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September 28, 2007

Mr. Richard J. Biery
Northern Tier Regional Planning
and Development Commission
312 Main Street
Towanda, PA 18848

- **Re: Tunkhannock Area Park & Ride Lot Feasibility Analysis Final Report**

Dear Rick:

On behalf of the project steering committee, I am providing the enclosed final report. The findings and recommendations were endorsed by the study steering committee members during their September 19th meeting.

The steering committee endorsed the recommendation to develop a formal park and ride facility at the Harding Street site as the most feasible alternative. The publicly-owned Harding Street site is the preferred alternative for several reasons, not the least of which includes its advantageous location at the intersection of US 6 and PA 29 in downtown Tunkhannock. It is also one of the lowest-cost options available to the region. In sum:

- Existing parking lots at the area's suburban retail shopping centers are already being used by commuters.
- The Harding Street site could be developed to accommodate approximately 25 spaces for commuter parking. Ideally, this should be done parallel with the installation of parking meters in the downtown to encourage motorists to refrain from using commercial (or residential) parking spots.
- The Tunkhannock Bypass changed area traffic and parking patterns upon its completion in 2000. So would the construction of a new park and ride facility at Harding Street. As the new facility gains visibility and acceptance by commuters, area leaders and PennDOT could begin looking to the suburban sites for extra capacity in designating them formal park and ride lots.
- Federal funds are eligible for promoting the new park and ride facility. We recommend such an approach be pursued to raise awareness of the benefits of the new park and ride, and the community impacts associated with not using it. This promotional activity would be a very low cost with much greater related benefits.

We are also submitting the report for review and approval by the region's Rural Transportation Advisory Committee (RTAC). After the report is approved, the RTAC should work with PennDOT to prepare the necessary TIP amendment to accommodate PE, final design, and eventual construction.

Feel free to contact me if you have any questions about the study process or the report. We look forward to supporting you, the RTAC and Tunkhannock area stakeholders should the need arise as the project moves into advanced phases of project delivery. Thank you for the opportunity to be part of this valuable project.

Sincerely,
GANNETT FLEMING, INC

Brian Funkhouser

Brian Funkhouser, AICP
Project Manager

Tunkhannock Area Park & Ride Lot Feasibility Analysis



August 2007



Executive Summary

In January 2007, the Northern Tier Regional Planning and Development Commission (NTRPDC) began a feasibility assessment for developing a park and ride facility in the greater Tunkhannock area.

Study Background and Purpose

As the seat of county government and regional commerce, Tunkhannock is an important destination for many community functions. The county's two primary roadways – US 6 and PA 29 – intersect in the borough. Over the years, Tunkhannock and the surrounding area have also become bedroom communities for the larger metropolitan areas in Scranton and Wilkes-Barre. As a result, Tunkhannock and Wyoming County in general is experiencing a greater degree of out commuting than ever before. Recent



improvements to US 6 have also increased the attractiveness of the area to workers who desire to live further away from their place of employment in adjacent Lackawanna and Luzerne Counties.

The improvements to US 6 had the benefit of removing trucks from downtown Tunkhannock. This also stimulated interest in the borough in redeveloping existing properties. This has increased overall demand for parking in the borough, whereby more commercial patrons are competing with commuters for available spaces. The lack of a municipal parking authority or parking meters to manage the parking situation has added to the problem.

The study also takes place just as gasoline prices are reaching historic highs. Ongoing instability in the energy-producing regions of the world has only served to increase the unpredictability and volatility of future energy costs. While these factors do not appear to have had any meaningful short-term impact on area motorists' mode choice or travel patterns, they still will have long-term implications for the community's decision-making as it relates to transportation and quality of life issues.

Methodology

The Northern Tier administered the feasibility study through a contractual agreement with Gannett Fleming, Inc.. The primary approach to the feasibility analysis was as follows:

- NTRPDC conducted a kick-off meeting on January 4, 2007 with members of the study steering committee. This committee included representation from each of the study area municipalities (Eaton Township, Tunkhannock Borough, Tunkhannock Township), the Federal Highway Administration, and PennDOT.



Tunkhannock Area Park & Ride Lot Feasibility Analysis

- The steering committee identified seven sites as potential candidates for development into a formal park and ride facility.
- The planning team collected various data related to area travel patterns from the U.S. Census Bureau, the Bureau of Economic Analysis, and other sources.
- Stakeholder interviews were also conducted with area business leaders and municipal officials.
- A community survey was administered to 1,000 households in the study area. The survey was targeted to workers who commute to destinations outside of the study area to their place of employment. Surveys were completed and returned from 181 different households, representing the views of 440 commuters.
- An evaluation of past trends in similar commutersheds, as well as parking costs/availability at destination were also examined. Commuting pattern trends were also compared to gasoline cost trends to determine if the latter historically had any impact on the former.
- Traffic engineers evaluated the seven candidate sites based on a variety of criteria, including bus accommodation, ease of ingress/egress, site distance, and other factors.
- The planning team, in turn, performed an evaluation of each candidate site that included broader planning criteria such as expected community impacts.
- NTRPDC presented the draft final report to the Steering Committee for its review and endorsement at its August 2007 meeting.

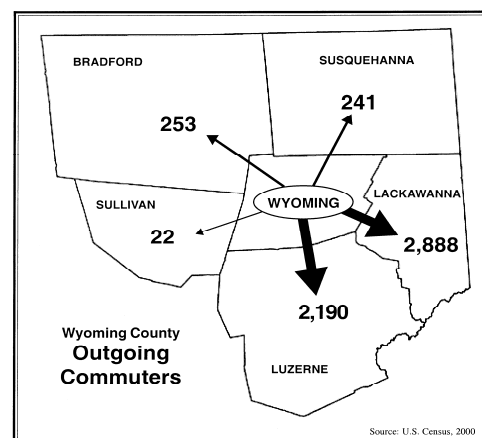
Survey Findings

Nearly 100 respondents (or nearly a third of those surveyed) indicated they would use a park and ride "if it were conveniently located somewhere in the Tunkhannock area."

Existing Conditions

There are a number of factors that are to be considered in developing a park and ride facility in the area. A few of these include:

- At 49 percent, Wyoming County has one of the highest levels of out commuting in Pennsylvania. Table 1 below shows the distribution of the study area's workers.
- The Environmental Protection Agency has classified the area to be in non-attainment for ozone.
- Parking capacity is increasingly becoming a critical issue for Tunkhannock Borough and its downtown business merchants.



Tunkhannock Area Park & Ride Lot Feasibility Analysis



- Commuters are creating *ad hoc* park and rides alongside area roadways (such as along PA 29 south of the Susquehanna River bridge) or in commercial parking lots and parking spaces.
- Travel times to work are increasing for area workers.
- The single occupant vehicle (SOV) is the dominant mode of choice for area workers. The 2000 Census estimated the rate at 84 percent; the study’s community survey identified the rate at 81 percent.
- Based on available census data, community survey results, past trends in similar commutersheds and professional opinion, demand for park and ride facilities is currently estimated to be between 30 and 35 spaces.
- The study process identified seven potential sites for park and rides. Two are directly within downtown Tunkhannock, while the remainder are located outside of the immediate area. All have various advantages and disadvantages for use as park and rides.

**Table 1: Study Area Workers - Municipality of Employment - 2000
Tunkhannock Area**

	Eaton Township	Tunkhannock Borough	Tunkhannock Township
Resident Workers	733	811	1,916
	Tunkhannock boro 213	Tunkhannock boro 410	Tunkhannock twp 699
	Tunkhannock twp 104	Mehoopany twp 76	Mehoopany twp 257
	Mehoopany twp 78	Wilkes-Barre 39	Tunkhannock boro 212
	Eaton twp 53	Factoryville 27	Scranton 95
	Dallas twp 20	Tunkhannock twp 27	Clarks Summit 54
	Wilkes-Barre 20	Scranton 20	Wilkes-Barre 45
	Clarks Summit 17	Plains twp 18	Factoryville boro 31
	Dallas boro 17	Dallas boro 16	South Abington 30
	Scranton 15	Dunmore boro 15	Dallas twp 25
	Plains twp 12	Dallas twp 14	Dunmore boro 24

Source: U.S. Census

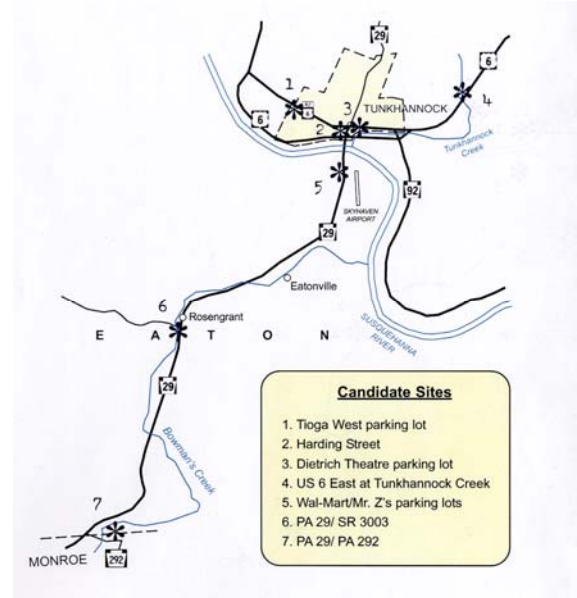


Tunkhannock Area Park & Ride Lot Feasibility Analysis

Park and Ride Alternatives

As part of determining feasibility, the study team developed order of magnitude planning cost estimates for the seven candidate sites as identified by the steering committee. Each site was evaluated against several criteria, including traffic, environmental and the broader community planning considerations related to greenfield development and community integration.

The following table provides an overview of the results of the evaluation against several criteria. Supporting information is provided in the full report that follows.



**Table 2: Evaluation Criteria
Seven Candidate Sites**

Criterion	Tioga West	Harding Street	Dietrich Theatre Area	US 6 at Tunk Creek	Mr. Z's/Wal-Mart	PA 29 @ SR 3003	PA 29 @ PA 292
	1	2	3	4	5	6	7
Ownership	Private	Public	Private	Public	Private	Private	Private
Capacity	Good	Fair	Good	Excellent	Good	Good	Good
Environmental	Excellent	Poor	Poor	Poor	Good	Poor	Poor
Ingress/egress	Excellent	Fair	Poor	Good	Good	Fair	Fair
Adjacent to Primary Arterial	Good	Excellent	Excellent	Good	Good	Poor	Poor
Community Integration	Fair	Good	Excellent	Fair	Fair	Poor	Poor
Safety/Security	Good	Good	Good	Fair	Good	Poor	Poor
Near Existing Informal Park and Ride Activity	Good	Excellent	Excellent	Poor	Good	Poor	Poor
Joint Use Potential	Excellent	Excellent	Excellent	Good	Good	Poor	Poor
Transit Accommodation	Excellent	Poor	Poor	Good	Good	Good	Good
Estimated Cost ¹	\$48,000	\$97,000	\$739,000	\$745,000	\$47,000	\$745,000	\$745,000

¹ Estimates assume capacity for a turnaround and a bus shelter. Values based on 2007 estimated construction costs.



Key Considerations for Moving Forward

While this study does not formally offer official recommendations per se, it does advance several key concepts for consideration at various levels of government. Some are outside of the scope of this study, yet still merit consideration in moving forward, regardless of which candidate site the community ultimately chooses. These concepts are described below in more detail.

- **Improved Parking Management** – A parking authority would also be helpful in building, managing and maintaining the area’s existing parking supply. The ultimate goal would be to provide parking at a fair price to customers in facilities that are convenient, accessible and safe. Parking meters would strengthen enforcement of the borough’s parking patterns.
- **Public Transportation** – The area is presently served by the Luzerne County Transportation Department, which provides demand-responsive service to residents of Wyoming County. As of this writing, it is unclear how the future of public transportation services in Tunkhannock and Wyoming County may change. Regardless, current trends may support express commuter bus service from Tunkhannock to Wilkes-Barre sometime in the future. Any new park and ride should be developed with consideration to accommodation of larger vehicles associated with public transportation.
- **Location** – Given the rural nature of the Tunkhannock area, a park and ride could serve multiple uses, including parking for retail and community events. Siting a park and ride in an area with existing transportation infrastructure would also have a more positive impact on auto emissions, as lots in remote locations would increase the total number of “cold starts”, thus diminishing one of the cardinal environmental goals of park and ride, that of improving air quality.
- **A staged approach** - The advantage to a staged approach to park and ride development would provide the opportunity to test the acceptance of the service without incurring major investment. The area has some low cost options available to it for moving forward. These include the development of relatively smaller lots while leasing spaces from existing suburban retailers for “overflow” purposes. Officials from PennDOT and the local municipalities should continue to monitor the use of existing lots for future planning purposes. As existing lots near capacity, short-term leases can be dissolved and money put towards construction at other locations where additional capacity can be acquired. This approach to “right sizing” of the project would be a more financially prudent way of meeting the area’s commuter parking needs and cast PennDOT as a fiscally responsible public agency.

The report recommends the development of 30-35 spaces today to meet immediate needs.



Tunkhannock Area
Park & Ride Lot Feasibility Analysis



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Tunkhannock Area **Park & Ride Lot Feasibility Analysis**

Acknowledgements

The Northern Tier Regional Planning and Development Commission expresses its appreciation to the following individuals for their guidance, insights and participation toward the successful completion of this feasibility study. Their active review of our preliminary documents, constructive dialog and enthusiasm for this project is greatly valued.

Steering Committee Members

- Brian Baker, Northern Tier Regional Planning and Development Commission
- Norman Ball, Tunkhannock Borough
- Richard Biery, Northern Tier Regional Planning and Development Commission
- Randy Ehrenzeller, Eaton Township
- Steve Fisher, PennDOT 4-0
- Alex Fried, Procter & Gamble
- Judy Gingher, Tunkhannock Township
- Donna LaBar, Tunkhannock Borough
- Glenn "Ace" Shupp, Tunkhannock Township
- Kenneth White, Eaton Township

Gannett Fleming Consulting Team

Brian Funkhouser, Project Manager

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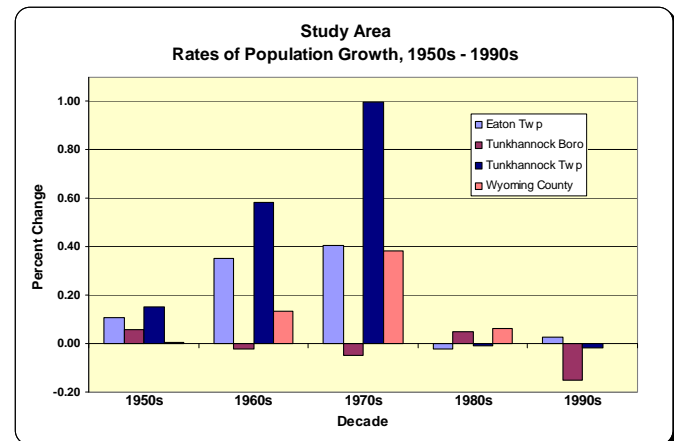
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Background/Overview

Trends, Infrastructure and Geographic Position

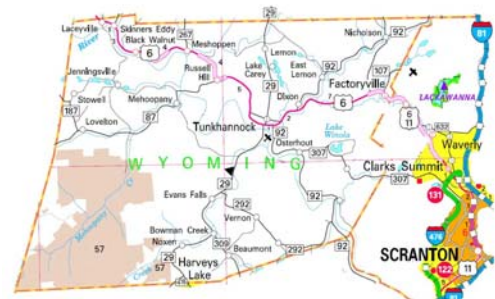
The Greater Tunkhannock area includes the municipalities of Tunkhannock Borough, Tunkhannock Township, and Eaton Township. As the seat of county government, Tunkhannock Borough is located in the center of Wyoming County and is an important commercial center. Since the 1950s, residential growth in the three municipalities (particularly in the two townships) has outpaced the rest of the county. In fact, during the 1970s, Tunkhannock Township doubled in size to become the single largest municipality in the county. Together, the three municipalities had an estimated 2006 population of 7,797, or nearly 28 percent of the county's total.



The area surrounding Tunkhannock Borough has also emerged as important commercial centers for the region and the upper Susquehanna Valley, with new development occurring on PA 29 in Eaton Township and on BUS 6 west of Tunkhannock Borough.

A Natural Point of Convergence

Given its geographic position, the area is a natural point of convergence for several trade routes linking Wyoming County and the upper Susquehanna Valley with the urban areas of Scranton and Wilkes-Barre, as well as connections to the national interstate system at I-81. PennDOT's completion of the US 6 bypass in October 2000 was an investment that improved safety in Tunkhannock Borough and increased overall mobility for motor carriers and motorists traveling through the central part of the county. It has also reduced travel times in the area and made it more attractive to people who work in the urban areas to the east, yet desire the rural benefits living in Wyoming County brings. The development of the bypass - while eliminating through traffic in the borough - has also stimulated an increase in downtown area business while at the same time eliminating one of the borough's three pre-existing parking lots.



No Parking

A shared problem for the three communities is the area's parking capacity. Community officials and business owners attest to the problems incurred by commuters who consume parking



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spaces intended for business patrons (or even employees). The problem has also extended into the residential areas of the borough, as well as along roadsides in Eaton Township.

Given the area's geographic position, residential and commercial growth, new transportation infrastructure and commuter patterns, parking demand has increased. The purpose of this study is to develop estimates on total number of commuter parking spaces needed, and provide considerations as to where any new commuter parking facility should be located.

Introduction/Study Objectives

A Growing Community Concern

The development of a park and ride lot in the greater Tunkhannock area has been an ongoing initiative for the area for the past seven years. The concept has been the subject of various studies, and presented to the State Transportation Commission in October 2003 as a candidate for placement on the state's Transportation Improvement Program (STIP).

This most current analysis of a park and ride began in January 2007 and takes place with several conditions currently in play:

- The study area is located in the middle of a county with one of the state's highest degrees of outcommuting (49 percent).
- The number of workers commuting from Wyoming County to neighboring Luzerne County has doubled since 1980, and quadrupled since 1970.
- The study area's urban core (downtown Tunkhannock Borough) has been adversely affected by commuters using both commercial and residential parking spaces.
- There are no parking meters in downtown Tunkhannock, a condition that encourages this type of parking behavior.
- Rising gasoline prices when, adjusted for inflation, are at their highest level than at any time over the past 25 years.

While long commutes have become more and more common in our nation's larger cities, they are becoming more prevalent in rural areas as well. This is particularly so in rural areas such as Wyoming County located on the fringes of major metropolitan areas. Nowhere is this more apparent than in Pike County, which, at 46 minutes, has the nation's second-longest mean travel time to work. Other rural examples include Calvert and Charles Counties in Maryland, and Hampshire County in West Virginia.

Study Objective

Demonstrate the level of anticipated demand for a park and ride facility in the Tunkhannock area, as well as make recommendations for siting such a facility.

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Commuting in Wyoming County is also noteworthy for the large percentages of resident workers who commute outside the county of residence for employment. While much of long-distance commuting has been caused by the decentralization of our urban cores, this is not the case in Wyoming County, which historically has been experiencing population decline. The county has evolved into a bedroom community, supplying labor for jobs in the economic centers of Scranton and Wilkes-Barre.

Wyoming County receives Congestion Mitigation/ Air Quality federal funds (CMAQ) based, in part, on its connection with and proximity to the Scranton/Wilkes-Barre airshed. The Environmental Protection Agency considers the area to be in non-attainment for ozone. As such, the county receives approximately \$380,000 annually through the Northern Tier Regional Planning and Development Commission's (NTRPDC) CMAQ program. The Northern Tier received \$642,000 in CMAQ funding in FFY 07 and will receive \$647,000 in FFY 08.

According to the Federal Highway Administration (FHWA), CMAQ funds can be used for a variety of transportation projects, but specifically for those that relieve congestion and/or reduce emissions. Sample CMAQ projects include programs for improved public transportation, truck idle reduction, coordinated signal timing, and *"fringe and transportation corridor parking facilities serving multiple-occupancy vehicle programs or transit service."*

Methodology

Steering Committee

The study was guided by a 15-member steering committee comprised of individuals from the following organizations:

- ✓ Eaton Township
- ✓ Federal Highway Administration (FHWA)
- ✓ Northern Tier Regional Planning and Development Commission
- ✓ PennDOT District 4-0
- ✓ Proctor & Gamble
- ✓ Tunkhannock Borough
- ✓ Tunkhannock Township.

Steering committee members actively participated in review meetings and in the development of the final study report.

Methodology
✓ Steering Committee
✓ Stakeholder Input
✓ Data Collection
✓ Community Survey
✓ Park and Ride Inventory
✓ Analysis and Final Report



Tunkhannock Area **Park & Ride Lot Feasibility Analysis**

Stakeholder Input

The study team received stakeholder input through interviews with local business leaders to gain input on the area's parking problems.

Data Collection

Much of the study's data was collected from the U.S. Census Bureau, as well as other sources, such as the Bureau of Economic Analysis. Census data was collected for the following measures, including:

- ✓ Commutation patterns (both at the county and local level)
- ✓ Mode split
- ✓ Travel time to work.

Community Survey

According to Berkheimer Outsourcing Inc. (the local tax collection agency), there are 3,900 taxpayers who reside in one of the three study area municipalities, yet are employed outside of the area. The study team mailed 1,000 surveys to this category of workers who reside in the area, yet are employed outside of the greater Tunkhannock area. The survey instrument consisted of 9 questions, including one to allow for open-ended responses. The results of the survey were used to extend trend lines from the 2000 census with respect to commuter behavior, and also yielded an assessment of how many total parking spaces are needed in the area to accommodate demand. Where applicable, the study team also cross-referenced survey results with the census for validation.

A few of the more pertinent findings from the survey included:

- ✓ A majority (81 percent) drive alone to school or work.
- ✓ A majority (42 percent) use US 6 as their means of getting to school or work.
- ✓ A large majority (87 percent) of the area's commuters park for free at their destination.
- ✓ The need for public transportation in conjunction with a new park and ride was cited by numerous survey respondents.
- ✓ Nearly 100 respondents (or nearly a third of those surveyed) indicated they would use a park and ride "if it were conveniently located somewhere in the Tunkhannock area."

The findings are reviewed in greater detail elsewhere in this report. A copy of the survey instrument and cover letter are included in Appendix A.

Park and Ride Inventory and Analysis

Traffic engineers from the study team evaluated seven candidate locations for development into formal park and ride facilities. The sites ranged from privately-owned, existing parking spaces,

Tunkhannock Area Park & Ride Lot Feasibility Analysis



to publicly-owned, undeveloped sites. The project team evaluated each of the sites across a range of environmental and traffic engineering-related criteria. Traffic engineers also developed planning level, order of magnitude cost estimates for each candidate site.

Analysis and Final Report

The planning team evaluated each of the 7 candidate sites based on various criteria, as recommended by PennDOT’s Design Manual Part 1A (DM-1A) and AASHTO’s “Guide for Park and Ride Facilities,” 2nd Edition (2004). These criteria were applied to this feasibility study as applicable:

Table 3: Evaluation Criteria

Criteria	Evaluation
Facility Development Policy	Agreements may be needed between PennDOT and the local municipality which would assume maintenance responsibility (e.g., mowing, snow removal, lighting, etc.) after the park and ride is constructed.
Development and Operating Costs	Funding resources for a new park and ride would come from public sources such as FHWA CMAQ funds as available through NTRPDC. Operating costs would be the responsibility of the host municipality.
Transit Service Accommodation	While there is no fixed-route public transportation service presently available in Wyoming County, any proposed park and ride should be able to accommodate buses that may enter and exit the site on a regular or special basis.
Staged construction potential	For greenfield sites, staging the contractor’s resources on a nearby parcel would likely be necessary. Consideration should be made for wasting excavated material off-site to an acceptable location.
Environmental sensitivity of the site	Involves, flooding, drainage, and stormwater management considerations.
Site availability	Public versus private.
Site visibility	Effective park and rides are located in areas highly visible from primary travel corridors. Visibility also reduces the need for extra signage.
Projected demand	Influences vary, but include: location, distance to destination and population/density, among others.
Site accessibility	Effective lot circulation should be furnished for vehicles entering and exiting the site. Potential access points should account for how they may affect the operations and safety of surrounding roadways.
Available user benefits	Promotes the opportunity to reduce air pollution and have fewer vehicles on the road. It also provides a greater number of Wyoming County workers with the option to rideshare and save on gasoline costs.



Review of Census Data

Various federal data provides a macro snapshot of journey to work commuting patterns for Wyoming County and the Tunkhannock area. Census data are available for indicators related to mode split (how workers are getting to work), journey to work travel time, and commutation patterns from one municipality to another. This section provides an overview of the area's commuting patterns, based on data available from the U.S. Census and other sources.

Commutation Patterns: A Major Exporter

Wyoming County ranks fifth among Pennsylvania counties in the percentage of workers who commute outside the county of residence for employment. Not surprisingly, the counties shown in the accompanying table are all located adjacent to major economic centers and are part of a larger commutershed.

Of the 12,464 workers residing in Wyoming County, a thin majority (51 percent) are employed within the county, while an additional 40 percent commute to destinations in either Lackawanna or Luzerne Counties. The remaining nine percent are employed at destinations in other Northern Tier counties or in New York State.²

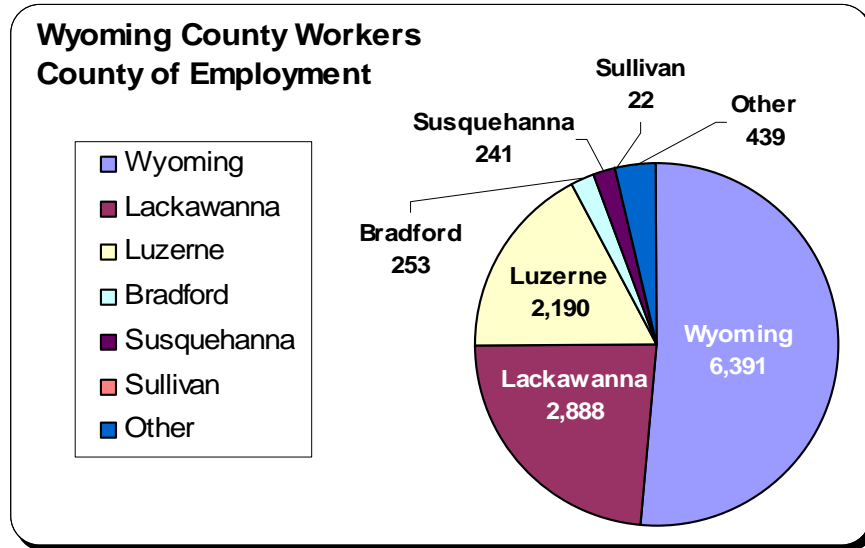
County	Percent Out-of County Commuters (2000)
1. Pike	71.7
2. Perry	68.5
3. Carbon	52.3
4. Susquehanna	51.8
5. Wyoming	48.7
6. Adams	46.1

Figure 1 graphically portrays the distribution of Wyoming County workers among adjoining counties. The importance of Lackawanna and Luzerne Counties as employment destinations is evident in this figure.

² It should be noted that all commutation pattern data from the census is based on the long form, or a 17 percent sample of all households.



Figure 1: Top Destinations of Wyoming County Workers (2000)
 Wyoming County



Source: U.S. Census

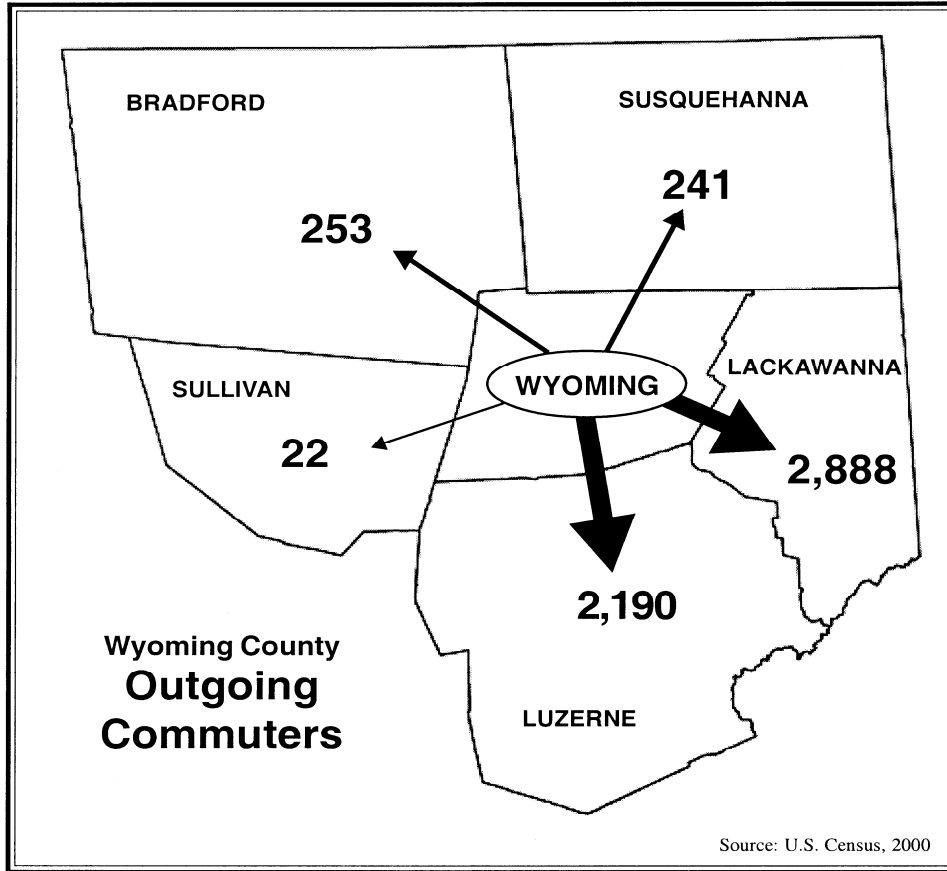
Like any county, Wyoming County has both inbound and outbound commuting. The county has a net worker surplus with its adjoining Northern Tier counties, but a significant deficit with the large urban counties of Lackawanna and Luzerne, as shown in Table 4 and in Figure 2.

Table 4: Worker Commutation by County - (2000)

County of Origin/Destination	Workers Commuting IN to Wyoming County from:	Workers Commuting OUT of Wyoming County to:	Difference
Bradford	794	253	541
Lackawanna	956	2,888	(1,932)
Luzerne	870	2,190	(1,320)
Sullivan	117	22	95
Susquehanna	1,366	241	1,125

Source: U.S. Census

Figure 2: Wyoming County Outgoing Commuters



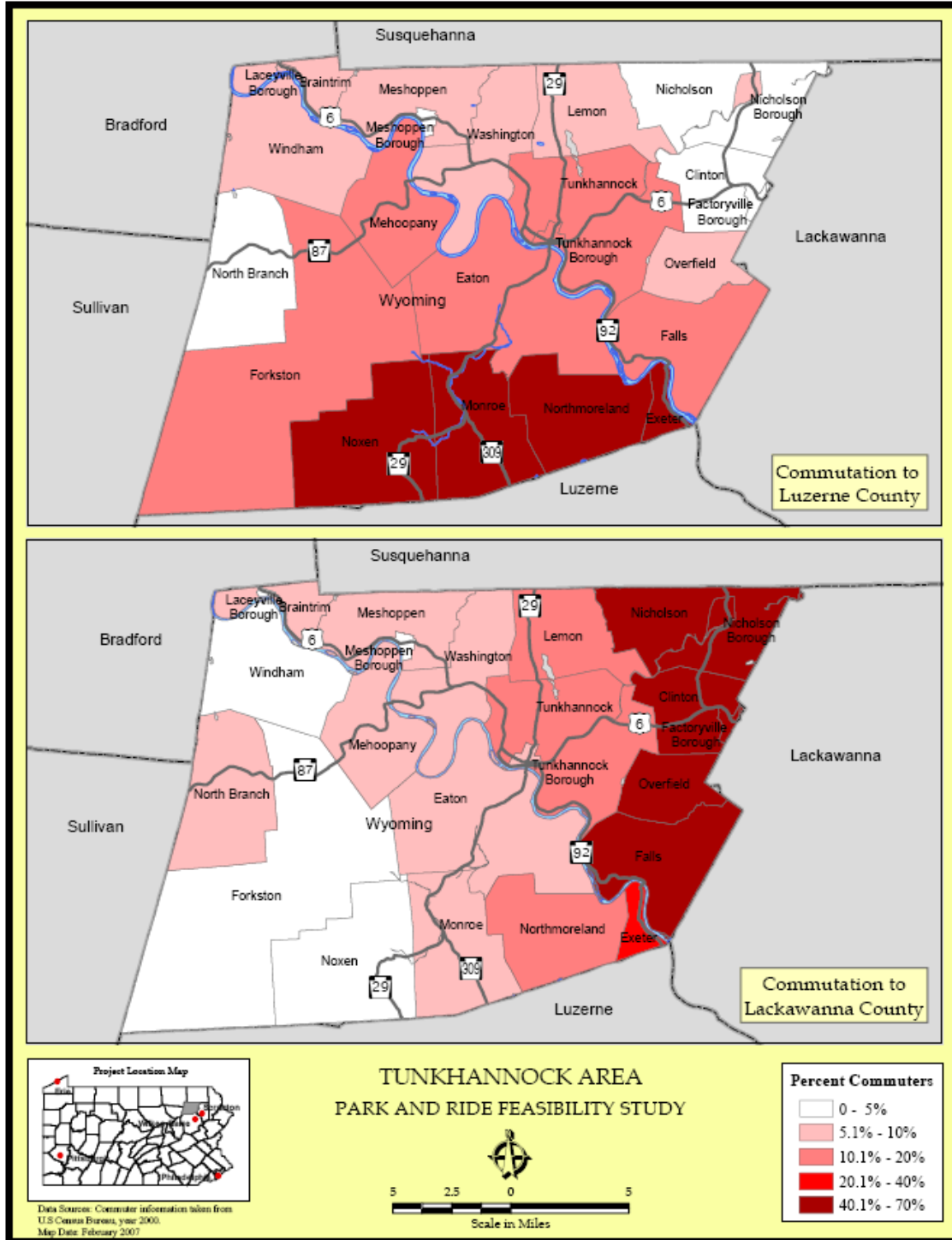
Of the commuters that travel outside of Wyoming County for employment, a significant percentage (approximately 82 percent) is destined for either Lackawanna or Luzerne Counties.

Table 5 and Figure 3 show the share of each Wyoming County municipality's workers that commute to destinations in either of the two urban counties. As expected, the municipalities with the heaviest commuter travel east include those on the eastern border, including Exeter and Noxen Townships, and Factoryville Borough. Municipalities within the Tunkhannock study area had among the lowest levels of commuting to these urban areas.

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Figure 3: Commutation Patterns
Wyoming County





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Table 5: Worker Commutation by Municipality - (2000)
Wyoming County

Municipal Origin	Total Workers	Workers Commuting to Lackawanna County	Workers Commuting to Luzerne County	Total Lack/Luzerne	Rate (%)
Braintrim twp	205	11	15	15	7.3
Clinton twp	604	337	18	355	58.8
Eaton twp	733	70	144	214	29.2
Exeter twp	317	68	157	225	71.0
Factoryville boro	602	413	14	427	70.9
Falls twp	877	410	119	529	60.3
Forkston twp	182	8	27	35	19.2
Laceyville boro	178	8	13	21	11.8
Lemon twp	515	98	45	143	27.8
Mehoopany twp	430	38	46	84	19.5
Meshoppen boro	188	8	7	15	8.0
Meshoppen twp	373	31	28	59	15.8
Monroe twp	822	48	462	510	62.0
Nicholson boro	284	131	15	146	51.4
Nicholson twp	665	308	30	338	50.8
North Branch twp	62	4	2	6	9.7
Northmoreland twp	691	83	357	440	63.7
Noxen twp	362	10	240	250	69.1
Overfield twp	709	376	56	432	60.9
Tunkhannock boro	811	68	113	181	22.3
Tunkhannock twp	1,916	293	218	511	26.7
Washington twp	583	58	44	102	17.5
Windham twp	355	9	20	29	8.2
Study Area	3,460	431	475	906	26.2
Wyoming County	12,464	2,888	2,190	5,078	40.7

Source: U.S. Census

Data from the Bureau of Economic Analysis in Table 6 illustrates the significant growth that has occurred in the total number of workers from Wyoming County commuting to employment destinations in Lackawanna and Luzerne Counties over the past 30 years. In the case of Luzerne County, the number has nearly quadrupled since 1970.

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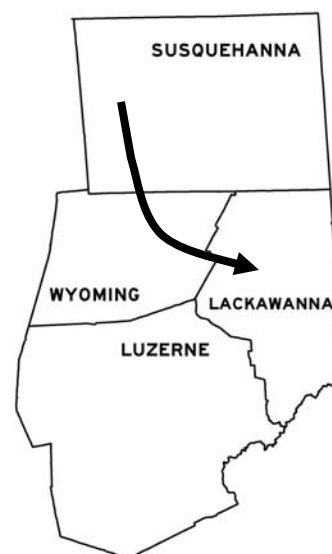


Table 6: Workers Commuting from Wyoming County to Selected Counties, 1970-2000
Wyoming County

Destination County	1970	1980	1990	2000
Bradford	69	140	251	255
Broome (NY)	25	3	25	24
Lackawanna	829	1,709	2,855	2,900
Luzerne	560	1,075	1,725	2,188
Sullivan	9	15	20	20
Susquehanna	274	329	220	234
Wayne	11	11	34	30

Source: Bureau of Economic Analysis (BEA)

It should also be noted that, in relation to Wyoming County, neighboring Susquehanna County also has a strong commuting relationship with Lackawanna County. Nearly 15 percent (or 2,720 workers) of Susquehanna County’s resident workforce commutes to Lackawanna County. While a majority of these would use I-81, some use PA 29 through Wyoming County and Tunkhannock...the “neck of the bottle”.³



Local Commutation

The Tunkhannock area is similar to Wyoming County as a whole in that it exports approximately half of its resident workforce. The most significant destination for the study area's 3,460 workers is Tunkhannock Borough, with 835, followed by Tunkhannock Township, with 830. (Mehoopany Township, with its Proctor & Gamble plant, is a distant third, with approximately 411.) Nearly 50 percent (1,729) commute to employment destinations outside the Tunkhannock area. This figure is similar to the county rate of 49 percent.

One interesting statistic from Table 4 above shows that, while Wyoming County exports 40 percent of its resident workforce to destinations in Lackawanna and Luzerne Counties, only 26 percent of Tunkhannock area workers commute there. In fact, a roughly equal number (431 vs. 475) travel from the Tunkhannock area to Lackawanna and Luzerne Counties, respectively. The Tunkhannock area does support a large number of the county's resident workers (over 27 percent of the county's total). Tunkhannock Township in fact ranks first in the county in total number of workers, with 1,916, while Tunkhannock Borough and Eaton Township rank fourth

³ Less than 1 percent of Bradford County workers commute to either Lackawanna or Luzerne Counties.



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and fifth, respectively. This relatively larger worker base is more significant in noting that nearly 22 percent of Wyoming County workers employed in Luzerne County are from the Tunkhannock area. In Lackawanna County, the rate is 15 percent.

Table 7 shows the top employment destinations for Tunkhannock area workers by municipality.

**Table 7: Study Area Workers - Municipality of Employment - 2000
Tunkhannock Area**

Resident Workers	Eaton Township	733	Tunkhannock Borough	811	Tunkhannock Township	1,916
	Tunkhannock boro	213	Tunkhannock boro	410	Tunkhannock twp	699
	Tunkhannock twp	104	Mehoopany twp	76	Mehoopany twp	257
	Mehoopany twp	78	Wilkes-Barre	39	Tunkhannock boro	212
	Eaton twp	53	Factoryville	27	Scranton	95
	Dallas twp	20	Tunkhannock twp	27	Clarks Summit	54
	Wilkes-Barre	20	Scranton	20	Wilkes-Barre	45
	Clarks Summit	17	Plains twp	18	Factoryville boro	31
	Dallas boro	17	Dallas boro	16	South Abington	30
	Scranton	15	Dunmore boro	15	Dallas twp	25
	Plains twp	12	Dallas twp	14	Dunmore boro	24

Source: U.S. Census

Mode Split: Reliance on the Automobile

There are 3,460 workers in the Tunkhannock area who do not work from home. According to census data, commuters in the Tunkhannock area are more reliant on the private automobile than their counterparts elsewhere in Wyoming County. Nearly 94 percent of all journey to work trips involve an automobile, with workers either driving alone or carpooling. Single-occupant vehicle (SOV) trips account for 84 percent of all Tunkhannock area commutes, with Eaton Township having the highest percentage of SOV trips for any area municipality (nearly 90 percent).

Despite area workers' widespread use of the private automobile, they carpool at a rate less than the county rate of 11 percent. Use of carpooling by workers from Tunkhannock Borough was only 6.3 percent, the lowest rate in Wyoming County.

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**Table 8: Mode Split (in percent) - 2000
Tunkhannock Area**

	# Workers	SOV	Carpool	Walk	Work at Home
Eaton twp	733	85.0	7.4	1.0	4.9
Tunkhannock boro	811	85.3	6.3	4.2	3.8
Tunkhannock twp	1,916	81.5	12.1	1.8	3.9
Study area	3,460	84.0	9.8	2.2	4.1
Wyoming County	12,464	81.3	10.9	3.2	3.6

Source: U.S. Census

Travel Time to Work: Higher and Growing Faster Than National Rates

The 2000 census indicates that, on average, journey to work travel times have increased for all Wyoming County workers to a present day average of 26.2 minutes. This is an increase of just over 22 percent from 1990.

Despite the overall increase in journey to work travel times, average travel time to work for Tunkhannock area workers is generally shorter than county averages. All study area municipalities reported a shorter journey to work travel times than the county average of 26 minutes. Workers from Tunkhannock Borough in fact have the shortest average commute time in the county, at just under 18 minutes.

Increasing Travel Times

During the 1990s, average travel time to work in the United States increased from 22.4 minutes to 25.5. Mean travel time to work is slightly greater in Wyoming County, at 26.2 minutes.

It is important to distinguish between congestion questions and work trip travel times. Although obviously related, they are not synonymous. A key way to think of these two perspectives is that travel time is an attribute of commuters, while congestion is an attribute of facilities.⁴

Mean travel time strongly correlates to commutation patterns, with those municipalities that retain more workers having shorter mean travel times than those that retain fewer workers.

One measure that helps to provide a sense of scale is the percentage of workers commuting more than an hour to work. This is one measure of the time extremes in commuting. Some analysts have suggested that the rate of journey to work commutes greater than 60 minutes would indicate clear signs of problems. In the study area however, the rate is 7.2 percent – up three and a half percentage points since 1990. Figure 4 shows how “Extreme Commutes” have grown among study area municipalities between 1990 and 2000.

⁴ NCHRP Report 550: Commuting in America



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Table 9 and Table 10 provide municipal details on travel time to work statistics between 1990 and 2000. Notice that mean travel time to work during the 1990s increased in all study area municipalities.

**Table 9: Travel Time to Work (in minutes) - 2000⁵
Tunkhannock Area**

	Total	< 15	15-29	30-59	60-89	90+	Mean Travel Time (Min.)
Eaton township	697	27.3	42.5	25.5	3.7	1.0	23.2
Tunkhannock borough	780	48.5	31.4	15.6	3.8	0.6	17.9
Tunkhannock township	1,841	35.7	33.7	24.2	3.4	3.0	23.5
Study area	3,318	36.9	35.0	22.5	3.6	2.0	22.1
Wyoming County	12,464	26.5	37.2	29.1	4.4	2.8	26.2

Source: U.S. Census

**Table 10: Travel Time to Work (in minutes) - 1990⁶
Tunkhannock Area**

	Total	< 15	15-29	30-59	60-89	90+	Mean Travel Time (Min.)
Eaton township	720	31.3	40.1	26.0	2.1	0.6	21.1
Tunkhannock borough	895	56.2	23.9	16.9	2.2	0.8	16.5
Tunkhannock township	2,157	36.0	40.1	19.2	2.9	1.8	20.3
Study area	3,772	39.9	36.3	20.0	2.6	1.3	19.6
Wyoming County	12,064	31.1	38.7	26.4	3.0	0.8	20.0

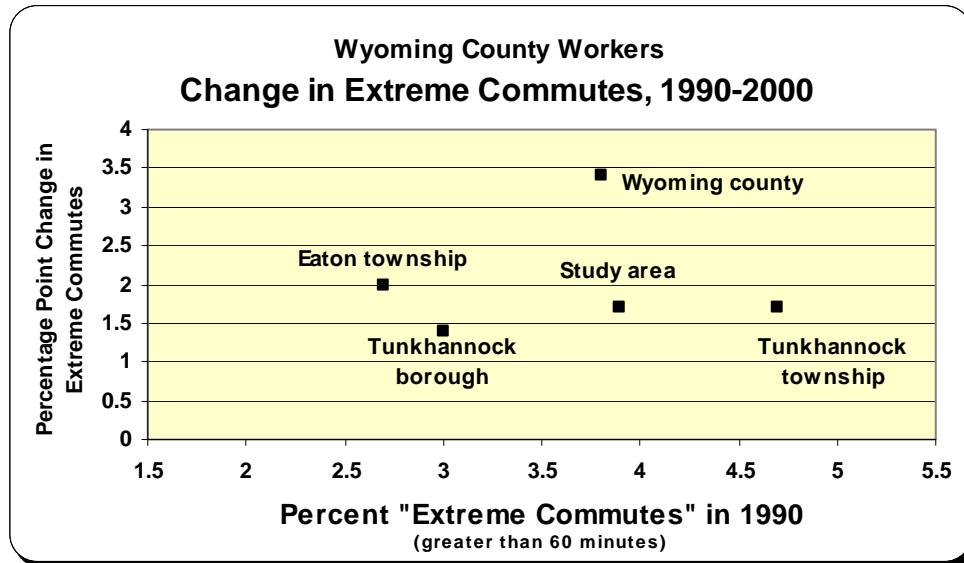
Source: U.S. Census

⁵ Does not include those working from home

⁶ Does not include those working from home



Figure 4: Percent Change in "Extreme Commutes", 1990-2000
Tunkhannock Area



Source: U.S. Census

Household Access to a Vehicle

A final census includes the percentage of households with access to a vehicle. Given the county's high degree of out commuting, it is not surprising that Wyoming has the Northern Tier's greatest percentage of households with access to a vehicle, as demonstrated in Table 11.

High Vehicle Access

At 94.6 percent, Wyoming County has the Northern Tier's greatest percentage of households with access to a vehicle.

Table 11: Access to a Vehicle (2000)
Northern Tier and Study Area

Municipality	None		1		2		3+	
	#	%	#	%	#	%	#	%
Bradford	1,707	7.0	8,083	33.1	10,344	42.3	4,319	17.7
Sullivan	154	5.8	921	34.6	1,081	40.6	504	18.9
Susquehanna	1,058	6.4	5,221	31.6	7,046	42.6	3,204	19.4
Tioga	937	5.9	5,480	34.4	6,522	41.0	2,986	18.8
Wyoming	584	5.4	3,258	30.3	4,641	43.1	2,279	21.2
Eaton township	34	5.2	169	26.0	301	46.2	147	22.6
Tunkhannock boro	133	15.9	287	34.4	322	38.6	92	11.0
Tunkhannock twp	44	2.7	445	27.4	783	48.2	352	21.7
Study area	211	6.8	901	29.0	1,406	45.2	591	19.0

Source: Bureau of Economic Analysis (BEA)



Tunkhannock Area Park & Ride Lot Feasibility Analysis

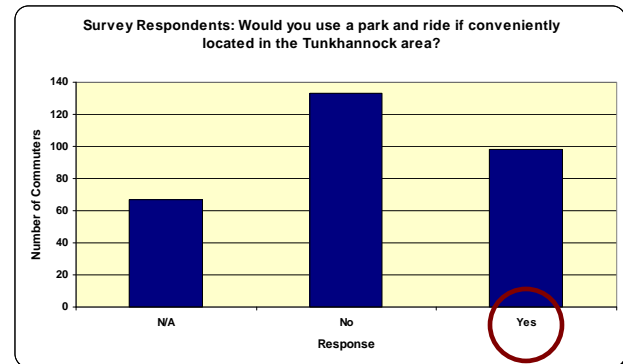
Interviews with Municipal Officials and Business Leaders

The project team interviewed various stakeholders in the study area, including area business owners, main street manager, and the former borough chief of police. A bulleted summary of stakeholder comments follows:

- Commuters have been parking at various commercial locations in Eaton Township, such as at Mr. Z's, Wal-Mart, and the area on the west side of PA 29 immediately south of the Susquehanna River bridge.
- At Wal-Mart, there are hazards with pedestrians mixing with commuter-related traffic.
- Despite the various problems of commuter parking in Eaton Township, stakeholders report parking shortages are more acute on the north side of the bridge, in Tunkhannock Borough.
- Public transportation is presently not available in the area. Moreover, in a recent (2005) survey conducted as part of Tunkhannock Township's comprehensive plan, 47 percent of respondents noted that public transportation was "not very important".⁷
- The area has no parking authority, and no parking meters, which diminishes the borough's ability to effectively manage its parking supply.

Community Survey

In May 2007, NTRPDC administered a community survey to 1,000 households in the study area. The survey sample was derived through a database maintained by Berkheimer Associates based on workers residing within the study area, yet employed at destinations outside of the study area. The commission used this sample in order to reduce the possibility of surveying workers employed within the municipality of residence, or other groups such as retirees or the unemployed. A total of 181 surveys were completed and returned, representing the views of 440 commuters. A copy of the survey instrument is included in Appendix A.



The results of the survey were used in complementing existing census data and in assessing project need. The results of the survey were as follows:

⁷ The Luzerne/Wyoming County Transportation Department currently provides on-demand van service to seniors and persons with disabilities.

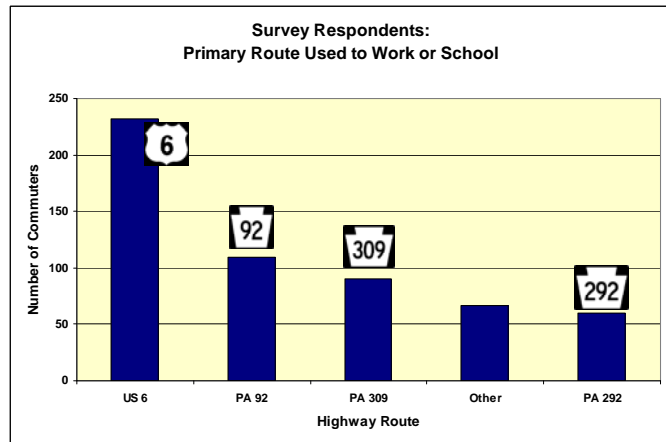
Tunkhannock Area Park & Ride Lot Feasibility Analysis



- **A majority are employed within Wyoming County** - Similar to census figures, approximately 45 percent of survey respondents are employed within Wyoming County, compared to the 2000 census estimate of 51 percent.

- **A roughly equal percentage requires less than 15 minutes to get to work.** The survey revealed 44 percent of respondents requiring 15 minutes or less to get to their place of employment or education.

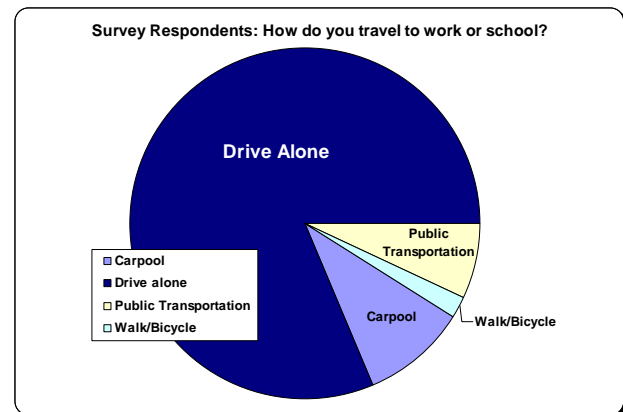
- **Nearly a third report experiencing congestion on their way to work or school.** The actual percentage was 30 percent, with a nearly equal 25 percent indicating they “never” experience traffic congestion.



- **US 6 is the area’s most important commuter corridor.** Roughly 42 percent of survey respondents reported using US 6. Fewer than 20 percent reported using PA 92, while 16 percent used PA 309 and 11 percent use PA 292.

- **A large majority of the area’s commuters park for free.** A majority (87 percent) of survey respondents indicated the availability of free parking at their destination. This is one disincentive to ridesharing. Less than 5 percent paid less than \$20 monthly, while 8.5 percent paid more than \$20 a month to park.

- **The Single Occupant Vehicle (SOV) is the mode of choice among area commuters.** Over 81 percent of surveyed commuters drive alone to work, while less than 10 percent carpool. These numbers are almost identical to the 2000 census estimate of 84 percent commuting alone, and 9.8 percent carpooling.



- **A majority of those surveyed indicated they would not use a formal park and ride, yet there are still large numbers who indicated interest.** Only a third of surveyed commuters indicated they would use a park and ride lot “if it were conveniently located somewhere in the Tunkhannock area.” This represents nearly 100 respondents, compared to the 46 who reported they currently carpool.



Tunkhannock Area Park & Ride Lot Feasibility Analysis

Current and Future Demand

The Northern Tier does not presently have a regional travel demand model (TDM) available to estimate future mode split or travel demand. Quantitative methods for forecasting order of magnitude demand estimates for park and ride have been performed elsewhere in connection with available public transportation service.

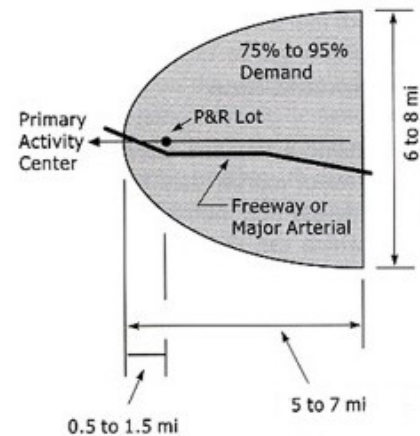
Projecting future park and ride demand in the absence of a TDM and public transportation service compounds the challenge. However, a quantitative-based approach for estimating a future use can be performed in a number of ways, as outlined in the following points:

- Calculating total estimated carpoolers from available census data
- Examining Past Trends in Similar Commutersheds
- Crosswalk of Commutation Patterns against Indexed Fuel Costs.

Calculating Total Number of Carpoolers from Available Census Data

From the numbers available in Table 3, a total number of carpoolers can be estimated from a proposed park and ride's market area. Patrons using a proposed park and ride in the study area can be expected to come from a *catchment* area, primarily upstream from the park and ride facility. It should be noted that "backtracking," or the commuters who live *between* a proposed park and ride and the employment destination, would be limited (*see figure at right*).

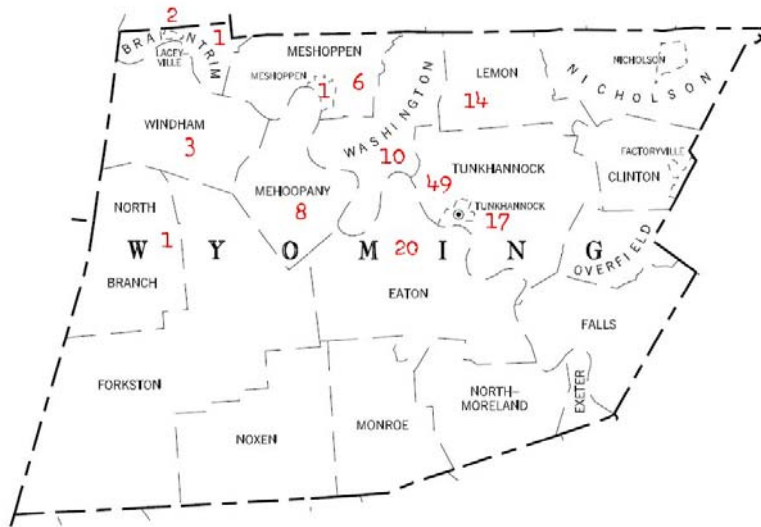
Thus, the primary market area for a proposed park and ride in the study area would primarily capture commuters to the north and west of Tunkhannock, with residual use from areas located immediately east in Tunkhannock Township. Figure 5 shows the total number of workers from the proposed park and ride's market area by municipality who presently commute by carpooling. The total estimated number from this approach is 132.



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Figure 5: Estimated Number of Workers from Park and Ride Market Area Who Carpool in Commuting to Lackawanna and Luzerne County



Past Trends in Similar Commutersheds - Case Study

Other, similar commutersheds can be examined and evaluated to assess any local applicability to the Tunkhannock area. As noted earlier, Perry County has a high degree of out commuting to a major economic center (Harrisburg).

In 1996, PennDOT constructed a park and ride at US 322's interchange with PA 34 just outside of Newport Borough in neighboring Howe Township. An evaluation of this park and ride with a conceptual facility in the Tunkhannock area is offered in Table 12, below. For the purposes of this exercise, the Newport area is defined by the municipalities of Newport Borough, and surrounding Howe and Oliver Townships.



This 75-space **park and ride lot** in Howe Township, Perry County opened in 1996 and has since been used by carpoolers and commuters riding Fullington Trailways, an inter-city bus service out of State College. This park and ride is a \$275,000 example of how a fraction of available transportation dollars can be used to complement existing transportation infrastructure.



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**Table 12: Review of Similar Commutersheds
Tunkhannock Area**

Parameters	Tunkhannock Area, Wyoming County	Newport, Perry County
Service Area Population	7,797	4,059
Distance to Primary Economic Center	27 miles (Scranton) 29 miles (Wilkes-Barre)	27 miles (Harrisburg)
Existing Congestion	30% surveyed say "Yes"	no
% commuting to Primary Economic Center ⁸	26.2	28.0
% of Extreme Commutes ⁹	5.6	12.3
Mean Travel Time to Work	22.1	33.5
Inter-city bus service	n/a	Yes
Size of Park and Ride	- -	75 spaces

Source: U.S. Census; Gannett Fleming

The park and ride facility at Newport has been an unqualified success. PennDOT is currently reviewing the results of a feasibility study that proposes expanding the lot by an additional 15 to 30 spaces.

⁸ Defined by the City of Harrisburg and the surrounding townships of Lower Paxton, Susquehanna and Swatara

⁹ Commutes greater than 60 minutes in length



Crosswalk of Commutation Patterns against Indexed Fuel Costs

A third technique for estimating demand for park and ride includes a comparison of historic commutation pattern data against indexed fuel costs.

In the aftermath of Hurricane Katrina in September 2005, average gasoline costs per gallon reached record highs in finally breaking the \$3 barrier. While such costs have increased over the past 25 years, they have done so at a rate less than most other consumer goods. For example, since 1980, the Consumer Price Index has risen 137 percent. According to the Department of Energy, if fuel prices had increased at a rate comparable to the Consumer Price Index over the past 25 years, average gasoline prices would be \$3.06 today. Motorists are actually paying almost 10 percent less for gasoline than might originally be expected. It should be noted that, since 2000, gasoline prices have risen in excess of consumer goods. Adjusted for inflation, gasoline prices today are not as high as what motorists paid in the early 1980s.

Figure 6, Figure 7 and Figure 7 all show how gasoline prices have changed in both real and constant dollars since 1978. During the 1980s, the number of workers using carpools declined substantially, falling 32 percent nationally. Much of the loss in share was attributed to a greater number of lower-income families gaining access to a vehicle, as well as declining gasoline prices in general. Use of carpooling continued to erode nationally during the 1990s, although not as great a rate as during the 1980s.

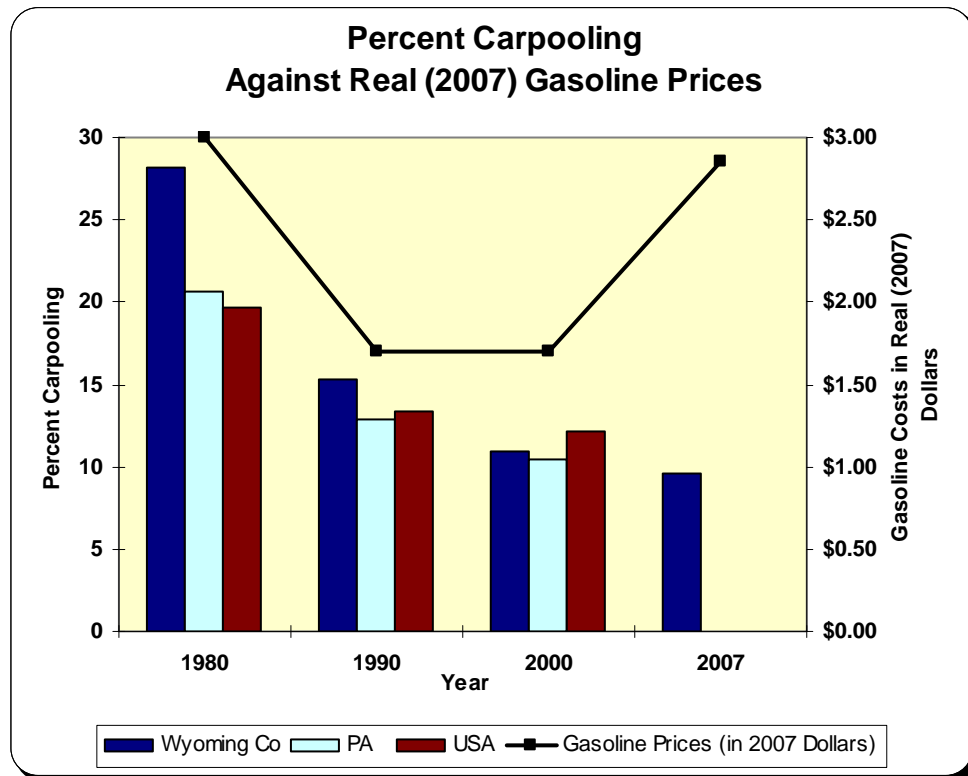
Trends in Wyoming County mirrored national trends, with the percentage of workers carpooling declining by nearly 13 percentage points in the 1980s and an additional 4.4 percentage points in the 1990s. Rates of carpooling even fell below national averages in the 2000 census. Data from a community survey administered in May 2007 found that, of a sample of 1,000 area households, approximately 9.5 percent of workers currently carpool as a means of getting to work. This indicates a further erosion of carpooling even since the 2000 Census.

New Approaches to Commuting Data

An important element of trend analysis is understanding the changes in census content over the decades. Common questions, such as "What is the average commute trip duration for residents in your region in 1970" or "What was the drive alone share in 1960 and 1970", can only be answered with "the data does not exist because census takers did not ask the same question in earlier censuses."

The Census Bureau has reported mode split in various forms over the years. In 1970, the Bureau captured carpooling rates under the heading of "Means of Transportation, private automobile, passenger." By 1980, the Bureau collected and organized carpooling data by those carpooling in car versus truck.

Figure 6: Percent Carpooling Against Real (2007) Gasoline Prices, 1980, 1990, 2000

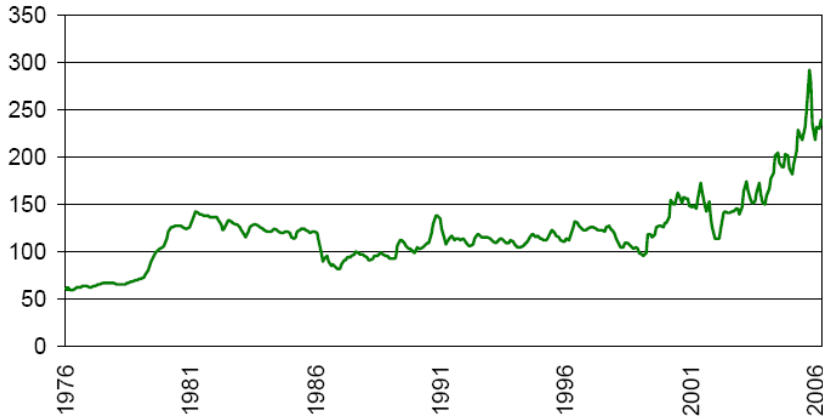


Note: Data for 2007 are from a May 2007 community survey and reflect only workers from the study area municipalities of Tunkhannock Borough, Tunkhannock Township and Eaton Township
 Source: PA State Data Center; U.S. Department of Energy; Gannett Fleming community survey

Figure 6 shows a strong correlation in the decline in carpooling during the 1980s and the decline in real gasoline prices. Trends since 1990 though appear to go against previous experience, as rates of carpooling continue to decline nationally and locally, even in the face of increasing gasoline prices. This trend would seem to indicate that the ongoing dispersion of employment destinations, coupled with an increase in employers that offer flexible hours, are combining to make the probability of finding carpool matches even more challenging than it is today. Results from the 2010 census should yield more information on the future of carpooling, particularly the role of gasoline prices in affecting this mode of journey to work.

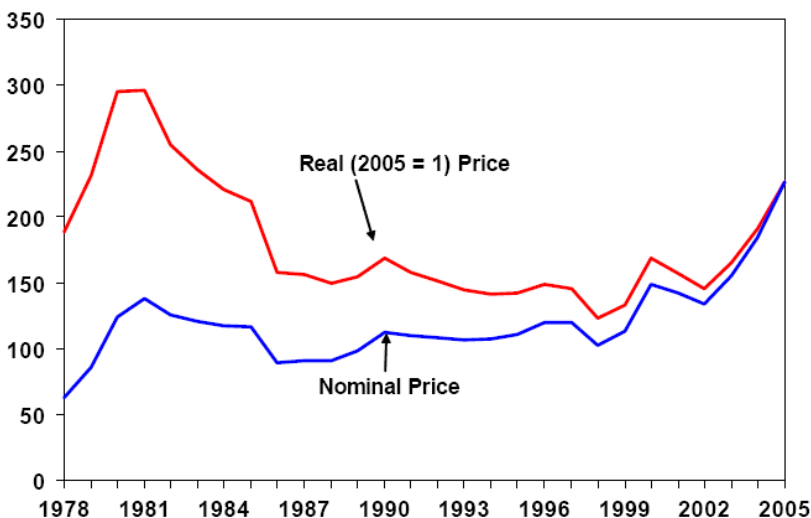


**Figure 7: Unleaded Gasoline Prices
Cents per Gallon**



Source: Center for Applied Demography and Survey Research; U.S. Dept. of Energy

**Figure 8: National Retail Motor Gasoline Prices, 1978 - 2005
Cents per Gallon**



Source: Center for Applied Demography and Survey Research; U.S. Dept. of Energy

Other Considerations: Congestion in Employment Areas or Along Corridors

Roadway congestion can cause motorists to consider ridesharing as their preferred mode to work, although it should be noted that empirical evidence might seem to suggest that motorists are willing to tolerate fairly high levels of congestion before changing.

As noted in the Northern Tier Long Range Transportation Plan, congestion is presently not a significant issue throughout the region. For the Tunkhannock area, there are three major roadways that serve commuters traveling to Lackawanna and Luzerne Counties: US 6, PA 29

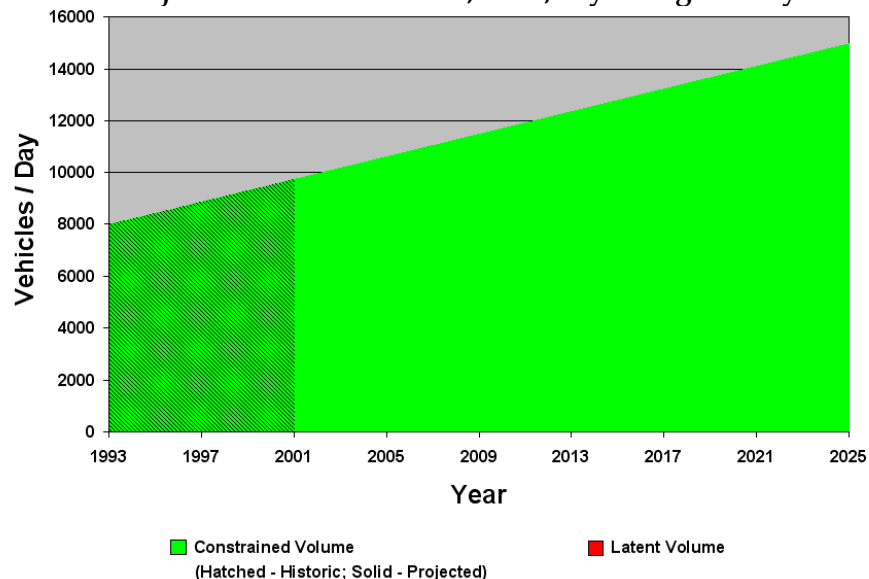


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and PA 92. While PA 29 will become the subject of a Congested Corridor Improvement Program (CCIP) study later in 2007¹⁰, other segments of the corridor are operating at acceptable levels of service.

The Pennsylvania Department of Transportation in 2002 completed a traffic analysis of 26 corridors of statewide significance. One of these corridors was centered on US 6 as the “Grand Army of the Republic” corridor. Traffic analysts examined raw HPMS data from PennDOT and combined roadway segments into so-called “Super segments”. The analysis revealed that the US 6 corridor in Wyoming County is not expected to experience any traffic congestion into the foreseeable future.

Figure 9: Historic and Projected Traffic Volumes, US 6, Wyoming County



Source: PennPlan Traffic Analysis (2002)

Bottom Line

In the absence of a regional travel demand model, other quantitative methods must be used in providing estimates for potential park and ride use. As shown above, rising gasoline costs have not reached a point to where it has had a measurable impact on commuter behavior. To summarize from the other methods outlined above:

- **132** – Number of workers from the proposed park and ride market area who presently carpool to either Lackawanna or Luzerne Counties.
- **98** – Number of respondents to the community survey who indicated they would use a park and ride if it were “conveniently located somewhere in the Tunkhannock area”.

¹⁰ Limits of the study are between Tunkhannock Creek and the Wal-Mart entrance in Eaton Township

Tunkhannock Area

Park & Ride Lot Feasibility Analysis

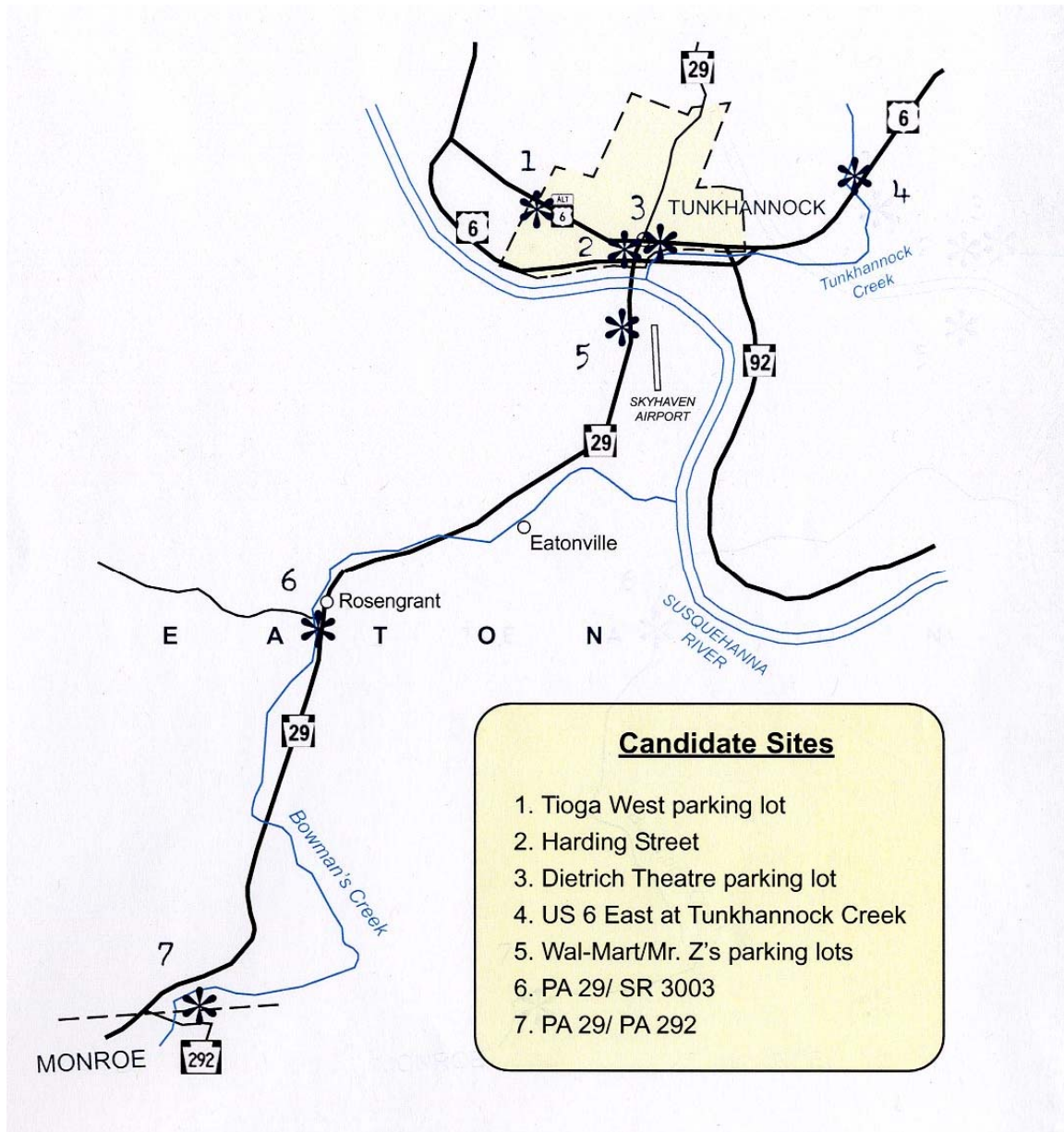


- **75** - Number of parking spaces at existing park and ride in Newport, Perry County. This site is situated in a commutershed very similar to Tunkhannock's. The lot will be expanded to include anywhere from 90 to 105 spaces in the near future.

Candidate Site Descriptions and Analysis

With assistance from the study steering committee, the project team identified and evaluated several candidate sites for potential development into a formal park and ride facility, as shown in Figure 10 and described more fully in Table 13 and the bullet points that follow.

**Figure 10: Candidate Site Locations
Tunkhannock Area**



Tunkhannock Area Park & Ride Lot Feasibility Analysis



**Table 13: Candidate Park and Ride Locations
Tunkhannock Area**

ID #	Candidate Location	Notes/Description
1	Tioga West Shopping Center	In the Tioga West shopping plaza parking lot west of Tunkhannock Borough along BUS 6.
2	Harding Street	This is a borough property with approximately 20 parking spaces, adjacent to the intersection of US 6 and PA 29. The intersection is a critical one for the borough and the area business association as both want to bring traffic into the borough in an orderly fashion. The borough has invested in developing the downtown area through a Transportation Enhancement streetscape program.
3	The Dietrich Theatre Parking Area	Located in the center of the Tunkhannock Central Business District, this area is jointly owned by 11 different property owners. The space is currently undefined and is not being used to its highest potential. Both Harding Street and Dietrich sites are located within the crosshairs of US 6 and PA 29 - Wyoming County's two principal highways.
4	US 6 East at Tunkhannock Creek	A 2.2 acre publicly-owned site in Tunkhannock Township just off of US 6 east of Tunkhannock Borough. The site is adjacent to Tunkhannock Creek and is in a floodplain. The township acquired the site through hazard mitigation through FEMA and PEMA. The site must be permanently maintained as open space. An adjoining 3.1 acre property on the opposite side of US 6 is being considered for development as a skate park.
5	Parking lots at Mr. Z's Plaza and at Wal-Mart in Eaton Township	These lots are currently being used by commuters. The sites are included in the evaluation, since CMAQ funds may be used to lease existing spaces.
6	PA 29/SR 3003 Intersection	A privately owned parcel (3/4 acres) at the southwest corner of this intersection, approximately 3 miles south of Tunkhannock.
7	PA 29/PA 292 Intersection	A parcel at the northeast corner of this intersection. The site has been flooded in recent months by Bowman's Creek. Eaton Township is attempting to purchase the site (including 8 homes) with PEMA funds. There would still be a dwelling or two remaining on the site, but it may have some merit as a potential park and ride. The site is approximately 6 miles south of Tunkhannock.

Source: Study Steering Committee



Tunkhannock Area Park & Ride Lot Feasibility Analysis

#1 – Tioga West Shopping Center

The Tioga West shopping center is located along BUS 6 / West Tioga Street just outside of the borough limits in Tunkhannock Township. Access from the parking lot to BUS 6 / West Tioga Street is controlled by a signal. The lot is located just east of the US 6 bypass interchange.

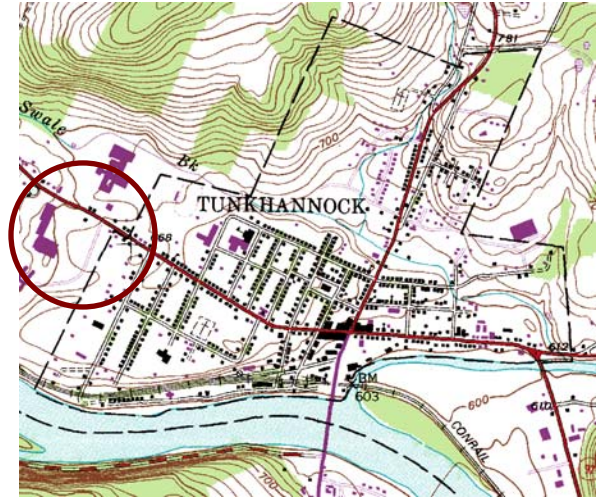
Pros:

- ✓ Signalized traffic control for ingress/egress (no issues with site distance)
- ✓ Wide throat, with easier access for transit vehicles
- ✓ Adequate capacity
- ✓ Adequate lighting
- ✓ Existing pavement structure is provided
- ✓ Proximity to US 6 bypass
- ✓ In an area where vandalism/theft can be minimized

Cons:

- ✓ Privately-owned
- ✓ No community orientation – distance to Tunkhannock CBD is approximately 1 mile

Estimated Cost to Construct: **\$48,000**

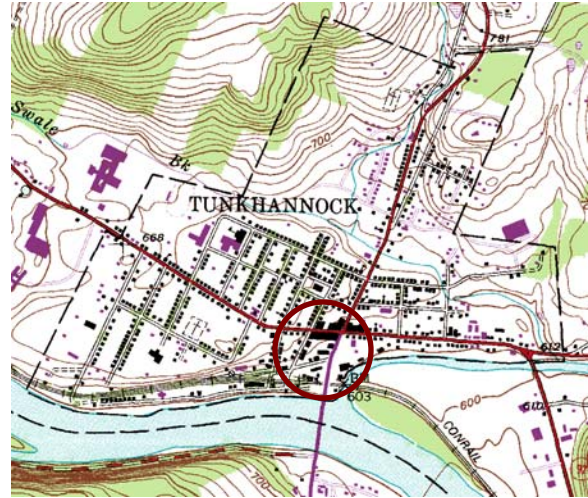


Tunkhannock Area Park & Ride Lot Feasibility Analysis



#2 - Harding Street

Background/Overview - The Harding Street parking lot is strategically located at the northwest corner of the intersection of US 6 and PA 29 just blocks away from downtown Tunkhannock. When PennDOT constructed and completed the US 6 Bypass in October 2000, a portion of an existing parking lot was eliminated. The area is still designated as a parking lot, but the lack of definition and awareness has minimized its use as a parking facility - for commuter purposes or otherwise. Until recently, there were no line markings on Harding Street to delineate available parking spaces, making it appear as a “no man’s land” between the street and US 6 right of way. It is occasionally used by tractor trailer drivers for overnight parking. It is also within walking distance of a majority of the downtown area and could potentially serve as a joint-use facility. The area is currently used during special community events such as Founder’s Day.

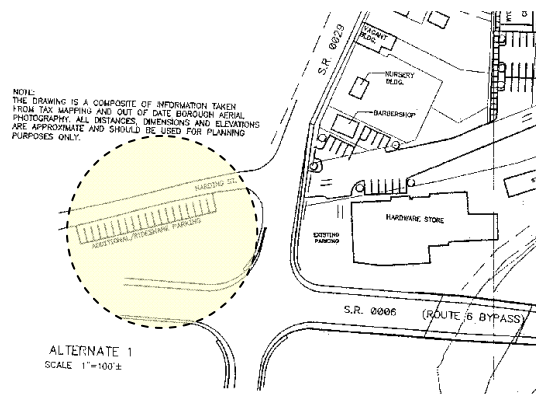


Pros:

- ✓ High visibility/ strategic location at US 6 and PA 29
- ✓ Publicly owned
- ✓ Community-oriented
- ✓ Adequate lighting, minimizing potential for vandalism and theft

Cons:

- ✓ Unsignalized traffic control for ingress/egress
- ✓ Would require minor pavement improvements for a bus turn-around/shelter area
- ✓ Access onto a roadway with congestion and queuing from an existing signalized intersection of US 6 Bypass and PA 29
- ✓ May not offer adequate capacity/no potential for expansion



Estimated Cost of Construction: **\$97,000**

#3 - Dietrich Theatre Parking Area

The parking area behind the Dietrich Theatre is jointly owned by 11 property owners. Like Harding Street, the space is currently undefined and is not being used to its highest potential. The Dietrich Theatre itself is the only such theatre in Wyoming County. The venue attracts patrons coming long distances to see various programs. The Dietrich is also linked to a cultural museum with art and pottery classes. With its matinees and movies, the theatre requires parking area every single day.

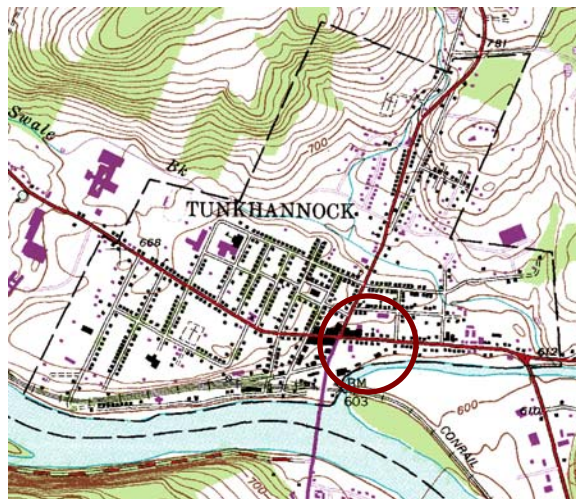
Area leaders have suggested that the lot - if properly developed - could accommodate upwards of 150 parking spaces. Essentially, the parking area would derive from the unused, rear portions of the surrounding businesses (e.g., Gay's True Value, Century 21 Real Estate, the Dietrich Theatre, and others). Since FHWA's CMAQ funds would require that the lot be used for commuter parking purposes only, the parking needs relative to downtown Tunkhannock should be addressed through private sources and initiatives.

Pros:

- ✓ High visibility/adequate capacity
- ✓ Strategic location at US 6 and PA 29
- ✓ Community-oriented/adjacent to CBD
- ✓ Located at or near existing, informal park and ride activity
- ✓ In an area where vandalism/theft can be minimized

Cons:

- ✓ Unsignalized traffic control for ingress and egress
- ✓ Would require significant pavement improvements for parking, bus turn-around/shelter area
- ✓ Multiple ownership/privately owned



- ✓ Environmental (flooding) issues
- ✓ Would require a significant amount of fill
- ✓ Installation of subsurface "special draining" required
- ✓ Will require lighting for safety/security
- ✓ Will require the elimination of several on-street parking spaces for safe ingress/egress to the site for adequate site distance
- ✓ Transit vehicle compatibility
- ✓ Competes with limited commercial parking demand

Estimated Cost to Construct: **\$739,000**

Tunkhannock Area Park & Ride Lot Feasibility Analysis



#4 – US 6 East at Tunkhannock Creek

Background/Overview – This site is a 2.2 acre publicly-owned parcel in Tunkhannock Township just off of US 6 east of Tunkhannock Borough. The site is adjacent to Tunkhannock Creek and is in a floodplain. The township acquired the site through hazard mitigation through FEMA and PEMA. The site must be permanently maintained as open space. Township officials are considering an adjoining 3.1 acre property on the southeastern side of US 6 for development as a skate park.

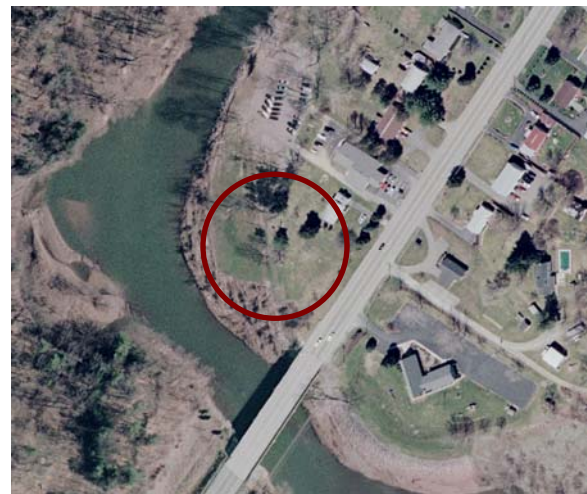
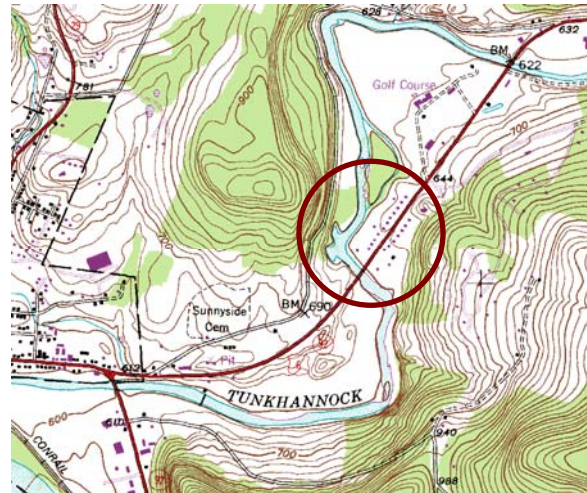
Pros:

- ✓ Publicly-owned
- ✓ Adequate capacity site
- ✓ Adequate site distance for ingress/egress

Cons:

- ✓ Unsignalized traffic control for ingress/egress
- ✓ Access onto US 6 is in an area where speeds are in excess of 45 MPH
- ✓ Environmental (flooding) impacts
- ✓ Would require a significant amount of fill
- ✓ Installation of subsurface “special draining” required
- ✓ No community integration (Tunkhannock CBD is approximately 2 miles west)
- ✓ No radial highway orientation
- ✓ Safety and security concerns (vandalism and theft)

Estimated Cost to Construct: **\$745,000**

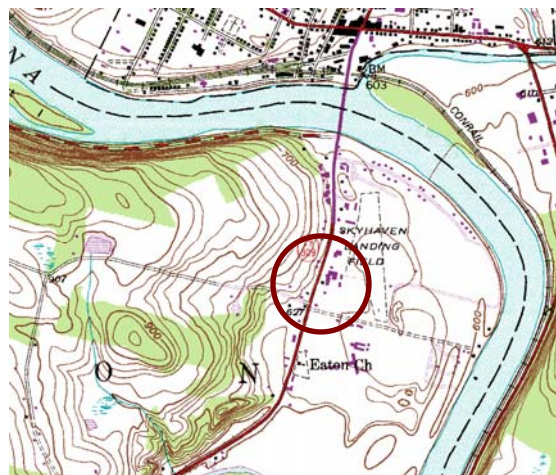




Tunkhannock Area Park & Ride Lot Feasibility Analysis

#5 – Parking Lots at Mr. Z's and Wal-Mart

Mr. Z's and Wal-Mart are two large suburban retailers located south of Tunkhannock Borough in Eaton Township along PA 29. Both retailers have large parking areas that are used by both commercial patrons and commuters. As FHWA's Congestion Mitigation and Air Quality (CMAQ) program does allow for the leasing of existing spaces as part of its program of eligibly-funded projects, these sites are included as part of this analysis.



Pros:

- ✓ Adequate capacity sites
- ✓ Wide throat, easier access for transit vehicles
- ✓ Relatively close location to Tunkhannock CBD
- ✓ Existing pavement structure is provided
- ✓ Adequate lighting
- ✓ At or near existing informal park and ride activity
- ✓ Spaces can be leased with CMAQ funds
- ✓ Wal-Mart: Signalized traffic control for ingress/egress (no issues with site distance)

Cons:

- ✓ Unsignalized traffic control for ingress/egress
- ✓ Pedestrian safety in an already busy/highly used parking area
- ✓ Privately-owned
- ✓ Pedestrian/patron conflicts
- ✓ No radial highway orientation
- ✓ Further from activity center than congestion bottleneck (located along an identified congested corridor)
- ✓ Mr. Z's: No signalized traffic control for ingress/egress
- ✓ Wal-Mart: Periodic Farmer's Market pedestrian conflicts



Estimated Cost to Construct (each):

\$47,000

Tunkhannock Area Park & Ride Lot Feasibility Analysis



#6 – Intersection of PA 29 and SR 3003

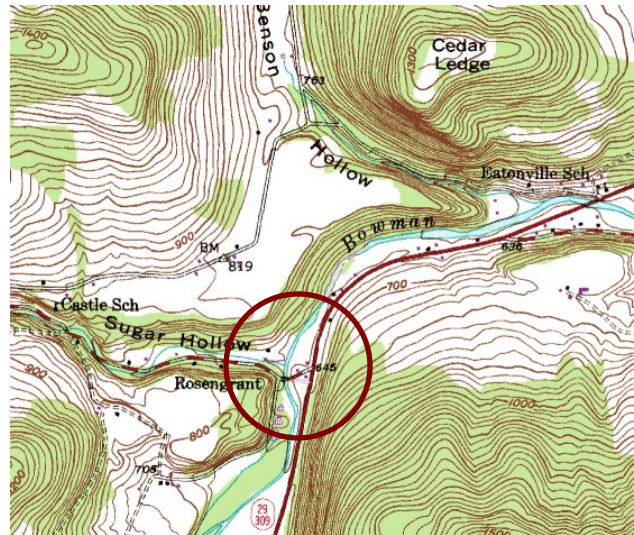
This privately-owned site is located approximately 3 miles south of Tunkhannock Borough at the southwestern quadrant of the intersection of PA 29 and SR 3003 in Eaton Township near the Village of Rosengrant.

Pros:

- ✓ Adequate capacity site

Cons:

- ✓ Unsignalized traffic control for ingress/egress
- ✓ Poor site distance
- ✓ Environmental constraints (floodplain)
- ✓ Would require a significant amount of fill
- ✓ Installation of subsurface “special draining” required
- ✓ Access onto PA 29 is in an area with speeds in excess of 45 MPH
- ✓ No community integration (Tunkhannock CBD is 3 miles to the north)
- ✓ Safety and security concerns (vandalism and theft)
- ✓ No radial highway orientation (does not capture workers using US 6, etc.)
- ✓ Privately-owned



Estimated Cost to Construct: **\$745,000**



Tunkhannock Area Park & Ride Lot Feasibility Analysis

#7 – Intersection of PA 29 and PA 292

This site includes a parcel at the northeast corner of PA 29's intersection with PA 292 at the Eaton Township/Washington Township line. The site has been flooded in recent months by Bowman's Creek. Eaton Township is attempting to purchase the site (including 8 homes) using PEMA funds. There would still be a dwelling or two remaining on the site.

The site is approximately 6 miles south of Tunkhannock

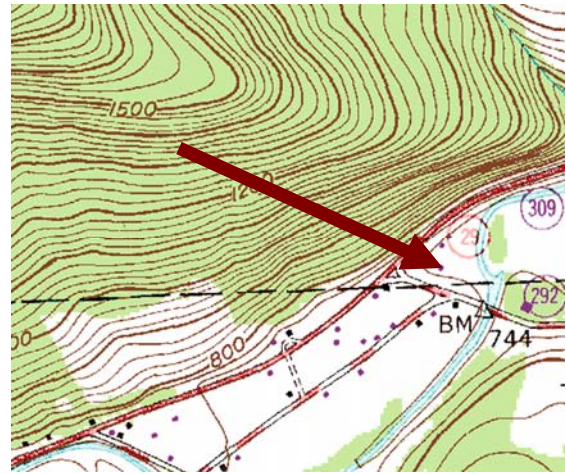
Pros:

- ✓ Adequate capacity site

Cons:

- ✓ Unsignalized traffic control for ingress/egress
- ✓ Poor site distance
- ✓ Environmental constraints (floodplain)
- ✓ Would require a significant amount of fill
- ✓ Installation of subsurface "Special Draining" required
- ✓ Privately-owned
- ✓ No radial highway orientation (does not capture workers using US 6, etc.)
- ✓ Safety and security concerns (will require lighting)
- ✓ No community integration (Tunkhannock CBD is 6 miles to the north)

Estimated Cost to Construct: **\$745,000**



Tunkhannock Area Park & Ride Lot Feasibility Analysis



**Table 14: Evaluation Criteria
Candidate Sites**

Criterion	Description	Tioga West	Harding Street	Dietrich Theatre Area	US 6 at Tunk Creek	Mr. Z's/Wal-Mart	PA 29 @ SR 3003	PA 29 @ PA 292
Public/Private Ownership		Private	Public	Private	Public	Private	Private	Private
Capacity	Ability to accommodate 25 spaces	Excellent	Fair	Excellent	Excellent	Good	Good	Good
Environmental	Presence of environmentally sensitive impediments	Excellent	Poor	Poor	Poor	Good	Poor	Poor
Ingress/egress	Ease in accessing the site	Excellent	Fair	Poor	Good	Good	Fair	Fair
Adjacent to Primary Arterial	Accessibility to major commuter corridors	Good	Excellent	Excellent	Good	Good	Poor	Poor
Community Integration	Joint use potential	Fair	Good	Excellent	Fair	Fair	Poor	Poor
Safety/Security	Real and perceived safety	Good	Good	Good	Fair	Good	Poor	Poor
Near Existing Informal Park and Ride Activity	Adjacent to ad hoc park and ride areas	Good	Excellent	Excellent	Poor	Good	Poor	Poor
Transit Accommodation	Lot geometrics favor transit	Excellent	Poor	Poor	Good	Good	Good	Good
Cost/Benefit Analysis ¹¹		\$48,000	\$97,000	\$739,000	\$745,000	\$47,000	\$745,000	\$745,000

¹¹ Estimates assume capacity for a turnaround and a bus shelter



Tunkhannock Area **Park & Ride Lot Feasibility Analysis**

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Tunkhannock Area
Park & Ride Lot Feasibility Analysis



