



EXECUTIVE SUMMARY

1 Implications of Doing Nothing

The U.S. 1/U.S. 78 Corridor Study addressed the needs, concerns, and future vision for the 12-mile corridor from the Savannah River to Hitchcock Parkway/Robert M. Bell Parkway (SC 118). Historically the Midland Valley, or Horse Creek Valley as it is referred to in the Aiken-Augusta region, was a textile region with several mills using the creeks for power. This created a vibrant economy in the region and fueled the construction of numerous mill villages. This success spurred the development of the current corridor as a bypass to the congestion on SC 421.

U.S. 1/U.S. 78 was completed in the 1970s to provide a quicker route between the two economic anchors of Aiken and Augusta. Since that time, development and traffic growth have slowly moved from SC 421 to the more convenient U.S. 1 corridor.

Today this highway functions as a “Main Street” for Aiken County, an entrance that showcases the County’s natural beauty and a variety of homes and businesses. However, if this growth is not managed properly, the corridor will likely go the way of so many suburban thoroughfares - endless driveways, signage clutter and sub-standard building designs that will negatively impact the quality of life in the region. As shown in the



picture, the Savannah River Scenic Highway (Washington Road) in Augusta is an example of a major thoroughfare where growth was not managed properly, and solutions to alleviate congestion and improve safety far exceed the available dollars.

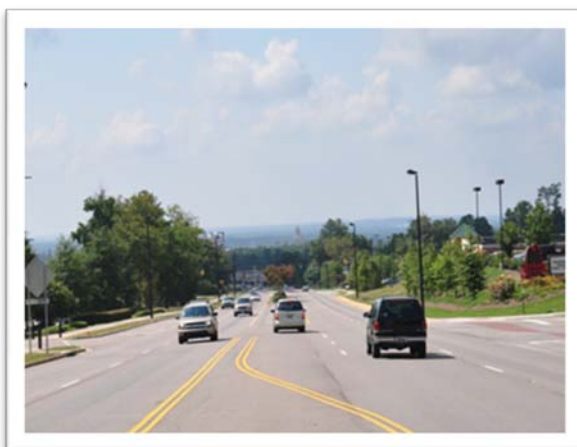
Changes in land use along U.S. 1/U.S. 78 from Aiken to the Savannah River in North Augusta create different contexts along the corridor. Ponds and pine forests are interspersed with small businesses, strip shopping malls, churches, and houses. The corridor context shifts between Urban (Freeway and Village Center), Suburban Highway and Rural Parkway, and it



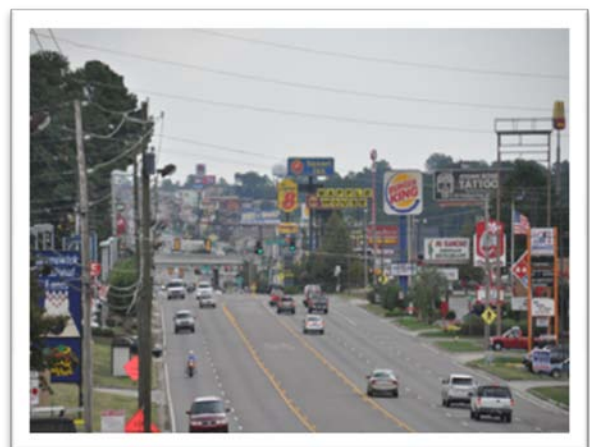
is this variety that provides a distinctive experience. This variety is eroded through continuing subdivision and commercial development of small lots along the corridor, each with a separate driveway (or two). Identifying and strengthening these contexts will improve the character of the corridor in the future, but it takes managed development, roadway design, and controlling the driveway and median cuts.

Consistently applying new development standards and roadway regulations are essential for the corridor. If nothing is done to link land use to the transportation system, the 12-mile corridor could easily become 12 miles of continuous development, disorganized curb cuts, increased congestion, and more collisions. There have been 536 collisions and 11 fatalities reported over the last 45 months (January 2007-September 2010). Averaging almost 12 collisions per month, 3 ½ of these monthly collisions involve an injury, and there is a fatality every 4 ½ months, on average.

The four-lane corridor is a tremendous asset to Aiken County as well as the region, and in order to preserve this asset, land use and access management standards must be developed and enforced along the Corridor. These standards need to be respected by the many agencies that have jurisdiction over the Corridor including: South Carolina DOT; the Aiken County Transportation Committee; Aiken County Council, Planning Commission Development Committee and Zoning Board; Burnetown and North Augusta. If this is accomplished, the result will be similar to the photo below on the left, of Knox Avenue in North Augusta. If development and access are not controlled along the corridor, the ensuing congestion, increase in collisions and degraded appearance will cost far more than the improvements recommended in this Study. The photo below on the right, of Washington Road in Augusta, is an example of unmanaged land use and access standards.



OR





2 Purpose and Need of Study

Initiated by Aiken County Planning and Development Department in the fall of 2010, the U.S. 1/U.S. 78 Corridor Study was conducted to relieve projected congestion along portions of the corridor; improve mobility options; improve safety and efficiency; improve public transit, pedestrian, and bicycle access to destinations within and connections outside of the study area; recommend land use changes; propose development concepts at three sites; and to develop multimodal improvements in an environmentally sensitive manner.

The need for studying the Corridor was based on a combination of factors: route importance; existing and projected travel demand; intersection congestion; inconsistent access management; safety issues; lack of modal options (specifically pedestrian and bicycle access); socio-economic demands; and inconsistent land use.

3 Community Profile

U.S. 1/U.S. 78, also known as the Jefferson Davis Highway, is the major roadway running from the southwest to the northeast through the Midland Valley of South Carolina, providing a critical link between the City of Augusta, Georgia; and in South Carolina, the City of North Augusta, Burnetown, and the City of Aiken. The City of Aiken is the county seat of Aiken County, South Carolina and is part of the Augusta-Richmond Metropolitan Statistical Area.

In 2006, the total population within the 12-mile corridor was 14,757, with 6,500 occupied households and 5,213 jobs. By 2035, total population is expected to increase by 56 percent while households and jobs are both expected to grow by approximately 54 percent. School enrollment for 2006 was 8,812 and is expected to grow to 9,422 in 2035, an anticipated seven percent growth.

4 Existing and Future Conditions

4.1 Roadway Geometry and Operations

Although the route is generally a four-lane divided highway, the median type, shoulder treatment, speed limit, and traffic control varies. Traffic volumes range from 20,600 to 31,600 vehicles per day, while population and employment projections suggest 2035 volumes may exceed 50,000 in some areas of the corridor. Currently, the corridor generally operates at a good level of service (LOS A to C). However, as traffic volumes increase, congestion will



decrease LOS measures below operational standards along portions of the study area with an estimated eight percent of the corridor being severely congested (LOS E or F) by 2035.

4.2 Safety

The rolling terrain, lack of acceleration and deceleration lanes, and inadequate control of driveways and median cut-through locations are major safety concerns along the corridor. A total of 536 collisions were reported during the 45-month period between January 2007



and September 2010, which equates to an average of approximately 143 collisions per year. Ten of these collisions involved at least one fatality and 166 collisions involved at least one injury. The South Carolina Highway Patrol noted that this 12-mile section of U.S. 1 is the most unsafe roadway in Aiken County. Thus, improving safety along U.S. 1 is a goal; and developing consistent intersection treatments, speed limits, limited access points and proper design will assist in making the corridor safe for all users.

4.3 Access Management

Within the 12-mile corridor there are 4 interchanges, 12 signalized intersections, 9 unsignalized intersections, 163 driveways, and 52 intermediate median openings that serve private drives. This amount of access along the 12-mile corridor creates a total of 1,600 conflict points or, on average, 133 conflict points per mile. In addition, approximately 0.7 miles of the corridor have two-way left-turn lanes that provide access to many other private driveways. Currently, very few driveways along the corridor do not have full-movement access, and some developments have two full movement accesses. These private drive median openings are in addition to the median openings that exist at almost every side road in the study area. The majority of median openings and driveways were not constructed in accordance with current South Carolina DOT access management standards, and many of them can be closed and consolidated. This study identifies consistent access design standards by context zone; and once implemented and enforced, the corridor will operate more efficiently and safely, which in turn will protect this major county infrastructure asset.



5 Corridor Context Areas and Potential Development Sites

The character of the U.S. 1/U.S. 78 corridor varies as it passes through the study area. The corridor is currently sparsely developed with uncoordinated outparcel development along various stretches. For evaluation purposes the corridor was divided into distinct context zones. Context zones provide a guide for the type of street section the highway will have from Aiken to Augusta. While each context zone keeps four lanes of through traffic, the land uses, types of development, and corridor character change as the context zone changes.

5.1 Context Zones

Although the context zones at the western end of the corridor are mainly characterized by significant segments of Freeway (0.5 miles) and Suburban Highway (.7 miles), the majority of the corridor consists of five segments of Rural Parkway (totaling 8 miles) separated by four areas of development referred to as Village Center context zones (2.9 miles), as shown in the graphic on the next page.

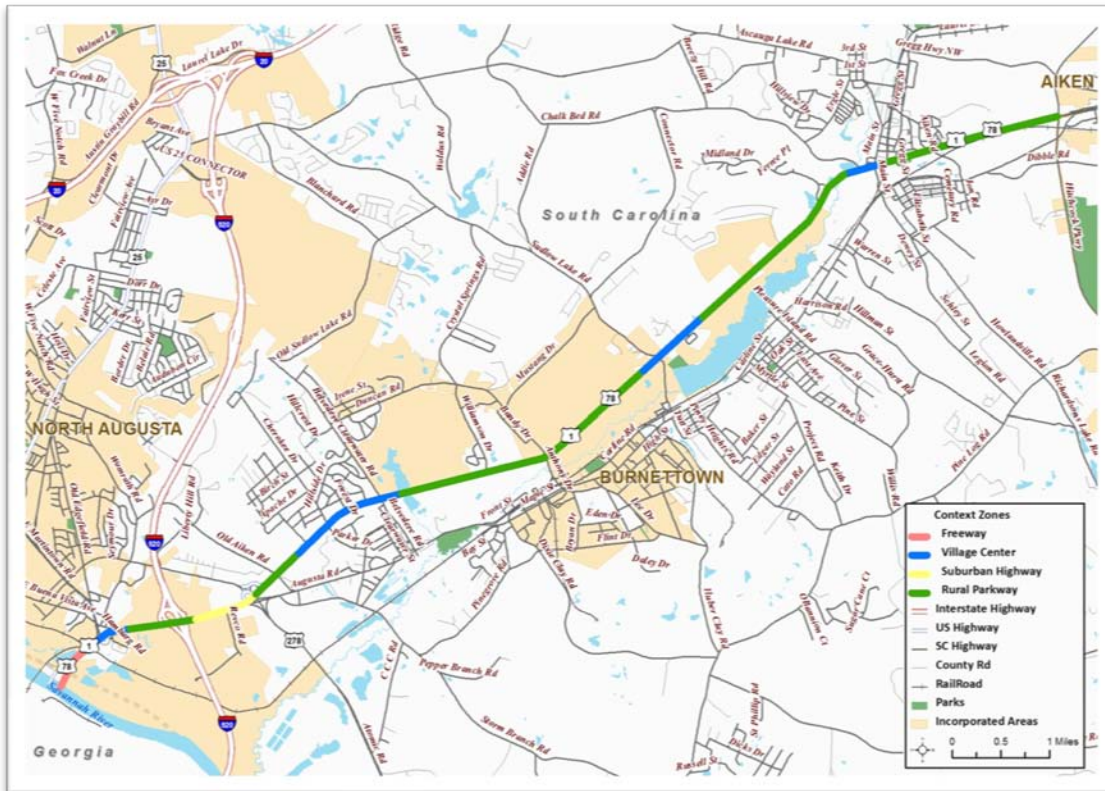
Rural Parkway - A parkway is a free moving road with a divided planted median and natural landscape on either side of the right-of-way. Parkway have limited median breaks and move traffic at a quick, consistent speed. The majority of U.S. 1/U.S. 78 is currently a parkway; however, the parkway condition is changing with the addition of curb cuts that come with new development and the desire for access. A parkway manages this access to prevent every parcel from having a curb cut. Separating focus areas of planned development with a parkway condition creates two benefits:

- A user will experience a sense of arrival and departure through a community
- Traffic will move quickly and safely

This Rural Parkway condition is ideal for the following road segments: Aiken to Graniteville, Graniteville to Burnetown, Burnetown to Clearwater, I-520 to east of Martintown Road/ US 25. These segments should be maintained, protected and enhanced. Much of this land is currently undeveloped and has limited development pressure. By creating a parkway, the land will be developed in a manner that establishes clearly defined access points, including shared, limited access driveways for new development such as single family housing neighborhoods and subdivisions, apartment complexes, shopping centers, and industrial sites.



Context Zones



Village Center - The village center context zone is a cluster of shops and homes with a distinct pedestrian-friendly character. A village center has a distinct beginning and end. It is an urban condition that includes multi-modal uses such as transit, pedestrians and cyclists. As a road condition, this includes traffic calming devices and alternate means to access the fronting development.

Suburban Highway - A suburban highway is the build out condition of U.S. 1/U.S. 78 if the current development pattern continues. A suburban highway typically has several median openings that are coordinated for businesses along the corridor. The type of development along a suburban highway is auto-oriented and can include car dealerships, big box stores, multi-family apartments and other highway commercial uses. To increase safety and improve circulation, the suburban highway condition should include shared driveways coordinated with the median openings when possible. This also includes limited access to single-family housing neighborhoods and subdivisions, with required connections to the surrounding road network.



Freeway - A limited access freeway is the quickest way to move traffic. This type of road is not appropriate for pedestrians or bicycles and involves high speed traffic with grade separated intersections. U.S. 1/U.S. 78 is currently a freeway from the area directly north of Rivernorth Drive in North Augusta to Augusta. A freeway does not provide opportunities for development on the fronting properties but, instead, provides interchange ramp access to other development.

5.2 Potential Development Sites

With the help of a four-day public planning and design charrette held in April 2011 nine potential development sites along the corridor were reviewed and evaluated. From these, three sites were chosen for further study and preparation of proposed development concepts consistent with the identified Village Center context zones. The identified sites are referred to as “catalyst” sites due to their potential to foster further similar quality growth along the corridor. The three catalyst sites identified by the Study are:

- Catalyst Site 1: The intersection of U.S. 1 and Main Street connecting the old mill villages of Graniteville and Warrenville
- Catalyst Site 2: The area of the corridor anchored by Aiken Technical College and Langley Pond/Harrison-Caver Park
- Catalyst Site 3: The North Augusta gateway, riverfront and Martintown Road

6 Recommended Improvements

A total of 43 individual recommendations to improve safety, access management, and congestion management along the U.S. 1/U.S. 78 Corridor were used to identify 20 potential improvement projects for implementation. These improvements, ranging from signal retiming to major interchange reconstruction, should be implemented as funding becomes available and as development opportunities arise. The majority of recommended improvements fall into one of the following four categories:

- Individual intersection geometric and signal improvements
- Access management, including required shared driveways, and median treatments
- Roadside shoulder improvements
- Reconstruction of existing interchanges.



While most of the projects could be implemented, subject to funding availability, in the short to medium term (2012 to 2014) others are considered long-term projects, such as:

- Widen U.S. 1 with improved median between Savannah River and I-520 and reconstruction of the Martintown Road interchange – a Tier 2 (2015-2024) ARTS 2035 LRTP project.
- Reconstruct interchange on U.S. 1/U.S. 78 at Atomic Road.
- Redevelop Interchange of U.S. 1 at Chalk Bed Road/Baker Street/Abear Street (see pictures of Phase 1 and Phase 2 recommendations below).
- Realign Greenville Road across from Aiken Road and provide a southbound right-turn lane on Aiken Road.
- Include northbound dual lefts in the future widening of Hitchcock Parkway.

Planning level cost estimates for the long-term improvements amount to \$25.0 million in 2011 dollars. The planning level cost estimates for short-term and medium-term projects total \$15.6 million, ranging from \$1,000 for a safety-related warning sign to \$6.25 million for shoulder improvements to 7.6 miles of Rural Parkway.



Phase 1 and 2 Intersection Improvements at Abear St, Baker St, and Chalk Bed Road



7 Regulatory Strategy

The U.S. 1/U.S. 78 Corridor from Aiken to Atomic Road in North Augusta does not have any design standards other than the 1984 Aiken County Development Standards that require development to meet the International Building Code for new construction. There are four basic approaches to the development of new regulations, especially when the desire is to maintain a context-sensitive, consistent set of standards across all jurisdictions:

- Option 1: Expand the Highway Corridor Overlay District for Aiken County to the remainder of the U.S. 1/U.S. 78 Corridor from the Savannah River to Hitchcock Parkway
- Option 2: Establish new Highway Corridor Overlay standards that are congruent with North Augusta’s current standard and adopt them for the county in specific locations identified through the Context Zones.
- Option 3: Create new Overlay Districts that are context and form-based standards. These would be consistent with the Context Zones listed in Section 4.2.2.
- Option 4: Locally calibrate the SmartCode™ form-based model code for the corridor.

Each option was evaluated, and the advantages and disadvantages of each were identified with respect to application in the corridor. Recommendations were also developed regarding basic principles for any coding strategy. Our recommendations are to implement these options in phases.

- 0-1 Years: Option 1- Adopt the Highway Overlay District for the U.S. 1/U.S. 78 Corridor that addresses access management issues and implements new driveway requirements. This includes amending the current land development regulations to require shared driveways for all types of development when property is subdivided and developed [Section 24-7.3.-Land Development Regulations].
- 1-3 Years: Option 3- Adopt Highway Overlay Districts for the U.S. 1/U.S. 78 Corridor that align with the Context Zones and provide for different types of development along the corridor, giving the County a range of access management options and solutions that address different development conditions, including limited access for single family neighborhoods on one end of the spectrum in



Parkway and in Village Center a pedestrian friendly environment on the other end of the spectrum.

- 3-10 Years: Option 4- Create a new Stand-alone County Ordinance that incorporates the Highway Overlay Districts as specific zoning categories

Implementing these options in progression will:

- First, provide an immediate stop-gap solution for new development in the corridor.
- In the near future, provide a template for new development that aligns with success and efficiency of the corridor.
- In the long term, create a regulatory framework in Aiken County that developers, land owners, residents, and government officials can easily implement.

8 Making it Happen

The U.S. 1/U.S. 78 Corridor Study identifies numerous congestion, access management, safety improvements, and land use strategies. When incorporated, these strategies will protect and preserve the corridor well into the future, as well as improve the economy, shape development patterns, and influence quality of life and the natural environment. The protection and preservation of the corridor will enhance economic development opportunities and the quality of life of local residents who live, work, and play along this corridor. To realize these benefits, it will require coordination among numerous state and county entities as well as elected officials to develop, implement, and enforce the improvements and strategies recommended in this study. Local residents have voiced their opinions, and an overwhelming majority supports the improvements and strategies recommended along the 12-mile corridor. While all the improvements and strategies cannot be completed short-term, work should begin immediately so incremental improvements can be accomplished over the next few years.