clarence Lockamy, Principal
1430 B Old Lenoir Road NW
Hickory, NC 28601
828.322.5533
Fax 828.322.5242

http://www.thewootencompany.com

City of Newton Administration
As of January 2016

Mayor:
Anne P. Stedman

Mayor Pro Tem:
John Stiver

City Council:
Robert Abernethy, Jr.
Jerry Hodge
Jody M. Dixon
Tom Rowe
John Stiver
Wes Weaver

City Manager:
Todd Clark

Deputy City Manager:
Sean Hovis

Planning Director:
Randy Williams, AICP

Public Information Officer:
Alex Frick
828.695.4266

City Hall Address:
401 North Main Avenue, Newton, NC 28658
828.695.4300

http://www.newtonnc.gov

1.0 Introduction & Analysis

1.1 Introduction

Newton plans to revitalize its downtown core and the North Newton area in order to improve the local economy and attract new businesses, visitors and residents. Allison Platt & Associates (landscape architects and urban designers) and The Wooten Company (engineers) were hired to undertake this work, which began in January of 2015 and concluded in August of 2015.

The Newton Depot Authority board is also interested in expanding their property, facilities, and exhibits to attract more visitors, so this study was expanded to include this area.

This report includes analysis, concepts, and final plans and recommendations for streetscape improvements in the downtown core, more general recommendations for a downtown streetscape hierarchy, and a master plan for the North Newton area concentrating on streetscape and museum improvements.

Because the focus of the North Newton area is different than for the downtown area (master plan vs. streetscape master plan), the analysis, concepts, and plans for the North Newton area are presented together in Section 4.0.

1.2 Demographics

Newton is the County Seat of Catawba County, with a population of nearly 13,000 (2010 census). It is immediately south of Conover, and near both Hickory to the north (within 11 miles) and Charlotte to the southeast (within 40 miles). The City was founded in 1843 and received its charter in 1855.

The economy of the area has been based on agriculture, the railroad, furniture and textiles. The current mix (2013) of employment opportunities includes manufacturing (34%), retail (11%), service (10%), education (7%), construction (7%), hotel and food service (6%), and public administration (5%).

The population is 67.9% White, 13.7% Black, 12.9% Hispanic, and less than less than 5% (total) Asian, mixed race, American Indian, or other. In the past few years, population has declined slightly from a high in 2007, and unemployment is slightly higher than the state. House prices are somewhat but not significantly lower than the state ($117,500 in Newton; $154,500 statewide). Household income is lower than the state at $31,000 in Newton (down from $37,000 in 2000) vs. $46,000 statewide.

Regarding education, for populations 25 and older, 76% have a high school or higher, 17% have a Bachelor's or higher, and 3.7% have a graduate degree or higher. Crime rate overall for the past two years is lower than the national average (239.7 per thousand in 2012 and 274.4 per thousand in 2013 in Newton; 294.8 overall average nationwide).

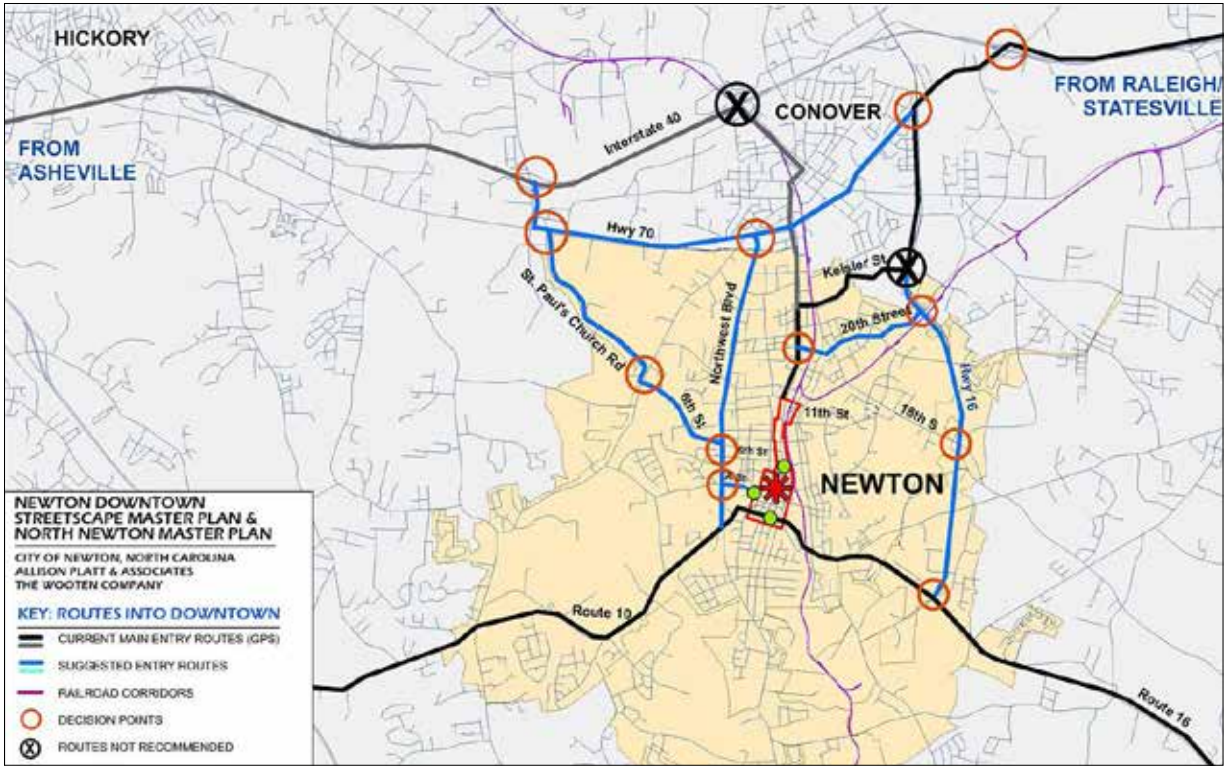


Figure 1.1: This Routes Into Downtown map shows the main routes (black lines) into the downtown (red asterisk), decision points (orange circles), and explores possible alternative routes (blue lines) that would provide more attractive entries. The study area is the area outlined in red at the center of the drawing.

There are no colleges or universities in Newton, but there are seven colleges, community colleges and technical colleges within 30 miles.

Overall the City is declining economically, with higher than average unemployment, lower than average household incomes, and population loss in a state that is gaining population. The City also does not have a high profile statewide. In order to take advantage of population trends statewide, the City must work to improve its image and raise awareness so it can begin to attract more visitors, residents, and businesses. The City has focused on the most likely areas to generate more economic activity in the entire community by taking advantage of the historic downtown and the Historic Newton Depot/North Newton area. With these assets developed, attracting more employers and residents will likely be more successful.

1.3 Study Area

The study area for this work is shown as a black dashed outline in Figure 1.2 (right). The study area includes the historic downtown and extends north to include the North Newton Area where the Depot Authority's narrow gauge museum is located. The downtown area is indicated with a red asterisk (Figure 1.2, right). At the center of this area is the Square, the historically significant heart of the community. The stone Beaux Arts Courthouse is set in a beautiful landscaped square, surrounded by main routes through town and (mostly) historic commercial buildings. Historic commercial and institutional buildings extend north and south from the Square. Other areas of the core are mixed in use and architectural quality, with many metal buildings and auto-related uses on the fringes of the historic core. There is an historic district within the larger core, and this can be seen in Figure 1.5.

1.4 Routes Into the Downtown

Figures 1.1 and 1.3 illustrate the existing routes in, and some recommendations for improvements. Unfortunately, there is no easy access to Newton from nearby main roads and interstates. The map on the previous page shows Interstate 40 north of Newton with the community of Conover in between. The routes into Newton from I-40 are confusing and not well marked. The route that brings the driver through downtown Conover and across the railroad tracks then south on N. Main Avenue is not only confusing and circuitous, but also makes a poor first impression. Possible solutions to this problem are addressed in a larger area map in Figure 1.1, and in a smaller area map in Figure 1.3. The suggested changes would require working with NCDOT to change exit signage into Newton from I-40 and redirecting traffic to more appropriate entry points. The City has already begun to implement these changes with an attractive wayfinding sign system, but work is still needed on signage and decisions point near I-40.

The main route from Charlotte to Newton is NC 16/NC 10. Parts of this road have been improved to four lane divided, but these improvements do not extend all the way to Newton, so efforts should be made to make this a priority for NCDOT. The section of NC 16 into Newton and it's continuation through Newton as NC 10 is problematic because of narrow lanes, sharp turns and limited sightlines. Remedying this will require major changes to the land uses and road width within the Newton municipal area. Improvements to NC 16/NC 10 would make it easier for people to live in Newton and commute to the Charlotte area. This route can be seen in Figure 1.2, above, and Figure 1.3, next page.

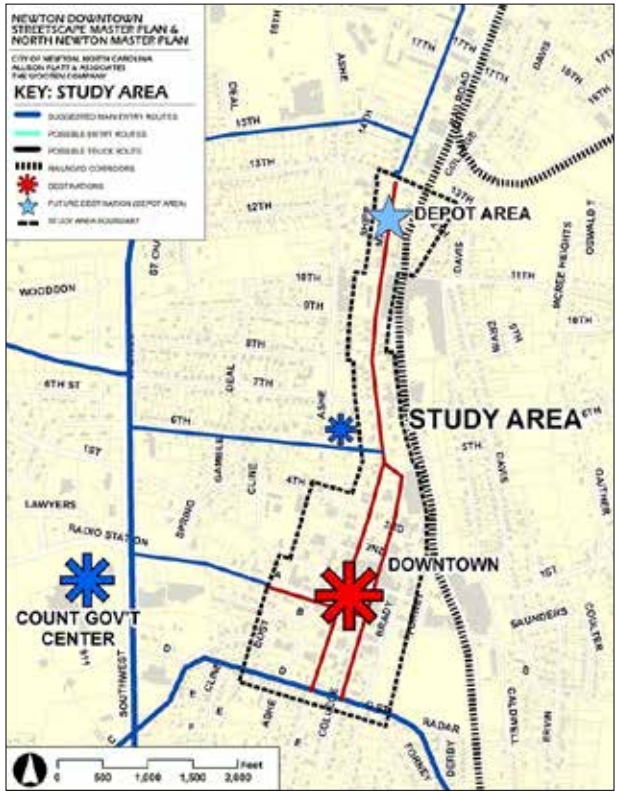


Figure 1.2: Study area map, showing existing and planned destinations.

The best entry point from east and west along NC 10 is College Avenue, which brings visitors directly to the Square.

Figure 1.1 on the previous page shows a larger area drawing of preferred routes from the northeast into the downtown and the North Newton area. East 20th Street is probably the most attractive and practical route in from the northeast via NC 16. The quality of the adjacent uses on 20th Street lessens near the North Main Avenue intersection, but the large tracts of vacant land near the inter-

section of N. Main and E. 20th represent an opportunity for future development/redevelopment. See discussion of this in Section 5.3. Design guidelines for sites and buildings along this corridor would help to upgrade the area over time.

A good route into the downtown from the west is Northwest/Southwest Boulevard from US 70 or (via St. Paul's Church Road). Although most of the uses are strip commercial, the quality of the buildings is higher and most are occupied. Bringing drivers north or south on Northwest/Southwest Blvd. and then east on West A Street into the downtown is the recommended route because East A Street is one of the best commercial approaches to the downtown. Routes into the downtown through the historic neighborhood on 5th or 6th Street are not recommended because increased traffic would negatively impact this neighborhood.

Truck routes into the downtown should also be carefully considered to ensure that heavy trucks are not travelling through the Square more than absolutely necessary, or north and south on Main Avenue or College Avenue above the downtown except for local deliveries. One of the largest generators of truck traffic is the Renwood Mills on East A Street between S. Brady Avenue and the railroad tracks. This company is a welcome addition to the local economy, so accommodating the considerable truck traffic the Mill generates is important to the City, the Mill, and the truck drivers. At the present time the preferred route in is NC1 6/NC1 0 to Brady (or sometimes College) and then north to A Street and east to the Mill, but narrow turn radii and poor sightlines made this problematic. Trucks are often lined up waiting to load; the lines down Brady Street threaten to block access to the new fire station.

A current strategy suggests that trucks turn off Northwest Boulevard at West 1st Street from the north and west, and continue on NC 10 from the south and east, then drive north on Ashe Avenue to a City-owned parking lot on the west side of North Ashe between 2nd and 4th. When alerted, the trucks would exit the parking lot on 4th Street and drive east to North Brady, south to A Street, then east on A to the Mill. This would remove most of the stacked trucks that now park on S. Brady. Implementing this or another solution should be accomplished before streetscape improvements are undertaken. A study of large truck turning radii near South College and A Street turning east, and of College and 1st Street turning west indicates that there is not sufficient room for these turns, either now or in the future, so directing truck traffic to better routes and stacking areas will be important to the success of the downtown area as well at the continued viability of Renwood Mills.

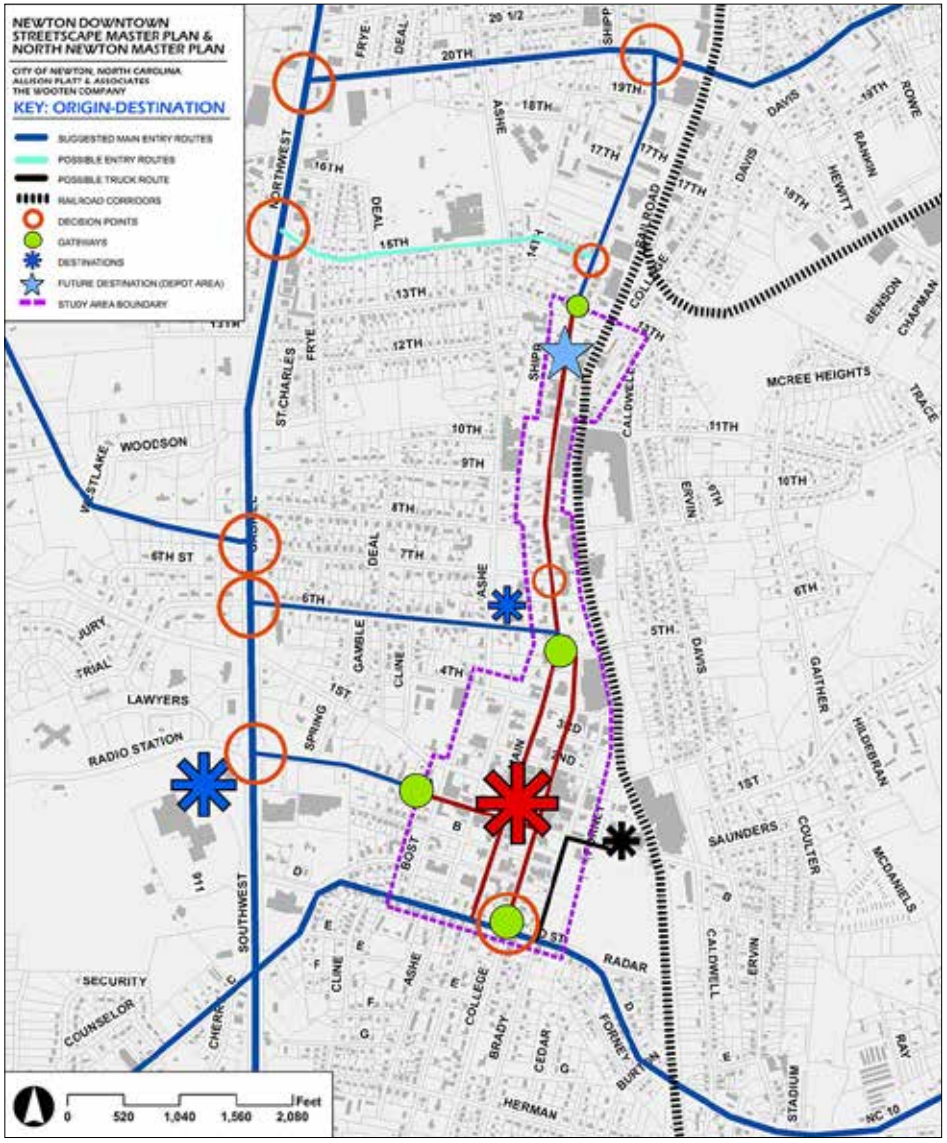


Figure 1.3: Origin-Destination Map. This map shows closer-in decision points and suggested routes into the downtown and North Newton.

1.5 Land Use and Density

The downtown area can be seen on the Land Use map (*Figure 1.4*, near right) as dark red. At the center of this area is the Square, the historically significant heart of the community. The stone Beaux Arts Courthouse is set in a beautiful square, surrounded by main routes through town and (mostly) historic commercial buildings. Historic commercial and institutional buildings extend north and south from the square. Other areas of the core are mixed in use and in architectural quality, with many metal buildings and auto-related uses on the fringes of the historic core.

The area immediately north and south of the downtown includes two very attractive neighborhood of mostly historic homes. To the west is Northwest/Southwest Boulevard with strip commercial uses and the Country government center, and further west there are newer homes at suburban densities. The North Newton area is a mix of uses including residential, commercial and industrial, with the latter uses located near the north-south NCRR rail lines.

Figure 1.5: Downtown Figure/Ground Drawing illustrates the relative building density in areas near the downtown. The National Register Historic District is outlined in red stripes. The Historic District has the best commercial architecture in the City and is the area which, if improved with streetscape, will be the most likely area to attract new businesses and jump-start the revitalization process for the entire community. Areas where buildings are closer together are usually the most comfortable areas for pedestrians to walk. Streetscape improvements will also make it more likely that upper floors of existing historic buildings will be redeveloped for other uses, primarily residential.

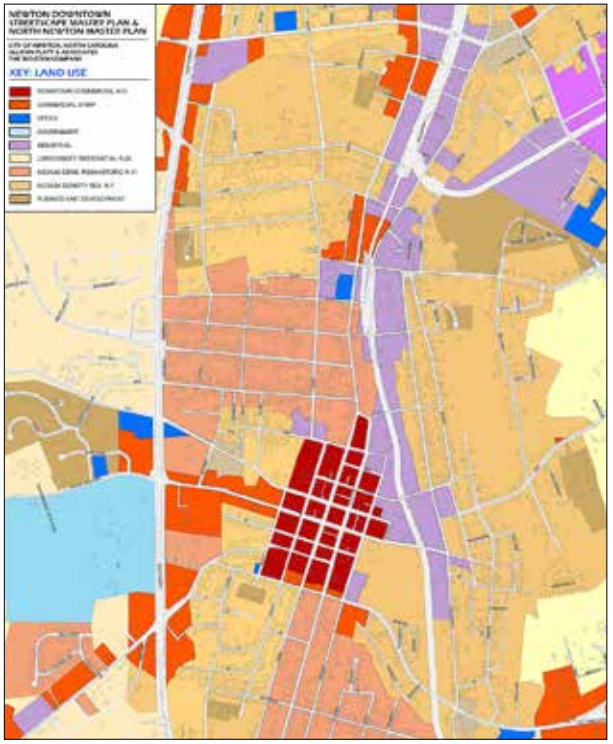


Figure 1.4: Downtown Area Land Use. Red is downtown commercial, orange strip commercial, light blue is government, dark blue is office, peach is historic residential, lilac is industrial (near the railroad), and beiges are newer residential neighborhoods.

Figure 1.5: Downtown Figure/Ground Study. This map illustrates the types of buildings and the density of development in the downtown study area. The National Register Historic District is shown as the red striped area. Development outside this area is a mix of scattered historic commercial and institutional buildings mixed with commercial strip buildings of varied quality. The amount of undeveloped land and underutilized buildings represents a development opportunity for the future.

Figure 1.6 (left): This view of East B Street from S. Main shows how the dense historic district transitions to strip development. The lack of pedestrian destinations, sporadic sidewalks, and auto-related uses make this area unlikely to redevelop without assistance.

Viewing the downtown area outside the Historic District reveals that the denser urban fabric of the historic commercial buildings breaks down into scattered historic and non-historic buildings interspersed with unimproved parking lots and vacant land. In this type of area, destination buildings are farther apart and pedestrians are less comfortable navigating between drive-ways, unscreened parking areas, and the street. This makes it more likely that people will drive to one location, conduct their business, and then leave. This does not create the type of economic synergy that is needed to expand the downtown.

Once the Historic District has been improved it will be more likely that lower-quality and underutilized buildings in the downtown will start to be redeveloped or rehabilitated. To ensure the creation of an attractive and economically viable downtown, design guidelines should be put in place to ensure continuous sidewalks, a more suitable mix of uses, improved site design, higher density, and improved architecture and building materials. These areas could be appropriate for medium density housing or mixed-use in the future.

1.6 Pedestrian Value

There are two elements that have been analyzed in *Figure 1.7: Pedestrian Value* in order to rank the existing downtown sidewalks and environment. One is the value or potential value of the nearby environment, and the other is by the existing conditions of sidewalks (or their absence). Solid lines indicate those areas where sidewalk improvements are most likely to cre-ate an improved economic environment for investment. Red solid lines are mostly historic buildings close together. Orange solid lines are lesser quality buildings with sidewalks. Green solid lines are park-like or residential areas with sidewalks. Dashed lines indicate the existing conditions and quality of adjacent uses. Green dashed lines indicate a higher-quality environment that lacks sidewalks. Orange dashed lines indicate an intermediate quality area (often parking lots or lower-quality buildings) without sidewalks. Black dashed lines indicate a poor-quality environment without sidewalks.

It would be desirable in the long term to have continuous sidewalks throughout the downtown, but that will take time, so this drawings is useful in evaluating which blocks should have the highest priority for improvements. In the long term these decisions will be influenced by any development op-portunities that may arise. Ideally, installation of improved sidewalks should be assumed for any new development or major redevelopment of downtown properties. I*n Figure 3.7*, page 26, a cross-section for improved sidewalks is presented.

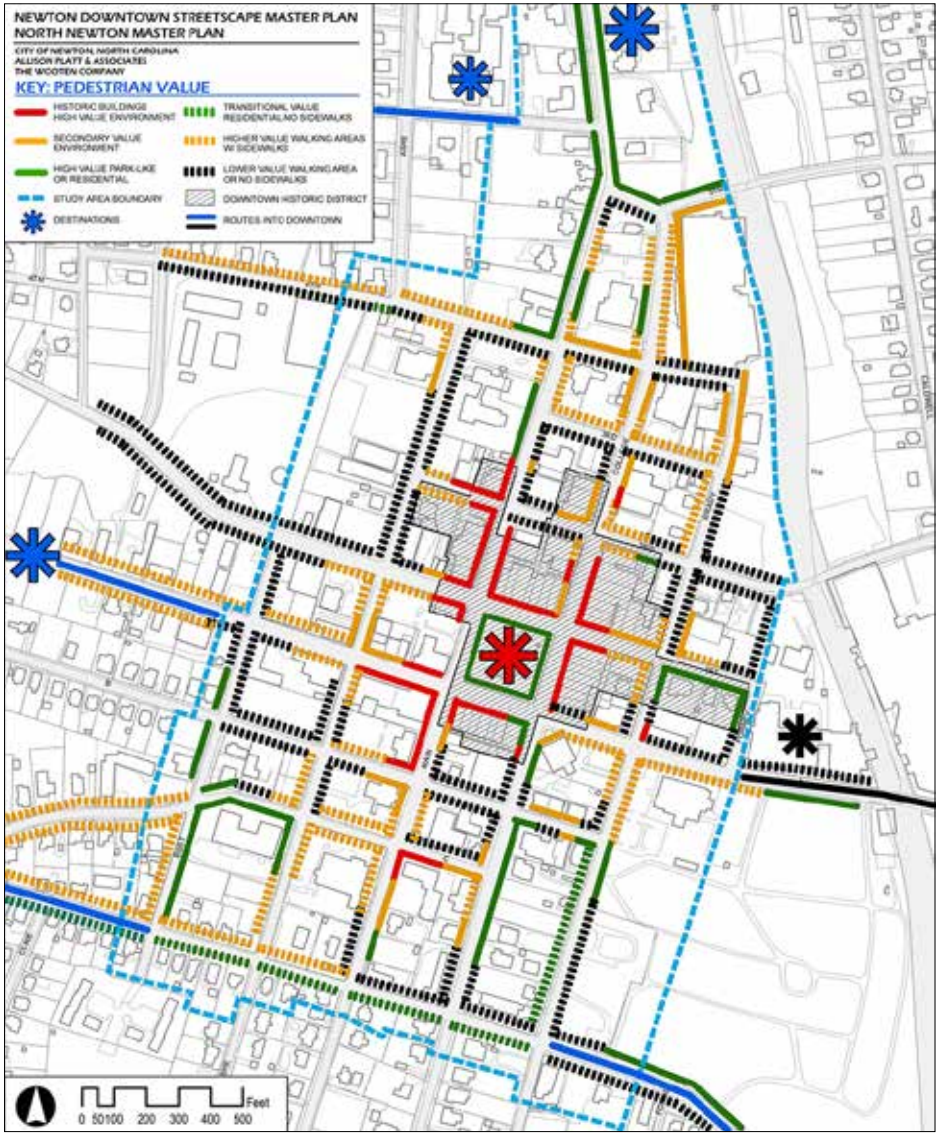


Figure 1.7: Pedestrian Value. This drawing establishes levels of quality based on a combination of sidewalk conditions and adjacent land use.

2.0 Concepts

2.1 Streetscape Hierarchy

Following analysis, public input and City input, the drawing on the right (*Figure 2.1: Streetscape Hierarchy*) presents the recommended hierarchy of streetscape types within the downtown area. Red indicates the proposed "highest and best" pedestrian streetscape treatment, which would usually include widened sidewalks with unit pavers, street trees, enhanced lighting, and other amenities.

Blue indicates "connector" streets, which connect from routes into the downtown. While it is assumed that such streets are important vehicular entries, they are also "image" streets for the community, and as such should also have continuous sidewalks, landscaping, and bike lanes if possible. Because College and Main are the principal north-south routes through the center of town, upgrading their appearance from D Street north to 4th Street and beyond is recommended. Likewise, A Street is the recommended route in from Northwest/Southwest Boulevard to the downtown.

Green indicates residential streetscapes. In these types of streets, the sidewalk should be set behind a grass tree strip if possible, with shade trees or small trees such as crepe myrtles where there are overhead utilities. A continuous sidewalk is recommended on at least one side of the street and preferably on both.

Yellow lines are "other" streetscapes. Design of these streets will be dictated by nearby uses and conditions, ROW width, frequency of driveways, and overhead utilities. Here, as with residential streets, the goal should be to have continuous sidewalks, at least on one side and preferably on two. The priority for streetscape improvement should be 1) Downtown (red); 2) Important connectors (blue); 3) Residential (green); and 4) Other.

Gateways are shown as green circles. They should be designed to welcome visitors to the downtown through landscaping, signage, and hopefully improved and continuous sidewalks from these points into the heart of downtown.

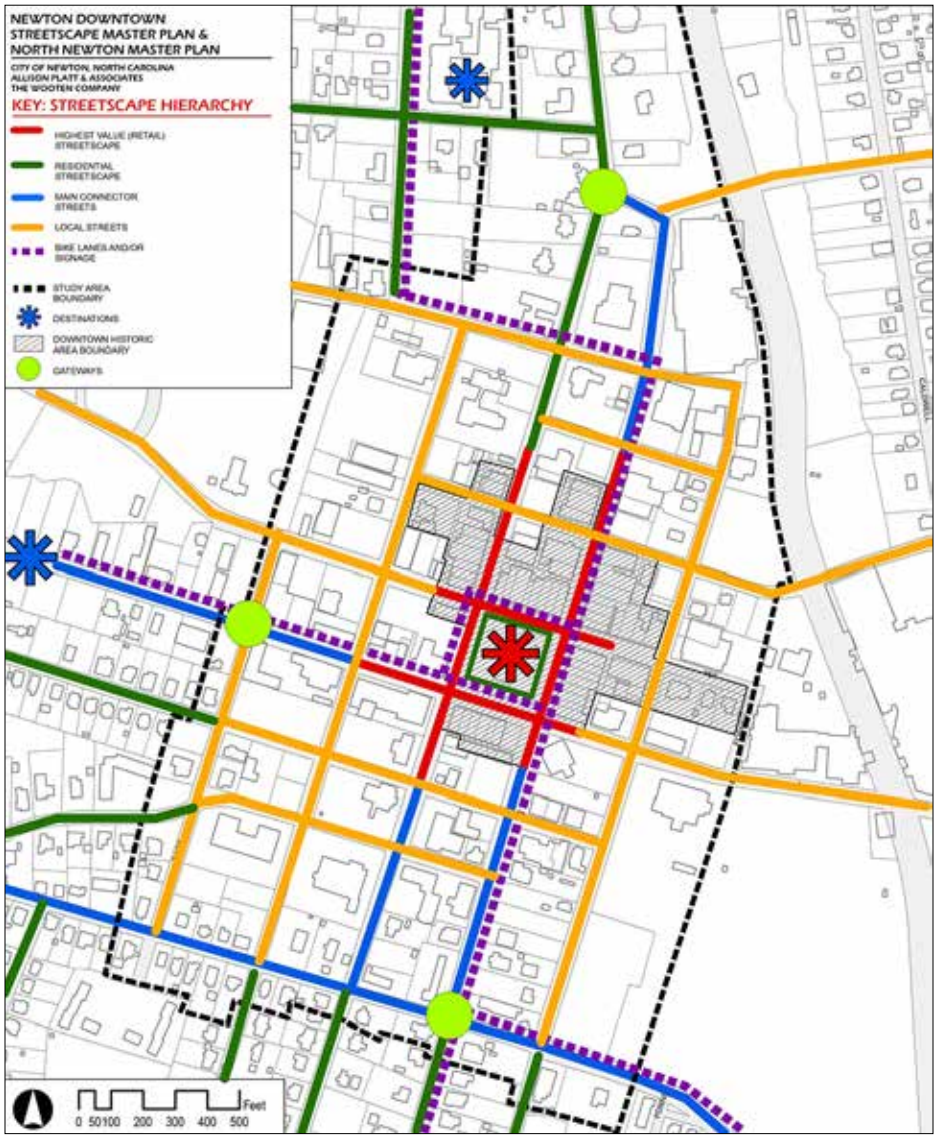


Figure 2.1: Streetscape Hierarchy illustrates the types of streets proposed in the downtown.

2.2 Complete Streets

If the City hopes to win funding for portions of downtown streetscape improvements, it will be important to incorporate “complete streets” design elements into the design. Complete streets are recommended by most agencies overseeing or promoting urban streetscape design, including NCDOT, USDOT, the Federal Highway Administration, Smart Growth America, and many other cities and states across the country.

Complete streets include enhanced pedestrian and handicap access, bike accommodations, and better integration of other forms of transit. This trend does not shortchange the importance of vehicular safety, but urges a broader view that allows all forms of transportation to be accommodated safely.

Our team has incorporated complete streets design elements into our streetscape master plan. *Figure 2.1* shows suggested bike lane and bike route integration into the downtown area and connections from the downtown to the neighborhoods in all directions and to the government center on A Street east of Northwest Boulevard. A possible design for the A Street improvements is shown in *Figures 3.20-3.23*. These plans incorporate separated bike lanes, continuous sidewalks from downtown to the government center, and enhanced crosswalks at the intersections of A Street with Northwest Boulevard. Because the City has implemented a very attractive greenway to the west of the Government Center, bike lanes should extend past the Government Center to connect the downtown with the greenway (and also bring riders from the greenway into downtown).

Bike lanes are shown going north on College Avenue, south on Main Avenue and east and west on A Street. At the intersection of N. College or N. Main with 4th Street, the bike path could go west along 4th Street then north on North Ashe Avenue. Bike paths on College and Main should also extend into the historic neighborhood south of the downtown.

2.3 Existing Conditions at the Square

Figure 2.2 shows the existing typical elevation and plan of Main Avenue and College Avenue at the Square. The ROW on all four blocks is approximately 70’. Main and College are both one-way streets and include two rows of parallel parking and three rows of moving lanes, each ~11’ wide. The other pair, A Street and 1st Street (shown in *Figure 2.5)* are both two-way, and include two moving lanes at ~11’ each and two rows of head-in parking at ~16’ each. All the sidewalks on the Courthouse side are approximately 8’ wide.

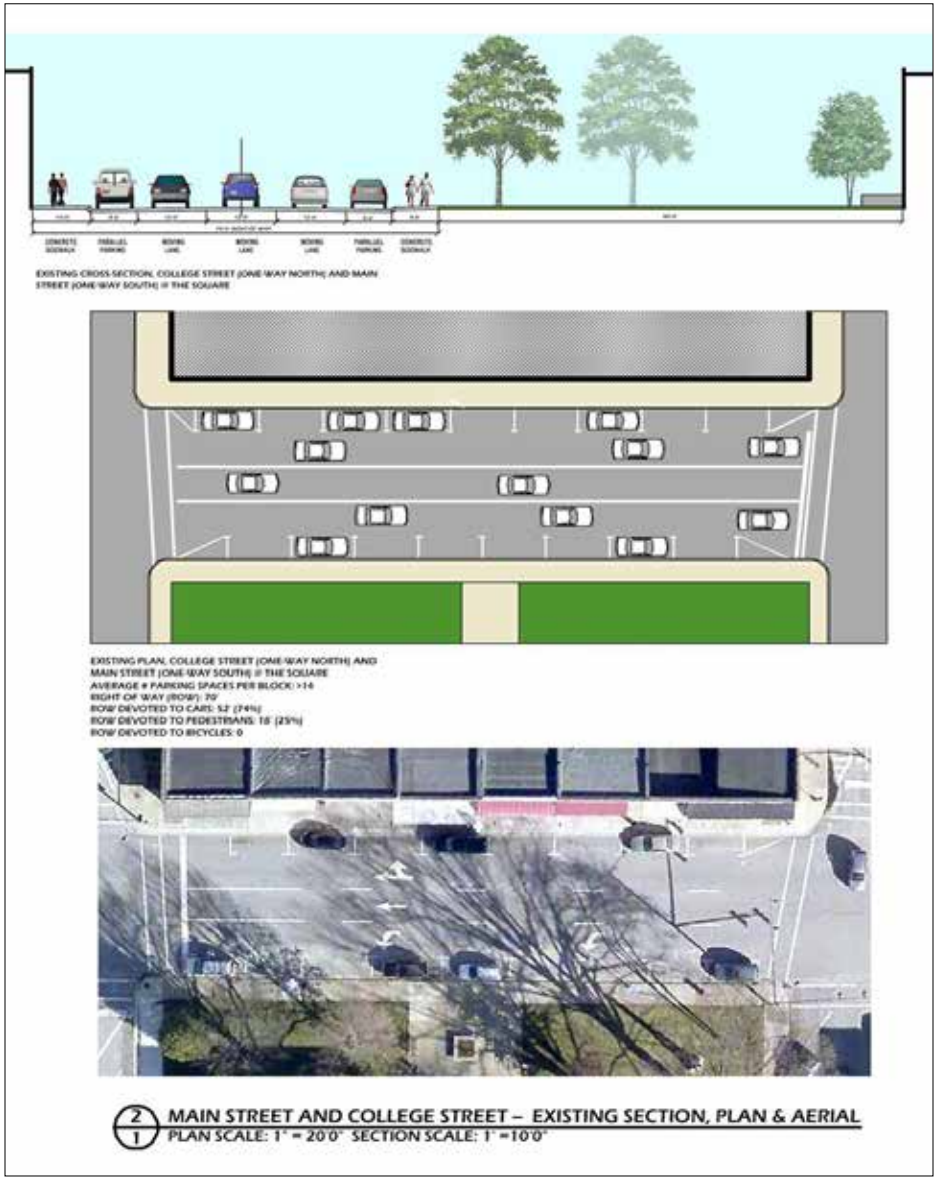


Figure 2.2: Existing Conditions on Main Avenue and College Avenue at the Square. See next page for text.

The sidewalks on the commercial building sides are ~10'-11' wide. Current widths will not easily accommodate sidewalk dining and the worn concrete is uninviting (see *Figures 2.3 and 2.4* below). Currently about 75% of the ROW is devoted to cars, and 25% to pedestrians.

The goal for the streetscapes around the Square is to add bike lanes and enough sidewalk space for expanded pedestrian paths plus sidewalk dining. After consideration of four different possible arrangements of bike lanes, parking arrangements, and sidewalk widths, the City and the public agreed on the cross-section shown in *Figure 2.6*. This configuration will need to be vetted with the NCDOT before construction drawings are prepared since Main Avenue is a State route, but NCDOT shows similar plans and cross-sections in their Complete Streets publication. Because there are no surveys to provide exact measurements, these approximate measurements will need to be revisited anyway.

Figure 2.6 shows generic brick-colored "improved paving" that is not meant to represent any particular material. However, the overwhelming public prefer-

Figure 2.3 and 2.4: Typical view (left) of existing College Avenue sidewalks and parallel parking immediately north of the Square, and typical view (right) of 1st Street sidewalks and head-in parking on the Square.

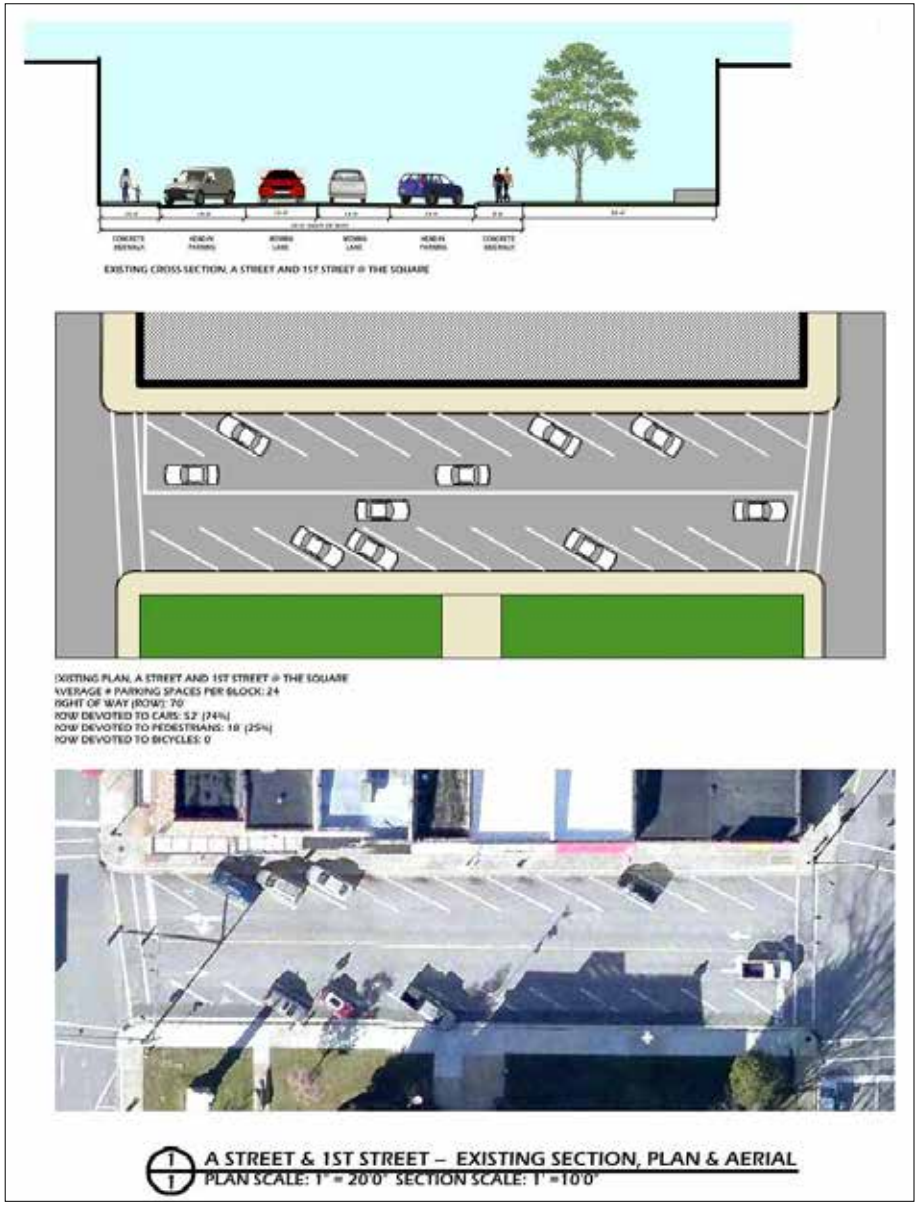


Figure 2.5: Existing Conditions on 1st Street and A Street at the Square.

ence for paving materials was for some type of unit paver rather than concrete sidewalks.

In the preferred configuration, the sidewalk on the retail building side is 19' wide, there are two 8' parallel parking lanes, one 5' bike lane, and two 11' moving lanes on all four sides of the Square, except on A Street, where the bike lanes are two-way (this street also has a slightly wider ROW). The walk on the Courthouse side remains at 8', but with improved paving.

This configuration has the following attributes in relation to the existing conditions:

- *Total parking spaces in the Square: 64 (was 77)*
- *Percentage for Cars: 54% (was 75%)*
- *Percentage for Pedestrians: 38% (was 25%)*
- *Percentage for Bicycles: 8% (was 0)*

Other preferences expressed by citizens and the City were to leave the historic globe streetlights near the Courthouse but use "depot" (shepherd's crook) type lights on the side near the commercial buildings. These were felt to be appropriate for a railroad town and also because they conform with "dark sky" guidelines that minimize light pollution towards the sky and the upper floors of nearby buildings. See Figure 2.7, next page, for examples.

There were also various suggestions from the public regarding benches. Some citizens favored individually-designed benches that would reflect important elements of Newton's character and history. Others suggested incorporating the new logo developed from the wayfinding sign system into the benches. The design team recommended considering a bench that had cast iron supports and tropical wood slats. This configuration is commonly available in a wide range of styles and offers the advantage of replaceable parts and durable wood that is comfortable all year-round. This was preferred by the team over all-metal benches that

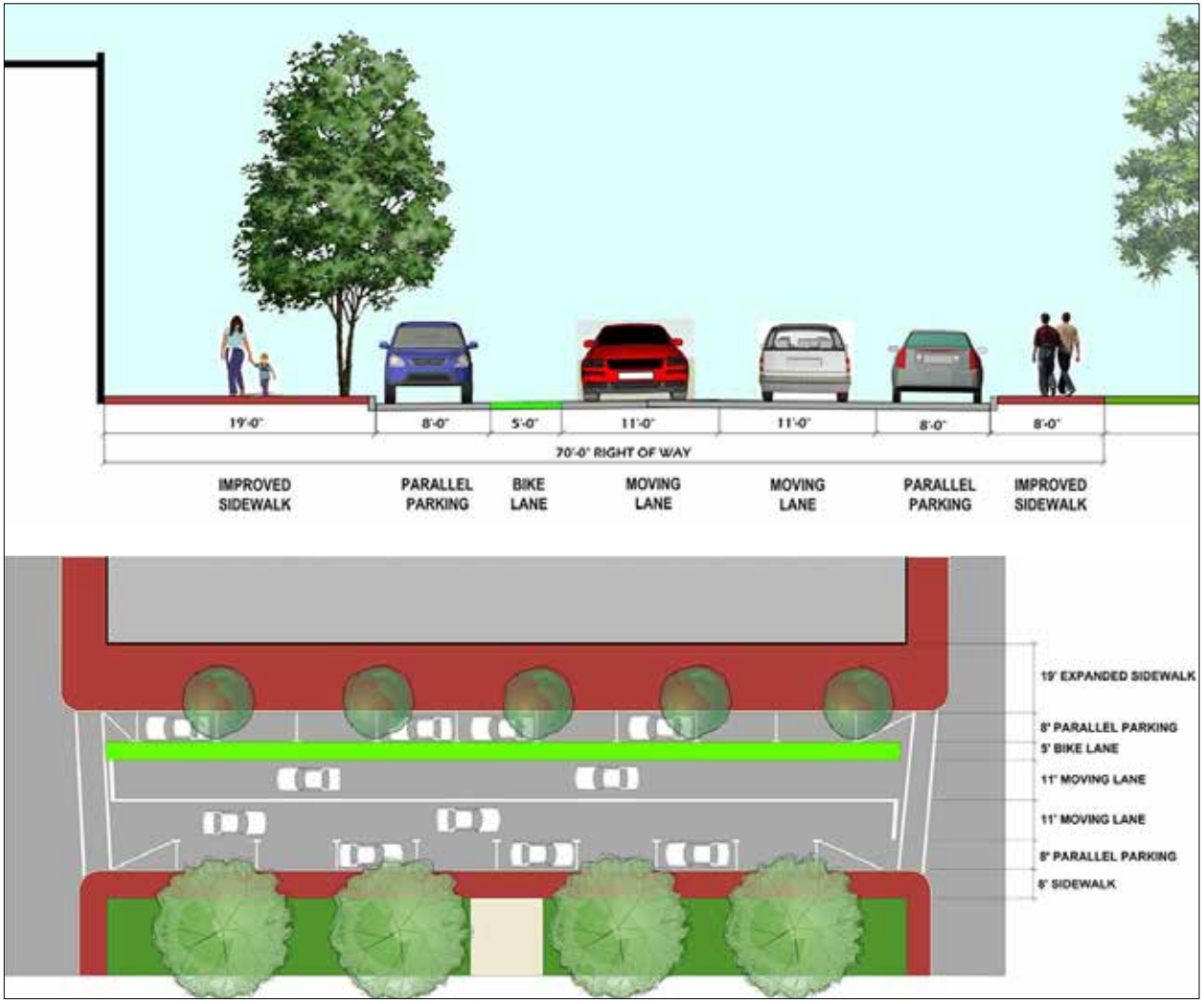


Figure 2.6: Preferred Elevation and Plan near the Square.

are often cold in the winter and hot in the summer. No final decision was reached on benches, but these details are probably best left to more detailed design work later in the process.

Likewise, images of a range of styles and materials for planters, bike racks and trash receptacles was discussed at the meetings in April, but no decisions were reached. Figure 2.8, next page, includes the boards presented at the April meeting that show a range of styles for each of these elements.

Figure 2.7: Several possible designs for "depot"-style lights. These lights are in Columbia, SC (left), Goldsboro, NC (center) and Statesville, NC (right).

Figure 2.8-2.10: These three boards illustrate some of the diverse styles of benches, bike racks, street lights, trash receptacles and planters available for streetscapes. The primary consideration should be durability. Although there was a strong preference for "depot" or "shepherd's crook" downfacing lights, no final decisions were made. Once the project moves to construction drawings, a coordinated set of street furnishings and lights can be chosen.

3.0 Downtown Streescape Master Plan

3.1 Paving Design at the Square

This section presents design development drawings and material selection for the preferred plan. Also presented are design development drawings for A Street, Yount Park, and the gateway area at the intersection of North Main Avenue and North College Avenue north of City Hall.

Following public and staff meetings on March 23 and 24, the preferred concepts for streetscape design were developed in greater detail and the streetscape master plan was prepared for presentation at public and staff meetings on May 15 and 16.

There were two different “typical” sidewalk designs developed for the “highest and best” streetscapes, one with slate-patterned pavers for the walkway and another that was all brick. These are shown in *Figures 3.1 and 3.3*.

Figure 3.1 shows the brick-patterned alternative for the sidewalks. 45-degree herringbone red brick would be used for the primary walking surface with a darker color banding on the edges, and possibly granite accent pavers. The areas between the tree pits would be permeable red brick in a matching color and a running bond pattern. The corners would be non-permeable brick in a basketweave pattern. The color would be chosen to compliment or harmonize with the newly-renovated sidewalks in areas such as in front of the Old Post Office Playhouse. See *Figure 3.2*, next page.

Figure 3.3 shows the alternative preferred by citizens and the City, including slate-patterned concrete pavers on the main walkways with a brick or concrete paver border, permeable brick or concrete

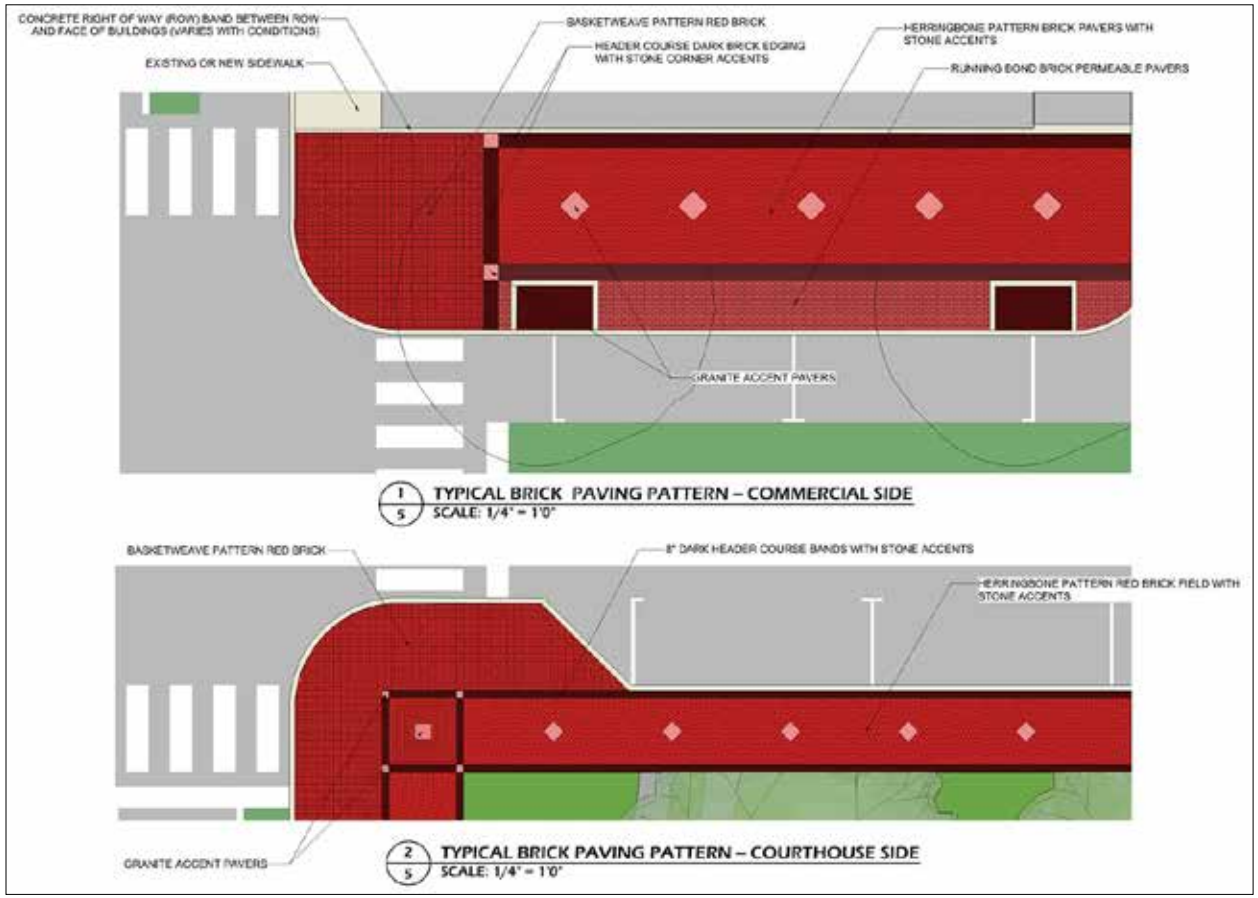


Figure 3.1: The first alternate layout for the sidewalks was primarily brick (exact colors to be decided). The main portion of the sidewalk would be 45-degree herringbone with granite accent pavers. This area would have a darker color banding around the edges. The brick between the tree pits would be permeable to help ensure tree health and assist with drainage. The corners would be basketweave brick in a color similar to that used on existing upgraded brick banding on adjacent sidewalks.

Figure 3.2 shows the existing improved sidewalks with basketweave-pattern red brick edges. In the future adding narrow tree grates and trees would help to shade the sidewalk. In areas with overhead utility lines, small trees such as Crepemyrtles could be used,

pavers in a running bond between the tree pits, and herringbone red brick at the corners as in the previous drawing to allow transition to nearby existing brick-edged sidewalks.

The City and citizens agreed that their preferred alternative was a slate-patterned concrete paver walkway with permeable brick pavers between tree pits, and basketweave brick at the corners to allow transition to existing brick borders on adjacent streets.

Both of these designs include the same street cross-section with two rows of parallel parking, a 5' one-way bike lane, two 11' moving lanes, an improved 8' sidewalk next to the Courthouse, and a 17-19' sidewalk next to the commercial buildings.

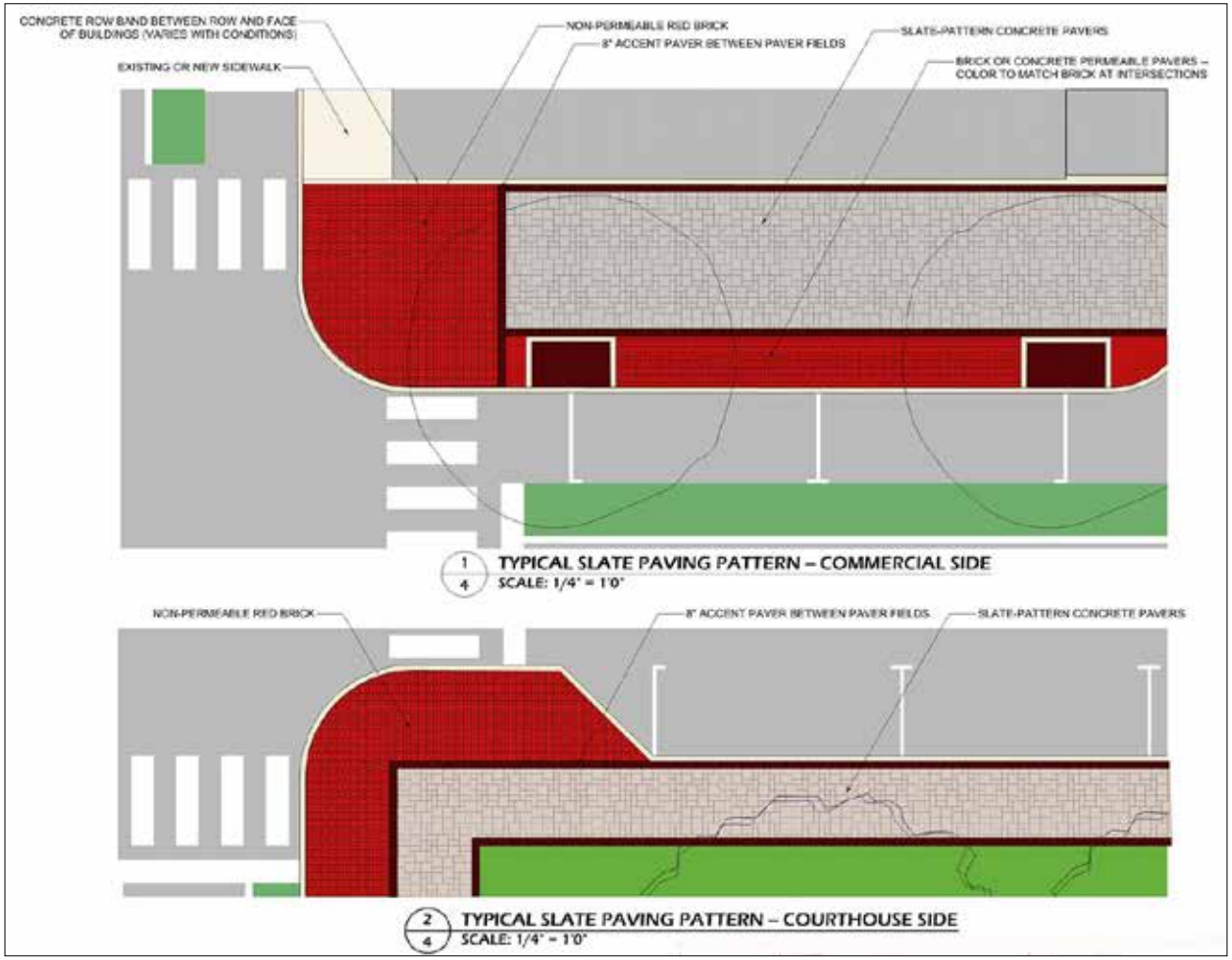


Figure 3.3: This is the preferred alternative for the sidewalk design, including slate-patterned concrete pavers in the main walkways bordered by concrete or brick pavers, concrete or brick running bond pavers between the tree pits, and basketweave-pattern brick pavers at the corners to transition to nearby existing brick-bordered sidewalks.

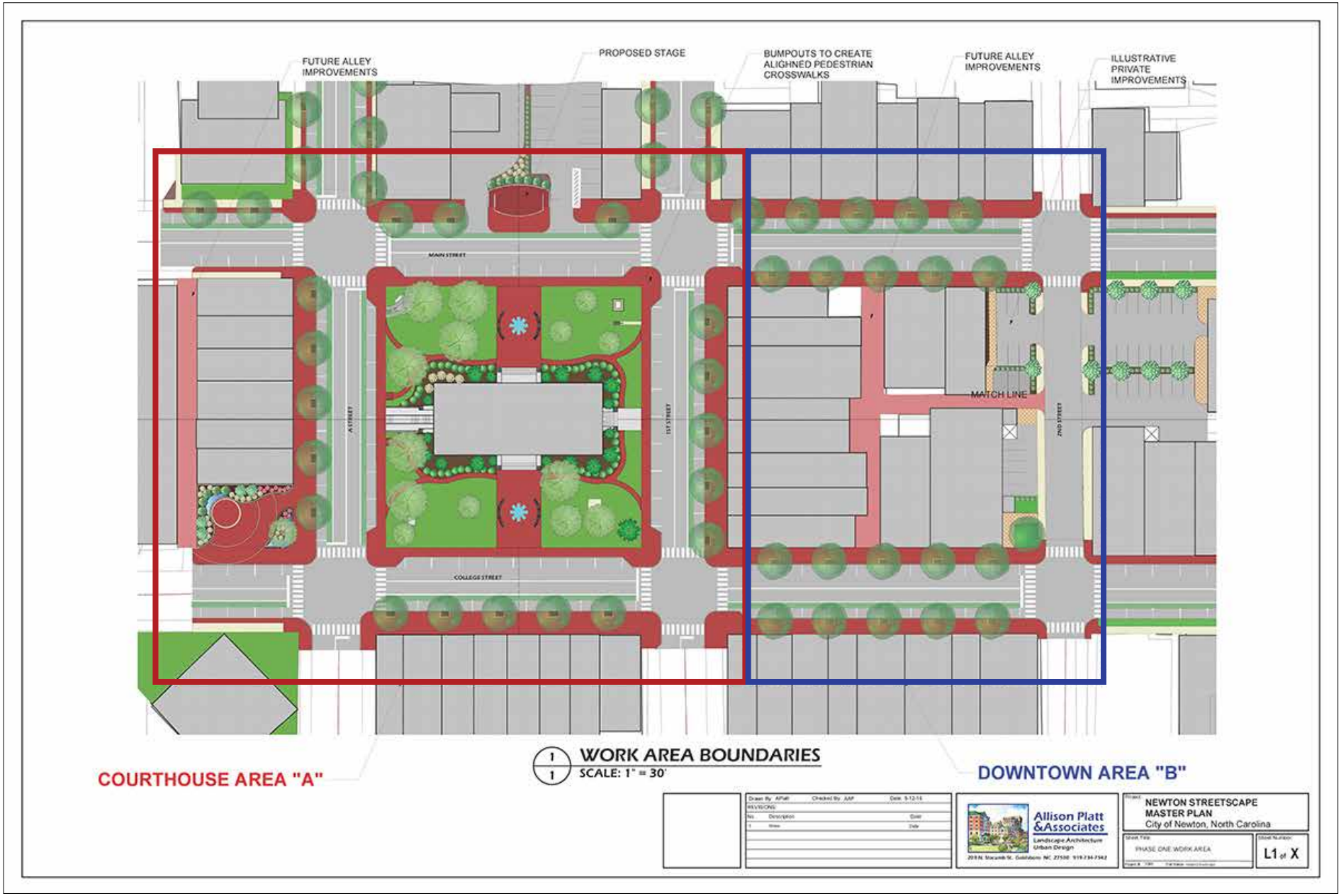


Figure 3.4: Downtown Streetscape Master Plan. This drawing shows the proposed layout and design for the "highest and best" streetscapes in the downtown area. Ideas are also presented for Yount Park and a proposed stage area on Main Avenue near the BB&T building.

3.2 Downtown Streetscape Master Plan

a. Overview

When design development drawings were being prepared, the City asked the design team to add two more blocks (the blocks north of 1st Street on N. College and N. Main) because of the density of historic buildings and redevelopment potential on these blocks. *Figure 3.4*, previous page, outlines in red the original area around the square ("Courthouse Area A"), and outlines in blue the additional area ("Downtown Area B").

The alignment of elements of Areas A and B has been adjusted where the blocks transition back to existing conditions on adjacent blocks. The cross-sections of blocks within the larger study area is highly variable, even along single streets such as Main and College.

The layout for the sidewalks in the Square includes several bumpout areas at the corners, primarily on the Courthouse side. These were added to make the crosswalk distances shorter to increase pedestrian safety.

Bike lanes are shown on the plan as green pavement in order to distinguish them from vehicular moving and parking lanes. All of the bike lanes would not likely be painted green; this is more of a graphic convention.

b. Bike Lanes

If the City intends to implement bike lanes on main routes such as Main and College, a longer stretch of road will need to be evaluated to assess how and whether the bike lanes will work. If the adjustment involves just lane widths rather than curb relocation, the design team recommends their installation as soon as possible, or at a minimum, installation of "share the road" signage. This will need to be discussed with NCDOT as it relates to Main Avenue.

Figure 3.5 (above): Example of conventional bike lane (credit: NACTO).

Figure 3.6 (left): Example of buffered bike lane (credit: NACTO).

Proposed one-way bike lanes in the Square and Area B are shown at 5' in the elevations and plans (*Figure 3.4*). This is adequate, but not ideal. In the Square in particular, the new sidewalks near the commercial buildings are ~19' wide, so it would be possible to add ~2' to this width in order to create a painted buffer between bikes and traffic. An example of this configuration can be seen above in *Figure 3.6*.

Other elements can be implemented that increase bike safety including colored pavement at potential areas of conflict (e.g. intersections and left turn lanes), bike boxes and signals, and lane markings at intersections. The reader is referred to the National Associates of City Transportation Officials (NACTO) excellent publication, "*Urban Bikeway Design Guide*," for more information.

Crosswalks and bike lanes are part of the Complete Streets trend. Adoption of this approach may be helpful in obtaining funding for implementation of these elements and may be of further assistance in obtaining overall funding, since agencies such as USDOT, NCDOT, and funding sources such as TIGER grants emphasize their importance.

Protected bike lanes (also called cycle tracks) are shown on A Street between the downtown and the County Government Center. See Section 3.3 for more information.

c. Sidewalk Design

Figure 3.9 shows a perspective sketch of the sidewalk near the commercial buildings on 1st Street at the Square. This sketch shows in perspective the preferred paving patterns and materials including slate-patterned concrete pavers in the main walkway area and brick in other areas.

The 17-19' sidewalk on the commercial building side of the Square will allow sidewalk dining or display, plenty of room for pedestrians, and a zone near the curb for street lights, benches, tree pits, planters, bike racks, etc.

The design team recommends using what are called "vase-shaped" trees that allow views through to the storefronts. Examples of vase-shaped trees include Elms and Zelkovas. These trees are medium-sized, so they are unlikely to

get so large that they lift the pavement or warp the sidewalks. See *Figure 3.7*, below, for an example of vase-shaped trees. Another advantage of these trees is they branch higher than other trees, allowing better views through to storefronts. For this reason they are often preferred by downtown business owners.

Sidewalk dining will add a great deal of activity and color to the Square and probably extend business hours, as well. Standards will need to be developed to ensure sufficient clearance for pedestrians as well as standards for fencing, tables and

Figure 3.7: An example of a vase-shaped tree. This is a Zelkova planted in New Bern about 20 years ago. These sidewalks are 10.5' wide.

Figures 3.8 (top) and 3.9 (bottom): The existing "before" and proposed"after" views of sidewalks around the square. This view is of 1st Street looking west.

chairs. In many cities we have also recommended that each business obtain a yearly renewable permit for sidewalk dining and/or display; this ensures that if the business does not comply with standards for materials, clearances and cleanliness that the permit can be pulled.

The sidewalks on the Courthouse side have not been widened except at the intersections. Since there is no shopping and no need for auxiliary activities on the sidewalks, 8' is sufficient. See *Figure 3.3* for the recommended design of these walks so that they harmonize with the wider sidewalks near the commercial buildings.

d. Parking

The layout of elements around the Square and the widening of sidewalks will require removal of head-in parking on the street. This will cause the total number of parking spaces to be reduced from 77 to 64. Judging from current use, this change can be absorbed, but in the near future the City, in conjunction with merchants and property owners, will need to develop strategies to make parking more available. Most privately-owned parking lots do not allow anyone else to use the space, which results in many empty parking spaces at all times of day. There are many models for addressing this problem, such as day/night sharing, a percentage for the property owner and the rest with a time limit, and formation of a parking authority to maintain and manage parking. It is probably not feasible to charge a fee for parking in the foreseeable future until the downtown area is more successful.

When our team works on downtown redevelopment projects, one of the universal complaints is that there is not sufficient parking on the street. However, it is also an almost universal condition that many property owners and employees are themselves parking on the street all day. This

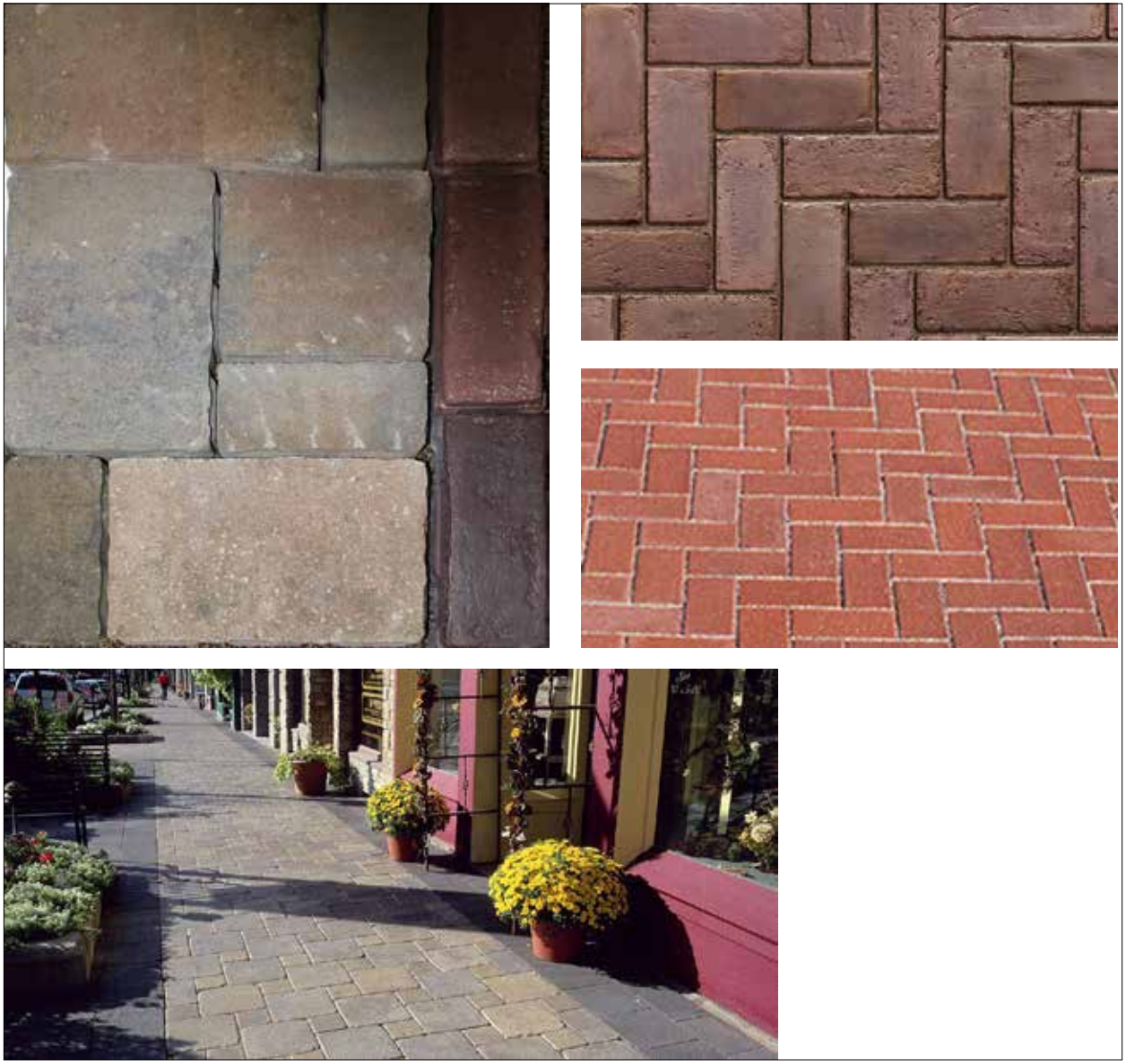


Figure 3.10: Materials. The photos above shows the preferred materials for the sidewalk. From top left, clockwise: Belgard slate-patterned concrete pavers; Unilock (or Pine Hall) permeable pavers; Pine Hall (or similar) red chamfered-edge pavers. Chamfered edge brick is preferred because it does not crack at the edges as easily as straight edge pavers. Edging around the slate-pattern pavers should be a dark earth-tone paver 8-16" wide.

needs to be corrected by the owners by providing a designated off-street parking area for employees, or by the City by placing a time limit on on-street parking.

Another action that is needed in the downtown is to develop and implement parking site design guidelines for both public and private lots in the downtown. At the present time the poor maintenance and lack of landscaping and screening make parking a negative influence on the character of the downtown.

The aerial photo (*Figure 3.11*) and plan (*Figure 3.12*) to the right show an example of several parking areas on 2nd Street between N. College and N. Main and recommendations for typical improvements. This concept shows very little or no reduction in the number of spaces while improving the appearance of these areas to a significant degree. Proposed requirements include:

- *A minimum 5' setback from the ROW for a 30-36" hedge of wall;*
- *A minimum number of trees per area ratio, with shade trees preferred but smaller trees such a crepe myrtles allowed where overhead lines prohibit shade trees;*
- *Allowance by exception only of parking with continuous access across the sidewalk;*
- *Access to parking lots from side street rather than main retail streets if possible;*
- *Discouraging drive-throughs in the downtown (existing drive-throughs would be grandfathered and all new such uses would be allowed by exception and only if the drive-through is screened from the main streets);*
- *Use of trash enclosures for trash receptacles and dumpsters (the white squares with an "x" through them in the Master Plan drawings represent trash enclosures). See photo of such an encloser in Figure 5.3.*

Figures 3.11 (left) and 3.12: This aerial and plan of 2nd Street between College and Main illustrates how is would be possible to improve the appearance of these parking lots with very little or no decrease in parking spaces.

Figure 3.13 (left): This is a view of the parking lot shown at top right in Figures 3.11 and 3.12. This photo was taken looking southeast from Main Avenue.

e. Open Spaces

Yount Park. The main open space at the Square besides the Courthouse grounds is Yount Park. Most of the comments from the public regarding this space were that it is too closed off and that the seating area is too small for it to function effectively as a public park.

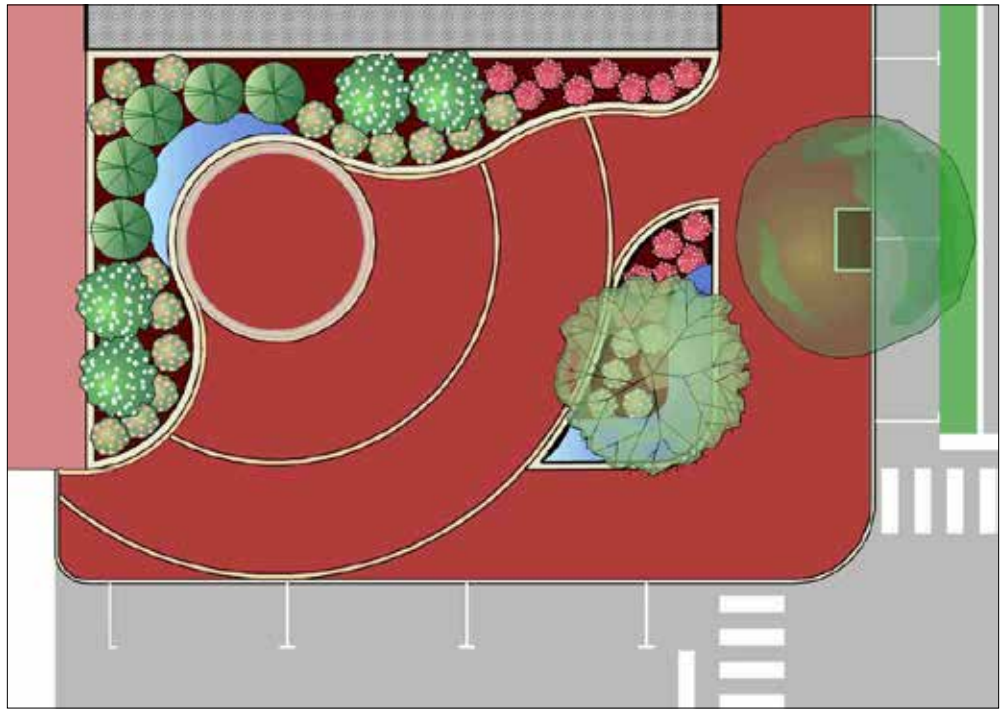
The concept shown at right (*Figure 3.15*) seeks to open up the park and provide more seating options. It also expands the park to the south by removing the three parking spaces off the alley (north it to the right in this drawing). There is a building to the west of the park, an alley to the south, College Avenue to the east, and A Street to the north. The landscaped area in the upper left corner is intended to be a raised planter of about 18"-2' in height. This can also serve as a seat wall where it faces the park.

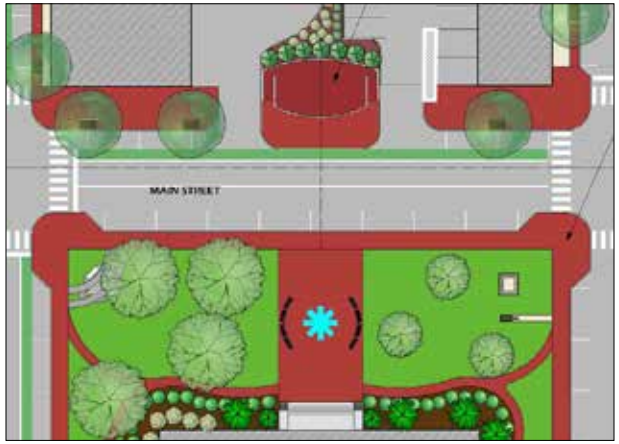
Landscaping would include shrubs, perennials or annuals, and medium-sized evergreen trees that could screen the park from the alley. The planting area near the street could either be raised like the other one or at ground level to provide better views in. The tan circle shown along with the partial circles radiating out from it are paving patterns intended to draw pedestrians into the space from the sidewalk on S. College Avenue while expanding the visual space of the park. If there were a special event planned such as a music festival, this circular space could be used for one or two people to perform.

Rather than placing benches in the park, we recommend tables and chairs. Lighting would be from the street and from low-voltage landscape lighting on the plants and under the cap of the seatwall. One interesting feature could be a green wall on the adjacent building if the building owner is amenable. A mural is another possibility.

Figure 3.14 (left): The high brick walls and vegetation make Yount Park feel inaccessible at present.

Figure 3.15 (right): The concept for improvements to the park includes expansion, visual accessibility, landscaping at the back corner, and a larger seating areas with tables and chairs.





Figures 3.16: A close up of the plan for the outdoor stage. The stage would be visible from most of this block of Main Avenue and from the Courthouse lawn.

Outdoor Performance Area/Stage. The design team is impressed by the sense of enclosure provided by the historic commercial buildings surrounding the Courthouse Square. The only place where that comfortable enclosure "bleeds off" is on the west side between the BB&T building on the southwest corner and the brick building on the northwest corner. Here, a large parking lot and wide driveway for access to BB&T's drive-through banking feels like lost space.

Over the course of the project an idea emerged to place a stage in the center of this space. This not only completes the Square, but also provides a downtown venue for music events. Many towns have "jams" or other regular music events in the warm months that attract thousands of people, and such events would help Newton raise its profile in the region and beyond.

By removing just one parking space from the BB&T parking lot and narrowing the entry to the drive-through banking, it is possible to fit a good-sized stage in this space. The stage would be

Figures 3.17 (top) and 3.18: The before (top) and after views of the Courthouse Square grounds looking towards the west side of Main Avenue with a proposed stage for outdoor performances.

raised about 18"-2' to improve visibility, and *Figure 3.17* shows a cover for the space to protect it from bad weather and to improve the acoustics. When events are held, the street could be closed, allowing a wide area with excellent views to the stage. The stage could also serve as a location for a master of ceremonies at parades and for local dignitaries during other events.

This might be a project that could be funded by various arts and/or economic development agencies as a revitalization tool, either as matching funds or an outright grant.

Courthouse Grounds. Before discussing possible enhancements to the Courthouse grounds, we emphasize that it is understood that the Courthouse building and the grounds around it are the property of the County, not the City, so these concepts are not in any way meant to be binding unless the County finds them useful.

On the other hand, if the City moves forward with plans to improve the streetscapes around the Square, it would make the Square even more successful if all the spaces worked together. The grounds are beautifully kept, but because the sidewalks connect to the building but do not move around it, it feels as if the building is not part of the life of the Square, especially as the museum hours are limited.

The suggested improvements to the grounds are not extensive. Observation of the way people move through the grounds reveals that many cut through the grounds closer to the Courthouse (worn areas of planting illustrate this), and formalizing this with paths of brick or gravel would allow people to interact with the grounds more effectively. Some citizens have suggested that small seating areas in shady locations would add to their enjoyment of the space.

Figure 3.19: Concept for improvements to the Courthouse (Catawba County Museum) grounds in the Square.

Beyond that, the plans show pavement complementary to the sidewalks on the main east and west walks to the building, and the concept of some sort of centerpiece along the walks (fountain, sculpture, planting area, etc.). One other suggestion is that the County consider either trimming or replacing the hollies planted right up against the building to allow better appreciation of the outstanding architecture.

3.3 Downtown-County Government Center Connection

It is essential to Newton's economic future that adequate wayfinding help motorists and especially visitors arrive in downtown Newton and, once there, find an attractive and vibrant downtown. Likewise, vehicular wayfinding and pedestrian and bike connections to and from the adjacent neighborhoods and to and from the nearby Catawba County Government Center will all encourage increased downtown visitation and increased economic activity.

The most direct route between the two destinations is along A Street. *Figure 3.20* shows a proposed enhanced connection along this road between the Government Center and the downtown. Existing conditions include significant overhead power lines on the south side of A Street which would be extremely expensive to place underground. Rather than taking on this challenge, the concept suggests that enhanced sidewalks, trees, and a two-way protected bikeway be installed on the north side of the street. The A Street ROW appears to be wide enough to provide room for these improvements without changing the curb-to-curb dimensions, but this will need to be analyzed further.

Figure 3.21 shows a close-up of the area from the Square to a point past Bost Street where the

Figure 3.20 (top) and 3.21: The top drawing shows the entire length of A Street between the Catawba County Government Center (left) and the Square (right). The lower drawings shows A Street from the Square (right) to a point past Bost Avenue. At Bost Avenue the cross-section switches from one bike lane on each side of the street to a protected two-way bike lane (cycle track). The advantage of the cycle track and island protection is that is allows planting of large trees. In the short term this could be implemented with paint striping only.

Figure 3.22 (above) and 3.23: The plan above shows the transition from protected bike lanes (right) to buffered (striped) bike lanes. It also shows improvements to the A Street/Northwest Boulevard intersection including crosswalks and traffic islands to improve pedestrian and bicycle safety. The bike lanes and sidewalks extend to the west to join the greenway. The Government Center is on the lower left. The 3-D model at right shows approximately what the protected bike lanes would look like.

protected bike lanes begin. *Figure 3.22* shows the west end of this concept, including the transition from protected to striped bike buffers as A Street approaches Northwest Blvd. It also shows possible improvements to the intersection to increase bicycle and pedestrian safety, and bike lanes continuing down Radio Station Road toward the nearby greenway. *Figure 3.23* presents a 3-D model of what the section of A Street with protected bike lanes might look like.

3.4 Gateways

When visitors are headed into the downtown on the preferred routes, new gateways should announce arrival and set the tone for the downtown. Entry signage similar to the wayfinding sign system should be used in these locations. Other elements such as landscaping, art, columns, or walls can also be added depending on the space available.

Gateways are shown in the plan at the intersections of East D Street and South College Avenue, Bost Avenue and West A Street, and at the point where North Main and North College merge north of City Hall. It is not useful at this time to design a gateway at S. College and E. D Street since this street will need to be widened in the future, and because the uses and site planning of the existing commercial buildings on the north side of D Street make it very difficult to find space for a gateway treatment other than signage (see *Figure 2.25*). Ultimately, signage combined with screened parking, sidewalks, and consolidation of existing regulatory signs will help to create a more attractive gateway in the next few years.

The intersection of W. A Street and Bost Avenue is a likely location for a gateway, but unscreened parking lots and buildings right up to the right of way make this difficult. The gateway might best

Figure 3.24: This drawing shows one way this intersection could be redesigned to serve as an attractive gateway into the downtown from the north.

Figure 3.25: This photo shows the intersection of D Street/NC 10 with College Avenue. This is a logical place for a gateway, but narrow rights of way, continuous driveways, and unscreened parking areas make improvements difficult. Design guidelines with screening and setback requirements would help.

Figure 3.26: This photo shows the service station at the intersection of College and Main, looking from the north. It would not be very difficult or expensive to create an attractive gateway in this location.

be located further to the west on the sloped and grassy edge of properties on the south side of the street. The slope there is probably too steep for development in any case.

The best location for a gateway at this time is the intersection of N. College and N. Main. There is an existing service station at this location (see *Figure 3.26*), but it is our understanding that the owner is willing to sell the property. College is one-way north and Main is one-way south. The existing traffic island is quite small and the view is dominated by parked cars and a small service station building, blocking views to City Hall, which is immediately to the south. If the station were removed it would provide space for a small park of green space, creating a very attractive entry to the historic downtown. The plan shows a possible one-way loop to provide access to E. 5th Street from N. Main. This access could be removed if desired.

3.5 Alleys

Many citizens expressed a desire to improve the downtown alleys to make them more pedestrian-friendly. Many cities have done this, in some cases creating outdoor dining areas where space allows, and also back entries, additional shops, or access to upstairs apartments. Auto and truck access is still needed in most cases, but if the space is designed properly vehicles and pedestrians can both use the alleys safely. Improvements should include improvements to the rear facades (many have great potential as seen in *Figure 3.27*) and use of shared trash enclosures rather than having trash receptacles lined up along the building walls. Because there are higher priorities in the revitalization process for the downtown, this is unlikely to happen in the short term, but it is still a worthy goal, and might be accomplished by private groups or property owners acting on their own.

Figure 3.27 (top left) and 3.28 (top right): The alley on the left is between N. College and N. Main and between E. 1st and E. 2nd. The back of many of the buildings on this alley are as (potentially) nice as this one. The alley on the right is in Charleston, SC. Such spaces can be used for deliveries and emergency access, but paving such as the cobbles shown at right slow vehicles down.

Figure 3.29 (left): This alley has an archway, overhead lights, artwork, and plants installed with volunteer help by the Arts Council in Goldsboro.

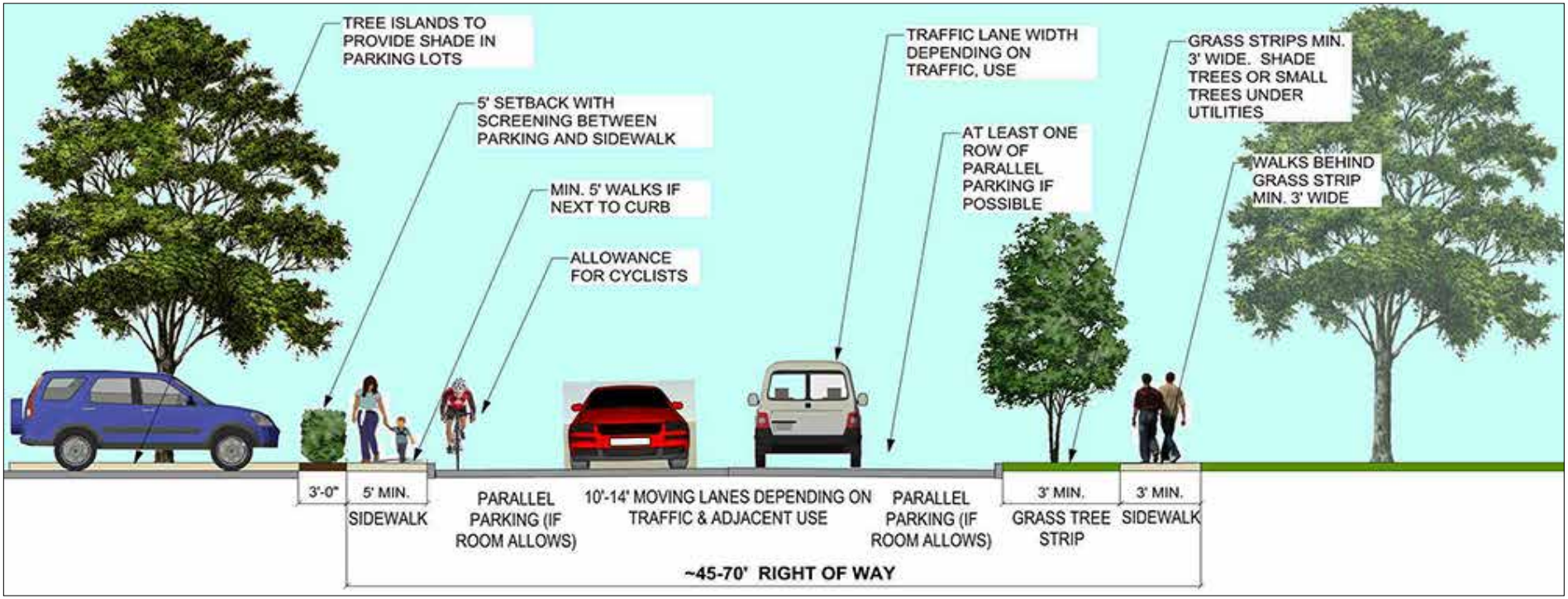


Figure 3.30: This elevation demonstrates some of the design elements that should be considered when streets and sidewalks in the downtown are renovated.

3.6 Other Streets

It would be very cumbersome to design typical cross sections for connector, residential, and other streets in the study area because the ROW width and conditions vary greatly, sometimes along the same street. Refer to *Figure 2.1: Streetscape Hierarchy* for classification of streets including Retail, Connector, Residential, and Other. There are already some renovated streets in the downtown that include concrete walks with a basketweave brick border of about 2'-3'. This is an attractive design and should be continued as a transition from dense historic commercial areas to adjoining areas. If possible on future sidewalk enhancements of this type, trees could be added where space allows.

Figure 3.30, above, shows some of the elements that will be useful to consider when redesigning other streets over time.

All streets, if possible, should include the following:

- *A continuous sidewalk on at least one side, preferably both sides;*
- *Walks should be a minimum 5' wide unless set behind a grass tree strip, in which case the tree strip and the sidewalk may be a minimum of 3' each;*
- *Tree strips less than 3' should probably be eliminated in favor of wider sidewalks because these narrow patches of grass are difficult to maintain and too narrow for trees;*
- *All parking areas adjacent to the ROW must have a minimum 5' (narrower by exception) setback with a ~36" screen (hedge or wall) is required;*
- *Where there are large areas of parking adjacent to the road, tree islands should be required as a percentage of pavement, especially next to the road;*
- *No continuous driveways across sidewalks should be allowed if possible, then by exception;*
- *Driveway widths should be limited to the minimum required for the use (two-way parking lot driveways would typically be ~24' wide, or as determined for larger vehicles);*
- *ADA access should be required across all driveways and at all intersections;*

- *On-street parking should be available if possible. If the ROW is narrow consider parking on one side;*
- *Lanes widths should vary with traffic and use, keeping in mind that recent studies show that narrower lanes move the same amount of traffic (safer for pedestrians). A minimum lane width of from 10' for quiet residential streets to 14' where heavy truck traffic and turning is anticipated is recommended (16' may be required on connectors such at D Street);*
- *Trees have been proven to raise the property values in residential areas, and in our North Carolina climate can make a big difference in the temperature. Planting trees should be a priority in new construction, and especially in residential areas. Many communities have a program of planting trees in the ROW of residential properties if the property owner requests it and agrees to care for the tree(s).*
- *Where there are overhead lines that prevent planting of full size shade trees, smaller ornamental trees such as crepe myrtles should be substituted;*
- *At a minimum, signage that encourages drivers to watch out for bicyclists is recommended. In other locations that will have designated bike routes but do not have room for a dedicated lane, additional signs are encouraged.*

4.0 North Newton Master Plan

4.1 Introduction

At the beginning of this project the City requested that a master plan for the North Newton area be added to the scope of work. Because this plan does not include the more detailed work involved with streetscape design, this work is included here as a separate section.

One of the main reasons for looking at the North Newton area is that the Newton Depot Authority has reutilized the Newton Depot for a very interesting Narrow Gauge & Shortline Railroad Museum (website: http://www.newtondepot.com/), and they have plans to expand. Railroad-themed attractions are very popular across the country, and this specialized narrow gauge focus and North Carolina relevance could potentially have a significant positive impact both on the North Newton area and the City as a whole. The Museum already has an impressive collection of memorabilia, train cars and a locomotive.

4.2 Analysis

Please refer to Section 1.0 for overall analysis maps pertaining to study area boundaries, land use, and routes into the area. The North Newton section of the study as it pertains to the Depot Museum is bounded by 13th Street on the north, N. College Avenue and the railroad ROW on the east, Shipp Avenue on the west, and 11th Street on the south.

The vacant warehouse building on the southwest corner of N. Main and 11th and extending originally to near 9th has been partially demolished. Unfortunately, the northernmost portion remains, which blocks views to the north, and the brick and debris from the demolition remain on site, making it hard to foresee redevelopment of the site and negatively impacting the character of the approach to the Depot and the surrounding area.

The study boundaries extend further south past this warehouse to join the core downtown area along N. Main Avenue. This area, with a few exceptions, is a high-value historic residential neighborhood. The neighborhood to the east is not historic and the quality of the housing varies.

Entry to this area from the north would be via N. Main Avenue from 20th Street. If wayfinding is used to direct people to the Depot Museum, the same routes discussed in Section 1.0 should be used. The same comments apply regarding the poor quality and condition of many of the buildings between 13th Street and 20th Street. See Section *5.0: Implementation* for strategies to improve this route into Newton.

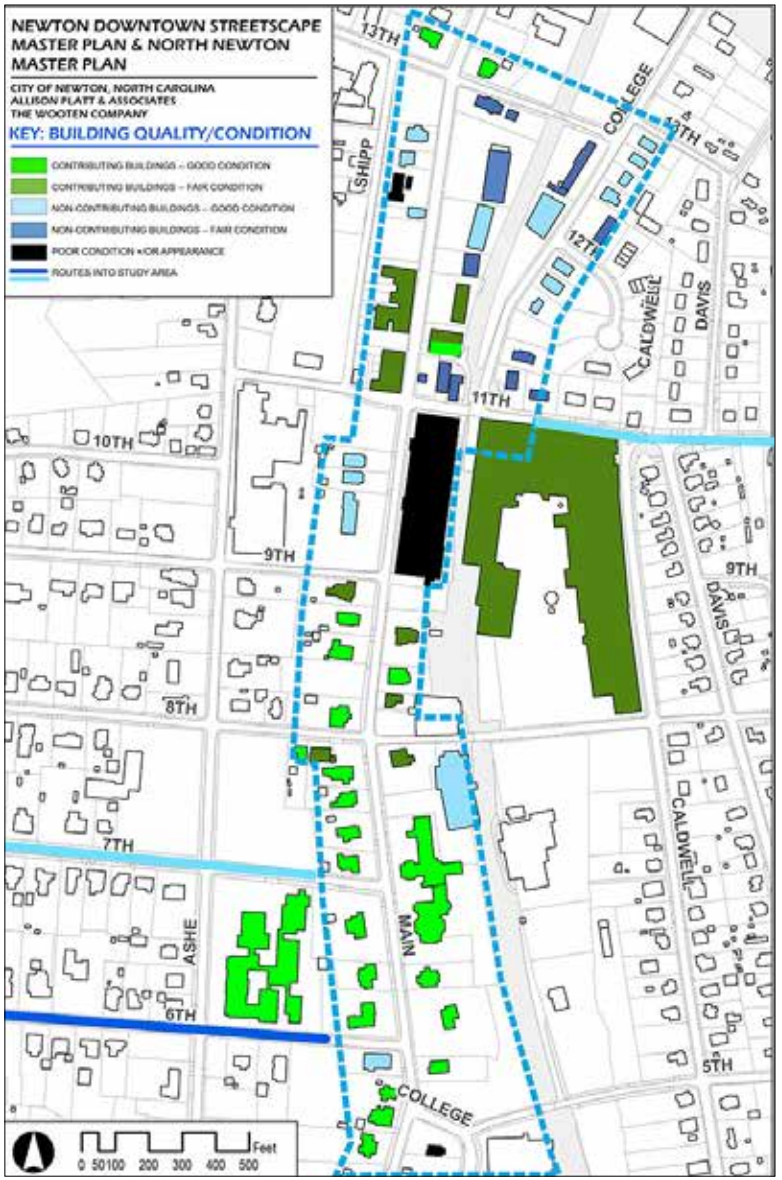


Figure 4.1: Building quality and condition.

The North Newton area itself is primarily commercial buildings. A few are historic (in the southwest corner). Many are strip commercial in character and use. The Depot was relocated from its original location next to the junction of the Carolina & North-Western Railway and the Western North Carolina Rail Road to its present location on the east side of N. Main Avenue. The Depot building has an attractive setting next to the railroad tracks. The only disadvantage of this location is that the building is set back from N. Main Avenue, making it is difficult to see from both north and south approaches, but especially from the south.

There is an attractive group of historic commercial buildings at the southwest side of N. Main Avenue at 11th Street, but these building are in only fair condition. North of this is an empty lot, additional historic commercial buildings (these are also in only fair condition but with less architectural merit) and then a wooded lot. North of the wooded area are a couple of commercial buildings, two houses, and the parking lot for a church located a block to the west.

There is a convenience store at the southeast corner of the intersection of 11th Street and N. Main Avenue. North of the convenience store there are two buildings

Figure 4.2: The original 1924 Newton Train Depot was relocated to 1123 N. Main Avenue from a site near the junction of the Carolina & North-Western Railway and the Western North Carolina Rail Road.

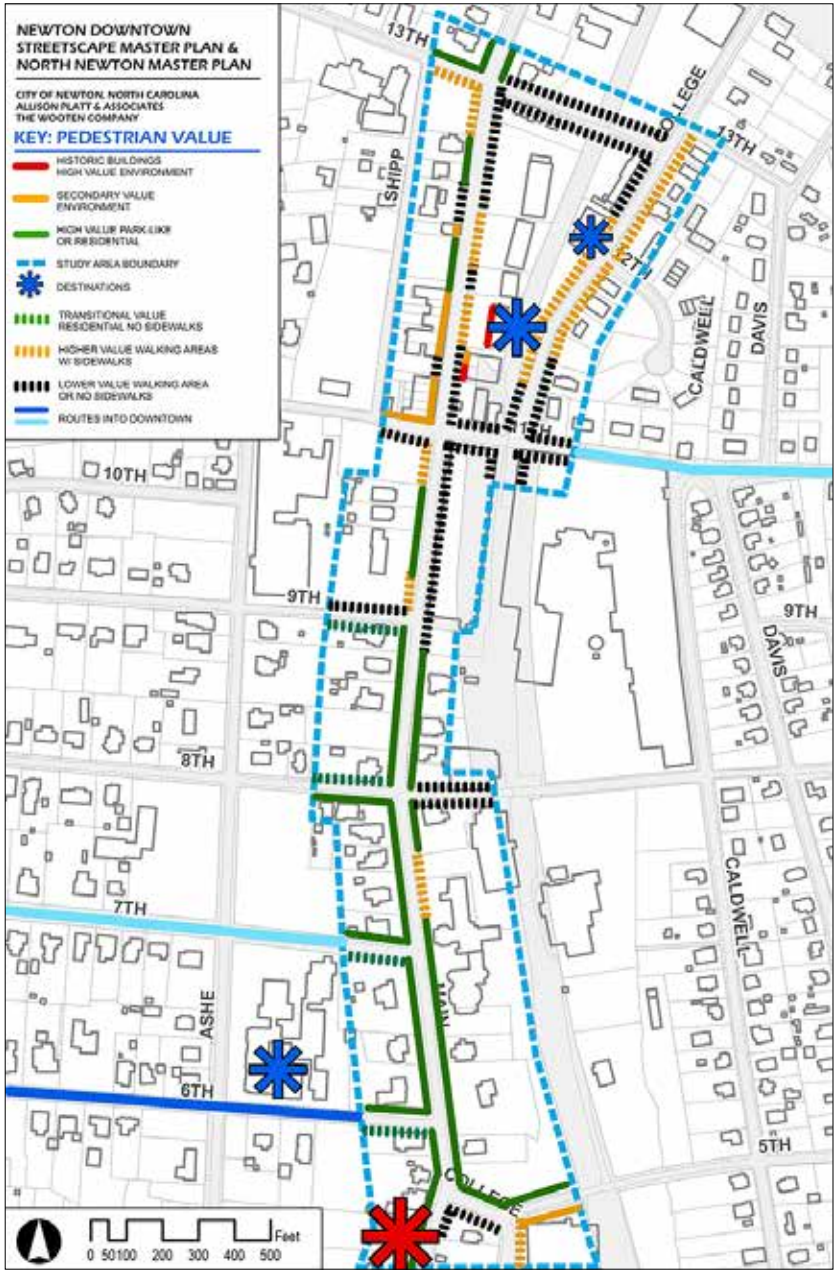


Figure 4.3: Pedestrian Value. The pedestrian environment near the Depot needs improvements. The residential area to the south is attractive, but improved sidewalks would help encourage walking.

close to the ROW that the Depot Authority has recently purchased and intends to use for a model railroad display. The Depot is north of these two buildings and set back from them, and the Deport Authority has also purchased the property immediately to the north of the Depot. A marginal commercial strip center is north of that, then a successful tire store, and a small property with a dilapidated structure on it at the intersection of N. Main and 13th.

North of 13th residential structures of mixed quality give way to primarily poor quality and/or vacant strip commercial structures.

On the east side of the railroad tracks at 13th Street there is a storage facility, and south of that is the covered Car Barn that houses the Museum's collection of narrow-gauge cars and a locomotive.

An aerial photograph shown in *Figure 4.4*, at right, provides a visual evaluation of the area.

4.3 Concept

The goal of any plan for the North Newton area should be to:

- *Maximize the visibility and viability of the Museum;*
- *Maximize the use of the land acquired by the Museum to attract visitors;*
- *Consider steps needed to support the Museum through complimentary uses, streetscape improvements, and site guidelines;*
- *Develop long term improvement strategies for the N. Main Avenue corridor from 13th Street to 20th Street.*

One of the strategies discussed with the board of the Museum was the use of murals to alert visitors to the presence of the Museum. When approaching the Museum from the south, a driver cannot see the Depot building until they are less

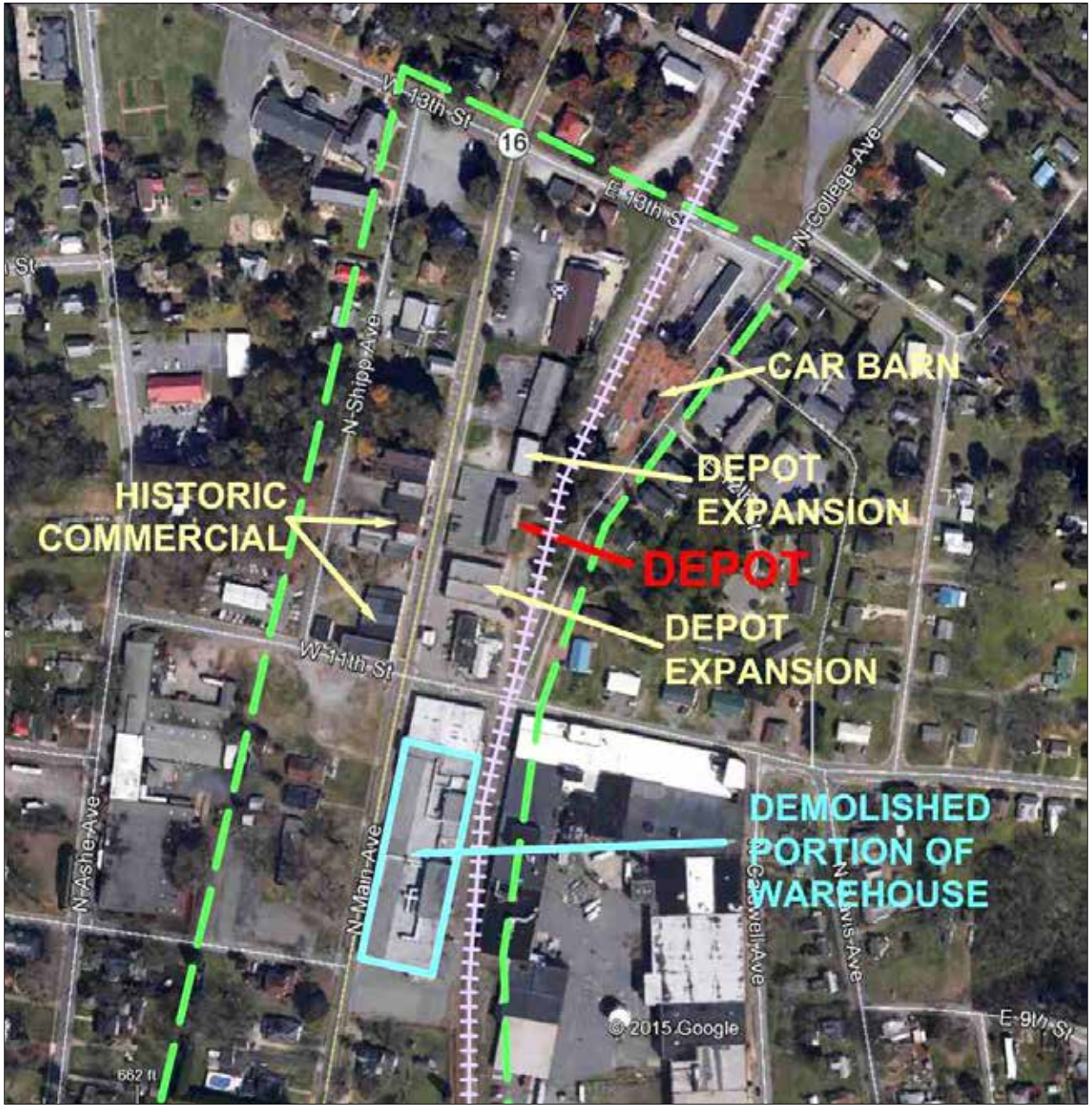


Figure 4.4: Aerial photo of the North Newton area.

than 100' from the driveway into the parking area. To address this, a railroad-themed mural and arrow could be placed on the wall of the historic commercial building on the southwest corner of 10th and N. Main. Another could be placed on the south-facing wall of the recently purchased buildings south of the Museum. Railroad-themed murals (see example, *Figure 4.8*) will more readily attract driver attention than smaller signage, although signs are also helpful.

From the north, signs can be used more effectively because in spite of the fact that the building is set back, it will be visible if the driver is looking for it.

One of the best strategies to increase visibility may be to place at least one easily-recognized railroad artifact right next to the sidewalk in front of the Museum. Because railroad-themed museums and attractions are so popular, this will draw people's attention from the artifact to the Museum.

Another issue to be resolved is the physical and perceptual distance between the Depot building and the Car Barn display area. Since it will likely be impossible to get permission from the North Carolina Railroad to cross the tracks between intersections, this problem must be addressed. The separation will mean that either visitors must drive themselves between the two locations, or they may skip that portion of the Museum tour. The trains themselves, and the story of their restoration, is a critical part of the mission of the Museum, so this challenge must be addressed.

4.4 North Newton Master Plan

The plans for the North Newton area include both short-range and a long-range plans. There is no market data that would suggest additional viable uses for the area at this time, so the plan shows short-term environmental improvements and longer-term desired development patterns with some Museum-dependent uses that may be feasible if the Museum grows. The shorter-term suggested improvements are shown in *Figure 4.5* at right. An enlargement of the area around the Depot is shown in *Figure 4.6* on the next page. Longer-term suggested improvements are shown in *Figure 4.7* on page 33.

Because the priority for the City should be improvements to the Square, no major improvement costs are included in the short term proposal for this area. However, there are guidelines that should be put in place regarding land use, site planning, and screening that, over time, will help to improve the appearance not only of this area, but also the N. Main Avenue corridor from 13th Street to 20th Street.

Possible shorter term improvements to the Depot Museum are shown at right. The Depot board stated its intention to expand into the two buildings they recently pur-

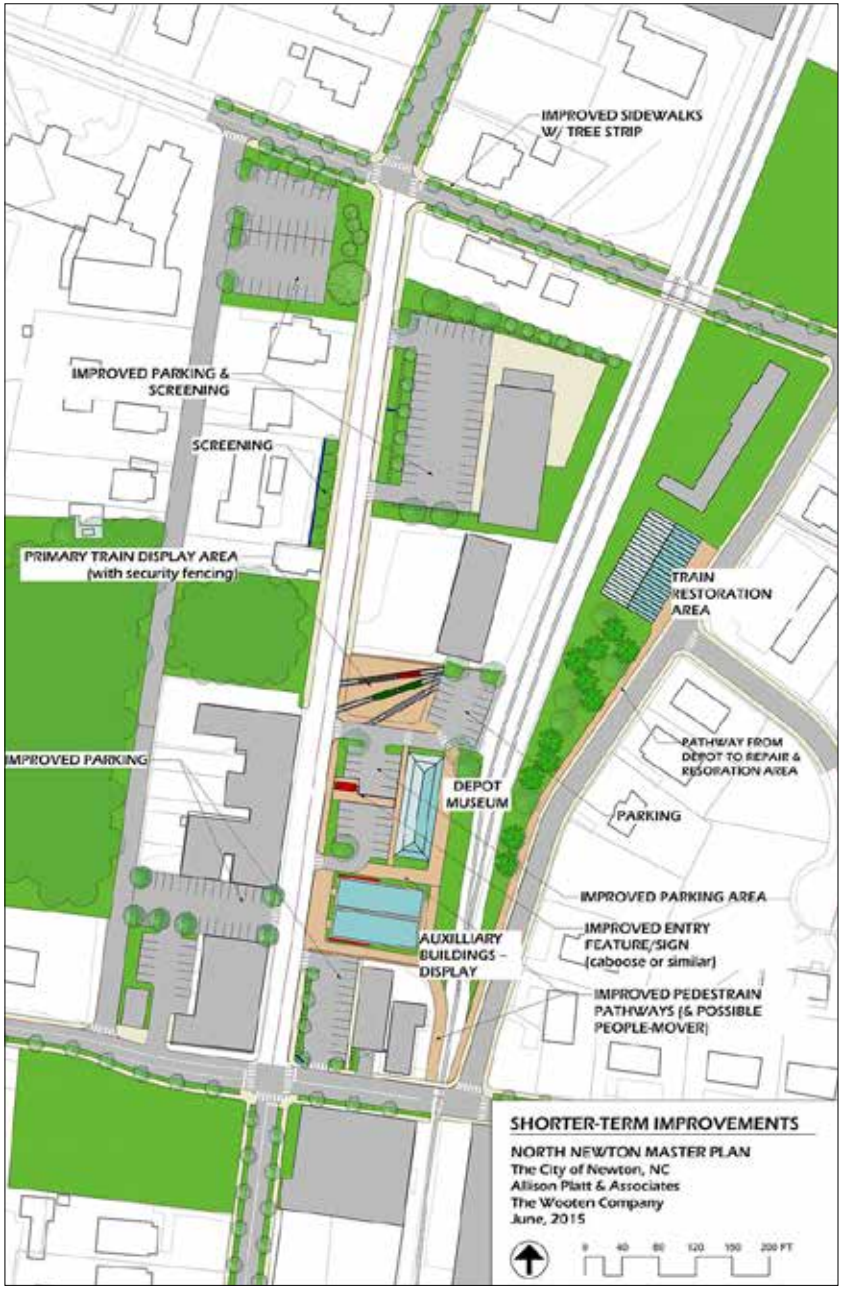


Figure 4.5: Plan showing shorter-term improvements to the North Newton area.

chased to the south of the depot itself. Our understanding is that this area will include additional display space including a model railroad display. The plan shows a new layout for the area in front of these buildings that removes the existing head-in parking and replaces it with a widened sidewalk and landscaping next to the building.

Note the tan areas of pavement on the plan, including areas around the Depot, the new buildings, a connector to 11th Street near the railroad tracks, across the tracks, and from there north along N. College to the Car Barn. These areas are labelled "Improved pedestrian pathways and possible people-mover" in the drawings.

Some years ago the City had an intern who developed a Sketchup model of what the North Newton area could look like if improved. Although some new development shown was highly speculative, some of the improvements related to the Depot Museum were compelling. One element shown was a small-scale "train" (probably rubber-tired) that could move visitors around the site. Such a conveyance would not be very expensive and might be a fun and entertaining way to move people between the Depot area and the Car Barn.

Figure 4.6: a "people mover" that runs on tires could be a fun way to move people around the Museum.

Figure 4.7: Close-up of shorter-term improvements near the Depot.

See image in *Figure 4.6*. Absent such a people-mover, a well-designed and landscaped pathway would encourage some to walk between the two areas. Weather-proof artifacts or interpretive signage along the way would help to make the walk more entertaining and educational. An improved and well-landscaped walkway system could also provide family picnic areas in the open areas on either side of the railroad tracks.

The parking lot in front of the depot building has been reconfigured with driveways at either end rather than in the middle. This will allow a more direct pedestrian entry to the front door of the Depot building. The plans suggest that the paving for the parking area could be improved to be patterned asphalt, permeable pavers, or brick to allow the parking lot to function as an outdoor activity area for special events or simply to draw attention to it from the street. We have shown improved signage and the suggestion for placements of a significant

artifact right next to the sidewalk. This would be the best way to induce vehicles passing by to notice the Museum and if not to stop immediately, at least to be aware of the location for a future visit.

Figure 4.8: A mural on the side of a building such as this one in Danville, VA could work well in Newton.

Also shown on the plan are red lines on the side of the buildings south of the depot. These represent murals painted on the side of the buildings as suggested in the Concept section. Since the Depot Authority owns these buildings, this could happen fairly soon. Another could be located on the building at the southwest corner of 11th and N. Main, but permission would be needed for this.

The parcel immediately to the north of the depot building shows a possible configuration of parking and train display for the future. At the present time the Depot Authority plans to expand parking into the front of this parcel with the possibility of additional display areas behind parking.

We would encourage the board to consider reversing this site plan to increase visibility of the Museum and its purpose. The plans suggest patterns in the pavement that could mimic the rail bed and rails, bringing the railroad (symbolically) right onto the sidewalk to draw people into the displays. In the places were actual rolling stock will be placed this could be an actual rail bed that could connect to the rail lines to assist with moving the cars and engines. Placing the most important assets of the Museum where they will be visible to motorists passing by the site is the best way to market the Museum in the short term. The train cars and engines would need to be covered and fenced for protection as they are at the Car Barn. If the Depot Authority is able to purchase the strip commercial property between their northernmost property and the tire store, this would offer additional display areas and parking as shown in *Figure 4.9.*

If the Depot Authority considers moving its displays to N. Main Avenue, this leads to the question of what the use will be of the existing Car Barn. We propose that the Depot Authority consider using the current Car Barn for restoration of cars and engines. Some of the most interesting sections of the group's website are those that document the restoration of two narrow-gauge boxcars. People would no doubt

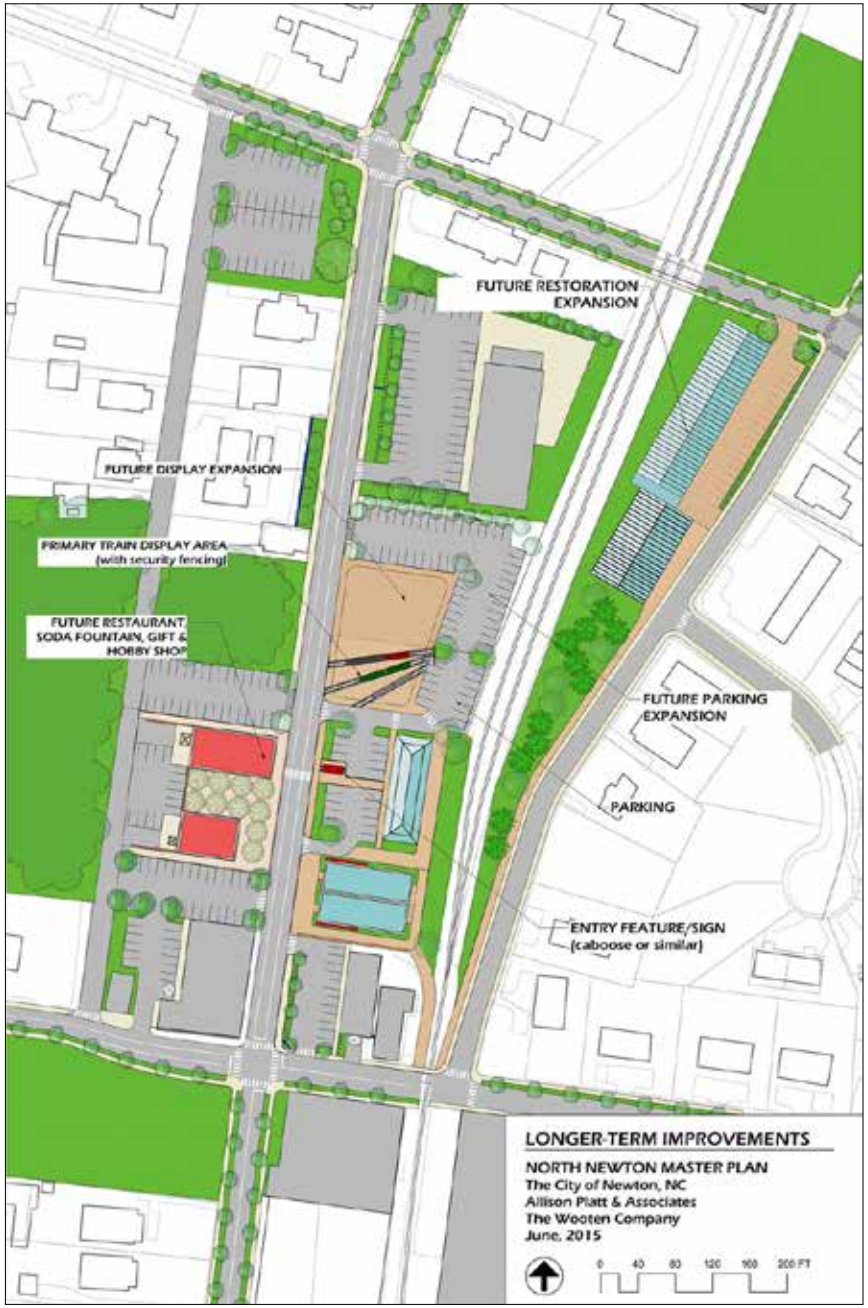


Figure 4.9: Close-up o longer-term improvements near the Depot.

be very interested in this process, especially if they could see it in person and up close.

A similar arrangement of display and restoration can be observed in Wilson with their Whirlygig Park and restoration areas. Vollis Simpson, a North Carolina artist who created wind sculptures, was an internationally famous artist who lived well into his 90s in Lucama, North Carolina near Wilson. The City purchased a large number of his sculptures before Mr. Simpson's death. Many needed restoration and the City was able to win millions in grants for restoration and technical assistance. Most of the work was accomplished by volunteers (as with the Depot Authority's work), and the project won recognition and increased visitation and visibility for the City both statewide and nationally.

Both the shorter- and longer-term drawings show improvements to parking in many areas in North Newton. The former gas station at the southeast corner of 11th and N. Main recently removed the gas pumps and canopy from the property. The resulting space could easily be improved to provide a more attractive setting for the business and the neighborhood. A new parking lot is shown between the two sets of historic buildings on the west side of N. Main where there is presently a vacant dirt lot. If property owners were willing to undertake the simple screening measures illustrated in the plan, the entire district would look very much improved.

The longer term improvements shown in *Figure 4.9*, previous page, show new buildings across from the Depot. These might both be restaurants (e.g. an ice cream parlor and a sit-down lunch and/or dinner establishment), or one could be a hobby/gift shop affiliated with or related to the Museum. In the interim, a small snack bar and/or gift shop might be installed in the new buildings that the Museum has acquired.

Figure 4.10: A true miniature train that runs on tracks through a created landscape could be a great attraction for Newton and/or for the Museum.

There is one other idea that might be considered to both garner attention for the Museum and solve a problem facing the North Newton area. The partially demolished warehouse building on the northeast corner of 11th and N. Main will be very difficult to redevelop because the construction debris has been disposed of on-site rather than being hauled away. A possible use for this site might be to regrade and stabilize it, then construct a half-size train ride on a half-size landscape. The train could run on tracks or on tires, and could be stored in the remaining portion of the warehouse when not in use. *Figure 4.10* shows a true miniature train that runs on tracks. This type of attraction could bring more people to both the Museum and the City while raising money for the Museum.

Both short- and long-term plans suggest improvements to the streets and sidewalks in North Newton. 11th Street and 13th Street have sufficient ROW to allow the creation of sidewalks set back behind a minimum 5' grass strip with trees. This would upgrade the appearance of these streets tremendously.

Possible improvements to N. Main Avenue near the Depot will be limited by the narrow ROW (about 50' total). There is one row of parallel parking on the west side of N. Main Avenue from 11th to 13th, and this should remain given the current scarcity of off-street parking. However, the sidewalks should be repaved in the future as they are in poor condition. A treatment similar to the upgraded walks near the downtown with brick on the edge and concrete on the primary walking surfaces would improve the appearance of the area. Trees in tree grates might be possible in some locations, but they are not recommended near the Depot because of the need for visibility. Instead, lower landscaping is recommended between parking and the sidewalk, including a low hedge or wall and trees planted in islands as discussed in Section 3.6. An example of this type of treatment can be seen in front of the Depot, the tire store, and the church parking lot in *Figures 4.5 and 4.9*.

4.5 Implementation Strategies

The Depot Authority has done an outstanding job of establishing the museum, raising money, and organizing and displaying the narrow gauge trains, their local history, and the interesting accessories and memorabilia associated with them.

If the Authority desires further growth, they will need to consider ways to increase revenue through expanded hours and days of operation, admission charges, targeted expansion, and subsidiary forms of revenue (snack bar, hobby shop, or the suggested miniature train ride).

At some point specialist museum consultants should probably be retained to assist with a master plan for the museum including targeted investments, possible funding sources and projected revenue.

The City can be helpful through sidewalk improvements, assistance with land acquisition or negotiation with the railroad if needed, and planning assistance. This partnership is already in place and should continue, as the success of the Museum can contribute significantly to the success of downtown and the revitalization of North Newton.

5.0 Implementation Strategies

5.1 Getting From Here to There

Newton has many assets on which to build a better future for its citizens. The best strategies require laying the groundwork for positive growth and making a commitment of public funds to the most promising project(s). Such projects will have the best chance of leveraging improved image, increased visitation and citizen pride, and ultimately, desired private investment. Once public agencies and private investment interests are confident that the community is committed to positive change, grants, loans, and development projects will follow.

There is a significant segment of the population that believes that any increased investment by a government body is likely to be unnecessary and should be avoided. But these same people understand completely the dynamics of, say, home ownership, which apply equally to city stability and growth. No one would suggest that if your house needs a new roof that you shouldn't figure out a way to get it done, because otherwise the value of your house and perhaps even your family's well-being is endangered. When the value of our homes or our communities begins to fall, action must be taken.

The time for action has arrived in Newton, and those who care about the community or are entrusted with its care should take action to reverse downward trends.

Improvements to the streetscape around the Square is investing in your highest and best asset. Revitalization of historic downtowns throughout North Carolina in communities large and small has proven to be one of the most effective ways to begin revitalization not just of the downtown, but of the community that the downtown represents. The money invested in downtown and especially streetscape projects has proven time and again to generate private investment and increased tax base many times greater than the cost of the initial public investment.

Here are a few examples:

- *In New Bern (pop 27,000), ~$500,000/block (54' ROW) x 8 blocks ($4 million) resulted in $260 million in private and public (State and Federal) investment. Tourism was $12 million a year in the 80s; in 2007 tourism totaled $108 million;*
- *In Goldsboro, (pop. 36,000), since planning for the first block of downtown streetscape improvements was initiated in 2010, there have been:*
  - *49 new businesses opened in downtown;*
  - *9 homes purchased for rehab that were in condemnation proceedings;*
  - *9 new investors in downtown commercial buildings and numerous rehabs either completed or in process;*
  - *Award of several additional grants (including a SmART grant and designation) based on community momentum;*
  - *Won the "Great Main Streets in the Making" award from NCAPA before the streetscape was even finished.*
  - *Goldsboro began in the 90s by creating a downtown master plan and a neighborhood master plan, and recruiting partners such as Self-Help and Preservation NC. They also kept in constant contact with elected officials and agencies at the state and federal levels*
  - *In 2010-12 the City borrowed money to pay for the first block of streetscape at $1.4 million, and won grants to stabilize their train station*
  - *In 2013 the City paid for design services for two more blocks*
  - *In 2014 the City applied for and won a $10 million TIGER V grant based on all the activities up to that point*
  - *A third block of Center Street, a Transit Center near the Railroad Depot, and improvements to the street connecting Center Street and the Train Station were also funded through TIGER V.*
- *In downtown Raleigh, a $10 million investment in Raleigh's Fayetteville Street produced about $3 billion in investment in 6 years.*
- *In Salisbury (population 34,000), since the 2001 master plan was adopted and they began addressing streetscape needs, they have seen over $60 million in investment.*

This section includes recommendations for:

- *Transportation Improvements;*
- *Land use considerations;*
- *Citizen engagement and themes;*
- *Streetscape Implementation next steps including infrastructure considerations, estimated costs and possible sources of funding.*

5.2 Transportation Improvements

Within the City itself, the highest priority should be the downtown core because there must be a "there" worth visiting. Second priority should be

the main connectors: Main and College between D Street and 5th, and A Street from the downtown to the County Complex and the greenway. These improvements should include bike lanes and bike route designations as shown in the plan.

While that work proceeds, planning for improvements to the routes into Newton is critical to the community's long-term revitalization goals. The City has already installed some of the wayfinding sign system on secondary roads, but the City should begin working with NCDOT to make adjustments to exit ramp signage on I-40 in both directions.

Even more critical in the long term is improvements to NC 16 from Charlotte, and NC 10 through the City (D Street). Newton could become a bedroom community for the greater Charlotte area if these roads are improved. There should be a long-term campaign by the City to convince state agencies and elected officials that this is a goal they should support.

5.3 Land Use Considerations

While the core historic commercial and residential areas of Newton and some of it's newer commercial areas provide a great basis for growth, there are a few key areas that detract from these assets, including N. Main Avenue above North Newton and the areas between the historic downtown core and the surrounding neighborhoods. While it is not possible to make changes everywhere at once, these areas can be nudged towards positive change with improved design and zoning controls at very little cost in the short term.

These areas are important because visitors to Newton are likely to pass through them and begin to form an opinion about your community while on their way to primary destinations. Looking toward the future, the fringes of the downtown are especially important because once the downtown core begins to redevelop, these areas could be viewed by potential investors as either an opportunity or a constraint.

Figure 5.1: This new mixed-use project in Morganton is a great addition to their downtown.

There is a unusually large number of auto-related uses and lower quality buildings on the fringes of the downtown core. There are also scattered attractive and historic buildings, but the overall impression is that these areas are distressed. At the present time, if auto-related uses are successful there is no reason to change them, so they should be grandfathered. However, uses that concentrate on the storage and movement of vehicles are often neither attractive nor friendly to pedestrians or cyclists, with the result that people who live in the surrounding neighborhoods are not inclined to walk downtown, and visitors to the downtown are not inclined to explore outside their destination.

Permitted uses in the downtown should be revised to discourage auto-oriented uses and encourage uses more appropriate to a walkable downtown, including housing, institutional, office, retail and mixed use. A good example of a new mixed-use development (commercial and residential) in downtown Morganton is shown above in *Figure 5.1*. While such uses might not be viable in Newton now, they could be in the future.

At the same time, design guidelines or zoning controls should be put in place to create more urban, dense land-use patterns and site controls. A few examples are given throughout this report, and include standards for such elements as:

- *The location of buildings on the site (near the ROW);*
- *The location and design of parking (to the side or rear of buildings, screened from the sidewalk);*

Figures 5.2-5.4: Examples of design elements for successful downtowns, including street trees, shared trash enclosures, and screening and landscaping for parking.

- *Screening of stored vehicles, trash, and utilities;*
- *Allowed construction materials (e.g. no metal buildings or Drivit);*
- *Standards for landscaping, fencing, and setbacks between non-compatible uses.*

There are those who feel that having too many standards discourages investment, but observation of the revitalization process proves otherwise: High quality developers are unlikely to invest significant resources in a community where there is no guarantee that nearby properties will develop to the same high standards.

The N. Main Avenue area is a more intractable problem, because this corridor is very distressed. In the past this was an important commercial corridor for the community, but clearly Northwest/ Southwest Boulevard and portions of US 70 have become the new commercial corridors for Conover and Newton, leaving commercial uses on N. Main redundant, vacant and outdated.

To envision the future for this corridor, it would be desirable to undertake a study and develop a long-term and flexible redevelopment strategy. With creativity, this area could be transformative for Newton, including parks, greenways, residential development, retirement communities, and new, green employment opportunities.

Once a vision has been agreed upon, it would be highly desirable to: 1) Change the zoning; 2) Acquire the most distressed vacant and abandoned properties and demolish them; and 3) If funds allow or if outside funding can be secured, assemble and landbank the properties and landscape the edges to prepare the area for reuse in the future.

5.4 Citizen Engagement & Theme

City leadership has a crucial role to play in revitalization, but citizen engagement is equally important in order to win approval of strategies and to develop a well-rounded and nuanced “character” or theme for the downtown area and the City as a whole. Citizen engagement involves all age groups, many different perspectives, and many interests. The new Main Street Program Manager will hopefully begin the process of encouraging citizens to participate in the revitalization process through committees, visioning, participation on

Figures 5.5: An example of a silo painted artistically to depict the agricultural heritage of the community.

Figures 5.6-5.9: Art can be serious, child-like, whimsical or functional. Whatever form it takes, it can create a memorable place and a memorable experience both for the visitor and for the community.

boards and commissions, and so on. Complete streets, downtown Wi-Fi access, bike paths, handicap access, concerts and other arts-related activities help to engage citizens and bring in new visitors. Such activities are also the best way to begin raising the profile of the community.

Several such strategies were discussed in public meetings and on the web during the course of this study. Ideas included placing high-quality murals on blank walls, fountains and sculpture around the downtown, concerts, sidewalk dining, improvements to the alleys, and connections to and expansion of the greenways. There was even interest in painting a mural on the Renwood Mills grain silos!

There are also some very interesting industrial buildings downtown that are either vacant or underutilized. Some towns or civic-minded property owners have made such spaces available at a very low cost to artists for studio and gallery space. Other towns have used such large spaces to set up "home improvement design centers" where artisans and carpenters can create unique home improvements for people in the region.

This study included a presence on a public website (MindMixer), and there were more than 7,000 unique visits to the site and many comments. This enthusiasm needs to be captured and channeled in positive directions.

5.5 Streetscape Implementation

The highest priority project to begin the revitalization process should be implementation of streetscape improvements around the Square and, if possible, the two blocks of N. Main and N. College immediately north of the Square. The drawings for this work were prepared using a CAD program, so may be considered to be a portion of the design development stage of construction documents, although adjustments and refinements will be needed once a survey has been completed. Included in this work was an estimate of costs based on these drawings, and this is included in Appendix A.

a. Streetscape Materials

See Section 3.0 for images of materials favored by citizens and staff for the streetscape. The list below includes specific manufacturers and lines that were selected by citizens and staff, but they should be considered "or equivalents." Chosen materials:

- *Belgard "Urbana" Series Slate-pattern concrete pavers for main portion of walkway (mixed warm colors);*
- *Pine Hall "English Edge Dark" non-permeable clay pavers with chamfered edge in double soldier course for 16" border around slate-pattern pavers;*
- *Pine Hall "RainPave English Edge Red" permeable pavers in running bond for areas between tree pits;*
- *Structural soil underneath the running bond and extending 6-8' wide from curb and 3' deep continuously under sidewalks;*
- *Pine Hall "Georgian Edge Red" (or to match installed edging on adjoining streets, but chamfered edge preferred);*
- *"Depot"-style pedestrian lights on all sidewalks except around the Courthouse, where the historic globe lights will be retained;*
- *"Vase-shaped" medium size trees such as Zelkova or Bosque Elm as streets trees in tree pits.*

Designs for other elements such as bike racks, planters and benches are still to be determined. Some citizens have expressed interest in competitions for unique street furniture elements.

b. Infrastructure

In order to conduct a preliminary evaluation of the existing utilities in the study area, discussions were held with the City's Public Works' staff. Their observations made during utilities repairs and general maintenance were key to developing an understanding of current conditions.

Generally, the existing water lines in this area are cast iron pipes with lead joints. These lines have been in place in excess of 50 years and are deteriorating. A recent example cited by the Public Works staff was for an excavation being made in an adjacent street. A probing rod was used to locate the waterline to avoid hitting it with the excavator. Instead, when the probing rod hit the waterline it penetrated the wall of the pipe. City staff agreed that replacement of the water lines, along with the associated valves, hydrants and services, should be included in the downtown improvements.

The existing sanitary sewer lines in the project area are also in excess of 50 years old. It appears that the original lines were vitrified clay (VC) pipe. Repairs over the years have been made using sections of ductile or cast iron pipe and PVC (plastic) pipe. The existing manholes are predominately made of clay brick but there are a couple of precast concrete manholes in place suggesting that some brick structures may have been replaced for maintenance purposes or additional manholes installed to provide better access to the lines.

Using their closed-circuit television equipment (CCTV) the Public Works' staff provided video of the interior of the sewer pipe for evaluation. Findings were typical for sewer lines of this age and material. Severely misaligned joints were common as were cracks in numerous pipe sections. Some sections of standing water were found, which is an indication that there may be some long term settling of the pipe. After reviewing the available information, the consensus was that the replacement of the existing sewer lines and manholes should be included in the downtown improvements.

While there were sections of lines that appeared to be in good condition, the staff expressed concern that, because this is VC pipe, it would likely be damaged due to the construction activities associated with the various improvements. It was agreed that the better option is to remove it now to avoid failure after the improvements are completed.

Early in the study process, the Public Works staff expressed concern about the existing storm drainage system in the downtown area. Deteriorating/failing pipe sections and inadequate capacity were the primary concerns. As with the sanitary sewer, the City video recorded most of the storm sewer system in this area. The line consisted primarily of corrugated metal pipe (CMP) but sections of reinforced concrete pipe (RCP) and sections of vitrified clay pipe (VC) were found. Confirming the City's original concerns, sections of the CMP were found to have the bottom (invert) missing due to corrosion; sections were partially crushed thus restricting flow; and joints were misaligned. No specific age can be determined for the storm sewer pipe. Based on the various materials used, it is likely that the system has been pieced together over a period of time. From the available evidence, it was the consensus that replacement and upgrading the storm sewer system should be included in the downtown improvements.

The City of Newton is a member of ElectriCities and as such owns, operates and maintains its electrical system. The electrical lines in the blocks surrounding the courthouse (Area A) are located underground. The City's staff indicated that these lines have been in place since around 2000 and are in good condition. It is not anticipated that significant adjustments or additions to these lines will be required for this area. Final design will determine if existing handholds will have to be adjusted or if additional services are required for relocated or new street lights.

The most significant electrical improvements will be made in Area B. The existing electrical lines are aerial along 2nd Street and overhead services run to the existing street lights on College Avenue and Main Avenue. Overhead services also extend to the adjacent buildings along 2nd Street. These lines and services would be placed underground as part of the Area B improvements.

Replacement of all utilities must be in accordance with all applicable State and Local requirements. During construction it will be critical to minimize the interruption of service to the adjacent customers. To the extent possible, the improvements should be designed so that new lines are installed and ready to be put into service prior to taking the existing lines out of service.

c. Project Cost Estimates

Project cost estimates are located in Appendix A. The unit costs were taken from a comparable project bid in 2014. Estimates include "soft" costs such as design, bidding, construction observation, and contingency. Prices are valid at this time, but whether they remain valid depends on market conditions at the time the project is bid.

The estimates show that the cost of each block around the Square will be about $1 million. Each of the blocks Area B will be about $1.25 million because of the need to bury the overhead utlity lines in these blocks. These figures include

improvements to the infrastructure that the City has determined need to be replaced. Infrastructure improvements account for about 50% of the cost of this work.

Concerning costs, these are intimidating numbers. But considering that some of the downtown infrastructure needs to be replaced whether or not surface improvements are undertaken, it makes sense to do both. Without surface improvements, property and business owners would have to endure the inconvenience and disruption of replacing the lines (perhaps several times if all the underground utilities were not replaced at one time) without the benefits that will accrue from redesigned streets.

Area A is the area around the Square, and Area B is the two blocks immediately north of the Square on N. College Avenue and N. Main Avenue, as shown in *Figure 3.4* on page 14. It would be highly desirable to renovate all six blocks at one time, but if this is not possible, funding for additional phases of work will probably be easier to obtain with a portion of the work already complete.

5.6 Possible Funding Sources

As the economy has improved in the past few years, an increasing number of communities are chasing a decreasing number and size of available funds. Because of this, it is more important than ever that the City take actions that will demonstrate to State and Federal agencies and private funding organizations that the project has public support, includes forward-thinking of design elements, and has the financial commitment of the City to pay for a portion of the cost. Here are some of the strategies employed by other cities that have been successful in winning state and federal dollars for planning work and construction projects (some of which the City is already doing):

- *At least yearly contact with funding agencies and elected representatives at the state and federal level to demonstrate commitment and share goals;*
- *Partial implementation with local funds of "starter" projects or self-funding for smaller projects. Funding can come from loans, bonds, and other funding strategies such as establishment of Municipal Service Districts or Business Improvement Districts;*
- *Documentation of a public process for input on setting goals and developing plans;*
- *Willingness to contribute more than the minimum share of costs specified in the grant (e.g. offering to fund 25% matching instead of the required 20%);*
- *Shovel-ready plans;*
- *Active programs to identify other funding sources for parts of the project or for other projects. Examples might include winning an arts grant to help pay for the outdoor stage, setting up an MSD, establishing an arts council, or conducting an in-house charrette to develop a vision for the N. Main Avenue corridor;*
- *Tactical urbanism actions such as painting the desired expanded sidewalk widths on the asphalt in the Square to allow people to experience what the increased space would do for pedestrians and businesses. This type of action could be either temporary (e.g. for a weekend) or semi-permanent (change head-in parking to parallel on one block and add bike lanes and painted bumpouts to shorten crosswalk distances).*
- *Work with local property owners to make building space available for artists for free or at a reduced cost;*
- *Active economic development strategies to help existing downtown business owners and attract new businesses (e.g. facade grants, publicity programs, downtown marketing, monthly concerts in the summer);*
- *Organized visits by citizens, business owners, elected officials and staff to other communities in the region that are further along in the redevelopment process to garner ideas and inspiration and to engender the determined optimism necessary to success;*
- *Active promotion of all positive actions and projects and all accomplishments, including press releases to local media, funding agencies and elected representatives.*

Here are some of the possible funding sources that may aid Newton in reaching its goals:

- ***Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grant Program.*** *The consolidated and Further Continuing Appropriations Act, 2015 appropriated $500 million, available through September 30, 2017, for National Infrastructure Investments otherwise known as TIGER grants. As with previous rounds of TIGER, funds for the FY 2015 TIGER program are to be awarded on a competitive basis for projects that will have a significant impact on the nation, a metropolitan area or a region.*

  TIGER Discretionary Grants have supported innovative projects, including multi-modal and multi-jurisdictional projects which are difficult to fund through traditional Federal programs. Successful TIGER projects leverage resources, encourage partnership, catalyze investment and growth, fill a critical void in the transportation system or provide a substantial benefit to the area in which the project is located. Applicants must detail the benefits their project would deliver for five long-term outcomes: safety, economic competitiveness, state of good repair, quality of life and

environmental sustainability. US Department of Transportation also evaluates projects on innovation, partnerships, project readiness, benefit cost analysis, and cost share.

- ***Congestion Mitigation/Air Quality Program.*** *The Congestion Mitigation/Air Quality Improvement Program (CMAQ) provides funding for projects and programs in air quality non-attainment and maintenance areas for ozone, carbon monoxide, and particulate matter which reduce transportation related emissions. States with no non-attainment areas may use their CMAQ funds for any CMAQ or STP eligible project. These federal dollars can be used to build bicycle and pedestrian facilities that reduce travel by automobile. Communities located in attainment areas who do not receive CMAQ funding apportionments may apply for CMAQ funding to implement projects that will reduce travel by automobile.*

- ***NCDOT Pedestrian Funds.*** *Each of the 14 NCDOT Highway Divisions administers $100,000 in pedestrian funds within its jurisdiction. These funds are used for new sidewalk construction. A written request should be submitted to the Division Engineer providing technical information such as justification, location, improvements being requested, timing, etc. for thorough review.*

- ***NCDOT Contingency Fund.*** *The Statewide Contingency Fund is a $10 million fund administered by the Secretary of Transportation. The Division Engineer elicits written requests from municipalities, counties, businesses, schools, citizens, legislative members and NCDOT staff. The appeals are reviewed on their merits by the Contingency and Small Urban Funds Committee, which makes recommendations for funding to the Secretary. Written requests must provide technical information such as justification, location, improvements being requested, timing, etc., for thorough review.*

- ***Small Urban Funds****. Each NCDOT Highway Division administers $2 million of funds for small-scale improvement projects in urban areas. Projects must be within 2 miles of city limits and have a maximum cost of $250,000. Requests for small urban funds may be made by municipalities, counties, businesses, school and industrial entities. A written request should be submitted to the Division Engineer providing technical information such as justification, location, improvements being requested, timing, etc., for thorough review.*

- ***NCDOT Spot Improvement Program.*** *The Division of Bicycle and Pedestrian Transportation (DBPT) budgets $500,000 per year for "spot" safety improvements throughout North Carolina. Eligible improvements include drain grate replacement, bicycle loop detectors, pedestrian signals and other small-scale improvements. These funds are used for small-scale projects not substantial enough to be included in the STIP. Proposals should be submitted directly to the Division of Bicycle and Pedestrian Transportation.*

- ***NCDOT Small Construction Funds.*** *Each of the 14 NCDOT Highway Divisions administers $357,000 of small construction funds. The purpose of these funds is to finance improvements on the State System (US, NC, and SR routes) to be used for projects anywhere in the counties. These funds are used to fund a variety of transportation projects for municipalities, counties, businesses, schools, and industries throughout the state. There is a $250,000 maximum amount per request per fiscal year. Any project with a total cost greater than $150,000 requires a resolution or a letter of support for the project from the local jurisdiction.*

- ***State Revolving Fund (SRF) - Water and Sewer Infrastructure.*** *These funds are administered by the N.C. Department of Environment and Natural Resources' Division of Water Infrastructure. The programs provide funding for eligible water (DWSRF) and sewer (CWSRF) projects including the replacement of existing facilities. The funds are generally loans at one-half of market interest rates for a maximum of 20 years. In the past these programs have had 0% interest loans and a limited amount of principal forgiveness.*

- ***CDBG Building Demolition Grant Program.*** *The NC Department of Commerce, Rural Economic Development Division (REDD) has a new federally funded program that provides funds of up to $500,000 for demolition of vacant dilapidated industrial buildings. The activity is expected to create a site where it can be reasonably expected that new jobs and private sector industrial investment will locate. The funds are qualified under the slums and blight national objective and therefore do not require job creation documentation. All non-entitlement communities are eligible to apply. There is a 25% match requirement for Tier 2 and 3 counties, but no match for those*

located in Tier 1 counties. Properties located within a designated redevelopment area are eligible as well as those to be treated on a spot basis.

Requirements:

* *Pre-application submission and conference with REDD staff*
* *Pre-app to include demolition estimates, location map and photos of building*
* *Phase I environmental study required*
* *Demolition estimates from a PE or licensed demolition contractor*
* *Two Public Hearings required prior to full application submission*
* *$5,000 planning fee reimbursable if properly procured (app prep, EA, Phase I)*
* *Administrative fees available the lesser of 10% of the total grant request or $25,000*
* *Davis Bacon Act compliance applicable to the demolition activity*
* *Standard CDBG program compliance (citizen participation, Section 3 and 504, environmental, EEO, procurement, etc.)*

- ***CDBG ED Building Reuse Grants.*** *Small Cities Community Development Block Grant (CDBG) funds are available for renovation and up-fitting of vacant industrial and commercial buildings for economic development purposes. The building reuse program is administered by the NC Department of Commerce Rural Economic Development Division (REDD), and is designed to return vacant industrial/commercial buildings to economic use for new and/or expanding business and industry. The ultimate goal of the Building Reuse program is to provide jobs for low and moderate-income persons (LMI).*

A local government applicant must propose a project in conjunction with a private for profit business that proposes to restore a vacant building to economic use resulting in the creation of permanent, full-time jobs by the project company. A job is considered full-time if the employee works at least 1,600 hours per year. To be eligible, documentation must be provided showing the building has been vacant thirty (30) consecutive days or more prior to the date of the pre-application conference. CDBG funds for this category are limited to a maximum of $750,000 per unit of government. The grant amount is calculated based on up to $20,000 per job depending on the type of business.

A cash match of 100% (1:1 ratio) is required for each CDBG dollar loaned to the project company. Matching funds may come from the building owner or from the project company.

CDBG funds provided to the company by the local unit of government will be in the form of a forgiven loan. The loan has a term of five years with no principal or interest payments. If the project company retains the jobs pledged in the loan agreement for the five year term with at least 51% benefit to low and moderate-income persons, the entire amount is forgiven. The five year term begins with the execution of the loan agreement. If there is a default by the project company prior to the expiration of the term, 20% of the loan is forgiven for each year the jobs were held prior to the default unless the 51% benefit to low and moderate-income persons is not met. If the benefit to low and moderate-income persons is less than 51% at the time of default, the entire loan must be repaid to the unit of local government. The forgiven loan will be secured with a promissory note/deed of trust or other form of security that is satisfactory to both the unit of local government and DOC. There are no monthly principal or interest payments on this loan. Also in the case of a default, no interest is charged on the loan.

- ***NC State Building Reuse Grants.*** *The Building Reuse Program under the Rural Grants/Programs Section of the North Carolina Department of Commerce will provide grants to local governments. Three categories of funding are available for 1) The renovation of vacant buildings, 2) The renovation or expansion of a building occupied by an existing North Carolina company wishing to expand in their current location and 3) The renovation, expansion or construction of health care entities that will lead to the creation of new, full-time jobs.*

Eligible applicants are units of local government located in either a Tier 1 or Tier 2 county, or a rural census tract in a Tier 3 county.

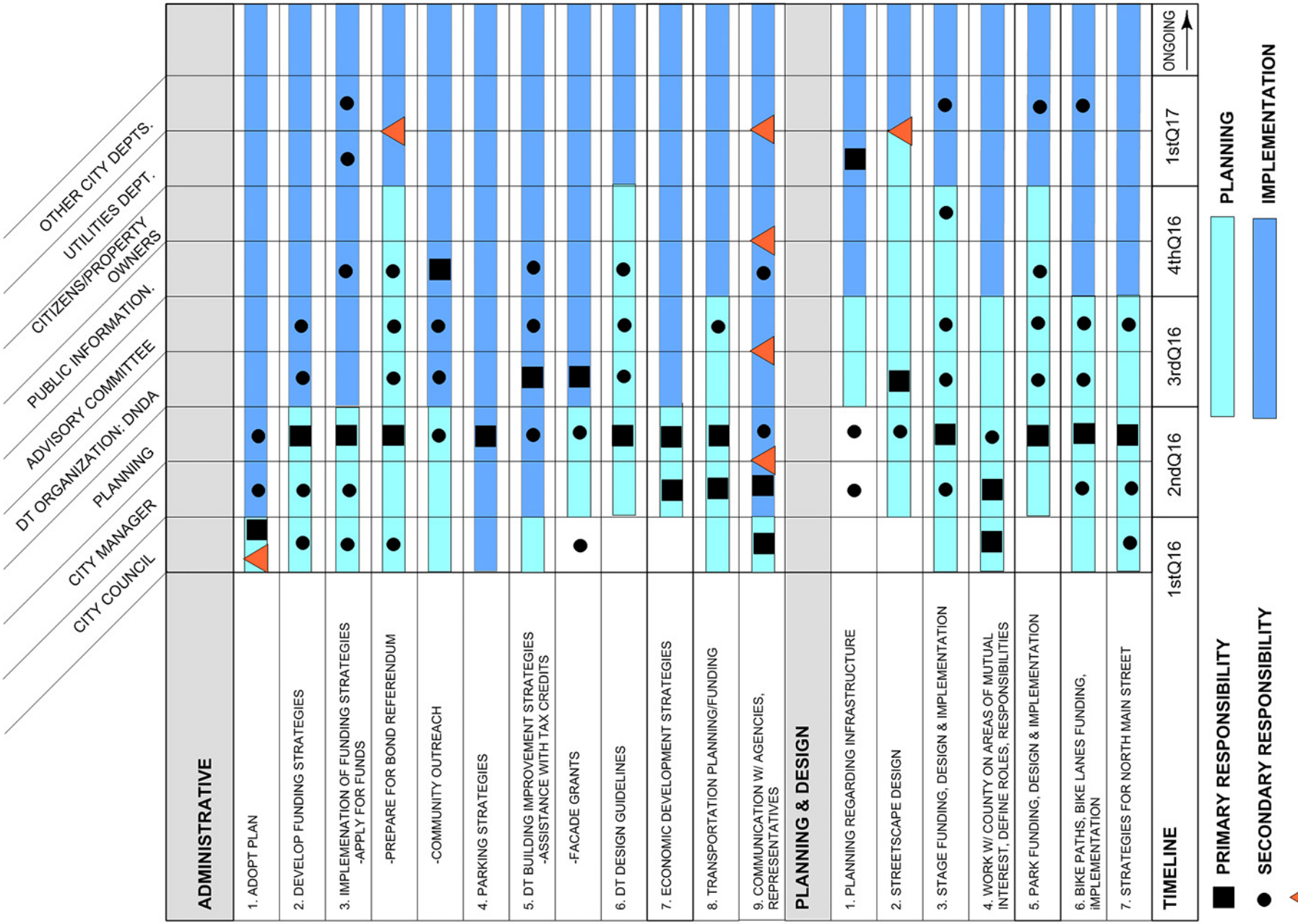
Funding availability for the Vacant Building category is up to $12,500 per full-time job with a maximum award of $500,000 depending on company type, wages and benefits paid and the County's economic tier. The funding availability for the Existing Business category and the Health Care category is up to $10,000 per full-time job with a maximum award of $500,000. The amount of award is also dependent on the company type, wages and benefits paid and the County's economic tier.

- ***Main Street Solutions Fund.*** *The purpose of the fund is to provide maximum support to small businesses in designated micropolitans located in Tier 2 and Tier 3 counties and/or in designated North Carolina Main Street communities. The grants can be used to assist planning agencies and small businesses with efforts to revitalize downtowns by creating jobs, funding infrastructure improvements and rehabilitating buildings. This program is administered by the Department of Commerce, NC Main Street Center, Office of Urban Development.*

5.7 Implementation Matrix

While it is clear that priorities always shift as opportunities and challenges present themselves, the implementation matrix on the following page sets up a framework of priorities and actions needed to accomplish the goals of this work. The category "Advisory Committee" is not meant to be a single committee but ones set up to address a particular set of goals (design guidelines, North Newton revitalization, fundraising for parks, etc.). These might be set up by Council, or by the DNDC.

Implementation Matrix



Appendix A: Estimate of Project Costs

Estimate of Probable Costs - AREA A

	DESCRIPTION	UNITS	TOTAL QUANTITY	UNIT COST	EXTENDED COST
	Administration				
1	Mobilization	LS	1	$100,000.00	$100,000.00
2	Construction Staking	LS	1	$20,000.00	$20,000.00
3	Traffic Control & Temporary Measures	LS	1	$40,000.00	$40,000.00
4	Construction Coordination	LS	1	$250,000.00	$250,000.00
	Demolition				
5	Remove Storm Drainage Pipe	LF	750	$15.00	$11,250.00
6	Remove Storm Drainage Structure	EA	7	$450.00	$3,150.00
7	Remove Water Lines and Appurtenances	LF	1,500	$10.00	$15,000.00
8	Remove Fire Hydrant Assembly	EA	4	$700.00	$2,800.00
9	Remove Water Meter Service	EA	29	$500.00	$14,500.00
10	Remove Existing Sewer Lines	LF	1,800	$23.00	$41,400.00
11	Remove Existing Sewer Service Lines	LF	1,050	$10.00	$10,500.00
12	Remove Existing Sanitary Sewer Manholes	EA	7	$900.00	$6,300.00
13	Remove Ex. Curb and Gutter	LF	2,300	$7.00	$16,100.00
14	Remove Asphalt Pavement	SY	8,200	$9.00	$73,800.00
15	Remove Existing Sidewalk	SY	1,800	$10.00	$18,000.00
	Water Distribution System				
16	6" DI Water Line	LF	1,500	$75.00	$112,500.00
17	10" DI Water Line	LF	500	$110.00	$55,000.00
18	Fire Hydrants	EA	4	$5,000.00	$20,000.00
19	6" Gate Valves & Box	EA	9	$1,300.00	$11,700.00
20	10" Gate Valves & Box	EA	3	$2,900.00	$8,700.00
21	6"x6" Tapping Sleeve and Valve	EA	6	$3,300.00	$19,800.00
22	10"x10" Tapping Sleeve and Valve	EA	2	$6,100.00	$12,200.00
23	New Water Meter Service	EA	29	$1,400.00	$40,600.00
24	Water Service Line	LF	1,015	$5.00	$5,075.00
25	Connection to Building Service Line	EA	29	$350.00	$10,150.00
	Wastewater Collection System				
25	New 4' ID Sanitary Sewer Manhole 0 to 6'	EA	3	$4,000.00	$12,000.00
26	New 4' ID Sanitary Sewer Manhole 6 to 8'	EA	2	$4,400.00	$8,800.00
27	New 4' ID Sanitary Sewer Manhole 8 to 10'	EA	2	$5,600.00	$11,200.00
28	New Sanitary Sewer Service Line	LF	1,440	$25.00	$36,000.00
29	8" Sanitary Sewer Depth 0 to 6'	LF	550	$80.00	$44,000.00
30	8" Sanitary Sewer Depth 6' to 8'	LF	500	$85.00	$42,500.00

Estimate of Probable Costs - AREA A

	DESCRIPTION	UNITS	TOTAL QUANTITY	UNIT COST	EXTENDED COST
31	8" Sanitary Sewer Depth 8' to 10'	LF	1,000	$98.00	$98,000.00
32	Sanitary Sewer Cleanouts	EA	21	$900.00	$18,900.00
33	Connect Existing Sewer Line	EA	2	$2,500.00	$5,000.00
	Roadway & Drainage				
34	Roadway Excavation - Unclassified	CY	1,600	$9.00	$14,400.00
35	Undercut Excavation	CY	600	$30.00	$18,000.00
36	Geotextile Fabric For Soil Stabilzation	SY	1,200	$6.00	$7,200.00
37	Pre-Cast Drop Inlet including Frame & Grate	EA	4	$2,800.00	$11,200.00
38	New Storm Manhole Depth 8-10'	EA	2	$4,500.00	$9,000.00
39	RCP, Depth 6 to 8'	LF	600	$55.00	$33,000.00
40	RCP, Depth 6 - 8'	LF	0	$60.00	$0.00
41	30" Standard Curb and Gutter	LF	1,500	$25.00	$37,500.00
42	2 1/2" S9.5B Asphalt Surface Course	SY	3,300	$20.00	$66,000.00
43	8" CABC Base Course	SY	3,300	$13.00	$42,900.00
44	Temporary Pavement Marking	LS	1	$4,000.00	$4,000.00
45	Thermoplastic Pavement Marking Symbol	EA	0	$250.00	$0.00
46	Thermoplastic Pavement Marking Lines 4", 120 mils	LF	500	$2.00	$1,000.00
47	Thermoplastic Pavement Marking Lines 24", 120 mils	LF	370	$11.00	$4,070.00
48	Roof Drain Downspout	EA	30	$900.00	$27,000.00
49	Misc. Drainage	LS	1	$10,000.00	$10,000.00
	Erosion Control				
50	Erosion and Sedimentation Control	LS	1	$8,000.00	$8,000.00
	Electrical				
51	Handhold	Ea	27	$800.00	$21,600.00
52	Conduit/Wiring	LF	800	$20.00	$16,000.00
53	Underground Wiring Allowance	LS	1	$375,000.00	$375,000.00
54	SMFO Communication Cable	LF	600	$20.00	$12,000.00
	Streetscape Surface Improvements				
55	Brick Pavers on 3/4" Sand Setting Bed	SF	10,000	$6.00	$60,000.00
56	Permeable Brick Pavers	SF	3,500	$6.00	$21,000.00
57	4" Concrete Slab under Pavers, No reinforcement	SF	10,000	$4.00	$40,000.00
58	Concrete Bands, Tree Collars	LF	320	$20.00	$6,400.00
59	Concrete Band at R/W (allowance)	LF	1,000	$22.00	$22,000.00
60	6" Reinforced Concrete Driveway	SF	0	$8.00	$0.00
61	Truncated Dome Pavers at Handicap Ramps	SF	64	$20.00	$1,280.00

Estimate of Probable Costs - AREA A

	DESCRIPTION	UNITS	TOTAL QUANTITY	UNIT COST	EXTENDED COST
62	Granite Accent Pavers	SF	800	$20.00	$16,000.00
63	Brick Seat Walls with Architectural Concrete Cap	LF	665	$200.00	$133,000.00
	Landscaping				
64	3" Caliper Trees Installed in Tree Pits	EA	18	$400.00	$7,200.00
65	Stalite 6' x 4' x 840'	CY	750	$76.00	$57,000.00
66	Prepared Topsoil for Tree Pits and Planting Beds	CY	182	$60.00	$10,920.00
67	Double Shredded Harwood Mulch	CY	23	$60.00	$1,380.00
68	Ornamental and Specimen Trees	LS	18	$500.00	$9,000.00
69	Perennials and Annuals	LS	1	$1,000.00	$1,000.00
70	Shrubs	EA	40	$10.00	$400.00
71	Irrigation	EA	1	$22,000.00	$22,000.00
72	French Drains- 4" Perforated PVC Pipe in Sleeve, in Fabric Wrapped Stone	LF	840	$10.00	$8,400.00
	Lights and Furniture				
73	Pedestrian Lights on Concrete Base	EA	15	$3,200.00	$48,000.00
74	Street Lights on Concrete Base	EA	16	$3,100.00	$49,600.00
75	Traffic Signal Allowance - Per Intersection	EA	4	$80,000.00	$320,000.00
76	Relocate Historic Lights	EA	12	$1,500.00	$18,000.00
77	Benches	EA	20	$1,000.00	$20,000.00
78	Benches, Courthouse	EA	16	$1,000.00	$16,000.00
79	Set, 2 Chairs and 1 Table, Park	EA	8	$1,800.00	$14,400.00
80	Bike Bollards	EA	8	$400.00	$3,200.00
81	Bike Racks	EA	4	$1,000.00	$4,000.00
82	Signs Allowance 10 per block	EA	40	$600.00	$24,000.00
83	Low Voltage Lighting, 25 Lights, 2 Transformers, Cable/Conduit	LS	1	$25,000.00	$25,000.00
84	Trash Receptacles	EA	8	$1,000.00	$8,000.00
85	Concrete Planters	EA	16	$300.00	$4,800.00

Construction Sub-Total	$3,127,395.00
Construction Contingency - 15%	$469,109.25
Engineering:	
Design, Permitting, CA,CO - 15%	$469,109.25

Total Estimated Project Cost **$4,065,613.50**

Estimate of Probable Costs - AREA B

	DESCRIPTION	UNITS	TOTAL QUANTITY	UNIT COST	EXTENDED COST
	Administration				
1	Mobilization	LS	1	$75,000.00	$75,000.00
2	Construction Staking	LS	1	$15,000.00	$15,000.00
3	Traffic Control & Temporary Measures	LS	1	$25,000.00	$25,000.00
4	Construction Coordination	LS	1	$150,000.00	$150,000.00
	Demolition				
5	Remove Storm Drainage Pipe	LF	400	$15.00	$6,000.00
6	Remove Storm Drainage Structure	EA	5	$450.00	$2,250.00
7	Remove Water Lines and Appurtenances	LF	1,300	$10.00	$13,000.00
8	Remove Fire Hydrant Assembly	EA	2	$700.00	$1,400.00
9	Remove Water Meter Service	EA	21	$500.00	$10,500.00
10	Remove Existing Sewer Lines	LF	1,000	$23.00	$23,000.00
11	Remove Existing Sewer Service Lines	LF	630	$10.00	$6,300.00
12	Remove Existing Sanitary Sewer Manholes	EA	7	$900.00	$6,300.00
13	Remove Ex. Curb and Gutter	LF	1,500	$7.00	$10,500.00
14	Remove Asphalt Pavement	SY	3,200	$9.00	$28,800.00
15	Remove Existing Sidewalk	SY	1,300	$10.00	$13,000.00
	Water Distribution System				
16	6" DI Water Line	LF	1,000	$75.00	$75,000.00
17	10" DI Water Line	LF	0	$110.00	$0.00
18	Fire Hydrants	EA	2	$5,000.00	$10,000.00
19	6" Gate Valves & Box	EA	6	$1,300.00	$7,800.00
20	10" Gate Valves & Box	EA	0	$2,900.00	$0.00
21	6"x6" Tapping Sleeve and Valve	EA	2	$3,300.00	$6,600.00
22	10"x10" Tapping Sleeve and Valve	EA	0	$6,100.00	$0.00
23	New Water Meter Service	EA	21	$1,400.00	$29,400.00
24	Water Service Line	LF	735	$5.00	$3,675.00
25	Connection to Building Service Line	EA	21	$350.00	$7,350.00
	Wastewater Collection System				
25	New 4' ID Sanitary Sewer Manhole 0 to 6'	EA	0	$4,000.00	$0.00
26	New 4' ID Sanitary Sewer Manhole 6 to 8'	EA	0	$4,400.00	$0.00
27	New 4' ID Sanitary Sewer Manhole 8 to 10'	EA	4	$5,600.00	$22,400.00
28	New Sanitary Sewer Service Line	LF	650	$25.00	$16,250.00
29	8" Sanitary Sewer Depth 0 to 6'	LF	0	$80.00	$0.00
30	8" Sanitary Sewer Depth 6' to 8'	LF	0	$85.00	$0.00

Estimate of Probable Costs - AREA B

	DESCRIPTION	UNITS	TOTAL QUANTITY	UNIT COST	EXTENDED COST
	Administration				
1	Mobilization	LS	1	$75,000.00	$75,000.00
2	Construction Staking	LS	1	$15,000.00	$15,000.00
3	Traffic Control & Temporary Measures	LS	1	$25,000.00	$25,000.00
4	Construction Coordination	LS	1	$150,000.00	$150,000.00
	Demolition				
5	Remove Storm Drainage Pipe	LF	400	$15.00	$6,000.00
6	Remove Storm Drainage Structure	EA	5	$450.00	$2,250.00
7	Remove Water Lines and Appurtenances	LF	1,300	$10.00	$13,000.00
8	Remove Fire Hydrant Assembly	EA	2	$700.00	$1,400.00
9	Remove Water Meter Service	EA	21	$500.00	$10,500.00
10	Remove Existing Sewer Lines	LF	1,000	$23.00	$23,000.00
11	Remove Existing Sewer Service Lines	LF	630	$10.00	$6,300.00
12	Remove Existing Sanitary Sewer Manholes	EA	7	$900.00	$6,300.00
13	Remove Ex. Curb and Gutter	LF	1,500	$7.00	$10,500.00
14	Remove Asphalt Pavement	SY	3,200	$9.00	$28,800.00
15	Remove Existing Sidewalk	SY	1,300	$10.00	$13,000.00
	Water Distribution System				
16	6" DI Water Line	LF	1,000	$75.00	$75,000.00
17	10" DI Water Line	LF	0	$110.00	$0.00
18	Fire Hydrants	EA	2	$5,000.00	$10,000.00
19	6" Gate Valves & Box	EA	6	$1,300.00	$7,800.00
20	10" Gate Valves & Box	EA	0	$2,900.00	$0.00
21	6"x6" Tapping Sleeve and Valve	EA	2	$3,300.00	$6,600.00
22	10"x10" Tapping Sleeve and Valve	EA	0	$6,100.00	$0.00
23	New Water Meter Service	EA	21	$1,400.00	$29,400.00
24	Water Service Line	LF	735	$5.00	$3,675.00
25	Connection to Building Service Line	EA	21	$350.00	$7,350.00
	Wastewater Collection System				
25	New 4' ID Sanitary Sewer Manhole 0 to 6'	EA	0	$4,000.00	$0.00
26	New 4' ID Sanitary Sewer Manhole 6 to 8'	EA	0	$4,400.00	$0.00
27	New 4' ID Sanitary Sewer Manhole 8 to 10'	EA	4	$5,600.00	$22,400.00
28	New Sanitary Sewer Service Line	LF	650	$25.00	$16,250.00
29	8" Sanitary Sewer Depth 0 to 6'	LF	0	$80.00	$0.00
30	8" Sanitary Sewer Depth 6' to 8'	LF	0	$85.00	$0.00

Estimate of Probable Costs - AREA B

	DESCRIPTION	UNITS	TOTAL QUANTITY	UNIT COST	EXTENDED COST
62	Granite Accent Pavers	SF	448	$20.00	$8,960.00
63	Brick Seat Walls with Architectural Concrete Cap	LF	0	$200.00	$0.00
	Landscaping				
64	3" Caliper Trees Installed in Tree Pits	EA	15	$400.00	$6,000.00
65	Stalite 6' x 4' x 840'	CY	818	$76.00	$62,168.00
66	Prepared Topsoil for Tree Pits and Planting Beds	CY	55	$60.00	$3,300.00
67	Double Shredded Harwood Mulch	CY	5	$60.00	$300.00
68	Ornamental and Specimen Trees	LS	0	$500.00	$0.00
69	Perennials and Annuals	LS	0	$1,000.00	$0.00
70	Shrubs	EA	0	$10.00	$0.00
71	Irrigation	EA	1	$10,000.00	$10,000.00
72	French Drains- 4" Perforated PVC Pipe in Sleeve, in Fabric Wrapped Stone	LF	920	$10.00	$9,200.00
	Lights and Furniture				
73	Pedestrian Lights on Concrete Base	EA	16	$3,200.00	$51,200.00
74	Street Lights on Concrete Base	EA	8	$3,100.00	$24,800.00
75	Traffic Signal Allowance - Per Intersection	EA	2	$80,000.00	$160,000.00
76	Relocate Historic Lights	EA	0	$1,500.00	$0.00
77	Benches	EA	8	$1,000.00	$8,000.00
78	Benches, Courthouse	EA	0	$1,000.00	$0.00
79	Set, 2 Chairs and 1 Table, Park	EA	0	$1,800.00	$0.00
80	Bike Bollards	EA	8	$400.00	$3,200.00
81	Bike Racks	EA	0	$1,000.00	$0.00
82	Signs Allowance 10 per block	EA	20	$600.00	$12,000.00
83	Low Voltage Lighting, 25 Lights, 2 Transformers, Cable/Conduit	LS	1	$22,000.00	$22,000.00
84	Trash Receptacles	EA	4	$1,000.00	$4,000.00
85	Concrete Planters	EA	8	$300.00	$2,400.00

Construction Sub-Total	$1,942,503.00
Construction Contingency - 15%	$291,375.45
Engineering:	
Design, Permitting, CA,CO - 15%	$291,375.45

Total Estimated Project Cost **$2,525,253.90**