Executive Summary

This document serves as an update of the long range transportation plan for the Lackawanna Luzerne MPO region. The last LRTP was completed as a combined Comprehensive Plan and Long Range Transportation Plan in 2010 and was done so in a revolutionary way. As this update only includes an update of the long range transportation plan, the Counties felt it was important to maintain the connection to the original adopted document and include those relevant sections by reference in this document. Therefore, the following includes a listing of the original document sections and those that have been updated with this long range transportation plan update. The entire 2010 adopted document is available at:

http://www.luzernecounty.org/county/departments_agencies/planning_commission/lackawanna-luzerne-regional-plan

For the purposes of this document:

Chapter 1 remains intact and as adopted by the counties in 2011

Chapter 2.1 and 2.2 were reviewed and concurred on with this LRTP update, the remainder of Chapter 2 remains as adopted in 2011

Chapter 3 – Implementation Strategy remains intact as adopted

Chapter 4 - Has been updated significantly and is included with this document

Chapter 5 - Has been updated and amended to reflect the outreach work completed as part of this LRTP update

Appendices have been adjusted and are included in this document

This amendment serves as the Long Range Transportation Plan update, which must be provided every five years. The 2011 Plan was adopted as the Lackawanna-Luzerne Regional Plan and combined the Comprehensive Plan and the Long Range Transportation Plan. As noted earlier, this amendment updates a number of chapters in the original document. Chapter numbers have remained intact to mimic the original document. The following sections of Chapter 4 – Conditions in the Region, which primarily deals with the Long Range Transportation portions of the document were revised for this update:

- 4.2 The Transportation Profile
- 4.3 Demographic Housing and Employment Profile
- 4.10 Patterns of Change
- 4.11 Scenario Analysis & Transportation Program Development
- 4.12 Transportation Funding Challenges

This chapter provides a general review of current conditions and recent trends in Lackawanna and Luzerne Counties. This information provides an inventory and a baseline for the Plan.

Transportation Plan Goals and Objectives

The Transportation Plan is intended to achieve a safe and efficient transportation system that is compatible with the natural, agricultural, and developed areas of Lackawanna and Luzerne Counties and that provides viable transportation alternatives, including driving, biking, walking, and public transportation. The following goals incorporate the SAFETEA-LU planning factors and take into account the statewide emphasis on asset management that addresses the condition of existing infrastructure, such as the accelerated bridge program currently underway within the Pennsylvania Department of Transportation (PennDOT):

1. Support the economic vitality of the region, especially by enabling global competitiveness, productivity, and efficiency by increasing the accessibility and mobility options available to people and goods;

2. Increase the safety and security of the transportation system for motorized and nonmotorized users;

3. Protect and enhance the environment, promote energy conservation, improve quality of life, and promote consistency between transportation improvements and state and two-county area planned growth and economic development patterns;

4. Enhance integration and connectivity of the transportation system across and between modes, for people and freight, in an effort to promote efficiency in system management and operation;

5. Emphasize preservation and connectivity of the existing transportation system (all modes);

6. Ensure consistency with the fundamental principles of Title VI and Environmental Justice.

Objectives

The objectives of the Transportation Plan are as follows:

A.) Provide access to and interconnectivity between Priority Areas through a variety of modes, including public transit;

B.) Promote the establishment of internal circulation systems for Priority Areas that are walkable, bikable, and transit-friendly;

C.) Encourage the development and expansion of the public transportation system that serves Lackawanna and Luzerne Counties and opportunities for multimodal integration allowing for easy switching from one mode of transportation (pedestrian, bicycle, automobile, bus, train) to another; and encourage the combination of the three regional transit operators;

D.) Identify roadway corridors, segments, and intersections with safety problems, along with methods of eliminating these deficiencies;

E.) Identify roadway corridor, segment, and intersection changes that would enhance circulation, economic growth, and quality of life;

F.) Identify freight and rail changes that would enhance circulation and economic growth;

G.) Maintain an acceptable level of service on the two counties' arterial roads;

H.) Explore opportunities to expand use of freight rail to serve existing and future businesses and identify prospective locations for an intermodal freight center;

I.) Identify and set priorities for projects that are appropriate for inclusion on Lackawanna and Luzerne Counties' Transportation Improvement Programs (TIP) and PennDOT's 12-Year Highway Program;

J.) Develop opportunities for travel by means other than private automobiles including bicycle and pedestrian transportation; pay particular attention to links to open space and recreational amenities within and adjacent to the two counties;

K.) Promote bicycle- and pedestrian-friendly roadway design in order to advance safe and convenient travel opportunities.

L.) Promote the growth and utilization of existing air transportation in the region.

Existing Transportation System

Highways, Roadways, and Streets

The system of collector roadways and local streets network is extensive and consists mostly of low-volume, two-lane roadways. These elements of the network supply the highest degree of access to adjacent land development, such as homes, businesses, offices, and schools. ***Table 4.2.1*** shows lane miles by highway jurisdiction in the two counties. ***Figure 4.2.2*** illustrates the Jurisdictional Classification in the two-county area.

Table 4.2.1
Lane Mileage by Highway Jurisdiction

Highway Type	Lane Mileage
Interstate Highway	609
U.S. Highway	289
PA Highway	906
State Route (SR)	1,844
K Route	273
W Route	5.2
County Roads	106
Local Roads	3,148
Two-County Region Total	**7,180**

Source: PennDOT RMS Data 2015

Public Transit

There are three agencies that provide a variety of public transportation services in Lackawanna and Luzerne counties – County of Lackawanna Transit System (COLTS), Luzerne

County Transportation Authority (LCTA), and Hazleton Public Transit (HPT). COLTS operates service in Lackawanna County, and LCTA provides service throughout Luzerne County, except for the southern portion which is served by HPT along with the City of Hazleton.

Transit services consist of fixed-route, deviated fixed route, and demand response. The term "fixed route" refers to service that operates on an established path or route at a set or fixed time. Deviated fixed route service is similar to fixed route in that it operates along a fixed path at set times, but may deviate from the path as designated by the transit agency. Demand response, also referred to as shared ride or paratransit, and is defined as door-to-door service that requires a customer to call in advance to reserve or schedule a ride.

The agencies regularly monitor performance to maintain cost-effective and high quality services. Together, the agencies provide over 2.9 million passenger trips each year and operate over 4.1 million vehicle revenue miles. The majority of each agency's ridership comes from their fixed route systems – COLTS 93%, LCTA 87%, and HPT 95%. Fare revenues, as well, are generated primarily from fixed route services – COLTS 97%, LCTA 86% and HPT 81%. The average age of the agencies' fixed route vehicle fleets range from six to nine years, with HPT having the oldest average fleet age. The average age of the agencies' demand response vehicles is three to four years. LCTA has the lowest cost ($6.16) per passenger trip for its fixed route service, followed by COLTS at $6.98, and HPT at $10.16. COLTS and LCTA cost for its demand response passenger trips is $22.45 and HPT cost is $29.98.

Travel Demand

Journey-to-Work Commuter Travel

Census OnTheMap data for 2011 Journey-to-Work data at the county level was examined to identify commuter travel patterns, particularly intra-county versus inter-county travel. ***Figure 4.2.6*** illustrates the counties in which residents of Lackawanna and Luzerne Counties work and it also shows the counties in which those employed in Lackawanna and Luzerne Counties live.

The following trends were noted:

- About 62 percent of Lackawanna County residents work in Lackawanna County and 10 percent work in Luzerne County.
- About 65 percent of Luzerne County residents work in Luzerne County and 7 percent work in Lackawanna County.
- About 72 percent of residents who live in Lackawanna and Luzerne Counties work there also. An additional 8 percent of residents who live in Lackawanna and Luzerne Counties work in the adjacent counties, with Monroe, Columbia, and Schuylkill Counties attracting the most workers. Non adjacent counties that attract a similar number of workers, if not more, as the adjacent counties include Dauphin, Lehigh, Montgomery and Philadelphia Counties.
- About 71 percent of workers who work in Lackawanna and Luzerne Counties live there also. An additional 12 percent of workers who work in Lackawanna and Luzerne Counties live in the adjacent counties, with Wayne, Wyoming, Columbia, and Schuylkill Counties supplying the most workers.

The trends indicate that the two-county area is mostly insular in regard to commuter travel

flow although these percentages have decreased since the last Long Range Plan. Previously 90 percent of residents of the two counties worked within the same area, which is now reduced to 72 percent. The data indicates that higher numbers of residents of the two counties are traveling further, or working remotely, for companies in Dauphin, Lehigh, Montgomery, and Philadelphia County. There is some interchange of workers and residents between Lackawanna and Luzerne Counties, but the majority of journey-to-work activity is contained within the county boundaries.

Highway Condition

International Roughness Index

The International Roughness Index, or IRI, is the current Federal Highway Administration standard for measuring highway pavement ride quality. The index measures roughness in terms of the number of inches per mile that a laser, mounted in a specialized van, jumps as it is driven over roadways—the lower the IRI number, the smoother the ride. Since the IRI provides an easy-to-collect measure of pavement surface condition that has nationwide consistency and comparability, it was chosen for use in FHWA's Highway Performance Monitoring System.[1]

Figure 4.2.9 illustrates the IRI for state-owned roadways in Lackawanna and Luzerne Counties. ***Table 4.2.5*** summarizes IRI condition by miles and compares to those reported in the 2011 report.

Table 4.2.5
Miles of Roadway by Roughness Index

	Excellent	Good	Fair	Poor
2011 TOTALS	**361.25** (22.0%)	**716.94** (43.6%)	**412.91** (25.1%)	**152.11** (9.3%)
2015 TOTALS	**274** (16.1%)	**626** (36.8%)	**435** (25.6%)	**365** (21.5%)

Source: PennDOT District 4-0, 2008; U.S. Census Bureau, 2000, 2015 MPMS IQ

Bridge Sufficiency Rating

The general integrity of state-owned bridges was evaluated in terms of the Federal Highway Administration's "Sufficiency Rating," as provided by PennDOT's MPMS IQ online system. The Sufficiency Rating, which was developed as a prioritization tool for allocating improvement funds, assesses bridges on a scale from 0 (poor) to 100 (very good) based on structural adequacy, whether the bridge is functionally obsolete, and the level-of-service provided to the public.[2] It should be noted that PennDOT's system for identifying "structurally deficient"

[1] Federal Highway Administration, Highway Performance Monitoring System (HPMS) Field Manual, Chapter 5.4: Pavement Data Guidance, http://www.fhwa.dot.gov/policyinformation/hpms/fieldmanual/HPMS_2014.pdf, 2014.
[2] Association of State Highway Transportation Officials, "Facts and Figures about the U.S. Transportation System," http://www.transportation.org/?siteid=93&pageid=2496, 2008.

bridges differs somewhat from FHWA's Sufficiency Rating scheme.

Figure 4.2.13 illustrates the general degree of need and priority for bridge improvements in the study area. ***Table 4.2.9*** shows the number of state-maintained bridges by priority category. The number of high priority bridges went up slightly from the 2011 data but has remained relatively consistent.

PennDOT prepares a Performance Measures Annual Report for Bridges where Structurally Deficient (SD) percentages by bridge count and deck area are measured against target values, ***Figure 4.2.14.*** These performance measures are consistent with those identified in the FHWA rulemaking that establishes new requirements for performance management to ensure an efficient investment of Federal transportation funds. The following performance goals are identified for State (greater than or equal to 8') and Local bridges (greater than or equal to 20'):

1. % of SD by count and deck area
2. Reducing rate of deterioration (by count and deck area)
3. Annual net SD reduction

The goals noted are directly from the 2013 Performance Measures Annual Report – Bridges and indicate optimum (long range goals) and cautionary (2014 targets) thresholds for performance. The 2014 goals provide a stepping stone to reaching the long range goals with significant advancements needed in the long term to meeting the long range goals. Based on the results for the Lackawanna Luzerne MPO, various metrics are meeting the cautionary threshold (2014 goals) based on 2013 data such as the reducing the rate of deterioration and the annual net SD reduction. Although not significantly different from the cautionary thresholds (2014 goals), the non-NHS bridges with greater than 2,000 ADT are consistently not meeting the cautionary thresholds for all metrics. Additionally, 50% of the bridge deck area of local bridges was SD in 2013 with a target goal of 43.9%. Currently, these values are consistent with other regions of the Commonwealth and reflect the continued asset management focus for the Commonwealth in the coming years.

Table 4.2.9
State Bridges by Condition

Location	Low Priority	Secondary Priority	High Priority	Unknown	TOTAL
State Roadway	839	54	88	0	981
Local Roadway	94	14	70	0	178
TOTAL	933	68	158	0	1159
2011 TOTAL	1274	68	149		

Source: PennDOT MPMS IQ, 2015 and PennDOT District 4-0, 2008.

Highway Safety Performance

The performance of the highway system may also be evaluated in terms of its safety or lack thereof, according to the frequency, severity, and distribution of roadway crashes. Such an evaluation not only suggests project locations but also assists in prioritizing projects in comparison to others. The following evaluation of highway safety considers the history of reportable crashes for the previous 5-year period (July 1, 2009 to June 30, 2014), which was provided by PennDOT Central Office for all state-maintained roadways.

Based on the following safety analysis, projects were included in the fiscally constrained Long Range Transportation Plan to address high crash locations (segment and intersection) including but not limited to: SR 0309, Memorial Highway in Kingston Township; SR 0006, State Street in Clark Summit Borough; SR 0307, Morgan Highway in the City of Scranton; SR 0011, Pittston and Cedar Avenue in the City of Scranton, SR 0347, Dunmore Signal Network.

Transit Level-of-Service

The performance of transit systems in the two-county region was previously evaluated using the methodology provided in the Transportation Research Board's Transit Capacity and Quality of Service Manual. While this performance is appropriate for larger transit agencies, the frequency and duration of service is not the only indicator of an agency's performance, particularly with the area and population density found in the two-county area. Therefore, the following information is provided in lieu of the Level of Service information provided in the last plan.

The performance of transit agencies is measured using multiple criteria and it is critical that agency transit services are evaluated in the context of the service that they provide as well as the service area demographics including population densities, employment densities and underserved populations.

Pennsylvania public transit agencies report and are evaluated on four key performance measures prescribed in Pennsylvania Act 44of 2007. The Act 44 metrics are:

- Passengers per revenue vehicle hour
- Operating cost per revenue vehicle hour
- Operating cost per passenger
- Operating revenue per revenue vehicle hour

The Act 44 performance data for FY 2013-14 is presented in ***Table 4.2.19***.

Table 4.2.19
Act 44 Performance Measures

Act 44 Performance Measures	COLTS	HPT	LCTA
Passengers per Revenue Vehicle Hour	12.87	7.16	15.42
Operating Cost per Revenue Vehicle Hour	$102.02	$79.59	$107.24
Operating Cost per Passenger	$7.93	$11.11	$6.95
Operating Revenue per Revenue Vehicle Hour	$17.97	$7.98	$16.36

Source: PA Public Transportation Annual Performance Report Transit Agency Profiles Fiscal Year 2013-14

Transportation Needs Assessment

The Lackawanna Luzerne MPO has developed an asset management focus to its project selection and deployment scheme to be consistent with directives from the Governor and Transportation Secretary and reports from various funding commissions. The first critical piece of that focus was the development of the total need in the region to maintain the existing system. With the uncertainty of current funding targets and development of differing asset management guidelines for long range transportation plans underway, a range of line items were utilized in the development of the plan. It should also be noted that the first six years of projects were identified in the development of the plan and line items for asset management related tasks were established for years beyond six. To develop these line items, the PennDOT Asset Management Reports were reviewed and ***Table 4.11.5*** and ***Table 4.11.6***. were each developed. Table 4.11.5 summarized the total asset planning need for the region. This table shows that the annual pavement needs alone for the bi-county area exceed $126 million. Table 4.11.6 summarizes specific investment to meet the state SD Bridge goals in the region. Table 4.11.6 includes the current assessment of the number of bridges in the region that are structurally deficient, their deck areas, and the investment required to reach the current state SD bridge goals.

The result of this analysis determined the asset management planning need for the long range plan. Projects have been defined for the first six years of the program and projects along with line items have been defined in the plan for the last 15 plus years of the plan.

Identifying Potential Transportation Problems and Projects

In addition to the asset management assessment that was completed, a transportation system assessment and public solicitation was completed as part of the plan development. Projects were solicited in a number of ways for consideration and prioritization in terms of the goals and objectives established by the MPO.

Current TIP and Long-Range Transportation Plan

The planning effort started with the list of projects from the current 2015 TIP and the past Long-Range Transportation Plan. This list was cross classified with information from MPMS and PennDOT 4-0 relative to projects which had been completed or had a let date after January 2016.

System Evaluation & Transportation Problems

Specific areas and problems were identified from the analysis and assessment that was completed and described in Chapter 4. These problems were also spatially compared to each other and to existing projects already funded on the TIP to determine if any problems would be solved by a current project, or if problems could be grouped together into one more asset friendly project which would address a safety issue, a bridge issue and a roadway issue at the same time.

Transportation Segments of Importance

Additionally, an analysis was completed that attempted to group transportation segments (As defined by PennDOT) of importance or areas of the transportation system that needed public investment. ***Figure 4.11.6*** was created to identify segments or areas that may be targeted for public investment. These segments would not only address multiple transportation problems but would also help meet land use goals of the Plan. The methodology is described ***Table 4.11.7*** and the results of the analysis is described in ***Table 4.11.8*** and ***Figure 4.11.6***. This methodology allows us to look at critical transportation segments rather than looking at types of projects (i.e. Bridge, Roadway, CMAQ, Enhancement, etc.) ***Table 4.11.8*** and ***Figure 4.11.6*** illustrate the transportation network segments which met a specific number of criteria. The more criteria a certain segment met, the more important it would be for future investment.

Solicitation for Other Transportation Projects

In addition to those problem areas and projects, the MPO committees were surveyed to identify any potential transportation problem areas. Finally, local governments, the public and other stakeholders were asked to submit any candidate problems or projects for consideration in the plan through the Transportation Issues Forums which were held in two separate sessions in Scranton and Forty Fort on April 2, 2015.

The State Transportation Commission solicited input for the PennDOT update of the 2017 Twelve Year Transportation Program (TYP) from April 16, 2015 to May 29, 2015, which were received late in this planning process. There were over 450 comments made for the Lackawanna Luzerne planning region. General themes included:

- Need for passenger rail between Scranton and NJ/NY/Philadelphia
- Improved transit service
- Improved roadway conditions
- Improvements to I-81
- More trails and connections
- Need for bike lanes
- Safety improvements
- Improved pedestrian access and safety

These comments will be reviewed in more detail as projects are scoped to identify if improvements can be incorporated into existing projects as well as identifying additional projects for future updates.

Project Scoring Criteria

In accordance with the goals and objectives of the long range plan steering committee and the goals and objectives of MAP 21 and the Mobility Plan, project ranking criteria was developed. The project ranking criteria was developed to identify measurable parameters against which projects could be scored. The importance of each criteria was weighted by the steering committee using a pairwise comparison method which determined the importance of each criteria relative to each other. System Management and Preservation ranked the highest with a score weighting 34.4% followed by Transportation Safety with a weighting score of 23.4%

Project Evaluation and Prioritization

Using the GIS layers and representatives for the MPO, each candidate project was evaluated in a series of meetings and online using the Decision Lens tool which compiles the data and provides a score for each project. The criteria either required direct input from the scoring committee or was auto scored based on GIS data and GIS analysis. This analysis has been documented in the GIS data book and included as an appendix to this document.

Seven criteria were utilized to place all candidate projects in a priority order for potential programming on the Long Range Plan. This priority takes into account the scores provided in each criteria as well as the weight assigned to each criteria. Once projects had been prioritized, funding levels and matching funds would enable projects to be selected from that list.

4.12 Transportation Funding Challenges

A key component of any Metropolitan Planning Organization's long-range plan is a vision for how the region will invest in transportation over the life of the plan. Federal regulations require that regional long-range transportation plans be fiscally constrained. This means that total transportation expenditures identified in a long-range plan must not exceed the total revenues reasonably expected to be available for the region over the life of the Plan.

The Lackawanna-Luzerne MPO worked in consultation with its federal, state, local, transit, and operating authority partners to develop the financial plan and set of transportation investments. This plan identifies the level of expenditure for all transportation infrastructure that is needed to achieve and maintain a state of good repair without considering fiscal constraint to be aligned with current FHWA, PennDOT and transit agency policies. Additionally, this plan assumes an asset management focus and accordingly, more funding on maintaining the existing roadway and transit networks. The goal is to achieve and maintain a state of good repair for existing transportation infrastructure before undertaking significant expansions to the system. Any new capacity adding projects will be focused on making key circulation connections and will be consistent with the two county land use goals set forth in this document.

To estimate revenue for the Plan, all federal and state funding sources were identified through the year 2040. Reasonably expected revenues were then allocated to the different expenditure categories based on policy and identified need. Need is much greater than available revenue. The funding deficit will be much greater if the full need for system expansion is also considered. Federal requirements dictate that fiscal constraint be determined using year-of- expenditure (YOE) dollars so that inflation is accounted for when determining project costs. A projected inflationary factor converts current year dollars to YOE dollars by using a compound annual inflation rate.

To assure better fiscal alignment between the current Transportation Improvement Program (TIP) and the fiscally constrained long range transportation plan, the following time periods were established. The four years of the current TIP (2015-2018) are developed in one year time periods. The next four years of the TYP are allocated in two, two year periods (2019-2020 and 2021-2022). The last four years of the TYP is included in the 2023-2026 time period. The final thirteen years of the LRTP are included in the 2027-2040 time frame.

Revenue Assumptions and Estimates

Preparation of this financial plan revenue estimate included a review of historical data and trends, including the Pennsylvania's 2015 Transportation Program Financial Guidance documents, previous statewide transportation improvement programs (STIPs) information from state DOTs and transit agencies, FHWA MAP 21 planning guidance, and other relevant materials. All planning principles and financial assumptions in identifying federal and state financial resources are developed with and reviewed by federal, state, and transit partners.

Revenue Assumptions

Revenue estimates are for capital project expenditures only and do not include any operating funds. All revenue amounts are in Year of Expenditure (YOE) dollars, as required by federal regulations. No new or undefined funding sources are recognized in the fiscally constrained Plan.(i.e. tolls on existing facilities, public private partnerships)

A lot has changed relative to transportation funding since the last LRTP Update in 2011. On July 6, 2012, the nation's current transportation bill, Moving Ahead for Progress in the 21st Century Act (MAP-21), supplanted the previous transportation bill, Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). Pennsylvania House Bill 1060 was signed into law the following year on November 25, 2013 resulting in "….the most comprehensive piece of state transportation legislation in decades."[3]

These bills imparted new objectives and areas of focus for transit, and, in the case of the state, additional funding for key initiatives.

Federal Funding

The current federal transportation bill, MAP-21 was a two-year authorization covering fiscal years 2013-2014 that provided $40.4 and $40.0 billion for fiscal year 2013 and 2014 in highway trust funding as well as $10.6 billion and $10.7 billion respectively for public transportation. The bill expired May 31, 2015 and has since been extended twice by Congress, most recently until October 29, 2015.

Financial projections of federal funding from the Pennsylvania's 2015 Transportation Program Financial Guidance document indicated 0% growth in Federal funds from 2015 to 2018, therefore for purposes of this plan, 0% growth was assumed through to 2040.

Highway Funding

MAP-21 restructures core highway formula programs. Activities carried out under some existing formula programs – the National Highway System Program, the Interstate Maintenance Program, the Highway Bridge Program, and the Appalachian Development Highway System Program – are incorporated into the following new core formula program structure:

- National Highway Performance Program (NHPP)

[3] http://www.dot.state.pa.us/internet/web.nsf/Secondary?OpenFrameSet&Frame=main&Src=%2Finternet%2Fweb.nsf%2FTransportationFunding%3FOpenForm%26AutoFramed

- Surface Transportation Program (STP)
- Congestion Mitigation and Air Quality Improvement Program (CMAQ)
- Highway Safety Improvement Program (HSIP)
- Railway-Highway Crossings (set-aside from HSIP)
- Metropolitan Planning

It creates two new formula programs:

- Construction of Ferry Boats and Ferry Terminal Facilities – replaces a similarly purposed discretionary program.
- Transportation Alternatives (TA) – a new program, with funding derived from the NHPP, STP, HSIP, CMAQ and Metropolitan Planning programs, encompassing most activities funded under the Transportation Enhancements, Recreational Trails, and Safe Routes to School programs under SAFETEA-LU

Transit Funding

According to the American Public Transportation Association, the extension does not increase funding for "…public transportation infrastructure, which has an $88 billion backlog in needed repairs."[4]

The changes introduced by MAP-21 center mostly on safety, state of good repair, performance and program efficiency. Significant emphasis is placed on replacing and/or restoring public transportation's aging assets and infrastructure. To ensure agencies' assets comply with a state of good repair, the Federal Transit Administration (FTA) established a "needs-based formula" program for funding as well as new asset maintenance requirements. The bill authorized the following national funding levels relative to this priority:[5]

- State of Good Repair Formula Apportionment - $2 billion based on formula high intensity fixed guideway and high intensity motorbus

MAP-21 also expands safety guidelines to encompass bus-only agencies. Previously, agencies that operated rail systems were the only agencies required to develop safety plans and comply with national guidelines. But over the next two years, FTA will be rolling out its regulations and minimum standards for bus agencies' safety plans. FTA's Safety Oversight Program Formula Apportionment is $18.5 million nationwide including $1.12 million for Pennsylvania, which is established on a formula of base tier, modal tier, passenger miles, vehicle revenue miles, directional miles.[6]

State Funding

ACT 89, implemented in 2014, increased funding for all transportation by $2.3 billion annually. This includes an additional $1.65 billion per year for highway and bridges and

[4] http://www.progressiverailroading.com/passenger_rail/news/APTA-MAP21-extension-bill-falls-short-of-infrastructure-needs--44517
[5] http://www.fta.dot.gov/12853_16495.html
[6] http://www.fta.dot.gov/12853_16495.html

about $480 million per year for public transit. "Partial funding for the new transportation package is being derived from the elimination of the flat 12-cent gas tax and modernizing an outdated transportation financing structure through the uncapping of the wholesale, Oil Company Franchise Tax."[7] Funding for public transportation operations, sourced by Turnpike funds, will eventually shift to sales tax on motor vehicles as the primary source. Turnpike revenues will be used to help fund transit capital projects until the Turnpike as a revenue source for transit operating and capital sunsets in 2021, according to the Act.

The full increase in funding will be realized by 2018 with some fees adjusted for inflation over time. The Commonwealth anticipates that this increased investment will help transit agencies evade inevitable service cuts and meet critical capital needs. Like the FTA's focus on State of Good Repair, one of ACT 89's objectives is to "maximize the benefits of capital investment for all modes of transportation" by providing funds for initiatives that improve transit infrastructure thereby improving the effectiveness of the transit network.

The ACT also encourages investments in alternative energy projects. As such, the Commonwealth authorized up to $60 million from 1514 discretionary capital for these project types as well as establishment of an "Alternative Energy Capital Investment Program for public transportation providers to invest in equipment and facility upgrades to utilize alternative technologies such as hybrid and natural gas."[8]

Pennsylvania's 2015 Transportation Program Financial Guidance document projected increases in state funding from 2015 to 2018 but indications from the draft 2017 guidance indicates a 7.5% per year decline in state funding is anticipated from 2018 to 2020 due to additional costs associated with the State Police pension fund. Therefore for purposes of this plan, state revenue declines to 2020 and then continues with no change from 2021 to 2040.

Estimated Revenue for the Plan

As noted above, a short term decline in state revenue is projected with no change in federal funding over the term of the plan. Based on financial guidance distributed by the Program Center a three percent YOE was used for all project estimates.

Federal and state funding allocation formulas, along with anticipated local match requirements, were used to develop the revenue estimates for the Plan. The Plan anticipates $1.7 billion YOE dollars in total federal and state. Revenue assumptions are shown in ***Table 4.12.1*** allocation of that revenue is shown in ***Table 4.12.2***

[7] ftp://ftp.dot.state.pa.us/public/Bureaus/PublicTransportation/GeneralInformation/Act_89_Summary_Presentation.pdf
[8] http://www.dot.state.pa.us/public/pdf/TRANSPLAN/FINAL_Trans_Funding_Plan_Summary.pdf

Projects on the Plan

Figure 4.12.1 present the projects on the fiscally constrained Long Range Transportation Plan by project category. This list is based on the prioritization process noted above along with consultation with the MPO and will be used in guiding the MPO through the next Transportation Improvement Program update.

Table 4.12.1 Revenue

FUNDING		2015	2016	2017	2018	2019-2020	2021-2022	2023-2026	2027-2040	TOTALS
Base Allocation		61,722,000	66,378,000	72,399,000	69,701,175	132,103,047	129,794,721	259,589,441	908,563,045	1,700,250,429
Federal Transit (Capital)		5,671,000	5,671,000	5,671,000	5,671,000	11,342,000	11,342,000	22,684,000	79,394,000	147,446,000
State Transit (Operating)		14,837,000	14,837,000	14,837,000	14,837,000	29,674,000	29,674,000	59,348,000	207,718,000	385,762,000
NHPP Allocation		17,886,000	17,886,000	17,886,000	17,886,000	35,772,000	35,772,000	71,544,000	250,404,000	465,036,000
STP Allocation		6,133,000	6,133,000	6,133,000	6,133,000	12,266,000	12,266,000	24,532,000	85,862,000	159,458,000
STP-Urban		6,211,000	6,211,000	6,211,000	6,211,000	12,422,000	12,422,000	24,844,000	86,954,000	161,486,000
State Highway		12,200,000	16,496,000	22,010,000	20,359,250	36,252,190	34,839,767	69,679,533	243,878,366	455,715,105
State Bridge		9,942,000	10,302,000	10,809,000	9,998,325	17,803,267	17,109,634	34,219,267	119,767,436	229,950,929
Off-System Bridge		3,152,000	3,152,000	3,152,000	2,915,600	5,191,590	4,989,321	9,978,641	34,925,244	67,456,395
HSIP		2,375,000	2,375,000	2,375,000	2,375,000	4,750,000	4,750,000	9,500,000	33,250,000	61,750,000
CMAQ		3,439,000	3,439,000	3,439,000	3,439,000	6,878,000	6,878,000	13,756,000	48,146,000	89,414,000
TAP		384,000	384,000	384,000	384,000	768,000	768,000	1,536,000	5,376,000	9,984,000
										0
										0
TOTAL		61,722,000	66,378,000	72,399,000	69,701,175	132,103,047	129,794,721	259,589,441	908,563,045	1,700,250,429
2015 to 2017 $ and 2018 non-State $ based on Pennsylvania's 2015 Transportation Program Fiancial Guidance										
2018 to 2020 $ assume a 7.5% decline/year in State funds (State Highway, Bridge, Off-System Bridge)										
0% increase in Federal Funds from 2019-2040, and State funds from 2021 to 2040										

Table 4.12.2 Expenditures

EXPENDITURES	2015	2016	2017	2018	2019-2020	2021-2022	2023-2026	2027-2040
NHPP PROJECTS	73,742,636				20,358,054	30,680,454	66,433,938	154,737,459
STP/STU PROJECTS	48,926,760				22,023,821	13,681,407	39,176,318	121,516,574
STATE HIGHWAY PROJECTS	69,695,080				36,012,000	26,887,653	53,903,251	57,002,205
STATE BRIDGE PROJECTS	37,813,981				16,902,682	14,748,500	30,944,578	115,477,288
OFF-SYSTEM BRIDGE PROJECTS	10,129,650				4,562,500	4,760,720	7,614,896	10,693,923
SAFETY (HSIP) PROJECTS	12,178,838				4,593,495	3,658,886	8,527,665	14,087,465
CONGESTION (CMAQ) PROJECTS	12,514,750				5,862,735	5,723,259	12,910,998	14,731,388
TRANSPORTATION ALTERNATIVE PROJECTS	2,024,422				0	0	0	0
NHPP RESERVE	2,188,677				15,413,946	5,091,546	5,110,062	95,666,541
STP/STU RESERVE	1,511,085				2,664,179	11,006,593	10,199,682	51,299,426
STATE HIGHWAY RESERVE	1,613,920				240,190	7,952,114	15,776,282	186,876,161
STATE BRIDGE RESERVE	5,187,507				900,585	1,377,703	2,672,615	4,290,148
OFF-SYSTEM BRIDGE RESERVE	3,121,433				629,090	228,601	2,363,745	24,231,321
SAFETY (HSIP) RESERVE	1,641,162				156,505	1,091,114	972,335	19,162,535
CONGESTION (CMAQ) RESERVE	1,241,250				1,015,265	1,154,741	845,002	33,414,612
TAP RESERVE	768,000				768,000	768,000	1,536,000	5,376,000
TOTAL PROJECTS	284,299,151				110,315,287	101,124,309	220,113,718	488,246,301
TOTAL RESERVE	17,273,034				21,787,760	28,670,412	39,475,723	420,316,744
TOTAL PROJECTS + RESERVE	301,572,185				132,103,047	129,794,721	259,589,441	908,563,045
	111.6%				100.0%	100.0%	100.0%	100.0%
TOTAL ALLOCATION	270,200,175				132,103,047	129,794,721	259,589,441	908,563,045
TRANSIT PROJECTS	43,487,000				62,554,021	26,523,923	43,533,533	102,646,179
TRANSIT RESERVE	-				-	-	-	-
TOTAL TRANSIT PROJECTS +RESERVE	43,487,000				62,554,021	26,523,923	43,533,533	102,646,179
	53.0%				152.5%	64.7%	53.1%	35.8%
TOTAL TRANSIT ALLOCATION	82,032,000				41,016,000	41,016,000	82,032,000	287,112,000

Outreach & Coordination and EJ/Title 6 Analysis

To be finalized once public involvement is completed.