



types, typical building height, and intensity of land use as indicated in Figures 1 and 2. These descriptors are subjective measures and don't always fit

into distinct categories. The Smart Transportation

Guidebook (PennDOT, New Jersey Department of

Transportation (NJDOT), March 2008) was used as

a foundation for assessing the corridor.

Figure 1: Context Zone Transition. Reprinted from the Smart Transportation Guidebook, PennDOT. NJDOT. 2008

Table 1 describes characteristics for specific Context Zones, all of which contain characteristics that describe the Business Route 62 corridor.

Identifying existing and desirable context zones is useful to planners and policy-makers for creating a framework for future growth. Planning for new developments and re-developments should reflect the desired context zone. Once the context is identified, context-sensitive treatments can be applied to enhance and improve the public realm.

Given the diversity of transportation and land use characteristics throughout the corridor, the study area was broken into six Character Zones. Other factors that were taken into account when delineating the Character Zones included municipal boundaries and urban design considerations.

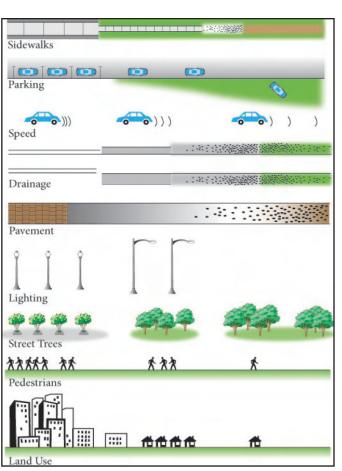


Figure 2: Urban to Rural. Reprinted from the Smart Transportation Guidebook, PennDOT, NJDOT, 2008

Planners and engineers
have developed the
concept of "context
zones" that characterize
place by corresponding
transportation, land
use, and urban design
features. This strikes
the balance between
facilitating movement and
preservation of "place."



Context Zone	Distinguishing Characteristics	Building Placement	Lot Frontage	Typical Building Height
Suburban Corridor	Primarily big box stores, commercial strip centers, restaurants, auto dealerships, office parks, and gas stations	Usually set back from roadway behind surface parking; 20-80 ft min/max setback	100-500 ft	Retail -1 story; office 3-5 stories
Suburban Center	Mixed-use, cohesive collection of land uses that may include residential, office, retail, and restaurant; typically designed to be serviced by car; less accomodating to pedestrians	20-80 ft min/max setback	100-300 ft	2 to 5 stories
Town/Village Neighborhood	Predominantly residential neighborhoods, sometimes mixed with retail, restaurants, restaurants, and offices; in urban places, residential buildings tend to be close to street; small retail establishments sometimes occupy principal corners; block sizes are regular and often small; majority have sidewalks; substantial pedestrian activity	Rowhouses fronting the sidewalk and houses setback 30 ft behind a front lawn are common; 10-20 ft min/max setback	18-50 ft	2 to 5 stories
Town/Village Center	Mixed-use, high density area with buildings adjacent to the sidewalk; commercial operations on ground floors and residential or offices above; parallel parking usually occupies both sides of the street; location of civic and cultural uses; highest pedestrian activity	Built to sidewalk; 0- 20 ft min/max setback	25-200 ft	1 to 3 stories

Table 1: Context Zone Descriptions that Apply to the State Street/Irvine Avenue Corridor Study (PennDOT, NJDOT, March 2008)



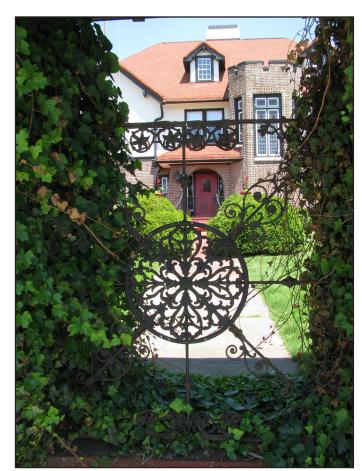
Rachelle House

"Context Sensitive Solutions (CSS) is a philosophy wherein safe transportation solutions are designed in harmony with the community. CSS strives to balance the environmental, scenic, aesthetic, cultural and natural resources, as well as community and transportation needs."

- New York State Department of Transportation







Clepper Manor

Zone 1 - Irvine Gateway [Ohio State Line to State Street]

The character of this zone can be described as mostly residential in nature. There are two lanes of traffic that run north and south. The Shenango Valley Freeway connects with the southern end of the zone. There are commercial enterprises at the southern part and sparingly northbound. Sidewalks are present, measuring at three and a half feet (3.5) to four and a half feet (4.5). Much of the housing stock is older, with access roads set back off Irvine Avenue on side streets. This zone can qualify under the transect model as Town/Village Neighborhood.

Zone 2 - Sharon CBD [Irvine Avenue to Sharpsville Avenue]

Sharon's downtown has a mix of commercial, industrial, and institutional uses. Travel lanes are typically 12 feet wide with 8 foot parking spaces on both sides of the road. Sidewalks can be found throughout the zone, measuring an average of eight and a half (8.5) feet in width. Additionally, an average four (4) foot buffer is located between Water Street and Sharpsville Avenue. Painted crosswalks can be found at intersections and a mid-block locations west of the Shenango River. This zone best signifies Town/Village Center.

Zone 3 - Sharon Transitional [Sharps-ville Avenue to City Line]

This two lane roadway contains cultural, residential, commercial, and institutional land uses. Measuring at 14 feet wide in each direction, there are no available parking spaces, however, there is a continuation of the sidewalk network. The Sharon Regional Health System can be found on southerly side at the State Street and Jefferson Avenue intersection. Two of the more iconic establishments in the corridor are also located here – Buhl Mansion and Daffin's Candies. Mid-block crosswalks are located in front of the hospital with "Yield to Pedestrians in Crosswalks" signs located in each crossing. Discussions with local residents have revealed that pedestrians will cross at any point along the road in front of the hospital. Additionally, the construction of the new Case Avenue El-

ementary School has relocated the districts' elementary children into the St. Joseph's Church, adjacent to the hospital. Zone 4 also contains Sharon Middle/ High School. Zone 3 is best described as Suburban Center.

Zone 4 - Hermitage Transitional [City Line to Buhl Farm Drive]

The most obvious change in this zone from the first three zones in the transition to a four (4) lane roadway. The lanes measure 11 feet in width. Another change is the absence of a complete sidewalk network. Sidewalks that are identified are typically five (5) feet in width. The majority of land uses within the zone are commercially based. Businesses that have been recently built are required to install sidewalks. There are indications that pedestrians are present based on worn walking paths on the side of the road through strips of grass along property lines. Additionally, the number of driveways dedicated to each business has increased. Businesses may have two or more driveways servicing the establishment. Zone 4 is best labeled as Suburban Center.

Zone 5 - Hermitage Commercial [Buhl Farm Drive to Shenango Valley Freeway]

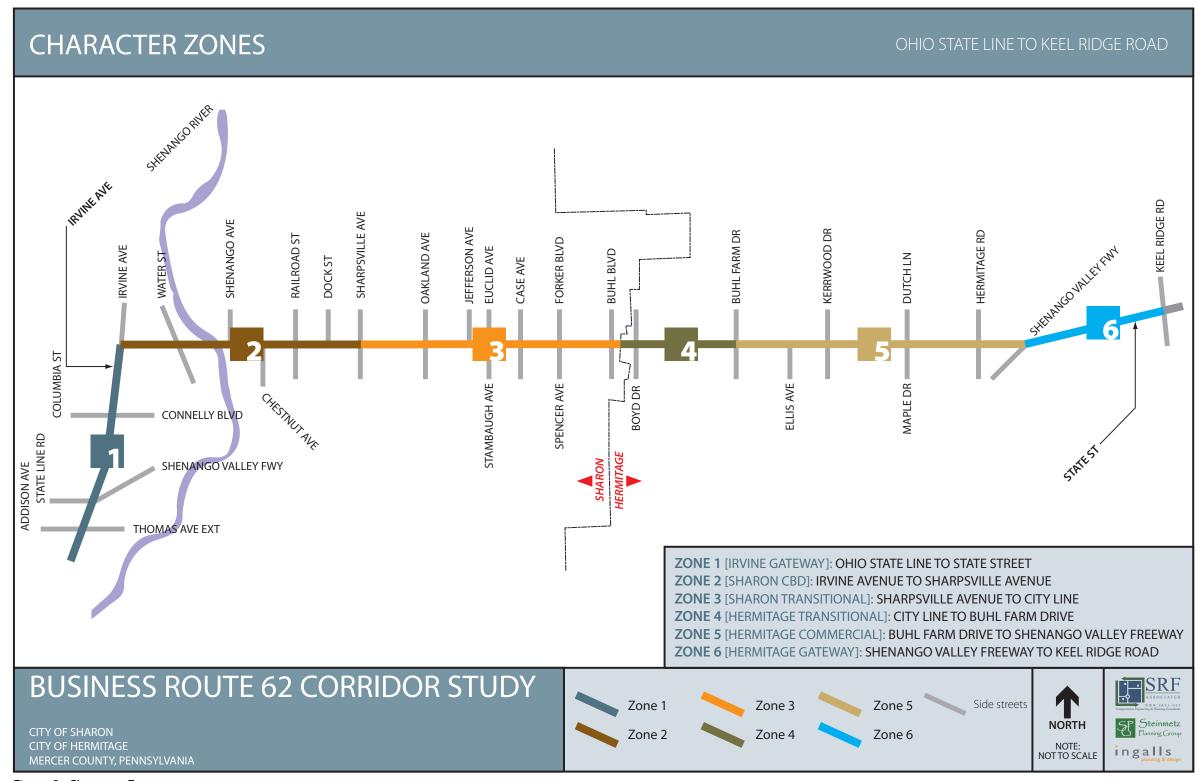
Commercial uses are the dominant presence in this zone. There are four lanes of traffic with inconsistent sidewalks. Lanes measure 11 feet in width with five (5) foot sidewalks. Those sidewalks that are present are buffered. The Shenango Valley Mall is located on the eastern edge of the zone, while the Hermitage Towne Plaza is located on the western portion. This zone has the highest annual average daily traffic (AADT) of the corridor. Larger "big box" stores are located here as well, including Kmart and Lowe's, as well as the area's tallest buildings, First National Bank. This area is generally labeled as Suburban Corridor.

Zone 6 - Hermitage Gateway [Shenango Valley Freeway to Keel Ridge Road]

The final Character Zone in the corridor transitions into a two lane roadway with a center turn lane. Travel lanes measure 11 feet wide with a two foot shoulder. Disconnected sidewalks are present, as newer businesses like Dunkin Donuts have built them, while older companies have not. There is a mix of commercial and residential land uses throughout this section. First National Bank has an office located on the eastern edge of the zone. The area has been noted as a potential gateway based on its location. Additionally, Keel Ridge Road provides a clear indication of the transition into rural residential, as one travels eastward on State Street. Based on Table 1, this zone falls under the category of Suburban Corridor.

Theses zones are depicted in Figure 3 on the following page.





Hillcrest Memorial Park





Photo-sim and Rendering

Recent Plans & Studies

Both cities have devoted a significant amount of time and energy in planning for the future of their communities as a whole and the State/Irvine Corridor. A bulk of the recommendations that are most relevant to this study are contained in the Joint Comprehensive Plan and the Sharon Vision Plan, These efforts are summarized below.

Joint Comprehensive Plan, 2007

This plan was developed for the Cities of Farrell, Hermitage, Sharon, and the Borough of Wheatland. Since its completion, the Plan has been formally adopted by Farrell, Wheatland, and Sharon. The Joint Comprehensive Plan is nearly 300 pages in length and contains a regional vision statement and goals that address 13 topic areas. In addition, the Joint Comprehensive Plan incorporates recommendations from other planning efforts such as the Mercer County Comprehensive Plan, the Sharon Comprehensive Downtown Revitalization Project, the Penn State Shenango Campus Master Plan, and the Hermitage Town Center Plan. The recommendations that are most relevant to this study are as follows:

Community Image & Quality of Development - "Quality development is important to the image of the Region, and ensuing economic development. There are several approaches to encouraging quality development in the Region."

- Enhance street corridors, parking areas, and commercial facades in downtown Sharon. (See photo-sim, upper figure).
- Introduce a mix of land uses, public spaces, more comfortable pedestrian accommodations, coordinated signage and more attractive commercial development in Hermitage. (See rendering, lower figure).

- Develop the necessary zoning language and review procedures to successfully regulate architecture.
- Utilize liner buildings to fill existing gaps in the streetscape and screen parking lots in downtown Sharon. (See photo-sim, upper figure).
- Support the projects identified in the Master Plan for the Penn State Shenango Campus.
- Foster a mixing of land uses within appropriate areas, including downtown Sharon and the Town Center of Hermitage.
- Create a Corridor Overlay Zoning District for East State Street.

Livable Communities - "Elements of livable communities which should be addressed in new development and redevelopment include:"

- Methods of controlling the safety and esthetic impacts of automobiles.
- Provision for interconnected, multi-purpose streets.
- Provision for community gathering places and settings for public, market, or institutional uses, such as greens and squares.
- Provision for mixed uses and range of housing opportunities in terms of type, cost, and type of household targeted. Appropriate uses might include convenience and neighborhood service businesses and civic and community functions.
- Physical and visual access to and incorporation of natural resources.
- Provision of useful open space which is safe, comfortable, and linked to other uses.
- Architectural elements and appearance which complement the existing built environment.
- Preservation of important character-defining historic, architectural, and landscape features. New development should fit into its environment rather than destroy and/or redefine it.

Smart Growth

The Comprehensive Plan also endorses the principles of Smart Growth that have been established by the USEPA. In short, Smart Growth is described as "development that serves the economy, community, and the environment." The Plan supports the following Smart Growth Principles:

- 1. Plan for mixed land uses.
- 2. Take advantage of compact building design.
- 3. Create a range of housing opportunities and choices.
- 4. Create walkable neighborhoods.
- 5. Foster distinctive, attractive communities with a strong sense of place.
- 6. Preserve open space, farmland, natural beauty, and critical environmental areas.
- 7. Strengthen and direct development towards existing communities.
- 8. Provide a variety of transportation choices.
- 9. Make development decisions predictable, fair and cost effective.
- 10. Encourage community and stakeholder collaboration in development decisions.



Anchors, Linkages, & Corridors Within the Region - "Corridors in the Region, such as East State Street and the Shenango River play several major roles. They provide a means of access to the Region and access to other areas outside the Region, they link portions of the Region together, they link the Anchors of Sharon and Hermitage, and they contribute to the image of the Region." In order to capitalize on these assets the Plan recommends that the communities work together to:

- Enhance the role of downtown Sharon as one of the primary anchors in the region. The vision for downtown includes; an attractive and vibrant district that is hospitable and known as, "the place to be."
- Establish the Town Center Area of Hermitage as a memorable destination that is unique and recognizable due to its blend of commercial uses and public spaces. These assets should be safely accessible by car or on foot.
- Prepare a concept plan for East State Street that identifies appropriate land uses, operational and safety improvements, and design strategies to improve the look, feel, and function of the corridor.
- Capitalize on the presence of the Shenango River in downtown Sharon. (See sketch rendering to the right).
- Develop the Sharpsville/Wheatland North-South Biking Corridor.
- Highlight the various gateways along Irvine Avenue and State Street using signage and various design elements.

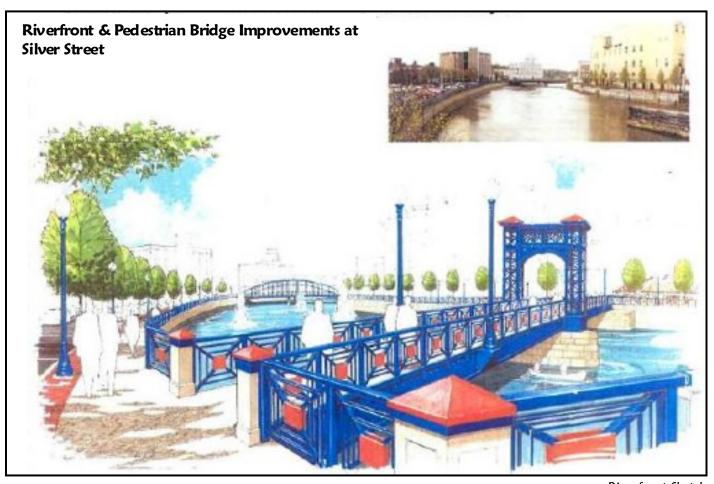
Community Facilities & Services Plan - The Joint Comprehensive Plan identifies a number of public projects, programs, and facilities including:

- Cooperative planning for enhancements to the State Street Corridor and development of consistent overlay zoning.
- Enhance pedestrian and bicycle facilities and interconnections within the Region.

- Develop and support development of onroad and off-road trails that link residential neighborhoods with park facilities.
- Build a footbridge across the Shenango River connecting Penn State Shenango to downtown Sharon.
- Enhance Stambaugh Avenue/State Street Intersection.
- Establish and/or implement, as applicable, design guidelines for the cities and borough consistent with the existing character of their streetscapes.
- Promote high quality, coordinated development, landscaping, and signage at gateways to and along the major roadway corridors to established town centers to provide a sense of place, create a favorable impression, and foster pride in the community.

Transportation & Circulation Plan - "There is a direct connection between land use planning and transportation, one cannot plan for one and ignore the other. The transportation system needs to provide each community with adequate access to the system; support economic development and revitalization efforts; serve but not adversely affect residential areas; and provide access to destinations within the Region." In order to achieve this the Plan recommends the following policies:

- Coordinate land use and zoning with roadway network capacities.
- Use access management techniques along the major road corridors in the Region.
- Continue to upgrade intersections within the Route 62 corridor, address congestion, and revitalize and enhance the corridor with improvements such as sidewalks, screening, landscaping, and design standards.
- Continue to improve and increase the connectivity of the Region's bicycle and pedestrian network.



Riverfront Sketch

Economic Development Plan - "The first step to improve the climate for economic development and develop a community wide vision is to identify the crucial or 'target areas' that present the most future economic development potential in the Region. The Region's most intense future commercial development should occur: along Business Route 62, PA Route 18, PA Route 60 Corridor, Ohio Street, Sharpsville Avenue Corridor, Route 718 Corridor in Wheatland, and the Shenango River." To be successful, the Plan articulates the following approach as part of the Region's Economic Development Plan:

 "Business Route 62 Corridor – Sharon and Hermitage The commercial areas in the cities of Sharon and Hermitage are found along State



Street from downtown Sharon to North Keel Ridge Road in Hermitage. The development potential for these areas includes larger scale retail (primarily in Hermitage), offices, ancillary commercial uses, residence serving uses, and cultural and tourist attractions. In downtown Sharon and the town center of Hermitage, the uses should adhere to design standards that encourage visual consistency along the corridor by regulating access management, signage, landscaping, setbacks, and streetscape improvements. The westernmost portion of the corridor will over time experience revitalization of an older industrial area."

Other Plan Sections - The Joint Comprehensive Plan is an extremely thorough document that is difficult to summarize in a few pages. The remaining plan sections that are not summarized here include:

- Historic Preservation and Natural Resource Plan.
- Implementation/Priority Actions.
- Existing and Future Land Use. These two topics are discussed in greater detail in subsequent sections of this Inventory and Analysis document.

The best way to get a complete understanding of the Joint Comprehensive Plan is to read the entire document, understand what it means to you and then look for opportunities to get involved in implementing the plan.

Joint Comprehensive Plan: Appendix I

The first appendix of the Joint Plan is entitled, "Potential Elements of Corridor Improvement Programs." This Appendix provides a detailed outline of the tasks necessary to transform the major travel routes within the Region using a multi-disciplinary approach. The steps listed in Appendix I are serving as the foundation for the State Street/Irvine Avenue Corridor Study. The key components of a Corridor Improvement Program listed in the Comprehensive Plan are as follows:

- Coordination of traffic signals.
- Employ land use tools such as Traditional Neighborhood Development (TND) to help preserve transportation capacity. TND's, with a mix of residential, commercial, and professional uses within walking distance of each other, could reduce the need for automobile trips.
- Site design guidelines and standards are important in corridor management programs, and include:
 - Lots that do not require direct access to the arterial.
 - Siting commercial buildings nearer to roads and providing for parking to the rear of lots with access to secondary roads and/or interconnected parking areas.
 - Installing mid-block crossings for pedestrians and bicyclists.
 - Requiring connections between parking lots and building entrances.
 - Minimizing the number of conflict points.
 - Providing incentives for smaller and fewer signs.
 - Encouraging attractive, interesting building design.

- Access management plans Access management plans address provision of access to adjacent land while simultaneously preserving the flow of traffic on the road system in terms of safety, capacity, and speed. Typical access management strategies include:
 - Reducing/limiting the number of curb cuts.
 - Requiring shared access points and connectivity between parcels.
 - Reducing the number of parking spaces by permitting shared parking arrangements among individual businesses.
- Construction of bicycle, pedestrian, and transit accommodations.

In order to be successful, proper planning must provide the foundation for the regulatory changes and capital improvements necessary to transform an auto-oriented highway to a mixed-used, multimodal corridor that is a source of pride for residents and business owners.



Sharon Vision Plan, 2011

The Sharon Vision Plan was initiated and led by a local group of volunteers. The result is a plan that was developed with the input and work of over 400 concerned residents and stakeholders through survey, focus groups, and work groups conducted in 2010 to propose a new direction that will define the future of Sharon and its role in the greater Shenango Valley. As part of the planning process, a brainstorming exercise was conducted to identify the City's strengths, weaknesses, opportunities, and threats. The results are summarized below:

Strengths

- Local community based nonprofits, colleges, and hospitals.
- Affordable housing.
- Walkable downtown and neighborhoods.
- Shenango River runs through center of downtown.
- Architecture historic mills, homes and churches.

Weaknesses

- Lack of civic engagement and institutions with disorganized and thinly spread resources.
- Inadequate governing capacity due to limited financial resources.
- Diminished employment and residential tax base coupled with shrinking federal and state subsidies for redevelopment has caused the City to struggle to provide basic resources.
- Chronic negative collective mindset beginning in the 1980's.

Opportunities

- Increase use/revival of industrial fields.
- Utilize "assets" for marketing and branding purposes.
- Develop Riverfront Historic Downtown Center.
- Recreational Development.
- Expand upon businesses with current reputation for drawing tourism.
- Affordable Access to Housing and Commercial Properties.

Threats

- Neighborhoods Declining, Rising Crime activity.
- Apathy / Prevailing Negative Attitudes.
- Lack of Leadership / Shared Vision.
- Complacency.
- Declining or decaying infrastructure.

The vision plan acknowledges the traditional and non-traditional obstacles that Sharon currently faces. Traditional obstacles include, lack of funding, aging infrastructure, and high unemployment. Non-traditional obstacles include: 1) Lack of civic engagement and institutions; 2) Inadequate governing capacity; and 3) Chronically negative collective mindset. The plan's primary focus is to develop an involved community first, and then utilize that community to solve issues.

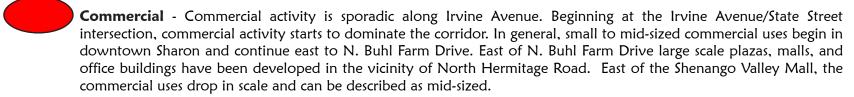
The Vision Plan contains 10 guiding principles. Principle #8 is directly related to this corridor study. It states the need for, "Streamlined, efficient, and attractive gateways and corridors into the City facilitating Sharon's new image as a 'destination'." In order to achieve this principle, Sharon should:

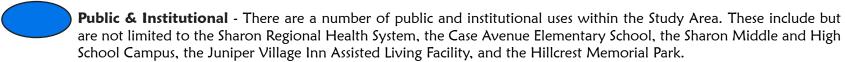
- 1. Enhance resources to promote consistent and effective code enforcement.
 - Investigate ways to support the effort of the code officer (volunteers, interns, clerical support, support systems).
 - Adopt a "top ten" code violations list that would assist residents to fix violations.
 Communicate and assist.
- 2. Prioritize infrastructure projects that relate to gateway and corridor improvements.
 - Promote improved aesthetics and community pride through establishment of "Adopt a Site/Block Program".
 - Install effective/attractive signage on gateways and corridors.
 - Focus code enforcement on the key-ways to the City.

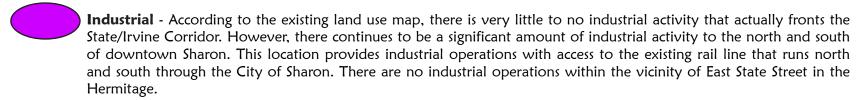


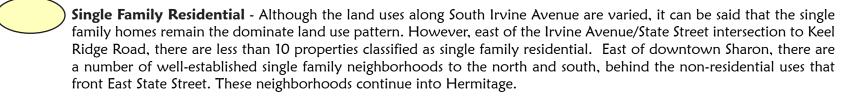
Existing Land Use

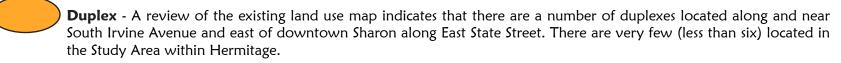
The existing land use pattern within the Study Area is shown in Figure 4 and is summarized below:

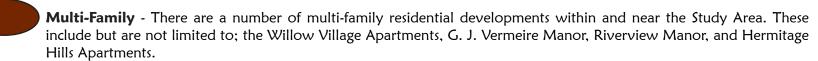




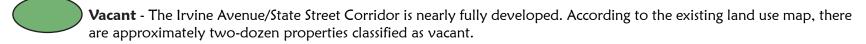












Photos of existing land uses within the Study Area



















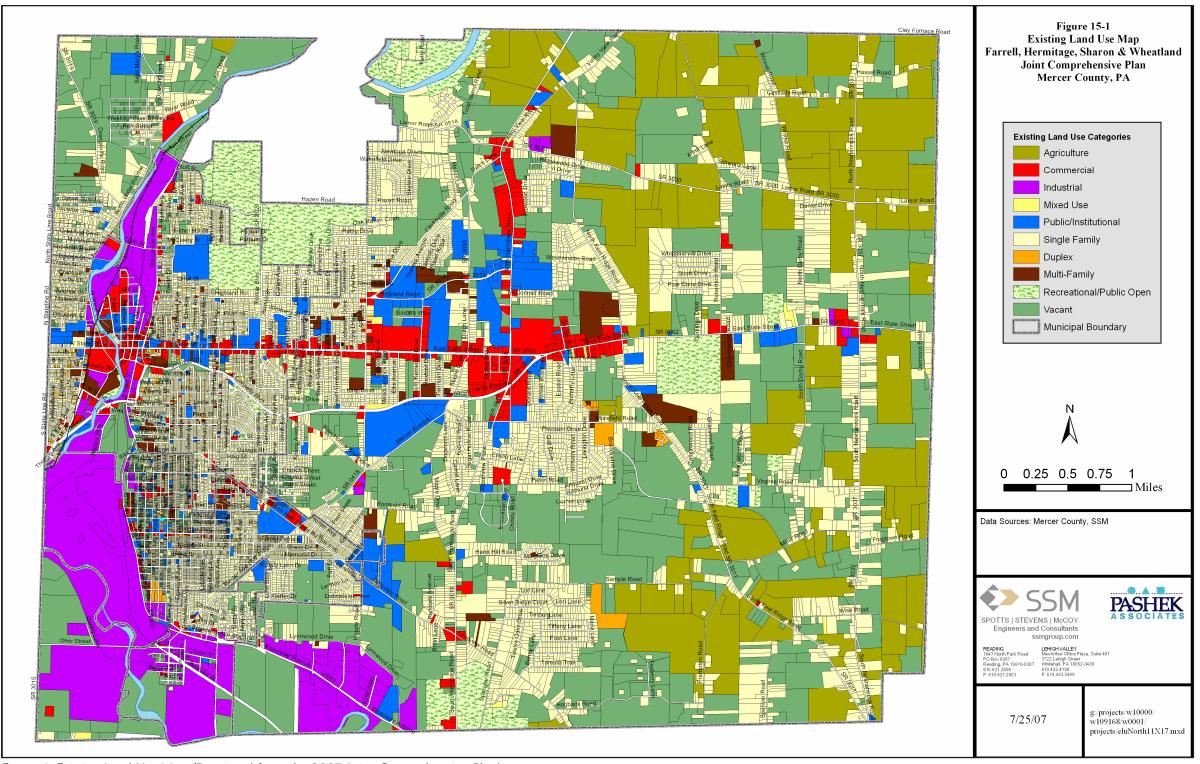


Figure 4: Existing Land Use Map (Reprinted from the 2007 Joint Comprehensive Plan)



Existing Zoning

City of Sharon

Sharon has eleven zoning classifications. The majority of the properties that will be considered for the purposes of this study are included in the districts that are summarized in this section. The location and extent of these districts can be seen in the City Zoning Map (Figure 5). This section is intended to provide a summary of the existing zoning regulations for Sharon rather than an exhaustive explanation of applicable regulations.

Two definitions that should be noted to better understand the zoning districts are as follows:

- 1. Conditional Use "A use permitted in a particular zoning district pursuant to the provisions of this Ordinance and in accordance with the Pennsylvania Municipalities Planning Code."
- 2. Special Exception "A use permitted with special permission granted by the Zoning Hearing Board, to occupy and use land and/or a building for specific purposes in accordance with the criteria set forth in this Ordinance when such use is not permitted by right."

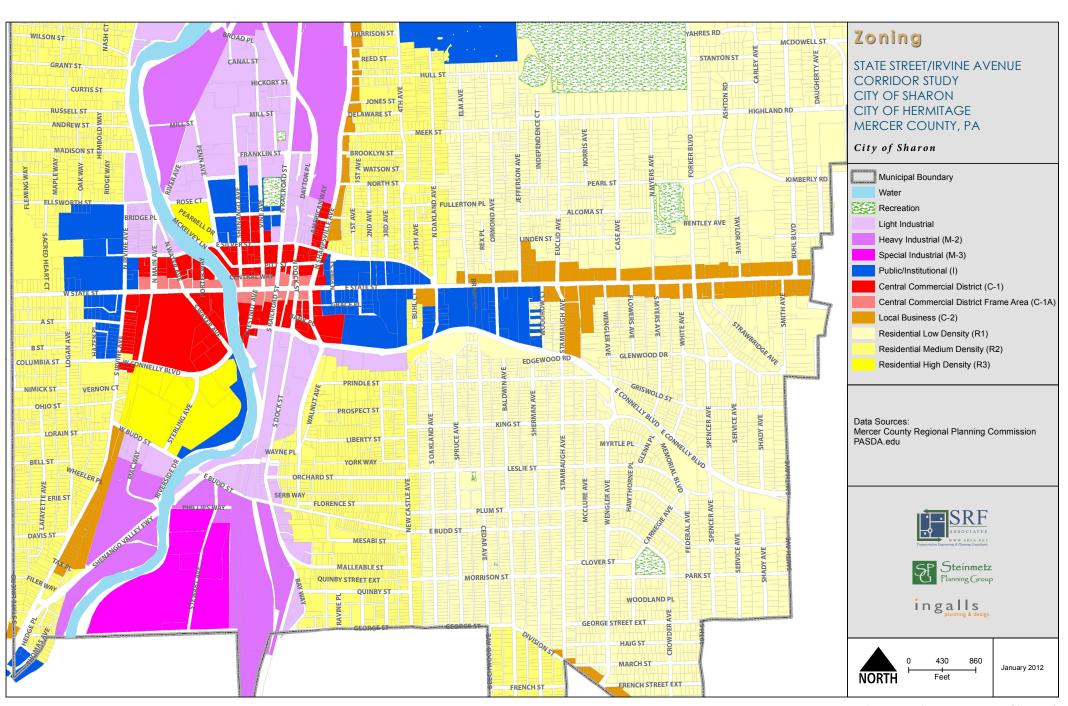


Figure 5: Existing Zoning (Sharon)



City of Sharon Residential Low Density (R-1) District

Purpose Statement - Districts designated for residential use are for dwellings and uses normally associated with residential neighborhoods. This zone is for single family dwellings and related uses.

Permitted Uses - Single-Family Dwellings

No-Impact Home-Based Businesses

Accessory Uses / Structures
Rooming / Boarding Houses

Public Recreation Essential Services

Public Utility Substations

Special Exceptions - Home Occupations

Churches Schools Cemeteries

Family Day Care Home

Conditional Uses - None

Dimensional Requirements -

Minimum Lot Area	7,500 sf
Minimum Lot Width	60 ft
Minimum Front Yard	20 ft
Total Side Yards	20 ft
Minimum Side Yard	5 ft
Minimum Rear Yard	30 ft
Maximum Lot Coverage	30%
Maximum Height Structure	40 f

City of Sharon Residential Medium Density (R-2) District

Purpose Statement - Districts designated for residential use are for dwellings and uses normally associated with residential neighborhoods. This district is established to provide an area of single-family, two-family, and some multifamily dwellings in a varied residential setting.

Permitted Uses - Single-Family Dwellings

Two-Family Dwellings

No-Impact Home Based Businesses Boarding / Rooming Houses

Accessory Uses / Structures

Public Recreation Multi-Family Dwellings

Schools Churches

Public Utility Substations

Essential Services

Special Exceptions - Home Occupations

Personal Care Boarding Homes

Conversion Apartments

Adult Day Care

Group Day Care Homes Family Day Care Homes Kennels & Veterinary Offices

Conditional Uses - Planned Residential Development

Dimensional Requirements - Minimum Lot Area Minimum Lot Width Minimum Front Yard Total Side Yards Minimum Side Yard Minimum Rear Yard Maximum Lot Coverage	Single/Duplex/Multi-Family 7,500 / 10,000 / 10,000 sf 60 / 80 / 80 ft 20 / 20 / 20 ft 20 / 30/ 30 ft 5 / 5 / 10 ft 30 / 30 / 35%
Maximum Lot Coverage Maximum Height Structure	30 / 30 / 35% 40 / 40 / 40 ft

City of Sharon Institutional (I) District

Purpose Statement - The purpose of this district is to permit a compatible mix of multi-family, residential, institutional, and limited commercial uses in specified areas within the City.

Permitted Uses - Hospitals

Professional Offices
Medical & Dental Clinics
College and University

Museums
Bed & Breakfast
Churches

Churches Schools Funeral Hon

Multi-Family Dwellings
Single-Family Dwellings
Two-Family Dwellings
Kennels & Veterinary Clinics
Boarding and Rooming Houses

Day Care Facilities
Adult Day Care Services
Personal Care Boarding Homes

Nursing Homes
Group Homes

Accessory Uses / Structures
Public Utility Substations

Special Exceptions - None

Conditional Uses - Planned Residential Development

 ${\it Traditional\,Neighborhood\,Development}$

Dimensional Requirements

Minimum Lot Area	7,500 sf
Minimum Lot Width	60 ft
Minimum Front Yard	15 ft
Total Side Yards	20 ft
Minimum Side Yard	10 ft
Minimum Rear Yard	30 ft
Maximum Lot Coverage	35%
Maximum Height Structure	40 ft





City of Sharon Central Commercial (C-1) District

Purpose Statement - This district is specifically designed to best use the existing downtown Sharon business district. It allows for a wide range of commercial, service, office, retail, and related uses to serve the entire community. Most off-street parking and loading/unloading requirements are eliminated for this zone. This Central Commercial District is divided into two categories, Zone C-1 being the immediate Downtown area and Zone C-1A includes the Downtown's frame areas.

Permitted Uses - Retail Bu

Personal Services

Offices

Eating & Drinking Establishments

Hotels & Motels

ndoor Commercial Recreation

Medical Clinics
Dental Clinics
Professional Offices
Social & Fraternal Clubs
Retail Manufacturing

Personal & Business Services
Residences as a Secondary Us
Parking Lots / Structures
Public Utility Substations
Accessory Lless / Structures

Essential Services

Special Exceptions - None

Conditional Uses - Traditional Neighborhood Development

Dimensional Requirements -

Difficilitional requirements	
Minimum Lot Area	None
Minimum Lot Width	None
Minimum Front Yard	None
Total Side Yards	None
Minimum Side Yard	None
Minimum Rear Yard	10 f
Maximum Lot Coverage	95%
Maximum Height Structure	100 f

City of Sharon Central Commercial Frame Area (C-1A) District

Purpose Statement - This district is specifically designed to best use the existing downtown Sharon business district. It allows for a wide range of commercial, service, office, retail, and related uses to serve the entire community. Most off-street parking and loading/unloading requirements are eliminated for this zone. This Central Commercial District is divided into two categories, Zone C-1 being the immediate Downtown area and Zone C-1A includes the Downtown's frame areas.

Permitted Uses - Retail Businesses

Personal Services

Offices

Eating & Drinking Establishments

Hotels & Motels

Indoor Commercial Recreation

Medical Clinics
Dental Clinics
Professional Offices
Social & Fraternal Clubs
Retail Manufacturing
Personal & Business Services

Light Manufacturing
Public Utility Substations
Residences as a Secondary Use
Accessory Uses / Structures

Essential Services

Special Exceptions - None

Conditional Uses - Traditional Neighborhood Development

Dimensional Requirements -

Minimum Lot Area	None
Minimum Lot Width	None
Minimum Front Yard	None
Total Side Yards	None
Minimum Side Yard	None
Minimum Rear Yard	10 ft
Maximum Lot Coverage	95%
Maximum Height Structure	100 ft

City of Sharon Local Business (C-2) District

Purpose Statement - This district is designed to accommodate a wide range of commercial, service, and related uses.

Permitted Uses - Automotive Dealers

Convenience Stores
Child Day Care Centers
Social & Fraternal Clubs

Eating & Drinking Establishments

Medical Clinics Dental Clinics

Parking Lots / Structures

Personal Services Retail Business Retail Manufacturing Automotive Services Professional Offices

Residences as a Secondary Use Kennels & Veterinary Offices Accessory Uses / Structures Public Utility Substations

Special Exceptions - Car Washes

Shopping Centers / Large Scale Retail

Conditional Uses - Traditional Neighborhood Development

Dimensional Requirements -

Minimum Lot Area	7,500 sf
Minimum Lot Width	60 ft
Minimum Front Yard	15 ft
Total Side Yards	20 ft
Minimum Side Yard	10 ft
Minimum Rear Yard	30 ft
Maximum Lot Coverage	35%
Maximum Height Structure	40 ft



City of Hermitage

Hermitage has twenty three zoning classifications. The majority of the properties that will be considered for the purposes of this study are included in the districts that are summarized in this section. The location and extent of these districts can be seen in the City Zoning Map (Figure 6). This section is intended to provide a summary of the existing zoning regulations for Hermitage rather than an exhaustive explanation of applicable regulations.

Two definitions that should be noted to better understand the zoning districts are as follows:

- 1. Conditional Use "Such uses may be granted or denied by the Board of Commissioners in accordance with the express standards and criteria of this Ordinance and after the review and recommendations of the Planning Commission."
- 2. Special Exception "Special exceptions may be granted or denied by the Zoning Hearing Board in accordance with the express standards and criteria of this Ordinance."

"In granting a conditional use or special exception, the approving body may attach such reasonable conditions and safeguards as it may deem necessary to implement the purposes of this Ordinance."

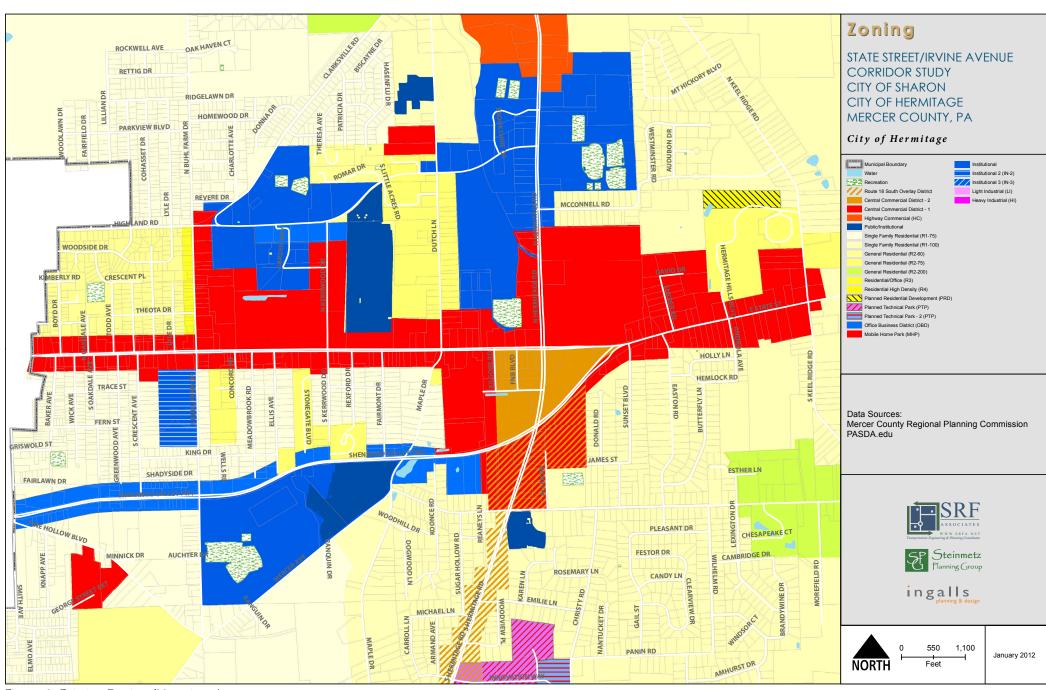


Figure 6: Existing Zoning (Hermitage)



City of Hermitage Central Commercial (CC-1) District

Purpose Statement - The Commercial Districts are designed to provide for needed commercial and related activities within the City. CC-1 Central Commercial is designed to accommodate a wide range of commercial and related uses.

Permitted Uses - Retail Businesses

Personal & Professional Services

Laundromats

Frozen Food Lockers with Retail
Offices & Professional Offices

Financial Institutions & Governmental Buildings

Parking Garages

Theaters, Bowling Alleys & Skating Rinks

Commercial Amusement

Funeral Home

Computer Assembly & Software Development

Motels

Day Care Centers
Multi-Family Dwellings
Communications Antennas
Accessory Uses & Buildings

Essential Services

Special Exceptions - Public Utility Substations

Veterinary Clinic Service Stations Used Car Sales

New Car Sales & Service Builders' Supplies

Auto-Truck Repair

Boat & Trailer Sales/Storage & Repairs

Conditional Uses - Adult Businesses

Dimensional Requirements

Minimum Lot Area	30,000 st
Minimum Lot Width (Corner lot/Interior Lot)	150/100 ft
Minimum Front Yard	10 ft
Minimum Side Yard	20 ft
Minimum Rear Yard	50 ft
Maximum Lot Coverage	40%
Maximum Height Structure	60 ft

City of Hermitage Central Commercial (CC-2) District

Purpose Statement - The Commercial Districts are designed to provide for needed commercial and related activities within the City. The uses in this district are the same as CC-I, however, more intense development is permitted.

Permitted Uses - Retail Businesses

Personal & Professional Services

Laundromats

Frozen Food Lockers with Retail Offices & Professional Offices

Financial Institutions & Governmental Buildings

Parking Garages

Theaters, Bowling Alleys & Skating Rinks Restaurants & Drive-In Restaurants

Commercial Amusement

Funeral Homes

Computer Assembly & Software Development

Motels

Day Care Centers Multi-Family Dwellings Communications Antennas Accessory Uses & Buildings

Essential Services

Special Exceptions - Public Utility Substations

Veterinary Clinics Service Stations Used Car Sales

New Car Sales & Service Builders' Supplies Auto-Truck Repair

Boat & Trailer Sales/Storage & Repairs

Conditional Uses - Adult Businesses

Dimensional Requirements -

Minimum Lot Area	30,000 sf
Minimum Lot Width (Corner lot/Interior Lot)	150/100 ft
Minimum Front Yard	10 ft
Minimum Side Yard	20 ft
Minimum Rear Yard	50 ft
Maximum Lot Coverage	40%
Maximum Height Structure	90 ft

Zoning Requirements that Enhance Character, Aesthetics & Connectivity

The Zoning Ordinances for the cities of Sharon and Hermitage each contain provisions that are intended to, "create a pleasant, attractive, healthy and convenient environment for living, working, shopping, and relaxing." In order to accomplish this, each code has incorporated the following requirements:

City of Sharon

- Sharon has provisions for large shopping centers that require sidewalks throughout the site, building entrances that face the street, and limits the amount of parking that can be placed between the building and the street and the number of access drives into the site.
- Any parking area for more than five spaces must have a planting strip between the front lot line and the parking lot at least five feet wide.
- For properties within 100 ft of the river or located within the Central Commercial Frame Area District, there are provisions that address the design of buildings and facades.
- The Traditional Neighborhood Development District (TND) is a tool
 that can be used in non-residential districts of the City upon approval
 of a Conditional Use Permit. The intent of TND is to provide flexibility
 in the use and layout of a parcel or site while fostering traditional
 design elements such as new streets and alleys, sidewalks, building
 placement and design that adds to the public realm and street trees.

City of Hermitage

- No front yard parking is permitted for certain uses such as professional offices and clinics.
- Any parking area for more than five spaces must have a planting strip between the front lot line and the parking lot at least five feet wide.
- For parking lots over 120 spaces the developer must clearly mark pedestrian ways from the parking lot to the building and identify any special features such as bikeways.
- Extensive landscaping requirements must be satisfied for any nonresidential development outside of a single family (R-1) zoning district. These include landscaping requirements for the building, access drives, street frontage and the parking lot.
- The Route 18 South Overlay District is intended to provide a wide variety of land use options while requiring new development to foster pedestrian activity, share access points, and coordinate signage, building setbacks and site design elements.



Off-Street Parking Requirements

Off-street parking requirements are generally contained in Section 408.2(b) of the Hermitage Zoning Code and Section 407.2(c) of the Sharon Zoning Code. Table 2 summarizes and compares the parking requirements of both cities. A review of the information contained in Table 2 indicates that Sharon and Hermitage have different parking requirements for a number of similar land uses. Those differences have been highlighted in the table using red text.

There are a number of additional parking provisions that should be noted here due to their impact on development and land uses along the Irvine Avenue/State Street Corridor. These include:

- The elimination of all off-street loading and parking requirements within the C-1 Downtown Commercial District, "because of its developed nature and the location of service alleys, on-street and public parking."
- Current or future uses in the C-1 and C-1A
 Downtown Commercial Districts in Sharon
 shall not be required to provide loading
 spaces.
- An Alternative Parking Plan provision in Sharon allows a property owner to take into account bike parking, proximity to mass transit, on-street spaces or shared parking agreements to satisfy parking requirements.
- Maximum off-street parking allowances in Sharon limit the amount of parking that can be developed on a particular site.
- Hermitage requires the interconnection of off-street parking areas to reduce traffic congestion and the number of curb cuts along public streets.
- Both cities have addressed the parking needs of mixed uses on a single parcel by requiring the off-street parking needs for each individual use must be met.

	City of Hermitage REQUIRED SPACES	City of Sharon REQUIRED SPACES
RESIDENTIAL USES	# UNIT	# UNIT
Single Family Dwelling	2 per dwelling	2 per dwelling
MF Dwelling Units w/ 2+ Bedrooms	2 per dwelling	1.5 per dwelling
MF Dwelling Units w/ 1.5 Bedrooms or less	1.5 per dwelling	1.5 per dwelling
PUBLIC / INSTITUTIONAL USES	# UNIT	# UNIT
Hospitals	1 per bed*	1 per bed*
Nursing Homes	1 per 3 beds	1 per 3 beds
Churches	1 per 4 seats	1 per 4 seats
Schools	1 per teacher & staff +	1 per teacher & staff on maximum shift
	1 per 4 classrooms +	1 per 4 classrooms +
	1 per 4 high school students	1 per 4 high school students
Community Buildings, Social Halls, Dance Halls, Clubs & Lodges	1 per 60 sf of public floor area	1 per 50 sf of public floor area
COMMERCIAL USES	# UNIT	# UNIT
Auto Sales	5 KSF	1 per 200 sf of indoor display
		1 per 5KSF of outdoor display
Auto Service Facilities	5 KSF	2 per service bay*
Banks & Offices	4 KSF	3.33 KSF
Bowling Alleys	5 per alley	4 per alley
Dental Offices	5 per physician	5 per physician
Fast Food/Drive-In Restaurants	1 per 2 patron seats	1 per 50 sf of gross floor area*
Food Supermarkets	5 KSF	4 KSF
Funeral Homes & Mortuaries	25 For 1st parlor	25 For 1st parlor
	10 For each additional parlor	10 For each additional parlor
Furniture Stores	2.5 KSF	2.5 KSF
Hotels & Motels	1 per guest room*	1 per guest room*
Medical Offices & Clinics	8 per physician	8 per physician
Retail Stores	5 KSF	4 KSF
Restaurants, Taverns & Nightclubs	1 per 2.5 patron seats	1 per 2.5 patron seats
Roller Rinks	5 KSF	5 KSF
Sports Arenas, Stadiums, Theaters, Auditoriums, & Assembly Halls	1 per 3 seats	1 per 3 seats
Trailer & Monument Sales	1 2,500 sf of lot area	1 2,500 sf of lot area
		2,000 000 000
INDUSTRIAL USES	# UNIT	# UNIT
Industrial & Manufacturing Establishments, Warehouses, & Wholesaling	1 per employee on the largest shift + 1 space per each 10 KSF for visitors, up to 10 spaces	1 per employee on largest shift
Truck Terminals	1 per employee on the largest shift + 1 space per each 10 KSF for visitors, up to 10 spaces	1 per vehicle maintained on premises*

NOT

* = Plus one space per employee and staff on major shift.

KSF = 1,000 sq ft of gross floor area.

Table 2: Off-street Parking Requirements



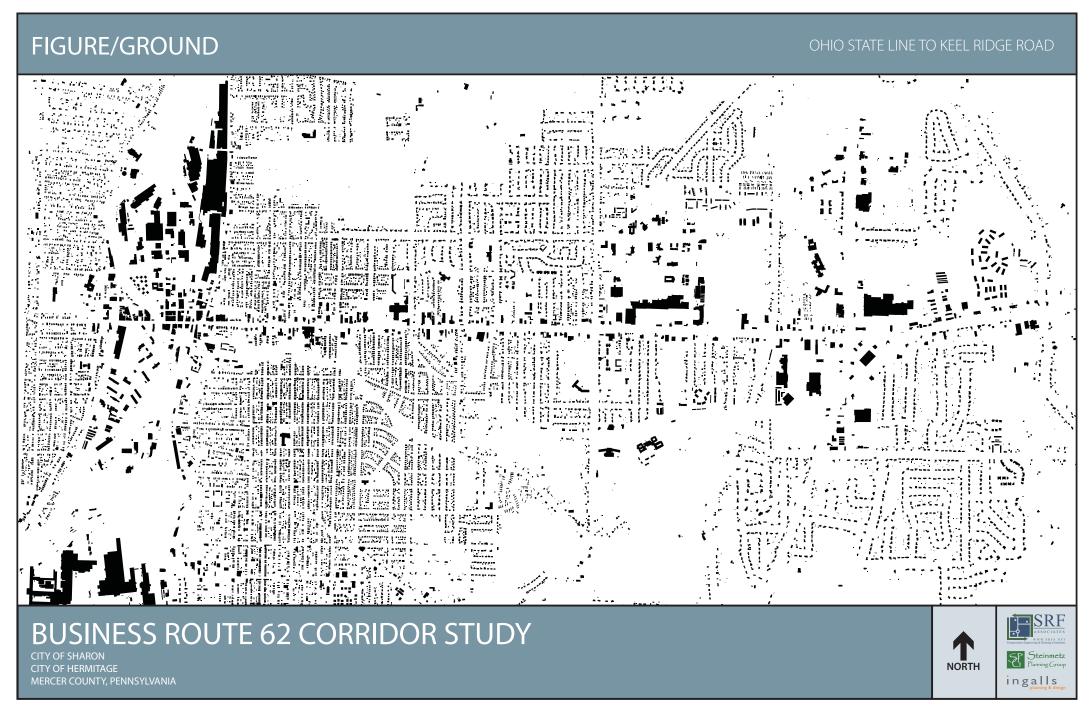


Figure 7: Figure/Ground Diagram

In addition to the land use patterns and zoning regulations, a figure/ground map assists in showing the spatial relationships between buildings and space along the corridor. Through this mapping technique, one can start to piece together a pattern of development, determine density and scale of the community fabric, and consider locations for future development.

An examination of Figure 7 reveals several interesting assumptions. The City of Sharon is built with a gridlike street pattern in mind, with a denser development structure. Along the corridor, buildings are larger in scale, as compared to those found in the residential neighborhoods. One can also begin to see a consistent setback of buildings in downtown Sharon, gradually increasing in setback distances as an individual travels eastward along the corridor. Buhl Farm Drive seems to be a demarcation line between two development patterns. To the west is generally denser residential development, with businesses and mixed-use facilities located with minimal setback from State Street. The area to the east shows that residential development is generally less dense and designed to residential subdivision standards. Commercial properties are also setback far from State Street, indicating large parking lots in front of the businesses. The largest buildings represent Hermitage Towne Plaza and the Shenango Valley Mall.



Existing Transportation Inventory - Transportation Characteristics

Transportation Facilities

US State Business Route 62 is a principal arterial highway that runs in an east/west orientation through the Cities of Hermitage and Sharon. Figure 8 illustrates the multitude of roadway classifications within the Cities of Sharon and Hermitage. The road is classified as a minor arterial through the Sharon CBD. The route is also known as both Irvine Avenue and State Street. State Street is separated into East and West orientations as delineated by the Shenango River. Irvine Avenue runs in a north/south orientation from the Ohio State line to West State Street. Between Irvine Avenue on the western side of the corridor and the Sharon/Hermitage city line, the roadway is two (2) lanes undivided with auxiliary turn lanes at most signalized intersections. Through the City of Hermitage, the roadway typically consists of four (4) travel lanes with a center turn lane. From the Shenango Valley Freeway to Keel Ridge Road, on the eastern side of the corridor, the roadway is two (2) lanes with a center turn lane. Figures 9 through 14 illustrate representative cross-sections for each Character Zone.

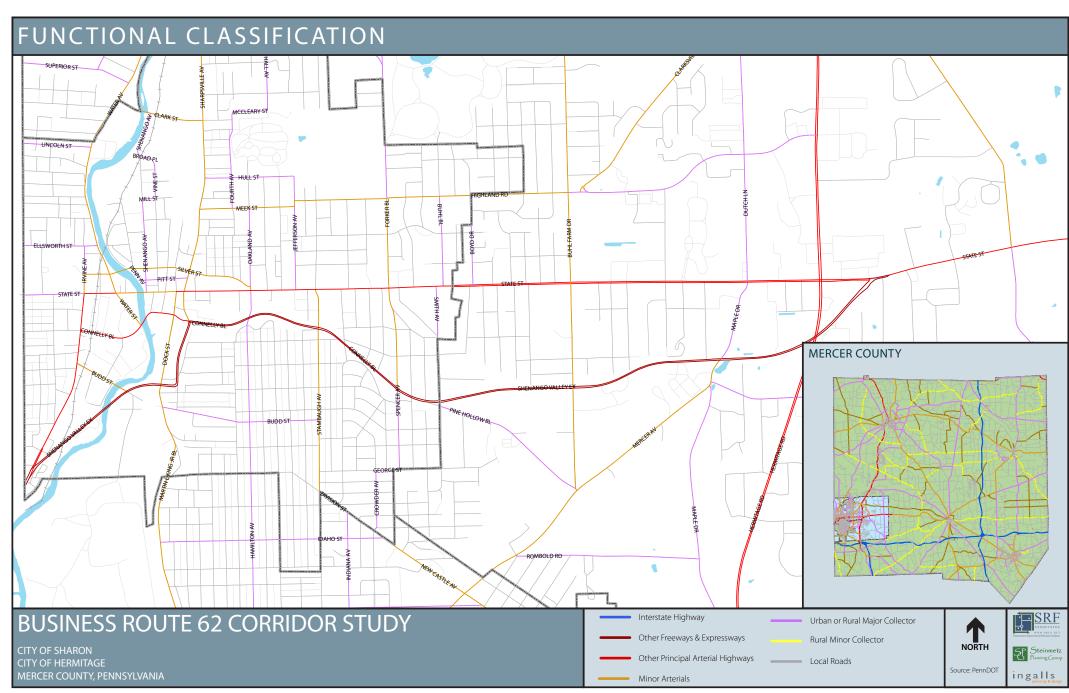


Figure 8: Functional Road Classification



REPRESENTATIVE SECTION & PLAN VIEW

ZONE 1 [IRVINE GATEWAY] OHIO STATE LINE TO STATE STREET

ZONE CHARACTERISTICS

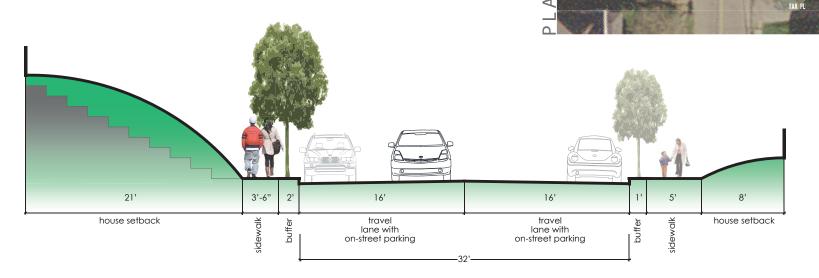
ASSETS

- > residential neighborhood
- > sidewalk network
- > freeway access
- > close to schools & churches

CHALLENGES

- > quality of sidewalks
- > perceived safety risks
- > crosswalks across Irvine Ave
- > close to railroad

SECTION [A]









BUSINESS ROUTE 62 CORRIDOR STUDY





REPRESENTATIVE SECTION & PLAN VIEW

ZONE 2 [SHARON CBD] IRVINE AVENUE TO SHARPSVILLE AVENUE

ZONE CHARACTERISTICS

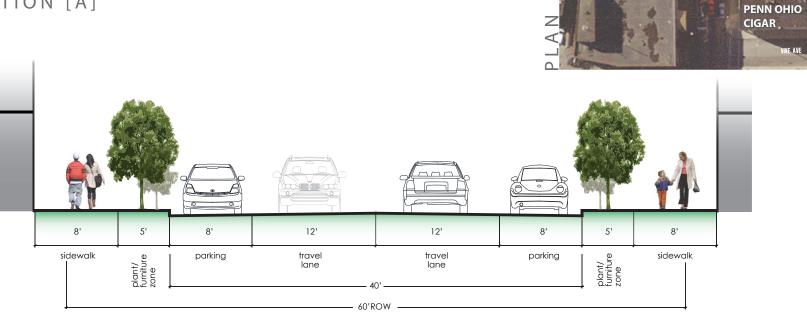
ASSETS

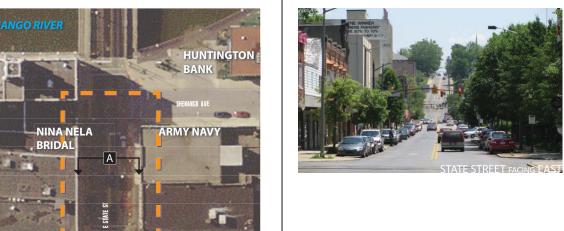
- > pedestrian friendly
- > shops and businesses
- > traffic calming
- > sense of place

CHALLENGES

- > frequent parking in prohibited spaces
- > low utilization of parking garage
- > economic development
- > connectivity and circulation

SECTION [A]









BUSINESS ROUTE 62 CORRIDOR STUDY





REPRESENTATIVE SECTION & PLAN VIEW

ZONE 3 [SHARON TRANSITIONAL] SHARPSVILLE AVENUE TO CITY LINE

ZONE CHARACTERISTICS

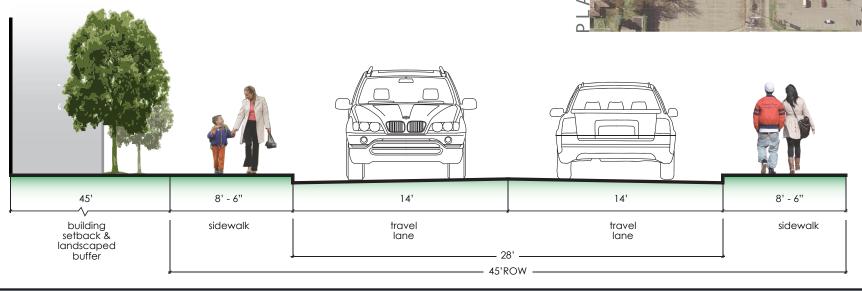
ASSETS

- > Sharon MS/HS and Case Elementary
- > Sharon Regional Health System
- > sidewalk network
- > cultural attractions

CHALLENGES

- > meeting the needs of pedestrian safety
- > ensure traffic calming in pedestrian zones
- > provide Safe Routes to School
- > deep setbacks

SECTION [A]









BUSINESS ROUTE 62 CORRIDOR STUDY





REPRESENTATIVE SECTION & PLAN VIEW

ZONE 4 [HERMITAGE TRANSITIONAL] CITY LINE TO BUHL FARM DRIVE

ZONE CHARACTERISTICS

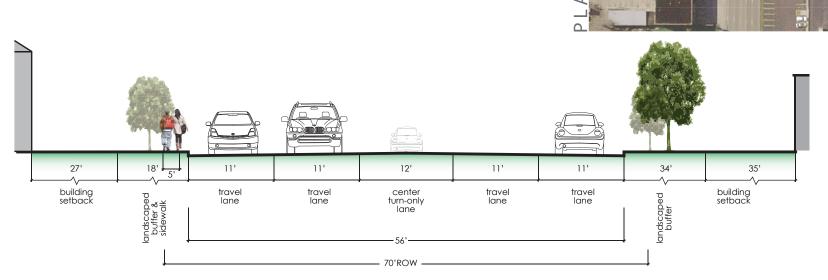
ASSETS

- > close to residential neighborhoods
- > close to schools
- > relative consistent setbacks
- > signs of a sidewalk network

CHALLENGES

- > sidewalks remain disconnected
- > numerous access points
- > worn walking paths along road
- > inconsistent land uses

SECTION [A]







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BUSINESS ROUTE 62 CORRIDOR STUDY





REPRESENTATIVE SECTION & PLAN VIEW

ZONE 5 [HERMITAGE COMMERCIAL] BUHL FARM DRIVE TO SHENANGO VALLEY FREEWAY

ZONE CHARACTERISTICS

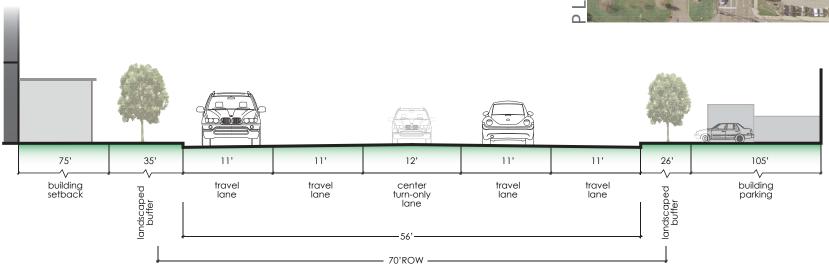
ASSETS

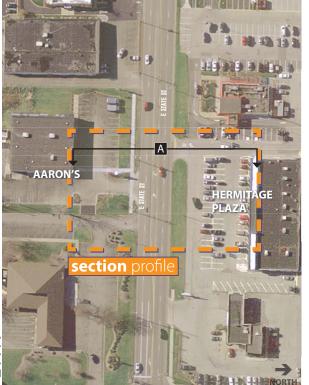
- > commercial "center"
- > Hillcrest Memorial Park
- > 35 mph zone
- > opportunities for infill development

CHALLENGES

- > disconnected sidewalks
- > lacks pedestrian facilities
- > deep setbacks of plazas
- > lacks bicycle facilities

SECTION [A]











BUSINESS ROUTE 62 CORRIDOR STUDY





REPRESENTATIVE SECTION & PLAN VIEW

ZONE 6 [HERMITAGE GATEWAY] SHENANGO VALLEY FREEWAY TO KEEL RIDGE ROAD

ZONE CHARACTERISTICS

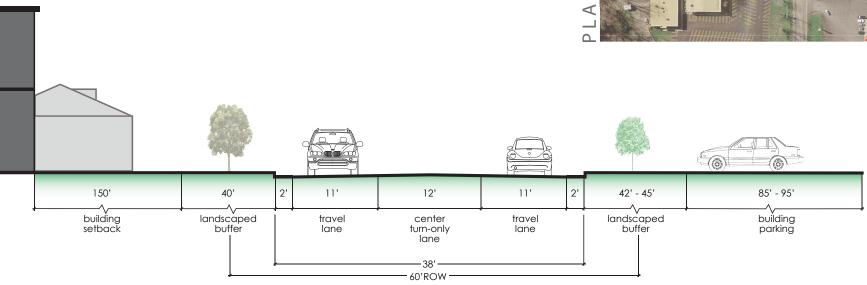
ASSETS

- > plentiful greenspace
- > wide landscaped buffer
- > gateway "feel"
- > opportunities for infill development

CHALLENGES

- > disconnected sidewalks
- > predominantly auto-oriented
- > inconsistent architectural form
- > close to residential clusters

SECTION [A]











BUSINESS ROUTE 62 CORRIDOR STUDY





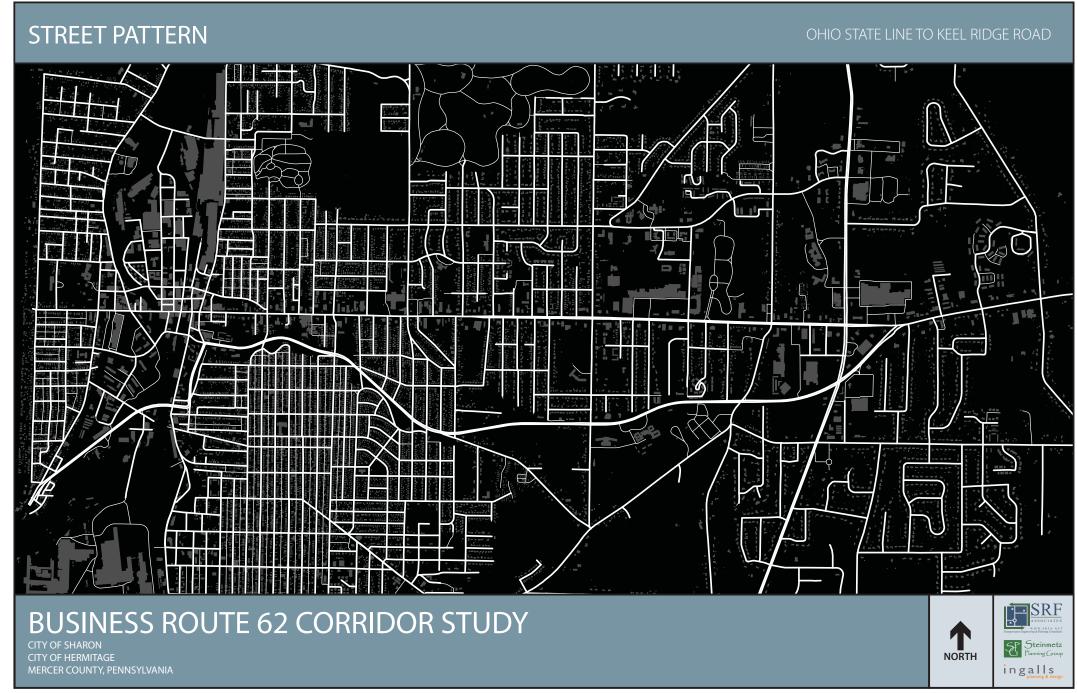


Figure 15: Street Pattern Diagram

In relation to the figure/ground map presented earlier, Figure 15 reveals the street network between the two communities. The grid-like pattern is more defined throughout the City of Sharon using this mapping technique. This map also points out the significance the Shenango Valley Freeway plays in bypassing the businesses on State Street, while providing a faster route of travel between the Ohio State Line and Hermitage Road. The density of streets in Sharon south of the Freeway reveals the use of alleyways to connect residential garages to local roads. Based on the street patterns for the two communities and field investigations to inventory the sidewalk network, one can begin to understand the dominance of the automobile in the City of Hermitage versus a more walkable community fabric in the City of Sharon.

Another key area to focus on when observing the street patterns seen in Figure 15, are the linkages between the neighborhoods north and south of State Street. Major roadways, such as Oakland Ave, Euclid/Stambaugh Ave, Forker Blvd/Spencer Ave, and Buhl Farm Dr, are important corridors for connecting communities across State Street. This street pattern map can show how neighborhoods and communities have been separated over time as development has occurred. However, it also reveals opportunity areas for stronger and more balanced linkages. As communities exhibit signs of increased street connectivity within and between neighborhoods, they can become more user-friendly for cyclists, pedestrians, and motorists alike.



Pedestrian

An important aspect of a high quality pedestrian environment is the presence of a sidewalk network. Sidewalks allow all users (e.g. adults, children, physically challenged) to move along the transportation network. Areas that do not have a complete or connected sidewalk network pose challenges for pedestrians and raise the perceived and/ or real safety risks that are associated with an incomplete pedestrian facility.

A sidewalk inventory was undertaken along the corridor. Through the use of geographic information system (GIS) mapping and field investigations, a mapped inventory of the sidewalk network was completed. Figures 16 through 21 represent the six (6) zones and each community throughout the corridor, while Figures 22 and 23 illustrate a contextual inventory for both Cities. Zones 1-3 have a more connected and complete sidewalk network than can be found in Zones 4-6.



Figure 16: Sidewalks (Zone 1)



Figure 17: Sidewalks (Zone 2)



Figure 18: Sidewalks (Zone 3)

"Everywhere is walking distance if you have the time."

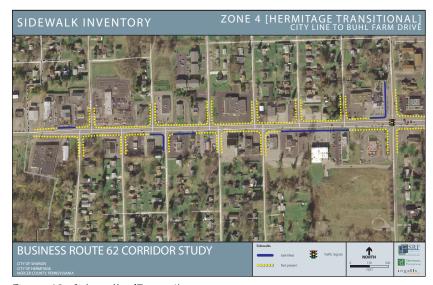


Figure 19: Sidewalks (Zone 4)

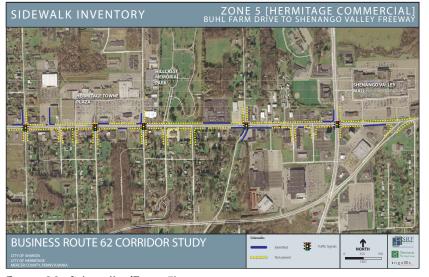


Figure 20: Sidewalks (Zone 5)



Figure 21: Sidewalks (Zone 6)



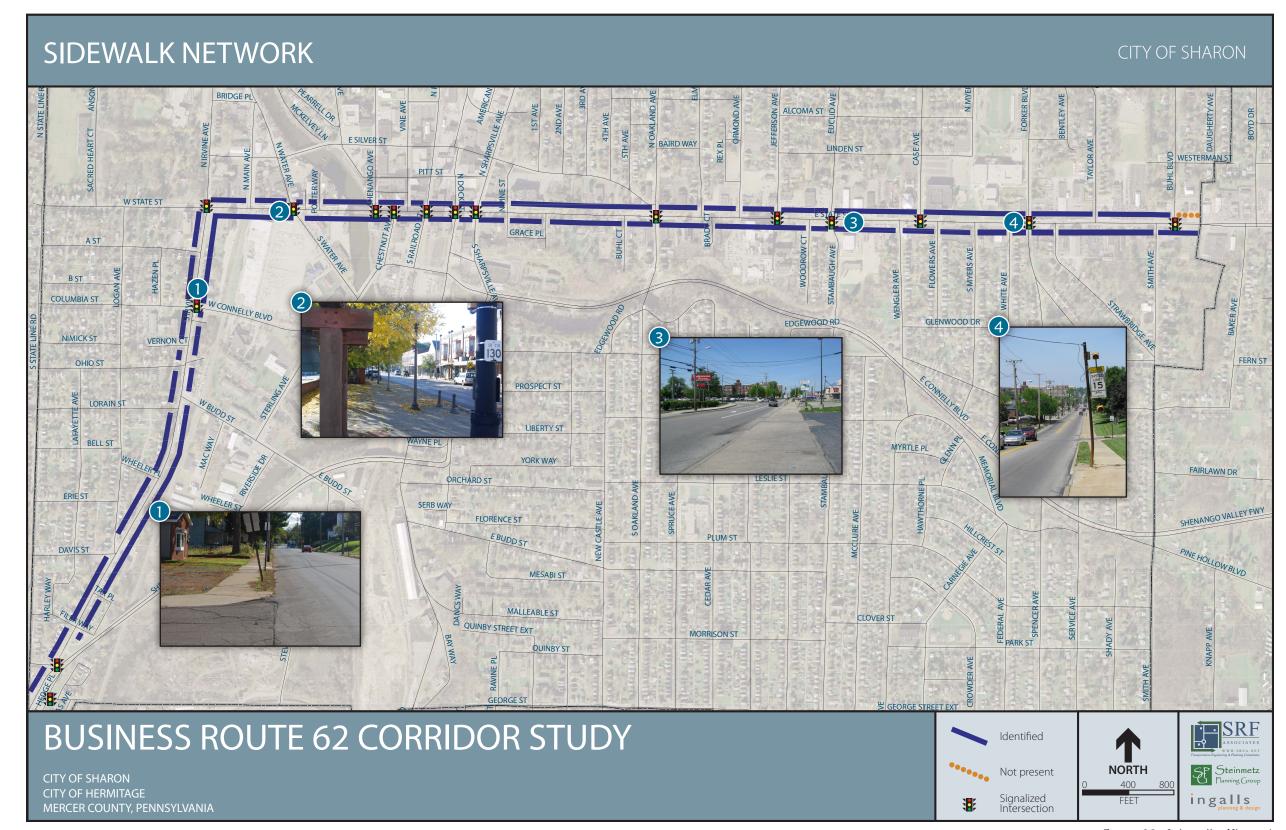


Figure 22: Sidewalks (Sharon)



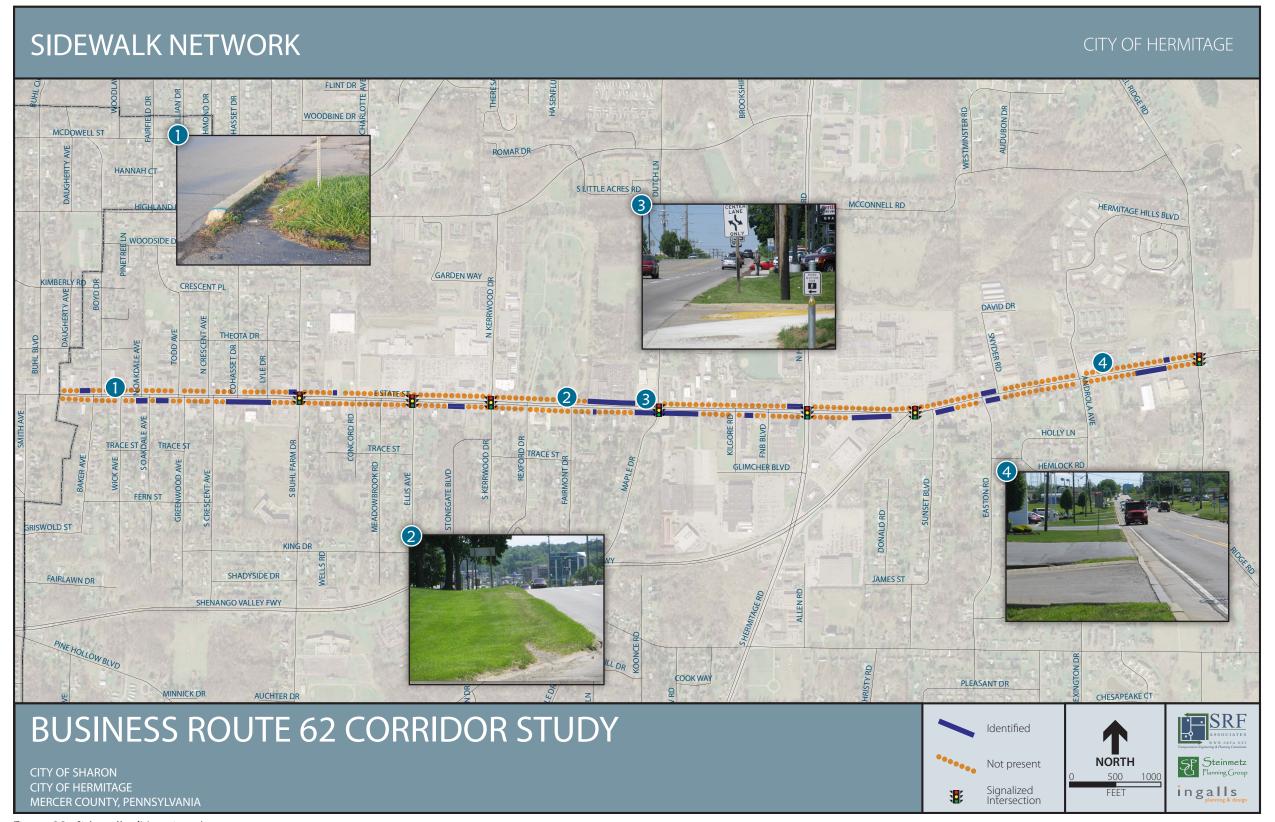


Figure 23: Sidewalks (Hermitage)



"Nothing compares to the simple pleasure of a bike ride"

-John F. Kennedy, 35th President of the United States

"Think of bicycles as rideable art that can just about save the world."

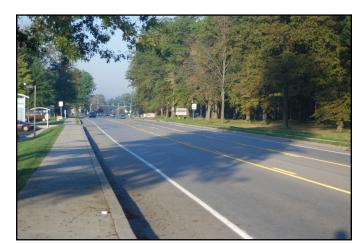
-Grant Peterson

Bicycle Routes

The supply of multi-use trails or bicycle lanes/routes in a community is vital to providing separated modes of travel. Sharon and Hermitage have two bikeway routes that are connected from the south, beginning in Wheatland, as shown in Figure 24. There are no designated bike lanes along the corridor, however, "Share the Road" signs are posted along Forker Boulevard.



Share the Road sign on Forker Blvd



Bike lanes on Highland Rd

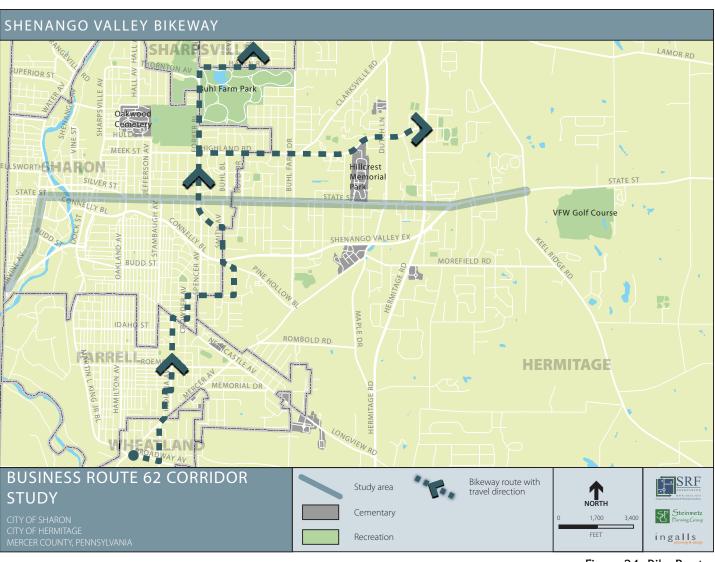


Figure 24: Bike Routes



Transit Routes

There are three transit routes (Northern, Central, and Southern) directed by the Shenango Valley Shuttle Service. The routes, as shown in Figures 25 through 27 begin at the Shenango Valley Mall or in downtown Sharon. Routes are available for use during weekday hours and on Saturdays. There is a noticeable lack of transit facilities as bus shelters are rarely found.



Figure 26: Transit (Central Route)

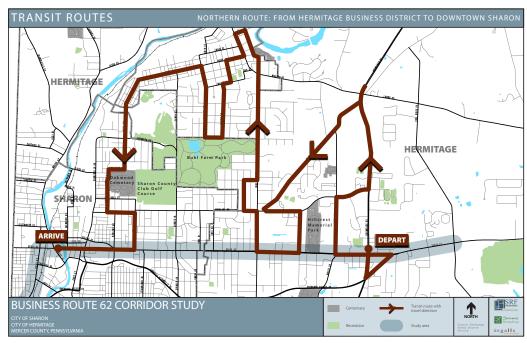


Figure 25: Transit (Northern Route)

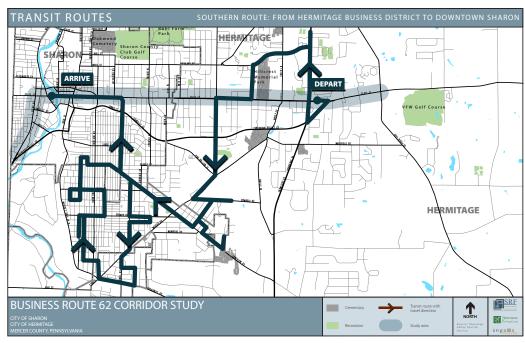


Figure 27: Transit (Southern Route)



Safe Routes to School

In response to Federal funding measures aimed at increasing safety and promoting walkable environments for children travelling to school, three schools were identified within the City of Sharon as candidates for the Safe Routes to School (SRTS) Program. Safe Routes to School is a Federally aided program, under the US Department of Transportation's Federal Highway Administration. The three schools chosen for a low-cost, immediate-impact SRTS study were (these schools are all located directly on, or adjacent, to the Business Route 62 corridor):

- West Hill Elementary;
- Case Elementary; and
- Sharon Middle/High School

See Figures 28 and 29 for a detailed inventory of the schools' existing conditions, making note of traffic control devices, speed limits, sidewalk infrastructure, and crossing guard locations. During the discovery phase of the study, field investigations found that many parents would park their cars in private lots near Sharon Middle/High School and St. Joseph's School in order to drop off or pick up their children. Traffic congestion in the area of the hospital has been noted as a deterrent factor for many commuters travelling through the area in the peak morning time periods. The neighborhood directly adjacent to West Hill Elementary school does contain a network of sidewalks, however, their quality has declined, mostly due to lack of maintenance. Figures 28 and 29 assist to support this claim.

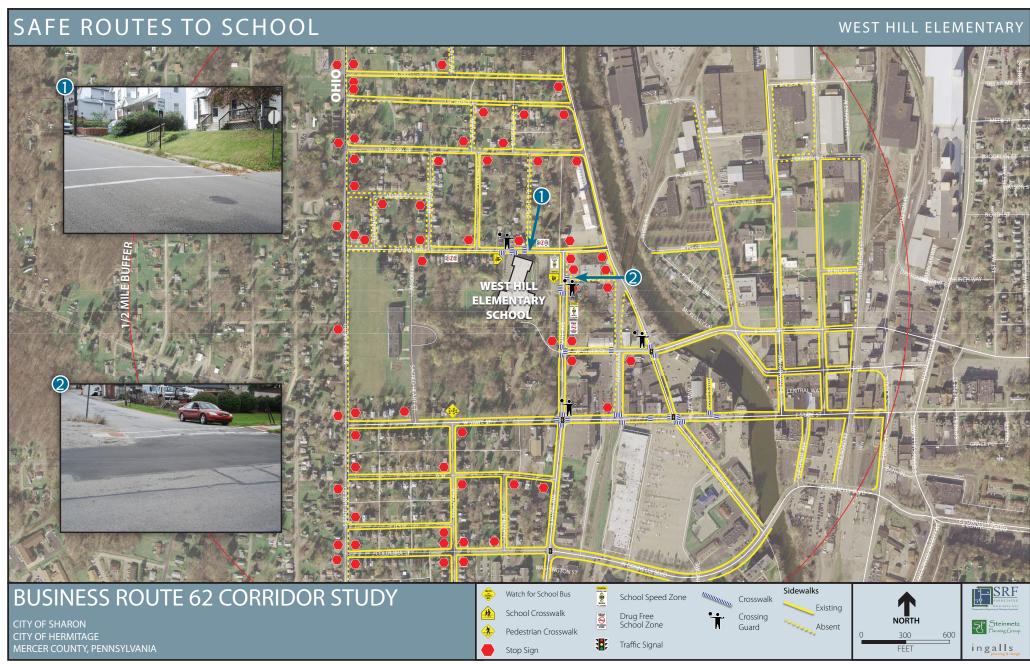


Figure 28: SRTS (West Hill with accompanying sidewalk photos)



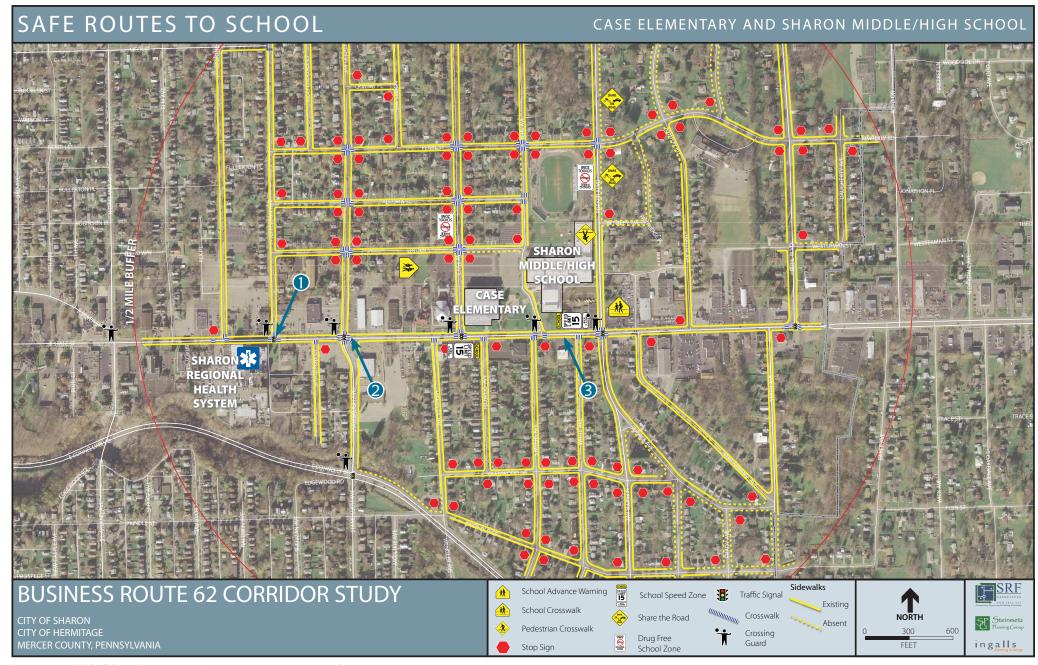


Figure 29: SRTS (Case/Sharon with accompanying photos)



Jefferson Ave /State St



Euclid Ave /State St



Sharon MS-HS/State St



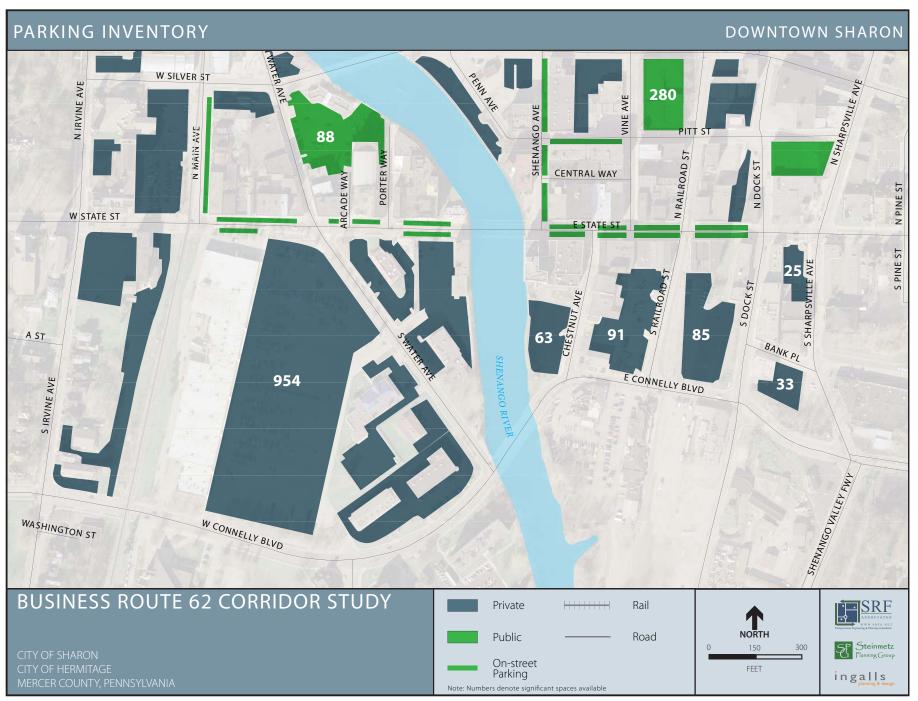


Figure 30: Downtown Sharon Parking Inventory

Parking

Conveniently located, adequate, and safe parking is a key component to the success of any commercial district. Using a combination of field investigations and aerial GIS imagery, the supply of on-street and off-street public parking was compiled. Parking along State Street is delineated by pavement markings. Parking spaces are eight (8) feet wide.

Parking is allowed on all streets except where prohibited, by signs and the rail lines. No on-street parking is metered. Off-street parking is available in a public parking structure located between Vine Avenue and Railroad Street.

- 60 minute parking on State Street, Vine Avenue, Pitt Street, Shenango Avenue
- Approx. 59 spaces on State Street
- Approx. 19 spaces on Vine Avenue
- Approx. 18 spaces on Shenango Avenue
- Approx. 9 spaces on Pitt Street
- Approx. 88 spaces at the Mercer County Visitor's Center

There are approximately 280 spaces in the parking garage and the garage is free for public use. In addition to the parking garage, there is a parking deck located adjacent to the Community Library of the Shenango Valley. Figure 30 illustrates the locations of available parking.



Motor Vehicle, Pedestrian, and Bicycle Volumes

Daily traffic volumes throughout the study area were obtained from the Pennsylvania Department of Transportation (PENNDOT) and are depicted in Figure 31. Weekday AM (7:00-9:00AM) and PM (4:00-6:00PM) vehicular turning movement count volumes and pedestrian crossing volumes were collected by SRF & Associates (SRF) at 21 intersections within the study area on September 28 – 29, October 4 – 5, and November 2, 2011. The existing peak hour volumes are provided in the Appendix and illustrated in Figures 32 and 33.

Pedestrian activity is greatest in the areas of downtown Sharon, in front of Sharon Regional Health System, and surrounding the Sharon Middle/High School and Case Avenue Elementary School.

"Transportation — the process of going to a place — can be wonderful if we rethink the idea of transportation itself. We must remember that transportation is the journey; enhancing the community is the goal."

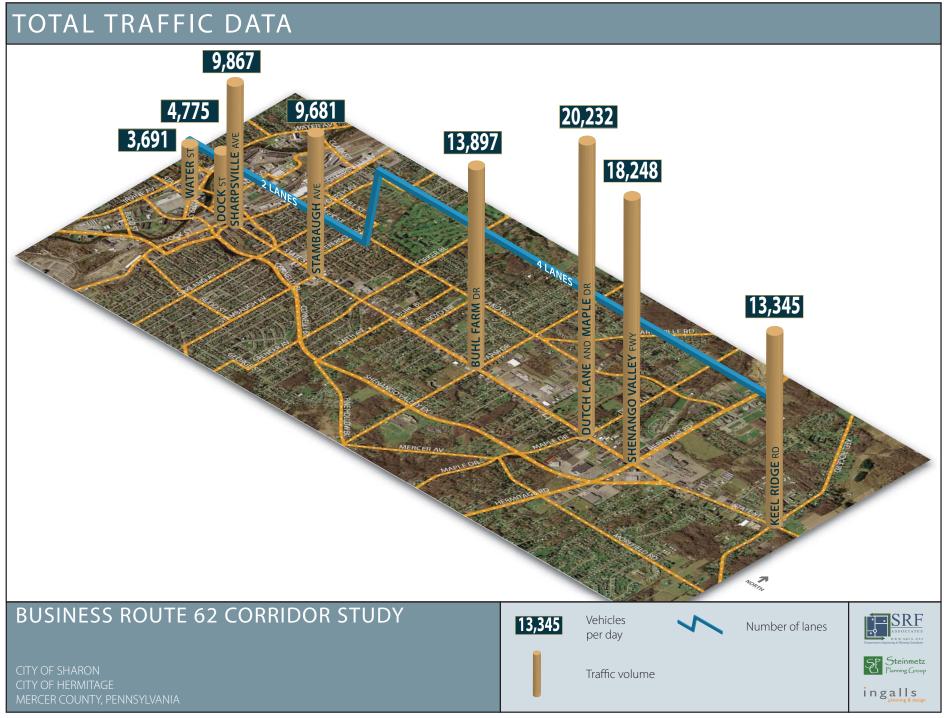


Figure 31: ADT Volumes



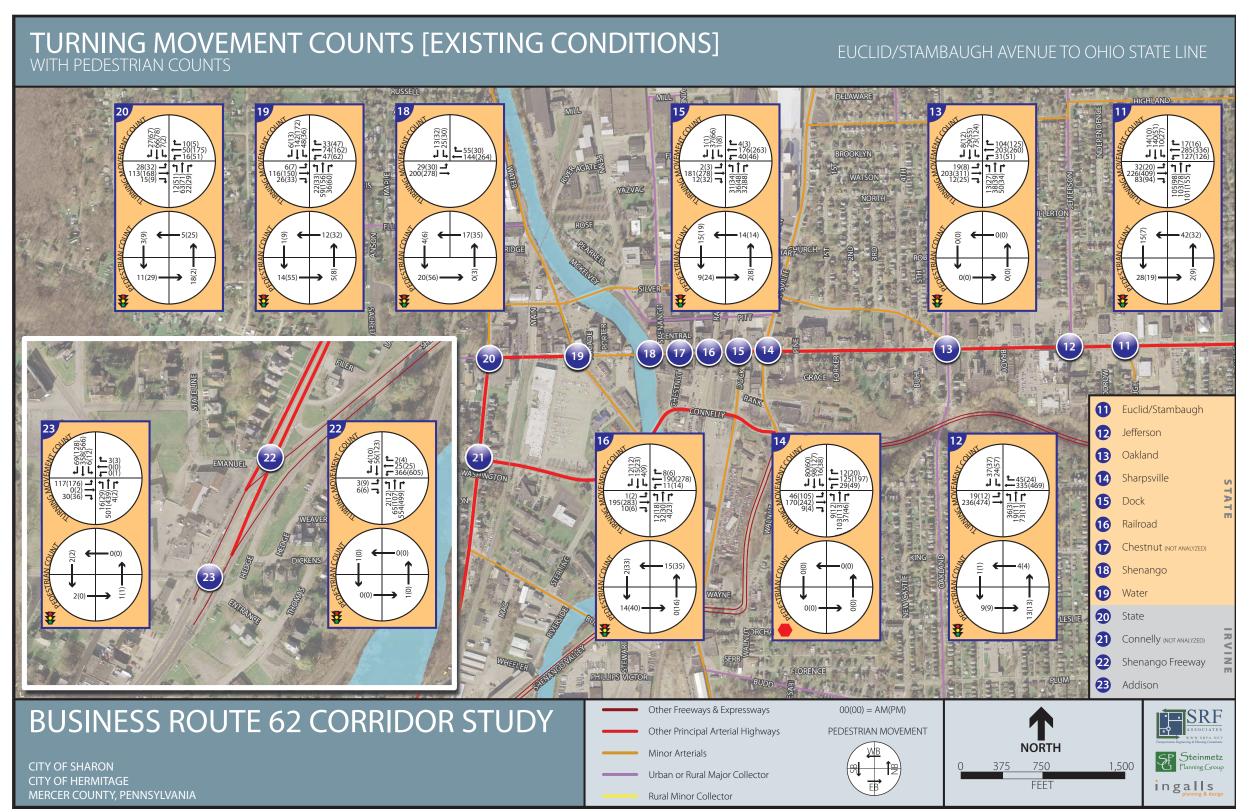


Figure 32: Turning Movement Counts (Euclid/Stambaugh Ave to Ohio State Line)



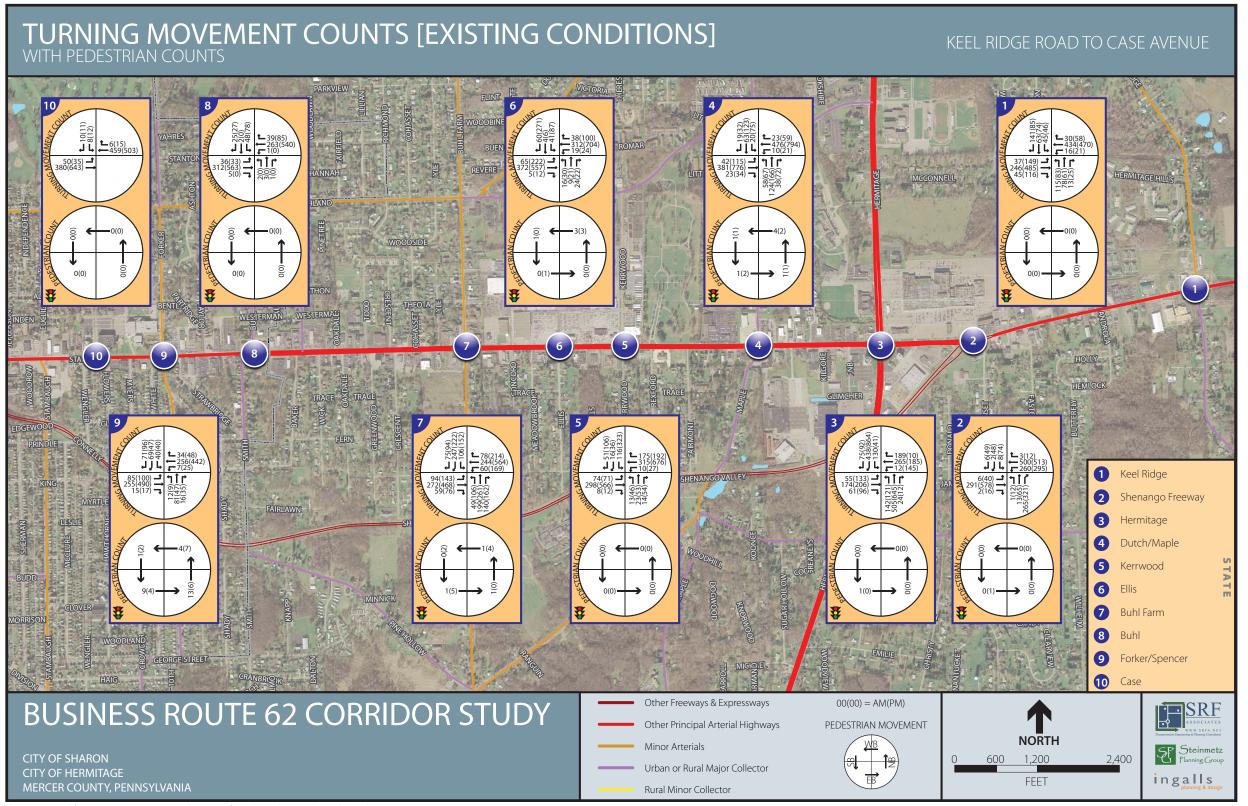


Figure 33: Turning Movement Counts (Keel Ridge Rd to Euclid Ave





Analyses of Existing Conditions

Vehicular Capacity Analysis

Data was collected to assess the quality of traffic flow for the existing AM and PM peak hour conditions.

Capacity analysis is one technique used for determining a measure of effectiveness for a section of roadway and/or intersection based on the number of vehicles during a specific time period. The measure of effectiveness used for the capacity analysis is referred to as a Level of Service (LOS). Levels of Service are calculated to provide an indication of the amount of delay that a motorist experiences while traveling along a roadway or through an intersection. Both roadway section and intersection capacity analyses have been performed and described in this section of the report.

Six Levels of Service are defined for analysis purposes. They are assigned letter designations, from "A" to "F", with LOS "A" representing operating conditions with the least time delay. LOS "F" is the least desirable operating condition where longer delays are experienced by motorists. The standard procedure for capacity analysis of signalized and unsignalized intersections is outlined in the 2000 Highway Capacity Manual (HCM 2000). Traffic analysis software, SYNCHRO (Build 773, Rev 8), which is based on procedures and methodologies contained in the HCM 2000, was used to analyze operating conditions at study area intersections. The procedure yields a Level of Service (LOS) based on the HCM 2000 as an indicator of how well intersections operate. Existing operating conditions are documented in the field and modeled using traffic analysis software. The traffic analysis models were developed based on the traffic volumes recorded in the field. Signal timings used in the models are based upon the signal timing plans provided by PennDOT for each intersection.

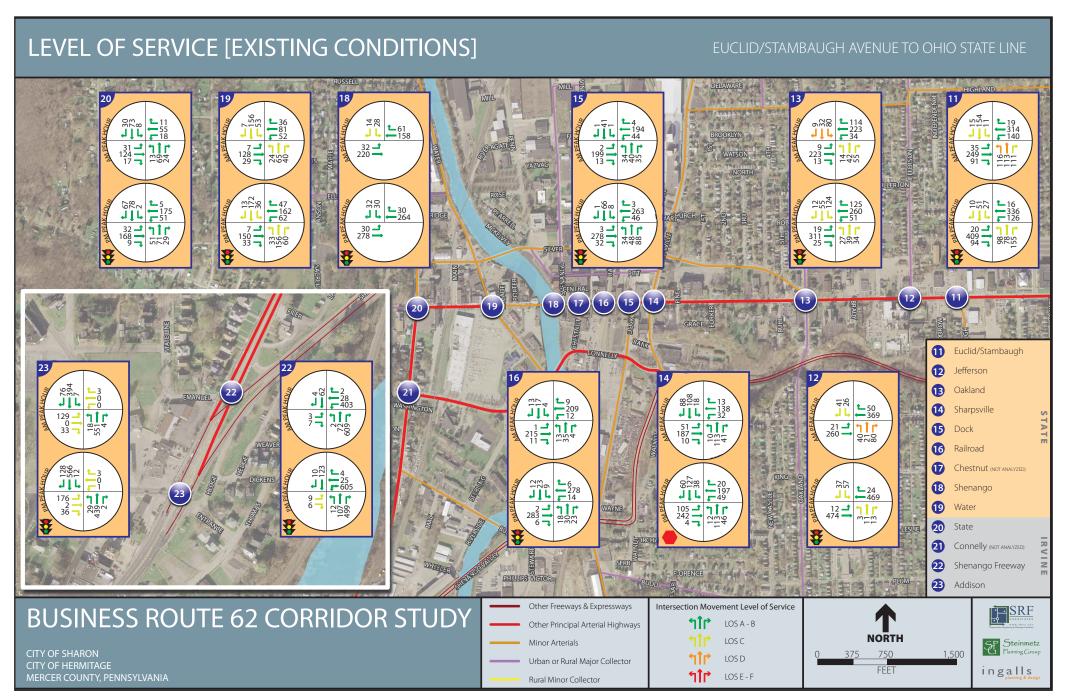
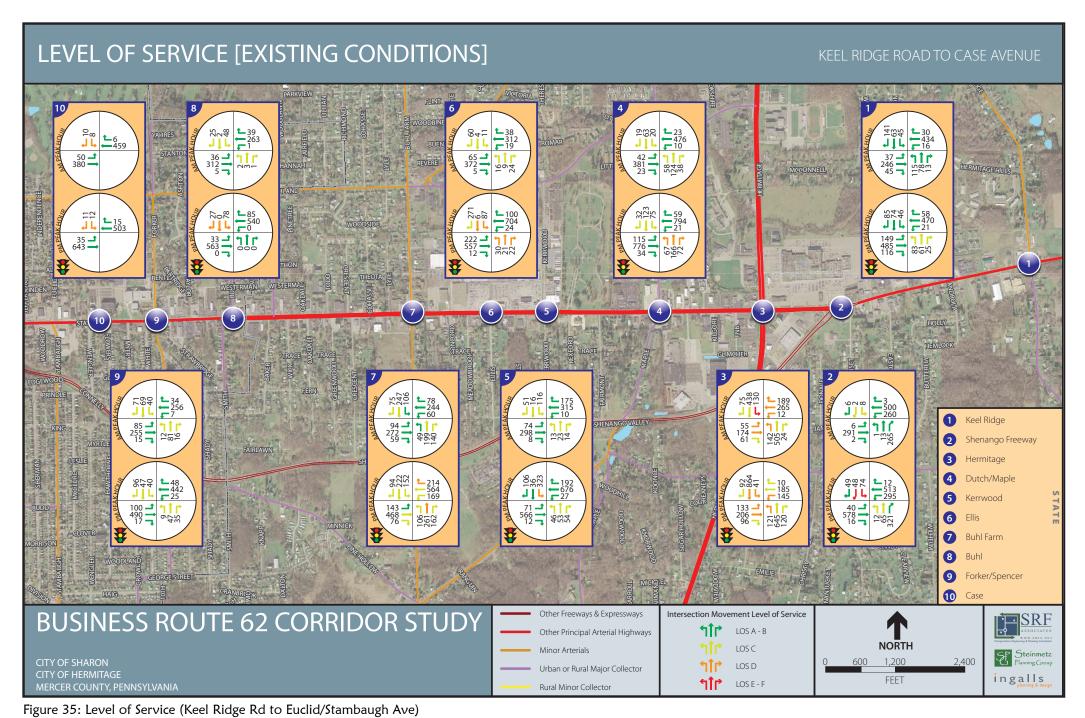


Figure 34: Level of Service (Euclid/Stambaugh Ave to Ohio State Line)





The majority of the intersections in the corridor operate at acceptable overall levels of service ("C") under the existing conditions with the exception of N Hermitage Road during the PM peak hour which operates at overall LOS "D". Most of the movements on State Street and Irvine Avenue in Sharon and Hermitage operate at LOS "C" or better under the existing conditions with the exception of the movements color coded in orange or red as shown in Figures 34 and 35. Based on the capacity analysis, the only movements that currently operate at LOS "E" is the southbound left turn movement at the State Street/Hermitage Road intersection during the AM peak hour. A detailed table containing LOS results at all of the study intersections is included in the Appendix.

The traffic signals along State Street between Keel Ridge Road and Irvine Avenue are currently coordinated in several smaller groupings. This means that the signals are timed to change in a coordinated fashion allowing motorists to travel the corridor with minimal stops and delays. However, the timings, phasing, and offsets in many cases have not been updated in many years. Field observations indicate congestion and queuing in the westbound direction in the morning. This condition primarily occurs in the vicinity of Sharon Middle/High School and Sharon Regional Health System. During the evening peak hour, congestion occurs in the westbound direction primarily from Buhl Farm Drive to Hermitage Road.





Travel Time Measure of Congestion

Business Route 62 (East State Street) is a 25-35 mph community arterial that varies from 2-3 lanes with "town/village center" and "town/village neighborhood" contexts through the City of Sharon, to 4-5 lanes with a mostly "suburban corridor" context and heavy commercial activity through the City of Hermitage. Congestion is typically heaviest during the weekday PM peak period with an emphasis on an earlier "school dismissal" peak.

- The presence of 4 different types of congestion and 9 different flagged considerations highlight a busy mix of potential issues or concerns.
- The 19 signalized intersections in this area of the corridor, many with aging equipment, contribute to overall delay as evidenced by the high delay ratio or number of stops.
- Oakland Avenue to Forker Boulevard: Pedestrian, school-pedestrian, and crossing guard activities near Sharon Regional Health System, Case Avenue Elementary, and Sharon MS/HS increase delays and potential pedestrian/vehicle conflicts.

Possible isolated hot-spots:

- Signalized left-turn issues at Node 10 (Stambaugh Avenue)
- Signalized left-turn issues at Node 16 (Kerrwood
- 5-lane to 2-lane bottleneck at Node 13 (Buhl Boulevard)

Summary of Travel Time Run completed by Mercer County Regional Planning Commission during Fall/ Winter 2009:

- » Heavy commercial area.
- » Free-flow speeds probably no more than 5 mph above the posted speed limit.
- » Multiple lane shifts through downtown Sharon to accommodate pocket turn lanes at each closely-spaced intersection, plus on-street

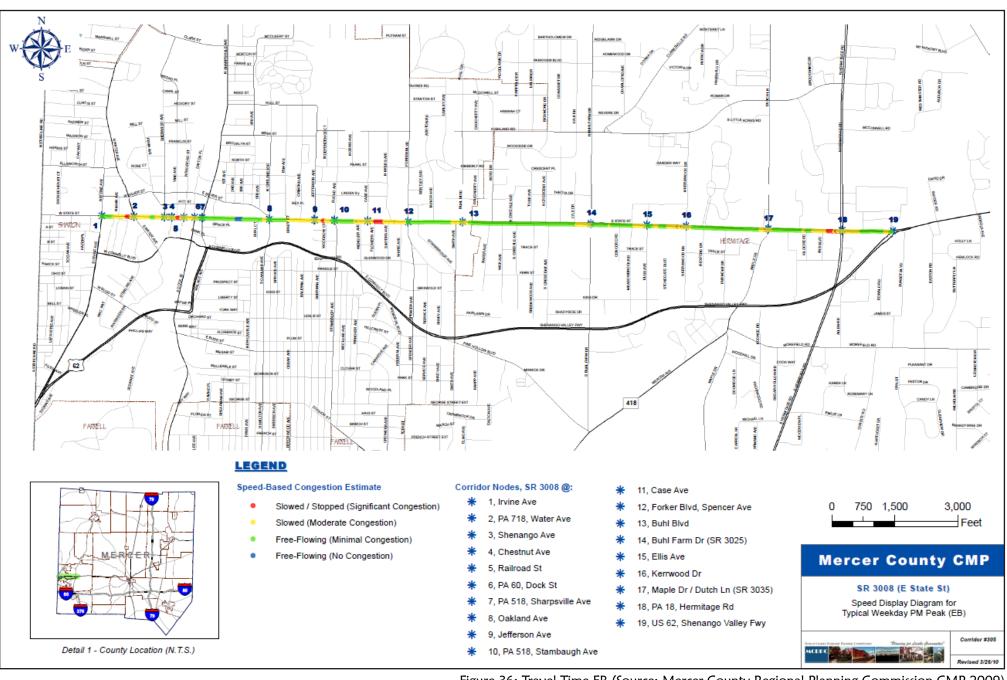


Figure 36: Travel Time EB (Source: Mercer County Regional Planning Commission CMP 2009)



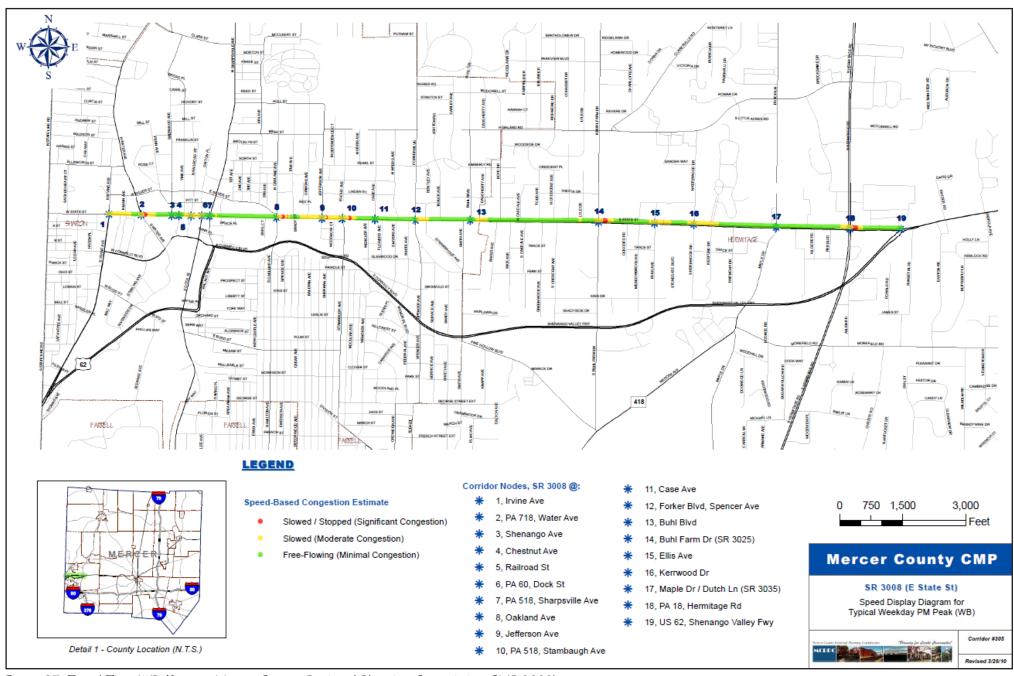


Figure 37: Travel Time WB (Source: Mercer County Regional Planning Commission CMP 2009)

- parking.
- » Some side street congestion observed at Node #14 (Buhl Farm Dr) and Node #16 (Kerrwood Dr).
- Older signal equipment near Sharon Regional Health System; signal displays difficult to see (dim/darkened lenses)
- » Midblock pedestrian crossings near Sharon Regional Health System; parking lots across from hospital.
- » Rough pavement conditions and multiple railroad crossings contribute to potential delays through downtown Sharon.
- » Heavily-utilized on-street parking in vicinity of downtown Sharon.
- » Signal progression / coordination through Sharon was either not apparent or inconsistent (i.e., sometimes coordinated; other times not).
- » Some ADA / state-of-disrepair issues with many sidewalk segments throughout corridor.
- » Mostly continuous sidewalk through Sharon; discontinuous sidewalk sections begin east of Buhl Blvd and throughout the 5-lane portions of the corridor.
- » Multiple driveway cuts/unsignalized commercial access throughout the corridor.
- » Potential delays behind SVSS transit vehicles observed stopping through downtown Sharon
- » Heavy school-related congestion near Case Avenue Elementary and Sharon MS/HS between approximately 2:45-3:15 PM. Significant crossing guard presence and pedestrian-related stoppages, delays, etc. Some students were also observed crossing midblock between crossing-guard sites.
- » Signalized left-turn issues (excessive delay, no protected phase, etc.) were cited for Nodes 10 (PA 518 /Stambaugh Ave) and 16 (Kerrwood Dr).
- » Potential multi-cycle failures along State Street approaching / crossing PA 18 during later peak periods of 3:30 to 4:30 PM.





Crash Analysis

Accident reports were investigated to assess the safety history within the study area. The accidents included in the current review collectively covered a five-year time period from January 1, 2006 through December 31, 2010. During this period, 416 accidents were documented within the study area; comprised of 158 accidents at the 23 signalized study intersections and 185 segment related accidents. In addition to these accidents, there were 73 accidents that occurred at the 30 unsignalized intersections in the study corridor. One fatal accident occurred at the Synder Road intersection in 2006 involving left turn movements. Only nine (9) of the 416 accidents involved pedestrians. The majority of vehicular collisions with pedestrians occurred near the Jefferson Avenue area (4 pedestrian accidents near the schools & Sharon Regional Health Center) and near the Buhl Farm Drive intersection (5 pedestrian accidents). Figures 38 and 39 depicts the crash frequency, crash rate and PennDOT accident rate comparison.

The accident history was further investigated to identify high incident areas and possible trends/causes of the accidents. Table 7 in the appendix summarizes accidents along with the type and severity occurring at each intersection and segments along the study corridor.

Crash Frequency

The intersections of Shenango Valley Freeway (east), Dutch Lane, Kerrwood Drive, Buhl Farm Drive, Sharpsville Ave and Irvine Ave with State Street had the greatest number of accidents at the signalized intersection locations (at least 10 accidents in the five year study period). Most of the mid-block segments along the study corridor experienced a high number of accidents over the five year period including Buhl Blvd to Buhl Farm Dr., Buhl Farm Dr. to Ellis Ave, Kerrwood Dr. to Dutch Lane, Dutch Lane to Hermitage Road and Shenango Valley Fwy to Keel Ridge Road. The intersections of FNB Blvd and Kilgore Road with State Street had the greatest number of accidents at unsignalized intersection locations (at least 10 accidents in the five year study period).

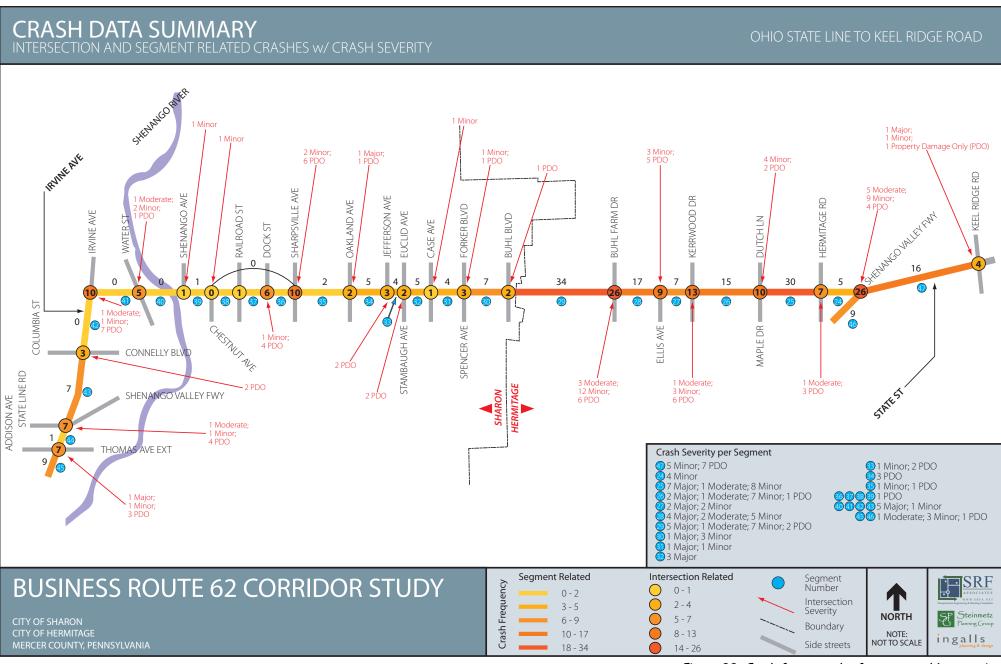


Figure 38: Crash Summary by Segment and Intersection



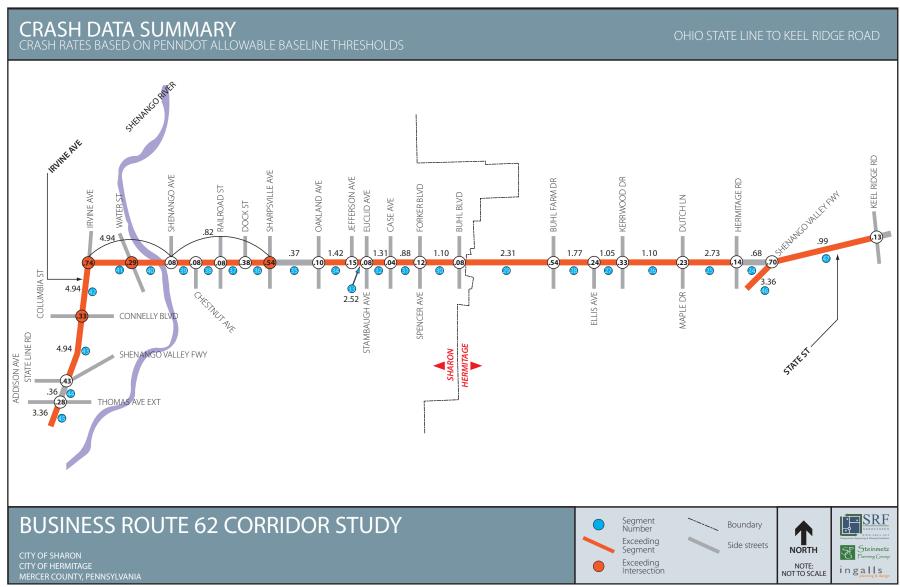


Figure 39: Crash Rate

Crash Rates

Based on the number of accidents at each intersection, accident rates were calculated and compared to the statewide average for similar facilities. The calculated rates and comparison to statewide averages are also summarized in Chart 2. Intersection rates are listed as accidents per million entering vehicles (ACC/MEV).

All of the intersections along the study corridor have accident rates that are below the state wide average accident rate with the exception of four intersections (Sharpsville Avenue - 10, Water Street - 5, Irvine Ave - 10 and Connelly Blvd - 3). The accident rate at these four intersections exceeds the statewide average rate for similar facilities primarily due to the low volume of traffic traveling through the intersections. Most of the accidents at these four intersections were right angle related accidents (Sharpsville Avenue - 7, Water Street - 3, Irvine Ave - 4 and Connelly Blvd - 1).

Almost all of the segments along the study corridor experienced accident rates that are greater than the state wide average accident rate. There were 185 segment related accidents in the entire study corridor over the five year period. The majority of the accidents include - 65 right angle related, 63 rear-end related and 33 fixed object accidents.

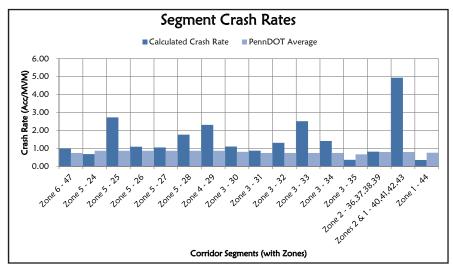
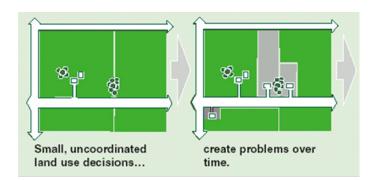
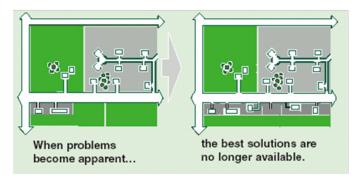


Chart 2: Crash Rate







Access Management Illustrations

"The application of access management techniques on a crash-prone corridor can achieve a 20 percent to 60 percent drop in crashes and injuries." - Phil Demosthenes, Principal Planner, Consultant

Access Management Evaluation

Access Management is the planning, design, and implementation of land use and transportation strategies that maintain a safe flow of traffic while accommodating the access needs of adjacent development. Safe and efficient transportation infrastructure and traffic operations are fundamental to local and regional economic development. Maintaining a safe and efficient transportation system, however, requires a careful balancing between the need to accommodate through traffic and the need to provide high quality access to properties abutting the roadway.

Access management techniques coordinate the development of lands and their access points. This technique can reduce the need for future costly highway improvements required to address safety and capacity issues. Land developments (large or small) occurring over time, slowly increase their effect on the safety and capacity of the roadway. Developing, or re-developing, one parcel at a time may not have a significant effect. However, as the number of developments increase the cumulative effect is greater than anticipated for each separate development. Therefore, a comprehensive approach to land use and access management planning yield the highest return from state, local, and private investment in infrastructure and land development. A comprehensive land use and access management plan also provides the land developer and the community with a strategy for meeting their other, non-transportation objectives for the corridor.

An access management evaluation was mapped out for each Character Zone. The Federal Highway Administration (FHWA) lists the following as effective management techniques:

- Increasing spacing between signals; Driveway location, spacing, and design;
- Use of exclusive turning lanes;
- Median treatments two-way left turn lanes (TWLTL) and raised medians;
- Service (backage) and frontage roads; and
- Land use policies limiting right-of-way (ROW) access to roadways

In order to properly assess the current situation of the corridor, data was collected for each zone: the length of the zone; access points per mile; signals per mile; number of lanes; and average annual daily traffic (AADT). During the initial stages of the public participation process, residents expressed their concerns for access management treatments specifically for Zones 5 and 6. Access density for each zone is depicted in Chart 3 and in Figures 40 though

"Safe access is good for business!" - USDOT Federal Highway Administration; Office of Real Estate

Services; Office of Transportation Management

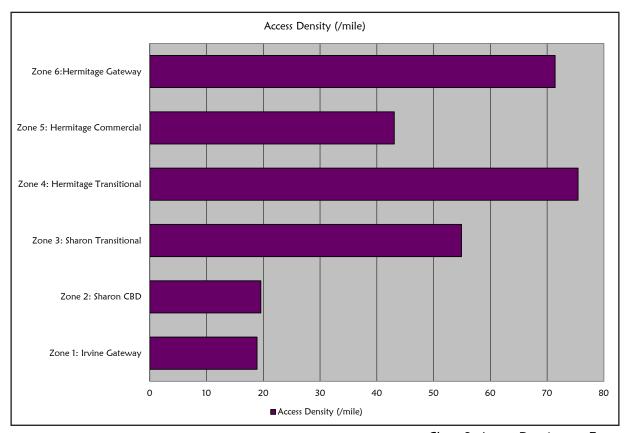


Chart 3: Access Density per Zone



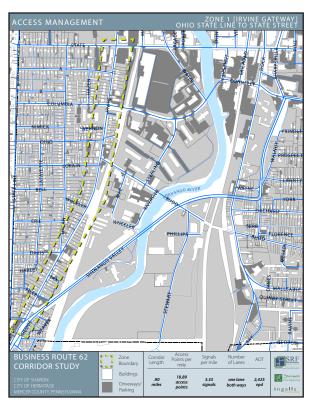


Figure 40: Access Management (Zone 1)



Figure 43: Access Management (Zone 4)

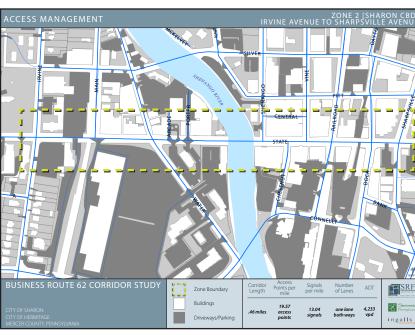


Figure 41: Access Management (Zone 2)

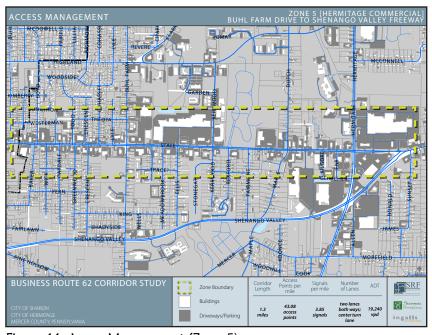


Figure 44: Access Management (Zone 5)



Figure 42: Access Management (Zone 3)

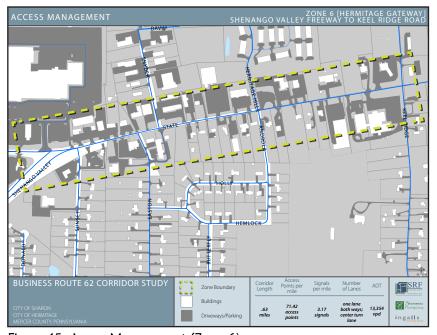


Figure 45: Access Management (Zone 6)



"It's no big mystery. The best streets are comfortable to walk along with leisure and safety. They are streets for both pedestrians and drivers. They have definition, a sense of enclosure with their buildings; distinct ends and beginnings, usually with trees. Trees, while not required, can do more than anything else and provide the biggest bang for the buck if you do them right. The key point again, is great streets are where pedestrians and drivers get along together." - Allan Jacobs, PPS.org

Quality of Service

Automotive travel ways can be evaluated to determine their user friendliness as it relates to bicycle or pedestrian users as opposed to the traditional motor vehicle. As mentioned earlier, the most common measure of effectiveness used for vehicular traffic, level of service (LOS), is based on capacity of the highway by considering the users' comfort level with the highway as it relates to buffer areas, sidewalk widths, vehicular volumes and speeds, outside lane width, presence of on-street parking, pavement conditions, and bike lane markings.

A pedestrian Quality of Service (QOS) has been developed for the pedestrian realm on both sides of the roadway, along the State Street and Irvine Avenue corridors. Using the previously segmented Character Zones, each segment along the corridor has been assigned a LOS score based on calculations using the HCM level of service method. Based on the pedestrian and bicycle realm related variables, scores ranging from A-F were calculated. The scores can be useful in determining segments that contain the greatest needs for accommodation improvement. A score of A-B are generally described as above average and the most acceptable realms, while E-F are the least comfortable and unacceptable performance. It should be noted that some roadways should not be expected to receive A-B scores, based on their functionality and their location within the area's context.

	Direction of	Bicycle		Pedestrian		
Character Zone	Survey	LOS	Compatibility Level	LOS	Compatibility Level	
Zone 1	NB	С	Moderately High	В	Very High	
Zone i	SB	С	Moderately High	В	Very High	
Zone 2	EB	D	Moderately Low	Α	Extremely High	
	WB	D	Moderately Low	Α	Extremely High	
Zone 3	EB	D	Moderately Low	С	Moderately High	
	WB	D	Moderately Low	С	Moderately High	
Zone 4	EB	Е	Very Low	Ε	Very Low	
20ne 4	WB	Ε	Very Low	Ε	Very Low	
Zone 5	EB	Е	Very Low	F	Extremely Low	
	WB	Е	Very Low	F	Extremely Low	
Zone 6	EB	Ε	Very Low	Ε	Very Low	
	WB	Е	Very Low	Ε	Very Low	

Table 3: Bike/Ped Levels of Service

The LOS analysis, summarized in Table 3 and Figure 46, indicates that Zones 1-3 are extremely high to moderately high for the pedestrian realm, while Zones 4-6 are very low to extremely low. In terms of bicycle ratings, Zones 1-3 are higher than Zones 4-6. This is partially due to lower ADT volumes and lower posted speed limits. Though the pedestrian LOS scores rate higher in Zones 1-3, the quality of the sidewalks are inconsistent, with Zone 1 containing the poorest quality. Zones 4-6 is an area of disconnected sidewalks, with most sidewalks located in front of newer businesses based on building code requirements.

Another analysis performed was a crosswalk level of service. This calculation determines the quality of the signalized intersection crosswalks. This evaluation takes into account speed limits, permitted left turns, right turns on red, number of lanes being crossed by the pedestrian, the total cycle length, and phase green time. Table 4 shows the results of the analysis. The crosswalks analyzed were within the hospital and school zones in the City of Sharon. Based on the results, although they all rated at LOS 'B', Stambaugh Ave and Euclid Ave tested the worst. However, based on field investigations and speaking with local

Score		
2.14	В	
2.01	В	
2.00	В	
1.97	В	
1.96	В	
1.96	В	
1.94	В	
1.92	В	
	2.14 2.01 2.00 1.97 1.96 1.96	

^{*} Sorted from worst to best performing crosswalk

Table 4: Crosswalk Levels of Service

crossing guards, that intersection is problematic and poses pedestrian safety issues during peak school hours. The same can be said for Jefferson Ave during the same time of day.



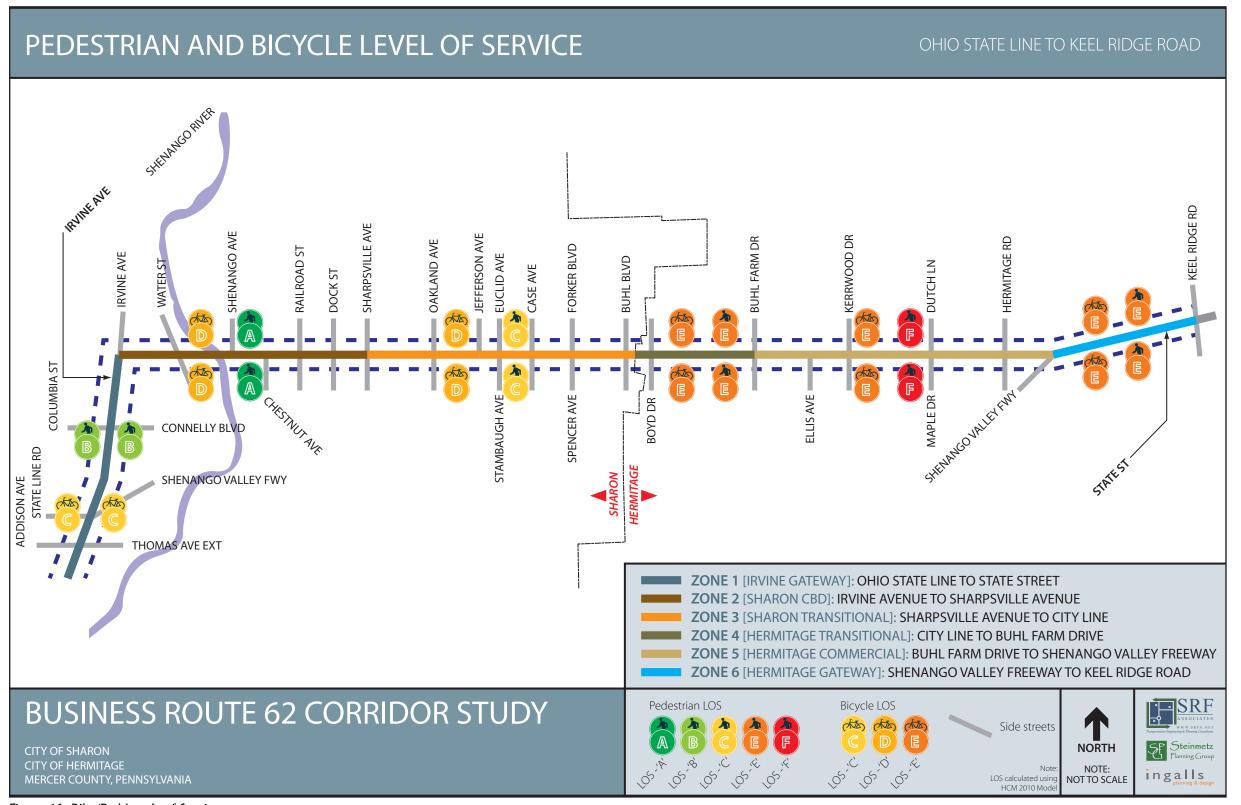


Figure 46: Bike/Ped Levels of Service



Future Land Use

The future land use pattern for Sharon and Hermitage is shown in Figure 47 and is summarized below. The Future Land Use Map and corresponding summaries are from the 2007 Joint Comprehensive Plan document.



Neighborhood Conservation - Located along and to the west of South Irvine Avenue.

- Description Neighborhoods which are currently well maintained and thriving, but are located adjacent to unaesthetic land uses and/or neighborhoods in decline.
- Planning Objective Protect these older existing residential areas from land uses that may infringe on the character and quality of life of the neighborhood. These areas should be monitored for signs of blight, enhancements and buffering should be recommended where appropriate. Flexibility in densities should be provided to accommodate a wide range of housing opportunities that are consistent with the neighborhood's character.
- Recommended Land Uses Single family detached dwellings; single family semidetached dwellings; townhouses; apartments; low-impact neighborhood commercial; park/open space uses.
- Recommended Development Densities / Strategies Density range of 5-12 units per acre, dependent upon neighborhood conditions and zoning district.



Central Business District - Commonly known as downtown Sharon.

- Description This category is similar to the "Town Center" area in that a variety of uses will be accommodated, but the area will have a more urban feel density will be higher, buildings may be taller and off-street parking areas should be to the side or rear of the structures. The Central Business District includes many of the City's historic resources.
- Planning Objective Area intended to allow continued growth of the existing downtown core, providing services including the niche specialty shops in contrast to commercial chain stores, and professional offices. Accessory uses to Penn State's Campus are appropriate as well. New construction should be consistent with the historic character of the area. River access and preservation should be incorporated into development regulations.

- Recommended Land Uses Professional and government offices; conversion and loft apartments; parks and recreation; small-scale and specialty retail; day-to day commercial uses.
- Recommended Development Densities/Strategies –
 Maximum density of one unit per 2000 square feet,
 with some flexibility depending on use. Target area for
 economic activity and re-development of vacant buildings
 with the goal of re-establishing the central business district
 as a destination. Emphasis should be on protection of the
 historic character of the area.



Corridor Enhancement - Extends from Sharpsville Avenue to the eastern Sharon City line.

- Description Corridors and/or gateways which are predominately developed but in need of beautification and upgrades.
- Planning Objective Convert unaesthetic developed strip areas into attractive, functional mixed commercial, residential, and business corridors that are consistent in character with the surrounding neighborhoods. Emphasis on access management and sign regulations are critical.
- Recommended Land Uses General commercial (excluding strip malls); office; residential; mixed uses; second floor residences; municipal use.
- Recommended Development Densities/Strategies In general, higher density uses are most appropriate in these areas, however, rear-parking lots and landscaping may require larger lot sizes where applicable.



Commercial Corridor Enhancement - Extends east from the Sharon/Hermitage City line to North Buhl Farm Road.

- Description East State Street Corridor which is developed, but in need of beautification and streetscape enhancements.
- Planning Objective Convert unaesthetic developed strip area into attractive, functional commercial business corridor. Emphasis on access management and sign regulations is critical.
- Recommended Land Uses General commercial (excluding strip malls); office; municipal uses.
- Recommended Development Densities/Strategies In general, higher density uses are most appropriate in these areas, however, rear-parking lots and landscaping may require larger lot sizes where applicable.



Commercial - Extends east from North Buhl Farm Road to Dutch Lane and begins again at Snyder Road and extends to Keel Ridge Road.

- Description Existing commercial areas in the State Street and Route 18 Corridors.
- Planning Objective To allow a variety of appropriate commercial uses while providing an attractive setting for these uses.
- Recommended Land Uses Retail, personal service, entertainment, offices
- Recommended Development Densities/Strategies Development or redevelopment must comply with
 established design standards for site design, landscaping,
 access/management, signage, and building design.



Town Center - Extends east from the Dutch Lane to Snyder Road.

- Description This area will be chiefly a commercial area, but professional offices, and limited mixed use residential will also be accommodated, and at a high density.
- Planning Objective Provide areas to encourage a mixture of commercial and business uses, consistent with the City's Town Center Plan. The critical element here is the creation of a flexible, pedestrian-friendly environment where the commercial uses are compatible with existing uses. Commercial uses within this district will be at a smaller neighborhood scale and should include uses such as corner grocery stores, coffee shops, specialty shops, and post offices. Highway oriented uses are not recommended in this area.
- Recommended Land Uses Small-scale retail and local commercial uses; professional offices; mixed use residential; parks and recreation.
- Recommended Development Densities/Strategies Density requirements should be flexible in this area, depending on the use. Lot sizes of 5,000 square feet to an acre on average. Neo-traditional development may be appropriate within these areas to create a sense of 'place', while discouraging automobile-dependent uses and large parking lots. Access management strategies are extremely important in this area.



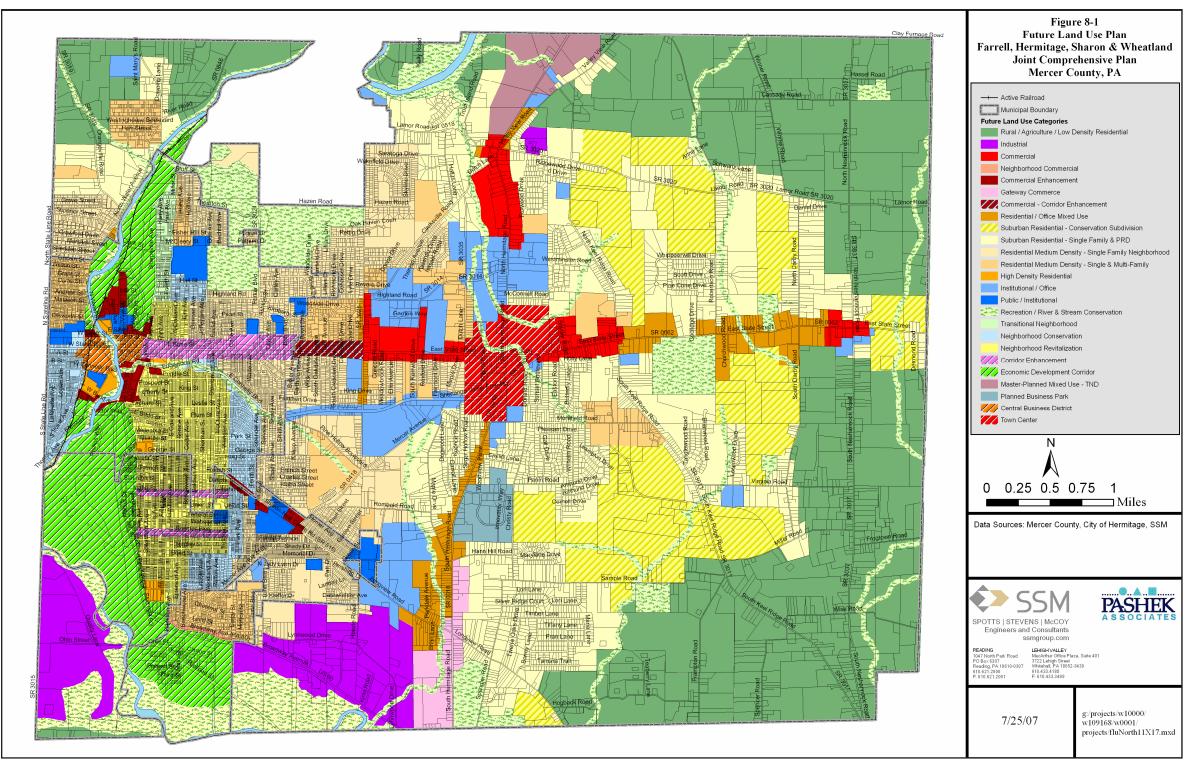


Figure 47: Future Land Use Map (Reprinted from the 2007 Joint Comprehensive Plan)





The Irvine Avenue/State Street corridor is almost completely built out. As a result, large scale projects such as the Sharon's Regional Health System Technology Center (shown above) are likely to be built elsewhere in Hermitage or Sharon, where larger tracts of land are available.

"'Placemaking' is both an overarching idea and a hands-on tool for improving a neighborhood, city or region. It has the potential to be one of the most transformative ideas of this century."

- Metropolitan Planning Council of Chicago

Future Build-Out Analysis

As part of this study, a planning level build-out analysis been conducted to determine the potential impacts that future growth and investment will have on the on the transportation system and on community character. This build-out analysis takes into account potential development within the study area; including infill, redevelopment, and new development that can reasonably be expected to occur within the next five to ten years. Once completed the future build out estimates served as the basis for the potential traffic demands along the Irvine Avenue/State Street corridor that are analyzed in the Future Traffic Analysis section of this study.

Hermitage Town Center Plan Market Assessment

A market assessment was completed as part of the process used to develop the Hermitage Town Center Plan. According to this market assessment, "Hermitage has a competitive demographic disadvantage when compared with other surrounding areas, in particular, high growth areas like Cranberry Township, Butten County or the East End of Pittsburgh. Particularly in terms of potential retail development, the lower disposable income levels suggest that a large scale retail development or redevelopment is unlikely.

Early on in the planning process, the steering committee identified examples such as Crocker Park near Cleveland, Ohio as a positive model of what the ultimate goal for the Hermitage Town Center should be. This "town center" development is a mixed-use community that includes extensive high-end retail, apartments and offices to support an intensively developed public realm of streetscapes, public parks and parking garages. However, this project was undertaken as a coherent project under the control of a single developer with site control of the entire land parcel. Hermitage's relatively small population, slowly declining population and moderate income levels make it unlikely that this type of a developer

intervention will take place, at least at the present time.

This means that change will most likely happen incrementally and the town center planning process needs to be based on that reality. It is clear, however, from the current level of developer and landowner interest, there is a market for new retail establishments, the new Super Wal-Mart and Home Depot projects testify to that fact. We believe that there is also a potential long-term market for residential development based on an aging population seeking new housing products such as condominiums and apartments.

Assumptions

The future build out analysis is based upon following information and assumptions of the corridor:

- Based on the Town Center market assessment, demographic trends, and conversations with staff from both cities, a high growth scenario is unlikely. As a result, a maximum build-out approach relying solely on existing zoning was not used.
- The future land use map from the Joint Comprehensive Plan and existing zoning requirements constitute the current land use policy for the Cities.
- Consideration was given to the Hermitage Town Center Plan and a portion of the development depicted in the plan was included in the analysis. Emphasis was placed upon new "liner" or "out-parcel" development near the mall and the theater.
- A majority of the development along the corridor is likely to be commercial or retail with some new office uses.

Using these assumptions, a general estimate of an additional 45,000+ sq ft of development in Sharon and 240,000+ sf in Hermitage can be expected along the corridor over the next five to ten years.

Parcel By Parcel Assessment

The project team reviewed the existing development pattern, zoning classifications, and future land use pattern to identify potential locations for development or in-fill. This review was conducted for each parcel along the corridor. The final results of the future build out analysis is summarized below by Character Area:

Future Build-Out Potential						
Character Area	Туре	Estimated Sq. Ft.				
Zone #1	General Commerical	10,000				
Zone #2	General Commerical	15,000				
Zone #3	General Commerical	10,000				
	Institutional	10,000				
Zone #4	General Commerical	4,000				
	Office	20,000				
	Residential Apartments (10 units)					
Zone #5	General Commerical	181,500				
	Office	10,000				
Zone #6	General Commerical	<u>33,000</u>				
Total		293,500				



Future Traffic Analysis

Historical traffic volume growth in the study area and potential developments in the corridor, based upon the future build out analysis contained in the previous section, have been reviewed and evaluated to determine a growth rate to account for normal increases in area-wide traffic growth. A twenty (20) year traffic forecast was derived and used for future traffic analyses.

The future build-out potential results in additional traffic added to the corridor. Table 5 indicates the potential for additional traffic in the corridor specifically attributed to future build-out.

In addition to traffic that may be added to the corridor as a result of the future potential build-out, there is also growth in traffic anticipated from areas outside the corridor (i.e. through traffic). PennDOT provided growth rates applicable for this corridor which indicate a yearly growth rate of 0.28% based upon historical VMT (Vehicle Miles Traveled) data between 1994 and 2009, as well as Woods and Poole demographic and economic data. Using both the build-out related traffic and the PennDOT growth rate, the existing 2011 turning movement counts at each intersection were increased to reflect 2031 (20 years in the future) conditions during both the AM and PM peak hour periods.

The 2031 traffic volumes were then analyzed using Synchro to determine the future capacity conditions at each intersection. Figures 48 and 49 show the 2031 peak hour traffic volumes and capacity analysis results (LOS) at the study intersections. The following intersection movements experience a decrease in level of service as a result of the growth in traffic volumes:

- State eastbound left turn at Keel Ridge PM Existing LOS B ↓ to LOS C
- State eastbound through at Shenango Valley Freeway – PM Peak LOS B ↓ to LOS C
- Hermitage northbound through and right turn – PM Peak LOS C ↓ to LOS D
- Hermitage southbound through PM Peak LOS D ↓ to LOS E
- Maple northbound approach all movements
 PM Peak LOS D ↓ to LOS E
- Kerrwood southbound left turn PM Peak LOS D ↓ to LOS E
- Buhl Farm northbound through PM Peak LOS D ↓ to LOS E
- Buhl Farm southbound left PM Peak LOS C
 ↓ to LOS D
- Stambaugh northbound left PM Peak LOS D ↓ to LOS E
- State eastbound all movements at Sharpsville
 PM Peak LOS B ↓ to LOS C

					AM Peak Hour		PM Peak Hour	
Zone	Land Use		Size	Enter	Exit	Enter	Exit	
Zone 1	Shopping Center	10	Th.Sq.Ft. GLA	6	4	18	19	
Zone 2	Shopping Center	15	Th.Sq.Ft. GLA	9	6	27	29	
Zone 3	Shopping Center	10	Th.Sq.Ft. GLA	6	4	18	19	
	Medical-Dental Office Building	10	Th.Sq.Ft. GFA	18	5	9	25	
	Zone 3 Total		·	24	9	27	44	
Zone 4	Shopping Center	4	Th.Sq.Ft. GLA	2	2	7	8	
	Office	20	Th.Sq.Ft. GLA	27	4	5	25	
	Residential Apartments	10	Units	2	7	15	8	
	Zone 4 Total			31	13	27	41	
Zone 5	Shopping Center	181.5	Th.Sq.Ft. GLA	111	71	332	345	
	General Office Building	10	Th.Sq.Ft. GFA	14	2	3	12	
	Zone 5 Total			125	73	335	357	
Zone 6	Shopping Center	33	Th.Sq.Ft. GLA	20	13	60	63	

Table 5: Trip Generation for Potential Development



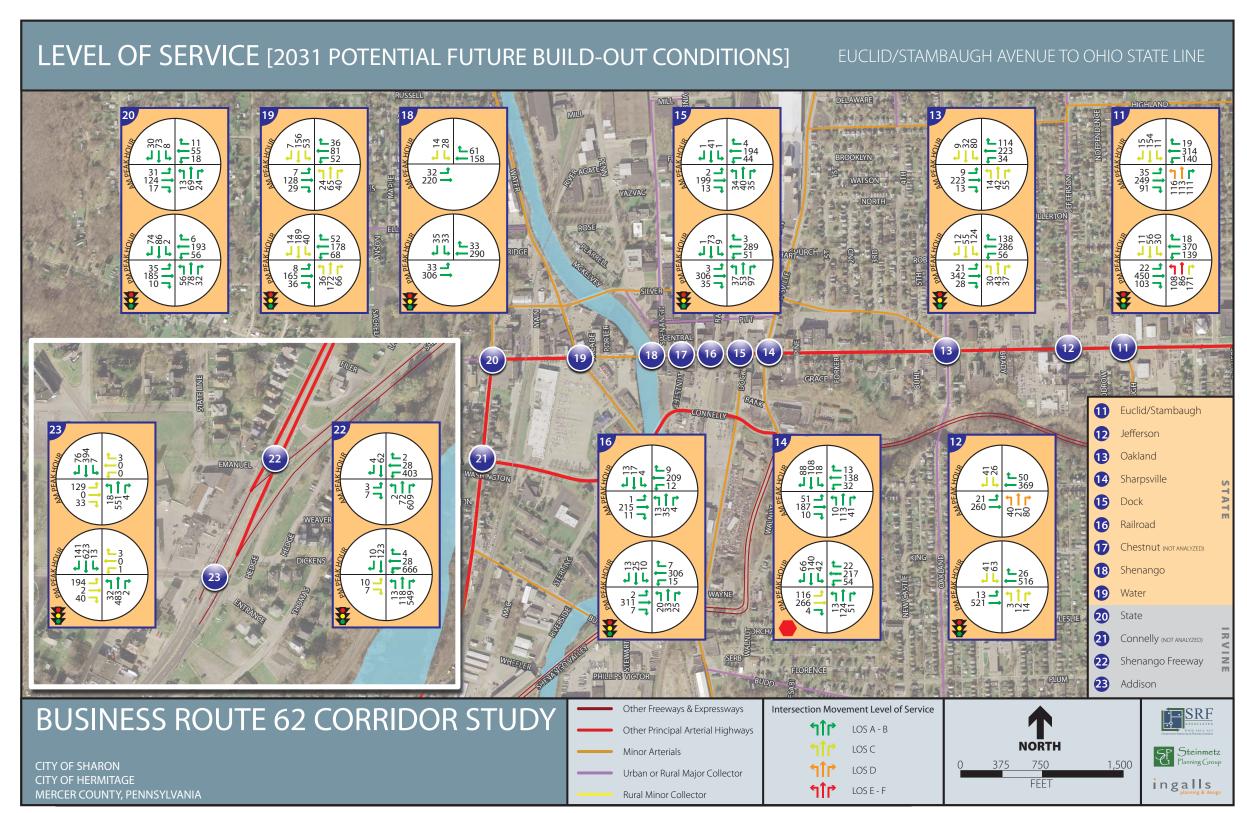


Figure 48: Future Level of Service (Euclid/Stambaugh Ave to Ohio State Line)



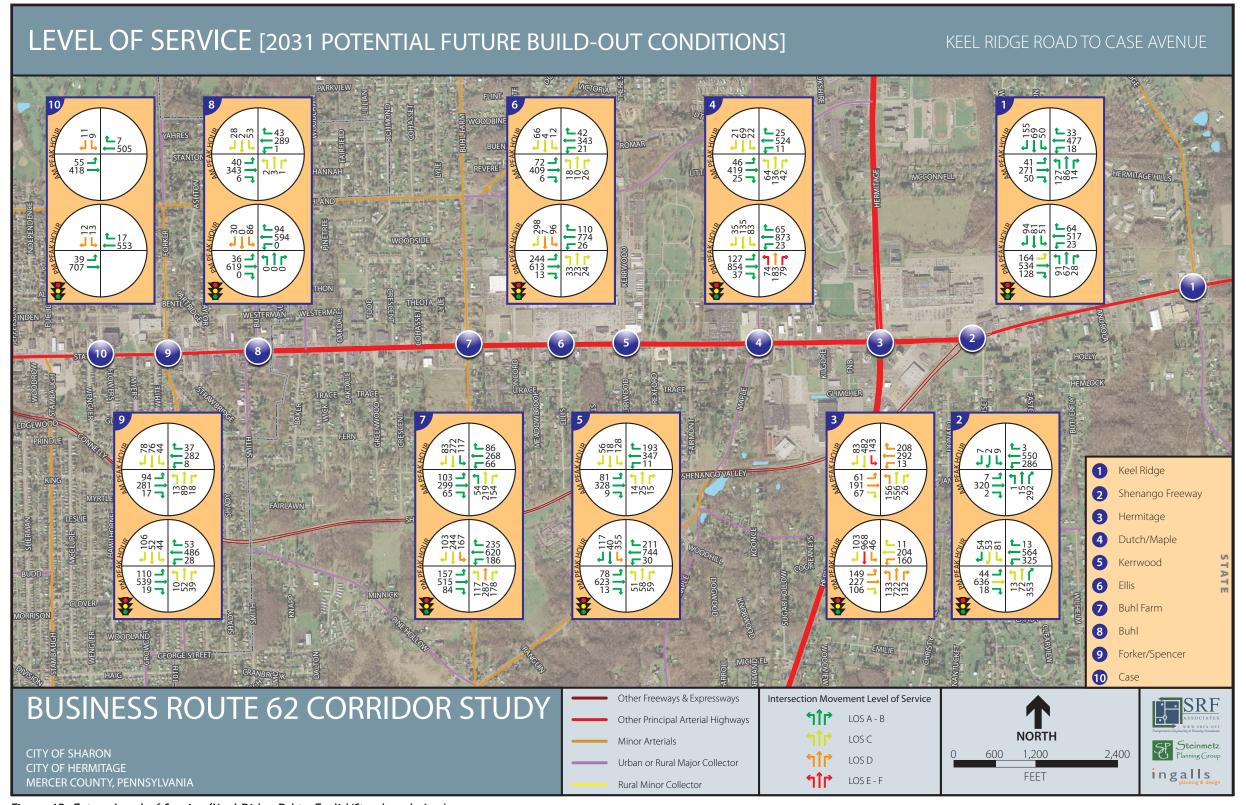


Figure 49: Future Level of Service (Keel Ridge Rd to Euclid/Stambaugh Ave)

