Roadway Sufficiency Analysis and Transportation Capital Improvement Plan

Fairview Township, York County, PA




Prepared by

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Introduction

Overview

This *Roadway Sufficiency Analysis* has been prepared in accordance with the requirements set forth in Pennsylvania Act 209 on behalf of Fairview Township in York County, Pennsylvania. Pennsylvania Act 209 was signed into law effective December 19, 1990. It amends the Pennsylvania Municipalities Code (Act 247 of 1968, as amended) to permit municipalities to assess transportation impact fees on new development within their boundaries, provided they have adopted a municipal transportation impact fee ordinance in accordance with the procedures set forth in the Act.

Impact fees under Act 209 generally may only be used for those costs incurred for improvements designated in the adopted transportation capital improvements plan of the municipality that are attributable to new development. The impact fees cannot be used for municipal, non-transportation-related capital improvements; for the repair, maintenance, or operation of existing or new municipal transportation capital improvements; or for the upgrade or replacement of existing municipal transportation capital improvements due to operational or safety deficiencies not related to new development. The Act specifically and only applies to off-site transportation capital improvements attributable to new development; it neither applies to, nor restricts the procedures or powers of the municipality to require on-site transportation improvements to remedy impacts of new development, nor is it intended to replace the municipality's ordinance requirements for submission of traffic impact studies.

All appendices supporting the *Roadway Sufficiency Analysis* referenced in this report are contained in a separate bound document entitled *Fairview Township Act 209 Transportation Impact Fee Study Technical Appendices*, dated May 2015.

Process

The process that Fairview Township has undertaken includes the completion of the necessary milestones pursuant to the Act 209 legislation, as follows:

1. Appointment of a Transportation Advisory Committee (also referred to as a Traffic Impact Fee Advisory Committee) and designation of the geographic area(s) of the municipality that will be subject to the transportation impact fee ordinance. The meeting minutes of the Transportation Advisory Committee are included in **Appendix A**. The Transportation Advisory Committee consisted of the following members appointed by the Township Board of Supervisors:

Anne Anderson	Michael Manning
Dan Alderman	Michael Martin
David Beinhower	Michael Mehaffey
Roy Cordrey	Mark Shugg
Kevin Gorman	John Wesley
David Guy	

2. Development and adoption of land use assumptions within the Township and the designated geographic areas known as the Transportation Service Areas (TSAs), which together with existing development are the subject of a roadway sufficiency analysis and development of a transportation capital improvement plan.

3. Completion and approval of a roadway sufficiency analysis for each Transportation Service Area, identifying traffic deficiencies and needed improvements attributable to existing traffic, future traffic not originating from within the service area (i.e., pass-through traffic), and future traffic originating from new development within the service area for a preferred level(s) of service in terms of desired traffic operations during the designated peak hour of study.

4. Development and adoption of a transportation capital improvement plan, including costs, implementation priorities, and funding sources, specifically and separately addressing improvements required to remedy:

    a. current traffic deficiencies resulting from **existing** traffic volumes and capacity limitations;

    b. traffic deficiencies attributable to future **pass-through** traffic after existing deficiencies have been remedied; and

    c. traffic deficiencies attributable to expected **new development** within the service area after pass-through traffic and after existing deficiencies have been remedied.

5. Adoption of a Transportation Impact Fee Ordinance based on the total cost of identified transportation improvements attributable to **new development** within the Transportation Service Area to be assessed on a "per trip" basis.

Act 209 requires a minimum future planning horizon of five years. A 10-year planning horizon has been selected for the purpose of this analysis, and the future year 2024 will be considered the design year. However, this document is not a static, "one-time" effort, as the Act 209 legislation has provisions for periodic updates of the roadway sufficiency analysis, capital improvement plan, and impact fees as changes in the land use assumptions, transportation improvement needs, or funding conditions occur.

Land Use Assumptions

As required by Act 209, the Fairview Township Transportation Advisory Committee approved the Fairview Township *Land Use Assumptions Report,* dated July 17, 2014, as prepared by RETTEW Associates, at a public hearing on December 1, 2014. Subsequently, the Board of

Supervisors adopted the *Land Use Assumptions Report* by resolution on December 1, 2014, as required by Act 209. A copy of the *Land Use Assumptions Report* is provided in **Appendix B**.

The *Land Use Assumptions Report* identifies the anticipated long-term development full build-out over within Fairview Township, as well as the projected short-term 2024 build-out. The projected short-term 2024 build-out, which is the basis of this analysis, is summarized below in **Table 1**.

Table 1. Land Use Assumptions Report 2024 Build-Out Summary

Land Use Classification	TSA 1	TSA 2	TSA 3
Residential	639 dwelling units	165 dwelling units	141 dwelling units
Non-Residential	1,742,400	1,095,720	N/A

Existing Transportation Network

This section includes a designation of the roadways and intersections selected to be evaluated as part of this *Roadway Sufficiency Analysis*, as well as an inventory of physical and operational characteristics of the existing Township transportation system required for the completion of the *Roadway Sufficiency Analysis*. This section also delineates the Transportation Service Areas required by the Act 209 legislation.

Transportation Service Areas

Act 209 requires the establishment of specific study boundaries, or transportation service areas, for evaluation and application of transportation impact fees. By law, each transportation service area is required to be completely contiguous and is limited to a maximum size of seven square miles. Moreover, traffic impact fees for each transportation service area are applicable only to development located within that respective service area, and therefore, development traffic from one service area is considered pass-through traffic within the other service area(s). Further explanation of pass-through and development traffic will be provided in subsequent sections.

The Transportation Advisory Committee established three transportation service areas within Fairview Township in accordance with the requirements of Act 209, and they are hereafter referred to as Transportation Service Area 1, Transportation Service Area 2, and Transportation Service Area 3. Each of the contiguous transportation service areas measures less than the maximum seven square miles required by the Act 209 legislation. A more definitive delineation of the service area boundaries is included in Map 1 of Appendix B.

Transportation Service Area 1

Transportation Service Area 1 (TSA 1) generally consists of the northwestern area of the Township. The twenty (20) study area intersections located within the approximate 6.9 square mile service area are defined in **Table 3** and shown in **Figure 1A** and **1B**.

Transportation Service Area 2

Transportation Service Area 2 (TSA 2) generally consists of the northeastern area of the Township. The twelve (12) study area intersections located within the approximate 7.0 square mile service area are defined in Table 3 and shown in **Figure 2**.

Transportation Service Area 3

Transportation Service Area 3 (TSA 3) generally consists of the southern portion of the Township. The two (2) study area intersections located within the approximately 7.0 square mile service area are defined in Table 3 and shown in **Figure 3.**

Roadway Characteristics

The Fairview Township roadway system, as illustrated in the Fairview Township Official Road Map (Appendix B), consists primarily of two-lane, undivided roadways. Many of the roadways in the Township are two-lane, suburban and rural roads. Major regional access to the Township is provided via Interstate 83 and Interstate 76 (Pennsylvania Turnpike). Old York Road is a minor arterial providing regional access to the north/south in eastern Fairview Township. Cedars Road and Lewisberry Road, also minor arterials, provide regional access to the west and south, respectively in western Fairview Township. Fishing Creek Road and Wyndamere Road, also minor arterials, provide regional access east/west in central Fairview Township. The operating characteristics of each of the major study roadways are summarized as shown in **Table 2**.

Table 2. Existing Transportation Network Summary

Roadway	Roadway Classification [1]	Roadway Ownership [2]	Posted Speed Limit (mph)
Lewisberry Road	Minor Arterial	State	35/40/55
Cedars Road	Minor Arterial	State	35/40
Old York Road	Minor Arterial/Major Collector	State	40/45
Fishing Creek Road	Minor Arterial	State	35
Wyndamere Road	Minor Arterial	State	35/40
Old Forge Road	Major Collector	State	35
Spanglers Mill Road	Major Collector	State	40
Limekiln Road	Major Collector	Township	25/30/35
Valley Road	Major Collector	State	40
Ridge Road	Major Collector	State/Township	35
Nauvoo Road	Minor Collector	State	40

(1) Based on Map 14 of the *Fairview Township Comprehensive Plan* per LUAR in Appendix B.
(2) See Figure 1A, 1B, 2, and 3 for numerical state roadway designations.

Several other Township roadways also comprise the transportation roadway network of the Township; however, these roadways are generally classified as local roadways that provide access to the arterials and collector roadways, but limited accessibility through the Township. The *Fairview Township Comprehensive Plan* and *Land Use Assumptions Report* provide a further description of the existing Township roadway network. In particular, Map 14 in the *Fairview Township Comprehensive Plan* depicts the roadway classification and Map 1 in the *Land Use Assumptions Report* shows the boundaries for the three TSAs.

The following roadway segments were specifically designated for evaluation as part of this Act 209 Study:

- Wyndamere Road near I-83
- Lewisberry Road near I-83
- Fishing Creek Road near I-83
- Limekiln Road near I-83

Thirty-four (34) study intersections have been selected by the Township to be evaluated and included in the *Roadway Sufficiency Analysis* and *Capital Improvement Plan*, and include the following intersections, as indicated in **Table 3** and shown in Figures 1A, 1B, and 2 and 3**:**

Table 3. Study Intersections

ID No.	TSA	Intersection	Current Traffic Control
1	1	Old York Rd (SR 1003) & Ross Ave (SR 1002)/Meadowbrook Rd	Traffic Signal
2	1	Old York Rd (SR 1003) & Airport Rd	Traffic Signal
3	1	Limekiln Rd & Poplar Rd (SR 1001)	Stop Sign
4	1	I-83 NB & Limekiln Rd & Sheraton Dr	Traffic Signal
5	1	Lewisberry Rd (SR 114) & Poplar Rd (SR 1001)	Stop Sign
6	1	Old York Road (SR 1003) & Old Depot Rd	Stop Sign
7	1	Limekiln Rd & I-83 SB	Stop Sign
8	1	Lewisberry Rd (SR 114) & Gaumer Rd	Stop Sign
9	1	Greenlane Dr & Limekiln Rd	Stop Sign
10	1	I-83 SB & Lewisberry Rd (SR 114)	Stop Sign
11	1	Limekiln Rd & Spanglers Mill Rd (SR 4027)	Stop Sign
12	1	Lewisberry Rd (SR 114) & Stetler Rd	Stop Sign
13	1	Shauffnertown Rd & Spanglers Mill Rd (SR 4027)	Stop Sign
14	1	I-83 SB & Pleasant View Rd	Stop Sign
15	1	Shauffnertown Rd & Old Forge Rd (SR 4020) & Rudytown Rd	Stop Sign
16	1	Old Stage Rd (SR 4025) & Old Forge Rd (SR 4020)	Stop Sign
17	1	Lewisberry Rd (SR 114)/Ironstone Rd & Fishing Creek Rd (SR 262)	Stop Sign
18	1	Lewisberry Rd (SR 114/SR 382) & Cedars Rd (SR 114)	Stop Sign
19	1	Cedars Rd (SR 114) & Nauvoo Rd (SR 4029) & Oak Hill Rd	Stop Sign
20	1	Nauvoo Rd (SR 4029) & Lewisberry Rd (SR 382)	Stop Sign
21	2	Shuey Rd & Pleasant View Road	Stop Sign
22	2	Fishing Creek Rd (SR 262) & Pleasant View Road	Stop Sign
23	2	Fishing Creek Rd (SR 262) & I-83 SB/School Dr	Traffic Signal
24	2	Fishing Creek Rd (SR 262) & I-83 NB & Locust Rd	Stop Sign
25	2	Old York Rd (SR 262/1003) & Fishing Creek Rd (SR 262)	Traffic Signal
26	2	Valley Rd (SR 262) & Beinhower Rd	Stop Sign
27	2	I-83 NB/Salem Rd (SR 1007) & Wyndamere Rd (SR 177)	Stop Sign
28	2	Wyndamere Rd (SR 177) & Lowther Rd	Stop Sign
29	2	Wyndamere Rd (SR 177) & Yorktown Rd (SR 4007)/Industrial Dr	Traffic Signal
30	2	I-83 SB & Yorktown Rd (SR 4007)	Stop Sign
31	2	Old York Road & Beinhower Rd	Stop Sign
32	2	Wyndamere Rd (SR 177) & Potts Hill Rd (SR 392) & Ridge Rd	Stop Sign
33	3	Pinetown Rd (SR 4024) and Rossville Rd (SR 177)	Stop Sign
34	3	Pinetown Rd (SR 4024) & Moores Mountain Rd (SR 4031)	Stop Sign

Existing Traffic Volumes

Traffic operating conditions are influenced by the relationships between traffic volumes and the service capacities of the roadways or intersections. In order to evaluate the existing conditions on area roadways, manual turning movement traffic counts were conducted at each of the 34 study intersections during the weekday afternoon (4:00 PM to 6:00 PM) peak periods. The actual traffic counts are provided in **Appendix C**.

The traffic counts completed in March and April 2014, and this traffic count/volume data should be considered the baseline by the Township for determining new development or redevelopment's effect on the study roadway network, based upon the vacancy/occupancy levels of each property at the time of the study. These traffic counts were tabulated by fifteen-minute periods to establish the four highest consecutive 15-minute periods, which constitute the weekday afternoon peak hour, and serve as the basis for this analysis. It is noted that the Transportation Advisory Committee has selected the weekday afternoon peak hour as the basis of this *Roadway Sufficiency Analysis*, and as such, Figures 1A, 1B, 2 and 3 illustrate the 2014 existing weekday afternoon peak hour traffic volumes at the study area intersections.

Additionally, 24-hour Automatic Traffic Recorder (ATR) counts were conducted at numerous locations during May and June 2014 to determine the traffic volumes typically entering and exiting the Township along the major study roadways, as well as to establish current traffic patterns along the area roadways. This data was also supplemented with daily traffic volume data on PennDOT's iTMS website. The 2014 average daily traffic volumes are summarized in **Figure 10**, and the detailed ATR count data is provided in **Appendix C**. The average daily traffic volumes were obtained at the following locations:

1. Spanglers Mill Rd (SR 4027) near northern Township border
2. Limekiln Rd west of I-83
3. Lewisberry Rd (SR 114) west of I-83
4. Lewisberry Rd (SR 114) east of PA Turnpike
5. Old York Road (SR 1003) north of Lewisberry Rd (SR 114)
6. Old York Road (SR 1003) south of Lewisberry Rd (SR 114)
7. Lewisberry Rd (SR 114) north of Rudytown Rd
8. Old Forge Rd (SR 4020) west of Old Stage Rd (SR 4025)
9. Cedars Rd (SR 114) west of Nauvoo Rd (SR 4029)
10. Lewisberry Rd (SR 114) west of Fishing Creek Rd (SR 262)
11. Lewisberry Rd (SR 114) north of Nauvoo Rd (SR 4029)
12. Fishing Creek Rd (SR 262) west of I-83
13. Fishing Creek Rd (SR 262) east of Steigerwalt Hollow Rd
14. Old York Road (SR 1003) north of Big Spring Rd
15. Valley Rd (SR 262) near eastern Township border
16. Valley Rd (SR 262) west of Beinhower Rd

17. Wyndamere Rd (SR 177) east of I-83
18. Old York Road (SR 1003) south of Fishing Creek Rd (SR 262)
19. Old York Road (SR 1003) north of Fishing Creek Rd (SR 262)
20. Ridge Road south of Woodburne Road
21. Wyndamere Rd (SR 177) near southern Township Border
22. Lewisberry Rd south of Nauvoo Road (SR 4029)
23. Nauvoo Road (SR 4029) south of Cedars Road (SR 114)
24. Moores Mountain Rd (SR 4031) north of Brenneman Drive

Existing Transportation Conditions

Evaluation of the existing transportation network is based on the physical (i.e., traffic control, intersection geometry, lane usage, etc.) and operational (i.e., traffic volumes, signal timing/phasing) characteristics of the study intersections during the peak operational period.

Analysis Methodology

The peak hour traffic volumes shown in Figures 1A, 1B, 2 and 3 were analyzed to determine the existing operating conditions, in accordance with the standard techniques contained in the *Highway Capacity Manual (2010)*. These standard capacity/level-of-service analysis techniques, which calculate total control delay, are more thoroughly described in **Appendix D** for both signalized and unsignalized intersections, as well the correlation between average total control delay and the respective level of service (LOS) criteria for each intersection type.

Preferred Levels of Service

Consistent with the Act 209 legislation, the Transportation Advisory Committee has adopted preferred level-of-service criteria for the various intersections studied. The preferred level of service is considered the operational design standard by which each study intersection must operate under existing conditions, future pass-through conditions, and future development conditions in this *Roadway Sufficiency Analysis*. Capacity improvements are identified for any deficient (worsened) operations that do not satisfy the preferred levels of service at the study intersections.

According to Act 209, the preferred level of service may be waived by the municipality at individual intersections or roadway segments based upon difficulty in implementing various improvements (i.e., geometric design limitations, topographic limitations, or the unavailability of necessary right-of-way). Similarly, for unsignalized intersections where the preferred level of service criterion is not satisfied, most often only signalization can mitigate the traffic deficiency; however, where traffic volumes do not meet traffic signal warrant criteria, as required by PennDOT, these intersections cannot be improved through signalization. Therefore, the required signalization/improvement must be waived or deferred until traffic volumes warrant signalization. As shown in **Table 4**, the Transportation Advisory Committee has adopted specific preferred level-of-service criteria for the purposes of this *Roadway Sufficiency Analysis*.

Table 4. Preferred Level-of-Service Criteria

Intersection/ Roadway Type	TSA 1	TSA 2	TSA 3
Signalized	**LOS D** lane group **LOS B** overall	**LOS D** lane group **LOS C** overall	**N/A** **N/A**
Unsignalized	**LOS D** overall	**LOS D** lane group **LOS C** overall	**LOS C** lane group **LOS B** overall
Roadway Segment	**LOS D**	**LOS E**	**N/A**

The preferred levels of service indicated above apply to lane groups, or overall intersection operations, as noted. For roadway segments, the preferred level of service applies to each direction of travel. There are no existing or proposed signalized intersections in TSA 3, therefore no signalized preferred LOS was selected.

Programmed Improvements

There is only one previously planned for, but not committed, improvement at the Fairview Township study roadway segments and intersections, which will directly affect traffic operations:

- **Fishing Creek Road (SR 262) between I-83 NB ramps and Old York Rd (SR 1003) –** The Township is pursuing grant funding to widen Fishing Creek Road between I-83 northbound ramps and Old York Road. This widening would include a center left-turn lane to improve access to the businesses along this corridor. The center left-turn lane is recommended as a development improvement under development future conditions analysis.

Existing Levels of Service

The existing weekday peak hour traffic volumes presented in Figures 1A, 1B, 2 and 3 were subject to detailed capacity/level-of-service analysis according to the methodology previously described. The results of the analysis are illustrated in **Figures 4A, 4B, 5** and **6**, and the detailed capacity/level-of-service analysis worksheets are contained in **Appendix E**.

As shown in Figures 4A, 4B, 5 and 6, of the 34 study intersections, 32 presently operate with acceptable levels of service with respect to the adopted preferred levels of service during the weekday afternoon peak hour. The remaining two study intersections, which do not satisfy the preferred levels of service criteria, are situated in TSA 2. The following unsignalized intersections operate below LOS D on at least one of the approaches:

<u>TSA 2</u>

- Fishing Creek Rd (SR 262) & I-83 NB & Locust Rd
- I-83 NB & Salem Rd (SR 1007) & Wyndamere (SR 177)

Existing Improvement Plan

The improvements necessary to mitigate existing traffic deficiencies and satisfy the preferred level-of-service criteria are described in **Table 5**, and the geometric and traffic signal improvements are also illustrated in **Figures 7A, 7B, 8** and **9**. Improvements are required at two study intersections within the TSA 2 in order to achieve the preferred levels of service under present traffic conditions.

It is noted that the recommended transportation improvements contained herein do not preclude the necessity or desirability of improvements at other non-study intersections/roadways within the Township, identified intersections/roadways contained in the *Fairview Township Comprehensive Plan*, or any other intersection/roadways where operational deficiencies or the need for traffic-calming measures may be identified in the future.

Table 5. Existing Improvements

Int No.	Intersection	Service Area	Current Traffic Control	Recommended Capacity Improvements
1	Old York Rd (SR 1003) & Ross Ave (SR 1002)/Meadowbrook Rd	1	Traffic Signal	No improvements required or recommended.
2	Old York Rd (SR 1003) & Airport Rd	1	Traffic Signal	No improvements required or recommended.
3	Limekiln Rd & Poplar Rd (SR 1001)	1	Stop Sign	No improvements required or recommended.
4	I-83 NB & Limekiln Rd & Sheraton Dr	1	Traffic Signal	No improvements required or recommended.
5	Lewisberry Rd (SR 114) & Poplar Rd (SR 1001)	1	Stop Sign	No improvements required or recommended.
6	Old York Road (SR 1003) & Old Depot Rd	1	Stop Sign	No improvements required or recommended.
7	Limekiln Rd & I-83 SB	1	Stop Sign	No improvements required or recommended.
8	Lewisberry Rd (SR 114) & Gaumer Rd	1	Stop Sign	No improvements required or recommended.
9	Greenlane Dr & Limekiln Rd	1	Stop Sign	No improvements required or recommended.
10	I-83 SB & Lewisberry Rd (SR 114)	1	Stop Sign	No improvements required or recommended.
11	Limekiln Rd & Spanglers Mill Rd (SR 4027)	1	Stop Sign	No improvements required or recommended.
12	Lewisberry Rd (SR 114) & Stetler Rd	1	Stop Sign	No improvements required or recommended.
13	Shauffnertown Rd & Spanglers Mill Rd (SR 4027)	1	Stop Sign	No improvements required or recommended.
14	I-83 SB & Pleasant View Rd	1	Stop Sign	No improvements required or recommended.
15	Shauffnertown Rd & Old Forge Rd (SR 4020) & Rudytown Rd	1	Stop Sign	No improvements required or recommended.
16	Old Stage Rd (SR 4025) & Old Forge Rd (SR 4020)	1	Stop Sign	No improvements required or recommended.
17	Lewisberry Rd (SR 114) & Ironstone Rd & Fishing Creek Rd (SR 262)	1	Stop Sign	No improvements required or recommended.
18	Lewisberry Rd (SR 114/SR 382) & Cedars Rd (SR 114)	1	Stop Sign	No improvements required or recommended.
19	Cedars Rd (SR 114) & Nauvoo Rd (SR 4029) & Oak Hill Rd	1	Stop Sign	No improvements required or recommended.
20	Nauvoo Rd (SR 4029) & Lewisberry Rd (SR 382)	1	Stop Sign	No improvements required or recommended.
21	Shuey Rd & Pleasant View Rd	2	Stop Sign	No improvements required or recommended.
22	Fishing Creek Rd (SR 262) & Pleasant View Rd	2	Stop Sign	No improvements required or recommended.
23	Fishing Creek (SR 262) & I-83 SB/School Dr	2	Traffic Signal	No improvements required or recommended.
24	Fishing Creek Rd (SR 262) & I-83 NB & Locust Rd	2	Stop Sign	Install a traffic signal.
25	Old York Rd (SR 262/1003) & Fishing Creek Rd (SR 262)	2	Traffic Signal	No improvements required or recommended.
26	Valley Rd (SR 262) & Beinhower Rd	2	Stop Sign	No improvements required or recommended.
27	I-83 NB & Salem Rd (SR 1007) & Wyndamere (SR 177)	2	Stop Sign	Install all-way stop control.
28	Wyndamere Rd (SR 177) & Lowther Rd	2	Stop Sign	No improvements required or recommended.
29	Wyndamere Rd (SR 177) & Yorktown Rd (SR 4007) & Industrial Dr	2	Traffic Signal	No improvements required or recommended.
30	I-83 SB & Yorktown Rd (SR 4007)	2	Stop Sign	No improvements required or recommended.
31	Old York Road & Beinhower Rd	2	Stop Sign	No improvements required or recommended.
32	Wyndamere Rd (SR 177) & Potts Hill Rd (SR 392) & Ridge Road	2	Stop Sign	No improvements required or recommended.
33	Pinetown Rd (SR 4024) and Rossville Rd (SR 177)	3	Stop Sign	No improvements required or recommended.
34	Pinetown Rd (SR 4024) & Moores Mtn. Rd (SR 4031)	3	Stop Sign	No improvements required or recommended.
Segment	Fishing Creek Rd (Segment) from I-83 SB to Old York Rd	2		No improvements required or recommended.

Future Traffic Conditions

Act 209 requires a minimum five-year future time horizon for the development of the *Transportation Capital Improvements Plan* and *Transportation Impact Fee Ordinance*. A ten-year time frame was selected by consensus of the Transportation Advisory Committee for the Fairview Township Act 209 traffic analysis, which is consistent with the short-term development projections contained in the *Land Use Assumptions Report*, and produces a forecast year of 2024.

Future Traffic Components

Total future traffic volume forecasts for 2024 include three components: existing traffic, pass-through traffic, and development traffic. The first component, **existing traffic** was described in the previous section. The second component of future traffic projections is **pass-through traffic**, which is subdivided into the following two elements:

- This first element of pass-through traffic also includes traffic generated by specific known future developments located within the adjacent municipalities or within the Township itself, but outside the designated transportation service areas, as well as a regional background traffic growth factor of 1.43 percent per year, compounded for 10 years to 2024 (or 15.3 percent total).

- The second element of pass-through traffic includes future development traffic generated from other designated transportation service areas within the Township. Specifically, since Fairview Township has three transportation service areas, development traffic in one service area constitutes pass-through traffic in the other service areas. For example, while traffic generated from within TSA 1 is considered "development" traffic in TSA 1, this same traffic is considered "pass-through" traffic when it traverses TSA 2.

Development traffic that is generated by new development within each respective/designated transportation service area constitutes the third and final component of future 2024 traffic volumes. Therefore, this section first addresses trip generation for each service area, based upon the development projections contained in the *Land Use Assumptions Report*, as well as the trip distribution assumptions utilized in the analysis.

Trip Generation

Based upon the *Land Use Assumptions Report*, vehicular trip generation was estimated for the 2024 weekday afternoon peak hour utilizing the Institute of Transportation Engineers publication, ***Trip Generation, 9th Edition***. The resulting 2024 weekday afternoon peak hour trip generation is summarized in **Table 6** for each transportation service area. In addition, the detailed trip generation estimates are shown in **Appendix F**.

Table 6. Future Weekday Afternoon Peak Hour Trip Generation by Transportation Service Area[1]

Location TSA & Sub-Area	Land Use	Size	Units	Daily	Weekday 4-6 PM In	Out	Total
1A	Single Family Homes	259	DU	2,521	156	91	247
1B	Single Family Homes	129	DU	1,327	83	49	132
1B	Residential Townhouses	66	DU	448	29	14	43
1B	Apartments	28	DU	293	21	12	33
1C	Apartments	28	DU	293	21	12	33
1D	Single Family Homes	129	DU	1,327	83	49	132
1E	Shopping Center	679,536	Sq. Ft.	23,598	1,038	1,125	2,163
	- Pass-By Trips	34	%	- 5,664	-352	-383	-735
	= "New" Trips			17,934	686	742	1,428
1E	Light Industrial	113,256	Sq. Ft.	744	13	97	110
1E	Office Building	339,768	Sq. Ft.	3,326	78	381	459
1F	Shopping Center	365,904	Sq. Ft.	15,781	686	743	1,429
	- Pass-By Trips	- 34	%	- 3,787	- 233	- 253	- 486
	= "New" Trips			11,994	453	490	943
1F	Light Industrial	60,984	Sq. Ft.	354	7	52	59
1F	Office Building	182,952	Sq. Ft.	2,078	48	235	283
TSA 1	**Total Trips**			**52,090**	**2,263**	**2,860**	**5,123**
	- Pass-By Trips			**- 9,451**	**- 585**	**- 636**	**- 1221**
	= "New" Trips			**42,639**	**1,678**	**2,224**	**3,902**
2A	Single Family Homes	165	DU	1,665	104	61	165
2B	Shopping Center	182,952	Sq. Ft.	10,057	431	467	898
	- Pass-By Trips	- 34	%	- 2,414	- 146	- 159	- 305
	= "New" Trips			7,643	285	308	593
2B	Light Industrial	30,492	Sq. Ft.	126	4	26	30
2B	Office Building	91,476	Sq. Ft.	1,227	31	150	181
2C	Shopping Center	474,480	Sq. Ft.	18,684	816	885	1,701

	- Pass-By Trips	- 34	%	- 4,484	- 277	- 301	- 578
	= "New" Trips			14,200	539	584	1,123
2C	Light Industrial	79,080	Sq. Ft.	489	9	68	77
2C	Office Building	237,240	Sq. Ft.	2,531	58	286	344
TSA 2	**Total Trips**			**32,779**	**1,453**	**1,943**	**3,396**
	- Pass-By Trips			**-6,898**	**- 423**	**- 460**	**- 883**
	= "New" Trips			**25,881**	**1,030**	**1,483**	**2,513**
3A	Single Family Homes	47	DU	524	33	20	53
3B	Single Family Homes	47	DU	524	33	20	53
3C	Single Family Homes	47	DU	524	33	20	53
TSA 3	**Total Trips**			**1,572**	**99**	**60**	**159**
	- Pass-By Trips			**- 0**	**- 0**	**- 0**	**- 0**
	= "New" Trips			**1,572**	**99**	**60**	**159**

(1) Based on the *Land Use Assumptions Report*.

Trip Distribution

Vehicular traffic volumes generated by new development over the next 10 years were generally distributed to the area roadway network based on existing travel patterns determined from the existing peak hour traffic volumes entering and exiting the Township, illustrated in **Figure 11**, as well as the location of specific future development parcels with respect to the study roadway network and other major traffic generators and destinations. The resultant overall directions of approach and departure are indicated in **Tables 7, 8,** and **9**.

Table 7. Directions of Approach and Departure
Transportation Service Area 1 Development

Roadway	External Location (to/from)	Arrival/Departure
Old Forge Road	north of Cedars Road	2 %
Cedars Road	west of Lewisberry Road	8 %
Moores Mountain Road	west of Lewisberry Road	2 %
Lewisberry Road	south of School House Lane	7 %
Ridge Road	west of I-83	1 %
Fishing Creek Road	east of Ridge Road	7 %
Pleasantview Road	north of Fishing Creek	3 %
I-83	south of Wyndamere Road	6 %
Old York Road/PA 1003	south of I-76/PA Turnpike	10 %

I-76/PA Turnpike	east of I-83	4 %
Old York Road	north of I-76/PA Turnpike	18 %
Poplar Road	north of I-76/PA Turnpike	6 %
I-83	north of Limekiln Road	10 %
Green Lane Drive	north of Limekiln Road	2 %
Spanglers Mill Road	north of Limekiln Road	6 %
Limekiln Road	north of I-76/PA Turnpike	5 %
I-76	west of Spanglers Mill Road	3 %

Table 8. Directions of Approach and Departure
Transportation Service Area 2 Development

Roadway	External Location (to/from)	Arrival/Departure
Old York Road	north of I-76/PA Turnpike	13 %
I-83	north of Fishing Creek Road	33 %
Pleasantview Road	north of Fishing Creek Road	3 %
Fishing Creek Road	west of Pleasantview Road	9 %
Pleasantview Road	south of PA 177	2 %
Wyndamere Road	west of I-83	7 %
I-83	west of Old York Road	14 %
Old York Road	east of I-83	16 %
Valley Road	eastern edge of Township	3 %

Table 9. Directions of Approach and Departure
Transportation Service Area 3 Development

Roadway	External Location (to/from)	Arrival/Departure
Siddonsburg Road	west of Moores Mountain Road	7 %
Moores Mountain Road	south of Pinetown Road	4 %
Traver Drive	east of Pinetown Road	2 %
Pinetown Road	south of Siddonsburg Road	6 %
Lewisberry Road	north of Pinetown Road	38 %
Old Quaker Road	north of Siddonsburg Road	2 %
Lewisberry Road	south of School House Lane	32 %
Moores Mountain Road	south of Cedars Road	7 %
PA 4028/Andersontown Road	west of Moores Mountain Road	2 %

2024 Future Pass-Through Traffic

Traffic generated by new development was generally assigned to the study intersections based on the trip distribution assumptions previously described. Also, an annual traffic growth rate of 1.43 percent per year was applied to the existing peak hour traffic volumes to reflect regional traffic growth.

Moreover, future development traffic associated with several approved developments in the municipalities surrounding Fairview Township have also been included in the future traffic projections. The approved developments in the adjacent municipalities that are anticipated to generate some traffic that may impact the study intersections include Arcona Mixed-Use Development in Lower Allen Township, as well as Autumn Chase, Orchard Glenn, and Winding Hills Residential Developments in Upper Allen Township. Only a small portion (2% - 3%) of trips generated by these developments to the west of Fairview Township travel to/from Fairview Township.

The 2024 future pass-through weekday afternoon peak hour traffic volumes are illustrated in **Figures 12A, 12B, 13** and **14**.

2024 Future Pass-Through Traffic Levels of Service

The future 2024 pass-through traffic volumes illustrated in Figures 12A, 12B, 13 and 14 were subject to the previously described capacity/level-of-service analysis procedures to determine 2024 pass-through levels of service, and the detailed analyses are provided in **Appendix G**. As required by Act 209, the future conditions analysis was completed for future 2024 pass-through volumes for each study intersection, assuming implementation of the improvements identified in the Existing Improvement Plan, in order to determine the incremental traffic impacts and required mitigation of future pass-through traffic.

Figures 15A, 15B, 16 and **17** summarizes the results of the 2024 future pass-through traffic capacity/level-of-service analyses for the study intersections. Traffic operating conditions at the following study intersections will not satisfy the preferred level of service criteria under 2024 future pass-through conditions.

TSA 1

- Limekiln Rd & I-83 SB

TSA 2

- I-83 NB & Salem Rd (SR 1007) & Wyndamere (SR 177)

2024 Future Pass-Through Improvement Plan

The additional improvements required to accommodate pass-through traffic, beyond those improvements necessary to accommodate existing traffic at the preferred levels of service are illustrated in **Figures 18A, 18B, 19** and **20.** Also, these specific improvements required by future pass-through traffic to achieve the preferred level of service criteria are summarized in more detail in **Table 10** for each study intersection. Improvements are required at two study intersections (one in TSA 1 and one in TSA 2), in order to achieve the preferred levels of service.

Table 10. Pass-Through Improvements

Int No.	Intersection	Service Area	Current Traffic Control	Recommended Capacity Improvements
1	Old York Rd (SR 1003) & Ross Ave (SR 1002)/Meadowbrook Rd	1	Traffic Signal	No improvements required or recommended.
2	Old York Rd (SR 1003) & Airport Rd	1	Traffic Signal	No improvements required or recommended.
3	Limekiln Rd & Poplar Rd (SR 1001)	1	Stop Sign	No improvements required or recommended.
4	I-83 NB & Limekiln Rd & Sheraton Dr	1	Traffic Signal	No improvements required or recommended.
5	Lewisberry Rd (SR 114) & Poplar Rd (SR 1001)	1	Stop Sign	No improvements required or recommended.
6	Old York Road (SR 1003) & Old Depot Rd	1	Stop Sign	No improvements required or recommended.
7	Limekiln Rd & I-83 SB	1	Stop Sign	Install all-way stop control.
8	Lewisberry Rd (SR 114) & Gaumer Rd	1	Stop Sign	No improvements required or recommended.
9	Greenlane Dr & Limekiln Rd	1	Stop Sign	No improvements required or recommended.
10	I-83 SB & Lewisberry Rd (SR 114)	1	Stop Sign	No improvements required or recommended.
11	Limekiln Rd & Spanglers Mill Rd (SR 4027)	1	Stop Sign	No improvements required or recommended.
12	Lewisberry Rd (SR 114) & Stetler Rd	1	Stop Sign	No improvements required or recommended.
13	Shauffnertown Rd & Spanglers Mill Rd (SR 4027)	1	Stop Sign	No improvements required or recommended.
14	I-83 SB & Pleasant View Rd	1	Stop Sign	No improvements required or recommended.
15	Shauffnertown Rd & Old Forge Rd (SR 4020) & Rudytown Rd	1	Stop Sign	No improvements required or recommended.
16	Old Stage Rd (SR 4025) & Old Forge Rd (SR 4020)	1	Stop Sign	No improvements required or recommended.
17	Lewisberry Rd (SR 114) & Ironstone Rd & Fishing Creek Rd (SR 262)	1	Stop Sign	No improvements required or recommended.
18	Lewisberry Rd (SR 114/SR 382) & Cedars Rd (SR 114)	1	Stop Sign	No improvements required or recommended.
19	Cedars Rd (SR 114) & Nauvoo Rd (SR 4029) & Oak Hill Rd	1	Stop Sign	No improvements required or recommended.
20	Nauvoo Rd (SR 4029) & Lewisberry Rd (SR 382)	1	Stop Sign	No improvements required or recommended.
21	Shuey Rd & Pleasant View Rd	2	Stop Sign	No improvements required or recommended.
22	Fishing Creek Rd (SR 262) & Pleasant View Rd	2	Stop Sign	No improvements required or recommended.
23	Fishing Creek (SR 262) & I-83 SB/School Dr	2	Traffic Signal	No improvements required or recommended.
24	Fishing Creek Rd (SR 262) & I-83 NB & Locust Rd	2	Stop Sign	No improvements required or recommended.
25	Old York Rd (SR 262/1003) & Fishing Creek Rd (SR 262)	2	Traffic Signal	No improvements required or recommended.
26	Valley Rd (SR 262) & Beinhower Rd	2	Stop Sign	No improvements required or recommended.
27	I-83 NB & Salem Rd (SR 1007) & Wyndamere (SR 177)	2	Stop Sign	Install 100' northbound left-turn lane.
28	Wyndamere Rd (SR 177) & Lowther Rd	2	Stop Sign	No improvements required or recommended.
29	Wyndamere Rd (SR 177) & Yorktown Rd (SR 4007) & Industrial Dr	2	Traffic Signal	No improvements required or recommended.
30	I-83 SB & Yorktown Rd (SR 4007)	2	Stop Sign	No improvements required or recommended.
31	Old York Road & Beinhower Rd	2	Stop Sign	No improvements required or recommended.
32	Wyndamere Rd (SR 177) & Potts Hill Rd (SR 392) & Ridge Road	2	Stop Sign	No improvements required or recommended.
33	Pinetown Rd (SR 4024) and Rossville Rd (SR 177)	3	Stop Sign	No improvements required or recommended.
34	Pinetown Rd (SR 4024) & Moores Mtn. Rd (SR 4031)	3	Stop Sign	No improvements required or recommended.
Segment	Fishing Creek Rd (Segment) from I-83 SB to Old York Rd	2		No improvements required or recommended.

2024 Future Development Traffic

As previously explained, the traffic generated by new development internal to the designated transportation service areas constitutes the third and final component of future 2024 traffic. The 2024 future development traffic volumes were determined based on assignment of development traffic within each respective transportation service area, and were added to 2024 future pass-through traffic volumes.

Assignment of the development trip generation to the study intersections results in 2024 future development traffic volumes, which are illustrated in **Figures 21A, 21B, 22** and **23**.

2024 Future Development Traffic Levels of Service

The future development traffic volumes presented in Figures 21A, 21B, 22 and 23 were subject to the previously described capacity/level-of-service analysis procedures to determine future 2024 development levels of service, and the detailed analyses are provided in **Appendix H**. The 2024 future development conditions are illustrated in **Figures 24A, 24B, 25** and **26**, and indicate that the following 14 study intersections will not satisfy the preferred levels of service criteria and require further improvements beyond the previously identified existing conditions improvements, programmed/committed improvements, and future pass-through improvements.

TSA 1

- I-83 NB & Limekiln Rd & Sheraton Dr
- Lewisberry Rd (SR 114) & Poplar Rd (SR 1001)
- Limekiln Rd & I-83 SB
- I-83 SB & Lewisberry Rd (SR 114)
- Limekiln Rd & Spanglers Mill Rd (SR 4027)
- Lewisberry Rd (SR 114) & Stetler Rd
- I-83 SB & Pleasant View Rd

TSA 2

- Fishing Creek (SR 262) & I-83 SB/School Dr
- Fishing Creek Rd (SR 262) & I-83 NB & Locust Rd
- Old York Rd (SR 262/1003) & Fishing Creek Rd (SR 262)
- I-83 NB & Salem Rd (SR 1007) & Wyndamere (SR 177)
- Wyndamere Rd (SR 177) & Lowther Rd
- Wyndamere Rd (SR 177) & Yorktown Rd (SR 4007) & Industrial Dr
- Old York Road & Beinhower Rd

2024 Future Development Improvement Plan

The improvements necessary to achieve the preferred level of service criteria under 2024 development traffic conditions at the study intersections are summarized in **Table 11**, and are also illustrated in **Figures 27A, 27B, 28** and **29**. In summary, improvements are required at 14

study intersections (7 in TSA 1 and 7 in TSA 2) to accommodate development-generated traffic within the transportation service areas in order to achieve the preferred levels of service.

Lastly, it is noted that additional roadway and intersection improvements beyond those identified herein may be required due to developments that may develop at a greater intensity than assumed for this study, that may generate higher traffic volumes outside the weekday afternoon peak hour, or that ultimately provide different access configurations than assumed for the purposes of this study. As such, traffic impact studies completed for these developments should be prepared to determine if additional improvements are required for sufficient traffic mitigation beyond the identified Act 209 improvements, and these additional improvements should ultimately be provided to ensure adequate traffic operations.

Table 11. Development Improvements

Int No.	Intersection	Service Area	Current Traffic Control	Recommended Capacity Improvements
1	Old York Rd (SR 1003) & Ross Ave (SR 1002)/Meadowbrook Rd	1	Traffic Signal	No improvements required or recommended.
2	Old York Rd (SR 1003) & Airport Rd	1	Traffic Signal	No improvements required or recommended.
3	Limekiln Rd & Poplar Rd (SR 1001)	1	Stop Sign	No improvements required or recommended.
4	I-83 NB & Limekiln Rd & Sheraton Dr	1	Traffic Signal	Modify traffic signal timings, time-based coordination with Intersection 7 (I-83 SB ramp).
5	Lewisberry Rd (SR 114) & Poplar Rd (SR 1001)	1	Stop Sign	Install a traffic signal. Install 225' northeast left-turn lane on Lewisberry Rd. Install sidewalk in area of widening.
6	Old York Road (SR 1003) & Old Depot Rd	1	Stop Sign	No improvements required or recommended.
7	Limekiln Rd & I-83 SB	1	Stop Sign	Install a traffic signal with time-based coordination with Intersection 4 (I-83 NB Ramp). Install 200' southbound left-turn lane.
8	Lewisberry Rd (SR 114) & Gaumer Rd	1	Stop Sign	No improvements required or recommended.
9	Greenlane Dr & Limekiln Rd	1	Stop Sign	No improvements required or recommended.
10	I-83 SB & Lewisberry Rd (SR 114)	1	Stop Sign	Install traffic signal. Install second northeast through lane (begin 250' west of intersection and drop into the right-turn lane at the I-83 NB Ramp east of the interchange), 75' southwest left-turn lane and 125' northbound right-turn lane.
11	Limekiln Rd & Spanglers Mill Rd (SR 4027)	1	Stop Sign	Install traffic signal. Install sidewalk along northside of Limekiln Road to connect to existing sidewalk east of the intersection along with pedestrian accommodations at the signal.
12	Lewisberry Rd (SR 114) & Stetler Rd	1	Stop Sign	Install traffic signal.
13	Shauffnertown Rd & Spanglers Mill Rd (SR 4027)	1	Stop Sign	No improvements required or recommended.
14	I-83 SB & Pleasant View Rd	1	Stop Sign	Install traffic signal.
15	Shauffnertown Rd & Old Forge Rd (SR 4020) & Rudytown Rd	1	Stop Sign	No improvements required or recommended.
16	Old Stage Rd (SR 4025) & Old Forge Rd (SR 4020)	1	Stop Sign	No improvements required or recommended.
17	Lewisberry Rd (SR 114) & Ironstone Rd & Fishing Creek Rd (SR 262)	1	Stop Sign	No improvements required or recommended.
18	Lewisberry Rd (SR 114/SR 382) & Cedars Rd (SR 114)	1	Stop Sign	No improvements required or recommended.
19	Cedars Rd (SR 114) & Nauvoo Rd (SR 4029) & Oak Hill Rd	1	Stop Sign	No improvements required or recommended.
20	Nauvoo Rd (SR 4029) & Lewisberry Rd (SR 382)	1	Stop Sign	No improvements required or recommended.
21	Shuey Rd & Pleasant View Rd	2	Stop Sign	No improvements required or recommended.
22	Fishing Creek Rd (SR 262) & Pleasant View Rd	2	Stop Sign	No improvements required or recommended.
23	Fishing Creek (SR 262) & I-83 SB/School Dr	2	Traffic Signal	Install 75' eastbound left-turn lane, 75' westbound left-turn lane, and 100' southbound right-turn lane. Modify traffic signal timings.
24	Fishing Creek Rd (SR 262) & I-83 NB & Locust Rd	2	Stop Sign	Install second eastbound through lane. Install 100' westbound left-turn lane, and 125' northbound left turn lane. Modify traffic signal timings. Proposed center TWLTL between Int 24 and 25 drops into the proposed 100' westbound left-turn lane at Int 24.
25	Old York Rd (SR 262/1003) & Fishing Creek Rd (SR 262)	2	Traffic Signal	Install 175' second northbound left-turn lane. Modify signal timings. Second receiving lane on Fishing Creek (WB) drops into proposed center TWLTL between Int 24 and 25.
26	Valley Rd (SR 262) & Beinhower Rd	2	Stop Sign	No improvements required or recommended.
27	I-83 NB & Salem Rd (SR 1007) & Wyndamere (SR 177)	2	Stop Sign	Install traffic signal. Install second 200' northbound left-turn lane and lengthen the current northbound left-turn lane to match. Install 75' southbound right-turn lane.
28	Wyndamere Rd (SR 177) & Lowther Rd	2	Stop Sign	Restrict Lowther Rd to right-out only.
29	Wyndamere Rd (SR 177) & Yorktown Rd (SR 4007) & Industrial Dr	2	Traffic Signal	Install 75' northbound left-turn lane and 150' southbound left-turn lane. Lengthen existing eastbound left-turn lane to 250'. Modify traffic signal timings.
30	I-83 SB & Yorktown Rd (SR 4007)	2	Stop Sign	No improvements required or recommended.
31	Old York Road & Beinhower Rd	2	Stop Sign	Install center TWLTL on Old York Rd from Clover St (north of Beinhower) to approx. 350' south of Beinhower. Include adequate shoulder width to accommodate bicycles.
32	Wyndamere Rd (SR 177) & Potts Hill Rd (SR 392) & Ridge Road	2	Stop Sign	No improvements required or recommended.
33	Pinetown Rd (SR 4024) and Rossville Rd (SR 177)	3	Stop Sign	No improvements required or recommended.
34	Pinetown Rd (SR 4024) & Moores Mtn. Rd (SR 4031)	3	Stop Sign	No improvements required or recommended.
Segment (24-25)	Fishing Creek Rd (Segment) from I-83 SB to Old York Rd	2		Install second EB through lane west of I-83 NB Ramps with the second eastbound through lane dropping into the right-turn lane at Old York Rd.

Transportation Capital Improvement Plan

This section summarizes Fairview Township's *Transportation Capital Improvement Plan* directly resulting from the *Roadway Sufficiency Analysis*. In accordance with Act 209, the following requirements were met:

1. The *Roadway Sufficiency Analysis* was adopted by the Township Board of Supervisors by resolution on December 1, 2014.
2. Public notice of a public hearing on the *Transportation Capital Improvement Plan* was published two successive weeks, between seven and thirty days from the date of the hearing, in the *Patriot News* on May 3, 2015 and May 10, 2015.
3. The *Transportation Capital Improvement Plan* was available for public inspection on the Township's webpage and at the Township building at least ten working days prior to the hearing.
4. The public hearing was held on May 18, 2015 to receive comments on the *Transportation Capital Improvement Plan*.

Following the public hearing, the *Transportation Capital Improvement Plan* was presented to the Township Board of Supervisors for adoption by resolution on May 18, 2015.

The *Transportation Capital Improvement Plan* consists of three sections, which are described below, and includes the ***Existing Transportation Capital Improvement Plan***, the ***Future Pass-Through Transportation Capital Improvement Plan***, and the ***Future Development Transportation Improvement Plan***.

Opinions of Cost for Capital Improvements

Preliminary opinions of costs for the identified capital improvements were developed based on readily available information from aerial images and field visits. Opinions of construction costs reflect estimates for material quantities and costs for construction items derived from recently bid construction projects and past project experience, as well as estimates for mobilization, maintenance and protection of traffic, erosion and sediment control, and drainage. Additionally, the total project cost opinions include the following components:

- Engineering (10% - 15% of construction costs)
- Legal and Planning (5% of construction costs)
- Right-of-Way Acquisition
- Construction Inspection (10% - 15% of construction costs)
- Contingency (10% of project subtotal)

Existing Transportation Capital Improvement Plan

The Existing Transportation Capital Improvement Plan is summarized in **Tables 12-1, 12-2,** and **12-3**, and details the improvements necessary to achieve the preferred levels of service under existing traffic conditions. Tables 12-1, 12-2, and 12-3 also provide a cost allocation of the improvements indicating the portions of the total cost for which the Township and PennDOT are responsible, which is based on roadway ownership. **The total cost of the Existing Transportation Capital Improvement Plan is approximately $0 for TSA 1, $360,500 for TSA 2 and $0 for TSA 3**. The anticipated completion year for each of the improvements is also included in Tables 12-1, 12-2, and 12-3.

Future Pass-Through Transportation Capital Improvement Plan

The Future Pass-Through Transportation Capital Improvement Plan is summarized in **Tables 13-1, 13-2,** and **13-3** and detail the improvements necessary to achieve the preferred levels of service under future 2024 pass-through conditions. Tables 13-1, 13-2 and 13-3 also provide a cost allocation of the improvements indicating the portions of the total cost for which the Township and PennDOT are responsible, which is based on roadway ownership. **The total cost of the Future Pass-through Transportation Capital Improvement Plan is approximately $4,500 for TSA 1, $351,570 for TSA 2 and $0 for TSA 3**. The anticipated completion year for each of the improvements is also included in Tables 13-1, 13-2 and 13-3.

Future Development Transportation Capital Improvement Plan

The Future Development Transportation Capital Improvement Plan is summarized in **Tables 14-1, 14-2,** and **14-3** and detail the improvements necessary to achieve the preferred levels of service under future 2024 development traffic conditions. Tables 14-1, 14-2 and 14-3 also provides a cost allocation of the improvements indicating the portions of the total cost for which PennDOT and future development are responsible. **The total cost of the Future Development Transportation Capital Improvement Plan is approximately $11,475,175 for TSA 1, with $6,157,258 allocated to Development, approximately $7,999,660 for TSA 2, with $4,919,888 allocated to Development, and $0 for TSA 3**. The anticipated completion year for each of the improvements is also included in Tables 14-1, 14-2 and 14-3.

Table 12-1
Existing Improvements Cost Estimates - TSA 1

Int. No.	Intersection or Corridor	Improvements Required	Description	Total Project Cost	Allocated Funding		Construction Completion
					PennDOT Costs	Township Costs	
			Totals	$0	$0	$0	

Table 12-2
Existing Improvements Cost Estimates - TSA 2

Int. No.	Intersection or Corridor	Improvements Required	Description	Total Project Cost	Allocated Funding		Construction Completion
					PennDOT Costs	Township Costs	
24	I-83 NB Ramps/Locust Rd & Fishing Creek Rd (SR 0262)	Install Traffic Signal	[Description]	$355,500	$133,313	$222,188	2024
27	Wyndamere Rd (SR 0177) & I-83 NB Ramps/Salem Rd (SR 1007)	Other Improvement (1)	All-way stop control	$5,000	$1,875	$3,125	2024
			Totals	$360,500	$135,188	$225,313	

Table 12-3
Existing Improvements Cost Estimates - TSA 3

Int. No.	Intersection or Corridor	Improvements Required	Description	Total Project Cost	Allocated Funding		Construction Completion
					PennDOT Costs	Township Costs	
			Totals	$0	$0	$0	

Table 13-1
Pass-Through Improvements Cost Estimates - TSA 1

Int. No.	Intersection or Corridor	Improvements Required	Description	Total Project Cost	Allocated Funding		Construction Completion
					PennDOT Costs	Township Costs	
7	I-83 SB Ramps & Limekiln Rd	Other Improvement (1)	All-Way Stop Control	$4,500	$750	$3,750	2024
			Totals	$4,500	$750	$3,750	

Table 13-2
Pass-Through Improvements Cost Estimates - TSA 2

Int. No.	Intersection or Corridor	Improvements Required	Description	Total Project Cost	Allocated Funding		Construction Completion
					PennDOT Costs	Township Costs	
27	Wyndamere Rd (SR 0177) & I-83 NB Ramps/Salem Rd (SR 1007)	Turn Lane (1)	100' NB Left Turn Lane	$351,570	$175,785	$175,785	2024
			Totals	$351,570	$175,785	$175,785	

Table 13-3
Pass-Through Improvements Cost Estimates - TSA 3

Int. No.	Intersection or Corridor	Improvements Required	Description	Total Project Cost	Allocated Funding		Construction Completion
					PennDOT Costs	Township Costs	
			Totals	$0	$0	$0	

Table 14-1
Development Improvements Cost Estimates - TSA 1

Int. No.	Intersection or Corridor	Improvements Required	Description	Total Project Cost	Allocated Funding		Construction Completion
					PennDOT Costs	Developer Costs	
4	Limekiln Rd & I-83 NB Ramps/Sheraton Dr	Traffic Signal Modifications	Modify signal timings & allow for time-based coordination with Int 7	$14,900	$1,862.50	$13,038	2024
5	Poplar Rd (SR 1001) & Lewisberry Rd	Install Traffic Signal	New 4-leg signal installation, actuated-uncoordinated	$334,300	$125,363	$208,938	2024
5	Poplar Rd (SR 1001) & Lewisberry Rd	Turn Lane (1)	NE 225' left turn lane	$732,400	$366,200	$366,200	2024
7	I-83 SB Ramps & Limekiln Rd	Install Traffic Signal	4-leg signal installation, actuated-uncoordinated, coordinated with Int 4	$282,200	$35,275.00	$246,925	2024
7	I-83 SB Ramps & Limekiln Rd	Turn Lane (1)	200' SB left turn lane	$470,700	$235,350	$235,350	2024
10	I-83 SB Ramps & Lewisberry Rd (SR 0114)	Install Traffic Signal	3-leg intersection, Actuated-uncoordinated, advance detection on interstate ramp, protected left turn	$282,200	$141,100	$141,100	2024
10	I-83 SB Ramps & Lewisberry Rd (SR 0114)	Turn Lane (1)	SW 75' left turn lane	$296,150	$148,075	$148,075	2024

Int. No.	Intersection or Corridor	Improvements Required	Description	Total Project Cost	Allocated Funding		Construction Completion
					PennDOT Costs	Developer Costs	
10	I-83 SB Ramps & Lewisberry Rd (SR 0114)	Turn Lane (2)	NB 125' right turn lane	$397,200	$198,600	$198,600	2024
10	I-83 SB Ramps & Lewisberry Rd (SR 0114)	Additional Through-Lane (1)	Additional EB Through Lane (drops into RTL @ NB Ramps)	$415,325	$207,663	$207,663	2024
10	I-83 SB Ramps & Lewisberry Rd (SR 0114)	Other Improvement (1)	Bridge replacement, Lewisberry Road over I-83	$7,264,400	$3,632,200	$3,632,200	2024
11	Spanglers Mill Rd (SR 4027) & Limekiln Rd	Install Traffic Signal	New signal installation, actuaded-uncoordinated	$354,100	$88,525	$265,575	2024
12	Lewisberry Rd (SR 0114) & Stetler Rd	Install Traffic Signal	3-leg signal installation, actuaded-uncoordinated	$282,200	$94,066.67	$188,133	2024
14	I-83 SB Ramps & Pleasant View Rd	Install Traffic Signal	4-leg signal installation, advance detection on I-83 SB off-ramp	$349,100	$43,637.50	$305,463	2024
			Totals	$11,475,175	$5,317,917	$6,157,258	

Table 14-2
Development Improvements Cost Estimates - TSA 2

Int. No.	Intersection or Corridor	Improvements Required	Description	Total Project Cost	Allocated Funding		Construction Completion
					PennDOT Costs	Developer Costs	
23	I-83 SB Ramps/School Dr & Fishing Creek Rd (SR 0262)	Traffic Signal Modifications	Coordinating with Int 24 & 25, advance detection on I-83 SB off-ramp	$185,800	$69,675	$116,125	2024
23	I-83 SB Ramps/School Dr & Fishing Creek Rd (SR 0262)	Turn Lane (1)	EB 75' left turn lane	$256,300	$128,150	$128,150	2024
23	I-83 SB Ramps/School Dr & Fishing Creek Rd (SR 0262)	Turn Lane (2)	WB 75' left turn lane	$251,600	$125,800	$125,800	2024
23	I-83 SB Ramps/School Dr & Fishing Creek Rd (SR 0262)	Turn Lane (3)	SB 100' right turn lane	$416,100	$208,050	$208,050	2024
24	I-83 NB Ramps/Locust Rd & Fishing Creek Rd (SR 0262)	Traffic Signal Modifications	[Description]	$14,900	$5,587.50	$9,313	2024
24	I-83 NB Ramps/Locust Rd & Fishing Creek Rd (SR 0262)	Turn Lane (1)	75' EB right turn lane	$171,400	$85,700	$85,700	2024
24	I-83 NB Ramps/Locust Rd & Fishing Creek Rd (SR 0262)	Turn Lane (2)	100' WB left turn lane & center TWLTL between Int 24 & 25	$670,600	$335,300	$335,300	2024
24	I-83 NB Ramps/Locust Rd & Fishing Creek Rd (SR 0262)	Turn Lane (3)	NB off-ramp left turn lane	$612,200	$153,050	$459,150	2024

Int. No.	Intersection or Corridor	Improvements Required	Description	Total Project Cost	Allocated Funding		Construction Completion
					PennDOT Costs	Developer Costs	
25	Old York Road (SR 1003/SR 0262) & Fishing Creek Rd (SR 0262)	Traffic Signal Modifications	Modify signal timings & CCI, coordination	$111,500	$41,812.50	$69,688	2024
25	Old York Road (SR 1003/SR 0262) & Fishing Creek Rd (SR 0262)	Turn Lane (1)	Install 2nd 175' NBL turn lane	$1,113,300	$556,650	$556,650	2024
27	Wyndamere Rd (SR 0177) & I-83 NB Ramps/Salem Rd (SR 1007)	Install Traffic Signal	[Description]	$334,300	$125,363	$208,938	2024
27	Wyndamere Rd (SR 0177) & I-83 NB Ramps/Salem Rd (SR 1007)	Turn Lane (1)	200' NB left turn lane (dual lanes; lengthen existing lane to match)	$535,600	$267,800	$267,800	2024
27	Wyndamere Rd (SR 0177) & I-83 NB Ramps/Salem Rd (SR 1007)	Turn Lane (2)	75' SB Right Turn Lane	$119,600	$59,800	$59,800	2024
28	Wyndamere Rd (SR 0177) & Lowther Rd	Other Improvement (1)	Restrict Lowther Rd to right-out only	$5,000	$1,667	$3,333	2024
29	Wyndamere Rd (SR 0177) & Industrial Rd/Yorktown Rd (SR 4007)	Traffic Signal Modifications	Modify signal timings, coordination	$148,500	$55,688	$92,813	2024

Int. No.	Intersection or Corridor	Improvements Required	Description	Total Project Cost	Allocated Funding		Construction Completion
					PennDOT Costs	Developer Costs	
29	Wyndamere Rd (SR 0177) & Industrial Rd/Yorktown Rd (SR 4007)	Turn Lane (1)	75' NB Left Turn Lane	$190,010	$95,005	$95,005	2024
29	Wyndamere Rd (SR 0177) & Industrial Rd/Yorktown Rd (SR 4007)	Turn Lane (2)	150' SB Left Turn Lane	$493,050	$246,525	$246,525	2024
29	Wyndamere Rd (SR 0177) & Industrial Rd/Yorktown Rd (SR 4007)	Turn Lane (3)	Lengthen EB Left Turn Lane to 250'	$287,100	$0	$287,100	2024
31	Beinhower Rd & Old York Rd (SR 0262)	Other Improvement (1)	Center TWLTL (Old York Rd)	$1,046,500	$0	$1,046,500	2024
A	Additional EB through lane between Int 24 & Int 25	Additional Through-Lane (1)	2nd EB through lane west of I-83 NB Ramps (Int 24), drops into right turn lane @ Old York Rd/Int 25	$1,036,300	$518,150	$518,150	2024
			Totals	$7,999,660	$3,079,772	$4,919,888	

Table 14-3
Development Improvements Cost Estimates - TSA 3

Int. No.	Intersection or Corridor	Improvements Required	Description	Total Project Cost	Allocated Funding		Construction Completion
					PennDOT Costs	Developer Costs	
			Totals	$0	$0	$0	

Impact Fee

The impact fee calculations for development improvements are summarized in **Table 15** for each transportation service area.

Table 15. Transportation Impact Fee by Service Area

Transportation Service Area	Development Capital Improvement Cost[1]	New Development Trips	Impact Fee[2,3]
TSA 1	$6,179,275	3,902	$1,583
TSA 2	$4,937,481	2,513	$1,964
TSA 3	$0	159	$0

(1) – Inclusive of the cost to prepare of the *Roadway Sufficiency Analysis (RSA)* that is attributable to development.
(2) – To be assessed on a per new weekday afternoon peak hour trip basis.
(3) – Development capital improvement costs divided by new development trips (rounded down to nearest dollar).

FIGURE 1A

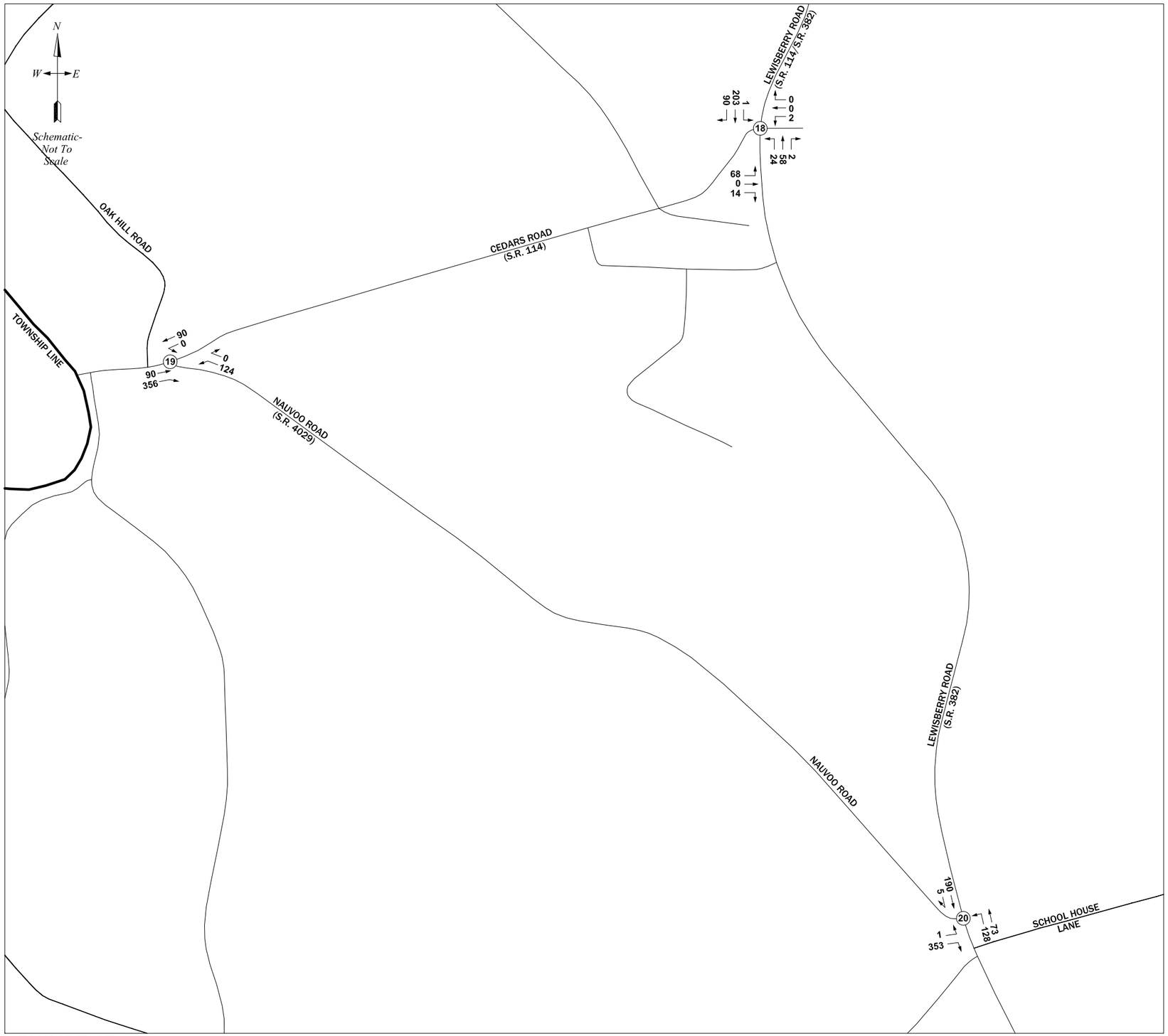
2014 Existing Weekday Afternoon Peak Hour Traffic Counts - Service Area 1

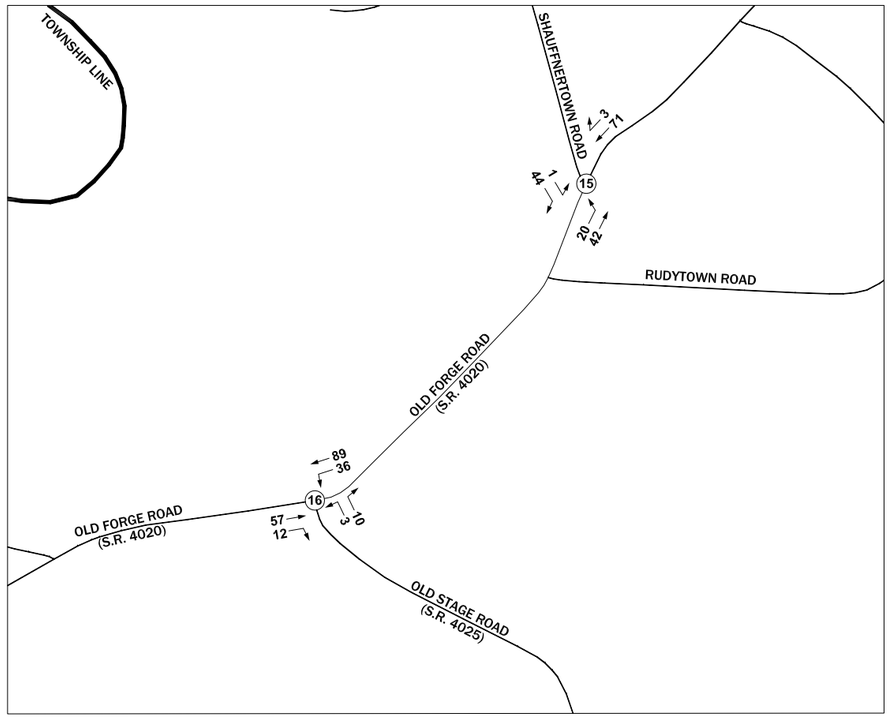
FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

McMAHON TRANSPORTATION ENGINEERS & PLANNERS

(4/10/2014 - TML) P:\913386 Fairview Twp York Co Act 209\Dwg\Figures\Weekday PM Ex Volumes.dwg





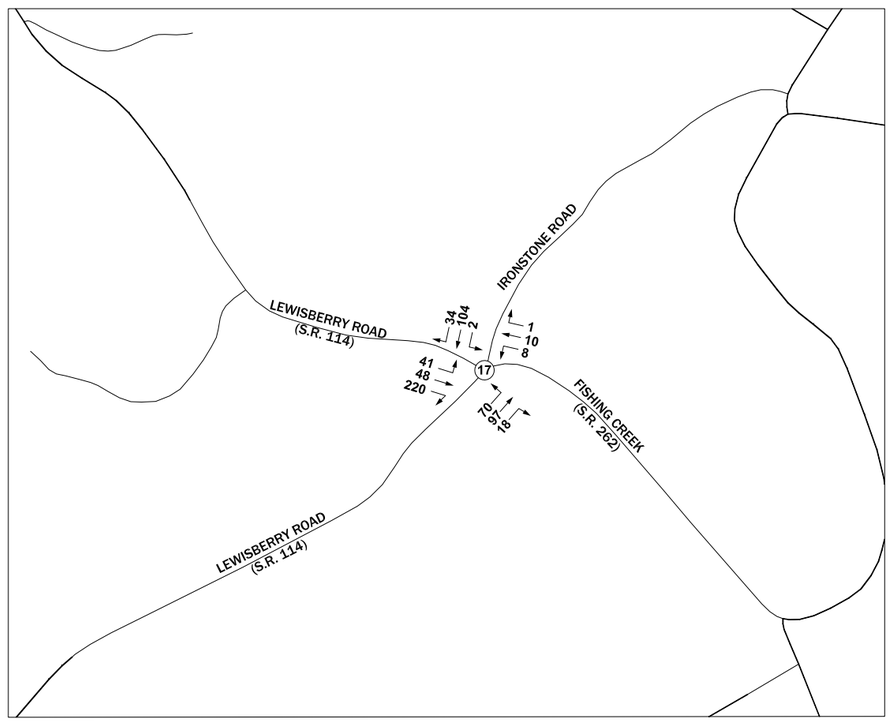


FIGURE 1B

2014 Existing Weekday Afternoon Peak Hour Traffic Counts - Service Area 1

FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

McMAHON TRANSPORTATION ENGINEERS & PLANNERS

(4/10/2014 - TML) P:\913386 Fairview Twp York Co Act 209\Dwg\Figures\Weekday PM Ex Volumes.dwg

FIGURE 2

2014 Existing Weekday Afternoon Peak Hour Traffic Counts - Service Area 2

FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

McMAHON TRANSPORTATION ENGINEERS & PLANNERS

FIGURE 3

2014 Existing Weekday Afternoon Peak Hour Traffic Counts - Service Area 3

FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

McMAHON TRANSPORTATION ENGINEERS & PLANNERS

(4/10/2014 - TML) P:\913386 Fairview Twp York Co Act 209\Dwg\Figures\Weekday PM Ex Volumes.dwg

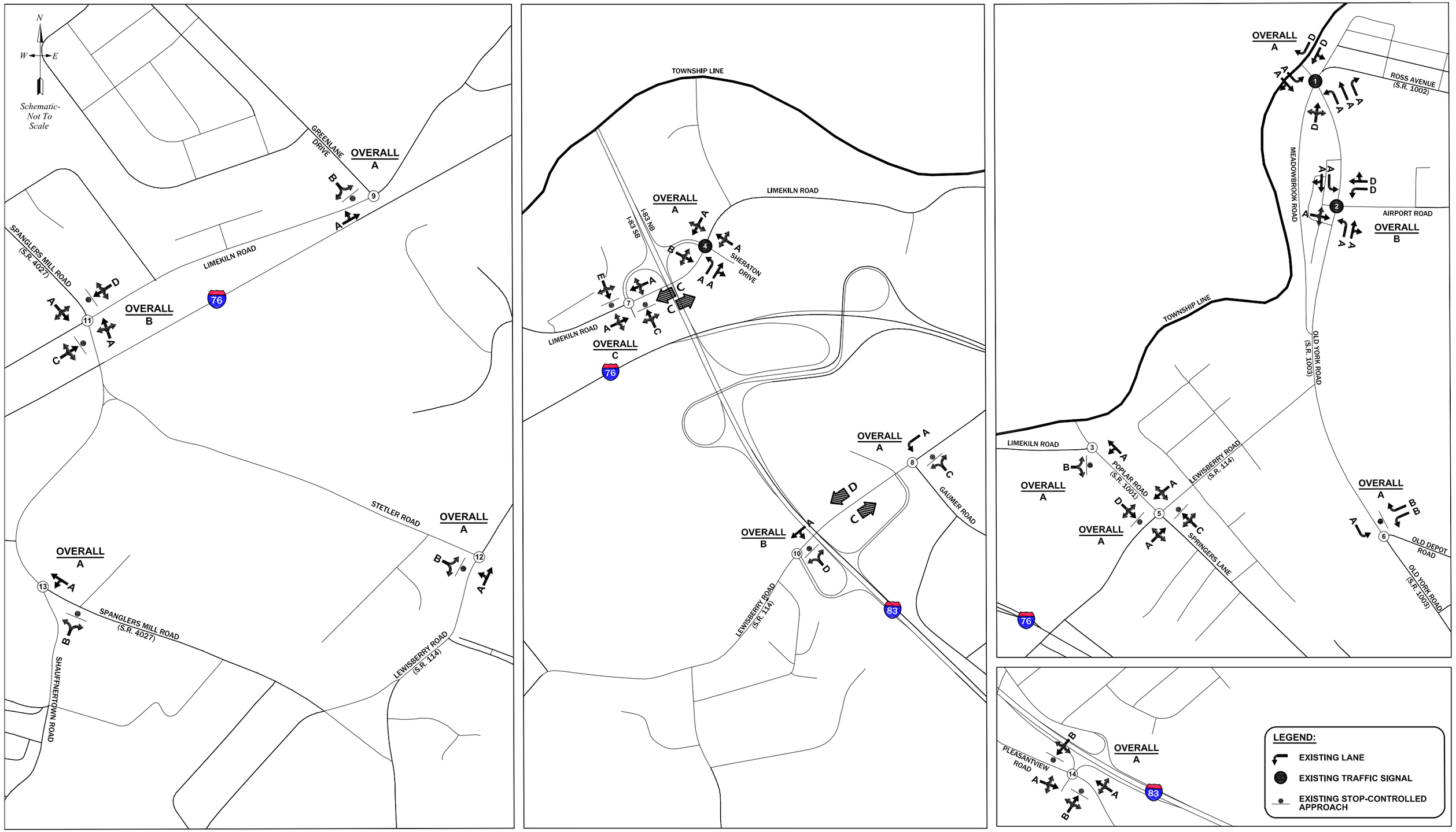


FIGURE 4A

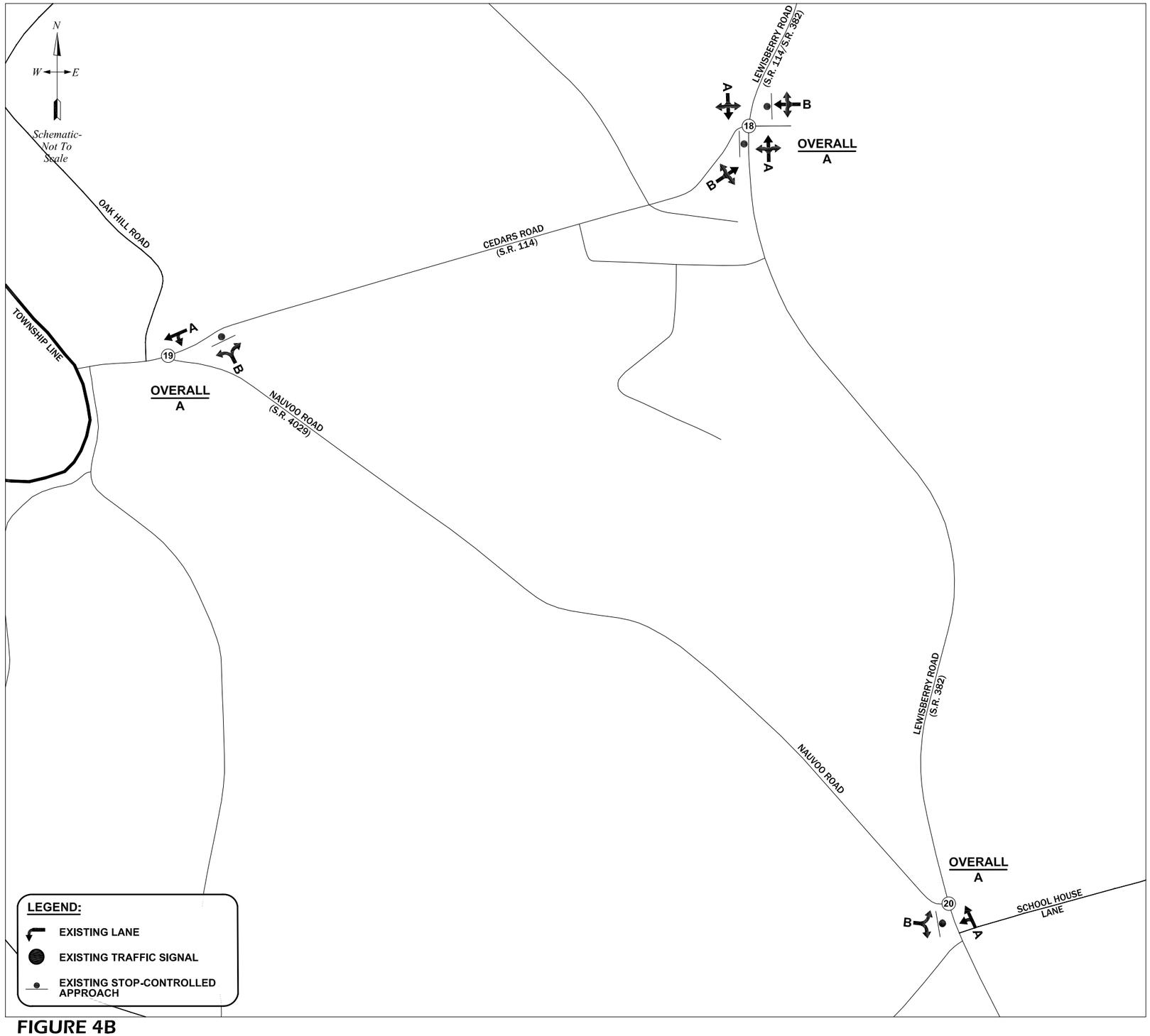
2014 Existing Weekday Afternoon Peak Hour Levels of Service - Service Area 1

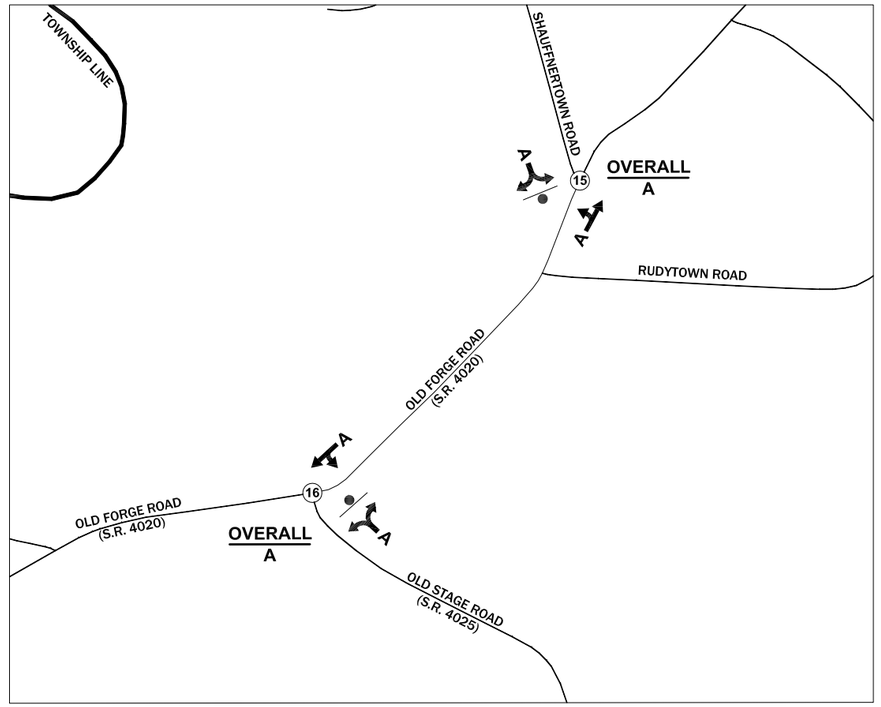
FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

McMAHON TRANSPORTATION ENGINEERS & PLANNERS

(4/10/2014 - TML) P:\913386 Fairview Twp York Co Act 209\Dwg\Figures\Weekday PM Ex LOS.dwg





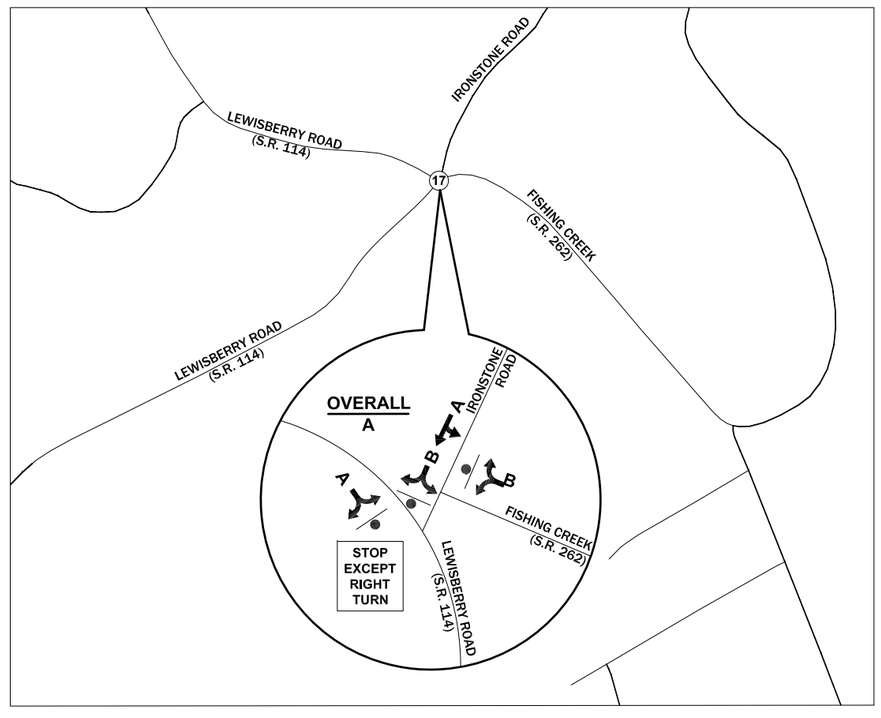


FIGURE 4B

2014 Existing Weekday Afternoon Peak Hour Levels of Service - Service Area 1

FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

McMAHON TRANSPORTATION ENGINEERS & PLANNERS

(4/10/2014 - TML) P:\913386 Fairview Twp York Co Act 209\Dwg\Figures\Weekday PM Ex LOS.dwg

FIGURE 5

2014 Existing Weekday Afternoon Peak Hour Levels of Service - Service Area 2

FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

McMAHON TRANSPORTATION ENGINEERS & PLANNERS

(4/10/2015 - ICP) P:\913386 Fairview Twp York Co Act 209\Dwg\Figures\Weekday PM Ex LOS.dwg

FIGURE 6

2014 Existing Weekday Afternoon Peak Hour Levels of Service - Service Area 3

FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

McMAHON TRANSPORTATION ENGINEERS & PLANNERS

(4/10/2014 - TML) P:\913386 Fairview Twp York Co Act 209\Dwg\Figures\Weekday PM Ex LOS.dwg

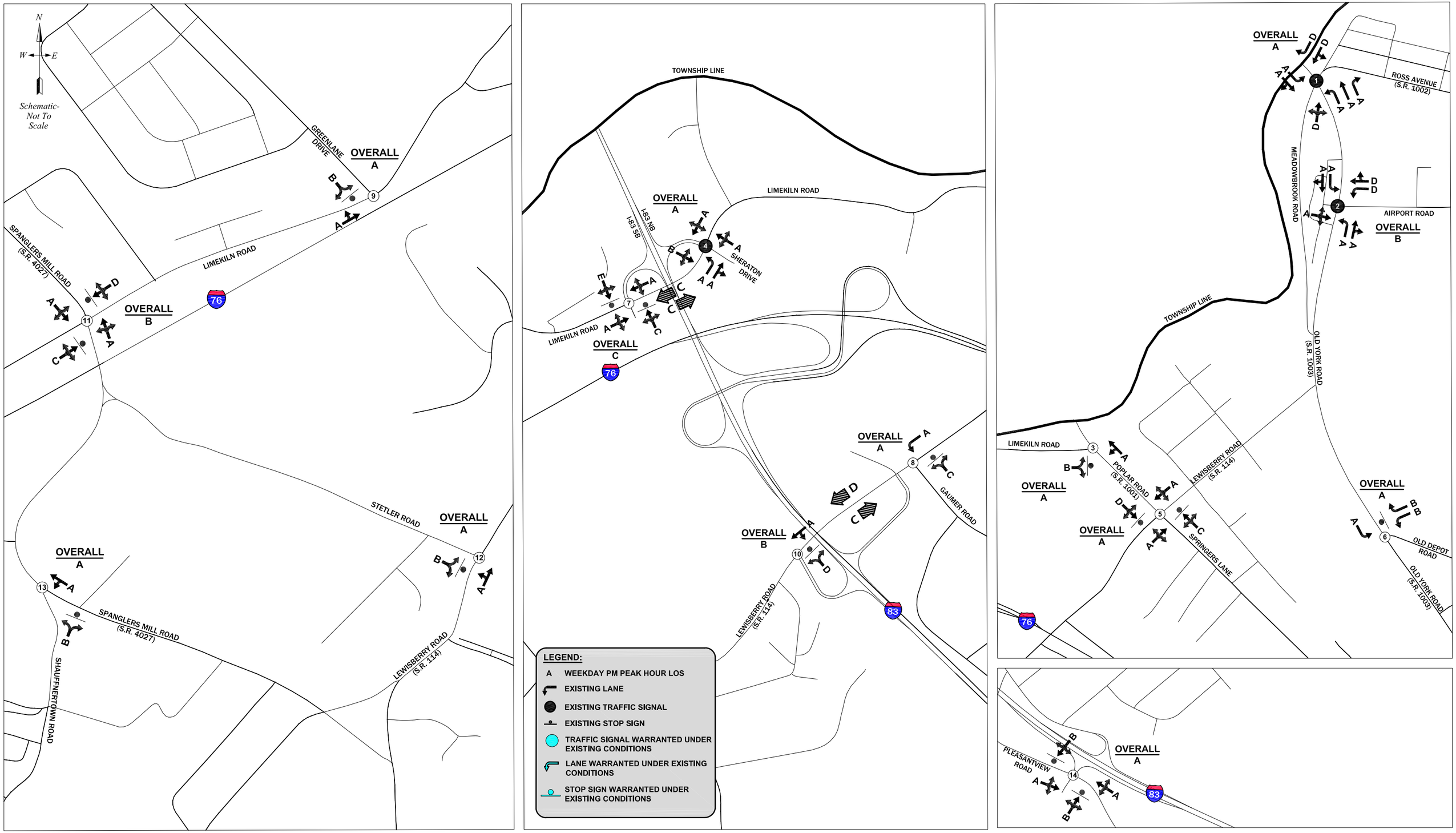


FIGURE 7A

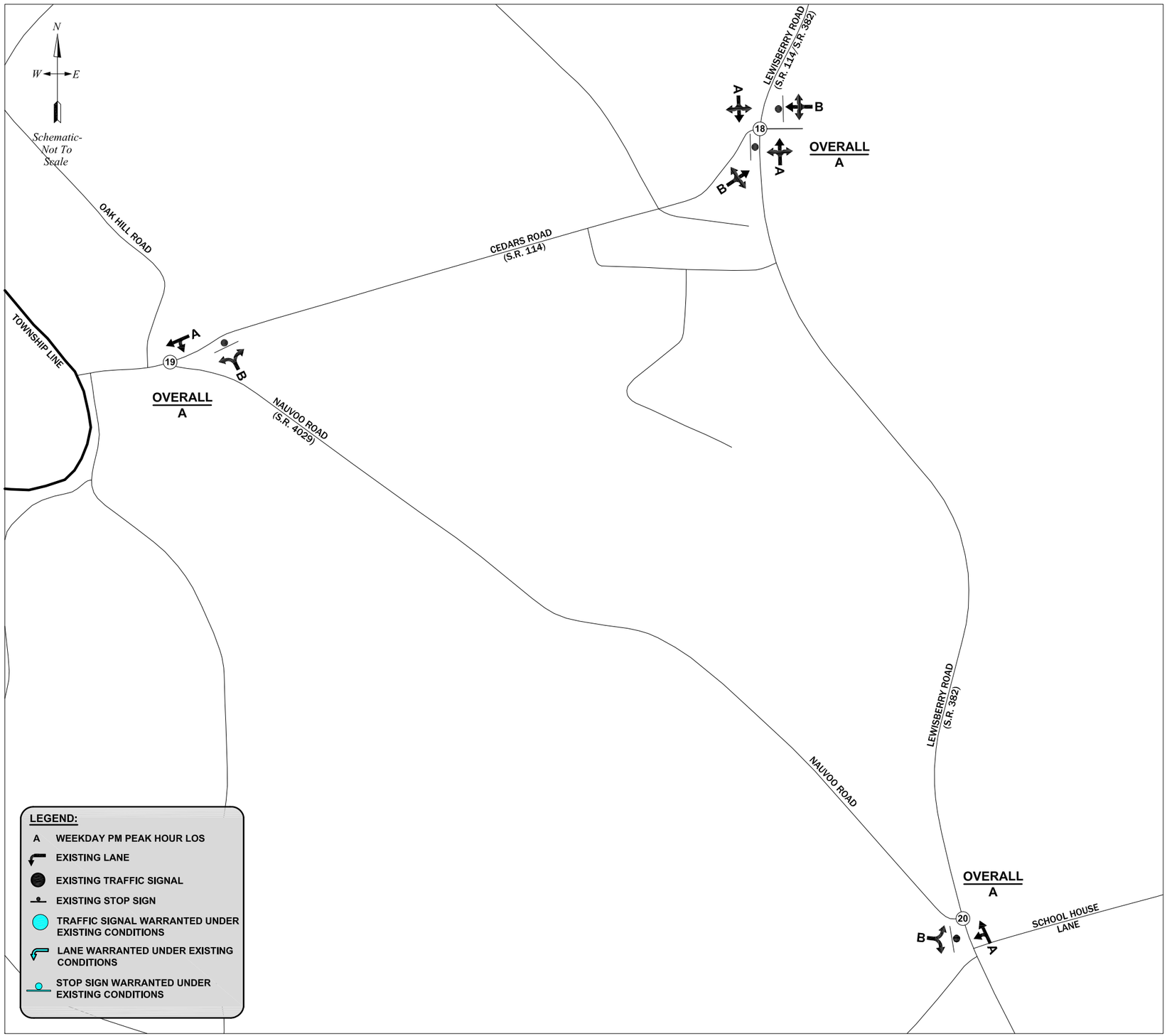
2014 Existing Weekday Afternoon Peak Hour Levels of Service with Improvements - Service Area 1

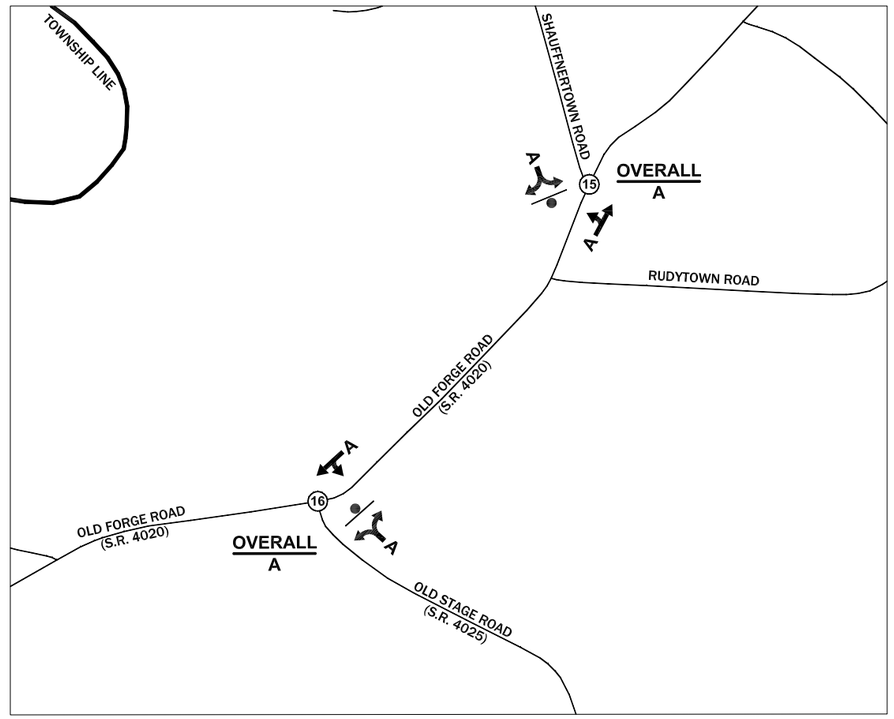
FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

McMAHON TRANSPORTATION ENGINEERS & PLANNERS

(4/10/2014 - TML) P:\913386 Fairview Twp York Co Act 209\Dwg\Figures\Weekday PM Ex LOS - w_Imp.dwg





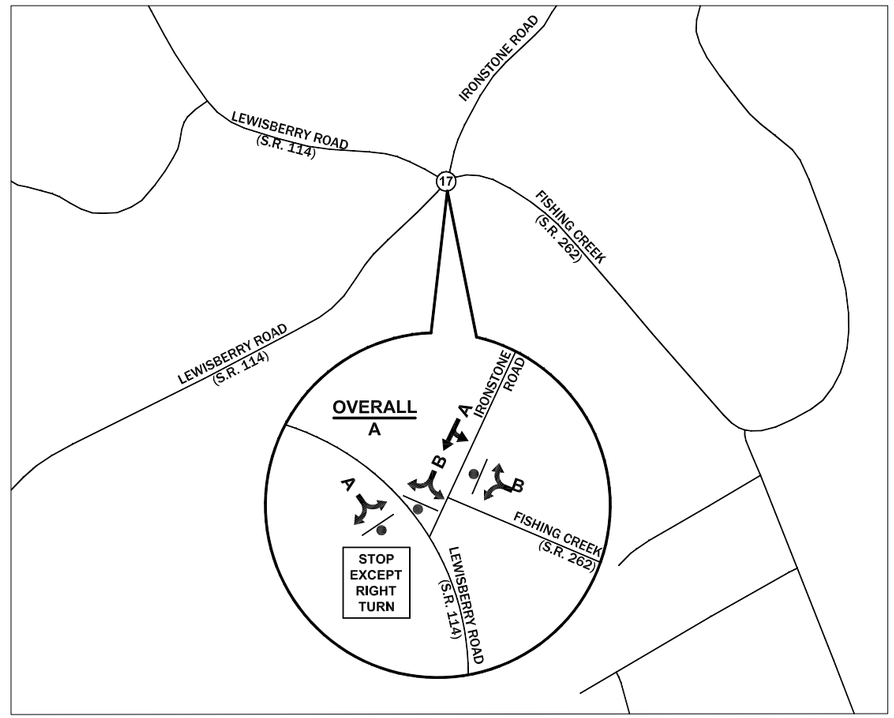


FIGURE 7B

2014 Existing Weekday Afternoon Peak Hour Levels of Service with Improvements - Service Area 1

FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

McMAHON TRANSPORTATION ENGINEERS & PLANNERS

(4/10/2014 - TML) P:\913386 Fairview Twp York Co Act 209\Dwg\Figures\Weekday PM Ex LOS - w_Imp.dwg

FIGURE 8

2014 Existing Weekday Afternoon Peak Hour Levels of Service with Improvements - Service Area 2

FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

McMAHON TRANSPORTATION ENGINEERS & PLANNERS

(4/10/2015 - ICP) P:\913386 Fairview Twp York Co Act 209\Dwg\Figures\Weekday PM Ex LOS - w_Imp.dwg

N

W E

Schematic-Not To Scale

MOORES MOUNTAIN ROAD (S.R. 4031)

PINETOWN ROAD (S.R. 4024)

ROSSVILLE ROAD (S.R. 177)

34

33

OVERALL
A

B

A

A

A

OVERALL
A

B

A

TOWNSHIP LINE

LEGEND:

A	WEEKDAY PM PEAK HOUR LOS
	EXISTING LANE
	EXISTING TRAFFIC SIGNAL
	EXISTING STOP SIGN
	TRAFFIC SIGNAL WARRANTED UNDER EXISTING CONDITIONS
	LANE WARRANTED UNDER EXISTING CONDITIONS
	STOP SIGN WARRANTED UNDER EXISTING CONDITIONS

FIGURE 9

2014 Existing Weekday Afternoon Peak Hour Levels of Service with Improvements - Service Area 3

FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

McMAHON TRANSPORTATION ENGINEERS & PLANNERS

(4/10/2014 - TML) P:\913386 Fairview Twp York Co Act 209\Dwg\Figures\Weekday PM Ex LOS - w_Imp.dwg

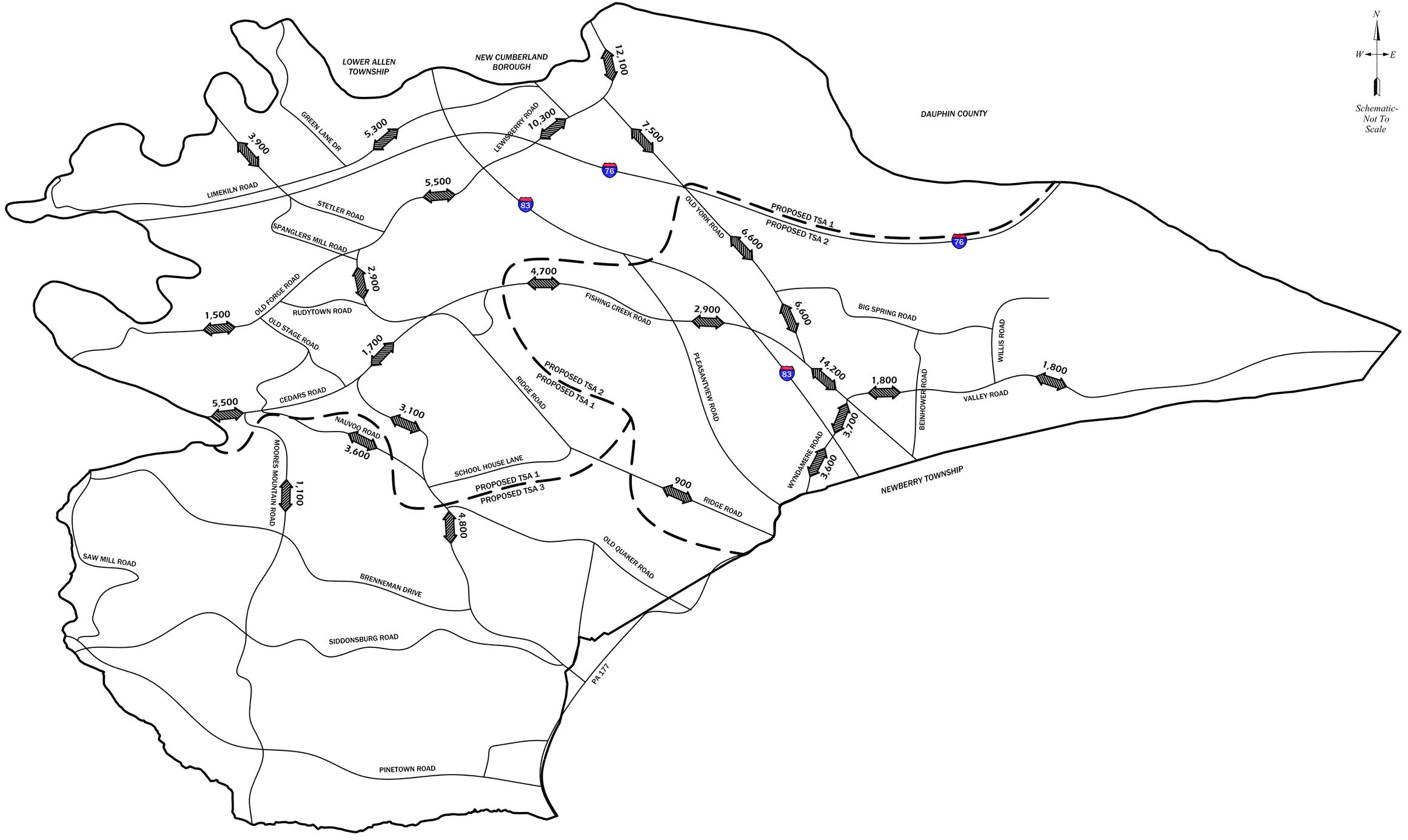


FIGURE 10

2014 Annual Daily Traffic Volumes

FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

McMAHON TRANSPORTATION ENGINEERS & PLANNERS

(12/04/2014 - ICP) P:\913386 Fairview Twp York Co Act 209\Dwg\Figures\ATR Volumes.dwg

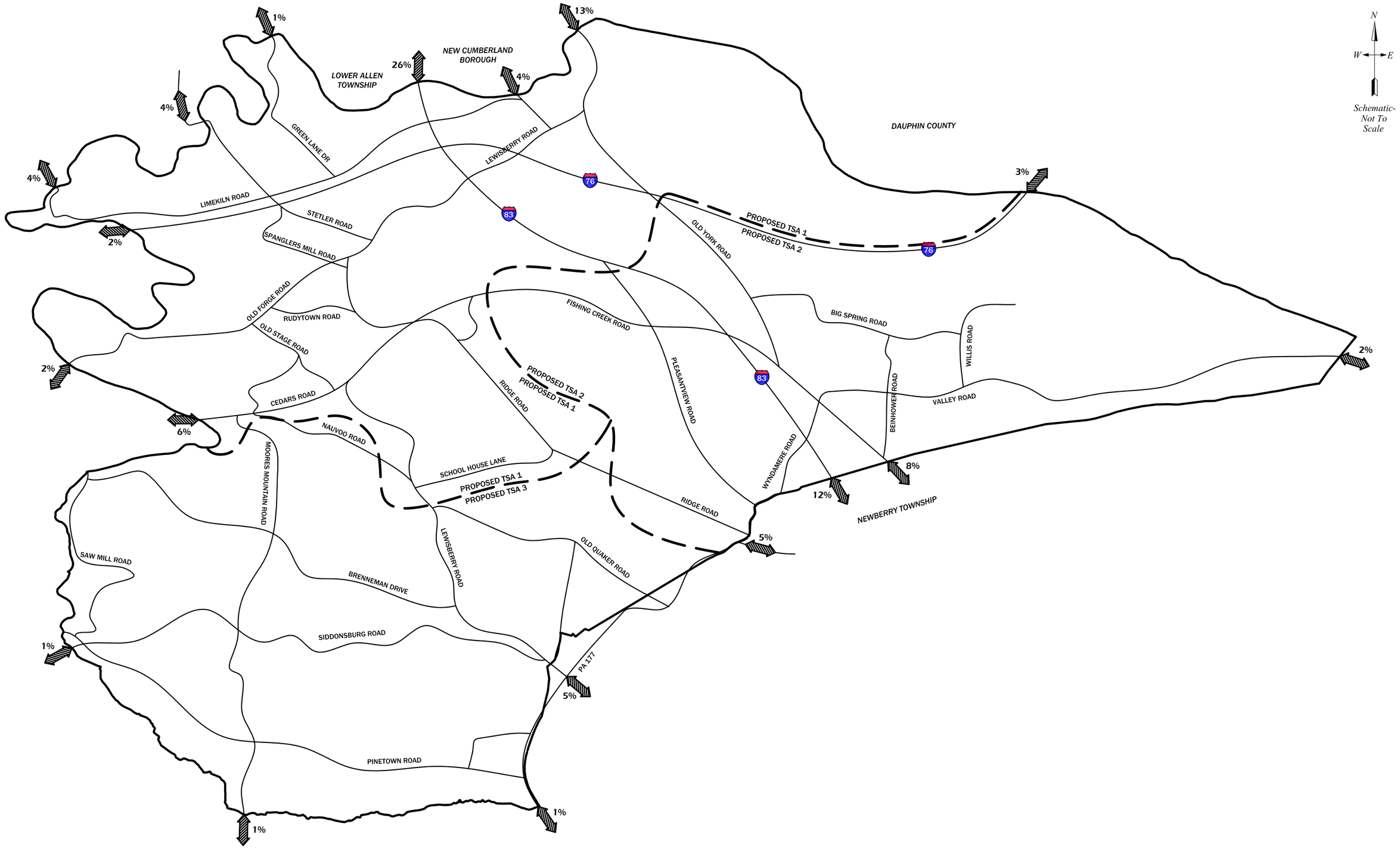


FIGURE 11

Directions of Approach and Departure

FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

McMAHON TRANSPORTATION ENGINEERS & PLANNERS

(2/13/2015 - ICP) P:\913386 Fairview Twp York Co Act 209\Dwg\Figures\Directions of Approach_Departure.dwg

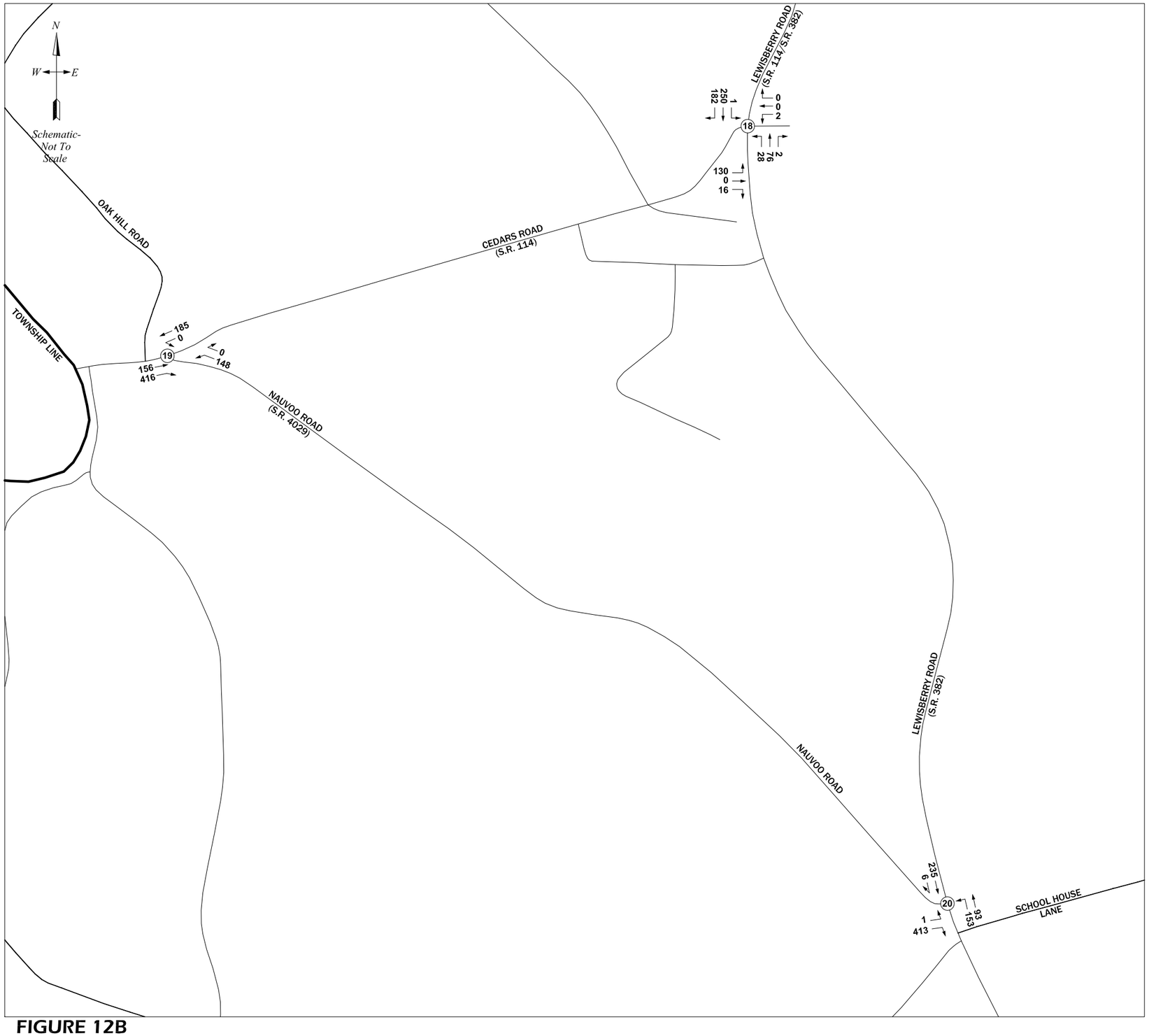
FIGURE 12A

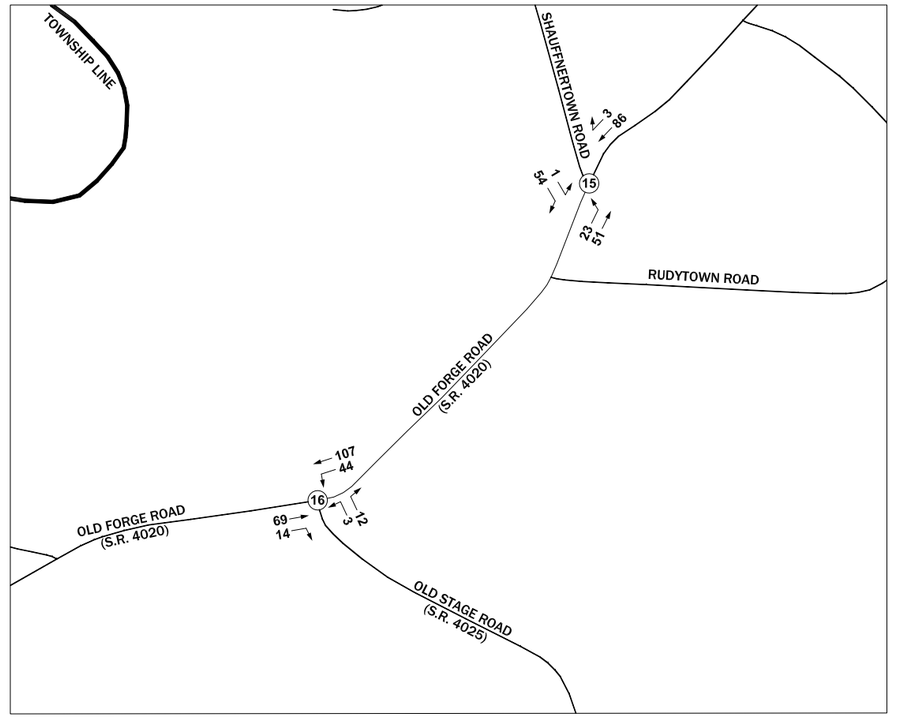
2024 Future Pass-Through Weekday Afternoon Peak Hour Traffic Volumes - Service Area 1

FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

McMAHON TRANSPORTATION ENGINEERS & PLANNERS





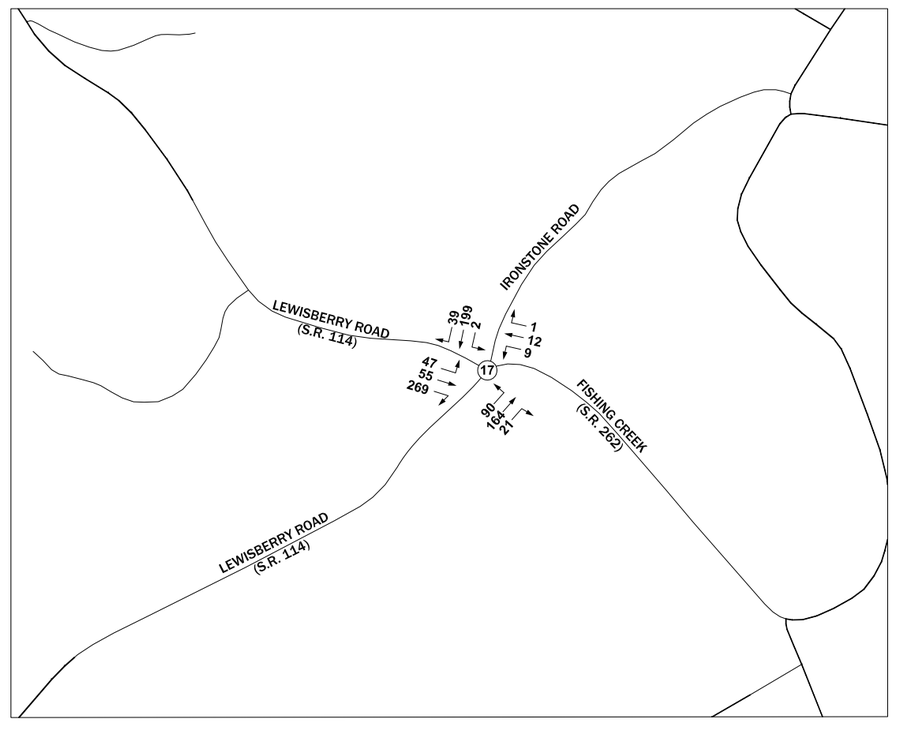


FIGURE 12B

2024 Future Pass-Through Weekday Afternoon Peak Hour Traffic Volumes - Service Area 1

FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

McMAHON TRANSPORTATION ENGINEERS & PLANNERS

(2/6/2015 - ICP) P:\913386 Fairview Twp York Co Act 209\Dwg\Figures\Weekday PM 2024 Pass-Thru Volumes.dwg

FIGURE 13

2024 Future Pass-Through Weekday Afternoon Peak Hour Traffic Volumes - Service Area 2

FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

McMAHON TRANSPORTATION ENGINEERS & PLANNERS

FIGURE 14

2024 Future Pass-Through Weekday Afternoon Peak Hour Traffic Volumes - Service Area 3

FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

McMAHON TRANSPORTATION ENGINEERS & PLANNERS

(2/6/2015 - ICP) P:\913386 Fairview Twp York Co Act 209\Dwg\Figures\Weekday PM 2024 Pass-Thru Volumes.dwg

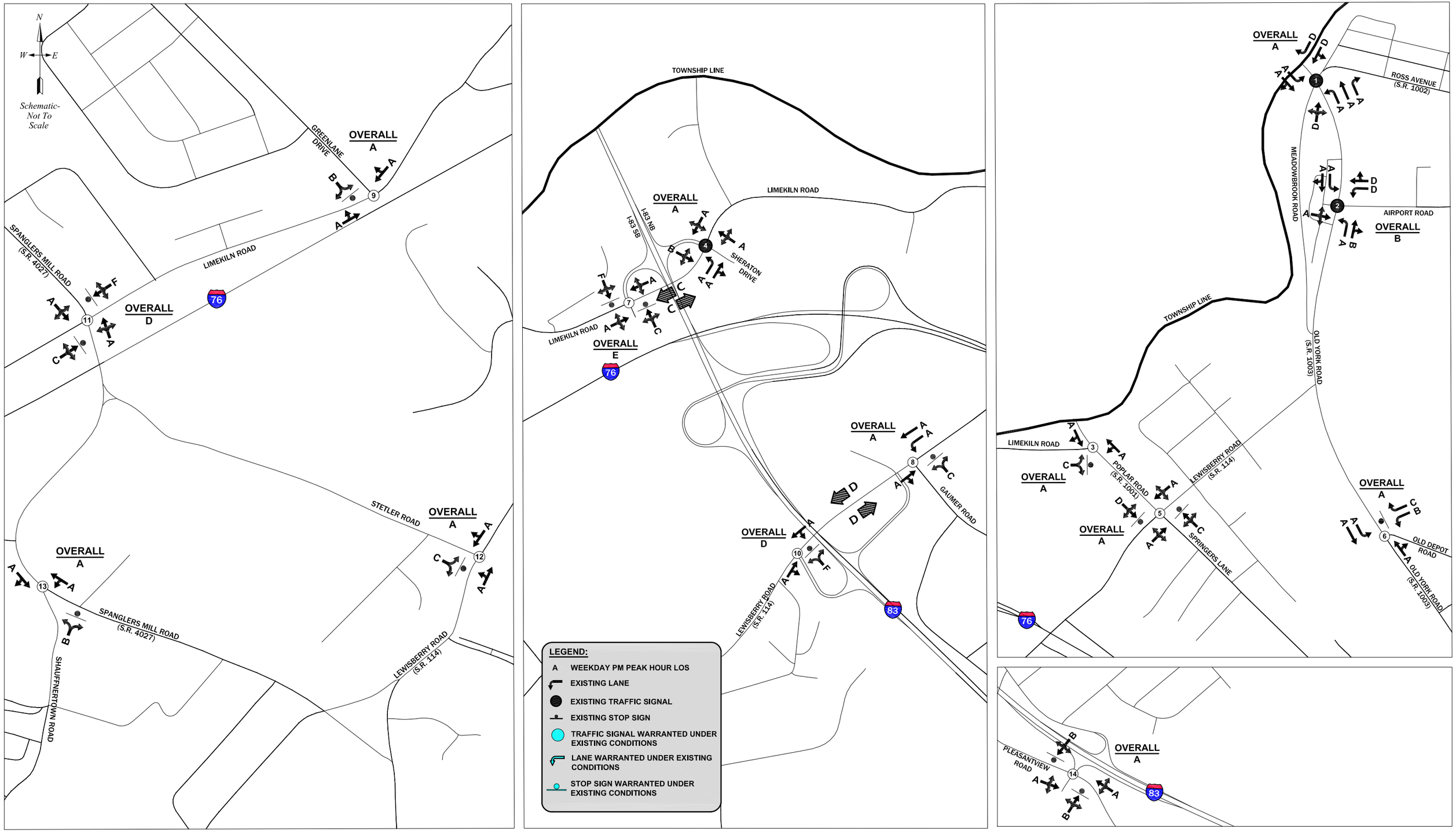


FIGURE 15A

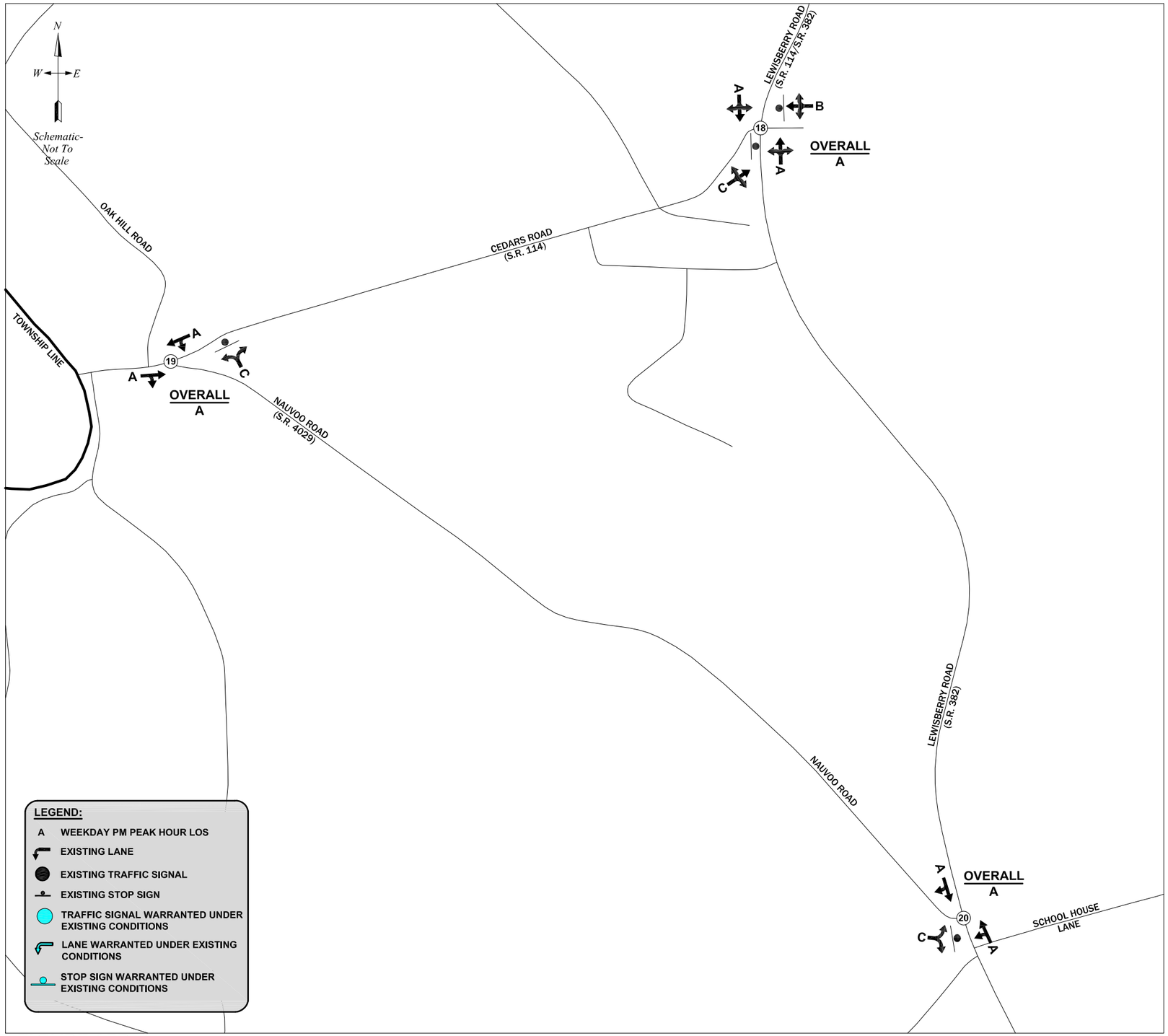
2024 Future Pass-Through Weekday Afternoon Peak Hour Levels of Service - Service Area 1

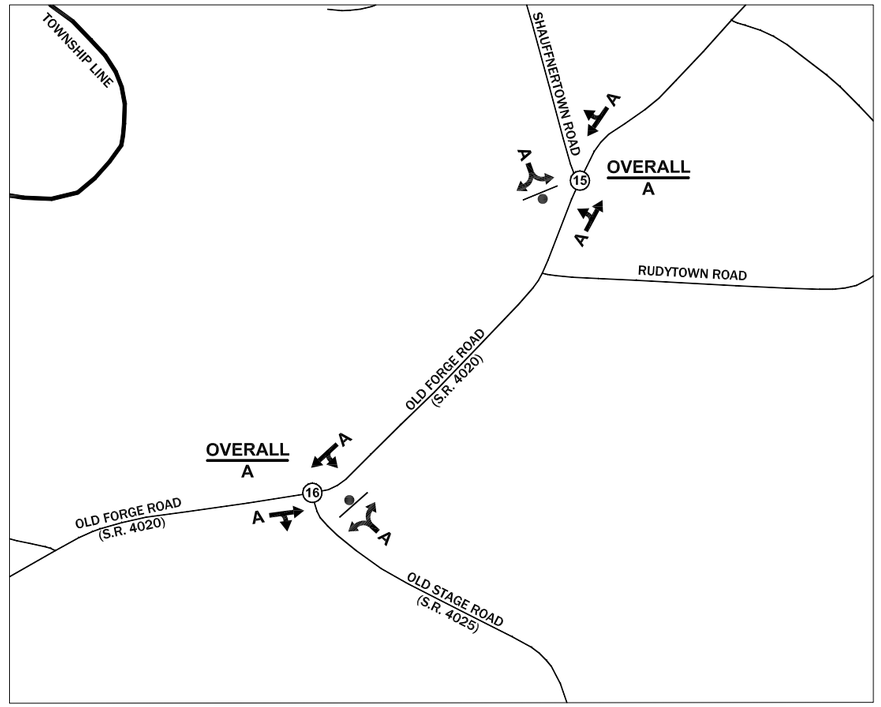
FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

McMAHON TRANSPORTATION ENGINEERS & PLANNERS

(2/11/2015 - ICP) P:\913386 Fairview Twp York Co Act 209\Dwg\Figures\Weekday PM 2024 Pass-Thru LOS.dwg





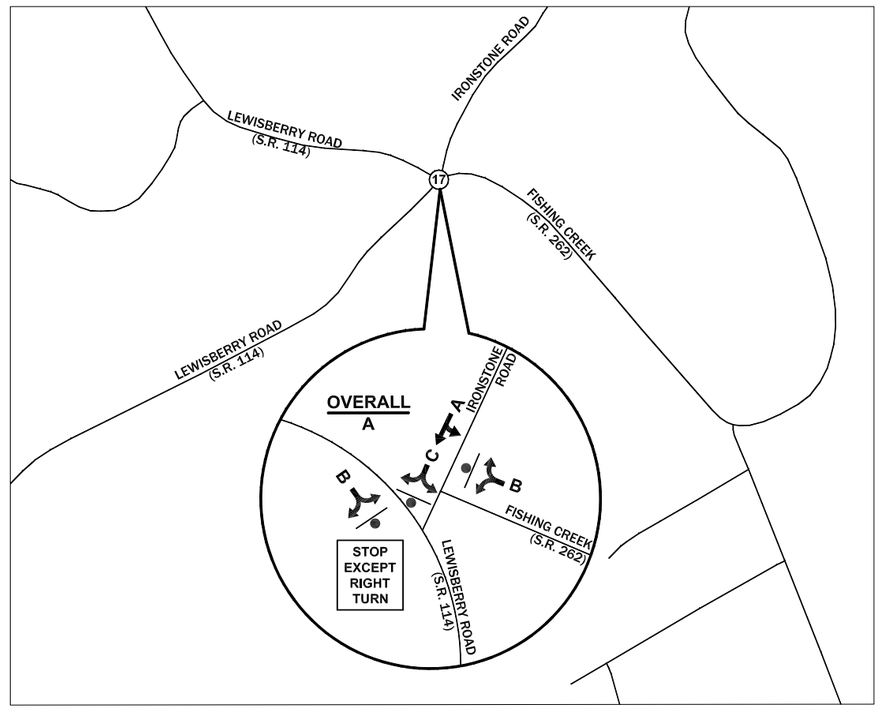


FIGURE 15B

2024 Future Pass-Through Weekday Afternoon Peak Hour Levels of Service - Service Area 1

FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

McMAHON TRANSPORTATION ENGINEERS & PLANNERS

(2/11/2015 - ICP) P:\913386 Fairview Twp York Co Act 209\Dwg\Figures\Weekday PM 2024 Pass-Thru LOS.dwg

FIGURE 16

2024 Future Pass-Through Weekday Afternoon Peak Hour Levels of Service - Service Area 2

FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

McMAHON TRANSPORTATION ENGINEERS & PLANNERS

(4/10/2015 - ICP) P:\913386 Fairview Twp York Co Act 209\Dwg\Figures\Weekday PM 2024 Pass-Thru LOS.dwg

FIGURE 17

2024 Future Pass-Through Weekday Afternoon Peak Hour Levels of Service - Service Area 3

FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

McMAHON TRANSPORTATION ENGINEERS & PLANNERS

(2/11/2015 - ICP) P:\913386 Fairview Twp York Co Act 209\Dwg\Figures\Weekday PM 2024 Pass-Thru LOS.dwg

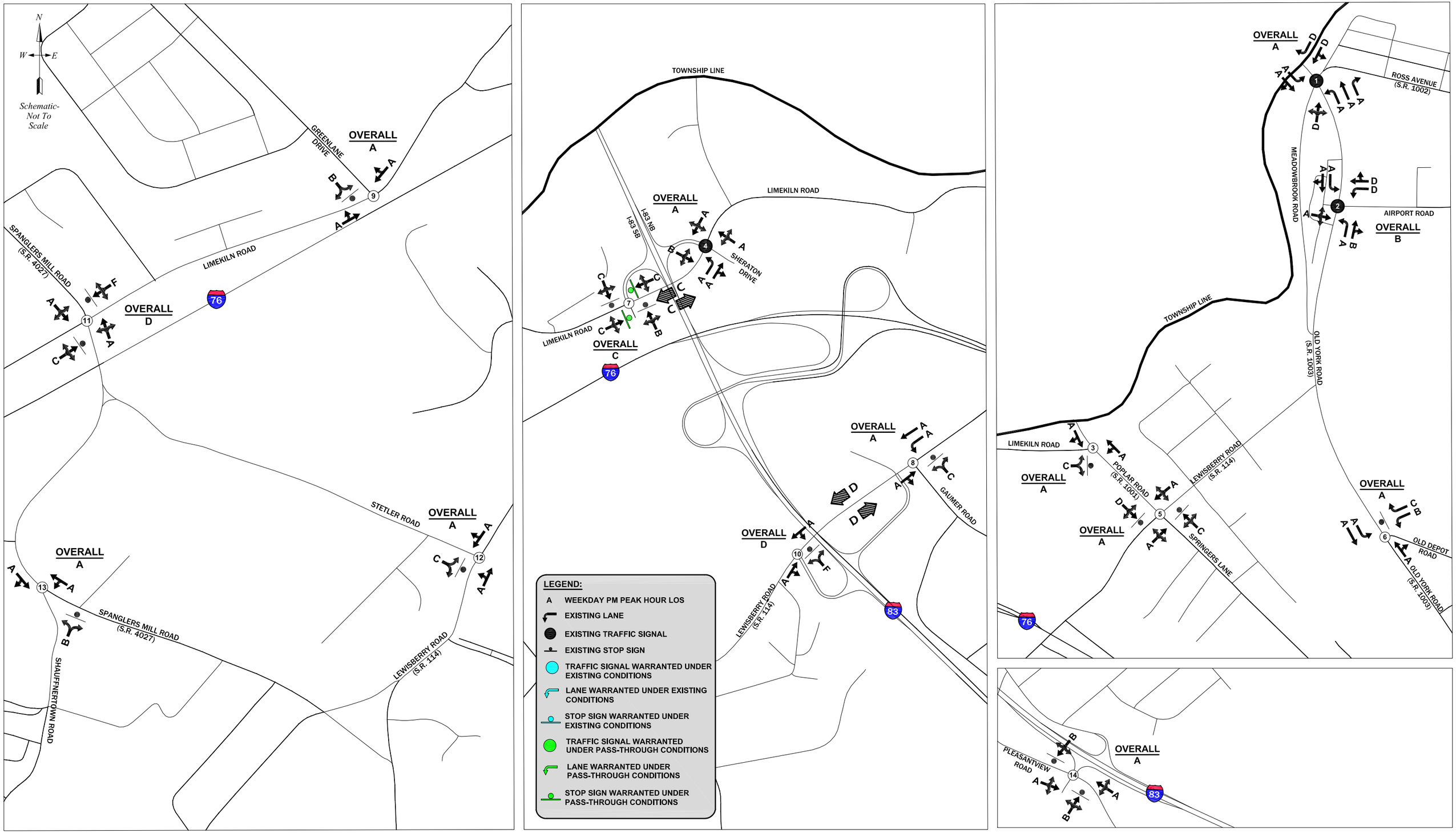


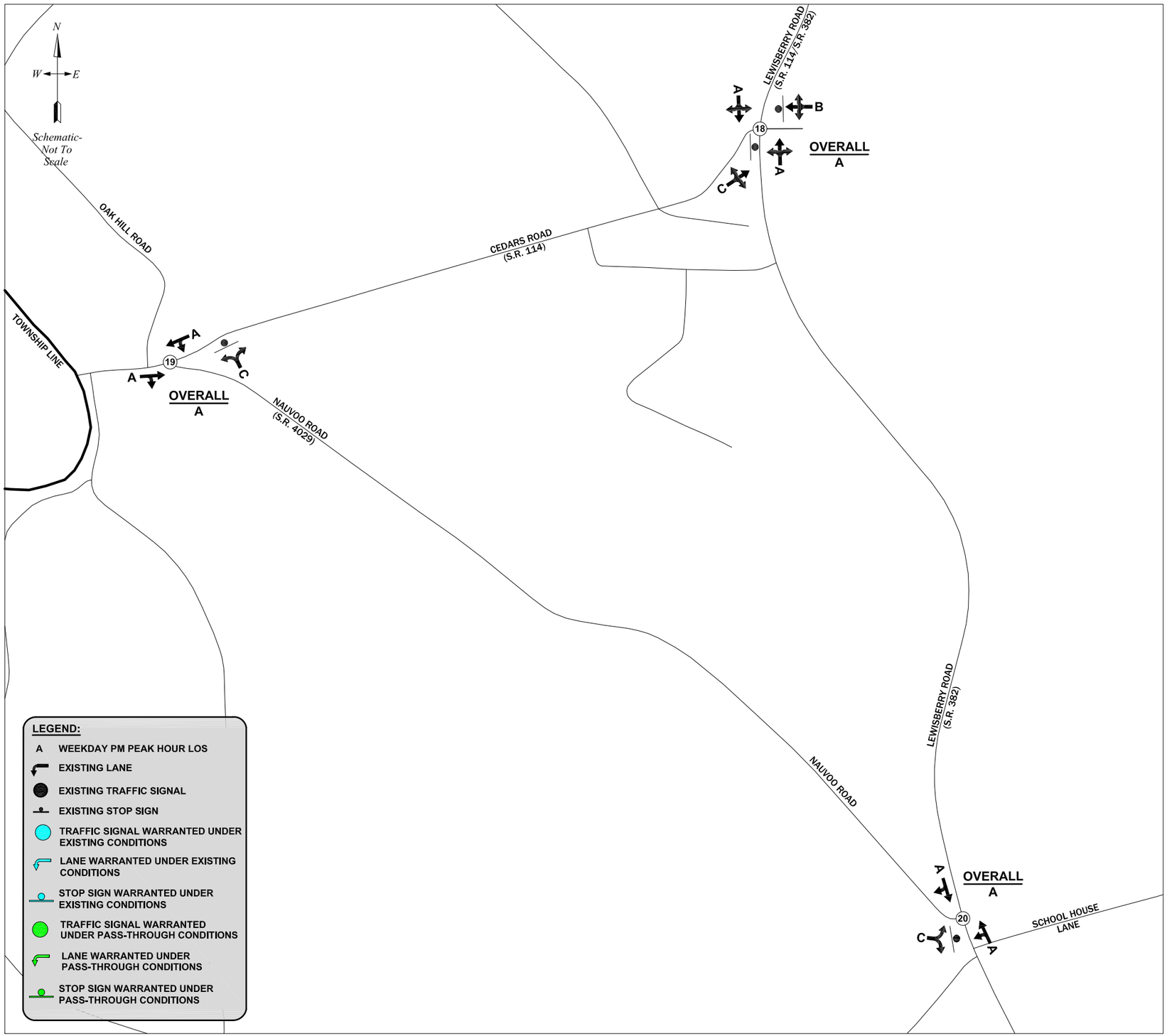
FIGURE 18A

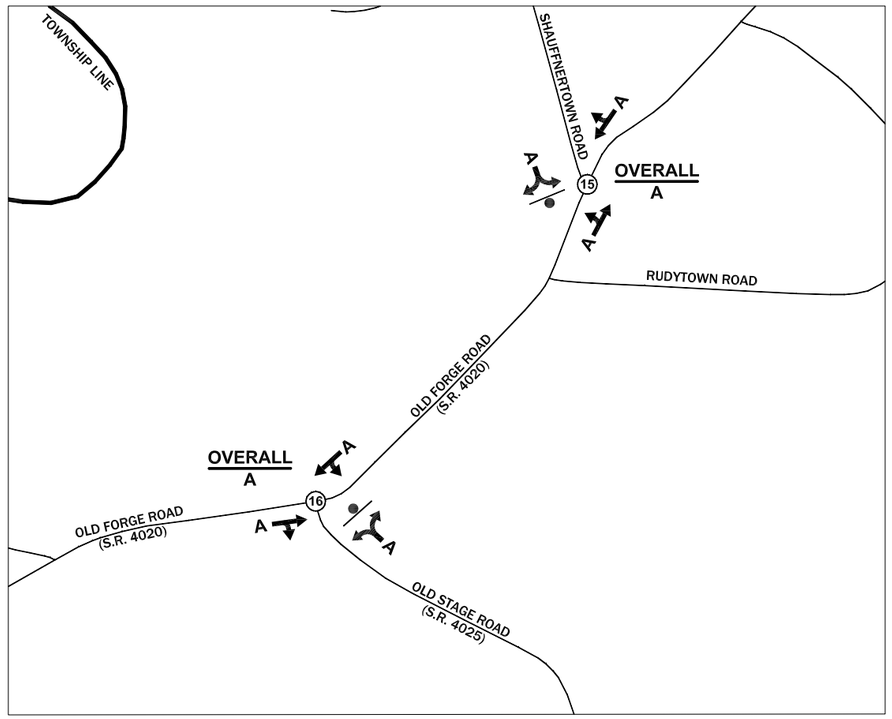
2024 Future Pass-Through Weekday Afternoon Peak Hour Levels of Service with Improvements - Service Area 1

FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

McMAHON TRANSPORTATION ENGINEERS & PLANNERS





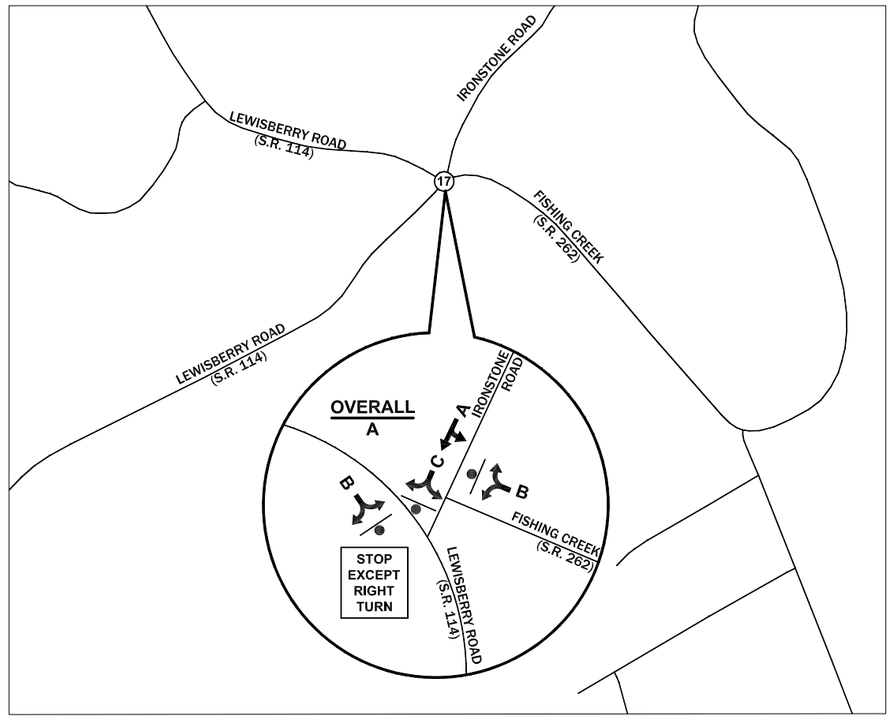


FIGURE 18B

2024 Future Pass-Through Weekday Afternoon Peak Hour Levels of Service with Improvements - Service Area 1

FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

McMAHON TRANSPORTATION ENGINEERS & PLANNERS

(2/11/2015 - ICP) P:\913386 Fairview Twp York Co Act 209\Dwg\Figures\Weekday PM 2024 Pass-Thru LOS w_Imp.dwg

FIGURE 19

2024 Future Pass-Through Weekday Afternoon Peak Hour Levels of Service with Improvements - Service Area 2

FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

McMAHON TRANSPORTATION ENGINEERS & PLANNERS

(4/10/2015 - ICP) P:\913386 Fairview Twp York Co Act 209\Dwg\Figures\Weekday PM 2024 Pass-Thru LOS w_Imp.dwg

N

W E

Schematic-
Not To
Scale

MOORES MOUNTAIN ROAD
(S.R. 4031)

PINETOWN ROAD
(S.R 4024)

B

OVERALL
A

A

A

34

B

ROSSVILLE ROAD (S.R. 177)

A

OVERALL
A

33

C

A

PINETOWN ROAD
(S.R. 4024)

TOWNSHIP LINE

LEGEND:

- A — WEEKDAY PM PEAK HOUR LOS
- EXISTING LANE
- EXISTING TRAFFIC SIGNAL
- EXISTING STOP SIGN
- TRAFFIC SIGNAL WARRANTED UNDER EXISTING CONDITIONS
- LANE WARRANTED UNDER EXISTING CONDITIONS
- STOP SIGN WARRANTED UNDER EXISTING CONDITIONS
- TRAFFIC SIGNAL WARRANTED UNDER PASS-THROUGH CONDITIONS
- LANE WARRANTED UNDER PASS-THROUGH CONDITIONS
- STOP SIGN WARRANTED UNDER PASS-THROUGH CONDITIONS

FIGURE 20

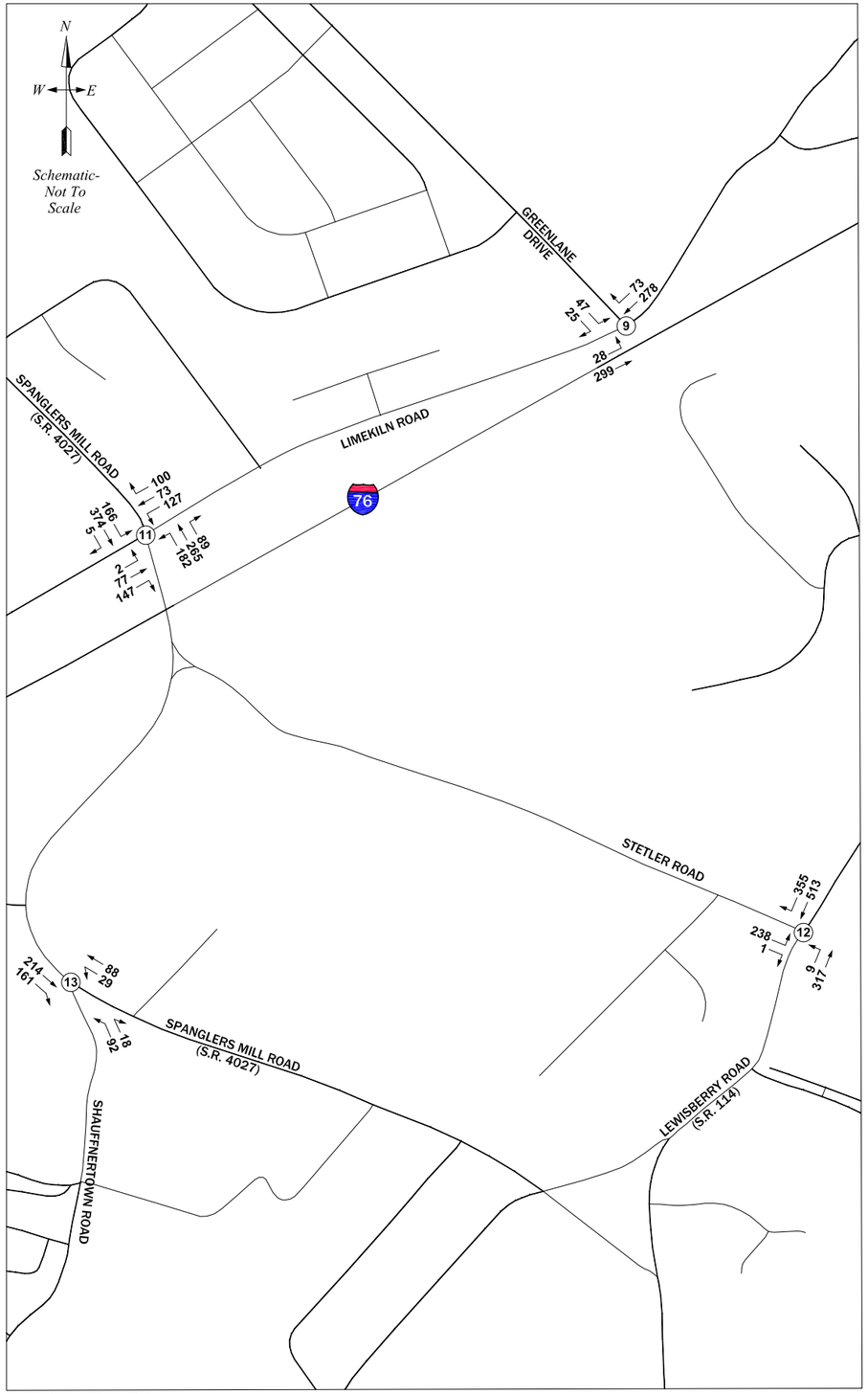
2024 Future Pass-Through Weekday Afternoon Peak Hour Levels of Service with Improvements - Service Area 3

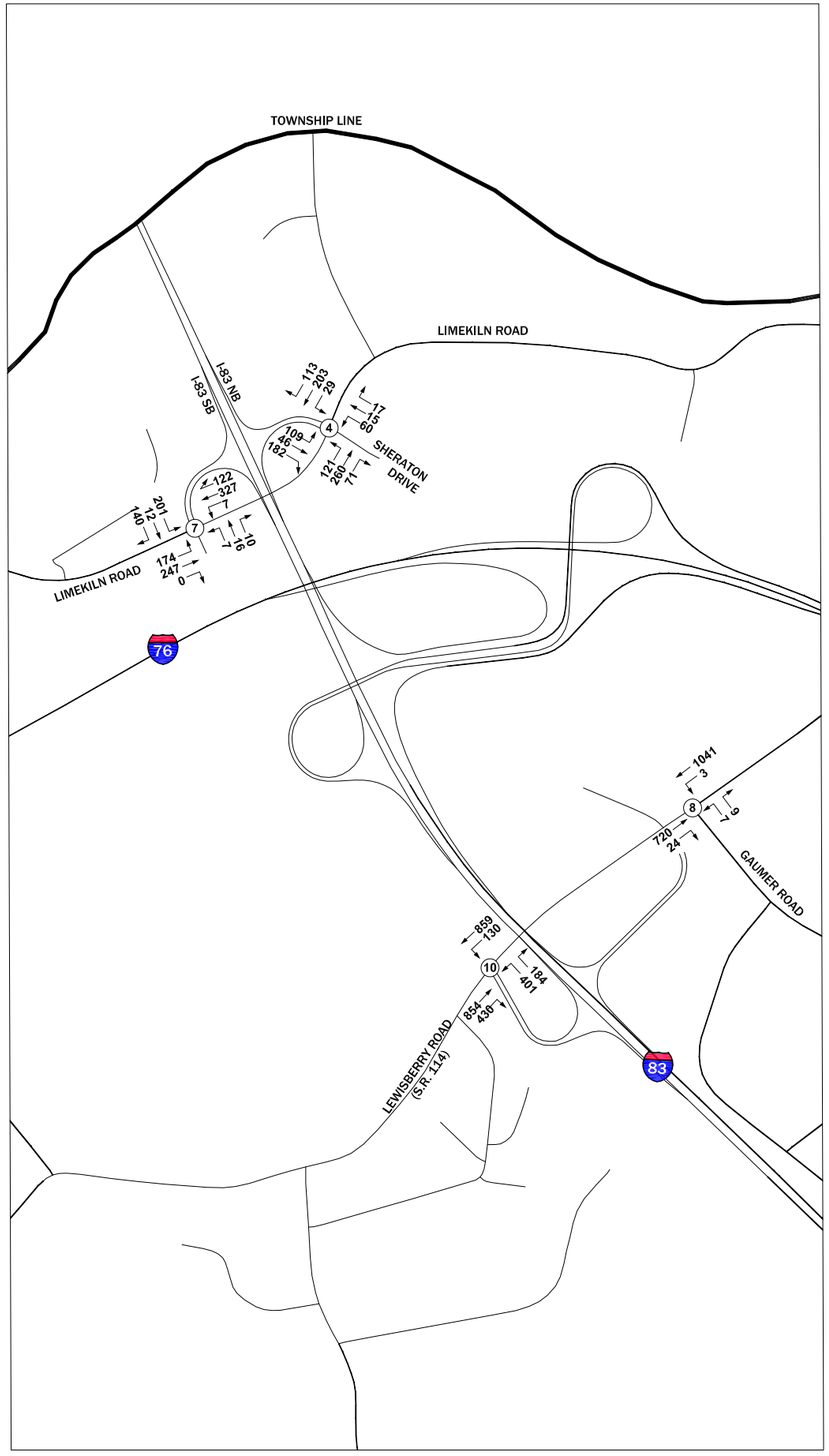
FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

McMAHON TRANSPORTATION ENGINEERS & PLANNERS

(2/11/2015 - ICP) P:\913386 Fairview Twp York Co Act 209\Dwg\Figures\Weekday PM 2024 Pass-Thru LOS w_Imp.dwg





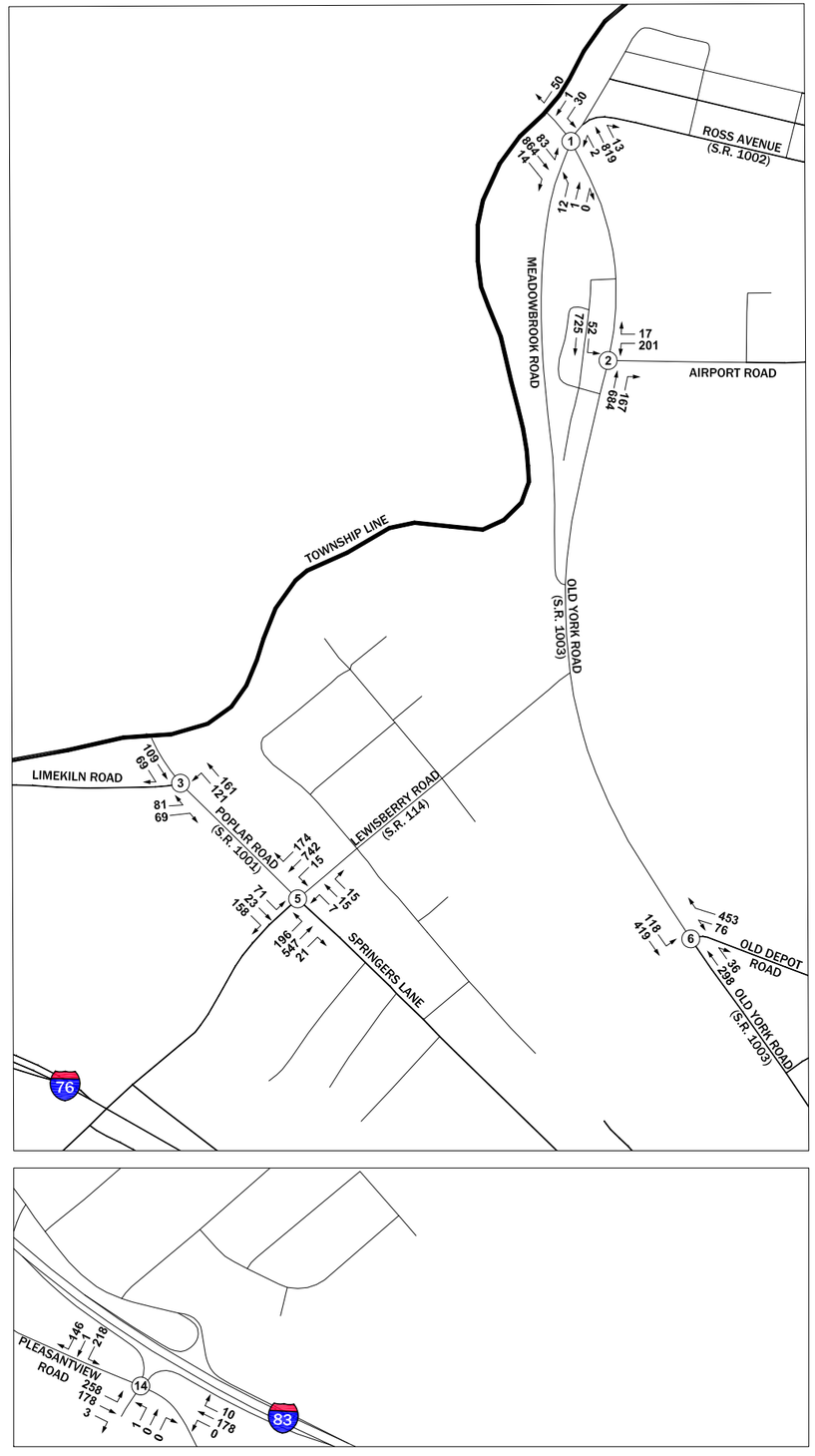


FIGURE 21A

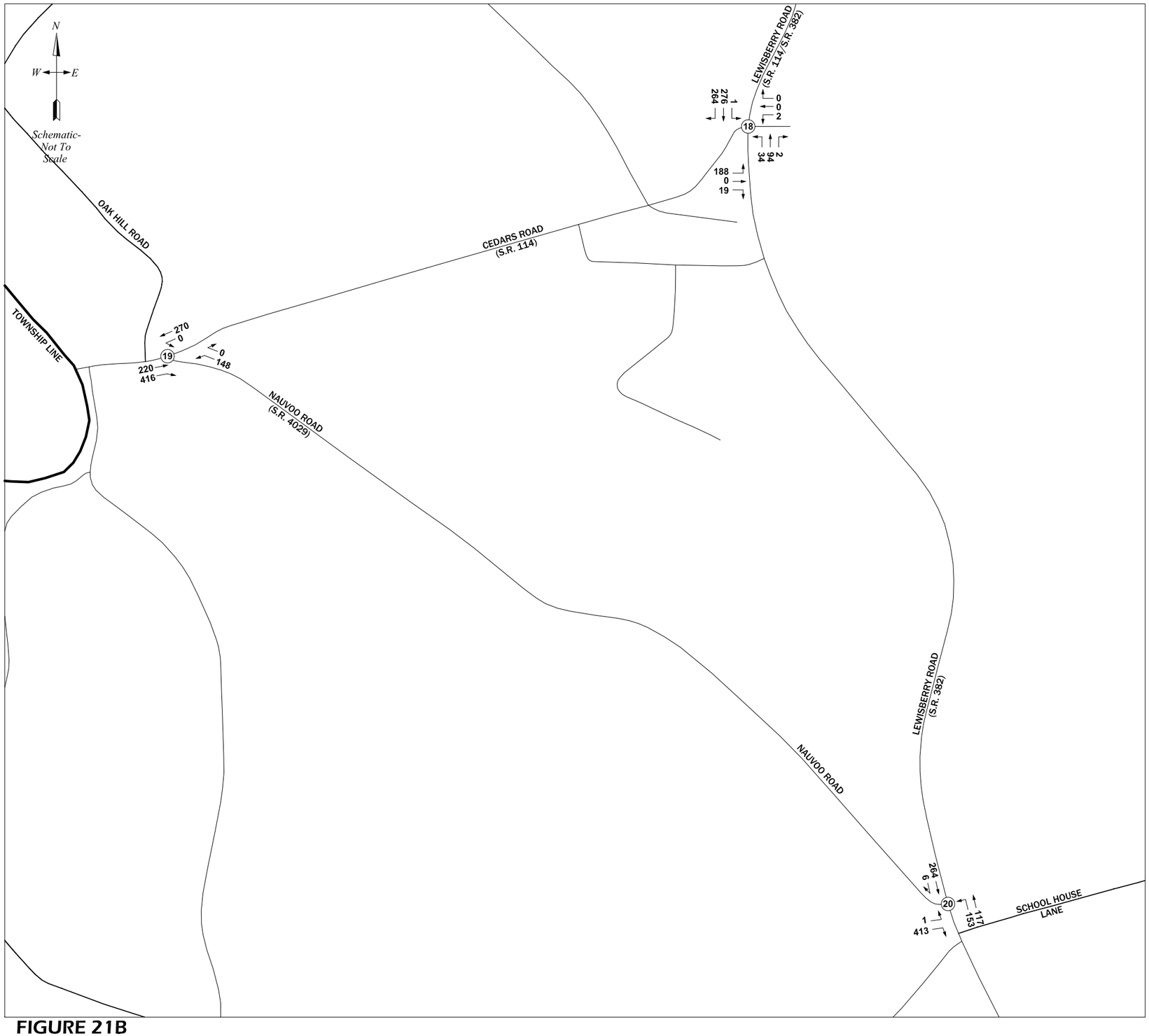
2024 Future Development Weekday Afternoon Peak Hour Traffic Volumes - Service Area 1

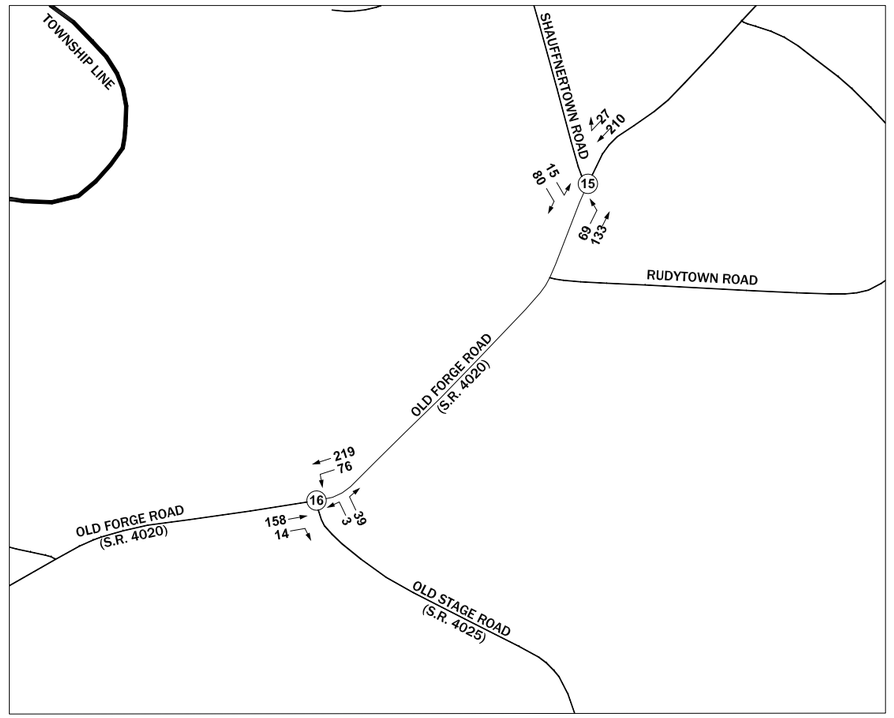
FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

McMAHON TRANSPORTATION ENGINEERS & PLANNERS

(2/06/2015 - ICP) P:\913386 Fairview Twp York Co Act 209\Dwg\Figures\Weekday PM 2024 Development Volumes.dwg





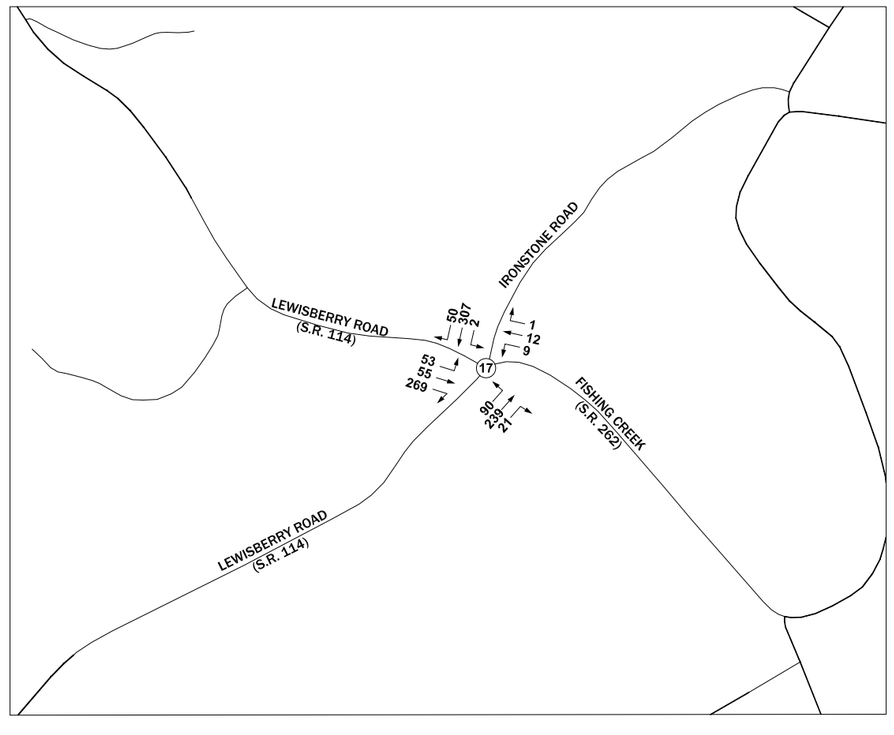


FIGURE 21B

2024 Future Development Weekday Afternoon Peak Hour Traffic Volumes - Service Area 1

FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

McMAHON TRANSPORTATION ENGINEERS & PLANNERS

(2/6/2015 - ICP) P:\913386 Fairview Twp York Co Act 209\Dwg\Figures\Weekday PM 2024 Development Volumes.dwg

FIGURE 22

2024 Future Development Weekday Afternoon Peak Hour Traffic Volumes - Service Area 2

FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

McMAHON TRANSPORTATION ENGINEERS & PLANNERS

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FIGURE 23

2024 Future Development Weekday Afternoon Peak Hour Traffic Volumes - Service Area 3

FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

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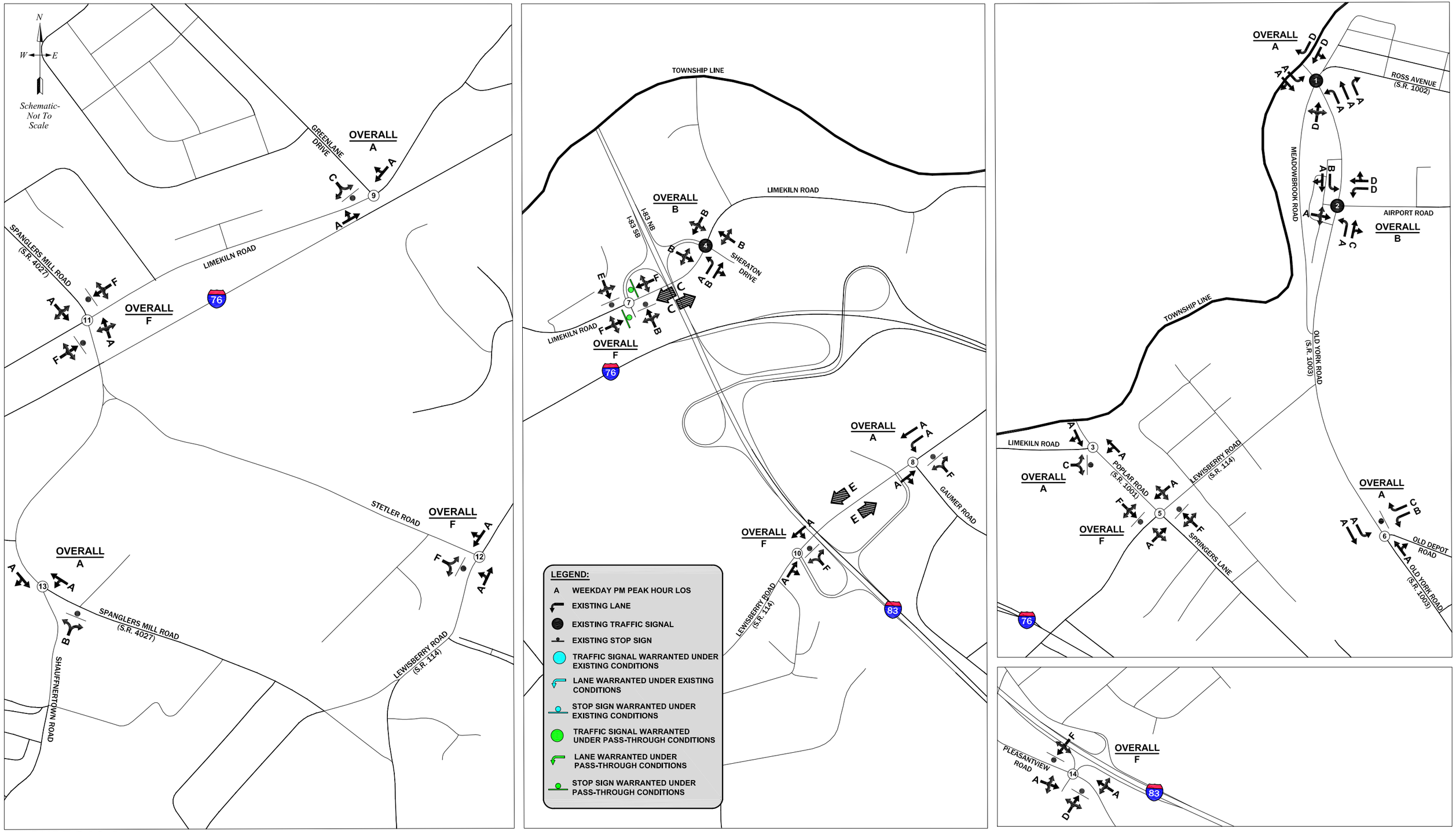

FIGURE 24A

2024 Future Development Weekday Afternoon Peak Hour Levels of Service - Service Area 1

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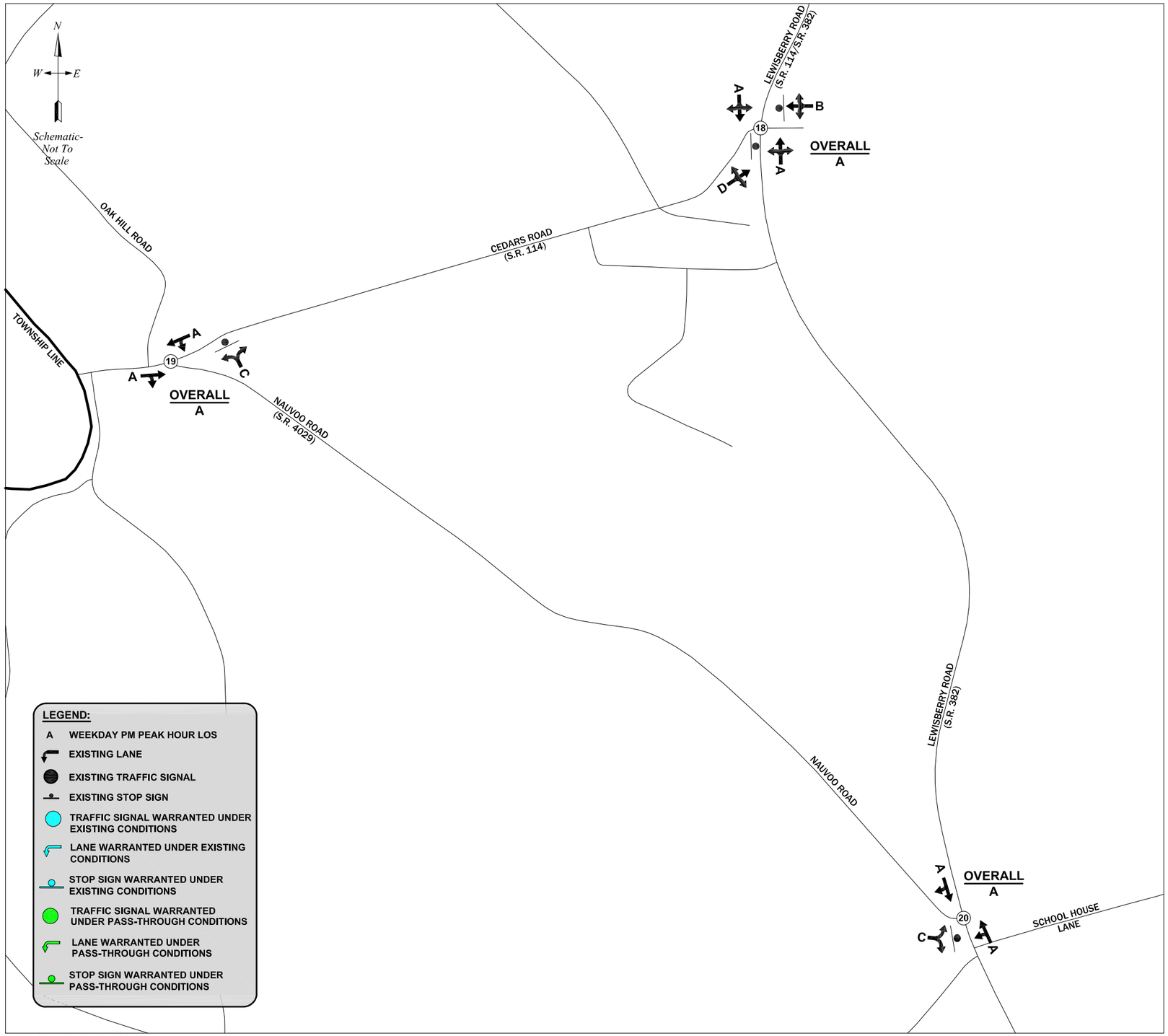

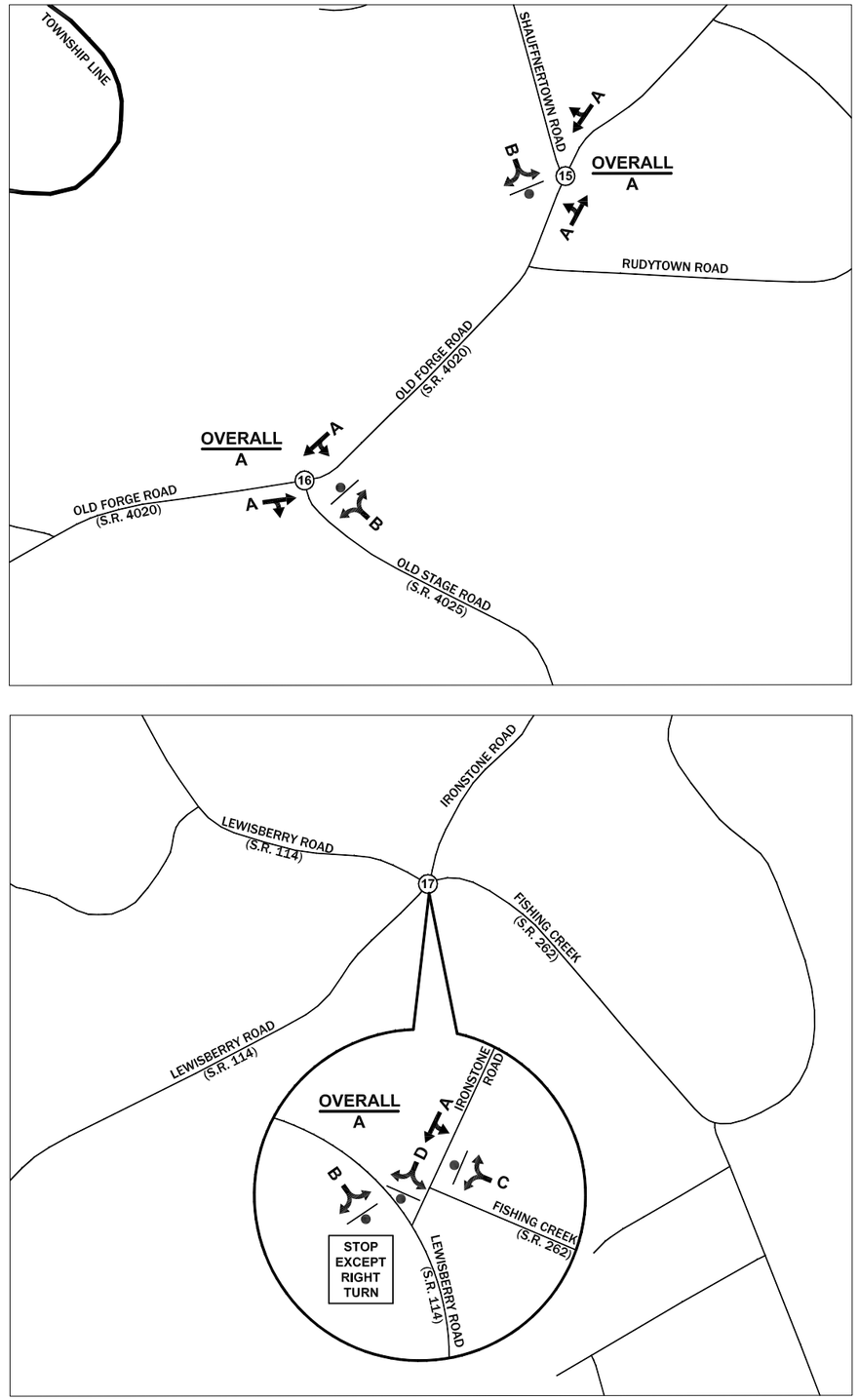

FIGURE 24B

2024 Future Development Weekday Afternoon Peak Hour Levels of Service - Service Area 1

FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

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FIGURE 25

2024 Future Development Weekday Afternoon Peak Hour Levels of Service - Service Area 2

FAIRVIEW TOWNSHIP ACT 209 STUDY

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FIGURE 26

2024 Future Development Weekday Afternoon Peak Hour Levels of Service - Service Area 3

FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

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(2/11/2015 - ICP) P:\913386 Fairview Twp York Co Act 209\Dwg\Figures\Weekday PM 2024 Development LOS.dwg

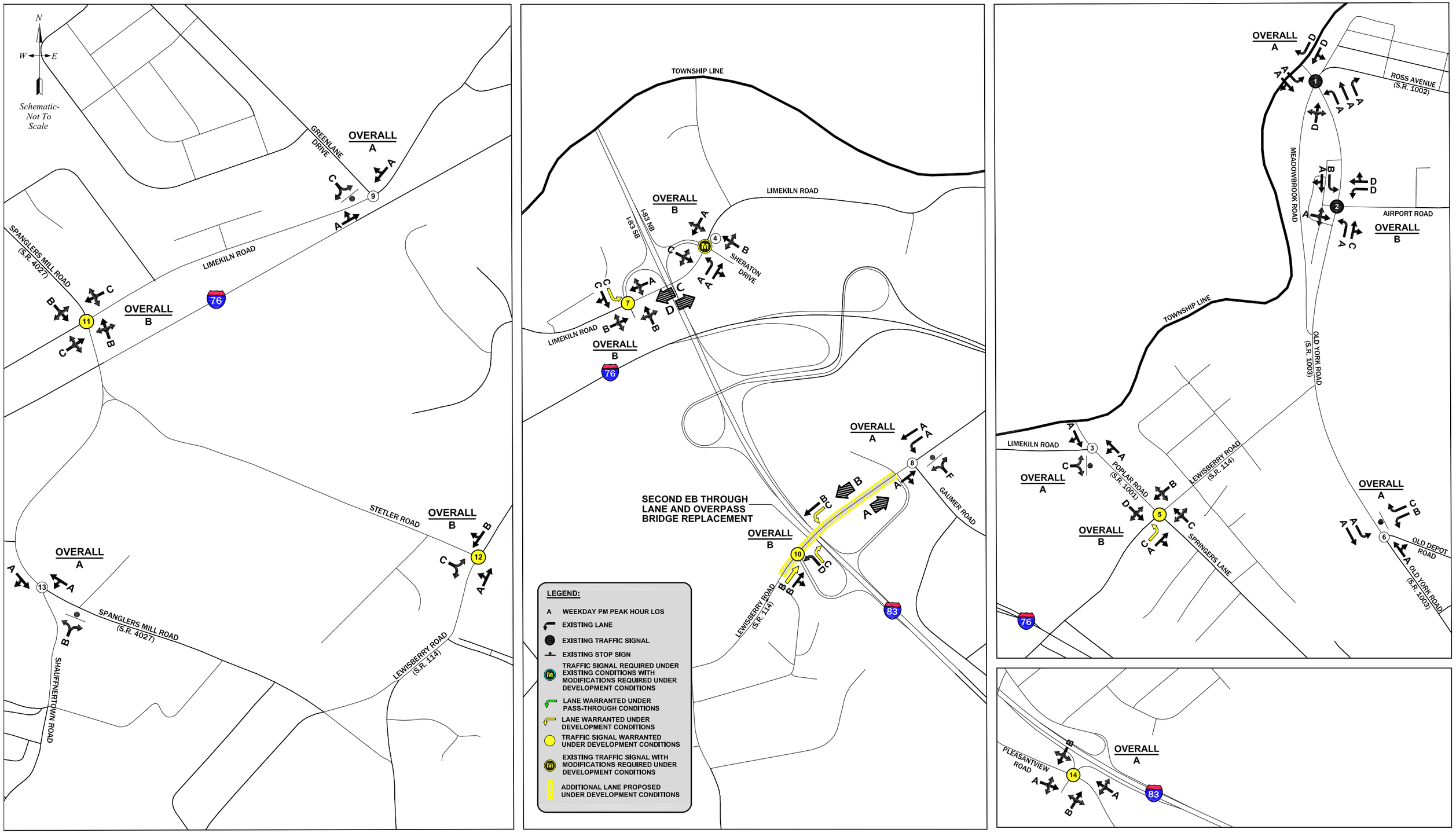

FIGURE 27A

2024 Future Development Weekday Afternoon Peak Hour Levels of Service with Improvements - Service Area 1

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FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

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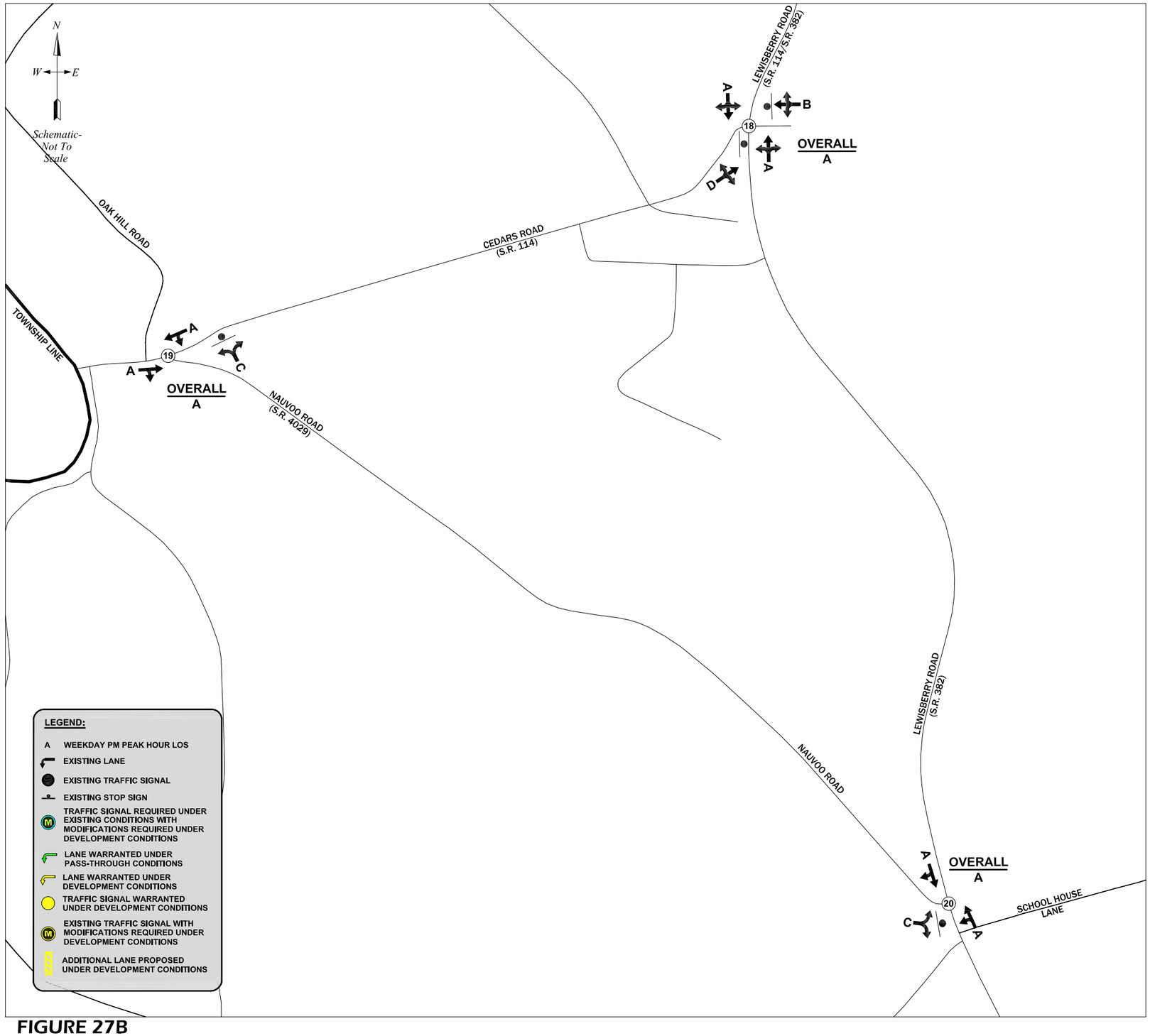

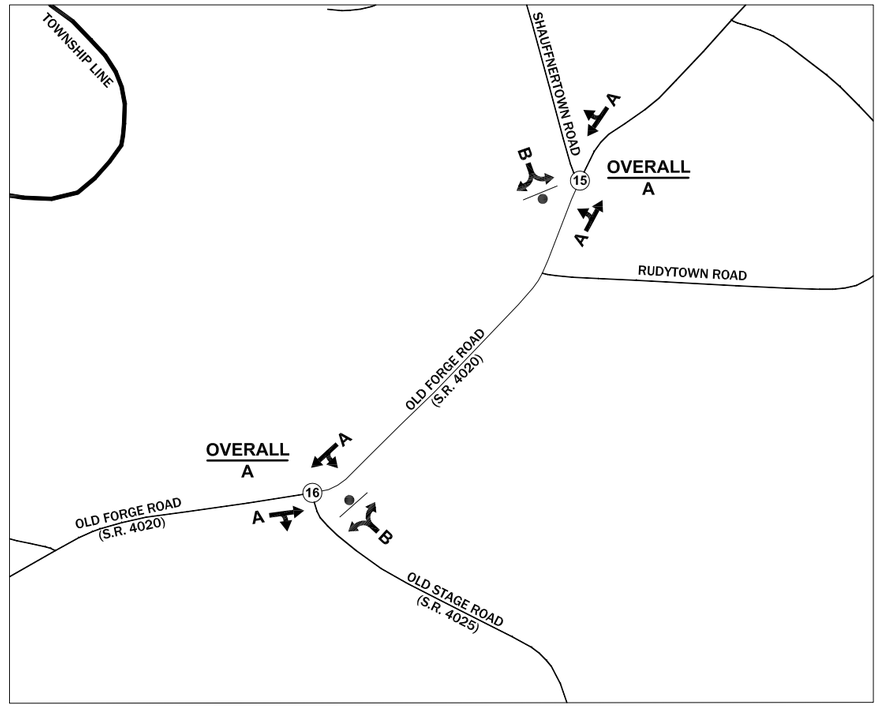

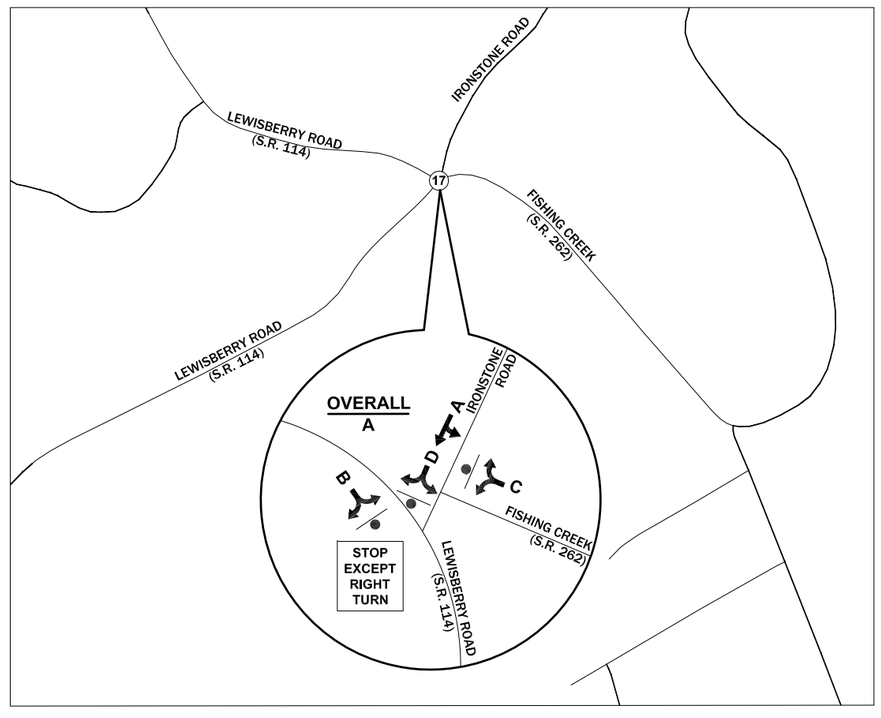

FIGURE 27B

2024 Future Development Weekday Afternoon Peak Hour Levels of Service - Service Area 1

FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

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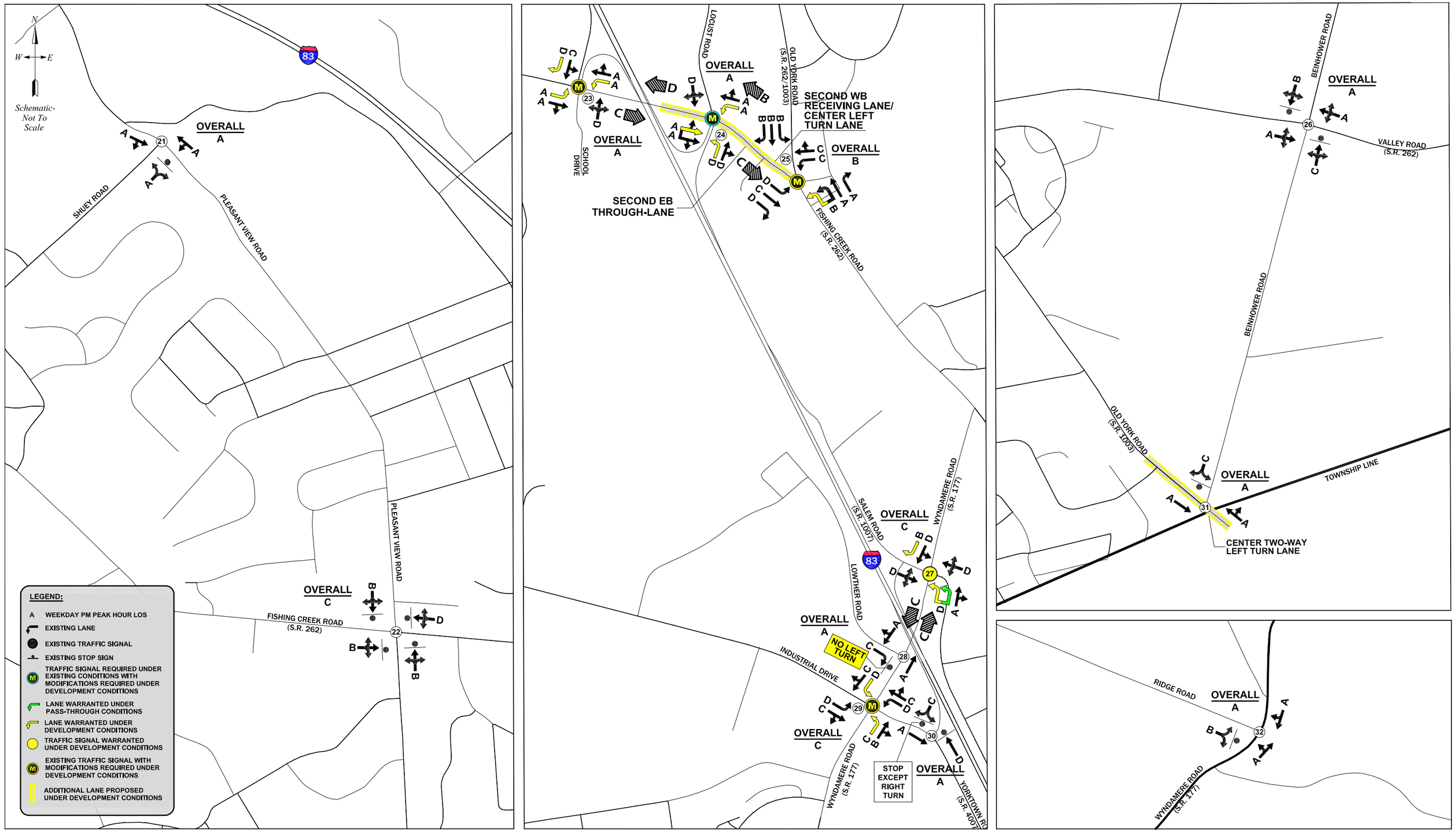

FIGURE 28

2024 Future Development Weekday Afternoon Peak Hour Levels of Service with Improvements - Service Area 2

FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

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FIGURE 29

2024 Future Development Weekday Afternoon Peak Hour Levels of Service with Improvements - Service Area 3

FAIRVIEW TOWNSHIP ACT 209 STUDY

FAIRVIEW TOWNSHIP, YORK COUNTY, PENNSYLVANIA

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