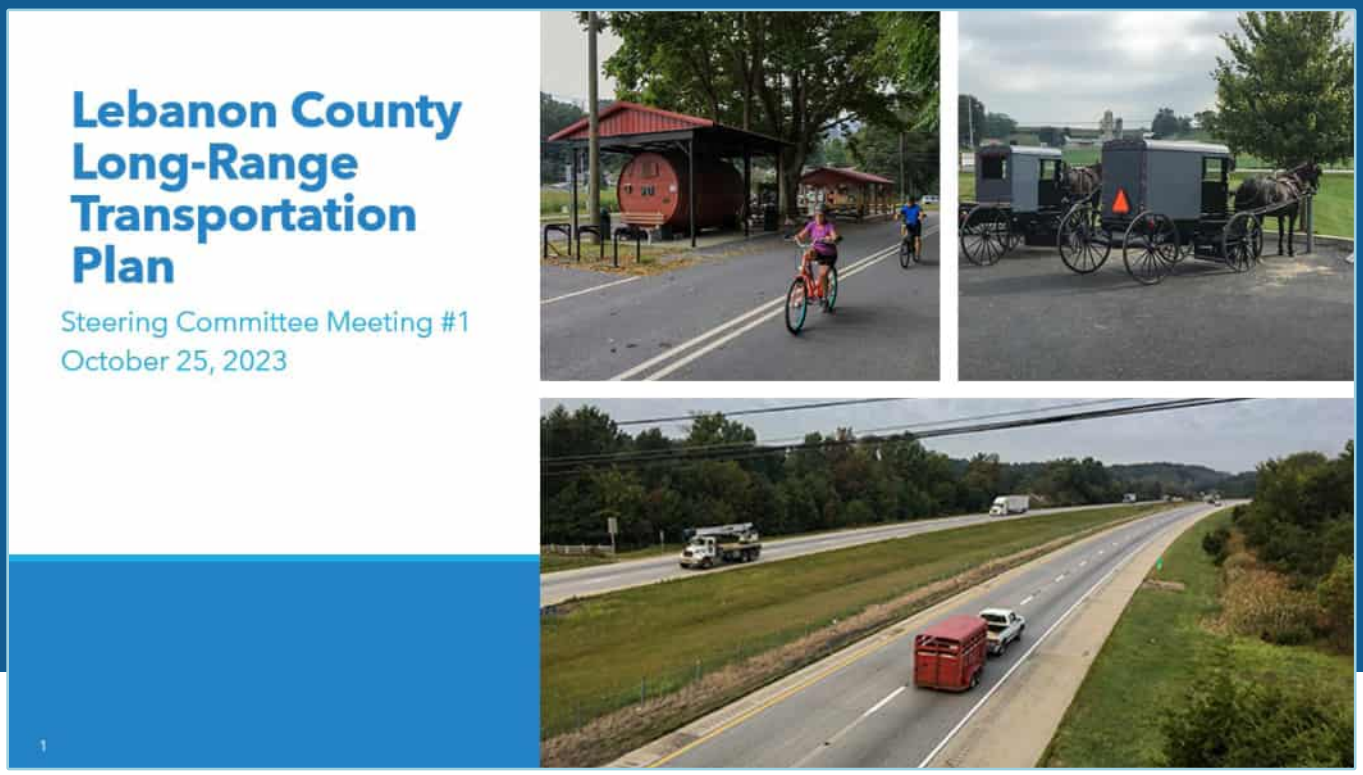
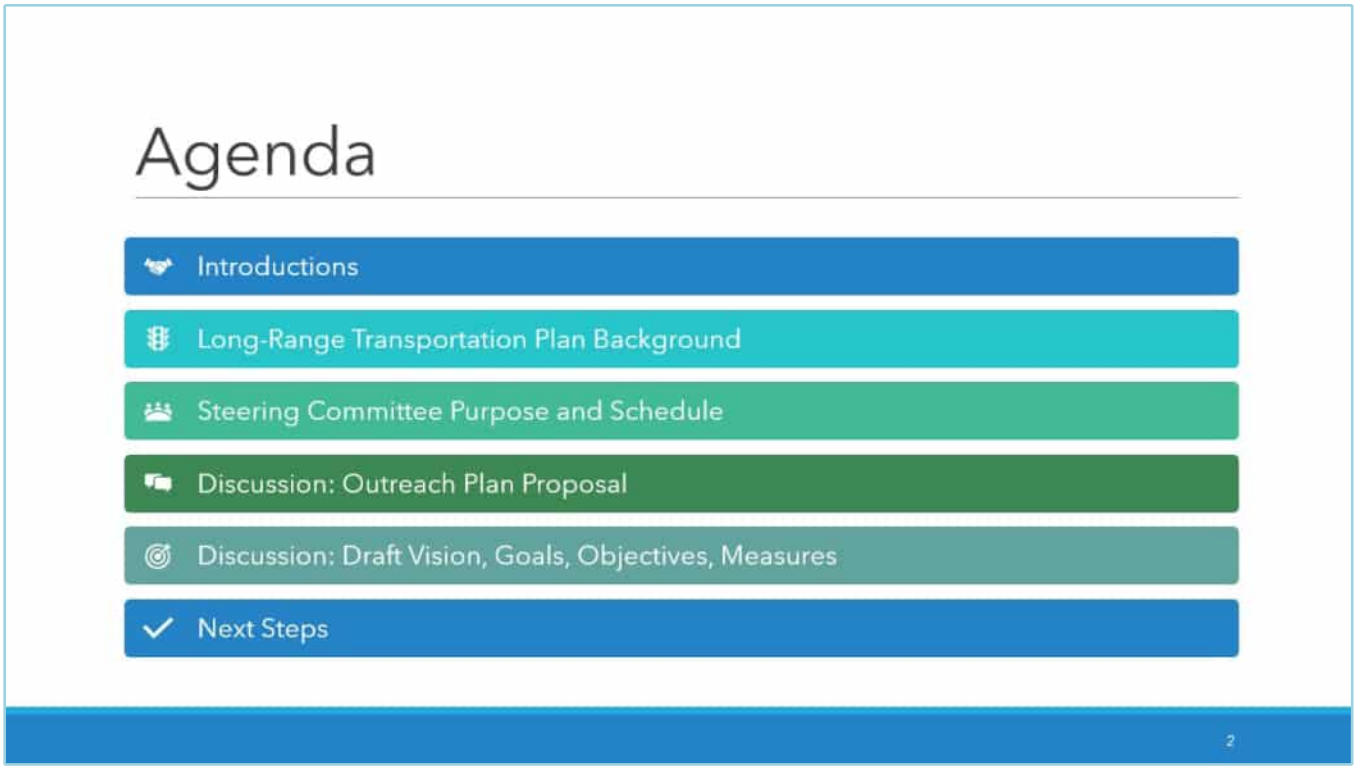
APPENDIX

APPENDIX A

Public Outreach Materials

1. Steering Committee #1 Presentation





Team Introductions

Lebanon County Planning

- Jon Fitzkee
- Song Kim
- Julie Cheyney

WSP Team

- Steve Chiaramonte (Project Manager)
- Alma Fargason
- Michelle Beaulieu
- Heather MacDougall

3

Steering Committee Introductions

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Long-Range Transportation Plan (LRTP) Background

5

LRTP Purpose

- **Long-term vision** (20 years) for the future of Lebanon County's transportation system
- **Policy statement** of the Metropolitan Planning Organization (MPO)
- Required for **federal and state funding** to transportation projects
- Decision-making tool
- Identifies issues for further study
- Helps inform the Comprehensive Plan
- Drives the Transportation Improvement Program (TIP) & Unified Planning Work Program (UPWP)

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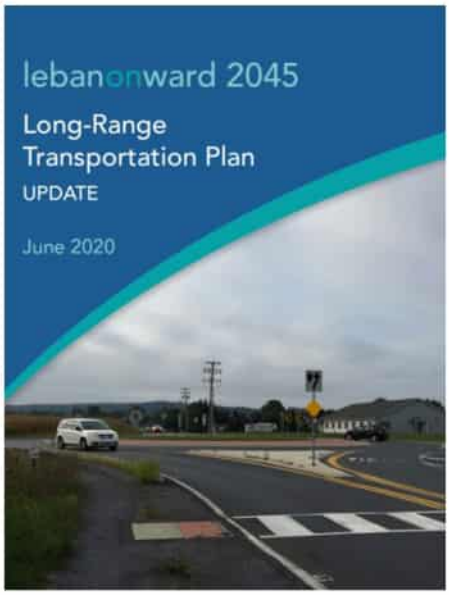

Previous Lebanon County LRTP

- Last updated in 2020
- Consistent with the Transportation Element of the 2007 County Comprehensive Plan
- leban**on**ward 2045 will be the starting point for the new plan

7

Updating the LRTP

Federal law requires:

- That an MPO be designated for each urbanized area
- A metropolitan area must have a **continuing**, **cooperative**, and **comprehensive** (3C) **transportation planning process** that results in plans and programs that consider all transportation modes and supports metropolitan community development and social goals
- These plans and programs shall lead to the development and operation of an **integrated, intermodal transportation system** that facilitates the efficient movement of people and goods
- The transportation plan shall be reviewed and **updated at least every four years** to confirm its validity and its consistency with current and forecasted transportation and land use conditions and trends

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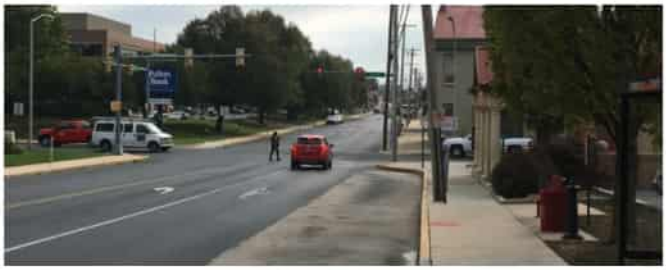
LRTP Steering Committee Purpose and Schedule



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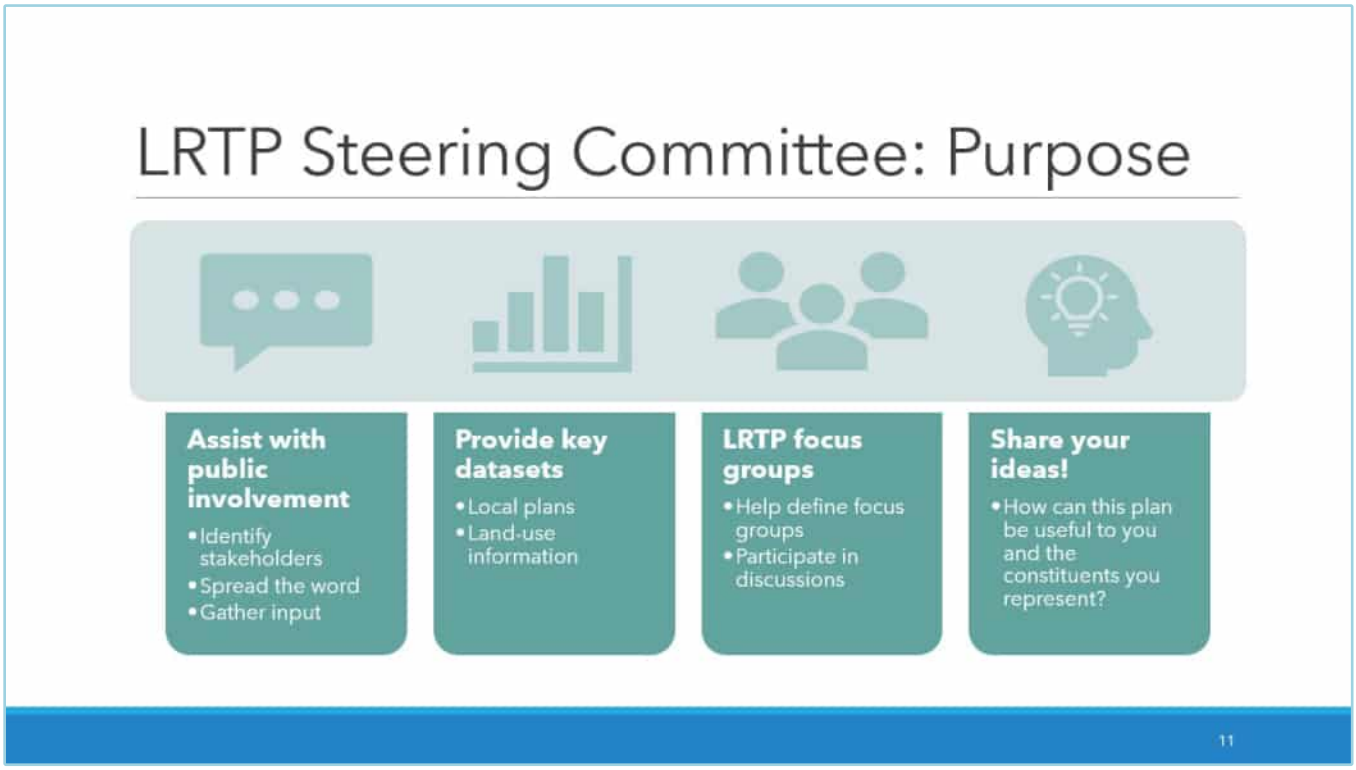
LRTP Outline

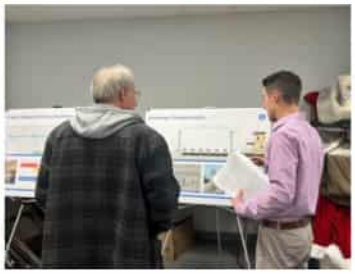
1. Goals and Objectives
2. Performance Measures
3. Inclusive Outreach and Collaboration
4. Modal/Network Analysis and Overview
5. Environmental Constraints
6. Projects, Actions, and Implementation
7. Project Funding

9


LRTP Steering Committee: Purpose
Assist with public involvement
•Identify stakeholders
•Spread the word
•Gather input
Provide key datasets
•Local plans
•Land-use information
LRTP focus groups
•Help define focus groups
•Participate in discussions
Share your ideas!
•How can this plan be useful to you and the constituents you represent?
11


LRTP Steering Committee: Schedule
Meeting #1: October 2023
• Outreach Plan
• Goals, Objectives, Measures
Meeting #2: January 2024
• Analysis Results
• Policy & Funding Recommendations
Meeting # 3: March 2024
• Outreach Summary
• Final Plan
LRTP Approval Deadline:
June 18, 2024
12

Discussion: Outreach Plan Proposal



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Outreach Plan Proposal

Outreach goals:

- **Educate** the public about transportation needs and funding in Lebanon County
- Be inclusive, including **meeting people in person** about the Long-Range Transportation Plan for the first time since before the COVID-19 pandemic (since the 2016 LRTP update)
- Capture **changing trends** in travel patterns and transportation needs
- Shape the transportation **investment priorities** for the next twenty years in the county

Question for discussion:
Are there other goals for meaningful outreach for the LRTP?

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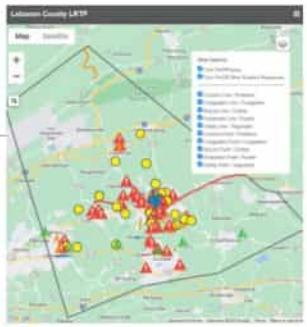
Outreach Plan Proposal



LRTP **Steering Committee** meetings

Municipal outreach

Stakeholder focus groups:
- Bicycle/Pedestrian
- Freight/Goods Movement
- Transit
- Municipal
- Disadvantaged Communities

Public meetings (in person)

Virtual public engagement
- Project website http://www.lebanoncountylrtp.com/
- Wikimap (multi-lingual) (image above)
- Project Survey (multi-lingual)

Questions for discussion:

What stakeholders and communities are particularly important to hear from?

What outreach tools have worked well for you?

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Outreach Plan Proposal

Draft survey questions:
- How do you get around, and what challenges do you experience?
- How have your travel patterns changed since the start of the COVID-19 pandemic?
- What types of projects are most important to fund today with the limited funding available? (Repair and maintain existing roadways; make safety improvements for all roadway users; etc)

Question for discussion:

Are there additional questions we should be asking?

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Outreach Plan Proposal

Questions for discussion:

- Do you feel that the proposal will result in meaningful engagement with the different communities in the county?
- Are we missing anything?

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Discussion:
Draft Vision, Goals, Objectives, Measures

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Vision, Goals, Objectives, Measures
Vision
What will the future look like?
Goals
Objectives
Measures
What does success look like?
What specific actions will help achieve the goals?
How will progress toward the goals be tracked?
Baseline
Where are we today?
Where do we want to be in 20 years?
Target
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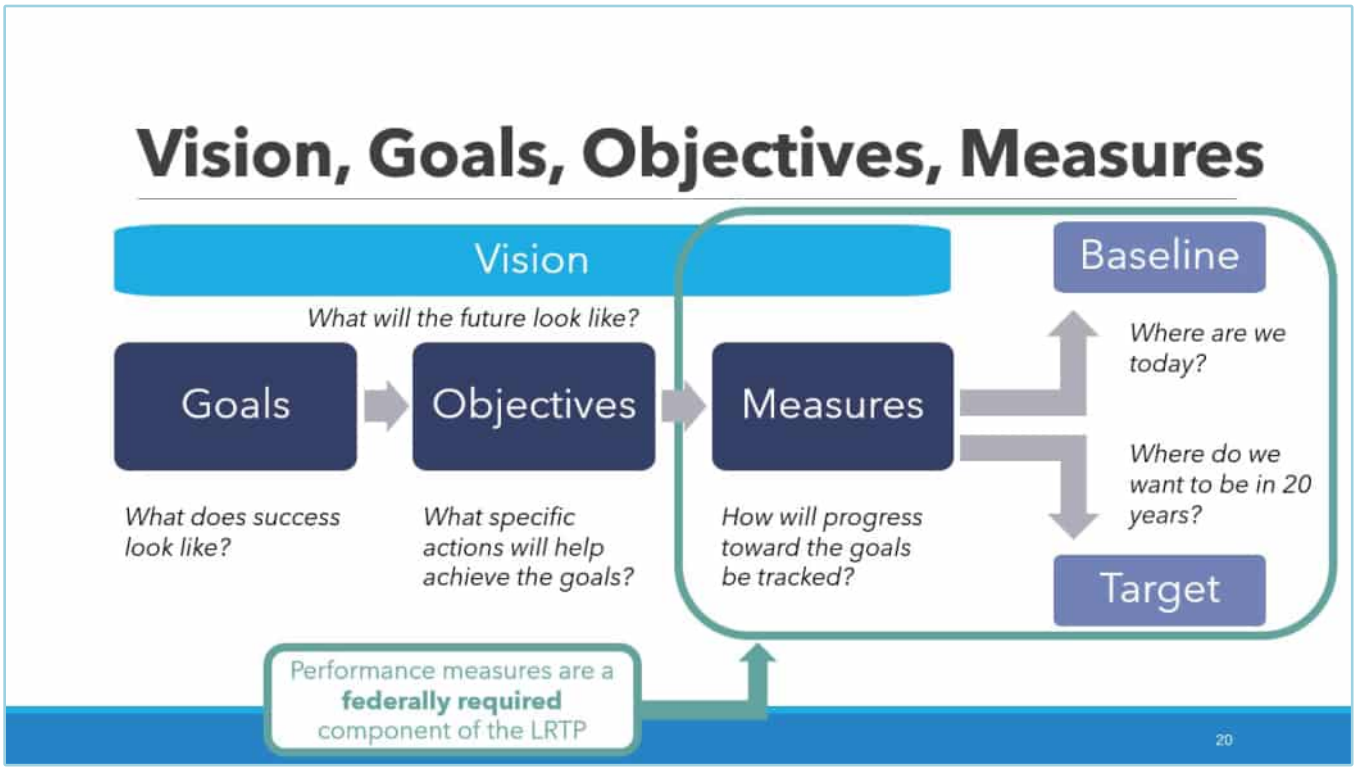
Vision, Goals, Objectives, Measures
Vision
What will the future look like?
Goals
Objectives
Measures
What does success look like?
What specific actions will help achieve the goals?
How will progress toward the goals be tracked?
Baseline
Where are we today?
Where do we want to be in 20 years?
Target
Performance measures are a federally required component of the LRTP
20

2020 LRTP **Vision and Goals**

lebanonward 2045 **Vision**

The transportation system of Lebanon County will safely, efficiently, and effectively service the mobility, access, and travel needs of all current and future users.

lebanonward 2045 **Goals**

- **Safety & Security:** Improve safety and security for all modes and all users
- **Personal & Freight Mobility:** Create a multi-modal transportation system that is efficient, interconnected, and accessible to all communities, and improves quality of life
- **Land Use & Environment:** Promote transportation and land use planning practices that enhance the county's natural and built environment
- **Asset Management:** Preserve transportation assets using sound management practices
- **Growth Management:** Meet the challenges and opportunities of growth through collaborative planning, funding, and project implementation
- **Funding:** Utilize all available funding sources and target investments for maximum local and regional benefit and impact
- **Economic Growth:** Facilitate and support the economic vitality of the County

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Setting **Goals**: Federal and State inputs

Federal Planning Factors

1. Support the **economic vitality** of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
2. Increase the **safety** of the transportation system for motorized and non-motorized users;
3. Increase the **security** of the transportation system for motorized and non-motorized users;
4. Increase **accessibility** and **mobility** of people and freight;
5. Protect and enhance the **environment**, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
6. Enhance the **integration and connectivity** of the transportation system, across and between modes, for people and freight;
7. Promote **efficient** system management and operation;
8. Emphasize the **preservation** of the existing transportation system;
9. Improve the **resiliency and reliability** of the transportation system and reduce or mitigate stormwater impacts of surface transportation; and
10. Enhance travel and **tourism**.

PennDOT Statewide 2045 LRTP goals

Safety Enhance safety and security for both motorized and non-motorized modes.	**Mobility** Strengthen transportation mobility to meet the increasingly dynamic needs of residents, businesses, and visitors.
Equity Improve transportation access and equity.	**Resilience** Strengthen transportation resilience to climate change and other risks and reduce transportation's environmental impacts.
Performance Improve the condition and performance of transportation assets	**Resources** Structure transportation funding and finance approaches that allocate sufficient resources for system safety, maintenance, preservation, and improvement.

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Draft Lebanon LRTP **Goals**

- **Safety & Security**: Improve safety and security for all modes and all users
- **Personal & Freight Mobility**: Create a multi-modal transportation system that is efficient, interconnected, and accessible to all communities, and improves quality of life
- **Equity**: Facilitate social and economic opportunity by providing equitable levels of access to affordable and reliable transportation, particularly for disadvantaged communities
- **Land Use, Environment, & Growth Management**: Promote collaborative transportation and land use planning and project implementation practices that enhance the county's natural and built environment, that reduce transportation's environmental impacts, and that meet the challenges and opportunities of growth
- **Economic Growth**: Facilitate and support the economic growth of the County
- **Asset Management & Resilience**: Preserve transportation assets using sound management practices, and improve the multi-modal transportation system's ability to withstand, respond to, and recover from environmental and other hazards
- **Funding**: Utilize all available funding sources and target investments for maximum local and regional benefit and impact

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Draft LRTP **Goals** and State/Federal Plans

Draft Lebanon LRTP Goals	State LRTP Goals						Federal Planning Factors
	Safety	Mobility	Equity	Resilience	Performance	Resources	
Safety & Security	●						2, 3, 4
Personal & Freight Mobility		●	●				2, 3, 4, 5, 6
Equity			●				4, 6
Land Use, Environment & Growth Management		●		●			1, 5, 7, 9, 10
Economic Growth		●					1, 4, 7, 10
Asset Management & Resilience					●		7, 8
Funding						●	7, 8

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Draft Lebanon LRTP **Vision**

The transportation system of Lebanon County will safely, efficiently, and effectively service the mobility access, and travel needs of all current and future users.

Questions for discussion:

Does this Vision Statement still reflect the current needs of Lebanon County residents and visitors?

Do you have any suggested updates or changes?

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leban**on**ward 2045 **Objectives** and **Measures**

Goal	Objectives	Measures
Safety & Security	Improve public understanding of high-risk traveling behaviors	Reduce transportation system fatalities Reduce serious injury crashes Reduce bicyclist, pedestrian, or buggy crashes
Personal & Freight Mobility	Increase access to jobs, labor, and transportation choices in urban, suburban, and rural communities Support communities through appropriate and equitable transportation modal options and investments Improve first and last mile intermodal access and connections Improve quality of life for county residents	Increase percentage of person-miles on Interstate/Non-Interstate roadways that are reliable Reduce number of substandard bridge under-clearances Improve County Health Ranking amongst Pennsylvania counties
Land Use & Environment	Enhance the performance of the transportation system while protecting the state's natural, cultural, and historic resources Encourage the development and use of innovative technologies Support coordination of land use and transportation planning Support clean air initiatives Promote initiatives aimed at improving system operations and energy efficiency	Meet or exceed CMAQ Emission Targets
Asset Management	Encourage state-of-good repair initiatives for all modes	Increase percentage of roadway pavement classified as fair or better Reduce the number of poor bridges Reduce the number of load-restricted bridges
Growth Management	Continue hosting Municipal Meetings and Conferences to facilitate cooperation, coordination, and information exchange Align local plans and projects across municipalities or counties Support technical assistance/training courses offered to municipalities	
Funding	Ensure TIP includes projects that will maximize benefits to local and regional users and achieve the goals of this plan Establish a database of applicable funding sources and public/private grant opportunities Create an application schedule for public/private grant opportunities	
Economic Growth	Support economic development	Increase annual number of visitors to Lebanon County

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Draft LRTP **Objectives** and **Measures**

Draft Goal	Objectives	Measures
Safety & Security	• Prioritize investments that improve road safety and security for all users	• Reduce transportation system fatalities • Reduce serious injury crashes • Reduce bicyclist, pedestrian, or buggy crashes

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Draft LRTP **Objectives** and **Measures**

Draft Goal	Objectives	Measures
Personal & Freight Mobility	• Increase access to jobs and improve transportation choices in urban, suburban, and rural communities • Improve first and last mile intermodal access and connections	• Increase percentage of person-miles on Interstate/Non-Interstate roadways that are reliable • Reduce number of substandard bridge under-clearances • Increase biking and walking mode share

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Draft LRTP **Objectives** and **Measures**

Draft Goal	Objectives	Measures
Equity	• Improve transportation choices for disadvantaged communities • Reduce transportation-related emissions on roadways in or next to disadvantaged communities	• Increase ridership on Lebanon Transit • Implement three projects to improve convenience and customer experience for transit riders, pedestrians, and/or bicyclists in disadvantaged communities • Implement two projects that encourage multimodal travel on high-volume roadways in disadvantaged communities

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Draft LRTP **Objectives** and **Measures**

Draft Goal	Objectives	Measures
Land Use, Environment, & Growth Management	• Align local plans and projects across municipalities or counties and support coordination of land use and transportation planning • Support clean air initiatives • Continue hosting Municipal Meetings and Conferences to facilitate cooperation, coordination, and information exchange • Support or provide technical assistance/training courses to municipalities	• Meet or exceed CMAQ Emission Targets • Improve County Health Ranking amongst Pennsylvania counties • Increase number of MPO-hosted municipal training opportunities

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Draft LRTP **Objectives** and **Measures**

Draft Goal	Objectives	Measures
Economic Growth	• Support tourism, businesses, and industry by improving access and improving transportation options	• Increase annual number of visitors to Lebanon County • Increase transportation planning training opportunities for municipal and economic development officials

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Draft LRTP **Objectives** and **Measures**

Draft Goal	Objectives	Measures
Asset Management & Resilience	• Encourage state-of-good repair initiatives for all modes • Promote initiatives aimed at improving system operations and energy efficiency • Include resiliency considerations in all transportation project design	• Increase percentage of roadway pavement classified as fair or better • Reduce the number of poor bridges • Reduce the number of load-restricted bridges

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Draft LRTP **Objectives** and **Measures**

Draft Goal	Objectives	Measures
Funding	• Ensure investment plan includes projects that will maximize benefits to local and regional users and achieve the goals of this plan • Establish and maintain a database of applicable funding sources and public/private grant opportunities • Create an application schedule for public/private grant opportunities	• Increase the number of federal and state transportation grants applied for • Increase the number of federal and state transportation grants awarded • Increase the dollar amount of federal and state transportation funding awarded

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Next Steps

Begin Outreach

- Focus Groups (early December 2023)
- Project website updates
- Online survey / Wikimap

Mapping and Analysis

- Develop draft Policy and Funding Recommendations

Next Steering Committee Meeting – January 2024

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Thank you!
Team member contacts:
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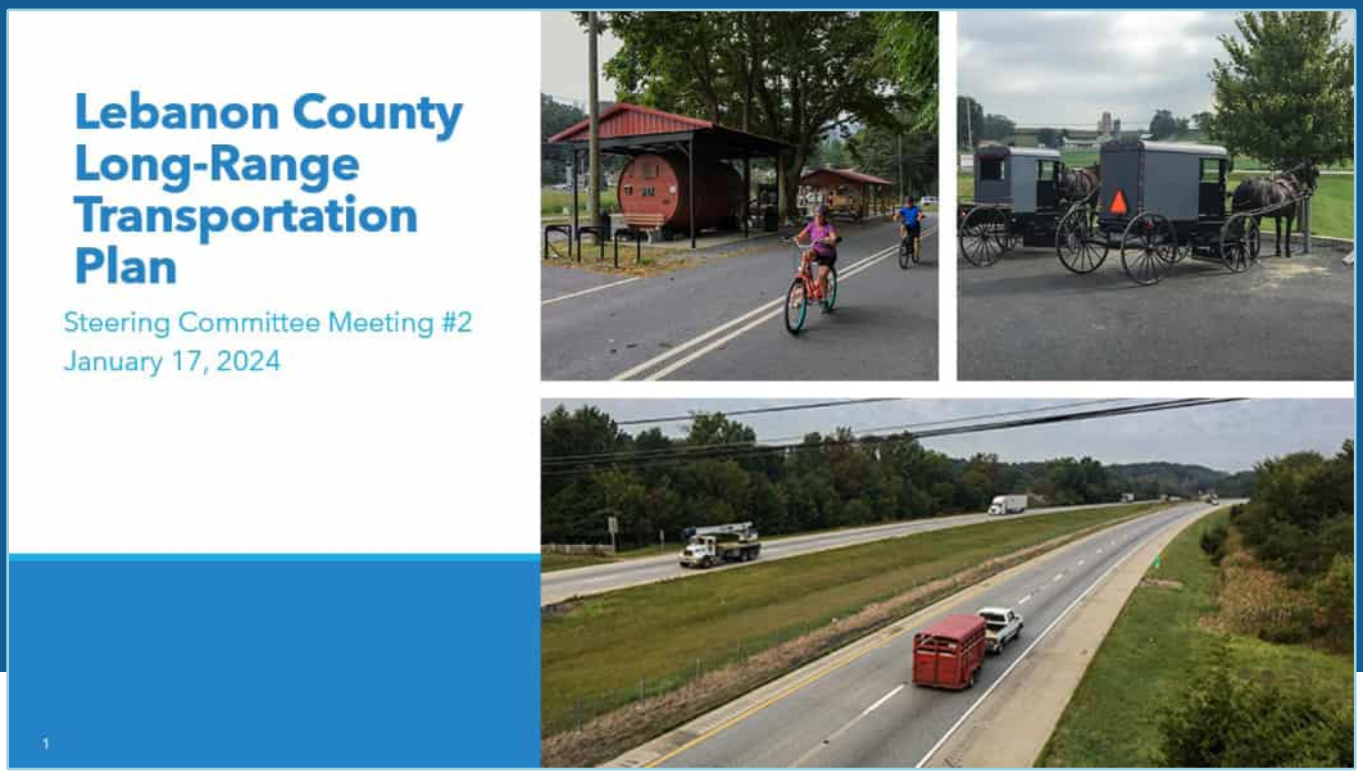
Jonathan Fitzkee
Jon.Fitzkee@lebanoncountypa.gov
717-228-4444
35

2. Steering Committee #2 Presentation



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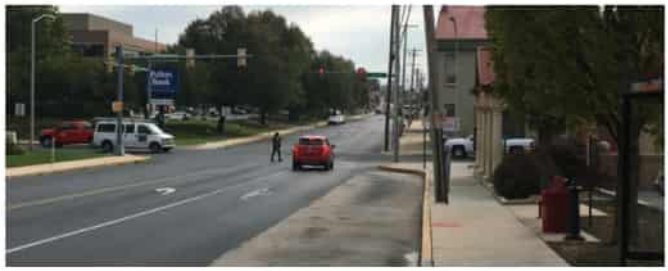
LRTP Steering Committee Purpose and Schedule



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Meeting # 3: March 2024
• Outreach Summary
• Review of Final Plan
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Lebanon LRTP **Updated Goals**

- **Safety & Security**: Improve safety and security for all modes and all users
- **Personal Mobility**: Create a multi-modal transportation system that provides reliable, efficient, and convenient mobility for current and future residents and visitors
- **Freight Mobility**: Support reliable freight mobility, access, and experience for providers and residents
- **Equity**: Ensure the transportation system serves disadvantaged communities' transportation needs
- **Land Use and Environment**: Promote transportation and land use planning practices that enhance the county's natural and built environment
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Discussion: Demographic & Modal Analysis Takeaways

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Changing Demographics

	Percent Change	2012	2021
Total Population	+6.7%	133,578	142,486
White	+0.7%	119,364	120,177
Black	+20.9%	2,544	3,075
Asian	+55.5%	1,347	2,135
Hispanic and Latino	+60.6%	12,492	20,064
65+ Population	+19.9%	22,859	27,398

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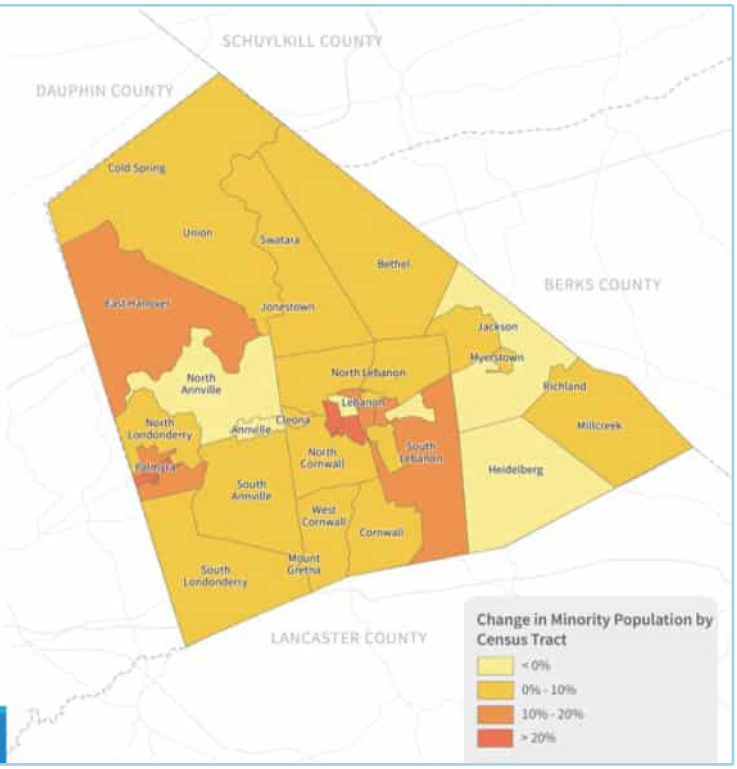
Change in Minority Populations



Changing Travel Patterns

Commute Method	Change	2008-2012	2017-2021
Drive Alone	-3%	81.3%	78.3%
Carpool	-0.5%	10.1%	9.6%
Transit	+0.2%	0.6%	0.8%
Bike	-0.2%	0.3%	0.1%
Walk	-0.7%	3.5%	2.8%
Work From Home	+4%	3.4%	7.4%

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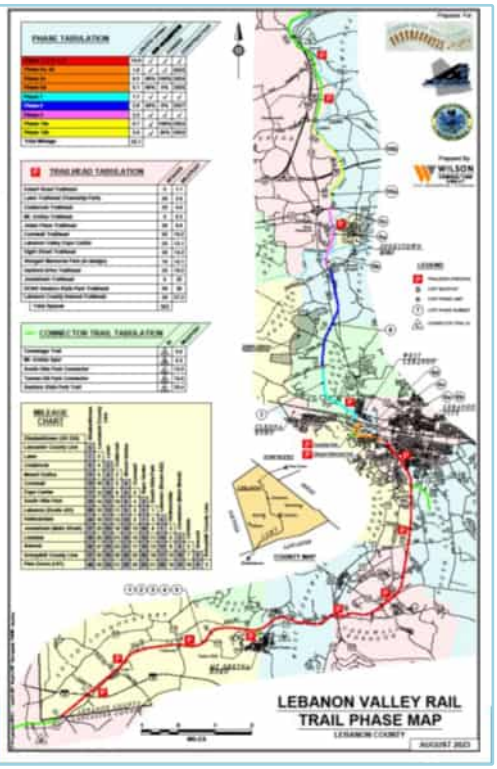
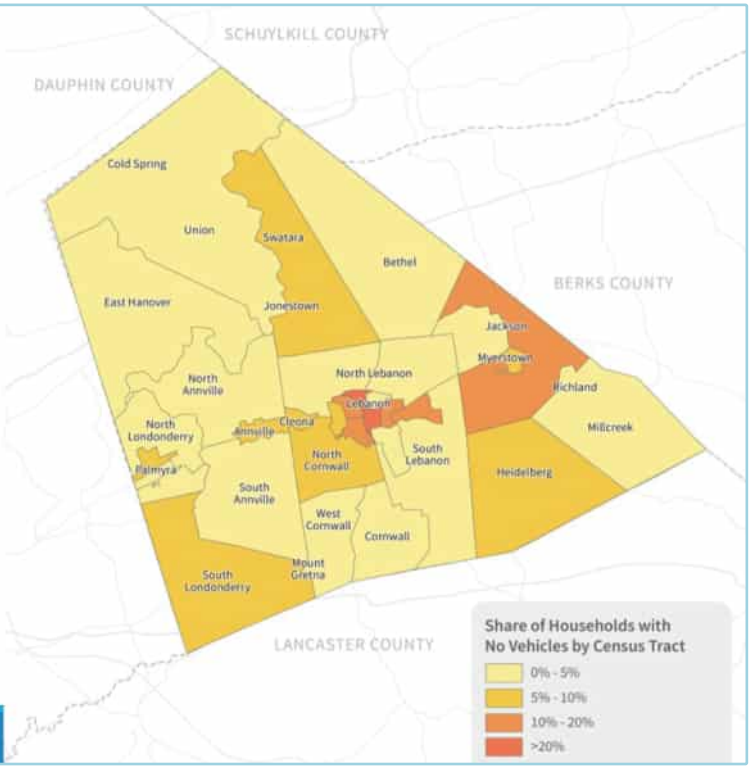
Trails

- Since 2019, trail users on the southern half of LVRT increased by 100,000 and is now up to **350,000 annual trail users**
- LVRT is expected to be **completed in 2027**



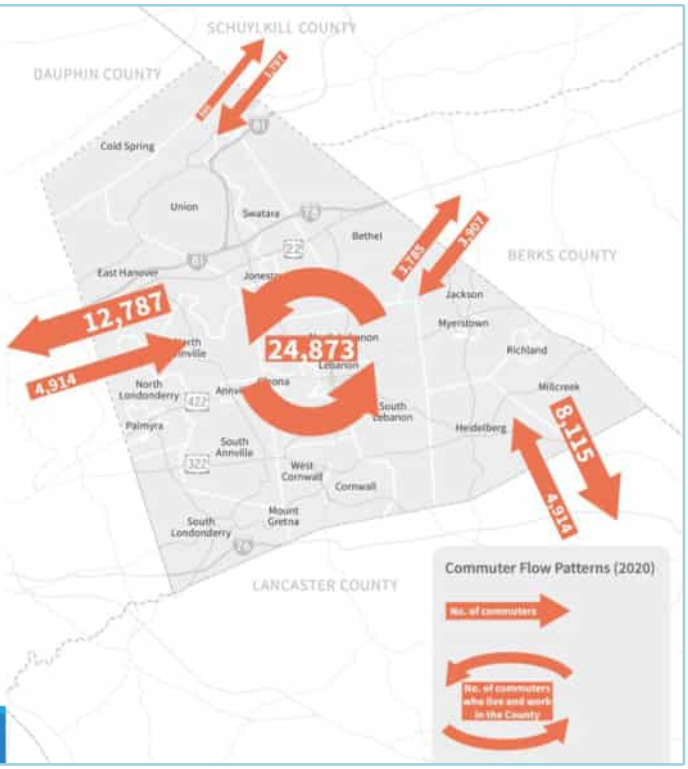
Households Without Vehicles Cluster in Lebanon and Eastern Lebanon County

	Pct Change	2012	2021
Households Without Vehicles	-16.9%	4,213	3,351



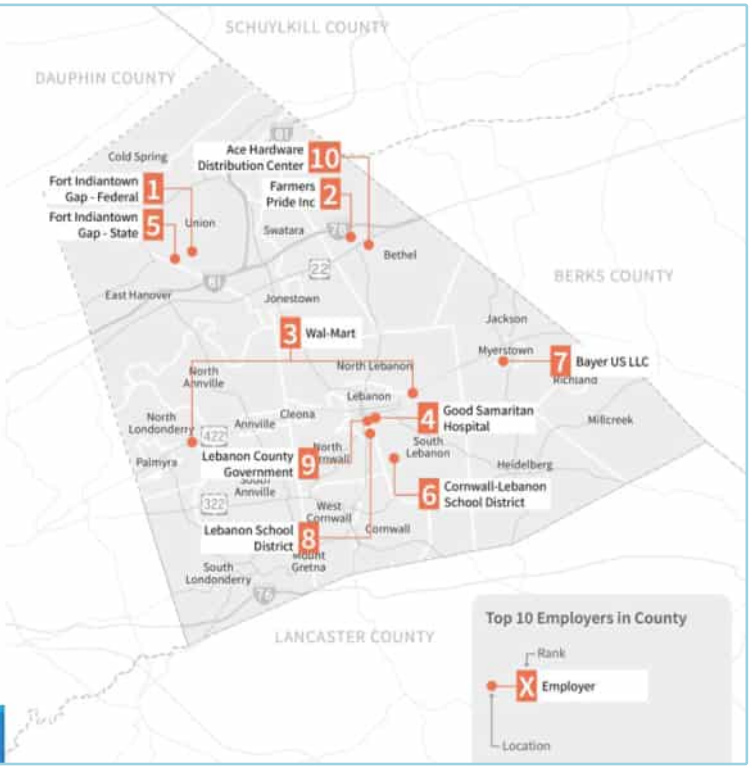
49% of employed residents work within the county

There are over 15,000 jobs in the county held by residents of other counties



The biggest employers include Fort Indiantown Gap, Farmers Pride, Walmart, and the school district.

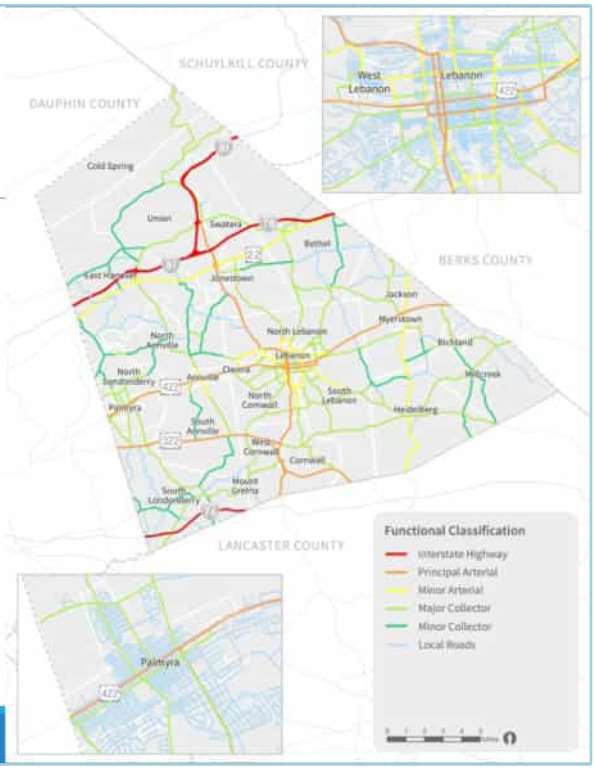
Bayer is a new top 10 employer.



Freight Analysis

Most concerned about minor roadways with heavier truck volumes.

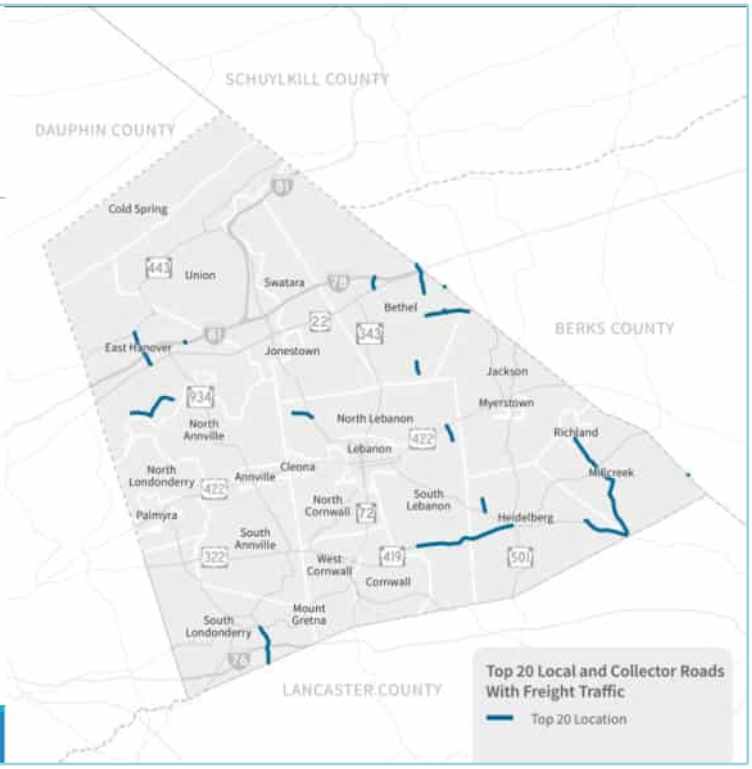
Top 20 list developed using functional classification and the percent of trucks on a roadway.



Top 20 Freight

Ranges from 19% - 11% truck traffic.

Rt 419 was also noted in the Freight focus group as an area of concern.



Discussion:
Review Outreach Materials & Promotion

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Outreach Plan

LRTP **Steering Committee** meetings

Stakeholder focus groups
- Bicycle/Pedestrian
- Freight/Goods Movement
- Schools

Municipal outreach – *call for projects*

Public meetings – *February and April 2024* (in person)

Virtual public engagement (bilingual)
- Project website
- Wikimap
- Project Survey

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Freight Focus Group Takeaways

Freight cut-through traffic

1. Significant **negative warehouse impacts** since last LRTP – warehouse footprints are increasing
2. Warehouses locating in the interior of the county, leading to **congestion** and increasing truck traffic on non-Interstate roadways
3. Opportunity to coordinate warehousing jobs and **transit** service
4. **Eastern PA Freight Alliance** has been positive but would like more resources to support
5. Potential for the County to create a **model ordinance** or overlay for municipalities to consider that could help mitigate freight-related impacts to warehousing development

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Schools Focus Group Takeaways

RRFBs in Annville on White Oak St

1. **Uneven enrollment growth** in school districts
2. Difficult to fill **bus driver** positions
3. Severe **congestion** impacts buses/school transportation
   - Pick-up and drop-off can cause severe congestion at specific times of day
4. **Varying transportation models** (and issues) by district: some bus to hubs, some don't bus, etc.
5. Students that walk have **long, unsafe walks**
   - RRFBs in Annville have been a great solution and more are wanted

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Bicycle/Pedestrian Focus Group Takeaways

1. Rise in **electric bicycles** and electric **scooters**
2. Issues with e-bikes and scooters **sidewalk riding** (and on trails)
3. **Truck traffic** changing bicyclists travel patterns due to safety concerns
4. **Speeding motorists** increasing concern for bicyclists and pedestrians
   - RRFBs in Annville wanted in Lebanon
5. Safe and clear **access to trails** is vital
6. Opportunities for **improved coordination** with MPO and bicycle/pedestrian community, particularly around paving

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Project Website

https://www.lebanoncountylrtp.com/

- Project "headquarters"
- Central place for updates, information about the plan, resources, and the survey/wikimap
- Option to view in Spanish
- Team will update as project progresses

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Survey

https://www.surveymonkey.com/r/LebCoLRTP

Spanish version: https://www.surveymonkey.com/r/LebCoLRTP-Spanish

- Survey to analyze existing transportation systems, prioritize project investments, and identify actions to improve transportation
- Option to view in Spanish

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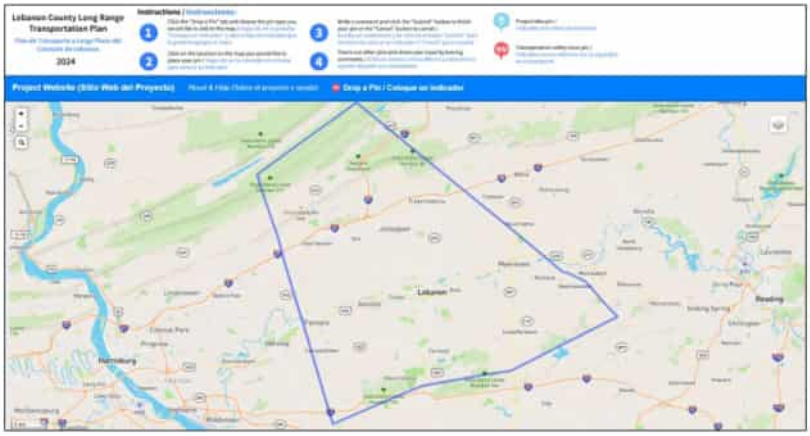
Wikimap

https://wikimapping.com/lebanoncountytransportationplan2024.html



- Place for public to spatially log project ideas and transportation safety issues
- In English and Spanish
- Team will monitor as comments come in

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Public Meeting Schedule

Public Meeting #1
Late February 2024

- Open-house style with four stations with boards and interactive exercises
- Station #1: "Why we're here"
  - What is an LRTP? Why is it important?
  - Draft goals – which is most important to you?
- Station #2: "What we're seeing"
  - A board per mode, chance to provide opportunities/experience traveling in the County
- Station #3: "What we're hearing"
  - Highlights from Steering Committee, focus groups, survey/wikimap
  - Post-its for additional thoughts
- Station #4: "What's next"
  - Summarizes project identification, prioritization, and funding processes
  - Example of a project moving through the process
  - List of current projects in TIP – ask what projects are most important to you

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Public Meeting Schedule

Public Meeting #2
Early April 2024

- Interactive small-group discussions interspersed with staff presentation of the draft final plan

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Discussion:
Call for Projects, Project Selection, Project Prioritization

32

What are LRTP Projects

- Transportation projects are required to be included in the LRTP to be eligible for federal and state funding
- The MPO is charged with **selecting and prioritizing** projects for the LRTP
  - Selected projects make up the **Fiscally Constrained** list
    - Prioritized and **funded** projects within the **4-year**, **12-year** and **20-year** budgets established by PennDOT using information from FHWA, FTA, and PennDOT
  - Projects not selected for the Fiscally Constrained list may be included in the LRTP as **Illustrative** of the greater need for investment in the county
- Projects will be collected via the MPO's Call for Projects to municipalities and other stakeholders

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LRTP Projects: Process

Municipalities and other stakeholders should submit all transportation projects that expect to **receive state and/or federal funds**, AND all projects that will **increase the capacity of the existing transportation system** (e.g., roadway widenings, trail extensions, etc).

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LRTP Projects: Past Successes

The LVRT: Phased development with a variety of funding

- Identified in the LRTP as an MPO priority early in development
- Consistent advocacy from municipalities and other stakeholders
- Funding came from a variety of sources, including federal and state funds, supported by local and private funding

LebTown, Oct 9, 2023

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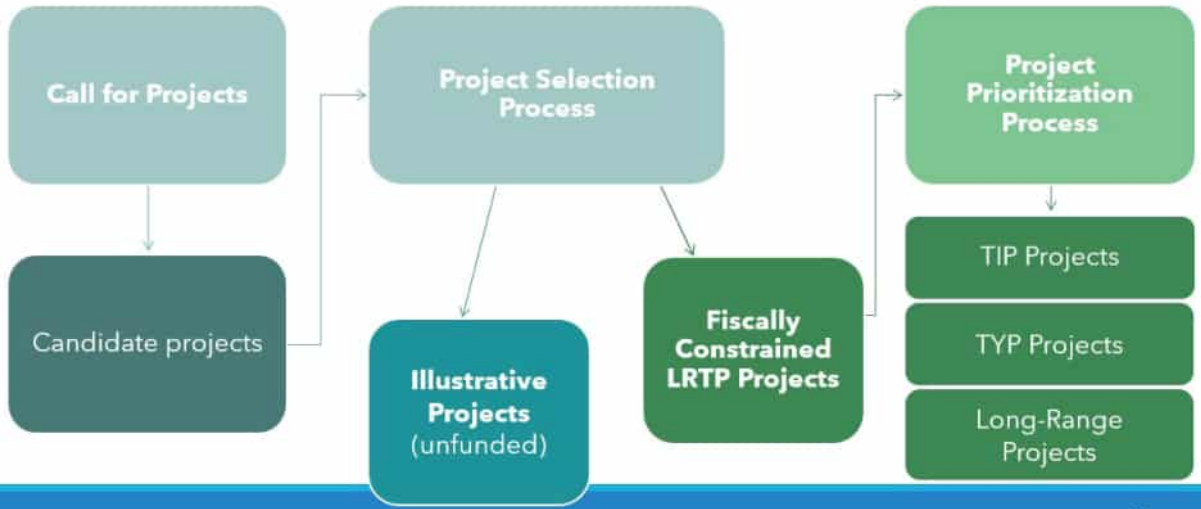
LRTP Projects: **Selection** and **Prioritization** Process



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LRTP Project Lists

Fiscally Constrained LRTP Project List

Eligible for competitive funding

Transportation Improvement Program (TIP)	Twelve-Year Transportation Program (TYP)	Long-Range LRTP Constrained	LRTP Illustrative
Near-term implementation (in the next 4 years)	Medium-term implementation (5-12 year)	Long-term implementation (13-20 years)	Implementation timeline is TBD
Projects have funding identified in next 4 years	Projects have funding identified in next 12 years	Projects can utilize formula funding in LRTP years 13-20	State/federal formula funding not identified for these projects
Projects are consistent with LRTP goals, have community support, and address known challenges			Projects may be consistent with LRTP goals, have community support, and/or address known challenges

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Project **Selection** Criteria

What is the project's status and schedule?

- ❑ Is the project already included in:
  - ❑ the State Transportation Improvement Plan (STIP)?
  - ❑ the State Twelve-Year Transportation Plan (TYP)?
  - ❑ the 2020 Lebanon County LRTP?
- ❑ How much funding (if any) is already committed or identified for the project?
- ❑ What is the project's schedule for construction?

Find the **STIP** and **TYP** at:
https://talkpatransportation.com/

*Selected projects will be recommended for the **Fiscally Constrained** LRTP.*

*Other projects may be included in the **Illustrative** project list.*

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Project **Prioritization** Criteria

- ❑ Does the project support the LRTP Goals?
- ❑ Does the project address takeaways identified in the LRTP modal analyses?
- ❑ Does the project address opportunities or concerns identified through LRTP outreach activities? Does it have otherwise identified support from the community?

Projects will be prioritized by timeframe:
- ***TIP Projects:*** *the first four years of the plan*
- ***TYP Projects:*** *years 5-12 of the plan*
- ***Long-Range Projects:*** *years 13-20 of the plan*

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LRTP Call for Projects **Questionnaire**

Project details:
- Scope
- Schedule
- Budget and Funding

Google Form

Project alignment with LRTP goals:
- Does the project help maintain existing transportation assets in a state of good repair?
- Does the project benefit disadvantaged communities?
- Does the project improve safety? Does it improve safe access to schools?
- Does the project provide multi-modal transportation benefits?
- Does the project support planned economic and housing growth?
- Does the project improve freight movement?

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LRTP **Call for Projects**

Municipalities and other stakeholders should submit all transportation projects that expect to **receive state and/or federal funds**, AND all projects that will **increase the capacity of the existing transportation system** (e.g., roadway widenings, trail extensions, etc).

Call for Projects Schedule	
Call for projects released	January 17, 2024
Responses due	February 1, 2024
Project discussions with stakeholders	Through early March 2024
Draft project selection and prioritization recommendations	March 12, 2024 (Steering Committee Meeting #3)

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Next Steps

Promote Public Outreach/Engagement

- Website (English and Spanish)
- Survey (English and Spanish)
- Wikimap (English and Spanish)
- Public meetings (February and April 2024) – *details forthcoming*

Municipal Outreach/Engagement

- Call for projects – *due end of February 2024*

Next Steps Committee Meeting – March 12th, 2024

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Thank you!

Team member contacts:

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609-865-3930

Alma Fargason
Alma.Fargason@wsp.com
215-209-1238

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Project **Prioritization** Criterion #1

1. **Does the project support the LRTP Goals?**

- ❑ *Does the project help maintain existing transportation assets in a state of good repair?*
- ❑ *Does the project benefit disadvantaged communities?*
- ❑ *Does the project improve safety? Does it improve safe access to schools?*
- ❑ *Does the project provide multi-modal transportation benefits?*
- ❑ *Does the project support planned economic and housing growth?*
- ❑ *Does the project improve freight movement?*

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Project **Prioritization** Criterion #2

2. **Does the project address takeaways identified in the LRTP Modal Analyses?** For example:

- ❑ *Takeaway 2*
- ❑ *Takeaway 3*
- ❑ *Takeaway 4*

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Project **Prioritization** Criterion #3

3. **Does the project address opportunities or concerns identified through LRTP outreach activities?** For example:

- ❑ *Does the project improve freight congestion?*
- ❑ *Does the project support safe access to the county's trail system?*
- ❑ *Does the project improve pedestrian safety and congestion concerns near schools?*

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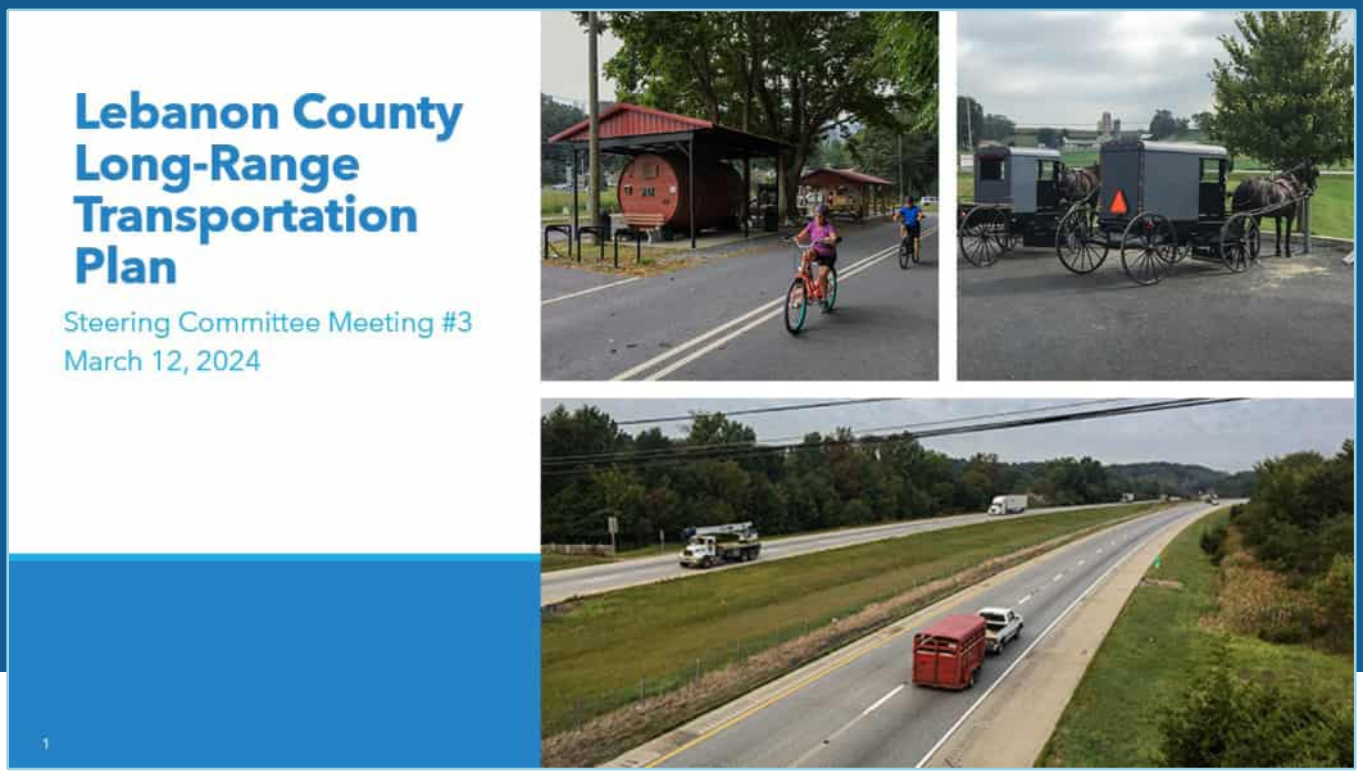
3. Steering Committee #2 Presentation



Team Introductions

Lebanon County Planning

- Jon Fitzkee
- Song Kim

WSP Team

- Steve Chiaramonte (Project Manager)
- Alma Fargason
- Michelle Beaulieu
- Heather MacDougall

3

Steering Committee Introductions

4

Long-Range Transportation Plan (LRTP) Background

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LRTP Purpose

- **Long-term vision** (20 years) for the future of Lebanon County's transportation system
- **Policy statement** of the Metropolitan Planning Organization (MPO)
- Required for **federal and state funding** to transportation projects
- Decision-making tool
- Identifies issues for further study
- Helps inform the Comprehensive Plan
- Drives the Transportation Improvement Program (TIP) & Unified Planning Work Program (UPWP)

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Lebanon LRTP **Goals**

- **Safety & Security**: Improve safety and security for all modes and all users
- **Personal Mobility**: Create a multi-modal transportation system that provides reliable, efficient, and convenient mobility for current and future residents and visitors
- **Freight Mobility**: Support reliable freight mobility, access, and experience for providers and residents
- **Equity**: Ensure the transportation system serves disadvantaged communities' transportation needs
- **Land Use and Environment**: Promote transportation and land use planning practices that enhance the county's natural and built environment
- **Growth Management**: Meet the challenges and opportunities of growth through collaborative planning, funding, and project implementation
- **Economic Growth**: Facilitate and support the economic vitality of the County
- **Asset Management & Resilience**: Preserve existing transportation assets and improve the multi-modal transportation system's ability to withstand, respond to, and recover from environmental and other hazards
- **Funding**: Utilize all available funding sources and target investments for maximum local and regional benefit and impact

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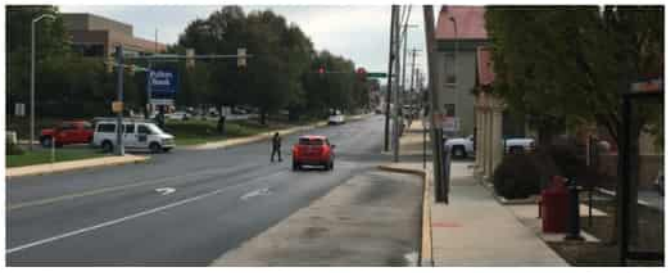
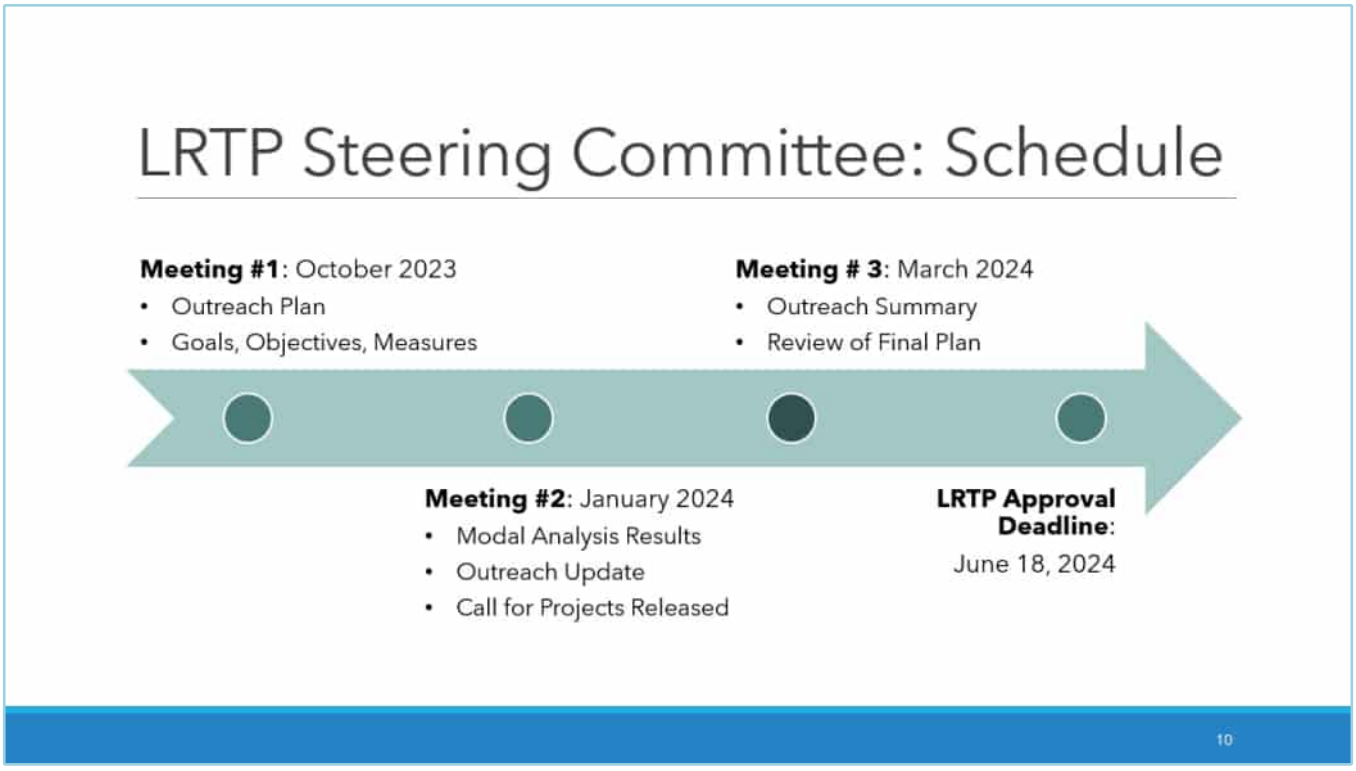
LRTP Steering Committee Purpose and Schedule



8


LRTP Steering Committee: Purpose
Assist with public involvement
• Identify stakeholders
• Spread the word
• Gather input
Provide key datasets
• Local plans
• Land-use information
LRTP focus groups
• Help define focus groups
• Participate in discussions
Share your ideas!
• How can this plan be useful to you and the constituents you represent?
9


LRTP Steering Committee: Schedule
Meeting #1: October 2023
• Outreach Plan
• Goals, Objectives, Measures
Meeting #2: January 2024
• Modal Analysis Results
• Outreach Update
• Call for Projects Released
Meeting # 3: March 2024
• Outreach Summary
• Review of Final Plan
LRTP Approval Deadline:
June 18, 2024
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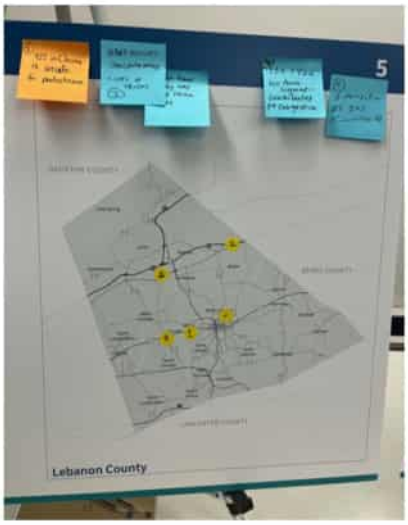
Discussion: Outreach Summary



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Outreach Plan

Outreach	Status
Steering Committee Meetings	Final meeting today ☑
Stakeholder **Focus Groups**	Completed December 2023 ☑
Call for Projects to Municipalities and Stakeholders	Completed January - February 2024 ☑
Virtual Engagement	Wikimap and Project Survey: Closing March 31 ⏳
Public Meeting #1	February 27, 2024 ☑
Public Meeting #2	April 2, 2024 📅

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Focus Group Takeaways

Schools

- Severe congestion impacts and during pick-up and drop-off times
- Difficult to hire bus drivers

Freight

- Increasing number of warehouses leads to increasing congestion
- A model ordinance or overlay developed by the county for municipalities could be helpful

Bike/Ped

- Safe and clear access to trails is vital
- Opportunities for improved coordination with MPO and bicycle/ pedestrian community, particularly around paving

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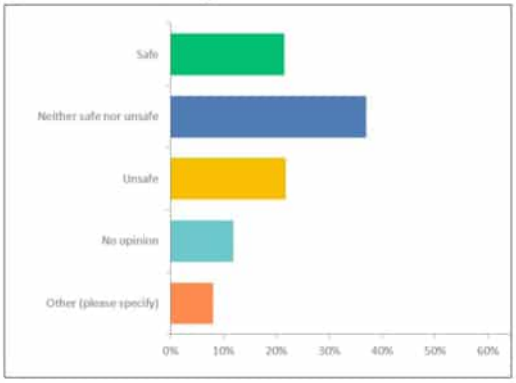
Survey Results *(as of March 11th)*

Q9: How would you rate safety on roadways in Lebanon County?



https://www.surveymonkey.com/r/LebCoLRTP

Spanish version: https://www.surveymonkey.com/r/LebCoLRTP-Spanish

- 362 survey responses, closes March 31st
- Respondents commuting to work or school 5 days a week has dropped by 20% since the COVID-19 pandemic
- 60% say roadways are in need of repair
- Typical respondents are 35-54, white, not Hispanic or Latino, and have a household income over 100k/year

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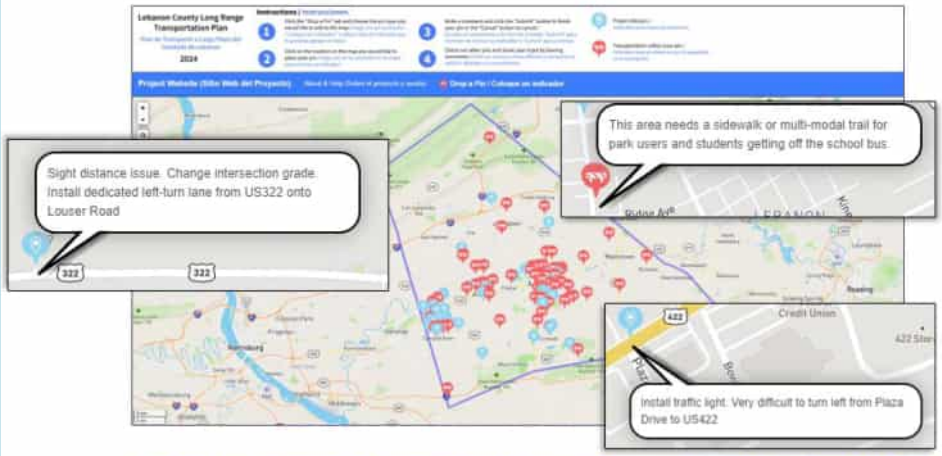
Wikimap Results *(as of March 11th)*



- 120+ pins
- Closes March 31st
- Assembling into map of potentially unsafe intersections

https://wikimapping.com/lebanoncountytransportationplan2024.html

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Public Meeting #1 Feedback

Key takeaways:

- Concern about truck traffic with **growing warehouse presence**
- Interest in seeing the **trail network** expanded
- **School** drop-off and pick-up times are challenging and at times unsafe
- Interest in expanding **inter-city transit**, potentially with a rail option

Any feedback from attendees on the format?

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Public Meeting Schedule

Public Meeting #2
April 2nd, 2024, 4:00-5:30 PM

Location: Lebanon Ag Center at Penn State Extension

2120 Cornwall Road, Suite 1

- Short (15 minute) presentation of draft plan with Q&A following

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Discussion:
Draft Plan: Implementation Actions

Implementation Actions in the LRTP

- Implementation actions are meant to guide LEBCO MPO to help realize plan goals in concert with the illustrative/municipal project list
- In the previous plan: 43 implementation actions
- From the focus groups: this update proposes reducing the number of implementation actions and for the ones included identify detailed set of next steps and responsible parties

How can LEBCO MPO best support your long-range transportation goals?

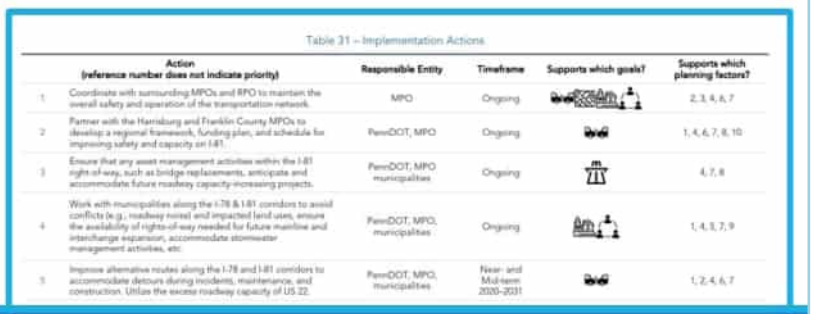

Table 31 – Implementation Actions

	Action (reference number does not indicate priority)	Responsible Entity	Timeframe	Supports which goals?	Supports which planning factors?
1	Coordinate with surrounding MPOs and RPO to maintain the overall safety and operation of the transportation network.	MPO	Ongoing		2, 3, 4, 6, 7
2	Partner with the Harrisburg and Franklin County MPOs to develop a regional framework, funding plan, and schedule for improving safety and capacity on I-81.	PennDOT, MPO	Ongoing		1, 4, 6, 7, 8, 10
3	Ensure that any asset management activities within the I-81 right-of-way, such as bridge replacements, anticipate and accommodate future roadway capacity-increasing projects.	PennDOT, MPO municipalities	Ongoing		4, 7, 8
4	Work with municipalities along the I-78 & I-81 corridors to avoid conflicts (e.g., roadway noise) and impacted land uses, ensure the availability of rights-of-way needed for future mainline and interchange expansion, accommodate stormwater management activities, etc.	PennDOT, MPO, municipalities	Ongoing		1, 4, 5, 7, 9
5	Improve alternative routes along the I-78 and I-81 corridors to accommodate detours during incidents, maintenance, and construction. Utilize the excess roadway capacity of US 22.	PennDOT, MPO, municipalities	Near- and Mid-term 2020–2031		1, 2, 4, 6, 7

2020 LebanOnward
Excerpt from Table 31 – Implementation Actions

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Example of a More Action-Oriented Implementation Action

4. Create a community-led bicycle/pedestrian advisory group – include coordination over resurfacing opportunities and set up recurring coordination/agenda items at MPO meetings.

Critical Path Item	Lead	Timeline
Invite interested parties to discuss the potential role of a bicycle/pedestrian advisory group	LEBCO MPO	Summer 2024
Formalize bicycle/pedestrian advisory group goals, activities, members – *could include biannual meetings with LEBCO MPO*	LEBCO MPO and Advisory Group	Fall 2024, recurring biannual
Coordinate with advisory group to include agenda items at MPO meetings	Advisory Group and LEBCO MPO	Recurring monthly

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What We Heard at the Focus Groups

Freight-related implementation actions

1. Develop a guide and model ordinance/overlay to help municipalities improve freight management – would include truck parking, transportation demand management tools, and connections to the SALDO
2. Dedicate resources to support PA Eastern Freight Alliance.
3. Encourage direct warehousing access to rail lines through local land use ordinances and planning.

Bicycle/pedestrian implementation actions

4. Create a community-led bicycle/pedestrian advisory group – include coordination over resurfacing opportunities and set up recurring coordination with advisory group at MPO meetings.

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Additional Implementation Actions from the Previous Plan

5. Restructure the County Liquid Fuels program to facilitate and provide funding for the construction of priority regional impact projects and to improve/maintain signal performance and bridge conditions. Consider adopting the optional $5 county vehicle registration fee.
6. Work to advance an MPO Congestion Monitoring Process to evaluate the county's roadway network and work to reduce or eliminate congestion.
7. Explore the potential for legislative relief to "turn back" the ownership of US 422 to PennDOT in the City of Lebanon.
8. Examine the feasibility of restoring US 422 and PA 72 to two-way traffic within the City of Lebanon.

Are there additional actionable ways that LEBCO MPO can help with your long-range transportation needs?

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Discussion:
Draft Plan:
Project Lists

What are LRTP Projects

- Transportation projects are required to be included in the LRTP to be eligible for federal and state funding
- The MPO is charged with **selecting and prioritizing** projects for the LRTP
  - Selected projects make up the **Fiscally Constrained** list
    - Prioritized and **funded** projects within the **4-year**, **12-year** and **20-year** budgets established by PennDOT using information from FHWA, FTA, and PennDOT
  - Projects not selected for the Fiscally Constrained list may be included in the LRTP as **Illustrative** of the greater need for investment in the county

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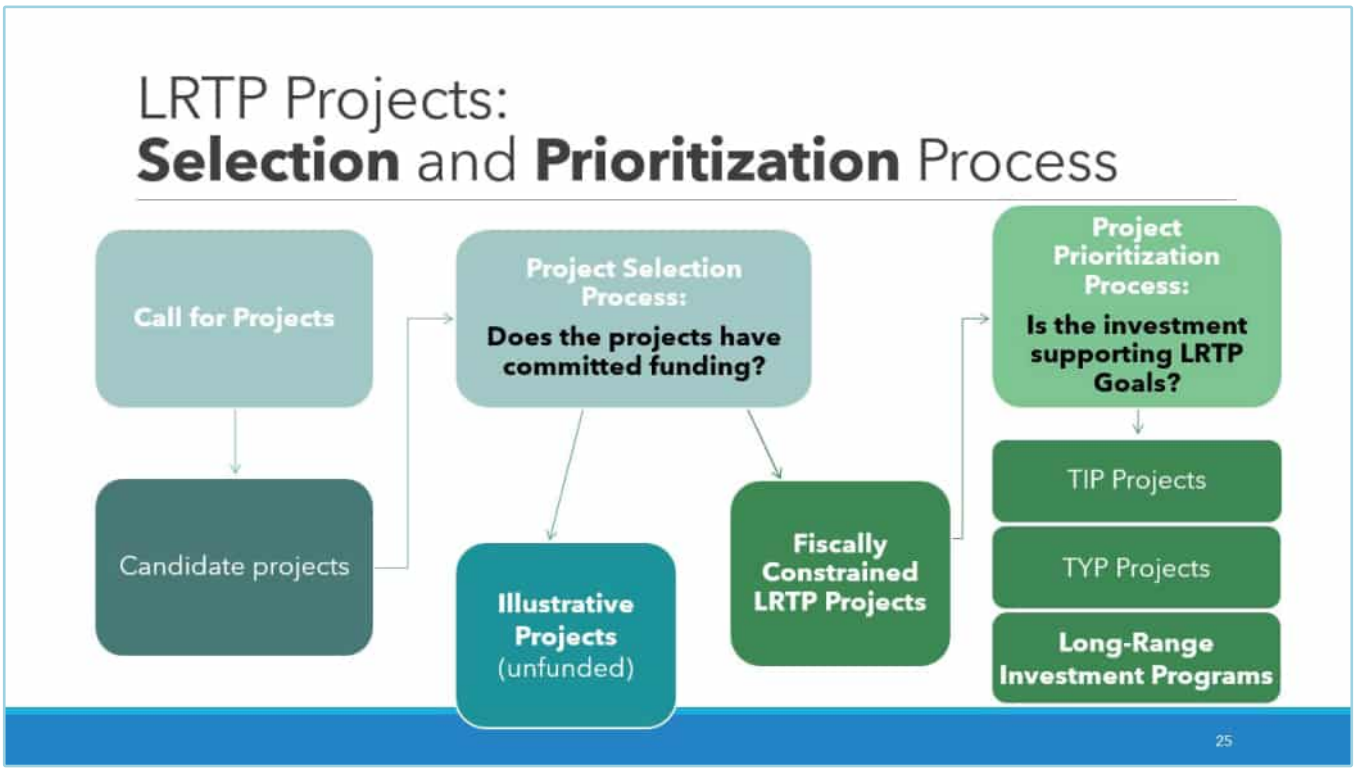
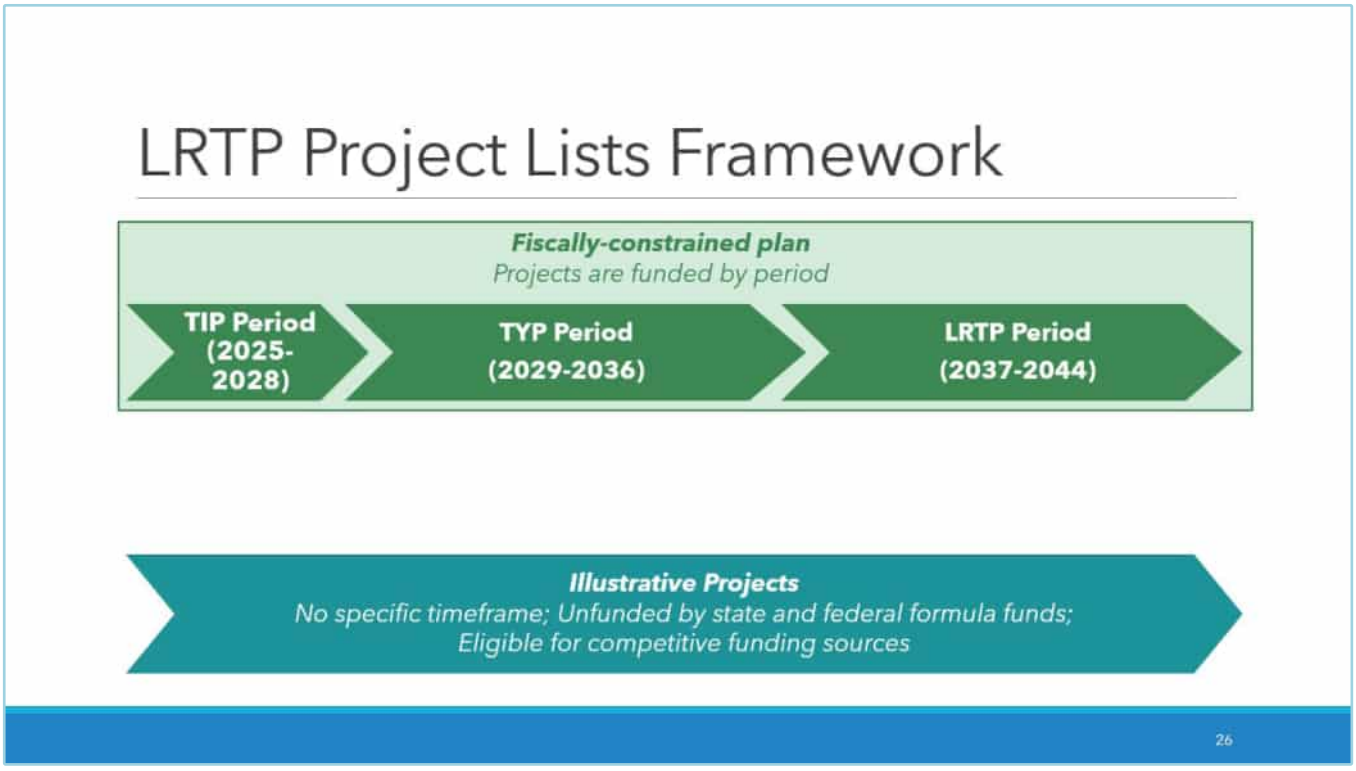

LRTP Projects:
Selection and Prioritization Process
Call for Projects
Candidate projects
Project Selection Process:
Does the projects have committed funding?
Illustrative Projects (unfunded)
Fiscally Constrained LRTP Projects
Project Prioritization Process:
Is the investment supporting LRTP Goals?
TIP Projects
TYP Projects
Long-Range Investment Programs
25


LRTP Project Lists Framework
Fiscally-constrained plan
Projects are funded by period
TIP Period (2025-2028)
TYP Period (2029-2036)
LRTP Period (2037-2044)
Illustrative Projects
No specific timeframe; Unfunded by state and federal formula funds;
Eligible for competitive funding sources
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Discussion Draft: LRTP Project Lists

Fiscally-constrained plan
Projects are funded by period

TIP + TYP Period (2029-2036):
83 Projects

LRTP Period (2037-2044):
12 Programs

Draft 2025 TIP and TYP
developed outside the LRTP process

Investment Programs
placeholder for the future

Illustrative Projects
TBD Projects
includes projects from the call for projects, municipal plans, and community outreach

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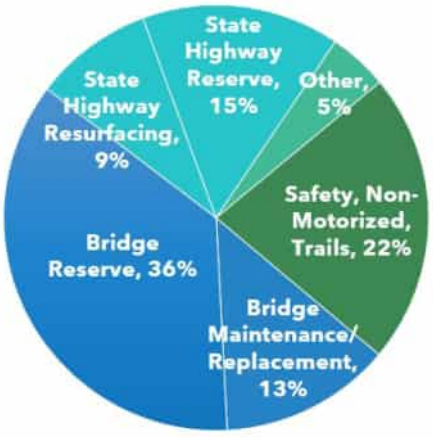
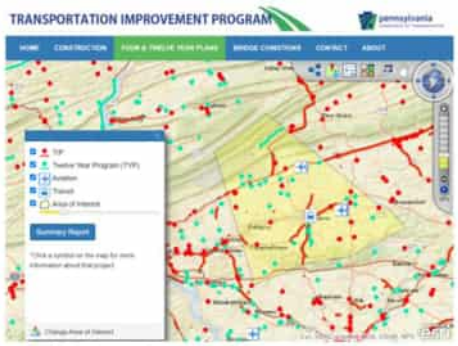
Draft TIP and TYP Periods: 1st 12 Years





☑ The TIP and TYP projects **meet the LRTP project SELECTION criteria** with federal and/or state funding commitments

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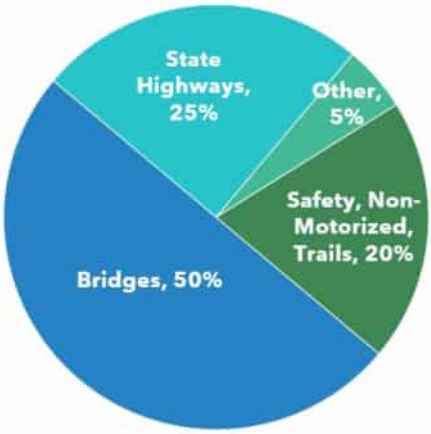
Discussion Draft: Investment Programs in the Last 8 Years



DRAFT Highway/Bridge Programs are based on:

- **LRTP Goals** established by the Steering Committee
- **Needs** identified by the LRTP modal analysis, the county, municipalities, and state
- **Priorities** identified through LRTP outreach
- **Prior investments** of state and federal formula funding and eligible project types

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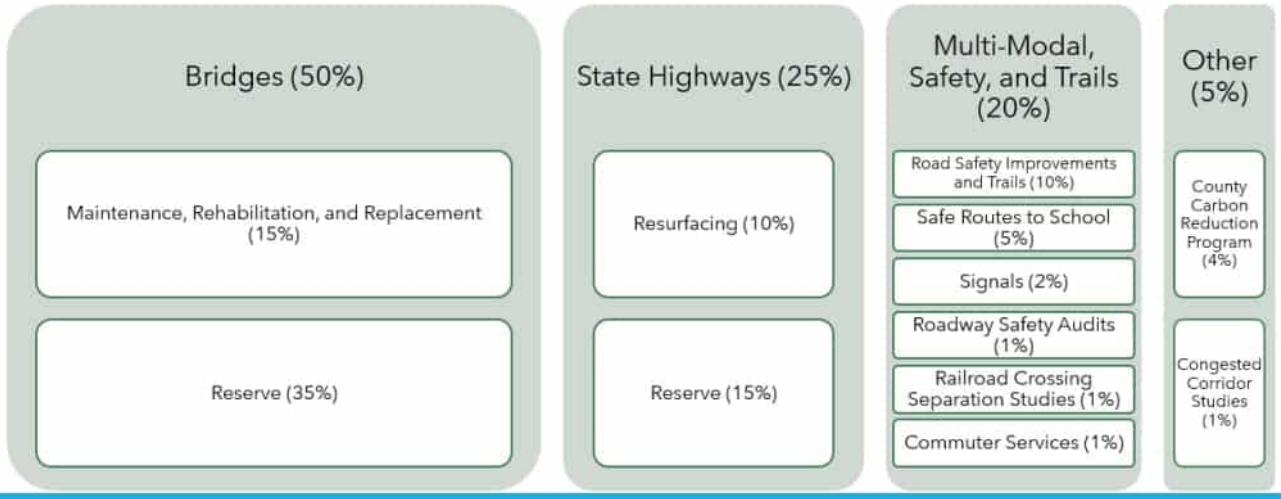
Discussion Draft: Investment Programs in the Last 8 Years



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Discussion Draft: Financial Plan

Reasonably Anticipated Funding for Highways and Bridges

Years	NHPP	STP	STU	TAP	Off-System Bridges	HSIP	CMAQ	Carbon Reduction	Carbon Red. Urban	Bridge Formula	State Highway (Capital)	State Bridge	Rapid Bridge Replacement	Local	Total
2025-2028	$7,480,000	$8,309,000	$2,018,632	$2,356,500	$5,584,000	$5,395,000	$5,812,000	$1,753,000	$828,000	$5,894,000	$14,953,000	$6,136,000	$120,000	$324,163	**$66,963,295**
2029-2032	$6,392,000	$8,144,000	$0	$0	$5,584,000	$5,428,000	$5,848,000	$1,764,000	$832,000	$7,368,863	$17,308,000	$6,084,000	$120,000	$395,727	**$65,268,590**
2029-2032	$6,392,000	$8,144,000	$0	$0	$5,584,000	$5,427,000	$5,846,000	$1,764,000	$831,000	$5,445,000	$17,306,000	$6,083,000	$122,000	$0	**$62,945,000**
2033-2044	$12,784,000	$16,288,000	$0	$0	$11,168,000	$10,856,000	$11,696,000	$3,528,000	$1,664,000	$10,888,000	$34,616,000	$12,168,000	$248,000	$0	**$125,904,000**
TOTAL	$33,048,000	$40,885,000	$2,018,632	$2,356,500	$27,920,000	$27,106,000	$29,202,000	$8,809,000	$4,155,000	$29,595,863	$84,183,000	$30,471,000	$611,000	$719,890	**$321,080,885**

Reasonably Anticipated Funding for Transit Assistance

	Capital	Operating Assistance								
Years	Federal	State Section 1516-CTC	State Act 44 Section 1514 Discretionary	County Act 44 Section 1514 Discretionary	Federal Section 5307	State 1513	Shared Ride Lottery	Shared Ride PWD	Local	Total
2025-2028	$16,100,000	$1,180,000	$15,667,644	$232,356	$6,666,481	$11,678,887	$1,608,608	$441,195	$639,322	**$54,214,493**
2029-2032		$1,100,000	$5,660,103	$194,897	$7,503,183	$13,144,690	$1,955,274	$536,275	$789,015	**$30,883,437**
2029-2032		$1,200,000	$5,394,186	$185,814	$8,444,898	$14,794,465	$2,376,647	$651,846	$959,053	**$34,006,909**
2033-2044		$2,400,000	$11,000,000	$500,000	$20,202,552	$35,392,486	$6,400,220	$1,755,395	$2,582,693	**$80,233,346**
TOTAL	$16,100,000	$5,880,000	$37,721,933	$1,113,067	$42,817,114	$75,010,528	$12,340,749	$3,384,711	$4,970,083	**$199,338,185**

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Discussion Draft: Lebanon Transit LRTP

Lebanon Transit receives state and federal capital and operating support. Over the next 20 years that funding will be used to:

- Complete construction of the agency's administration building
- Replace fixed-route and shared ride vehicles as required
- Conduct other routine capital maintenance
- Provide consistent levels of service on existing bus routes and for shared ride users

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Discussion Draft:
LRTP Illustrative Projects

Projects sourced from:
- Municipal plans
- Call for projects
- LRTP outreach
- 2020 LRTP

Are they consistent with:
- **LRTP Goals** established by the Steering Committee
- **Needs** identified by the LRTP modal analysis, the county, municipalities, and state
- **Community priorities** identified through LRTP outreach

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Discussion Draft:
LRTP Illustrative Project Examples

S Lincoln Ave Pedestrian Safety Project
- Submitted by South Lebanon to the Call for Projects
- Community Priority: Input via Wikimaps, School Focus Group
- LRTP Goals: Safety & Security, Personal Mobility, Equity

LVRT Phase 6D
- Submitted to the Call for Projects
- 2020 LRTP Illustrative Projects List
- Community Priority: Input via Public Meeting #1, Bike/Ped Focus Group
- LRTP Goal: Personal Mobility

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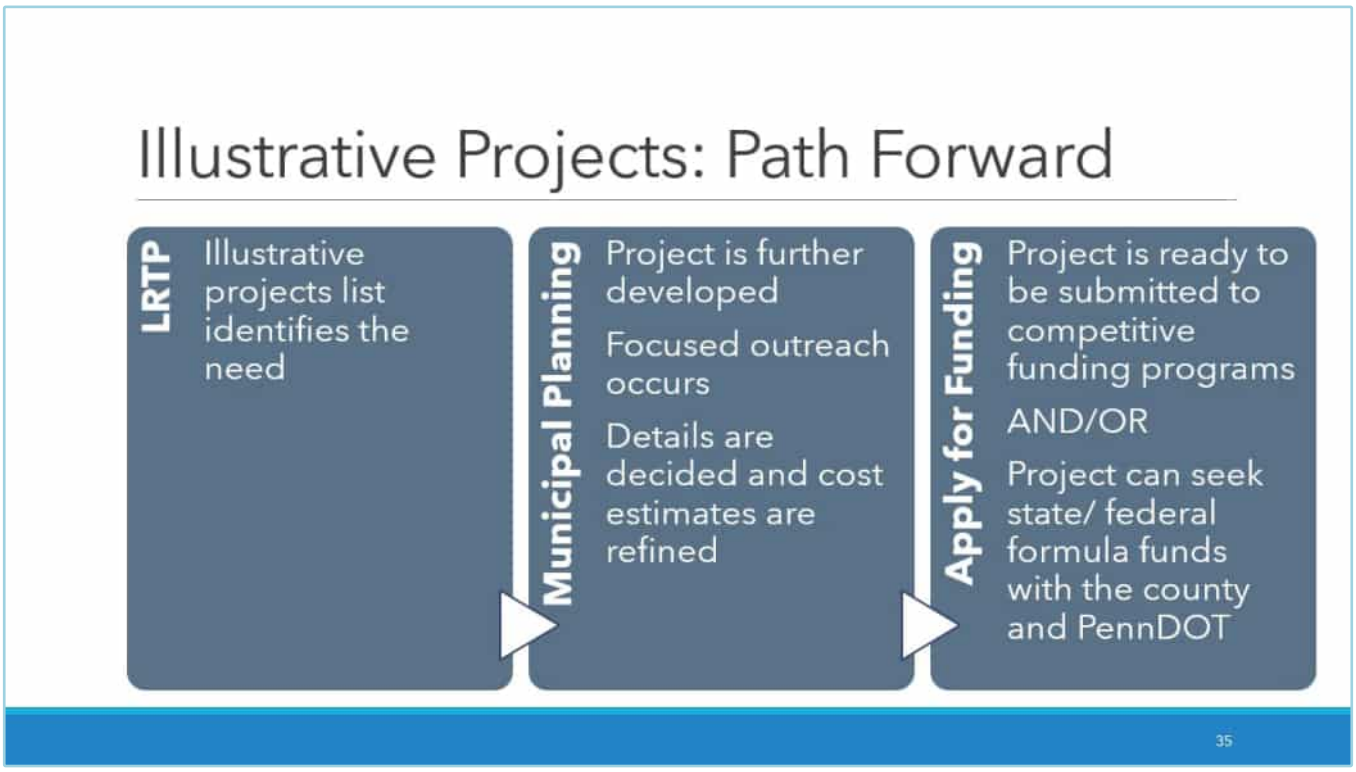
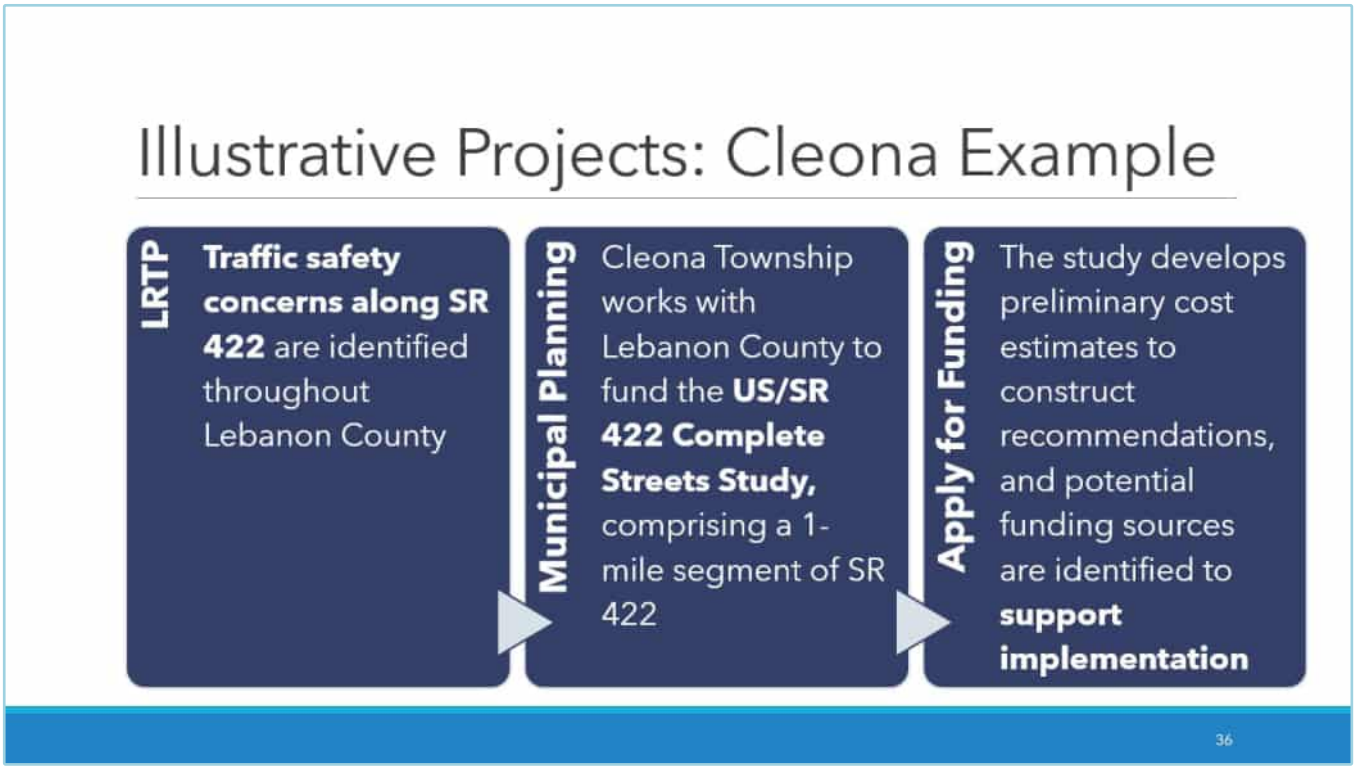

Illustrative Projects: Path Forward
LRTP
Illustrative projects list identifies the need
Municipal Planning
Project is further developed
Focused outreach occurs
Details are decided and cost estimates are refined
Apply for Funding
Project is ready to be submitted to competitive funding programs
AND/OR
Project can seek state/ federal formula funds with the county and PennDOT
35


Illustrative Projects: Cleona Example
LRTP
Traffic safety concerns along SR 422 are identified throughout Lebanon County
Municipal Planning
Cleona Township works with Lebanon County to fund the US/SR 422 Complete Streets Study, comprising a 1-mile segment of SR 422
Apply for Funding
The study develops preliminary cost estimates to construct recommendations, and potential funding sources are identified to support implementation
36

Draft LRTP Fiscally Constrained Plan

The draft Fiscally Constrained Plan includes:

DRAFT 2024 Lebanon County LRTP Fiscally Constrained List: Highways and Bridges

DRAFT 2024 Lebanon County LRTP Fiscally Constrained list: Transit

DRAFT 2024 Lebanon County LRTP Financial Plan

*Please review and get us comments by **March 19**!*

DRAFT 2024 Lebanon County LRTP Illustrative Project List

*Draft open through Public Meeting #2. Please provide comments by **April 5**.*

37

Next Steps

Online Engagement: closes March 31

Public Meeting #2: April 2

- Draft Final Plan Presentation and Public Comment

Draft Final Plan:

- Submitting to FHWA for review in early April

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Thank you!

Team member contacts:

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609-865-3930

Alma Fargason
Alma.Fargason@wsp.com
215-209-1238

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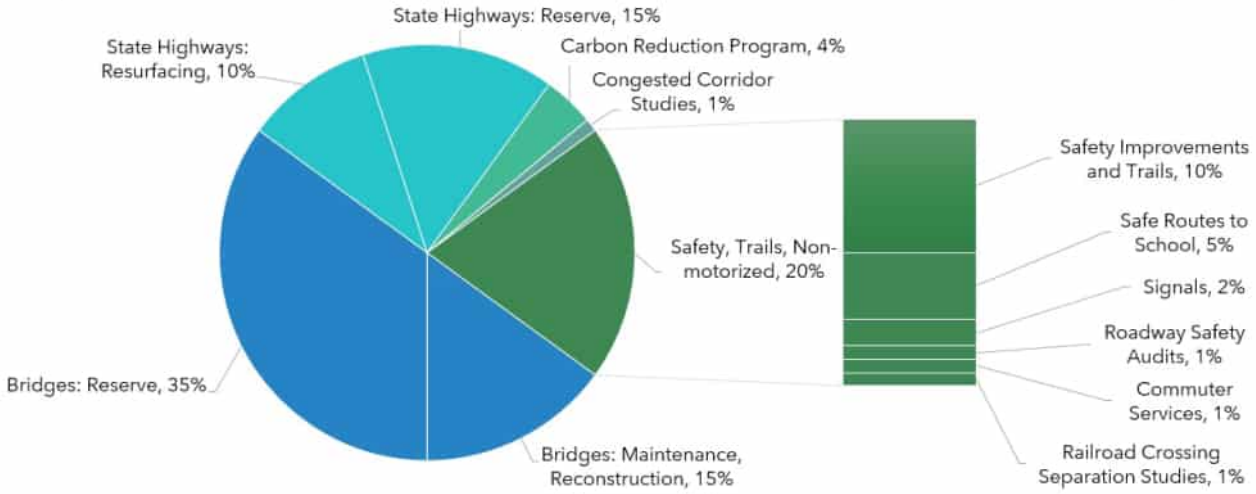
Discussion Draft: Programmatic Investments



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4. Public Meeting # 1 Boards

LEBCO LRTP **Overview** 1

What is an LRTP?

A Long Range Transportation Plan (LRTP) is a 20-year vision for the future of Lebanon County's transportation system.

The plan is developed through a **continuing, cooperative, and comprehensive transportation planning process** that supports the community and County's development goals.

The plan is updated every four years to stay up-to-date with transportation and land use trends and conditions.

Why is the LRTP important?

The plan helps the County and Metropolitan Planning Organization (MPO) to **make decisions, develop policies, and determine what issues need further study**.

The plan helps determine which projects in the County will receive funding.

The LRTP is required by the federal and state governments to receive funding for transportation projects.

LEBCO LRTP **Overview** 2

What does the process of creating a long-range transportation plan look like?

Review & Evaluate Previous LRTP

Establish Goals & Objectives

Set Performance Measures

Air Quality Conformity

Financial Plan

Analyze County Data

LebCo LRTP 2024

Consult Existing Plans

Pennsylvania 2045 LRTP
Lebanon County Comprehensive Plan
Municipal Comprehensive Plans

Consult Community

Stakeholder Outreach
Public Outreach

We are here!

Incorporate Projects from Existing Programs

Lebanon Transit Transportation Improvement Program
Lebanon County MPO Transportation Improvement Program


LEBCO LRTP Draft Goals
3
The LRTP team has drafted 9 goals for Lebanon County that will be addressed in the plan.
Which of these goals is most important to you? Place your dots next to your top three goals.
1
Improve safety and security for all modes and users.
2
Create a multi-modal transportation system that provides reliable, efficient, and convenient mobility for current and future residents and visitors.
3
Support reliable freight mobility, access, and experience for providers and residents.
4
Ensure the transportation system serves disadvantaged communities' transportation needs.
5
Promote transportation and land use planning practices that enhance the County's natural and built environment.
6
Meet the challenges and opportunities of growth through collaborative planning, funding, and project implementation.
7
Facilitate and support the economic vitality of the County.
8
Preserve existing transportation assets and improve the multi-modal transportation's ability to withstand, respond to, and recover from environmental and other hazards.
9
Utilize all available funding sources and target investments for maximum local and regional benefit and impact.

LEBCO LRTP **Summary of Findings** 4

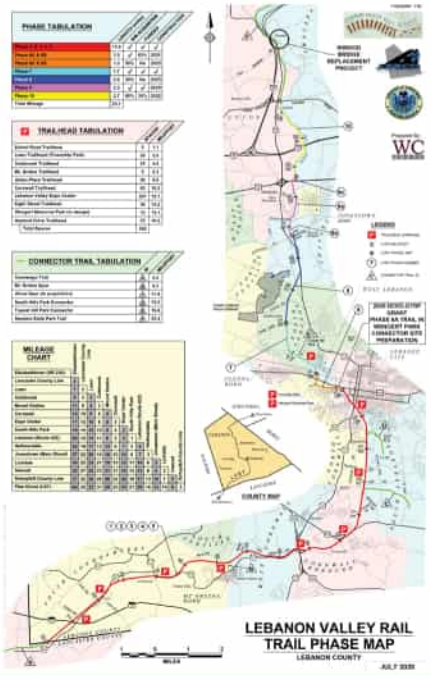
Preliminary research and analysis has revealed key findings about the state of commuting, freight traffic, trail usage and access to schools.

Freight Traffic

We are most concerned about minor roadways with heavier truck volumes. The map below shows the local roads with the most freight traffic.

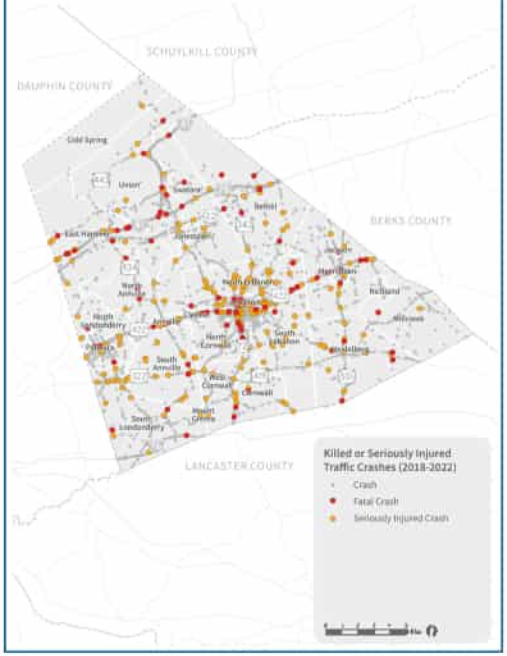
Trail Network

Users of the southern half of the Lebanon Valley Rail Trail has **increased by 100,000** since 2019, up to 350,000 annual trail users.



Traffic Crashes

From 2018 to 2022, there were **371 crashes** that resulted in death or serious injury. Most of these occurred on local highways or in the City of Lebanon.



LEBCO LRTP **Get Involved** 5

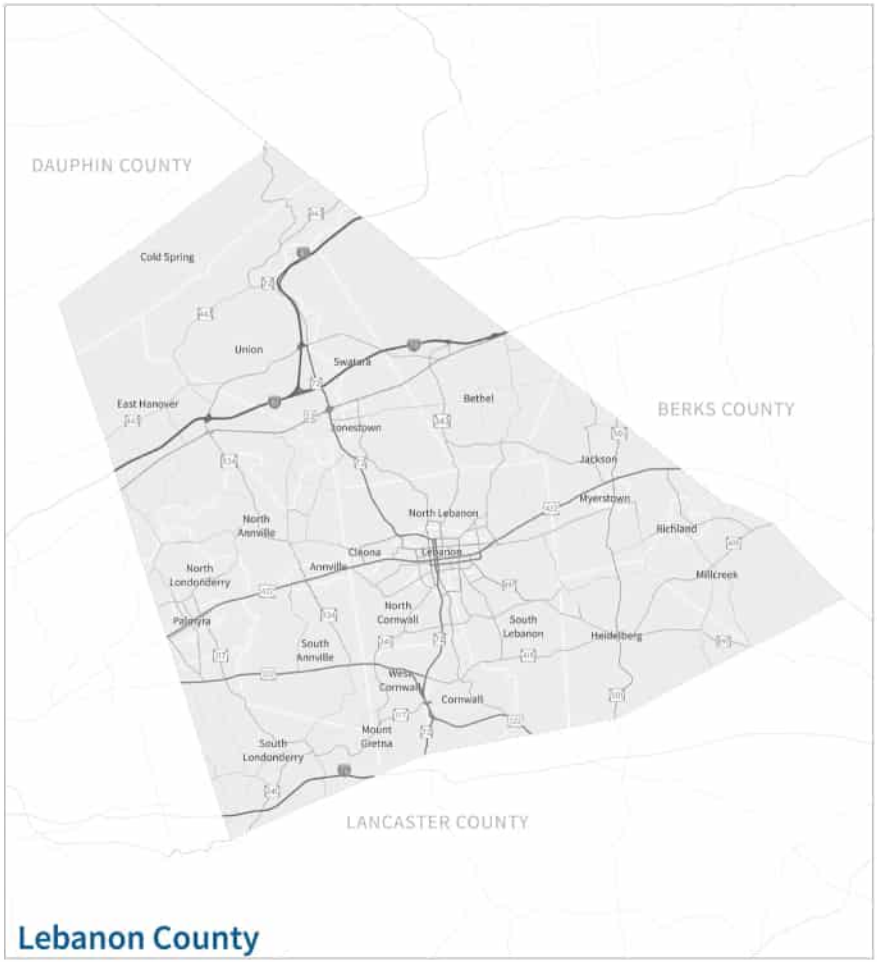
Help us identify **potential project locations** and where there are transportation safety issues.

Transportation Safety Issue Location

Traffic Congestion Location

Project Idea Location

City of Lebanon



Lebanon County

LEBCO LRTP **Community Feedback** 6

The LRTP team has gathered input from the community through online engagement and focus groups on **freight**, **schools**, and **bicycles/pedestrians**. Here's what we've heard so far:

The growing size/number of warehouses is causing increased truck traffic and congestion	Flashing pedestrian crossings (RRFBs) in Annville have been a successful safety solution for students walking to school	Key roadways are in need of repair	The rise in e-bikes and electric scoots are causing conflicts on sidewalks and trails.	Truck traffic and speeding motorists are causing unsafe conditions for pedestrians/ bicyclists
More residents are working some days at home/school than pre-pandemic	US-422 feels unsafe and is difficult to cross as a turning motorist, bicyclist, or pedestrian	The rail trail is a great regional asset that needs safer and clearer connections to entry/exit points	School pick-up and drop-offs cause congestion	Place any other feedback here!

Do you agree with these takeaways? Do you have anything to add?

Write your thoughts on the notes and put them on the board.

LEBCO LRTP **LRTP Investment Priorities** 7

Where do project ideas come from?

- PennDOT's Twelve-Year Program
- LebCo's Transportation Improvement Program
- Public agencies and non-profit stakeholders
- Members of the public

Transportation projects that receive state and federal funding are **required** to be included in the LRTP's funded project list.

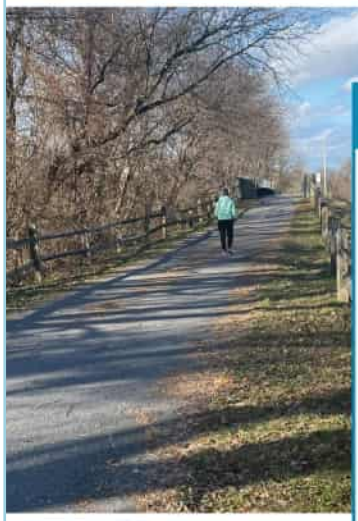
What types of transportation investments are important to you?

Write your thoughts on the notes and put them on the board.

LEBCO LRTP

LRTP Investment Priorities

8



Past Successes

The **Lebanon Valley Rail Trail** (LVRT) was identified as a priority by the MPO early in development of the last LRTP. Consistent advocacy from municipalities and other stakeholders made this project was key to the trail's success. Funding came from multiple levels of government—federal, state, and local—in addition to private sources.

Examples of Funded TIP Projects

Project	Municipality
Allentown Blvd East Bridge	East Hanover
Ebenezer Rd & Swatara Cr Bridge	Swatara
PA 934 Bridge (over Indiantown Run)	East Hanover
22nd St & Quittapahill Bridge Replacement	North Cornwall
PA 72 & Isabel Drive Safety Improvements	North Cornwall
PA 72 Highway Restoration at 10th St	Lebanon
Lingle Road Reconstruction	South Londonderry

Visit our website to learn more about the long-range transportation plan for Lebanon County:

bit.ly/lebcolrtp

5. Blank Survey

Lebanon County Long Range Transportation Plan Public Survey

The Lebanon County Metropolitan Planning Organization is updating its Long-Range Transportation Plan. The plan will:

- Analyze the existing transportation systems in Lebanon County.
- Prioritize transportation project investments over a 20-year planning period.
- Identify specific actions for the County and its partners that will improve transportation for Lebanon County residents, workers, and visitors.

This survey is intended for residents and visitors of Lebanon County. The questions in the survey aim to capture travel patterns and how travel has changed after the COVID-19 pandemic, and to help shape the long-term transportation priorities of Lebanon County.

We anticipate this survey will take approximately 10 minutes of your time. Your input is a critical element of our overall effort to understand the daily transportation experiences within Lebanon County.

Please turn in this sheet to staff at Public Meeting #1 or mail to the following address by 3/31/24 AT THE LATEST:

WSP USA
c/o Alma Fargason
1700 Market Street, Suite 1050
Philadelphia, PA 19145

Where You Live and Work

Telling us where you live and work will help us understand where transportation challenges are most prevalent in Lebanon County. It will also help us ensure that we are hearing from a diverse cross-section of county residents.

1. In what zip code do you live?

2. In what zip code do you work? (Skip if not employed)

Changes in Transportation Experience

Lebanon County's last transportation plan was updated four years ago. A lot has changed since then, including the rise of remote and hybrid work due to the COVID-19 pandemic, an increase in home deliveries, the proliferation of warehousing developments, and population growth in Lebanon County. How have these trends affected your travel over the last four years?

3. In recent years, has transportation in Lebanon County:

    [ ] Improved
    [ ] Stayed about the same
    [ ] Gotten worse

4. Looking ahead, do you see transportation in Lebanon County:

    [ ] Improving
    [ ] Staying about the same
    [ ] Getting worse

How You Get Around in Lebanon County

Think about how you get around Lebanon County. Do you drive to work? Take the bus to see family? Bike on a nearby trail on the weekends? Walk to school? Your answers will help us understand travel needs in Lebanon County.

5. Which types of transportation do you currently use? (select all that apply)*

    [ ] Personal vehicle (car or truck)
    [ ] Public transportation
    [ ] Bicycle
    [ ] Walk
    [ ] Other (please specify): _____

6. How many days a week did you regularly commute to work or school before the COVID-19 pandemic?*

    [ ] 1 – 2 days
    [ ] 3 – 4 days
    [ ] 5 days
    [ ] 6 – 7 days
    [ ] I did not commute regularly to work or school prior to the COVID-19 pandemic

7. How many days a week do you regularly commute to work or school now?*

    [ ] 1-2 days
    [ ] 3-4 days
    [ ] 5 days
    [ ] 6-7 days
    [ ] I do not commute regularly to work or school

Roadways in Lebanon County

Roadways in Lebanon County range from the local residential streets to busy arterials with businesses to the Interstate highways that connect Lebanon County to the rest of the state.

8. How would you describe the roadways in Lebanon County? (select all that apply)

    [ ] In good condition
    [ ] Easy to get to where I want to go
    [ ] In need of repair
    [ ] Congested
    [ ] Too many trucks

[ ] Other (please specify): _____

9. How would you rate safety on roadways in Lebanon County?

[ ] Safe
[ ] Neither safe nor unsafe
[ ] Unsafe
[ ] No opinion
[ ] Other (please specify):_____

Public Transportation in Lebanon County

Lebanon Transit provides public transportation in Lebanon County. Fourteen different bus routes serve the county.

10. How would you describe public transportation in Lebanon County?

[ ] Convenient to get where I want to go
[ ] Adequate for my needs
[ ] Inconvenient for where or when I want to go
[ ] I do not use public transportation
[ ] Other (please specify):_____

11. How would you rate safety on public transportation in Lebanon County?

[ ] Safe
[ ] Neither safe nor unsafe
[ ] Unsafe
[ ] No opinion
[ ] Other (please specify):_____

Bicycling in Lebanon County

Many residents and visitors navigate Lebanon County on bicycle, whether it be on-street or on scenic trails.

12. How would you describe bicycle facilities in Lebanon County? Bicycle facilities include on-street facilities and trails.

[ ] Convenient to get where I want to go
[ ] Adequate for my needs
[ ] Inconvenient for where I want to go
[ ] I do not bike
[ ] Other (please specify):_____

13. How would you rate safety for bicyclists in Lebanon County?

[ ] Safe
[ ] Neither safe nor unsafe
[ ] Unsafe

[ ] No opinion
[ ] Other (please specify):_____

Walking in Lebanon County

Pedestrian facilities in Lebanon County include sidewalks, trails, and crosswalks.

14. How would you describe walking facilities (i.e. sidewalks, trails, etc) in Lebanon County?

    [ ] Convenient to get where I want to go
    [ ] Adequate for my needs
    [ ] Inconvenient for where or when I want to go
    [ ] I do not travel on foot
    [ ] Other (please specify):_____

15. How would you rate safety for people walking in Lebanon County?

    [ ] Safe
    [ ] Neither safe nor unsafe
    [ ] Unsafe
    [ ] No opinion
    [ ] Other (please specify):_____

Conclusion

Thank you for your time filling out this survey. Please provide any additional thoughts below. Identifying location-specific transportation issues can help us prioritize projects to improve your travel in Lebanon County.

16. Please list and describe any specific transportation problem areas that need to be improved.

17. Please describe any ideas you have to improve transportation in Lebanon County.

18. Are there other ways your travel has changed since before the COVID-19 pandemic? (e.g. taking the bus more or less often, biking more often, etc)

19. The 2020 version of the long-range transportation plan was titled “LebanOnward”. What should we title the 2024 Lebanon County Long Range Transportation Plan?

    [ ] Lebanon County Long Range Transportation Plan 2050
    [ ] Destination Lebanon
    [ ] LebanOnTrack
    [ ] LebanOnBoard
    [ ] Other: _____

Demographic Questions

The following demographic questions help us better analyze transportation needs of the county. Your responses are anonymous.

20. What is your gender?

21. What is your age?

[ ] Under 18 years old
[ ] 18 – 34 years old
[ ] 35 – 54 years old
[ ] 55 – 64 years old
[ ] 65 years old or older

22. Are you of Hispanic, Latino, or Spanish origin?

[ ] Yes
[ ] No

23. How would you describe yourself?

[ ] American Indian or Alaska Native
[ ] Asian
[ ] Black or African American
[ ] Native Hawaiian or Other Pacific Islander
[ ] White or Caucasian
[ ] None of the above

24. What is your current employment status?

[ ] Employed full time (37.5 or more hours per week)
[ ] Employed part time (up to 37 hours per week)
[ ] Self-Employed
[ ] Unemployed and currently looking for work
[ ] Unemployed and not currently looking for work
[ ] Homemaker or stay-at-home parent
[ ] Retired
[ ] Student
[ ] Unable to work

25. What is your current household income per year?

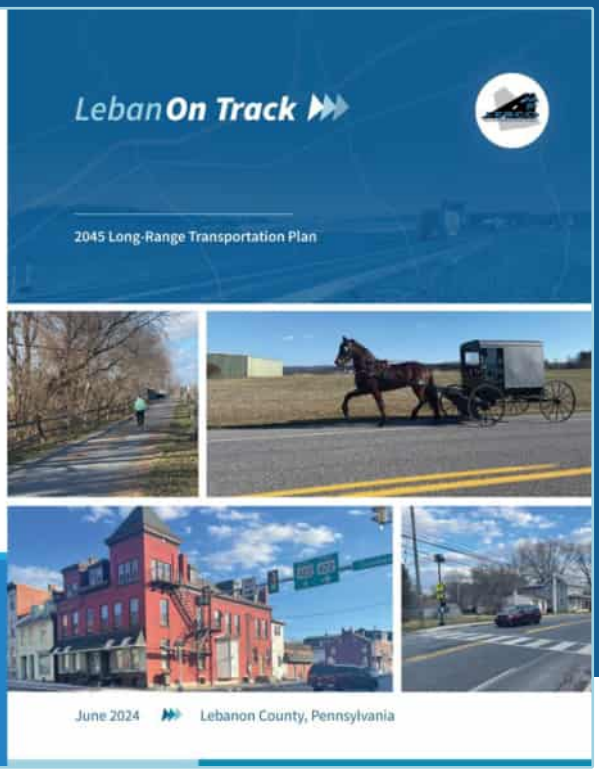
[ ] Less than $20,000
[ ] $20,000 to $49,999
[ ] $50,000 to $74,999
[ ] $75,000 to $100,000
[ ] More than $100,000

6. Public Meeting #2 Presentation

Lebanon County Long-Range Transportation Plan

Public Meeting #2
April 2, 2024

1



Agenda

- Introduction
- Plan Background
- Demographic and Modal Analysis
- Outreach Summary
- **Plan Recommendations**
- Next Steps

2

Team Introductions

Lebanon County Planning

- Jon Fitzkee
- Song Kim

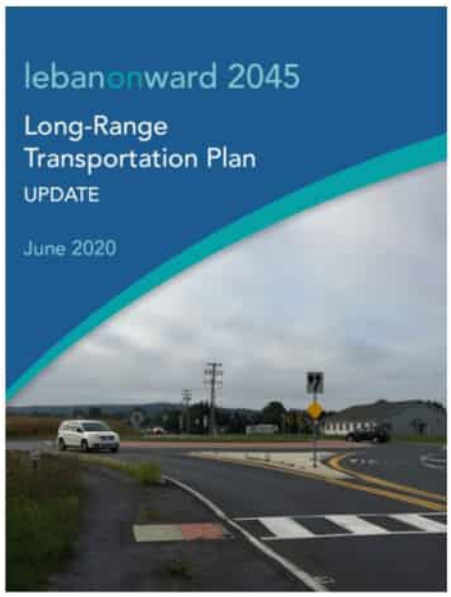
WSP Team

- Steve Chiaramonte
- Alma Fargason
- Michelle Beaulieu
- Heather MacDougall

3

Long-Range Transportation Plan (LRTP) Background

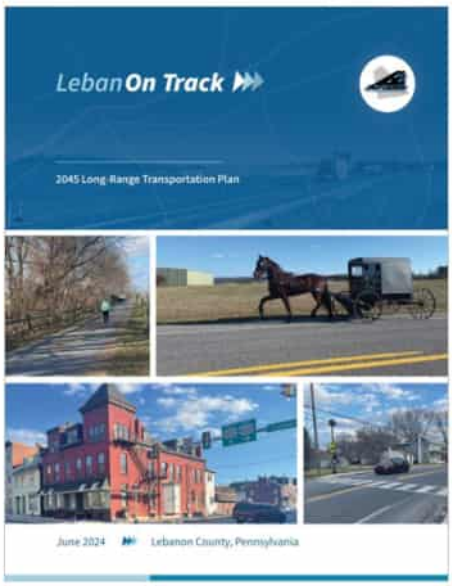
4



Previous Lebanon County LRTP

- Last updated in 2020
- Consistent with the Transportation Element of the 2007 County Comprehensive Plan
- leban**on**ward 2045 was the starting point for the new plan

5



LRTP Purpose

- **Long-term vision** (20 years) for the future of Lebanon County's transportation system
- Required for **federal and state funding** to transportation projects
- Decision-making tool
- Identifies issues for further study
- Helps inform the Comprehensive Plan
- Drives the Transportation Improvement Program (TIP) & Unified Planning Work Program (UPWP)

6

Updating the LRTP

Federal law requires:

- That an MPO be designated for each urbanized area
- A metropolitan area must have a **continuing**, **cooperative**, and **comprehensive** (3C) **transportation planning process** that results in plans and programs that consider all transportation modes and supports metropolitan community development and social goals
- These plans and programs shall lead to the development and operation of an **integrated, intermodal transportation system** that facilitates the efficient movement of people and goods
- The transportation plan shall be reviewed and **updated at least every four years** to confirm its validity and its consistency with current and forecasted transportation and land use conditions and trends

7

LRTP Outline

1. Introduction
2. Goals and Objectives
3. Performance Measures
4. Outreach and Collaboration
5. Modal/Network Analysis and Overview
6. Environmental Constraints
7. Projects, Actions, and Implementation
8. Project Funding

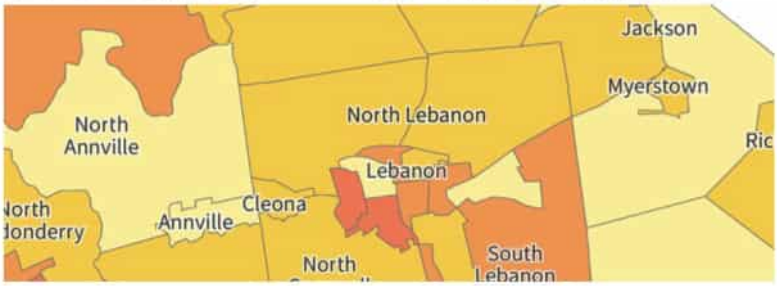
8

Lebanon LRTP **Goals**

- **Safety & Security**: Improve safety and security for all modes and all users
- **Personal Mobility**: Create a multi-modal transportation system that provides reliable, efficient, and convenient mobility for current and future residents and visitors
- **Freight Mobility**: Support reliable freight mobility, access, and experience for providers and residents
- **Equity**: Ensure the transportation system serves disadvantaged communities' transportation needs
- **Land Use and Environment**: Promote transportation and land use planning practices that enhance the county's natural and built environment
- **Growth Management**: Meet the challenges and opportunities of growth through collaborative planning, funding, and project implementation
- **Economic Growth**: Facilitate and support the economic vitality of the County
- **Asset Management & Resilience**: Preserve existing transportation assets and improve the multi-modal transportation system's ability to withstand, respond to, and recover from environmental and other hazards
- **Funding**: Utilize all available funding sources and target investments for maximum local and regional benefit and impact

9

Demographic & Modal Analysis Takeaways



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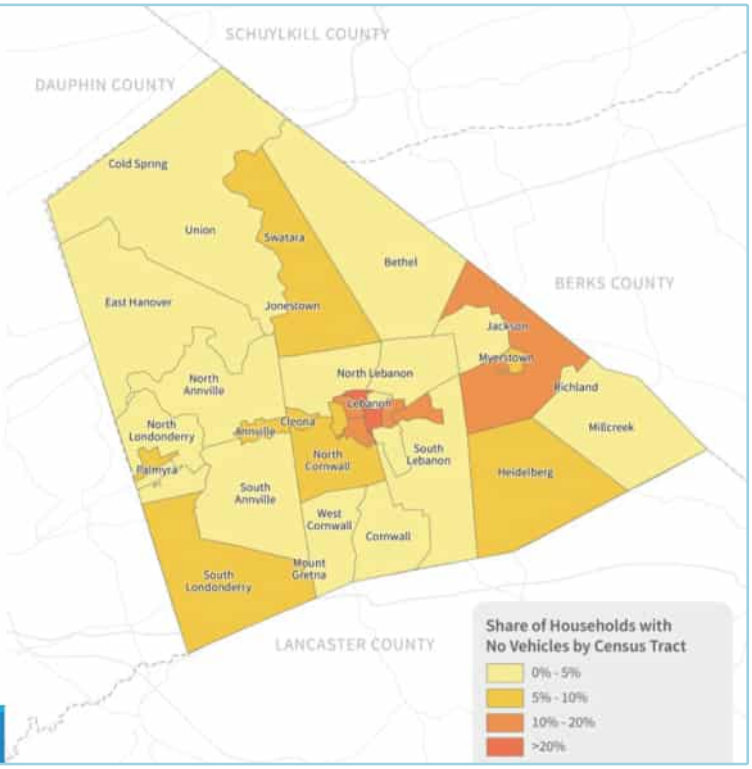
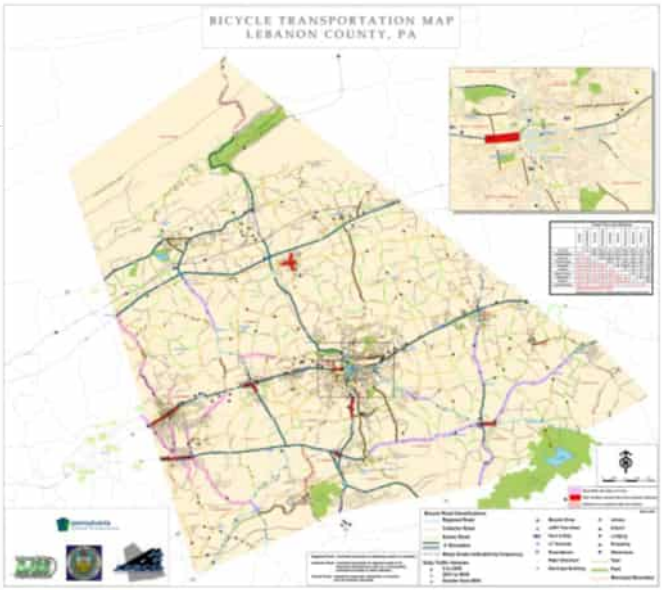
Households Without Vehicles Cluster in Lebanon and Eastern Lebanon County

	Pct Change	2012	2021
Households Without Vehicles	-16.9%	4,213	3,351



Biking and Trails

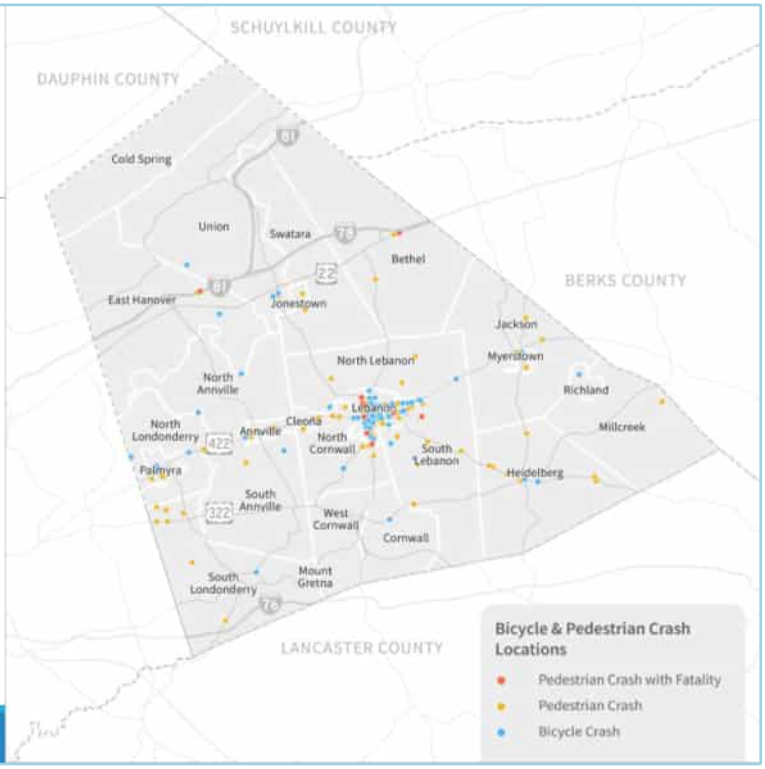
- Since 2019, trail users on the southern half of LVRT increased by 100,000 and is now up to **350,000 annual trail users**
- Countywide map updated March 2024



12

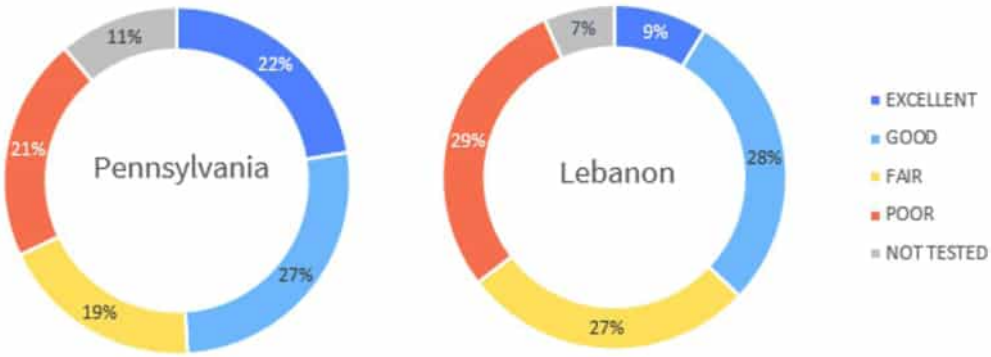
Bike & Pedestrian Crashes

- 2018-2022
  - 0 cyclist fatalities
  - 12 pedestrian fatalities
  - 221 reportable crashes involving pedestrians or cyclists



Pavement Conditions

International Roughness Rating on NHS Highway Miles



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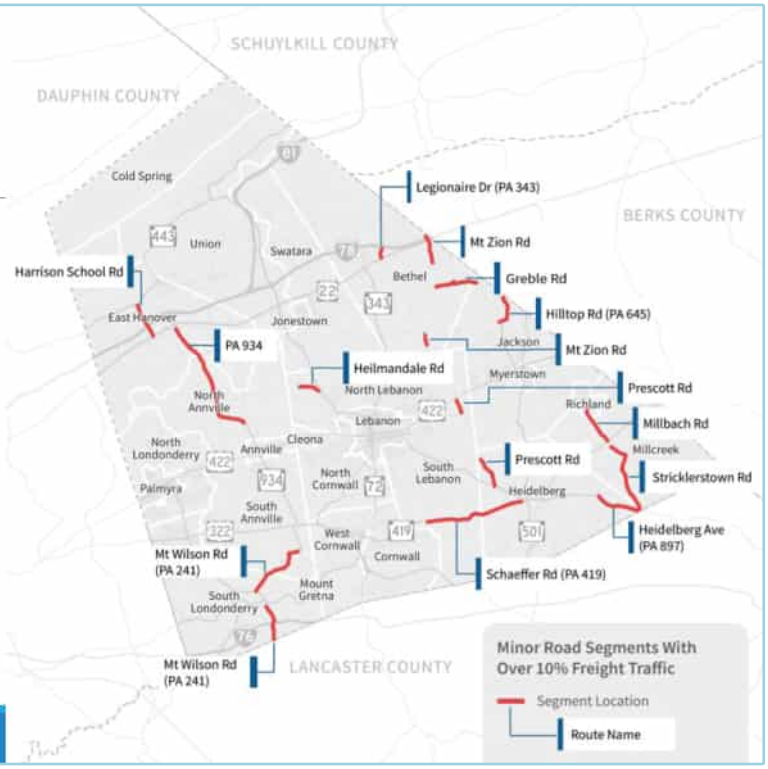
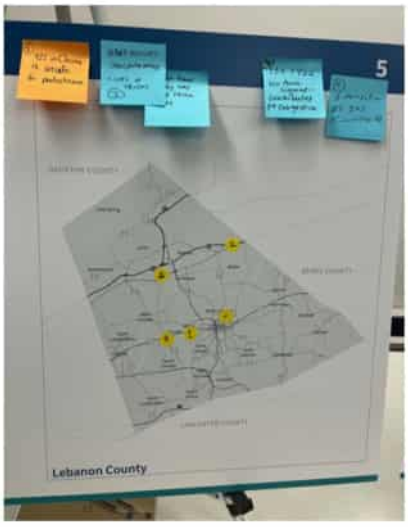
Freight



Outreach Summary



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Outreach Plan

Outreach	Status
Steering Committee Meetings	Completed March 2024 ☑
Stakeholder **Focus Groups**	Completed December 2023 ☑
Call for Projects to Municipalities and Stakeholders	Completed January - February 2024 ☑
Virtual Engagement	Wikimap and Project Survey: Closed March 31 ☑
Public Meeting #1	February 27, 2024 ☑
Public Meeting #2	April 2, 2024

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Steering Committee

- FHWA
- PennDOT
- Annville-Cleona School District
- Eastern Lebanon County School District
- Lebanon School District
- Lebanon Valley Bicycle Coalition
- Lebanon Valley Rail Transit
- Rails to Trails
- Fort Indiantown Gap
- Lebanon Transit
- Community Health Council of Lebanon County
- Lebanon Valley Chamber of Commerce
- North Lebanon Township
- City of Lebanon
- City of Lebanon Water Authority
- Jackson Township
- North Cornwall Township
- Union Township
- Borough of Myerstown
- Cornwall Borough
- North Londonderry Township
- South Lebanon Township

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Focus Group Takeaways

Schools

- Severe congestion impacts during pick-up and drop-off times
- Difficult to hire bus drivers

Freight

- Increasing number of warehouses leads to increasing congestion
- A model ordinance or overlay developed by the county for municipalities could be helpful

Bike/Ped

- Safe and clear access to trails is vital
- Opportunities for improved coordination with MPO and bicycle/pedestrian community, particularly around paving

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Survey Results

Q9: How would you rate safety on roadways in Lebanon County?

https://www.surveymonkey.com/r/LebCoLRTP

Spanish version: https://www.surveymonkey.com/r/LebCoLRTP-Spanish

- 386 survey responses, closed March 31st
- Respondents commuting to work or school 5 days a week has dropped by 20% since the COVID-19 pandemic
- 60% say roadways are in need of repair
- Typical respondents are 35-54, white, not Hispanic or Latino, and have an annual household income over $100,000

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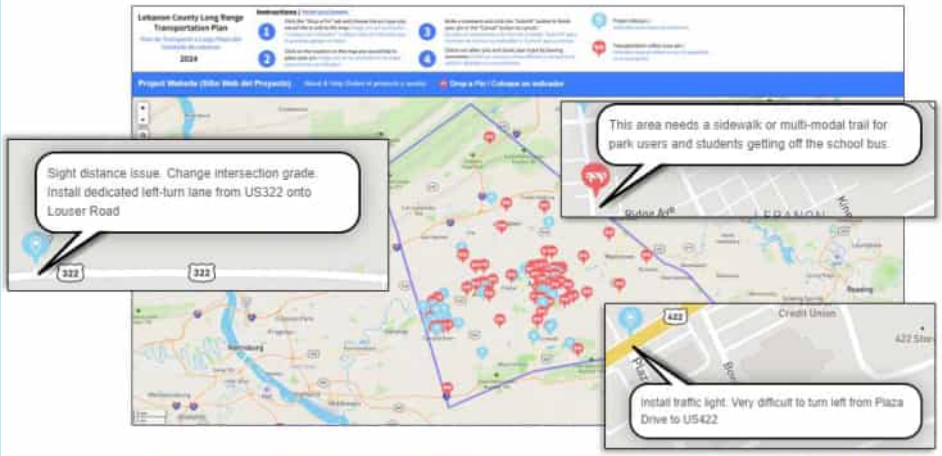
Wikimap Results



- 152 pins
- Closed March 31st
- Some comments are incorporated into illustrative projects list

https://wikimapping.com/lebanoncountytransportationplan2024.html

21

Public Meeting #1 Feedback

Key takeaways:

- Concern about truck traffic with **growing warehouse presence**
- Interest in seeing the **trail network** expanded
- **School** drop-off and pick-up times are challenging and at times unsafe
- Interest in expanding **inter-city transit**, potentially with a rail option

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Plan Recommendations: Projects and Implementation Actions

LRTP Projects Overview

- Transportation projects are required to be included in the LRTP to be eligible for federal and state funding
- The MPO is charged with selecting and prioritizing projects for the LRTP
  - Selected projects make up the **Funded Projects** (or fiscally constrained) list
  - Projects not selected for the Funded Projects list may be included in the LRTP as **Illustrative** of the greater need for investment in the county

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LRTP Funding

	Available Funding 2025-2028 (4 years)	Available Funding 2029-2036 (8 years)	Available Funding 2037-2044 (8 years)	Total Available Funding 2025-2044 (20 years)
State and Federal Hwy/Bridge Formula Funding	$66,843,295	$127,970,590	$125,656,000	**$320,469,885**
Transit Capital	$33,180,000	$13,735,000	$13,900,000	**$60,815,000**
Transit Operations	$21,034,493	$51,155,346	$66,333,346	**$138,523,185**
Totals	**$121,057,788**	**$192,861,936**	**$205,889,346**	**$519,809,070**

Much of this funding comes with "strings" and is required to be spent on specific types of projects (e.g., bridge capital funds can only fund bridge construction projects, transit assistance can only fund transit operations, etc.).

Given the relative small amount of funding compared to the need for investment, the majority of this funding is programmed to **asset management**, repairing and replacing existing infrastructure.

25

Highway/Bridge LRTP Projects

The LRTP focuses on formula funding to the county from the state and federal governments. Over the next 20 years that funding will be used to:

- Repair, maintain, and replace bridges throughout the county
- Resurface and reconstruct state highways as needed
- Make roadway safety improvements for all users, with a focus on areas near schools and improving the trail network
- Fund congestion management studies and road safety audits

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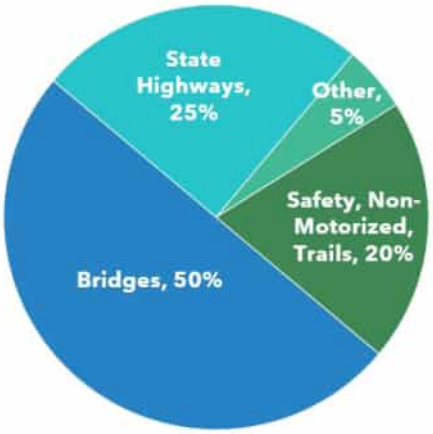
Highway/Bridge LRTP Investments



Highway/Bridge Investments are based on:

- **Existing commitments and eligibility** for state and federal formula funding
- **LRTP Goals** established by the Steering Committee
- **Needs** identified by the LRTP modal analysis, the county, municipalities, and state
- **Priorities** identified through LRTP outreach

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Lebanon Transit LRTP Projects

Lebanon Transit receives state and federal capital and operating support. Over the next 20 years that funding will be used to:

- Complete construction of the administration building
- Replace fixed-route and shared ride vehicles as required
- Conduct routine capital maintenance
- Provide consistent levels of service on existing bus routes and for shared ride users

Transit Investments are based on:

- **Existing commitments and eligibility** for state and federal formula funding
- **Needs and priorities** identified by Lebanon Transit

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LRTP Funded Projects

	Funded Projects 2025-2028 (4 years)	Funded Projects 2029-2036 (8 years)	Funded Programs 2037-2044 (8 years)	Total Investments 2025-2044 (20 years)
Bridges	$23,778,498	$73,639,129	$63,078,133	$160,245,627
Safety, Multi-Modal, and Trails	$15,631,669	$24,928,302	$25,231,253	$65,691,171
Highway Resurfacing	$11,333,803	$6,738,838	$12,615,627	$30,638,241
Highway Construction	$12,486,359	$17,960,221	$18,923,440	$49,294,980
Transit Capital	$33,180,000	$13,735,000	$13,900,000	$60,815,000
Transit Operations	$21,044,296	$51,155,346	$66,333,346	$138,532,988
Other	$3,851,006	$5,191,000	$6,307,813	$15,324,806
Totals	**$121,295,828**	**$193,347,836**	**$206,389,612**	**$521,042,078**

The first 12 years of projects are programmed through the Transportation Improvement Program and Twelve-Year Planning processes. The last eight years of the plan represent programs that continue funding similar project types being mindful of eligibility requirements and consistent with the LRTP Goals.

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LRTP Illustrative Projects

The LRTP Funding is a limited and restricted pot of funding.

There are many more needs in the county than can be funded in this plan.

The Illustrative list "illustrates" that need and identifies projects that require municipalities and/or project champions either conduct additional planning-level work and/or seek funding through other sources (e.g., competitive grants).

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LRTP Illustrative Projects

Projects sourced from:

- Municipal plans
- Call for projects
- LRTP outreach
- 2020 LRTP

Are they consistent with:

- **LRTP Goals** established by the Steering Committee
- **Needs** identified by the LRTP modal analysis, the county, municipalities, and state
- **Community priorities** identified through LRTP outreach

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LRTP Illustrative Project Examples

S Lincoln Ave Pedestrian Safety Project

- Submitted by South Lebanon to the Call for Projects
- Community Priority: Input via Wikimaps, School Focus Group
- LRTP Goals: Safety & Security, Personal Mobility, Equity

LVRT Phase 6D

- Submitted to the Call for Projects
- 2020 LRTP Illustrative Projects List
- Community Priority: Input via Public Meeting #1, Bike/Ped Focus Group
- LRTP Goal: Personal Mobility

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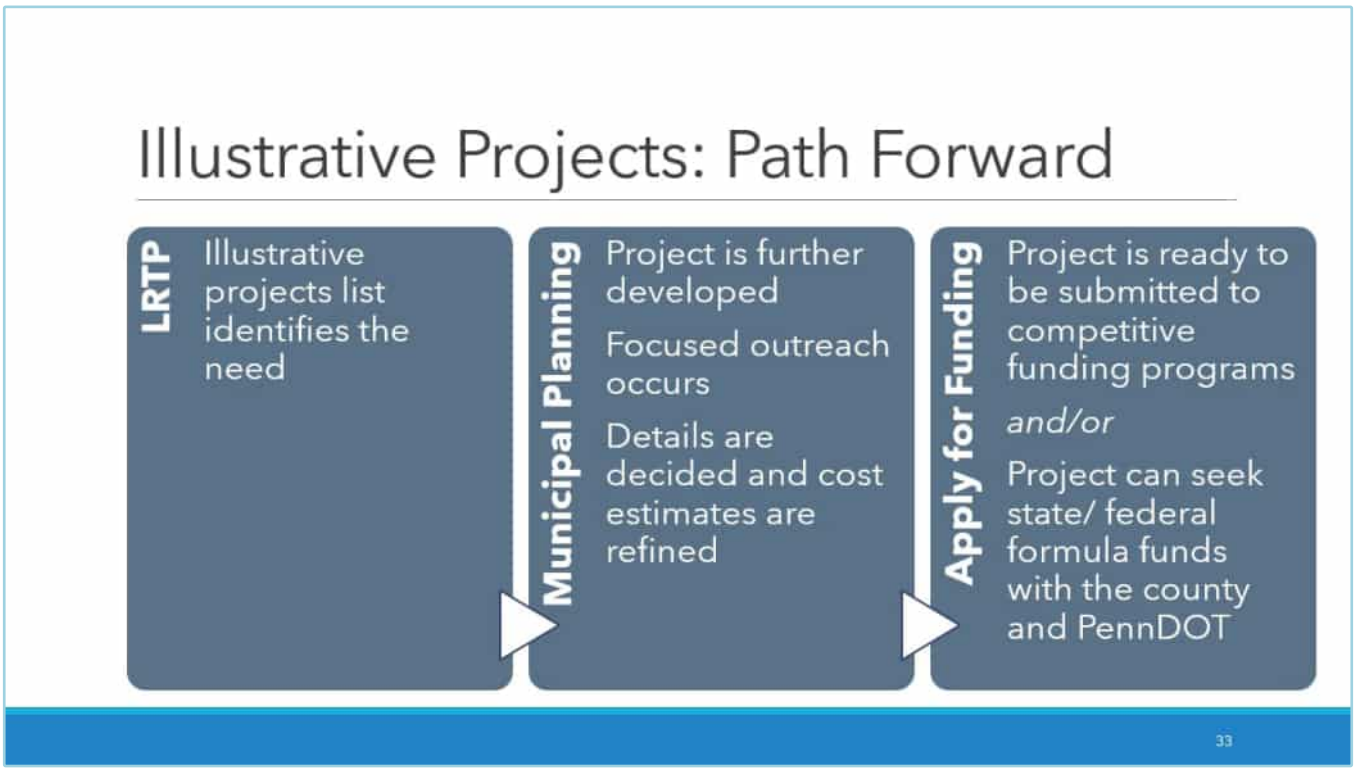
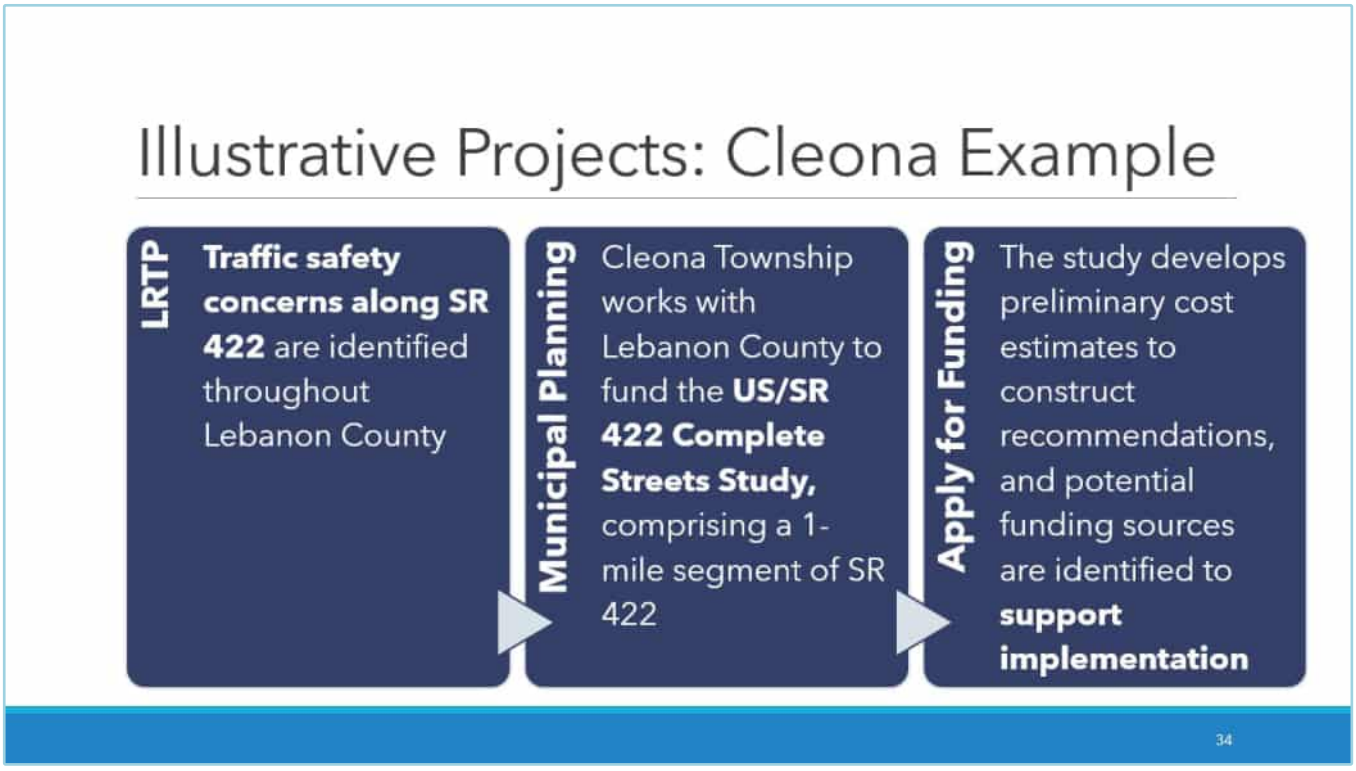

Illustrative Projects: Path Forward
LRTP
Illustrative projects list identifies the need
Municipal Planning
Project is further developed
Focused outreach occurs
Details are decided and cost estimates are refined
Apply for Funding
Project is ready to be submitted to competitive funding programs
and/or
Project can seek state/ federal formula funds with the county and PennDOT
33


Illustrative Projects: Cleona Example
LRTP
Traffic safety concerns along SR 422 are identified throughout Lebanon County
Municipal Planning
Cleona Township works with Lebanon County to fund the US/SR 422 Complete Streets Study, comprising a 1-mile segment of SR 422
Apply for Funding
The study develops preliminary cost estimates to construct recommendations, and potential funding sources are identified to support implementation
34

Implementation Actions in the LRTP

- Implementation actions are meant to guide LEBCO MPO to help realize plan goals in concert with the illustrative/municipal project list
- In the previous plan: 43 implementation actions
- From the focus groups: this update proposes reducing the number of implementation actions and for the ones included identify detailed set of next steps and responsible parties

Table 31 – Implementation Actions

	Action (reference number does not indicate priority)	Responsible Entity	Timeframe	Supports which goals?	Supports which planning factors?
1	Coordinate with surrounding MPOs and RPO to maintain the overall safety and operation of the transportation network.	MPO	Ongoing		2, 3, 4, 6, 7
2	Partner with the Harrisburg and Franklin County MPOs to develop a regional framework, funding plan, and schedule for improving safety and capacity on I-81.	PennDOT, MPO	Ongoing		1, 4, 6, 7, 8, 10
3	Ensure that any asset management activities within the I-81 right-of-way, such as bridge replacements, anticipate and accommodate future roadway capacity-increasing projects.	PennDOT, MPO municipalities	Ongoing		4, 7, 8
4	Work with municipalities along the I-78 & I-81 corridors to avoid conflicts (e.g., roadway noise) and impacted land uses, ensure the availability of rights-of-way needed for future mainline and interchange expansion, accommodate stormwater management activities, etc.	PennDOT, MPO, municipalities	Ongoing		1, 4, 5, 7, 9
5	Improve alternative routes along the I-78 and I-81 corridors to accommodate detours during incidents, maintenance, and construction. Utilize the excess roadway capacity of US 22.	PennDOT, MPO, municipalities	Near- and Mid-term 2020–2031		1, 2, 4, 6, 7

2020 LebanOnward
Excerpt from Table 31 – Implementation Actions

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Example of a More Action-Oriented Implementation Action

6. Create a community-led bicycle/pedestrian advisory group – include coordination over resurfacing opportunities and set up recurring coordination/agenda items at MPO meetings.

Critical Path Item	Lead	Timeline
Invite interested parties to discuss the potential role of a bicycle/pedestrian advisory group	LEBCO MPO	Summer 2024
Formalize bicycle/pedestrian advisory group goals, activities, members – *could include biannual meetings with LEBCO MPO*	LEBCO MPO and Advisory Group	Fall 2024, recurring biannual
Coordinate with advisory group to include agenda items at MPO meetings	Advisory Group and LEBCO MPO	Recurring monthly

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Implementation Actions

MPO Administration

1. Increase staff capacity at the MPO to keep pace with county growth and development demands.
2. Provide additional opportunities for ongoing collaboration between municipalities and the MPO

Freight

3. Develop a guide and model ordinance for municipalities to help guide municipalities who are considering freight management tools such as changes to truck parking and/or implementing transportation demand management tools.
4. Dedicate resources to support the Eastern PA Freight Alliance
5. Encourage direct warehousing access to rail lines through local land use ordinances and planning

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Implementation Actions

Bicycle/Pedestrian

6. Create a community-led bicycle/pedestrian advisory group – include coordination over resurfacing opportunities and set up recurring coordination with advisory group at MPO meetings

Projects

7. Develop an investment strategy for the County Liquid Fuels program to provide funding for county bridges
8. Work to advance an MPO Congestion Monitoring Process to evaluate the county's roadway network and work to reduce congestion
9. Track county progress on LRTP goals through an interim review of performance measures between LRTP updates

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Next Steps

Draft Final Plan:

- Submitting to FHWA for review in April
- Available for public comment (for 30 days) in April/May
- Approval and adoption in June

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Thank you!

Team member contacts:

Alma Fargason

Alma.Fargason@wsp.com

215-209-1238

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Changing Demographics

	Percent Change	2012	2021
Total Population	+6.7%	133,578	142,486
White	+0.7%	119,364	120,177
Black	+20.9%	2,544	3,075
Asian	+55.5%	1,347	2,135
Hispanic and Latino	+60.6%	12,492	20,064
65+ Population	+19.9%	22,859	27,398

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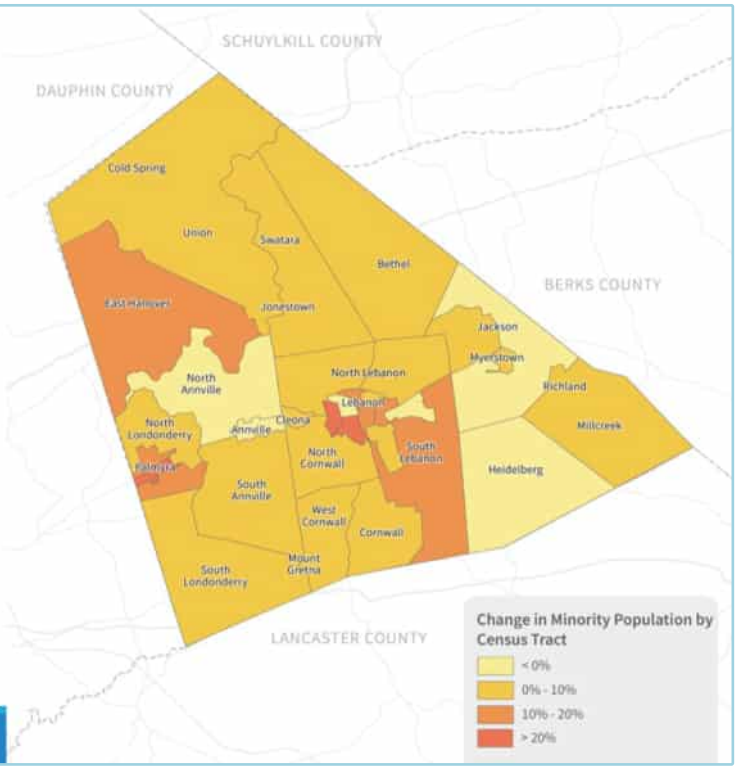
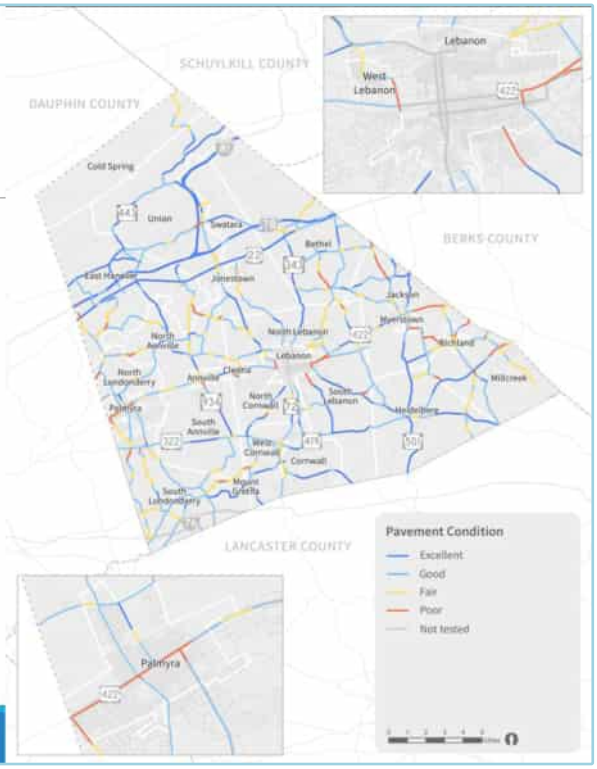
Change in Minority Populations



Pavement Conditions



APPENDIX B

Public Survey Responses

Lebanon County Long-Range Transportation Plan Public Survey

Monday, April 01, 2024

386

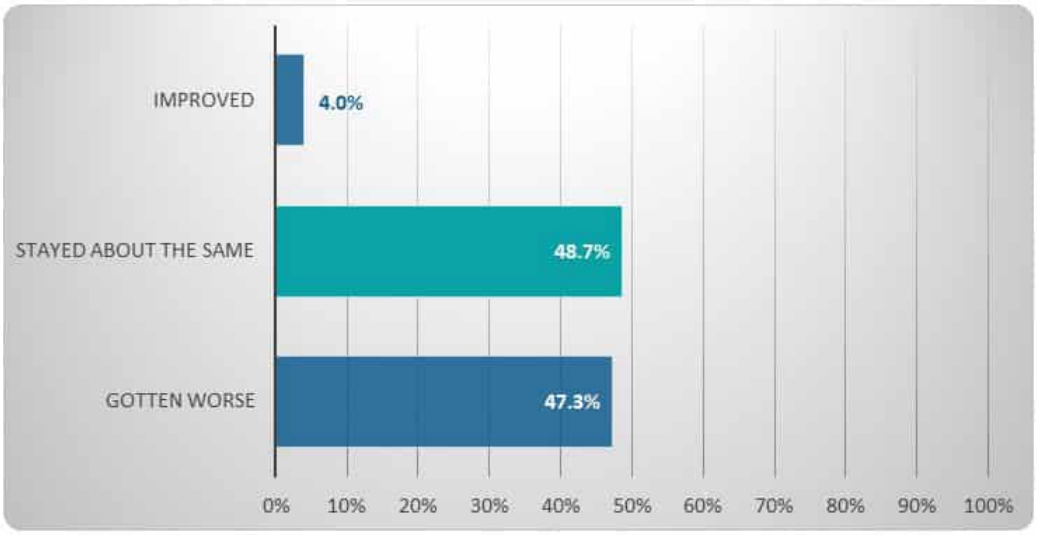
Total Responses

Date Created: Wednesday, December 06, 2023

Complete Responses: 386

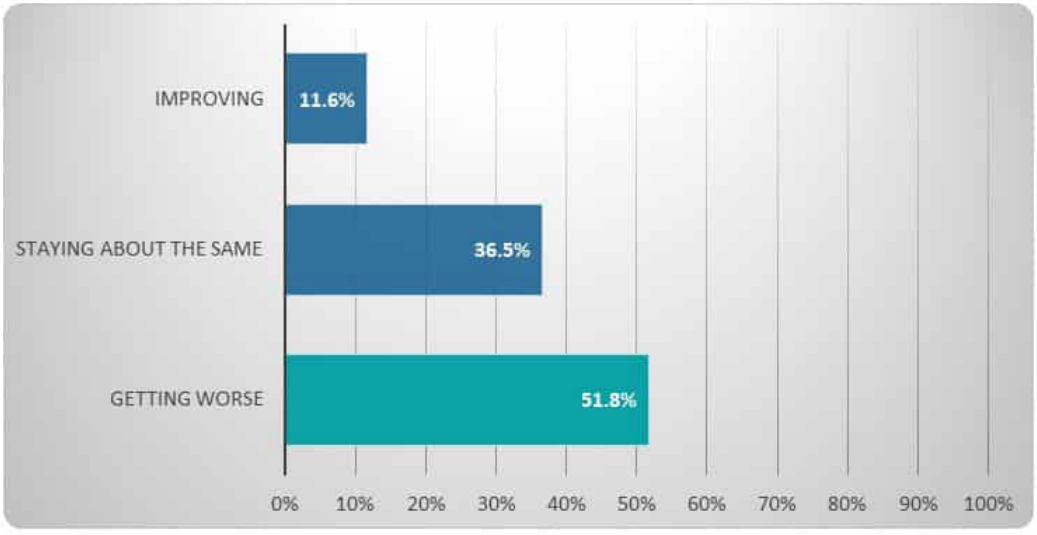
Q3: In recent years, has transportation in Lebanon County:

Answered: 353 Skipped: 33



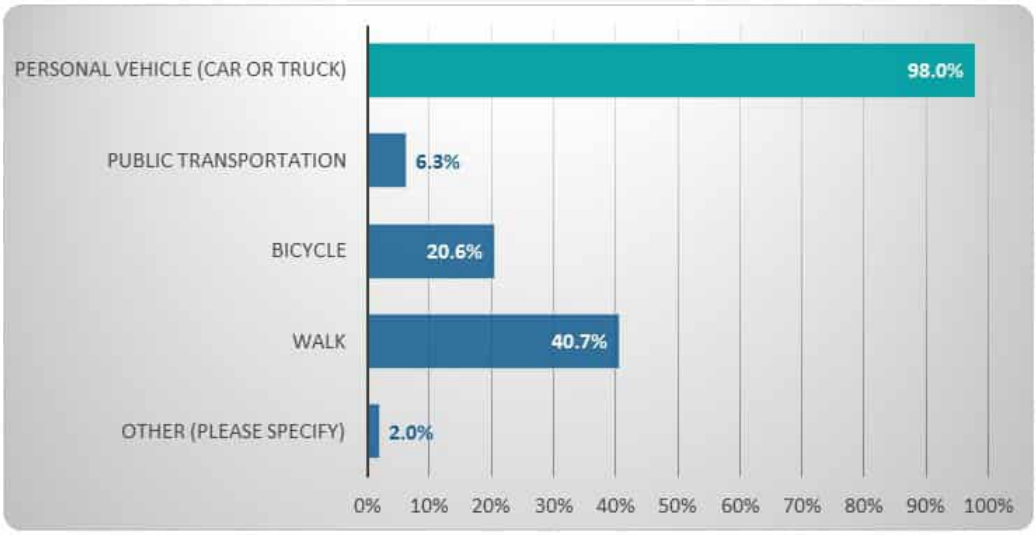
Q4: Looking ahead, do you see transportation in Lebanon County:

Answered: 353 Skipped: 33



Q5: Which types of transportation do you currently use? (select all that apply)

Answered: 349 Skipped: 37

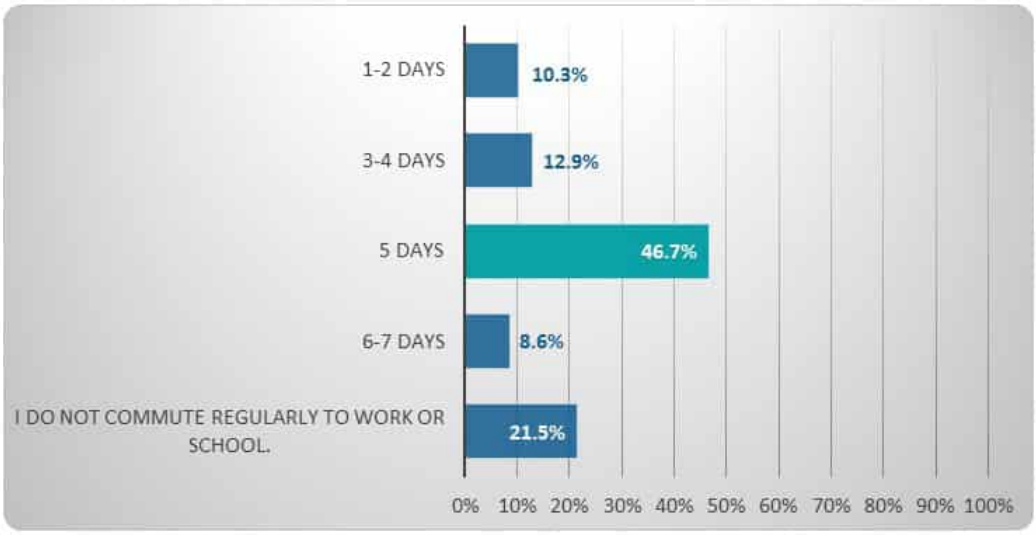


Q6: How many days a week did you regularly commute to work or school before the COVID-19 pandemic?

Answered: 349 Skipped: 37

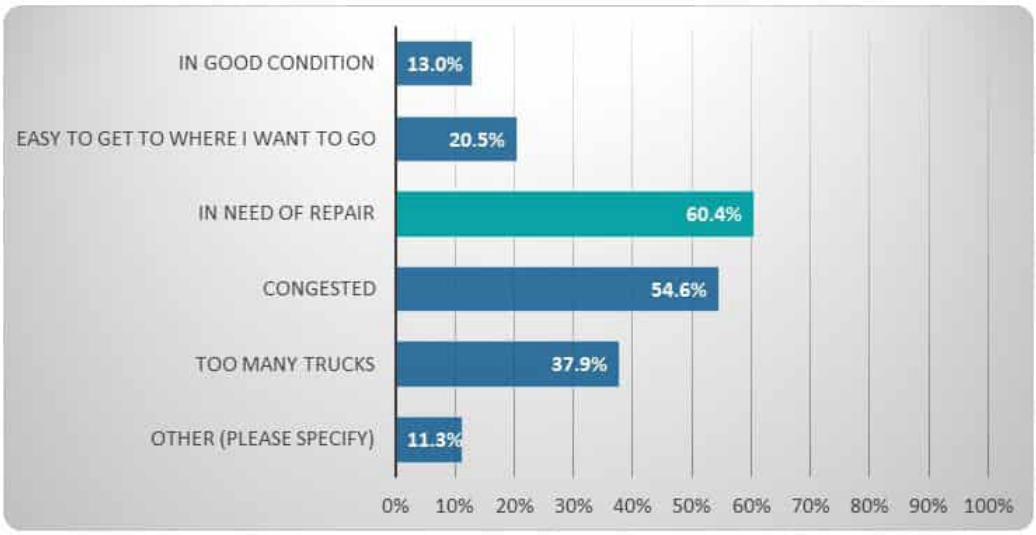
Q7: How many days a week do you regularly commute to work or school now?

Answered: 349 Skipped: 37



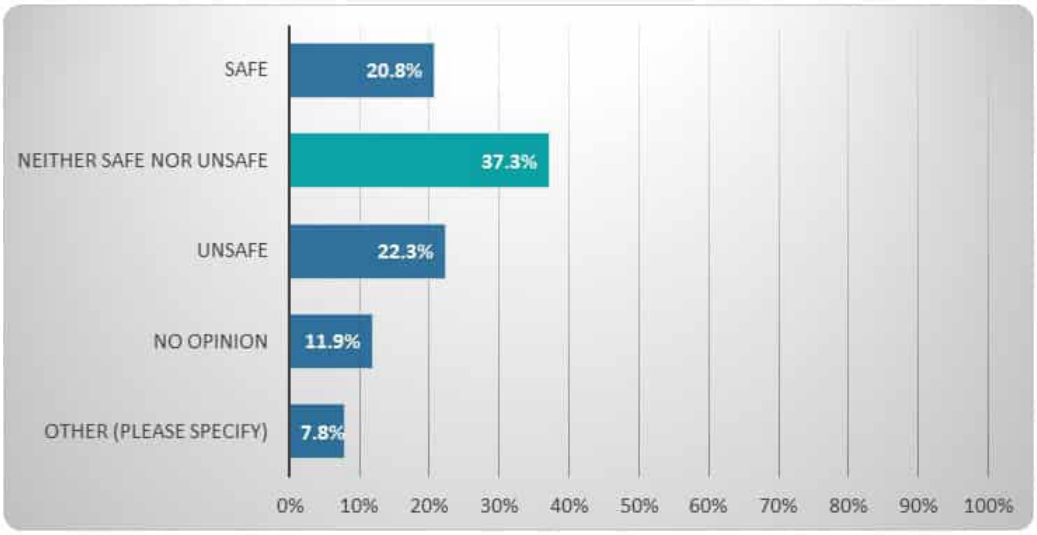
Q8: How would you describe the roadways in Lebanon County? (select all that apply)

Answered: 346 Skipped: 40



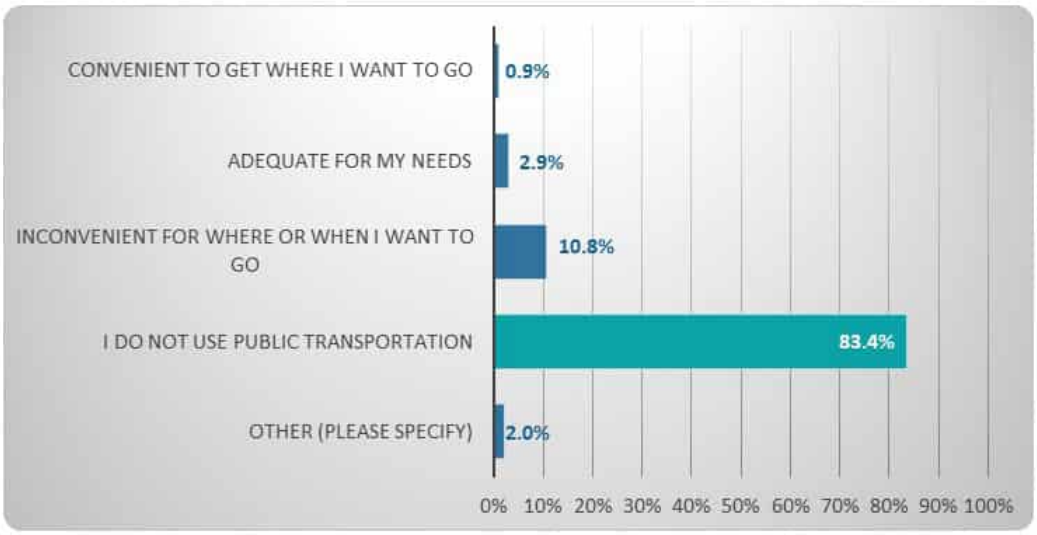
Q9: How would you rate safety on roadways in Lebanon County?

Answered: 346 Skipped: 40



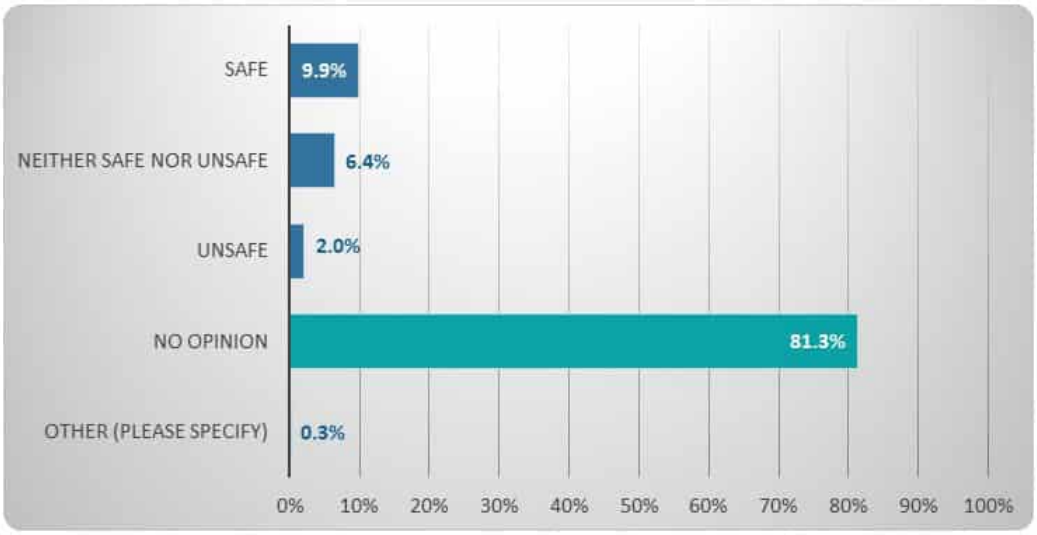
Q10: How would you describe public transportation in Lebanon County?

Answered: 344 Skipped: 42



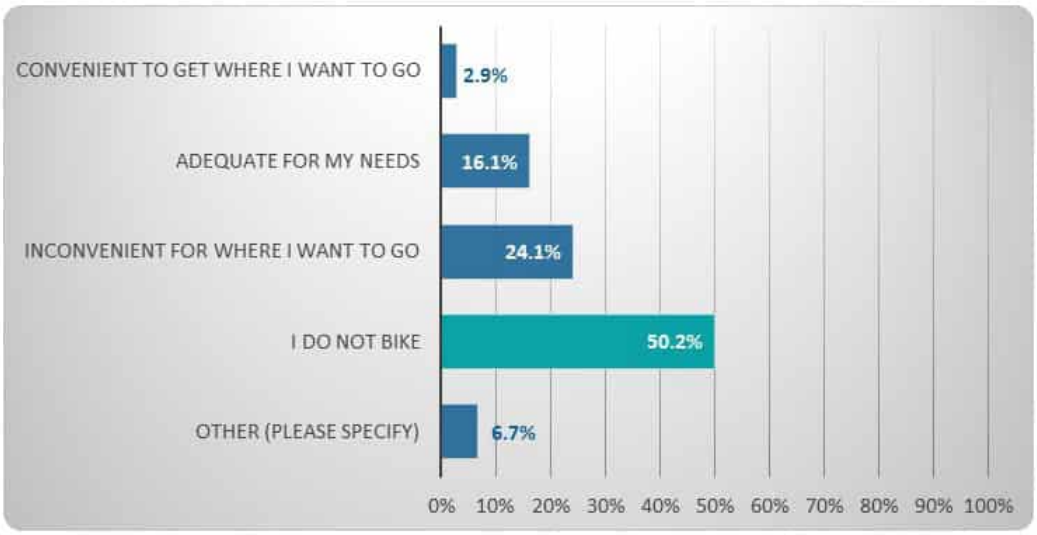
Q11: How would you rate safety on public transportation in Lebanon County?

Answered: 343 Skipped: 43



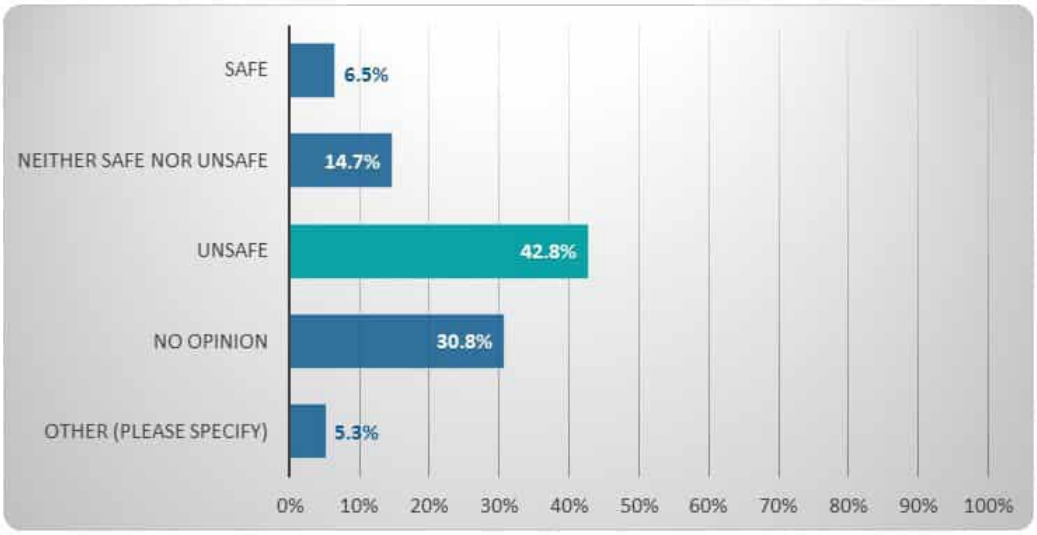
Q12: How would you describe bicycle facilities in Lebanon County? "Bicycle facilities" refers to both on-street facilities and trails.

Answered: 341 Skipped: 45



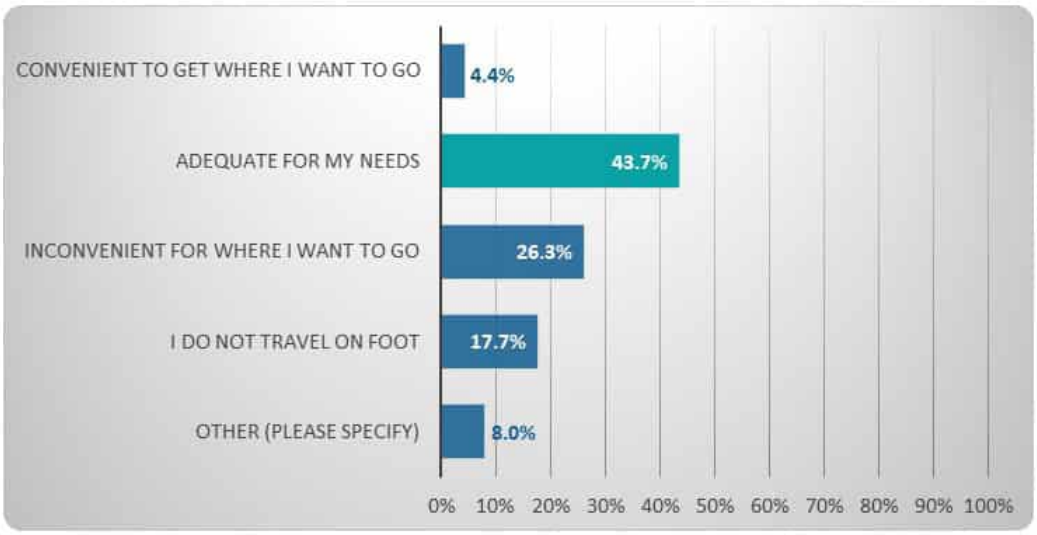
Q13: How would you rate safety for bicyclists in Lebanon County?

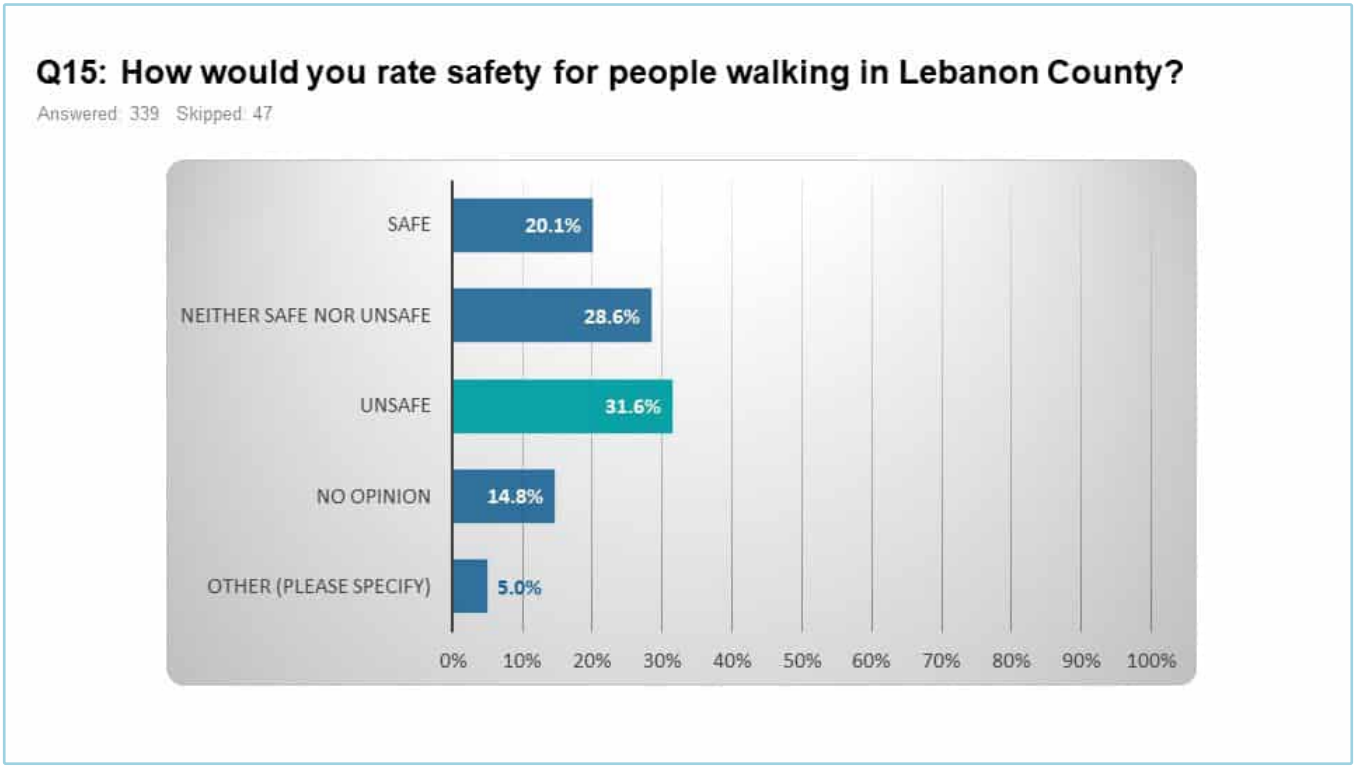
Answered: 341 Skipped: 45



Q14: How would you describe walking facilities (i.e., sidewalks, trails, etc.) in Lebanon County?

Answered: 339 Skipped: 47





Question 16: Please list and describe any specific transportation problem areas that need to be improved.

- Drivers running red lights.
- Speed - people travel well above the posted speed limit on east Walnut and Lehman Streets. Walnut Street lots of cars zig-zag down the road to get around those of us doing the speed limit.
- Red light at 422 and 934 in Annville.
- The light at 423 & 934 in annville always has major congestion.
- The increased truck traffic creates unsafe approaches to 934 and clear spring and also at Kauffman rd and 934 to name just two major safety issues. The trucks are increasing wear and tear in back roads and drive way too fast on these windy roads.
- I would love to take a bus into Lebanon to do my shopping on the weekend but no busses come out to Fredicksburg.
- Too much traffic on Rte 72 from “Lickdale” to Lancaster County line.
- Annville square-nightmare
- Route 72 South
- Route 72/Long Lane
- Lebanon City-congestion and parking
- I know Wilhelm is under construction, but the conditions there are terrible.
- Encourage the County Bike Coalition to do more to educate its member bicyclists about road courtesy (i.e. using road shoulders, rather than riding in the roadway).
- Better municipal planning, especially in regard to warehouses to reduce/divert truck traffic, which is getting out of hand - but even more generally for municipalities to consider roadway surfaces and traffic flow when they decide on employers and housing. We know what needs to happen, we just need leaders willing

to examine and act toward a longer-term vision for the community and not just a quick hit of tax money.
- roadways are full of potholes. No designated bike lanes on any roadways which causes bike/vehicle accidents.
- 422 needs repaired
- Route 72 need to be a four lane highway. Since they put a Walmart distribution center at Heilmandale road. There has a be increase in truck traffic. The traffic is bumper to bumper at peak times about five hours a day.
- 57 ft. tractor trailers dont belong on narrow, rural roads with sharp turns.
- City lights take way too long to change when no opposing traffic is present (ex: Chestnut St); Unsafe walking/biking paths; Poor road conditions
- More traffic congestion near the Walmart Warehouse in North Lebanon township. No easy way to get from the North part of Lebanon County to the Southern parts of Lebanon County
- Transportation to reading. Transportation to Lancaster Saturday more busses. Transportation afternoon and sundays
- Cornwall Rd and Burd Coleman. Ironmaster Rd and Rt 322.
- Cross walks and sidewalks to allow for safe pedestrian passage
- Route 934 and 422 intersection-congestion. 422 between Palmyra and Annville is becoming very built up and takes much longer to traverse. 934 speed limit south of the AC high school needs to be lowered until clear of all residential areas. Louder Road and 934 in South Annville Twp might need possible red light in the future?
- clear spring road and rt.934
- Intersection of 343 and Kimmerlings/Kochenderfer.
- Intersection of 422 and Narrows Drive.
- Congestion on the Palmyra to Annville on 422. To many trucks with warehouses.
- This survey should have a list of issues from which respondents can identify their top concerns. You have effectively constricted the survey to a handful of issues, namely the condition of the roads and safety concerns, with a couple questions about walking, biking, and public transport. Nowhere in this survey is there a question about growing traffic congestion, especially the rapid growth of truck traffic due to all the ongoing logistics industry development (“”warehouses””).
- For example: “”Identify your top three concerns when it comes to transportation issues in Lebanon County:
- - Safety
- - Road conditions
- - Public Transportation
- - Walking and biking
- - Traffic congestion
- - Travel time
- - Air pollution
- Traffic on 422 in Annville gets backed up way too much for having just one traffic light
- Intersection of rocherty and Cornwall rd is congested, difficult to turn across traffic; exit from expo center is tough during peak times; Oak and 12th street has low visibility; Isabel drive and 72 is terrible to turn out of, similarly the turns from the Panera is really tough too. The strangest point and difficult place is the intersection at Sacred Heart and Cornwall Elementary. How does one pull out of there safely?!?
- State drive and rocherty road
- Love the roundabout at rocherty and Colebrook; alleviated a lot of congestion.
- Longer exit ramp from 322 to Iron Master Road
- Rocherty Road at certain times of day is very congested, and with all the new things going in across from

the expo, should probably be addressed. Same for Quentin Road, especially at the shops across from Tuck St. and the mess that will be Chick-fil-a.

- center of cornwall ; 10th & Colebrook Rd
- RT343 (7th St) and Kochenderfer Rd can be very dangerous at certain times of the day. Even the intersection at 7th and Maple could use some upgrades/widening of some sort. Possbily a light at Narrows Drive and 422....making a left there is awful.
- Rt 501 & Reistville Rd.
- Congested traffic... from Hershey to Lebanon on rt #422 always backed up from the square in Annville for 1/4 to 1/2 mile midday!!!!
- We need more infrastructure for bikes and e-bikes and pedestrians.
- Better traffic management for renaissance faire traffic blocking entrance to turnpike.
- More EV charging in Lebanon. We drive a Tesla and if we didn't have a home charger, it would be hard to visit Lebanon as it's quite far from most commercially available fast charging options.
- North Cornwall commons development needs an easier way to turn left onto Rocherty Rd. It would also be nice to have more sidewalks/bike lanes/pedestrian crossings going to the high/middle school campus.
- 422 & 72 very congested
- Unsafe intersections: 1. N. 8th Ave / Weavertown Rd. 2. N. 8th Ave. / Maple St. 3. Kochenderfer / Rt.343 4. Crossing over 422 onto N. 8th Ave in between McDonald's & Giant gas.
- 7th street and kockenderfer needs a light. 16th street and Lehman is busier bc of the school and needs a light
- Roads need to be repaired and preferably widened. Shoulders are not wide enough for cyclists, buggies and pedestrians in many areas.
- Cars parked too close to perpendicular street exits. Especially is making a left onto 422 going East. Also road surfaces are rough all throughout.
- The intersection of Kochenderfer and 7th St is very busy. This winter when driving past the Lebanon Library on 7th St., I noticed that there was either no sidewalk or it was not properly removed of the snow and there was a walker who was using a walker with extreme difficulty.
- The roads in lebanon city are terrible. Police should also be out on foot, especially when city schools are dismissing
- Shoulders/sidewalks/signage near schools. When repaving roads, add a berm/shoulder so folks can walk or bicycle. Signage near schools. Signals/reduced speeds near schools. Lack of traffic enforcement is an issue.
- There is a lack of robust public transit, and alternative modes of transportation. Lebanon County is only accessible for people with cars. It would be beneficial for the health and well-being of county residents, and the environment, as well as significantly reduce traffic and congestion in Lebanon County, if we invested in alternatives such as public transit, bike lanes and walking trails/sidewalks.
- The roads are in disrepair especially when you consider the amount of taxes, we pay on our gasoline to maintain the roads.
- sync red lights thru out leb.
- Lebanon city: sidewalk repair, pothole repair, more stops for public transportation, actual lines for traffic flow.
- Lebanon county: pothole repair, lines on the road, left turn arrows at lights, lights at 2/4 way stops signs with many accidents.
- Living on South Lincoln Ave. in Lebanon, traffic has gotten much heavier for a road that was not built to handle it. Problems with a lot of trucks and speeding.
- Campbelltown is quite congested.
- Elderly need more specific transportation for their needs. There's more transportation they need than to

just doctor appts. Need one specific to Senior Activities, Farmers' Market check distribution sites and the participating vendors.

- 72 and 343 needs widened. 72 in Cornwall needs significant improvement where the new Chick Fil A is going.
- There is not enough parking available in the city of lebanon.
- There are a few blocks on Cumberland Street that have parking meters that really shouldn't have meters (in a residential area).
- Pot holes unsealed man hole covers out of sync traffic lights poor visibility at many intersections
- The stretch of Route 422 eastbound toward Lebanon is in terrible condition and needs repaved desperately. Route 422 in Cleona is fine, in terms of the road's condition, but could be beautified.
- The intersection at Rt. 72 and Spring Hill Lane MUST be a priority in any long term transportation, public safety plan. It is dangerous due to speed, congestion, inadequate site distance and the increasing volume of truck traffic. Please do a study at this intersection to confirm these concerns.
- I can think of multiple places that could use traffic lights.
- Maple St. Should be 2way between 9th and 10th. This would improve traffic flow.
- Trucks headed to and from the business park behind the mall, too many use Tunnel Hill Road and Long Lane and the hard turn at Lehman St. Also the Annville Business Park even with the improvements planned for Clear Spring Road. 934 is narrow for truck traffic.
- There should be a traffic light at 12th and Colebrook.
- Bike safety in the City of Lebanon and other larger populated towns is horrific. We encourage the use of bicycles as a way to get to everyday destinations however, there is no safe way to use this type of mode of transportation. Where are the bike lines in the city? Why are we more concerned about the roadways in the city being large enough for large tractor trailers and not safe biking. Also- why are there tractor trailers utilizing our city and town streets if they are not delivering goods?
- The intersection at the center of Cornwall needs corrected before further development occurs in the region. The awkward 4-point intersection creates a lot of confusion for drivers unfamiliar with the area. I try to avoid the intersection as much as possible, but there are times where it does not make sense to avoid it. Unfortunately, about 25% of the time I do use the intersection, I have to slam on my brakes or swerve to avoid being hit by a driver that does not understand I am turning or that only 3 of the 4 roads at the intersection have a stop sign. I am a HUGE fan of this intersection becoming a roundabout if it is done correctly.
- Truck traffic on rural roads from any large warehouses or distribution centers to interstate highways are destroying the quality of life the county once valued. The problem seems to be a lack of foresight by township or county administrators and there after any planning to address the issue.
- There are areas of the County that could really use sidewalks or multi-modal trails. I wish were were investing in more bike/pedestrian features.
- Klein Ave/rt 897- needs traffic light, when turning lane was added- traffic turning north onto 897 cannot see south if vehicle in turning lane.
- Corridor from Lincoln Ave, to Evergreen Road all the way down to the Sheetz at Quentin Rd. When school lets out and the VA has a shift change, this backs all the way over the bridge.
- more bike lanes would be great. better traffic light timing
- Isabel Dr at Quentin Rd. needs traffic signal. Rt 934 at Rt 422 traffic signal. Tractor trailers executing turns often take the entire green light to execute turning. Strong need to reduce these large vehicles on the mostly 2 lane roadway. Difficult for people to get to all of the medical facilities between and beyond Quentin Rd and Cornwall Rd. These are busy places (collectively) that are serviced by folks who need to see medical providers. Poorest access roads I have ever seen. Endless lines of traffic, especially on Quentin Rd.
- more public transportation to Harrisburg and Lancaster needed. Stop approving trucking terminals for construction

- Adherence to current regulations on travel--especially bikes and motorized bikes using streets--is the biggest issue of safety in transportation that I am aware of.
- Congestion near warehouses in northern Lebanon. Rt. 422 congestion and safety.
- State drive in Lebanon from 1100 block into Lebanon is horrendous and unexcusable. Needs resurfaced NOT patched!
- Turning lanes prior to Sheetz, Turning lane at sheetz where you turn into sheets to the left and then also turn left just a few feet beyond that.
- West bound on Rocherty RD, the traffic light at Cornwall rd should be changed. I feel it gives to much time green to Cornwall rd and not enough to Rocherty. There are times traffic is backed up to the bridge over the rail trail and Cornwall has a green light with few cars traveling there.
- Better education on crosswalks, clear definition of when a car must stop and when the pedestrian has to wait.
- Repair some roads and fix some intersections
- pot holes
- South Annville township approving the warehouses, as well as a ton of new home developments has caused a nightmare driving in Annville and South Annville Townships
- The congestion at 934 and 422 is horrible!
- Traffic congestion in Annville at intersection of 422/934; no sidewalks on some Annville side streets where students walk to school.
- The Annville intersection of Main Street and 934/S White Oak Street.
- There has been so many warehouses opened with absolutely no improvement to roads to safely handle all the traffic due to trucks and people gravelly to work in the eyesores. I dread the day my son is old enough to get his license and I have to fear for his life!!
- Bus from Jonestown Square and Fredericksburg Square to HersheyPark Employee Center and Lebanon city.
- Too many warehouses are being put in, without consideration to the increased truck traffic and harm to the road ways.
- Truck traffic on Rt. 72.
- I feel unsafe trying to walk or ride to local shops, ice cream parlors, grocery store. I see a lack of safe side walks and bike baths to shop or eat from my home.
- 422 in Annville has had more accidents then can be counted. Cross walks with lights in several locations in Annville and Cleona would be helpful.
- Need more ways other than 9th St to cross railroad
- Too congested traveling thru Annville
- Sidewalks, especially in Campbelltown
- 322 snow removal is very poor
- Public transportation is not an option for me as it does not meet any of my needs.
- Additional routes in western Leb Co other than directly on 422
- Left Turn light needed for left turn lane when heading east on Rocherty and turning left onto Cornwall rd.
- Bus schedule needs to be adjusted to accommodate the additions of the newer stops on Rtes 8 and 16. You added extra stops but didn't account for the extra time that it would add to the route. If I take the 8, then I am consistently late for work at Hershey Med. A route audit needs to be completed for that run.
- I work 12-16 work days. Most of the times, The LT routes do not support this because of Rtes 8/16 stop running at 4pm and/ there is no service to Hershey Med on the weekends.
- There is no service for the 8/16 on the weekends to Hershey Med. I have to work every other weekend there so If my vehicle isn't running, etc I either have to walk (it takes 2 hrs), rely on non-dependable Uber availability, or ride my bike (45-60 min ride). Getting home on weekends is also a challenge...see above, but

add a 45 min walk from Hershey Med to the Hershey Park Employees entrance of which the majority of the walk is unsafe as part of the the route to get to Hershey Park along Park Ave/743 has no walking path and is unlit. Several years ago, the stop was at Hershey Intermodal which saved me 20 min of walking and it eliminated the dark and unsafe walk along Park Ave/743.

- People that are walking or biking need to be warned/fined for not wearing lights, and reflective gear while it's dark
- Potholes and wearing away of roads at curbs. Roads and drains are not cleaned enough in my neighborhood causing additional wear on roads
- The roads are in terrible shape. 422 coming through town (mostly heading east). There are holes and bumps that are difficult to navigate, bad for the car. That stretch through Lebanon city is really bad.
- More speed humps / bumps are needed around Palmyra, including in the Londoncroft develo-meant, where we live. People speed constantly!
- Lehman st (east & west) Walnut st (east & west) Maple st (east)
- The sidewalks and Palmyra Borough are very uneven. The elderly walk on the street so as not to trip the kids walk from the high school to the neighborhoods by Redners because there's no shoulder or path.
- roads have to many potholes
- It would be great if the flooding on Lingle Road in Palmyra could be addressed. A large amount of traffic then flows through the Arbor Greene development - many at high rates of speed causing serious safety issues to homeowners and children.
- There is no safe way to walk or bike into/out of Palmyra.
- The road work (the sidewalk "improvement" on cumberland street has been a nightmare. It's created terrible traffic that was not there before. Also it seems every time I travel to work from Palmyra to Lebanon City there is road work in a different part of my route and I constantly have to try and work around it.
- Lingle Avenue by Lingle Avenue Elementary School - flooding/and now more pot-holes are appearing. Also, the 'T' intersection by Reigle Airport Field; South Forge Road and Airport Road. That is always congested from sporting events and people pulling out in front of vehicles to get onto S Forge Road.
- Palmyra- needs red light at area of Regel Airport/ paramount/ in the net. Palmyra- Lingle Avenue flooding.
- Lebanon County needs a by-pass so that semi trucks that are not coming to Lebanon City for deliveries or business can go around instead of congesting 422, 322, and route 72 through town.
- All forms for transportation other than private car should be promoted and encouraged.
- to many pot holes, poor cleaning of roads during snow.
- Sidewalks in major need of repair in much of Palmyra and Campbelltown. They are unsafe for even walking. East Maple street in Palmyra needs to be repaved.
- Congestion on 422 esp from 3p to 5:00p
- The downtown Lebanon roads are in need of complete resurfacing. They are in horrible condition and likely to cause car damage from driving on them. Intersections also need more regular repainting for where a car should stop.
- The flooding situation on Lingle Avenue continues to be an untenable issue, but I know repairs are in the works. The intersections of both Hinkle Avenue and Airport Road with Forge Road/117 are overly congested, in need of repair, and arguably dangerous.
- Severe lack of adequate, safe, and convenient roadways between Lebanon and Lancaster, causing large trucks and too many vehicles on small congested single-lane roads.
- Not enough stops for public buses. Sidewalks in major disrepair. Need of additional bike lanes/safety.
- Along with areas listed in the others sections related to my home community, I would list the following items for improvement: RT 72 in its entirety-to accommodate truck traffic. Walmart warehouse intersection and Lickdale intersection in particular.
- Cleona RT 422 has many crashes on the east end-investigate why, Cleona RT 422 Center Street intersection

light timing needs improvement to accommodate school and truck traffic, Annville RT 422&934 needs turning lane arrows and more space to accommodate increased traffic due to community growth and increased truck traffic.

- Too congested through Annville
- We had an exchange student living with us who used public transportation and it was hard for her to make it work on her time schedule.
- We are a family who loves to walk. It's very unsafe even in town.
- The circle in front of Regals airport is unsafe. No one goes when they are suppose to!
- Fix 422 and 934 intersection. Lebanon County roads are not keeping up with residential and industrial growth.
- 1) Tractor trailer traffic is too heavy on Clear Springs Road in Annville. 934 south-bound to new whare-houses, via Clear Spring Rd, is a problem you created. It is sad to see how it is impacting the residences on Clear Spring Rd. A 934 round-a-bout at the crest of a hill is not an answer & will cause Tractor Trailer problems. We are a trucking family. This is a really dumb idea for this specific location. You created the new wharehouse traffic problem, so now you need to fix it. This is the #1 traffic problem in our County, affecting drivers & residences. Instead of coming up with dumb unknowledgable decisions, why not come up with a group of local Tractor Trailer drivers to get their opinions & ideas. Not getting this correction right will cost lives & property values.
- 2) Closing Rt 72 for Swatara Creek Bridge repair will increase danger on surrounding roads. Work is needed, but should be done as quickly as possible.
- 3) Rt 72 & Fisher Ave/Lickdale Rd needs deep road replacement.
- 4) Moonshine Road needs NO Tractor Trailer traffic. It is a common detour when 81 has an accident, which is most days.
- Route 422 in Annville is very congested and prone to delays. Especially problematic is the intersection at 422 and 934. Additionally, the new warehouses west of Annville will be using already congested roads and roads not designed for truck traffic. We need some sort of alternative or better design for Route 422 in the western part of Lebanon County.
- A walking bridge from South Lancaster Street across the Quittie to Annville Elementary would improve the safety of those neighborhoods walking from south annville to annville Elementary and downtown. The sidewalks are not adequate on 934 to walk downtown and to annville Elementary with young children.
- 934 and louser road needs a light. 934 and Reigert's needs a light or a lane change. Speed limit on 934 needs to be lowered to 25.
- Lack of sidewalks on many US and State Roads
- The intersection of S Forge Rd and Airport rd in palmyra is very congested and unsafe. A traffic circle should be installed
- Route 422 between the new Snitz Creek Brewery and the intersection past The Rising Sun
- Road signs and more yellow lights near elementary and middle schools.
- Double parking is rampant
- School Buses- Overcrowded & Unsafe
- 322 gets backed up in Campbelltown and needs to be improved upon
- The intersection at 322 & 117 in Campbelltown needs a turn lane- very dangerous turning left without one
- More intersections with traffic lights need left turn arrows. Ex: 322 at Lynmar/Palmyra Road. Volume is already too high to not have left turn arrows in all directions, and we're continuing population growth.
- A lot of traffic thru centers of town with trucks.
- Sidewalks missing for lots of areas (such as Campbeltown)
- So many new developments being built, roadways cannot accommodate all the traffic
- There have been several fatal crashes on route 322 between Boyd Street and Brickerville. Something

should be done to identify the cause of these crashes and then to mitigate these risks in order to prevent additional serious injuries and fatalities.

- Need to consider future growth(warehouses) and truck traffic that will create
- 322 and 422 way too congested. Routes both take exceptionally long
- Palmyra to Lebanon on 422 is quite congested. The warehouses built near Clear Spring Road has started to produce some mild traffic that will continue to increase
- Sidewalks along major roadways for adults who do not drive.
- Would like to see more sidewalks and bike paths.
- Route 81 and 422 - lots of congestion and tractor trailers
- Annville on 422 and Campbelltown light at Palmyra Road and 322.
- Lingle avenue flooding is a problem. Rerouting traffic through neighborhoods not designed for that volume is unsafe for the residents, said specially when commuters are now in a hurry due to the inconvenience.
- My children are on the school bus for 40 minutes. It includes a bus change and we only live 7 minutes from the school.
- Congestion on 422
- Intersection of Gingrich Rd and Prospect Rd. Strongly encourage making this a 4-way stop. Poor visibility at this intersection due to elevation changes on Prospect Rd. Many near accidents after stopping on Gingrich Rd due to poor visibility. Thank you.
- More sidewalks so people are not walking on roads.
- in need of sidewalk from campbelltown to Palmyra
- Bus stop in campbelltown 322 for the 422 route hershey and lebanon city
- Chestnut at 9th heading east. The lanes are not marked as turn lanes or straight and many people go straight from the turn lane
- Trucks speed on Cumberland Street and shake the buildings
- Lots of congestion on 322 through Palmyra from 6:30am-9:30am and 3pm-7pm. Traffic is always backed up; turning at schoolhouse and 322 is dangerous during those times as well
- Left turn lanes with signal arrows at high traffic intersections
- Speed limit on Gravel Hill Rd. 55 for the amount of traffic is to high
- Need sidewalks more and bike trails. That are not consistent and so we can not rely on them. I wish I could walk and bike more, but it's just not safe with the lack of pedestrian road space.
- Way to much truck traffic
- Bring back j walking fines.
- Need sidewalks for walking; safe paths for bikes; need more crosswalks near/around Redners shopping area; the intersection of Northside and Stonebrook is very dangerous and congested and will only get worse with the 34 New apartments that are being built
- Traffic flow and speed on Evergreen Rd from truck traffic traveling to and from lebanon valley business park on state drive.
- Increased traffic on Evergreen from Cornwall Rd and Fairground area development. The area is congested from additional businesses and housing combined with VA and school traffic. The traffic is unsafe for our children.
- The congestion on 72 has also greatly increased with the growing businesses. Rt 72 needs to be widened to 4 lanes.
- Semi trucks driving through residential areas. Many cars have been damaged/destroyed as a direct result of semi trucks attempting to navigate narrow residential streets. I personally have had 2 cars damaged from semi trucks, my neighbor has had 3 damaged with one of those being a total loss
- 117 and Hoffer Rd. Pulling out is extremely unsafe.
- There are way too many 18-wheeler trucks in residential areas, especially in Palmyra

- 934 and Louser Road. Very dangerous cross road. I called the police department and was told it would cost 1,000,000 (1 million dollars) to put a light at this intersection. Very dangerous.....
- Fix pot holes
- Linking to Dauphin and Lancaster County to bring airport and amtrak
- Red light wait time crossing over 422 in Palmyra. Drivers not following rules of the road. Road rage of drivers who want to go 20 over the speed limit due to lack of law enforcement. Speed limits being to high in palmyra borough. Should be 25 on all streets going east to west.
- The light at 117 and 322 in Campbelltown seems to have lots of issues. It's hard to turn across traffic onto 117 when the light is green. There also seem to be lots of accidents at that intersection.
- Better visibility to pedestrian walkways, especially near schools (like the flashing lights and very visible crosswalks in Annville)
- It is very difficult to walk around the area. I live in South Annville Township and the shoulders of the Roads are so narrow that it is difficult to walk anywhere. I live less than Half a mile from the Quittie Park. It is too dangerous for me to walk to the park to take a walk. I also find it impossible to walk into town to take the bus for the same reason, no shoulders and increase traffic. I find it inconvenient to drive or get a ride to take a bus.
- PA roads are horrible, especially in Harrisburg. The pot holes are insane and do damage to so many vehicles. It's extremely frustrating paying so much in taxes and car registration to drive on roads that are horrible.
- Tractor trailers in annville
- Sidewalks are needed that connect 322 to 422 either on 117 or Palmyra Rd. There is no way for people to safely walk or bike between these two locations
- Need more side work for walk and bicycle. Also increase public transportation facilities.
- I would love more easy connections to New York City or Philadelphia.
- Routes of buses and timing. Waiting areas for bus stop is important.
- Kids walking to school with no sidewalk available
- Needside walk in community
- Bike path lighting
- 322 in campbelltown has significant challenges during rush hours. A bypass could be an option. Also the intersection at 934 and clear spring road neeeds to be improved with the construction of the 3 warehouses in annville. This construction type could continue so planning needs to incorporate access to 81.
- RT 322 from start to finish in Lebanon County for vehicular driving has gotten bad.
- Biggest problem isn't p people running schl bus reds and police and never around especially on major routes like 322 etc
- More sidewalks. Especially near the schools.
- Bicycle lanes on major streets are either absent or poorly designed, sometimes even putting cyclists in danger. They are not well thought out and discourage the use of bicycles for things like daily errands. Route 72, Route 422 (Cumberland Street), Lincoln Avenue all need to offer better protection for riders.
- Roads for truck traffic to increasing number of warehouses and commercial areas are not built or sufficient. 422 & 322 are too congested.
- SW L County: 3 connecting roads to Palmyra/NLT - Forge, S Lingle, Palmyra/Campbelltown Road - S Lingle is going to be improved; Forge and Palmyra/Campbelltown are in poor condition and lack adequate shoulders for walking and biking. There is an illustrative project in the LRTP for which nothing has happened - this was to figure a way to link the communities by walking/biking; bicyclists must be vigilant to find out when a business is submitting an HOP in order to assure bicyclists/walkers are included in the HOP. All roundabouts to be built should provide for all modes of transportation; Lebanon City failed to include safer bicycling facilities when 72 and 422 were resurfaced by PennDOT; LVRT crossings of busy roads in the City

should have modern signalization to assure bicyclists/pedestrians' crossing safely. Non compliant edge line rumbles are on several roads and make it dangerous for bicycling; these include Butler and SR 443 as two examples. Other dangerous areas are identified on the county bicycle transportation map which is being updated

- Bicycle safety. I have been hit by cars 3 times in Lebanon County in the past 5 years, this past November, my wife was hit at intersection of 16th and Chestnut. Driver ran a red light.
- Cumberland needs to be repaved. I live on Cumberland (400 block) and the insane bumps cause trucks to bang around. This is highly disrupting to my sleep. The street should be properly repaved.
- 422 in Annville is a log jam.
- Congestion on 422, missing turn arrows at intersection in Annville
- Intersection at S. Forge Rd and Airport Rd. in Palmyra is dangerous. I suggest a round about. I have almost gotten hit several times with people pulling out from Airport Rd.
- There needs to be a dedicated turn light at Cornwall and Rocherty Rd for all four directions, especially with the insane way people need to get in and out of the new shopping center there.
- The intersection of N 7th St. and Kochenderfer/Kimmerlings Rds.
- The intersection of N 7th St. and Maple St.
- The intersection of Kimmerlings Rd. and N 8th Avenue
- Public transportation needs to be expanded beyond the proposals. The public should've been involved in meetings from the beginning so the routes would be accurate to what people want/need. More sidewalks and crosswalks need to be added on cumberland especially on the avenue side. Safe places to walk on the railroad crossings.
- More turning lanes to keep traffic flowing.
- More smart traffic signals that trigger red & green lights to keep traffic flowing.
- Too many tractor trailers flowing through the city.
- With the railway traveling through Lebanon county, how can we prevent an event similar to East Palestine OH train derailment?
- The timing on the red lights in the city need changed so that traffic can flow instead of stopping every block. The light at 343 & Maple needs fixed: if you're on Maple going west, the light only lets 2-3 cars through before turning red again.
- Biking safety
- roads need repaired
- Need to make room on the streets to make transportation safer. Many times I've seen people get out of a car/bus in the middle of the street because there's nowhere to pull off to
- East west traffic backups on 422 at the square in Annville at peak hours made worse by tractor trailers unsuccessfully navigating a turn off 934, onto 422.
- Intersection of routes 422 and 934. Need turn arrows for north/south traffic.
- Lebanon city roads are in rough shape. Synchro of traffic lights is off and causes back ups in north Cornwall. Too many that appear to not know the rules of driving or that they don't apply to them. Making things dangerous for everyone on the road. More bike lanes on roads fr safe transportation. Further development on trails so people can safely bike or walk.
- A lot of roadway markings for turn lanes, crosswalks, etc.., are missing in the city. Yellow paint on the curbing for areas where parking is prohibited.
- On the walkway/trail that runs between N 9th (rite aid) to N 12th (Jubilee), there are always tons of garbage and beer can because a short Mexican man lives along the trails and drinks beer all day and leaves his garbage!
- Lebanon City 16th Street from Lehman South to Elm Street. This stretch is a heavily walked section with little to no sidewalk/paved path area for walkers many of them walking to and from work.

- RT 422 congestion. There is too much development both residential and business in which the current transportation infrastructure cannot handle the increased traffic.
- Intersections are in need of turning lanes ex, evergreen and state as well as evergreen and cornwall
- Driving Westbound through Annville is very congested.
- Eighth Ave. at Cumberland St. is bad for left hand turns.
- Need bike lanes
- Planning and construction of complete walking / bicycle routes to key locations are needed. (Schools, Commercial areas are not easily accessible along many roadways that lack complete sidewalks or adequate lanes / shoulders for bicyclists. Many intersections lack dedicated turn lanes and protected turn arrow signal systems.
- The roads-bowed and potholes
- Public transportation is not adequate for those of us who have to work second shift (evenings) or have to be at work by 6am. Not everyone has the luxury of a 9-5 job. A lot of retail and food service workers have to work until 9pm (or later).
- With all the new development of business and housing no new roads or extra lanes have been developed. Traffic is congested in every area of the county.
- Heading east or west on 422 in Annville from 2pm to 7pm is always a disaster. Traffic is always incredible backed up.
- The intersection of 8th Avenue, Walnut Street and Route 422 is an awkward intersection in need of re-design.
- 72 near kohls. People always run red lights and it is very contested.

Question 17: Please describe any ideas you have to improve transportation in Lebanon County.

- It would be nice for tickets or citations be given for all the vehicles who disobey the stop signs and breeze through them. Seen way to often.
- Enforce traffic safety rules and get the wheelie boys and unlicensed or improper mini bikes…etc off the streets.
- More enforcement of current laws. I know the LPD is short on officers but they wouldn't have to chase so many accidents if they could address the speed problem.
- a traffic study needs to be done when the college and schools are in session not during the summer to adequately understand the needs for turn arrows.
- Widening of intersection caution lights one way travel
- A roundabout will help but needs to be placed safely to see at the crest of the hill.
- Rte 72 Bypass, more bus routes to warehousing if currently being used to capacity, transportation to/from Philly & Baltimore
- More city parking lots/garages to free up narrow streets like Lehman.
- More public transportation that reaches more areas of the county
- We need rail travel
- A left turn signal for traffic turning left (south) on to Cornwall Road from Rocherty Road in front of the Expo Center would help.
- As a resident of NL, if there were more types of shops in NL (or at least on the northside of the city), I wouldn't drive so far to go places. For example, if I need a pet store, I have to drive all the way through to the far side of Lebanon (and then back). But if a pet store existed on the northside of the city, my car wouldn't need to plug up roads in the city. So, basically, I would stay in NL to shop if there were more amenities. But they are overwhelmingly concentrated in the south Lebanon / Cornwall / Quentin area. More shopping hubs means fewer cars going to a single area.

- Promote the need for CDL drivers because by having more drivers, Lebanon Transit could expand services to more places in the county.
- Better and more lighting on the walking/biking paths. Designated bicycle lanes. Smoother roadways.
- Make Route 72 a four-lane highway from Lebanon to Lickdale.
- Better enfircement of existing rules of the road. Better directionall signs to keep big trucks off little roads .
- Increase responsiveness of traffic lights to reflect traffic build up
- - Fix potholes on Cumberland St and S Cherry St near hospital (these are awful)
- - Connect current walking/biking trails
- - Add more lights to walking/biking trails
- - Fix damaged sidewalks
- - Add more green space in Lebanon City
- Bicycle lanes.
- More routes.
- No trucks on Ironmaster Rd
- More cross walks and signage where children cross roads specifically in S Londonderry Twp
- More traffic circles. They are practical, safer, and keep traffic moving. Make spur trails from the LVRT into local towns to promote economic growth yet keep car traffic down.
- Traffic lights would make intersections safer at 343 and Kimmerlings/Kochenderfer, and 422 and Narrows Drive.
- Local municipalities need to be actively encouraged to talk to each other and cooperate more, so that developments in one municipality do not have undue negative ripple effects in a neighboring municipality.
- Municipalities should be encouraged and incentivized to form regional compacts so that their zoning ordinances can be coordinated to more effectively plan for future development. For but one example: if South Annville and North Annville townships had formed an inter-municipal compact on zoning and sharing of property tax revenue, all the “”warehouse”” development could have been concentrated further north near I-81 and not along Rt 422 as it is now, choking our local roads with truck traffic. As it stands, when it comes to transportation issues, deep-pocketed corporate developers have the upper hand and call the shots, not the public and not public authorities. That needs to change. The opposite should be true.
- Bicycling, walking, and public transport need more infrastructural investment and emphasis from public officials.
- Need left turn arrow on 934 in Annville; Improve traffic flow in Annville
- Signals specifically to allow turning left at intersections; Roundabouts where they make sense.
- Provide more electric charging stations
- larger trucks should stay on major roads unless need to make a delivery. should not be able to use rural roads for short cuts.
- Synchronize traffic lights... We DO NOT need a downtown parking garage!!!! Use tax dollars wisely-or-return my share!
- The rail trails in the area attract cyclists, and having an overall cycling-friendly area could attract new residents (taxpayers), as well as increasing the activity levels and health of the current population. Adding pedestrian and cycling lanes, increasing use of buses, and/or lowering speed limits would also help us be more environmentally friendly.
- Replacing traditional intersections with roundabouts would reduce collisions and injuries. We use the roundabout at Rocherty and Colebrook several times a week and it’s always running smoothly.
- Overall we should be focusing on how we can positively impact our immediate environment and make Lebanon a more pleasant place to travel around, spend time with our neighbors, and be more connected. Improving non-car travel would get people out of their cars and into their community.
- Sync up traffic signals so north & south roads are green at same time while the east & west roads are red at

same time. Will help make travel more efficient.
- Fix the potholes
- Widen and improve street surfaces.
- Limit parking so close to intersections and place mirrors across the street so drivers can around. Also synchronized traffic lights to improve traffic flow.
- Perhaps more traffic circles.
- We pay enough taxes that the roads in the city should not be as bad as they are right now.
- I would love to see Lebanon reconnected to passenger rail service. When Amtrak restarts service to Reading, and SEPTA does as well in the future, all the cities surrounding Lebanon (Harrisburg, Lancaster, and Reading) will have easy 1 ticket access to Philadelphia, and NYC.
- I would also like to see an investment in protected bike lanes, in the City of Lebanon, but also the surrounding communities. Traveling by bike in both the city and county, outside of the Rail Trail, is a risky proposition and outright dangerous at worst.
- The county should also make investments into new walking trails and sidewalks to connect the many retail centers to suburban and more rural communities. I regularly see people walking along Rt 72 north towards the Cedar Crest Square shopping center. This is relatively dangerous route that people use, because there aren't any viable alternatives, other than driving.
- The "highways" running from Lebanon in either direction or seriously lacking. Route 72 and 422 or poor excuse for a highway.
- stop truck traffic,no more warehouses.have local police enforce the law,to many illegal vehicles,60% of people run the stop sign at my house 16th & oak,cell phone use
- Major roads should bypass downtown areas to minimize the number of big trucks going through downtown.
- More specific to elderly
- Widen roads, make certain roads one ways
- Severely limit truck traffic sync traffic lights during the day and at night
- I heard someone suggest islands in-between the eastbound and westbound lanes on Route 422 in Cleona. I like that.
- A warning signal in the north and southbound lanes on Rt. 72 notifying vehicles of the intersection or, better yet, a traffic light at the intersection of Rt. 72 and Spring Hill Ln. I understand that site distance traveling south at the bend in the road/Rt. 322 overpass is an issue, but installing a "Red/Green" advisory sign would solve that problem. Speed on the roadway makes this area very unsafe for those entering and exiting Spring Hill Ln. and proposed development in Cornwall Borough will only exacerbate an already bad situation.
- Start an online poll about where the next traffic lights should go.
- Wider Roadways and Intersections
- Public Transportation- I wouldn't call what we have to offer in Lebanon County public transportation and unfortunately those at Lebanon Transit are the hardest to work with to increase use and utilization. LT does not provide what is needed!
- Lebanon County should work with Cornwall Manor and Byler Holdings to address two transportation issues in Cornwall Borough. First, it is generally unsafe to ride bicycle in the heart of Cornwall Borough to even get to the Lebanon Valley Rail Trail due to the narrows roads (which are likely to become more congested in the future). If there was a trailhead near ""The Woods"" entrance to Cornwall Manor and a trail on the Byler Holdings property around the lake, this would be a nice way to provide an extension of the Rail Trail to the historically significant iron furnace area while also making it easier (and safer) for those in Miners Village and Iron Valley to be able to access the rail trail by bike. Ironically, the only safe way to access the Rail Trail from these neighborhoods is to first drive to the ""root beer barrel"" lot.

- Second, a new “”Boyd St”” should be constructed around Miners Village to make the main thoroughfare avoid the narrow street in the village. The main section of the existing Boyd St through the village should become a “”side street””. There have been too many close calls on this street with people coming into town from 322.
- Provide more enforcement of current driving laws and regulations to reduce speeding and reckless driving.
- The county could be looking more towards the future in a network of safe, easy bike routes and pedestrian corridors.
- Need a bypass type route to get down to Lancaster. Every North/South route gets congested around the lights (East Petersberg, Neffsville). I know that part happens in Lancaseter County, but the congestion comes Lebanon County initially. So the bypass would start in Lebanon county.
- Limiting trucks somehow on 934. When the bridges were being built on 72 in town, the trucks realized that 934 was a ‘shortcut’ that didn’t cut through town, truck traffic (including oversized loads) increased dramatically and never went back down.
- Discontinue access for semi trucks on these 2 lane roads! Route truck traffic to either 322 or Rt 81. You have made things much worse for residents by adding all the warehouses along 422. What were you thinking??? There are no major limited access highways around Lebanon Co. We do not need more traffic. How do you expect To accommodate MORE traffic???
- increase bus routes and stops
- Providing more sidewalks and crosswalks, especially in the commercial district of Quentin Road, would be helpful to protect pedestrians.
- There needs to be a bypass of 422 from Hershey to Reading.
- Designated truck routes would be helpful, especially with the warehouses in the county. Country roads aren’t necessarily designed for heavy truck traffic.
- Let’s upgrade some traffic lights to smart lights for example 7th and maple in Lebanon do we are not sitting for nothing
- Less housing developments and warehouses :)
- Start enforcement of signs, no parking in school zones and school speed limits
- Make some roundabouts at areas that need them like hill church road n Thompson
- repair roadways; add more sidewalks/ walking paths
- Stop overgrowing the community with residential AND commercial developments...because the road systems cant handle it.
- Add left turn arrows at 422/934 intersections; build more sidewalks along side streets; add more clear crosswalks and signage/lights.
- Add turning arrows for those turning left.
- Expand the rail to trail. Make sure roads have adequate shoulders for bikers, walkers, or runners.
- Sidewalks.
- Bus routes from Jonestown, northern Lebanon to Lebanon would be helpful.
- Repair work more often. Don’t let them get to be almost undriveable before you fix the issues.
- Better walking routes for example Campbelltown/Palmyra area
- 1. Increase attention to 322 and 422 during inclement weather.
- 2. Add more traffic circles to alleviate congestion.
- 3. Increase public transportation in all of Lebanon County.
- Improvement to bike and walking paths
- Maple street traffic should be 2 ways at old NW Elementary school between 9th and 10th St
- Conduct a Route Audit on Rte 8 and adjust times.
- Add additional sevice after 4pm to Hershey Medical Center for weekdays and afd service to HMC on the weekends

- Add additional stops in Hershey for the 8/16 to
- Make it known that people who do not wear reflective gear and lights that they will get fines or something. Crosswalk lights and force people to use them.
- Clean the streets more often
- Fix all of the streets.
- A bike path going along Forge, through Campbell town and then back up along Palmyra Campbell town Road would be the best addition. Safe for kids walking to/from school and biking would be easier and safer
- roads need to be fix plus sidewalks
- Walking/biking path or even larger shoulders on 422, 322, 241 and/or 117. There are a ton of bikes riding on roads around Mt. Gretna and the surrounding areas. Since these roads have no shoulder and lots of blind turns and hills, this creates a very dangerous situation. I have had many near misses due to cyclists on the roads in that area.
- If there is going to be road work on a busy street like cumberland, maybe try to plan a way to keep traffic moving, I don't know if it's the timing of the lights or what, but something
- We need a by-pass for traffic not having direct need to be in the city of Lebanon.
- Route 72 from Evergreen Rd to the south up to Maple St on the north needs to be widened the entire way with proper turn lanes going left and right into shopping centers. Congestion in this area has really increased, especially since the pandemic is over. It does not appear that city and township planners give much thought to the potential accidents that are created by the poor traffic patterns.
- encorage more public transportation and biking. Less trucks.
- I would love to someday to be able to use a public transit passenger train that runs through Lebanon county using the railway that already exists and is used commercially. This could include stops in Lebanon, Annville, Palmyra, and continue to Hershey, Hummelstown, and Harrisburg. Imagine the increase in safety, and decrease in traffic congestion for people wanting to visit Hershey/Harrisburg. Giving people more options in a county that is constantly increasing in population and in warehouses with truck traffic, this would be an amazing venture and would help make our county and state more accessible. This would be good for tourists visiting the Hershey area as well. With the infrastructure there, this possibility would be an extremely progressive way to bring our area into the future.
- Finishing the rail trail through and north of the city would improve recreational transportation and safety for those using bikes to get around town.
- I'm sure eminent domain would be an issue, but a connector road between Lingle Avenue (possibly opposite the entrance of the elementary school) and North Larkspur Drive would improve Campbelltown traffic quite a bit. Traffic circles or lights at Hinkle/117 and Airport/117 seem necessary given the growth of the In The Net facility.
- Sidewalk repair throughout public areas. Bike lanes or at least signage in Lebanon city like Annville/Cleona. Well marked alleys/small side streets in Lebanon city. Better management at Lebanon Transit.
- Since Fulton Bank no longer wants to use its Annville branch office-the building should be knocked down to improve the intersection at 422&934
- more roundabouts, more trails!
- Take the circle out
- Please provide wide shoulders or alternative routes for people to walk along the roads. Put up signs to indicate new bus stops for students. Also signs for hidden driveways.
- Involve several professional drivers in your decisions. Office workers, i.e Civil Engineers, limit best decisions.
- Improve pedestrian safety with sidewalks and crosswalks on Quentin Road south of Lebanon in the area of Target, new Chik-fil-a, etc.
- Consider transit routes that bring people into Lebanon from surrounding communities in the morning and

take them home in the evening.
- Lower speed limits, add additional lights or round about.
- Expand or create 422 and 322 bypasses. Northside Drive should be extended to 322 towards the Dauphin County line to bypass Campbeltown.
- repair roads
- Protected bike lanes, better crossings for walking, upkeep of sidewalks, upkeep of shade trees, cleaning of rainwater grates, pickup/dropoff zones, 15-30 minute parking zones in high traffic areas, 3 hr parking zones w/o Lebanon city resident permit for street parking.
- Possibly traffic circles in Campbelltown to keep traffic moving like it does in Hershey
- More sidewalks! I live in Campbelltown and don't have great access to the park on Lawn Road, or any safe way to walk to Redners plaza.
- a bypass for 322/422? Although this would be extremely expensive.
- Enforce traffic laws related to driving through red lights. It seems more common for people to speed through a yellow light too late or even a red light that just changed from yellow.
- Restrict roads for tractor trailers so they follow state roads not township roads(Clear Spring Road)
- 422 should be 4 lanes from Palmyra to Lebanon or a bypass built to improve the flow of vehicles along with the congestion
- 1. Add walkways
- 2. Town shuttles for disabled adults who do not drive. These would increase independence and ease care taker responsibilities.
- Would like to see more sidewalks and bike paths. Would also like to see more improvement on warehouse roads, those traveled frequently by trucks. More identification of high use areas and the addition of appropriate lights/stop signs (i.e. lead lights during times of high use and light or stop sign by In The Net road that meets Forge road)
- Improve the roadways. They're horrible to drive on.
- Make certain routes specific for trucks and specific for vehicles.
- Add extra lighting and/or emergency systems on walking/hiking trails in Lebanon, such as emergency blue light phones.
- Turn lanes for entering and exiting schools -- OR -- utilizing safety traffic personnel during the start and end of school to facilitate flow of traffic safely and efficiently.
- in need of sidewalk from campbelltown to Palmyra; Bus stop in campbelltown 322 for the 422 route hershey and lebanon city
- Raised speed bump type crosswalks on Cumberland Street and other busy areas
- Push truck traffic to major highways
- Make more right turn lanes and left turn lanes. So then cars wanting to go straight won't got around the car waiting to turn left. That's so dangerous. We need to get more lanes. The area is growing and we have lots is semis and people populating the city, so there are more cars in the road. I can't believe it's basically all only 2 lane roads still.
- Truck bypass
- Bring back j walking fines, require bikers to take safe biking classes.
- Build sidewalks and crosswalks
- No semi traffic on residential streets.
- Would like to see lights for pedestrian crossing in Palmyra and Campbelltown like in Annville, E-town, and Hummelstown. Also bike trail from Palmyra to the Net/ Library area in Campbelltown
- Ban 18-wheel trucks. Require factories and businesses to utilize smaller box trucks or relocate their facilities to the areas along the highway routes.
- Traffic light at 934 and Louser Road

- Linking to Dauphin and Lancaster County to bring airport and amtrak
- Before all these new housing developments go up in South Annville Township the shoulder of the road should be widened to connect existing neighborhoods and make them walkable since more houses mean more drivers and trafficMaking even more dangerous to walk or bike in this area.
- Traffic and congestion in Harrisburg, Hershey and Palmyra are ridiculous. A drive that should take 25-30 minutes takes upwards of 45 minutes.
- More side walks in the townships
- Sidewalks are needed that connect 322 to 422 either on 117 or Palmyra Rd. There is no way for people to safely walk or bike between these two locations
- Increase number of public transportation and side work
- Continue building the rails to trails. Having options to venture into the woods is great.
- More buses
- School districts extending bus transportation to children in less than 2 mile radius
- Public is unsafe for community
- Continue to look for opportunities to install circles st intersections that have heavy traffic and dangerous.
- More police presents
- Better crosswalk areas on main streets similar to those in annville
- Bike lanes should not just be painted on the side of the street, they should also restrict the ability of automobiles to be in the lane at all (i.e. no parking in the bike lane). Put up barriers where necessary. Not every street needs a bike lane, but don't just slap some paint on the road and call it a day!
- Better road planning is necessary to allow through traffic to be separate from local traffic, bypasses or better connectivity between neighborhoods and highways. The traffic light system along 422 needs to be improved to allow better flow of traffic. More turning lane arrows in traffic lights need to be added especially on side streets intersecting with 422.
- Undertake an active transportation plan to assure that rolling, cycling, walking are treated as equal modes of transportation with motorized travel.
- Actual bicycle lanes and safe berms where bicyclists actually ride. Not on Rt 72 @ Rt 419 intersection. We don't ride big route #s!
- It would be nice if there was public transportation that went 2-3x a week from Lebanon city to downtown Lancaster city.
- We need a traffic light with turn lanes.
- more walking paths, more roundabouts, wider roads
- Teach people how to make a right turn without coming to a dead stop before hand. Also how to tell when it is safe to pull out in front of me when turning from one street to another.
- I mentioned in an earlier question that I believe we could all benefit from more traffic circles instead of 4-way stop intersections and numerous traffic lights. I do realize that property acquisition would be necessary. N 9th and Maple Streets would be an example... S. 12th and Walnut Sts. is another
- More turning lanes to keep traffic flowing.
- More smart traffic signals that trigger red & green lights to keep traffic flowing.
- Too many tractor trailers flowing through the city.
- Add walking and biking paths that connect to the LVRT
- Fix the broken roads. Reduce tractor trailer traffic. Fix the red light timing so it doesn't take 20-30 minutes to get across the city. Turn some brownlots into AFFORDABLE parking so the streets aren't lined with cars and made overly narrow and dangerous for other cars, pedestrians, and bicyclists.
- Add bike lanes in the City of Lebanon.
- new paving
- More biking. LVRT is heavily used by many. Connecting Rail Trail to other areas such as Camp Mack, Camp

Shand would be welcomed. Also, crossing 117 near Gov. Dick trails in Mount Gretna is unsafe. Key crossing lanes are near blind spots.

- A parking facility may help with providing more space on the roads
- In Palmyra, connect Airport road to the traffic circle at S Forge Road and Northside Drive. This would allow traffic flowing south on Airport Road to merge onto Southbound Forge Road without delay.
- Creating an east/west bypass of rt 422 and a north/south bypass of rt 72 would ease congestion.
- More bike lanes. Synched lights/sensors to move traffic more better. Safe driving classes for those new to the area.
- A bypass around the city would reduce traffic in the city and improve safety for pedestrians.
- On the walkway/trail that runs between N 9th (rite aid) to N 12th (Jubilee), there are always tons of garbage and beer can because a short Mexican man lives along the trails and drinks beer all day and leaves his garbage!
- Please add new sidewalks and connect to existing existing sidewalks/shared and make them usable for pedestrian/bike riders.
- More bike lanes
- Peak traffic hours have made many intersections difficult to turn, particularly near the medical facilities in North Cornwall - South Lebanon
- Seek and obtain ROW for future walking/bicycling corridors. There are many abandoned rail road easements that could provide valuable future spur routes to connect to LVRT system. Establish connectors to residential areas and commercial areas.
- Have less busses during the day when people are at work and offer evening routes so retail workers can get home. Update to a fare system that accepts cards instead of cash only.
- Instead of traffic circles, stop light would be easier to manage.
- Adjust the trafffic light at the square in annville to allow more traffic flow at each green light? There are also many occasions when large trucks are unable to turn at this intersection. Maybe moving the white line back a little so traffic is far enough away for trucks to turn (part of the problem is people don't follow the paint markings where they are supposed to stop at the light)
- In Lebanon County, bicycling as a mode of transportation is utilized by an extremely small fraction of the residents. Stop wasting our limited funds on bicycling improvements. Those funds should be allocated to pedestrian facilities, which are utilized by a significantly larger percentage of the population.

Question 18: Are there other ways in which your travel has changed since before the COVID-19 pandemic? (For example, taking the bus more or less often, bicycling more often, etc.)

[Deleted responses in open-end list that said no change]

- Staying home more often. People on the roads are crazy!
- I walk more
- Before COVID, I commuted into the city for work. For 3 years during COVID, I worked from home. Now I am back to commuting into the city. I will say this though - my opinion is that drivers have gotten worse at driving. I witness more speeding than before and I constantly see people making illegal u-turns in the middle of streets (and not just in Lebanon city). Not sure what can be done about it, but it does (to me) make me feel less safe on roads and walking on sidewalks.
- Taking less congested side streets and country roads rather than state routes
- I try to avoid driving between 3:00 !and 5:30, when drivers on their way home drive like crazy people!
- I walked many times
- Bicycling and walking more
- Less travel

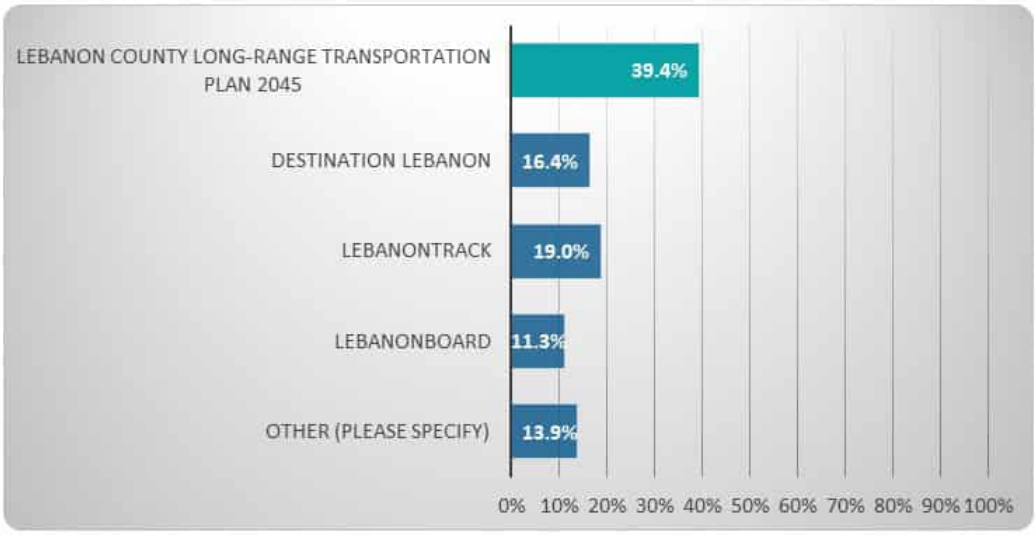
- We work from home almost exclusively since the pandemic. We also moved to having only one car for our family and having a cargo e-bike for backup/secondary transportation with our children rather than having two cars for our family of four. Because of this, we'd love to see Lebanon adopt a more European style bike and pedestrian friendly transportation plan. (Portland, OR is a great example of Amsterdam-style infrastructure in the US, the street tram, bus, and bike infrastructure makes it very easy to get around without a car).
- I would cycle to work if I felt safe doing it.
- Public transpo only available on 422. Is a joke. Rail trail pretty much the only option for bicycling.
- public transportation is not helpful for my transportation, it could be. I drive, bike, and to get around.
- I would bike more often if it seemed safer on the roads. Right now, I only feel comfortable sticking to trails.
- I wish it was possible to bike to work from Miners Village to Lebanon. I think people would use the Rail Trail more from Cornwall if there were safer paths to get from our neighborhoods to the trail without first having to drive our vehicles to the trailheads. The county should seriously consider how to connect more neighborhoods to the trail with dedicated bike lanes or additional trail heads to facilitate greater trail use, which could eliminate some of the congestion on the roads.
- I used to bicycle on rural roads but feel threatened by truck traffic and people driving recklessly
- Added developements and truck traffic have increased congestion to a point where some areas are barely recognizable.
- I work from home most days and am only at work half days. I try to time this around not being at the traditional commuting times.
- taking bus more often
- People walking without reflective gear or using crosswalks
- No, I just don't need to go into the office as much.
- I avoid travel during "peak" commuting times. I also avoid roads, like 72 and 422 through town, because it's too dangerous.
- Not as much travel. Retired.
- Driving less so biking and walking more.
- None. I work in public education, so not much has changed.
- Working more to pay for higher costs=more travel.
- Driving less often
- Commuting less
- walking more
- I work from home now but still visit the office a few days a week. I bike more now, on trails for fun.
- Wanting to walk and bike plus my kids got older to do these things
- I am a casual biker and find it too dangerous to bake from my home anywhere in my neighborhood. I have not biked since I have moved here.
- Biking more
- No transportation for mental health appointments like partial days
- More working from home
- Walk and Bicycle much more often for daily errands.
- More driving during non-rush hours, but traffic congestion is always a problem throughout the county.
- Yes, riding on the rail trail a lot more. We need more investment into this type of infrastructure.
- Retired, so I drive for volunteerism, pleasure and caretaking instead of driving for work.
- More biking. LVRT is heavily used by many. Connecting Rail Trail to other areas such as Camp Mack, Camp Shand would be welcomed. Also, crossing 117 near Gov. Dick trails in Mount Gretna is unsafe. Key crossing lanes are near blind spots.
- I would never walk in town anymore - and avoid driving through it - people just park in street with four

ways - roads are terrible and what was one a beautiful view with trees is now gone. I used to love shopping up town - not anymore. I would never even consider taking a bus or taxi. It's just bad.

- I lost a job that was close by and now have to drive farther. However the position is remote three days a week which is great.
- On the walkway/trail that runs between N 9th (rite aid) to N 12th (Jubilee), there are always tons of garbage and beer can because a short Mexican man lives along the trails and drinks beer all day and leaves his garbage!
- Stay away from a lot of traffic. Don't go main roads
- More use of bicycling trails and routes. More walking and hiking. Less use of cars for short range trips.
- Riding bike has became more unsafe
- I take the bus less often because it doesn't work with my schedule, so I have to find a ride to work instead.
- Try to combine trips because of fuel prices and overall traffic congestion.

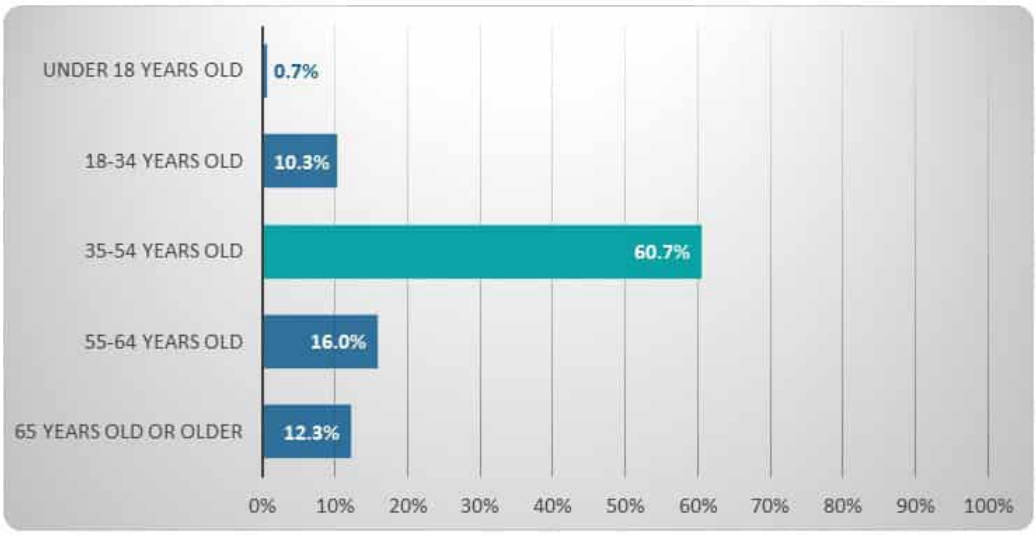
Q19: The 2020 Long-Range Transportation Plan was titled "LebanONward." What should we title the 2024 Lebanon County Long-Range Transportation Plan?

Answered: 274 Skipped: 112



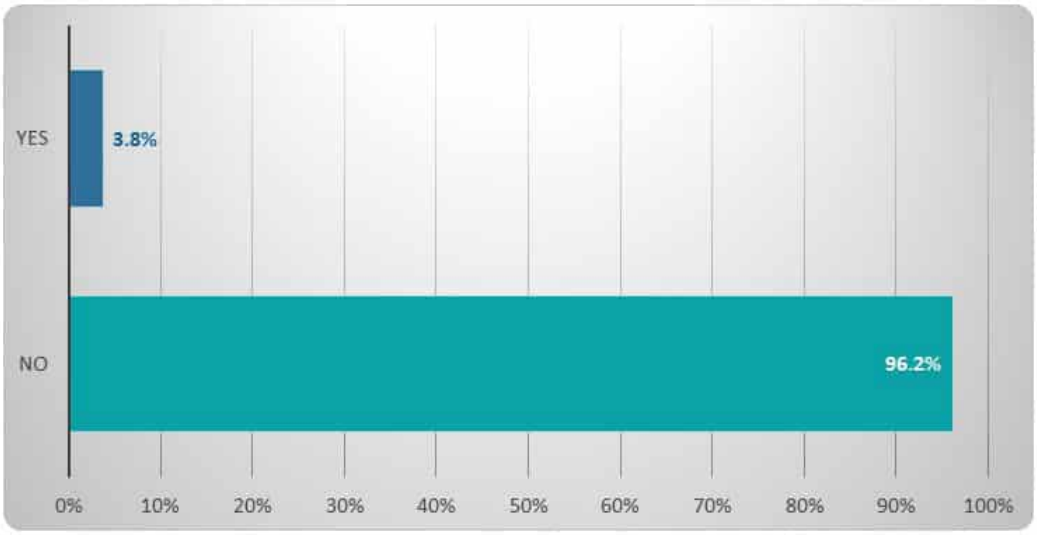
Q21: What is your age?

Answered: 300 Skipped: 86



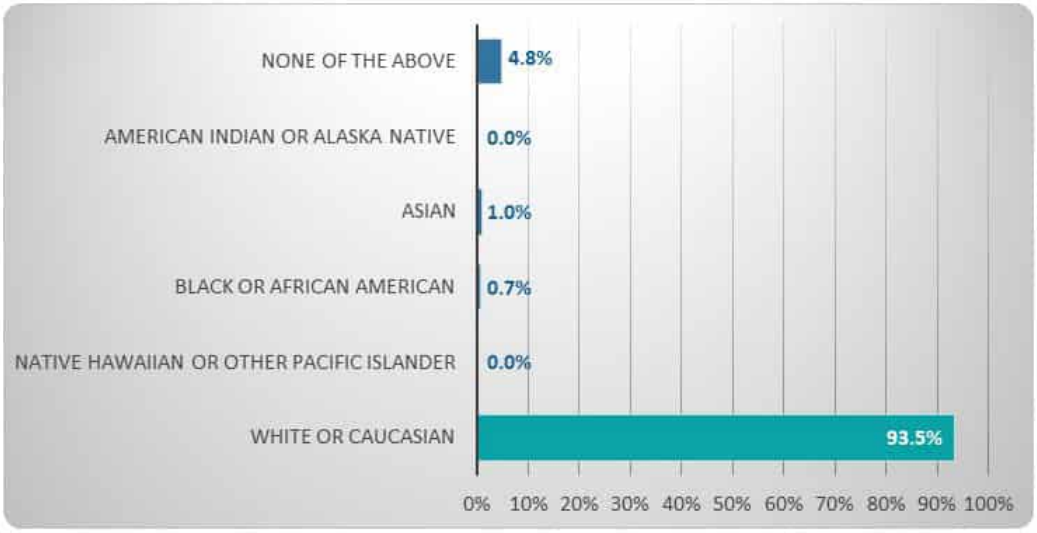
Q22: Are you of Hispanic, Latino, or Spanish origin?

Answered: 291 Skipped: 95



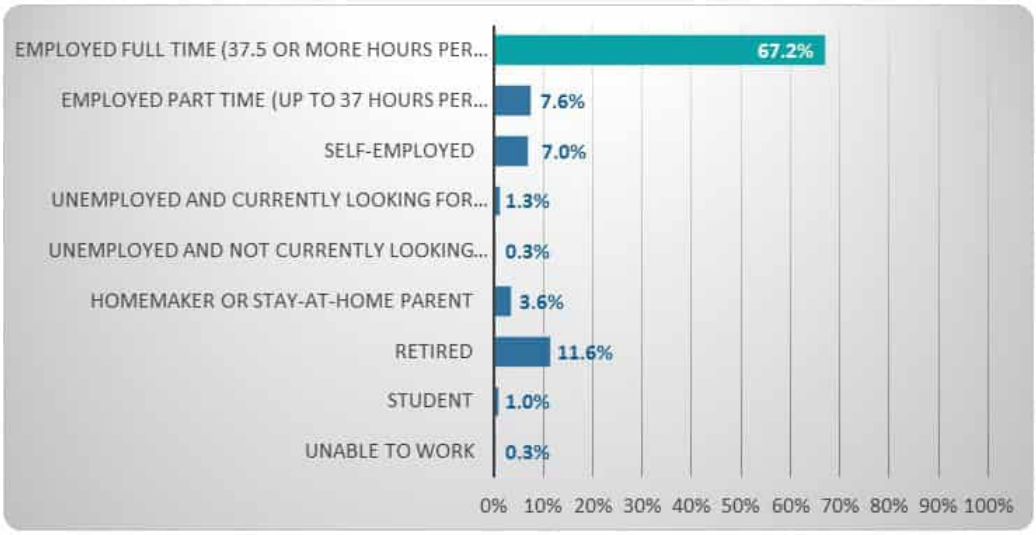
Q23: How would you describe yourself?

Answered: 292 Skipped: 94



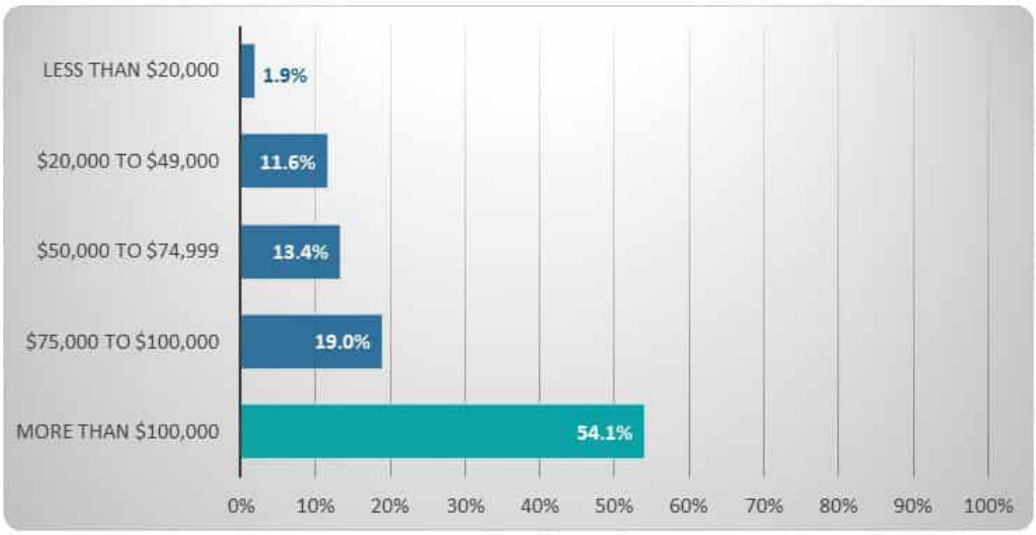
Q24: What is your current employment status?

Answered: 302 Skipped: 84



Q25: What is your current household income per year?

Answered: 268 Skipped: 118



APPENDIX C

Wikimap Responses

Location	Municipality	Category	Notes 1	Notes 2	Notes 3
PA 343 and I-78	Bethel	Freight	Lots of trucks, some times of day worse than others		
US 22 west of PA 72	Bethel	Freight	Lots of trucks, some times of day worse than others		
PA 934 and US 422	Annville	Congestion	This intersection has no turn signal, which causes congestion	add turn arrows for north/south traffic on rt 934	
PA 343 and Kimmerlings Rd	North Lebanon	Intersection Improvements		This intersection needs a traffic circle to keep traffic moving	
Lebanon Middle School	Lebanon	Schools	No parking and dropoffs are difficult. Would benefit from a better designated dropoff zone.		
Harding Elementary School	Lebanon	Schools	Pickups and dropoffs cause congestion. Crossing guard helps.		
Weaber Saw Mill	South Annville	Transit	Weaber Saw Mill Shuttle is FULL. Bill and Evans too. Bus to Hershey does not go where people work.		
US 422 in Cleona and Lebanon	Cleona, Lebanon	Safety	RRFBs should be added in Cleona and Lebanon on 422		
US 422 in Cleona	Cleona	Safety	This road is unsafe, it is very hard to cross because many cars drive fast and don't stop for people trying to cross.	Agreed. I see people trying to walk to the diner and pizza shop here and crossing Route 422 seems unsafe and unwise. How about adding blinking, pedestrian-activated lights to the crosswalk here, like those near the theater and college in Annville? That w	
S Lincoln Ave	South Lebanon	Safety	no sidewalk for pedestrians	This area needs a sidewalk or multi-modal trail for park users and students getting off the school bus.	

Location	Municipality	Category	Notes 1	Notes 2	Notes 3
E Evergreen Rd and Fonderwhite Rd	South Lebanon	Safety	hard to see to pull out onto E Evergreen		
US 422 and Bowman St	Lebanon	Intersection Improvements	confusing yield	Has been a bad intersection for years and years, regularly occurring accidents, not sure what could be changed but something should for safety	
S 5th Ave and S 14th Ave	South Lebanon	Intersection Improvements	Intersection of 5th Av. (897) and Fonderwrite Road/S 14th Av. has seen greatly increased traffic at this intersection along with accidents.		
Klein Ave and State Dr	South Lebanon	Intersection Improvements	Dangerous intersection. Needs 3-way Stop to permit safe access from Klein onto State. Cannot adequately see traffic approaching from North. No pedestrian walkways or bike lanes. Speed limit is too high for this area compared to other streets in area.	traffic backs up. can't see to turn left	
S Lincoln Ave, Poplar St, Wilhelm Ave	South Lebanon	Safety/School	No contiguous sidewalks available from city to South Hills Park and Lebanon High and Cedar Crest School campuses. VA traffic, Daily commuters and new school additions have increased vehicle traffic on Lincoln Ave., Poplar St. and Wilhelm. Heavy truck tra	Need bike / pedestrian lane under bridge to connect Lebanon High School trail to South Hills connector. Unsafe for walkers / bikes.	Need connector path for pedestrians and bikes to connect Strathford Meadows Development sidewalk to South Hills and Cedar Crest Campus. Currently there is no bike lane or other safe route currently available without being on busy South Lincoln Avenue. Ex
E Evergreen Rd and State Dr	South Lebanon	Intersection Improvements	Dedicated turn lanes with protected signal arrows needed in all four directions.		

Location	Municipality	Category	Notes 1	Notes 2	Notes 3
Rocherty Rd and Cornwall Dr	North Cornwall	Intersection Improvements	Dedicated turn lane needed on Rocherty Road - East bound. Protected turn signals needed on Rocherty side of light.		
Iona Rd and PA 897	South Lebanon	Intersection Improvements	Dangerous intersection. Need to redesign to prevent 897 Southbound traffic, exiting onto Iona Road from cutting off Northbound 897 traffic.		
US 422 and PA 897	Lebanon	Intersection Improvements	Southbound S. 5th Avenue needs protected turn signal. Traffic backs up when cars are waiting to turn east on Walnut Street.		
LVRT	Cornwall	Trails	Rail Trail connectors needed to Rexmont area and trails to east at Camp Mack, Middle Creek, and SGL's. Available abandoned rail corridor exists to Rexmont Road. Abandoned trolly line exists across Rt 322 into county Camp Kiwanis property.	Abandoned trolley route could be converted to Rail Trail to connect LVRT at Cornwall Junction to recreational areas to the east.	
Klein Ave in South Lebanon	South Lebanon	Safety	Needs left turn lane for northbound traffic on 897. Speed limit is too high on Klein Avenue residential area. Volume of traffic at morning and evening rush hours creates a hazard for pedestrians. No sidewalks or bike lanes on Klein Avenue.		
Hill Church Rd and Thompson Ave	North Annville	Intersection Improvements	Difficult intersection to pull out from. Many accidents at this location. Continual overhead flashing Yellow lights on Hill Church Road and Red flashing lights on Thompson Avenue at the intersection.	Traffic Circle or Traffic Light. Very dangerous intersection.	It is very difficult to see cars approaching from the east on Hill Church Road. The sightline is too short and many cars are speeding.
E Evergreen Rd in South Lebanon	South Lebanon	Safety	Speeding passing on solid line...more than once almost collision for people turning		

Location	Municipality	Category	Notes 1	Notes 2	Notes 3
T-328 and PA 117	South Londonderry	Congestion	Traffic backs up on Airport Rd when turning left from Airport Rd onto S Forge Rd. Create a conduit that would divert traffic away from that intersection and connect into the traffic circle at S Forge Rd and Northside Dr.	Traffic backs up very often on Airport Road; difficult to enter intersection. Upgrade to traffic light or traffic circle.	
US 422 and T376	North Annville	Intersection Improvements	Add turn arrows for traffic in all directions at this intersection		
US 422 and Prescott Dr	South Lebanon	Intersection Improvements	The signal at this intersection is one of the oldest in the county and does not meet current safety standards. There has been at least 1 fatal crash and many serious crashes in the past 5 years.		
US 22 and N Lancaster St	Swatara	Intersection Improvements	There is a higher than average amount of crashes at this intersection due to crossing 6 lanes of traffic plus a grass median, straight through cross traffic should be eliminated. Similar to SR 15 and Golf Course Rd, Dillsburg		
Maple St and N 10th St	Lebanon	Intersection Improvements	Traffic circle proposal and take away the no turn on red restriction currently I place		
Maple St and N 7th St	Lebanon	Intersection Improvements	Intersection improvements with dedicated turn lanes on 7th St.		
Greble Rd and S Pine Grove St	Bethel	Intersection Improvements	Dangerous intersection		
Gold Rd Bridge	Bethel	Safety	REPLACE THE BRIDGE!		
Kimmerlings Rd and N 8th Ave	North Lebanon	Intersection Improvements	A traffic circle would work well—too many accidents because of poor sight lines.		

Location	Municipality	Category	Notes 1	Notes 2	Notes 3
Northwest Elementary School	Lebanon	Schools	Enforce the no stopping or standing rule currently in effect for the school zone, This current situation is dangerous morning and afternoon.		
US 422 and N 11th Ave	Lebanon	Safety	NO left turn from 422 into ALDI and Autozone		
E Lehman St and N 11th Ave	Lebanon	Intersection Improvements	Oversize vehicle parking restriction within 50 yards of the intersection		
Chestnut St and S 5th St	Lebanon	Intersection Improvements	Oversize vehicle parking restriction within 50 yards of the intersection		
E Lehman St and N 5th Ave	Lebanon	Intersection Improvements	Oversize vehicle parking restriction within 50 yards of the intersection		
Palmyra Bellgrove and Albert Dr	North Annville	Intersection Improvements	blind curves with traffic crossing over	Dangerous Intersection - Needs improvement	
Hostetter Ln and Bellegrove Rd	North Annville	Intersection Improvements	install roundabout - traffic backs up with large trucks turning/pulling out here		
Louser Rd in South Annville	South Annville	Safety	Would love to see more options for walking into Annville provided in this general area. Many residents around here like to walk and there are more residential developments being built.		
Bellegrove Rd and Kauffman Rd	North Annville	Intersection Improvements	blind curves with traffic crossing over		
US 422 in Lebanon	Lebanon	Paving	Cumberland / 422 needs repaving. There are serious bumps along the road.	This whole section of Route 422 is in terrible shape. Please repave it!	

Location	Municipality	Category	Notes 1	Notes 2	Notes 3
Hauck St and Quentin Rd	Lebanon	Intersection Improvements	Dedicated turning lane, traffic calming measure south and north bound. This intersection is often used to avoid congestion on 72 and to connect with Cornwall Rd.		
PA 72 by Lebanon Plaza	Lebanon	Intersection Improvements	Dedicated turning lane, traffic calming measure with the addition of Chik fil A	Reduce speed along 72 from Sheetz to Plaza. Better lighting, several streetlghts out of service.	Upgrade signal at PA 72 and York St/Summit St to improve traffic flow and interconnect with signals to the south. Poles are heavily rusted and will need replaced soon. Good candidate for Green Light Go.
York St and Quentin Rd	Lebanon	Intersection Improvements	Dedicated left turn arrow on traffic light for turns onto York as you approach the light southbound.		
PA 241 and S 12th St	Lebanon	Safety	Traffic calming measure. Several accidents as you approach the turn.		
Dawson St and PA 241	Lebanon	Intersection Improvements	Significant traffic making this turn. Increase visibility, traffic calming measure.		
Mill Rd by Lebanon Bible Fellowship Church	North Cornwall	Intersection Improvements	Increase visibility as you approach this turn. Drivers approach this turn too quickly with limited visibility. Several accidents. Mirrors, signage, cutback vegetation.		
N Zinns Mill Rd and PA 72	Cornwall	Intersection Improvements	Dedicated turning lane. Traffic calming measure. Difficult area to cross 72.		
PA 72 by Fairview Golf Course	Cornwall	Safety	Turning lane/center lane along 72.		
Freeman Dr and Burd Coleman Rd	Cornwall	Intersection Improvements	Confusing intersection. Difficult for pedestrians to cross.	Blinking Yellow Pedestrian Crossing Lights	

Location	Municipality	Category	Notes 1	Notes 2	Notes 3
SR 3017 by Lingle Ave Elementary School	South Londonderry	Roadway	This area floods with each rain storm. Some times to the point of closing the road. This is a much used road especially with elementary school located here. How about some drains, has been a problem for years.	This road is constantly flooding causing it to be closed and redirecting traffic through Arbor Greene neighborhood. Repairing this heavily traveled road would fix logistic issues	
Mapledale Rd and T300	South Londonderry	Intersection Improvements	Very poor visibility due to elevation changes on Prospect Rd. Please consider adding stop signs on Prospect Rd at this intersection. It is a lightly traveled road so making a 4 way stop should have minimal travel impact with a large safety effect. I d		
US 422 and SR 3017	Palmyra	Intersection Improvements	There is a left turn lane but no left turn arrow to turn on s Lingle Ave from 422.		
E Cherry St and S Railroad St	Palmyra	Intersection Improvements	Visibility and speeding make this an unsafe intersection		
Northside Dr and SR 3017	South Londonderry	Roadway	Continue Campbelltown bypass; extend Northside Drive to 322. Traffic circle at Northside Drive and Lingle Avenue and include Northside Drive Ext. to US 322.		
Hinkle Rd and PA 117	South Londonderry	Intersection Improvements	Upgrade Hinkle Road/PA117 intersection, awkward angles to see when pulling out. Reroute eastern section of Hinkle Road to Northside Drive traffic circle.		
Northside Dr and PA 117	South Londonderry	Intersection Improvements	Connect Hinkle Road with traffic circle.		
Park Dr and S Forge Rd	North Londonderry	Intersection Improvements	Awkward intersection angles make it difficult to pull out. Upgrade with traffic light or traffic circle.		
US 422 and Spruce St	Annville	Intersection Improvements	Install Traffic Light		

Location	Municipality	Category	Notes 1	Notes 2	Notes 3
US 422 and Mt Pleasant Rd	Annville	Intersection Improvements	Install traffic light		
Royal Rd in Palmyra	South Londonderry	Safety	Need traffic calming measures; high speed, road used as a bypass when there are accidends on US322		
US 322 and Palmyra Rd	South Londonderry	Congestion	Dedicated right-turn lane should be added from Palmyra Road to W US322; traffic backs up when traffic traveling to South and not turning.		
US 322 and N Larkspur Dr	South Londonderry	Roadway	Add bypass to Campbelltown; extend Northside Drive to meet US322		
Lingle Ave and SR 3017	North Londonderry	Safety	No sidewalks to/from Campbelltown area. Add flashing red light to activate during school hours or traffic circle. Difficult to pull out into intersection		
Cottonwood Ct and Campbelltown Rd	North Londonderry	Intersection Improvements	Install Traffic Light	A lot of student cross here to get into Arbor Greene. I recommend putting Pedestrian crosswalk with flashing lights to notify traffic. Similar to what is in place on main street in Annville where LVC is.	
US 322 and SR 3015	South Londonderry	Intersection Improvements	Install Traffic Light		
US 322 and Louser Rd	South Annville	Intersection Improvements	Sight distance issue. Change intersection grade. Install dedicated left-turn lane from US322 onto Louser Road		
US 322 in South Londonderry	South Londonderry	Safety	Need sidewalks from Thistledown Drive to Campbelltown Community Park		
US 422 and N Concord St	Annville	Safety	Restrict parking so close to Concord St/ Main Street. Cannot see when pulling out into intersection		
I78 and PA 72	Union	Roadway	Add Interchange with I78 and PA72		

Location	Municipality	Category	Notes 1	Notes 2	Notes 3
PA 72 and Thompson Ave	Swatara	Intersection Improvements	Traffic Circle/Traffic Light/Traffic calming measures needed.		
Louser Rd and PA 934	South Annville	Intersection Improvements	Install Traffic Light at Louser/934		
Royal Rd and PA 934	South Annville	Intersection Improvements	Install Traffic Light PA934/Royal Road		
PA 322 and PA 241	South Annville	Intersection Improvements	Install Traffic Light US322/PA241		
E Cherry St and S Forge Rd	South Annville	Intersection Improvements	Dangerous Intersection with numerous accidents. Install traffic light or traffic calming measures		
E Cherry St and Earl Dr	Palmyra	Roadway	Connection E Cherry Street to help bypass 422		
US 422 and Plaza Dr	Palmyra	Intersection Improvements	Install traffic light. Very difficult to turn left from Plaza Drive to US422		
US 422 and Killinger Rd	South Annville	Congestion	How will trucks get to and from these warehouses without causing further delays on already congested roads? Before more warehouses like these are built, more thought needs to be given to the impact of truck traffic.		
US 422 and Lynmar Ave	South Londonderry	Congestion	Street parking should be time-limited here on the west side of Lynmar--the traffic volume is too heavy to be safe during peak times. Block off entrance/exit to Turkey Hill on Lynmar closest to intersection and add a don't block the box at the rear e	This intersection is a nightmare from 7-9am and 4-6pm!	
PA 934 in North Londonderry	North Londonderry	Intersection Improvements	Dangerous intersection, hard to pull out of driveways around here.		

Location	Municipality	Category	Notes 1	Notes 2	Notes 3
Reistville Rd and Stiegel Pike	Heidelberg	Intersection Improvements	Unsafe intersection. Thankful for recent signage and efforts to slow traffic through this intersection; however, the majority of drivers still do not obey the posted speed limit of 20 mph through the intersection even with digital speed notification and		
Locust St and PA 645	Myerstown	Intersection Improvements	Unsafe intersection. Not uncommon for accidents at this T intersection.	Traveling south on Kutztown - as you approach this intersection, other than the stop sign, the lines on the road are painted as such that it looks like the flow of traffic continues to the left. The intersection as such is NOT distinct.	
S Locust St in Palmyra	Palmyra	Safety	All the E/W bound streets don't have stop signs. A lot of children walk to school and have to cross this traffic that doesn't stop. I recommend adding 4 way stop signs at the Locust Street intersections	I recommend adding 4 way stop signs at the Locust Street intersections. Right now there are only stop signs for those going north and southbound.	
US 422 and S 8th St	Lebanon	Intersection Improvements	The pedestrian signals only indicate safe crossing when all traffic is stopped. These should run parallel to the vehicle traffic and allow pedestrians to cross with the traffic flow without stopping all traffic.		
Chestnut St in Richland	Richland	Safety	There needs to be speed enforcement on this road. Cars come through at racing speeds. This is a neighborhood with kids.		
Klein Ave and PA 897	South Lebanon	Intersection Improvements	needs traffic light- when turning lane was added on Klein, traffic turning north onto 897 cannot see oncoming traffic when a vehicle in that southbound turning lane		
Coleman Memorial Park	South Lebanon	Safety	There could be better park access to this park from the south side.		

Location	Municipality	Category	Notes 1	Notes 2	Notes 3
Oak Srt and S 8th St	Lebanon	Safety	This area needs a corridor for walking pedestrians. It is overrun by students 2x a day.		
PA 322 and Schoolhouse Rd	South Londonderry	Safety	Dangerous to pull out on to 322 in either direction!	Traffic leaving out the back of Corl Eye and the person who lives in the house behind them do not stop before coming out onto 16 alley they all just fly on through. This is an accident waiting to happen and something needs done here. Kids also play in th	
US 422 and PA 934	Annville	Congestion	Traffic severely backs up on both 934 N/S and 422 E/W; there needs to be turning lanes.		
Tractor trailers regularly can't navigate the current intersection.			This is always backed up and it is nearly impossible to make a left turn. We definitely need a turning arrow on all four corners.		
Annville-Cleona Middle/ High School	South Annville	Schools	There needs to be a better way to relieve the traffic issues in the morning/afternoon from the school. It is really bad when the frequent wide-loads are coming through.		
US 422 and S Christian St	Cleona	Safety	How about adding a sidewalk or bike lane or something from the Cycling and Fitness shop eastbound? That would allow people who live south of Route 422 to walk to the Dairy Queen, convenience stores and other shops that way. Right now, the sidewalk ends a		
US 81 in Swatara	Swatara	Safety	Needs consistent traffic enforcement to reduce speeds; too many going in advance of 80 mph, including tractor trailer units.		

Location	Municipality	Category	Notes 1	Notes 2	Notes 3
US 322 in South Lebanon	South Lebanon	Safety	Needs consistent traffic enforcement as traffic travels greatly in excess of posted speed limit. Needs No Passing Zone signs. Too many recent fatalities. Parking should NOT be allowed b/w Pumping Station and Rt. 72.		
PA 117 and PA 241	South Londonderry	Intersection Improvements	Dangerous intersection at Kirchenwald. Re-align Rt 117 to remove blind curve for northbound Rt 241 drivers seeking to turn left onto Rt. 117.		
US 322 and S Forge Rd	South Londonderry	Intersection Improvements	Leeds Corner sees many accidents involving left-hand turns. Resignalize to that when a vehicle enters the left-turn lane, the green arrow is triggered.		
Lehman St and N 16th St	West Lebanon	Congestion	Red light needed, school buses, train back up, Truck Traffic. Been issues for years. I think this is a State Road.		
Lehman St and N 22nd St	West Lebanon	Freight	Truck turning horrible, needs wider turning area		
Schoolhouse Rd in South Londonderry	South Londonderry	Safety	Install speed humps to control speed on Schoolhouse Rd. The speed limit is 30mph but most do almost double that. Pulling out of driveways has become extremely dangerous. This has been done in problem areas in E-town and most recently Devonshire near Cost		
Rocherty Rd by the Lebanon Valley Exposition Center and Fairgrounds	North Cornwall	Intersection Improvements	There needs to be a better way to turn left from the North Cornwall Commons development onto Rocherty Road. It's nearly impossible to make this turn during busy times of day. Having a light or roundabout would also improve pedestrian experience going t		

Location	Municipality	Category	Notes 1	Notes 2	Notes 3
Rocherty Rd and PA 72	North Cornwall	Intersection Improvements	Roundabout		
Rocherty Rd by Sheetz	North Cornwall	Other	Encourage Sheetz to install Tesla supercharger		
Isabel Rd and PA 72	North Cornwall	Intersection Improvements	Roundabout		
PA 117 and US 322	West Cornwall	Intersection Improvements	Roundabout would assist in traveling from 322 to Mt Gretna		
US US 422 and N 5th St	Lebanon	Safety	Sidewalks on south side of E Cumberland continuing from 5th Ave to BK/Pizza Hut/ Dollar Tree area		
King St and S Ramona Rd	Myerstown	Intersection Improvements	Extreme care is needed when entering this intersection. Frequently, cars exceed the speed limit on King Street. Pulling out onto King or crossing over King from Ramona can sometimes be tricky.		
S Cherry St in Lebanon	Lebanon	Paving	Potholes need filled in/fixed		
Chestnut St in Lebanon	Lebanon	Parking	City roads would benefit from parallel parking lines and overflow parking areas as street cleaning days make it really hard to find parking and current parking space utilization is not lean		
E Lehman St and N 8th Ave	Lebanon	Intersection Improvements	When they recently paved Lehman St. (summer 2023 I think), they did not level out this intersection, they just paved over top. So when driving north on 8th Avenue and approaching Lehman St., there is a deep valley in the road surface. Lower set cars have		
US 422 and Lincoln Ave	Lebanon	Paving	Worst paved intersection in town in my opinion		

Location	Municipality	Category	Notes 1	Notes 2	Notes 3
E Evergreen Rd and State Dr	Lebanon South	Congestion	Needs a sign on the traffic signal light bar telling tractor trailers to turn left to get to Route 72 and 422. There is too much truck traffic on State Drive.		
Zinns Mill Rd and LVRT	Lebanon	Congestion	Bridge and Roadway needs to be re-built and connected to ease traffic thru already congested intersections on Rocherty road for residents going from east to west and west to east in this part of South Lebanon		

APPENDIX D

Focus Group Session Summaries

December 13, 2023

Freight Focus Group

Attendees: Lebanon Valley Economic Development Corporation, Lebanon Transit, Commuter Services of PA

Agenda and minutes: slides attached for reference

- Long-Range Transportation Plan background and draft goals review: focus on economic mobility and economic growth goals
- Focus group purpose: small group of interested parties brought together to discuss freight and provide insights to into (A) changing trends in travel patterns and transportation needs; and (B) shape the investment and policy priorities for the next twenty years in the county.
- (A) Changing trends in travel patterns and transportation needs - discussion
    - Warehouses were locating on I-78 and I-81, are now locating in the interior of the county, causing increasing congestion (roadways named in discussion included Evergreen Rd, 422, 934)
    - Increasing warehouse demand responding to online shopping
    - Discussed Lebanon Transit's ongoing outreach to warehouses to offer transit service and competition from informal, unlicensed vanpools
    - Labor shortage needed to staff warehouses has forced employers out of the county, likely demand to support vanpools (potential CMAQ funding)
- (B) Shaping the investment and policy priorities for the next twenty years – discussion
    - Need more resources to support the PA Eastern Freight Alliance
    - Discussion that a model ordinance or overlay is needed to guide municipalities who are struggling with the impacts of freight. Needs to be include ties to the SALDO, truck parking, minimum requirements for developers such as bus turnarounds.
    - Discussion about pairing rail sites with manufacturers who could use existing rail to transport goods
- Wrap-up discussion: the County is tired of the negative externalities that the warehouses are imposing on the residents and are increasingly wary as warehouse footprints are growing

Schools Focus Group

Attendees: Eastern Lebanon School District, Lebanon School District, Annville-Cleona School District, Palmyra School District, Cornwall-Lebanon School District

Agenda and minutes: slides attached for reference

- Long-Range Transportation Plan background and draft goals review: focus on safety and security and personal mobility goals
- Focus group purpose: small group of interested parties brought together to discuss getting to and from schools and provide insights to into (A) changing trends in travel patterns and transportation needs; and (B) shape the investment and policy priorities for the next twenty years in the county.

- (A) Changing trends in travel patterns and transportation needs – discussion
    - Population growth is not spread evenly among school districts: Palmyra and Annville school districts have grown rapidly and ELCO and North Lebanon are not growing
    - All school districts have varying transportation needs and methods: for Palmyra, which is growing, all schools are within two miles of each other, and students are bussed to hubs and then transferred to a second bus. Exploring returning to neighborhood schools. On the other hand, Cornwall busses all their student through the city and are often battling congestion in the city of Lebanon. Lebanon, on the other hand, has 2,000 students who walk (out of 5,000). They have some buses that pick up elementary students who are 1.5 miles from school, secondary students who are over 2 miles from school, and special education vans that go door-to-door. Students are chronically late or absent due to walk time. Passes are limited for Lebanon Transit, which some students take. There's a need for transit support for the junior and high school students.
    - All school districts are struggling to find bus drivers
    - All school districts struggle with time-based congestion around pick-up and drop-off times
- (B) Shaping the investment and policy priorities for the next twenty years – discussion
    - An area of traffic concern for students who walk is 8th street (crossing 72, 422, railroad tracks). In general, crosswalks are not observed by drivers and the districts want RRFBs (like in Annville).
    - 422 and 934 intersection congested and unsafe
    - Designated truck routes needed – how to get trucks from warehouses in Annville-Cleona south to the Turnpike
    - Amish schoolchildren cross 501, creating a safety concern with increasing truck traffic

Bicycle/Pedestrian Focus Group

Attendees: Commuter Services of PA, Lebanon Valley Bicycle Coalition, Community Health Council, Penn State REACH, Lebanon Valley Rail Trail, City of Lebanon

Agenda and minutes: slides and map attached for reference

- Long-Range Transportation Plan background and draft goals review: focus on safety and security and personal mobility goals
- Focus group purpose: small group of interested parties brought together to discuss bicycles and pedestrians and provide insights to into (A) changing trends in travel patterns and transportation needs; and (B) shape the investment and policy priorities for the next twenty years in the county.
- (A) Changing trends in travel patterns and transportation needs – discussion
    - More e-bikes and scooters (which are not legal) riding on sidewalks and the Lebanon Valley Rail Trail, for which the Rail Trail is establishing an ordinance against and will be enforcing
    - Warehouse-related truck traffic is pushing bicyclists to different routes due to safety concerns. Areas of concern include 934, Killinger, Clear Springs, 419, Rockerty, and Evergreen. Additionally, heavy truck traffic is wearing down the roadways and affecting cyclist experience.
    - Vehicular speeds and residential traffic are also improving and posing safety concerns to cyclists.

- Safe access to the rail trail is a necessity and an existing gap – Penn State REACH is working on linking existing resources/parks to the rail trail.
- Pick-up and drop-off for schools causes congestion and safety concerns for all: discussed student education to decrease scooters/motorcycles on sidewalks, the effectiveness of crossing guards, and the need for more RRFBs in the City of Lebanon.

- (B) Shaping the investment and policy priorities for the next twenty years – discussion
  - Need for a bicycle/pedestrian advisory group which was recommended in the previous plan. – would have agenda items at MPO meetings, coordinate with the City's paving plan, etc.
  - Discussed potential projects for the project list, including downtown streetscaping, LVRT 6A & 6B, LVRT asset management, Rexmont Spur (LVRT), and more.
  - High-level takeaways include resurfacing projects can bring the bicyclist and pedestrian community in earlier and need for an advisory group

Lebanon County 2024 Long-Range Transportation Plan

Freight Focus Group
December 13, 2023

1

Today's Agenda

1. Introductions
2. Long-Range Transportation Plan (LRTP) Background and Draft Goals
3. Focus Group Purpose
4. Discussion: Changing trends in freight transportation
5. Discussion: Draft plan priorities
6. Next Steps

2

Introductions

- Name
- Organization

3

LRTP Background

- **Long-term vision** (20 years) for the future of Lebanon County's transportation system
- **Policy statement** of the Metropolitan Planning Organization (MPO)
- Required for **federal and state funding** to transportation projects
- Decision-making tool
- Identifies issues for further study
- Helps inform the Comprehensive Plan
- Drives the Transportation Improvement Program (TIP) & Unified Planning Work Program (UPWP)
- *Updated every 4 years; last LRTP was approved in 2020*

4

Draft 2024 Lebanon LRTP **Goals**

- **Safety and Security**: Improve safety and security for all modes and all users.
- **Personal Mobility**: Create a multi-modal transportation system that provides reliable, efficient, and convenient mobility for current and future residents and visitors.
- **Freight Mobility**: Support reliable freight mobility, access, and experience for providers and residents.
- **Equity**: Ensure the transportation system serves disadvantaged communities' transportation needs.
- **Land Use and Environment**: Promote transportation and land use planning practices that enhance the county's natural and built environment.
- **Growth Management**: Meet the challenges and opportunities of growth through collaborative planning, funding, and project implementation.
- **Economic Growth**: Facilitate and support the economic vitality of the County.
- **Asset Management and Resilience**: Preserve existing transportation assets and improve the multi-modal transportation's ability to withstand, respond to, and recover from environmental and other hazards.
- **Funding**: Utilize all available funding sources and target investments for maximum local and regional benefit and impact.

5

Focus Group Purpose

A small group of interested parties brought together to discuss a particular transportation topic – **freight** – and provide insights to:

- Capture **changing trends** in travel patterns and transportation needs
- Shape the **investment and policy priorities** for the next twenty years in the county

6

Freight in the 2020 LRTP

Lebanon County is uniquely positioned between the Lehigh Valley and Carlisle, two of the most important freight nodes within the region… The northern portion of the county is directly served by I-81… and I-78... **These key assets make Lebanon County a likely target for growth in freight and warehousing activity**.

Since 2020:

- the Lebanon County MPO has become a participant in the Eastern PA Freight Alliance
- PennDOT conducting a truck parking study

For discussion today: how have things on the ground changed since 2020? What are new needs and opportunities? What actions can the MPO take in the next 4 years to address existing challenges?

7

Freight in the 2020 LRTP

Implementation Action	Responsible Party	Timeframe
14) Develop a freight plan as a component of the MPO's LRTP.	MPO	2020-24
15) Anticipate–through local ordinances and comprehensive planning–warehouse and other significant development impacts to I-78 and I-81 interchanges.	MPO, municipalities	2020-24
16) Encourage direct warehousing access to rail lines through local land use ordinances and planning. This action has the potential to reduce the role of trucks to service warehouses.	MPO, municipalities, Norfolk Southern	Ongoing
18) Examine the need to provide designated areas for truck parking and queuing in proximity to large-truck traffic generators. Encourage private-sector development of these facilities and incorporate through local land use ordinances the provision of truck queuing and parking options at warehouses and other truck traffic generators.	MPO, municipalities, local industry representative	2020-24

8

Freight Focus Group for 2020 LRTP

- Need to identify designated truck routes.
- Truck parking near I-81/I-78 Interchange.
- Clearance issues for connections to N. Lebanon.
- Several freight bottlenecks.
- Need to look at interchange of I-78 and US 22.
- Warehouse growth would be welcomed if managed appropriately.

9

Lebanon County 2024 Long-Range Transportation Plan

School Transportation Focus Group

December 13, 2023

1

Today's Agenda

1. Introductions
2. Long-Range Transportation Plan (LRTP) Background and Draft Goals
3. Focus Group Purpose
4. Discussion: Changing trends in school transportation
5. Discussion: Draft plan priorities
6. Next Steps

2

Introductions

Name

Organization

3

LRTP Background

- **Long-term vision** (20 years) for the future of Lebanon County's transportation system
- **Policy statement** of the Metropolitan Planning Organization (MPO)
- Required for **federal and state funding** to transportation projects
- Decision-making tool
- Identifies issues for further study
- Helps inform the Comprehensive Plan
- Drives the Transportation Improvement Program (TIP) & Unified Planning Work Program (UPWP)
- *Updated every 4 years; last LRTP was approved in 2020*

4

Draft 2024 Lebanon LRTP **Goals**

- **Safety and Security**: Improve safety and security for all modes and all users.
- **Personal Mobility**: Create a multi-modal transportation system that provides reliable, efficient, and convenient mobility for current and future residents and visitors.
- **Freight Mobility**: Support reliable freight mobility, access, and experience for providers and residents.
- **Equity**: Ensure the transportation system serves disadvantaged communities' transportation needs.
- **Land Use and Environment**: Promote transportation and land use planning practices that enhance the county's natural and built environment.
- **Growth Management**: Meet the challenges and opportunities of growth through collaborative planning, funding, and project implementation.
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- **Funding**: Utilize all available funding sources and target investments for maximum local and regional benefit and impact.

5

Focus Group Purpose

A small group of interested parties brought together to discuss a particular transportation topic – **getting to and from schools** – and provide insights to:

- Capture **changing trends** in travel patterns and transportation needs
- Shape the **investment and policy priorities** for the next twenty years in the county

6

Schools in the 2020 LRTP

Schools were not a major focus of the 2020 LRTP. Why not? What has changed that it became a key topic of discussion at the first Steering Committee?

For discussion today: how have things changed since 2020? What are new needs and opportunities? What actions can the MPO take in the next 4 years to address existing challenges?

7

Schools in the 2020 LRTP

Implementation Action	Responsible Party	Timeframe
25) Identify locations and neighborhoods that need updated or new sidewalks, bike paths, and other improvements. Safety and connectivity to **schools**, neighborhoods, employment, and commercial centers are the highest priorities. Identify best practices, funding opportunities, and the ability to implement projects through the land development process.	PennDOT, MPO, Lebanon Transit, municipalities	Ongoing

8

Lebanon County 2024 Long-Range Transportation Plan

Bicycle/Pedestrian Focus Group
December 13, 2023

1

Today's Agenda

1. Introductions
2. Long-Range Transportation Plan (LRTP) Background and Draft Goals
3. Focus Group Purpose
4. Discussion: Changing trends in bicycle/pedestrian transportation
5. Discussion: Draft plan priorities
6. Next Steps

2

Introductions

Name

Organization

3

LRTP Background

- **Long-term vision** (20 years) for the future of Lebanon County's transportation system
- **Policy statement** of the Metropolitan Planning Organization (MPO)
- Required for **federal and state funding** to transportation projects
- Decision-making tool
- Identifies issues for further study
- Helps inform the Comprehensive Plan
- Drives the Transportation Improvement Program (TIP) & Unified Planning Work Program (UPWP)
- *Updated every 4 years; last LRTP was approved in 2020*

4

Draft 2024 Lebanon LRTP **Goals**

- **Safety and Security**: Improve safety and security for all modes and all users.
- **Personal Mobility**: Create a multi-modal transportation system that provides reliable, efficient, and convenient mobility for current and future residents and visitors.
- **Freight Mobility**: Support reliable freight mobility, access, and experience for providers and residents.
- **Equity**: Ensure the transportation system serves disadvantaged communities' transportation needs.
- **Land Use and Environment**: Promote transportation and land use planning practices that enhance the county's natural and built environment.
- **Growth Management**: Meet the challenges and opportunities of growth through collaborative planning, funding, and project implementation.
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- **Asset Management and Resilience**: Preserve existing transportation assets and improve the multi-modal transportation's ability to withstand, respond to, and recover from environmental and other hazards.
- **Funding**: Utilize all available funding sources and target investments for maximum local and regional benefit and impact.

5

Focus Group Purpose

A small group of interested parties brought together to discuss a particular transportation topic – **bicycles and pedestrians** – and provide insights to:

- Capture **changing trends** in travel patterns and transportation needs
- Shape the **investment and policy priorities** for the next twenty years in the county

6

Bike/Ped in the 2020 LRTP

Connected and accessible circulation options for non-motorized transportation modes, particularly bicyclists and pedestrians, are critical for a fully functioning transportation network…**Targeted improvements for these modes can significantly improve safety and mobility, while also expanding opportunities for upward economic mobility.** The Bicycle Transportation Map indicates the county's desire to become a community that embraces bicycling as a mode–not only to improve health and mobility, but also to have positive community impacts with respect to the environment and economy.

Since 2020:

- Significant increase in trails use + expanded trail infrastructure (Lebanon Valley Rail Trail)

For discussion today: how have things changed since 2020? What are new needs and opportunities? What actions can the MPO take in the next 4 years to address existing challenges?

7

Bike/Ped in the 2020 LRTP

Implementation Action	Responsible Party	Timeframe
10) Assess all asset-management-related projects, such as resurfacing and bridge replacements, for accommodation of pedestrians, bicycles, and buggies. The MPO should develop a process to ensure that all projects incorporate non-motorized access improvements when demand dictates.	PennDOT, MPO, municipalities	Ongoing
25) Identify locations and neighborhoods that need updated or new sidewalks, bike paths, and other improvements. Safety and connectivity to schools, neighborhoods, employment, and commercial centers are the highest priorities. Identify best practices, funding opportunities, and the ability to implement projects through the land development process.	PennDOT, MPO, Lebanon Transit, municipalities	Ongoing
26) Create a community-led county bicycle/pedestrian advisory group.	LVBC, LVRT, county residents, MPO	2020-24
27) Develop a county-wide sidewalk inventory.	MPO, municipalities, local industry representative	2020-24
28) Develop a non-motorized transportation plan as a component of the MPO's LRTP.	MPO	2020-24
29) Work with PennDOT to ensure that current and future rumble strip treatments are bicycle-compatible per PennDOT standards.	PennDOT, Planning Department, LVBC	2020-24
30) Leverage the Lebanon County Bicycle Transportation Map to advance critical bicycle-focused projects.	MPO, LVBC, PennDOT, municipalities	2020-24

8

Bike/Ped in the 2020 LRTP

Project	Location	Funding Status
LVRT Phase 6B	North Cornwall	STIP funded (2022)
Jonestown Park Walking Trails	Jonestown Borough	Unfunded, municipal project
Downtown Streetscape, pedestrian improvements	Lebanon City	Unfunded, municipal project
Lebanon Valley Rail Trail (LVRT) Asset Management	Countywide	Unfunded, illustrative
LVRT Trailhead Development	Union Township	Unfunded, illustrative
Union Central Connector Trail	Lebanon & North Lebanon	Unfunded, illustrative
LVRT Phase 8	North Lebanon & Swatara	Unfunded, illustrative
LVRT Phase 10	Swatara Township	Unfunded, illustrative
Phase 2 South Lebanon Township Trail	South Lebanon Township	Unfunded, illustrative
LVRT ALCOA Spur	South Lebanon Township	Unfunded, illustrative

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Bike/Ped in the 2020 LRTP

Project	Location	Funding Status
Lebanon Valley College Connector Trail	Annville Township, Cleona Borough, and North Lebanon Twp	Unfunded, illustrative
Cornwall Spur Rail Trail	Cornwall Borough	Unfunded, illustrative
Rexmont Spur		Unfunded, illustrative
PA 419 Scenic Byway Improvements (widen shoulders or consider sidepath)	Cornwall Borough, South Lebanon Twp, Heidelberg Twp, Millcreek Township	Unfunded, illustrative
Palmyra to Campbelltown Active Transportation Connection (shared-use path)	Palmyra Borough, North Londonderry Township, South Londonderry Twp	Unfunded, illustrative

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Bike/Ped Focus Group for 2020 LRTP

- Conditions improving but still a general negative attitude toward bikers/walkers.
- Access to Lebanon Valley Rail Trail (LVRT) can be challenging.
- Access to transit for bikes/peds not optimal.
- Many residents walk/bike out of necessity (lack of access to a car).
- Lack of task force for City of Lebanon.
- Communities have not yet embraced complete streets policies.

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Bicycle/pedestrian focus group map

APPENDIX E

Vision and Projects from Previous LRTP

Vision, Goals and Performance Measures

This LRTP serves as an update of the transportation element of the 2007 Lebanon County Comprehensive Plan. The vision for Lebanon County's transportation network builds upon past LRTP work, with an overall objective that better embraces inclusion and the needs of all residents and visitors. The goals and actions of the MPO LRTP must support the County's overall transportation vision as described in the comprehensive plan and stated below. The County's vision for transportation is:

The transportation system of Lebanon County will safely, efficiently, and effectively serve the mobility, access, and travel needs of all current and future users.

The LRTP update has been developed to support this long-term vision and the necessary interrelationships among stakeholders to support the Lebanon County Comprehensive Plan goals as stated below.

Provide transportation choices for residents,businesses, and visitors.

- Maintain a safe, efficient, interconnected, and accessible transportation system.
- Enhance and expand the variety of travel modes in existing and future development, with particular emphasis on energy efficiency.
- Target transportation investment for maximum local and regional benefit.
- Maintain and improve the existing transportation system first; focus on affordable operational improvements second.
- Encourage local and private financial support to help expedite transportation project delivery.

Encourage distinctive, attractive communities with a strong sense of place.

- Direct development toward existing communities and utilities to strengthen and revitalize them.
- Encourage the appropriate redevelopment of existing vacant, blighted, or underutilized sites.
- Discourage zoning that encourages sprawl.
- Coordinate land use, utility, and transportation planning to make development and redevelopment attractive to developers and sustainable by local government.

Plan for economic growth and development that expands employment, sustains businesses, and provides family sustaining jobs.

- Enhance the stability of the local economy through business
- retention, expansion, and diversification efforts.
- Prepare "shovel-ready" sites for target industries.
- Provide an educated, trained workforce sufficient to maintain economic prosperity and meet modern technological demands.
- Implement multifaceted strategies to enhance the agricultural and forestry industries through land protection, workforce training, and sustainable production and harvesting practices.

Protect the natural and cultural landscape that defines our local identity as Lebanon County.

- Acknowledge, enhance, and protect the open space, farmland, scenic views, historic resources, and critical environmental areas that are important to the county.
- Facilitate acquisition or preservation of key sites.
- Link these resources with existing communities through open space planning, conservation greenways, and recreational paths and trails, where appropriate.
- Enhance this green infrastructure by conserving and managing vegetation in greenways and woodlots; by

establishing street trees in developments; and by restoring vegetation along stream banks.
- Encourage the continued use of historic building patterns and designs with modern materials. Promote an understanding of these resources among citizens.
- Protect threatened natural features and implement appropriate restoration for damaged resources, with emphasis on water resources.
- Enhance and restore the interconnections of natural systems to sustain them.
- Coordinate conservation and preservation activities on a resource scale, by watershed, mountain range, or other holistic approaches.

Encourage compact building anddevelopment designs.

- Mix compatible land uses, especially within larger developments or revitalization projects, to reduce vehicular travel and encourage walkable business and residential neighborhoods.
- Promote energy-efficient site design to reduce energy consumption for heating and cooling.
- Promote the use and production of alternative energy sources.

Broaden the range of housing opportunities and choices.

- Encourage sound maintenance and modernization of existing housing units, as well as the utility infrastructure that serves them.
- Increase the range of housing types in new housing construction.
- Encourage development that provides housing, business, and employment opportunities close to one another.

Provide adequate, costeffective public services to meet the needs of the community.

- Expand recreation programs and services for all ages.
- Increase local parkland and interconnect parks with trails.
- Maintain and expand services to protect human health, safety, and welfare.
- Share service contracts, where cost-effective.

Think, communicate, and plan regionally; implement locally.

- Share knowledge and strive for effective public communication.
- Encourage continuous dialogue among municipalities, government agencies, and school districts regarding community growth andresource conservation.
- Encourage community and stakeholder communication and collaborative decision-making.
- Develop partnerships among public and private sectors—public–public, public–private, and private–private—to make community planning and associated projects affordable.

Lebanon County MPO Transportation Improvement Program (TIP) Projects (2021-2024)

Project Type	MPMS	Project Name	Map Ref #	Municipal-ity		Project Cost (2021)	Project Cost 2022)	Project Cost (2023)	Project Cost (2024)	Total Cost
Bridge	87835	Bridge Reserve			C			$163,087	$360,000	$523,087
Bridge	100343	Allentown Blvd/Trib Racc	2	East Ha-nover	P		$200,000			$200,000
Bridge	100340	Allentown Blvd/	21	Union	C		$591,000			$591,000
		Kevins Run-B								
Bridge	100348	Allentown Blvd East Brdg-B	22	East Ha-nover	C	$579,201	$1,071,775	$592,353	$67,500	$2,310,829
Bridge	97148	Allentown Blvd ovr Beach-B	11	Bethel	+C	$800,000				$800,000
Bridge	100314	Ebenezer Road Bridge-B	16	Union	C	$543,350	$51,250			$594,600
Bridge	100331	Ebenezer Rd/Swatara Cr	19	Swatara	F		$192,000	$75,000		$1,828,000
					C				$1,561,000	
Bridge	100336	Ebenezer Rd/US 22	20	Union	F		$107,000			$1,698,000
					C			$762,000	$829,000	
Bridge	100292	PA-419 over Hammer Cr-B	14	Heidelberg	C	$300,000	$422,000			$722,000
Bridge	100293	Cumberland Street Bridge	15	Jackson	C				$295,775	$295,775
Bridge	91346	PA 501 Bridge-B	4	Myerstown	C	$302,299		$557,851	$560,850	$1,421,000
Bridge	90999	Bellegrove Road Bridge-B	3	North Ann-ville	C	$182,650	$320,350			$503,000
Bridge	100329	PA 934 ovr Indiantown Run	18	East Ha-nover	F	$75,000	$28,000			$716,750
					+U	$25,000				
					R	$25,000	$750			
					+C				$563,000	
Bridge	100299	22nd Street/ Quittapahill	25	North Cornwall	+P			$16,180	$250,000	$266,180
Bridge	91350	Syner Road Bridge-B	5	North Ann-ville	+C	$977,380	$1,232,000			$2,209,380

Lebanon County MPO Transportation Improvement Program (TIP) Projects (2021-2024)

Project Type	MPMS	Project Name	Map Ref #	Municipal-ity		Project Cost (2021)	Project Cost 2022)	Project Cost (2023)	Project Cost (2024)	Total Cost
Safety and Mobility	114554	Hill Church Rd Safety Imp	10	North Ann-ville	C		$170,000	$1,107,000		$800,000
Bridge	100328	Golf Rd/Trib Swatara Cr	17	Bethel	P		$252,500			$645,000
					F				$392,500	
Bridge	20217	N Lincoln Ave Leb-5	1	Lebanon	F	$250,000				$2,388,641
					C			$2,138,641		
Highway Restoration	106393	Lebanon City Resurfacing - Phase 1 - Walnut St (US422)-	29	Lebanon	+C	$672,620				$672,620
Highway Restoration	111910	Lebanon City Resurfacing Phase 2 - Cumberland St	24	Lebanon	+C	$1,120,000	$1,422,000	$1,412,000		$3,954,000
Highway Restoration	111911	Lebanon City Resurfacing - Phase 3 -10th St - PA 72	26	Lebanon	+C			$647,000	$2,346,678	$2,993,678
Highway Restoration	111912	Lebanon City Resurfacing Phase - 4 - Quentin Rd	28	Lebanon	+C				$683,322	$683,322
Highway Construc-tion	97153	Lingle Road Reconstruct	12	South Lon-donderry	+F	$255,090				$4,190,180
					+U	$100,000				
					+R	$50,000				
					C		$405,090	$2,443,910	$936,090	
Safety and Mobility	106537	PA72/Isabel Drive Improvements	23	North Cornwall	+F	$116,000				$2,578,513
					+U	$232,000				
					+R	$87,000				
					+C			$1,009,790	$1,133,723	
Safety and Mobility	96783	Colebrook Road Improvement	8	North Cornwall	+C	$1,107,000	$189,100			$1,296,100

Lebanon County MPO Transportation Improvement Program (TIP) Projects (2021-2024)

Project Type	MPMS	Project Name	Map Ref #	Municipal-ity		Project Cost (2021)	Project Cost 2022)	Project Cost (2023)	Projec Cost (2024)	Total Cost
Safety and Mobility	99081	Cornwall & Wilhelm Inters	13	South Leb-anon	+C	$701,524	$1,135,600	$124,876		$1,962,000
Safety and Mobility	87847	HSIP Line Item			C		$477,900			$477,900
Trans-portation Enhance-ment	111396	LVRT Phase 6B	27	North Cornwall	C		$964,000			$964,000
Consulting Svcs	87842	Delivery/Consult Assist			P	$400,000	$400,000			$1,200,000
					C	$200,000	$200,000			
Transit	82375	SRTP Rideshare Program			P	$92,476	$93,400	$94,334	$95,277	$375,487

Total TIP		**$9,693,590**	**$9,695,715**	**$11,144,022**	**$11,181,715**	**$41,715,042**
Total – Construction	C	$3,507,500	$4,343,365	$7,764,842	$5,717,215	$21,332,922
Total – Final Design	F	$325,000	$327,000	$75,000	$392,500	$1,119,500
Total – Preliminary Engineering	P	$492,476	$945,900	$94,334	$95,277	$1,627,987
Total – Right-of-Way	R	$25,000	$750	$-	$-	$25,750
Total – Construction (TOLL funds eligible)	+C	$4,578,524	$3,978,700	$3,193,666	$4,726,723	$16,477,613
Total – Final Design (TOLL funds eligible)	+F	$371,090	$-	$-	$-	$371,090
Total – Preliminary Engineering (TOLL funds eligible)	+P	$-	$-	$16,180	$250,000	$266,180
Total – Right-of-Way (TOLL funds eligible)	+R	$137,000	$-	$-	$-	$137,000
Total – Utilities (TOLL funds eligible)	+U	$357,000	$-	$-	$-	$357,000

Lebanon Transit Transportation Improvement Program (TIP) Projects (2021-2024)

Year	Project #	Project Name	Cost
FY 20-21	4452	Bus: Revenue Rolling Stock: Purchase - Replacement project	$441,126
FY 20-21	4469	Bus: Support Facilities and Equipment: Acquisition project	$195,826
FY 20-21	6578	Bus: Signal & Communication: Acquisition project	$37,064
FY 20-21	7132	Bus: Station Stops/Terminals: Acquisition project	$558,886
FY 21-22	4453	Bus: Revenue Rolling Stock: Purchase - Replacement project	$4,292,331
FY 21-22	5494	Bus: Support Facilities and Equipment: Acquisition project	$11,683
FY 22-23	4454	Bus: Revenue Rolling Stock: Purchase - Replacement project	$917,696
FY 22-23	4470	Bus: Support Facilities and Equipment: Acquisition project	$55,182
FY 22-23	4481	Bus: Signal & Communication: Acquisition project	$11,005
FY 22-23	7134	Bus: Station Stops/Terminals: Acquisition project	$2,281,175
FY 23-24	4482	Bus: Signal & Communication: Acquisition project	$837
		Total	**$8,802,811**
		Total: Bus: Revenue Rolling Stock	$5,651,153
		Total: Bus: Station Stops/Terminals	$2,840,061
		Total: Bus: Support Facilities and Equipment	$262,691
		Total: Bus: Signal & Communication	$48,906

Lebanon County MPO Twelve-Year Program (TYP) Projects (2025-2032)

Key to Phases: C = Construction; F = Final Design; P = Preliminary Engineering; R = Right-of-Way Acquisition; S = Study; U = Utilities; + = TOLL Funds-Eligible

Project Type	MPMS	Project Name	Map Ref #	Municipality	Phase	Project Costs (2025-2028)	Project Costs (2029-2032)	Total Costs
Bridge	78751	SR 117 Over Conewago Crk	28	South Londonderry	P	$150,000	$150,000	$1,500,000
					C	$600,000	$600,000	
Bridge	87477	East Main Street Bridge	30	Bethel	P	$117,000	$117,000	$1,714,000
					C	$740,000	$740,000	
Bridge	88973	SR 4019 over Vesle Run	6	East Hanover	P		$606,000	$3,512,000
					+C	$1,453,000	$1,453,000	
Bridge	90340	Ebenezer Road Bridge	22	Union	P	$150,000	$150,000	$2,388,000
					C	$1,044,000	$1,044,000	
Bridge	91347	PA 501 Bridge 2	36	Heidelberg	P	$121,000	$121,000	$1,646,000
					C	$702,000	$702,000	
Bridge	91351	Pleasant View Drive Bridge	37	East Hanover	P		$150,000	$792,000
					+C		$642,000	
Bridge	100262	Bohns Lane over I-81	2	Union	P		$357,000	$1,663,000
					C		$1,306,000	
Bridge	100264	Harrison Road over I-81	4	East Hanover	P		$277,000	$1,232,000
					C		$257,000	
					C		$698,000	
Bridge	100279	Weavertown Road over NS	32	Jackson	P		$312,000	$1,089,000
					C		$120,375	
					C		$656,625	
Bridge	100282	US322 over Quentin Rd	13	West Cornwall	P	$150,000	$150,000	$942,000
					C	$321,000	$321,000	
Bridge	100283	Millbach Road ov Mill Cr	25	Millcreek	P		$150,000	$831,000
					C		$681,000	
Bridge	100291	Horseshoe Pike ov Beck Cr	15	West Cornwall	P	$150,000	$150,000	$1,906,000
					C	$803,000	$803,000	

Lebanon County MPO Twelve-Year Program (TYP) Projects (2025-2032)

Key to Phases: C = Construction; F = Final Design; P = Preliminary Engineering; R = Right-of-Way Acquisition; S = Study; U = Utilities; + = TOLL Funds-Eligible

Project Type	MPMS	Project Name	Map Ref #	Municipality	Phase	Project Costs (2025-2028)	Project Costs (2029-2032)	Total Costs
Bridge	100293	Cumberland Street Bridge	5	Jackson	C		$564,125	$564,125
Bridge	100294	SR 4005/Trib Swatara Cr	33	North Annville	P		$150,000	$885,000
					C		$735,000	
Bridge	100299	22nd Street/ Quittapahill	26	North Cornwall	C		$715,000	$856,000
					C		$141,000	
Bridge	100302	Harrison Rd ovr Spring Cr	20	North Annville	P		$150,000	$1,032,000
					C		$113,000	
					C		$769,000	
Bridge	100305	Cumberland St Bridge 2	21	Jackson	P	$150,000	$150,000	$3,028,000
					C	$1,364,000	$1,364,000	
Bridge	100306	Lincoln Schl Rd/Mill Cr	3	East Hanover	P		$150,000	$1,032,000
					C		$882,000	
Bridge	100309	Jonestown Rd/Raccoon Cr	38	East Hanover	P		$150,000	$1,285,000
					+C		$718,000	
					+C		$417,000	
Bridge	100311	Lawn Rd over Conewago Crk	29	South Londonderry	P		$150,000	$1,399,000
					C		$1,249,000	
Bridge	100312	Sheridan Rd over Mill Cr	10	Millcreek	+P		$150,000	$3,444,000
					+C	$1,647,000	$1,647,000	
Bridge	100317	Lincoln Avenue Bridge	18	Jackson	P	$150,000	$150,000	$3,510,000
					+C	$1,605,000	$1,605,000	
Bridge	100326	Fisher Avenue/ Swatara Cr	31	East Hanover	P	$482,000	$482,000	$5,138,000
					+C	$2,087,000	$2,087,000	
Bridge	100327	Fisher Ave over Forge Ck	42	Union	P		$150,000	$3,010,000
					+C	$1,244,000	$1,584,000	
					+C		$32,000	

Lebanon County MPO Twelve-Year Program (TYP) Projects (2025-2032)

Key to Phases: C = Construction; F = Final Design; P = Preliminary Engineering; R = Right-of-Way Acquisition; S = Study; U = Utilities; + = TOLL Funds-Eligible

Project Type	MPMS	Project Name	Map Ref #	Municipality	Phase	Project Costs (2025-2028)	Project Costs (2029-2032)	Total Costs
Bridge	100328	Golf Rd/Trib Swatara Cr	35	Bethel	C		$1,835,000	$4,781,249
					C		$2,946,249	
Bridge	100330	Horseshoe Pike/Quentin Rd	19	Cornwall	P	$150,000	$150,000	$942,000
					C	$321,000	$321,000	
Bridge	100331	Ebenezer Rd/Swatara Cr	17	Swatara	C		$2,160,838	$5,065,000
					C		$2,904,162	
Bridge	100332	Earlakill Run Bridge	40	Bethel	P	$150,000	$150,000	$4,152,000
					C	$1,926,000	$1,926,000	
Bridge	100333	Allentown Blvd/Fisher Ave	27	East Hanover	P	$150,000	$150,000	$2,130,000
					C	$915,000	$915,000	
Bridge	100337	US 22 over Deep Run Brdg	24	Bethel	P	$150,000	$150,000	$5,436,000
					C	$2,568,000	$2,568,000	
Bridge	100338	Ebeneezer Rd/Snitz Cr	11	Swatara	P	$150,000	$150,000	$1,906,000
					C	$803,000	$803,000	
Bridge	100343	Allentown Blvd/Trib Racc	8	East Hanover	C		$385,000	$1,385,000
					C		$1,000,000	
Bridge	100347	Cornwall Rd ovr Snitz Ck	41	Cornwall	P		$150,000	$1,209,000
					C		$1,059,000	
Bridge	100349	US 22 over Reeds Ck Brdg	1	East Hanover	P	$150,000	$150,000	$8,026,000
					+C	$1,863,000	$1,863,000	
					+C	$2,000,000	$2,000,000	
Bridge	100350	Pine Grove St Bridge PM	43	Bethel	P	$150,000	$150,000	$814,000
					C	$257,000	$257,000	
Bridge	100351	Ebenezer Rd over Forge Ck	14	Union	P	$150,000	$150,000	$1,906,000
					C	$803,000	$803,000	
Bridge	100352	Beach Run Bridge	39	Bethel	P	$37,000	$37,000	$2,066,000

Lebanon County MPO Twelve-Year Program (TYP) Projects (2025-2032)

Key to Phases: C = Construction; F = Final Design; P = Preliminary Engineering; R = Right-of-Way Acquisition; S = Study; U = Utilities; + = TOLL Funds-Eligible

Project Type	MPMS	Project Name	Map Ref #	Municipality	Phase	Project Costs (2025-2028)	Project Costs (2029-2032)	Total Costs
					P	$113,000	$113,000	
					C	$883,000	$883,000	
Bridge	100353	Greble Road Bridge	16	Swatara	P		$150,000	$982,000
					C		$345,000	
					C		$487,000	
Bridge	100354	Mountain Road Bridge	12	East Hanover	P	$150,000	$150,000	$2,226,000
					C	$963,000	$963,000	
Highway Restoration	111912	Lebanon City Resurfacing	44	Lebanon	+C		$2,274,322	$2,274,322
		Phase 4 - Quentin Rd						
Highway Restoration	113297	PA 72 Quentin Rd Resurface	45	West Cornwall	C	$732,000	$4,362,553	$5,094,553
Highway Construc-tion	97153	Lingle Road Reconstruct	7	South Londonderry	C		$5,305,000	$5,305,000
Safety and Mobility	88741	PA72 Congested Corr Study	34	North Cornwall	+S		$441,000	$441,000
Safety and Mobility	97161	Cornwall Traffic Signals	9	North Cornwall	+P		$327,000	$4,955,000
					+C	$2,314,000	$2,314,000	
Safety and Mobility	106537	PA72/Isabel Drive Improve-ments	23	North Cornwall	+C		$2,214,000	$2,214,000
Safety and Mobility	87847	HSIP Line Item			C	$4,428,000	$9,333,900	$13,761,900
Highway Reserve	87838	Highway Reserve			C		$81,000	$81,000
Transit	87841	CMAQ Line Item			C	$2,601,000	$7,119,513	$9,720,513

Lebanon County MPO Twelve-Year Program (TYP) Projects (2025-2032)

Key to Phases: C = Construction; F = Final Design; P = Preliminary Engineering; R = Right-of-Way Acquisition; S = Study; U = Utilities; + = TOLL Funds-Eligible

Total TYP		**$40,107,000**	**$91,164,662**	**$131,271,662**
Total – Construction	C	$22,774,000	$63,224,340	$85,998,340
Total – Preliminary Engineering	P	$3,120,000	$6,172,000	$9,292,000
Total – Construction (TOLL funds eligible)	+C	$14,213,000	$20,850,322	$35,063,322
Total – Preliminary Engineering (TOLL funds eligible)	+P		$477,000	$477,000
Total – Study (TOLL funds eligible)	+S		$441,000	$441,000

Lebanon Transit Twelve-Year Program (TYP) Projects (2025-2032)

Year	Project #	Project Name	Cost
FY 24-25	4459	Bus: Revenue Rolling Stock: Purchase - Replacement project	$646,240
FY 24-25	4473	Bus: Support Facilities and Equipment: Acquisition project	$144,266
FY 25-26	4462	Bus: Station Stops/Terminals: Acquisition project	$5,892
FY 25-26	4472	Bus: Support Facilities and Equipment: Acquisition project	$11,044
FY 25-26	5495	Bus: Support Facilities and Equipment: Acquisition project	$12,204
FY 25-26	6582	Bus: Revenue Rolling Stock: Purchase - Replacement project	$327,591
FY 27-28	7133	Bus: Station Stops/Terminals: Acquisition project	$1,530
FY 28-29	4449	Bus: Revenue Rolling Stock: Purchase - Replacement project	$675,145
FY 28-29	4471	Bus: Support Facilities and Equipment: Acquisition project	$150,722
FY 28-29	6317	Bus: Revenue Rolling Stock: Purchase - Replacement project	$3,388,505
FY 29-30	4451	Bus: Revenue Rolling Stock: Purchase - Replacement project	$342,246
FY 29-30	5496	Bus: Support Facilities and Equipment: Acquisition project	$12,751
FY 30-31	6313	Bus: Revenue Rolling Stock: Purchase - Replacement project	$407,031
FY 30-31	6314	Bus: Support Facilities and Equipment: Acquisition project	$180,197
FY 30-31	6577	Bus: Support Facilities and Equipment: Acquisition project	$4,437
FY 30-31	6579	Bus: Signal & Communication: Acquisition project	$41,348
FY 31-32	7130	Bus: Revenue Rolling Stock: Purchase - Replacement project	$4,407,712
FY 31-32	7131	Bus: Revenue Rolling Stock: Purchase - Replacement project	$1,218,826
		Total	**$11,977,687**
		Total: Bus: Revenue Rolling Stock	$11,413,296
		Total: Bus: Station Stops/Terminals	$7,422
		Total: Bus: Support Facilities and Equipment	$515,621
		Total: Bus: Signal & Communication	$41,348

Municipal Projects

Municipality	Project	Date	Description	Project Cost
Bethel Township	Mountain Road (Mechanic St to Snow Dr)	Summer 2020	New base and overlay pavement	$250,000
Bethel Township	Shirksville Road/Earlakill Run	Summer 2020	Replace bridge deck and support beams	$200,000
Cleona Borough	South Wilson St and East Walnut St	Fall 2020	Repair and resurface	$200,000
Heidelberg Township	Distillery Road	2020	Roadway improvements	$100,000
Jackson Township	West Main Avenue	2020	Culvert Replacement	$77,000
Jonestown Borough	Jonestown Park Walking Trails	2019-2020	Paving of park trails	
Jonestown Borough	Chestnut Street	2019-2020	Repaving and ADA Ramps	
Jonestown Borough	Blackberry Street	2020	Repaving	
Lebanon City	422 East	2021	Repaving	$3,400,000
Lebanon City	422 West	2022	Repaving	$3,200,000
Lebanon City	Downtown Streetscape	2022	Pedestrian improvements	$2,400,000
Lebanon City	72 South	2023	Repaving	$3,700,000
Lebanon City	72 North	2024	Repaving	$3,200,000
Myerstown	Main Avenue	2020	Repaving	$82,000
Myerstown	Railroad Street	2020	Repaving	$128,000
Myerstown	South Broad Street	2020	Repairs	$15,000
Myerstown	Madison Alley	2020	Oil and Chip	$6,000
Myerstown	North Locust Street	2021	Oil and Chip/ADA improvements	$45,000
Myerstown	Center Avenue	2022	Reconstruction	$140,000
Myerstown	Center Avenue	2022	Milling/Overlay	$68,000
Myerstown	South Locust Street	2023	Microsurface	$16,300
Myerstown	South Broad Street	2023	Fibermat	$100,000
Myerstown	Railroad Street	2024	Cold in-place recycling	$220,000
South Annville	Louser Road/Reigerts Lane	2021	Widen and Resurface	
South Annville	Louser Road at PA 934	TBD	Install Traffic Signal	
South Annville	Royal Road at PA 934	TBD	Install Traffic Signal	
South Annville	Mount Pleasant at US 422	TBD	Relocate Traffic Signal	
South Londonderry	PA 117 at Airport Road	TBD	Intersection Improvement -Signal/Roundabout	

Municipal Projects

Municipality	Project	Date	Description	Project Cost
South Londonderry	PA 117 at Hinkle Road	TBD	Realignment project	
Swatara	Troy Avenue	2020-2022	Widen and Resurface	$370,000
Swatara	Center Street, Church Street Broad Street	2020	Resurface	$80,000
Swatara	North Mill Street	2023	Resurface	$175,000
Union	PA 443 at Ridge Road	2020	Bridge Replacement	$270,000
West Cornwall	PA 241 at US 322	2020-2021	Signal Upgrade	$70,000
West Cornwall	Zinns Mill Road	TBD	Overlay	$200,000
West Lebanon	N 16th Street at Lehman Street/N 22nd Street at Lehman Street	TBD	Signal and Widening	$750,000

LRTP Illustrative (Unfunded) Projects

Illustrative Project	Project Type	Map Ref. #	Description	Municipality	Origin	Timeframe	Potentially Federal-Aid Eligible	Project Cost
PA 72	Safety	1	Continue truck climbing lane and provide turning lanes from the Lancaster County line to US 322	Cornwall Borough & West Cornwall Twp.	LRTP	Mid-term (2025-2031)	Yes	$5 million - $15 million
I-78 & I-81	Safety & Congestion	2	Extend the left lane merge lane from I-78 West to I-81 South	Union	LRTP	Mid-term (2025-2031)	Yes	$1million - $5 million
I-78	Congestion	3	Complete the interchanges at	Bethel	LRTP	Long Term (2031-2045)	Yes	>$50 million
I-78/PA 72	Congestion	4	Construct new interchange	Union	LRTP	Long Term	Yes	$30 - $50 million
PA 72 Roundabout	Safety & Congestion	5	Construct roundabout at the intersections of South 9th & 10th Streets/Poplar Street, Quentin Rd	City of Lebanon	LRTP	Mid-term (2025-2031)	Yes	
Maple Street	Connectivity	6	Convert 900 block of Maple St from one-way to two-way operations	City of Lebanon	LRTP	Mid-Term	Yes	$100,000
Lebanon Valley Rail Trail (LVRT) Asset Management	Trails	7	Implement 2020 asset management plan and update the plan in 2030	County-wide	LVRT	Mid-term	Yes	$100,000
LVRT Trailhead Development	Trails	8	Develop trailhead along PA 72 in Union Township	Union	LVRT	2022	Yes	$50,000
Union Canal Connector Trail	Trails	9	Construct connecting trail between Union Canal Tunnel Park and Coleman Memorial Park	Lebanon & North Lebanon	LVRT	2025-2030	Yes	$400,000
LVRT Phase 8	Trail	10	Construct Phase 8	North Lebanon & Swatara	LVRT	2025	Yes	$1 million to $5 million
LVRT Phase 10	Trail	11	Construct trail from US 22 to Swatara State Park	Swatara Township	LVRT	2022	Yes	$5,000,000

LRTP Illustrative (Unfunded) Projects

Illustrative Project	Project Type	Map Ref. #	Description	Municipality	Origin	Timeframe	Potentially Federal-Aid Eligible	Project Cost
Phase 2 South Lebanon Township Trail	Trail	12	Construct trail from CLSD High School to CLSD Elementary School	South Lebanon Township	LVRT	2030	Yes	$650,000
LVRT ALCOA Spur	Trail	13	Purchase right-of-way and construct trail along abandoned railroad spur	South Lebanon Township	County of Lebanon and LVRT	2030	Yes	$100,000-$500,000
Lebanon Valley College Connector Trail	Trail	14	Construct trail from LVC to LVRT Phase 7	Annville Township, Cleona Borough, and North Lebanon Twp	LVRT	2035	Yes	$1 million to $5 million
Cornwall Spur Rail Trail	Trail	15	Construct trail along abandoned Norfolk Southern line from Cornwall Trail head to Cornwall Furnace Historic Site	Cornwall Borough	County of Lebanon and LVRT	2035	Yes	$100,000-$500,000
Rexmont Spur	Trail	16	Construct trail along Norfolk Southern line from Cornwall Trail head to Rexmont		LVRT	2035	Yes	$100,000-$500,000
PA 419 Scenic Byway Improvements	Safety	17	Widen shoulders or consider sidepath from Cornwall to Newmanstown	Cornwall Borough, South Lebanon Twp, Heidelberg Twp, Millcreek Township	County of Lebanon	2025	Yes	$1 million to $5 million
Palmyra to Campbelltown Active Transportation Connection	Safety	18	Provide north-south shared-use path to serve as spine for non-motorized users to link to existing east-west facilities.	Palmyra Borough, North Londonderry Township, South Londonderry Township	LVBC	2025	Yes	$1 million to $5 million
PA 343 at Kimmerlings Road	Safety	19	Roadway Safety Audit	North Lebanon Township	LRTP	2022	Yes	$30,000
Hill Church Road (SR 4004) at Thompson Avenue (SR 4005)	Safety	20	Roadway Safety Audit	North Annville Township	LRTP	2022	Yes	$30,000

APPENDIX F

Detailed Fiscally Constrained Project List

Financial Plan: Highway/Bridge Reasonably Avaliable Funding

Years	NHPP	STP	STU	TAP	Off-System Bridges	HSIP	CMAQ	Carbon Reduction	Carbon Reduction Urban	Bridge Formula Program	State Highway (Capital)	State Bridge	Rapid Bridge Re-placement	Local	Total
2025	$2,115,000	$2,199,000		$1,056,500	$1,396,000	$1,324,000	$1,426,000	$430,000	$204,000	$1,473,500	$3,149,000	$1,547,000	$59,190	$324,163	$16,703,353
2026	$1,998,000	$2,037,000			$1,396,000	$1,357,000	$1,462,000	$441,000	$208,000	$1,473,500	$3,519,000	$1,546,000	$59,420		$15,496,920
2027	$1,769,000	$2,037,000	$1,441,704	$1,300,000	$1,396,000	$1,357,000	$1,462,000	$441,000	$208,000	$1,473,500	$3,958,000	$1,522,000	$59,600		$18,424,804
2028	$1,598,000	$2,036,000	$576,928		$1,396,000	$1,357,000	$1,462,000	$441,000	$208,000	$1,473,500	$4,327,000	$1,521,000	$59,830		$16,456,258
2029	$1,598,000	$2,036,000			$1,396,000	$1,357,000	$1,462,000	$441,000	$208,000	$1,842,216	$4,327,000	$1,521,000	$59,950	$395,727	$16,643,893
2030	$1,598,000	$2,036,000			$1,396,000	$1,357,000	$1,462,000	$441,000	$208,000	$1,842,216	$4,327,000	$1,521,000	$60,190		$16,248,406
2031	$1,598,000	$2,036,000			$1,396,000	$1,357,000	$1,462,000	$441,000	$208,000	$1,842,216	$4,327,000	$1,521,000	$60,400		$16,248,616
2032	$1,598,000	$2,036,000			$1,396,000	$1,357,000	$1,462,000	$441,000	$208,000	$1,842,216	$4,327,000	$1,521,000	$60,650		$16,248,866
2033	$1,598,000	$2,036,000			$1,396,000	$1,357,000	$1,461,500	$441,000	$208,000	$1,361,250	$4,327,000	$1,520,750	$60,800		$15,767,300
2034	$1,598,000	$2,036,000			$1,396,000	$1,356,750	$1,461,500	$441,000	$207,750	$1,361,250	$4,326,500	$1,520,750	$61,060		$15,766,560
2035	$1,598,000	$2,036,000			$1,396,000	$1,356,750	$1,461,500	$441,000	$207,750	$1,361,250	$4,326,500	$1,520,750	$61,290		$15,766,790
2036	$1,598,000	$2,036,000			$1,396,000	$1,356,750	$1,461,500	$441,000	$207,750	$1,361,250	$4,326,500	$1,520,750	$61,560		$15,767,060
2037	$1,598,000	$2,036,000			$1,396,000	$1,357,000	$1,462,000	$441,000	$208,000	$1,361,000	$4,327,000	$1,521,000	$61,776		$15,768,776
2038	$1,598,000	$2,036,000			$1,396,000	$1,357,000	$1,462,000	$441,000	$208,000	$1,361,000	$4,327,000	$1,521,000	$61,993		$15,768,993
2039	$1,598,000	$2,036,000			$1,396,000	$1,357,000	$1,462,000	$441,000	$208,000	$1,361,000	$4,327,000	$1,521,000	$62,209		$15,769,209
2040	$1,598,000	$2,036,000			$1,396,000	$1,357,000	$1,462,000	$441,000	$208,000	$1,361,000	$4,327,000	$1,521,000	$62,425		$15,769,425
2041	$1,598,000	$2,036,000			$1,396,000	$1,357,000	$1,462,000	$441,000	$208,000	$1,361,000	$4,327,000	$1,521,000	$62,641		$15,769,641
2042	$1,598,000	$2,036,000			$1,396,000	$1,357,000	$1,462,000	$441,000	$208,000	$1,361,000	$4,327,000	$1,521,000	$62,858		$15,769,858
2043	$1,598,000	$2,036,000			$1,396,000	$1,357,000	$1,462,000	$441,000	$208,000	$1,361,000	$4,327,000	$1,521,000	$63,074		$15,770,074
2044	$1,598,000	$2,036,000			$1,396,000	$1,357,000	$1,462,000	$441,000	$208,000	$1,361,000	$4,327,000	$1,521,000	$63,290		$15,770,290
TOTAL			$2,018,632	$2,356,500				$8,809,000	$4,155,250				$1,224,205	$719,890	$321,695,090

Financial Plan: Transit Reasonably Avaliable Funding

Year	Federal	State Section 1516-CTC	State Act 44 Section 1514 Discretionary	County Act 44 Section 1514 Discretionary	Federal Section 5307	State 1513	Shared Ride Lottery	Shared Ride PWD	Local	Total
2025	$7,500,000*	$280,000	$7,591,911	$103,089	$1,593,469	$2,791,570	$373,216	$102,362	$150,605	$20,486,222
2026	$7,500,000*		$7,591,911	$103,089	$1,641,273	$2,875,317	$391,877	$107,481	$158,135	$20,369,083
2027		$300,000	$91,911	$3,089	$1,690,511	$2,961,576	$411,471	$112,855	$166,042	$5,737,455
2028	$1,100,000	$600,000	$391,911	$23,089	$1,741,227	$3,050,424	$432,044	$118,497	$174,344	$7,631,536
2029		$350,000	$91,911	$3,089	$1,793,464	$3,141,936	$453,647	$124,422	$183,061	$6,141,530
2030			$1,372,714	$47,286	$1,847,268	$3,236,195	$476,329	$130,643	$192,214	$7,302,648
2031		$370,000	$2,629,424	$90,576	$1,902,686	$3,333,280	$500,145	$137,175	$201,825	$9,165,111
2032		$380,000	$1,566,054	$53,946	$1,959,766	$3,433,279	$525,153	$144,034	$211,916	$8,274,148
2033			$116,004	$3,996	$2,018,559	$3,536,277	$551,410	$151,236	$222,512	$6,599,994
2034		$390,000	$1,469,384	$50,616	$2,079,116	$3,642,365	$578,981	$158,798	$233,637	$8,602,897
2035		$400,000	$2,146,074	$73,926	$2,141,489	$3,751,636	$607,930	$166,738	$245,319	$9,533,112
2036		$410,000	$1,662,724	$57,276	$2,205,734	$3,864,186	$638,326	$175,074	$257,585	$9,270,905
2037		$300,000	$1,375,000	$62,500	$2,271,906	$3,980,111	$670,243	$183,828	$270,464	$9,114,052
2038		$300,000	$1,375,000	$62,500	$2,340,063	$4,099,514	$703,755	$193,020	$283,988	$9,357,840
2039		$300,000	$1,375,000	$62,500	$2,410,265	$4,222,500	$738,943	$202,671	$298,187	$9,610,065
2040		$300,000	$1,375,000	$62,500	$2,482,573	$4,349,175	$775,890	$212,804	$313,096	$9,871,038
2041		$300,000	$1,375,000	$62,500	$2,557,050	$4,479,650	$814,684	$223,444	$328,751	$10,141,080
2042		$300,000	$1,375,000	$62,500	$2,633,762	$4,614,040	$855,418	$234,617	$345,189	$10,420,525
2043		$300,000	$1,375,000	$62,500	$2,712,775	$4,752,461	$898,189	$246,347	$362,448	$10,709,720
2044		$300,000	$1,375,000	$62,500	$2,794,158	$4,895,035	$943,099	$258,665	$380,570	$11,009,026
TOTAL	$16,100,000	$5,880,000	$37,721,933	$1,113,067	$42,817,114	$75,010,528	$12,340,750	$3,384,710	$4,979,886	$199,347,988

**federal funding for the Lebanon Transit Admin Building*

Highway/Bridge Projects

TIP/ TYP #	Project Name	Municipality	Project Limits	Scope of Work	Total Funding	Phase	2025	2026	2027	2028	2029-32	2033-36	2037-44	Project Source
20217	N Lincoln Ave Leb-5	Lebanon (City)	North Lincoln Avenue bridge Leb-5 over Quittapahilla Creek City of Lebanon Bridge Replacement	This project consists of a bridge replacement on North Lincoln Avenue bridge Leb-5 over Quittapahilla Creek in the City of Lebanon, Lebanon County.	$1,639,091	CON	$858,749	$306,543	$473,799	$0	$0	$0		2025 TIP / TYP
20299	Levan's Iron Bridge CO-5	Swatara (TWP)	Levan's Iron Bridge CO-5 over the Little Swatara Creek Swatara Township Bridge Replacement	This project consists of a bridge replacement on Levan's Iron Bridge CO-5 over the Little Swatara Creek in Swatara Township, Lebanon County.	$2,754,000	PE	$0	$0	$0	$0	$0	$0		2025 TIP / TYP
						FD	$350,000	$0	$0	$0	$0	$0		
						CON	$0	$0	$545,750	$219,386	$1,638,864	$0		
20364	Yortys Bridge Road CO-22	North Annville (TWP)	Yortys Bridge Road CO-22 over Swatara Creek North Annville Township	This project consists of a bridge rehabilitation/replacement on Yortys Bridge Road CO-22 over Swatara Creek in North Annville Township, Lebanon County.	$5,065,310	PE	$0	$0	$0	$0	$0	$0		2025 TIP / TYP
						FD	$0	$350,000	$0	$0	$0	$0		
						CON	$0	$0	$0	$425,310	$4,290,000	$0		
78751	SR 117 Over Conewago Crk	South Londonderry (TWP)	SR 117 Over Conewago Crk South Lodonderry Twp	This project may consist of a bridge improvements on PA 117 (Mt Wilson Road) over Conewago Creek in South Londonderry Township	$307,712	PE	$0	$0	$0	$0	$150,000	$0		2025 TIP / TYP
						CON	$0	$0	$0	$0	$0	$157,712		
82375	SRTP Rideshare Program				$393,078	PE	$97,114	$98,655	$98,164	$99,145	$0	$0		2025 TIP / TYP
87477	East Main Street Bridge	Bethel (TWP)	SR 1020 (Main Street) over Beech Run	This project may consist of bridge improvements on State Route 1020 (Main Street) over Beech Run in Bethel Township, Lebanon County.	$949,064	PE	$0	$0	$0	$0	$117,000	$0		2025 TIP / TYP
						CON	$0	$0	$0	$0	$0	$832,064		
87835	Bridge Reserve				$16,518,357	CON	$434,692	$2,121,002	$607,472	$431,964	$7,783,348	$5,139,879		2025 TIP / TYP
87838	Highway Reserve				$23,479,608	CON	$0	$245,258	$642,346	$4,631,783	$12,883,361	$5,076,860		2025 TIP / TYP

Highway/Bridge Projects

TIP/ TYP #	Project Name	Municipality	Project Limits	Scope of Work	Total Funding	Phase	2025	2026	2027	2028	2029-32	2033-36	2037-44	Project Source
87841	CMAQ Line Item				$13,415,009	CON	$562,385	$1,363,345	$1,363,836	$1,362,855	$5,521,000	$3,241,588		2025 TIP / TYP
87842	Delivery/Consult Assist				$1,200,000	PE	$400,000	$400,000	$0	$0	$0	$0		2025 TIP / TYP
						CON	$200,000	$200,000	$0	$0	$0	$0		
87847	HSIP Line Item				$8,141,000	CON	$0	$0	$0	$0	$2,714,000	$5,427,000		2025 TIP / TYP
88741	PA72 Congested Corr Study	Cornwall (Borough) & North Cornwall (TWP) & Lebanon (City)	PA 72 (Quentin Road) and SR 2001 (Cornwall Road) from PA 419 (Main Street/ Freeman Drive/ Schaeffer Road) to Poplar Street	This item provides funds for a Transportation Study of PA 72 (Quentin Road) and State Route 2001 (Cornwall Road) from PA 419 (Main Street/Freeman Drive/Schaeffer Road) to Poplar Street in Cornwall Borough, North Cornwall Township, and Lebanon City.	$300,000	STUDY	$300,000	$0	$0	$0	$0	$0		2025 TIP / TYP
88973	SR 4019 over Vesle Run	East Hanover (TWP)	SR 4019 (Asher Miner Road) over Vesle Run	This project may consist of a Bridge Improvements on State Route 4019 (Asher Miner Road) over Vesle Run in East Hanover Township, Lebanon County	$2,035,018	PE	$0	$0	$0	$0	$400,000	$0		2025 TIP / TYP
						CON	$0	$0	$0	$0	$0	$1,635,018		
90340	Ebenezer Road Bridge	Union (TWP)	PA 72 (Ebenezer Road) over Kevin's Run in Union Township	This project may consist of bridge Improvements on PA 72 (Ebenezer Road) over Kevin's Run in Union Township, Lebanon County.	$1,323,972	PE	$0	$0	$0	$0	$150,000	$0		2025 TIP / TYP
						CON	$0	$0	$0	$0	$0	$1,173,972		
91346	PA 501 Bridge-B	Myerstown (Borough)	PA 501 over Tulpehocken Creek	This project consists of a bridge replacement on PA 501 over Tulpehocken Creek in Myerstown Borough, Lebanon County.	$1,874,960	FD	$0	$0	$0	$0	$0	$0		2025 TIP / TYP
						CON	$937,480	$937,480	$0	$0	$0	$0		
91347	PA 501 Bridge 2	Heidelberg (TWP)	PA 501 over East Branch of Hammer Creek Heildelberg Township	This project may consist of a Bridge Improvement on PA 501 over East Branch of Hammer Creek in Heildelberg Township, Lebanon County.	$910,435	PE	$0	$0	$0	$0	$121,000	$0		2025 TIP / TYP
						CON	$0	$0	$0	$0	$0	$789,435		

Highway/Bridge Projects

TIP/ TYP #	Project Name	Municipality	Project Limits	Scope of Work	Total Funding	Phase	2025	2026	2027	2028	2029-32	2033-36	2037-44	Project Source
91351	Pleasant View Rd over Trib to Raccoon Ck	East Hanover (TWP)	SR 4013 (Pleasant View Road) over Tributary to Raccoon Creek	This project may consist of a bridge rehabilitation/replacement on SR 4013 (Pleasant View Road) over Tributary to Raccoon Creek in East Hanover Township, Lebanon County.	$1,285,488	PE	$0	$0	$0	$0	$0	$0		2025 TIP / TYP
						FD	$33,000	$170,000	$2,000	$0	$0	$0		
						CON	$0	$0	$0	$1,080,488	$0	$0		
97153	Lingle Avenue Reconstruct	Palmyra (Borough) & North Londonderry (TWP) & South Londonderry (TWP)	SR 3017 (Lingle Road) from Cherry street to SR 3019 (Palmyra Road)	This project may consist of drainage improvements, stream restoration, roadway resurfacing, realignment, and widening of SR 3017 (Lingle Road) from Cherry Street to SR 3019 (Palmyra Road) in Palmyra Borough, North and South Londonderry Townships, Leb	$5,766,972	PE	$0	$0	$0	$0	$0	$0		2025 TIP / TYP
						FD	$0	$0	$0	$0	$0	$0		
						ROW	$0	$0	$0	$0	$0	$0		
						UTL	$0	$0	$0	$0	$0	$0		
						CON	$1,882,056	$2,326,975	$1,557,941	$0	$0	$0		
97161	Cornwall Traffic Signals	North Cornwall (TWP) & Lebanon (City)	SR 2001 (Cornwall Road) from Wilhelm Avenue to York Street	This project may consist of adding turn lanes and installing one stand alone traffic signal on SR 2001 (Cornwall Road) from Wilhelm Avenue to York Street in the City of Lebanon and North Cornwall Township, Lebanon County. There are no signals in the	$2,931,412	PE	$0	$0	$0	$0	$327,000	$0		2025 TIP / TYP
						CON	$0	$0	$0	$0	$0	$2,604,412		
99081	Cornwall & Wilhelm Inters	North Cornwall (TWP) & Lebanon (City)	SR 2001 (Cornwall Road) at Wilhelm Ave to York Street	This project consists of relocating the intersection of Wilhelm Avenue and SR 2001 (Cornwall Road) to align with York Street in North Cornwall Township and Lebanon City, Lebanon County.	$591,131	FD	$0	$0	$0	$0	$0	$0		2025 TIP / TYP
						CON	$591,131	$0	$0	$0	$0	$0		
100262	Bohns Lane over I-81	Union (TWP)	State Route 1022 (Bohn Lane) over Interstate 81 in Union Township	This project may consist of a bridge improvement on State Route 1022 (Bohn Lane) over Interstate 81 in Union Township, Lebanon County.	$1,915,674	PE	$0	$0	$0	$0	$357,000	$0		2025 TIP / TYP

Highway/Bridge Projects

TIP/ TYP #	Project Name	Municipality	Project Limits	Scope of Work	Total Funding	Phase	2025	2026	2027	2028	2029-32	2033-36	2037-44	Project Source
						CON	$0	$0	$0	$0	$0	$1,558,674		
100264	Harrison Road over I-81	East Hanover (TWP)	Harrison School Road over Interstate 81 in East Hanover Township	This project may consist of a Bridge Improvement or Preservation on Harrison School Road over Interstate 81 in East Hanover Township, Lebanon County.	$1,373,972	PE	$0	$0	$0	$0	$200,000	$0		2025 TIP / TYP
						CON	$0	$0	$0	$0	$0	$1,173,972		
100279	Weavertown Road over NS	Jackson (TWP)	State Route 2011 (Weaver Road) over Norfolk Southern Railroad in Jackson Township	This project may consist of a Bridge Improvement on State Route 2011 (Weaver Road) over Norfolk Southern Railroad in Jackson Township, Lebanon County	$1,248,588	PE	$0	$0	$0	$0	$293,574	$0		2025 TIP / TYP
						CON	$0	$0	$0	$0	$0	$955,014		
100282	US322 over Quentin Rd	West Cornwall (TWP)	US 322 (Horseshoe Pike) over southbound PA72 (Quentin Road) in West Cornwall Township	This project may consist of a bridge improvement on US 322 (Horseshoe Pike) over southbound PA72 (Quentin Road) in West Cornwall Township, Lebanon County.	$511,222	PE	$0	$0	$0	$0	$150,000	$0		2025 TIP / TYP
						CON	$0	$0	$0	$0	$0	$361,222		
100283	Millbach Road ov Mill Cr	Mill Creek (TWP)	State Route 2017 (Millbach Road) over Mill Creek in Mill Creek Township	This project may consist of a bridge improvement on State Route 2017 (Millbach Road) over Mill Creek in Mill Creek Township, Lebanon County.	$962,750	PE	$0	$0	$0	$0	$150,000	$0		2025 TIP / TYP
						CON	$0	$0	$0	$0	$0	$812,750		
100291	Horseshoe Pike ov Beck Cr	West Cornwall (TWP)	US 322 (Horseshoe Pike) over Beck Creek in West Cornwall Township	This project may consist of a bridge improvement on US 322 (Horseshoe Pike) over Beck Creek in West Cornwall Township, Lebanon County.	$1,053,056	PE	$0	$0	$0	$0	$150,000	$0		2025 TIP / TYP
						CON	$0	$0	$0	$0	$0	$903,056		
100294	SR 4005/Trib Swatara Cr	North Annville (TWP)	State Route 4005 (Thompson Avenue) over Tributary to Swatara Creek in North Annville Township	This project may consist of a bridge Improvement on State Route 4005 (Thompson Avenue) over Tributary to Swatara Creek in North Annville Township	$1,053,056	PE	$0	$0	$0	$0	$150,000	$0		2025 TIP / TYP
						CON	$0	$0	$0	$0	$0	$903,056		

Highway/Bridge Projects

TIP/ TYP #	Project Name	Municipality	Project Limits	Scope of Work	Total Funding	Phase	2025	2026	2027	2028	2029-32	2033-36	2037-44	Project Source
100302	Harrison Rd ovr Spring Cr	Annville (TWP)	State Route 4008 (Harrison Road) over Spring Creek in Annville Township	This project may consist of a bridge improvement on State Route 4008 (Harrison Road) over Spring Creek in Annville Township, Lebanon County.	$1,233,667	PE	$0	$0	$0	$0	$150,000	$0		2025 TIP / TYP
						CON	$0	$0	$0	$0	$0	$1,083,667		
100305	Cumberland St Bridge 2	Jackson (TWP)	US 422 (Cumberland Street) over Tributary to Tulpehocken Creek in Jackson Township	This project may consist of a bridge improvement on US 422 (Cumberland Street) over Tributary to Tulpehocken Creek in Jackson Township, Lebanon County	$1,685,195	PE	$0	$0	$0	$0	$150,000	$0		2025 TIP / TYP
						CON	$0	$0	$0	$0	$0	$1,535,195		
100306	Lincoln Schl Rd/Mill Cr	East Hanover (TWP)	State Route 4027 (Lincoln School Road over Mill Creek in East Hanover Township	This project may consist of a bridge improvement on State Route 4027 (Lincoln School Road over Mill Creek in East Hanover Township, Lebanon County.	$1,233,667	PE	$0	$0	$0	$0	$150,000	$0		2025 TIP / TYP
						CON	$0	$0	$0	$0	$0	$1,083,667		
100309	Jonestown Rd/ Raccoon Cr	East Hanover (TWP)	State Route 4013 (Jonestown Road) over Raccoon Creek in East Hanover Township	This project may consist of a bridge improvement on State Route 4013 (Jonestown Road) over Raccoon Creek in East Hanover Township, Lebanon County	$1,504,583	PE	$0	$0	$0	$0	$150,000	$0		2025 TIP / TYP
						CON	$0	$0	$0	$0	$0	$1,354,583		
100311	Lawn Rd over Conewago Crk	South Londonderry (TWP)	State Route 3007 (Lawn Road) over Conewago Creek in South Londonderry Township	This project may consist of a bridge improvement on State Route 3007 (Lawn Road) over Conewago Creek in South Londonderry Township, Lebanon County.	$1,685,195	PE	$0	$0	$0	$0	$150,000	$0		2025 TIP / TYP
						CON	$0	$0	$0	$0	$0	$1,535,195		
100312	Sheridan Rd over Mill Cr	Mill Creek (TWP)	State Route 2019 (Sheridan Road) over Mill Creek	This project may consist of a bridge rehabilitation/replacement on SR 2019 (Sheridan Road) over Mill Creek in Mill Creek Township, Lebanon County.	$1,727,056	PE	$0	$0	$0	$0	$0	$0		2025 TIP / TYP
						FD	$220,000	$0	$0	$0	$0	$0		
						CON	$0	$0	$753,528	$753,528	$0	$0		

Highway/Bridge Projects

TIP/ TYP #	Project Name	Municipality	Project Limits	Scope of Work	Total Funding	Phase	2025	2026	2027	2028	2029-32	2033-36	2037-44	Project Source
100317	Lincoln Avenue Bridge	Jackson (TWP)	US 422 (Lincoln Avenue) over Tributary to Owl Creek in Jackson Township	This project may consist of a bridge improvement on US 422 (Lincoln Avenue) over Tributary to Owl Creek in Jackson Township, Lebanon County.	$1,956,111	PE	$0	$0	$0	$0	$150,000	$0		2025 TIP / TYP
						CON	$0	$0	$0	$0	$0	$1,806,111		
100326	Fisher Avenue/ Swatara Cr	East Hanover (TWP)	PA934 (Fisher Avenue) over Swatara Creek in East Hanover Township	This project may consist of a bridge improvement on PA934 (Fisher Avenue) over Swatara Creek in East Hanover Township, Lebanon County.	$2,829,945	PE	$0	$0	$0	$0	$482,000	$0		2025 TIP / TYP
						CON	$0	$0	$0	$0	$0	$2,347,945		
100327	Fisher Ave over Forge Ck	Union (TWP)	State Route 4020 (Fisher Avenue) over Forge Creek in Union Township	This project may consist of a bridge improvement on State Route 4020 (Fisher Avenue) over Forge Creek in Union Township, Lebanon County	$2,136,722	PE	$0	$0	$0	$0	$150,000	$0		2025 TIP / TYP
						CON	$0	$0	$0	$0	$0	$1,986,722		
100328	Golf Rd over Little Swatara Ck	Bethel (TWP)	Township Road 471 (Golf Road) over Little Swatara Creek in Bethel Township	This project consists of a bridge replacement on Township Road 471 (Golf Road) over Little Swatara Creek in Bethel Township, Lebanon County.	$4,939,453	FD	$350,000	$0	$0	$0	$0	$0		2025 TIP / TYP
						CON	$0	$0	$858,749	$1,744,999	$1,985,705	$0		
100330	Horseshoe Pike/Quentin Rd	Cornwall (Borough)	US 322 over PA 72(Quentin Road) in Cornwall Borough	This project may consist of a bridge improvement on US 322 over PA 72(Quentin Road) in Cornwall Borough, Lebanon County.	$511,222	PE	$0	$0	$0	$0	$150,000	$0		2025 TIP / TYP
						CON	$0	$0	$0	$0	$0	$361,222		
100331	Ebenezer Rd/ Swatara Cr	Union (TWP) & Swatara (TWP)	PA 72 (Ebenezer Road) over Swatara Creek in Union and Swatara Townships	This project may consist of a bridge replacement on PA 72 (Ebenezer Road) over Swatara Creek in Union and Swatara Townships, Lebanon County.	$2,144,009	PE	$0	$0	$0	$0	$0	$0		2025 TIP / TYP
						FD	$0	$0	$0	$0	$0	$0		
						UTL	$0	$0	$0	$0	$0	$0		
						CON	$1,515,000	$629,009	$0	$0	$0	$0		

Highway/Bridge Projects

TIP/ TYP #	Project Name	Municipality	Project Limits	Scope of Work	Total Funding	Phase	2025	2026	2027	2028	2029-32	2033-36	2037-44	Project Source
100332	Earlakill Run Bridge	Bethel (TWP)	US 22 (Allentown Boulevard) over Earlakill Run in Bethel Township	This project may consist of a bridge improvement on US 22 (Allentown Boulevard) over Earlakill Run in Bethel Township, Lebanon County.	$2,317,333	PE	$0	$0	$0	$0	$150,000	$0		2025 TIP / TYP
						CON	$0	$0	$0	$0	$0	$2,167,333		
100333	Allentown Blvd/Fisher Ave	East Hanover (TWP)	US 22 (Allentown Boulevard) over PA 934 (Fisher Avenue) in East Hanover Township	This project may consist of a bridge improvement on US 22 (Allentown Boulevard) over PA 934 (Fisher Avenue)in East Hanover Township, Lebanon County.	$1,179,483	PE	$0	$0	$0	$0	$150,000	$0		2025 TIP / TYP
						CON	$0	$0	$0	$0	$0	$1,029,483		
100337	US 22 Allentown Bl over Deep Run	East Hanover (TWP)	US 22 (Allentown Boulevard) over Reeds Creek in East Hanover Township	This project may consist of a bridge improvement on US 22 (Allentown Boulevard) over Reeds Creek in East Hanover Township, Lebanon County.	$2,938,863	PE	$232,000	$100,000	$0	$0	$0	$0		2025 TIP / TYP
						FD	$0	$0	$0	$200,000	$0	$0		
						CON	$0	$0	$0	$0	$2,406,863	$0		
100338	Ebeneezer Rd/ Snitz Cr	Swatara (TWP)	PA 72 (Ebenezer Road) over Snitz Creek in Swatara Township	This project may consist of a bridge improvement on PA 72 (Ebenezer Road) over Snitz Creek in Swatara Township, Lebanon County.	$1,053,056	PE	$0	$0	$0	$0	$150,000	$0		2025 TIP / TYP
						CON	$0	$0	$0	$0	$0	$903,056		
100343	Allentown Blvd/Trib Racc	East Hanover (TWP)	US 22 (Allentown Boulevard) over Tributary to Raccoon Creek in East Hanover Township	This project may consist of a bridge rehabilitation on US 22 (Allentown Boulevard) over Tributary to Raccoon Creek in East Hanover Township.	$483,000	FD	$0	$0	$0	$0	$0	$0		2025 TIP / TYP
						ROW	$0	$0	$0	$0	$0	$0		
						CON	$483,000	$0	$0	$0	$0	$0		
100347	Cornwall Rd ovr Snitz Ck	Cornwall (Borough)	State Route 2001(Cornwall Road) over Snitz creek in Cornwall Borough	This project may consist of a bridge improvement on State Route 2001(Cornwall Road) over Snitz creek in Cornwall Borough, Lebanon County	$1,414,278	PE	$0	$0	$0	$0	$150,000	$0		2025 TIP / TYP
						CON	$0	$0	$0	$0	$0	$1,264,278		

Highway/Bridge Projects

TIP/ TYP #	Project Name	Municipality	Project Limits	Scope of Work	Total Funding	Phase	2025	2026	2027	2028	2029-32	2033-36	2037-44	Project Source
100349	US 22 over Reeds Ck Brdg	East Hanover (TWP)	US 22 (Allentown Boulevard) over Reeds Creek in East Hanover Township	This project may consist of a bridge improvement on US 22 (Allentown Boulevard) over Reeds Creek in East Hanover Township, Lebanon County.	$4,484,667	PE	$0	$0	$0	$0	$150,000	$0		2025 TIP / TYP
						CON	$0	$0	$0	$0	$424,862	$3,909,805		
100350	Pine Grove St over Elizabeth Run	Bethel (TWP)	PA 343 (Pine Grove Street) over Elizabeth Run in Bethel Township	This project may consist of a bridge improvement on PA 343 (Pine Grove Street) over Elizabeth Run in Bethel Township, Lebanon County.	$1,365,609	PE	$225,000	$0	$0	$0	$0	$0		2025 TIP / TYP
						CON	$0	$0	$0	$0	$0	$1,140,609		
100351	Ebenezer Rd over Forge Ck	Union (TWP)	PA 72 (Ebenezer Road) over Forge Creek in Union Township	This project may consist of a bridge improvement on PA 72 (Ebenezer Road) over Forge Creek in Union Township, Lebanon County.	$1,053,056	PE	$0	$0	$0	$0	$150,000	$0		2025 TIP / TYP
						CON	$0	$0	$0	$0	$0	$903,056		
100352	Beach Run Bridge	Bethel (TWP)	State Route 1007 (Pine Grove Road) over Beach Run in Bethel Township	This project may consist of a bridge improvement on State Route 1007 (Pine Grove Road) over Beach Run in Bethel Township, Lebanon County.	$1,143,361	PE	$0	$0	$0	$0	$150,000	$0		2025 TIP / TYP
						CON	$0	$0	$0	$0	$0	$993,361		
100353	Greble Road Bridge	Swatara (TWP)	State Route 1014 (Greble Road) over Tributary to Little Swatara creek in Swatara Township	This project may consist of a bridge improvement on State Route 1014 (Greble Road) over Tributary to Little Swatara creek in Swatara Township, Lebanon County.	$1,143,361	PE	$0	$0	$0	$0	$150,000	$0		2025 TIP / TYP
						CON	$0	$0	$0	$0	$0	$993,361		
100354	Mountain Road Bridge	East Hanover (TWP)	s PA 443 (Mountain Road) over Tributary to Indiantown Run in East Hanover Township	This project may consist of a bridge improvement on PA 443 (Mountain Road) over Tributary to Indiantown Run in East Hanover Township, Lebanon County	$1,233,667	PE	$0	$0	$0	$0	$150,000	$0		2025 TIP / TYP
						CON	$0	$0	$0	$0	$0	$1,083,667		

Highway/Bridge Projects

TIP/ TYP #	Project Name	Municipality	Project Limits	Scope of Work	Total Funding	Phase	2025	2026	2027	2028	2029-32	2033-36	2037-44	Project Source
105343	US 422 Cumberland St Resurfacing	South Lebanon (TWP) & North Lebanon (TWP) & Jackson (TWP) & Lebanon (City)	US 422 (Cumberland Street) from South 5th Avenue to east of Halfway Drive	This project consists of resurfacing on US 422 (Cumberland Street) from South 5 th Avenue to east of Halfway Drive in South Lebanon, North Lebanon and Jackson Townships and Lebanon City, Lebanon County.	$3,445,803	PE	$0	$0	$0	$0	$0	$0		2025 TIP / TYP
						CON	$0	$1,494,793	$1,951,010	$0	$0	$0		
105802	College St over Trib to Owl Cr	Jackson (TWP)	PA 501 (College Street) over Tributary to Owl Creek	This project may consist of a bridge rehabilitation/replacement on PA 501 (College Street) over Tributary to Owl Creek in Jackson Township, Lebanon County.	$1,376,172	PE	$0	$0	$0	$0	$0	$0		2025 TIP / TYP
						FD	$0	$125,000	$0	$0	$0	$0		
						CON	$0	$0	$990,255	$260,917	$0	$0		
106537	PA72/Isabel Drive Improvements	North Cornwall (TWP)	PA 72 (Quentin Road) at Isabel Drive	This project may consist of intersection improvements with the addition of a signal to be coordinated with other signals on the corridor. Improvements will evaluate the need for turning lanes on PA 72 and Isabel Drive. The project location is on PA	$175,370	CON	$175,370	$0	$0	$0	$0	$0		2025 TIP / TYP
111910	Lebanon City Resurfacing Phase 4 - Cumberland St				$903,000	CON	$903,000	$0	$0	$0	$0	$0		2025 TIP / TYP
113297	PA 72 Quentin Rd Resurface	North Cornwall (TWP) & West Cornwall (TWP) & Cornwall (Borough)	PA 72 (Quentin Road) from Lebanon County line to Rocherty Road	This project may consist of a resurfacing on PA 72 (Quentin Road) from Lebanon County line to Rocherty Road in North and West Cornwall Townships and Cornwall Borough, Lebanon County	$6,985,000	PE	$0	$0	$0	$0	$0	$0		2025 TIP / TYP
						CON	$2,172,589	$2,208,347	$2,604,064	$0	$0	$0		
113316	PA 443 Old State Rd Resurface	Union (TWP)	PA 443(Old State Road) from PA 72 to the Schuylkill County line	This project consists of resurface on PA 443 (Old State Road) from PA 72 to the Schuylkill County line in Union Township, Lebanon County.	$6,738,838	CON	$0	$0	$0	$0	$6,738,838	$0		2025 TIP / TYP

Highway/Bridge Projects

TIP/ TYP #	Project Name	Municipality	Project Limits	Scope of Work	Total Funding	Phase	2025	2026	2027	2028	2029-32	2033-36	2037-44	Project Source
114554	Hill Church Rd Safety Imp	North Annville (TWP)	Intersection of SR 4004(Hill Church Road) and SR 4005(Thompson Avenue) North Annville Township	This is a safety improvement project which may consist of installing a traffic signal and reconstructing existing horizontal and vertical curves or installing flashing beacons on existing advisory signs at the intersection of SR 4004 (Hill Church Road)	$2,945,800	FD	$0	$0	$0	$0	$0	$0		2025 TIP / TYP
						ROW	$0	$0	$0	$0	$0	$0		
						UTL	$0	$0	$0	$0	$0	$0		
						CON	$805,016	$779,335	$757,144	$604,305	$0	$0		
116163	PA 343 Seventh Street Improvements	North Lebanon (TWP)	Intersection of North 7th St (PA 343) and Kochenderfer Road/ Kimmerlings Road Resurfacing on PA 343 from Lebanon City Line to south of Heffelfinger road	This project may consist of safety improvements with a potential roundabout at the intersection of North 7th St (PA 343) and Kochenderfer Road/Kimmerlings Road, also resurfacing on PA 343 from the Lebanon City Line to south of Heffelfinger Road in No	$4,296,563	PE	$0	$0	$0	$0	$0	$0		2025 TIP / TYP
						FD	$0	$225,000	$0	$0	$0	$0		
						ROW	$0	$250,000	$0	$0	$0	$0		
						UTL	$0	$150,000	$0	$0	$0	$0		
						CON	$0	$0	$600,000	$627,335	$2,444,228	$0		
116164	US 422 Cumberland St and Prescott Rd Int	North Lebanon (TWP) & South Lebanon (TWP)	Cumberland Street (US 422) and Prescott Drive/ Prescott Road (SR 1013/SR 2005)	This project may consist of safety improvements with a potential roundabout at the intersection of Cumberland Street (US 422) and Prescott Drive/Prescott Road (SR 1013/ SR 2005) in North Lebanon Township and South Lebanon Township, Lebanon County.	$4,255,803	PE	$0	$0	$0	$0	$0	$0		2025 TIP / TYP
						FD	$250,000	$0	$0	$0	$0	$0		
						ROW	$260,000	$0	$0	$0	$0	$0		
						UTL	$300,000	$0	$0	$0	$0	$0		
						CON	$0	$600,000	$357,000	$1,021,112	$1,467,691	$0		

Highway/Bridge Projects

TIP/ TYP #	Project Name	Municipality	Project Limits	Scope of Work	Total Funding	Phase	2025	2026	2027	2028	2029-32	2033-36	2037-44	Project Source
117410	Gravel Hill Rd ovr Trib to Swatara Ck	East Hanover (TWP)	SR 4011 (Gravel Hill Road) over a tributary to Swatara Creek	This project consists of a bridge preservation on SR 4011 (Gravel Hill Road) over a tributary to Swatara Creek in East Hanover Township, Lebanon County.	$664,358	PE	$0	$0	$0	$0	$0	$0		2025 TIP / TYP
						FD	$0	$150,000	$0	$0	$0	$0		
						CON	$0	$0	$0	$514,358	$0	$0		
117411	US322 Horsheshoe Pk ovr Killinger Crk	South Annville (TWP)	US 322 (Horseshoe Pike) over Killinger Creek	This project consists of a bridge preservation on US 322 (Horseshoe Pike) over Killinger Creek in South Annville Township, Lebanon County.	$681,764	PE	$0	$0	$0	$0	$0	$0		2025 TIP / TYP
						FD	$0	$0	$125,000	$0	$0	$0		
						CON	$0	$0	$0	$0	$556,764	$0		
117412	PA72 Ebenezer Rd over Trib to Swatara Crk	Union (TWP)	PA 72 (Ebenezer Road) over a tributary to Swatara Creek	This project consists of a bridge preservation on PA 72 (Ebenezer Road) over a tributary to Swatara Creek in Union Township, Lebanon County.	$726,610	PE	$150,000	$0	$0	$0	$0	$0		2025 TIP / TYP
						FD	$0	$0	$125,000	$0	$0	$0		
						CON	$0	$0	$0	$0	$451,610	$0		
117488	US 422 Main Street over Quittapahilla Creek	Annville (TWP)	US 422 (Main Street) over Quittapahilla Creek	This project may consist of a bridge improvement on US 422 (Main Street) over Quittapahilla Creek in Annville Township, Lebanon County	$4,916,499	PE	$350,000	$0	$0	$0	$0	$0		2025 TIP / TYP
						FD	$0	$0	$250,000	$0	$0	$0		
						CON	$0	$0	$0	$0	$4,316,499	$0		
117496	PA 501 Stiegel Pk and Reistville Rd	Jackson (TWP) & Heidelberg (TWP)	PA 501 (Stiegel Pike) and SR 2004 (Reistville Road)	This project may consist of intersection improvements, that may include installation of systemic signing and pavement markings, installation of optical speed bars and intersection warning treatment at PA 501 (Stiegel Pike) and SR 2004 (Reistville Roa	$2,531,383	PE	$0	$0	$0	$0	$0	$0		2025 TIP / TYP
						FD	$150,000	$0	$0	$0	$0	$0		
						CON	$0	$0	$400,000	$800,000	$1,181,383	$0		

Highway/Bridge Projects

TIP/ TYP #	Project Name	Municipality	Project Limits	Scope of Work	Total Funding	Phase	2025	2026	2027	2028	2029-32	2033-36	2037-44	Project Source
118512	Jonestown Borough Ped Improvements	Jonestown (Borough)	SR 1014 (Market Street) from Broad Street to King Street	This project may consist of bicycle and pedestrian facilities on SR 1014 (Market Street) from Broad Street to King Street in Jonestown Borough, Lebanon County.	$1,056,500	CON	$1,056,500	$0	$0	$0	$0	$0		2025 TIP / TYP
118513	Quittapahilla Creek New Bridge	North Cornwall (TWP) & North Lebanon (TWP) & West Lebanon (TWP)	SR 3025 (22nd Street) located between Chestnut Street and US 422 North Cornwall, North Lebanon and West Lebanon Townships	This project consists of a new bridge and partial road realignment on SR 3025 (22nd Street) located between Chestnut Street and US 422 in North Cornwall, North Lebanon and West Lebanon Townships, Lebanon County.	$1,300,000	CON	$0	$400,000	$900,000	$0	$0	$0		2025 TIP / TYP
119212	Lebanon MPO TIP Funded Bridge Maint Contract				$850,000	PE	$0	$50,000	$0	$0	$0	$0		2025 TIP / TYP
						CON	$0	$0	$400,000	$400,000	$0	$0		
119254	Orange St and Cornwall Rd Intersection				$220,000	CON	$220,000	$0	$0	$0	$0	$0		2025 TIP / TYP
119290	Carbon Reduction Program (CRP) Lebanon MPO				$7,772,000	CON	$634,000	$649,000	$649,000	$649,000	$2,596,000	$2,595,000		2025 TIP / TYP
88057	STU (HATS)				$576,928	CON	$34,555	$35,229	$0	$507,144	$0	$0		2025 TIP / TYP
	Bridge Preservation, Rehabilitation, and Reconstruction				$18,923,440								$18,923,440	Draft LRTP Investment Program
	Bridge Reserve				$44,154,693								$44,154,693	Draft LRTP Investment Program

Highway/Bridge Projects

TIP/ TYP #	Project Name	Municipality	Project Limits	Scope of Work	Total Funding	Phase	2025	2026	2027	2028	2029-32	2033-36	2037-44	Project Source
	State Highway Resurfacing				$12,615,627								$12,615,627	Draft LRTP Investment Program
	State Highway Reserve				$18,923,440								$18,923,440	Draft LRTP Investment Program
	Safety, Non-Motorized, and Trails				$25,231,253								$25,231,253	Draft LRTP Investment Program
	Carbon Reduction Program				$5,046,251								$5,046,251	
	Congested Corridor Studies				$1,261,563								$1,261,563	Draft LRTP Investment Program
	Rapid Bridge Replacement Program				$723,940		$59,190	$59,420	$59,600	$59,830	$241,190	$244,710		
	TOTAL				**$321,694,090**		**$17,191,827**	**$16,424,391**	**$17,071,658**	**$16,393,459**	**$65,389,780**	**$63,067,710**	**$126,156,265**	

Transit Projects

LRPT Project #	Project Name	Sponsor	Total Funding	Phase	Project Funding						
					2025-28 TIP				2029-36 TYP		2037-44 LRTP
					2025	2026	2027	2028	2029-32	2033-36	2037-44
202400401	LT Admin Building	Lebanon Transit	$30,200,000	CON	$15,100,000	$15,100,000					
202400402	Operating Assistance (2025-28)	Lebanon Transit	$21,044,296	OPS	$5,011,222	$5,174,083	$5,342,455	$5,516,536			
202400403	Replace (2) Paratransit vehicles	Lebanon Transit	$280,000	CON	$280,000						
202400404	Replace (2) Paratransit vehicles	Lebanon Transit	$300,000	CON			$300,000				
202400405	Replace (4) Paratransit vehicles	Lebanon Transit	$600,000	CON				$600,000			
202400406	Replace Computers/IT	Lebanon Transit	$80,000	CON	$20,000	$20,000	$20,000	$20,000			
202400407	Misc. Maintenance	Lebanon Transit	$300,000	CON	$75,000	$75,000	$75,000	$75,000			
202400408	Replace (2) Fixed Route vehicles	Lebanon Transit	$1,420,000	CON				$1,420,000			
202400409	Replace (15) Fixed Route vehicles (2029-36)	Lebanon Transit	$10,500,000	CON					$5,400,000	$5,100,000	
202400410	Replace (12) Paratransit vehicles (2029-36)	Lebanon Transit	$2,300,000	CON					$1,100,000	$1,200,000	
202400411	Replace (11) Fixed Route vehicles (2037-44)	Lebanon Transit	$9,580,000	CON							$9,580,000
202400412	Replace (16) Paratransit vehicles (2037-44)	Lebanon Transit	$3,360,000	CON							$3,360,000
202400413	Replace Computers/IT (2029-44)	Lebanon Transit	$320,000	CON					$80,000	$80,000	$160,000
202400414	Misc. Maintenance (2029-44)	Lebanon Transit	$1,575,000	CON					$375,000	$400,000	$800,000
202400415	Operating Assistance (2029-44)	Lebanon Transit	$117,488,692	OPS					$23,928,437	$27,226,909	$66,333,346
TOTAL			**$199,347,988**		**$20,486,222**	**$20,369,083**	**$5,737,455**	**$7,631,536**	**$30,883,437**	**$34,006,909**	**$80,233,346**

Illustrative Projects

LRPT Project	Project Name	Municipality	Project Limits	Scope of Work	Total Project Cost	Schedule	Project
202400101	LVRT Phase 6D	West Lebanon (TWP) & North Lebanon (TWP)	From US Route 422 (Cumberland Street) where Phase 6C ends; north through and around the east side of the mall; through the 25th Street RR bridge tunnel; and to a connection with existing Phase 7 in West Lebanon and North Lebanon Townships, a distance of 0.55 miles.	This will be an easement through the LV Mall property; new demand actuated signals for the underpass to let bicyclists and pedestrians pass through the tunnel while opposing traffic is stopped. Then the last piece of Phase 6D will be located on the west side of 25th Street to a connection with existing Phase 7.	$500,000	2026	2020 LRTP Illustrative Project; 2024 Call for Projects
202400102	LVRT Phase 8	North Lebanon (TWP) & Swatara (TWP)	From the northern-most part of the completed Phase 7 at Long Lane; using the former rail bed going north to the existing tunnel under PA Route 72; and just north to where Phase 8 will tie into the existing Phase 9 in North Lebanon and Swatara Townships, a distance of 2.80 miles.		$4,100,000	TBD	2020 LRTP Illustrative Project; 2024 Call for Projects
202400103	LVRT Phase 10B	Swatara (TWP) & Union (TWP)	From where Phase 10A ends near Pine Tree Road in Swatara Township; using the existing tunnel under I-78; and going north using the former RR bed and Union Canal Towpath to Lickdale Road in Union Township, a distance of 2.11 miles.		$3,490,000	TBD	2020 LRTP Illustrative Project; 2024 Call for Projects
202400104	LVRT Rectangular Rapid Flashing Beacons (RRFBs)	Jonestown (Borough) & North Lebanon (TWP) & Lebanon (City) & Cornwall (TWP) & Mt. Gretna (Borough) & South Londonderry (TWP)	At various locations in Lebanon County where LVRT crosses heavily-trafficked roads, including Market Street in Jonestown; Long Lane in N. Lebanon Township; 9th & 10th Streets in the City of Lebanon; PA Route 419 in Cornwall; at S. Butler Road near Mt. Gretna; and at PA Route 241 in Lawn.			TBD	2020 LRTP Illustrative Project; 2024 Call for Projects
202400105	25th Street Bridge Feasibility Study	North Lebanon (TWP)	N. Lebanon Township, just west of the existing 25th Street 1-Lane Tunnel (Underpass)	1-year detailed study	$750,000	TBD	2024 Call for Projects
202400106	LVRT Section 9 Tunnel Repair	Swatara (TWP)	This tunnel is under LVRT just south of the iron truss RR Bridge over Swatara Creek in Swatara Township	Repair leaks in tunnel	$175,000	TBD	2024 Call for Projects
202400107	Inwood Iron Bridge Pocket Park Spur Trail	Swatara (TWP)	South along the east side of Swatara Creek to the Inwood Bridge Pocket Park	short spur trail to encourage people to visit the pocket park and learn about the historic truss bridge.	$300,000	TBD	2024 Call for Projects
202400108	LVRT User Survey and Economic Impact Analysis			Study/analysis	$125,000	TBD	2024 Call for Projects

Illustrative Projects

LRPT Project	Project Name	Municipality	Project Limits	Scope of Work	Total Project Cost	Schedule	Project
202400109	LVRT Phase 6C	North Cornwall (TWP)	S. 22nd Street from US Route 422 (Cumberland Street) south to a new connection with existing S. 22nd Street adjacent to Gloniger Woods Park in N. Cornwall Township, a distance of 0.20 mile.	The rail-trail will run on the west side of S. 22nd Street. A new bridge will also be built and from that new bridge the roadway will be relocated to a new and safer connection with southbound 22nd Street. The project is being tied into the ongoing stormwater management project for the Quittapahilla Creek so roadway flooding will be greatly reduced. Lebanon Transit and emergency vehicles also use S. 22nd Street, so the improvements will not only positively effect bicyclists and pedestrians. There will also be intersection safety and access improvements at US Route 422 and S. 22nd Street. The new southern connection at S. 22nd Street will also improve the safety for motorcyclists, since a major motorcycle club is located on S. 22nd Street.	$4,970,000	TBD	2024 Call for Projects
202400110	Coleman Memorial Park / Union Canal Tunnel Park Spur Trail	Lebanon (City) & West Lebanon (TWP) & North Lebanon (TWP)	From Coleman Memorial Park west to the Union Canal Tunnel Park and a connection to LVRT Phase 7 in the City of Lebanon, West Lebanon Township and North Lebanon Township, a distance of approximately 0.40 mile.	To encourage people to visit the parks on foot or by bicycle.	$800,000	TBD	2024 Call for Projects
202400111	Governor Dick Spur Trail	West Cornwall (TWP)	From PA Route 117 at the former Radar Road were the parking area is in the park; across 117; and go directly north to a new connection with LVRT east of Butler Road in West Cornwall Township, a distance of 500 +/- feet.	To establish a spur to the well used Governor Dick Park and to provide a safe crossing of PA Route 117	$200,000	TBD	2024 Call for Projects
202400112	Jonestown Spur Trail	Jonestown (Borough) & Union (TWP)	From the Jonestown area and the George F. Kaufman Community Park west to a new connection with LVRT in Jonestown Borough and Union Township, a distance of 1.0 mile	To establish another important east-west spur for LVRT to connect with the well used community park and other key destinations in Jonestown Borough and Union Township. This spur could cross Swatara Creek just south of the existing bridge on Jonestown Road / Market Street or if a new bridge is constructed to replace the existing bridge, the bridge could have a wide water table / shoulder on the south side to accommodate bike/ped traffic.	$750,000	TBD	2024 Call for Projects
202400113	Quentin Spur Trail	Cornwall (Borough) & West Cornwall (TWP)	From the rail-trail near Ironmaster Road and paralleling US Route 322 / PA Route 72 going north through the next phase of development at Alden Place to the end of the new residential development at Dollar general in Cornwall Borough and West Cornwall Township, a distance of 3,000 +/- feet	To establish another important north-south spur for LVRT to connect with the development (current and future) in Quentin and to tie into the sprawling Alden Place 55+ residential development.	$350,000	TBD	2024 Call for Projects

Illustrative Projects

LRPT Project	Project Name	Municipality	Project Limits	Scope of Work	Total Project Cost	Schedule	Project
202400114	Alcoa Spur Trail	South Lebanon (TWP)	From the rail-trail near Zinns Mill Road, going east using the abandoned RR line to Lincoln Ave.; using Lincoln Ave. north to Zinns Mill Road; going east on Zinns Mill Raod to State Drive; and then going south on State Drive in South Lebanon Township, a distance of approximately 1.3 miles. The Lincoln Ave. and Zinns Mill Road portions of the project might have to be shared roadway use, but wide shoulders on State Drive could be improved to better accommodate bike and ped traffic.	To establish another important east-west spur for LVRT to connect various commercial/industrial developments off of State Drive	$800,000	TBD	2024 Call for Projects
202400115	Boyd Street Spur Trail	Cornwall (Borough)	From the Cornwall Trailhead area SSE; east of Boyd Street; going under existing tunnel at US Route 322; and connecting with a residential development (Springhill Acres) and a nearby camp in Cornwall Borough, a distance of 2.4 miles	To establish another spur for LVRT to a nearby existing residential development and camp, and to connect with future Byler development	$1,000,000	TBD	2024 Call for Projects
202400116	Lebanon Valley College (LVC) East-West Spur Trail	North Lebanon (TWP) & Cleona (Borough) & Annville (TWP) & North Annville (TWP) & South Annville (TWP)	From LVRT Phase 7 west to Lebanon Valley College (LVC) on the north side of the NS RR tracks; west on the north side of the NS RR tracks to Clear Spring Road; and then south along Clear Spring Road to a connection with the walking path in the business park (Eastern Land and Resources Company), a distance of approximately 4.45 miles.	To establish another very important east-west connector trail to key destinations in the County, like LVC, various shopping / employment centers, etc.	$8,000,000	TBD	2020 LRTP Illustrative Project
202400117	S Lincoln Ave Pedestrian Safety Project	South Lebanon (TWP)		S Lincoln Avenue from Township line to Wilhelm Ave in South Lebanon Township	$525,369	2024	2024 Call for Projects
202400118	Rexmont Spur Trail	Cornwall (Borough)	From the trailhead in the Borough of Cornwall to Rexmont, using the abandoned Norfolk Southern RR ROW to the area of Tony's Mining Company Restaurant on Rexmont Road in Cornwall Borough, a distance of 1 mile.	To establish an east-west spur that connects two very important local parks to LVRT.	$750,000	TBD	2020 LRTP Illustrative Project
202400201	Mountain Road (Mechanic St to Snow Dr)	Bethel (TWP)		New base and overlay pavement	$250,000	Summer 2020	2020 LRTP Municipal Project
202400202	Shirksville Road/Earlakill Run	Bethel (TWP)		Replace bridge deck and support beams	$200,000	Summer 2020	2020 LRTP Municipal Project
202400203	South Wilson St and East Walnut St	Cleona (Borough)		Repair and resurface	$200,000	Fall 2020	2020 LRTP Municipal Project
202400204	Distillery Road	Heidelberg (TWP)		Roadway improvements	$100,000	2020	2020 LRTP Municipal Project
202400205	West Main Avenue	Jackson (TWP)		Culvert Replacement	$77,000	2020	2020 LRTP Municipal Project
202400206	Jonestown Park Walking Trails	Jonestown (Borough)		Paving of park trails		2019-2020	2020 LRTP Municipal Project

Illustrative Projects

LRPT Project	Project Name	Municipality	Project Limits	Scope of Work	Total Project Cost	Schedule	Project
202400207	Chestnut Street	Jonestown (Borough)		Repaving and ADA Ramps		2019-2020	2020 LRTP Municipal Project
202400208	Blackberry Street	Jonestown (Borough)		Repaving		2020	2020 LRTP Municipal Project
202400209	422 East	Lebanon (City)		Repaving	$3,400,000	2021	2020 LRTP Municipal Project
202400210	422 West	Lebanon (City)		Repaving	$3,200,000	2022	2020 LRTP Municipal Project
202400211	Downtown Streetscape	Lebanon (City)		Pedestrian improvements	$2,400,000	2022	2020 LRTP Municipal Project
202400212	72 South	Lebanon (City)		Repaving	$3,700,000	2023	2020 LRTP Municipal Project
202400213	72 North	Lebanon (City)		Repaving	$3,200,000	2024	2020 LRTP Municipal Project
202400214	Main Avenue	Myerstown (Borough)		Repaving	$82,000	2020	2020 LRTP Municipal Project
202400215	Railroad Street	Myerstown (Borough)		Repaving	$128,000	2020	2020 LRTP Municipal Project
202400216	South Broad Street	Myerstown (Borough)		Repairs	$15,000	2020	2020 LRTP Municipal Project
202400217	Madison Alley	Myerstown (Borough)		Oil and Chip	$6,000	2020	2020 LRTP Municipal Project
202400218	North Locust Street	Myerstown (Borough)		Oil and Chip/ADA improvements	$45,000	2021	2020 LRTP Municipal Project
202400219	Center Avenue	Myerstown (Borough)		Reconstruction	$140,000	2022	2020 LRTP Municipal Project
202400220	Center Avenue	Myerstown (Borough)		Milling/Overlay	$68,000	2022	2020 LRTP Municipal Project
202400221	South Locust Street	Myerstown (Borough)		Microsurface	$16,300	2023	2020 LRTP Municipal Project
202400222	South Broad Street	Myerstown (Borough)		Fibermat	$100,000	2023	2020 LRTP Municipal Project
202400223	Railroad Street	Myerstown (Borough)		Cold in-place recycling	$220,000	2024	2020 LRTP Municipal Project

Illustrative Projects

LRPT Project	Project Name	Municipality	Project Limits	Scope of Work	Total Project Cost	Schedule	Project
202400224	Louser Road/Reigerts Lane	South Annville (TWP)		Widen and Resurface		2021	2020 LRTP Municipal Project
202400225	Louser Road at PA 934	South Annville (TWP)		Install Traffic Signal		TBD	2020 LRTP Municipal Project
202400226	Royal Road at PA 934	South Annville (TWP)		Install Traffic Signal		TBD	2020 LRTP Municipal Project
202400227	Mount Pleasant at US 422	South Annville (TWP)		Relocate Traffic Signal		TBD	2020 LRTP Municipal Project
202400228	PA 117 at Airport Road	South Londonderry (TWP)		Intersection Improvement -Signal/Roundabout		TBD	2020 LRTP Municipal Project
202400229	PA 117 at Hinkle Road	South Londonderry (TWP)		Realignment project		TBD	2020 LRTP Municipal Project
202400230	Troy Avenue	Swatara (TWP)		Widen and Resurface	$370,000	2020-2022	2020 LRTP Municipal Project
202400231	Center Street, Church Street Broad Street	Swatara (TWP)		Resurface	$80,000	2020	2020 LRTP Municipal Project
202400232	North Mill Street	Swatara (TWP)		Resurface	$175,000	2023	2020 LRTP Municipal Project
202400233	PA 443 at Ridge Road	Union (TWP)		Bridge Replacement	$270,000	2020	2020 LRTP Municipal Project
202400234	PA 241 at US 322	West Cornwall (TWP)		Signal Upgrade	$70,000	2020-2021	2020 LRTP Municipal Project
202400235	Zinns Mill Road	West Cornwall (TWP)		Overlay	$200,000	TBD	2020 LRTP Municipal Project
202400236	N 16th Street at Lehman Street/N 22nd Street at Lehman Street	West Lebanon (TWP)		Signal and Widening	$750,000	TBD	2020 LRTP Municipal Project
202400301	PA 72	Cornwall (Borough) & West Cornwall (TWP)		Continue truck climbing lane and provide turning lanes from the Lancaster County line to US 322	$5,000,000 - $15,000,000	Mid-term 2025-2031	2020 LRTP Illustrative Project
202400302	I-78 & I-81	Union (TWP)		Extend the left lane merge lane from I-78 West to I-81 South	$1,000,000 - $5,000,000	Mid-term 2025-2031	2020 LRTP Illustrative Project

Illustrative Projects

LRPT Project	Project Name	Municipality	Project Limits	Scope of Work	Total Project Cost	Schedule	Project
202400303	I-78	Bethel (TWP)		Complete the interchanges at Exits 6 and 8		Long term 2031-2045	2020 LRTP Illustrative Project
202400304	I-78/PA 72	Union (TWP)		Construct new interchange	$30,000,000 - $50,000,000	Long term	2020 LRTP Illustrative Project
202400305	PA 72 Roundabout	Lebanon (City)		Construct roundabout at the intersections of South 9th & 10th Streets/ Poplar Street, Quentin Rd	$1,000,000 -$5,000,000	Mid-term 2025-2031	2020 LRTP Illustrative Project
202400306	Maple Street	Lebanon (City)		Convert 900 block of Maple St from one-way to two-way operations	$100,000	Mid-term	2020 LRTP Illustrative Project
202400307	Lebanon Valley Rail Trail (LVRT) Asset Management	County-wide		Implement 2020 asset management plan and update the plan in 2030	$100,000	Mid-term	2020 LRTP Illustrative Project
202400308	LVRT Trailhead Development	Union (TWP)		Develop trailhead along PA 72 in Union Township	$50,000	2022	2020 LRTP Illustrative Project
202400309	Union Canal Connector Trail	Lebanon (City) & North Lebanon (TWP)		Construct connecting trail between Union Canal Tunnel Park and Coleman Memorial Park	$400,000	2025-2030	2020 LRTP Illustrative Project
202400311	LVRT Phase 10	Swatara (TWP)		Construct trail from US 22 to Swatara State Park	$5,000,000	2022	2020 LRTP Illustrative Project
202400312	Phase 2 South Lebanon Township Trail	South Lebanon (TWP)		Construct trail from CLSD High School to CLSD Elementary School	$650,000	2030	2020 LRTP Illustrative Project
202400313	LVRT ALCOA Spur	South Lebanon (TWP)		Purchase right-of-way and construct trail along abandoned railroad spur	$100,000 - $500,000	2030	2020 LRTP Illustrative Project
202400315	Cornwall Spur Rail Trail	Cornwall (Borough)		Construct trail along abandoned Norfolk Southern line from Cornwall Trail head to Cornwall Furnace Historic Site	$100,000 - $500,000	2035	2020 LRTP Illustrative Project
202400317	PA 419 Scenic Byway Improvements	Cornwall (Borough) & South Lebanon (TWP) & Heidelberg (TWP) & Millcreek (TWP)		Widen shoulders or consider sidepath from Cornwall to Newmanstown	$1,000,000 -$5,000,000	2025	2020 LRTP Illustrative Project
202400318	Palmyra to Campbelltown Active Transportation Connection	Palmyra (Borough) & North Londonderry (TWP) & South Londonderry (TWP)		Provide north-south shared-use path to serve as spine for non-motorized users to link to existing east-west facilities.	$1,000,000 -$5,000,000	2025	2020 LRTP Illustrative Project
202400319	PA 343 at Kimmerlings Road	North Lebanon (TWP)		Roadway Safety Audit	$30,000	2022	2020 LRTP Illustrative Project

Illustrative Projects

LRPT Project	Project Name	Municipality	Project Limits	Scope of Work	Total Project Cost	Schedule	Project
202400320	Hill Church Road (SR 4004) at Thompson Avenue (SR 4005)	North Annville (TWP)		Roadway Safety Audit	$30,000	2022	2020 LRTP Illustrative Project
202400321	US 422 from Mill St to Christian St	Cleona (Borough)		Proposed improvements include restriping, RRFBs and curb extensions at 4-6 key intersections, emergency beacons at 2 unsignalized intersections, signal upgrades at Center and Mill St, improved lighting, and a potential gateway treatment near Christian St.	$1,815,895		US/SR 422 Complete Streets Study, 2023

Long-Range Programmatic Investments

2024-2044 LRTP Long-Range Programmatic Investments	2037-44
15% Bridge Preservation, Rehabilitation and Reconstruction	$18,923,440
35% Bridge Reserve	$44,154,693
10% State Highway Resurfacing	$12,615,627
15% State Highway Reserve	$18,923,440
20% Roadway Safety, Non-Motorized Travel, and Trails	$25,231,253
10% Complete Streets Improvements and Trails	
5% Safe Routes to School	
2% Signals	
1% Roadway Safety Audits	
1% Commuter Services	
1% Railroad Crossing Separation Studies	
4% Carbon Reduction Program	$5,046,251
1% Congested Corridor Studies	$1,261,563
Total 2024-2044 LRTP Long-Range Investments	**$126,156,265**

APPENDIX G

HSM Network Screening

				Major Road									Minor Road							Skew Angle		Observed Crashes				Fatal & Injury Crashes						Total Crashes							
District	County	Municipality	Intersection Type	Road Name	Designation	Segment	Offset	AADT	Number of Lanes (Multilane = 4 or more)	Speed Limit	Left Turn Lane	Right Turn Lane	Crosswalk	Road Name	Designation	Segment	Offset	AADT	Speed Limit	Crosswalk	Angle 1	Angle 2	No. Years of Analysis	Fatal & Injury	PDO	Total	Observed Crashes / Year	Predicted Crashes / Year	Overdispersion	W	Expected Crashes / Year	Excess	Excess Cost	Observed Crashes / Year	Predicted Crashes / Year	Overdispersion	W	Expected Crashes / Year	Excess	Google Maps Web Link
8	Lebanon	North Lebanon Twp	4-Leg Minor-Street Stop-Controlled	7th St	SR 0343	0030	0585	6599	2-lane	N/A	N/A	N/A	N/A	Kochenderfer Rd / Kimmerlings Rd	T-487 / T-805	N/A	N/A	4116	N/A	N/A	90	90	5	16	7	23	3.20	0.83	2.597	0.08	3.01	2.18	40.3661825, -76.41703437	4.60	1.77	1.348	0.08	4.37	2.60	$904,900	********** google.com/maps/search/?api=1&query=40.3661825,-76.41703437
8	Lebanon	North Annville Twp	4-Leg Minor-Street Stop-Controlled	Hill Church Rd	SR 4004	0020	0000	4177	2-lane	N/A	N/A	N/A	N/A	Thompson Ave	SR 4005 / T-390	0010 / N/A	0000 / N/A	1269	N/A	N/A	75	75	5	13	8	21	2.60	0.60	2.597	0.11	2.38	1.78	40.3499764, -76.51529921	4.20	1.12	1.348	0.12	3.83	2.71	$746,200	********** google.com/maps/search/?api=1&query=40.3499764,-76.51529921
8	Lebanon	Swatara Twp	4-Leg Minor-Street Stop-Controlled	Ebenezer Rd	SR 0072	0200	1984	10463	2-lane	N/A	N/A	N/A	N/A	Thompson Ave / New Bunkerhill St	SR 4005 / T-561	0080 / N/A	3513 / N/A	1123	N/A	N/A	90	90	5	8	4	12	1.60	0.83	2.597	0.08	1.54	0.71	40.3955059, -76.48656939	2.40	1.58	1.348	0.09	2.33	0.75	$293,500	********** google.com/maps/search/?api=1&query=40.3955059,-76.48656939
8	Lebanon	Heidelberg Twp	4-Leg Minor-Street Stop-Controlled	Route 0501	SR 0501	0120	0000	8150	2-lane	N/A	N/A	N/A	N/A	Reistville Rd	SR 2004 / T-312	0070 / N/A	0000 / N/A	1931	N/A	N/A	75	75	5	8	2	10	1.60	0.91	2.597	0.08	1.54	0.63	40.3271827, -76.3031532	2.00	1.79	1.348	0.08	1.98	0.19	$254,500	********** google.com/maps/search/?api=1&query=40.3271827,-76.3031532
8	Lebanon	East Hanover Twp	4-Leg Minor-Street Stop-Controlled	Allentown Blvd	SR 0022	0010	0905	8850	Multi-lane	N/A	N/A	N/A	N/A	Gravel Hill Rd	SR 4011	0140	0000	1721	N/A	N/A	N/A	N/A	5	9	3	12	1.80	0.87	0.413	0.36	1.47	0.60	40.3789079, -76.6377887	1.94	0.381	0.21	2.30	0.36	$244,600	********** google.com/maps/search/?api=1&query=40.3789079,-76.6377887
8	Lebanon	Bethel Twp	4-Leg Minor-Street Stop-Controlled	Pine Grove St	SR 0343	0090	0000	6599	2-lane	N/A	N/A	N/A	N/A	Freeport Rd / Troy Ave	SR 1008 / T-650	0010 / N/A	0000 / N/A	1949	N/A	N/A	80	80	5	7	5	12	1.40	0.79	2.597	0.09	1.35	0.56	40.4008083, -76.41935052	2.40	1.55	1.348	0.09	2.32	0.77	$233,700	********** google.com/maps/search/?api=1&query=40.4008083,-76.41935052
8	Lebanon	North Lebanon Twp	4-Leg Minor-Street Stop-Controlled	Prescott Dr	SR 1013	0040	0000	1302	2-lane	N/A	N/A	N/A	N/A	Kercher Av	Local Road	N/A	N/A	2291	N/A	N/A	90	90	5	5	2	7	1.00	0.33	2.597	0.19	0.87	0.54	40.3729185, -76.3671685	1.40	0.64	1.348	0.19	1.26	0.62	$223,900	********** google.com/maps/search/?api=1&query=40.3729185,-76.3671685
8	Lebanon	North Annville Twp	4-Leg Minor-Street Stop-Controlled	Pine Grove St	SR 1020	0100	0946	3679	2-lane	N/A	N/A	N/A	N/A	Pine Grove St	SR 1007	0020	0000	680	N/A	N/A	90	90	5	5	1	6	1.00	0.45	2.597	0.15	0.92	0.47	1.60	0.79	1348.1	1.16	1.47	1.68	1.348	0.68	$196,600	********** google.com/maps/search/?api=1&query=40.4138916,-76.4292939
8	Lebanon	North Annville Twp	3-Leg Minor-Street Stop-Controlled	Bellegrove Rd / Harrison Dr	SR 0934	0170	0000	7201	2-lane	N/A	No	No	N/A	Black's Bridge Rd	SR 4014	0090	2356	384	N/A	N/A	N/A	N/A	5	5	2	7	1.00	0.60	1.810	0.16	0.94	0.34	1.40	1.07	1.117	0.14	1.35	0.28	$139,600	********** google.com/maps/search/?api=1&query=40.3672657,-76.54953071
8	Lebanon	West Cornwall Twp	4-Leg Minor-Street Stop-Controlled	Butler Rd	SR 3001	0030	0000	2713	2-lane	N/A	N/A	N/A	N/A	Old Mine Rd	SR 3002 / Local Road	0070 / N/A	1550 / N/A	623	N/A	N/A	75	75	5	4	2	6	0.80	0.42	2.597	0.15	0.74	0.32	1.20	0.73	1.348	0.17	1.12	0.39	$132,900	********** google.com/maps/search/?api=1&query=40.2610865,-76.46797439
8	Lebanon	North Annville Twp	4-Leg Minor-Street Stop-Controlled	Bellgrove Rd	SR 0934	0160	0000	7201	2-lane	N/A	N/A	N/A	N/A	Palmyra-Bellgrove Rd / Harrison Dr	SR 4008	0130	0000	832	N/A	N/A	80	80	5	5	4	9	1.00	0.71	2.597	0.10	0.97	0.26	1.80	1.28	1.348	0.10	1.75	0.47	$109,900	********** google.com/maps/search/?api=1&query=40.36105408,-76.54704906
8	Lebanon	North Lebanon Twp	4-Leg Minor-Street Stop-Controlled	Seventh St	SR 0343	0060	0000	6599	2-lane	N/A	N/A	N/A	N/A	Kercher Av	Local Road	N/A	N/A	948	N/A	N/A	75	75	5	5	5	10	1.00	0.72	2.597	0.10	0.97	0.25	2.00	1.32	1.348	0.10	1.93	0.61	$107,700	********** google.com/maps/search/?api=1&query=40.38044462,-76.41177907
8	Lebanon	Heidelberg Twp	4-Leg Minor-Street Stop-Controlled	Stiegel Pk	SR 0501	0040	0000	8334	2-lane	N/A	N/A	N/A	N/A	Distillery Rd / Mountain Trail Rd	Local Road	N/A	N/A	73	N/A	N/A	60	60	5	4	5	9	0.80	0.58	2.597	0.12	0.77	0.19	1.80	0.82	1.348	0.15	1.65	0.83	$86,400	********** google.com/maps/search/?api=1&query=40.27135498,-76.2998417
8	Lebanon	North Annville Twp	3-Leg Minor-Street Stop-Controlled	White Oak St	SR 0934	0120	0366	12071	2-lane	N/A	No	No	N/A	Kauffman Rd	Local Road	N/A	N/A	498	N/A	N/A	N/A	N/A	5	5	1	6	1.00	0.82	1.810	0.12	0.98	0.16	1.20	1.51	1.117	0.11	1.23	-0.28	$60,500	********** google.com/maps/search/?api=1&query=40.3389338,-76.52018311
8	Lebanon	South Lebanon Twp	4-Leg Minor-Street Stop-Controlled	5th Ave	SR 0897	0210	0000	6549	2-lane	N/A	N/A	N/A	N/A	Fonderwhite Rd / 14th Ave	T-528 / T-603	N/A	N/A	1925	N/A	N/A	65	65	5	5	6	11	1.00	0.88	2.597	0.08	0.99	0.11	2.20	1.71	1.348	0.08	2.16	0.45	$49,700	********** google.com/maps/search/?api=1&query=40.3254419,-76.3833161
8	Lebanon	North Annville Twp	3-Leg Minor-Street Stop-Controlled	Clear Spring Rd	SR 0934	0150	0000	7201	2-lane	N/A	No	No	N/A	Clear Spring Rd	Local Road	N/A	N/A	3511	N/A	N/A	N/A	N/A	5	7	5	12	1.40	1.27	1.810	0.08	1.39	0.12	2.40	2.39	1.117	0.07	2.40	0.01	$48,100	********** google.com/maps/search/?api=1&query=40.3524793,-76.54484099
8	Lebanon	North Londonderry Twp	3-Leg Minor-Street Stop-Controlled	Gravel Hill Rd	SR 4011	0070	0000	2650	2-lane	N/A	No	No	N/A	Bindnagles Rd	SR 4012	0010	2443	857	N/A	N/A	N/A	N/A	5	3	6	9	0.60	0.51	1.810	0.18	0.58	0.07	1.80	0.89	1.117	0.17	1.65	0.76	$37,500	********** google.com/maps/search/?api=1&query=40.3368407,-76.61836589
8	Lebanon	North Lebanon Twp	3-Leg Minor-Street Stop-Controlled	Ebenezer Rd	SR 0072	0160	2216	10463	2-lane	N/A	No	No	N/A	Hellmandale Rd	SR 4006	0110	0539	1378	N/A	N/A	N/A	N/A	5	6	3	9	1.20	1.09	1.810	0.09	1.19	0.10	1.80	2.04	1.117	0.08	1.82	-0.22	$37,300	********** google.com/maps/search/?api=1&query=40.3668044,-76.4666125
8	Lebanon	North Cornwall Twp	3-Leg Minor-Street Stop-Controlled	Colebrook Rd	SR 0241	0200	0000	5867	2-lane	N/A	N/A	No	N/A	Royal Rd	Local Road	N/A	N/A	1796	N/A	N/A	N/A	N/A	5	5	4	9	1.00	0.93	1.810	0.11	0.99	0.06	1.80	1.70	1.117	0.10	1.79	0.09	$25,100	********** google.com/maps/search/?api=1&query=40.3073461,-76.44851561
8	Lebanon	Bethel Twp	4-Leg Minor-Street Stop-Controlled	Pine Grove St	SR 0343	0110	1482	8053	2-lane	N/A	N/A	N/A	N/A	Greble Rd / Greble Rd	SR 1014 / Local Road	0080 / N/A	0000 / N/A	843	N/A	N/A	85	70	5	4	2	6	0.80	0.77	2.597	0.09	0.80	0.03	1.20	1.39	1.348	0.10	1.22	-0.17	$9,900	********** google.com/maps/search/?api=1&query=40.41971496,-76.41978825
8	Lebanon	North Annville Twp	3-Leg Minor-Street Stop-Controlled	White Oak St	SR 0934	0120	0000	12071	2-lane	N/A	No	No	N/A	Thompson Ave	T-390	N/A	N/A	2351	N/A	N/A	N/A	N/A	5	7	7	14	1.40	1.39	1.810	0.07	1.40	0.01	2.80	2.65	1.117	0.06	2.79	0.14	$5,800	********** google.com/maps/search/?api=1&query=40.33800441,-76.51961735
8	Lebanon	Bethel Twp	4-Leg Minor-Street Stop-Controlled	Allentown Blvd	SR 0022	0260	0535	8948	Multi-lane	N/A	N/A	N/A	N/A	Legionaire Dr	SR 0343	0150	0000	5970	N/A	N/A	N/A	N/A	5	6	6	12	1.20	1.40	0.441	0.24	1.25	-0.15	2.40	2.68	0.187	0.29	2.48	-0.20	$62,500	********** google.com/maps/search/?api=1&query=40.4450287,-76.4157878
8	Lebanon	Heidelberg Twp	3-Leg Minor-Street Stop-Controlled	Stiegel Pk	SR 0501	0050	2692	8334	2-lane	N/A	No	No	N/A	Michters Rd	Local Road	N/A	N/A	719	N/A	N/A	N/A	N/A	5	3	4	7	0.60	0.79	1.810	0.12	0.62	-0.17	1.40	1.45	1.117	0.11	1.41	-0.04	-$68,500	********** google.com/maps/search/?api=1&query=40.2837673,-76.30431055
8	Lebanon	North Annville Twp	3-Leg Minor-Street Stop-Controlled	Hill Church Rd	SR 4004	0050	0000	4581	2-lane	N/A	No	No	N/A	Russel Rd	T-430	N/A	N/A	2962	N/A	N/A	N/A	N/A	5	4	0	4	0.80	0.99	1.810	0.10	0.82	-0.17	0.80	1.81	1.117	0.09	0.89	-0.92	-$79,600	********** google.com/maps/search/?api=1&query=40.3476241,-76.49277844
8	Lebanon	West Cornwall Twp	3-Leg Minor-Street Stop-Controlled	Horseshoe Pk	SR 0322	0150	0000	14310	2-lane	N/A	No	No	N/A	Spangler Rd	Local Road	N/A	N/A	786	N/A	N/A	N/A	N/A	5	4	4	8	0.80	1.03	1.810	0.10	0.82	-0.21	1.60	1.93	1.117	0.08	1.63	-0.30	-$87,800	********** google.com/maps/search/?api=1&query=40.2831246,-76.4597248
8	Lebanon	Union Twp	3-Leg Minor-Street Stop-Controlled	Route 72 / Moonshine Rd	SR 0072 / SR 0443	0350 / 0214	2690 / 0000	3812	2-lane	N/A	No	No	N/A	Moonshine Rd	SR 0443	0200	0870	3089	N/A	N/A	N/A	N/A	5	3	4	7	0.60	0.92	1.810	0.11	0.64	-0.28	1.40	1.68	1.117	0.10	1.43	-0.25	-$115,200	********** google.com/maps/search/?api=1&query=40.48221497,-76.55011026
8	Lebanon	North Lebanon Twp	4-Leg Signalized	Ebenezer Rd	SR 0072	0160	0000	10463	2-lane	45 MPH	N/A	Yes	N/A	Long Ln	T-465	N/A	N/A	2189	25 MPH	N/A	N/A	N/A	5	7	5	12	1.40	1.85	0.892	0.11	1.45	-0.40	2.40	3.18	0.579	0.10	2.48	-0.70	-$168,800	********** google.com/maps/search/?api=1&query=40.36162993,-76.46258145
8	Lebanon	East Hanover Twp	4-Leg Minor-Street Stop-Controlled	Allentown Blvd	SR 0022	0070	0000	8850	Multi-lane	N/A	N/A	N/A	N/A	Harrison School Rd	SR 4017	0020	0000	502	N/A	N/A	N/A	N/A	5	0	6	6	0.00	0.72	0.413	0.40	0.29	-0.43	1.20	1.40	0.381	0.27	1.25	-0.15	-$173,900	********** google.com/maps/search/?api=1&query=40.40055441,-76.59555469
8	Lebanon	South Lebanon Twp	3-Leg Minor-Street Stop-Controlled	Schaeffer St	SR 0419	0110	0000	4708	2-lane	N/A	No	No	N/A	State Dr	SR 2003	0010	0000	3863	N/A	N/A	N/A	N/A	5	3	7	10	0.60	1.09	1.810	0.09	0.64	-0.45	2.00	2.02	1.117	0.08	2.00	-0.02	-$180,300	********** google.com/maps/search/?api=1&query=40.3866917,-76.3836534
8	Lebanon	Bethel Twp	4-Leg Signalized	Allentown Blvd	SR 0022	0251	0000	8571	Multi-lane	N/A	N/A	N/A	N/A	Pine Grove St / Pine Grove St	SR 0343 / SR 1007	0140 / 0010	2269 / 0000	5094	N/A	N/A	N/A	N/A	5	4	6	10	0.80	1.60	0.227	0.26	1.09	-0.51	2.00	3.02	0.203	0.25	2.26	-0.76	-$213,600	********** google.com/maps/search/?api=1&query=40.43964619,-76.42955539
8	Lebanon	East Hanover Twp	4-Leg Minor-Street Stop-Controlled	Allentown Blvd	SR 0022	0130	0000	8785	Multi-lane	N/A	N/A	N/A	N/A	Lincoln School Rd / Lincoln School Rd	SR 4007 / SR 4027	0110 / 0010	1197 / 0000	1491	N/A	N/A	N/A	N/A	5	2	4	6	0.40	1.37	0.227	0.39	0.78	-0.59	1.20	2.58	0.203	0.28	1.59	-0.99	-$248,500	********** google.com/maps/search/?api=1&query=40.40608529,-76.53573025
8	Lebanon	North Annville Twp	3-Leg Minor-Street Stop-Controlled	White Oak St / Bellegrove Rd	SR 0934	0130	0000	9636	2-lane	N/A	No	No	N/A	Hill Church Rd	SR 4007	0010	0000	1559	N/A	N/A	N/A	N/A	5	1	5	6	0.20	1.10	1.810	0.09	0.28	-0.82	1.20	2.05	1.117	0.08	1.27	-0.78	-$337,000	********** google.com/maps/search/?api=1&query=40.34733676,-76.52550978
8	Lebanon	North Lebanon Twp	3-Leg Minor-Street Stop-Controlled	Ebenezer Rd	SR 0072	0150	0000	10463	2-lane	N/A	No	No	N/A	Jay St	T-477	N/A	N/A	2481	N/A	N/A	N/A	N/A	5	2	3	5	0.40	1.33	1.810	0.08	0.47	-0.86	1.00	2.52	1.117	0.07	1.11	-1.41	-$361,800	********** google.com/maps/search/?api=1&query=40.35596484,-76.45591155
8	Lebanon	South Annville Twp	4-Leg Signalized	Horseshoe Pk	SR 0322	0120	1055	17564	2-lane	45 MPH	N/A	No	N/A	White Oak St / Private Dwy	SR 0934 / Private Dwy	0010 / N/A	0000 / N/A	6991	55 MPH	N/A	N/A	N/A	5	10	10	20	2.00	3.05	0.892	0.07	2.07	-0.98	4.00	6.14	0.579	0.05	4.11	-2.03	-$417,600	********** google.com/maps/search/?api=1&query=40.28497032,-76.48546388
8	Lebanon	North Cornwall Twp	3-Leg Minor-Street Stop-Controlled	Colebrook Rd	SR 0241	0190	0438	6905	2-lane	N/A	N/A	No	N/A	Rocherty Rd	T-441	N/A	N/A	6537	N/A	N/A	N/A	N/A	5	1	4	5	0.20	1.55	1.810	0.07	0.29	-1.26	1.00	2.94	1.117	0.06	1.12	-1.82	-$527,000	********** google.com/maps/search/?api=1&query=40.30213795,-76.44970083
8	Lebanon	West Cornwall Twp	4-Leg Signalized	Horseshoe Pk	SR 0322	0140	0000	16334	2-lane	55 MPH	N/A	No	N/A	Colebrook Rd / Butler Rd	SR 0241 / SR 3001	0150 / 0060	0000 / 3362	4323	45 MPH	N/A	N/A	N/A	5	7	8	15	1.40	1.00	0.892	0.07	1.51	-1.49	3.00	5.94	0.579	0.05	3.15	-2.79	-$631,200	********** google.com/maps/search/?api=1&query=40.28531266,-76.4698476
8	Lebanon	Heidelberg Twp	4-Leg Signalized	Stiegel Pk	SR 0501	0080	0000	8242	2-lane	55 MPH	N/A	No	N/A	Heidelberg Av	SR 0419	0200	0000	7428	35 MPH	N/A	N/A	N/A	5	3	8	11	0.60	2.45	0.892	0.08	0.75	-1.70	2.20	4.77	0.579	0.07	2.38	-2.39	-$710,200	********** google.com/maps/search/?api=1&query=40.29835269,-76.30515731
8	Lebanon	Union Twp	4-Leg Signalized	Route 72 / Ebenezer Rd	SR 0072	0290	0000	7538	2-lane	45 MPH	N/A	Yes	N/A	Lickdale Rd / Fisher Av	SR 1020 / SR 4020	0010 / 0110	0000 / 2687	5421	45 MPH	N/A	N/A	N/A	5	1	8	9	0.20	3.00	0.892	0.07	0.40	-2.60	1.80	4.77	0.579	0.07	2.01	-2.76	-$1,075,000	********** google.com/maps/search/?api=1&query=40.45153871,-76.51224788
8	Lebanon	South Annville Twp	4-Leg Signalized	Main St	SR 0422	0110	0000	16531	2-lane	55 MPH	Yes	Yes	N/A	Clear Spring Rd/Killinger Rd	T-376	N/A	N/A	4529	40 MPH	N/A	N/A	N/A	5	4	5	9	0.80	4.09	0.892	0.05	0.96	-3.13	1.80	6.98	0.579	0.05	2.06	-4.92	-$1,314,200	********** google.com/maps/search/?api=1&query=40.32422639,-76.54050074

District	County	Road Name	SR	Beginning		Ending		Number of Lanes (Multi-lane = 4 or more lanes)	Length (Feet)	AADT	Roadside Hazard Rating	Passing Zone	Shoulder Rumble Strips	Total Driveways & Intersections	Number of Curves	Total Degree of Curvature	Presence of Median Barrier	Speed Limit	Centerline Rumble Strips	Observed Crashes				Fatal & Injury Crashes						Total Crashes						Excess Cost
				Segment	Offset	Segment	Offset													No. Years of Analysis	Fatal & Injury	PDO	Total	Observed Crashes / Year	Predicted Crashes / Year	Overdispersion	W	Expected Crashes / Year	Excess	Observed Crashes / Year	Predicted Crashes / Year	Overdispersion	W	Expected Crashes / Year	Excess	
8	Lebanon	Gravel Hill Rd	4011	0120	1540	0130	0114	2-lane	1458	2854	N/A	No	N/A	3	3	144	N/A	N/A	N/A	5	10	15	25	2.00	0.28	0.584	0.25	1.57	1.29	5.00	0.54	0.529	0.16	4.29	3.75	$563,200
8	Lebanon	Gravel Hill Rd	4011	0110	1930	0120	0562	2-lane	1153	2854	N/A	No	N/A	2	1	38	N/A	N/A	N/A	5	9	7	16	1.80	0.18	0.584	0.29	1.33	1.15	3.20	0.34	0.529	0.20	2.63	2.29	$488,900
8	Lebanon	Old State Rd	0443	0270	2426	0280	1227	2-lane	1396	1813	N/A	No	N/A	4	2	30	N/A	N/A	N/A	5	9	3	12	1.80	0.18	0.584	0.33	1.27	1.09	2.40	0.34	0.529	0.23	1.93	1.59	$456,100
8	Lebanon	Harrison Dr	0934	0180	3030	0210	0414	2-lane	7833	7201	N/A	No	Yes	16	5	98	N/A	N/A	N/A	5	15	8	23	3.00	1.76	0.584	0.22	2.73	0.97	4.60	3.42	0.529	0.14	4.43	1.01	$400,800
8	Lebanon	Gold Mine Rd	4025	0110	1557	0120	1462	2-lane	2150	1567	N/A	No	N/A	0	3	90	N/A	N/A	N/A	5	6	4	10	1.20	0.23	0.584	0.38	0.83	0.60	2.00	0.43	0.529	0.26	1.59	1.16	$254,600
8	Lebanon	Elizabethtown Rd	0241	0050	3581	0060	1166	2-lane	1177	2419	N/A	No	N/A	4	2	48	N/A	N/A	N/A	5	5	3	8	1.00	0.20	0.584	0.28	0.78	0.58	1.60	0.37	0.529	0.19	1.37	1.00	$244,600
8	Lebanon	Seventh St	0343	0040	1216	0070	0831	2-lane	5716	6599	N/A	Yes	N/A	10	5	99	N/A	N/A	N/A	5	10	7	17	2.00	1.25	0.584	0.23	1.83	1.14	3.40	2.43	0.529	0.14	3.26	0.83	$242,500
8	Lebanon	East Main St	0897	0060	0171	0070	3640	2-lane	3880	4002	N/A	No	N/A	25	4	57	N/A	N/A	N/A	5	8	3	11	1.60	0.89	0.584	0.22	1.44	0.55	2.20	1.69	0.529	0.14	2.13	0.44	$225,600
8	Lebanon	Hill Church Rd	4004	0040	1303	0050	0284	2-lane	1272	4583	N/A	No	N/A	6	1	32	N/A	N/A	N/A	5	5	0	5	1.00	0.29	0.584	0.22	0.84	0.55	1.00	0.56	0.529	0.14	0.94	0.38	$224,800
8	Lebanon	Mount Wilson Rd	0241	0110	1166	0120	0594	2-lane	3192	2841	N/A	No	N/A	10	5	237	N/A	N/A	N/A	5	6	12	18	1.20	0.58	0.584	0.26	1.04	0.46	3.60	1.11	0.529	0.17	3.18	2.07	$210,000
8	Lebanon	Horseshoe Pk	0322	0110	2286	0140	1056	2-lane	6888	15944	N/A	No	N/A	25	2	25	N/A	N/A	N/A	5	20	16	36	4.00	3.43	0.584	0.12	3.93	0.50	7.20	6.50	0.529	0.07	7.15	0.65	$208,200
8	Lebanon	White Oak St	0934	0030	0860	0040	1090	2-lane	2726	6993	N/A	Yes	N/A	6	0	0	N/A	N/A	N/A	5	6	3	9	1.20	0.54	0.584	0.25	1.04	0.50	1.80	1.04	0.529	0.16	1.68	0.64	$208,100
8	Lebanon	Butler Rd	3001	0020	0275	0030	0427	2-lane	1885	2713	N/A	No	N/A	12	4	143	N/A	N/A	N/A	5	5	5	10	1.00	0.40	0.584	0.23	0.86	0.46	2.00	0.76	0.529	0.15	1.81	1.05	$197,200
8	Lebanon	Ebenezer Rd	0072	0170	1818	0180	2752	2-lane	4574	10463	N/A	Yes	N/A	17	1	5	N/A	N/A	N/A	5	9	7	16	1.80	1.30	0.584	0.19	1.71	0.41	3.20	2.52	0.529	0.12	3.12	0.60	$171,600
8	Lebanon	Gold Mine Rd	4025	0060	0708	0070	1658	2-lane	1691	1567	N/A	No	N/A	0	4	60	N/A	N/A	N/A	5	4	4	8	0.80	0.21	0.584	0.34	0.60	0.39	1.60	0.41	0.529	0.23	1.33	0.92	$167,600
8	Lebanon	College St	0501	0150	2601	0160	1041	2-lane	1627	9598	N/A	No	N/A	8	0	0	N/A	N/A	N/A	5	5	5	10	1.00	0.55	0.584	0.16	0.93	0.38	2.00	1.05	0.529	0.10	1.91	0.86	$162,800
8	Lebanon	Gold Mine Rd	4025	0080	0730	0090	0698	2-lane	2265	1567	N/A	No	N/A	0	5	132	N/A	N/A	N/A	5	4	8	12	0.80	0.28	0.584	0.34	0.62	0.34	2.40	0.53	0.529	0.23	1.97	1.44	$154,100
8	Lebanon	Sheridan Dr	2019	0040	1559	0050	0062	2-lane	714	2504	N/A	No	N/A	1	1	25	N/A	N/A	N/A	5	3	1	4	0.60	0.11	0.584	0.30	0.45	0.34	0.80	0.21	0.529	0.20	0.68	0.47	$141,900
8	Lebanon	Gold Mine Rd	4025	0100	1594	0100	2345	2-lane	751	1567	N/A	No	N/A	0	1	50	N/A	N/A	N/A	5	3	2	5	0.60	0.08	0.584	0.38	0.40	0.32	1.00	0.15	0.529	0.26	0.78	0.63	$135,900
8	Lebanon	Mount Wilson Rd	0241	0120	1617	0130	0316	2-lane	1036	3378	N/A	No	N/A	2	1	99	N/A	N/A	N/A	5	3	3	6	0.60	0.19	0.584	0.26	0.49	0.30	1.20	0.35	0.529	0.17	1.06	0.71	$128,900
8	Lebanon	Forge Rd	0117	0170	0000	0170	1311	2-lane	1311	2107	N/A	No	N/A	6	2	69	N/A	N/A	N/A	5	3	1	4	0.60	0.20	0.584	0.30	0.48	0.28	0.80	0.38	0.529	0.20	0.72	0.34	$116,300
8	Lebanon	Schaeffer Rd	0419	0150	1680	0160	0682	2-lane	2010	4383	N/A	No	N/A	14	1	20	N/A	N/A	N/A	5	4	4	8	0.80	0.45	0.584	0.22	0.72	0.27	1.60	0.86	0.529	0.14	1.50	0.64	$116,100
8	Lebanon	Colebrook Rd	0241	0180	1434	0180	2136	2-lane	902	7943	N/A	No	N/A	1	1	34	N/A	N/A	N/A	5	3	4	7	0.60	0.30	0.584	0.16	0.55	0.25	1.40	0.56	0.529	0.10	1.32	0.76	$109,600
8	Lebanon	Seventh St	0343	0030	0964	0040	0150	2-lane	1338	6599	N/A	No	N/A	11	2	73	N/A	N/A	N/A	5	4	3	7	0.80	0.50	0.584	0.15	0.76	0.26	1.40	0.95	0.529	0.09	1.36	0.41	$109,200
8	Lebanon	Harrison Dr	0934	0170	2336	0170	3209	2-lane	873	7201	N/A	No	N/A	3	1	6	N/A	N/A	N/A	5	3	1	4	0.60	0.29	0.584	0.16	0.55	0.26	0.80	0.54	0.529	0.10	0.77	0.23	$106,900
8	Lebanon	Gold Mine Rd	4025	0040	1747	0060	0294	2-lane	1785	1567	N/A	No	N/A	0	3	171	N/A	N/A	N/A	5	3	1	4	0.60	0.20	0.584	0.37	0.45	0.25	0.80	0.38	0.529	0.25	0.70	0.32	$104,000
8	Lebanon	Elizabethtown Rd	0241	0020	0141	0030	1434	2-lane	3353	2352	N/A	No	N/A	16	4	52	N/A	N/A	N/A	5	4	6	10	0.80	0.52	0.584	0.29	0.72	0.20	2.00	0.99	0.529	0.20	1.80	0.81	$90,200
8	Lebanon	Myerstown Rd	0419	0270	1957	0270	2632	2-lane	675	1864	N/A	No	N/A	4	1	10	N/A	N/A	N/A	5	2	2	4	0.40	0.10	0.584	0.30	0.31	0.21	0.80	0.18	0.529	0.21	0.67	0.49	$90,200
8	Lebanon	Gravel Hill Rd	4011	0060	2408	0070	1845	2-lane	2373	2650	N/A	No	N/A	5	2	91	N/A	N/A	N/A	5	2	13	14	0.60	0.35	0.584	0.31	0.52	0.17	2.80	0.67	0.529	0.20	2.37	1.70	$89,300
8	Lebanon	Monroe Valley Dr	1022	0020	1482	0020	2632	2-lane	1050	1369	N/A	No	N/A	4	2	86	N/A	N/A	N/A	5	2	0	2	0.40	0.12	0.584	0.36	0.30	0.18	0.40	0.23	0.529	0.25	0.36	0.13	$73,700
8	Lebanon	Lawn Rd	3015	0030	1294	0030	2003	2-lane	709	1099	N/A	No	N/A	2	1	52	N/A	N/A	N/A	5	1	1	2	0.20	0.06	0.584	0.43	0.14	0.08	0.40	0.12	0.529	0.30	0.32	0.20	$34,500
8	Lebanon	Horseshoe Pk	0322	0050	0983	0050	1835	2-lane	852	14338	N/A	Yes	N/A	5	0	0	N/A	N/A	N/A	5	2	2	4	0.40	0.31	0.584	0.15	0.39	0.08	0.80	0.60	0.529	0.09	0.78	0.18	$34,300
8	Lebanon	Myerstown Rd	0419	0260	2073	0260	2765	2-lane	692	1864	N/A	No	N/A	0	1	31	N/A	N/A	N/A	5	1	1	2	0.20	0.08	0.584	0.36	0.16	0.08	0.40	0.16	0.529	0.24	0.34	0.18	$34,300
8	Lebanon	Main St	0422	0100	0795	0100	2352	2-lane	1557	16531	N/A	No	N/A	1	0	0	N/A	N/A	N/A	5	4	1	5	0.80	0.70	0.584	0.13	0.79	0.09	1.00	1.32	0.529	0.08	1.03	-0.29	$32,400
8	Lebanon	Sr 0501 Sb	0501	0080	1287	0080	1670	2-lane	383	8150	N/A	No	N/A	2	0	0	N/A	N/A	N/A	5	1	2	3	0.20	0.12	0.584	0.17	0.19	0.07	0.60	0.22	0.529	0.11	0.56	0.34	$32,300
8	Lebanon	Freeport Rd	1008	0020	2009	0020	2490	2-lane	481	1949	N/A	No	N/A	2	2	61	N/A	N/A	N/A	5	1	1	2	0.20	0.11	0.584	0.22	0.18	0.07	0.40	0.21	0.529	0.14	0.37	0.16	$30,000
8	Lebanon	Lickdale Rd	1020	0020	1338	0020	2299	2-lane	961	1863	N/A	Yes	N/A	8	0	0	N/A	N/A	N/A	5	1	2	3	0.20	0.09	0.584	0.41	0.15	0.06	0.60	0.17	0.529	0.29	0.48	0.31	$27,900
8	Lebanon	Iron Master Rd	0117	0010	0951	0020	0043	2-lane	1437	2190	N/A	No	N/A	3	2	57	N/A	N/A	N/A	5	1	5	6	0.20	0.20	0.584	0.32	0.20	0.00	1.20	0.39	0.529	0.21	1.03	0.64	$8,000
8	Lebanon	Allentown Bl	0022	0100	3032	0110	0110	Multi-lane	901	8991	4	N/A	No	3	N/A	0	Yes	55 MPH	No	5	1	1	2	0.20	0.21	0.929	0.15	0.20	-0.01	0.40	0.50	0.790	0.08	0.41	-0.09	-$5,100
8	Lebanon	Ebenezer Rd	0072	0230	2372	0240	0210	Multi-lane	1012	6730	3	N/A	No	7	N/A	0	No	45 MPH	No	5	2	1	3	0.40	0.41	0.929	0.09	0.40	-0.01	0.60	0.70	0.790	0.06	0.61	-0.09	-$5,100
8	Lebanon	Pine Grove St	0343	0080	3472	0090	0893	2-lane	959	6599	N/A	No	N/A	3	0	0	N/A	N/A	N/A	5	1	1	2	0.20	0.24	0.584	0.21	0.21	-0.03	0.40	0.45	0.529	0.13	0.41	-0.04	-$12,500
8	Lebanon	Allentown Bl	0022	0050	1829	0060	0694	Multi-lane	1219	8850	4	N/A	No	3	N/A	0	Yes	55 MPH	No	5	1	3	4	0.20	0.25	0.929	0.17	0.21	-0.04	0.80	0.60	0.790	0.09	0.78	0.18	-$13,700
8	Lebanon	Bellegrove Rd	0934	0130	0075	0130	0867	2-lane	792	7201	N/A	No	N/A	2	1	34	N/A	N/A	N/A	5	1	0	1	0.20	0.26	0.584	0.16	0.21	-0.05	0.20	0.49	0.529	0.10	0.23	-0.26	-$23,300
8	Lebanon	Pine Grove St	0343	0100	1613	0100	2066	2-lane	453	6599	N/A	No	N/A	1	0	0	N/A	N/A	N/A	5	0	1	1	0.00	0.11	0.584	0.21	0.02	-0.09	0.20	0.21	0.529	0.13	0.20	-0.01	-$36,100

APPENDIX H

Air Quality Conformity Analysis Report

Air Quality Conformity Analysis Report

Lebanon County MPO 2025-2028 TIP and 2045 LRTP

National Ambient Air Quality Standards (NAAQS) Addressed:

The Lebanon County MPO Portion of the:

- ***Harrisburg–Lebanon–Carlisle, PA 1997 8-Hour Ozone Maintenance Area***
- ***Harrisburg–Lebanon–Carlisle-York, PA 2006 24-Hour $PM_{2.5}$ Maintenance Area***
- ***Lebanon County, PA 2012 Annual $PM_{2.5}$ Maintenance Area***

Prepared by:

The Lebanon County MPO
and Pennsylvania Department of Transportation

April 2024

LEBCO Transportation Conformity Analysis
2025-2028 TIP and 2045LRTP

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Attachment B: Detailed Emission Results
Attachment C: Sample MOVES Input Files

Overview

This report provides an analysis of the air quality implications of the current Lebanon County Metropolitan Planning Organization (LEBCO MPO) 2025-2028 Transportation Improvement Program (TIP) and 2045 Long Range Transportation Plan (LRTP). The analysis demonstrates transportation conformity under the 1997 8-hour ozone National Ambient Air Quality Standard (NAAQS), the 2006 24-hour fine particulate ($PM_{2.5}$) NAAQS and the 2012 annual $PM_{2.5}$ NAAQS. The air quality conformity determination reflects an assessment of the regionally significant, non-exempt transportation projects included in both the current TIP and the LRTP.

This document replaces the previously approved conformity demonstration and ensures that the findings meet all current criteria established by the U.S. Environmental Protection Agency (EPA) for the applicable NAAQS.

Background on Transportation Conformity

Transportation conformity is a way to ensure that federal funding and approval are awarded to transportation activities that are consistent with air quality goals. Under the Clean Air Act (CAA), transportation and air quality modeling procedures must be coordinated to ensure that the TIP and the LRTP are consistent with the area's applicable State Implementation Plan (SIP). The SIP is a federally approved and enforceable plan by which each area identifies how it will attain and/or maintain the health-related primary and welfare-related secondary NAAQS.

In order to receive transportation funding and approvals from the Federal Highway Administration (FHWA) or the Federal Transit Administration (FTA), state and local transportation agencies must demonstrate that the plans, programs, or projects meet the transportation conformity requirements of the CAA as set forth in the transportation conformity rule. Under the transportation conformity rule, transportation plans are expected to conform to the applicable SIP in nonattainment or maintenance areas. The integration of transportation and air quality planning is intended to ensure that transportation plans, programs, and projects will not:

- Cause or contribute to any new violation of any applicable NAAQS.
- Increase the frequency or severity of any existing violation of any applicable NAAQS.
- Delay timely attainment of any applicable NAAQS, any required interim emissions reductions, or other NAAQS milestones.

The transportation conformity determination includes an assessment of future highway emissions for defined analysis years, including the end year of the LRTP. Emissions are estimated using the latest available planning assumptions and available analytical tools, including EPA's latest approved on-highway mobile sources emissions model, the Motor Vehicle Emission Simulator (MOVES). The conformity determination provides a tabulation of the analysis results for applicable precursor pollutants, showing that the required conformity test was met for each analysis year.

Report Contents

This document includes a summary of the methodology and data assumptions used for the conformity analysis. As shown in **Exhibit 1**, attachments containing additional detail have been provided with the document. In addition, modeling input and output files have been reviewed by the Environmental Protection Agency (EPA) Region III and the Pennsylvania Department of Environmental Protection (DEP).

EXHIBIT 1: SUMMARY OF ATTACHMENTS

Attachment	Title	Description
A	Project List	Provides a list of regionally significant highway projects that have been updated or added to the TIP and LRTP.
B	Detailed Emission Results	Provides a detailed summary of emissions by roadway type.
C	MOVES Sample Run Specification	Provides example MOVES data importer (XML) and run specification (MRS) files.

National Ambient Air Quality Standard Designations

The CAA requires the EPA to set NAAQS for pollutants considered harmful to public health and the environment. A nonattainment area is any area that does not meet the primary or secondary NAAQS. Once a nonattainment area meets the standards and additional redesignation requirements in the CAA [Section 107(d)(3)(E)], EPA will designate the area as a maintenance area.

Lebanon County is currently included within the *Harrisburg-Lebanon-Carlisle, PA* maintenance area under the 1997 8-hour ozone NAAQS and the *Harrisburg-Lebanon-Carlisle-York, PA* maintenance area under the 2006 24-Hour $PM_{2.5}$ NAAQS. Lebanon County is designated as a single county maintenance area for the 2012 annual $PM_{2.5}$ NAAQS. The county is in attainment for all other NAAQS. Transportation conformity requires nonattainment and maintenance areas to demonstrate that all future transportation projects will not prevent an area from reaching its air quality attainment goals.

Final Particulate Matter

Fine particulate matter ($PM_{2.5}$) can be emitted directly into the atmosphere (sources include exhaust and dust from brake and tire wear) or formed in the atmosphere by combinations of precursor pollutants (secondary formation). Sulfates and nitrates are two types of pollutants that contribute to secondary formation. Sulfate emissions are a result of power plant and industry emissions, while nitrate emissions result from automobiles, power plants, and other combustion sources. Scientific studies have shown a significant correlation between exposure to fine particulates and severe health issues such as heart disease, lung disease, and premature death.

The pollutants that could be analyzed in the conformity analysis are: [1] direct $PM_{2.5}$ emissions (tail pipe emissions, brake and tire wear), [2] re-entrained road dust, and [3] precursors nitrogen oxides (NO_X),

volatile organic compounds (VOC), sulfur oxides (SO_X) and ammonia (NH_3). The EPA has ruled that until the EPA or DEP find that other precursor pollutants are significant contributors, and a SIP revision is approved stating such findings, direct $PM_{2.5}$ emissions and NOx are the only pollutants that must be analyzed for transportation conformity (40 CFR 93.119(f)(8)–(10)).

1997 Annual $PM_{2.5}$ and 2006 24-hour $PM_{2.5}$ Standards

The EPA published the 1997 annual $PM_{2.5}$ NAAQS on July 18, 1997, (62 FR 38652), with an effective date of September 16, 1997. An area is in nonattainment of this standard if the 3-year average of the annual mean $PM_{2.5}$ concentrations (for designated monitoring sites within an area) exceed 15.0 micrograms per cubic meter ($\mu g/m^3$). Lebanon County was designated as part of the Harrisburg-Lebanon-Carlisle nonattainment area under the 1997 annual $PM_{2.5}$ NAAQS, effective April 5, 2005 (70 FR 944).

The EPA published the 2006 24-hour $PM_{2.5}$ NAAQS on October 17, 2006, (71 FR 61144), with an effective date of December 18, 2006. The rulemaking strengthened the 1997 24-hour standard of 65 $\mu g/m^3$ (62 FR 38652) to 35 $\mu g/m^3$ and retained the 1997 annual $PM_{2.5}$ NAAQS of 15 $\mu g/m^3$. An area is in nonattainment of the 2006 24-hour $PM_{2.5}$ NAAQS if the 98th percentile of the annual 24-hour concentrations, averaged over three years, is greater than 35 $\mu g/m^3$. Lebanon County was designated as a nonattainment area as part of the Harrisburg-Lebanon-Carlisle-York nonattainment area under the 2006 24-hour $PM_{2.5}$ NAAQS, effective December 14, 2009 (74 FR 58688).

A redesignation request and maintenance plan applicable to both the 1997 annual and 2006 24-hour $PM_{2.5}$ NAAQS was approved by EPA and effective December 8, 2014 (79 FR 72522). The maintenance plan includes 2017 and 2025 $PM_{2.5}$ and NOx mobile vehicle emission budgets (MVEBs) for transportation conformity purposes. On April 28, 2015, EPA provided an additional rulemaking to address document errors with the original approval and the listed MVEBs for Lebanon County (80 FR 23449).

EPA took final action on the "*Fine Particulate Matter National Ambient Air Quality Standards: State Implementation Plan Requirements*" rule on August 24, 2016 (81 FR 58010 effective on October 24, 2016). In that rulemaking, EPA finalized the option that revokes the 1997 primary annual $PM_{2.5}$ NAAQS in areas that are designated as attainment or maintenance of that NAAQS. After revocation, areas no longer have to expend resources on CAA air quality planning and conformity determination requirements associated with the 1997 annual $PM_{2.5}$ NAAQS.

2012 Annual $PM_{2.5}$ Standard

The EPA published the 2012 annual $PM_{2.5}$ NAAQS on January 15, 2013, (78 FR 3086), with an effective date of March 18, 2013. The EPA revised the annual $PM_{2.5}$ NAAQS by strengthening the standard from 15 $\mu g/m^3$ to 12 $\mu g/m^3$. An area is in nonattainment of this standard if the 3-year average of the annual mean $PM_{2.5}$ concentrations for designated monitoring sites in an area is greater than 12.0 $\mu g/m^3$. On December 18, 2014, EPA issued final designations for the standard that were revised on April 7, 2015 (80 FR 18535). Lebanon County was designated as a nonattainment area under the standard.

On March 6, 2018, EPA made a final determination (FR 83 9435) that the Lebanon County nonattainment area has attained the 2012 annual $PM_{2.5}$ NAAQS. A redesignation request and maintenance plan applicable to the 2012 24-hour $PM_{2.5}$ NAAQS was approved by EPA and effective September 30, 2019 (84 FR 51420). The maintenance plan includes 2022 and 2030 $PM_{2.5}$ and NOx mobile vehicle emission budgets (MVEBs) for transportation conformity purposes.

2024 Annual $PM_{2.5}$ Standard

On February 7, 2024, EPA strengthened the annual $PM_{2.5}$ standard at 9.0 µg/m3 to provide increased public health protection, consistent with the available health science. The nonattainment areas have not been designated yet for this new standard.

Ozone

Ozone is formed by chemical reactions occurring under specific atmospheric conditions. Precursor pollutants that contribute to the formation of ozone include VOC and NO_X, both of which are components of vehicle exhaust. VOCs may also be produced through the evaporation of vehicle fuel, as well as by displacement of vapors in the gas tank during refueling. By controlling VOC and NO_X emissions, ozone formation can be mitigated.

1997 and 2008 8-hour Ozone NAAQS

The EPA published the 1997 8-hour ozone NAAQS on July 18, 1997, (62 FR 38856), with an effective date of September 16, 1997. An area was in nonattainment of the 1997 8-hour ozone NAAQS if the 3-year average of the individual fourth highest air quality monitor readings, averaged over 8 hours throughout the day, exceeded the NAAQS of 0.08 parts per million (ppm). On May 21, 2013, the EPA published a rule revoking the 1997 8-hour ozone NAAQS, for the purposes of transportation conformity, effective one year after the effective date of the 2008 8-hour ozone NAAQS area designations (77 FR 30160).

The EPA published the 2008 8-hour Ozone NAAQS on March 27, 2008, (73 FR 16436), with an effective date of May 27, 2008. EPA revised the ozone NAAQS by strengthening the standard to 0.075 ppm. Thus, an area is in nonattainment of the 2008 8-hour ozone NAAQS if the 3-year average of the individual fourth highest air quality monitor readings, averaged over 8 hours throughout the day, exceeds the NAAQS of 0.075 ppm. Lebanon County was designated as an attainment area under the 2008 8-hour ozone NAAQS, effective July 20, 2012 (77 FR 30088). As a result, transportation conformity is not required for the standard.

On February 16, 2018, the United States Court of Appeals for the District of Columbia Circuit in *South Coast Air Quality Mgmt. District v. EPA* ("*South Coast II*," 882 F.3d 1138) held that transportation conformity determinations must be made in areas that were either nonattainment or maintenance for the 1997 ozone national ambient air quality standard (NAAQS) and attainment for the 2008 ozone NAAQS when the 1997 ozone NAAQS was revoked. These conformity determinations are required in these areas after February 16, 2019. Lebanon County was maintenance at the time of the 1997 ozone NAAQS revocation on April 6, 2015 and was also designated attainment for the 2008 ozone NAAQS on May 21,

2012. Therefore, per the *South Coast II* decision, this conformity determination is also being made for the 1997 ozone NAAQS.

2015 8-hour Ozone NAAQS

In October 2015, based on its review of the air quality criteria for ozone and related photochemical oxidants, the EPA revised the primary and secondary NAAQS for ozone to provide requisite protection of public health and welfare, respectively (80 FR 65292). The EPA revised the levels of both standards to 0.070 ppm, and retained their indicators, forms (fourth-highest daily maximum, averaged across three consecutive years) and averaging times (eight hours). On April 30, 2018, EPA completed area designations, and Lebanon County was designated as an attainment area for the standard.

Interagency Consultation

As required by the federal transportation conformity rule, the conformity process includes a significant level of cooperative interaction among federal, state, and local agencies. For this air quality conformity analysis, interagency consultation was conducted as required by the Pennsylvania Conformity SIP. This included conference call(s) or meeting(s) of the Pennsylvania Transportation-Air Quality Work Group (including the Pennsylvania Department of Transportation (PennDOT), DEP, EPA, FHWA, FTA and representatives from larger MPOs within the state). Meeting and conference calls are conducted on quarterly and included the review of all input planning assumptions, methodologies and analysis years. A meeting was conducted on February 7, 2024 to review all planning assumptions and to discuss the template and content for transportation conformity analyses.

Analysis Methodology and Data

This transportation conformity analysis was conducted using EPA's MOVES model, which is the official model for estimating emissions from highway vehicles for SIP emission inventories and transportation conformity. MOVES3 has been used for this conformity determination and is (in addition to MOVES4) currently considered one of the latest approved model versions for SIP and transportation conformity purposes (86 FR 1106). After September 12, 2025, MOVES4 must be used for conformity determinations (88 FR 62567).

Planning assumptions are updated following EPA and FHWA joint guidance (EPA420-B-08-901) that clarifies the implementation of the latest planning assumption requirements in 40 CFR 93.110. This analysis utilizes the best available latest traffic, vehicle fleet and environmental data to estimate regional highway emissions.

PennDOT updates many of the key planning assumptions on a triennial basis to support EPA's National Emissions Inventory (NEI) and FHWA's latest planning assumption requirements for transportation conformity. The PennDOT triennial data update is typically used to inform the planning assumptions for the future analysis years used for transportation conformity.

Due to the impacts that COVID has had on the vehicle fleet turnover, PennDOT, in coordination with the Pennsylvania Air Quality Workgroup, has determined that the estimates of the vehicle fleet age for the most recent available data (2020-2022) may not be reflective of future conditions or longer term trends. Thus, the vehicle age assumption relied on previous planning assumptions used for past conformity analyses.

All other data assumptions for the conformity analysis relied on the latest available planning assumptions or national/local defaults consistent with methods used for past conformity analyses and EPA's technical guidance. This includes information and characteristics related to fuels, inspection maintenance (I/M) program parameters, heavy-truck long duration idling, and environmental data (e.g. temperatures and humidity). The analysis methodology and data inputs for this analysis were developed through interagency consultation and used available EPA guidance documents that included:

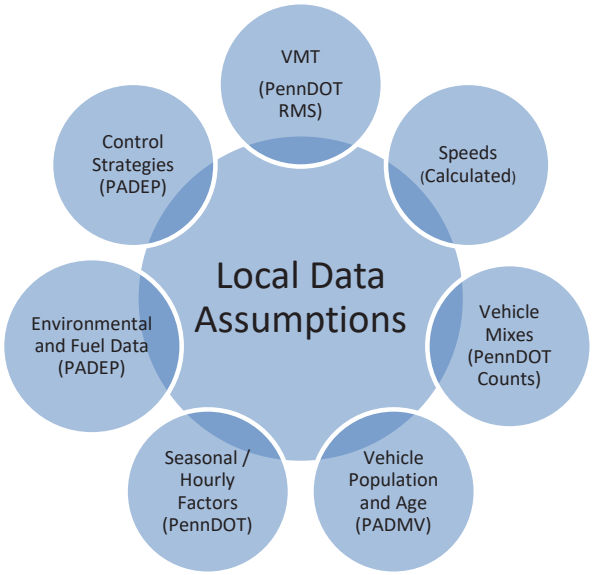
- *Policy Guidance on the Use of MOVES3 for State Implementation Plan Development, Transportation Conformity, General Conformity, and Other Purposes,* US EPA Office of Transportation and Air Quality, EPA-420-B-20-044, November 2020.
- *MOVES3 Technical Guidance: Using MOVES to Prepare Emission Inventories for State Implementation Plans and Transportation Conformity,* US EPA Office of Transportation and Air Quality, EPA-420-B-20-052, November 2020.

A mix of local and national default (internal to MOVES) data are used in the analysis. As illustrated in **Exhibit 2**, local data has been used for data items that have a significant impact on emissions, including: vehicle miles of travel (VMT), vehicle population, congested speeds, and vehicle type mix, as well as environmental and fuel assumptions. Local data inputs to the analysis process reflect the latest available planning assumptions using information obtained from PennDOT, DEP and other local/national sources.

The methodology used for this analysis is consistent with the methodology used to develop SIP inventories. This includes the use of custom post-processing software (PPSUITE) to calculate hourly speeds and prepare key traffic input files to the MOVES emission model. PPSUITE consists of a set of programs that perform the following functions:

- Analyzes highway operating conditions.
- Calculates highway speeds.
- Compiles VMT and vehicle type mix data.
- Prepares MOVES runs and processes MOVES outputs.

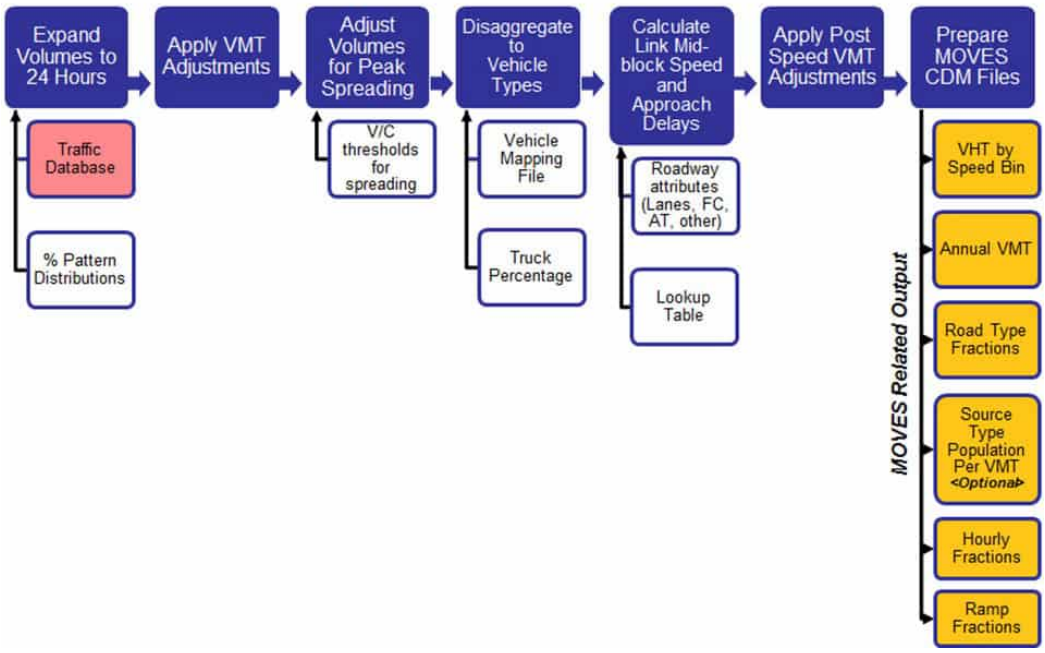
EXHIBIT 2: LOCAL DATA INPUTS USED FOR CONFORMITY RUNS



PPSUITE is a widely used and accepted tool for estimating speeds and processing emissions rates. The PPSUITE tool has been used for developing on-highway mobile source inventories in SIP revisions, control strategy analyses, and conformity analyses in other states. The software was developed to utilize accepted transportation engineering methodologies. The PPSUITE process is integral to producing traffic-related input files to the MOVES emission model. **Exhibit 3** summarizes the key functions of PPSUITE within the emission calculation process. Other MOVES input files are prepared externally to the PPSUITE software, including vehicle population, vehicle age, environmental and fuel input files.

The CENTRAL software is also used in this analysis. CENTRAL is a menu-driven software platform that executes the PPSUITE and MOVES processes in batch mode. The CENTRAL software allows users to execute runs for a variety of input options and integrates custom SQL steps into the process. CENTRAL provides important quality control and assurance steps, including file naming and storage automation.

EXHIBIT 3: EMISSION CALCULATION PROCESS



Key MOVES Input Data

A large number of inputs to MOVES are needed to fully account for the numerous vehicle and environmental parameters that affect emissions. These inputs include traffic flow characteristics, vehicle descriptions, fuel parameters, I/M program parameters and environmental variables. MOVES includes a default national database of meteorology, vehicle fleet, vehicle activity, fuel and emission control program data for every county; EPA, however, cannot certify that the default data is the most current or best available information for any specific area. As a result, local data, where available, is recommended for use when conducting a regional conformity analysis. A mix of local and default data is used for this analysis. These data items are discussed in the following sections.

Travel Demand Model

The roadway data input to emissions calculations for this conformity analysis is based on information from the region's travel demand forecasting model. The travel demand model estimates roadway volumes based on input demographic forecasts and expected changes to the transportation roadway network.

The travel demand model follows the basic "four-step" travel demand forecasting process and utilizes the Cube Voyager (TP+) software platform. The model was recently updated in 2020 to include the Lancaster, Harrisburg, York, Franklin, Adams and Lebanon MPO areas in the south-central region. The network

contains attributes such as distance, number of lanes, area type, facility type, free flow speed, capacity of the lane, and location of traffic signals. The model updates included a revalidation of the travel model to 2018-2019 traffic conditions. Using the projected traffic volume data from the model, conditions were evaluated for all applicable future analysis years. All significant air quality projects from the TIP and LRTP were coded into the travel demand model.

Transit data was also generated as part of the travel demand model. Existing fixed transit routes and their associated attributes (i.e., stops, headways, fares, and speeds) are included within a transit subroutine. Ridership estimates generated by this subroutine are fed back into the model stream as part of the overall network processing.

Traffic forecasts were projected based on the socioeconomic and land use data projections. This data includes total population, household population, total employment, and school enrollment. **Exhibit 4** summarizes socioeconomic data for the base year and horizon years included in the conformity analysis.

EXHIBIT 4: SOCIOECONOMIC GROWTH ASSUMPTIONS TO THE TRAVEL MODEL

County	Year	Population	Households	Total Employment
Lebanon	2018	139,633	53,578	47,089
	2025	147,474	60,032	48,783
	2035	155,380	62,750	51,323
	2045	161,827	64,262	54,001
	2050	165,102	65,374	55,407

The travel model network and assigned traffic volumes are processed by PPSUITE to prepare the traffic inputs needed to run the MOVES emission model. The following information is extracted from the model for emission calculations:

- Lanes
- Roadway capacity
- Distance
- Daily traffic volume
- Type of area abutting the roadway (e.g. urban, suburban, rural, etc.)
- Type of roadway facility (e.g. interstate, arterial, collector, local, etc.)

Other Supporting Traffic Data

Other traffic data is used to adjust and disaggregate traffic volumes. Key sources used in these processes include the following:

- *Highway Performance Monitoring System (HPMS VMT)*: According to EPA guidance, baseline inventory VMT computed from the RMS highway segment volumes must be adjusted to be consistent with HPMS VMT totals. The VMT contained in the HPMS reports are considered to represent average annual daily traffic (AADT), an average of all days in the year, including weekends and holidays. Adjustment factors are calculated for the 2017 analysis year. These factors are used to adjust locally modeled roadway data VMT to be consistent with the reported HPMS totals and are applied to all county and facility group combinations within the region. These adjustments are important to account for local roadway VMT not represented within the regional travel demand model.
- *Seasonal Factors*: The traffic volumes estimated from the RMS are adjusted to summer or average monthly conditions (as needed for annual processing), using seasonal adjustment factors prepared by PennDOT's BPR in their annual traffic data report published on the BPR website (http://www.dot.state.pa.us/ Search: Research and Planning). The seasonal factors are also used to develop MOVES daily and monthly VMT fraction files, allowing MOVES to determine the portion of annual VMT that occurs in each month of the year.
- *Hourly Patterns*: Speeds and emissions vary considerably depending on the time of day. In order to produce accurate emission estimates, it is important to estimate the pattern by which roadway volume varies by breaking the data down into hourly increments. Pattern data is in the form of a percentage of the daily volumes for each hour. Distributions are provided for all the counties within the region and by each facility type grouping. The hourly pattern data has been developed from 24-hour vehicle count data compiled by PennDOT's BPR, using the process identified in PennDOT's annual traffic data report. The same factors are also used to develop the MOVES hourly fraction file.

Vehicle Class

Emission rates within MOVES also vary significantly by vehicle type. MOVES produces emission rates for thirteen MOVES vehicle source input types. VMT, however, is input to MOVES by six HPMS vehicle groups (note that passenger cars and light trucks are grouped for input to MOVES). **Exhibit 5** summarizes the distinction between each classification scheme.

EXHIBIT 5: MOVES SOURCE TYPES AND HPMS VEHICLE GROUPS

SOURCE TYPES		HPMS Class Groups	
11	Motorcycle	10	Motorcycle
21	Passenger Car	25	Passenger Car
31	Passenger Truck	25	Passenger/Light Truck
32	Light Commercial Truck	40	Buses
41	Other Buses	50	Single Unit Trucks
42	Transit Bus	60	Combination Trucks
43	School bus		
51	Refuse Truck		
52	Single Unit Short-haul Truck		
53	Single Unit Long-haul Truck		
54	Motor Home		
61	Combination Short-haul Truck		
62	Combination Long-haul Truck		

The emissions estimation process includes a method to disaggregate the traffic volumes to the thirteen source types and then to recombine the estimates to the six HPMS vehicle classes. Vehicle type pattern data is used by PPSUITE to distribute the hourly roadway segment volumes among the thirteen MOVES source types. Similar to the 24-hour pattern data, this data contains percentage splits to each source type for every hour of the day. The vehicle type pattern data is developed from several sources of information:

- PennDOT truck percentages from the RMS database.
- Hourly distributions for trucks and total traffic compiled by PennDOT's BPR.
- School bus registration data from PennDOT's Bureau of Motor Vehicles Registration Database.

Vehicle type percentages are also input into the capacity analysis section of PPSUITE to adjust the speeds in response to truck volume. Larger trucks take up more roadway space compared to an equal number of cars and light trucks, which is accounted for in the speed estimation process by adjusting capacity using information from the Transportation Research Board's fifth edition of the *Highway Capacity Manual*. (http://hcm.trb.org/).

Vehicle Ages

Vehicle age distributions are input to MOVES for each of the thirteen source types. These distributions reflect the percentage of the vehicle fleet falling under each vehicle model year (MY), to a maximum age of 31 years. The vehicle age distributions were prepared from the most recently available registration download from PennDOT's Bureau of Motor Vehicles Registration Database. Due to data limitations, information for light duty vehicles (including source types 11, 21, 31 and 32) was used as local data for MOVES inputs, while heavy-duty vehicles (including source types 41, 42, 43, 51, 52, 53, 54, 61, and 62) used the internal MOVES national default age distribution data. The registration data download is based

improving the fuel efficiency of vehicles. 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 I/M program requirements vary by region (five regions) and include on-board diagnostics (OBD) technology that uses the vehicle's computer for model years 1996 and newer to identify potential engine and exhaust system problems that could affect emissions. The program, named PAOBDII, is implemented by region as follows:

- *Philadelphia Region* - Bucks, Chester, Delaware, Montgomery and Philadelphia Counties
  [Includes tailpipe exhaust testing using ASM2015 or equipment for pre-1996 vehicles up to 25 years old]
- *Pittsburgh Region* - Allegheny, Beaver, Washington and Westmoreland Counties.
  [Includes tailpipe exhaust testing using PA 97 equipment for pre-1996 vehicles up to 25 years old]
- *South Central and Lehigh Valley Region* - Berks, Cumberland, Dauphin, Lancaster, Lebanon, Lehigh, Northampton and York Counties.
  [Includes gas cap and visual inspection only for 1975 through 1995 model years]
- *North Region* - Blair, Cambria, Centre, Erie, Lackawanna, Luzerne, Lycoming, and Mercer Counties.
  [Gas cap and visual inspection only – No OBD]
- *Other 42 Counties* – Includes the remaining 42 counties not included above.
  [Visual inspection only – No OBD]

The OBDII program is implemented in Philadelphia and Pittsburgh along with tailpipe (idle in Pittsburgh and idle and ASM in Philadelphia) and gas cap tests. Tests in other regions include:

- *Subject vehicles registered in the South Central and Lehigh Valley counties receive the visual, OBD and gas cap tests.*
- *Subject vehicles registered in the North region receive a gas cap test and visual inspection.*
- *Subject vehicles registered in the other 42 counties (67 total counties) receive a visual inspection as part of the annual safety inspection.*

Vehicle Technology Programs

Federal Programs

Current federal vehicle emissions control and fuel programs are incorporated into the MOVES3 software. The MOVES3 model includes the National Program standards covering light duty vehicles through model year 2026, heavy duty greenhouse gas standards for model year 2014-2018 vehicles, and the Tier 3 vehicle standards. Modifications of default emission rates are required to reflect the early implementation of the National Low Emission Vehicle (NLEV) program in Pennsylvania. To reflect these impacts, EPA has released instructions and input files that can be used to model these impacts. The NLEV input database was created for Pennsylvania per EPA's instructions and was used for this inventory.

MOVES3 also incorporates the following new federal emission standard rules:

- *Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles – Phase 2 (HD GHG2) Rule*: MOVES3 accounts for the HD GHG2 rule published in 2016. The rule set stricter fuel economy standards for HD vehicles which reduce CO2 emissions, but also impact other pollutants through changes in glider sales, hoteling activity, vehicle mass and road load coefficients.

- *Safe Affordable Fuel Efficient (SAFE) Vehicles Rule*: MOVES3 also accounts for the March 2020 SAFE standards for light-duty vehicles. These standards were less stringent than the preceding fuel economy standards, and thus increased fuel consumption and CO2 emissions.

State Programs

The Pennsylvania Clean Vehicles (PCV) Program, adopted in 1998, incorporated the California Low Emission Vehicle Regulations (CA LEV) by reference. The PCV Program allowed automakers to comply with the NLEV program as an alternative to this Pennsylvania program until MY2006. Beginning with MY2008, all "new" passenger cars and light-duty trucks with a gross vehicle weight rating (GVWR) of 8,500 pounds or less sold/leased and titled in Pennsylvania must be certified by the California Air Resources Board (CARB) or be certified for sale in all 50 states. For this program, a "new" vehicle is a qualified vehicle with an odometer reading less than 7,500 miles. DEP and PennDOT both work with the public, including manufacturers, vehicle dealers and consumers, to ensure that vehicles sold and purchased in Pennsylvania or vehicles purchased from other states by Pennsylvania residents comply with the requirements of the PCV Program, in order to be titled in Pennsylvania. Additionally, PennDOT ensures that paperwork for title and registration includes proof of CARB- or 50-state emission certification or that the vehicle owner qualifies for an exemption to the requirements, as listed on PennDOT's MV-9 form and in the PCV Program regulation. When necessary, information from PennDOT's title and registration process may be used to audit vehicle title transactions to determine program compliance.

The impacts of this program are modeled for all analysis years beyond 2008 using the same instructions and tools downloaded for the early NLEV analysis. EPA provided input files to reflect state programs similar to the CAL LEV program. Modifications to those files were made to reflect a 2008 program start date for Pennsylvania.

Analysis Process Details

The previous sections have summarized the input data used for computing speeds and emission rates for this conformity analysis. This section explains how PPSUITE and MOVES use that input data to produce emission estimates. **Exhibit 6** provides a more detailed overview of the PPSUITE analysis procedure using the available traffic data information described in the previous sections.

VMT Preparation

Producing an emissions inventory with PPSUITE requires a process of disaggregation and aggregation. Data is available and used on a very detailed scale – individual roadway segments for each of the 24 hours

of the day. This data needs to be processed individually to determine the distribution of vehicle hours of travel (VHT) by speed and then aggregated by vehicle class to determine the input VMT to the MOVES emission model. Key steps in the preparation of VMT include:

- *Assemble VMT* - The RMS database contains the roadway segments, distances and travel volumes needed to estimate VMT. PPSUITE processes each segment by simply multiplying the assigned travel volume by the distance to obtain VMT.
- *Apply Seasonal Adjustments* – PPSUITE adjusts the traffic volumes to the appropriate analysis season using an average monthly day to support annual $PM_{2.5}$ analyses. These traffic volumes are assembled by PPSUITE and extrapolated over the course of a year to produce the annual VMT file input to MOVES.
- *Disaggregate to Hours* - After seasonal adjustments are applied, the traffic volumes are distributed to each hour of the day. This allows for more accurate speed calculations (effects of congested hours) and allows PPSUITE to prepare the hourly VMT and speeds for input to MOVES.
- *Peak Spreading* - After distributing the daily volumes to each hour of the day, PPSUITE identifies hours that are unreasonably congested. For those hours, PPSUITE then spreads a portion of the volume to other hours within the same peak period, thereby approximating the "peak spreading" that normally occurs in such over-capacity conditions. This process also helps prevent hours with unreasonably congested speeds from disproportionately impacting emission calculations.
- *Disaggregation to Vehicle Types* - EPA requires VMT estimates to be prepared by the five HPMS vehicle groups, reflecting specific local characteristics. As described in the previous section, the hourly volumes are disaggregated into thirteen MOVES source types based on data from PennDOT, in combination with MOVES defaults. The thirteen MOVES source types are then recombined into five HPMS vehicle classes.
- *Apply HPMS VMT Adjustments* - Volumes must also be adjusted to account for differences with the HPMS VMT totals, as described in previous sections. VMT adjustment factors are provided as inputs to PPSUITE and are applied to each of the roadway segment volumes. VMT adjustment factors are also applied to runs for future years.
- *Apply VMT Growth Adjustments* Volumes must also be adjusted to estimate future year VMT. VMT growth factors are provided as inputs to PPSUITE, and are applied to each of the roadway segment volumes. The VMT growth factors were developed from the PennDOT BPR Growth Rate forecasting system.

Speed Estimation

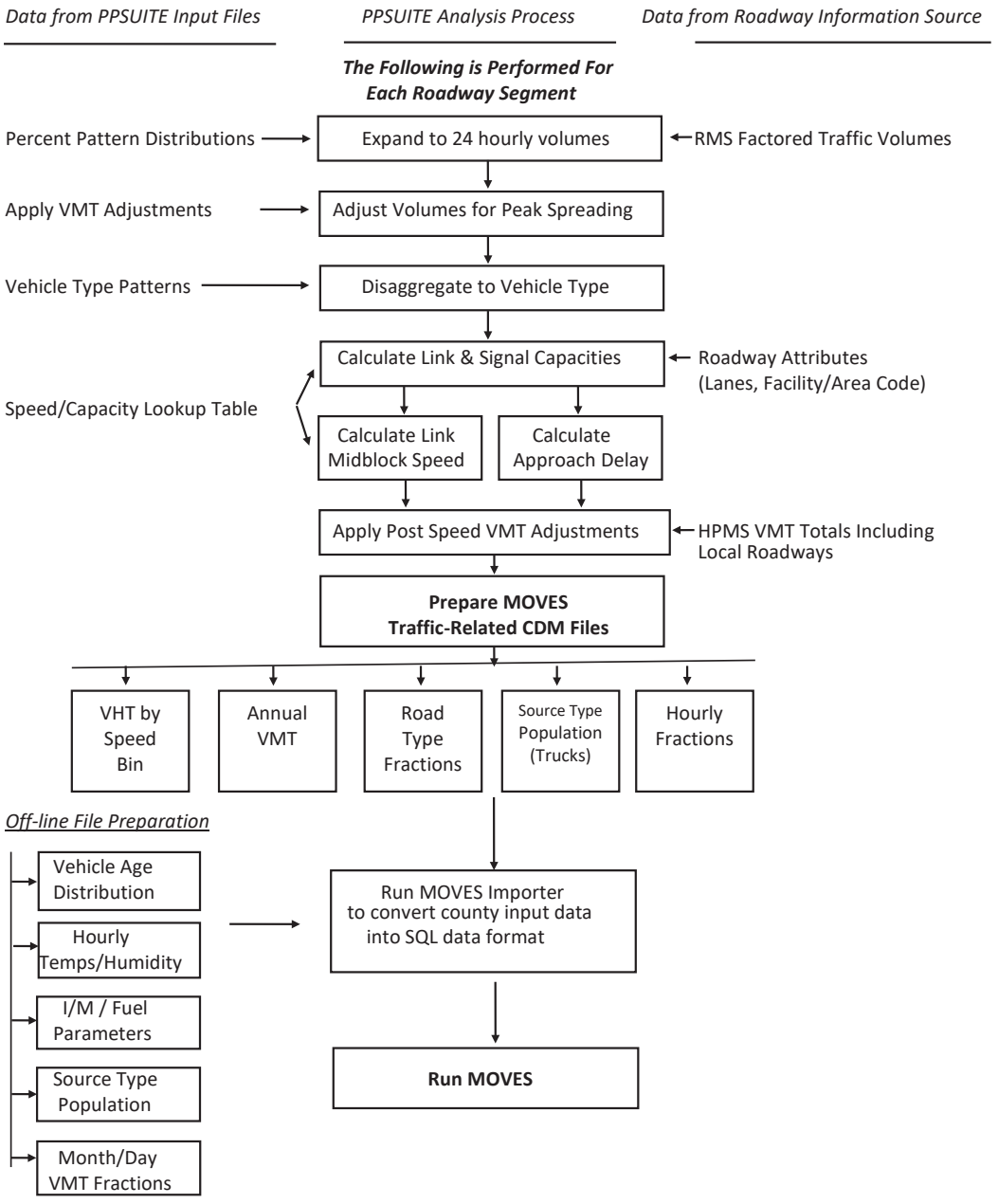
Emissions for many pollutants (including VOC and NOx) vary significantly with travel speed. VOC emissions generally decrease as speed increases, while NO_X emissions decrease at low speeds and increases at higher speeds. Because emissions are so sensitive to speed changes, EPA recommends special attention be given to developing reasonable and consistent speed estimates. EPA also recommends that VMT be

disaggregated into subsets that have roughly equal speeds, with separate emission factors for each subset. At a minimum, speeds should be estimated separately by road type.

The computational framework used for this analysis meets and exceeds the recommendation above relating to speed estimates. Speeds are individually calculated for each roadway segment and hour. Rather than accumulating the roadway segments into a particular road type and calculating an average speed, each individual link hourly speed is represented in the MOVES vehicle hours of travel (VHT) by a speed bin file. This MOVES input file allows the specification of a distribution of hourly speeds. For example, if 5% of a county's arterial VHT operates at 5 mph during the AM peak hour and the remaining 95% operates at 65 mph, this can be represented in the MOVES speed input file. For the roadway vehicle emissions calculations, speed distributions are input to MOVES by road type and source type for each hour of the day.

To calculate speeds, PPSUITE first obtains initial capacities (i.e., how much volume the roadway can serve before heavy congestion) and free-flow speeds (speeds assuming no congestion) from a speed/capacity lookup table. As described previously, this data contains default roadway information indexed by the area and facility type codes. For areas with known characteristics, values can be directly coded to the database and the speed/capacity default values can be overridden. For most areas where known information is unavailable, the speed/capacity lookup tables provide valuable default information regarding speeds, capacities, signal characteristics, and other capacity adjustment information used for calculating congested delays and speeds. The result of this process is an estimated average travel time for each hour of the day for each highway segment. The average travel time multiplied by traffic volume produces vehicle hours of travel (VHT).

EXHIBIT 6: PPSUITE SPEED/EMISSION ESTIMATION PROCEDURE



Developing the MOVES Traffic Input Files

The PPSUITE software is responsible for producing the following MOVES input files during any analysis run:

- VMT by HPMS vehicle class.
- VHT by speed bin.
- Road type distributions.
- Hourly VMT fractions.

These files are text formatted files with a *.csv extension. The files are provided as inputs within the MOVES County Data Manager (CDM) and are described below:

- *VMT Input File*: VMT is the primary traffic input affecting emission results. The roadway segment distances and traffic volumes are used to prepare estimates of VMT. PPSUITE performs these calculations and outputs the MOVES annual VMT input file to the County Data Manager (CDM). The annual VMT is computed by multiplying the RMS roadway adjusted VMT by 365 days (366 days in a leap year).
- *VHT by Speed Bin File*: As described in the previous section, the PPSUITE software prepares the MOVES VHT by speed bin file, which summarizes the distribution of speeds across all links into each of the 16 MOVES speed bins for each hour of the day by road type. This robust process is consistent with the methods and recommendations provided in EPA's technical guidance for the MOVES2014 model (http://www.epa.gov/otaq/models/moves/) and ensures that MOVES emission rates are used to the fullest extent.
- *Road Type Distributions*: Within MOVES, typical drive cycles and associated operating conditions vary by roadway type. MOVES defines five different roadway types as follows:

  1 Off-Network.
  2 Rural Restricted Access.
  3 Rural Unrestricted Access.
  4 Urban Restricted Access.
  5 Urban Unrestricted Access.

  For this analysis, the MOVES road type distribution file is automatically generated by PPSUITE using defined equivalencies. The off-network road type includes emissions from vehicle starts, extended idling, and evaporative emissions. Off-network activity in MOVES is primarily determined by the Source Type Population input.

MOVES Runs

After computing speeds and aggregating VMT and VHT, PPSUITE prepares traffic-related inputs needed to run EPA's MOVES software. Additional required MOVES inputs are prepared externally from the processing software and include temperatures, I/M program parameters, fuel characteristics, vehicle fleet

age distributions, and source type population. The MOVES county importer is run in batch mode. This program converts all data files into the SQL format used by the MOVES model. At that point, a MOVES run specification file (*.mrs) is created which specifies options and key data locations for the run. The MOVES run is then executed in batch mode. A summary of key MOVES run specification settings is shown in **Exhibit 7**. MOVES can be executed using either an inventory or rate-based approach. For this analysis, MOVES is applied using the inventory-based approach. Using this approach, actual VMT and population are provided as inputs to the model; MOVES is responsible for producing the total emissions for the region.

EXHIBIT 7: MOVES RUN SPECIFICATION FILE PARAMETER SETTINGS

Parameter	Setting
MOVES Version	MOVES3
MOVES Default Database Version	MOVESDB20221007
Scale	COUNTY
Analysis Mode	Inventory
Time Span	**Annual Runs:** Single MOVES run with 12-month inputs including all days and hours
Input Time Aggregation	Hour
Geographic Selection	County [FIPS]
Vehicle Selection	All source types Gasoline, Diesel, CNG, E85, Electricity
Road Type	All road types including off-network
Pollutants and Processes	All $PM_{2.5}$ categories, NO_X, VOC
Database selection	Early NLEV database PA-Specific CA LEV program database
General Output	Units: Emission = grams; Distance = miles; Time = hours; Energy = Million BTU
Output Emissions	Time = Hour or Month, Emissions by Process ID, Source Type and Road Type

Conformity Analysis Results (Fine Particulate Matter)

Transportation conformity analyses of the current TIP and LRTP have been completed for Lebanon County. The analyses were performed according to the requirements of the Federal transportation conformity rule at 40 CFR Part 93, Subpart A. The analyses utilized the methodologies, assumptions and data as presented in previous sections. Interagency consultation has been used to determine applicable emission models, analysis years and emission tests.

Emission Tests

On December 8, 2014, EPA approved the Commonwealth of Pennsylvania's request to redesignate the *Harrisburg-Lebanon-Carlisle, PA* and *Harrisburg-Lebanon-Carlisle-York, PA* nonattainment areas to attainment for the 1997 annual and 2006 24-hour $PM_{2.5}$ NAAQS. On April 28, 2015, EPA provided an additional rulemaking to address document errors with the original approval and the listed MVEBs for Lebanon County (80 FR 23449). On March 6, 2018, EPA made a final determination (FR 83 9435) that the Lebanon County nonattainment area has attained the 2012 annual $PM_{2.5}$ NAAQS. A redesignation request and maintenance plan applicable to the 2012 24-hour $PM_{2.5}$ NAAQS was approved by EPA and effective September 30, 2019 (84 FR 51420). The maintenance plan includes 2022 and 2030 $PM_{2.5}$ and NOx MVEBs for transportation conformity purposes. All MVEBs are summarized in **Exhibit 8**.

EXHIBIT 8: ANNUAL $PM_{2.5}$ MOTOR VEHICLE EMISSION BUDGETS

County / Pollutant	For 2006 $PM_{2.5}$ NAAQS		For 2012 $PM_{2.5}$ NAAQS	
	2017 Budget (tons/year)	2025 Budget (tons/year)	2022 Budget (tons/year)	2030 Budget (tons/year)
$PM_{2.5}$	76	52	50	31
NOx	2,252	1,446	1,867	1,374

Analysis Years

Section 93.119(g) of the Federal Transportation Conformity Regulations requires that emissions analyses be conducted for specific analysis years as follows:

- A near-term year, one to five years in the future.
- The last year of the LRTP's forecast period.
- All established MVEB years.
- Attainment year of the standard if within timeframe of TIP and LRTP.
- An intermediate year or years such that if there are two years in which analysis is performed, the two analysis years are no more than ten years apart.

All analysis years were determined through the interagency consultation process. **Exhibit 9** provides the analysis years used for this conformity analysis.

EXHIBIT 9: TRANSPORTATION CONFORMITY ANALYSIS YEARS

Analysis Year	Description
2025	Budget Year
2035	Interim Year
2045	Horizon Year of LRTP
2050	Additional Horizon Year

Components of the $PM_{2.5}$ Regional Emissions Analysis

$PM_{2.5}$ can be the result of either direct or indirect emissions. Direct transportation emissions can be the result of brake or tire-wear, particulates in exhaust emissions, or dust raised by on-road vehicles or construction equipment. Possible indirect transportation related emissions of $PM_{2.5}$ include: NH_3, NO_X, SO_X, and VOC. The EPA has ruled that regional analysis of direct $PM_{2.5}$ emissions must include both exhaust and brake/tire-wear emissions. EPA's current regulations specify that road dust should be included in the regional analysis of direct $PM_{2.5}$ emissions only if the EPA or the state air agency have found it to be a significant contributor to the region's nonattainment. Neither the EPA nor the state air agency has determined road dust to be a significant contributor in the nonattainment area for this conformity determination.

Until a SIP revision is approved proving that NO_X is insignificant, EPA's current regulations state that indirect $PM_{2.5}$ emissions must be analyzed for NO_X. Conversely, VOC, SO_X and NH_3 must be analyzed only if the state(s) or the EPA determines one or more of these pollutants significant. Therefore, NO_X is the only indirect $PM_{2.5}$ component analyzed for the nonattainment area in this conformity determination.

Regionally Significant Highway Projects

For the purposes of conformity analysis, model highway networks are created for each analysis year. For the horizon years, regionally significant projects from the LRTP were coded onto the networks. Detailed assessments were only performed for those new projects which may have a significant effect on emissions in accordance with 40 CFR Parts 51 and 93. Only those projects which would increase capacity or significantly impact vehicular speeds were considered. Projects such as bridge replacements and roadway restoration projects, which constitute the majority of the TIP and LRTP list, have been excluded from consideration since they are considered exempt under 40 CFR 93.126-127. A list of highway projects is shown in **Attachment A**.

Analysis Results

An emissions analysis has been completed for the 2006 24-hour and 2012 annual $PM_{2.5}$ NAAQS. Forecast years have been estimated using the procedures and assumptions provide in this conformity report. A detailed emission summary is also provided in **Attachment B**. Example MOVES importer (XML) and run specification (MRS) files are provided in **Attachment C**.

Exhibit 10 summarizes the annual $PM_{2.5}$ and NO_X emissions. Emissions are compared against the available 2022, 2025 and 2030 SIP MVEBs listed in **Exhibit 8**. The results illustrate that projected emissions are below the applicable MVEBs.

EXHIBIT 10: ANNUAL PM2.5 EMISSION ANALYSIS RESULTS AND CONFORMITY TEST
(Annual)

Pollutant		*2025 (tons/year)*	*2035 (tons/year)*	*2045 (tons/year)*	*2050 (tons/year)*
$PM_{2.5}$		*30*	*19*	*18*	*18*
NO_X		*901*	*583*	*613*	*652*
MVEBs 2006 $PM_{2.5}$ NAAQS	*$PM_{2.5}$*	***52***	***52***	***52***	***52***
	NO_X	***1,446***	***1,446***	***1,446***	***1,446***
MVEBs 2012 $PM_{2.5}$ NAAQS	*$PM_{2.5}$*	***50***	***31***	***31***	***31***
	NO_X	***1,867***	***1,374***	***1,374***	***1,374***
Conformity Result		**Pass**	**Pass**	**Pass**	**Pass**

Conformity Analysis Results (Ozone)

On November 29, 2018, EPA issued *Transportation Conformity Guidance for the South Coast II Court Decision*[1](EPA-420-B-18-050, November 2018) that addresses how transportation conformity determinations can be made in areas that were nonattainment or maintenance for the 1997 ozone NAAQS when the 1997 ozone NAAQS was revoked, but were designated attainment for the 2008 ozone NAAQS in EPA's original designations for this NAAQS (May 21, 2012).

The transportation conformity regulation at 40 CFR 93.109 sets forth the criteria and procedures for determining conformity. The conformity criteria for TIPs and LRTPs include: latest planning assumptions (93.110), latest emissions model (93.111), consultation (93.112), transportation control measures (93.113(b) and (c), and emissions budget and/or interim emissions (93.118 and/or 93.119).

For the 1997 ozone NAAQS areas, transportation conformity for TIPs and LRTPs for the 1997 ozone NAAQS can be demonstrated without a regional emissions analysis, per 40 CFR 93.109(c). This provision states that the regional emissions analysis requirement applies one year after the effective date of EPA's nonattainment designation for a NAAQS and until the effective date of revocation of such NAAQS for an area. The 1997 ozone NAAQS revocation was effective on April 6, 2015, and the *South Coast II* court upheld the revocation. As no regional emission analysis is required for this conformity determination, there is no requirement to use the latest emissions model, or budget or interim emissions tests. Therefore, transportation conformity for the 1997 ozone NAAQS can be demonstrated by showing the remaining

[1] Available from https://www.epa.gov/state-and-local-transportation/policy-and-technical-guidance-state-and-local-transportation

requirements in Table 1 in 40 CFR 93.109 have been met. These requirements, which are laid out in Section 2.4 of EPA's guidance and addressed below, include:

- Latest planning assumptions (93.110)
- Consultation (93.112)
- Transportation Control Measures (93.113)
- Fiscal constraint (93.108)

The use of latest planning assumptions in 40 CFR 93.110 of the conformity rule generally applies to a regional emissions analysis. In the 1997 ozone NAAQS areas, the use of latest planning assumptions requirement applies to assumptions about transportation control measures (TCMs) in an approved SIP. However, the Lebanon County SIP maintenance plans do not include any TCMs. All remaining requirements are addressed in the conformity determination section of this document.

Conformity Determination

Financial Constraint

The planning regulations, Sections 450.324(f)(11) and 450.326(j), requires the transportation plan and TIP to be financially constrained while the existing transportation system is being adequately operated and maintained. Only projects for which construction and operating funds are reasonably expected to be available are included. LEBCO, in conjunction with PennDOT, FHWA and FTA, has developed an estimate of the cost to maintain and operate existing roads, bridges and transit systems in Lebanon County and have compared the cost with the estimated revenues and maintenance needs of the new roads over the same period. The TIP and LRTP have been determined to be financially constrained.

Public Participation

The TIP and LRTP have undergone the public participation requirements as well as the comment and response requirements according to the procedures established in compliance with 23 CFR Part 450, the LEBCO Public Participation Plan, and Pennsylvania's Conformity SIP. The draft document was made available for a 30-day public review and comment period starting on May 10th, which included a public meeting.

Conformity Statement

The conformity rule requires that the TIP and LRTP conform to the applicable SIP(s) and be adopted by the MPO/RPO before any federal agency may approve, accept, or fund projects. Conformity is determined by applying criteria outlined in the transportation conformity regulations to the analysis.

The TIP and LRTP for Lebanon County are found to conform to the applicable air quality SIP(s) or EPA conformity requirements. This finding of conformity positively reflects on the efforts of the LEBCO and its partners in meeting the regional air quality goals, while maintaining and building an effective transportation system.

Resources

MOVES Model

Modeling Page within EPA's Office of Mobile Sources Website contains a downloadable model, MOVES users guide and other information. See (http://www.epa.gov/omswww/models.htm)

Policy Guidance on the Use of MOVES3 for State Implementation Plan Development, Transportation Conformity, General Conformity, and Other Purposes, US EPA Office of Transportation and Air Quality, EPA-420-B-20-044, November 2020.

MOVES3 Technical Guidance: Using MOVES to Prepare Emission Inventories for State Implementation Plans and Transportation Conformity, US EPA Office of Transportation and Air Quality, EPA-420-B-20-052, November 2020.

Traffic Engineering

Highway Capacity Manual, fifth edition (HCM2010), Transportation Research Board, presents current knowledge and techniques for analyzing the transportation system.

Traffic Data Collection and Factor Development Report, 2020 Data, Pennsylvania Department of Transportation, Bureau of Planning and Research.

Highway Vehicle Emissions Analysis Glossary

AADT: Average Annual Daily Traffic, average of ALL days

CAA: Clean Air Act as amended

CARB: California Air Resources Board

CFR: Code of Federal Regulations

County Data Manager (CDM): User interface developed to simplify importing specific local data for a single county or a user-defined custom domain without requiring direct interaction with the underlying SQL database in the MOVES emission model

DEP: Department of Environmental Protection.

Emission rate or factor: Expresses the amount of pollution emitted per unit of activity. For highway vehicles, this is usually expressed in grams of pollutant emitted per mile driven

EPA: Environmental Protection Agency.

FC: Functional code. Applied to road segments to identify their type (freeway, local, etc.)

FHWA: Federal Highway Administration

FR: Federal Register

FTA: Federal Transit Administration

Growth factor: Factor used to convert volumes to future years

HPMS: Highway Performance Monitoring System

I/M: Vehicle emissions inspection/maintenance programs are required in certain areas of the country. The programs ensure that vehicle emission controls are in good working order throughout the life of the vehicle. The programs require vehicles to be tested for emissions. Most vehicles that do not pass must be repaired.

LRTP: Long Range Transportation Plan

MOVES: Motor Vehicle Emission Simulator. The latest model EPA has developed to estimate emissions from highway vehicles

MVEB: motor vehicle emissions budget

NAAQS: National Ambient Air Quality Standard

NTD: National Transit Database

Pattern data: Extrapolations of traffic patterns (such as how traffic volume on road segment types varies by time of day, or what kinds of vehicles tend to use a road segment type) from segments with observed data to similar segments

PPSUITE: Post-Processor for Air Quality. A set of programs that estimate speeds and prepares MOVES inputs and processes MOVES outputs

Road Type: Functional code, applied in data management to road segments to identify their type (rural/urban highways, rural/urban arterials, etc.)

RMS: Roadway Management System

SIP: State Implementation Plan

Source Type: One of thirteen vehicle types used in MOVES modeling

TAZ: Traffic Analysis Zone System

TIP: Transportation Improvement Program

VHT: Vehicle hours traveled

VMT: Vehicle miles traveled. In modeling terms, it is the simulated traffic volumes multiplied by link length

VOC: volatile organic compound emissions

ATTACHMENT A

Project List

The following Lebanon County air quality significant highway projects are included in the conformity analysis:

MPMS #	Project Name	Description
Air Quality Significant Projects on 2025-2028 TIP		
106537	PA 72 / Isabel Drive Improvements	This project consists of intersection improvements with the addition of a signal to be coordinated with other signals on the corridor. Improvements will evaluate the need for turning lanes on PA 72 and Isabel Drive. The project location is on PA 72 (Quentin Road) at Isabel Drive in North Cornwall Township, Lebanon County. Additionally, the Isabel and Rt 72 improvements will help to lay foundation for the Rt 72/ Cornwall Road corridor study to be done later upon completion of this and the Wilhelm Ave Intersection Improvements, and will be consistent with current Bike/Ped improvements already in place at other intersections already improved.
116163	PA 343 Seventh Street Improvements	This project consists of safety improvements with a potential roundabout at the intersection of North 7th St (SR 343) and Kochenderfer Road/Kimmerlings Road, also resurfacing on SR 343 from the Lebanon City Line to south of Heffelfinger Road in North Lebanon Township, Lebanon County.
116164	US 422 Cumberland St and Prescott Rd Int	This project consists of safety improvements with a potential roundabout at the intersection of Cumberland Street (SR 422) and Prescott Drive/Prescott Road (SR 1013/SR 2005) in North Lebanon Township and South Lebanon Township, Lebanon County.
Air Quality Significant Projects on LRTP (Consistent with PennDOT's 12-Year Program (TYP))		
No Additional Air Quality Significant Projects		

ATTACHMENT B

Detailed Emission Results*

Annual $PM_{2.5}$ Analysis

**All table values and totals have been estimated from the MOVES detailed output and rounded to 1-2 decimal points. Due to rounding, individual table entries may not add exactly to the total*

Detailed Emission Results for Annual $PM_{2.5}$ Analysis

2025 Annual $PM_{2.5}$ by Road Type

County	Road Type	Annual VMT	Speed (mph)	Emissions (Tons/Year)	
				NOx	$PM_{2.5}$
Lebanon	Off-Network	N/A	N/A	162.72	5.55
	Rural Restricted	484,349,928	64.3	434.49	10.76
	Rural UnRestricted	432,882,363	41.6	152.45	6.14
	Urban Restricted	418,982	65.2	1.53	0.05
	Urban UnRestricted	460,511,353	33.5	150.07	7.12
	Subtotal	*1,378,162,626*		*901.26*	*29.62*
Off-Model Project Emission Benefits				0.00	0.00
Region Total		**1,378,162,626**	**(Kg/Year)**	**901.26** **817,607**	**29.62** **26,874**

2025 Annual $PM_{2.5}$ by Source Type

County	Source Type	Annual VMT	Emissions (Tons/Year)	
			NOx	$PM_{2.5}$
Lebanon	Motorcycle	8,057,588	6.30	0.19
	Passenger Car	527,532,054	36.50	4.11
	Passenger Truck	556,637,014	151.02	7.81
	Light Commercial Truck	65,973,037	29.70	1.29
	Intercity Bus	4,376,755	17.56	0.41
	Transit Bus	3,196,457	12.07	0.21
	School Bus	3,377,635	8.54	0.32
	Refuse Truck	688,983	2.03	0.04
	Single Unit Short-haul Truck	70,780,843	78.45	1.97
	Single Unit Long-haul Truck	4,760,464	4.37	0.11
	Motor Home	2,223,720	8.27	0.30
	Combination Short-haul Truck	25,787,142	87.28	1.73
	Combination Long-haul Truck	104,770,934	459.16	11.14
	Subtotal	*1,378,162,626*	*901.26*	*29.62*
Off-Model Project Emission Benefits			0.00	0.00
Region Total		**1,378,162,626** **(Kg/Year)**	**901.26** **817,607**	**29.62** **26,874**

2025 Annual $PM_{2.5}$ by Emission Process

County	Emission Process	Emissions (Tons/Year)	
		NOx	$PM_{2.5}$
Lebanon	Running Exhaust	786.17	16.10
	Start Exhaust	82.63	3.88
	Brakewear	0.00	4.28
	Tirewear	0.00	2.46
	Evap Permeation	0.00	0.00
	Evap Fuel Vapor Venting	0.00	0.00
	Evap Fuel Leaks	0.00	0.00
	Crankcase Running Exhaust	6.18	2.39
	Crankcase Start Exhaust	0.00	0.03
	Crankcase Extended Idle Exhaust	0.19	0.14
	Extended Idle Exhaust	24.43	0.31
	Auxiliary Power Exhaust	1.64	0.03
	Subtotal	*901.26*	*29.62*
Off-Model Project Emission Benefits		0.00	0.00
Region Total	**(Kg/Year)**	**901.26** **817,607**	**29.62** **26,874**

2035 Annual $PM_{2.5}$ by Road Type

County	Road Type	Annual VMT	Speed (mph)	Emissions (Tons/Year)	
				NOx	$PM_{2.5}$
Lebanon	Off-Network	N/A	N/A	130.87	4.64
	Rural Restricted	591,634,590	64.2	274.73	5.21
	Rural UnRestricted	479,555,190	40.7	88.75	4.04
	Urban Restricted	1,090,662	65.2	1.28	0.05
	Urban UnRestricted	487,719,708	32.3	87.39	5.01
	Subtotal	*1,560,000,149*		*583.02*	*18.94*
Off-Model Project Emission Benefits				0.00	0.00
Region Total		**1,560,000,149**	**(Kg/Year)**	**583.02** **528,911**	**18.94** **17,187**

2035 Annual $PM_{2.5}$ by Source Type

County	Source Type	Annual VMT	Emissions (Tons/Year)	
			NOx	$PM_{2.5}$
Lebanon	Motorcycle	9,035,785	6.96	0.22
	Passenger Car	591,575,913	18.37	4.15
	Passenger Truck	624,217,434	44.68	6.24
	Light Commercial Truck	73,976,948	6.99	0.79
	Intercity Bus	5,376,354	11.83	0.17
	Transit Bus	3,696,992	6.73	0.06
	School Bus	3,909,729	4.77	0.08
	Refuse Truck	758,145	1.59	0.01
	Single Unit Short-haul Truck	84,405,593	65.93	1.14
	Single Unit Long-haul Truck	5,618,748	3.60	0.06
	Motor Home	2,385,078	4.84	0.23
	Combination Short-haul Truck	29,835,388	75.49	1.08
	Combination Long-haul Truck	125,208,042	331.22	4.72
	Subtotal	*1,560,000,149*	*583.02*	*18.94*
Off-Model Project Emission Benefits			0.00	0.00
Region Total		**1,560,000,149** **(Kg/Year)**	**583.02** **528,911**	**18.94** **17,187**

2035 Annual $PM_{2.5}$ by Emission Process

County	Emission Process	Emissions (Tons/Year)	
		NOx	$PM_{2.5}$
Lebanon	Running Exhaust	498.40	6.11
	Start Exhaust	58.31	4.13
	Brakewear	0.00	4.91
	Tirewear	0.00	2.80
	Evap Permeation	0.00	0.00
	Evap Fuel Vapor Venting	0.00	0.00
	Evap Fuel Leaks	0.00	0.00
	Crankcase Running Exhaust	6.90	0.81
	Crankcase Start Exhaust	0.00	0.03
	Crankcase Extended Idle Exhaust	0.17	0.07
	Extended Idle Exhaust	15.57	0.07
	Auxiliary Power Exhaust	3.68	0.01
	Subtotal	*583.02*	*18.94*
Off-Model Project Emission Benefits		0.00	0.00
Region Total	**(Kg/Year)**	**583.02** **528,911**	**18.94** **17,187**

2045 Annual $PM_{2.5}$ by Road Type

County	Road Type	Annual VMT	Speed (mph)	Emissions (Tons/Year)	
				NOx	$PM_{2.5}$
Lebanon	Off-Network	N/A	N/A	139.74	3.48
	Rural Restricted	718,475,653	64.0	296.15	5.26
	Rural UnRestricted	515,394,214	40.0	86.65	3.88
	Urban Restricted	2,018,678	65.2	0.92	0.02
	Urban UnRestricted	540,727,590	31.1	89.72	5.17
	Subtotal	*1,776,616,135*		*613.19*	*17.80*
Off-Model Project Emission Benefits				0.00	0.00
Region Total		**1,776,616,135**	**(Kg/Year)**	**613.19** **556,279**	**17.80** **16,151**

2045 Annual $PM_{2.5}$ by Source Type

County	Source Type	Annual VMT	Emissions (Tons/Year)	
			NOx	$PM_{2.5}$
Lebanon	Motorcycle	10,204,866	7.87	0.24
	Passenger Car	668,115,498	15.17	3.94
	Passenger Truck	704,974,630	33.17	5.44
	Light Commercial Truck	83,554,571	4.78	0.69
	Intercity Bus	6,828,506	13.20	0.11
	Transit Bus	4,146,568	7.01	0.05
	School Bus	4,398,271	4.81	0.07
	Refuse Truck	914,689	1.87	0.01
	Single Unit Short-haul Truck	100,115,055	75.88	1.31
	Single Unit Long-haul Truck	6,635,520	4.13	0.07
	Motor Home	2,837,087	2.44	0.06
	Combination Short-haul Truck	35,137,771	84.31	1.13
	Combination Long-haul Truck	148,753,103	358.56	4.66
	Subtotal	*1,776,616,135*	*613.19*	*17.80*
Off-Model Project Emission Benefits			0.00	0.00
Region Total		**1,776,616,135** **(Kg/Year)**	**613.19** **556,279**	**17.80** **16,151**

2045 Annual $PM_{2.5}$ by Emission Process

County	Emission Process	Emissions (Tons/Year)	
		NOx	$PM_{2.5}$
Lebanon	Running Exhaust	527.23	5.00
	Start Exhaust	57.01	3.09
	Brakewear	0.00	5.64
	Tirewear	0.00	3.21
	Evap Permeation	0.00	0.00
	Evap Fuel Vapor Venting	0.00	0.00
	Evap Fuel Leaks	0.00	0.00
	Crankcase Running Exhaust	7.82	0.72
	Crankcase Start Exhaust	0.00	0.02
	Crankcase Extended Idle Exhaust	0.18	0.07
	Extended Idle Exhaust	16.09	0.06
	Auxiliary Power Exhaust	4.86	0.01
	Subtotal	*613.19*	*17.80*
Off-Model Project Emission Benefits		0.00	0.00
Region Total	**(Kg/Year)**	**613.19** **556,279**	**17.80** **16,151**

2050 Annual $PM_{2.5}$ by Road Type

County	Road Type	Annual VMT	Speed (mph)	Emissions (Tons/Year)	
				NOx	$PM_{2.5}$
Lebanon	Off-Network	N/A	N/A	147.87	3.18
	Rural Restricted	687,229,531	64.0	277.04	4.85
	Rural UnRestricted	505,972,081	38.8	86.45	3.86
	Urban Restricted	104,208,126	62.7	42.93	0.76
	Urban UnRestricted	602,655,273	31.2	98.04	5.59
	Subtotal	*1,900,065,010*		*652.33*	*18.25*
Off-Model Project Emission Benefits				0.00	0.00
Region Total		**1,900,065,010**	**(Kg/Year)**	**652.33** **591,786**	**18.25** **16,554**

2050 Annual $PM_{2.5}$ by Source Type

County	Source Type	Annual VMT	Emissions (Tons/Year)	
			NOx	$PM_{2.5}$
Lebanon	Motorcycle	10,879,040	8.39	0.26
	Passenger Car	712,252,280	15.35	4.08
	Passenger Truck	751,553,690	31.85	5.32
	Light Commercial Truck	89,071,172	4.65	0.69
	Intercity Bus	7,678,653	14.74	0.13
	Transit Bus	4,365,059	7.35	0.06
	School Bus	4,636,985	5.05	0.07
	Refuse Truck	1,010,778	2.07	0.01
	Single Unit Short-haul Truck	108,656,566	82.13	1.42
	Single Unit Long-haul Truck	7,228,012	4.49	0.08
	Motor Home	3,079,080	2.56	0.07
	Combination Short-haul Truck	38,340,484	90.79	1.19
	Combination Long-haul Truck	161,313,210	382.91	4.87
	Subtotal	*1,900,065,010*	*652.33*	*18.25*
Off-Model Project Emission Benefits			0.00	0.00
Region Total		**1,900,065,010 (Kg/Year)**	**652.33** **591,786**	**18.25** **16,554**

2050 Annual $PM_{2.5}$ by Emission Process

County	Emission Process	Emissions (Tons/Year)	
		NOx	$PM_{2.5}$
Lebanon	Running Exhaust	562.60	5.06
	Start Exhaust	58.43	2.78
	Brakewear	0.00	6.08
	Tirewear	0.00	3.44
	Evap Permeation	0.00	0.00
	Evap Fuel Vapor Venting	0.00	0.00
	Evap Fuel Leaks	0.00	0.00
	Crankcase Running Exhaust	8.37	0.74
	Crankcase Start Exhaust	0.00	0.02
	Crankcase Extended Idle Exhaust	0.19	0.07
	Extended Idle Exhaust	17.37	0.06
	Auxiliary Power Exhaust	5.37	0.01
	Subtotal	*652.33*	*18.25*
Off-Model Project Emission Benefits		0.00	0.00
Region Total	**(Kg/Year)**	**652.33** **591,786**	**18.25** **16,554**

ATTACHMENT C

Sample MOVES Data Importer (XML) Input File
and
Run Specification (MRS) Input File

(Sample for 2025 Annual Runs)

MOVES County Data Manager Importer File – Annual Run (MOVESIMPORTER.XML)

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MOVES Run Specification File – Annual Run (MOVESRUN.MRS)

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APPENDIX I

Public Comment Log

APPENDIX I: PUBLIC COMMENT LOG

Date Received	Affiliation	Comment Summary	Disposition
5/13/2024	Unknown	Proposal to author a guest post for the LRTP website about household cleaning.	Comment not relevant to plan. No plan changes made.
5/18/2024	County Resident	Requested inclusion of an Active Transportation Plan.	Comment forwarded to Lebanon County Comprehensive Plan team. No plan changes made.
5/24/2024	Unknown	Proposal to author a guest post for the LRTP website about managing grief.	Comment not relevant to plan. No plan changes made.
5/24/2024	South Lebanon Township	Requested minor revision to a map in the modal analysis section and provided additional detail on an illustrative project.	Map revision completed. Note added to Illustrative Projects list.
5/24/2024	FHWA Pennsylvania Division	Requested multiple minor revisions to plan, including small changes to the transportation funding tables, the addition of a map in the environmental justice section, and addition of the air quality conformity analysis to the appendix.	All revisions completed.
5/24/2024	FTA Region III	Requested addition of Transit Asset Managemnt performance targets and measures and Public Transit Safety performance targets, additional information on transit revenue sources, and addition of any relevant transportation control measures to the project list.	Performance targets/measures revisions completed. Transit revnue sources clarified. No relevant TCMs exist.
6/9/2024	North Annville Township	Requested LRTP to include population projections, crash analysis, and to address truck traffic concerns on specific road segments in the county. Population projections and addressing specific truck traffic concerns are outside of the scope of this plan.	Crash analysis is included in the plan. No plan changes made.
6/10/2024	City of Lebanon	Question about source for two illustrative projects.	Question answered. No plan changes made.