Investment Criteria

With this update of the LRTP, the Northern Tier took its first steps towards formally identifying project selection criteria.

As transportation funding becomes even more constrained, it is important that the Northern Tier begin developing a project evaluation and selection process that reflects the regional priorities of the Regional Strategy and Action Plan (page 3).

As larger investments (such as the modernization of US 15) have been completed (and thus removed from the program), the potential will be greater for smaller (read: more numerous) projects to complete with one other for position on the region's transportation program.

The LRTP advances the following priority selection criteria for further development and use in developing future transportation plans and programs.

1. System Preservation
2. Safety
3. Intermodalism
4. Economic Development
5. Environmental/Energy
6. Public/Private Partnerships
7. Goods Movement
8. Security
9. Improving Operations of Existing Facilities

Rural Transportation Advisory Committee Members

State, regional, and local decision makers participate in technical advisory committees and policy committees which identify issues and opportunities, conduct studies and offer informed recommendations for programming and implementing transportation projects. The advisory and planning committees are charged with evaluating all aspects of transportation planning, including highway, bridge, transit, rail, bicycle, and pedestrian issues. For the Northern Tier, an 18-member "Rural Transportation Advisory Committee" (RTAC) fulfills this obligation.

Donald Abrey
Chairman, Bradford County Airport Authority
Leon Allen
Susquehanna County Commissioner
Brian Baker*
Regional Planning Assistant
Richard J. Biery*
Regional Program Manager
Marie Bishop
PennDOT District 4-0
Michael Castellano
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Fred LaVancher
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NORTHERN TIER
Regional Planning & Development Commission

LRTP
Long Range Transportation Plan
2009-2035

A component of the Regional Strategy & Action Plan

Executive Summary
to be adopted September 2008

northern tier regional planning & development commission

A Report Card of Progress

Northern Tier's investments have been guided over the past four years by the Northern Tier Regional Planning and Development Commission's 2004 Long Range Transportation Plan (LRTP).

To track progress, NTRPDC has kept a scorecard of actions completed since adopting its previous plan. The organizing principle for the 2004 plan was a "corridors-based" approach to transportation planning which was introduced by PennDOT's LRTP (*PennPlan*) at that time. The Northern Tier became the first planning partner in Pennsylvania to adopt the corridor-based approach.

Federal transportation policy in 2004 used seven "planning factors". These broad-based planning factors were tailored for their applicability to the Northern Tier and used in establishing regional transportation policy.

A summary of the region's accomplishments in recent years are highlighted here as part of this abridged "Report Card of Progress."

Northern Tier Accomplishments by Planning Factor

1. Economic Viability

- NTRPDC received federal funding for the construction of two access roads: Oliver Road in Susquehanna County and Road C in Bradford County.
- The Athens River bridge project provided access to a Keystone Opportunity Expansion Zone (KOEZ) and opened an old property for redevelopment.
- The Ulster River bridge was reconstructed in direct response to a key industry cluster requesting higher weight limits.

2. Safety and Security

- The region received safety corridor initiative funding to review corridors of regional significance.

3. Accessibility and Mobility Options for People and Freight

- Mobility analyses with recommended improvements were conducted in sub-areas throughout the region, including the Elmira Street corridor in Athens Township, and Greater Mansfield area. A mobility analysis is underway in Wellsboro borough.
- A new terminal and maintenance building were constructed at Bradford County Airport.

4. Environment, Energy Conservation and Quality of Life

- A four-county Greenway Plan is scheduled for SFY 09.
- Park and rides are completed or are being developed at Blossburg, Lawrenceville, Mansfield and Tunkhannock.
- NTRPDC staff has served on statewide initiatives aimed at linking planning with the evaluation of environmental impacts.
- Streetscape projects were completed in Factoryville, Great Bend/Hallstead, Laceyville, Towanda, Troy and Tunkhannock.

5. Transportation Connectivity

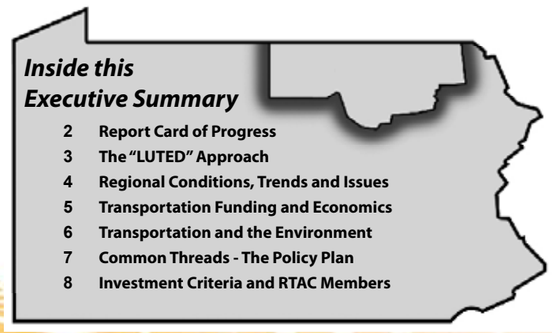
- NTRPDC lead the development of a Local Coordinated Plan for human service transportation.
- The Commission continued to coordinate with NYSDOT on improvements to US 15 and the associated impacts to the Twin Tiers.
- Efforts continue with rail freight shippers and operators to identify connectivity issues.

6. System Management and Operation

- The region adopted a Regional Operations Plan (ROP).
- Monitored growth in freight volumes on the Canadian Pacific rail line (CPR).
- NTRPDC worked with PennDOT a Bridge Management System for the region's local bridges.

7. System Preservation

- NTRPDC continues to plan for airport improvements in relation to the state system plan.
- Continued emphasizing system preservation projects: a significant majority of the region's transportation program is devoted to this, particularly bridge rehabs and replacement projects.



Inside this Executive Summary

2 Report Card of Progress
3 The "LUTED" Approach
4 Regional Conditions, Trends and Issues
5 Transportation Funding and Economics
6 Transportation and the Environment
7 Common Threads - The Policy Plan
8 Investment Criteria and RTAC Members

Common Themes - LRTP Policy Plan

Through the LUTED process discussed on page 3, there are six themes, or "common threads" that emerged in guiding the region's transportation, land use, and economic development policies. The transportation policies and projects being advanced by this LRTP update were shaped by these six goal areas. The LRTP policy plan is highlighted below The complete content is featured in the LRTP document. It addresses transportation's strategic role with specific actions that relate to mobility and accessibility, as well as in land use management and economic development.

1. Expand regional economic opportunities supporting agriculture, manufacturing, health care, and travel and tourism.

A. The Northern Tier Rural Transportation Advisory Committee, as the technical arm of the RPO, should develop project selection criteria that support this goal. This should be in place before the 2009 TIP is updated.

2. Improve infrastructure, supporting mobility, economic growth, and quality of life improvements.

A. The Northern Tier should develop a Bridge Management System for improving and expediting the delivery of local bridges.

B. The RPO should continue to program projects that address system preservation and preventive maintenance needs to prevent more costly rehabilitation or construction work.

C. Reduce the growing backlog of structurally deficient bridges to meet a state target of 10 percent (structurally deficient by deck area).

D. The Northern Tier should continue to work with its partners at the Endless Mountains Transportation Authority (EMTA), Susquehanna County Transportation and PennDOT's Bureau of Public Transportation to advance the strategies identified in the Local Coordinated Plan.

E. Monitor the region's rail freight network to ensure needed long term capacity and operability.

F. Advance improvements to the region's airports in support of corporate travel, pilot training, and tourism.

G. The Northern Tier should collaborate with PennDOT Districts 3-0 and 4-0 to implement the recommendations of the respective Regional Operations Plans.

H. Northern Tier staff should periodically meet with both PennDOT districts to evaluate crash cluster locations. Continue to support the development of a regional greenways plan over the next few years.

I. Work with partners such as EMTA, municipalities and major employers, identify areas with congested bottlenecks or areas where there is demonstrable need for park and ride facilities.

J. Work with the region's municipalities to identify projects appropriate for bicycle/pedestrian-related improvements through such programs as Transportation Enhancements, and the state and federal Safe Routes to School program.

Common Themes - Goal Areas for Implementation

1. Expand regional economic opportunities supporting agriculture, manufacturing, health care, and travel and tourism.
2. Improve infrastructure, supporting mobility, economic growth, and quality of life improvements.
3. Improve human resource development through the promotion and support of healthy lifestyles, education, training and workforce development.
4. Integrate land use, transportation and economic development programs region-wide.
5. Develop a unified regional identity and promotion.
6. Improve municipal cooperation and governance.

3. Improve human resource development through the promotion and support of healthy lifestyles, education, training and workforce development.

A. Increase awareness of the availability of LTAP training (Local Transportation Assistance Program) for municipal officials for roadway maintenance concerns.

B. Establish innovative pilot projects such as the Safe Routes to School grant initiative in Wellsboro.

4. Integrate land use, transportation and economic development programs, and region-wide.

A. Continue to identify areas similar to Athens Township, Mansfield, and Wellsboro where "LUTED-type" studies have been performed, linking the various aspects of land use, transportation and economic development.

B. Strengthen the integration of planning and NEPA through ongoing collaboration with Agency Coordination Meeting (ACM) members on the LRTP's project portfolio and individual project development.

5. Develop a unified regional identity and promotion.

A. Pursue projects aimed at enhancing gateways into the region, particularly on higher-order National Highway System (NHS) routes such as US 6, US 15, US 220, and I-81. This action should be performed as part of a broader regional promotion strategy.

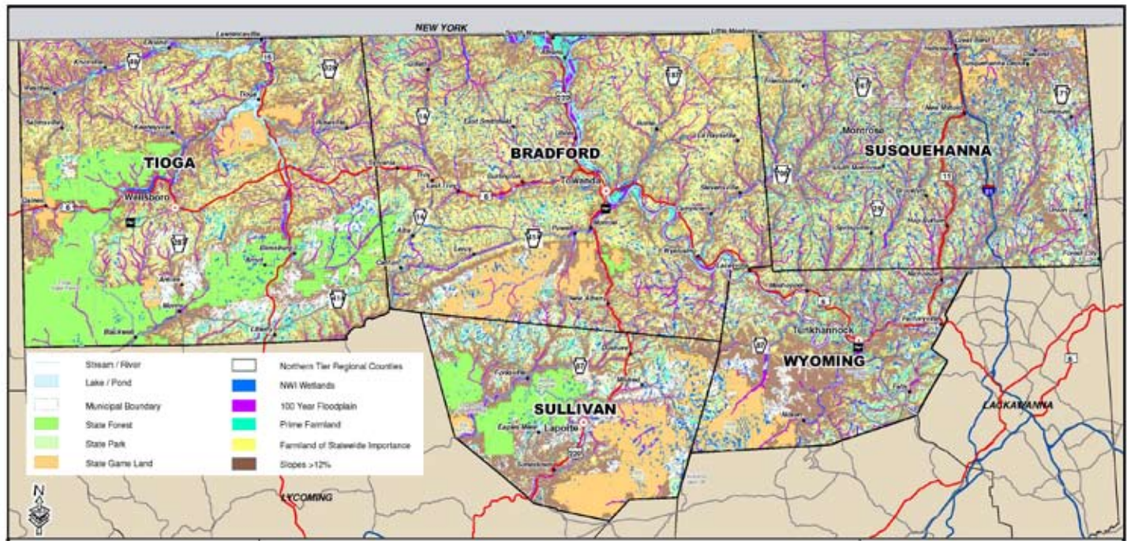
6. Improve municipal cooperation and governance.

A. Northern Tier should encourage its member municipalities in avenues for municipal cooperation through the development of joint maintenance agreements, sharing of equipment and services, and bid lettings, just to name a few opportunities.

Much has been made of the need to streamline the delivery of new transportation projects from planning to construction. One means of streamlining this process is to provide better information at early stages of project development to inform state and federal resource agencies of the environmental resources within the vicinity of a proposed project. This involves a statewide process known as "Linking Planning and NEPA," or the National Environmental Policy Act.

Historically, NEPA-related analyses were performed independent of long range transportation planning or TIP development. This evolving process will benefit the region from increased coordination between Northern Tier, PennDOT, regulatory and resource partners. The transportation plan includes a summary and assessment of the region's land use, particularly its environmentally sensitive lands (table and map).

From a land use management perspective, many of the region's local municipalities are not guided by a comprehensive plan, let alone zoning or subdivision and land development ordinances. State enabling legislation empowers communities to adopt and enforce various plans and ordinances, yet in our region, fewer than half (82) even have a local planning commission or a comprehensive plan (78). Local zoning and subdivision ordinances are even less common. Over the long term, a lack of adequate land use planning and management tools is costly to the local municipality and to the region as a whole.



Summary of Environmentally Sensitive Land (in acres)
Northern Tier

	Bradford	Sullivan	Susquehanna	Tioga	Wyoming	Northern Tier
Floodplains	42,544	7,221	29,990	30,710	17,692	128,158
Prime Farmland	64,141	16,355	61,974	52,491	22,813	217,775
State Forests	25,160	43,327	0	139,674	0	208,161
State Game Lands	54,857	64,472	14,190	25,412	29,425	188,355
State Parks	1,310	2,562	397	1,297	0	5,566
Steep Slopes	346,913	138,784	273,572	393,683	138,576	1,291,528
Wetlands	20,492	7,817	19,774	11,571	12,849	72,502

Source: Northern Tier GIS

Background and Overview

The Northern Tier Regional Planning and Development Commission has a proud history of pioneering new approaches to transportation planning.

In 2004, the Commission was the first in Pennsylvania to adopt a corridors-based plan. An assessment of 15 corridors of regional significance, coupled with extensive public and stakeholder participation, yielded corridor-specific recommendations for improved mobility and safety. A report card on the implementation of this approach phase is summarized on page two of this executive summary.

Since 2004, the Commission has administered several local studies that address transportation's integral role with land use management in community and economic development. Such studies in Athens Township in 2006 and the greater Mansfield area the following year demonstrated transportation's role in promoting not only mobility, but the local economic potential.

This integrated approach was most recently used at a regional level for the development of the 2009-2035 Long Range Transportation Plan (LRTP). The LRTP was updated at the same time the Commission was updating its Comprehensive Economic Development Strategy, or CEDS. Together, the recommendations from the CEDS and the LRTP form what is known as the Regional Strategy and Action Plan (graphic).

The LUTED Framework

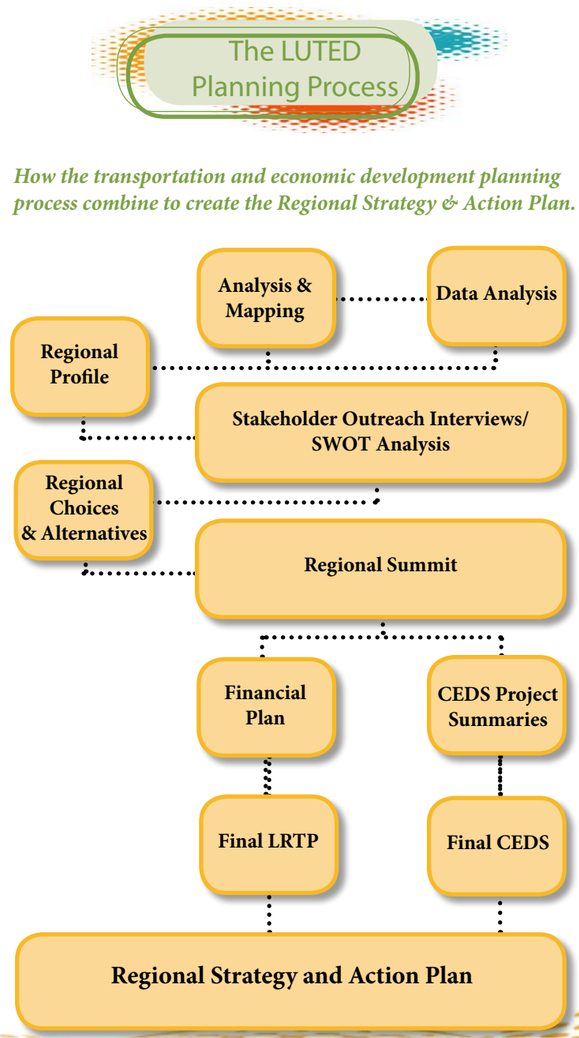
Because the development process for the Regional Strategy and Action Plan combined land use, transportation, and economic development factors, the process is known as LUTED. The LUTED process facilitated the coordination of priorities to achieve meaningful strategies for sound growth management. These strategies will support incremental decision-making by land use, transportation and economic development entities at a regional scale.

The process included extensive outreach and collaboration with major stakeholders from all five member counties, a Project Advisory Council (PAC) and the Commission's Board of Directors and staff. The Commission hosted a Regional Summit in February 2008 to bring these parties together for the development/refinement of the coordinated strategies.

More Progressive, "Big Picture" Thinking

Beyond the LRTP, CEDS and Regional Strategy and Action Plan, the Commission continues to enhance its understanding of the various interrelationships among natural resources, manmade infrastructure and sustainable growth. The Scenic (Transportation) Corridors Inventory identifies the primary network of travel routes with potential for enhancement, interpretation, and even preservation of the visible resources and landscapes that define the Northern Tier Region. The LDD Pilot Survey and Preservation Plan has provided the first detailed field inventory of potentially historic structures and significant landscapes in our region; it aims to stimulate further inventory and preservation planning at the local level by providing baseline data and identified preservation opportunities for the primary scenic network. Furthermore, the Commission's forthcoming Strategic Conservation Plan will frame its goals for sustainable community and economic growth in the context of sensitive natural resources and cultural values.

After the adoption of this LRTP in September 2008, the plan will be used by the Commission and its affiliates to program projects and initiatives, including the bienniel update of the Transportation Improvement Program (TIP), annual Unified Planning Work Program (UPWP), PennDOT District Business Plans, and others.



How the transportation and economic development planning process combine to create the Regional Strategy & Action Plan.

A Well-Maintained and Expansive Roadway Network

The Northern Tier's roadway network serves as the backbone of its transportation system. There are 7,700 linear miles of roadway to be maintained and operated across the five-county region. This constitutes nearly 6.5 percent of the statewide total. Roadway surface conditions on higher-order roadways such as the National Highway System (NHS) are in either "excellent" or "good" condition. However, more than one-fifth of the region's lower-order roadways (such as four-digit SRs) are considered to be in "poor" condition. Tioga County has a large, 200-mile network of roadways owned by "Other Agencies", ranking fifth among all Pennsylvania counties.

Structurally Deficient Bridges

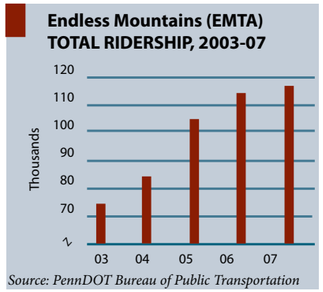
Much attention is being paid to the growing problem of bridge conditions both here in Pennsylvania and across the nation. In the Northern Tier, bridge conditions are better compared to other areas of the state, yet still lag state targets for suitable conditions. Currently, the region has 382 state-owned structurally deficient bridges, representing 17 percent of all bridge deck area. This is 7 points higher than the statewide goal of 10 percent.

The problem is even greater at the local level, where 30 percent of all locally-owned bridges (greater than 20 feet in length) are considered to be structurally deficient. Over half of all funding in the region's 2009 TIP is devoted to addressing bridge conditions.

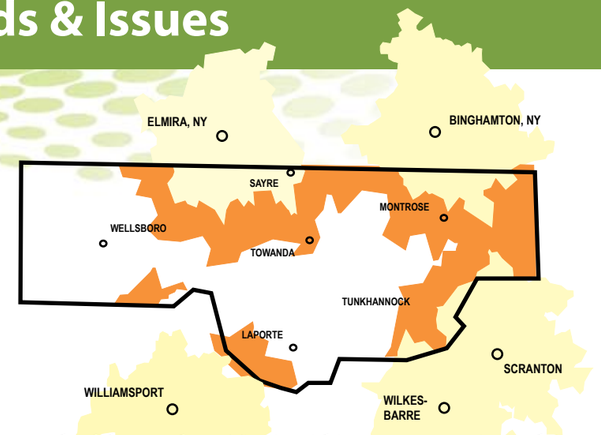
Public Transportation Challenges in a Rural Region

The region's decentralized rural nature, coupled with a growing dependent population (those under age 18 and over 65) makes the delivery of human service public transportation services challenging. Consumers point to a myriad of confusing programs with a corresponding lack of information and guidelines, limited service availability (especially on weekends), while operators point to a need for improved infrastructure and changing demands for services (e.g., long-term care populations, etc.).

Endless Mountains Transportation Authority (EMTA) continues to experience year over year increases in ridership on its fixed-route services. Since 1996, total ridership has nearly tripled, to over 114,000.



Source: PennDOT Bureau of Public Transportation



Much of the Northern Tier is within a 30 to 45-minute drive time (areas shaded in yellow and orange, respectively) of five major surrounding economic centers. Commuting is more pronounced in Susquehanna and Wyoming Counties, where only half of resident workers are employed within the county of residence.

Laborshed Defines Worker Commuter Patterns

The Northern Tier's position among five medium-sized economic centers defines its laborshed and affects worker commuting patterns. A majority of the region's workers are within a 30- or 45-minute drive of one of these centers (graphic).

Moreover, the region has more workers than jobs. All five counties have a net labor outflow. Among Pennsylvania counties, Wyoming and Susquehanna Counties have among the highest percentages of resident workers commuting outside the county of residence for employment.

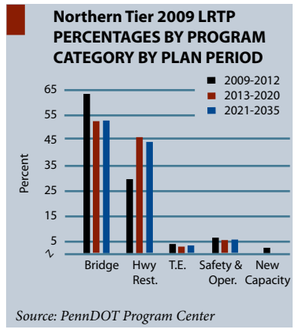
Growing Reliance on the Private Automobile

The region is more reliant than most on the private automobile. Nearly 90 percent of journey to work trips are by private automobile - nearly 78 percent drive alone. Single occupant vehicle commuting increased by 6 percentage points during the 1990s. In the decade ending 2005, all but one Northern Tier county (Wyoming) experienced growth in the number of registered vehicles in excess of the state rate of 18 percent. Daily Vehicle Miles of Travel, or DVMT, has also increased by 11 percent since 1995.

Background/Overview

The Federal Highway Administration requires that long range transportation plans be financially constrained, meaning that the plan must demonstrate the amount of funding that the region can reasonably expect to receive over the life of the plan. For the 2009-2035 period, the Northern Tier can expect to receive a total of $2.03 billion from state and federal sources. Nearly $221 million of this total will be available over the first four year period, which is also known as the TIP, or Transportation Improvement Program.

There are a multitude of demands for a limited amount of financial resources. Because of this, the region's project mix has evolved into a portfolio that has a higher share of projects that address structurally deficient bridges and system preservation projects (chart). This is especially true, now that the capital-intensive US 15 project is nearing completion through Tioga County. There are no major capacity adding projects in this plan beyond the TIP period.



Source: PennDOT Program Center

The Planning Context

During this plan's development, there were several significant factors in play affecting the near-term future of available transportation funding:

- Gasoline prices continued to rise nationally and in May 2007 reached historic highs, even when factoring for inflation. Rising costs have caused changes in driving habits and could conceivably impact the federal Highway Trust Fund, which is projected to be depleted by October 2008.
- In July 2007, the General Assembly passed and Governor Rendell signed Act 44. The act represented landmark legislation for Pennsylvania, increasing the amount of capital funding available for public transportation infrastructure. The act also overhauled the structure of public transportation's many grant programs.
- In February 2008, Governor Rendell announced a special initiative to rebuild Pennsylvania's infrastructure. This includes a 10-year program to rebuild deficient bridges through the issuance of bonds. This translates into an extra $33 million for Northern Tier bridges through 2019.
- In October 2009, successor federal transportaton legislation to SAFETEA-LU should be under consideration.

New forecasting requirements also dictated that not only future revenues, but project costs be adjusted for inflation. This new requirement, known as Year of Expenditure, puts a tighter focus on both inflated revenues and estimated project costs. Federal highway and bridge funds were inflated 4 percent annually, while state highway and bridge funds were inflated at a rate of 1.5 percent through the year 2035.

Highway and Transit Revenue Estimates (Federal and State)
In Thousands

	TIP 2009-2012 (actual)	Mid-Range 2013-2020	Long Range 2021-2035	Total 2009-2035
Highway	$220,911	$498,928	$1,318,024	$2,037,863
Transit	$3,232	$7,258	$18,298	$28,788

Source: PennDOT Financial Guidance

Air Quality Conformity

The region's air quality conformity status changed slightly during the development of the 2009 plan. Susquehanna County joined Tioga County as a "maintenance area" for air quality monitoring purposes. The new status ushers Susquehanna County into eligibility for "CMAQ" funds, or funding for projects that address Congestion Mitigation and Air Quality. These funds will be available to the two counties over the next 20 years. CMAQ funds are typically used for projects like park and ride lots (such as the ones proposed in Tunkhannock and Mansfield), signal timing coordination, and public transit advertising for operators like EMTA.

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Executive Summary

1. *Why do we need an updated plan?*

Long-range transportation plans consider our priorities as a region over a minimum of 20 years. The region's previous plan was adopted in 2004 and has been successfully implemented to varying degrees (see report card). By revisiting the previous plan and engaging our regional transportation stakeholders, we can assess where we need to make adjustments to our approaches for addressing our region's most pressing transportation concerns and challenges. In doing so, we make the most of limited transportation funding, and help ensure that each project we identify contributes effectively to "big picture" improvements. Also, long-range transportation plans are a state and federal requirement.

For 2008, our LRTP update was done in concert with a broader, more comprehensive strategy for considering transportation's role within the context of land use and economic development. This process (commonly referred to as "LUTED") provided the framework from which the resulting policies and projects that flowed from this joint process combined to form a Regional Action Strategy.

2. *How was the plan developed?*

The planning process followed state and federal guidance, and involved:

- Assessing the region's current transportation facilities and services.
- Analyzing trends and issues with implications for transportation.
- Articulating a vision, goals, and objectives.
- Identifying candidate projects to help us achieve those goals.

3. *Who was involved?*

This LRTP update was developed in collaboration with residents, business owners, local officials, and other organizations in Bradford, Sullivan, Susquehanna, Tioga and Wyoming counties. The process was guided by Northern Tier's Rural Transportation Advisory Committee (RTAC). Our planning team conducted numerous interviews and focus group meetings (or "Weeds Group" meetings) with those on the front lines of transportation. Our public participation process culminated in a Regional Summit on February 29, 2008. The purpose of the Summit was to reach consensus on investment strategies and projects of regional significance. There was also a 45-day public review and comment period before the updated LRTP was adopted by the Commission's executive committee.

4. *What trends and issues influence transportation decisions?*

There are a variety of trends in play that affect transportation decision-making in the Northern Tier. A few are summarized below:

Demographics: The region's population is declining slightly (down 0.6 percent since 2000) and getting older. Dependent populations (such as those older than age 65) have implications

on transportation, particularly human service transportation. As an example, by 2020 in Tioga County, more than one out of five residents will be older than age 65. Transportation will need to be more efficient, predictable and accessible in coming years.

Commuting: Given the region's position among four economic centers, many of the region's workers commute to counties outside their place of residence for employment. In the case of Susquehanna and Wyoming counties, they rank fourth and fifth respectively among Pennsylvania counties in exporting workers.

Transit: Public transportation ridership has been trending in a positive direction in recent years. Human service transportation however, has become more problematic, with many consumers unable to understand the availability of various programs, lack of evening and weekend service, and institutional issues which make service across county or state lines more challenging.

Infrastructure: The region has more than 7,700 linear miles of state highway and 1,777 state bridges (greater than eight feet in length). Its percentage of structurally deficient bridges is two percentage points lower than the state average, at 21.5 percent. There are 50 structures on the state system that are weight-restricted. Nearly half of these are on lower order roadways in Susquehanna County. There are many competing needs for available resources.

5. *What would we like for our future?*

Through the LUTED process, a series of six themes, or "common threads", emerged in guiding the plan's policies. These included:

1. Expand regional economic opportunities in an economic climate supporting agriculture, manufacturing, health care, and travel and tourism.
2. Improve infrastructure, supporting mobility, economic growth, and quality of life improvements.
3. Improve human resource development through the promotion and support of healthy lifestyles, education, training and workforce development.
4. Integrate land use, transportation and economic development programs region-wide.
5. Develop a unified regional identity and promotion.
6. Improve municipal cooperation and governance.

The transportation policies and projects being advanced by the LRTP update were shaped by these six policy areas.

6. *How can we get there?*

Two primary elements of the Northern Tier LRTP consist of a **policy plan** which provides direction on decision-making, as well as a **project plan** that identifies a range of short-, medium- and long-term project investments.

The plan also includes a list of specific transportation projects that support the region's goals. This list is organized into candidate projects to be pursued in the near-term (2009-2012), mid-

term (2013-2020), and long-term (2021-2035). Projects to be executed in the next four years that qualify for federal funding comprise the Transportation Improvement Program, or TIP. The resources are projected at $2.066 billion over the life of the long-range plan.

In accordance with state and federal guidelines, the list of candidate projects is "fiscally-constrained," meaning that the total cost of listed projects matches the amount of funding we can reasonably expect over the planning period.

7. *What happens next?*

Implementation will now begin, which will include addressing the implementation actions and using the plan in the next update of the transportation improvement program (TIP).

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Background/Introduction

The Northern Tier Regional Planning and Development Commission Long Range Transportation Plan is aimed at maintaining an efficient transportation system and providing a direction for the region's future over a 25-year time frame. The plan includes near-term projects and mid- to long-range strategies to advance progress toward long-range goals for the region's transportation system.

The Long-Range Transportation Planning process comprises three main steps:

- **A transportation system profile** – an inventory of transportation facilities and an assessment of its capacity to serve its users; this includes historic and forecasted user demand of the transportation facilities and a discussion of key trends and issues impacting transportation demand in the region.
- **Direction-setting** – an identification of common threads or themes that will guide the region's decision-making as it relates to transportation investments and policy-making.
- **A transportation plan** – a prioritized list of project investments to be funded and programmed through local, state, and federal agencies.

The long-range transportation plan has been developed in accordance with the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) passed by Congress in 2005, and federal transportation planning regulations published in February 2007.

While the federal requirements for Metropolitan Planning Organizations (MPOs) do not formally extend to Rural Planning Organization (RPO) long-range plans, Pennsylvania's RPOs (including Northern Tier) have signed memorandums of understanding with PennDOT which hold them to the same standard as MPOs. Northern Tier works with the Pennsylvania Department of Transportation (PennDOT) as the regional agency responsible for transportation planning and programming. It works in collaboration with representatives from county government (elected officials and planning department staff), transit authorities, aviation, rail and trail organizations, business and industry (including tourism), as well as state and federal transportation agencies. The Northern Tier's Rural Transportation Advisory Committee also functions as a technical planning committee, and meets at regularly scheduled intervals.

The Northern Tier region includes the five counties of Bradford, Sullivan, Susquehanna, Tioga and Wyoming. The Commission serves as the staff support for the RPO and works closely with various partners at all levels of government for the ongoing planning, maintenance, and operation of the region's multimodal transportation system. The region has

Figure 1: Northern Tier's geographic position within northeastern Pennsylvania

many transportation challenges to address, including a large highway network of over 7,700 linear miles and an aging bridge inventory of over 1,770 state and 331 local bridges[1]. The region's other modes, such as aviation, rail freight and public transportation also face unique challenges.

The long-range transportation planning process is all about making the best possible choices. The Long-Range Transportation Plan (LRTP) is intended to introduce the options before us as a region, and to facilitate a dialogue regarding those choices. This document:

- presents an overview of the most significant trends and issues affecting transportation in Pennsylvania's Northern Tier;
- presents common themes as an organizing principle for future transportation decision-making;
- underscores the need for our transportation decisions to support land use, community, and economic development;
- presents a financial plan, consistent with state and federal transportation regulations that require long-range plans to be fiscally constrained and determined by Year of Expenditure;
- provides a listing of projects from the 2009 TIP, as well as longer-range candidate projects to be considered in later years; and
- meaningfully sets the stage for implementation.

The LRTP recognizes that there will always be more candidate projects than there are resources to improve and maintain the region's multimodal transportation system. The need for thoughtful transportation planning becomes even more acute in this era of limited financial resources.

The LRTP was developed with input from a plan advisory committee, transportation stakeholders from county meetings, telephone interviews, "weeds group" meetings, and a Regional Summit in February 2008 that established the region's draft investment criteria and transportation strategies.

The LRTP is organized into several sections, as follows:

- A report card that in effect monitors and reports how well the region has been faring in implementing its 2004 LRTP;
- A profile of the region's transportation conditions, trends and issues;
- The LRTP's methodology – including public and stakeholder involvement process;
- Plan directions, including the six common threads, or themes in guiding future policy making and project selection; and
- The 2009-2035 Project Plan (see Appendix A).

[1] These include state bridges greater than eight feet in length and local bridges greater than twenty feet in length

Accomplishments since 2004: A Report Card of Progress

As part of measuring and monitoring progress, NTRPDC has kept a running track of actions completed since the adoption of the previous LRTP in 2004.

The Northern Tier's 2004 LRTP was organized around two principles. The first was the federal planning factors as espoused by TEA-21, the previous federal transportation funding bill. The second principle was the corridors-based approach as introduced by PennDOT during the development of "PennPlan," the statewide long range transportation plan. The Northern Tier was the first planning partner in Pennsylvania to adopt this planning methodology in identifying 15 corridors of regional significance. Accomplishments by corridor are also noted within this report card.

Federal Planning Factor #1 – Economic Viability

NTRPDC Related Planning Considerations Overview - As a rural area, our region sees multimodal transportation as a key to promoting economic development, it is especially important that our region remain connected to key markets.

Action Strategy	Outcome
Target transportation improvements to serve Keystone Opportunity Zones and other existing economic generators.	NTRPDC sought and received ARC money for the construction of two access roads: Oliver Road in Susquehanna County, and Road C in northern Bradford County.
Continue to monitor interest in the region's KOZ sites with respect to private sector interest and potential redevelopment options.	NTRPDC always monitors this as an ongoing program area.
Advance transportation projects that take advantage of Brownfield reuse and other similar opportunities.	The Athens River bridge project provided access to a Keystone Opportunity Expansion Zone (KOEZ) and opened property up for redevelopment in Bradford County.
Continue working closely with key industry clusters like Blue Stone manufacturers to ensure that their transportation needs are being met.	One example includes the Ulster River bridge project, which was done in direct response to a key industry cluster requesting higher weight limits (and school bus safety) so a shipper could access a concrete block plant. The bridge reopened to traffic in late summer 2007.
Advance improvements to regional airports in support of goods movement and general/corporate aviation service.	NTRPDC staff has leadership on the state advisory committee.
Monitor changes in Class 1 Railroad service.	This is an ongoing area of program activity for NTRPDC. Staff is Vice-Chairman of the state's Rail Freight Advisory Committee.
Upgrade any bridges that pose as bottlenecks to regional shipping needs.	Several accomplishments under this strategy include the aforementioned bridges at Ulster and Athens, as well as the Franklin Forks

Action Strategy	Outcome
	bridge.
Support the financial backing of short lines; including regional advocacy for proposed Rail Freight and Capital Assistance Grants before the State Transportation Commission, the General Assembly, and PennDOT.	NTRPDC staff reviews and comments on RFAP grant applications on an ongoing basis.
Use TeamPA interview output as one means of determining regional shipper needs and requirements. TeamPA data includes employer transportation issues and needs.	Performed on an ongoing basis.
Use the new Welcome Center in Tioga for tourism and related economic development efforts – support the development of new Visitor Information Centers in the I-81 and US 220 (Muncy Valley) corridors as needed.	Since 2004, a new Visitor Information Center has been constructed in Susquehanna County along the I-81 corridor. A similar facility for the US 220 corridor does not look likely at the present time.

Federal Planning Factor #2 – Safety And Security

NTRPDC Related Planning Considerations Overview - Working with PennDOT, the RPO will continue to consider safety and security as primary planning factors in all planning and programming activity. It will also remain as a focal point for current and future public involvement activity.

Action Strategy	Outcome
Consider PennDOT Crash data and trends in TIP and LRP development and updates.	The region received safety corridor initiative funding for review of our corridors of regional significance.
Increase police enforcement in corridors where high speeds have been documented, such as PA 29 and US 220 through Ulster Township.	As a predominantly local issue, NTRPDC does not have much purview over this.
Expansion of regional bicycle-pedestrian committee activities through "Walkable Audits" and other planning techniques to assist NTRPDC in the identification of improved bike-ped improvements including maintenance related (e.g., shoulder paving and clearing). Update a Bicycle-Pedestrian action plan for the region with the PennDOT District Bike-Ped Coordinator and stakeholders.	NTRPDC has led mobility analyses for two sub-areas in the region, including Elmira Street in Athens Township, Bradford County, and in Mansfield, Bradford County. A third such study in Wellsboro is currently under way.
Continue to monitor all security related planning guidance from Homeland Security, FEMA, FHWA, PennDOT, and PEMA.	This is performed on an ongoing basis.
Participate in District ITS planning activity.	The region recently adopted a Regional Operations Plan (ROP).

Federal Planning Factor #3 – Accessibility And Mobility Options For People And Freight

NTRPDC Related Planning Considerations Overview - These are factors that are core to this LRTP and to ongoing planning activity.

Action Strategy	Outcome
Remain in active leadership roles in state rail freight and aviation advisory committees. Strive to host a future RFAC annual conference in a Northern Tier venue to showcase the region's rail assets and directions.	The region has maintained leadership roles in both state-level advisory groups and has actively marketed the region as a potential Rail freight seminar destination.
Consider opportunities to expand participation in Persons with Disabilities Statewide Expansion Program.	NTRPDC recently developed a public participation plan which has been reviewed, approved and adopted with FHWA's concurrence. A copy resides in the appendix of this LRTP.
Consider the establishment of an RPO Goods Movement task force with the active involvement of regional shippers and carriers.	This strategy has been considered, but not accomplished. It remains under advisement.
Identify areas in the region where other intermodal facilities are needed or could be constructed.	There is the potential for a transload facility for stone and concrete in Susquehanna County.

Federal Planning Factor #4 – Environment, Energy Conservation and Quality Of Life

NTRPDC Related Planning Considerations Overview - Through this plan, NTRPDC strongly supports further improvements to all modes of transportation in the region that will serve to make our system more efficient and environmentally compatible. The Quality of Life of the Northern Tier counties is one of the greatest assets that we seek to preserve.

Action Strategy	Outcome
Promote the development of Greenways Corridors and Trails.	A four-county greenway initiative is slated to begin in 2008. NTRPDC staff members were active participants in the development of Bradford County's Greenway plan.
Promote use of transit and car-pooling as practicable.	This strategy was accomplished with regard to two facilities: along US 15 in Lawrenceville and in downtown Tunkhannock.
Increase participation in PennDOT preliminary engineering/environmental studies to further bolster key environmental consideration of transportation alternatives.	NTRPDC staff is on the state's advisory committee for Linking Planning and NEPA.
Monitor PennDOT resource opportunities and guidance related to traffic calming and other statewide efforts aimed at community preservation and quality of life.	NTRPDC has performed mobility analyses in three communities.
Expand planning commission's skills and use of emerging transportation and land use techniques.	NTRPDC has encouraged municipalities to adopt tougher access management ordinances.
Encourage major regional employers to get involved in carpool promotion and in such programs as the Welfare to Work initiative with EMTA.	NTRPDC has done on an ongoing basis.
Advance strategies and access state programs and technical resources focused on downtown development and redevelopment.	One example includes the Mansfield Revitalization Strategy and Mobility Analysis, which was completed in September 2007.

Federal Planning Factor #5 – Transportation Connectivity

NTRPDC Related Planning Considerations Overview: NTRPDC promotes the use of all modes in a seamless fashion for the effective transportation of people and goods.

Action Strategy	Outcome
Continue the process to identify any key system disconnects or barriers—physical, regulatory, institutional.	This is an ongoing program activity for NTRPDC.
Focus on needed access and other improvements to the National Highway System and other corridors designated in this Plan.	This is an ongoing program activity for NTRPDC.
Seek funding for development of Intermodal freight transfer facilities.	The Susquehanna County Rail Authority has been involved but had funding pulled from the state Capital Budget.
Provide for improved bike parking and storage in our downtown communities and at tourism attractions.	One example includes the Elmira Street Pedestrian and Bicyclist Mobility Plan of April 2006.
Work with regional airports and railroads to identify connectivity issues on a regular basis.	This is an ongoing program activity for NTRPDC.
Expand marketing efforts of EMTA, especially by working with regional employers as partners—making them aware, for example, of transit benefits to employers.	NTRPDC is making CMAQ funds available in Tioga County as an air quality non-attainment county.
Continue to coordinate with NYSDOT on ongoing improvements to US 15 and the need for bi-state collaboration and cooperation, particularly as it relates to issues as the potential relocation of Bliss Road and other issues.	As of this writing, the first mile is under construction. NTRPDC remains in contact through the ATA and the US 15 coalition. New York has an I-86 Coalition.
Continue to coordinate with NYSDOT and FHWA on forthcoming designation of portions of NY 17 as I-86.	NTRPDC accomplishes this as a voting member of the Binghamton (NY) Technical Committee.
Coordinate with PennDOT regarding the potential placement of US 11 on the BicyclePA network, as well as ongoing efforts with BicyclePA Route J on PA 14.	BicyclePA Route J has been completed. NTRPDC has had no discussions with BHSTE on US 11.
Coordinate with EMTA on planning issues related to their service area.	NTRPDC is leading an effort for mapping EMTA's transit routes as well as leading the development of the Local Coordinated Plan.

Federal Planning Factor #6 – System Management And Operation

NTRPDC Related Planning Considerations Overview - This will largely be a focus in the areas of monitoring state and national trends and determining applicable areas for the RPO.

Action Strategy	Outcome
Participate as beneficial in District Intelligent Transportation System (ITS) activity.	NTRPDC staff participated in the development of a Regional Operations Plan (ROP).
Monitor growth of rail freight volumes, particularly on the strategic CP-Rail line through Susquehanna County and the need for additional passing sidings and signalization.	NTRPDC remains in communication with CPR on this strategy.
Continue to advocate funding assistance through the Rail Freight Assistance Program and the capital budget for the region's shortline railroads.	This is an ongoing program activity for NTRPDC.
Monitor traffic patterns on US 6 through Towanda after the River Street extension project is completed and its effect on signal timing patterns in adjacent municipalities.	Project outcomes have been satisfactory.
Continue to coordinate with NYSDOT on its future plans for NY 328 as an ARC corridor.	This is no longer an ARC corridor.
Monitor the status and utility of the region's existing networks as they relate to the National Highway System, Federal Aid System, functional class and others.	This is an ongoing program activity for NTRPDC.
Consider the development of a Bridge Management System for the region's local bridges.	NTRPDC staff is participating on a statewide task force with PennDOT's Program Center.
With PennDOT, perform a comprehensive analysis of the Highway Performance Monitoring System (HPMS) input.	NTRPDC has since ceded responsibility for traffic counting activities to PennDOT.
Conduct Major Investment Analyses and Cost-Benefit studies as needed on major capital projects.	This was performed on the Wyalusing Bypass project on US 6 and PA 706. The project was subsequently right-sized.
Encourage the Department of Environmental Protection (DEP) to install additional air quality monitoring stations for improved quantitative data in determining air quality conformity.	This strategy is not desired at this time. Tioga County remains CMAQ-eligible for another 20 years.
Promote increased participation in the transportation planning process by minority and low-income groups by inviting them to public meetings at appropriate locations.	NTRPDC's public participation plan was adopted by the RTAC and the executive committee.
Expand on NTRPDC's current website to include additional transportation-related information, including RTAC meeting notices and summaries.	This is currently under development.

Action Strategy	Outcome
Use PennPlan Corridor Profiles as a system-planning tool.	NTRPDC will be using this framework as part of its upcoming safety corridor initiative.

Federal Planning Factor #7 – System Preservation

NTRPDC Related Planning Considerations Overview - The limited state of resources mandates this as a continued major focus.

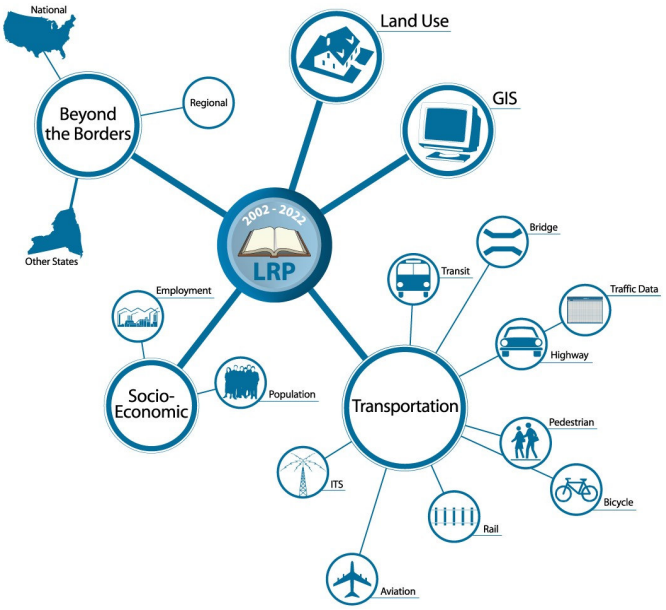
Action Strategy	Outcome
Continue to provide input to PennDOT on regional maintenance and Betterment needs.	This is performed on an ongoing monthly basis at RTAC meetings
Monitor our freight rail network to ensure needed long-term capacity and current operability.	This is an ongoing program activity for NTRPDC.
Work with the new Susquehanna County Rail Authority.	This is an ongoing program activity for NTRPDC.
Continue to plan for airport improvements in relation to new statewide airport system plan.	NTRPDC staff served on the steering committee for the Statewide Airport System plan.

Evaluating Progress on the Corridors of Regional Significance

NTRPDC's 2004 LRTP identified 15 corridors of regional significance as a framework for ongoing transportation planning activity. This sub-section identifies the Commission's accomplishments for each of the 15 corridors identified. The corridors of regional significance were defined by the primary roadway in the corridor, using the municipality as the corridor "building block".

The 15 corridors were centered on the roadways of:

- US 6
- US 11/I-81
- US 15/I-99
- US 220
- PA 14
- PA 29
- PA 49
- PA 87
- PA 167
- PA 171
- PA 187
- PA 287
- PA 328
- PA 414
- PA 706



The corridors and summary of planning activity on each are described in the bulleted statements below.

US 6

- Completed the development of the Mansfield-Richmond-Covington multi-municipal plan and subsequent mobility analyses
- Wyalusing right-sizing and PA 706 project.
- River Street construction and corresponding walking trail in Towanda Borough.
- Central Bradford Comprehensive Plan developed
- Wellsboro Enhancement Strategy and Mobility Plan project planned for a May 2008 kick-off

- Signal pre-emption project planned in Wyoming County
- Studies of US 6 intersection with US 11 in the Factoryville area. The Lackawanna-Luzerne Transportation Study (MPO) is funding the initial study phase. The purpose of the project will be to reconstruct the corridor with accompanying intersection and safety improvements.
- Streetscape projects in Factoryville (being completed), in Laceyville (underway) and in Tunkhannock, Towanda and Troy.
- Addressed a roadway slide/slump just east of Mansfield Borough
- Two bridges: Bardwell Bridge and the Deer Park Lumber Bridge are in design
- Reconstruction from Meshoppen to Black Walnut
- Completed a bicycle/pedestrian improvement project from Meshoppen to Russell Hill, where shoulders were widened and paved
- Realignment of US 6 near Sylvania. (Truck climbing lane project was right-sized.)
- Park and ride feasibility study for the Tunkhannock area
- Improvements made to Claverack Curve at the top of the hill in Standing Stone Township. The project involved a widening and realignment of the curve, as well as an intersection improvement and a new box culvert.

US 11/I-81

- Oliver Road awarded ARC funding at the Gibson interchange of I-81
- Championed an Interstate interchange study on the Gibson interchange
- Some ITS installation is occurring in the corridor with some cameras being installed
- A new Welcome Center was built with TIP dollars. The new facility is located near the state line.
- Championed a study at US 11's intersection with PA 171 in Great Bend
- Most of the US 11 corridor was paved with wider shoulders for bicycle lanes with "Share the Road" signs.
- Streetscape projects for Great Bend and Hallstead Boroughs with new sidewalks.
- A new passing siding was installed on CPRail's strategic rail line.
- Many bridges and paving work completed on I-81.
- NTRPDC is in discussions with CPRail over pending improvements to the Tunkhannock Viaduct. The structure is currently on the Capital Budget for $10,000,000 for rehabilitation.

US 15/I-99

- Mansfield Revitalization Strategy and Mobility Analysis completed in September 2007

- Construction of modernized US 15 is nearing completion in 2008 through Tioga County
- Canoe Camp interchange lighting installation and energization project to be let in June 2008
- A business park is planned for the interchange with US 6
- A park and ride is proposed for placement within the business park
- A new park and ride constructed at US 15's interchange with PA 49 near Lawrenceville

US 220

- Received ARC funds and PennDOT Economic Development funds to construct Road C Valley Business Park access
- Central Bradford Comprehensive Plan completed
- Elmira Street Pedestrian and Bicyclist Mobility Plan completed in April 2006
- New traffic signal in Ulster
- Ulster River Bridge completed
- Athens River Bridge completed
- Chemung River backwater bridge and Norfolk Southern highway overpass will be built in Summer 2008
- Muncy Valley to Sonestone widening will be let for wide loads. It is on the 2009 TIP.
- Reconstructed the Sayre and Towanda bypasses
- Will be repaving Sonestown Mountain
- Betterment project in Laporte
- Transportation Enhancement project in Eagles Mere Borough
- New terminal building and maintenance building for snow removal and grass-cutting equipment at Bradford County Airport.
- Fuel farm relocated from Blue Swan to Bradford County Airport

PA 14

- Troy and Troy Twp multi-municipal comprehensive plan
- Canton Borough/Township and Granville Township multi-municipal comprehensive plan

- PA 14 and US 6 enhancement project with new streetlights, sidewalks and curbs

PA 29

- PA 29 project is still in design where PA 167 and PA 706 intersect in Montrose
- Tunkhannock Area Park and Ride Lot Feasibility Analysis completed August 2007
- Congested Corridor Improvement Program in Eaton Township. A third lane is being constructed with curbing and crosswalks. PennDOT will also reconstruct the intersection with Wal-Mart.
- Tunkhannock streetscape project
- Franklin Forks Bridge and the intersection of PA 309 and PA 29 (flood work).
- Bridge at Sugar Hollow rehabilitated
- Bridges in Noxen currently in design and will be rehabilitated

PA 49

- Some bridge painting and bridge rehabilitation work
- Aforementioned park and ride at the (new) interchange with US 15

PA 87

- Reconstruction projects from Forksville to nearly the county line.
- Betterment projects, with new guiderail and widening as far west as Hillsgrove
- Resurfacing project at Mehoopany Bridge
- Russell Hill improvements completed with upgraded intersection and signal
- All steel bridges on PA 87

PA 167

- Some resurfacing north of Montrose

PA 171

- Some maintenance activity
- New multi-municipal comprehensive plan (Thompson, Union Dale, et. al.); currently working on joint zoning
- Rail to trail project - working on design for next section for construction
- A portion in the Lanesboro area is now a scenic byway between PA 92 and Starucca.

PA 187

- Much paving and maintenance activity
- Served as a detour during the Claverack Hill project

PA 287

- Marsh Creek Greenway will be a rail with trail
- The extension of the Pine Creek Rail Trail from US 6 to Ansonia Junction
- Wellsboro Enhancement Strategy and Mobility Plan to begin, summer 2008
- New operator for both the passenger and freight railroad (Wellsboro & Corning; Tioga Central)

PA 328

- ARC corridor status was transferred to US 15 from Tioga Junction north to I-86

PA 414

- Some segments were paved; more will be resurfaced this coming year. Part will be widened with 4-foot shoulders (in certain sections PennDOT has identified).
- The County is considering closing a bridge and rebuilding another one in that corridor. They will do a bridge crossing analysis to determine where they need to invest in or build new structures. There are currently six or seven such bridges; not all are needed. The County will develop a strategy for moving forward.

PA 706

- Entire corridor resurfaced approximately two years ago
- SR 3023 intersection and bridge was completed
- Right-sized the Wyalusing Bypass project
- Most all environmental clearances are close to being completed in Susquehanna County (for four discrete projects)
- Camptown Bridge replaced
- Montrose section is currently under design

- Montrose Borough was awarded a streetscape enhancement project

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Public Participation

NTRPDC completed an ongoing and inclusive outreach to regional, county and municipal officials, residents, business and commercial interests and representatives, school superintendents and the administrators of institutions of higher education, and economic development groups. This diverse and proactive process included large conferences and small brainstorming meetings, individual interviews, discussion and voting and web surveys. Over 200 people participated directly in the successful discussion of regional strengths and weaknesses, and offering realistic and achievable strategies for the future of the region.

A "weeds group" meeting was held with FHWA and PennDOT officials in May 2008 to discuss action strategies and investment criteria.

An extensive amount of data was gathered for input to the RSAP. This data included regional transportation plans, such as prior Long Range Transportation Plans, Transportation Improvement Plans, Transit Strategy, and review of other plans, such as Scenic Corridors Inventory, among others.

Economic development information for the region was gathered from a variety of sources, primarily through personal interviews and workshops. Extensive regional socio-economic information, both external and internal, was gathered from a variety of primary sources. Current data of the region and "beyond-the-borders" was collected and forecasts of future economic and demographic conditions and trends were calculated.

Additionally, land use data was also collected and analyzed. This included all five county comprehensive plans, recreation and greenways plans, land use patterns, the number of municipalities with plans (and planning tools), and environmental factors.

Background Profile

In developing this plan an essential first step is to understand the region as it is today, what forces have defined its existing condition, and which are likely to shape its future. This section considers the trends and issues affecting the region's transportation system and examines their potential impact on its future sustainability. An overview of the Northern Tier region is provided across various socio-economic and transportation planning indicators.

This section is organized into two major subsections: Trends & Issues, and Existing Modal Conditions. Ongoing trends with respect to the area's demographics and economics all play a role in how changes in the area's transportation and land use patterns should be directed.

A summary of transportation conditions, trends and issues follows.

Demographically, the region's rate of population change has been holding steady.
Total population change has been unremarkable, with a growth rate of only 2.5 percent during the 1990s. Since 2000, total population has declined by 0.6 percent.

The region is growing older, emphasizing a need for focus on transportation needs for an increasingly elderly population.
During the 1990s, the region's total population growth among those over 65 grew at a rate nearly double the state rate (8 percent versus 4.9). The transportation needs of this growing demographic are typically much more reliant on forms of transportation other than the private automobile.

The region is the least-densely developed in Pennsylvania.
Only two municipalities have populations exceeding 5,000; with only 45 people per square mile, the region is the least densely-populated one in Pennsylvania. The decentralized nature of the region's population, coupled with the mobility needs of the elderly make our region challenging to serve from the standpoint of human service and public transportation.

The region is not racially diverse.
The region's non-white population is only 1.9 percent, compared to the state rate of 15 percent. This LRTP recognizes that "Environmental Justice" issues must be considered as part of project planning and delivery, as they relate to the benefits and burdens of various transportation improvements on various user groups.

The region has more workers than jobs.
All counties have a net labor outflow, especially so in Susquehanna and Wyoming Counties. Commuter travel is largely defined by commutation to the urban centers immediately surrounding the Northern Tier, including: Scranton/Wilkes-Barre, Williamsport, Binghamton, NY and Elmira, NY.

The region is more reliant than most on the private automobile for personal mobility and motor carrier modes for shipping.
77.5 percent of workers travel to work alone by car – an increase of 6 percentage points from 1990. Only 6.4 percent of households do not have access to a vehicle, half the state rate of

12.8 percent. And during the decade ending 2005, all but one county (Wyoming) experienced growth in the number of registered vehicles in excess of the state rate of 18 percent.

Long-term issues at all three of the region's airports include a demand for longer runways to accommodate larger aircraft and an ongoing challenge in raising local funding.
Bradford and Skyhaven would like to expand their runways by 700 and 1,200 feet, respectively. Wellsboro has difficulty raising local matches for state grants, while Skyhaven is a privately-owned, public-use airport, precluding it from receiving federal funds.

The region has a large network of roadways to maintain and operate.
While the Northern Tier has only 1.5 percent of the state's total population, it has nearly 6.4 percent of its state-owned roadways. There is also a large network of roadways owned by "Other Agencies" such as the U.S. Forest Service. A majority of this mileage occurs in Tioga County.

Most growth in travel is occurring on the region's locally-owned roadways.
Overall Daily Vehicle Miles of Travel (DVMT) has increased 11 percent over the past decade, led by a 24 percent increase in Tioga County. More importantly, DVMT increased by nearly 28 percent on locally-owned roadways, region-wide in the decade ending 2006.

Roadway conditions are worst on secondary roadways.
PennDOT data indicate that the region's higher-order roadways such as the National Highway System (NHS) are in either "excellent" or "good" condition. However, more than one-fifth of the region's lower-order roadways are considered to be in "poor" condition.

Bridge deficiencies are significant.
The region has 382 structurally deficient bridges, representing 17 percent of all bridge deck area. This is slightly lower than statewide averages, yet still significantly higher than the statewide goal of 10 percent. Thirty percent of all locally-owned bridges are structurally deficient.

The delivery of public transportation services remains challenging.
The region's rural nature, coupled with a growing senior population make the delivery of public transportation services challenging. Consumers point to a plethora of confusing programs with a corresponding lack of information and guidelines, limited service availability (particularly on weekends), while operators point to a need for improved infrastructure and changing demands for services (e.g., long-term care populations, etc.)

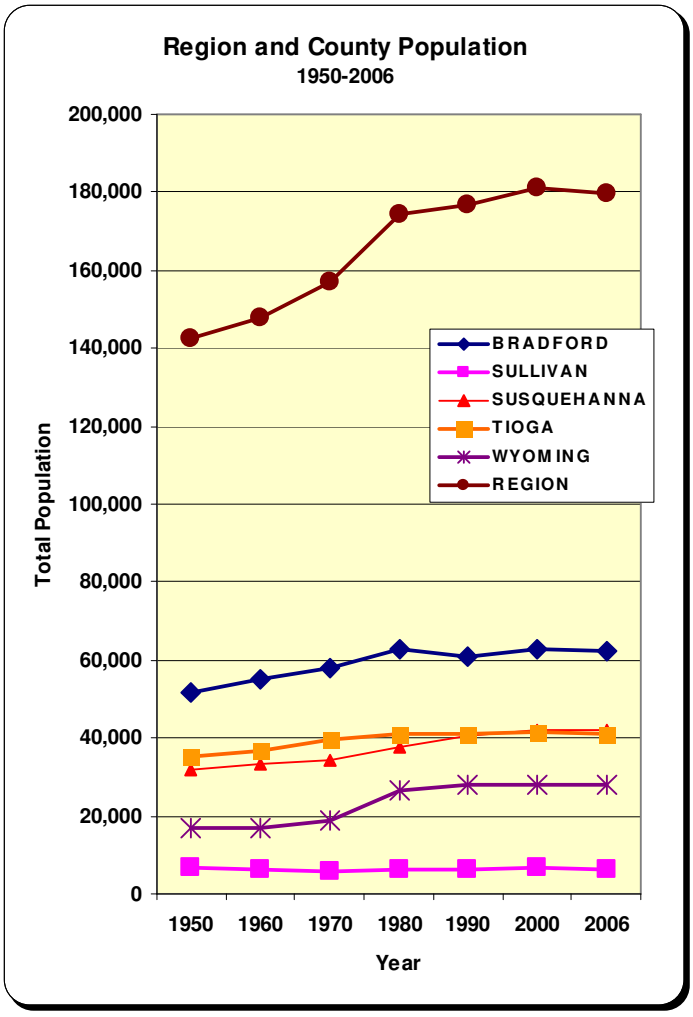
The Northern Tier has over 3 million acres of environmentally sensitive land.
Over half of the region can be characterized by steep slopes (>12 percent) while another third can be classified as Farmland of Statewide importance. In an effort to streamline the project delivery process, NTRPDC is doing more to identify environmentally sensitive areas before transportation projects move into preliminary engineering phases.

Introduction

The region's transportation system is a significant resource that provides the people and businesses of the Northern Tier with access to their neighbors and the nation. Demographic and economic trends directly affect transportation demand, and likewise, transportation can affect the economic vitality of the region. The trends and implications mentioned in the previous section and throughout the LRTP promise continuing challenges as the region moves forward to meet the travel needs of people and goods. The region's transportation systems will have to respond to growing travel demands especially on roadways and bridges; the special travel needs of an older, more diverse population; the growing importance for reliability and predictability in transportation services, and expanding international markets.

A Generation of Slow Population Growth

Total population is just one of many indicators that provide a glimpse as to how well an area is faring economically. For the Northern Tier, the region has historically experienced steady population growth. Since the beginnings of the post-war period, the region has undergone more moderate growth. An exception during this period included the 1970s, when the region grew by a rate in excess of 10 percent.



During the 1990s, the region grew by 4,355 persons for a growth rate of less than 2.5 percent. Over 80 percent of this growth occurred in Bradford and Susquehanna Counties. Bradford remains the largest county in the region, with a population of over 60,000.

Estimates recently released (July 2006) from the Census Bureau indicate population declines in all but one Northern Tier county (Wyoming) since the 2000 census. The Census has estimated the region's total population declining by slightly more than 1,000, with losses evenly distributed among the five counties. The decline in Tioga County has nearly offset any increase it experienced during the 1990s.

Table 1 provides more detail on the region's total population, by county.

Table 1: County Population Change, 1990 - 2006
Northern Tier

	1990	2000	Numerical Change (90-00)	Percent Change (90-00)	2006 Est.	Numerical Change (00-06)	Percent Change (00-06)
Bradford	60,967	62,761	1,794	2.9	62,471	(290)	(0.4)
Sullivan	6,104	6,556	452	7.4	6,277	(279)	(4.3)
Susquehanna	40,380	42,238	1,858	4.6	41,889	(349)	(0.8)
Tioga	41,126	41,373	247	0.6	41,137	(236)	(0.6)
Wyoming	28,076	28,080	4	0.0	28,093	13	0.0
Northern Tier	176,653	181,008	4,355	2.5	179,867	(1,141)	(0.6)

Source: U.S. Census

Population Composition – The Graying of the Northern Tier

The graying of Pennsylvania has been a common topic of transportation and economic planning in recent years. The so-called “Baby Boomer” generation of those born between 1945 and 1963 has created economic and transportation implications throughout its existence. As the front end of this group moves into the region’s more senior demographic ranks, it will continue to have significant ramifications in terms of how efficient, predictable, and accessible transportation will need to be in coming years.

While the region sustained moderate population growth during the 1990s, the differences among various age groups is striking. There have been significant changes in population among certain age groups, including those aged 45-54 and those over the age of 75. The region’s share of population 65 years old and older is now 15.6 percent, just over the Pennsylvania average of 15.2 percent. However, total population growth among those over the age of 65 increased in the Northern Tier at a faster rate than Pennsylvania as a whole (8 percent versus 4.9 percent). Among Pennsylvania’s counties, Sullivan County ranks first in the percentage of its population 65 years old and older, at 23.8 percent.

Table 2 below shows more detailed information on changes in population composition among the region’s counties.

Table 2: Percent Change by Age Group - 1990-2000
Northern Tier

	Total	45-54	55-64	65-74	75-84	85+
Bradford	62,761	30.0	(36.3)	(1.7)	26.5	28.5
Sullivan	6,556	49.0	16.1	11.0	16.0	9.3
Susquehanna	42,238	34.0	25.0	(3.2)	15.6	25.8
Tioga	41,373	22.5	14.7	3.4	22.4	23.8
Wyoming	28,080	42.2	24.3	(4.5)	17.0	23.6
Northern Tier	181,008	31.5	0.8	(2.2)	21.1	25.0

Source: U.S. Census

Sparse Settlement Patterns

In addition to a municipality's total population and composition, another important demographic indicator for transportation (and particularly public transportation) includes population *density*. A typical rule of thumb demographically for measuring the potential for fixed route public transportation service includes a population density of 2,500 persons per square mile, along with a population base of at least 5,000.

With a population density of fewer than 46 persons per square mile, the Northern Tier is Pennsylvania's least densely populated region. The region has some of the state's largest counties by land area (Bradford, for example, ranks second in size to Lycoming while Tioga ranks fourth). Wyoming County is the region's smallest in land area, contributing to its position as the region's most densely-populated county. The Northern Tier's most densely populated county is far below the state average of 274 (see Table 3).

With Sayre Borough and Athens Township as the first- and second-largest municipalities in the region, the area known as "the Valley" in northern Bradford County is the region's largest and most densely populated area. None of the Northern Tier's other 164 municipalities has more than 5,000 persons. The region's more relatively "urban" communities can be best characterized as mid-size boroughs that serve as trading centers for smaller sub-areas within the region.

Table 3: Population Density (2000)
Northern Tier

	Population	Size in Square Miles	Persons per Square Mile	Municipalities
Bradford	62,761	1,151	55	51
Sullivan	6,556	450	15	13
Susquehanna	42,238	823	51	40
Tioga	41,373	1,134	36	39
Wyoming	28,080	397	71	23
Northern Tier	181,008	3,955	45.7	166
Pennsylvania	12.28 M	44,820	274	2,566

Source: Center for Rural PA

Pennsylvania's Least Densely Populated Counties	
County	Persons per Square Mile (2000)
1. Forest	12
2. Sullivan	**15**
3. Cameron	15
4. Potter	17
5. Fulton	33
6. Tioga	**36**
7. Elk	42
8. Clinton	43
9. McKean	47
10. Bedford	49
11. Warren	50
12. Susquehanna	**51**
13. Bradford	**55**
Source: Center for Rural PA	

A Racially Homogenous Region

It is the Federal Highway Administration (FHWA's) longstanding policy to ensure nondiscrimination in federally funded activities. Furthermore, it is FHWA's continuing policy to identify and prevent discriminatory effects by actively administering its programs, policies, and activities to ensure that social impacts to communities and people are recognized early and continually throughout the transportation decision-making process (from early planning through implementation). The LRTP identifies certain "Environmental Justice" populations at a broad level. It is acknowledged that consideration of the benefits and burdens of future transportation decisions being made will need to be recognized even through project delivery phases.

The Northern Tier has some of the smallest concentrations of minority populations in Pennsylvania. The region has a small Hispanic population and an even smaller African-American population. As shown in Table 4, in 2000 the racial breakdown of the region's residents indicates that minority populations comprised less than 2 percent of the total population, compared to the state rate of 14 percent. The region's non-white population ranges from a low of 1.5 percent in Susquehanna and Wyoming Counties, to a high of 4.4 percent in Sullivan County. By contrast, Pennsylvania's non-white population in 2000 was nearly 15 percent.

Table 4: Racial Composition – (in %)
Northern Tier

	Total	White	Black	Hispanic	Indian	Asian	Other
Bradford	62,761	61,471	251	398	193	285	125
Sullivan	6,556	6,266	144	72	50	10	30
Susquehanna	42,238	41,621	128	285	63	92	79
Tioga	41,373	40,589	250	214	96	124	60
Wyoming	28,080	27,598	149	187	47	77	43
Northern Tier	181,008	177,545	922	1,156	449	588	337

Source: U.S. Census

Per Capita and Household Incomes Lag State Averages

The Federal Highway Administration has defined "Low income" for transportation planning purposes as a household income at or below the Department of Health and Human Service guideline of $19,971 a year. Sullivan County has the region's lowest median household income ($30,279), while Tioga County has the lowest per capita income ($15,549). Based on per capita income, Tioga County ranks among the bottom ten counties in the state.

Pennsylvania state averages in 2000 were $40,106 and $20,880, respectively.

Table 5 and Table 6 illustrate the diversity of average per capita and household incomes.

Table 5: Low Income Population
Northern Tier

	Per Capita Income	Median Household Income	PA Rank of 67 Counties	National Rank of 3140 Counties
Bradford	$17,148	$35,038	35	1462
Sullivan	$16,438	$30,279	46	1793
Susquehanna	$16,435	$33,622	47	1796
Tioga	$15,549	$32,020	60	2193
Wyoming	$17,452	$36,365	32	1322
Pennsylvania	$20,880	$40,106	n/a	n/a

Source: U.S. Census Bureau Table P82 (2000)

Table 6: Households by Income (in %)
Northern Tier

	Households	< $10	$10 – 14,999	$15 – 24,999	$25 – 34,999	$35 – 49,999	$50+
Bradford	24,427	9.9	7.9	16.0	16.1	19.3	30.7
Sullivan	2,667	11.0	10.4	19.6	15.3	16.8	26.9
Susquehanna	16,543	10.1	8.7	17.2	15.9	18.7	29.5
Tioga	15,942	10.8	9.2	18.2	16.3	18.6	26.9
Wyoming	10,822	9.6	8.0	15.4	15.1	18.0	34.0
Northern Tier	70,401	10.1	8.5	16.9	15.9	18.7	29.9
Pennsylvania	4.78 M	9.7	7.0	13.8	13.3	16.9	39.4

Source: U.S. Census Bureau Table P82 (2000)

Increasing Travel Times to Work

Travel times in a region as large and dispersed as the Northern Tier are generally longer than elsewhere in the state. Workers in Bradford County generally have the region's shortest commute times, with nearly 40 percent requiring less than 15 minutes to get to work. Bradford County also has the region's lowest mean travel time to work, at only 22.6 minutes. By comparison, the national mean travel time to work in 2000 was 25.5 minutes.

Although not shown in Table 7, the percentage of "Extreme Commutes" in the Northern Tier, or commutes in excess of 60 minutes increased from 3.4 to 6.0 percent of all journey to work trips during the 1990s.

Table 7: Travel Time to Work (in minutes) - 2000[2]
Northern Tier

	Total	< 15	15-29	30-59	60-89	90+	Mean Travel Time (Min.)
Bradford	26,043	39.0	31.5	24.2	3.1	2.2	22.6
Sullivan	2,570	39.5	22.6	29.3	6.3	2.3	25.3
Susquehanna	17,872	26.7	32.9	34.3	3.8	2.2	26.2
Tioga	16,929	38.7	31.8	23.3	3.9	2.4	23.1
Wyoming	12,015	26.5	37.2	29.1	4.4	2.8	26.2
Northern Tier	75,429	34.0	32.5	27.4	3.7	2.3	n/a
Pennsylvania	5.39 M	30.3	36.1	26.0	4.9	2.6	n/a

Source: U.S. Census; P31

[2] Does not include those working from home

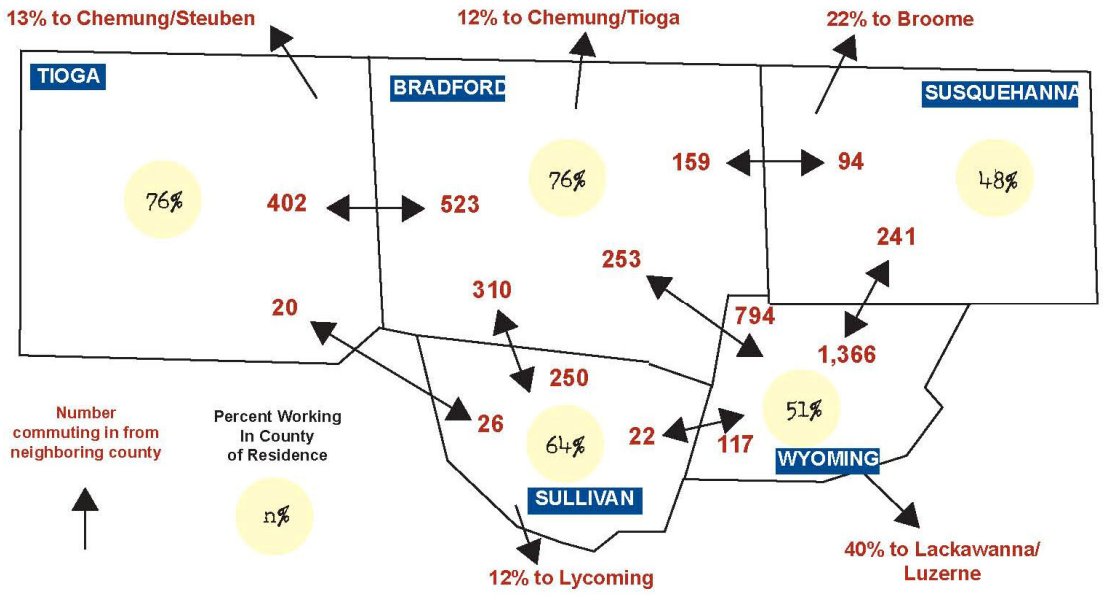
Net Labor Outflows Drive Regional Commutation Patterns

Commutation patterns vary widely among the five Northern Tier counties. Commutation data provides a coarse indication of journey to work travel patterns.

As one of many factors, the region's geographic position among four relatively large economic centers has a profound influence on its commuting patterns. Two of the region's counties (Susquehanna and Wyoming) send approximately half their resident workforce to employment destinations outside the county of residence. (A third county, Sullivan, sends over a third.) With regard to out of county commuting, Susquehanna and Wyoming rank fourth and fifth respectively statewide among Pennsylvania's counties.

Internally, the most significant journey to work numbers show a significant number of workers from Bradford and Susquehanna Counties employed at destinations in Wyoming County. Tioga County sends over 500 workers into Bradford County. Cross-county commuting among the remaining counties is fairly unremarkable, with no more than 400 moving from any one county to another (see Figure 2).

Figure 2: Northern Tier Inter-County Commuting Patterns



Wyoming County's laborshed exhibits a strong relationship with neighboring Lackawanna and Luzerne Counties. This is due to the presence of Proctor & Gamble in Mehoopany, as well as major employers such as Keystone College near the Wyoming County border. Although not shown in the table, data from the Bureau of Economic Analysis show significant growth in the total number of Wyoming County workers commuting to employment destinations in Lackawanna and Luzerne Counties over the past 30 years. (In the case of Luzerne County, the number commuting from Wyoming County has nearly quadrupled since 1970.) Wyoming County serves not only as a labor source to Lackawanna and Luzerne, but an employment

destination as well with over 40 percent of its jobs being filled by workers from those two counties.

Table 8 and Table 9 below show commutation patterns for the five Northern Tier counties. Table 8 shows where the region's resident workers are commuting to for employment, while Table 9 shows the origins of the region's workers.

Table 8: Residence County to Workplace County Flows (in percent) - 2000
Northern Tier

		County of Residence				
		Bradford	**Sullivan**	**Susquehanna**	**Tioga**	**Wyoming**
	Total Resident Workers	27,404	2,691	18,685	17,859	12,464
County of Employment	Bradford	**76.3**	11.5	0.9	2.9	2.0
	Broome (NY)	2.0	0.0	21.6	0.0	0.0
	Chemung (NY)	7.7	0.0	0.0	6.5	0.0
	Columbia	0.0	1.2	0.0	0.0	0.0
	Lackawanna	0.0	0.0	14.6	0.0	23.2
	Luzerne	0.0	1.6	1.2	0.2	17.6
	Lycoming	0.5	11.9	0.0	2.7	0.0
	Potter	0.0	0.0	0.0	1.8	0.0
	Sullivan	1.0	**63.6**	0.0	0.1	0.2
	Steuben (NY)	0.0	0.0	0.0	6.6	0.0
	Susquehanna	0.0	0.0	**48.2**	0.0	1.9
	Tioga	1.5	0.7	0.0	**75.8**	0.0
	Tioga (NY)	4.2	0.1	1.5	0.0	0.0
	Wyoming	2.9	4.3	7.3	0.0	**51.3**
	Total To Outside Northern Tier	18.3	19.9	43.6	21.2	44.6

Source: U.S. Census

Overall, all the Northern Tier counties experience a net labor outflow. That is, there are more workers than jobs. Susquehanna County in particular experiences the highest such outflow, with a net loss of nearly 8,000 workers. Beyond mere roadway or transportation/capacity needs, this baseline data should inform decision-making related to future planning strategies, e.g., should the region position itself and recognize the benefits of being a bedroom community, to a more thorough analysis of commuter patterns by industry to identify available worker skill sets/wages paid and then market potential employers accordingly. In any event, the data prove just how critical transportation infrastructure is to the Northern Tier's economy.

Table 9: County to County Commutation Patterns (in percent) - 2000
Northern Tier

		County of Employment				
		Bradford	**Sullivan**	**Susquehanna**	**Tioga**	**Wyoming**
	Total Workers	25,749	2,326	10,907	15,906	10,876
County of Residence	Bradford	**81.2**	10.7	0.9	2.5	7.3
	Broome (NY)	0.0	0.0	2.5	0.0	0.0
	Chemung (NY)	2.9	0.0	0.0	0.0	0.0
	Columbia	0.0	2.9	0.0	0.0	0.0
	Lackawanna	0.0	0.0	5.2	0.0	8.8
	Luzerne	0.0	0.0	0.0	0.0	8.3
	Lycoming	0.0	0.0	0.0	1.6	0.0
	Potter	0.0	0.0	0.0	3.0	0.0
	Sullivan	1.2	**73.6**	0.0	0.0	1.1
	Steuben (NY)	0.0	0.0	0.0	1.8	0.0
	Susquehanna	0.6	0.0	**82.5**	0.0	12.5
	Tioga	2.0	0.0	0.0	**85.1**	0.0
	Tioga (NY)	7.3	0.0	0.0	0.0	0.0
	Wayne	0.0	0.0	3.1	0.0	0.0
	Wyoming	1.0	1.0	2.2	0.0	**58.8**
	Total From Outside the Northern Tier	14.0	13.6	14.4	12.4	20.6

Source: U.S. Census

Other potential causes of this situation include:

- Housing may be more economical in the Northern Tier than it is near employment destinations
- Higher wages outside the region may attract Northern Tier workers, putting existing occupations within the region at risk
- Available occupations in the Northern Tier may not match commuting worker skill sets
- Finally, the Northern Tier's workers are potentially at risk to move outside the region, closer to their employment destination.

Figure 3 below shows the extent of each county's existing net labor outflow.

Figure 3: Northern Tier Worker Commuter Flows (2000)

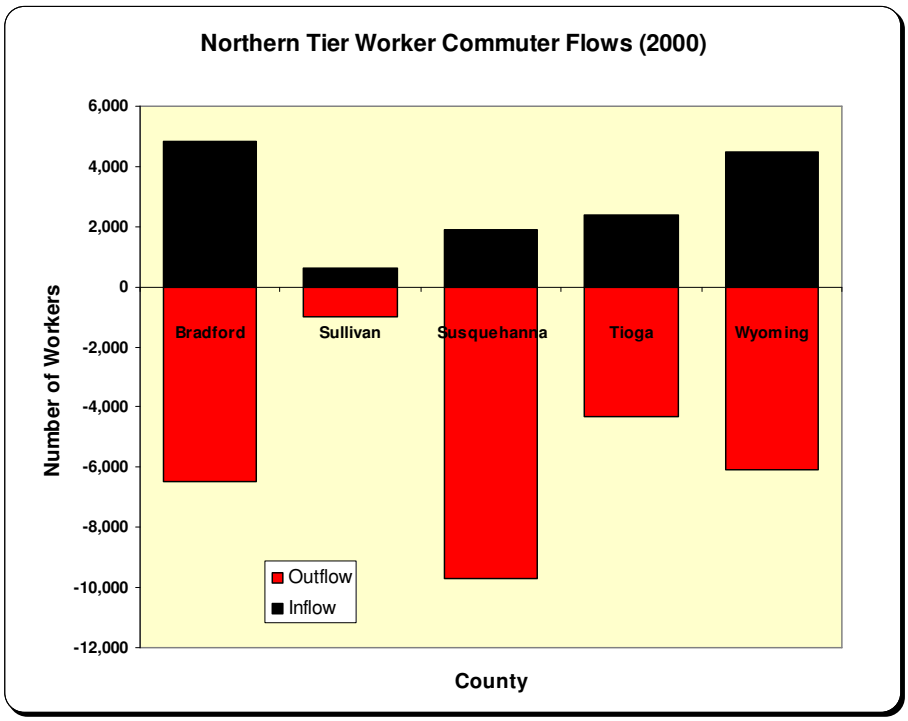
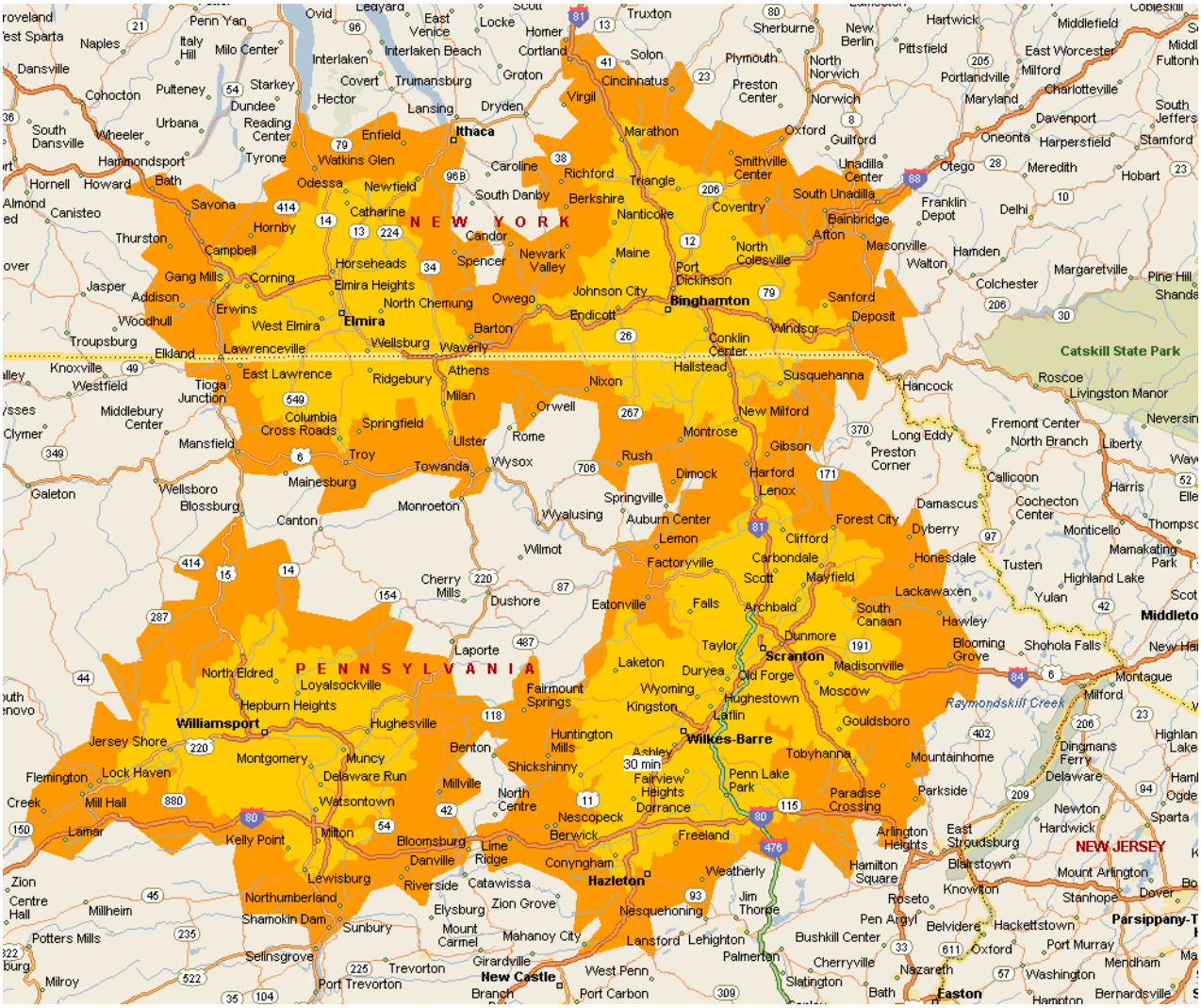


Figure 4 shows the Northern Tier's relationship with four of the primary economic centers it is surrounded by. These include Scranton, Wilkes-Barre, and Williamsport, as well as Binghamton and Elmira, NY. The figure demonstrates that – with the exception of Sullivan County and western Tioga County - most of the region is within a 45-minute drive of a major economic center.

Better transportation infrastructure in the I-81 corridor in particular provides greater mobility for Susquehanna County workers in getting to the greater Scranton/Wilkes-Barre and Binghamton, NY market areas.

Figure 4: Isochronal Map of Drive Times from Regional Economic Centers: 30 and 45-minute Intervals



Source: Gannett Fleming

Reliance on the Private Automobile

Like most regions in Pennsylvania, most journey to work trips are done by private automobile. Nearly 90 percent of all workers reported using a private automobile in getting to work – nearly 78 percent drove alone. This is an increase of nearly six percentage points since the 1990 census. Wyoming County had the highest percentage of SOV trips for any county (81.3 percent), yet Tioga County experienced the greatest increase in SOV as a mode, at nearly eight percentage points. Carpooling accounted for 12 percent of all commuting trips in the Northern Tier, with Sullivan County reporting the highest rate (13.3 percent). Use of carpooling as a means of journey to work has dropped in all counties since 1990, especially in Wyoming, where use of carpooling dropped by four and a half percentage points.

Walking to work is uncommon among Northern Tier counties. As a region, only 4.7 percent of all workers walk to work. In Sullivan County however, the rate of workers walking to work is over twice the regional average, at over 10 percent. As a region, the percentage of workers walking to work has declined slightly, at one and a half percentage points.

The Northern Tier has a relatively high percentage of workers working from home, at 4.7 percent. Tioga and Bradford Counties have some of the highest such rates in the state, with over 5 percent each. (The state average is 3 percent.)

Mean travel time strongly correlates to commutation patterns, with those counties that retain more commuters having shorter mean travel times than those counties that retain fewer commuters (see Table 7). Two counties that export approximately half their resident workforce (Susquehanna and Wyoming) have the region's highest mean travel times to work, both at 26.2 minutes. These two counties export some of the highest percentages of its resident workforce in the state.

Table 10: Mode Split (in percent) – 2000/1990
Northern Tier

	# Workers	SOV		Carpool		Walk		Work at Home		Mean Travel Time (Min.)
		2000	1990	2000	1990	2000	1990	2000	1990	
Bradford	27,404	77.5	72.7	11.4	11.8	4.9	6.3	5.0	6.8	22.6
Sullivan	2,691	70.7	65.4	13.3	16.1	10.2	8.0	4.5	7.7	25.3
Susquehanna	18,685	78.3	72.5	12.5	15.1	3.8	4.3	4.4	6.8	26.2
Tioga	17,859	75.0	67.2	12.7	15.9	5.7	8.8	5.2	6.6	23.1
Wyoming	12,464	81.3	75.5	10.9	15.3	3.2	4.5	3.6	3.7	26.2
Northern Tier	79,103	77.5	71.7	12.0	14.2	4.7	6.2	4.6	6.2	24.2

Source: U.S. Census SF3

Household Access to a Vehicle

Rural regions such as the Northern Tier typically have a higher degree of reliance on the private automobile for mobility. Because of this, it is not unusual to see that the region's rate of households without access to a vehicle is less than half of the state's rate of nearly 13 percent. Among the region's counties, Wyoming County's households have the highest rate of access to a vehicle, at nearly 95 percent. Rates in Sullivan and Tioga Counties are nearly equally as high.

On the other end of the spectrum, approximately 14.8 percent of all Pennsylvania households have access to 3 or more vehicles. In the Northern Tier, the rate is 18.7 percent. Table 11 includes more detail on regional households' rates of access to a vehicle.

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

	None		1		2		3+	
	#	%	#	%	#	%	#	%
Bradford	1,701	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	41.1	2,986	18.8
Wyoming	584	5.4	3,258	30.3	4,641	43.1	2,279	21.2
Northern Tier	4,434	6.4	22,963	32.7	29,634	42.2	13,292	18.7
Pennsylvania	4.77 M	12.8	1.67 M	34.9	1.79 M	37.5	704,693	14.8

Source: U.S. Census SF3; Table H44/46

Through the decade ending 2005, the total change in the number of in-state registered vehicles has varied widely throughout the region. All but one county (Wyoming) experienced growth in excess of the state rate of 18.2 percent. Growth in Wyoming County was only 7.4 percent, the fifth-slowest rate of growth in the state. As shown in the preceding table, Wyoming County already had one of the highest rates of households with access to a vehicle in the state, at nearly 95 percent.

Table 12: Percentage Change in In-state Registered Vehicles (1995-2005)
Northern Tier

	Total
Bradford	19.8
Sullivan	22.1
Susquehanna	30.2
Tioga	30.4
Wyoming	7.4
Pennsylvania	18.2

Source: Center for Rural Pennsylvania

Existing Modal Conditions

This section of the profile provides an overview of existing modal conditions within the region, including synopses of aviation, bicycle and pedestrian, highway and bridge, intercity bus and rail freight.

Aviation

There are three public use airports that currently serve the Northern Tier: the Bradford County Airport in Towanda Township, Bradford County; Grand Canyon Airport in Tioga County; and Tunkhannock's Skyhaven Airport. Major airports immediately outside of the region include Binghamton, Elmira, Wilkes-Barre/Scranton International, and Williamsport Regional. A discussion of these facilities and their projects for state fiscal years 2008 to 2012 follows.

Table 13: Projects for State Fiscal Year 2008 – 2012 (in dollars)
Northern Tier Airports

Airport	State Fiscal Year	Project Description	Federal Share	State Share	Other/Local Share	Total Cost
Bradford	2008	Construct partial parallel taxiway, Ph1, Design	47,500	1,250	1,250	50,000
Wellsboro	2008	Acquire SRE	242,500	6,375	6,375	255,250
Wellsboro	2008	Construct non-revenue automobile parking	33,250	875	875	35,000
Wellsboro	2008	Install AWOS	118,750	3,125	3,125	125,000
Wellsboro	2008	Upgrade airport utilities	28,500	750	750	30,000
Bradford	2009	Construct partial parallel taxiway, Ph2, construction	408,500	10,750	10,750	430,000
Skyhaven	2009	Airfield/terminal area improvements	0	375,000	125,000	500,000
Wellsboro	2009	Acquire land	142,500	3,750	3,750	150,000
Bradford	2010	Extend taxiway to full parallel, Ph1, design	152,000	4,000	4,000	160,000
Wellsboro	2010	Ins.perimeter fence	242,250	6,375	6,375	255,000
Bradford	2011	Acquire land for development	150,000	3,750	3,750	157,500
Bradford	2011	Extend taxiway to full parallel, Ph2, construction	1,520,000	40,000	40,000	1,600,000
Wellsboro	2011	ALP update	95,000	2,500	2,500	100,000

Source: PennDOT Bureau of Aviation

Bradford Regional Airport

PennDOT's Bureau of Aviation has functionally classified the Bradford Regional Airport as a business airport. The airport, with 33 based aircraft, experiences 23,000 annual operations. There is one runway, completed in November 2001. It is 4,300 feet long and is equipped with standard medium intensity runway lighting.

Figure 5: Aerial View of the Bradford County Airport

The airport is owned and operated by the Bradford County Airport Authority and is located near the junction of US 220 and US 6 and is also adjacent to the Towanda-Monroeton Shippers Lifeline. Aircraft operations average 50 per day generally comprising of approximately 82 percent local general aviation, approximately 18 percent transient general aviation, and less than one percent military operations. The facility is used mainly for flight training and for business aircraft. There is some tourism-related traffic for such things as hunting, fishing and golfing. Fly-overs of French Asylum are also done on a seasonal basis.

In recent years, the airport has completed work on a 12,500 square foot maintenance hangar/terminal building. The $500,000 facility includes areas for the maintenance and storage of aircraft, a fixed-base operator's office, office space for the airport manager, classrooms, and a reception area for charter flights.

Other capital projects being pursued by the authority include:

- Crack-sealing the runway, then design/build a 400-foot long taxiway between the two aprons. The new taxiway would prevent pilots from having to go back onto the runway. This project would include new lighting and drainage work.
- A second priority includes the addition of a fuel tank. The airport currently has one, 6,000 gallon tank it received through the closure of the Blue Swan airport in Sayre. A

second tank would provide the airport with the capacity to take on a full delivery of fuel. Since the airport cannot accommodate an 8,000 gallon tanker, it must pay a higher rate for fuel.

- A potential 700 foot runway extension and full parallel taxiway needs to be constructed in order for the County to be able to compete for FAA funds. The extra 700 feet would provide extra capacity to serve area industries. Five thousand feet is a standard, which generally allows for accommodation of business aircraft, including corporate jets. The lack of runway length has diverted traffic to other facilities in Binghamton and Avoca. A lengthened runway is anticipated to cost upwards of $3 million to complete. Despite the support of the county commissioners, the project has run into stiff competition for funding statewide.

- The airport has some land south of the runway reserved for industry that is currently being used for aircraft parking. The Bradford County airport can currently park planes cheaper than at other airports in the region, such as Elmira. One future strategy for the airport may be to host more corporate business aircraft to alleviate congestion at other facilities in the region.

- A long-term issue includes TR 457, which used to provide a direct connection to US 220 but now encroaches onto the runway and airfield. The roadway ultimately needs to be relocated parallel to the runway, which would potentially open more property for landside development. As such, multiple funding sources may be available for this improvement—potentially including a mix of aviation, highway, and site development programs. This project has been estimated to cost upwards of $8 million to complete.

- In addition to a 5,000-foot runway, the authority would also like to have an Instrument Landing System (ILS) in place. An ILS would allow aircraft to land at the airport during inclement weather, thus preventing additional diversion to other area airports.

Wellsboro/Johnston Airport

In operation since 1940, this Tioga County facility is one of the principal airports in the region, with 14 based aircraft*. Current annual aircraft operations are comprised mainly of local and itinerant general aviation operations. An estimated 8,100 local general aviation, 1,058 itinerant general aviation, 68 air taxi operations, and 48 military operations comprise the airport's annual operations. The general aviation facility is used by businesses for fuel, repair and air taxi services, and also supports recreational and pleasure flying. (The seasonal nature of the airport's use is evident as demand spikes during the summer months of July and August.) The airport is able to accommodate small aircraft with wingspans less than 49 feet.

All of the airport's major facilities, including runway, apron and terminal facilities, have been rated as being in "good" condition, meaning that the condition of these facilities are presumed to be adequate throughout the next five years. The airport property includes a 7,200 square

* The number of based aircraft at the airport has declined from a decade high of 19 in 1994-95 and has remained constant at 14 over the past five years. Based aircraft is an important component in determining existing and future airport activity.

foot, 6-unit T-hangar, which had been rated as being in "poor" condition, yet the authority secured a local grant within the past year to replace the roof.

In 1995, the state evaluated the potential for improvements at the airport by having a master plan prepared. From that plan, the airport's runway was extended from 2,200 to 3,600 feet in 1996, and additional hangers, terminal building and equipment storage buildings were built. Snow removal equipment was also purchased. Lights were also added to the runway so pilots could make night operations.

At one point, the airport was the sole remaining airport owned by the state. From that, Wellsboro and Delmar Township agreed to form the Grand Canyon Airport Authority, which took ownership of the airport on September 25, 2001. Until recently, the airport carried the same name as the authority, but was changed to its current name of "Wellsboro/Johnston Airport".

Figure 6: Aerial View of the Wellsboro Johnston Airport

The airport is served by PA 362 and SR 3029 (Dexter Road), both relatively narrow country roads. If any commercial development were to take place adjacent to the airport, these roadways would need to be improved, according to Tioga County economic development officials.

For a general aviation facility, Wellsboro is a marginal airport in its ability to break even. A major challenge for the airport will be raising the local match needed when grants are awarded. Airport officials cite the difficulty in fund raising for small, rural airports, and, with the exception of Roger Penske and Trucklite, not many area industries are using it. There is rare use of freight movement at the airport, freight movement typically involving some medical or transport use. Medical helicopters have used it despite the availability of a helicopter pad just south of Wellsboro. DCNR also uses it for spraying. The airport at one time provided charter flights over the PA Grand Canyon but this practice has ceased with the need for $10 million in

liability insurance. The authority concedes it could possibly work with airport officials in Elmira in chartering these flights.

Sky Haven Airport

This airport is a privately-owned, public-use facility located just one mile south of Tunkhannock in Eaton Township, Wyoming County. The airport features an asphalt runway 2,007 feet in length which accommodates the local general aviation needs of the area. The airport has the distinction of having the second-shortest, public-use, paved runway in the state. The airport has 45 based aircraft, the majority of which are single engine airplanes, although there are 4 multi-engine planes. The airport offers many services, including: aircraft rental, sales, structural welding and fabrication, engine overhaul, and pilot services.

A few of the primary challenges facing the Skyhaven Airport include its short runway length, as well as the lack of fueling facilities. Because of this, Skyhaven is sometimes passed over as a destination. Airport officials in fact note that a runway extension is the single most critical thing for continued safety and growth at the airport. An objective of Skyhaven, Inc. is to lengthen to runway to 3,200 feet.

Given the airport's status as a privately-owned entity, it is not eligible for federal funding. It is, however, eligible for grant funding from PennDOT's Bureau of Aviation on projects that are not for-profit (e.g., runway extensions, line painting, etc.). The BOA may provide 50-50 grants for such items as fuel systems that generate profit.

The land located to the south of the existing runway is not in the floodplain and would require little grading. There are also several buildings on the property that could conceivably be adapted for airport use.

Airspace around the airport is also an issue, as land developments such as cell phone towers and tree growth have the potential to obstruct the areas of approach to the runway. Eaton Township, the host municipality, has enacted Airport Hazard Zoning.

A positive trend for Skyhaven has been an increase in the average age of aircraft. The average of 35 years is expected to grow, which will continue to increase demand for total overhaul and structural repairs of airframes. The airport also projects an increase in skydiving operations and in flight instruction.

Figure 7 shows an aerial view of the Sky Haven Airport. The image shows the extent of suburban encroachment with residential units and "big box" retailers such as Wal-Mart and Mr. Z's. For context, the Susquehanna River is visible in the upper right hand corner of the image.

Figure 7: Aerial View of Sky Haven Airport

Market Service Areas

PennDOT has defined a market area for each Pennsylvania commercial service airport using the results of passenger and travel agency surveys. In establishing each airport's market area, a percentage of each county's 2000 demand (originations) was assigned to a departure airport, either in- or out-of-state.

A majority of the region's aviation needs are served by out-of-state airports, as demonstrated in Table 14. (The table also illustrates existing airport capture rates and demand, by county.) It is interesting to note that nearly every Northern Tier county is primarily served by a different airport. The Elmira/Corning Airport has the highest capture rates in Bradford and Tioga Counties, while Wilkes-Barre/Scranton serves the majority of demand from Susquehanna and Wyoming Counties. In Sullivan County, Williamsport has the highest capture rate, at 65 percent.

Table 14: Existing Airport Capture Rates (2000)
Northern Tier

	Syracuse	Wilkes-Barre/ Scranton	Williams-port	Albany	Bing-hamton	JFK	Elmira/ Corning
Bradford	13		11	7	6		63
Sullivan		29	65		5		
Susquehanna	8	48		11	28	5	
Tioga	11		12				75
Wyoming		76		5		12	

Source: PennDOT's Assessment of Pennsylvania Air Service (2000)

Bicycle/Pedestrian

There are many non-commuting opportunities for bicycling and walking in the Northern Tier. These include signed and unsigned bicycle routes, as well as recreational walking and bicycling trails.

The Northern Tier RPO developed a regional bicycle/pedestrian transportation plan in 2000. Currently, the region is working with the state in mapping existing trails, in addition to the projects proposed in the regional bicycle and pedestrian plan. The RPO will compare the mapping of proposed projects to the agency's Transportation Improvement Program to determine where there is overlap and opportunities for implementing bicycle and pedestrian projects through scheduled TIP projects.

The region's most significant roadway-based bicycle facility includes BicyclePA Route Y. The corridor serves as Pennsylvania's northernmost east-west cross-state bicycle route. Route Y is one of seven such corridors PennDOT has designated for cross-state bicycle travel. The corridor is generally along US 6 but could be expanded to include other segments. Roadway improvements and shoulder widening have been identified as a regionally significant project. Other BicyclePA Routes in the region include “G”, “J” and “L”.

Roadway Networks

There are over 7,700 linear miles of roadway criss-crossing the Northern Tier. While the region has less than 1.5 percent of the state's total population, it has nearly 6.4 percent of its state-owned roadways. The region also includes over 7 percent of all the state's roadways that are maintained and operated by "Other Agencies". These include facilities owned and maintained by other state and federal agencies such as state universities, the state Department of Conservation and Natural Resources, and the U.S. Forest Service. Tioga County leads the region in the total number of roadways owned by “other agencies”, with more than 200 linear miles. The county ranks fifth in the state in this regard.

Bradford County has the region’s largest roadway network, at nearly 2,500 miles. With only 615 linear miles of roadway, Sullivan County has the smallest roadway network in the region, and the fourth-smallest in the state. Table 15 below shows the region's linear roadway mileage by jurisdiction.

Table 15: Roadway Mileage by Jurisdiction, 2005
Northern Tier

	PennDOT Linear Miles	Other Agencies Linear Miles	Local Municipal Linear Miles	Total Linear Miles
Bradford	898.6	3.3	1,593.4	2,495.3
Sullivan	243.8	74.0	297.9	615.7
Susquehanna	797.8	0.0	1,075.4	1,873.2

	PennDOT Linear Miles	Other Agencies Linear Miles	Local Municipal Linear Miles	Total Linear Miles
Tioga	627.9	207.8	1,134.9	1,970.6
Wyoming	364.6	0.0	395.0	759.6
Northern Tier	2,932.7	285.1	4,496.6	7,714.4
Pennsylvania	39,889.6	4,028.2	76,210.3	120,667.2

Source: PennDOT Bureau of Planning and Research (2005)

PennDOT has been functionally classifying its network of roadways since the mid-1960s. The classifications of highways groups highways into a hierarchy based on the type of highway service they provide. Streets and highways generally perform two types of service. They either provide traffic mobility or land access and can be grouped (or "ranked") in terms of the proportion of service they perform.

PennDOT defines this hierarchy of roadways as follows:

- **Interstate System** – The Interstate System consists of all presently designated freeway routes meeting the Interstate geometric and construction standards for future traffic. The Interstate system is the highest classification of arterial roads and streets and provides the highest level of mobility, at the highest speed, for a long interrupted distance. In the Northern Tier, this includes approximately 27 miles of Interstate 81 through Susquehanna County.
- **Other Arterials** – These consist of limited-access freeways, multi-lane highways, and other important highways supplementing the Interstate system that connect, as directly as practicable, the Nation's principal urbanized areas, cities, and industrial centers; serve the national defense; and connect at suitable border points with routes of continental importance.
- **Collectors** – Collectors provide both land access service and traffic circulation within residential neighborhoods, commercial and industrial areas, and downtown city centers. Collectors connect local roads and streets with arterials and provide less mobility than arterials at lower speeds and for a shorter distance.
- **Locals** – The local roads and streets provide a high level of access to abutting land but limited mobility.

This hierarchy is evident in the table below. Interstate 81 is the region's highest functionally classified roadway, with over 27 miles of roadway through Susquehanna County. "Other Freeway" includes the Sayre Bypass in Bradford County. Table 16 provides a breakdown of all of the region's functionally classified roadways, by county.

Table 16: Mileage by Highway Functional Classification, 2005
Northern Tier

County	Federal Aid Linear Miles					Non-Federal Aid Linear Miles		Total Linear Miles
	Interstate	Other Freeway	Other Principal Arterial	Minor Arterial	Major Collector	Minor Collector	Local	
Bradford	0.0	4.1	60.9	122.0	162.8	217.2	1,928.3	2,495.3
Sullivan	0.0	0.0	0.0	58.3	65.9	38.0	453.5	615.7
Susquehanna	27.2	0.0	0.0	99.4	181.4	181.2	1,384.0	1,873.2
Tioga	0.0	0.0	80.1	95.0	138.7	162.1	1,494.7	1,970.6
Wyoming	0.0	0.0	29.9	55.5	52.0	66.6	555.6	759.6
Northern Tier	27.2	4.1	170.9	430.2	600.8	665.1	5,816.1	7,714.4

Source: PennDOT Bureau of Planning and Research, 2005

Daily Vehicle Miles of Travel (DVMT) Slowly Increasing

Over the past decade, the region's average daily vehicle miles of travel (VMT) has increased by 11 percent, or an annualized rate of 1.1 percent a year. This is only slightly less than the statewide rate of 1.2 percent annually. The region's daily average of vehicle miles of travel is currently approximately 5.6 million, or less than 2 percent of the state share. DVMT has increased in every county over the past decade, particularly in the two counties with limited access highways. Growth in each county ranged from a low of 0.6 percent in Bradford County to 24 percent in Tioga County.

In examining DVMT by facility type, the greatest change in DVMT has occurred on locally-owned roadways. Average DVMT on these roadways has grown by nearly 28 percent between 1996 and 2006. Change in average DVMT on locally-owned roadways was greatest in Susquehanna County, where it increased by nearly 50 percent.

While DVMT on roadways owned by other agencies comprises the smallest share of DVMT in the region, it is also the facility type that has been experiencing the greatest rate of change. DVMT on these facilities throughout the region has increased from 122 miles a day to nearly 300. Here, Tioga County led the region in total growth, at 150 percent. Among Pennsylvania counties, Tioga County currently ranks fifth in average DVMT on roadways owned by other agencies.

State-owned facilities such as interstates, PA routes, and 4-digit SRs carry the greatest volumes of traffic, and are thus less susceptible to dramatic rate changes of DVMT. Average DVMT on these facilities increased by only 5.7 percent over the ten year period, with the greatest increases coming in Susquehanna and Tioga Counties. DVMT on state-owned

facilities has actually *declined* in Bradford, Sullivan and Wyoming Counties over the past ten years.

Table 17 compares DVMT for each county and the region, by facility ownership.

Table 17: Daily Vehicle Miles of Travel, 1996 and 2006 (in 000s)
Northern Tier

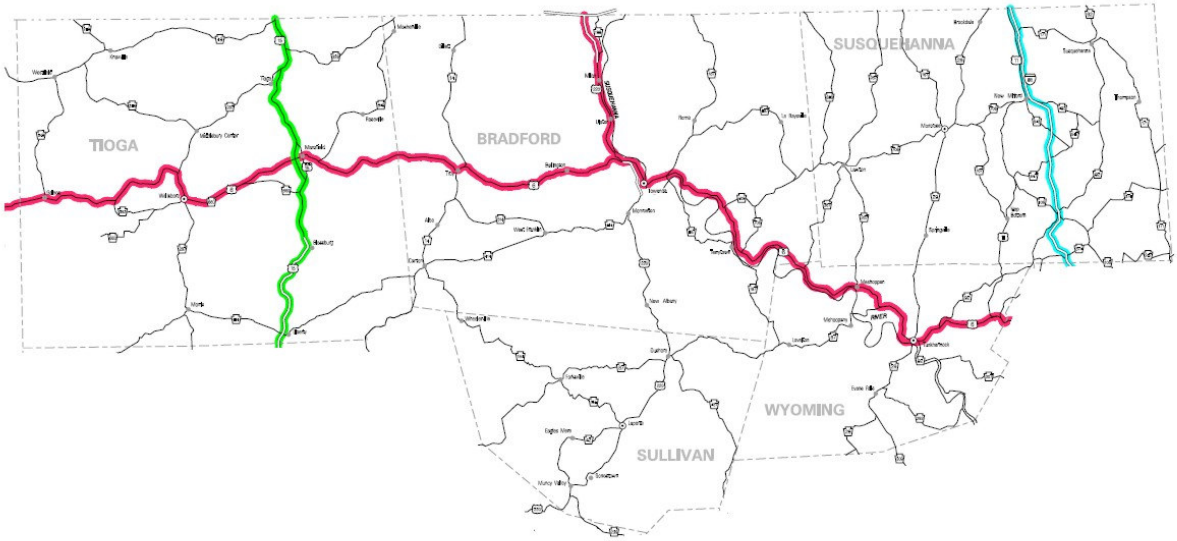
	PennDOT DVMT		Other Agencies DVMT		Local Municipal DVMT		Total DVMT	
	1996	2006	1996	2006	1996	2006	1996	2006
Bradford	1,190	1,156	1.0	3.3	161.4	201.5	1,353	1,362
Sullivan	185	169	34.9	75.6	25.5	25.3	246	270
Susquehanna	1,286	1,439	0.0	0.0	142.9	208.4	1,429	1,648
Tioga	1,051	1,206	85.7	212.5	126.3	150.4	1,263	1,569
Wyoming	700	693	0.0	0.0	79.8	98.7	780	792
Northern Tier	4,412	4,663	121.6	291.4	535.9	684.3	5,071	5,641
Pennsylvania	202,208	223,884	2,017.5	4,125.7	46,128.6	50,521.1	264,032	296,149

Source: PennDOT Bureau of Planning and Research (2006)

The National Highway System (NHS): The Region's Most Strategic Highway Network

The highest-order network in Pennsylvania and throughout the nation includes the National Highway system, or NHS. Designated by Congress in 1995, the NHS entails only 4 percent of the nation's roads, but carries 40 percent of its traffic. Elements of the NHS within the Northern Tier include US 6, US 15, I-81, and US 220 north of Towanda. From a transportation revenue standpoint, the Northern Tier RPO will receive approximately $24.8 million in NHS funds during the 2009 program. This entails approximately 12.2 percent of the region's entire base allocation of $202.5 million. These figures are discussed in more detail in the Financial Plan section of this LRTP.

Figure 8: Northern Tier NHS Routes



Roadway Conditions

The condition of the roadway network is important to the operating efficiency of the system. PennDOT maintains condition information on all state owned roads. Roadway condition is based on the International Roughness Index (IRI). IRI measurements are recorded based on the level of deflections per segment of highway. The lower the IRI, the smoother the road. Using IRI ranges, all roads are rated excellent, good, fair or poor.

IRI data is summarized for the following highway network classifications:

- Interstate
- National Highway System (NHS)
- Non-NHS > 2000 ADT
- Non-NHS< 2000 ADT

The following tables show the 2006 IRI ratings for all tested sections for each Northern Tier county.

Table 18: International Roughness Index (IRI) Ratings
Bradford County

IRI rating	NHS		Non-NHS with ADT> 2000		Non-NHS with ADT<2000		Total	
	Miles	%	Miles	%	Miles	%	Miles	%
Excellent	18	25	60	52	88	12	166	18
Good	40	56	41	36	74	10	155	17
Fair	12	17	10	9	81	11	102	11
Poor	2	2	4	3	474	66	480	53
Total Tested	**72**	**100**	**114**	**100**	**716**	**100**	**902**	**100**

Table 19: International Roughness Index (IRI) Ratings
Sullivan County

IRI rating	NHS		Non-NHS with ADT> 2000		Non-NHS with ADT<2000		Total	
	Miles	%	Miles	%	Miles	%	Miles	%
Excellent	0	0	13	52	52	26	64	28
Good	0	0	9	36	40	20	48	21
Fair	0	0	2	8	30	15	32	14
Poor	0	0	2	8	81	40	81	36
Total Tested	**0**	**0**	**25**	**100**	**203**	**100**	**227**	**100**

Table 20: International Roughness Index (IRI) Ratings
Susquehanna County

IRI rating	Interstate		Non-NHS with ADT> 2000		Non-NHS with ADT<2000		Total	
	Miles	%	Miles	%	Miles	%	Miles	%
Excellent	26	47	41	43	92	15	160	21
Good	17	31	35	37	118	20	170	23
Fair	11	20	15	16	119	20	146	19
Poor	0	0	4	4	271	45	275	37
Total Tested	**55**	**100**	**95**	**100**	**600**	**100**	**750**	**100**

Table 21: International Roughness Index (IRI) Ratings
Tioga County

IRI rating	NHS		Non-NHS with ADT> 2000		Non-NHS with ADT<2000		Total	
	Miles	%	Miles	%	Miles	%	Miles	%
Excellent	43	47	68	71	52	12	163	26
Good	40	43	19	20	75	17	134	22
Fair	7	8	8	8	71	17	86	14
Poor	2	2	1	1	232	54	235	38
Total Tested	**92**	**100**	**96**	**100**	**430**	**100**	**618**	**100**

Table 22: International Roughness Index (IRI) Ratings
Wyoming County

IRI rating	NHS		Non-NHS with ADT> 2000		Non-NHS with ADT<2000		Total	
	Miles	%	Miles	%	Miles	%	Miles	%
Excellent	9	27	20	32	57	21	86	24
Good	16	48	34	55	99	37	149	41
Fair	8	24	7	11	54	20	69	19
Poor	0	0	1	1	57	21	58	16
Total Tested	**33**	**100**	**62**	**100**	**267**	**100**	**362**	**100**

The major concern for condition ratings is the amount of the roadway system that is rated as poor. PennDOT's goals are to eliminate poor IRI on higher volume roads and to reduce, to the extent possible, poor IRI mileage on lower volume roads.

The following table summarizes the poor IRI roads in the region. The Northern Tier's IRI ratings show that for the major roads (Interstate, NHS and Non-NHS>2000ADT), there are almost no poor IRI roads. Only 16 miles, or 0.6 percent, are rated as poor. These are the highways which carry the majority of the traffic. However, for the lower volume roads 1,115, or 39 percent, are rated as poor. Significant resources are required to reduce the poor IRI roads on all highway networks in the region.

Table 23: IRI Mileage by County
Northern Tier

	2006 Poor IRI Miles				
	I-State	NHS	Non-NHS, ADT>2k	Non-NHS, ADT<2k	Total
Bradford	0	2	4	474	480
Sullivan	0	0	2	81	83
Susquehanna	0	0	4	271	275
Tioga	0	2	1	232	235
Wyoming	0	0	1	57	58
Northern Tier	**0**	**4**	**12**	**1,115**	**1,131**

Source: PennDOT Bureau of Maintenance and Operations

In serving a large, rural area, the region's highway network operates as the backbone of the Northern Tier's overall transportation system. A synopsis of the region's more significant roadways is highlighted in the points below.

I-81: The I-81 corridor in the Northern Tier includes just over 27 miles through Susquehanna County and is one of the region's three major north-south routes. The interstate is a major, strategic corridor for the Northern Tier, providing mobility to the Southern Tier Expressway (I-86) and I-88 and Albany, NY and south to the Pennsylvania Turnpike's Northeast Extension. Of prime interest includes the six interchanges within the I-81 corridor. Many of the interchanges are substandard and need to be improved. The interchanges at Gibson and at Great Bend/Hallstead were not designed to accommodate the level of demand they are now experiencing.

US 6: With the development of I-80, US 6 has transitioned to a scenic highway. Functionally classified as a principal arterial, the focus for planning for US 6 has been one geared more toward tourism potential than capacity expansion. The roadway is part of PennDOT's BicyclePA priority network of cross-state bicycle facilities. As such, some shoulders need to be improved. There has been no bus service on US 6 since the late 1970s; neither is there inter-city bus service. The roadway serves the timber industry, with logs and hardwood lumber being shipped. Farming communities also rely on US 6 for the transport of products such as sweet corn, beans, spinach, feed, and fertilizer. Approximately 4,800 vehicles use US 6 per day with a truck share of 7 percent.

US 15: The US 15/I-99 corridor has been the subject of major federal and state investment in recent years. The corridor traverses nearly 37 miles through Tioga County in the western portion of the region. Between Interstates 80 and 86, US 15 is characterized by both four-lane, limited-access sections, as well as two-lane segments with at-grade crossings. The entire corridor awaits designation by

the federal government as Interstate 99. Since the adoption of the region's 2004 LRTP, the section between Blossburg and Mansfield has been completed, with a February 2005 ground-breaking for the $110 million segment between the Tioga Welcome Center and the New York state line.

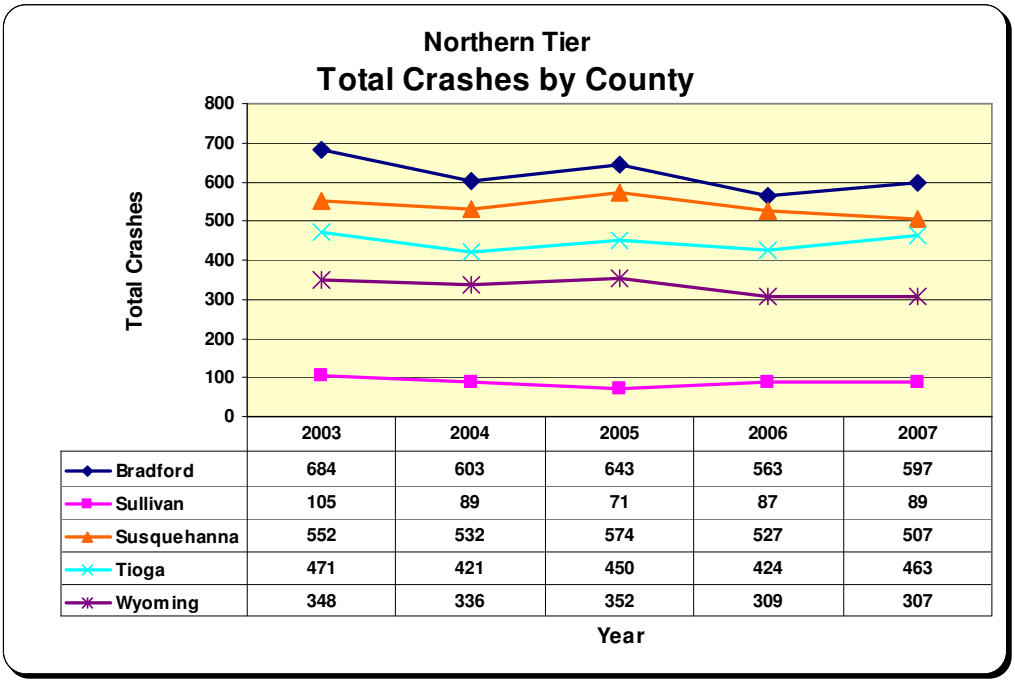
US 220: This roadway runs 73 miles through Sullivan and Bradford Counties and is one of the longest roadways in the Northern Tier, second only to US 6. The roadway connects two of the region's county seats (LaPorte and Towanda), as well as providing mobility to the urban centers of Williamsport and Elmira, NY. Within the region, the corridor features two, limited access bypasses around Towanda and Sayre. FHWA has designated the section north of Towanda as part of the National Highway System (see figure).

Highway-Related Crashes and Fatalities Declining

Data from PennDOT's Bureau of Highway Safety and Traffic Engineering reveal that the total number of crashes in the Northern Tier has been trending in a favorable direction. Since recording a total of 2,160 crashes in 2003, total crashes have declined to a 2007 total of 1,963 in 2007 (a 9 percent decline). All counties have demonstrated declines in total crashes over the five-year period, although Tioga County registered a 9 percent increase in total crashes from 2006-07, while Bradford County experienced a 6 percent increase. Crashes statewide have also declined during the period, by 6.8 percent.

Figure 9 below shows more detail on crash trends for each Northern Tier county.

Figure 9: Total Crashes by County
Northern Tier



Traffic data from PennDOT reveal that the number of traffic-related fatalities has declined by nearly half for the five year period ending 2007. Traffic deaths statewide declined by 5.5 percent over the same period. PennDOT data also reveal there were 5 pedestrian-related fatalities region-wide for the five-year period.

The following table provides more information on highway-related traffic deaths in the Northern Tier by county for the five-year period ending 2007.

Table 24: Total Traffic Fatalities by County
Northern Tier

	2003	2004	2005	2006	2007
Bradford	13	12	9	9	7
Sullivan	5	4	3	0	0
Susquehanna	14	8	13	8	11
Tioga	10	6	11	11	9
Wyoming	9	3	9	7	0
Northern Tier	51	33	45	35	27

Source: PennDOT Bureau of Highway Safety and Traffic Engineering

An Aging Inventory of Bridges

There are 1,777 state-owned bridges longer than 8 feet in length and 331 locally owned bridges greater than 20 feet in length in the Northern Tier. A good network of bridges is essential in improving residents' access to activities, goods and services. Their ongoing preservation, improvement and expansion serve to bolster the region's economic development potential and mobility.

Bridge conditions can be measured in myriad ways:

- **Load Capacity Challenged (Posted and Closed)**: One of the most obvious measures of bridge performance is that of bridge closings and postings as a percentage of total state bridges. Posted and closed bridges negatively impact emergency response, goods movement, and commerce in general. In the Northern Tier, most posted and closed bridges are on lower-system roadways (such as four-digit SRs).

- **Substandard Bridges (Structurally Deficient/Functionally Obsolete)**: Together, these two categories entail bridges that are substandard. Structurally deficient bridges are structures unable to carry vehicle loads or tolerate the speeds that would normally be expected for that particular bridge in its designated system. They do not meet current criteria for live load capacity and traffic capacity. Functional obsolescence refers to a bridge with inadequate width or vertical clearance for its associated highway system…a "choke point."

- **Load Challenged Bridges (Weak Link/On Deck)**: These are relative new measures PennDOT has been using to identify structures that are within 110 and 120 percent, respectively of their legal load limit.

- **Sufficiency Ratings**: Ratings of individual bridge elements (deck, substructure, superstructure, etc.) and levels of traffic are factors that are important in the determination of bridge Sufficiency Ratings.

PennDOT's Bridge Management System estimates it would require over $300 million to bring the region's inventory of state-owned bridges up to an acceptable condition. Table 25 below provides county by county detail on the region's bridge inventory for state-owned structures in the Northern Tier by classification. From the table, nearly three-quarters of all the region's state-owned bridges are on lower-order networks carrying fewer than 2000 vehicles daily.

Table 25: Highway Bridges on the State System > 8 feet
Northern Tier

	# Bridges	I-state & Ramp	Other NHS	Non-NHS, ADT>2000	Other Non-NHS	Deck Area (000^{ft})	Rehab/ Replacement Cost ($000,000s)
Bradford	509	0	40	88	381	1,097	89.3
Sullivan	138	0	0	15	123	164	14.4
Susquehanna	414	35	0	55	324	732	93.9
Tioga	513	3	80	97	333	1,283	50.9
Wyoming	203	0	26	44	133	552	56.4
Northern Tier	1,777	38	146	299	1,294	3,828	304.9

Source: PennDOT Bridge Management System

According to PennDOT's Bureau of Design, the region has a greater share of locally-owned bridges that are posted than the state average. Bradford County leads the region in the total number of non-PennDOT bridges that have some kind of bridge restriction (posted or closed). Of the eight locally-owned bridges greater than 20 feet in length that are closed, four are in Tioga County.

Among bridges on the state system (greater than 8 feet) there are 50 such structures that are either posted

or closed. Nearly half of these (22) are in Susquehanna County, with an additional 12 in Wyoming County. Only three of these structures are closed. All three of the closed bridges are on lower-order, secondary roadways, such as four-digit SRs.

Table 26 below summarizes all state bridges in the region that are either posted or closed, while Table 27 does the same for locally-owned bridges.

Table 26: Posted and Closed Bridges on the State System > 8 feet
Northern Tier

County	State Route	Feature Intersected	Status	Length (in feet)
Bradford	1029	Bullard Creek	Posted	43
Bradford	1055	Parks Creek	Posted	28
Bradford	1056	Satterlee Creek	Posted	17
Bradford	3008	Tr to Towanda Creek	Posted	17
Bradford	3022	Sugar Creek	CLOSED	152
Bradford	4006	Stone Lick Creek	Posted	15
Bradford	4010	Sugar Creek	Posted	56
Bradford	4024	Stone Lick Creek	Posted	20
Sullivan	2002	Muncy Creek	Posted	78
Sullivan	4012	Loyalsock Creek	Posted	153
Susquehanna	0106	E Br Tunkhannock Creek	Posted	113
Susquehanna	0367	Tuscarora Creek	Posted	27
Susquehanna	0367	Br Tuscarora Creek	Posted	28
Susquehanna	0858	Summers Creek	Posted	34
Susquehanna	1009	Br Starrucca Creek	Posted	23
Susquehanna	1010	Salt Lick Creek	Posted	45
Susquehanna	1011	Hemlock Creek	Posted	35
Susquehanna	1012	Salt Lick Creek	Posted	33
Susquehanna	1015	Cascada Creek	Posted	41
Susquehanna	1016	Delaware & Hudson RR	Posted	66
Susquehanna	1017	Tr of Susquehanna River	Posted	18
Susquehanna	1029	Trowbridge Creek	Posted	32
Susquehanna	1033	Tr Susquehanna River	Posted	27
Susquehanna	1037	DuBois Creek	Posted	58
Susquehanna	2009	Tr Horton Creek	Posted	31
Susquehanna	2019	Willow Brook	Posted	15
Susquehanna	2034	Tunkhannock Creek	Posted	50
Susquehanna	2061	Meylert Creek	Posted	17
Susquehanna	3017	Thomas Creek	Posted	22
Susquehanna	3029	E Br Wyalusing Creek	Posted	55
Susquehanna	3033	Wyalusiing Creek	Posted	84

County	State Route	Feature Intersected	Status	Length (in feet)
Susquehanna	4013	Cork Hill Creek	CLOSED	30
Tioga	1005	Mill Creek	Posted	72
Tioga	2014	Fellows Creek	Posted	34
Tioga	3005	Stony Fork Creek	Posted	39
Tioga	3014	Zimmerman Creek	Posted	71
Tioga	4009	Troups Creek	Posted	108
Tioga	4017	Losey Creek	Posted	18
Wyoming	0029	Bowmans Creek	Posted	95
Wyoming	0029	Bowmans Creek	Posted	156
Wyoming	0087	So Br Mehoopany Creek	Posted	155
Wyoming	0087	Mehoopany Creek	Posted	158
Wyoming	0092	Monroe Creek	Posted	31
Wyoming	0267	Meshoppen Creek	Posted	214
Wyoming	0307	Osterhout Creek	Posted	47
Wyoming	1015	Fieldbrook Creek	Posted	34
Wyoming	1029	Tunkhannock Creek	CLOSED	115
Wyoming	2001	South Run Creek	Posted	24
Wyoming	2012	So Br Tunkhannock Creek	Posted	82
Wyoming	2012	Br of So Br Tunkhannock Cr	Posted	36

Source: PennDOT Bridge Management System

Table 27: Closed and Posted Local Highway Bridges > 20 Feet
Northern Tier

	# Bridges	Closed		Posted		Avg. Sufficient Rating
		#	%	#	%	
Bradford	122	1	0.8	39	32	64.7
Sullivan	38	1	2.6	18	47	56.9
Susquehanna	54	0	0.0	13	24	77.1
Tioga	92	4	4.3	32	35	68.9
Wyoming	25	2	8.0	10	40	58.6
Northern Tier	331	8	2.4	112	34	- -
Pennsylvania	6,329	188	3.0	1,988	31.4	67.5

Source: PennDOT Bridge Management System

Of the 1,777 state-owned bridges in the Northern Tier that are greater than 8-feet in length, 505 (28 percent) are substandard. While this is much better than the statewide average (37 percent), there are still regional concerns about bridge conditions. Looking at just the structurally deficient bridges (the more critical category when considering condition), the Northern Tier has 382 structurally deficient bridges which represent 17 percent of all bridge deck area. This is slightly lower than the average statewide structurally deficient deck area (20.8 percent). PennDOT has a goal to reduce structurally deficient deck area to 10 percent over time.

Within the region, Susquehanna County has the greatest percentage of structurally deficient bridges, at 33 percent, followed by Wyoming County, at 29 percent. These two counties also lead the region in the total deck area involving bridges that are structurally deficient, at 26 and 27 percent, respectively.

The following tables provide more detail on the extent of the region's substandard bridges.

Table 28: Structurally Deficient and Functionally Obsolete Bridges on the State System > 8 Feet Northern Tier

	# Bridges	Total Bridges			Structurally Deficient		Functionally Obsolete	
		8-20'	20'+	Deck Area[3]	#	Deck Area	#	Deck Area
Bradford	509	232	277	1,097	94	181	30	158
Sullivan	138	62	76	164	13	20	6	4
Susquehanna	414	197	217	731	136	191	27	56
Tioga	513	200	313	1,282	80	115	43	57
Wyoming	203	90	113	553	59	150	17	21
Northern Tier	1,777	781	996	3,827	382	657	123	296
Pennsylvania	25,355	9,950	15,405	110,157	5,906	22,886	3,556	26,470

Source: PennDOT Bureau of Design

When examining bridge condition data for structures not owned by PennDOT, conditions are generally worse in Northern Tier, depending on what measure one decides to use. For structures that are functionally obsolete, the region's bridge inventory is nine percentage points lower than the state average of 19 percent. However (and more importantly) the region has a higher share of bridges that are structurally deficient (39 percent). This is nine percentage points higher than the state rate of 30 percent.

[3] In thousands of square feet

Nearly every county in the region has a greater share of locally-owned structurally deficient bridges than the state average of 30 percent. In Sullivan County, the rate is 50 percent, while in Wyoming County, the rate is nearly 65 percent. Table 29 shows more county by county detail on bridge conditions for structures not owned by PennDOT.

Table 29: Structurally Deficient and Functionally Obsolete Bridges (NON-PennDOT)
Local Highway Bridges > 20 Feet
Northern Tier

	# Bridges	Structural Deficient		Functionally Obsolete		Deficient (SD/FO)	
		#	%	#	%	#	%
Bradford	122	45	37	14	12	59	48
Sullivan	38	19	50	6	16	25	66
Susquehanna	54	15	28	3	6	18	33
Tioga	92	34	37	8	9	42	46
Wyoming	25	16	64	1	4	17	68
Northern Tier	331	129	39	32	10	161	47
Pennsylvania	6,329	1,914	30.2	1,190	18.8	3,104	49

Source: PennDOT Bridge Management System (February 2007)

Rail Freight

While freight movement in the region is primarily via truck, the importance of rail service should not be underestimated. Rail freight traffic in the Northern Tier is shaped by the region's position in the eastern and national rail network and by the structure of the network itself. Ownership, connection, and distance combine to influence the pattern and character of current and prospective freight volume. While the Northern Tier is a gateway for substantial volumes of highway traffic on I-81, it is less accessible from a freight rail perspective. The ability of regional rail to relieve highway congestion is constrained by network position, vertical clearance limitations, facility capacity limitations, and institutional factors.

From a rail freight perspective, shippers in the region are served by primarily by shortlines and Class I railroads. These include:

- The Wellsboro & Corning Railroad
- The Towanda-Monroeton Shippers Lifeline
- Norfolk Southern's (nee Lehigh Valley) line
- CPRail.

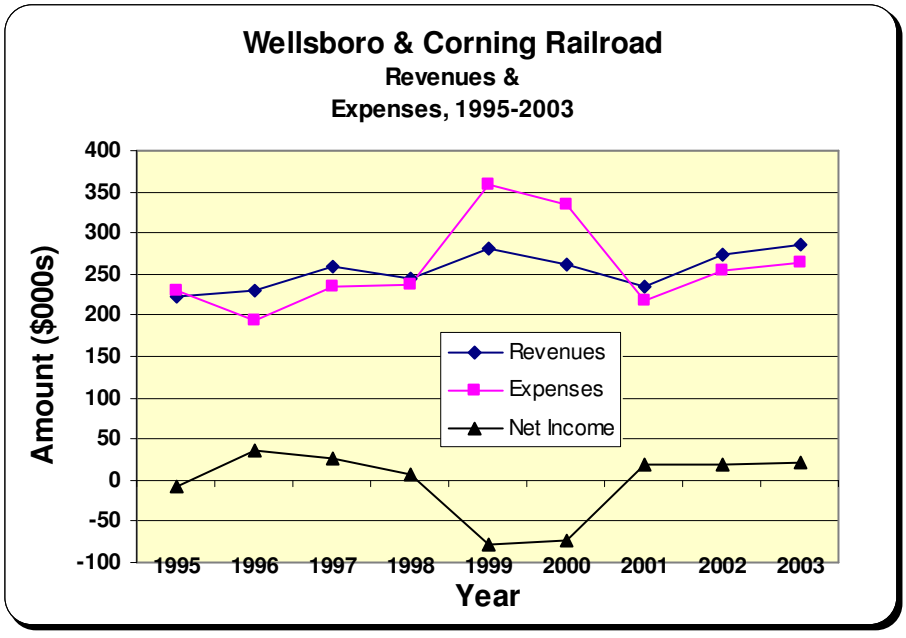
The Wellsboro & Corning Railroad

The Wellsboro & Corning Railroad (WCOR) is an important short line for industries and agriculture in Tioga County. It serves as a switching carrier for both Norfolk Southern (NS) and the Canadian Pacific (CP). It connects the county seat of Wellsboro with NS' Southern Tier line and yard in Gang Mills, NY.

The WCOR line had its beginnings in 1872, when it was constructed by the Wellsboro and Lawrenceville Railroad. Over time, the line experienced several mergers and changes in ownership before becoming part of the New York Central in 1914, then part of the Penn Central Railroad Transportation Company in 1968. Conrail then operated the line from 1976 through December 31, 1992.

The line's owner, Growth Resources of Wellsboro Foundation (GROW) acquired the line in 1993 from Conrail after the rail giant announced it was planning to shut the line down. At the time there were three major industries using the 35-mile line, including Osram (formerly GTE) Sylvania, Borden (Eagle Family) Foods in Wellsboro and Cornell Brothers Agway in Middlebury Center. The three firms combined represented approximately 450 jobs. Until December 2007, the line was operated as part of the North Shore & Affiliated group of railroads. The Wellsboro & Corning was the North Shore's second-smallest railroad, always operating on the margins of profitability (see Figure 10). The line (including the scenic Tioga Central Railroad) is currently owned by the Myles Group of Exton.

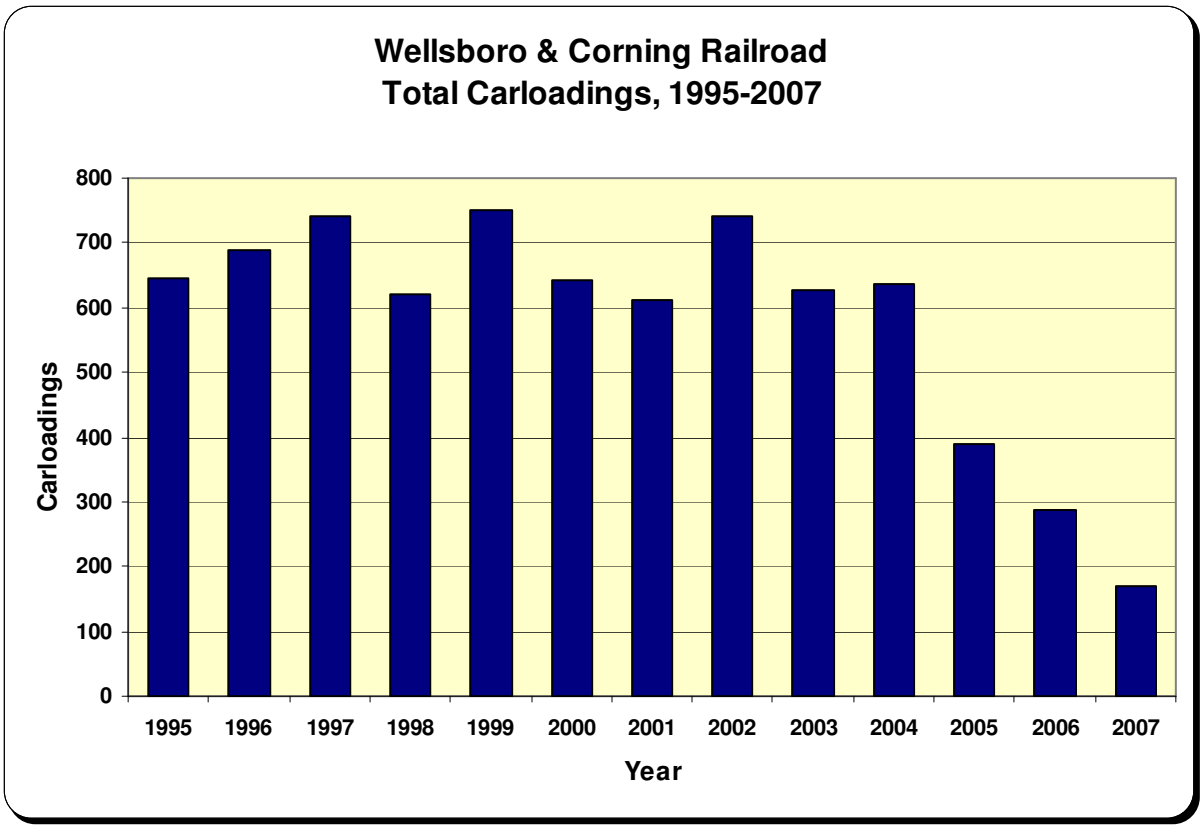
Figure 10: Wellsboro & Corning Railroad Net Income



The loss of Eagle Family Foods as one of the line's major shippers in February 2005 had a dramatic impact on total carload counts. Total carload counts as recently as 2002 were as high as 750. (For 2007, rail officials anticipated a count of 320.) Figure 11 includes more historical information on total carloadings.

Since its beginnings in 1992, the Tioga Central Railroad has provided passenger excursion service on the line, which has had a significant impact on the tourism industry locally. Passenger excursions typically operate on weekends when freight isn't moving although during times of additional runs (as during the fall foliage season) the excursions must defer to freight movement. Ridership has grown from approximately 10,000 at its inception to over 20,000 during the 2002 season to a total of 15,046 in 2006. The company's equipment includes three locomotives and a half dozen passenger cars. Total revenues in 2002 were $181,026, which was comparable to the line's freight-generated revenues.

Figure 11: WCOR Annual Carloadings, 1995-2007[4]



Financial assistance is of critical importance to the W&C Railroad, as it wouldn't survive without it. Of the line's 35 miles, 11 are located in New York State, which hinders funding assistance through such sources as Pennsylvania's Rail Freight Assistance Program. This program is critical to the future of the line although the RFAP budget has been cut in half in recent years from $8.5 million to just $4.25 million in assistance annually. With the operation of the line currently in question, GROW has decided not to participate in the RFAP program for the 2008-09 funding cycle.

[4] As of June 2007

The line has a number of at-grade crossings, yet no major incidents have been reported. The carrier reports having more problems with vandalism and trespassing (ATV traffic, etc.). There are a number of crossings on the line that merit signalization, due to train speed. Again, dependence on outside sources (public investment) is needed to fund these types of improvements, which are typically cost prohibitive for small railroads such as WCRR.

A major new development affecting the line's operations includes the planned 2009 construction of a new salt plant right off the rail line just north of Tioga. Dominion plans to mine table salt for shipment from Tioga County. The new plant is expected to generate 200 construction jobs, then 75 jobs during the first two years. More importantly, the new salt plant is expected to generate 400 carloads a year – a modest projection by some analysts. The additional carloads would be welcome new business and would bolster the fortunes and interests of the line's two remaining shippers – Agway and Osram-Sylvania. In the case of the latter, Osram could not survive without the rail option. The company and its 180 jobs would be in jeopardy without it. For Agway, the resulting impact on its retail business would be affected by as much as $5-17/ton.

Putting It In Context

Osram-Sylvania is one of Tioga County's largest manufacturing employers with 225 employees. All of these jobs would cease without rail freight service.

The Towanda-Monroeton Shippers Lifeline

The Towanda-Monroeton Shippers' Lifeline, Inc. (nee Lehigh Valley, Conrail) is a 5.6-mile shortline carrying grain and fertilizer from the NS line in Towanda to businesses in central Bradford County. Growmark and Shaffer's Feed Mill in Monroeton are the line's biggest customers, generating annual traffic of approximately 145 cars annually. Rail service is provided three days per week during ten months of the year and six days a week the balance of the year. A majority of freight on the line is being shipped to (as opposed to from) Monroeton. Line operators estimate that approximately 85 percent of the mill's freight is received by rail, adding to its competitiveness. The rail line is a vital part of the businesses' transportation operations.

After a 1975 flood destroyed the line (and the Lehigh Valley went out of business), the Commonwealth of Pennsylvania rebuilt the line, which was then operated locally by private concerns. The line originally ran south of Monroeton through Dushore and Sullivan County to its eventual terminus in Wilkes-Barre. That portion of the line however was abandoned in 1981-82. The railroad historically received $4,000 annually in state operating assistance up until 2001. The railroad presently receives no funding assistance from the state.

A key issue for the shortline includes the future of Norfolk Southern in the region. The rise in fuel costs may have increased inquiries to NS's website, yet the Class I's long-term future within the region remains questionable. If ownership on NS' Lehigh Valley line (Sayre to Mehoopany) should change in the future, there may be opportunities to expand rail freight service through a shortline carrier. This is an emerging opportunity that should be kept in front of the area's economic development agencies.

Norfolk Southern's (nee Lehigh Valley) line

Norfolk Southern owns the former Lehigh Valley line, which runs 60 miles from Sayre through Towanda on its way to the Proctor and Gamble plant in Mehoopany. This line is considered a "tactical" line by NS, in that it serves as a "surplus" main line or branch line with a limited amount of freight. As a tactical line, it is dependent on local freight for its viability. Currently, NS owns the line, yet does not operate any trains. The Class I has an agreement with a shortline which serves 2 customers along the route. NS does not have any intention of providing service itself on the line in the future and is actively looking to lease it to another operator.

A policy recommendation from the Bradford County Comprehensive Plan (2004) states: "The County should coordinate with NTRPDC in monitoring the status of Norfolk Southern's (NS) line between Athens and Mehoopany. Current trends on the line have not been encouraging and policy should be in place as to what should happen to the line (land bank for a rail trail, passenger excursion use, etc.) should NS decide to abandon or downgrade it.

Reading, Blue Mountain & Northern

The Reading, Blue Mountain & Northern began as a 12-mile line that today serves businesses and industry everywhere between Reading and Scranton all the way north into Mehoopany. The railroad today operates a total of 266 route miles on 16 different lines in eastern Pennsylvania. They primarily haul coal out of eastern Pennsylvania for shipment throughout the United States, Canada, and exportation throughout the world. The railroad also hauls paper, lumber, plastics, fertilizer, stone, sand, road slat, brick, fly-ash and other products.

Most importantly to the Northern Tier, the railroad became an exclusive carrier for Proctor & Gamble's Mehoopany plant for more than 4,000 annual carloads of pulp board. The rail carrier is also being used by NS to carry traffic between Buffalo and Harrisburg.

CPRail

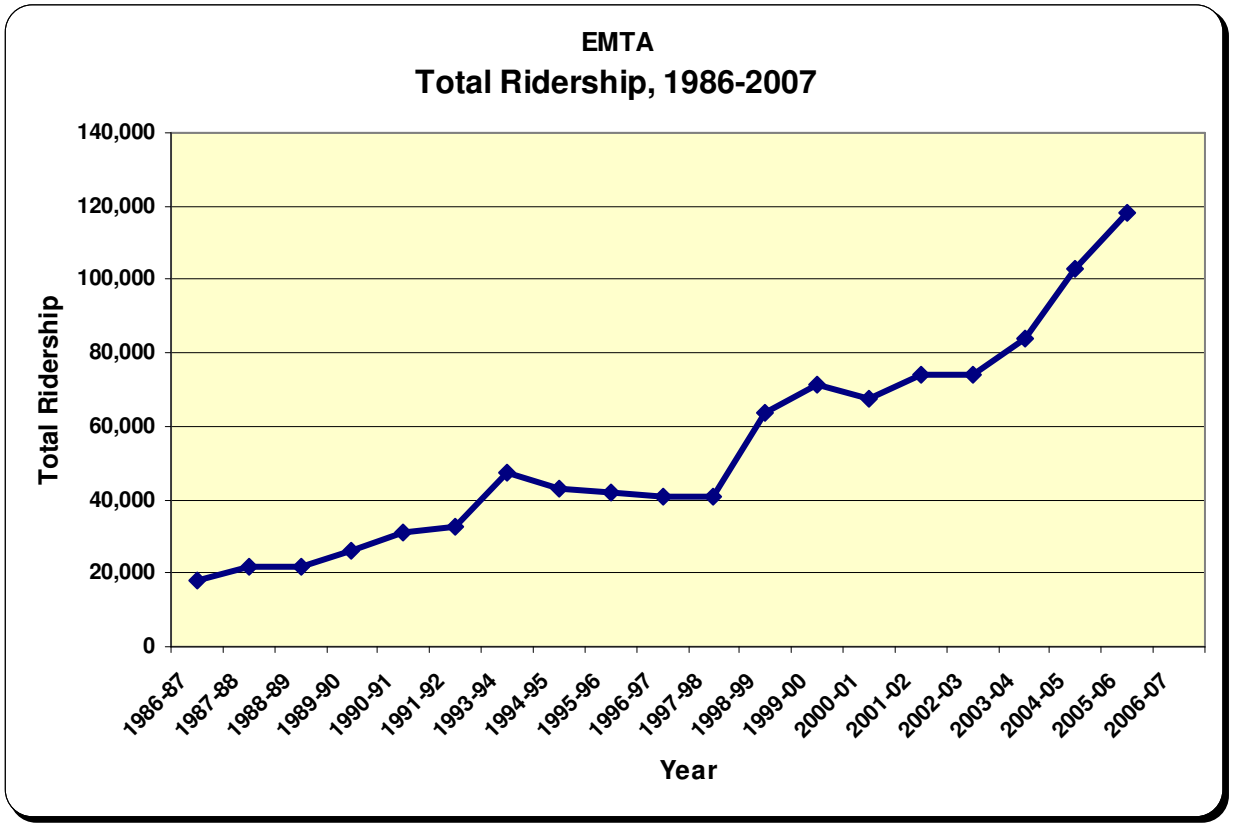
Of all the rail lines in the Northern Tier, CP Rail's line through Susquehanna County is arguably the most important. In fact, rail freight analysts believe the line is one of the top one or two north-south lines in the northeastern United States. CP Rail bought the line from the D&H in 1991 and traffic on the line is currently higher than it has been at any point over the past 20 years. In spite of this, the operation of the line is suspect as it may be leased to a regional railroad. Traffic on the line is funneled in all directions from the corridor. From Binghamton freight moves west to Buffalo and Toronto as well as north towards New England and Montreal. To the south, rail traffic heads to Allentown and Harrisburg as well as southern New Jersey. CP Rail also connects with CSX in Philadelphia. CP Rail is looking to PennDOT for basic maintenance funds for this line.

Public Transportation Experiencing Ridership Growth

Public transportation services in the region are provided primarily by the Endless Mountains Transportation Authority, or EMTA. EMTA provides fixed-route and demand responsive public transportation services in Bradford, Sullivan and Tioga Counties. Service in Wyoming and Susquehanna Counties is provided by the Luzerne-Wyoming County Transportation Department and Barnes-Kasson Hospital, respectively. Susquehanna County is the only Northern Tier county and one of only 15 in Pennsylvania that does not have fixed route bus service.

Total ridership on EMTA has been trending in a favorable direction, actually doubling over the past decade. By this broad indicator, EMTA has fared well, as total ridership on its system has grown from a 2001-02 total of 73,928 and in 2005 exceeded 100,000 for the very first time. In 2006, the authority registered a total ridership number of nearly 120,000. Roughly 85 percent of EMTA's passengers are fare-paying, while 14 percent are senior citizens. Figure 12 below shows the favorable trends related to total ridership on EMTA.

Figure 12: Total Ridership, 1986 – 2007
EMTA



Total ridership is just one coarse indicator for measuring transit operator performance. By any measure though, EMTA has been performing well. Consider:

- EMTA ranks in the middle of the state in expense per passenger.
- EMTA ranks as one of the higher operators in revenue per passenger.
- Expense per hour is one of the lowest in the state (in 2005-06 EMTA was the least expensive rural system in the state to operate in expense per hour).
- EMTA had the third-lowest deficit in the state behind only Venango County and Shippensburg. This is a good measure of EMTA's efficiency.
- EMTA's revenue per mile will naturally not be as good as some others, since they typically drive longer distances.
- Deficits per passenger mile in 2005-06 was the lowest in the state.

The authority has actively been identifying new services that need to be provided, particularly more work-based services for commuters. As a result, from 2005-06, ridership increased by 10 percent, or 11,000 riders. New service includes a Mansfield to Towanda run, which began in August 28, 2006.

Another example includes new fixed route service initiated in Sullivan County – a significant reason for the uptick in revenue vehicle hours in 2005. In order to try and help reign in the costs of the shared ride program, EMTA devised a deviated fixed route system for Sullivan County (Dushore to Towanda). EMTA initially offered two shared ride vans from Towanda to each end of Sullivan County. Since some riders didn't need to be on the shared ride van all the time, one of the routes was eliminated. A deviated fixed bus route then went along a fixed route and deviated a quarter mile, capturing some of the more mobile riders who had been using the van service. This change in service opened up additional capacity in the guise of an entire van and driver for the day.

EMTA has also examined some underperforming runs and redesigned several of them, as well as removing hours that weren't producing. As a result, both ridership and hours of service have increased, while hours of operation have decreased. With the advent of additional revenue through Act 44, EMTA is investigating making other changes to improve its services and efficiency even further.

Since the region's previous LRTP was adopted in 2004, EMTA has relocated its administrative offices to its facility in Athens to reduce overhead costs. The authority still maintains a small maintenance facility in Mansfield.

Outside of EMTA's current service area, public transportation (shared ride) services in Wyoming County are provided by the Luzerne County Transportation Authority. Any future fixed route service in the county could take the form of express bus service from Tunkhannock. Within the county proper, it should be noted that Wal-Mart can be a tremendous generator of public transportation trips, and could potentially lend itself to some form of a circulator service, especially since the Tunkhannock area Wal-Mart is not within walking distance of the downtown. A small fixed route transit service may be feasible.

Both Wyoming and Susquehanna Counties were part of EMTA's original charter when it formed as an authority. Even though both counties eventually withdrew from the municipal authority filing, EMTA could still provide service as a contractor for the county. Wyoming County may eventually need to become part of the authority again, should such a service be desired.

Public Transit: Looking Ahead

For EMTA's part, one of the most significant issues and driving forces for it has been the passage of Act 44 in August 2007. One of the more immediate results of the infusion of new money will be the expansion of Route 10 with shorter headways. Another significant issue has been the challenge in fulfilling Medical Assistance (MA) grants. EMTA currently must dispatch on demand and cannot take others from Ride Share on same dispatched call. For EMTA, this is bad for business, inefficient, and a public relations headache, as the unwanted side-effect is denying some seniors rides due to the demands of MA requirements. Ultimately, EMTA would like to see this issue addressed at the state level through an integrated policy that allows Medical assistance and Shared Ride programs to speak to one another so that operators like EMTA can be even more efficient and avoid alienating the public.

A related challenge for EMTA also includes Inter-county reciprocal transit arrangements—as most cannot currently cross county lines except for medical purposes—visitors to medical facilities cannot use the service. More interstate cooperation is also needed between the two Tiers, as Binghamton, NY is closer to much of the region and has more advanced medical facilities. Unfortunately, there are liability and policy challenges that preclude service to these areas.

Future opportunities for EMTA include changing demographics and economics. A greater share of the region's population is becoming more elderly and dependent on public transportation services. These seniors are living in remote, rural areas which challenges the efficiency of delivering public transportation services to them. Also, escalating fuel costs have affected the amount of interest in public transportation once again and increased awareness of various programs available to seniors.

The use and promotion of public transportation in the region would also gain from the designation of "park and ride" locations to increase EMTA's "catchment area" and encourage people to use its services.

T-Best - Transit Boardings Estimation and Simulation Tool

Along with York County, the Northern Tier in 2007 piloted a research project in collaboration with PennDOT on the viability of a new planning tool for public transportation. Called "T-Best", it remains to be seen at this writing how it will ultimately be used. It is hoped though that such a tool could be used in the future to modify existing routes.

At its core, T-Best is a software program fully GIS-enabled with network coding and editing capability to code and manage routes and proposed scenarios. PennDOT anticipates that the Northern Tier RPO would eventually assume and maintain the planning tool upon its

finalization. PennDOT will ultimately be developing other pilots in determining coefficients for smaller transit systems within Pennsylvania.5

On June 21, 2007, the Northern Tier RPO adopted an Interim Coordinated Public Transit-Human Services Transportation Plan. A copy of the plan is included as an appendix to this LRTP.

[5] See also www.tbest.org, a website developed in conjunction with the Center for Urban Transportation Research

Environmental Overview

The Northern Tier region is approximately 3,955 square miles in size, comprising 2.5 million acres of some of the state's most rugged topography.

Of the 67 counties in Pennsylvania, 52 are located within the Appalachian region. All five Northern Tier counties (also sometimes known as the "Endless Mountains" region[6]) are located squarely within this region. The Northern Tier has a physical character that is quite distinct from the rest of the state. Historically, the rugged nature of the Appalachian region has been a barrier to east-west movement, and to economic advancement. Over time, the region has become isolated and separated from other areas. Map 5 and Map 6 in the plan appendix shows the region's environmental features and topography in more detail.

Geography

The five counties within the Northern Tier are shaped in large part by topography and geology. The majority of the Northern Tier lies within the Allegheny Plateau, a portion of the much larger Appalachian Uplands that run from New York State to Alabama. The Allegheny Plateau comprises three-fifths of Pennsylvania's landmass and is situated adjacent to the Ridge and Valley Province directly to the south. The portion of the plateau that lies within the Northern Tier exhibits significant topographical relief resulting from glacial action and erosion. These sloping uplands are historically referred to as the "Endless Mountains," a name that was originally coined by eighteenth century European explorers.

The "Endless Mountains," mainly found in Bradford, Sullivan, Susquehanna, and Wyoming Counties, is a unique landform that conveys a strong sense of place and tells a compelling story, one that has helped identify a common heritage throughout much of the Northern Tier.

A bucolic scene from Herrick Township in Susquehanna County.

Land Use

The region's isolated nature has historically been a function of both its topography, as well as the mobility offered by two-lane roads. That has been changing however, with the construction of I-81 in the 1960s and the modernization of US 15 into the future Interstate 99 occurring today. In neighboring New York, improvements on making the I-86 roadway into a limited access corridor will also lessen the region's isolation from other markets and transportation corridors.

There are eight general types of environmentally sensitive lands. Table 30, as well as Map 5, shows the distribution of the region's environmentally sensitive lands by county.

[6] Excluding Tioga County

Table 30: Summary of Environmentally Sensitive Land
Northern Tier

Environmental Feature	Acreage	Square Miles	Percent of Total Land Area
State Parks	5,566	8.6	0.2
State Forests	208,161	325.3	8.2
State Game Lands	188,355	294.3	7.4
Wetlands	72,502	113.3	2.9
Floodplains	128,158	200.2	5.1
Steep Slopes (>12 percent)	1,291,566	2,018.1	51.0
Farmland	217,775	340.3	8.6
Farmland of Statewide Importance	927,135	1,448.6	36.6

Source: Northern Tier GIS; Gannett Fleming

Table 31: Environmentally Sensitive Land (in acres)
Northern Tier

Environmental Feature	Bradford	Sullivan	Susquehanna	Tioga	Wyoming	Northern Tier
Floodplains	42,544	7,221	29,990	30,710	17,692	128,158
Prime Farmland	64,141	16,355	61,974	52,491	22,813	217,775
Farmland of Statewide Importance	353,237	33,652	190,638	284,564	65,044	927,135
State Forests	25,160	43,327	0	139,674	0	208,161
State Game Lands	54,857	64,472	14,190	25,412	29,425	188,355
State Parks	1,310	2,562	397	1,297	0	5,566
Steep Slopes (>12 percent)	346,913	138,784	273,572	393,683	138,576	1,291,528
Wetlands	20,492	7,817	19,774	11,571	12,849	72,502
Total	908,655	314,191	590,536	939,402	286,399	3,039,182

Source: Northern Tier GIS; Gannett Fleming

Each land use highlighted in the preceding tables is explained in more detail in the following points.

Floodplains – Much of the region is drained by the north and west branches of the Susquehanna River. Related tributaries include the creeks of Loyalsock, Meshoppen, Pine, Towanda, Tunkhannock and Wyalusing, among many others. Floodplains are areas adjacent to watercourses which are covered by water during times of flooding. A 100-year floodplain is the area adjacent to a river or stream which has a 1 percent chance of being flooded during any one year, and is typically used for regulatory purposes. Floodplains should not be developed, due to the potential for damage to persons and property. If development occurs within the floodplain, it may limit the floodway, resulting in increased damage downstream because of resulting increased velocities of the floodwater downstream. There are over 128,000 acres within the region that are within a floodplain. A majority of these (33 percent) are in Bradford County.

Prime Farmland – These soils are included as qualifying as "prime farmland". There have been over 8,200 acres of land subject to agricultural conservation purchases, a majority of which have been in Susquehanna County. Bradford County though still has the highest share of Prime Farmland in the region. According to the Department of Agriculture's National Agricultural Statistics Service, the total number of farms in the region has declined from 4,230 in 1996 to 4,120 in 2006 while the amount of land in farms has declined by nearly 6 percent over the same period, to 776,000 acres in 2006. Bradford County alone has 1,655 farms covering over 329,000 acres ranking third and second, respectively, statewide.

Farmland of Statewide Significance – Because of their location, distribution and environmental significance, farmland of statewide significance. The state has recognized that productive farmland is being converted into nonagricultural uses daily. The definition of "prime farmland" has been established nationwide by the U.S. Department of Agriculture to include Class I and Class II soils. The region's greatest share of these farms are in Bradford and Tioga Counties. Bradford County specifically has 38 percent of the region's farmland of statewide importance.

State Forests – A little over 8 percent of the Northern Tier's land is comprised of state forest. Much of the region's state forests lands originally owned by lumber companies and land holding companies. The Tioga State Forest is the largest such forest in the Northern Tier, consisting of 160,000 acres in Bradford and Tioga Counties. Loyalsock State Forest is located in Sullivan County. Over two-thirds of the region's state forest land is in Tioga County. There are no state forests in Susquehanna or Wyoming Counties.

State Game Lands – There are several State Game Lands in the Northern Tier, consisting of nearly 300 total acres. These lands are managed by the Pennsylvania Game Commission for hunting, trapping and fishing. Sullivan County contains only 11 percent of the region's total land area, yet has 34 percent of all the region's state game lands.

State Parks – There are three state parks within the Northern Tier consisting of over 5,500 acres or nearly 9 square miles of land. Two of these parks – Ricketts Glen and Worlds End – are located in Sullivan County, while Mt. Pisgah is located in west-central Bradford County. Nearly half of all the region's state park land (46 percent) is located within Sullivan County. There are no state parks in Wyoming County.

Steep Slopes – Over half of the region consists of steep slopes, or slopes greater than 12 percent. Elevations in the region range from 523 feet at the Susquehanna River in Wyoming County to the top of North Knob in the Elk Mountain ski resort in Susquehanna County (2,693 feet[7]). The region is separated by ridges and valleys of mountains from the great western plateau of the Allegheny Mountains. Tioga County has the region's greatest share of steep slopes, at 30 percent.

Wetlands – Wetlands are generally found along watercourses or in other areas subject to frequent flooding, and are characterized by soil type and the presence of hydrophytic ("water-loving") vegetation, in addition to the presence of visible surface water. Susquehanna County has the region's greatest share of wetlands, at 27 percent.

Land Use Management

A review of DCED's municipal statistics summary shows that the region is generally lacking in terms of using the various land use management tools that are available to municipal government. The state planning code is the enabling legislation that empowers municipalities to adopt and enforce various plans and ordinances geared towards community preferences regarding land use management. Within the Northern Tier, fewer than half (82) even have a municipal planning commission or a comprehensive plan (78). More detailed land management ordinances such as zoning or subdivision and land development ordinances are even less common. This general lack of planning at a municipal level contributes to uncoordinated development, undesirable uses of land, and sprawl. Over the long term, a lack of adequate land use planning is costly to municipalities and the region.

Table 32 shows the total number of various land use management plans and ordinances in place, by county.

Table 32: Municipal Land Use Controls
Northern Tier

	Municipalities	Comprehensive Plan	Zoning	Subdivision/Land Development
Bradford	51	19	13	7
Sullivan	13	5	3	3
Susquehanna	40	20	7	10
Tioga	39	21	16	10
Wyoming	23	13	10	4
Total	166	78	49	34

Source: DCED

[7] The highest point in eastern Pennsylvania

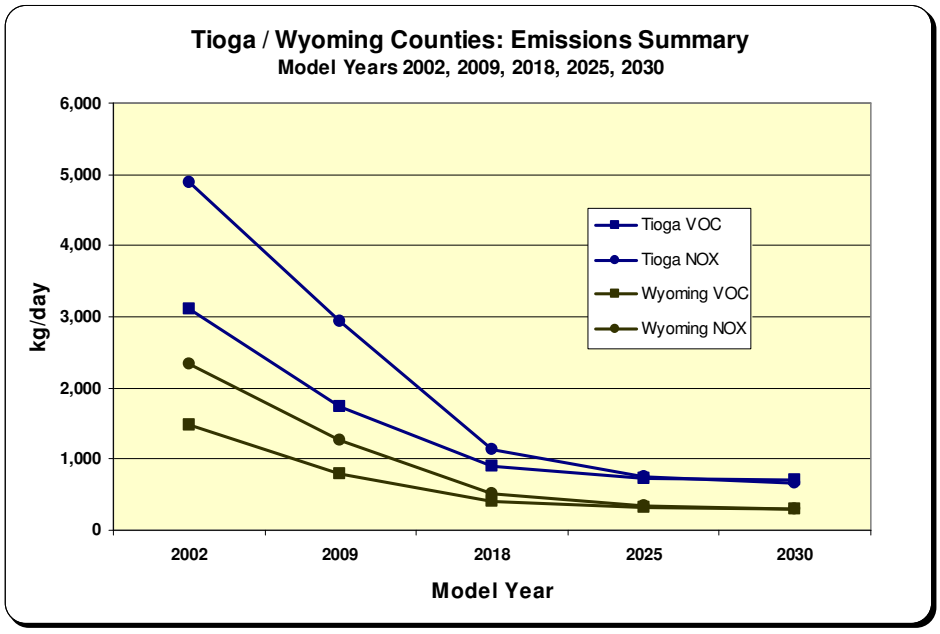
Air Quality Conformity Analysis

Based on requirements of the Clear Air Act Amendments of 1990 (CAAA), transportation improvement programs (TIPs) and long range transportation plans (LRTPs) must undergo a air quality conformity determination. Pollutants addressed include volatile organic compounds (VOCs) and nitrogen oxides (NO_x) for ozone, and direct PM2.5 and NO_x for fine particulates.

Transportation conformity for ozone includes a demonstration that emissions are lower than the emissions budgets established in the maintenance plan. Transportation conformity for the fine particulate standards includes a demonstration that emissions are not greater than those in 2002, called the base year. Ozone analyses are for emissions during a summer day, while fine particulate analyses are for annual emissions.

The analysis of ozone precursors resulting from implementation of the TIP and LRTP indicates an overall increase in mobility and decrease in VOC and NO_x emissions. The emissions for 2009 in Tioga and Wyoming counties were found to be lower than the 2009 emissions budget. The emissions for 2018, 2025 and 2030 were found to be lower than the 2018 emissions budget, as shown below in Figure 13.

Figure 13: Emissions Summary: Tioga and Wyoming Counties



Source: PennDOT

The analysis for PM2.5 direct and precursor emissions includes the estimation of future year emissions including the influence of planned projects. Analysis years, satisfying EPA requirements, include 2009, 2018, 2025 and 2035. In all cases, emissions are less than or equal to 2002 base year emissions levels.

Policy Plan – Directions Chapter

Through the LUTED process discussed earlier, there are six themes, or "common threads" that emerged in guiding the region's transportation, land use, and economic development policies. The transportation policies and projects being advanced by this LRTP update was shaped by these six goal areas, particularly goals 2 and 4. These goal areas are further developed in the directions described below. These included:

1. Expand regional economic opportunities supporting agriculture, manufacturing, health care, and travel and tourism.
    a. The Northern Tier Rural Transportation Advisory Committee, as the technical arm of the RPO, should develop project selection criteria that support this goal. This should be in place before the 2009 TIP is updated.
2. Improve infrastructure, supporting mobility, economic growth, and quality of life improvements.
    a. Improve Infrastructure - The Northern Tier should develop a Bridge Management System for improving and expediting the delivery of local bridges.
    b. Improve infrastructure – The RPO should continue to program projects that address system preservation and preventive maintenance needs to prevent more costly rehabilitation or construction work.
    c. Improve infrastructure – Reduce the growing backlog of structurally deficient bridges to meet a state target of 10 percent (structurally deficient by deck area).
    d. Supporting mobility – Continue to support the modernization of US 15 and advocate for interstate status.
    e. Supporting mobility – The Northern Tier should continue to work with its partners at Endless Mountains Transportation Authority (EMTA) and PennDOT's Bureau of Public Transportation to advance the strategies identified in the Local Coordinated Plan (contained in this plan appendix).
    f. Supporting mobility – Monitor the region's rail freight network to ensure needed long term capacity and operability. This is especially important, given Norfolk Southern's questionable long-term future within the region, and WCRR's new ownership.
    g. Supporting mobility – advance improvements to the region's airports in support of corporate travel, pilot training, and tourism.
    h. Supporting mobility – The Northern Tier should collaborate with PennDOT Districts 3-0 and 4-0 to implement the recommendations of the respective Regional Operations Plans.
    i. Supporting mobility – The region should evaluate goods movement patterns and trends, particularly as they relate to the 15 corridors of regional significance and major shippers. Goods movement and resulting impacts on the region's economic clusters should also be evaluated and better understood.

j. Economic growth - Support improvements to the region's Keystone Opportunity Zones to leverage tax incentives for creating additional employment opportunities.

k. Quality of life – Northern Tier staff should periodically meet with both PennDOT districts to evaluate crash cluster locations and develop a program of improvements through routine maintenance activities, Betterments, etc. Highway Safety Improvement Program (HSIP) funding is available specifically for safety-related projects. As part of this, the region should also build on its understanding of its regionally significant corridors by participating in Road Safety Audits (RSAs) with PennDOT.

l. Quality of Life – Continue to support the development of a regional greenways plan over the next few years.

m. Quality of Life – Work with partners such as EMTA, municipalities and major employers, identify areas with congested bottlenecks or areas where there is demonstrable need for park and ride facilities.

n. Quality of Life – Work with the region's municipalities to identify projects appropriate for bicycle/pedestrian-related improvements through such programs as Transportation Enhancements, and the state and federal Safe Routes to School program.

3. Improve human resource development through the promotion and support of healthy lifestyles, education, training and workforce development.

   a. Increase awareness of the availability of LTAP training (Local Transportation Assistance Program) for municipal officials covering such topics as transportation maintenance and operations.

   b. Establish innovative pilot projects such as the Safe Routes to School grant initiative in Wellsboro.

4. Integrate land use, transportation and economic development programs region-wide.

   a. Continue to identify areas similar to Athens Township, Mansfield, and Wellsboro where "LUTED-type" studies have been performed, linking the various aspects of land use, transportation and economic development.

   b. Advance transportation projects that take advantage of brownfield reuse and other similar opportunities.

   c. Strengthen the integration of planning and NEPA through ongoing collaboration with Agency Coordination Meeting (ACM) members on the LRTP's project portfolio and individual project development.

   d. Continue the scenic corridors planning process for the Northern Tier. This ongoing process is inventorying the region's scenic resources and established priorities for their conservation and tourism promotion; periodic updates are expected.

   e. Develop and implement a Strategic Conservation Plan to identify sensitive environmental features in advance of transportation project development and

prepare suitable mitigation strategies. These strategies will be incorporated in future LRTP updates.

5. Develop a unified regional identity and promotion.
    a. Pursue projects aimed at enhancing gateways into the region, particularly on higher-order National Highway System (NHS) routes such as US 6, US 15, US 220, and I-81. This action should be performed as part of a broader regional promotion strategy.
6. Improve municipal cooperation and governance.
    a. Northern Tier should encourage its member municipalities in avenues for municipal cooperation through the development of joint maintenance agreements, sharing of equipment and services, and bid lettings, just to name a few opportunities.
    b. Northern Tier should encourage its member municipalities to participate in PennDOT's Agility Program. This program formalizes a working relationship between a municipality and PennDOT in delivering transportation services in a more efficient manner. It also helps local municipalities stretch their operating budgets through this strategic partnership with the state.

Investment Criteria

With this update of the LRTP, the Northern Tier took its first steps towards formally identifying project selection criteria.

As transportation funding becomes even more constrained, it is important that the Northern Tier begin developing a project evaluation and selection process that reflects the regional priorities of the Regional Strategy and Action Plan.

As larger investments (such as the modernization of US 15) have been completed (and thus removed from the program), the potential will be greater for smaller (read: more numerous) projects to complete with one other for position on the region's transportation program.

The LRTP advances the following priority selection criteria for further development and use in developing future transportation plans and programs.

1. System Preservation
2. Safety
3. Intermodalism
4. Economic Development
5. Environmental/Energy
6. Public/Private Partnerships
7. Goods Movement
8. Security
9. Improving Operations of Existing Facilities

Financial Plan

By federal law, the long range transportation plan must be "financially constrained" and contain a section outlining the amount of revenue expected over the life of the LRTP. For the LRTP to be financially constrained means that the LRTP (and the TIP) include sufficient financial information for demonstrating that proposed projects can be implemented using committed, available or reasonably available revenue sources. A second purpose is to provide assurance that the federally supported transportation system is being adequately operated and maintained. This requirement applies to each program year for the TIP. For the LRTP, this applies to a planning horizon of not less than 20 years.

Revenue and Cost Estimation Methodology

The Long Range Plan's time horizon spans twenty seven years from 2009 – 2035. The Plan must estimate the level of funding that can reasonably be expected over that period, and it must show how the plan projects can be accommodated within the financial constraint. The following outlines the sources of revenue and the process used to calculate the projected transportation revenue and project costs.

Year of Expenditure

Following the passage of SAFETEA-LU, new Statewide Transportation Planning and Metropolitan Transportation Planning Regulations were issued on February 14, 2007. This new rule included a new requirement that revenue and cost estimates for the Transportation Improvement Program (TIP) and the Long Range Transportation Plan (LRTP) use inflation rates to better reflect costs in each "Year of Expenditure". Regulations governing Year of Expenditure require that TIPs and LRTPs account for revenue growth and inflation, and that projects be slotted in the years in which the expenditure is expected to occur.

PennDOT issued guidance on Year of Expenditure on September 17, 2007 that was used in developing this section of the plan.

Highway Revenue

The highway capital revenue baseline was developed using Pennsylvania's 2009 Transportation Financial Guidance as a base for the years 2009 – 2012. Revenues were projected to 2035. The following summarizes the revenue estimation process:

- 2009 Financial Guidance includes expected federal highway funds through SAFETEA-LU legislation which accounts for funding for federal fiscal year 2009. Federal funding levels for FFY 2010 through FFY 2012 assume a 4 percent annual growth rate. State funds are based on the most recent estimates by PennDOT's Bureau of Fiscal Management.
- Base revenues for federal highway funding categories, state highway/bridges funds and Act 44 revenue were taken from the 2009 Financial Guidance for the years 2009 – 2012.

- Revenue figures for the years 2013 – 2035 were inflated based on the Year of Expenditure Guidance according to the following rates:
    - Federal highway/bridge funds – 4% annual growth
    - State highway/bridge funds – 1.5% annual growth
    - Act 44 Revenue – 2.5% annual growth
- On February 5, 2008, Governor Rendell announced a special initiative to rebuild Pennsylvania's infrastructure. This includes a 10 year program to rebuild deficient bridges through the issuance of bonds. PennDOT provided figures for the new program as an addendum to Financial Guidance. These figures were included in the LRTP as an "Additional Bridge" category. These figures decline over the 10 year period, and no inflation was applied.
- Discretionary funding can include special federal funds or state discretionary funds. Special federal funds are usually specific project earmarks contained in federal reauthorization acts or annual federal appropriations. State discretionary dollars represent 20 percent of highway funding, which is reserved for distribution by the Secretary of Transportation to offset the impact of high cost projects which are beyond a region's allocation. For this plan, there was no discretionary funding assumed. Historically, Northern Tier has received fairly significant state discretionary funds which were primarily directed at the completion of the US 15 corridor. Since that corridor is now approaching completion, it is considered inappropriate to assume historical trends. The current state priorities for discretionary funding are directed towards deficient bridges, however, no specific funds were assumed. Special federal earmarks are also difficult to predict. Northern Tier does not actively solicit federal earmarks, and when consulted has only encouraged earmarking of projects already programmed.
- Local and private project funding shares are also difficult to estimate going forward. Recent TIPs have included minimal amounts of local funds, generally for local bridges. Since these dollars were minimal, no local funding was assumed.

The resulting revenue estimates are shown in Table 33. This yields the following in terms of total dollars by period:

Table 33: Highway Revenue Estimates
Northern Tier (reflects Year of Expenditure inflationary impact)

TIP 2009-2012 (actual)	Mid Range 2013-2020	Long Range 2021-2035	Total 2009-2035
$244,079,339	$498,928,000	$1,318,024,000	$2,061,031,339

Transit Revenue

The transit revenue baseline was developed using Pennsylvania's 2009 Transportation Financial Guidance as a base for the years 2009 – 2012. Revenues were projected over the LRTP planning horizon to 2035. The following summarizes the revenue estimation process:

- Transit funding is a combination of federal, state and local money. Federal funding is based on SAFETEA-LU for 2009.
- State transit funding was restructured through Act 44 of 2007. Public transit funds are deposited in the new dedicated Public Transportation Trust Fund. Growth is now anticipated for future years.
- Federal transit funds coming to the region are generally Section 5311, non-urbanized and rural apportionments, which come through PennDOT. The Bureau of Public Transportation was consulted to determine normal levels of 5311 that could be expected. These levels were assumed for the TIP years, 2009 - 2012.
- Base revenues for state transit funds were taken from the 2009 Financial Guidance for the years 2009 – 2012.
- Revenue figures for the years 2013 – 2035 were inflated based on the Year of Expenditure Guidance according to the following rates:
    - Federal transit funds – 2.67% annual growth
    - State transit funds – 2.5% annual growth

Table 34: Transit Revenue Estimates (Federal and State)
Northern Tier(reflects Year of Expenditure inflationary impact)

TIP 2009-2012 (actual)	Mid Range 2013-2020	Long Range 2021-2035	Total
$5,468,250	$7,258,000	$18,298,000	$31,024,250

Project Cost Estimation/Year of Expenditure

Project cost estimates are essential to LRTP and TIP decision making. Projecting project costs to Year of Expenditure was accomplished based on 2009 Financial Guidance and Year of Expenditure Guidance. The following summarizes the process:

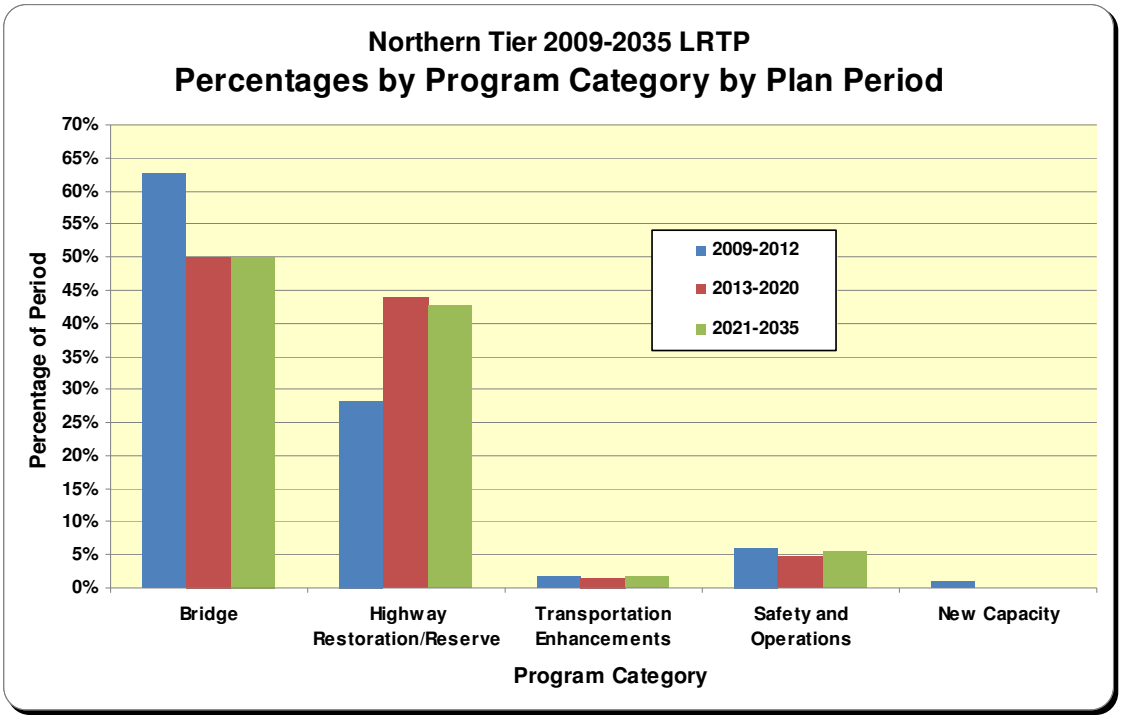
- All project cost estimates were updated and reflected in 2008 dollars.
- A 4 percent annual inflation rate was applied based on the guidance.
- The 4 percent rate was compounded. For projects in the LRTP out years, a middle year point of each cost band (2013 – 2020; 2021 – 2035) was used to apply the inflation factor. The following were the mid-point factors:

Table 35: Cost Band Mid-Point Inflation Factors
Northern Tier

Cost Escalation Band	Inflation Factor at Mid-point
Mid-Range (FFY 2013-2020)	1.396
Long-Range (2021-2035)	2.1911

Candidate projects were placed into the project listing and costs were factored based on the rates shown in Table 35 above for the mid- and long-range periods of the LRTP. It should be noted that the bottom-line numbers shown in Table 33 and Table 34 serve as "control totals" in ensuring that the project listing in the LRTP is financially constrained.

Figure 14: Percentages by Program Category by Plan Period
Northern Tier



With the completion of US 15 through Tioga County, the region has very little in the way of additional capacity-adding projects planned through the plan horizon year of 2035.

An analysis of the composition of projects within the LRTP project listing shows that the plan's project portfolio is strongly oriented towards bridges and system preservation-type projects. In fact, over half of the LRTP's planned investment through 2035 will be specifically for bridge projects. The middle and "out" years of the LRTP (2013-2035) will see a ramping up of highway restoration and system preservation projects.

Transportation Enhancement projects typically do not consume a large portion of the TIP or LRTP. In this case, the TE-related projects account for approximately 1.5 to 1.8 percent of the total, depending upon the period in question. Due to a backlog of existing projects, funding cycles for the popular Enhancement program are currently temporarily closed.

New capacity projects account for slightly over 1 percent of the 2009 TIP. There are no such projects planned for the latter two periods of the LRTP.

Appendix A – 2009-2035 Highway, Bridge and Transit Projects

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NORTHERN TIER LONG RANGE PLAN
Highways 2009 - 2035

						TIP 2009-2012		2013-2020		2021-2035	PHASE TOTAL
County	**S.R.**	**Sec.**	**MPMS**	**Project Title**	**Area**	**Ph**	**Costs**	**Ph**	**Costs**	**Ph**	**Costs**	**Cost**
Regionwide				Transportation Enhancements	TENH			C	7,110,000	C	21,147,000	28,257,000
Regionwide				CMAQ Line Item (Tioga & Wyoming)	IMOD			C	7,110,000	C	21,147,000	28,257,000
Regionwide				Rail Crossings	SAMI			C	613,000	C	1,824,000	2,437,000
Regionwide				Bridge Reserve	BRDG			C	161,145,072	C	508,195,000	669,340,072
Regionwide				Act 44 Highway/Bridge Reserve	HRST			C	93,990,270	C	245,086,000	339,076,270
Regionwide				Safety Line Item	SAMI			C	15,687,000	C	46,654,000	62,341,000
Regionwide				Highway Reserve	HCON			C	73,522,531	C	473,971,000	547,493,531
Totals									**359,177,873**		**1,318,024,000**	**1,677,201,873**
Bradford			65102	RAIL XING GRP-NTIER 3-0	SAMI	C	182,000					182,000
Bradford			71069	NTIER TE Line Item	TENH	C	1,846,000					1,846,000
Bradford			84354	Hwy/Bridge S Line item	HRST	C	1,109,100					1,109,100
Bradford		BR	4986	TOWANDA CR BR (#17)	BRDG	F	104,000					104,000
Bradford		BR	4986	TOWANDA CR BR (#17)	BRDG	R	21,632					21,632
Bradford		BR	4986	TOWANDA CR BR (#17)	BRDG	C	1,574,810					1,574,810
Bradford		BR	5124	TOMJACK CK T-623	BRDG	P	173,056					173,056
Bradford		BR	5124	TOMJACK CK T-623	BRDG	F	112,486					112,486
Bradford		BR	5124	TOMJACK CK T-623	BRDG	C	584,928					584,928
Bradford		BRG	5108	S.BR.TOWANDA CK BR	BRDG	P	187,177					187,177
Bradford		BRG	5108	S.BR.TOWANDA CK BR	BRDG			C	885,723			885,723
Bradford		BRG	5276	SPAULDING CR BR	BRDG	P	179,978					179,978
Bradford		BRG	5276	SPAULDING CR BR	BRDG	F	116,986					116,986
Bradford		BRG	5276	SPAULDING CR BR	BRDG			C	1,012,255			1,012,255
Bradford		BRG	5279	TOWANDA CR BR (#16)	BRDG	F	41,600					41,600
Bradford		BRG	5279	TOWANDA CR BR (#16)	BRDG	R	21,632					21,632
Bradford		BRG	5279	TOWANDA CR BR (#16)	BRDG	C	224,973					224,973
Bradford		HSI	76483	N TIER HSIP line	SAMI	C	2,049,200					2,049,200
Bradford		RDC	69303	Valley Business Park Acs	HCON	C	2,560,000					2,560,000
Bradford	6	25	81587	US6/2010 Intersection	HRST	C	1,054,560					1,054,560
Bradford	6	0SF	5288	SR 6 over Sugar Creek	BRDG	P	41,600					41,600
Bradford	6	0SF	5288	SR 6 over Sugar Creek	BRDG	C	812,282					812,282
Bradford	6	104	68144	State Street	HRST	C	2,808,000					2,808,000
Bradford	6	105	82302	SR 6 Over Sugar Creek	BRDG	C	728,000					728,000

NORTHERN TIER LONG RANGE PLAN
Highways 2009 - 2035

						TIP 2009-2012		2013-2020		2021-2035	PHASE TOTAL
County	**S.R.**	**Sec.**	**MPMS**	**Project Title**	**Area**	**Ph**	**Costs**	**Ph**	**Costs**	**Ph**	**Costs**	**Cost**
Bradford	6	106	5132	US 6 SUGAR CREEK BR	BRDG	P	86,528					86,528
Bradford	6	106	5132	US 6 SUGAR CREEK BR	BRDG	F	33,746					33,746
Bradford	6	106	5132	US 6 SUGAR CREEK BR	BRDG	R	44,995					44,995
Bradford	6	106	5132	US 6 SUGAR CREEK BR	BRDG	C	906,411	C	614,405			1,520,816
Bradford	6	107	79037	SR 6 over Morgan Creek	BRDG	P	58,493					58,493
Bradford	6	M19	77058	Tracy Rd. to (T-624)	SAMI	C	2,040,000					2,040,000
Bradford	187	3	83657	SR 187 over Ellis Creek	BRDG	P	166,400					166,400
Bradford	187	3	83657	SR 187 over Ellis Creek	BRDG	F	43,269					43,269
Bradford	187	3	83657	SR 187 over Ellis Creek	BRDG	R	32,448					32,448
Bradford	187	3	83657	SR 187 over Ellis Creek	BRDG	C	787,405					787,405
Bradford	187	4	5292	PA 187 ovr Wappasening Ck	BRDG	P	78,653					78,653
Bradford	187	0SF	78766	SR 187 over Bullard Creek	BRDG	P	41,600					41,600
Bradford	187	0SF	78766	SR 187 over Bullard Creek	BRDG	C	707,366					707,366
Bradford	199	4	5247	PA 199/NORFOLK-SOUTHERN	BRDG	C	960,000					960,000
Bradford	220	94	5037	WOLCOTT CREEK BRIDGE	BRDG	F	20,800					20,800
Bradford	220	94	5037	WOLCOTT CREEK BRIDGE	BRDG	U	20,800					20,800
Bradford	220	94	5037	WOLCOTT CREEK BRIDGE	BRDG	R	20,800					20,800
Bradford	220	94	5037	WOLCOTT CREEK BRIDGE	BRDG	C	1,297,920					1,297,920
Bradford	220	102	76482	New Albany Super Correct	SAMI	C	832,000					832,000
Bradford	220	107	5323	US 220 BR OVER BR ST	BRDG	C	312,000					312,000
Bradford	220	108	5324	US 220 BR O/ SR 3020	BRDG	C	312,000					312,000
Bradford	220	113	82770	PA 220 over Towanda Creek	BRDG	P	15,600					15,600
Bradford	220	113	82770	PA 220 over Towanda Creek	BRDG	F	10,816					10,816
Bradford	220	113	82770	PA 220 over Towanda Creek	BRDG	C	995,072					995,072
Bradford	220	M03	79680	SR 6 to SR4018	HRST	C	4,867,200					4,867,200
Bradford	220	M09	82193	3-6 Line to New Albany	HRST	C	3,205,862					3,205,862
Bradford	220	M10	82194	N. Albany to Monroeton	HRST	C	2,948,215	C	561,361			3,509,576
Bradford	328	23	5286	PA 328/DAGGET CK BR	BRDG	P	83,200					83,200
Bradford	328	23	5286	PA 328/DAGGET CK BR	BRDG	F	21,668					21,668
Bradford	328	23	5286	PA 328/DAGGET CK BR	BRDG	U	32,448					32,448
Bradford	328	23	5286	PA 328/DAGGET CK BR	BRDG	R	108,600					108,600
Bradford	328	23	5286	PA 328/DAGGET CK BR	BRDG	C	2,249,728					2,249,728
Bradford	367	3	5091	STEAM MILL CREEK BR	BRDG	P	89,989					89,989
Bradford	367	3	5091	STEAM MILL CREEK BR	BRDG	F	23,397					23,397

NORTHERN TIER LONG RANGE PLAN
Highways 2009 - 2035

						TIP 2009-2012		2013-2020		2021-2035	PHASE TOTAL
County	**S.R.**	**Sec.**	**MPMS**	**Project Title**	**Area**	**Ph**	**Costs**	**Ph**	**Costs**	**Ph**	**Costs**	**Cost**
Bradford	367	3	5091	STEAM MILL CREEK BR	BRDG	R	46,794					46,794
Bradford	367	3	5091	STEAM MILL CREEK BR	BRDG			C	253,064			253,064
Bradford	414	25	5048	PA 414/TOWANDA CREEK	BRDG	P	86,528					86,528
Bradford	414	25	5048	PA 414/TOWANDA CREEK	BRDG	F	22,497					22,497
Bradford	414	25	5048	PA 414/TOWANDA CREEK	BRDG	U	22,497					22,497
Bradford	414	25	5048	PA 414/TOWANDA CREEK	BRDG	R	22,497					22,497
Bradford	414	25	5048	PA 414/TOWANDA CREEK	BRDG			C	3,163,298			3,163,298
Bradford	414	27	82728	SR 414 ov Trib Towanda Cr	BRDG	P	89,989					89,989
Bradford	414	27	82728	SR 414 ov Trib Towanda Cr	BRDG	F	23,397					23,397
Bradford	414	27	82728	SR 414 ov Trib Towanda Cr	BRDG	R	46,794					46,794
Bradford	414	27	82728	SR 414 ov Trib Towanda Cr	BRDG			C	1,771,447			1,771,447
Bradford	414	24M	75443	W. Franklin to Monroe	HRST	C	684,000					684,000
Bradford	467	3	76863	SR467 ov Wysox Creek	BRDG	P	93,589					93,589
Bradford	467	4	82535	Soil Slide Repair	SAMI	P	62,400					62,400
Bradford	467	4	82535	Soil Slide Repair	SAMI	F	41,600					41,600
Bradford	467	4	82535	Soil Slide Repair	SAMI	U	21,632					21,632
Bradford	467	4	82535	Soil Slide Repair	SAMI	R	21,632					21,632
Bradford	467	4	82535	Soil Slide Repair	SAMI	C	908,544					908,544
Bradford	467	5	5240	PA 467 JOHNSON'S CK	BRDG	P	70,192					70,192
Bradford	514	2	5267	N Br Towanda Crk Brg	BRDG	C	1,560,000					1,560,000
Bradford	514	3	5039	PA 514 over Towanda Cr	BRDG	P	67,492					67,492
Bradford	514	3	5039	PA 514 over Towanda Cr	BRDG	F	23,397					23,397
Bradford	514	3	5039	PA 514 over Towanda Cr	BRDG			C	1,391,851			1,391,851
Bradford	549	15	5328	PA 549 over Daggett Creek	BRDG	P	58,493					58,493
Bradford	549	16	78770	SR 549 over Beckwith Crk	BRDG	P	58,493					58,493
Bradford	706	20	82300	Bradford Scour 2009	BRDG	C	150,000					150,000
Bradford	706	30	4983	PA 706 @ Wyalusing	HCON	C	1,456,000					1,456,000
Bradford	1007	10	72217	Wyalusing Creek Bridge	BRDG	P	21,632					21,632
Bradford	1007	10	72217	Wyalusing Creek Bridge	BRDG	F	21,632					21,632
Bradford	1007	10	72217	Wyalusing Creek Bridge	BRDG	C	1,237,350					1,237,350
Bradford	1013	06M	79852	SR1013 ov Mill&Rckwll Cks	BRDG	C	208,000					208,000
Bradford	1017	6	83709	SR 1017 over South Creek	BRDG	P	58,493					58,493
Bradford	1017	6	83709	SR 1017 over South Creek	BRDG	R	23,397					23,397
Bradford	1017	6	83709	SR 1017 over South Creek	BRDG			C	151,838			151,838

NORTHERN TIER LONG RANGE PLAN
Highways 2009 - 2035

						TIP 2009-2012		2013-2020		2021-2035	PHASE TOTAL
County	**S.R.**	**Sec.**	**MPMS**	**Project Title**	**Area**	**Ph**	**Costs**	**Ph**	**Costs**	**Ph**	**Costs**	**Cost**
Bradford	1021	2	82301	SR 1021 ov Rummerfield Ck	BRDG	C	260,000					260,000
Bradford	1022	9	75698	Br over Bullards Ck	BRDG	P	86,528					86,528
Bradford	1022	9	75698	Br over Bullards Ck	BRDG	F	22,497					22,497
Bradford	1022	9	75698	Br over Bullards Ck	BRDG	U	22,497					22,497
Bradford	1022	9	75698	Br over Bullards Ck	BRDG	R	22,497					22,497
Bradford	1022	9	75698	Br over Bullards Ck	BRDG	C	1,200,000	C	437,802			1,637,802
Bradford	1022	8PM	80937	SR 1022 Bridge Paint	BRDG	C	878,000					878,000
Bradford	1026	3	5293	WYALUSING CREEK BR	BRDG	P	86,528					86,528
Bradford	1026	3	5293	WYALUSING CREEK BR	BRDG	F	33,746					33,746
Bradford	1026	3	5293	WYALUSING CREEK BR	BRDG	R	44,995					44,995
Bradford	1026	3	5293	WYALUSING CREEK BR	BRDG	C	1,080,051	C	188,793			1,268,844
Bradford	1029	2	75697	Bullard Creek Bridge	BRDG	P	86,528					86,528
Bradford	1029	2	75697	Bullard Creek Bridge	BRDG	F	22,497					22,497
Bradford	1029	2	75697	Bullard Creek Bridge	BRDG	U	22,497					22,497
Bradford	1029	2	75697	Bullard Creek Bridge	BRDG	R	22,497					22,497
Bradford	1029	2	75697	Bullard Creek Bridge	BRDG	C	1,084,550	C	184,294			1,268,844
Bradford	1029	0SF	79244	SR 1029 over Bullard Crk	BRDG	P	41,600					41,600
Bradford	1029	0SF	79244	SR 1029 over Bullard Crk	BRDG	C	587,500					587,500
Bradford	1033	1	82303	SR 1033 ov Laning Cr	BRDG	C	119,600					119,600
Bradford	1041	6	82825	James St Br Presv	BRDG	P	20,800					20,800
Bradford	1041	6	82825	James St Br Presv	BRDG	F	10,400					10,400
Bradford	1041	6	82825	James St Br Presv	BRDG	C	1,851,800					1,851,800
Bradford	1043	3	82541	Sheshequin Slides	SAMI	P	83,200					83,200
Bradford	1043	3	82541	Sheshequin Slides	SAMI	F	108,160					108,160
Bradford	1043	3	82541	Sheshequin Slides	SAMI	U	44,995					44,995
Bradford	1043	3	82541	Sheshequin Slides	SAMI	R	44,995					44,995
Bradford	1043	3	82541	Sheshequin Slides	SAMI	C	2,082,348					2,082,348
Bradford	1049	1	5043	SR 1049 ov Pendelton Crk	BRDG	P	26,000					26,000
Bradford	1049	1	5043	SR 1049 ov Pendelton Crk	BRDG	F	26,000					26,000
Bradford	1049	1	5043	SR 1049 ov Pendelton Crk	BRDG	U	10,400					10,400
Bradford	1049	1	5043	SR 1049 ov Pendelton Crk	BRDG	R	10,400					10,400
Bradford	1049	1	5043	SR 1049 ov Pendelton Crk	BRDG	C	162,240					162,240
Bradford	1055	0SF	78774	SR 1055 over Parks Creek	BRDG	P	41,600					41,600
Bradford	1055	0SF	78774	SR 1055 over Parks Creek	BRDG	C	613,267					613,267

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Bradford	1057	1	82769	SR 1057 over Saterlee Crk	BRDG	P	20,800					20,800
Bradford	1057	1	82769	SR 1057 over Saterlee Crk	BRDG	F	10,816					10,816
Bradford	1057	1	82769	SR 1057 over Saterlee Crk	BRDG	C	380,000					380,000
Bradford	1058	1	5206	SACKETT RUN BRIDGE	BRDG	P	89,989					89,989
Bradford	1058	1	5206	SACKETT RUN BRIDGE	BRDG	F	22,497					22,497
Bradford	1058	1	5206	SACKETT RUN BRIDGE	BRDG	U	22,497					22,497
Bradford	1058	1	5206	SACKETT RUN BRIDGE	BRDG	R	22,497					22,497
Bradford	1058	1	5206	SACKETT RUN BRIDGE	BRDG	C	1,175,009					1,175,009
Bradford	1058	2	79248	SR1058 ov Tb Satterlee Ck	BRDG	P	58,493					58,493
Bradford	1058	2	79248	SR1058 ov Tb Satterlee Ck	BRDG	R	23,397					23,397
Bradford	1058	2	79248	SR1058 ov Tb Satterlee Ck	BRDG			C	151,838			151,838
Bradford	1067	1	83500	SR 1067 ovr Satterlee Crk	BRDG	P	28,122					28,122
Bradford	1067	1	83500	SR 1067 ovr Satterlee Crk	BRDG	F	26,000					26,000
Bradford	1067	1	83500	SR 1067 ovr Satterlee Crk	BRDG	U	11,249					11,249
Bradford	1067	1	83500	SR 1067 ovr Satterlee Crk	BRDG	R	11,249					11,249
Bradford	1067	1	83500	SR 1067 ovr Satterlee Crk	BRDG	C	140,383					140,383
Bradford	2010	4	5216	WYALUSING N-S RR BR	BRDG	U	52,000					52,000
Bradford	2010	4	5216	WYALUSING N-S RR BR	BRDG	R	83,200					83,200
Bradford	2010	4	5216	WYALUSING N-S RR BR	BRDG	C	2,163,200					2,163,200
Bradford	2010	9	5303	TOWANDA CREEK BRIDGE	BRDG	P	83,200					83,200
Bradford	2010	9	5303	TOWANDA CREEK BRIDGE	BRDG	F	21,632					21,632
Bradford	2010	9	5303	TOWANDA CREEK BRIDGE	BRDG	C	1,119,864					1,119,864
Bradford	2014	102	82349	Membrane and Overlay	BRDG	P	5,600					5,600
Bradford	2014	102	82349	Membrane and Overlay	BRDG	F	5,600					5,600
Bradford	2014	102	82349	Membrane and Overlay	BRDG	C	270,000					270,000
Bradford	2032	DNT	79234	Laning(Little Wysox)Creek	BRDG	C	487,500					487,500
Bradford	3004	04M	79853	SR 3004 over Ladds Creek	BRDG	P	26,000					26,000
Bradford	3004	04M	79853	SR 3004 over Ladds Creek	BRDG	F	26,000					26,000
Bradford	3004	04M	79853	SR 3004 over Ladds Creek	BRDG	U	10,400					10,400
Bradford	3004	04M	79853	SR 3004 over Ladds Creek	BRDG	R	10,400					10,400
Bradford	3004	04M	79853	SR 3004 over Ladds Creek	BRDG	C	129,792					129,792
Bradford	3005	9	5251	SR 3005 over Towanda Crk	BRDG	P	260,000					260,000
Bradford	3005	9	5251	SR 3005 over Towanda Crk	BRDG	F	86,528					86,528
Bradford	3005	9	5251	SR 3005 over Towanda Crk	BRDG	R	32,448					32,448

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Bradford	3005	9	5251	SR 3005 over Towanda Crk	BRDG	C	1,124,864					1,124,864
Bradford	3006	11	5036	MILLSTONE CREEK	BRDG	C	1,352,000					1,352,000
Bradford	3009	GRP	82226	Membrane & Overlay	BRDG	C	1,169,859					1,169,859
Bradford	3013	1	68004	SR 3013 ovr Tb Towanda Ck	BRDG	P	58,493					58,493
Bradford	3013	1	68004	SR 3013 ovr Tb Towanda Ck	BRDG	R	23,397					23,397
Bradford	3013	1	68004	SR 3013 ovr Tb Towanda Ck	BRDG			C	151,838			151,838
Bradford	3016	05M	82354	3-7 line to SR14	HRST	F	28,122					28,122
Bradford	3016	05M	82354	3-7 line to SR14	HRST	C	523,494					523,494
Bradford	4002	1	5266	SR 4002 over Brown's Crk	BRDG	P	260,000					260,000
Bradford	4002	1	5266	SR 4002 over Brown's Crk	BRDG	F	86,528					86,528
Bradford	4002	1	5266	SR 4002 over Brown's Crk	BRDG	R	32,448					32,448
Bradford	4002	1	5266	SR 4002 over Brown's Crk	BRDG	C	1,462,323					1,462,323
Bradford	4013	12	75702	Br over Tomjack Creek	BRDG	C	624,000					624,000
Bradford	4013	14	75700	Bridge over Bentley Creek	BRDG	P	86,528					86,528
Bradford	4013	14	75700	Bridge over Bentley Creek	BRDG	F	22,497					22,497
Bradford	4013	14	75700	Bridge over Bentley Creek	BRDG	R	44,995					44,995
Bradford	4013	14	75700	Bridge over Bentley Creek	BRDG	C	1,020,816	C	500,000			1,520,816
Bradford	4013	DNT	5287	JUSTICE RUN BRIDGE	BRDG	C	487,500					487,500
Bradford	4022	3	82734	SR4022 ov Trib Chemung Rv	BRDG	P	67,492					67,492
Bradford	4022	3	82734	SR4022 ov Trib Chemung Rv	BRDG	F	23,397					23,397
Bradford	4022	3	82734	SR4022 ov Trib Chemung Rv	BRDG			C	1,138,787			1,138,787
Bradford	4022	DNT	76864	SR4022 ov Stone Lick Ck	BRDG	C	487,500					487,500
Bradford	4024	11M	82111	Berwick Trpk to Wilawana	HRST	C	1,560,001					1,560,001
Bradford	4031	4	5290	SR4031 ovr Tb Beckwith Ck	BRDG	P	27,040					27,040
Bradford	4031	4	5290	SR4031 ovr Tb Beckwith Ck	BRDG	F	27,040					27,040
Bradford	4031	4	5290	SR4031 ovr Tb Beckwith Ck	BRDG	U	10,816					10,816
Bradford	4031	4	5290	SR4031 ovr Tb Beckwith Ck	BRDG	R	10,816					10,816
Bradford	4031	4	5290	SR4031 ovr Tb Beckwith Ck	BRDG	C	162,240					162,240
Bradford	4031	03M	82355	SR14 to SR549	HRST	F	60,743					60,743
Bradford	4031	03M	82355	SR14 to SR549	HRST	C	1,349,837					1,349,837
Bradford	4033	4	83647	SR 4033 ovr Trb Sugar Cr	BRDG	P	28,122					28,122
Bradford	4033	4	83647	SR 4033 ovr Trb Sugar Cr	BRDG	F	28,122					28,122
Bradford	4033	4	83647	SR 4033 ovr Trb Sugar Cr	BRDG	U	11,249					11,249
Bradford	4033	4	83647	SR 4033 ovr Trb Sugar Cr	BRDG	R	11,249					11,249

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Bradford	4033	4	83647	SR 4033 ovr Trb Sugar Cr	BRDG	C	140,383					140,383
Bradford	4037	1	83497	SR4037 ovr Trb Sugar Crk	BRDG	P	26,000					26,000
Bradford	4037	1	83497	SR4037 ovr Trb Sugar Crk	BRDG	F	26,000					26,000
Bradford	4037	1	83497	SR4037 ovr Trb Sugar Crk	BRDG	U	10,816					10,816
Bradford	4037	1	83497	SR4037 ovr Trb Sugar Crk	BRDG	R	10,816					10,816
Bradford	4037	1	83497	SR4037 ovr Trb Sugar Crk	BRDG	C	134,984					134,984
Bradford	7215	0	57570	T-544 #32 SUGAR CR	BRDG	C	1,027,000					1,027,000
Totals							**78,625,492**		**12,558,594**		**0**	**91,184,086**
Sullivan	42	54M	80136	Eagles Mere	HRST	C	1,456,000					1,456,000
Sullivan	87	59	7010	SR 87/LITTLE LOYALSOCK Cr	BRDG	C	2,288,000					2,288,000
Sullivan	87	64	7022	PA 87 LICK RUN BR	BRDG	P	86,528					86,528
Sullivan	87	64	7022	PA 87 LICK RUN BR	BRDG	F	22,497					22,497
Sullivan	87	64	7022	PA 87 LICK RUN BR	BRDG	R	44,995					44,995
Sullivan	87	64	7022	PA 87 LICK RUN BR	BRDG			C	1,265,319			1,265,319
Sullivan	87	65M	82195	Forksville to T-444	HRST	C	2,474,701					2,474,701
Sullivan	154	37M	80744	SR 154 over Elk Creek	BRDG	C	108,160					108,160
Sullivan	220	79	7031	Muncy Vly-Sonestown	HRST	U	15,600					15,600
Sullivan	220	79	7031	Muncy Vly-Sonestown	HRST	C	1,456,000					1,456,000
Sullivan	220	114	83650	SR 220 ov Lt Loyalsock Ck	BRDG	P	260,000					260,000
Sullivan	220	114	83650	SR 220 ov Lt Loyalsock Ck	BRDG	F	86,528					86,528
Sullivan	220	114	83650	SR 220 ov Lt Loyalsock Ck	BRDG	R	32,448					32,448
Sullivan	220	114	83650	SR 220 ov Lt Loyalsock Ck	BRDG	C	935,887					935,887
Sullivan	220	M04	80137	3-2 Cty Ln - Muncy Valley	HRST	C	1,081,600					1,081,600
Sullivan	220	M11	82198	Ringdale to Dushore	HRST	C	2,103,117	C	236,600			2,339,717
Sullivan	1015	06M	82334	SR87 to 3-9 Cnty line	HRST	F	19,469					19,469
Sullivan	1015	06M	82334	SR87 to 3-9 Cnty line	HRST	C	436,866					436,866
Sullivan	2002	5	7002	MUNCY CRK. BR. #3	BRDG	P	70,192					70,192
Sullivan	2002	7	82827	SR 2002 over Muncy Creek	BRDG	P	43,264					43,264
Sullivan	2002	7	82827	SR 2002 over Muncy Creek	BRDG	F	11,249					11,249
Sullivan	2002	7	82827	SR 2002 over Muncy Creek	BRDG	C	482,267	C	453,620			935,887
Sullivan	2003	3	82350	Sullivan Bridge Paint	BRDG	P	2,250					2,250
Sullivan	2003	3	82350	Sullivan Bridge Paint	BRDG	F	2,250					2,250
Sullivan	2003	3	82350	Sullivan Bridge Paint	BRDG	C	180,000					180,000

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Sullivan	3005	GRP	82231	Mmbrne & Ovrly Sulvn Cnty	BRDG	C	93,589					93,589
Sullivan	3009	10	82828	SR 3009 over Rock Run	BRDG	P	28,122					28,122
Sullivan	3009	10	82828	SR 3009 over Rock Run	BRDG	F	28,122					28,122
Sullivan	3009	10	82828	SR 3009 over Rock Run	BRDG	U	11,249					11,249
Sullivan	3009	10	82828	SR 3009 over Rock Run	BRDG	R	11,249					11,249
Sullivan	3009	10	82828	SR 3009 over Rock Run	BRDG	C	140,383					140,383
Sullivan	4007	2	7020	SR 4007 over King's Creek	BRDG	P	26,000					26,000
Sullivan	4007	2	7020	SR 4007 over King's Creek	BRDG	F	26,000					26,000
Sullivan	4007	2	7020	SR 4007 over King's Creek	BRDG	U	10,400					10,400
Sullivan	4007	2	7020	SR 4007 over King's Creek	BRDG	R	10,400					10,400
Sullivan	4007	2	7020	SR 4007 over King's Creek	BRDG	C	140,608					140,608
Sullivan	4018	12	78946	SR 4018 over Marsh Run	BRDG	C	487,500					487,500
Totals							**14,713,490**		**1,955,539**		**0**	**16,669,029**
Susquehanna			64280	N.TIER ENHANCEMENT LINE	TENH	C	528,000					528,000
Susquehanna			70156	Susque. Rail Line Item	SAMI	C	60,000					60,000
Susquehanna			73298	NTier D4 Hwy Reserve	HCON	C	268,357					268,357
Susquehanna			75720	N Tier HSIP Line Item	SAMI	C	2,581,000					2,581,000
Susquehanna			77526	D&H Rail Trail Phase 2	TENH	C	976,120					976,120
Susquehanna			82735	Northern Tier ACT 44 Fund	HRST	C	2,802,577					2,802,577
Susquehanna			82903	NTier NEW 2009 BRG Group	BRDG	P	3,600,000					3,600,000
Susquehanna			82903	NTier NEW 2009 BRG Group	BRDG	F	2,400,000					2,400,000
Susquehanna			84346	HWY/BRG Reserve Line Item	BRDG	C	2,913,819					2,913,819
Susquehanna			84346	HWY/BRG Reserve Line Item	HRST	C	4,221,012					4,221,012
Susquehanna			83953	Dam Repl Susq. - Act 44	BRDG	P	29,246					29,246
Susquehanna		0	73299	N Tier D4 Bridge Reserve	BRDG	C	556,670					556,670
Susquehanna		0	83948	Group 4-10-ST1 (44)	HCON	C	1,000,000					1,000,000
Susquehanna		364	83013	Carmalt Rd Brg T-695	BRDG	F	50,619					50,619
Susquehanna		364	83013	Carmalt Rd Brg T-695	BRDG			C	506,128			506,128
Susquehanna	11	502	66583	Lathrop-Kingsley Shoulder	HRST	F	116,986					116,986
Susquehanna	11	502	66583	Lathrop-Kingsley Shoulder	HRST			C	1,265,319			1,265,319
Susquehanna	11	503	70163	SR11/171	HRST	P	324,480					324,480
Susquehanna	11	503	70163	SR11/171	HRST			F	379,596			379,596
Susquehanna	11	503	70163	SR11/171	HRST			C	5,180,855			5,180,855

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Susquehanna	11	ENH	65091	Bridging Communities	TENH	C	172,000					172,000
Susquehanna	29	590	72320	SR 29 Slides, Liberty Twp	HRST	R	56,243					56,243
Susquehanna	29	590	72320	SR 29 Slides, Liberty Twp	HRST			C	2,530,638			2,530,638
Susquehanna	92	502	62996	SR 92 & 171 Intersection	HRST	U	78,000					78,000
Susquehanna	92	502	62996	SR 92 & 171 Intersection	HRST	R	260,000					260,000
Susquehanna	92	502	62996	SR 92 & 171 Intersection	HRST	C	1,841,890					1,841,890
Susquehanna	92	551	83960	SR 92, Leslie Ck. Act 44	BRDG	P	78,000					78,000
Susquehanna	92	551	83960	SR 92, Leslie Ck. Act 44	BRDG	C	547,290					547,290
Susquehanna	106	552	9516	SR 0106, Act 44	BRDG	P	337,459					337,459
Susquehanna	106	552	9516	SR 0106, Act 44	BRDG	C	1,462,323					1,462,323
Susquehanna	106	571	9515	Tunkhannock Creek Bridge	BRDG	C	1,558,503					1,558,503
Susquehanna	171	502	47034	Main St., Jail Hill	HRST	U	75,712					75,712
Susquehanna	171	502	47034	Main St., Jail Hill	HRST	R	75,712					75,712
Susquehanna	171	502	47034	Main St., Jail Hill	HRST			C	1,138,787			1,138,787
Susquehanna	171	551	83958	SR 171, D&H RR Act 44	BRDG	P	78,000					78,000
Susquehanna	171	551	83958	SR 171, D&H RR Act 44	BRDG	C	549,453					549,453
Susquehanna	171	570	9637	Drinkers Cr Brg Susq Depo	BRDG	F	302,848					302,848
Susquehanna	171	570	9637	Drinkers Cr Brg Susq Depo	BRDG	U	54,080					54,080
Susquehanna	171	570	9637	Drinkers Cr Brg Susq Depo	BRDG	R	86,528					86,528
Susquehanna	171	570	9637	Drinkers Cr Brg Susq Depo	BRDG	C	1,169,859					1,169,859
Susquehanna	247	501	47361	Dundaff St, Betterment	HRST	C	1,747,200					1,747,200
Susquehanna	267	503	9663	PA 267, Rush Township	HRST	U	32,448					32,448
Susquehanna	267	503	9663	PA 267, Rush Township	HRST	R	52,000					52,000
Susquehanna	267	503	9663	PA 267, Rush Township	HRST			C	2,214,308			2,214,308
Susquehanna	706	501	9745	Bradford to Rush	HCON	F	449,946					449,946
Susquehanna	706	501	9745	Bradford to Rush	HCON	R	787,405					787,405
Susquehanna	706	501	9745	Bradford to Rush	HCON			C	4,428,617			4,428,617
Susquehanna	706	502	47123	Rush to Fairdale	HCON	P	562,432					562,432
Susquehanna	706	502	47123	Rush to Fairdale	HCON			C	23,091,811			23,091,811
Susquehanna	706	503	47124	Fairdale to W. Montrose	HCON			P	1,265,319			1,265,319
Susquehanna	706	503	47124	Fairdale to W. Montrose	HCON			C	25,254,448			25,254,448
Susquehanna	706	504	47125	W.Montrose to Tiffany	HCON	F	1,040,000					1,040,000
Susquehanna	706	504	47125	W.Montrose to Tiffany	HCON	U	10,400					10,400
Susquehanna	706	504	47125	W.Montrose to Tiffany	HCON	R	343,200					343,200

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Susquehanna	706	504	47125	W.Montrose to Tiffany	HCON	C	5,745,377	C	2,668,606			8,413,983
Susquehanna	706	505	47126	Tiffany to US 11	HCON	P	584,929					584,929
Susquehanna	706	505	47126	Tiffany to US 11	HCON			C	5,920,977			5,920,977
Susquehanna	858	551	9652	SR 858, Apolacon Ck Act44	BRDG	P	404,560					404,560
Susquehanna	858	551	9652	SR 858, Apolacon Ck Act44	BRDG	C	946,184					946,184
Susquehanna	858	573	9721	PA 858 Wyalusing Creek	BRDG	C	899,891					899,891
Susquehanna	1006	FY8	81278	Group 4-08-ST8 (44)	BRDG	C	371,411					371,411
Susquehanna	1009	571	9570	Starrucca Creek Bridge	BRDG	C	1,681,680					1,681,680
Susquehanna	1011	552	83952	SR 1011 - Act 44	BRDG	P	175,479					175,479
Susquehanna	1011	552	83952	SR 1011 - Act 44	BRDG	C	925,124					925,124
Susquehanna	1011	570	9578	Hemlock Creek Bridge	BRDG	U	21,632					21,632
Susquehanna	1011	570	9578	Hemlock Creek Bridge	BRDG	R	54,080					54,080
Susquehanna	1011	570	9578	Hemlock Creek Bridge	BRDG	C	899,891					899,891
Susquehanna	1012	570	9708	Salt Lick Creek Bridge	BRDG	F	206,910					206,910
Susquehanna	1012	570	9708	Salt Lick Creek Bridge	BRDG	R	21,632					21,632
Susquehanna	1012	570	9708	Salt Lick Creek Bridge	BRDG	C	935,887					935,887
Susquehanna	1015	550	9569	SR 1015,Cascada Ck. Act44	BRDG	P	78,000					78,000
Susquehanna	1015	550	9569	SR 1015,Cascada Ck. Act44	BRDG	C	332,592					332,592
Susquehanna	1016	570	9580	New Milford RR Bridge	BRDG	F	432,640					432,640
Susquehanna	1016	570	9580	New Milford RR Bridge	BRDG	U	64,896					64,896
Susquehanna	1016	570	9580	New Milford RR Bridge	BRDG	R	54,080					54,080
Susquehanna	1016	570	9580	New Milford RR Bridge	BRDG	C	1,754,788					1,754,788
Susquehanna	1016	571	9525	Meylert Creek Bridge	BRDG	F	312,000					312,000
Susquehanna	1016	571	9525	Meylert Creek Bridge	BRDG			C	1,455,117			1,455,117
Susquehanna	1029	550	9678	SR1029 &I-81 Brg Repairs	BRDG			C	1,280,503			1,280,503
Susquehanna	1029	570	9571	Randolf Road Bridge	BRDG	C	1,243,840					1,243,840
Susquehanna	1033	551	83062	SR1033, Act 44	BRDG	P	281,216					281,216
Susquehanna	1033	551	83062	SR1033, Act 44	BRDG	C	701,915					701,915
Susquehanna	1033	590	72321	SR 1033 Slides, Gr Bend	HRST	C	1,144,000					1,144,000
Susquehanna	1037	571	9639	Dubois Creek Bridge	BRDG	F	171,217					171,217
Susquehanna	1037	571	9639	Dubois Creek Bridge	BRDG	U	16,224					16,224
Susquehanna	1037	571	9639	Dubois Creek Bridge	BRDG	R	16,224					16,224
Susquehanna	1037	571	9639	Dubois Creek Bridge	BRDG	C	1,089,138					1,089,138
Susquehanna	2019	550	79699	SR 2019 Ov Willow Brook	BRDG	C	562,432					562,432

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County	**S.R.**	**Sec.**	**MPMS**	**Project Title**	**Area**	**Ph**	**Costs**	**Ph**	**Costs**	**Ph**	**Costs**	**Cost**
Susquehanna	2030	ABT	68724	Abutment Removal	HRST	C	151,944					151,944
Susquehanna	2034	570	9724	Tunkhannock Creek Bridge	BRDG	C	1,243,840					1,243,840
Susquehanna	2039	570	9681	Millard Creek Bridge	BRDG	C	1,243,840					1,243,840
Susquehanna	2050	570	9567	SR 2050 o/Dundaff Cr.	BRDG	C	1,116,960					1,116,960
Susquehanna	2061	570	9653	Tingley Lake Road Bridge	BRDG	F	156,000					156,000
Susquehanna	2061	570	9653	Tingley Lake Road Bridge	BRDG	R	10,400					10,400
Susquehanna	2061	570	9653	Tingley Lake Road Bridge	BRDG	C	1,040,000					1,040,000
Susquehanna	3003	570	9744	Transue Ck Br, Auburn Twp	BRDG	F	203,340					203,340
Susquehanna	3003	570	9744	Transue Ck Br, Auburn Twp	BRDG	R	16,224					16,224
Susquehanna	3003	570	9744	Transue Ck Br, Auburn Twp	BRDG	C	818,901					818,901
Susquehanna	3033	570	9620	Wyalusing Creek Bridge	BRDG	C	1,297,920					1,297,920
Susquehanna	4013	570	9527	SR 4013 Cork Hill Creek	BRDG	C	717,600					717,600
Susquehanna	7407	BRG	9547	Bolles Hill Road	BRDG	F	128,864					128,864
Susquehanna	7407	BRG	9547	Bolles Hill Road	BRDG	R	5,849					5,849
Susquehanna	7407	BRG	9547	Bolles Hill Road	BRDG			C	740,122			740,122
Susquehanna	7409	000	65189	CHURCH ST BRG,NEW MILFORD	BRDG	P	233,973					233,973
Susquehanna	7409	000	65189	CHURCH ST BRG,NEW MILFORD	BRDG			F	126,533			126,533
Susquehanna	7409	000	65189	CHURCH ST BRG,NEW MILFORD	BRDG			R	63,266			63,266
Susquehanna	7409	000	65189	CHURCH ST BRG,NEW MILFORD	BRDG	P		C	1,110,183			1,110,183
Totals							**66,753,341**		**80,621,133**		**0**	**147,374,474**
Tioga			82736	NTIER CMAQ Line Item	IMOD	C	1,669,000					1,669,000
Tioga		BRG	7203	Trib to Tioga River T-750	BRDG	P	173,056					173,056
Tioga		BRG	7203	Trib to Tioga River T-750	BRDG	F	84,365					84,365
Tioga		BRG	7203	Trib to Tioga River T-750	BRDG	R	22,497					22,497
Tioga		BRG	7203	Trib to Tioga River T-750	BRDG	C	701,915					701,915
Tioga		BRG	7365	T-402 COWANESQUE RIV	BRDG	P	216,320					216,320
Tioga		BRG	7365	T-402 COWANESQUE RIV	BRDG	F	89,988					89,988
Tioga		BRG	7365	T-402 COWANESQUE RIV	BRDG	R	22,497					22,497
Tioga		BRG	7365	T-402 COWANESQUE RIV	BRDG	C	1,000,000	C	871,774			1,871,774
Tioga		BRG	47871	HAMMOND CR BR T-952	BRDG	F	130,000					130,000
Tioga		BRG	47871	HAMMOND CR BR T-952	BRDG	U	26,000					26,000
Tioga		BRG	47871	HAMMOND CR BR T-952	BRDG	R	26,000					26,000
Tioga		BRG	47871	HAMMOND CR BR T-952	BRDG	C	1,297,020					1,297,020

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County	**S.R.**	**Sec.**	**MPMS**	**Project Title**	**Area**	**Ph**	**Costs**	**Ph**	**Costs**	**Ph**	**Costs**	**Cost**
Tioga		LOC	7109	T-431/TIOGA RIVER	BRDG	C	416,000					416,000
Tioga	6	103	68012	SR 6 ovr Tb Charleston Ck	BRDG	F	20,800					20,800
Tioga	6	103	68012	SR 6 ovr Tb Charleston Ck	BRDG	U	31,200					31,200
Tioga	6	103	68012	SR 6 ovr Tb Charleston Ck	BRDG	C	757,120					757,120
Tioga	6	GRP	82229	Mmbrne & Ovrly Tioga Cnty	BRDG	C	467,943					467,943
Tioga	6	M26	82380	Stockdale to Wellsboro	HRST	F	39,775					39,775
Tioga	6	M26	82380	Stockdale to Wellsboro	HRST	C	410,036	C	410,035			820,071
Tioga	15	111	74027	Br over Harts Creek	BRDG	P	83,200					83,200
Tioga	15	111	74027	Br over Harts Creek	BRDG	F	22,000					22,000
Tioga	15	111	74027	Br over Harts Creek	BRDG	R	32,500					32,500
Tioga	15	111	74027	Br over Harts Creek	BRDG	C	1,015,000					1,015,000
Tioga	15	123	79538	15-D51 Section	HRST	C	2,640,000					2,640,000
Tioga	15	131	82377	SR287 to Tioga River	HRST	F	74,241					74,241
Tioga	15	131	82377	SR287 to Tioga River	HRST	C	1,546,688					1,546,688
Tioga	15	I99	82533	US15 I-99 Study	HRST	S	260,000					260,000
Tioga	49	044	7245	PA 49 HOLDEN CK BR	BRDG	C	1,349,298					1,349,298
Tioga	49	056	7321	SR 49 overTRIB COWANESQUE	BRDG	C	1,456,000					1,456,000
Tioga	49	057	82826	SR 49 over Cowanesque Rvr	BRDG	P	41,600					41,600
Tioga	49	057	82826	SR 49 over Cowanesque Rvr	BRDG	F	10,816					10,816
Tioga	49	057	82826	SR 49 over Cowanesque Rvr	BRDG	C	2,197,811					2,197,811
Tioga	49	PNT	83692	Tioga & Bradford BR Paint	BRDG	C	624,000					624,000
Tioga	249	020	7403	SR 249 BR/CROOKED CK	BRDG	C	2,288,000					2,288,000
Tioga	249	021	7231	PA 249/LOSEY CREEK	BRDG	P	83,200					83,200
Tioga	249	021	7231	PA 249/LOSEY CREEK	BRDG	F	21,632					21,632
Tioga	249	021	7231	PA 249/LOSEY CREEK	BRDG	R	43,264					43,264
Tioga	249	021	7231	PA 249/LOSEY CREEK	BRDG	C	1,124,864					1,124,864
Tioga	287	090	82203	SR 287 over Marsh Creek	BRDG	C	701,915					701,915
Tioga	287	091	70740	Crooked Cr Br Preserv	BRDG	P	43,264					43,264
Tioga	287	091	70740	Crooked Cr Br Preserv	BRDG	F	10,816					10,816
Tioga	287	091	70740	Crooked Cr Br Preserv	BRDG	C	877,394					877,394
Tioga	287	092	7322	NORRISBROOK BR TR287	BRDG	P	89,989					89,989
Tioga	287	092	7322	NORRISBROOK BR TR287	BRDG	F	23,397					23,397
Tioga	287	092	7322	NORRISBROOK BR TR287	BRDG	R	46,794					46,794
Tioga	287	092	7322	NORRISBROOK BR TR287	BRDG			C	506,128			506,128

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County	**S.R.**	**Sec.**	**MPMS**	**Project Title**	**Area**	**Ph**	**Costs**	**Ph**	**Costs**	**Ph**	**Costs**	**Cost**
Tioga	287	79M	82196	SR3019 to Wellsboro	HRST	C	2,643,430					2,643,430
Tioga	287	80M	82202	3-2 Line to Morris	HRST	C	1,017,777					1,017,777
Tioga	328	024	82824	SR 328 over Bear Creek	BRDG	P	83,200					83,200
Tioga	328	024	82824	SR 328 over Bear Creek	BRDG	F	21,632					21,632
Tioga	328	024	82824	SR 328 over Bear Creek	BRDG	R	43,264					43,264
Tioga	328	024	82824	SR 328 over Bear Creek	BRDG	C	787,405					787,405
Tioga	328	GRP	82371	Tioga - Bridge Paint	BRDG	P	6,000					6,000
Tioga	328	GRP	82371	Tioga - Bridge Paint	BRDG	F	6,000					6,000
Tioga	328	GRP	82371	Tioga - Bridge Paint	BRDG	C	260,000					260,000
Tioga	349	007	7356	PA 349 over MILL CREEK #2	BRDG	F	20,800					20,800
Tioga	349	007	7356	PA 349 over MILL CREEK #2	BRDG	U	72,800					72,800
Tioga	349	007	7356	PA 349 over MILL CREEK #2	BRDG	R	20,800					20,800
Tioga	349	007	7356	PA 349 over MILL CREEK #2	BRDG	C	2,487,680					2,487,680
Tioga	414	026	7250	PA 414/ZIMMERMANS CK	BRDG	F	21,000					21,000
Tioga	414	026	7250	PA 414/ZIMMERMANS CK	BRDG	R	31,200					31,200
Tioga	414	026	7250	PA 414/ZIMMERMANS CK	BRDG	C	1,080,000					1,080,000
Tioga	549	012	82351	Membrane and Overlay	BRDG	P	5,200					5,200
Tioga	549	012	82351	Membrane and Overlay	BRDG	F	5,200					5,200
Tioga	549	012	82351	Membrane and Overlay	BRDG	C	740,000					740,000
Tioga	549	013	7329	ELK RUN BRIDGE	BRDG	P	89,989					89,989
Tioga	549	013	7329	ELK RUN BRIDGE	BRDG	F	23,397					23,397
Tioga	549	013	7329	ELK RUN BRIDGE	BRDG	R	46,794					46,794
Tioga	549	013	7329	ELK RUN BRIDGE	BRDG			C	2,024,510			2,024,510
Tioga	549	014	83655	SR 549 over Seely Creek	BRDG	P	179,978					179,978
Tioga	549	014	83655	SR 549 over Seely Creek	BRDG	F	46,794					46,794
Tioga	549	014	83655	SR 549 over Seely Creek	BRDG	R	35,096					35,096
Tioga	549	014	83655	SR 549 over Seely Creek	BRDG			C	1,265,319			1,265,319
Tioga	1001	GRP	82370	Tioga - Deck Joints	BRDG	P	22,000					22,000
Tioga	1001	GRP	82370	Tioga - Deck Joints	BRDG	F	11,000					11,000
Tioga	1001	GRP	82370	Tioga - Deck Joints	BRDG	C	575,000					575,000
Tioga	1002	009	7384	SR 1002 ovr Brch Corey Ck	BRDG	U	52,000					52,000
Tioga	1002	009	7384	SR 1002 ovr Brch Corey Ck	BRDG	C	162,240					162,240
Tioga	1007	014	83514	SR1007 ovr Trb of Elk Run	BRDG	P	26,000					26,000
Tioga	1007	014	83514	SR1007 ovr Trb of Elk Run	BRDG	F	26,000					26,000

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County	**S.R.**	**Sec.**	**MPMS**	**Project Title**	**Area**	**Ph**	**Costs**	**Ph**	**Costs**	**Ph**	**Costs**	**Cost**
Tioga	1007	014	83514	SR1007 ovr Trb of Elk Run	BRDG	U	10,816					10,816
Tioga	1007	014	83514	SR1007 ovr Trb of Elk Run	BRDG	R	10,816					10,816
Tioga	1007	014	83514	SR1007 ovr Trb of Elk Run	BRDG	C	134,984					134,984
Tioga	2005	001	82539	Soil Slide Repair	SAMI	P	62,400					62,400
Tioga	2005	001	82539	Soil Slide Repair	SAMI	F	41,600					41,600
Tioga	2005	001	82539	Soil Slide Repair	SAMI	U	21,632					21,632
Tioga	2005	001	82539	Soil Slide Repair	SAMI	R	21,632					21,632
Tioga	2005	001	82539	Soil Slide Repair	SAMI	C	908,544					908,544
Tioga	2005	002	83664	SR 2005 ovr Blockhouse Ck	BRDG	P	10,400					10,400
Tioga	2005	002	83664	SR 2005 ovr Blockhouse Ck	BRDG	F	10,400					10,400
Tioga	2005	002	83664	SR 2005 ovr Blockhouse Ck	BRDG	R	10,400					10,400
Tioga	2005	002	83664	SR 2005 ovr Blockhouse Ck	BRDG	C	86,528					86,528
Tioga	2005	03M	82379	Arnot Rd. to Tioga River	HRST	F	113,476					113,476
Tioga	2005	03M	82379	Arnot Rd. to Tioga River	HRST	C	966,941	C	1,302,585			2,269,526
Tioga	2017	014	7234	MILLCREEK BRIDGE	BRDG	P	87,000					87,000
Tioga	2017	014	7234	MILLCREEK BRIDGE	BRDG	F	23,000					23,000
Tioga	2017	014	7234	MILLCREEK BRIDGE	BRDG	U	11,000					11,000
Tioga	2017	014	7234	MILLCREEK BRIDGE	BRDG	R	23,000					23,000
Tioga	2017	014	7234	MILLCREEK BRIDGE	BRDG	C	350,075	C	949,925			1,300,000
Tioga	2022	001	83515	SR 2022 over Wilson Creek	BRDG	P	28,122					28,122
Tioga	2022	001	83515	SR 2022 over Wilson Creek	BRDG	F	26,000					26,000
Tioga	2022	001	83515	SR 2022 over Wilson Creek	BRDG	U	11,249					11,249
Tioga	2022	001	83515	SR 2022 over Wilson Creek	BRDG	R	11,249					11,249
Tioga	2022	001	83515	SR 2022 over Wilson Creek	BRDG	C	140,383					140,383
Tioga	3001	003	7270	PINE CREEK BRIDGE	BRDG	F	21,632					21,632
Tioga	3001	003	7270	PINE CREEK BRIDGE	BRDG	U	10,816					10,816
Tioga	3001	003	7270	PINE CREEK BRIDGE	BRDG	R	21,632					21,632
Tioga	3001	003	7270	PINE CREEK BRIDGE	BRDG	C	1,687,296					1,687,296
Tioga	3001	005	79055	SR 3001 over Elk Run	BRDG	P	233,972					233,972
Tioga	3001	006	83713	SR 3001 over Buck Run	BRDG	P	58,493					58,493
Tioga	3001	006	83713	SR 3001 over Buck Run	BRDG	R	23,397					23,397
Tioga	3001	006	83713	SR 3001 over Buck Run	BRDG			C	151,838			151,838
Tioga	3007	001	7294	OLMSVILLE BRIDGE	BRDG	C	208,000					208,000
Tioga	3007	007	7390	SR3007 over Stoney ForkCr	BRDG	C	624,000					624,000

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County	**S.R.**	**Sec.**	**MPMS**	**Project Title**	**Area**	**Ph**	**Costs**	**Ph**	**Costs**	**Ph**	**Costs**	**Cost**
Tioga	3007	010	83874	SR3007 ovr WB Stoney Fork	BRDG	P	58,493					58,493
Tioga	3007	010	83874	SR3007 ovr WB Stoney Fork	BRDG	R	23,397					23,397
Tioga	3007	010	83874	SR3007 ovr WB Stoney Fork	BRDG			C	151,838			151,838
Tioga	3014	001	7255	ZIMMERMAN CREEK BRG	BRDG	P	89,989					89,989
Tioga	3014	001	7255	ZIMMERMAN CREEK BRG	BRDG	F	23,397					23,397
Tioga	3014	001	7255	ZIMMERMAN CREEK BRG	BRDG	R	46,794					46,794
Tioga	3014	001	7255	ZIMMERMAN CREEK BRG	BRDG			C	822,547			822,547
Tioga	3019	03M	82119	SR287 to Bradley St.	HRST	F	70,720					70,720
Tioga	3019	03M	82119	SR287 to Bradley St.	HRST	C	1,470,976					1,470,976
Tioga	3022	004	83490	SR 3022 over Marsh Creek	BRDG	P	58,493					58,493
Tioga	4001	022	78960	SR4001 over Cowanesque Rv	BRDG	P	58,493					58,493
Tioga	4002	DNT	78963	Over Catlin Hollow Cr.	BRDG	C	487,500					487,500
Tioga	4005	0SF	79056	SR 4005 over North Fork	BRDG	P	41,600					41,600
Tioga	4005	0SF	79056	SR 4005 over North Fork	BRDG	C	939,910					939,910
Tioga	4007	003	7263	SR4007 ov Califrnia Brook	BRDG	P	28,122					28,122
Tioga	4007	003	7263	SR4007 ov Califrnia Brook	BRDG	F	28,122					28,122
Tioga	4007	003	7263	SR4007 ov Califrnia Brook	BRDG	U	11,249					11,249
Tioga	4007	003	7263	SR4007 ov Califrnia Brook	BRDG	R	11,249					11,249
Tioga	4007	003	7263	SR4007 ov Califrnia Brook	BRDG	C	140,383					140,383
Tioga	4007	02M	75095	SR 4007 over North Brook	BRDG	C	208,000					208,000
Tioga	4012	023	78972	SR4012 ov Hornby HollowCk	BRDG	C	487,500					487,500
Tioga	4013	013	82829	SR 4013 over Yarnell Run	BRDG	P	26,000					26,000
Tioga	4013	013	82829	SR 4013 over Yarnell Run	BRDG	F	26,000					26,000
Tioga	4013	013	82829	SR 4013 over Yarnell Run	BRDG	U	10,816					10,816
Tioga	4013	013	82829	SR 4013 over Yarnell Run	BRDG	R	10,816					10,816
Tioga	4013	013	82829	SR 4013 over Yarnell Run	BRDG	C	140,383					140,383
Tioga	4017	015	7331	LOSEY CREEK BRIDGE	BRDG	F	21,632					21,632
Tioga	4017	015	7331	LOSEY CREEK BRIDGE	BRDG	U	21,632					21,632
Tioga	4017	015	7331	LOSEY CREEK BRIDGE	BRDG	R	21,632					21,632
Tioga	4017	015	7331	LOSEY CREEK BRIDGE	BRDG	C	1,237,350					1,237,350
Tioga	4017	016	7346	HOLDEN CREEK BR #1	BRDG	P	93,589					93,589
Tioga	4017	017	7347	HOLDEN CREEK BR #2	BRDG	P	93,589					93,589
Tioga	4023	001	7269	Camp Brook Bridge	BRDG	C	973,400					973,400
Tioga	4024	005	7090	SR 4024 over Elkhorn Crk	BRDG	P	260,000					260,000

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County	**S.R.**	**Sec.**	**MPMS**	**Project Title**	**Area**	**Ph**	**Costs**	**Ph**	**Costs**	**Ph**	**Costs**	**Cost**
Tioga	4024	005	7090	SR 4024 over Elkhorn Crk	BRDG	F	86,528					86,528
Tioga	4024	005	7090	SR 4024 over Elkhorn Crk	BRDG	R	32,448					32,448
Tioga	4024	005	7090	SR 4024 over Elkhorn Crk	BRDG	C	590,767	C	169,641			760,408
Tioga	4024	09M	79861	SR4024 ov. Elkhorn Ck	BRDG	C	156,000					156,000
Tioga	4024	10M	82108	Starhigh Rd to SR287	HRST	F	94,600					94,600
Tioga	4024	10M	82108	Starhigh Rd to SR287	HRST	C	2,108,080					2,108,080
Tioga	4035	010	83470	SR 4035 ovr Catlin Hollow	BRDG	P	233,972					233,972
Tioga	7409	0	82732	King St over Kelsey Crk	BRDG	P	179,978					179,978
Tioga	7409	0	82732	King St over Kelsey Crk	BRDG	F	93,589					93,589
Tioga	7409	0	82732	King St over Kelsey Crk	BRDG	R	46,794					46,794
Tioga	7409	0	82732	King St over Kelsey Crk	BRDG			C	1,897,979			1,897,979
Totals							**51,813,758**		**10,524,119**		**0**	**62,337,877**
Wyoming			73338	N. Tier CMAQ Reserve	IMOD	C	741,461					741,461
Wyoming			77532	Laceyville Stscape Ph IV	TENH	C	443,038					443,038
Wyoming		000	83949	Group 4-10-ST2 (44)	HCON	C	1,000,000					1,000,000
Wyoming		BR	10150	E Lemon Rd/T-416 Br	BRDG	R	20,800					20,800
Wyoming		BR	10150	E Lemon Rd/T-416 Br	BRDG			C	2,277,574			2,277,574
Wyoming		BR	10151	T-502 Meshoppen Bridge	BRDG	F	57,200					57,200
Wyoming		BR	10151	T-502 Meshoppen Bridge	BRDG	U	1,040					1,040
Wyoming		BR	10151	T-502 Meshoppen Bridge	BRDG	R	4,160					4,160
Wyoming		BR	10151	T-502 Meshoppen Bridge	BRDG			C	229,299			229,299
Wyoming	6	712	75718	Lackawanna Trail (Bett.)	HCON	F	1,081,600					1,081,600
Wyoming	6	712	75718	Lackawanna Trail (Bett.)	HCON			C	18,979,785			18,979,785
Wyoming	6	757	83057	SR 0006 over Meshoppen Ck	BRDG	P	78,000					78,000
Wyoming	6	757	83057	SR 0006 over Meshoppen Ck	BRDG	C	900,000					900,000
Wyoming	6	772	10125	Deer Park BRG,Tunkhannock	BRDG	F	216,320					216,320
Wyoming	6	772	10125	Deer Park BRG,Tunkhannock	BRDG	R	108,160					108,160
Wyoming	6	772	10125	Deer Park BRG,Tunkhannock	BRDG	C	2,173,750	C	5,547,316			7,721,066
Wyoming	6	773	10203	Bardwell Bridge	BRDG	F	208,000					208,000
Wyoming	6	773	10203	Bardwell Bridge	BRDG	R	83,200					83,200
Wyoming	6	773	10203	Bardwell Bridge	BRDG	C	2,163,200					2,163,200
Wyoming	6	775	10204	US 6 OV 1017, Clinton Twp	BRDG	F	162,240					162,240
Wyoming	6	775	10204	US 6 OV 1017, Clinton Twp	BRDG	U	21,632					21,632

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Highways 2009 - 2035

						TIP 2009-2012		2013-2020		2021-2035	PHASE TOTAL
County	**S.R.**	**Sec.**	**MPMS**	**Project Title**	**Area**	**Ph**	**Costs**	**Ph**	**Costs**	**Ph**	**Costs**	**Cost**
Wyoming	6	775	10204	US 6 OV 1017, Clinton Twp	BRDG	R	21,632					21,632
Wyoming	6	775	10204	US 6 OV 1017, Clinton Twp	BRDG			C	1,595,567			1,595,567
Wyoming	6	776	10223	US 6 Bridge Tunkhannock	BRDG	F	156,000					156,000
Wyoming	6	791	70153	Tunkhannock Park & Ride	SAMI	C	391,539					391,539
Wyoming	6	ENH	65191	Iroquois Trail, Tioga St.	TENH	C	158,500					158,500
Wyoming	11	771	10197	US 11 Over US 6 Bridge	BRDG	F	140,608					140,608
Wyoming	11	771	10197	US 11 Over US 6 Bridge	BRDG	U	21,632					21,632
Wyoming	11	771	10197	US 11 Over US 6 Bridge	BRDG	R	21,632					21,632
Wyoming	11	771	10197	US 11 Over US 6 Bridge	BRDG	C	900,000	C	1,077,061			1,977,061
Wyoming	29	772	10179	Bowmans Ck. Bridge	BRDG	C	1,943,240					1,943,240
Wyoming	29	773	10134	Bowman's Creek, Noxen Twp	BRDG	F	242,320					242,320
Wyoming	29	773	10134	Bowman's Creek, Noxen Twp	BRDG	R	10,400					10,400
Wyoming	29	773	10134	Bowman's Creek, Noxen Twp	BRDG	C	1,237,350					1,237,350
Wyoming	87	771	10142	PA 87 S. Br. Mehoopany Ck	BRDG	R	78,000					78,000
Wyoming	87	771	10142	PA 87 S. Br. Mehoopany Ck	BRDG	C	2,704,000					2,704,000
Wyoming	92	752	83959	SR 92,Trib Tunk. Act44	BRDG	C	216,320					216,320
Wyoming	307	770	10102	Osterhout Creek Bridge #2	BRDG	F	303,940					303,940
Wyoming	307	770	10102	Osterhout Creek Bridge #2	BRDG	R	10,400					10,400
Wyoming	307	770	10102	Osterhout Creek Bridge #2	BRDG	C	1,034,875					1,034,875
Wyoming	307	771	10161	Osterhout Creek Bridge #3	BRDG	F	208,000					208,000
Wyoming	307	771	10161	Osterhout Creek Bridge #3	BRDG	U	5,200					5,200
Wyoming	307	771	10161	Osterhout Creek Bridge #3	BRDG	R	15,600					15,600
Wyoming	307	771	10161	Osterhout Creek Bridge #3	BRDG	C	1,034,875					1,034,875
Wyoming	1010	770	68803	SR 1010, Act 44	BRDG	P	337,459					337,459
Wyoming	1010	770	68803	SR 1010, Act 44	BRDG	C	1,838,540					1,838,540
Wyoming	1015	770	10137	Fieldbrook Ck,Nicholson T	BRDG	U	84,365					84,365
Wyoming	1015	770	10137	Fieldbrook Ck,Nicholson T	BRDG	R	12,373					12,373
Wyoming	1015	770	10137	Fieldbrook Ck,Nicholson T	BRDG	C	843,086					843,086
Wyoming	1029	770	10113	Tunk.Cr.BR.,Nicholson Twp	BRDG	P	270,400					270,400
Wyoming	1029	770	10113	Tunk.Cr.BR.,Nicholson Twp	BRDG			F	126,532			126,532
Wyoming	1029	770	10113	Tunk.Cr.BR.,Nicholson Twp	BRDG			R	25,306			25,306
Wyoming	1029	770	10113	Tunk.Cr.BR.,Nicholson Twp	BRDG			C	1,776,293			1,776,293
Wyoming	2002	751	33169	Mill Creek Box, Exeter Tw	BRDG	U	7,019					7,019
Wyoming	2002	751	33169	Mill Creek Box, Exeter Tw	BRDG	R	50,304					50,304

NORTHERN TIER LONG RANGE PLAN
Highways 2009 - 2035

						TIP 2009-2012		2013-2020		2021-2035	PHASE TOTAL
County	**S.R.**	**Sec.**	**MPMS**	**Project Title**	**Area**	**Ph**	**Costs**	**Ph**	**Costs**	**Ph**	**Costs**	**Cost**
Wyoming	2002	751	33169	Mill Creek Box, Exeter Tw	BRDG			C	629,104			629,104
Wyoming	2012	770	10148	Br.Tunk.Ck.Brg.#1,Clinton	BRDG	F	273,645					273,645
Wyoming	2012	770	10148	Br.Tunk.Ck.Brg.#1,Clinton	BRDG	R	10,816					10,816
Wyoming	2012	770	10148	Br.Tunk.Ck.Brg.#1,Clinton	BRDG	C	877,394					877,394
Wyoming	2012	771	10105	Br.Tunk.Ck.Brg.#2,Clinton	BRDG	F	295,277					295,277
Wyoming	2012	771	10105	Br.Tunk.Ck.Brg.#2,Clinton	BRDG	R	5,408					5,408
Wyoming	2012	771	10105	Br.Tunk.Ck.Brg.#2,Clinton	BRDG	C	498,315					498,315
Wyoming	2027	770	10195	Highland Road Bridg,Falls	BRDG	F	254,176					254,176
Wyoming	2027	770	10195	Highland Road Bridg,Falls	BRDG	C	395,952					395,952
Wyoming	3001	775	69221	SR3001over Trib Susq. riv	BRDG	P	84,365					84,365
Wyoming	3001	775	69221	SR3001over Trib Susq. riv	BRDG	C	350,958					350,958
Wyoming	3001	ENH	71670	Laceyville St. Scape III	TENH	C	276,960					276,960
Wyoming	3003	773	10212	SR 3003 Mehoopany Bridge	BRDG	C	2,860,000					2,860,000
Wyoming	3007	750	83059	SR 3007, Act44	BRDG	P	112,486					112,486
Wyoming	3007	750	83059	SR 3007, Act44	BRDG	C	492,043					492,043
Wyoming	4002	770	57872	Little Mehoopany Ck Brg	BRDG	U	22,497					22,497
Wyoming	4002	770	57872	Little Mehoopany Ck Brg	BRDG	R	78,740					78,740
Wyoming	4002	770	57872	Little Mehoopany Ck Brg	BRDG	C	1,286,844					1,286,844
Wyoming	4015	701	47364	4015 Slide, Meshoppen Twp	HRST	P	116,986					116,986
Wyoming	4015	701	47364	4015 Slide, Meshoppen Twp	HRST			U	12,653			12,653
Wyoming	4015	701	47364	4015 Slide, Meshoppen Twp	HRST			R	37,960			37,960
Wyoming	4015	701	47364	4015 Slide, Meshoppen Twp	HRST			C	1,480,244			1,480,244
Wyoming	7207	BRG	56761	T-404 Bridge #14	BRDG	C	116,986					116,986
Wyoming	7210	BRG	64091	T-337 Leonards Ck Brg #3	BRDG			P	296,048			296,048
Totals							**32,173,258**		**34,090,742**		**0**	**66,264,000**
				GRAND TOTALS			**244,079,339**		**498,928,000**		**1,318,024,000**	**2,061,031,339**

NORTHERN TIER INTERSTATE TIP
2009 - 2012

						2,009		2,010		2,011		2,012
County	**S.R.**	**Sec.**	**MPMS**	**Project Title**	**Area**	**Ph**	**Costs**	**Ph**	**Costs**	**Ph**	**Costs**	**Ph**	**Cost**
Susquehanna	81	511	75917	NTier Interstate 4R	IMAN			P	4,160,000				
Susquehanna	81	511	75917	NTier Interstate 4R	IMAN							C	2,000,000
Susquehanna	81	558	75847	Lenox Bridges	IMAN	C	3,500,000						
Susquehanna	81	558	75847	Lenox Bridges	IMAN			C	3,000,000				
Susquehanna	81	590	75976	I-81 Exit 218, Gibson	IMAN			F	2,080,000				
Susquehanna	81	590	75976	I-81 Exit 218, Gibson	IMAN					R	600,000		
Susquehanna	81	590	75976	I-81 Exit 218, Gibson	IMAN							C	1,000,000
Totals							**3,500,000**		**9,240,000**		**600,000**		**3,000,000**

NORTHERN TIER LONG RANGE PLAN
Transit 2009 - 2035

			TIP 2009-2012	2013-2020	2021-2035	Project TOTAL
MPMS	**Project Title**	**Sponsor**	**Costs**	**Costs**	**Costs**	**Cost**
71300	Light Duty Buses	ENDLES	2,154,000			2,154,000
71303	Communication Equip	ENDLES	60,000			60,000
71310	Computer/Office equipment	ENDLES	48,000			48,000
71313	Oper/Maint Facility	ENDLES	150,000			150,000
77307	Maint. Washbay Equipment	ENDLES	156,250			156,250
77308	Security Cameras	ENDLES	150,000			150,000
84250	Heavy Duty Buses	ENDLES	1,900,000			1,900,000
84251	AVL/MDT Radio Equip	ENDLES	550,000			550,000
84296	Fuel Storage Tanks	ENDLES	300,000			300,000
	Capital/Maintenance/Operations Line Item	ENDLES		7,258,000	18,298,000	25,556,000
	TOTALS		**5,468,250**	**7,258,000**	**18,298,000**	**31,024,250**

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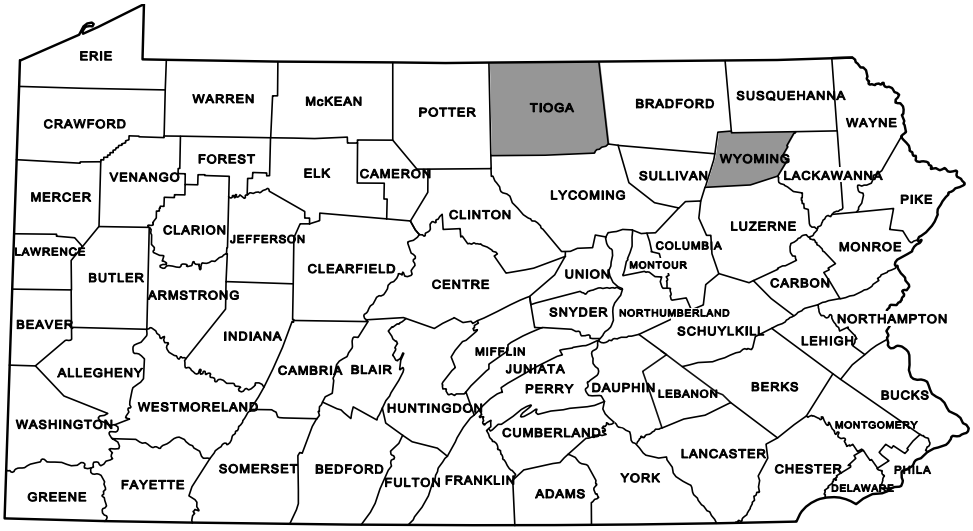
Appendix C – Air Quality Conformity Analysis Summary

AIR QUALITY
CONFORMITY ANALYSIS REPORT
FOR THE NORTHERN TIER RPO PORTION OF THE
SCRANTON-WILKES-BARRE OZONE MAINTENANCE AREA
(WYOMING COUNTY)
AND THE
TIOGA COUNTY OZONE MAINTENANCE AREA
FOR THE 8-HOUR OZONE NAAQS

VOLUME II – TECHNICAL ANALYSIS

FFY 2009 TIP and 2030 LRTP



Prepared by:
Pennsylvania Department of Transportation

DRAFT

PUBLIC REVIEW:

PLANNING PARTNER APPROVAL:

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B. MOBILE6 - Program Parameters

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C. Public Participation

D. Clean Air Acronyms

TABLES
OZONE CONFORMITY
TIOGA COUNTY

2002
Summer Weekday Emission Summary
TIOGA COUNTY

	Vehicle Mile of Travel (VMT)	Vehicle Hours of Travel (VHT)	Average Speed (mph)	VOC Emissions (kg/day)	NOX Emissions (kg/day)
Rural					
Interstate					
Other Prin. Art.	636,689	12,621	50.45	927.40	2,297.40
Minor Arterials	356,939	8,313	42.94	572.50	863.60
Major Collectors	199,654	5,162	38.68	329.60	473.10
Minor Collectors	95,619	2,486	38.46	157.50	231.50
Local	411,815	13,497	30.51	1,130.40	1,013.60
Small Urban					
Interstate					
Expressway					
Other Prin. Art.					
Minor Arterials					
Collector					
Local					
Urban					
Interstate					
Expressway					
Other Prin. Art.					
Minor Arterials					
Collector					
Local					
COUNTY TOTAL	1,700,716	42,079	40.42	3,117.40	4,879.20

2009 TIP
Summer Weekday Emission Summary
TIOGA COUNTY

	Vehicle Mile of Travel (VMT)	Vehicle Hours of Travel (VHT)	Average Speed (mph)	VOC Emissions (kg/day)	NOX Emissions (kg/day)
Rural					
Interstate					
Other Prin. Art.	666,300	12,812	52.01	521.40	1,399.00
Minor Arterials	355,708	8,198	43.39	306.20	493.40
Major Collectors	196,235	5,083	38.61	175.40	250.70
Minor Collectors	97,289	2,517	38.65	86.50	127.90
Local	461,721	15,046	30.69	650.10	656.00
Small Urban					
Interstate					
Expressway					
Other Prin. Art.					
Minor Arterials					
Collector					
Local					
Urban					
Interstate					
Expressway					
Other Prin. Art.					
Minor Arterials					
Collector					
Local					
Off Network Emission Benefits				0.00	0.00
COUNTY TOTAL	1,777,253	43,656	40.71	1,739.60	2,927.00

2018 TIP
Summer Weekday Emission Summary
TIOGA COUNTY

	Vehicle Mile of Travel (VMT)	Vehicle Hours of Travel (VHT)	Average Speed (mph)	VOC Emissions (kg/day)	NOX Emissions (kg/day)
Rural					
Interstate					
Other Prin. Art.	651,015	12,504	52.06	273.20	505.00
Minor Arterials	347,482	8,004	43.41	158.80	205.80
Major Collectors	191,729	4,963	38.63	90.70	108.60
Minor Collectors	94,995	2,457	38.66	44.70	54.20
Local	451,567	14,712	30.69	342.90	272.90
Small Urban					
Interstate					
Expressway					
Other Prin. Art.					
Minor Arterials					
Collector					
Local					
Urban					
Interstate					
Expressway					
Other Prin. Art.					
Minor Arterials					
Collector					
Local					
Off Network Emission Benefits				0.00	0.00
COUNTY TOTAL	1,736,788	42,640	40.73	910.30	1,146.50

2025 LRP
Summer Weekday Emission Summary
TIOGA COUNTY

	Vehicle Mile of Travel (VMT)	Vehicle Hours of Travel (VHT)	Average Speed (mph)	VOC Emissions (kg/day)	NOX Emissions (kg/day)
Rural					
Interstate					
Other Prin. Art.	637,634	12,235	52.12	210.70	311.60
Minor Arterials	340,398	7,838	43.43	123.20	142.30
Major Collectors	187,762	4,857	38.66	70.70	76.90
Minor Collectors	92,991	2,405	38.67	34.80	37.90
Local	442,189	14,403	30.70	281.80	184.60
Small Urban					
Interstate					
Expressway					
Other Prin. Art.					
Minor Arterials					
Collector					
Local					
Urban					
Interstate					
Expressway					
Other Prin. Art.					
Minor Arterials					
Collector					
Local					
Off Network Emission Benefits				0.00	0.00
COUNTY TOTAL	1,700,974	41,738	40.75	721.20	753.30

2030 LRP
Summer Weekday Emission Summary
TIOGA COUNTY

	Vehicle Mile of Travel (VMT)	Vehicle Hours of Travel (VHT)	Average Speed (mph)	VOC Emissions (kg/day)	NOX Emissions (kg/day)
Rural					
Interstate					
Other Prin. Art.	627,824	12,038	52.15	203.20	262.50
Minor Arterials	335,115	7,714	43.44	119.10	127.50
Major Collectors	184,873	4,781	38.67	68.40	69.70
Minor Collectors	91,625	2,370	38.66	33.70	34.10
Local	435,376	14,180	30.70	273.30	164.10
Small Urban					
Interstate					
Expressway					
Other Prin. Art.					
Minor Arterials					
Collector					
Local					
Urban					
Interstate					
Expressway					
Other Prin. Art.					
Minor Arterials					
Collector					
Local					
Off Network Emission Benefits				0.00	0.00
COUNTY TOTAL	1,674,813	41,083	40.77	697.70	657.90

TABLES
OZONE CONFORMITY
WYOMING COUNTY

2002
Summer Weekday Emission Summary
WYOMING COUNTY

	Vehicle Mile of Travel (VMT)	Vehicle Hours of Travel (VHT)	Average Speed (mph)	VOC Emissions (kg/day)	NOX Emissions (kg/day)
Rural					
Interstate					
Other Prin. Art.	253,096	4,952	51.11	370.00	784.50
Minor Arterials	235,672	5,160	45.67	361.00	619.70
Major Collectors	125,656	2,965	42.38	199.10	292.30
Minor Collectors	68,853	1,806	38.12	107.30	211.70
Local	167,618	5,308	31.58	450.00	427.70
Small Urban					
Interstate					
Expressway					
Other Prin. Art.					
Minor Arterials					
Collector					
Local					
Urban					
Interstate					
Expressway					
Other Prin. Art.					
Minor Arterials					
Collector					
Local					
Off Network Emission Benefits				0.00	0.00
COUNTY TOTAL	850,895	20,191	42.14	1,487.40	2,335.90

2009 TIP
Summer Weekday Emission Summary
WYOMING COUNTY

	Vehicle Mile of Travel (VMT)	Vehicle Hours of Travel (VHT)	Average Speed (mph)	VOC Emissions (kg/day)	NOX Emissions (kg/day)
Rural					
Interstate					
Other Prin. Art.	277,809	5,418	51.28	209.70	454.10
Minor Arterials	233,874	5,013	46.65	184.30	309.50
Major Collectors	118,743	2,816	42.17	96.30	148.10
Minor Collectors	56,726	1,403	40.43	45.20	84.40
Local	177,073	5,577	31.75	232.80	250.60
Small Urban					
Interstate					
Expressway					
Other Prin. Art.					
Minor Arterials					
Collector					
Local					
Urban					
Interstate					
Expressway					
Other Prin. Art.	9,156	219	41.81	7.30	13.60
Minor Arterials					
Collector	4,717	221	21.34	4.60	6.60
Local	3,416	180	18.98	4.50	5.20
Off Network Emission Benefits				0.00	0.00
COUNTY TOTAL	881,514	20,847	42.28	784.70	1,272.10

2018 TIP
Summer Weekday Emission Summary
WYOMING COUNTY

	Vehicle Mile of Travel (VMT)	Vehicle Hours of Travel (VHT)	Average Speed (mph)	VOC Emissions (kg/day)	NOX Emissions (kg/day)
Rural					
Interstate					
Other Prin. Art.	269,149	5,238	51.38	107.40	173.10
Minor Arterials	226,569	4,852	46.70	93.70	126.90
Major Collectors	115,013	2,727	42.18	48.90	62.20
Minor Collectors	54,959	1,359	40.44	23.00	32.60
Local	171,553	5,403	31.75	121.20	99.90
Small Urban					
Interstate					
Expressway					
Other Prin. Art.					
Minor Arterials					
Collector					
Local					
Urban					
Interstate					
Expressway					
Other Prin. Art.	10,153	244	41.61	4.20	6.00
Minor Arterials					
Collector	5,225	247	21.15	2.70	3.00
Local	3,784	199	19.02	2.70	2.30
Off Network Emission Benefits				-0.11	-0.09
COUNTY TOTAL	856,405	20,269	42.25	403.69	505.91

2025 LRP
Summer Weekday Emission Summary
WYOMING COUNTY

	Vehicle Mile of Travel (VMT)	Vehicle Hours of Travel (VHT)	Average Speed (mph)	VOC Emissions (kg/day)	NOX Emissions (kg/day)
Rural					
Interstate					
Other Prin. Art.	262,884	5,109	51.46	83.50	112.00
Minor Arterials	221,293	4,736	46.73	73.10	86.50
Major Collectors	112,355	2,663	42.19	38.30	43.10
Minor Collectors	53,680	1,328	40.42	18.00	21.20
Local	167,378	5,271	31.75	100.00	66.20
Small Urban					
Interstate					
Expressway					
Other Prin. Art.					
Minor Arterials					
Collector					
Local					
Urban					
Interstate					
Expressway					
Other Prin. Art.	10,732	259	41.44	3.60	4.30
Minor Arterials					
Collector	5,526	263	21.01	2.30	2.20
Local	3,996	211	18.94	2.40	1.60
Off Network Emission Benefits				-0.09	-0.07
COUNTY TOTAL	837,844	19,840	42.23	321.11	337.03

2030 LRP
Summer Weekday Emission Summary
WYOMING COUNTY

	Vehicle Mile of Travel (VMT)	Vehicle Hours of Travel (VHT)	Average Speed (mph)	VOC Emissions (kg/day)	NOX Emissions (kg/day)
Rural					
Interstate					
Other Prin. Art.	258,568	5,020	51.51	80.50	97.00
Minor Arterials	217,653	4,656	46.75	70.60	77.10
Major Collectors	110,503	2,619	42.19	37.00	38.70
Minor Collectors	52,786	1,305	40.45	17.40	18.50
Local	164,635	5,184	31.76	96.80	58.10
Small Urban					
Interstate					
Expressway					
Other Prin. Art.					
Minor Arterials					
Collector					
Local					
Urban					
Interstate					
Expressway					
Other Prin. Art.	11,095	268	41.40	3.70	3.90
Minor Arterials					
Collector	5,709	272	20.99	2.40	2.10
Local	4,130	218	18.94	2.40	1.50
Off Network Emission Benefits				-0.09	-0.07
COUNTY TOTAL	825,079	19,542	42.22	310.71	296.83

APPENDICES

APPENDIX A1

TIOGA COUNTY/WYOMING COUNTY
LONG RANGE PLAN/
TRANSPORTATION IMPROVEMENT PROGRAM
FOR HIGHWAYS

APPENDIX A2

TIOGA COUNTY/WYOMING COUNTY
LONG RANGE PLAN/
TRANSPORTATION IMPROVEMENT PROGRAM
FOR TRANSIT

APPENDIX B

TIOGA COUNTY/WYOMING COUNTY
MOBILE6.2 PROGRAM PARAMETERS

APPENDIX B1

MOBILE6.2 PROGRAM SETUP FILES
For
Ozone Conformity Analysis

MOBILE6.2 INPUT FILE SETTINGS
Tioga County

```
MOBILE6.2 INPUT FILE
REPORT FILE        :  M6OUTPUT.OUT  REPLACE
DATABASE OUTPUT    :
WITH FIELDNAMES    :
EMISSIONS TABLE    :  M6OUTPUT.TB1  REPLACE
POLLUTANTS         :  HC CO NOX
AGGREGATED OUTPUT  :
```

(Runs are Repeated for Urban, Small Urban, and Rural)

```
RUN DATA           : 0001
EXPRESS HC AS VOC  :
EXPAND EXHAUST     :
EXPAND EVAPORATIVE :
NO REFUELING       :
FUEL RVP           : 8.7
MIN/MAX TEMPERATURE: 62.5  89.4
94+ LDG IMP        : NLEVNE.D
T2 EXH PHASE-IN    : pal2exh.08
T2 EVAP PHASE-IN   : pal2evp.08
T2 CERT            : leviistd.d
REG DISTRIBUTION   : TIOG05ag.dat
```

CALLEVII Phase-In Files

(2002 for base year; 2005 ages used for all future years)

(ATP Programs <u>Only</u> Apply to 2004 and Later Analysis Years)

```
ANTI-TAMP PROGRAM  : 04 75 95 22222 11111111 1  11 096. 22212222
```

(Scenarios are Repeated for Each Functional Class)

```
SCENARIO RECORD    :
CALENDAR YEAR      : 2009
EVALUATION MONTH   : 7
ABSOLUTE HUMIDITY  : 42.1
SEASON             : 1
VMT FRACTIONS      :
.333874 .074180 .247058 .076106 .035010 .073550 .007209 .005883
.004557 .016505 .019344 .021061 .075289 .003800 .001717 .004857
```

(Analysis year depends on year being run)

(VMT mix varies for each year, run/scenario combination)

(Speed, hourly, and facility distributions prepared by PPSUITE post processor for each Run/Scenario combination)

```
VMT BY FACILITY    :V000101F.def
VMT BY HOUR        :V000101H.def
SPEED VMT          :V000101S.def
```

ATTACHMENT: 1
Tioga County Vehicle Age Distributions Input to MOBILE6.2

2005 Age Distribution:

```
REG DIST
1  0.0249  0.0472  0.0555  0.0652  0.0664  0.0825  0.0740  0.0767  0.0725  0.0704
   0.0766  0.0547  0.0488  0.0414  0.0343  0.0258  0.0211  0.0183  0.0138  0.0087
   0.0055  0.0049  0.0023  0.0015  0.0071
2  0.0277  0.0581  0.0497  0.0482  0.0560  0.0684  0.0675  0.0591  0.0711  0.0472
   0.0615  0.0601  0.0501  0.0347  0.0311  0.0311  0.0310  0.0382  0.0227  0.0184
   0.0118  0.0099  0.0071  0.0049  0.0345
3  0.0277  0.0581  0.0497  0.0482  0.0560  0.0684  0.0675  0.0591  0.0711  0.0472
   0.0615  0.0601  0.0501  0.0347  0.0311  0.0311  0.0310  0.0382  0.0227  0.0184
   0.0118  0.0099  0.0071  0.0049  0.0345
4  0.0317  0.0831  0.0682  0.0642  0.0668  0.0716  0.0702  0.0602  0.0823  0.0455
   0.0606  0.0485  0.0434  0.0266  0.0200  0.0215  0.0278  0.0234  0.0142  0.0159
   0.0083  0.0074  0.0045  0.0026  0.0317
5  0.0317  0.0831  0.0682  0.0642  0.0668  0.0716  0.0702  0.0602  0.0823  0.0455
   0.0606  0.0485  0.0434  0.0266  0.0200  0.0215  0.0278  0.0234  0.0142  0.0159
   0.0083  0.0074  0.0045  0.0026  0.0317
16 0.0627  0.0730  0.0901  0.0661  0.0730  0.0695  0.0421  0.0300  0.0343  0.0292
   0.0283  0.0240  0.0223  0.0137  0.0120  0.0120  0.0155  0.0103  0.0137  0.0318
   0.0386  0.0232  0.0352  0.0343  0.1150
```

(Truck Age Distributions Assume MOBILE6.2 National Defaults)

MOBILE6.2 INPUT FILE SETTINGS
Wyoming County

```
MOBILE6.2 INPUT FILE
REPORT FILE        :  M6OUTPUT.OUT  REPLACE
DATABASE OUTPUT    :
WITH FIELDNAMES    :
EMISSIONS TABLE    :  M6OUTPUT.TB1  REPLACE
POLLUTANTS         :  HC CO NOX
AGGREGATED OUTPUT  :
```

(Runs are Repeated for Urban, Small Urban, and Rural)

```
RUN DATA           : 0001
EXPRESS HC AS VOC  :
EXPAND EXHAUST     :
EXPAND EVAPORATIVE :
NO REFUELING       :
FUEL RVP           : 8.7
MIN/MAX TEMPERATURE: 62.5  89.4
94+ LDG IMP        : NLEVNE.D
T2 EXH PHASE-IN    : pal2exh.08
T2 EVAP PHASE-IN   : pal2evp.08
T2 CERT            : leviistd.d
REG DISTRIBUTION   : WYOM05ag.dat
```

CALLEVII Phase-In Files

(2002 for base year; 2005 ages used for all future years)

(ATP Programs <u>Only</u> Apply to 2004 and Later Analysis Years)

```
ANTI-TAMP PROGRAM  : 04 75 95 22222 11111111 1  11 096. 22212222
```

(Scenarios are Repeated for Each Functional Class)

```
SCENARIO RECORD    :
CALENDAR YEAR      : 2009
EVALUATION MONTH   : 7
ABSOLUTE HUMIDITY  : 42.1
SEASON             : 1
VMT FRACTIONS      :
.333874 .074180 .247058 .076106 .035010 .073550 .007209 .005883
.004557 .016505 .019344 .021061 .075289 .003800 .001717 .004857
```

(Analysis year depends on year being run)

(VMT mix varies for each year, run/scenario combination)

(Speed, hourly, and facility distributions prepared by PPSUITE post processor for each Run/Scenario combination)

```
VMT BY FACILITY    :V000101F.def
VMT BY HOUR        :V000101H.def
SPEED VMT          :V000101S.def
```

ATTACHMENT: 2
Wyoming County Vehicle Age Distributions Input to MOBILE6.2

2005 Age Distribution:

```
REG DIST
1  0.0311  0.0636  0.0681  0.0722  0.0658  0.0779  0.0706  0.0699  0.0672  0.0610
   0.0658  0.0504  0.0472  0.0381  0.0354  0.0267  0.0247  0.0185  0.0134  0.0082
   0.0055  0.0050  0.0024  0.0013  0.0099
2  0.0392  0.0718  0.0674  0.0608  0.0582  0.0659  0.0638  0.0531  0.0736  0.0452
   0.0537  0.0536  0.0346  0.0328  0.0271  0.0290  0.0313  0.0345  0.0213  0.0201
   0.0144  0.0102  0.0074  0.0023  0.0288
3  0.0392  0.0718  0.0674  0.0608  0.0582  0.0659  0.0638  0.0531  0.0736  0.0452
   0.0537  0.0536  0.0346  0.0328  0.0271  0.0290  0.0313  0.0345  0.0213  0.0201
   0.0144  0.0102  0.0074  0.0023  0.0288
4  0.0379  0.0985  0.0873  0.0799  0.0618  0.0681  0.0656  0.0612  0.0808  0.0479
   0.0510  0.0497  0.0264  0.0233  0.0183  0.0186  0.0233  0.0208  0.0115  0.0162
   0.0152  0.0081  0.0062  0.0012  0.0211
5  0.0379  0.0985  0.0873  0.0799  0.0618  0.0681  0.0656  0.0612  0.0808  0.0479
   0.0510  0.0497  0.0264  0.0233  0.0183  0.0186  0.0233  0.0208  0.0115  0.0162
   0.0152  0.0081  0.0062  0.0012  0.0211
16 0.0649  0.0744  0.1086  0.0791  0.0638  0.0531  0.0413  0.0425  0.0295  0.0460
   0.0260  0.0165  0.0201  0.0153  0.0130  0.0106  0.0153  0.0165  0.0177  0.0331
   0.0248  0.0165  0.0283  0.0224  0.1204
```

(Truck Age Distributions Assume MOBILE6.2 National Defaults)

APPENDIX B2

INSPECTION AND MAINTENANCE MODELING PARAMETERS FOR LRTP/TIP CONFORMITY ANALYSIS

Pennsylvania I/M Program

The Pennsylvania inspection and maintenance (I/M) program was upgraded and expanded throughout the state with a phase-in period starting in September 2003 and fully implemented by June 2004. The program test requirements vary by region and include on-board diagnostics (OBD) technology that uses the vehicle's computer for model years 1996 and newer to download potential engine problems that could effect emissions. The program, named PAOBDII, is implemented in the Philadelphia, Pittsburgh, and South Central and Lehigh Valley Regions. The Northern Region receives gas cap and visual inspections and the other 42 counties in the Commonwealth receive a visual inspection. For all of projected analysis years beyond 2004, the upgraded I/M program was modeled.

Vehicles subject to the program include 1975 and newer model year gasoline cars and light duty trucks up to 9,000 pounds GVW. New model years are exempt for the first year. The county of registration determines which inspections are required. Details of the program by region are provided below.

Philadelphia 5-County Area

The five counties include Bucks, Chester, Delaware, Montgomery and Philadelphia. The previous PA97 program with ASM was upgraded in final ASM cutpoints in September 2003 and OBD implemented in between April and June 2004. The program parameters for Philadelphia include:

Model Years	Program Parameters
1996 & newer	PAOBDII Gas Cap
1981-1995 (LDGV) 1984-1995 (LDGT)	ASM Gas Cap ATP
1975-1980 (LDGV) 1975-1983 (LDGT)	Idle Test Gas Cap ATP

Pittsburgh 4-County Area

The four counties include Allegheny, Beaver, Washington and Westmoreland. The previous PA97 program was upgraded to OBD between January and March 2004. The program parameters include:

Model Years	Program Parameters
1996 & newer	PAOBDII Gas Cap
1975-1995	2-speed Idle Gas Cap ATP

South Central and Lehigh Valley Region

The eight counties in the region include Berks, Cumberland, Dauphin, Lancaster, Lebanon, Lehigh, Northampton, and York. The new program expanded to these counties during December 2003 to February 2004. There was not prior inspection program. The program parameters include:

Model Years	Program Parameters
1996 & newer	PAOBDII Gas Cap
1975-1995	Gas Cap ATP

Northern Region

The eight counties in the region include Blair, Cambria, Centre, Erie, Lackawanna, Luzerne, Lycoming, and Mercer. The new program expanded to these counties during January and March 2004, which did not have a prior program. The program parameters include:

Model Years	Program Parameters
1975 & newer	Gas Cap ATP

42-County Region

The remaining 42 counties in the Commonwealth will receive an anti-tampering program for all 1975 and newer subject vehicles as part of their Safety Inspection starting in December 2003. The program consists of seven visual inspections of key emissions control components. They include: air pump system, catalytic converter, fuel inlet restrictor, EGR, evaporative system, PCV system, and gas cap. The seven inspections are the same for all areas for vehicles receiving the ATP inspection.

APPENDIX B3

MOBILE6.2 OZONE Summer Weekday Temperature and Humidity Inputs

MOBILE6 Summer Daily Temperatures and Humidity

Air Quality District	Maximum	Minimum	Absolute Humidity
1. Bucks, Chester, Delaware, Montgomery, Philadelphia	93.1	68.7	52.2
2. Berks	94.4	68.8	75.0
3. Lancaster	94.0	66.7	57.2
4. Carbon, Lehigh, Northampton	92.0	62.8	59.2
5. Adams, Franklin, York	94.0	66.7	57.2
6. Cumberland, Dauphin, Lebanon, Perry	94.0	66.7	57.2
7. Columbia, Lackawanna, Luzerne, Schuylkill, Susquehanna, Wayne, Wyoming	89.4	62.5	42.1
8. Bedford, Blair, Fulton, Huntingdon, Juniata, Mifflin	88.3	62.1	42.3
9. Cameron, Centre, Clearfield, Clinton	88.3	62.1	42.3
10. Bradford, Lycoming, Potter, Sullivan, Tioga	89.4	62.5	42.1
11. Allegheny, Armstrong, Beaver, Butler, Fayette, Greene, Washington, Westmoreland	89.4*	68.8*	78.0*
12. Clarion, Lawrence, Mercer, Venango	88.3	62.1	42.3
13. Crawford, Elk, Erie, Forest, McKean, Warren	87.7	69.5	61.3
14. Cambria, Indiana, Somerset	88.3	62.1	42.3

* *Temperatures based on 10 highest ozone exceedence days from 2000-2002 consistent with their respective maintenance plans.*

APPENDIX B4

MOBILE6.2 OZONE Summer Weekday Fuel Volatility Inputs

MVMA Fuel Volatility Survey Results

Nonattainment Area	MVMA Surveyed City	RVP		
		1990	2002	Beyond 2002
Allentown-Bethlehem-Easton	Philadelphia	8.4	8.7	8.7
Altoona	Philadelphia	8.4	8.7	8.7
Erie	Cleveland	9.7	8.7	8.7
Harrisburg-Lebanon-Carlisle	Philadelphia	8.4	8.7	8.7
Johnstown	Philadelphia	8.4	8.7	8.7
Lancaster	Philadelphia	8.4	8.7	8.7
Philadelphia-Wilmington-Trenton	Philadelphia	8.4	8.7	8.7
Pittsburgh-Beaver Valley	Philadelphia	8.4	7.8	7.8
Reading	Philadelphia	8.4	8.7	8.7
Scranton-Wilkes Barre	Philadelphia	8.4	8.7	8.7
York	Philadelphia	8.4	8.7	8.7
Youngstown-Warren-Sharon	Cleveland	9.7	8.7	8.7

APPENDIX C

TIOGA COUNTY/WYOMING COUNTY
PUBLIC PARTICIPATION

APPENDIX D

CLEAN AIR ACRONYMS

ACRONYMS

ACRONYMS

AADT	Annual Average Daily Traffic (July 1 and seasonally adjusted)
AASHTO	American Association of State and Highway Transportation Officials
ACT	Alternative Control Technique Documents
ADA	Americans with Disabilities Act of 1990
ADT	Average Daily Traffic
ADTT	Average Daily Truck Traffic
AFV	Alternative Fuel Vehicle
AIRS	Aerometric Information Retrieval Systems
APCA	Air Pollution Control Act of 1992 (Pennsylvania)
APO	Average Passenger Occupancy
AQ	Air Quality
AQP	Air Quality Program
AQTF	Air Quality Task Force
AQRV	Air Quality Related Values
AVI	Automatic Vehicle Identification
AVO	Average Vehicle Occupancy
AVR	Average Vehicle Ridership
BEQ	Bureau of Environmental Quality (PENNDOT)
BMS	Bridge Management System
BMV	Bureau of Motor Vehicles
CAA70	Clean Air Act of 1970
CAA77	Clean Air Act Amendments of 1977
CAA90	Clean Air Act Amendments of 1990
CAAA	Clean Air Act Amendments of 1990
CARB	California Air Resources Board
CBD	Central Business District
CE	Categorical Exclusion
CEE	Categorical Exclusion Evaluation
CFF	Clean Fuel Fleet
CFFV	Clean Fuel Fleets Vehicles
CFR	Code of Federal Regulations
CFV	Clean Fuel Vehicle
CMAQ	Congestion Mitigation and Air Quality
CMP	Congestion Management Plan
CMS	Congestion Management System OR Contract Management System
CMSA	Consolidated Metropolitan Statistical Area
CNG	Compressed Natural Gas
CO	Carbon Monoxide (ppm) OR Central Office
CO_2	Carbon Dioxide (ppm)
CPI	Consumer Price Index
CTG	Control Technique Guidance
CV	Conventional Vehicle
DEIS	Draft Environmental Impact Statement
DEP	Department of Environmental Protection
DOI	Department of Interior
DOT	Department of Transportation
DVMT	Daily Vehicle Miles of Travel
DVRPC	Delaware Valley Regional Planning Commission
EA	Environmental Assessment
ECO	Employee Commute Option

ECONS	Energy Conservation and Safety
EDD	Economic Development District
E I/M	Enhanced Inspection/Maintenance
EIS	Environmental Impact Statement
EKMA	Empirical Kinetic Measurement Assessment
EPA	Environmental Protection Agency (United States)
EPACT	Energy Policy Act of 1992
EPS	Emissions Pre-Processor Systems
EQB	Environmental Quality Board (PA)
ERC	Emission Reduction Credit
ETC	Employer Trip Coordinator OR Employee Transportation Coordination
ETRP	Employer Trip Reduction Program
ETTM	Electronic Toll and Traffic Management
FEIS	Final Environmental Impact Statement
FFY	Federal Fiscal Year
FHWA	Federal Highway Administration
FIP	Federal Implementation Plan
FIPS	Federal Information Processor Systems
FONSI	Finding of No Significant Impact
FTA	Federal Transit Administration
FTP	Federal Test Procedure
GM/BHP-HR	Grams per Break Horsepower Hour
GIS	Geographic Information System
GVWR	Gross Vehicle Weight Rating
HBW	Home-Based Work
HC	Hydrocarbons (Kg/day, Tons/yr)
HCM	Highway Capacity Manual
HDDV	Heavy Duty Diesel Vehicle
HDGV	Heavy Duty Gasoline Vehicle
HDV	Heavy Duty Vehicle
HOV	High Occupancy Vehicle
HPMS	Highway Performance Monitoring System
HP&R	Highway Planning and Research Funds (Federal)
ILEV	Inherently Low Emission Vehicles
I/M	Inspection/Maintenance
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
ITE	Institute of Transportation Engineers
IVHS	Intelligent Vehicle Highway Systems
LAER	Lowest Achievable Emission Rate
LDD	Local Development District
LDDT	Light Duty Diesel Truck
LDDV	Light Duty Diesel Vehicle
LDGT	Light Duty Gasoline Truck
LDGV	Light Duty Gasoline Vehicle
LDT	Light Duty Truck
LDV	Light Duty Vehicle
LEV	Low Emission Vehicle
LOS	Level of Service
LPG	Liquid Petroleum Gas
LPO	Lead Planning Organization
MACT	Maximum Achievable Control Technology
MOBILE	EPA's computer program used to run conformity -- latest version is number 5A
MPO	Metropolitan Planning Organization
MPH	Miles Per Hour
MSA	Metropolitan Statistical Area
NAAQS	National Ambient Air Quality Standards

NARC	National Association of Regional Councils
NCHRP	National Cooperative Highway Research Program
NEPA	National Environmental Policy Act of 1969, as amended
NHB	Non-Home Based
NHS	National Highway System
NH_3	Ammonia
NO_2	Nitrogen Dioxide
No_x	Nitrogen Oxides
NO_xRACT	Nitrous Oxides Reasonable Available Control Technology
NPRM	Notice of Proposed Rulemaking
NSPS	New Source Performance Standards
NSR	New Source Review
O_3	Ozone (ppm)
OEM	Original Equipment Manufacturer
OMB	Office of Management and Budget (US)
OTC	Ozone Transport Commission
OTR	Ozone Transport Region
PADEP	Pennsylvania Department of Environmental Protection
PENNDOT	Pennsylvania Department of Transportation
PAMPTA	Pennsylvania Association of Mass Transit Authorities
P&R	Park and Ride
PERC	Perchloroethylene
PHF	Peak Hour Factor
PI&E	Public Information and Education
PL	Metropolitan Planning Funds
$PM_{2.5}$	Fine Particulate Matter (ug/m^3)
PM_{10}	Particulate Matter (ug/m^3)
PMS	Pavement Management System OR Project Management System
PPAQ	Post Processor for Air Quality
PPM	Parts Per Million
RACT	Reasonable Available Control Technology
RFA	Regulatory Flexibility Analysis
RFG	Reformulated Federal Gasoline
RFP	Reasonable Further Progress
RMS	Roadway Management System
RMSE	Route Mean Square Error
ROD	Record of Decision
ROG	Reactive Organic Gases
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
RVP	Reid Vapor Pressure
SAMI	Safety and Mobility Initiative (PENNDOT)
SIP	State Implementation Plan
SMA	Statistical Metropolitan Area
SO_x	Sulfates
SO_2	Sulfur Dioxide
SOL	Strike-Off-Letter (PENNDOT)
SOV	Single Occupancy Vehicle
SOVCAP	Single Occupancy Vehicle Capacity Adding Project
SPRPC	Southwestern Pennsylvania Regional Planning Commission
STAMPP	Systematic Technique to Analyze & Manage Pennsylvania's Pavement (PENNDOT)
STC	State Transportation Commission
STEP	Short-range Transportation Evaluation Program
STIP	Statewide Transportation Improvement Plan
STP	Surface Transportation Program
TAC	Technical Advisory Committee

TAZ	Traffic Analysis Zone
TCM	Transportation Control Measure
TCP	Traffic Control Plan
TDM	Travel Demand Management
TDR	Travel Demand Reduction
TIP	Transportation Improvement Program
TLEV	Transitional Low Emission Vehicle
TMA	Transportation Management Association OR Transportation Management Area
TODF	Time of Day Factor
TPD	Tons Per Day
TPY	Tons Per Year
TR	Traffic Route
TRB	Transportation Research Board
TRO	Trip Reduction Ordinance
TSM	Transportation System Management
TYP	Twelve-Year Program (PADOT)
UAM	Urban Air Shed Model
UG/M^3	Micrograms per Cubic Meter
ULEV	Ultra Low Emission Vehicles
UMTA	Urban Mass Transportation Administration (renamed FTA--Federal Transit Administration)
USC	United States Code
VHT	Vehicle Hours Travelled
VMT	Vehicle Miles Travelled
VOC	Volatile Organic Compounds
VPH	Vehicles Per Hour
ZEV	Zero Emission Vehicles

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Appendix D – Local Coordinated Plan

Northern Tier
Local Coordinated Plan

BRADFORD | SULLIVAN | SUSQUEHANNA | TIOGA | WYOMING

February 29, 2008

Executive Summary

Key trends and issues that are affecting human service transportation in the area include changes occurring in the larger environment, such as increasing fuel costs and a growing senior population, as well as issues with how programs are currently structured, such as the often confusing, contradictory and overly restrictive program guidelines.

The most important human service transportation needs generally consist of the need for more flexible, easier-to-understand program guidelines for consumers and providers, and the need for expanded transit service throughout the area.

Recommendations to improve the coordination of transit services and make the system more consumer-friendly include creation of a consumer information clearinghouse, allowing transit funding to "follow the consumer" (i.e., for inter-county trips), and improved coordination and cooperation among agencies.

A number of infrastructure-related issues need to be addressed, including poor road conditions that increase vehicle wear and tear, the lack of sidewalks and curbs that hinders wheelchair accessibility, and the need for improved fleet radio communications equipment.

Recommendations to make human service transportation in the area more efficient and effective include conducting consumer satisfaction surveys, upgrading scheduling software and GPS capabilities, improving the timeliness of transit service delivery, and expanding program eligibility.

The region's most significant needs, priorities, and strategies are summarized in the following table:

Needs	Priorities	Strategies
Designated "park and ride" locations in conjunction with public transportation service	Improve consumer focus	Establish a central information clearinghouse
Clarity of program information and guidelines	Monitoring of program performance	Monitor performance through regular customer satisfaction surveys and financial audits
Fewer limitations on service availability	Expand program access to unserved populations and destinations	Develop easy to understand program guidelines/literature
Services to meet changing demands		Expand service on weekends
Improved infrastructure (roadways and sidewalks)		Invest in improved technology, e.g., scheduling software, GPS, etc
Equitable distribution of equipment		

Introduction

Beginning in Fiscal Year 2007, projects funded through three programs included in SAFETEA-LU, including the Job Access and Reverse Commute Program (JARC, Section 5316), New Freedom (Section 5317) and the Formula Program for Elderly Individuals and Individuals with Disabilities (Section 5310) are required to be derived from a locally developed, coordinated Public Transit- Human Services Transportation Plan.

The purpose of the Local Public Transit-Human Service Coordination Plan is to create a comprehensive plan to help state and local community leaders, organizations and agencies involved in human service transportation and public transit services to cooperate and coordinate programs and develop action plans for the delivery of services. In communities which practice coordination and cooperation, the results have been improved services, lower costs and improved access, which benefits the consumer.

The key elements of the plan include:

- An assessment of available services that identifies current providers (public, private, and non-profit).
- An assessment of transportation needs for individuals with disabilities, older adults, and people with low incomes.
- Strategies and/or activities to address the identified gaps and achieve efficiencies in service delivery.
- Relative priorities for implementation based on resources, time, and feasibility for implementing specific strategies/activities identified.

A key purpose of the plan is to maximize the coverage of existing human service transportation programs by minimizing the duplication of services. Representatives of public, private and non-profit transportation and human service transportation providers and members of the general public were involved in the development of this plan.

The Plan will ultimately help guide in the selection of projects funded through the programs mentioned previously.

Background

Service Area Overview

The following section presents pertinent information concerning the study area and transit-dependent populations.

Population Composition – The Graying of the Northern Tier

The graying of Pennsylvania has been a common topic of transportation and economic planning in recent years. The so-called "Baby Boomer" generation of those people born between 1946 and 1964 has created economic and transportation implications throughout its existence. As the front end of this group moves into the region's more senior demographic ranks, it will continue to have significant ramifications in terms of how efficient, predictable, and accessible transportation will need to be in coming years.

While the region sustained moderate population growth during the 1990s, the differences among various age groups is striking. There have been significant changes in population among certain age groups, including those aged 45-54 and those over the age of 75. The region's share of population 65 years old and older is now 15.6 percent, just over the Pennsylvania average of 15.2 percent. However, total population growth among those over the age of 65 increased in the Northern Tier at a faster rate than Pennsylvania as a whole (8 percent versus 4.9 percent). Among Pennsylvania's counties, Sullivan County ranks first in the percentage of its population 65 years old and older, at 23.8 percent.

Table 1 below shows more detailed information on changes in population composition among the region's counties.

Table 1: Percent Change by Age Group - 1990-2000
Northern Tier (Good)

	Total	45-54	55-64	65-74	75-84	85+
Bradford	62,761	30.0	(36.3)	(1.7)	26.5	28.5
Sullivan	6,556	49.0	16.1	11.0	16.0	9.3
Susquehanna	42,238	34.0	25.0	(3.2)	15.6	25.8
Tioga	41,373	22.5	14.7	3.4	22.4	23.8
Wyoming	28,080	42.2	24.3	(4.5)	17.0	23.6
Northern Tier	181,008	31.5	0.8	(2.2)	21.1	25.0

Source: U.S. Census

Low-Income Populations

The Federal Highway Administration has defined "Low income" for transportation planning purposes as a household income at or below the Department of Health and Human Service guideline of $19,971 a year. Sullivan County has the region's lowest median household income ($30,279), while Tioga County has the lowest per capita

income ($15,549). Based on per capita income, Tioga County ranks among the bottom ten counties in the state.

Pennsylvania state averages in 2000 were $40,106 and $20,880, respectively.

Table 2 and Table 3 illustrate the diversity of average per capita and household incomes.

Table 2: Low Income Population
Northern Tier

	Per Capita Income	Median Household Income	PA Rank of 67 Counties	National Rank of 3140 Counties
Bradford	$17,148	$35,038	35	1462
Sullivan	$16,438	$30,279	46	1793
Susquehanna	$16,435	$33,622	47	1796
Tioga	$15,549	$32,020	60	2193
Wyoming	$17,452	$36,365	32	1322
Pennsylvania	$20,880	$40,106	n/a	n/a

Source: U.S. Census Bureau Table P82 (2000)

Table 3: Households by Income
Northern Tier

	Households	< $10	$10 – 14,999	$15 – 24,999	$25 – 34,999	$35 – 49,999	$50+
Bradford	24,427	9.9	7.9	16.0	16.1	19.3	30.7
Sullivan	2,667	11.0	10.4	19.6	15.3	16.8	26.9
Susquehanna	16,543	10.1	8.7	17.2	15.9	18.7	29.5
Tioga	15,942	10.8	9.2	18.2	16.3	18.6	26.9
Wyoming	10,822	9.6	8.0	15.4	15.1	18.0	34.0
Northern Tier	70,401	10.1	8.5	16.9	15.9	18.7	29.9
Pennsylvania	4.78 M	9.7	7.0	13.8	13.3	16.9	39.4

Source: U.S. Census Bureau Table P82 (2000)

Household Access to a Vehicle

Rural regions such as the Northern Tier typically have a higher-than-average degree of reliance on the private automobile for mobility. Because of this, it is not unusual to see that the region's rate of households without access to a vehicle is less than half of the state's rate of nearly 13 percent. Among the region's counties, Wyoming County's households have the highest rate of access to a vehicle, at nearly 95 percent. Rates in Sullivan and Tioga Counties are nearly equally as high.

On the other end of the spectrum, approximately 14.8 percent of all Pennsylvania households have access to 3 or more vehicles. In the Northern Tier, the rate is 18.7

percent. Table 4 includes more detail on regional households' rates of access to a vehicle.

Table 4: Access to a Vehicle (2000)
Northern Tier

	None		1		2		3+	
	#	%	#	%	#	%	#	%
Bradford	1,701	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	41.1	2,986	18.8
Wyoming	584	5.4	3,258	30.3	4,641	43.1	2,279	21.2
Northern Tier	4,434	6.4	22,963	32.7	29,634	42.2	13,292	19.0
Pennsylvania	4.77 M	12.8	1.67 M	34.9	1.79 M	37.5	704,693	14.8

Source: U.S. Census SF3; Table H44/46

Over the past ten years, the total change in the number of in-state registered vehicles has varied widely throughout the region. All but one county (Wyoming) experienced growth in excess of the state rate of 18.2 percent. Growth in Wyoming County was only 7.4 percent, the fifth-slowest rate of growth in the state. As shown in the preceding table, Wyoming County already had one of the highest rates of households with access to a vehicle in the state, at nearly 95 percent.

Table 5: Percentage Change in In-state Registered Vehicles (1995-2005)
Northern Tier

	Total
Bradford	19.8
Sullivan	22.1
Susquehanna	30.2
Tioga	30.4
Wyoming	7.4
Pennsylvania	18.2

Source: Center for Rural Pennsylvania

Existing Services Overview

Public transportation services in the region are provided primarily by the Endless Mountains Transportation Authority, or EMTA. EMTA provides fixed-route and demand responsive public transportation services in Bradford, Sullivan and Tioga Counties. Service in Wyoming and Susquehanna Counties is provided by the Luzerne-Wyoming County Transportation Department and Barnes-Kasson Hospital, respectively. Susquehanna County is the only Northern Tier county and one of only 15 in Pennsylvania that does not have fixed route bus service.

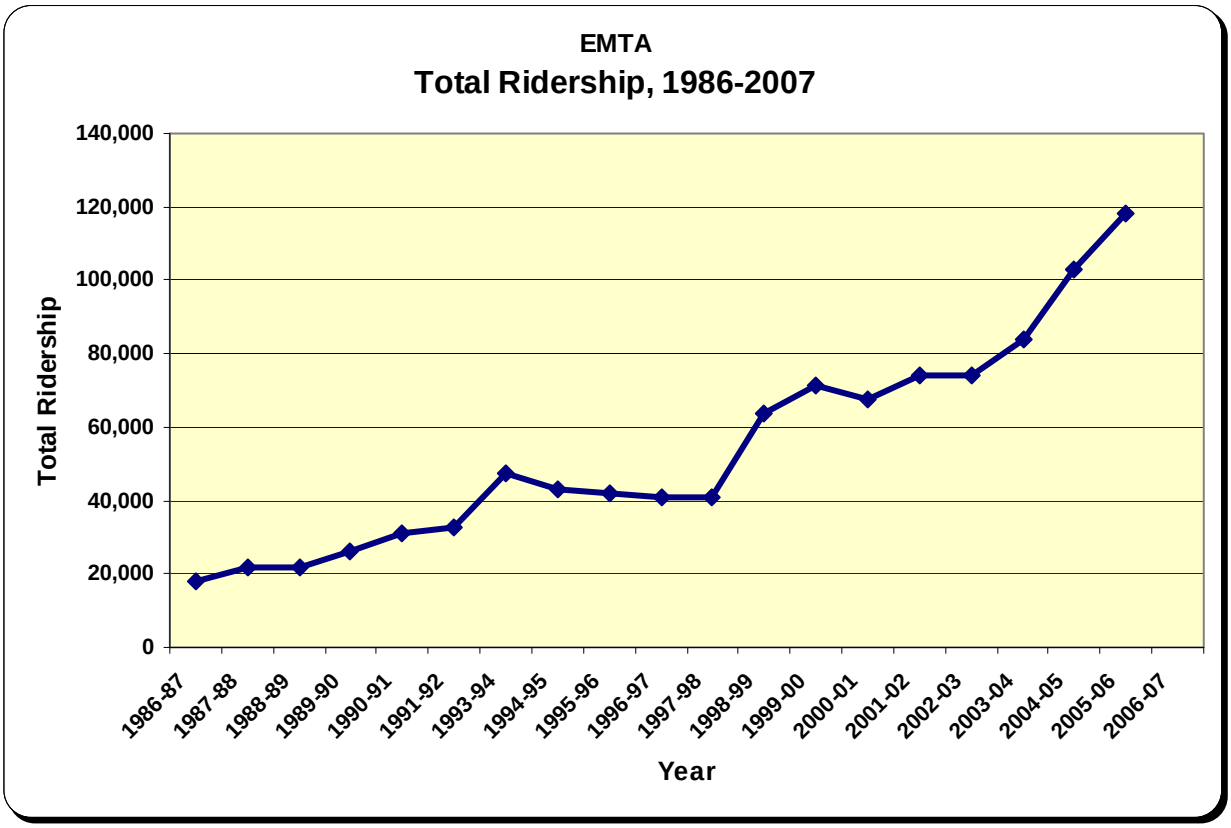
By many indications, EMTA has been performing well. Consider:

- EMTA ranks in the middle of the state in expense per passenger.
- EMTA ranks as one of the higher operators in revenue per passenger.
- Expense per hour is one of the lowest in the state (in 2005-06 EMTA was the least expensive rural system in the state to operate in expense per hour).
- EMTA had the third-lowest deficit in the state behind only Venango County and Shippensburg. This is a good measure of EMTA's efficiency.
- EMTA's revenue per mile will naturally not be as good as some others, since they typically drive longer distances.
- Deficits per passenger mile in 2005-06 was the lowest in the state. (This is calculated by dividing total system revenue by total expense.)

Service Trends/Forecast

Total ridership on EMTA has been trending in a favorable direction, actually doubling over the past decade. By this broad indicator, EMTA has fared well, as total ridership on its system has grown from a 2001-02 total of 73,928 and in 2005 exceeded 100,000 for the very first time. In 2006, the authority registered a total ridership number of nearly 120,000. Roughly 85 percent of EMTA's passengers are fare-paying, while 14 percent are senior citizens. Figure 1 below shows the favorable trends related to total ridership on EMTA.

Figure 1: Total Ridership, 1986 – 2007
EMTA



The authority has actively been identifying new services that need to be provided, particularly more work-based services for commuters. As a result, from 2005-06, ridership increased by 10 percent, or 11,000 riders. New service includes a Mansfield to Towanda run, which began in August 28, 2006.

Another example includes new fixed route service initiated in Sullivan County – a significant reason for the uptick in revenue vehicle hours in 2005. In order to try and help reign in the costs of the shared ride program, EMTA devised a deviated fixed route system for Sullivan County (Dushore to Towanda). EMTA initially offered two shared ride vans from Towanda to each end of Sullivan County. Since some riders didn't need to be on the shared ride van all the time, one of the routes was eliminated. A deviated fixed bus route then went along a fixed route and deviated a quarter mile, capturing some of the more mobile riders who had been using the van service. This change in service opened up additional capacity in the guise of an entire van and driver for the day.

EMTA has also examined some underperforming runs and redesigned several of them, as well as removing hours that weren't producing. As a result, both ridership and hours of service have increased, while hours of operation have decreased. With the advent of

additional revenue through Act 44, EMTA is investigating making other changes to improve its services and efficiency even further.

Since the region's previous LRTP was adopted in 2004, EMTA has relocated its administrative offices to its facility in Athens to reduce overhead costs. The authority still maintains a small maintenance facility in Mansfield.

Outside of EMTA's current service area, public transportation (shared ride) services in Wyoming County are provided by the Luzerne County Transportation Authority. Any future fixed route service in the county could take the form of express bus service from Tunkhannock. Within the county proper, it should be noted that Wal-Mart can be a tremendous generator of public transportation trips, and could potentially lend itself to some form of a circulator service, especially since the Tunkhannock area Wal-Mart is not within walking distance of the downtown. A small fixed route transit service may be feasible.

Both Wyoming and Susquehanna Counties were part of EMTA's original charter when it formed as an authority. Even though both counties eventually withdrew from the municipal authority filing, EMTA could still provide service as a contractor for the county. Wyoming County may eventually need to become part of the authority again, should such a service be desired.

Public Transit: Looking Ahead

For EMTA's part, one of the most significant issues and driving forces for it has been the passage of Act 44 in August 2007. One of the more immediate results of the infusion of new money will be the expansion of Route 10 with shorter headways. Another significant issue has been the challenge in fulfilling Medical Assistance (MA) grants. EMTA currently must dispatch on demand and cannot take others from Ride Share on the same dispatched call. For EMTA, this is bad for business, inefficient, and a public relations headache, as the unwanted side-effect is denying some seniors rides due to the demands of MA requirements. Ultimately, EMTA would like to see this issue addressed at the state level through an integrated policy that allows Medical Assistance and Shared Ride programs to speak to one another so that operators like EMTA can be even more efficient and avoid alienating the public.

A related challenge for EMTA also includes inter-county reciprocal transit arrangements—as most cannot currently cross county lines except for medical purposes—visitors to medical facilities cannot use the service. More interstate cooperation is also needed between the two Tiers, as Binghamton, NY is closer to much of the region and has more advanced medical facilities. Unfortunately, there are liability and policy challenges that preclude service to these areas.

Future opportunities for EMTA include changing demographics and economics. A greater share of the region's population is becoming more elderly and dependent on public transportation services. These seniors are living in remote, rural areas, a situation

that challenges the efficiency of delivering public transportation services to them. Also, escalating fuel costs have affected the amount of interest in public transportation once again and have increased awareness of various programs available to seniors.

The use and promotion of public transportation in the region would also gain from the designation of "park and ride" locations to increase EMTA's "catchment area" and encourage people to use its services.

Human Service Transportation Needs

A meeting of human service transportation stakeholders was held on February 8, 2008 to provide input for the preparation of the Local Coordinated Plan. The group identified the following issues and needs for human service transportation consumers and operators.

Client/User Issues and Needs

The stakeholders group suggested that users of transportation services often find the programs difficult to understand, inflexible or inconvenient in operation, and not well targeted to their actual needs. Furthermore, new needs for transportation are emerging that current programs do not fully address.

1. *Program Information and Guidelines*
   a. Clear information about transportation programs is not readily available, nor is assistance in navigating the system. As a result, consumers often have difficulty determining the appropriate program to meet their needs.

   b. Guidelines for the various transportation programs often conflict, causing confusion and frustration among consumers.

   c. For instance, riders who come for a medical visit under the Medical Assistance program cannot return home under the Shared Ride program, since the former program is for urgent visits only, and the latter program requires 24-hour advance reservation.

2. *Limitations on Service Availability*
   a. Human service transportation programs currently do not permit inter-county trips, yet many consumers rely on health care providers and facilities in neighboring counties for medical care. People cannot take public transportation to Barnes-Kasson Hospital from Starruca, for example, or from Tunkhannock to Scranton. Likewise, they cannot go to Mercy Hospital in Scranton, but they can

go to a hospital in Wilkes-Barre. The ongoing trend of health services relocating outside of Wyoming County is only making the situation worse.

b. Weekend transportation service is minimal. There is no service on Sundays, and Saturday service is very limited.

3. *Changing Needs for Transportation Services*
   a. The need for transportation services extends beyond the groups currently eligible for the various transportation programs.
      - There is a growing demand, for instance, for demand-responsive service from the mentally and physically challenged, many of whom are on the borderline for eligibility with People with Disabilities (PwD) program.

   b. Over the last 10 years, the number of human service caseworkers and providers has declined. As a result, consumers must now travel to the agencies to obtain services. Many people may not be able to make it due to various transportation barriers.

Operator Issues and Needs

The stakeholders group suggested that transportation operators are challenged by problems with program guidelines, changing demands for transportation services, and various infrastructure needs.

1. *Program Guidelines*
   a. Existing programs often serve the same people, resulting in a duplication of effort.

   b. Rising fuel costs are placing a financial burden on transit operators, since the mileage reimbursement has not risen accordingly.

   c. Fleet insurance does not cover vehicles on runs into New York State.

2. *Changing Needs for Transportation Services*
   a. The growing senior population means increasing numbers of riders with disabilities, which creates additional challenges for transit providers.

   b. Long-term-care populations are being shifted from nursing homes out into the community. This trend is putting tremendous stress on the providers of Medical Assistance (MA) transportation, especially in serving those who need physical assistance as well as a ride.

3. *Infrastructure Needs*
   a. Poor road conditions in the area increase vehicle wear and tear.

   b. The lack of sidewalks and curbs makes it difficult to maneuver wheel chairs.

c. A microwave transmitter is needed to improve fleet radio communications.

Human Service Transportation Strategies

Priorities

The input received from the stakeholders group suggests several priorities for improving the human service transportation system in the region.

- Improve Consumer Focus--The human service transportation system needs to be made more consumer-friendly: programs should be easier to understand; information and assistance should be more readily available; and program rules should be more flexible so as to better meet consumers' transportation needs.

- Program Performance--Ongoing monitoring of programs is needed to track program effectiveness and efficiency.

- Service Access--Access to programs should be expanded to reflect the growing demand for transportation services from currently unserved populations.

- Funding--Program funding and other provisions should be adjusted to reflect the full costs and liabilities incurred by operators.

It should be noted that achieving many of these priorities, particularly those involving changes to program guidelines and funding, will require action at the state level.

Opportunities for Improvement

A number of opportunities exist to make improvements in the human service transportation system in the region.

- Better program information resources and consumer assistance mechanisms can be developed.
- Improved program monitoring procedures can be developed.
- Agencies can better coordinate the administration of programs.

Strategies

The stakeholders group recommended a number of strategies to improve the human service transportation system in the region. These strategies are grouped into the following categories:

- Program Information Strategies
- Service Expansion Strategies
- Program Monitoring Strategies
- Infrastructure Investment Strategies
- Program Guideline Strategies.

1. *Program Information Strategies*
    a. Establish a central information clearinghouse that people can contact for assistance in accessing the right program(s).

    b. Develop easy-to-understand program guidelines/literature.

    c. Develop clear program literature to educate consumers and medical providers.

2. *Service Expansion Strategies*
    a. Broaden program eligibility guidelines to expand access to transportation services.

    b. Expand service on weekends.

3. *Program Monitoring Strategies*
    a. Undertake regular consumer satisfaction surveys of both individual consumers and social service agencies.

b. Undertake regular financial audits of the various programs.

4. *Infrastructure Investment Strategies*
   a. Invest in improved scheduling software, GPS technology, and other essential technology.

5. *Program Guideline Strategies*
   a. During the upcoming State Human Service Transportation Coordination Study, Northern Tier Stakeholders should be given the opportunity to raise their concerns about program guidelines, including the following:
      - The guidelines are difficult for many people to understand.
      - The guidelines of some programs conflict, reducing overall efficiency and effectiveness of the system.
      - Some programs prohibit inter-county travel, reducing accessibility of key destinations (such as hospitals) for some people.
      - Program eligibility requirements should be expanded to include previously unserved user groups.

Implementation

This is a dynamic plan that may be updated from time to time. In the near term it will be used as the primary reference from which to assess any investments—operating, capital, planning, etc.-- in the region and with PennDOT for human services transportation.

In general, all such proposed or pending investments will be considered in relation to the priorities and strategies contained in this document. This will be done to ensure overall consistency of investment and that there is adequate consideration of these priorities and strategies from this point forward.

Appendix A

This appendix includes a summary of a stakeholders meeting held with human service transportation stakeholders at Lackawanna College in Towanda on February 8, 2008.

Local Coordinated Plan Stakeholders Meeting
Meeting Summary
February 8, 2008

A meeting of key stakeholders was held on February 8 to give guidance for the preparation of the Local Coordinated Plan. The meeting was held from 9:30 AM to 11:30 AM at the Progress Building of Lackawanna College, in Towanda. The following people attended:

- Peggy Harbaugh, Wyoming County United Way
- Cheryl McGovern, PA Dept. of Health, Wyoming Co.
- Jim Krupinski, Montrose Minute Men
- Bob Getz, Sullivan County Commissioner
- Tom Carinan, Western Alliance
- Pam Mott, Greater Valley EMA
- April, Greater Valley EMS
- Bill Farly, AAA
- Grace McGill, Barnes Kasson
- Jennie Schoonover, Bradford County Action
- Michelle Blade, Western Alliance
- Chris Cokas, Sullivan
- Jim Blinn, Wyoming CAO
- Marian Hugo, AAA Council
- Carl Hugo
- Karen Graber, Endless Mountains Transportation (EMTA)
- Rick Biery, NTRPDC
- Keith Chase, Gannett Fleming
- Brian Funkhouser, Gannett Fleming.

Keith Chase and Brian Funkhouser of Gannett Fleming facilitated the meeting discussion. The following topics were addressed:

- Trends (over the past 2-4 years)
- Driving Forces and Factors (from supply and demand) consumer and operator
- Human Service Transportation Needs

- Consumer-Based Strategy Elements
- Service Coordination Problems and Possible Solutions
- Infrastructure Issues
- Definition of Effective Human Service Transportation.

Meeting participants' comments are summarized below.

Trends

- Rising fuel costs are a significant issue. EMTA is currently reimbursed at the rate of 12 cents a mile. EMTA transports clients monthly to various employment and training sites. The level of financial support it receives is unchanged, but all other costs are going up.
- In Pennsylvania, long-term populations are being shifted from nursing homes to the community. This trend is putting tremendous stress on the providers of Medical Assistance Transportation, especially in serving those who need physical assistance as well as a ride. It puts a higher burden on the provider.
- There is a growing demand for demand-responsive service from the mentally and physically challenged, many of whom are on the borderline for eligibility within the PwD program.
- Over the last 10 years, the number of human service caseworkers and providers has declined. As a result, consumers must now go to the agencies to obtain services. Many may not be able to make it due to some sort of transportation barrier.
- Health services are being shifted from Wyoming County to another county, creating a barrier for access. The declining availability of health services has had health consequences; many customers have not been getting necessary treatments or preventive health care.
- The 85-and-older population is increasing at a significant rate. Many of these folks have at least one disability.
- One of the biggest challenges for EMTA and its consumers is the often-conflicting rules of the various programs, such as MA or PwD, etc. Under the MA program, for instance, EMTA responds directly to ride requests, but the Shared Ride program requires that seniors schedule a ride 24 hours in advance. Consequently, EMTA has to be careful under what circumstances it transports a consumer. This situation can cause confusion and frustration among riders and a public relations problem for EMTA.
- Another source of confusion is that EMTA has equipment, but when the County comes in with another welfare program, it becomes yet another layer of government. The County gets into the transportation business, resulting in a duplication of service.

- The Shared Ride program provides a reduced fare for seniors, as PennDOT pays 85 percent of the total, while AAA pays the remaining 15 percent. (There's supposed to be no third-party payers.)
- The existing prohibition on crossing county lines creates problems for service provision. People cannot take public transportation to Barnes-Kasson Hospital from Starruca, for example, or from Tunkhannock to Scranton. Likewise, they cannot go to Mercy Hospital in Scranton, but they can go to a hospital in Wilkes-Barre. Furthermore, accidents incurred by EMTA vehicles while on trips into New York State are not covered by insurance.

Human Service Transportation Needs

Keith Chase distributed post-it notes and asked participants to record the most pressing human service transportation needs. After these were posted in front, Keith asked them to review the full list and individually vote on the top four issues.

The issues are listed below in order of priority, with the number of votes received shown in parentheses.

- More funding to expand services (10)
- Standardized regulations/fairness to all consumers. (The money is not distributed based on percent of population. If the region were to get its fair share, it would have twice as much money as at present.) (7)
- Weekend service (7)
- A unifying vision for human service transportation (7)
- Lower the age of eligibility for the Shared Ride program from 65 to 60 for greater access to senior centers (6)
- Easier-to-understand program guidelines for consumers (5)
- Medical Transportation- permit trips to the doctor when needed, without a 24-hour notice (3)
- "Door through door" transportation (3)
- Transportation between counties and across state lines (3)
- Pick-up on secondary roads at established points (1)
- Impacts of overlapping services (1)
- Have PUC reduce the driving age requirement from 21 to 18 (1)
- Eligibility requirements (1)
- Funding for non-medical trips for seniors
- Clients without driver's licenses
- Special permissions to circle the Lycoming Mall, etc.

Additional Comments

After the voting was completed, Keith asked the meeting participants to evaluate the overall list and make any concluding comments.

- Programs are too complicated and too expensive. People can't get the information they need.
- Most of the needs identified here are focused on the consumers. Give them easier guidelines to understand and give them more fairness.

Consumer Based Strategy Elements (CBS)

- Expand eligibility.
- Lower age requirements.
- Provide service on weekends for medical visits, shopping trips, going to church, and leisure. MA transportation is currently available only for urgent needs. There is no service at all on Sundays, and Saturday service is very limited.
- Make program guidelines easier for consumers to understand.
- Give providers more flexibility in meeting the needs of consumers (i.e., address liability issues, etc.).
- Provide fairness to everyone.

Service Coordination Problems and Possible Solutions

Keith distributed 5x7 cards for meeting participants to record service coordination problems and possible solutions.

The following questions were used to guide the discussion:

What are the problems related to service coordination, and what are the possible solutions? Think locally, so as not to point exclusively at Harrisburg. What are some of the breakthroughs to the solutions?

- Funding for consumers is currently restricted to service within their county of residence. It makes more sense for the money to follow the person. People in Starucca in Wayne County should be able to come to Barnes-Kasson Hospital.
- Increase funding for drivers and buses.
- Too many agencies are trying to do the same thing, resulting in a duplication of time and effort. The "KISS" principle should apply ("keep it simple"). This problem could be addressed through technology that facilitates greater coordination among programs.

- Providers need to have the flexibility to deal with individual versus group needs.
- People often don't understand the varying program eligibility guidelines. A central registry is needed that people can contact for assistance in accessing the right program. This could be done at a county level. Consumers currently have to navigate the system on their own. Case workers at the county assistance office are supposed to provide that kind of assistance, but it doesn't always happen. EMTA receives a lot of referrals through the county assistance office.
- Turf issues are a barrier to more effective service. EMTA has to subcontract out to various EMS companies. It also uses Valley Taxi. EMTA might bring someone to the hospital in the morning under the MA program but be unable to pick them up under the Shared Ride Program, since they don't have a 24-hour advance reservation. EMTA uses Valley Taxi for evenings or weekends when it can't run. It only goes outside its "turf" for medical-related trips.
- Overcoming regulatory fragmentation would be a major breakthrough in coordination. Measures that could be undertaken at the local level include reciprocal agreements between neighboring counties.
- EMTA's advisory group tries to identify unmet needs and address them.

Infrastructure Issues

- Poor road conditions create vehicle wear and tear.
- The lack of sidewalks or curbs makes it difficult to maneuver wheelchairs. EMTA will pay for home improvements such as handicapped ramps, etc to make homes more accessible.
- Public transportation does not provide access outside of the area (e.g., to airports, etc.) People can't get from here to Scranton, for instance, unless they're under the MA program. There isn't intercity bus service anymore.
- Van and bus ramps can be damaged when loading overweight people in heavy wheelchair.
- Every EMTA vehicle has a two-way radio. Most vehicles are wheelchair-accessible. EMTA is in the process of upgrading its radios. Many of the radios do not get good coverage right now. A microwave transmitter is needed on the tower. There will always be some dead spots. Verizon provides good coverage.
- An EMTAtransit.com clearinghouse could provide links to human service agency web sites, other available information and a calendar of events. EMTA tries to serve as an information clearinghouse. In fact, many of its passengers do not use a computer. Perhaps the County website should have a link to the EMTA website.

Definition of Effective Human Service Transportation

Lastly, meeting participants divided into two small groups to discuss the following questions:

- What is effective Human Service Transportation?
- What is efficient Human Service Transportation?
- How would you measure success?
- How would you grade existing human service transportation services today?

The comments of each group are summarized below.

Group A

- Effectiveness can be measured through consumer satisfaction surveys. The best time to survey people is after their first ride. If their initial experience is not good, they may never come back again. Survey them on their initial ride and then address any deficiencies.
- Consumers should be educated about the different regulations and programs. Medical providers should be educated as well.
- The ultimate measure would be the relative success in meeting the demand for a demand-responsive service.
- Timeliness of service is a good measure of efficiency.
- Another measure of efficiency/effectiveness is coordination of local resources.
- Many resources are being spent now on 911 maps. We should piggyback on their technology
- Greater coordination with subcontractors is needed to fill the gaps in service.
- Scheduling software, computerization and GPS technology are needs.
- Financial audits and satisfaction surveys are other means to measure efficiency and effectiveness. The program data collection, e.g, live miles, dead miles, urban/rural issues. EMTA is being expected to meet urban levels of efficiency while facing rural challenges such as long trip lengths (20 mile average) and miles of dirt roads.
- The grade for public perception is a "C." The grade for the effort being made to better meet demand is a "B+."

Group B

- One measure of effectiveness should be the accessibility of service to everyone, not just to low-income people to bring them to human- and social-service destinations.
- A family's needs may change from one week to another.

- Efficient human service transportation should foster more cooperation among providers. It should be possible to freely refer people to other transportation providers, especially those who can provide a service more cheaply or cost-effectively.
- Providing efficient and effective human service transportation in a rural area requires good rapport with many agencies. EMTA mails surveys to seniors. Social service agencies should also be surveyed as to how well their needs are being met. For instance, what have their clients been saying about EMTA? Etc.
- There needs to be more of a balance of services provided in the region to facilitate connections. The *system* deserves a bad grade, but not the *effort*.

Conclusion

The group agreed to provide additional comments via e-mail and adjourned at 11:30.

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Appendix E – Public Participation Plan

PUBLIC INVOLVEMENT PLAN

northern tier regional planning & development commission

ADOPTED: JANUARY 19, 2007

PUBLIC INVOLVEMENT PLAN

Northern Tier Regional Planning and Development Commission (NTRPDC)

1. State and Federal Regulations and Requirements

A. Commonwealth of Pennsylvania, the Sunshine Law

Act 84 of 1986 as amended June 15, 1993, February 26, 1996, and October 15, 1998 is an act requiring public agencies to hold certain meetings and hearings open to the public; and providing penalties. This act shall be known and may be cited as the Sunshine Law.

The General Assembly of Pennsylvania finds that secrecy in public affairs undermines the faith of the public in government. Highlights of the Sunshine Law are:

- Official action and deliberation by a quorum of the members of and agency shall take place at a meeting open to the public.
- Written minutes shall be kept of all open meetings of agencies.
- Public notice is not required in the case of an emergency meeting or a conference.
- The board or council has the option to accept all public comment at the beginning of the meeting.
- A person attending a meeting of an agency shall have the right to use recording devices to record all the proceedings.

B. Public Laws

Public involvement in the transportation planning and programming process has been a priority for federal, state and local officials since the passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991 its successor, the Transportation Efficiency Act for the 21st Century (TEA-21) and the present Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). Therefore the Northern Tier Regional Planning and Development Commission (NTRPDC) Public Involvement & Environmental Justice policies must reflect the mandates of ISTEA, TEA-21 and SAFETEA-LU.

C. Environmental Justice

Public involvement must also take into consideration of the Presidential Executive Order 12898, Environmental Justice. The Environmental Protection Agency defines Environmental Justice as the "fair treatment of people of all races, cultures and income with respect to development, implementation and enforcement of environmental laws, regulations, programs and policies." Fair treatment means that no racial, ethnic or socioeconomic group should bear a disproportionate share of the negative environmental consequences resulting from the operation of industrial, municipal and commercial

enterprises and from the execution of federal, state, local, and tribal programs and policies.

The Federal Highway Administration articulates three fundamental environmental justice principles:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

D. Title VI

"No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."

Title VI of the Civil Rights Act of 1964 is the Federal law that protects individuals from discrimination on the basis of their race, color, or national origin in programs that receive federal financial assistance.

There are many forms of illegal discrimination based on race, color, or national origin that can limit the opportunity of minorities to gain equal access to services and programs. Among other things, in operating a federally assisted program, a recipient cannot, on the basis of race, color, or national origin, either directly or through contractual means:

- Deny program services, aids, or benefits;
- Provide a different service, aid, or benefit, or provide them in a manner different than they are provided to others; or
- Segregate or separately treat individuals in any matter related to the receipt of any services, aid, or benefit.

E. Americans with Disabilities Act

The Americans with Disabilities Act of 1990 (ADA) requires involving the community, particularly those with disabilities, in the development and improvement of public services and capital facilities. Meetings and hearings must be held in ADA-compliant

buildings. Special accommodations must be made to assist those with disabilities to participate in meetings, planning and programming activities.

2. Public Involvement Principles

Public Participation is a dynamic activity that requires commitment at all levels of the agency.

A. Promote Respect

- All citizens and the views they promote are respected by the NTRPDC.

B. Provide Opportunities for Involvement

- Avenues for involvement will be open, meaningful and organized to allow people to participate comfortably. Needs for accessibility, scheduling, location, information, material format and language will be addressed.
- Meetings will be structured to allow informed, constructive exchange.
- The direction and effectiveness of the public involvement effort will be constantly reviewed to ensure active public participation.

C. Be Responsive to Participants

- NTRPDC meetings and events will facilitate discussion that corresponds to participants' level of interest and available time.
- The NTRPDC will fully consider the results of all public involvement activities during decision making and document public responses.

D. Offer Substantive Work

- Public processes will provide participants purposeful involvement, allowing useful feedback and guidance. Effective public participation is a two-way street – public input must come from informed opinions and ideas.
- A clearly defined purpose and set of objectives are needed for initiating a public dialogue on transportation plans, programs and projects.
- Participants will be encouraged to grapple with the many competing transportation interests, issues and needs in the region.

E. Provide a Predictable Transportation Planning Process

- The transportation planning process will be understandable and known well in advance, in order to make the process coherent and comprehensible.

F. Outreach & Communication

- Effective outreach strategies must be tailored to fit the identified audience and the issue at hand. Notification procedures must effectively target the identified audience.

- Outreach and education will be continuous and repetitive in order to increase public knowledge and involvement.

- Efforts to reach new constituencies will include outreach to low-income, senior, youth, minority, refugee and accessibility-issued communities. These efforts must be tailored to ensure meaningful participation of these constituents.

- The NTRPDC will be mindful of the evolution of communications tools and continue to evaluate new tools to expand outreach methods.

- Informational materials will be clear, concise and address participants' questions.

3. Community/Region Profile

Data from the 1980, 1990 and 2000 Censuses shows the region relatively stagnant in population by a little more than +1% from 174,550 to 176,653 to 181,008 people. Of this population, 97.7% are white persons, 0.8% are African Americans, and 0.7% are persons of Hispanic or Latino origin. Additionally, the combined total of American Indian, Alaska Native, Asian, Native Hawaiian and other Pacific Islander residents is approximately 1.5% of the region's population. Persons age 65 years and older make up 16.5% of the region's population. The following Tables I. through V. portray this data. Poverty status can be found on Table III.

Additional information about each county can be found in the attached County Profile pages.

The overwhelmingly predominant language spoken in the region is English. NTRPDC is going to undertake an analysis of the region to determine whether other languages are spoken in sporadic locations throughout the region. Upon completion of this analysis the PIP will be amended accordingly to reflect the outcome and needs generated.

4. Major NTRPDC Activities and Public Involvement

A. Northern Tier Long Range Transportation Plan (LRTP)

Northern Tier Long Range Transportation Plan (LRTP)	
Participation Element	**Vehicle**
Document Availability	Via website (Executive Summary), mail, County Planning Commission Offices, NTRPDC Offices
Comment Opportunities	Public Meeting, Written comments accepted
Public Meeting	One meeting prior to recommending adoption by the NTRPO RTAC to the NTRPDC Executive Committee
Initial Notice Period/Type	Thirty (30) calendar days prior to the Public Comment period ending, published in The Daily Review, The Wellsboro Gazette, The Sullivan Review, The Susquehanna County Independent, The New Age Examiner
Public Meeting Notice Period / Type	Ten (10) calendar days prior to meeting and following the Public Comment Period, published in The Daily Review, The Wellsboro Gazette, The Sullivan Review, The Susquehanna County Independent, The New Age Examiner
Amendment Notice Period/Type	Thirty (30) calendar days prior to the Public Comment period ending, published in The Daily Review, The Wellsboro Gazette, The Sullivan Review, The Susquehanna County Independent, The New Age Examiner
Evaluation Technique	Number of participants at meetings, number of comments received

B. Transportation Improvement Program (TIP)

Transportation Improvement Program (TIP)	
Participation Element	**Vehicle**
Document Availability	Forty (40) Public Libraries throughout the region, Mansfield University Library, Regional Legislators Offices, County Commissioners Offices, PENNDOT District 3.0 & District 4.0 Offices, NTRPDC Offices
Comment Opportunities	Public Meeting, Written comments accepted
Public Meeting	One meeting prior to recommending adoption by the NTRPO RTAC to the NTRPDC Executive Committee
Initial Notice Period/Type	Thirty (30) calendar days prior to the Public Comment period ending, published in The Daily Review, The Wellsboro Gazette, The Sullivan Review, The Susquehanna County Independent, The New Age Examiner
Public Meeting Notice Period / Type	Ten (10) calendar days prior to meeting and following the Public Comment Period, published in The Daily Review, The Wellsboro Gazette, The Sullivan Review, The Susquehanna County Independent, The New Age Examiner
Amendment Notice Period/Type	Depending on the project type and cost of amendment, different processes are required. See policy adopted July 2006.
Evaluation Technique	Number of participants at meetings, number of comments received

C. Public Involvement Plan

Public Involvement	
Participation Element	**Vehicle**
Document Availability	Via website, mail, NTRPDC Offices
Comment Opportunity	Minimum public comment period of 45 calendar days for initial adoption and revisions
Public Meeting	One at initial adoption
Initial Notice Period/Type	Minimum public comment period of 45 calendar days
Amendment Notice Period/Type	Minimum public comment period of 45 calendar days
Evaluation Technique	Number of participants at meetings, number of comments received

D. Municipal Outreach Activity

The NTRPDC facilitates two public/private partnership driven Equipment Shows for municipal officials and their employees. These shows have been in existence for over 8 years each. Each show has annually attracted over 350 attendees from numerous counties within the NTRPO region and from surrounding counties.

E. Special Studies: Scoping, Technical Assistance, Corridor Studies

These studies and plans are specialized and require individualized public involvement strategies. NTRPDC relies on PENNDOT to develop and implement public involvement strategies for projects. NTRPDC through consultant selection and the Request for Proposal process and document stresses public involvement "early and often" in every special planning program and project. The NTRPDC will continue to make this an integral part of the RFP and contract development process.

5. Outreach Techniques

Current Outreach Techniques

Technique	**Description**	**Promotion**	**Evaluation**
Website	Provides limited general information about NTRPO	Long Range Transportation Plan Executive Summary	Number of hits and downloads
Legal Notices	Classified advertisements in the Daily Review, Sullivan Review, Susquehanna County	Public Meetings	Attendance at public meetings

	Independent, Wellsboro Gazette, New Age Examiner		
Public Meetings	To solicit public comments on final products/projects and plan amendments	Final Comment	Participation at the public meetings

Although these efforts have been some what successful, there is a feeling that more could be done to increase public participation. The following suggestions are offered:

- Form a Public Participation Committee to oversee, recommend and suggest methods to improve public participation.
- Issues have to be important to people's lives, "What's in it for me?" People are busy and need to understand the benefits of their participation.
- People may think that their input won't make a difference; the NTRPDC has to show otherwise.
- How does the NTRPDC directly impact citizens?
- Planning feels nebulous.
- People have to be involved and complete tasks to maintain interest.

Along with these thoughts, the following are suggestions to enhance the NTRPDC public involvement efforts:

Technique	**Description**	**Promotion**	**Evaluation**
Information Center located at the NTRPDC Offices and on the Website.	Central repository for documents, publications and other information for public inspection.	Provides a central place to find NTRPO information	Visits, calls, emails.
Website	Create a NTRPO specific section on the NTRPDC Website.	Provide timely information relevant to the region. LRP, TIP, Public Input via survey, etc.	Number of hits, requests and downloads
Informational Brochures	General Topics for informational purposes	TIP Process, LRP, The planning and programming process, project selection, etc.	Number of brochures distributed and requested.

The NTRPDC has been much less successful in engaging minority and low-income communities. To improve our efforts in the environmental justice arena, we identify the following strategy to engage minority and low-income communities in transportation decision making:

- Work with the Public Participation Committee to target "Avenues of Outreach." Example: Working with the regional housing authorities to hold meetings and events at their facilities.

- The public input process should be tailored to use adaptive or innovative approaches that overcome linguistic, institutional, cultural, economic, historical or other potential barriers to effective participation in the decision making process.

- Developing a database of contact information of underserved populations by identifying community leaders in these underserved populations and add them to the mailing list.

- Work with community groups, if present, to publicize events and activities.

6. Public Meetings & Privacy Policy

A. Public Meetings

In order to maximize participation, public involvement meetings should be held at a variety of times and at a variety of venues. For topic or geographically specific meetings, meetings should be held at locations convenient to the group targeted for involvement.

The NTRPDC encourages municipalities and state agencies to coordinate their outreach plans, when possible, with the NTRPDC workshops and meetings to consolidate public involvement activities.

For monthly RTAC meetings, members and alternates are sent meeting notification, agendas, and appropriate documents at least one week prior to the actual meeting date, except in the case of special meetings. RTAC agendas and meeting minutes are mailed to all county commissioners, legislators and others as requested. Information should be available ahead of the meeting and should include: agendas, meeting background information, previous meeting minutes, public notices, public comment period information and a contact person.

The Americans with Disabilities Act of 1990 (ADA) requires involving the community, particularly those with disabilities, in the development and improvement of public services and capital facilities. Meetings and hearings must be held in ADA compliant buildings. Special accommodations must be made to assist those with disabilities to participate in meetings, planning and programming activities:

- Where possible, meetings will be held in places that are convenient to alternate transportation modes.

- Special assistance, if required, will be made available, upon request at least ten (10) calendar days prior to the event. All public meeting notices

and advertisements shall state the following, "If you require special assistance to attend or participate in this meeting or need additional information please contact the NTRPDC Representative noted below ten days prior to the meeting event so that the special assistance can be accommodated."

- NTRPDC will include language in its public notices and advertisements relating to nondiscrimination and avenues of redress if an individual feels they have been discriminated against. All public meeting notices and advertisements shall state the following, "Under Title VI of the Civil Rights Act of 1964. If you feel you have been denied participation in, or denied benefits of, or been subject to discrimination, in regard to this project development or otherwise discriminated against because of race, ethnic or socioeconomic status. You may contact Kim D. Barnes, Deputy Director, NTRPDC."

- Identify alternative meeting sites, such as churches, schools and senior centers to reach traditionally underserved populations.

B. Privacy Policy

With the launch of the NTRPDC website, a privacy policy should be developed to protect any information gathered by website cookies or downloads.

In terms of public meetings, all public sign-in sheets must print the following disclaimer: "If personal information is requested and volunteered by the user, state law and federal Privacy Act of 1974 may protect it. However, this information is a public record once you provide it, and may be subject to public inspection and copying if not protected by federal or state law."

7. Evaluation Procedures for Public Involvement

NTRPDC will evaluate the procedures for public involvement constantly. In order for meaningful and inclusive involvement, constant evaluation through a "after action review" is necessary. After action reviews (AAR) allow constant evaluation and constant revaluation of public involvement principles and outreach attempts. These AAR findings will be incorporated into subsequent involvement events and if significant used as amendments and updates to the PIP.

NTRPDC will update the PIP on a two (2) years cycle concurrent with the Transportation Improvement Program (TIP) update cycle.

How to Get Involved

Want to get involved in the NTRPDC's activities? We periodically arrange public forums, public meetings and special presentations to select groups and interested civic groups. We maintain a mailing list and are contemplating development of a newsletter. Our meetings are notified via the Daily Review (Bradford County), Sullivan Review (Sullivan County), New Age Examiner (Wyoming County), Susquehanna Independent (Susquehanna County), Wellsboro Gazette (Tioga County).

The RTAC currently meets the second Monday of the month at 10 am, at the NTRPDC Offices (312 Main Street, Towanda, PA). We recommend confirming all meetings with the NTRPDC staff or via the website (www.northerntier.org). All meetings are open to the public and a public comment period is available at all meetings.

Northern Tier Regional Planning and Development Commission
312 Main Street, Towanda, PA 18848
570.265.9103 (phone) 570.265.7585 (fax)
888.868.8800 (toll free phone)
www.northerntier.org info@northerntier.org

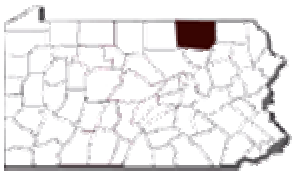
Our office hours are 7:30 AM to 4:00 PM, Monday through Friday.

Our offices can be reached via the Endless Mountains Transportation Authority (EMTA).
For details: 800.242.3484 or www.emtatransit.com

Our offices are handicapped accessible. This document, as well as others by our agency, can be made available in alternative media formats for people with disabilities.

Bradford County Profile

Northern Tier Workforce Investment Board



POPULATION: 62,544

(Based on 2005 Estimates)

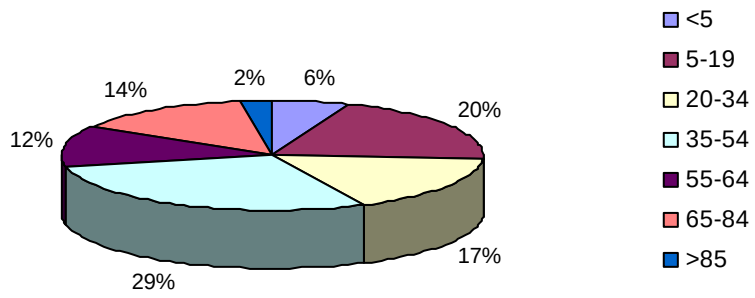
Largest Townships/Boroughs
(Based on 2000 Census Data-Population 16 Years and Older)

Sayre Borough	4,546
Athens Township	3,851
Athens Borough	2,709
Towanda Borough	2,367
Canton Township	1,592
Wysox Township	1,423
Canton Borough	1,386

Educational Attainment
(Based on 2005 Estimates)

Population 25+	42,448
Less than 9th Grade	5.89%
9th to 12th No Diploma	14.62%
High School Graduate or GED	43.48%
Some College, No Degree	13.20%
Associate Degree	6.35%
Bachelor's Degree	9.97%
Graduate or Professional Degree	6.49%
% High School Graduate +	79.49%
% Bachelor's Degree +	16.46%

Population by Age



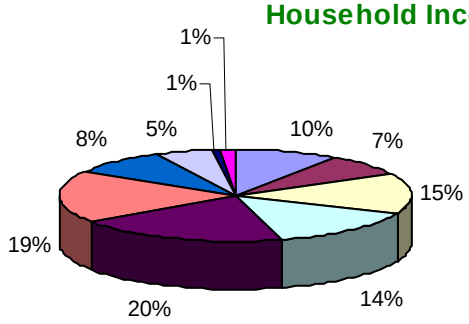
Occupation Class of Worker
(Based on 2000 Census Data)

Private Wage & Salary Workers	77.39%
Government Workers	10.97%
Self-employed in Own, Non-Incorporated Business	10.74%
Unpaid Family Workers	0.90%

Bradford County Occupations
(Based on 2000 Census Data)

Management, Professional, & Related Occupations	27.56%
Productions, Transportation, & Material Moving Occupations	25.92%
Sales & Office Occupations	20.53%
Service Occupations	13.75%
Construction, Extraction, & Maintenance Occupations	9.98%
Farming, Fishing, & Forestry Occupations	2.27%

Household Income



Commuting Patterns
Based on 2000 Census Data

76% of the 27,404 workers who RESIDE in Bradford County also WORK in Bradford County.

81% of the 25,749 individuals who WORK in Bradford County also RESIDE in Bradford County.

Where Other Bradford County Residents Work

Destination County	Commuters	
Chemung (NY)	2,097	7.65%
Tioga (NY)	1,158	4.23%
Wyoming	794	2.90%
Broome (NY)	562	2.05%
Other Counties	1,881	6.86%

Where Other Bradford County Workers Reside

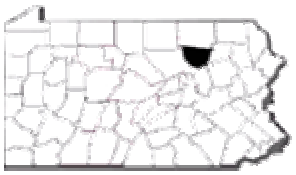
Origination County	Commuters	
Tioga (NY)	1,876	7.29%
Chemung (NY)	754	2.93%
Tioga	523	2.03%
Sullivan	310	1.20%
Other Counties	1,374	5.34%

Sources:
DemographicsNow (provides 2005 estimates)
United States Government Census Data

December 2005

Sullivan County Profile

Northern Tier Workforce Investment Board



POPULATION: 6,369
(Based on 2005 Estimates)

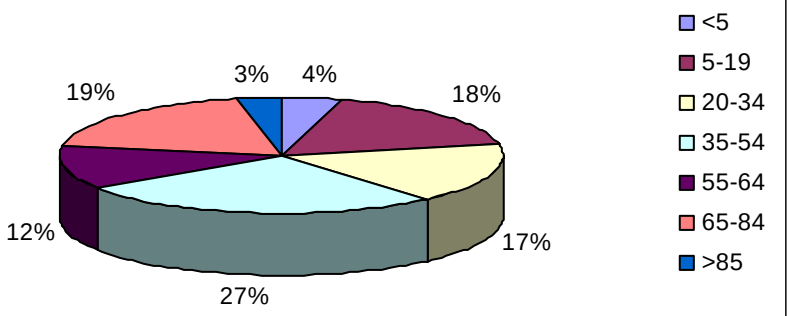
Largest Townships/Boroughs
(Based on 2000 Census Data-Population 16 Years and Older)

Cherry Township	1,354
Colley Township	609
Dushore Borough	558
Davidson Township	539
Elkland Township	486

Educational Attainment
(Based on 2005 Estimates)

Population 25+	4,460
Less than 9th Grade	7.35%
9th to 12th No Diploma	17.22%
High School Graduate or GED	41.82%
Some College, No Degree	12.96%
Associate Degree	6.46%
Bachelor's Degree	8.09%
Graduate or Professional Degree	6.10%
% High School Graduate +	75.43%
% Bachelor's Degree +	14.19%

Population by Age

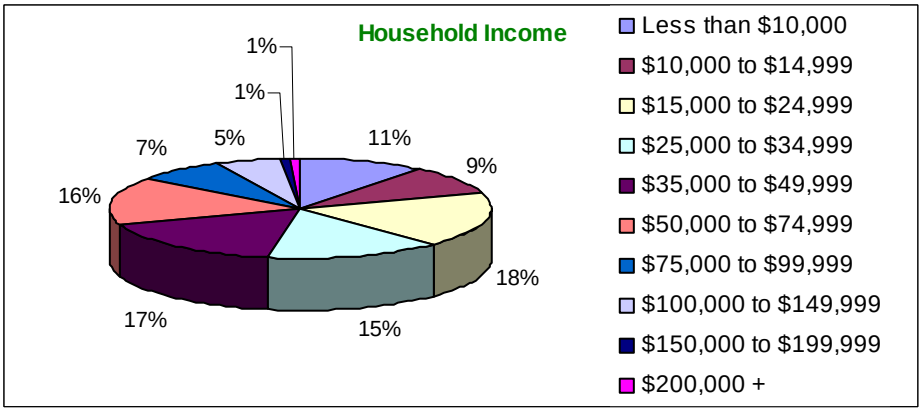


Occupation Class of Worker
(Based on 2000 Census Data)

Private Wage & Salary Workers	68.96%
Government Workers	19.62%
Self-employed in Own, Non-Incorporated Business	10.98%
Unpaid Family Workers	0.44%

Sullivan County Occupations
(Based on 2000 Census Data)

Management, Professional, & Related Occupations	23.24%
Productions, Transportation, & Material Moving Occupations	22.99%
Sales & Office Occupations	20.06%
Service Occupations	16.91%
Construction, Extractive, & Maintenance Occupations	14.68%
Farming, Fishing, & Forestry Occupations	2.12%



Commuting Patterns
Based on 2000 Census Data

64% of the 2,691 workers who RESIDE in Sullivan County also WORK in Sullivan County.

74% of the 2,326 individuals who WORK in Sullivan County also RESIDE in Sullivan County.

Where Other Sullivan County Residents Work

Destination County	Commuters	
Lycoming	319	11.85%
Bradford	310	11.52%
Wyoming	117	4.35%
Luzerne	42	1.56%
Other Counties	191	7.10%

Where Other Sullivan County Workers Reside

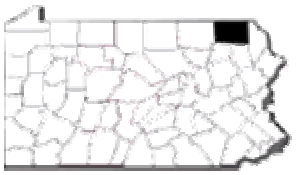
Origination County	Commuters	
Bradford	250	10.75%
Lycoming	141	6.06%
Columbia	68	2.92%
Luzerne	46	1.98%
Other Counties	109	4.69%

Sources:
DemographicsNow (provides 2005 estimates)
United States Government Census Data

December 2005

Susquehanna County Profile

Northern Tier Workforce Investment Board



POPULATION: 41,700
(Based on 2005 Estimates)

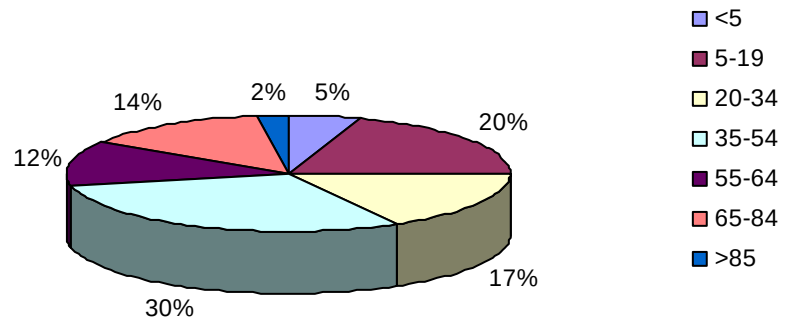
Largest Townships/Boroughs
(Based on 2000 Census Data-Population 16 Years and Older)

Bridgewater Township	2,140
Clifford Township	1,816
Forest City Borough	1,539
Great Bend Township	1,499
Lenox Township	1,422

Educational Attainment
(Based on 2005 Estimates)

Population 25+	28,385
Less than 9th Grade	5.37%
9th to 12th No Diploma	14.35%
High School Graduate or GED	43.60%
Some College, No Degree	14.88%
Associate Degree	7.06%
Bachelor's Degree	9.06%
Graduate or Professional Degree	5.69%
% High School Graduate +	80.29%
% Bachelor's Degree +	14.75%

Population by Age



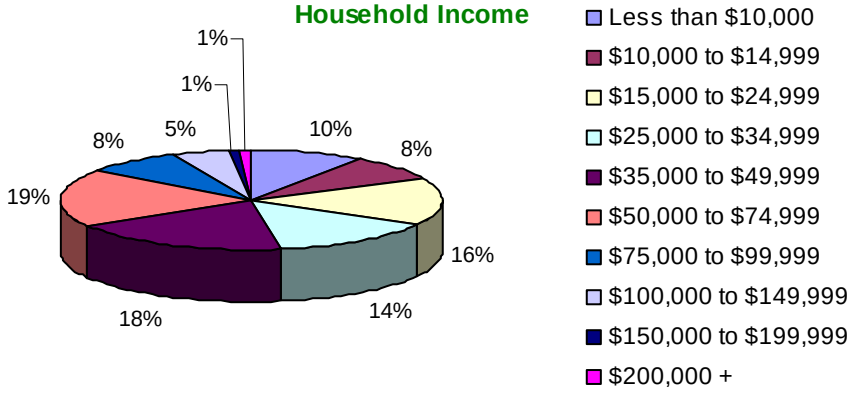
Occupation Class of Worker
(Based on 2000 Census Data)

Private Wage & Salary Workers	76.47%
Government Workers	11.18%
Self-employed in Own, Non-Incorporated Business	11.89%
Unpaid Family Workers	0.46%

Susquehanna County Occupations
(Based on 2000 Census Data)

Management, Professional, & Related Occupations	26.26%
Productions, Transportation, &	23.17%
Sales & Office Occupations	22.53%
Service Occupations	13.96%
Construction, Extraction, &	12.41%
Farming, Fishing, & Forestry	1.67%

Household Income



Commuting Patterns
Based on 2000 Census Data

48% of the 18,685 workers who RESIDE in Susquehanna County also WORK in Susquehanna County.

Where Other Susquehanna County Residents Work

Destination County	Commuters	
Broome (NY)	4,031	21.57%
Lackawanna	2,720	14.56%
Wyoming	1,366	7.31%
Tioga (NY)	284	1.52%
Other Counties	1,283	6.87%

83% of the 10,907 individuals who WORK in Susquehanna County also RESIDE in Susquehanna County.

Where Other Susquehanna County Workers Reside

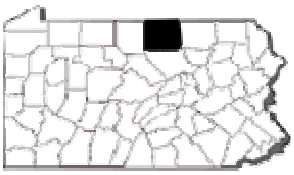
Origination County	Commuters	
Lackawanna	563	5.16%
Wayne	339	3.11%
Broome (NY)	273	2.50%
Wyoming	241	2.21%
Other Counties	490	4.49%

Sources:
DemographicsNow (provides 2005 estimates)
United States Government Census Data

December 2005

Tioga County Profile

Northern Tier Workforce Investment Board



POPULATION: 41,888
(Based on 2005 Estimates)

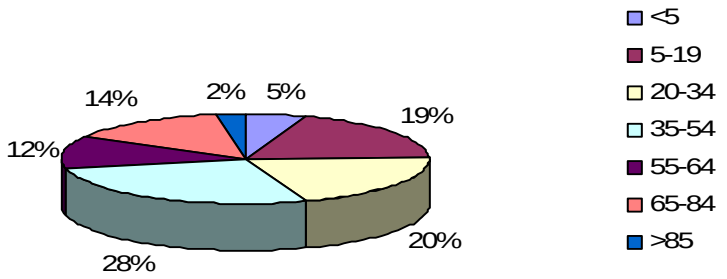
Largest Townships/Boroughs
(Based on 2000 Census Data-Population 16 Years and Older)

Mansfield Borough	2,957
Wellsboro Borough	2,726
Charleston Township	2,549
Delmar Township	2,252
Richmond Township	1,985
Jackson Township	1,614
Elkland Borough	1,406

Educational Attainment
(Based on 2005 Estimates)

Population 25+	28,172
Less than 9th Grade	5.91%
9th to 12th No Diploma	15.90%
High School Graduate or GED	41.03%
Some College, No Degree	14.73%
Associate Degree	6.66%
Bachelor's Degree	9.52%
Graduate or Professional Degree	6.24%
% High School Graduate +	78.18%
% Bachelor's Degree +	15.76%

Population by Age



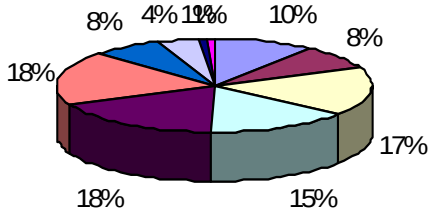
Occupation Class of Worker
(Based on 2000 Census Data)

Private Wage & Salary Workers	74.26%
Government Workers	14.33%
Self-employed in Own, Non-Incorporated Business	10.66%
Unpaid Family Workers	0.75%

Tioga County Occupations
(Based on 2000 Census Data)

Management, Professional, & Related Occupations	25.93%
Productions, Transportation, & Material Moving Occupations	25.23%
Sales & Office Occupations	21.63%
Service Occupations	15.47%
Construction, Extraction, &	10.05%
Farming, Fishing, & Forestry	1.69%

Household Income



Commuting Patterns
Based on 2000 Census Data

76% of the 17,857 workers who RESIDE in Tioga County also WORK in Tioga County.

Where Other Tioga County Residents Work

Destination County	Commuters	
Steuben (NY)	1,176	6.59%
Chemung (NY)	1,167	6.54%
Bradford	523	2.93%
Lycoming	484	2.71%
Other Counties	969	5.43%

85% of the 15,906 individuals who WORK in Tioga County also RESIDE in Tioga County.

Where Other Tioga County Workers Reside

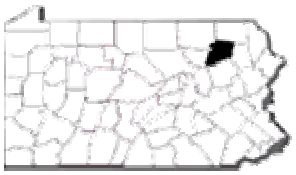
Origination County	Commuters	
Potter	470	2.95%
Bradford	402	2.53%
Steuben (NY)	294	1.85%
Allegheny	263	1.65%
Other Counties	939	5.90%

Sources:
DemographicsNow (provides 2005 estimates)
United States Government Census Data

December 2005

Wyoming County Profile

Northern Tier Workforce Investment Board



POPULATION: 28,230
(Based on 2005 Estimates)

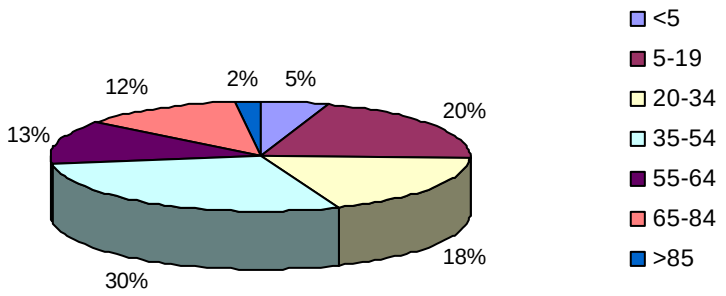
Largest Townships/Boroughs
(Based on 2000 Census Data-Population 16 Years and Older)

Tunkhannock Township	3,415
Tunkhannock Borough	1,550
Falls Township	1,505
Monroe Township	1,440
Eaton Township	1,292
Overfield Township	1,198

Educational Attainment
(Based on 2005 Estimates)

Population 25+	19,053
Less than 9th Grade	4.50%
9th to 12th No Diploma	13.71%
High School Graduate or GED	41.79%
Some College, No Degree	15.71%
Associate Degree	7.09%
Bachelor's Degree	11.06%
Graduate or Professional Degree	6.13%
% High School Graduate +	81.78%
% Bachelor's Degree +	17.19%

Population by Age



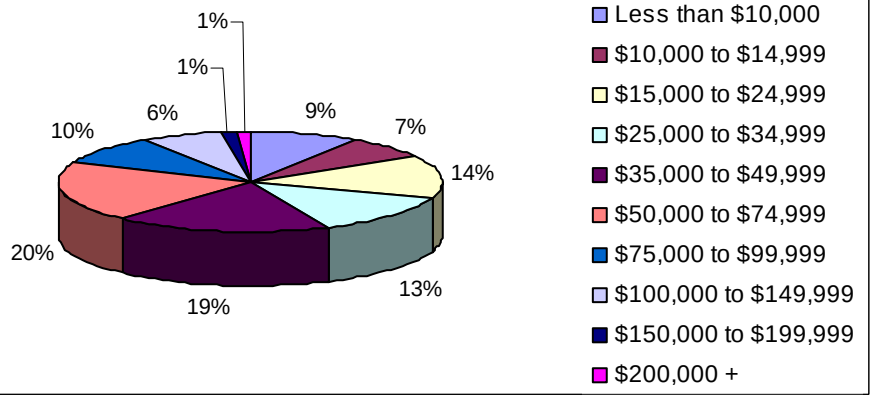
Occupation Class of Worker
(Based on 2000 Census Data)

Private Wage & Salary Workers	80.70%
Government Workers	9.85%
Self-employed in Own, Non-Incorporated Business	8.92%
Unpaid Family Workers	0.53%

Wyoming County Occupations
(Based on 2000 Census Data)

Management, Professional, & Related Occupations	25.85%
Sales & Office Occupations	23.19%
Productions, Transportation, &	20.94%
Service Occupations	15.51%
Construction, Extractive, &	13.38%
Farming, Fishing, & Forestry	1.13%

Household Income



Commuting Patterns
Based on 2000 Census Data

51% of the 12,464 workers who RESIDE in Wyoming County also WORK in Wyoming County.

Where Other Wyoming County Residents Work

Destination County	Commuters	
Lackawanna	2,892	23.20%
Luzerne	2,190	17.57%
Bradford	253	2.03%
Susquehanna	241	1.93%
Other Counties	493	3.96%

59% of the 10,876 individuals who WORK in Wyoming County also RESIDE in Wyoming County.

Where Other Wyoming County Workers Reside

Origination County	Commuters	
Susquehanna	1,366	12.56%
Lackawanna	962	8.85%
Luzerne	903	8.30%
Bradford	794	7.30%
Other Counties	456	4.19%

Sources:
DemographicsNow (provides 2005 estimates)
United States Government Census Data

December 2005

Appendix F – Acronyms

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Background/Overview

A summary of definition of acronyms and terms used in this plan are highlighted in this appendix.

AQ – Air Quality

AADT – Annual Average Daily Traffic

ADA – Americans with Disabilities Act

ATA – Appalachian Thruway Coalition

BHSTE – PennDOT's Bureau of Highway Safety and Traffic Engineering

CCIP – Congested Corridor Improvement Program

CMAQ – Congestion Mitigation and Air Quality

CPR – Canadian Pacific Railway

DCED – Department of Community and Economic Development

DVMT – Daily Vehicle Miles of Travel

EMTA – Endless Mountains Transportation Authority

FFY – Federal Fiscal Year, from October 1 through September 30

FHWA – Federal Highway Administration

FTA – Federal Transit Administration

HSIP – Highway Safety Improvement Program

IRI – International Roughness Index

ITS – Intelligent Transportation System

JARC – Job Access and Reverse Commute Program

LUTED – Land Use, Transportation, and Economic Development

LRTP – Long Range Transportation Plan

MA – Medical Assistance transportation

NEPA – National Environmental Policy Act

NHS – National Highway System, a federal classification of highways consisting of the Interstate system and other key roadways; 5,479 miles in Pennsylvania

NS – Norfolk Southern (Railroad)

NTRPDC – The Northern Tier Regional Planning and Development Commission

NYSDOT – The New York State Department of Transportation

PennDOT – Pennsylvania Department of Transportation

PwD – Persons with Disabilities

RSAP – Regional Strategy and Action Plan

ROP – Regional Operations Plan

RPO – Rural Planning Organization

RTAC – Northern Tier's Rural Transportation Advisory Committee

SAFETEA-LU – Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users

SD – structurally deficient (bridge)

SOV – single occupant vehicle

STC – State Transportation Commission

TE – Transportation Enhancement

TIP – Transportation Improvement Program: A priority list of transportation projects developed by a metropolitan or rural planning organization; must include documentation of federal and state funding source for each project.

TMSLL – Towanda-Monroeton Shippers Lifeline

WCRR – Wellsboro & Corning Railroad

YOE – Year of Expenditure

NEW YORK

TIOGA

BRADFORD

SUSQUEHANNA

WYOMING

LACKAWANNA

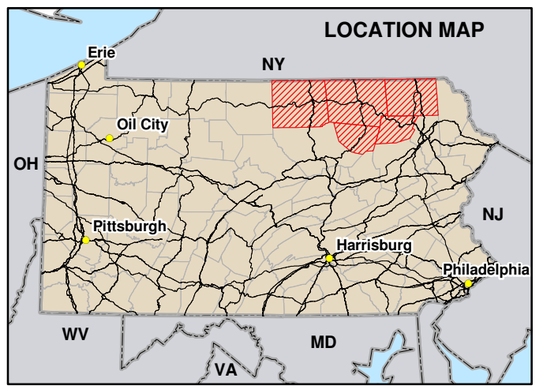
SULLIVAN

LYCOMING

Lawrenceville
Elkland
Cowanesque Lake
Knoxville
Westfield
Tioga
Hammond Reservoir
Sabinsville
Keeneyville
W&C RR
SGL No.37
Tioga Reservoir
Roseville
Mansfield
Sylvania
SGL No.208
Gaines
Wellsboro
Troy
East Troy
Alba
Blossburg
Arnot
Canton
Tioga State Forest
SGL No.268
Antrim
Morris
Blackwell
Liberty
South Waverly
Sayre
Athens
Gillett
220
Susquehanna River
East Smithfield
Ulster
Rome
Mt. Pisgah SP
Burlington
Towanda
Le Raysville
Stevensville
TMSLL
Norfolk Southern
Camptown
Monroe
Powell
Leroy
Wyalusing
Laceyville
SGL No.36
SGL No.12
New Albany
Little Meadows
SGL No.219
Friendsville
Great Bend
Hallstead
Susquehanna River
Oakland
Susquehanna Depot
SGL No.35
SGL No.70
Salt Springs SP
New Milford
Thompson
Montrose
CPR
South Montrose
Brooklyn
Union Dale
Springville
Hop Bottom
Forest City
Nicholson
Meshoppen
Factoryville
Tunkhannock
Susquehanna River
Falls
Noxen
SGL No.57
Ricketts Glen SP
Dushore
Forksville
Worlds End SP
Mildred
Loyalsock State Forest
SGL No.134
Eagles Mere
Laporte
Sonestown
SGL No.13
15
6
11
81

N

LOCATION MAP



Legend

- County Seat
- Airport
- Railroad
- Interstate
- U.S. Highway
- PA State Route
- Stream / River
- Lake / Pond
- Urbanized Area
- Municipal Boundary
- State Forest
- State Park
- State Game Land
- Northern Tier Regional Counties

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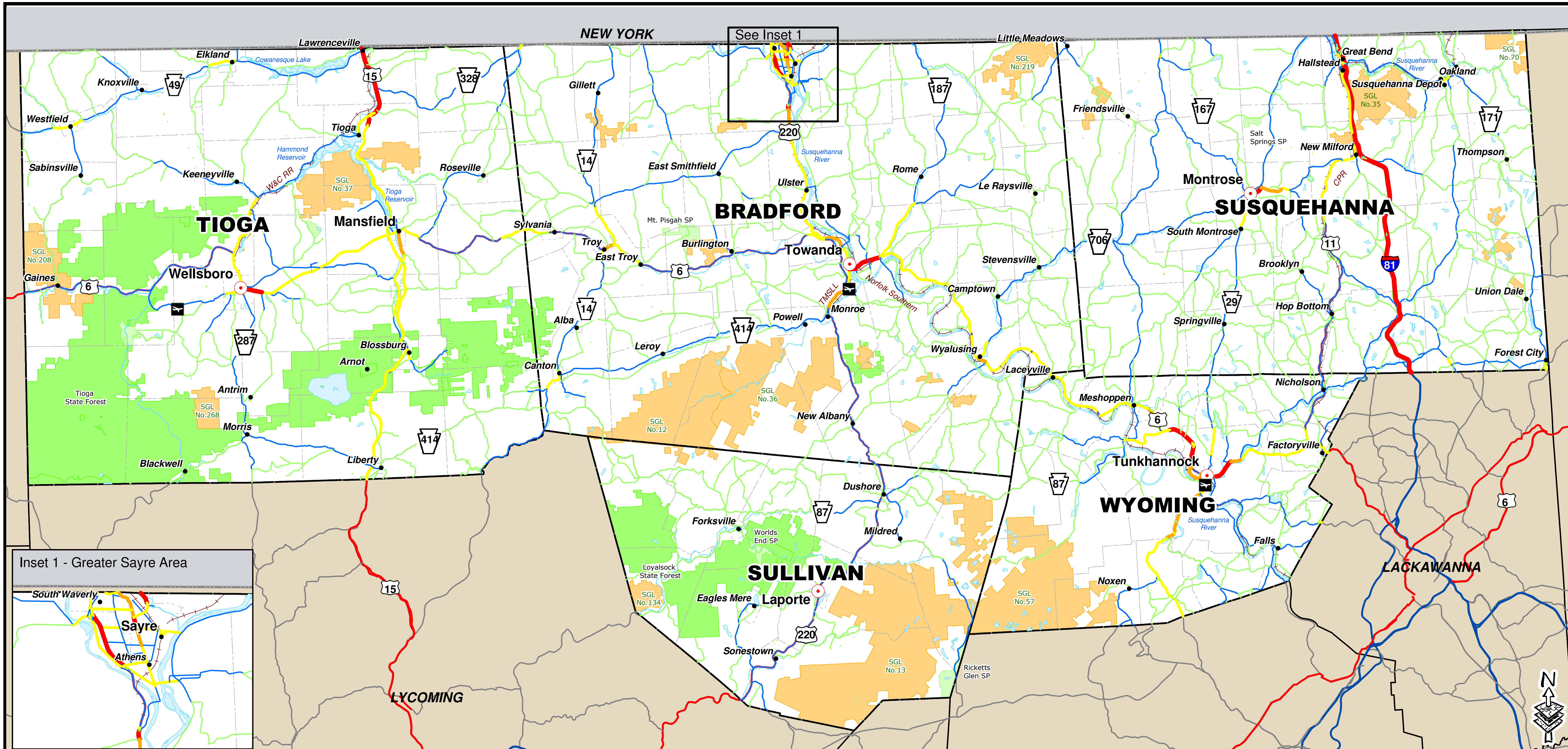
LONG RANGE TRANSPORTATION PLAN

BASE MAP
Map 1

AUGUST 2007


NEW YORK
See Inset 1
TIOGA
BRADFORD
SUSQUEHANNA
SULLIVAN
WYOMING
LYCOMING
LACKAWANNA
Wellsboro
Mansfield
Towanda
Montrose
Tunkhannock
Laporte
Lawrenceville
Elkland
Knoxville
Westfield
Tioga
Sabinsville
Keeneyville
Roseville
Gaines
Blossburg
Arnot
Antrim
Morris
Blackwell
Liberty
Gillett
East Smithfield
Ulster
Rome
Le Raysville
Little Meadows
Sylvania
Troy
East Troy
Burlington
Mt. Pisgah SP
Monroe
Powell
Alba
Leroy
Canton
Stevensville
Camptown
Wyalusing
New Albany
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Friendsville
Great Bend
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Oakland
Susquehanna Depot
New Milford
Thompson
South Montrose
Brooklyn
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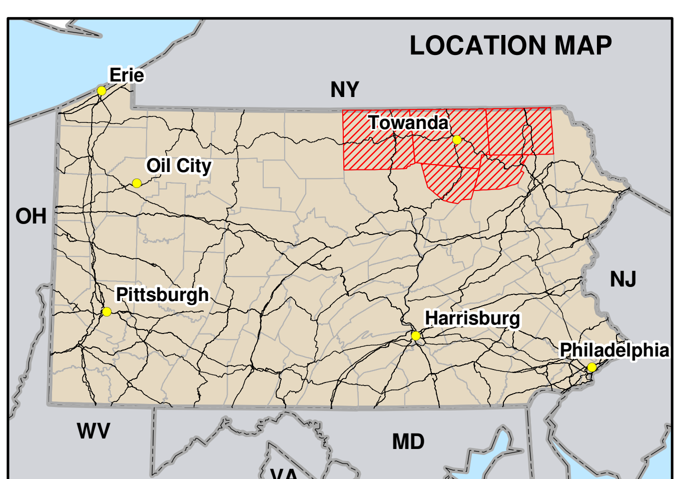
Union Dale
Springville
Forest City
Nicholson
Meshoppen
Factoryville
Dushore
Forksville
Mildred
Eagles Mere
Sonestown
Falls
Noxen
Worlds End SP
Loyalsock State Forest
Ricketts Glen SP
Salt Springs SP
Tioga State Forest
Hammond Reservoir
Tioga Reservoir
Cowanesque Lake
Susquehanna River
W&C RR
Norfolk Southern
TMSLL
CPR
SGL No.37
SGL No.208
SGL No.268
SGL No.219
SGL No.35
SGL No.70
SGL No.36
SGL No.12
SGL No.134
SGL No.13
SGL No.57
15
49
328
6
287
414
14
220
187
167
171
706
11
29
81
87
N
Inset 1 - Greater Sayre Area
South Waverly
Sayre
Athens



Legend

- County Seat
- Airport
- Railroad
- Stream / River
- Lake / Pond
- Municipal Boundary
- State Forest
- State Park
- State Game Land
- Northern Tier Regional Counties

AADT

- < 1,000
- 1,000 - 4,000
- 4,000 - 8,000
- 8,000 - 10,000
- > 10,000

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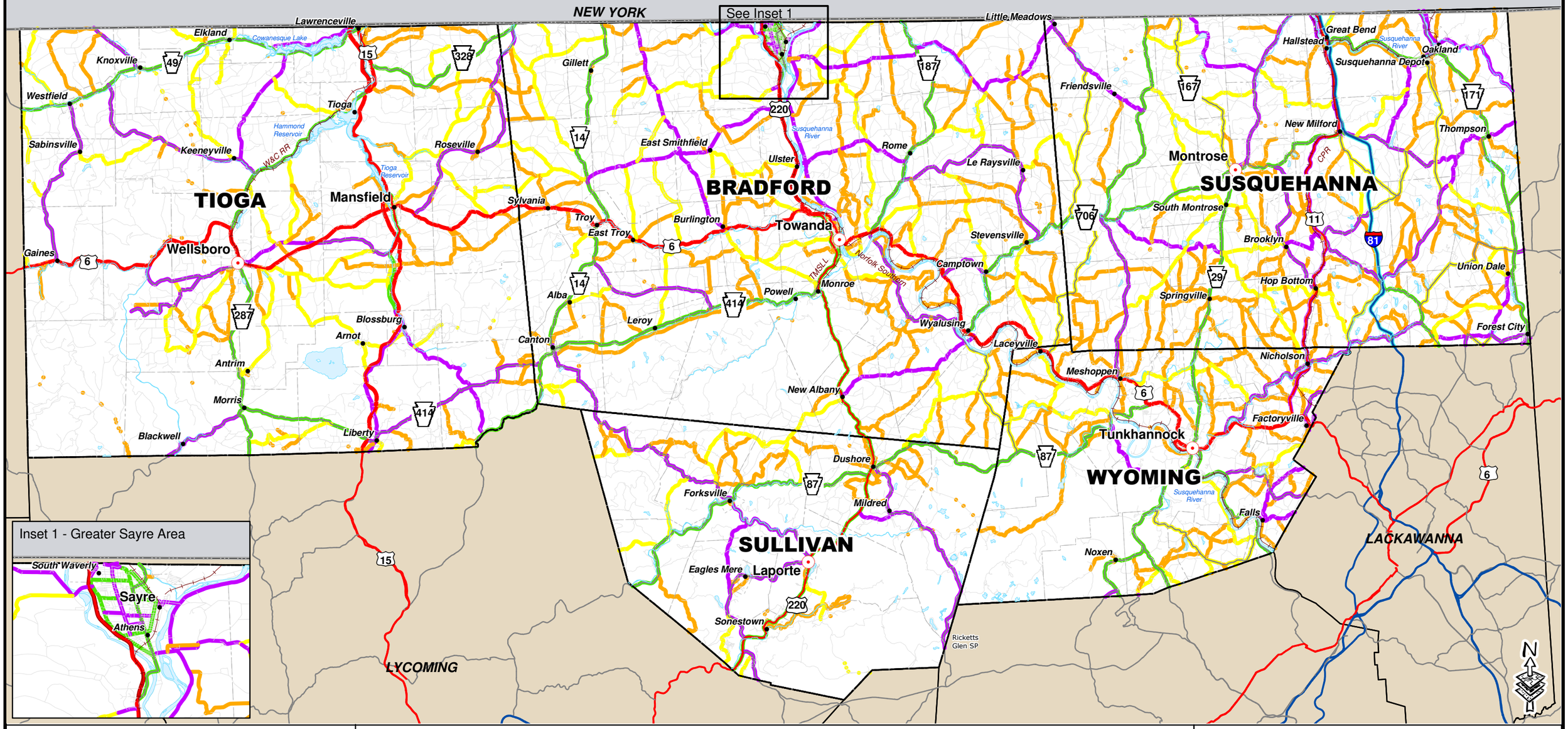
LONG RANGE TRANSPORTATION PLAN

ANNUAL AVERAGE DAILY TRAFFIC (2007) Map 2

JUNE 2008



Legend

- County Seat
- Railroad
- Stream / River
- Lake / Pond
- Municipal Boundary
- Northern Tier Regional Counties

Functional Class

- Interstate Highways
- Other Freeways and Expressways
- Other Principal Arterial Highways
- Minor Arterials
- Urban Collector or Rural Major Collector
- Rural Minor Collector
- Local Roads

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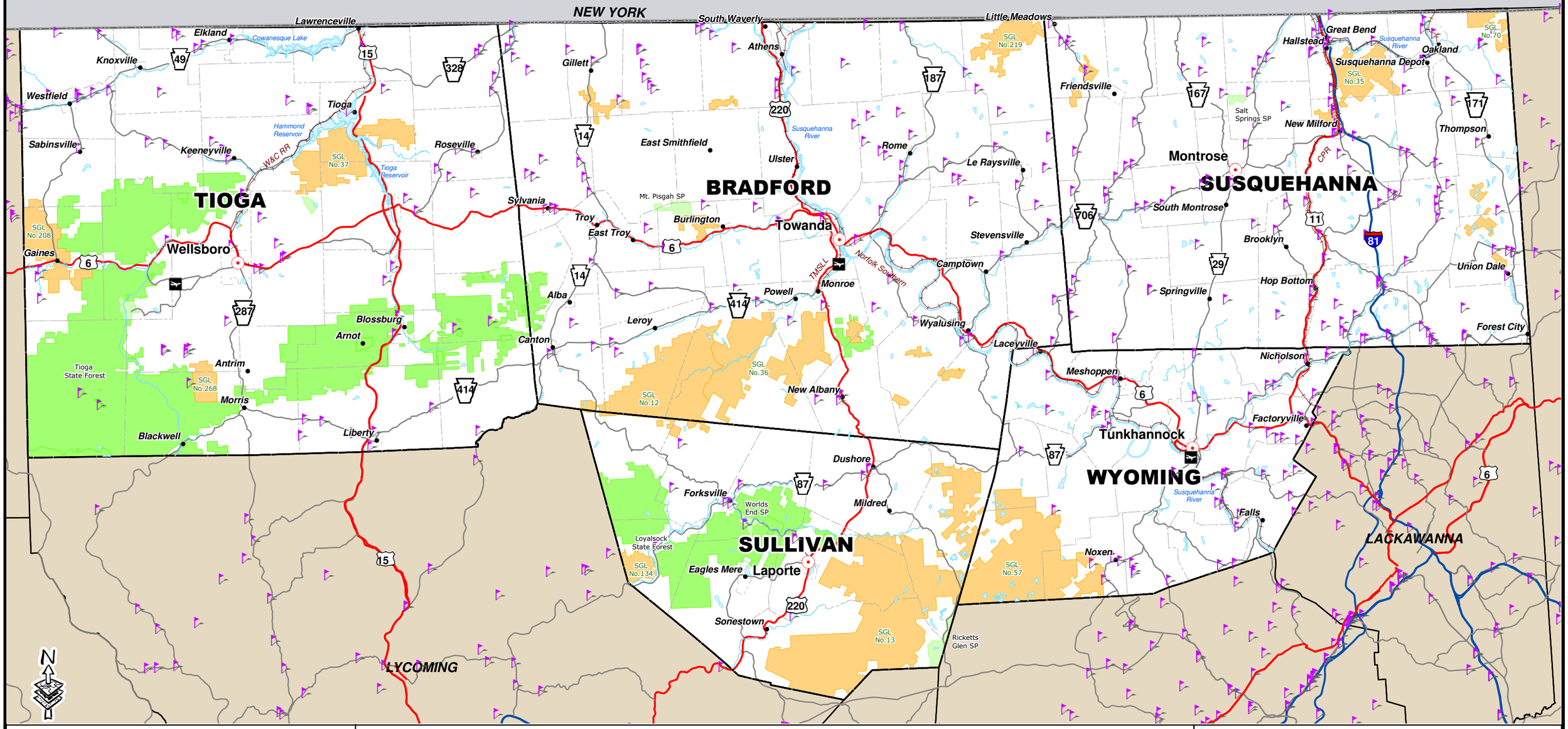
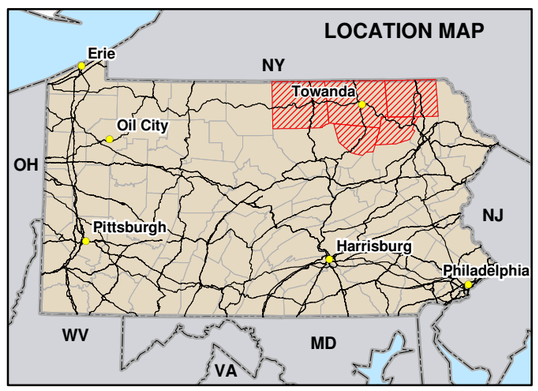
LONG RANGE TRANSPORTATION PLAN

FUNCTIONAL CLASS Map 3

JUNE 2008





Legend

- County Seat
- Structurally Deficient Bridge
- Airport
- Railroad
- Interstate
- U.S. Highway
- PA State Route
- Stream / River
- Lake / Pond
- Municipal Boundary
- State Forest
- State Park
- State Game Land
- Northern Tier Regional Counties

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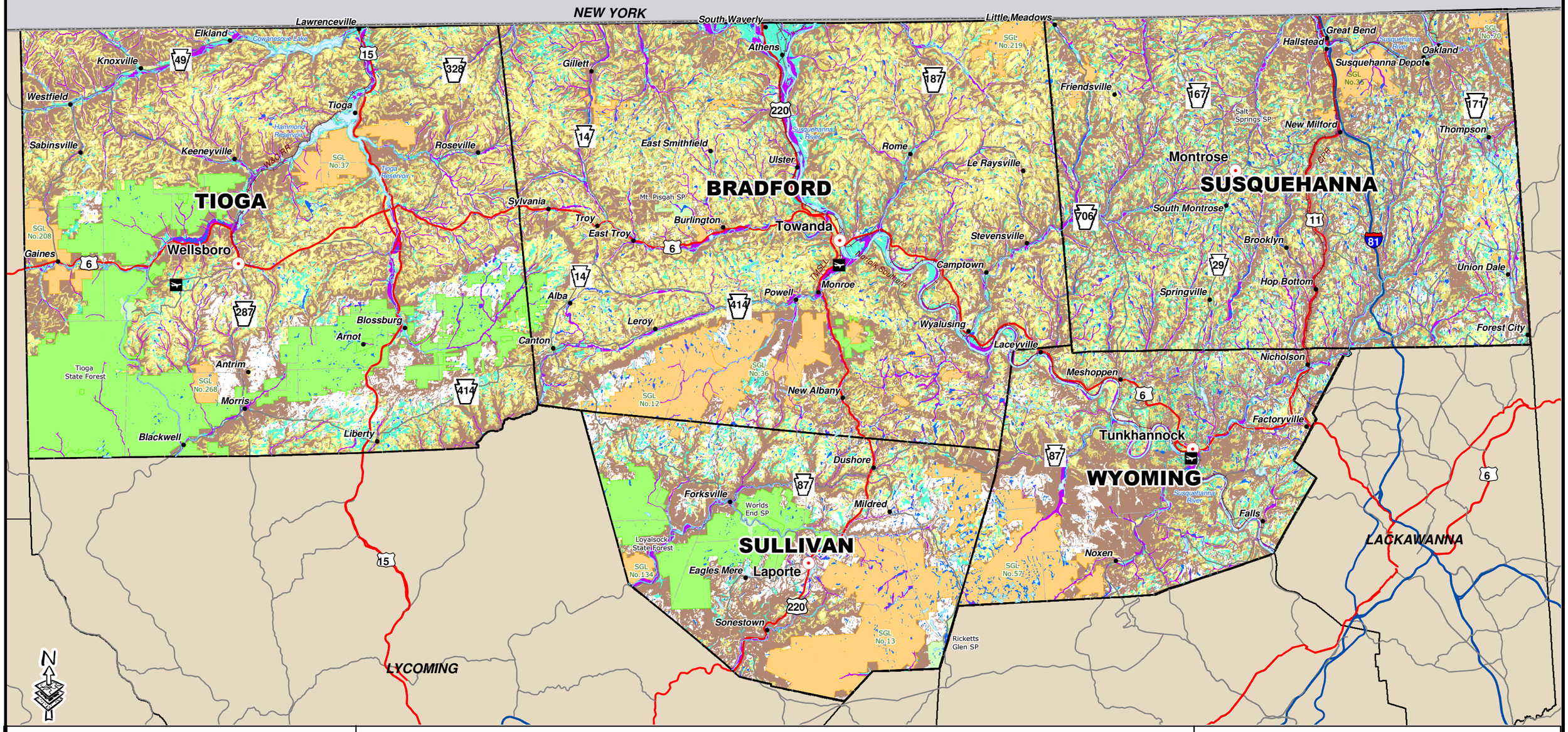
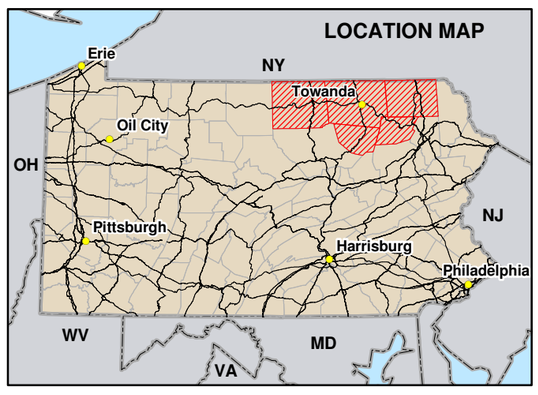
LONG RANGE TRANSPORTATION PLAN

STRUCTURALLY DEFICIENT BRIDGES Map 4

JUNE 2008





Legend

- County Seat
- Airport
- Railroad
- Interstate
- U.S. Highway
- PA State Route
- Stream / River
- Lake / Pond
- Municipal Boundary
- State Forest
- State Park
- State Game Land
- Northern Tier Regional Counties
- NWI Wetlands
- 100 Year Floodplain
- Prime Farmland
- Farmland of Statewide Importance
- Slopes >12%

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LONG RANGE TRANSPORTATION PLAN

ENVIRONMENTAL FEATURES Map 5

JUNE 2008

NEW YORK

Cowanesque Lake

Hammond Reservoir

Tioga Reservoir

Susquehanna River

Susquehanna River

TIOGA

Wellsboro

BRADFORD

Towanda

Montrose

SUSQUEHANNA

Tunkhannock

WYOMING

Susquehanna River

SULLIVAN

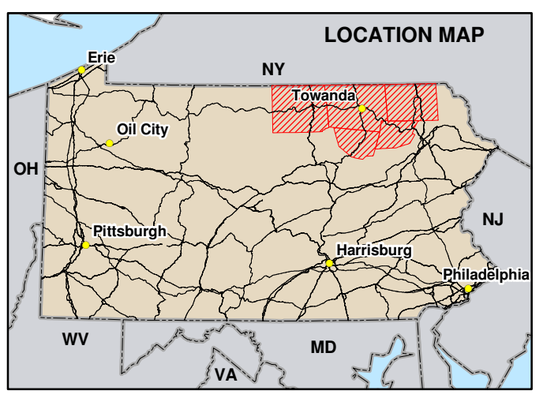
Laporte

15

6

N

LOCATION MAP



Legend

- County Seat
- Railroad
- Interstate
- U.S. Highway
- PA State Route
- Stream / River
- Lake / Pond
- Municipal Boundary
- Northern Tier Regional Counties

Elevation

High : 2690

Low : 523

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LONG RANGE TRANSPORTATION PLAN

TOPOGRAPHIC FEATURES Map 6

JUNE 2008