ROADWAY EVALUATION

East Union Township SCHUYLKILL COUNTY, PENNSYLVANIA

PREPARED FOR

East Union Township Supervisors 10 EAST ELM STREET SHEPPTON, PA 18248

March 2024

PROJECT NO. 32098.02



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TABLE OF CONTENTS

PURPOSE OF REPORT	.1
BACKGROUND	.1
ROADWAY EVALUATION	.1
ROADWAY EVALUATION CONCLUSION	.2
ROAD PROJECT RECOMMENDATIONS	.2
LIQUID FUELS ROADWAY REQUIREMENTS	.3
UTILITY CUT AND EXCAVATION ORDINANCE RECOMMENDATIONS	.3
POTENTIAL FUNDING SOURCES	.3
COST ESTIMATE SUMMARY	.4

APPENDIX

OVERVIEW OF LOCAL ROADWAYS PHOTOS OF EXISTING CONDITIONS REPAIR MAPS COST ESTIMATE BREAKDOWN 2ND BOULEVARD 33' ROW CONFRIMATION



PURPOSE OF REPORT

The purpose of this report is to provide the East Union Township Supervisors with an assessment of roadways in the Township and to identify and prioritize recommended roadway improvements. This report also provides costs and potential funding sources for the repairs.

BACKGROUND

As a result of discussions with representatives of East Union Township Supervisors, it was determined that roadways listed below within East Union needed evaluation. These roadways consist of mostly dirt and minimally paved roads that need improvements to improve rideability and to reduce yearly maintenance costs. All roads were visited to evaluate existing conditions and identify potential pavement repairs.

ROADWAY EVALUATION

The sections of roadways that were evaluated and our observations of each are as follows. An overview of the indicated roads and photos of existing conditions are included in the appendix.

- 1. <u>Portion of Elm Street.</u> (350 LF x 20 FT) This roadway is a minimally paved road in need of a durable pavement surface to improve rideability and reduce yearly maintenance costs.
- 2. <u>Pole Road Patch (T-876)</u> (600 SF 30 FT x 20 FT) This roadway needs a patch due to a drainage cross pipe installation.
- Along Green Mountain Road (T-878) at Walnut Street (1800 SF Two areas of 30 FT x 30 FT each) These intersections require milling & overlay to improve rideability and reduce yearly maintenance costs.
- 4. <u>Old Mill Road (T-454) from Bridge to Green Mountain Road</u> (2250 LF x 18 FT) This roadway is a minimally paved road in need of a durable pavement surface and drainage to improve rideability and reduce yearly maintenance costs.
- 5. <u>2nd Boulevard (T-870) from Pole Road to Park Avenue</u> (1400 LF x 18 FT) This roadway is a minimally paved road in need of a durable pavement surface and drainage to improve rideability and reduce yearly maintenance costs.
- 6. <u>Park Avenue (T-867)</u> (400 LF x 18 FT) This roadway is a minimally paved road in need of a durable pavement surface to improve rideability and reduce yearly maintenance costs.
- Spruce Street (T-872) from 2nd Boulevard to 4th Boulevard (400 LF x 18 FT) This roadway is a minimally paved road in need of a durable pavement surface to improve rideability and reduce yearly maintenance costs.
- 8. <u>Pine Street (T-855) from SR 924 to 4th Boulevard</u> (200 LF x 18 FT) This roadway is a minimally paved road in need of a durable pavement surface to improve rideability and reduce yearly maintenance costs.



ROADWAY EVALUATION CONCLUSION

The observations in this report provide a comprehensive overview of the conditions of the indicated roadways within East Union. Recommendations are intended to provide solutions to many recurring problems along the roadway. This report can be utilized for East Union Township Supervisors' decision-making process on roadway improvements.

ROAD PROJECT RECOMMENDATIONS

The roadways indicated below have been prioritized by their need for improvements. All improvements to meet requirements for liquid fuels roadway requirements. Suggested recommendations are as follows:

- Portion of Elm Street. (350 LF x 20 FT) Full Depth Pavement Replacement: 6" Subbase, 4" Base, 1 ½" Overlay. Confirmation of a 33' Right-of-Way with a 80' Diameter cul-de-sac turn-around prior to the Township Building parking lot.
- Pole Road Patch (T-876) (600 SF 30 FT x 20 FT) Full Depth Pavement Replacement: 6" Subbase, 4" Base, 1 ¹/₂" Overlay (Confirmed 33' ROW as shown on the attached liquid fuels map)
- Along Green Mountain Road (T-878) at Walnut Street (1800 SF Two areas of 30 FT x 30 FT each) Mill & Overlay. (Confirmed 33' ROW as shown on the attached liquid fuels map)
- 4. Old Mill Road (T-454) from Bridge to Green Mountain Road (2250 LF x 18 FT) Full Depth Pavement Replacement (18' wide): 6" Subbase, 4" Base, 1 ½" Overlay and Installation of inlets, pipes, and swale improvements (Confirmed 33' ROW as shown on the attached liquid fuels map)
- 5. <u>2nd Boulevard (T-870) from Pole Road to Park Avenue</u> (1400 LF x 18 FT) Milling, Binder Course, & Overlay and Installation of inlets and pipes. (Confirmed 33' ROW as shown on the attached liquid fuels map)
- 6. <u>Park Avenue (T-867)</u> (400 LF x 18 FT) Milling, Binder Course, & Overlay (Confirmed 33' ROW as shown on the attached liquid fuels map)
- Spruce Street (T-872) from 2nd Boulevard to 4th Boulevard (400 LF x 18 FT) Milling, Binder Course, & Overlay (Confirmed 33' ROW as shown on the attached liquid fuels map)
- 8. <u>Pine Street (T-855) from SR 924 to 4th Boulevard</u> (200 LF x 18 FT) Milling, Binder Course, & Overlay (Confirmed 33' ROW and on liquid fuels map)

Proposed roadway improvement repair areas shown on aerials and cost estimates are included in the appendix. A Pennsylvania One-Call ticket will be completed to identify any utilities in the evaluated locations once the Supervisors authorize the project. Responses from utility companies and a notification letter will be sent to all utilities included in the appendix.



LIQUID FUELS ROADWAY REQUIREMENTS

To qualify for Liquid Fuels Funds, roadways must meet the following notable requirements:

- 33' dedicated right-of-way (ROW) by Ordinance
- 16' cartway paved or unpaved
- 80' diameter cul-de-sac at dead ends
- Connection to another public roadway

UTILITY CUT AND EXCAVATION ORDINANCE RECOMMENDATIONS

Utilities will be contacted upon approval of the project by East Union Township Supervisors.

POTENTIAL FUNDING SOURCES

Due to the scope of work described in the project recommendations, it is anticipated that outside sources of funding will be required. These may include:

- CFA Multimodal Transportation Fund These funds are administered by the PA-DCED. The grant award ranges from \$100,000 to \$3 million. A 30% local match is typically required. Applications are due between March 1st and July 31st of each year.
- 2. **PennDOT Multimodal Transportation Fund** These funds are administered separately from the CFA MTF by PennDOT. The grant award ranges from \$100,000 to \$3 million. A 30% local match is required and may include general funds, liquid fuels tax, Act 13 impact fees, and other statutorily allocated municipal fees/taxes. Applications are usually due in October of each year.
- 3. **Transportation Alternatives** This program provides funding for sidewalks, walking lanes, streetscapes, and other projects defined as transportation alternatives. It is not applicable to roadway construction. Grant awards range from \$50,000 to \$1 million. Application deadline varies from year to year.
- 4. **Other Small Programs** Various annual programs announced each year. These funding sources provide small awards and are typically not practical for large scale projects.
- 5. **PIB Loan** Pennsylvania Infrastructure Bank Loan. This is a low interest loan that can be paid back over a period of 10 years with Liquid Fuels funds.



COST ESTIMATE SUMMARY

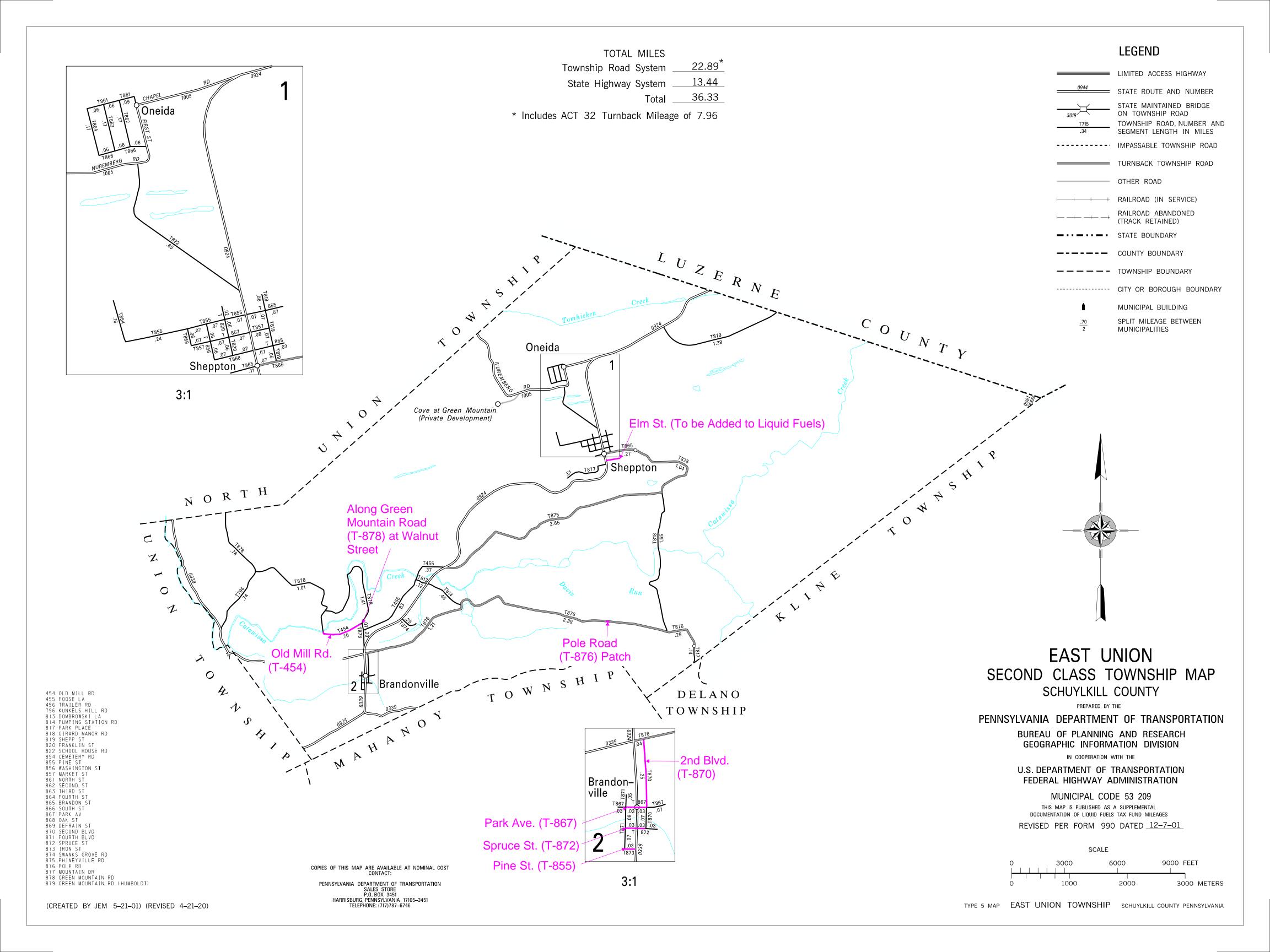
The following table provides an overview of the total cost for each roadway. Detailed cost breakdowns are provided in the appendix.

SUMMARY OF OV	ERALL COSTS
Elm Street	\$44,000.00
Pole Road	\$6,000.00
Along Green Mountain Road at Walnut Street	\$7,000.00
Old Mill Road	\$375,000.00
2 nd Boulevard	\$228,000.00
Park Avenue	\$36,000.00
Spruce Street	\$36,000.00
Pine Street	\$18,000.00
TOTAL	\$750,000.00



OVERVIEW OF ROADWAYS





PHOTOS OF EXISTING CONDITIONS





East Elm Street looking East from SR 924





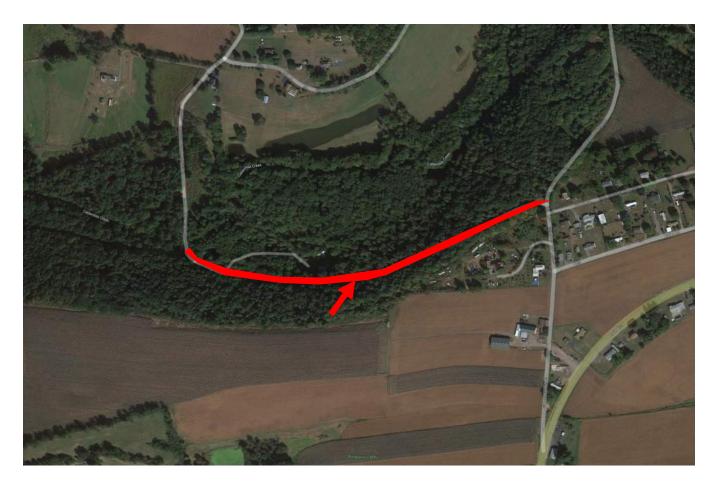
Pole Road





Along Green Mountain Road at Walnut Street





Old Mill Road





2nd Boulevard looking South from Pole Road





Park Avenue looking West from SR 924 (other side similar)





Spruce Street looking West from SR 924 (other side similar)



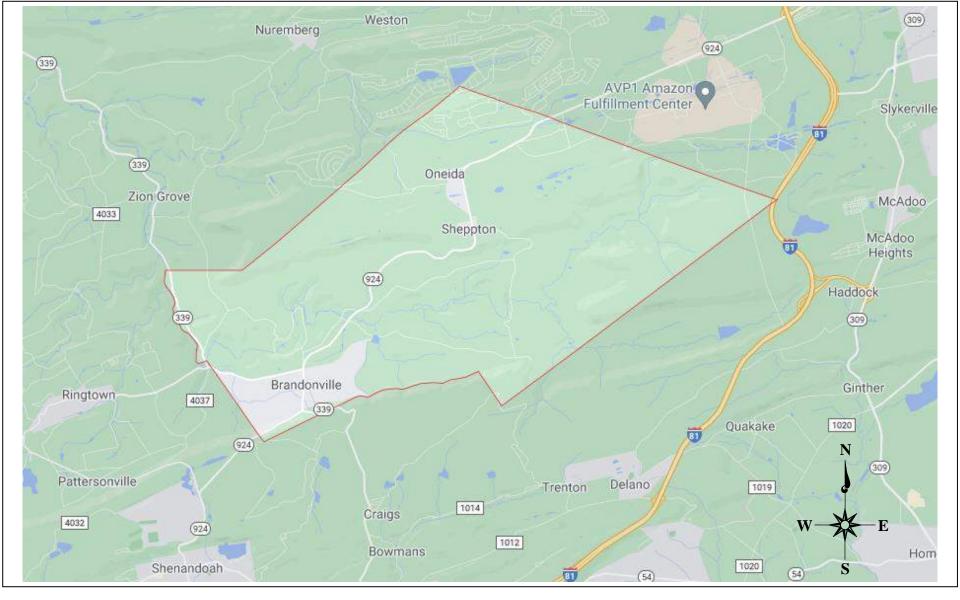


Pine Street looking west from SR 924



REPAIR MAPS





East Union Township, Schuylkill County, Pennsylvania





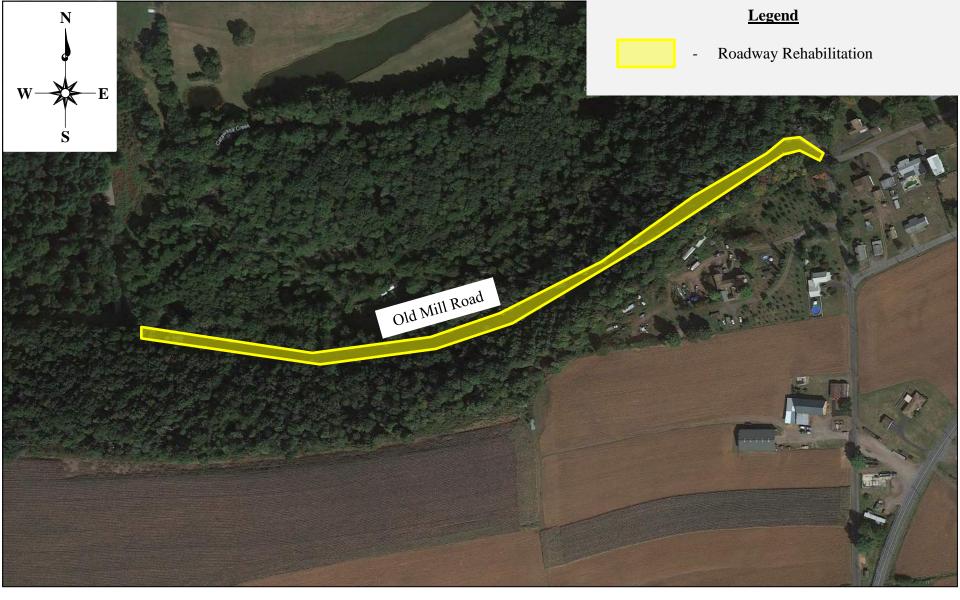




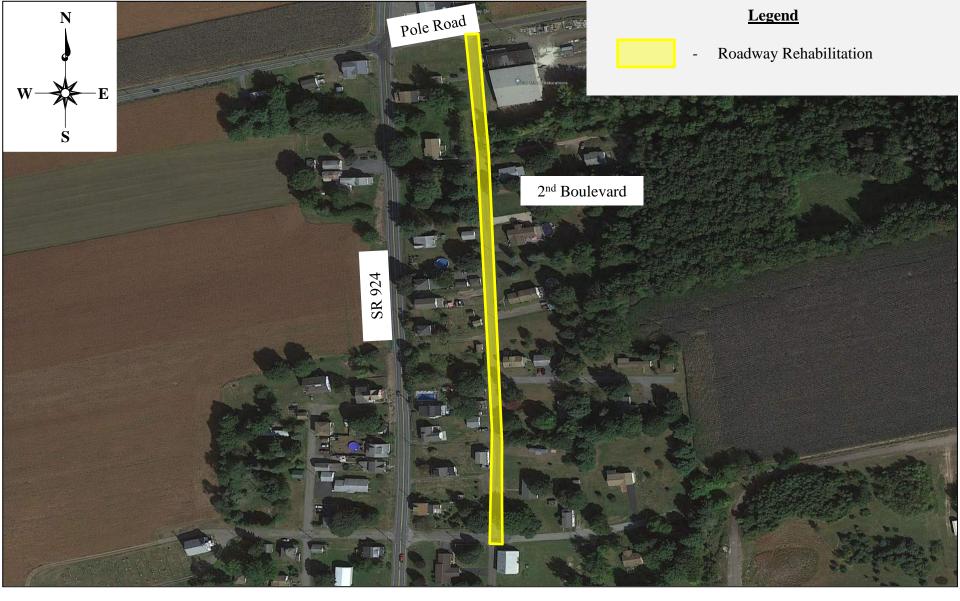


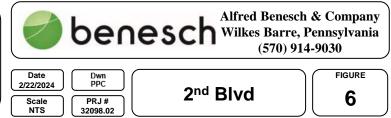


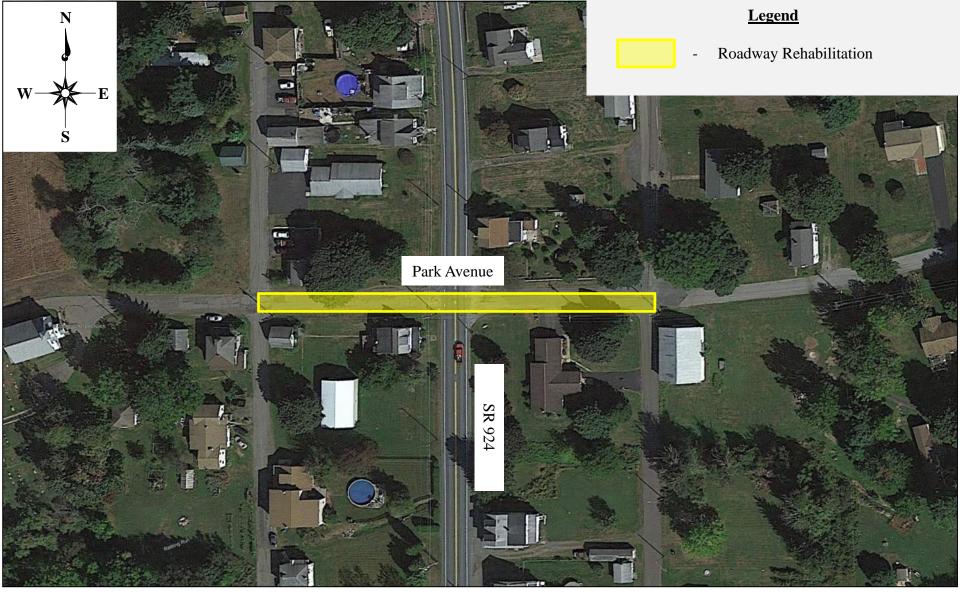




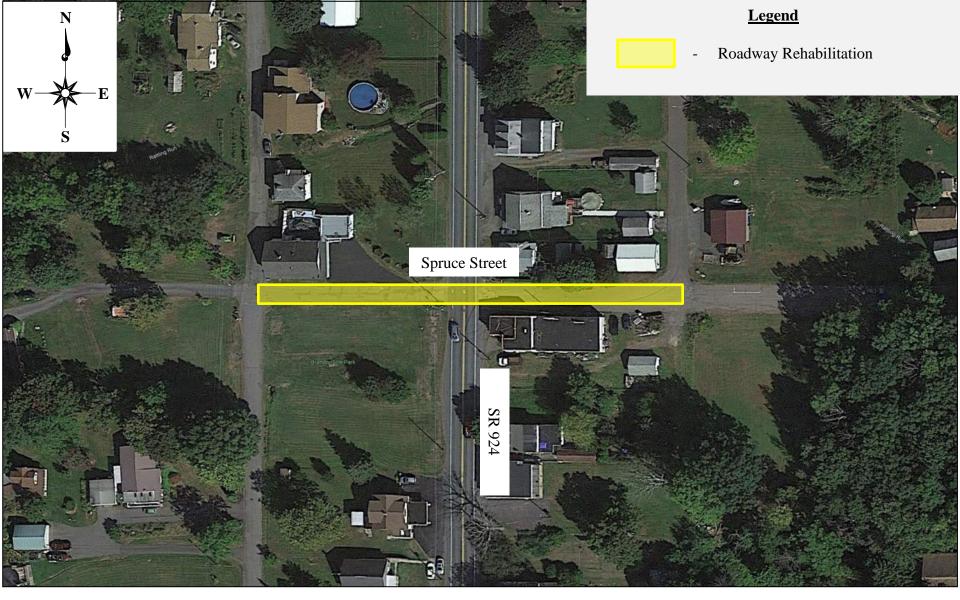


















COST ESTIMATE BREAKDOWN



SUMMARY OF OVERALL COSTS									
Elm Street	\$ 44,000.00								
Pole Road	\$ 6,000.00								
Intersection of Walnut St. & Green St.	\$ 7,000.00								
Old Mill Road	\$ 375,000.00								
2nd Boulevard	\$ 228,000.00								
Park Avenue	\$ 36,000.00								
Spruce Street	\$ 36,000.00								
Pine Street	\$ 18,000.00								
Total	\$ 750,000.00								
	-								

Say \$750,000.00

	1. Portion of Elm Street (350 LF x 20 FT) and 40' Radius Cul-de-sac										
Item No.	Bid	Unit	Item Title	U	nit Price (\$)	Tot	al Amount (\$)				
	453	453	453	453	453	453	3 SY Subbase - 6" Depth	\$	20.00	\$	9,054.81
	453	SY	Base - 4" Depth	\$	25.00	\$	11,318.52				
	964	SY	Overlay - 1 1/2" Depth	\$	14.00	\$	13,493.93				
	964	SY	Class 1 Excavation	\$	4.00	\$	3,855.41				
						\$	-				
						\$	-				
						\$	-				
						\$	-				
						\$	-				
						\$	-				
						\$	-				
			Subtotal	\$			37,722.67				
			Engineering 10%	\$			3,772.27				
			Inspection 5%	\$			1,886.13				
			2024 COST ESTIMATE	\$			43,381.07				
					SAY	\$	44,000.00				

SAY \$ 44,000.00

		2. Pole Road Patch (600 SF - 30FT x 20FT)									
Item No.	Bid	Unit	Item Title	Unit	Price (\$)	Tota	l Amount (\$)				
	67	SY	Subbase - 6" Depth	\$	20.00	\$	1,666.67				
	67	SY	Base - 4" Depth	\$	25.00	\$	1,666.67				
	67	SY	Overlay - 1 1/2" Depth	\$	14.00	\$	933.33				
	67	SY	Class 1 Excavation	\$	10.00	\$	666.67				
						\$	-				
						\$	-				
						\$	-				
						\$	-				
						\$	-				
			Subtotal	\$			4,933.33				
			Engineering 10%	\$			493.33				
			Inspection 5%	\$			246.67				
			2024 COST ESTIMATE	\$			5,673.33				

SAY \$ 6,000.00

	3. Along Green Mountain Road at Walnut Street (1800 SF - Two Areas 30 FT x 30 FT each)									
Item No.	Bid	Unit	Item Title	Uni	t Price (\$)	Tota	l Amount (\$)			
	200	SY	Milling - 2" Depth	\$	8.00	\$	1,600.00			
	200	SY	Overlay - 2" Depth	\$	20.00	\$	4,000.00			
						\$	-			
						\$	-			
						\$	-			
						\$	-			
						\$	-			
						\$	-			
						\$	-			
			Subtotal	\$			5,600.00			
			Engineering 10%	\$			560.00			
			Inspection 5%	\$			280.00			
			2024 COST ESTIMATE	\$			6,440.00			

SAY \$ 7,000.00

	4. Old Mill Road from Bridge to Green Mountain Road (2250 LF x 18 FT)									
Item No.	Bid	Unit	Unit Item Title	Un	nit Price (\$)	To	al Amount (\$)			
	4500	SY	Milling - 3" Depth	\$	9.00	\$	40,500.00			
	4500	SY	Subbase - 4" Depth	\$	16.00	\$	72,000.00			
	4500	SY	Base - 4" Depth	\$	25.00	\$	112,500.00			
	4500	SY	Overlay - 1 1/2" Depth	\$	14.00	\$	63,000.00			
	300	CY	Rock, Class R-4 - Swales	\$	65.00	\$	19,500.00			
	6	CY	Rock, Class R-5 - Outlets	\$	70.00	\$	420.00			
	3	EACH	Inlets	\$	3,500.00	\$	10,500.00			
	150	LF	18" Plastic Pipe	\$	50.00	\$	7,500.00			
						\$	-			
						\$	-			
			Subtotal	\$			325,920.00			
			Engineering 10%	\$			32,592.00			
			Inspection 5%	\$			16,296.00			
			2024 COST ESTIMATE	\$			374,808.0			
					C A M	•	255 000 0			

SAY \$ 375,000.00

		5. 2nd	Boulevard from Pole Road to Park Avenue (1400	LF	x 18 FT)			
Item No.	Bid	Unit	Item Title	U	nit Price (\$)	Total Amount (\$)		
	2800	SY	Milling - 1 1/2" Depth	\$	7.00	\$	19,600.00	
	2800	SY	Binder Course - 2" Depth	\$	18.00	\$	50,400.00	
	2800	SY	Overlay - 1 1/2" Depth	\$	14.00	\$	39,200.00	
	6	EACH	Inlets	\$	3,500.00	\$	21,000.00	
	1500	LF	15" Plastic Pipe	\$	45.00	\$	67,500.00	
						\$	-	
						\$	-	
						\$	-	
						\$	-	
			Subtotal	\$			197,700.00	
			Engineering 10%	\$			19,770.00	
			Inspection 5%	\$			9,885.00	
			2024 COST ESTIMATE	\$			227,355.00	
							<i>.</i>	

SAY \$ 228,000.00

	6. Park Avenue from 2nd Boulevard to 4th Boulevard (400 LF x 18 FT)										
Item No.	Bid	Unit	Item Title	Uni	t Price (\$)	Tota	al Amount (\$)				
	800	SY	Milling - 1 1/2" Depth	\$	7.00	\$	5,600.00				
	800	SY	Binder Course - 2" Depth	\$	18.00	\$	14,400.00				
	800	SY	Overlay - 1 1/2" Depth	\$	14.00	\$	11,200.00				
						\$	-				
						\$	-				
						\$	-				
						\$	-				
						\$	-				
						\$	-				
			Subtotal	\$			31,200.00				
			Engineering 10%	\$			3,120.00				
			Inspection 5%	\$			1,560.00				
			2024 COST ESTIMATE	\$			35,880.00				

SAY \$ 36,000.00

	7. Spruce Street from 2nd Boulevard to 4th Boulevard (400 LF x 18 FT)										
Item No.	Bid	Unit	Item Title	Uni	t Price (\$)	Tota	al Amount (\$)				
	800	SY	Milling - 1 1/2" Depth	\$	7.00	\$	5,600.00				
	800	SY	Binder Course - 2" Depth	\$	18.00	\$	14,400.00				
	800	SY	Overlay - 1 1/2" Depth	\$	14.00	\$	11,200.00				
						\$	-				
						\$	-				
						\$	-				
						\$	-				
						\$	-				
			Subtotal	\$			31,200.00				
			Engineering 10%	\$			3,120.00				
			Inspection 5%	\$			1,560.00				
			2024 COST ESTIMATE	\$			35,880.00				

SAY \$ 36,000.00

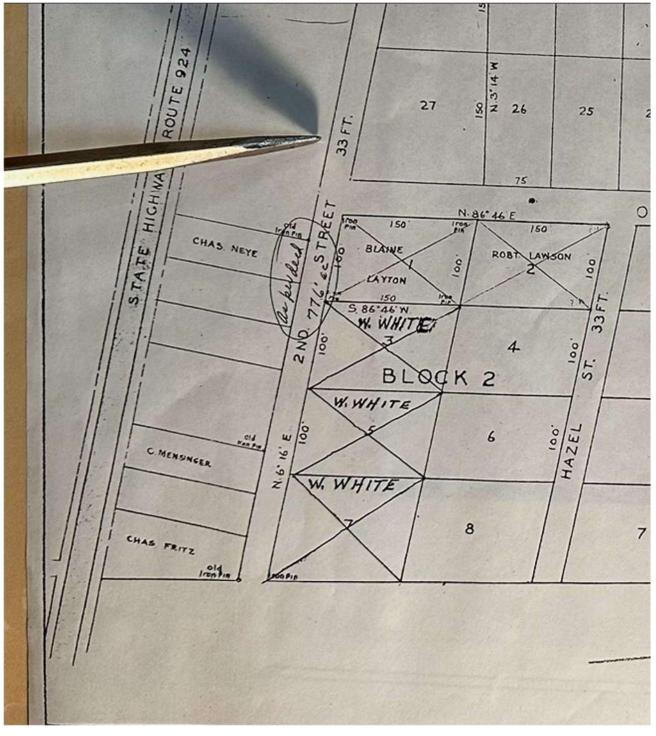
	8. Pine Street from SR 924 to 4th Boulevard (200 LF x 18 FT)									
Item No.	Bid	Unit	Unit Item Title	Item Title	Uni	t Price (\$)	Total Amount (\$)			
	400	SY	Milling - 1 1/2" Depth	\$	7.00	\$	2,800.00			
	400	SY	Binder Course - 2" Depth	\$	18.00	\$	7,200.00			
	400	SY	Overlay - 1 1/2" Depth	\$	14.00	\$	5,600.00			
						\$	-			
						\$	-			
						\$	-			
						\$	-			
						\$	-			
						\$	-			
			Subtotal	\$			15,600.00			
			Engineering 10%	\$			1,560.00			
			Inspection 5%	\$			780.00			
			2024 COST ESTIMATE	\$			17,940.00			

SAY \$ 18,000.00



East Union Township | Roadway Evaluation Report | 17

2nd BOULEVARD 33' RIGHT-OF-WAY CONFIRMATION



2ND BOULEVARD 33' RIGHT-OF-WAY CONFIRMATION

Project Impacts

10 Congestion Reduction and Environmental Impacts

Improvements to roads will create a smoother driving experience which will lead to a decrease in gas consumption and greenhouse gas emissions. The decrease in greenhouse gas emissions will be present for as long into the future as the roadway improvements are functional, compounding the environmental benefits year after year. These improvements will also increase the capacity of each road, decreasing congestion.

Project Impacts

11 Safety Benefits

The proposed improvements will provide better rideability along several roads leading to safer travel. The improved durability of the impacted roads will decrease the occurrences of deterioration, increasing the ease of travel. These improvements will also accommodate improved traffic flow, reducing the number of crashes.

Project Impacts

12 Economic Benefits

This project will create about 15 short term jobs in the township. The Township will save on yearly maintenance costs caused by the lack of adequate paving on several roadways. The improved infrastructure will improve the circumstances for local businesses.