

Pennsylvania Act 209 Transportation Impact Fee Study

Worcester Township Roadway Sufficiency Analysis and Transportation Capital Improvements Plan



Prepared for:
Worcester Township,
Montgomery County, Pennsylvania

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Introduction

This *Roadway Sufficiency Analysis and Transportation Capital Improvements Plan* has been prepared in accordance with the requirements set forth in Pennsylvania Act 209 on behalf of Worcester Township, Montgomery 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 that they have adopted a municipal transportation impact fee ordinance in accordance with the procedures set forth in the Act.

Impact fees under Act 209, with only one exception contained in Act 68 amendments to the Municipalities Planning Code (2000), 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.

Without the adoption of this Ordinance, permitted by the Act 209 Law, a municipality does not have the power to require, as a condition for approval of a land development or subdivision application, the construction, dedication, or payment of any offsite improvements or capital expenditures.

All appendices supporting the *Roadway Sufficiency Analysis and Transportation Capital Improvements Plan* referred to in this report are contained in a separate bound document entitled *Pennsylvania Act 209 Transportation Impact Fee Study Technical Appendices*, Worcester Township, Montgomery County, dated December 2014.

Process

The process that Worcester 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 and designation of the geographic areas of the municipality that will be subject to the transportation impact fee ordinance. Meeting agendas prepared for the Transportation Advisory Committee meetings are included in **Appendix A**.

2. Development and adoption of a land use assumptions report for the Township and its designated geographic areas, called Transportation Service Areas (TSA), which together with existing development, are the subject of the roadway sufficiency analysis and development of a transportation capital improvements plan.
3. Completion and approval of a roadway sufficiency analysis for the Transportation Service Areas, identifying traffic deficiencies and needed improvements attributable to existing traffic, future traffic not originating from the service areas (i.e., pass-through traffic), and future traffic originating from new development within the service areas based on preferred levels of service (desired traffic operations) for the designated peak hour of study.
4. Development and adoption of a transportation capital improvements 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 addressed; and
 - c. traffic deficiencies attributable to expected **new development** within the service area after pass-through and existing traffic deficiencies have been addressed.
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 Areas, to be assessed on a "per trip" basis.

Act 209 requires a minimum future planning horizon of five years. In order to be consistent with the future horizon year of the Land Use Assumptions Report, the future year 2023 was selected as the design year of this study. However, this document should not be considered a static, "one-time" effort, as the Act 209 legislation has provisions for periodic updates of the roadway sufficiency analysis, capital improvements plan, and impact fees, as changes in the land use assumptions, transportation improvement needs, or funding conditions occur.

As the law allows for the periodic update of the impact fees, it is recommended that the Transportation Advisory Committee continue to meet periodically and make recommendations to the Board of Supervisors, as necessary, to update the Capital Improvements Plan (CIP) or impact fees based on the following:

1. New subsequent development that has occurred in the Township.
2. Capital improvements, listed in the CIP, which have been constructed.

3. Unavoidable delays in construction of the improvements listed in the CIP that are outside the control or responsibility of the Township.
4. Significant changes in the land use assumptions.
5. Significant changes in the estimated costs of the improvements listed in the CIP.
6. Significant changes in the projected revenues from all sources listed, needed for the construction of the improvements listed in the CIP.

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 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 areas. Further explanation of pass-through and development traffic will be provided in subsequent sections.

As illustrated in Figure 1, the Transportation Advisory Committee has established two transportation service areas within Worcester Township in accordance with the requirements of Act 209, which cover the most developable areas of the Township. Each of the transportation service areas measures equal to or less than the maximum seven square miles required by the Act 209 legislation.

Transportation Service South

As illustrated in Figure 1, Transportation Service Area South generally includes the area of the Township south of Skippack Pike (S.R. 0073), to the west of North Wales Road (S.R. 2010), north of Germantown Pike, to the east of Valley Forge Road (S.R. 0363). The area includes the following 12 study intersections, which are listed in Table 1.

Table 1. Transportation Service Area South Study Intersections

Reference Number	Intersection	Existing Traffic Control
1	Germantown Pike and Kreibel Mill Road	Signal
2	Germantown Pike and Quarry Hall Road/Church Road	Stop Sign
3	Germantown Pike and Valley Forge Road (S.R. 0363)	Signal
4	Valley Forge Road (S.R. 0363) and Woodlyn Avenue.	Stop Sign
5	Valley Forge Road (S.R. 0363) and Water Street (S.R. 4005)	Signal
6	Valley Forge Road (S.R. 0363) and Stump Hall Road (S.R. 3001)/Township Line Road (S.R. 3001)	Signal
7	Township Line Road (S.R. 3001) and Trooper Road (S.R. 3002)	Stop Sign
8	Township Line Road (S.R. 3001) and Whitehall Road (S.R. 3006)	Signal
9	Township Line Road (S.R. 3001) and North Wales Road (S.R. 2010)	Signal
10	Valley Forge Road (S.R. 0363) and Potshop Road	Stop Sign
11	Berks Road (S.R. 3004) and Bean Road	Stop Sign
12	Whitehall Road (S.R. 3006) and Bean Road	Stop Sign

Transportation Service Area North

As illustrated in Figure 1, Transportation Service Area North generally includes the area of the Township north of Skippack Pike (S.R. 0073), to the west of North Wales Road (S.R. 2010), south of Morris Road (S.R. 2001), to the east of Bustard Road (S.R. 1002). The 8 study intersections included in this service area are listed in Table 2.

Table 2. Transportation Service Area North Study Intersections

Reference Number	Intersection	Existing Traffic Control
13	Skippack Pike (S.R. 0073) and Bustard Road (S.R. 1002)	Signal
14	Skippack Pike (S.R. 0073) and Wentz Church Road	Stop Sign
15	Skippack Pike (S.R. 0073) and Berks Road (S.R. 3004)	Signal
16	Skippack Pike (S.R. 0073) and Bethel Road (S.R. 3006)	Signal
17	Skippack Pike (S.R. 0073) and Whitehall Road (S.R. 3006)	Signal
18	Skippack Pike (S.R. 0073) and North Wales Road (S.R. 2010)	Signal
19	Valley Forge Road (S.R. 0363) and Morris Road (S.R. 2001)	Signal
20	North Wales Road (S.R. 2010) and Morris Road (S.R. 2001)	Signal

Land Use Assumptions Report

As required by Act 209, the Worcester Township Transportation Advisory Committee approved the Worcester Township *Land Use Assumptions Report (LUAR)* (dated January 15, 2014), which was prepared and completed by the Montgomery County Planning Commission, and a public hearing was held on the LUAR on January 15, 2014. Subsequently, the Board of Supervisors adopted the *Land Use Assumptions Report* by resolution, as required by Act 209, on January 15, 2014. A copy of the *Land Use Assumptions Report*, and the resolution drafted by the Township to accept it, are provided in **Appendix B**.

The *Land Use Assumptions Report* identifies the anticipated development build-out potential within Worcester Township, as well as the projected 2023 build-out on an area-by-area basis, and provides graphics illustrating the potential locations of these parcels. The projected 2023 build-out within each Transportation Service Area, which is the basis of this analysis, is summarized below in Table 3.

Table 3. Land Use Assumptions Report 2023 Build-Out Summary

Land Use Classification	Service Area South	Service Area North
Residential	142 dwelling units	110 dwelling units
Non-Residential	8,027 square feet	2,000 square feet

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*.

Roadway Characteristics

The Worcester Township roadway system, as illustrated in Figure 2, consists primarily of two-lane, undivided roadways. Additionally illustrated in Figure 2 is the existing Average Daily Traffic (ADT) volumes collected on several of the main roadways entering, within, and exiting the Township. Major regional access to/from the Township is provided via Germantown Pike, Valley Forge Road (S.R. 0363), Township Line Road (S.R. 3001), Skippack Pike (S.R. 0073), and Morris Road (S.R. 2001).

The roadway network shown in Figure 2, including both roadway segments and intersections, constitutes the transportation roadway network analyzed pursuant to Act 209. The designations and operating characteristics of each of the major study roadways are summarized in Table 4.

Table 4. Existing Transportation Network Summary

Roadway	Classification	Ownership	Posted Speed Limit (mph)
Germantown Pike	Principal Arterial	County	35
Valley Forge Road (S.R. 0363)	Principal Arterial	State	35 to 45
Church Road	Local Road	Township	35
Quarry Hall Road	Major Collector	Township	35
Woodlyn Avenue	Major Collector	Township	35
Water Street (S.R. 4005)	Local Road	State	40
Stump Hall Road (S.R. 3001)	Local Road	State	45
Township Line Road (S.R. 3001)	Minor Arterial	State	35 to 40
Trooper Road (S.R. 3002)	Minor Arterial/Major Collector	State	35
Whitehall Road (S.R. 3006)	Minor Arterial	State	40
North Wales Road (S.R. 2010)	Minor Arterial	State	25 to 40
Potshop Road	Local Road	Township	25
Berks Road (S.R. 3004)	Local Road	State	40
Bean Road	Local Road	Township	35
Skippack Pike (S.R. 0073)	Principal Arterial	State	35 to 45

Table 4. Existing Transportation Network Summary (continued)

Roadway	Classification	Ownership	Posted Speed Limit (mph)
Bustard Road (S.R. 1002)	Minor Collector	State	40
Wentz Church Road	Local Road	Township	40
Bethel Road (S.R. 3006)	Minor Arterial	State	40
Morris Road (S.R. 2001)	Minor Arterial/Major Collector	State	40 to 45

Existing Transportation Conditions

The evaluation of the existing transportation network is based on the physical (i.e., intersection geometry, lane usage, etc.) and operational (i.e., traffic controls, traffic volumes, signal timing/phasing, etc.) characteristics of the study intersections and roadways during the weekday afternoon peak hour. The Transportation Advisory Committee selected the weekday afternoon peak hour as the basis of this *Roadway Sufficiency Analysis*.

Existing Traffic Volumes

Traffic operating conditions are influenced by the relationships between traffic volumes and the service capacities of the roadways and intersections. In order to evaluate existing conditions at area intersections, Manual Turning Movement (MTM) counts were conducted at the 20 study intersections listed in Tables 1 and 2 during the weekday afternoon peak period (4:00 PM to 6:00 PM). The counts were conducted on a typical Tuesday, Wednesday, or Thursday in May 2013. These traffic counts were tabulated by 15-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. Figure 3 illustrates the 2013 existing weekday afternoon peak hour traffic volumes at the study area intersections. The actual MTM counts are provided in Appendix C.

Analysis Methodology

The traffic volumes depicted in Figure 3 were subjected to detailed capacity/level-of-service analysis in accordance with the standard techniques contained in the *Highway Capacity Manual*⁽¹⁾. 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 as the correlation between average total control delay and the respective levels of service (LOS) for each intersection type. Level of service (LOS) is the criteria utilized to evaluate the study intersections and roadways in accordance with standard traffic engineering practice and the Act 209 legislation. In the surrounding area, PennDOT District 6-0, as well as many local municipalities, considers LOS A through D as constituting acceptable operating conditions, while LOS E represents conditions approaching capacity, and LOS F indicates that traffic volumes exceed available capacity.

⁽¹⁾ *Transportation Research Board, Special Report 209, Highway Capacity Manual, published by the Transportation Research Board, Washington, DC, 2010.*

Preferred Levels of Service

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

According to Act 209, the preferred level of service may be waived by the municipality at individual intersections based upon difficulty in implementing various improvements (i.e., geometric design limitations, topographic limitations, or unavailable/unobtainable necessary right-of-way). For unsignalized intersections where the preferred level-of-service criterion is not satisfied, most often only signalization can mitigate the traffic deficiency. Where traffic volumes do not meet traffic signal warrant criteria, these intersections cannot be improved and the improvement must be waived or deferred until traffic volumes warrant signalization.

As shown in Table 5, the Transportation Advisory Committee has adopted specific preferred level-of-service criteria for the purposes of this *Roadway Sufficiency Analysis* for each of the Transportation Service Areas. For signalized intersections, the preferred levels of service apply to the individual movements, as well as the overall intersection operation. For unsignalized intersections, the preferred levels of service apply only to the main street left-turn movements and the minor street, stop-controlled movements. The preferred levels of service were established based on a review of typical acceptable thresholds utilized by PennDOT and other adjacent municipalities, and also reflect the urban/suburban character of each Transportation Service Area.

Table 5. Preferred Level-of-Service Criteria

Intersection	TSA South	TSA North
Signalized	LOS E all movements LOS D overall	LOS E all movements LOS D overall
Unsignalized	LOS D all movements	LOS D all movements

Programmed Improvements

The Township has a number of programmed improvements to be completed by developers or by PennDOT:

- **Skippack Pike (S.R. 0073) and North Wales Road (S.R. 2010)** – Install eastbound and westbound left-turn lanes on North Wales Road (S.R. 2010) in conjunction with the PA Turnpike roadway widening.

Existing Levels of Service

The 2013 existing weekday afternoon peak hour traffic volumes presented in Figure 3 were subjected to the detailed capacity/level-of-service analysis methodology previously described. The results of the analysis are illustrated in Figure 4, and the detailed capacity/level-of-service analysis worksheets are contained in Appendix E.

As shown in Figure 4, of the 20 existing study intersections, five presently operate at acceptable levels of service during the weekday afternoon peak hour, in accordance with the preferred level-of-service criteria contained in Table 5. The following 15 intersections currently do not satisfy the preferred level-of-service criteria:

- **Transportation Service Area South**
 - Germantown Pike and Kreibel Mill Road
 - Germantown Pike and Church Road/Quarry Hall Road
 - Germantown Pike and Valley Forge Road (S.R. 0363)
 - Valley Forge Road (S.R. 0363) and Woodlyn Avenue
 - Valley Forge Road (S.R. 0363) and Water Street (S.R. 4005)
 - Valley Forge Road (S.R. 0363) and Stump Hall Road (S.R. 3001)/Township Line Road (S.R. 3001)
 - Township Line Road (S.R. 3001) and Whitehall Road (S.R. 3006)
 - Township Line Road (S.R. 3001) and North Wales Road (S.R. 2010)
 - Valley Forge Road (S.R. 0363) and Potshop Road

- **Transportation Service Area North**
 - Skippack Pike (S.R. 0073) and Bustard Road (S.R. 1002)
 - Skippack Pike (S.R. 0073) and Wentz Church Road
 - Skippack Pike (S.R. 0073) and Bethel Road (S.R. 3006)
 - Skippack Pike (S.R. 0073) and Whitehall Road (S.R. 3006)
 - Skippack Pike (S.R. 0073) and North Wales Road (S.R. 2010)
 - Valley Forge Road (S.R. 0363) and Morris Road (S.R. 2001)

It should be noted that an additional intersection, that of Valley Forge Road (S.R. 0363) and Skippack Pike (S.R. 0073) also does not meet the preferred level-of-service based on existing conditions. Given the overall level of cost necessary for the recommended improvements to that intersection, it is recommended that the Township pursue grant funding for the long-term improvements to that intersection. While the future needs of that intersection should definitively be determined by the Worcester Township, in consultation with PennDOT, since both are state highways, based on the existing traffic volumes and the projected growth rate, it is anticipated that the long-term improvement of that intersection will require the addition of a second through lane on each approach to the intersection.

Existing Improvement Program

The improvements necessary to mitigate existing traffic deficiencies and satisfy the preferred level-of-service criteria are illustrated in Figure 5 and summarized in Table 6 for each study intersection. Improvements will be required, and are feasible, at fourteen study intersections in order to achieve the preferred levels of service under existing traffic conditions. The one additional unsignalized intersection does not satisfy the preferred level-of-service criteria. However, existing afternoon peak hour traffic volumes do not meet warrants for traffic signal installation in accordance with PennDOT guidelines; no other reasonable improvements are feasible. Therefore, the improvements at these intersections must be deferred.

Table 6 - Existing Conditions Improvements Program for Study Intersections

Int No.	Intersection	Service Area	Control Type	Recommended Improvement
1	Germantown Pike and Kreibel Mill Road	S	Signal	Modify signal timings.
2	Germantown Pike and Quarry Hall Road/Church Road	S	Stop Sign	No improvements recommended or required as signal is not warranted.
3	Germantown Pike and Valley Forge Road (S.R. 0363)	S	Signal	Modify signal timings, install NB and SB right-turn lanes.
4	Valley Forge Road (S.R. 0363) and Woodlyn Avenue	S	Stop Sign	Install new traffic signal.
5	Valley Forge Road (S.R. 0363) and Water Street (S.R. 4005)	S	Signal	Modify signal timings.
6	Valley Forge Road (S.R. 0363) and Stump Hall Road (S.R. 3001)/Township Line Road (S.R. 3001)	S	Signal	Modify signal timings, install WB left-turn lane.
7	Township Line Road (S.R. 3001) and Trooper Road (S.R. 3002)	S	Stop Sign	No improvements recommended or required.
8	Township Line Road (S.R. 3001) and Whitehall Road (S.R. 3006)	S	Signal	Modify signal timings, install WB left-turn lane.
9	Township Line Road (S.R. 3001) and North Wales Road (S.R. 2010)	S	Signal	Modify signal timings.
10	Valley Forge Road (S.R. 0363) and Potshop Road	S	Stop Sign	Install new traffic signal.
11	Berks Road (S.R. 3004) and Bean Road	S	Stop Sign	No improvements recommended or required.
12	Whitehall Road (S.R. 3006) and Bean Road	S	Stop Sign	No improvements recommended or required.
13	Skippack Pike (S.R. 0073) and Bustard Road (S.R. 1002)	N	Signal	Modify signal timings, install SB right-turn lane.
14	Skippack Pike (S.R. 0073) and Wentz Church Road	N	Stop Sign	Install new traffic signal.
15	Skippack Pike (S.R. 0073) and Berks Road (S.R. 3004)	N	Signal	No improvements recommended or required.
16	Skippack Pike (S.R. 0073) and Bethel Road (S.R. 3006)	N	Signal	Modify signal timings.
17	Skippack Pike (S.R. 0073) and Whitehall Road (S.R. 3006)	N	Signal	Modify signal timings, install NB right-turn lane.
18	Skippack Pike (S.R. 0073) and North Wales Road (S.R. 2010)	N	Signal	Modify signal timings, install NB right-turn lane.
19	Valley Forge Road (S.R. 0363) and Morris Road (S.R. 2001)	N	Signal	Modify signal timings, install EB and SB right-turn lanes.
20	North Wales Road (S.R. 2010) and Morris Road (S.R. 2001)	N	Signal	No improvements recommended or required.

Future Transportation 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 Worcester Township Act 209 traffic analysis, which is consistent with the development projections contained in the *Land Use Assumptions Report*. Therefore, a future forecast year of 2023 was utilized in the study.

Future Traffic Components

Traffic volume forecasts for 2023 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 reflects future increases in regional traffic, and is subdivided into the following two elements:

- This first element reflects future increases in regional traffic which is both generated by, and destined to, locations external to the designated transportation service areas, but passes through the designated service areas along the study area roadways. This first element of pass-through traffic also includes traffic generated by specific known future developments located within the adjacent municipalities.
- The second element of pass-through traffic includes future development traffic generated from one designated transportation service area within the Township that passes through the other designated transportation service area within the Township. For example, while traffic generated from within TSA South is considered “development” traffic in TSA South, this same traffic is considered “pass-through” traffic when it traverses through TSA North.

Development traffic is generated by new development within the respective or designated transportation service area, and constitutes the third and final component of future 2023 traffic volumes.

This section first addresses development trip generation for each service area, based upon the development projections contained in the *Land Use Assumptions Report* and the trip distribution assumptions utilized in the analysis. Future pass-through traffic conditions are then described for each service area, incorporating existing traffic volumes in the service area; regional traffic growth (external to the Transportation Service Area); and development traffic from the adjacent service area. Finally, future 2023 development traffic conditions are defined, incorporating existing traffic volumes, future pass-through traffic volumes, and future development traffic volumes.

Service Area Trip Generation

From the *Land Use Assumptions Report*, the transportation service area development vehicular trip generation was estimated for the 2023 weekday afternoon peak hour utilizing the Institute of Transportation Engineers publication, *Trip Generation, 9th Edition*, for both the TSA South and TSA North. The resulting 2023 weekday afternoon peak hour trip generation is summarized in Table 7 for each service area.

Table 7. Service Area Development Vehicular "New" Trip Generation⁽¹⁾

Description	ITE Land Use Code	Size	Weekday Afternoon Peak Hour ⁽²⁾		
			In	Out	Total
<u>TSA South</u>					
Residential					
Single-Family	210	142 d.u.	83	47	130
Non-Residential					
Retail	820	1,000 s.f.	0	2	2
Institution	560	7,027 s.f.	2	2	4
Total			85	51	136
<u>TSA North</u>					
Residential					
Single-Family	210	110 d.u.	67	40	107
Non-Residential					
Retail	820	2,000 s.f.	3	2	5
Total			70	42	112

(1) The locations of developments are identified and illustrated in the *Land Use Assumptions Report*.

(2) Trips shown exclude "pass-by" trips, which are applicable to commercial developments.

Accordingly, Transportation Service Area South is estimated to experience an increase in total new (inbound and outbound) weekday afternoon peak hour trip generation of 136 new trips over the next ten years, while Transportation Service Area North is estimated to experience an increase of 112 total new trips over the same period, which have been included in the with-development traffic analysis.

Trip Distribution

Vehicular traffic volumes generated by the new development over the next ten years were distributed to the area network based on existing travel patterns determined from the ADT volumes and MTM counts, entering and exiting the Township, as shown in Figure 6, as well as the locations of specific

future development parcels with respect to the study roadway network and other major traffic generators and destinations.

2023 Future Pass-Through Traffic

To determine 2023 future weekday afternoon peak hour pass-through traffic volumes, an annual traffic growth rate of 0.36 percent per year (half the recommended PennDOT growth rate) was applied to existing weekday afternoon peak hour traffic volumes to reflect regional traffic growth. One half of the PennDOT recommended growth rate was used since specific future developments in adjacent communities were accounted for as explained below.

In addition to regional traffic growth, traffic associated with a number of developments located within the surrounding seven municipalities, including Lower Providence Township, East Norriton Township, West Norriton Township, Whitpain Township, Upper Gwynedd Township, Skippack Township, and Towamencin Township was also distributed through the two service area roadway networks, and is included in the future traffic projections. These developments represent specific known/proposed developments identified by staff of the surrounding municipalities, and were determined to potentially have a significant influence on the study roadways and intersections. The trip generation for these specific developments has been calculated, and is included in **Appendix F**, and the estimated portion of those development trips that will traverse the two service areas was distributed within the study roadway and intersection network. Once again, these traffic volumes also reflect the assignment of development traffic from one transportation service area which will pass through the other transportation service area. The 2023 future weekday afternoon peak hour pass-through traffic volumes are illustrated in **Figure 7**.

2023 Future Pass-Through Traffic Levels of Service

The future 2023 weekday afternoon pass-through traffic volumes illustrated in **Figure 7** were subjected to the previously described capacity/level-of-service analysis procedures to determine 2023 pass-through levels of service. The detailed analyses are provided in **Appendix G**. As required by Act 209, the future 2023 pass-through conditions analysis for each study intersection determines the **incremental** traffic impacts and required mitigation of future pass-through traffic in comparison to existing traffic conditions after required existing traffic mitigation has been added.

Figure 8 summarizes the results of the 2023 future pass-through traffic capacity/level-of-service analyses for the study intersections with the recommended improvements proposed under existing conditions. Traffic operating conditions at the following sixteen study intersections will not satisfy the preferred level-of-service criteria under 2023 future pass-through conditions:

- **Transportation Service Area South**
 - Germantown Pike and Kreibel Mill Road

- Germantown Pike and Church Road/Quarry Hall Road
 - Germantown Pike and Valley Forge Road (S.R. 0363)
 - Valley Forge Road (S.R. 0363) and Woodlyn Avenue
 - Valley Forge Road (S.R. 0363) and Water Street (S.R. 4005)
 - Valley Forge Road (S.R. 0363) and Stump Hall Road (S.R. 3001)/Township Line Road (S.R. 3001)
 - Township Line Road (S.R. 3001) and Trooper Road (S.R. 3002)
 - Township Line Road (S.R. 3001) and Whitehall Road (S.R. 3006)
 - Township Line Road (S.R. 3001) and North Wales Road (S.R. 2010)
 - Valley Forge Road (S.R. 0363) and Potshop Road
- **Transportation Service Area North**
 - Skippack Pike (S.R. 0073) and Bustard Road (S.R. 1002)
 - Skippack Pike (S.R. 0073) and Wentz Church Road
 - Skippack Pike (S.R. 0073) and Berks Road (S.R. 3004)
 - Skippack Pike (S.R. 0073) and North Wales Road (S.R. 2010)
 - Valley Forge Road (S.R. 0363) and Morris Road (S.R. 2001)
 - North Wales Road (S.R. 2010) and Morris Road (S.R. 2001)

2023 Future Pass-Through Improvement Program

The additional improvements required to accommodate pass-through traffic are illustrated in **Figure 9**. These improvements are also summarized in more detail in **Table 8** for each study intersection, respectively in Transportation Service Area South and Transportation Service Area North. Improvements will be required at sixteen study intersections in order to achieve the preferred levels of service under pass-through traffic conditions.

2023 Future Development Traffic

As explained previously, traffic generated by new development internal to each designated transportation service area constitutes the third and final component of future 2023 traffic. The 2023 future development traffic volumes were determined based on assignment of service area development traffic within each respective transportation service area to the study roadway network, and the addition of these volumes to 2023 future pass-through traffic volumes. Total 2023 volumes, including both future pass-through traffic and future development traffic volumes, are summarized in **Figure 10**.

Table 8 - Pass Through Conditions Improvements Program for Study Intersections

Int No.	Intersection	Service Area	Control Type	Recommended Improvement
1	Germantown Pike and Kreibel Mill Road	S	Signal	Modify signal timings, install SB right-turn lane.
2	Germantown Pike and Quarry Hall Road/Church Road	S	Stop Sign	Install new traffic signal.
3	Germantown Pike and Valley Forge Road (S.R. 0363)	S	Signal	Modify signal timings, install additional NB and SB through lanes, install EB right-turn lane.
4	Valley Forge Road (S.R. 0363) and Woodlyn Avenue	S	Signal	Modify signal timings, install NB and SB left-turn lanes, install WB right-turn lane.
5	Valley Forge Road (S.R. 0363) and Water Street (S.R. 4005)	S	Signal	Modify signal timings, install NB left-turn lane.
6	Valley Forge Road (S.R. 0363) and Stump Hall Road (S.R. 3001)/Township Line Road (S.R. 3001)	S	Signal	Modify signal timings, install NB and SB left-turn lanes, install SB right-turn lane, install additional NB through lane.
7	Township Line Road (S.R. 3001) and Trooper Road (S.R. 3002)	S	Stop Sign	Install new traffic signal.
8	Township Line Road (S.R. 3001) and Whitehall Road (S.R. 3006)	S	Signal	Modify signal timings, install EB, NB, and SB left-turn lanes.
9	Township Line Road (S.R. 3001) and North Wales Road (S.R. 2010)	S	Signal	Modify signal timings, install EB and WB left-turn lanes, install WB and NB right-turn lanes.
10	Valley Forge Road (S.R. 0363) and Potshop Road	S	Signal	Modify signal timings, install SB left-turn lane.
11	Berks Road (S.R. 3004) and Bean Road	S	Stop Sign	No improvements recommended or required.
12	Whitehall Road (S.R. 3006) and Bean Road	S	Stop Sign	No improvements recommended or required.
13	Skipack Pike (S.R. 0073) and Bustard Road (S.R. 1002)	N	Signal	Modify signal timings, install EB left-turn lane, install WB right-turn lane.
14	Skipack Pike (S.R. 0073) and Wentz Church Road	N	Signal	Modify signal timings.
15	Skipack Pike (S.R. 0073) and Berks Road (S.R. 3004)	N	Signal	Modify signal timings, install NB and SB left-turn lanes.
16	Skipack Pike (S.R. 0073) and Bethel Road (S.R. 3006)	N	Signal	No improvements recommended or required.
17	Skipack Pike (S.R. 0073) and Whitehall Road (S.R. 3006)	N	Signal	No improvements recommended or required.
18	Skipack Pike (S.R. 0073) and North Wales Road (S.R. 2010)	N	Signal	Modify signal timings, install EB and WB left-turn lanes, install WB right-turn lane.
19	Valley Forge Road (S.R. 0363) and Morris Road (S.R. 2001)	N	Signal	Modify signal timings, install additional SB through lane.
20	North Wales Road (S.R. 2010) and Morris Road (S.R. 2001)	N	Signal	Modify signal timings.

2023 Future Development Traffic Levels of Service

The future development traffic volumes presented in Figure 10 were subject to the previously described capacity/level-of-service analysis procedures to determine future 2023 development levels of service, and the detailed analyses are provided in Appendix H. The 2023 future development conditions are illustrated in Figure 11, and indicate that the following six study intersections will not satisfy the preferred level-of-service criteria and will require further improvements beyond the previously identified future pass-through improvements:

- **Transportation Service Area South**
 - Germantown Pike and Valley Forge Road (S.R. 0363)
 - Valley Forge Road (S.R. 0363) and Stump Hall Road (S.R. 3001)/Township Line Road (S.R. 3001)

- **Transportation Service Area North**
 - Skippack Pike (S.R. 0073) and Wentz Church Road
 - Skippack Pike (S.R. 0073) and Berks Road (S.R. 3004)
 - Skippack Pike (S.R. 0073) and North Wales Road (S.R. 2010)
 - North Wales Road (S.R. 2010) and Morris Road (S.R. 2001)

2023 Future Development Improvement Program

Improvements will be required at six of the existing study intersections to accommodate development-generated traffic within the transportation service areas of the established preferred levels of service. The additional improvements required to accommodate development traffic are illustrated in Figure 12. These improvements are also summarized in more detail in Table 9 for each study intersection, respectively in Transportation Service Area South and Transportation Service Area North.

Additional Improvement Considerations

Any improvements done at the intersection of Skippack Pike (S.R. 0073) and Valley Forge Road (S.R. 0363) must be completed in accordance with the Township's vision for the Center Point Village, as detailed in the report, *A Vision for Center Point Village*, completed by Kennedy & Associates. This report includes recommendations to assist in maintaining the character of the Center Point Village area.

Additionally, in order to encourage traffic to utilize major roadways in the area, instead of cutting through on local roadways, it is recommended that traffic calming be utilized, where feasible and appropriate. Traffic calming measures include a large range of measures from easily implementable measures, such as signing and pavement striping, to physical measures that directly impact traffic

flow on roadways. Where applicable, coordination should be made with Township staff to determine the appropriate measures for individual locations.

Table 9 - Development Conditions Improvements Program for Study Intersections

Int No.	Intersection	Service Area	Control Type	Recommended Improvement
1	Germantown Pike and Kreibel Mill Road	S	Signal	No improvements recommended or required.
2	Germantown Pike and Quarry Hall Road/Church Road	S	Signal	No improvements recommended or required.
3	Germantown Pike and Valley Forge Road (S.R. 0363)	S	Signal	Modify signal timings.
4	Valley Forge Road (S.R. 0363) and Woodlyn Avenue	S	Signal	No improvements recommended or required.
5	Valley Forge Road (S.R. 0363) and Water Street (S.R. 4005)	S	Signal	No improvements recommended or required.
6	Valley Forge Road (S.R. 0363) and Stump Hall Road (S.R. 3001)/Township Line Road (S.R. 3001)	S	Signal	Modify signal timings, install EB left-turn lane.
7	Township Line Road (S.R. 3001) and Trooper Road (S.R. 3002)	S	Signal	No improvements recommended or required.
8	Township Line Road (S.R. 3001) and Whitehall Road (S.R. 3006)	S	Signal	No improvements recommended or required.
9	Township Line Road (S.R. 3001) and North Wales Road (S.R. 2010)	S	Signal	No improvements recommended or required.
10	Valley Forge Road (S.R. 0363) and Potshop Road	S	Signal	No improvements recommended or required.
11	Berks Road (S.R. 3004) and Bean Road	S	Stop Sign	No improvements recommended or required.
12	Whitehall Road (S.R. 3006) and Bean Road	S	Stop Sign	No improvements recommended or required.
13	Skippack Pike (S.R. 0073) and Bustard Road (S.R. 1002)	N	Signal	No improvements recommended or required.
14	Skippack Pike (S.R. 0073) and Wentz Church Road	N	Signal	Modify signal timings, install EB left-turn lane.
15	Skippack Pike (S.R. 0073) and Berks Road (S.R. 3004)	N	Signal	Modify signal timings, install WB right-turn lane.
16	Skippack Pike (S.R. 0073) and Bethel Road (S.R. 3006)	N	Signal	No improvements recommended or required.
17	Skippack Pike (S.R. 0073) and Whitehall Road (S.R. 3006)	N	Signal	No improvements recommended or required.
18	Skippack Pike (S.R. 0073) and North Wales Road (S.R. 2010)	N	Signal	Modify signal timings, install EB right-turn lane.
19	Valley Forge Road (S.R. 0363) and Morris Road (S.R. 2001)	N	Signal	No improvements recommended or required.
20	North Wales Road (S.R. 2010) and Morris Road (S.R. 2001)	N	Signal	Modify signal timings.

Transportation Capital Improvements Plan

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

1. Public notice of a public hearing on the *Transportation Capital Improvements Plan* was published two successive weeks, between seven and thirty days from the date of the hearing.
2. The *Transportation Capital Improvements Plan* was available for public inspection at the Township building at least ten working days prior to the hearing.
3. The public hearing was held on the *Transportation Capital Improvements Plan* to receive comments on July 15, 2015.

Following the public hearing, the *Transportation Capital Improvements Plan* was adopted by the Township Board of Supervisors by resolution, along with the *Roadway Sufficiency Analysis*, on _____.

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

Existing Transportation Capital Improvements Program

The Existing Transportation Capital Improvement Program is summarized in Table 10 for Transportation Service Areas South and North, respectively, and details the improvements necessary to achieve the preferred levels of service under existing 2013 conditions. Table 10 also provides cost allocations for the improvements, indicating the portions of the total cost for which the Township, County, and PennDOT are responsible. **The total cost of the Existing Transportation Capital Improvements Program is approximately \$2,796,275 for Transportation Service Area South and \$2,301,225 for Transportation Service Area North.** The anticipated completion year for each of the improvements is also included in Table 10.

Future Pass-Through Transportation Capital Improvements Program

The Future Pass-Through Transportation Capital Improvements Program is summarized in Table 11 for Transportation Service Areas South and North, respectively, and details the additional improvements necessary to achieve the preferred levels of service under future 2023 pass-through

Table 10. Existing Transportation Capital Improvement Program
Transportation Service Area South

Int. No.	Intersection or Corridor	Improvements Required	Total Project Cost	Allocated Funding		Construction Completion
				PennDOT Costs	County Costs	
1	Germanstown Pike and Kriebel Mill Road	Traffic signal timing/phasing modifications.	\$5,000	\$0	\$1,250	2023
3	Germanstown Pike and Valley Forge Road (S.R. 0363)	Traffic signal timing/phasing modifications, install northbound and southbound right-turn lanes.	\$691,525	\$230,508	\$230,508	2023
4	Valley Forge Road (S.R. 0363) and Woodlyn Avenue	Install traffic signal.	\$297,000	\$74,250	\$0	2023
5	Valley Forge Road (S.R. 0363) and Water Street (S.R. 4005)	Traffic signal timing/phasing modifications.	\$10,000	\$5,000	\$0	2023
6	Valley Forge Road (S.R. 0363) and Stump Hill Road/Township Line Road (S.R. 3001)	Traffic signal timing/phasing modifications, install westbound left-turn lane.	\$872,700	\$436,350	\$0	2023
8	Township Line Road (S.R. 3001) and Whitehall Road (S.R. 3006)	Traffic signal timing/phasing modifications, install westbound left-turn lane.	\$613,050	\$306,525	\$0	2023
9	Township Line Road (S.R. 3001) and North Wales Road (S.R. 2010)	Traffic signal timing/phasing modifications.	\$10,000	\$5,000	\$0	2023
10	Valley Forge Road (S.R. 0363) and Potshop Road.	Install traffic signal.	\$297,000	\$99,000	\$0	2023
			\$2,796,275	\$1,156,633	\$231,758	\$1,407,884

Transportation Service Area North

Int. No.	Intersection or Corridor	Improvements Required	Total Project Cost	Allocated Funding		Construction Completion
				PennDOT Costs	County Costs	
13	Skippack Pike (S.R. 0073) and Bushard Road (S.R. 1002)	Traffic signal timing/phasing modifications, install southbound right-turn lane.	\$406,625	\$203,312	\$0	2023
14	Skippack Pike (S.R. 0073) and Wentz Church Road	Install traffic signal.	\$371,300	\$123,767	\$0	2023
16	Skippack Pike (S.R. 0073) and Bethel Road (S.R. 3006)	Traffic signal timing/phasing modifications.	\$10,000	\$5,000	\$0	2023
17	Skippack Pike (S.R. 0073) and Whitehall Road (S.R. 3006)	Traffic signal timing/phasing modifications, install northbound right-turn lane.	\$445,700	\$222,850	\$0	2023
18	Skippack Pike (S.R. 0073) and North Wales Road (S.R. 2010)	Traffic signal timing/phasing modifications, install northbound right-turn lane.	\$467,100	\$233,550	\$0	2023
19	Valley Forge Road (S.R. 0363) and Morris Road (S.R. 2001)	Traffic signal timing/phasing modifications, install southbound and eastbound right-turn lanes.	\$600,500	\$300,250	\$0	2023
			\$2,301,225	\$1,088,729	\$0	\$1,212,496

Table 11. Pass-Through Transportation Capital Improvement Program
Transportation Service Area South

Int. No.	Intersection or Corridor	Improvements Required	Total Project Cost	Allocated Funding			Construction Completion
				PennDOT Costs	County Costs	Township Costs	
1	Germanstown Pike and Knebel Mill Road	Traffic signal timing/phasing modifications, install southbound right-turn lane, install traffic signal.	\$265,850	\$0	\$66,662	\$199,888	2023
2	Germanstown Pike and Quarry Hall Road/Church Road	Install traffic signal.	\$297,000	\$0	\$74,250	\$222,750	2023
3	Germanstown Pike and Valley Forge Road (S.R. 0863)	Traffic signal timing/phasing modifications, install additional northbound and southbound through lanes, install eastbound right-turn lane.	\$4,395,125	\$1,465,041	\$1,465,042	\$1,465,042	2023
4	Valley Forge Road (S.R. 0863) and Woodlyn Avenue	Traffic signal timing/phasing modifications, install northbound and southbound left-turn lanes, install westbound right-turn lane.	\$666,100	\$166,525	\$0	\$499,575	2023
5	Valley Forge Road (S.R. 0863) and Water Street (S.R. 4005)	Traffic signal timing/phasing modifications, install northbound left-turn lane.	\$508,850	\$254,425	\$0	\$254,425	2023
6	Valley Forge Road (S.R. 0863) and Stump Hill Road/Township Line Road (S.R. 3001)	Traffic signal timing/phasing modifications, install northbound and southbound left-turn lanes, install additional northbound through lane, install southbound right-turn lane.	\$1,664,350	\$832,175	\$0	\$832,175	2023
7	Township Line Road (S.R. 3001) and Trooper Road (S.R. 3002)	Install traffic signal.	\$297,000	\$148,500	\$0	\$148,500	2023
8	Township Line Road (S.R. 3001) and Whitehall Road (S.R. 3006)	Traffic signal timing/phasing modifications, install northbound and southbound left-turn lanes, install eastbound left-turn lane.	\$1,282,100	\$641,050	\$0	\$641,050	2023
9	Township Line Road (S.R. 3001) and North Wales Road (S.R. 2010)	Traffic signal timing/phasing modifications, install eastbound and westbound left-turn lanes, install westbound right-turn lane, install northbound right-turn lane.	\$1,238,200	\$619,100	\$0	\$619,100	2023
10	Valley Forge Road (S.R. 0863) and Polishop Road.	Traffic signal timing/phasing modifications, install southbound left-turn lane.	\$616,000	\$205,333	\$0	\$410,667	2023
			\$11,230,575	\$4,332,149	\$1,605,754	\$5,292,672	

Transportation Service Area North

Int. No.	Intersection or Corridor	Improvements Required	Total Project Cost	Allocated Funding			Construction Completion
				PennDOT Costs	County Costs	Township Costs	
13	Skipack Pike (S.R. 0073) and Bustard Road (S.R. 1002)	Traffic signal timing/phasing modifications, install eastbound left-turn lane, install westbound right-turn lane.	\$1,130,125	\$565,062	\$0	\$565,063	2023
14	Skipack Pike (S.R. 0073) and Wentz Church Road	Traffic signal timing/phasing modifications.	\$10,000	\$3,333	\$0	\$6,667	2023
15	Skipack Pike (S.R. 0073) and Berks Road (S.R. 3004)	Traffic signal timing/phasing modifications, install northbound and southbound left-turn lanes.	\$978,125	\$439,062	\$0	\$439,063	2023
18	Skipack Pike (S.R. 0073) and North Wales Road (S.R. 2010)	Traffic signal timing/phasing modifications, install eastbound and westbound left-turn lanes, install westbound right-turn lane.	\$1,115,500	\$557,750	\$0	\$557,750	2023
19	Valley Forge Road (S.R. 0863) and Morris Road (S.R. 2001)	Traffic signal timing/phasing modifications, install additional southbound through lane.	\$1,521,750	\$760,875	\$0	\$760,875	2023
20	Morris Road (S.R. 2001) and North Wales Road (S.R. 2010)	Traffic signal timing/phasing modifications.	\$10,000	\$5,000	\$0	\$5,000	2023
			\$4,665,500	\$2,351,082	\$0	\$2,354,418	

conditions. Table 11 also provides cost allocations for the improvements, indicating the portions of the total cost for which the Township, County, and PennDOT are responsible. **The total cost of the Future Pass-through Transportation Capital Improvements Program is approximately \$11,230,575 for Transportation Service Area South, and \$4,665,500 for Transportation Service Area North.** The anticipated completion year for each of the improvements is also included in Table 11.

Future Development Transportation Capital Improvements Program

The Future Development Transportation Capital Improvements Program is summarized in Table 12 for Transportation Service Areas South and North, respectively, and details the improvements necessary to achieve the preferred levels of service under future 2023 development traffic conditions. Table 12 also provides cost allocations for the improvements, indicating the portions of the total cost for which the County, PennDOT, and future development are responsible. **The total cost of the Future Development Transportation Capital Improvement Program is approximately \$851,200 for Transportation Service Area South and \$887,700 for Transportation Service Area North.** The anticipated completion year for each of the improvements is also included in Table 12.

Improvements Summary

The total costs of the Worcester Township *Transportation Capital Improvements Plan*, which includes existing, pass-through, and development improvements for both Transportation Service Areas South and North are summarized in Table 13. As indicated, the total cost of the *Transportation Capital Improvements Plan* for the entire Township is approximately \$22,732,475, of which \$10,247,470 is allocated to the Township (approximately 45 percent), \$9,776,376 to PennDOT (approximately 43 percent), \$1,840,845 is to the County (approximately 8 percent), and \$867,784 to future development (approximately 4 percent).

Impact Fee

The impact fee calculations for development improvements are summarized in Table 14 for the transportation service areas. It should be noted that, according to the impact fee law, an applicant may physically construct improvements identified in the Transportation Capital Improvements Plan as being development warranted, in lieu of paying the impact fee to the Township, upon agreement by the Township.

Table 12. Development Transportation Capital Improvement Program
 Transportation Service Area South

Int No.	Intersection or Corridor	Improvements Required	Total Project Cost	Allocated Funding		Development Costs	Construction Completion
				PennDOT Costs	County Costs		
3	Germanstown Pike and Valley Forge Road (S.R. 0963)	Traffic signal timing/phasing modifications.	\$10,000	\$3,333	\$3,333	\$3,334	2023
6	Valley Forge Road (S.R. 0963) and Stump Hall Road/Township Line Road (S.R. 3001)	Traffic signal timing/phasing modifications, install eastbound left-turn lane.	\$841,200	\$420,600	\$0	\$420,600	2023
			\$851,200	\$423,933	\$3,333	\$423,934	

Transportation Service Area North

Int No.	Intersection or Corridor	Improvements Required	Total Project Cost	Allocated Funding		Development Costs	Construction Completion
				PennDOT Costs	County Costs		
14	Skippack Pike (S.R. 0073) and Wentz Church Road	Traffic signal modifications, install eastbound left-turn lane.	\$465,400	\$232,700	\$0	\$232,700	2023
15	Skippack Pike (S.R. 0073) and Berks Road	Traffic signal timing/phasing modifications, install westbound right-turn lane.	\$238,750	\$119,375	\$0	\$119,375	2023
18	Skippack Pike (S.R. 0073) and North Wales Road (S.R. 2010)	Traffic signal timing/phasing modifications, install eastbound right-turn lane.	\$175,550	\$86,775	\$0	\$86,775	2023
20	Morris Road (S.R. 2001) and North Wales Road (S.R. 2010)	Traffic signal timing/phasing modifications.	\$10,000	\$5,000	\$0	\$5,000	2023
			\$887,700	\$443,850	\$0	\$443,850	

Table 13. Transportation Capital Improvement Plan Summary

Transportation Service Area South

	Cost Allocations				Total
	PennDOT	County	Township	Development	
Existing Program	\$1,156,633	\$231,758	\$1,407,884	\$0	\$2,796,275
Pass-Through Program	\$4,332,149	\$1,605,754	\$5,292,672	\$0	\$11,230,575
Development Program	\$423,933	\$3,333	\$0	\$423,934	\$851,200
	\$5,912,715	\$1,840,845	\$6,700,556	\$423,934	\$14,878,050
Share of Total	40%	12%	45%	3%	

Transportation Service Area North

	Cost Allocations				Total
	PennDOT	County	Township	Development	
Existing Program	\$1,088,729	\$0	\$1,212,496	\$0	\$2,301,225
Pass-Through Program	\$2,331,082	\$0	\$2,334,418	\$0	\$4,665,500
Development Program	\$443,850	\$0	\$0	\$443,850	\$887,700
	\$3,863,661	\$0	\$3,546,914	\$443,850	\$7,854,425
Share of Total	49%	0%	45%	6%	

Combined Study Intersections/Roadways

	Cost Allocations				Total
	PennDOT	County	Township	Development	
Existing Program	\$2,245,362	\$231,758	\$2,620,380	\$0	\$5,097,500
Pass-Through Program	\$6,663,231	\$1,605,754	\$7,627,090	\$0	\$15,896,075
Development Program	\$867,783	\$3,333	\$0	\$867,784	\$1,738,900
	\$9,776,376	\$1,840,845	\$10,247,470	\$867,784	\$22,732,475
Share of Total	43%	8%	45%	4%	

Table 14. Transportation Impact Fee

Transportation Service Area	Development Capital Improvement Costs ⁽¹⁾	Development Trips	Impact Fee ^{(2), (3)}
South	\$424,955	136 trips	\$3,125
North	\$445,384	112 trips	\$3,977

- (1) Inclusive of the prorated share of costs incurred for the completion of the *Roadway Sufficiency Analysis* that is attributable to development (\$1,021 as allocated by the cost of development-warranted improvements for Transportation Service Area South and \$1,534 as allocated by the cost of development-warranted improvements for Transportation Service Area North).
- (2) To be assessed on a per weekday afternoon peak hour trip basis.
- (3) Development capital improvement costs divided by new development trips.

TSA NORTH

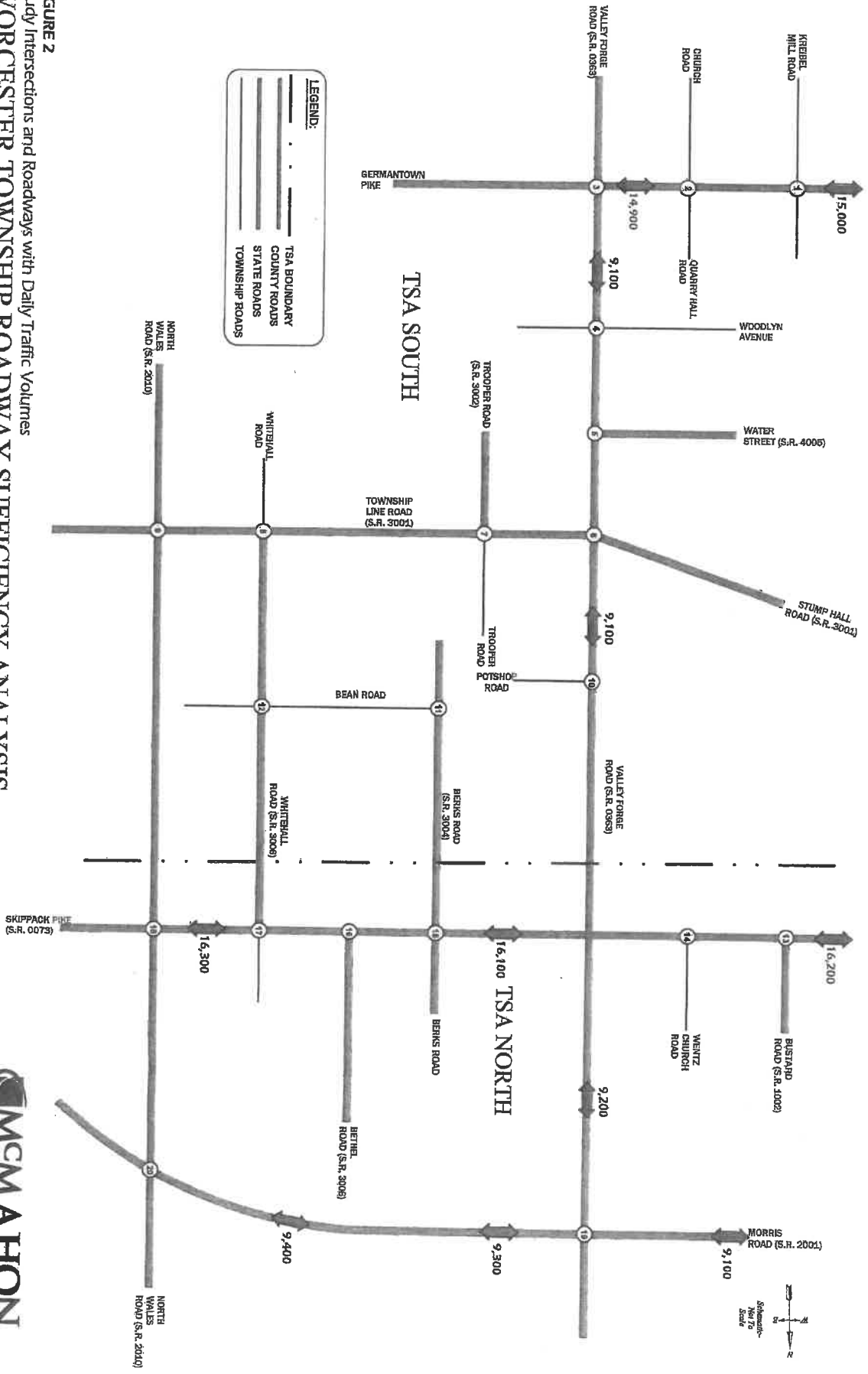
TSA SOUTH

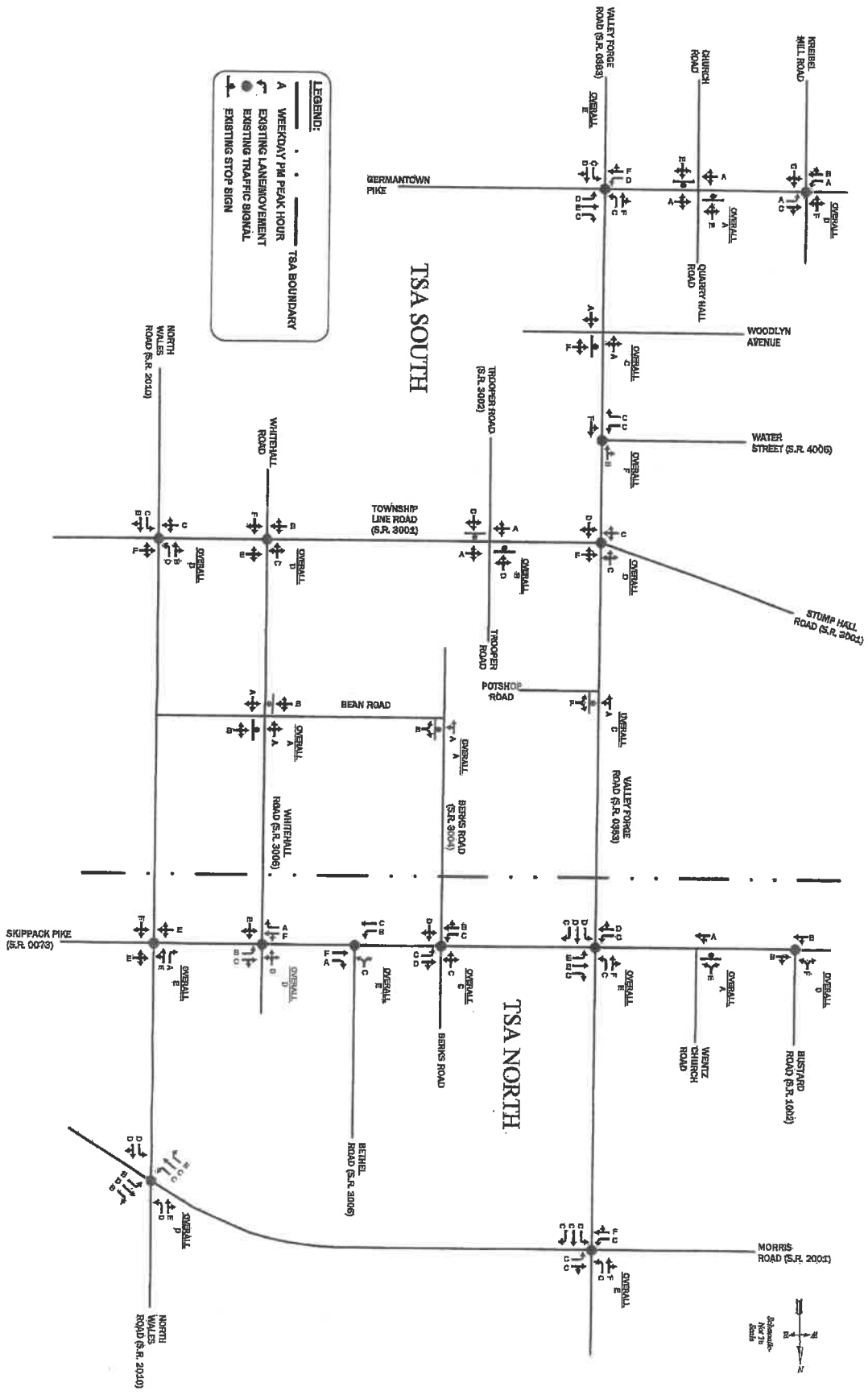
MAP FIGURE PROVIDED FROM
WORCESTER TOWNSHIP
LAND USE ASSUMPTIONS REPORT



FIGURE 1
 Transportation Service Area
WORCESTER TOWNSHIP ROADWAY SUFFICIENCY ANALYSIS
WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PA

FIGURE 2
 Study Intersections and Roadways with Daily Traffic Volumes
WORCESTER TOWNSHIP ROADWAY SUFFICIENCY ANALYSIS
 WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PA





LEGEND:

- A WEEKDAY PM PEAK HOUR
- EXISTING LANE IMPROVEMENT
- EXISTING TRAFFIC SIGNAL
- EXISTING STOP SIGN

--- TSA BOUNDARY

FIGURE 4
 2013 Existing Levels of Service
WORCESTER TOWNSHIP ROADWAY SUFFICIENCY ANALYSIS
 WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PA



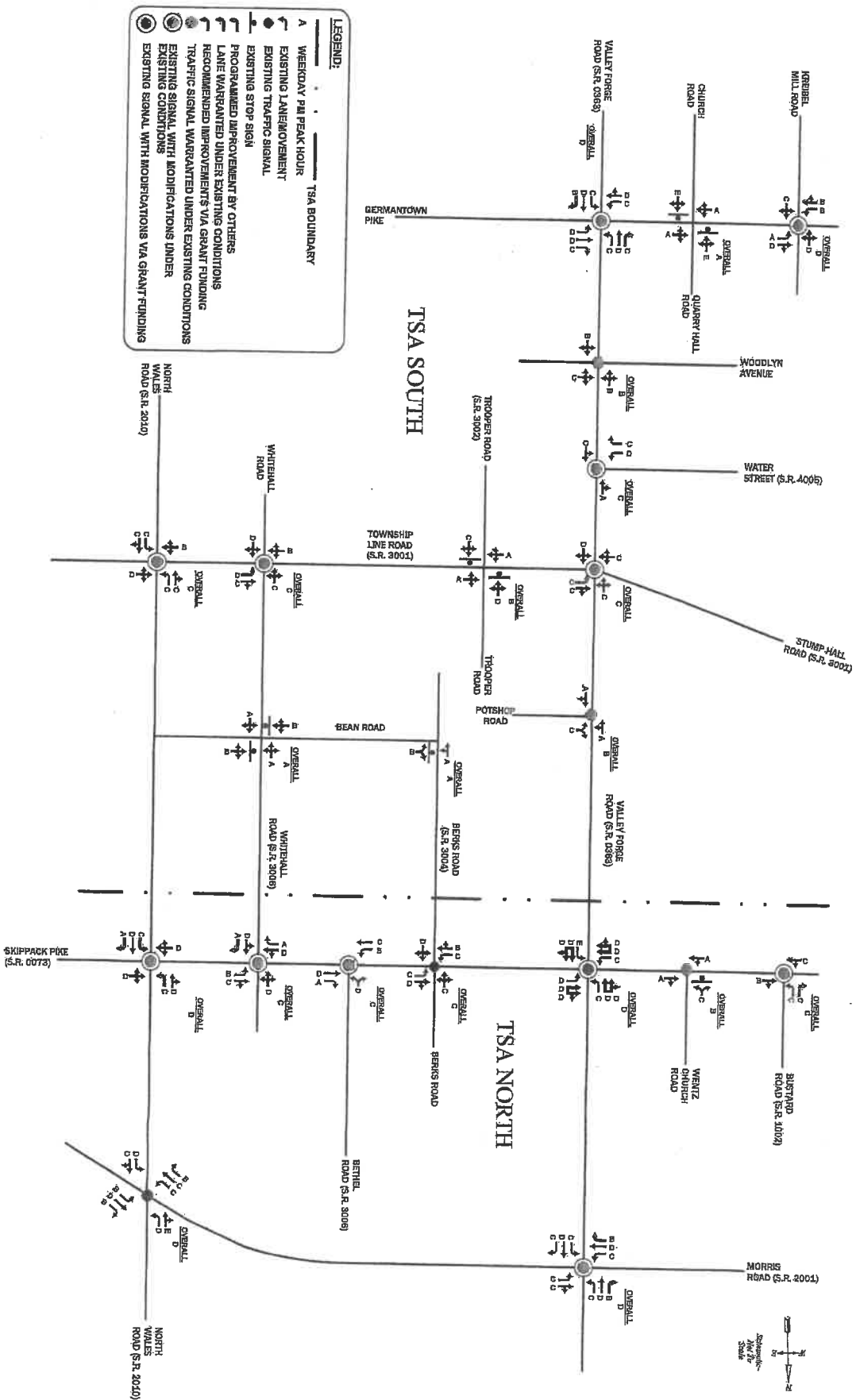


FIGURE 5
 2013 Existing Levels of Service with Improvements
WORCESTER TOWNSHIP ROADWAY SUFFICIENCY ANALYSIS
 WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PA

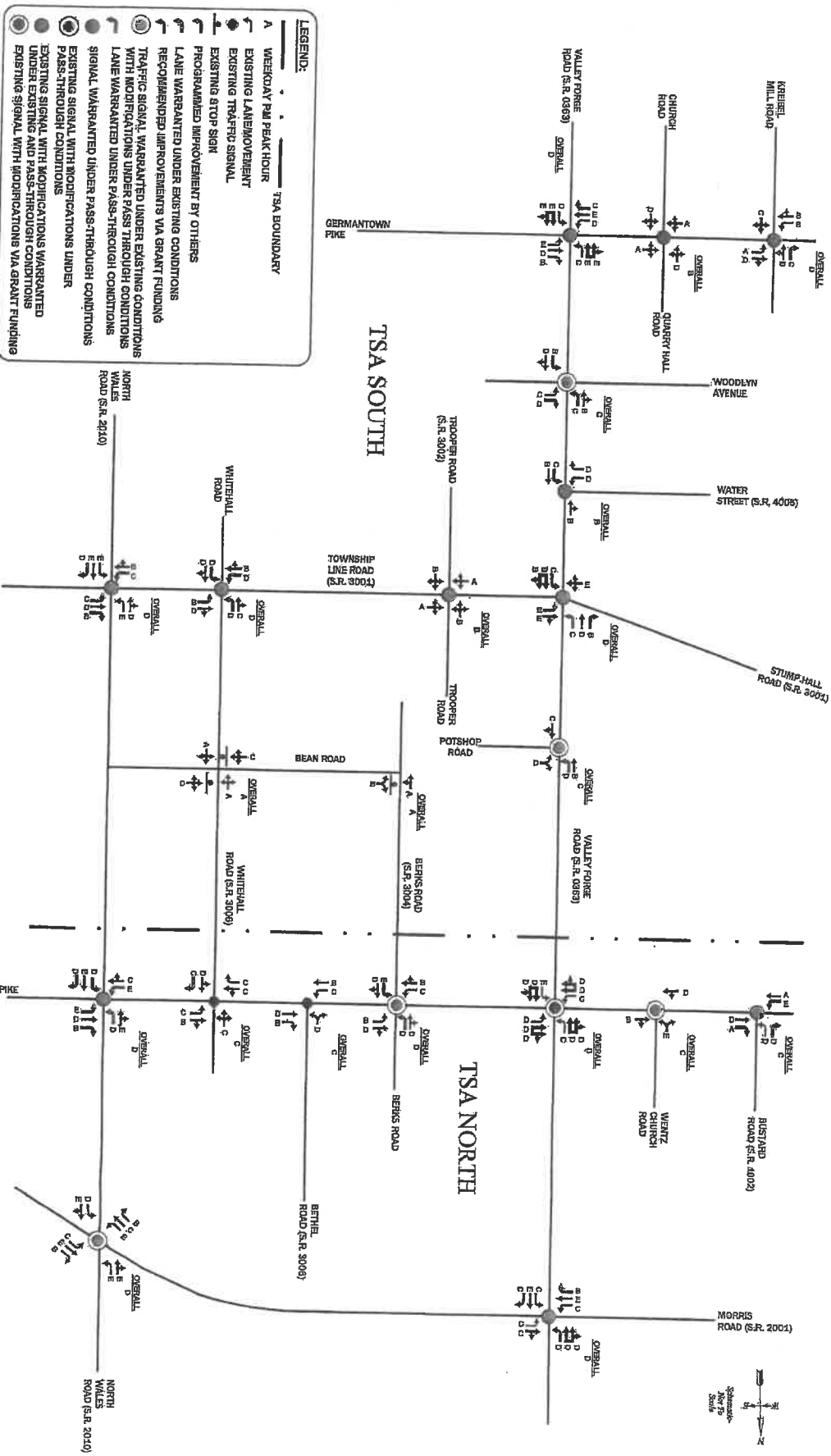
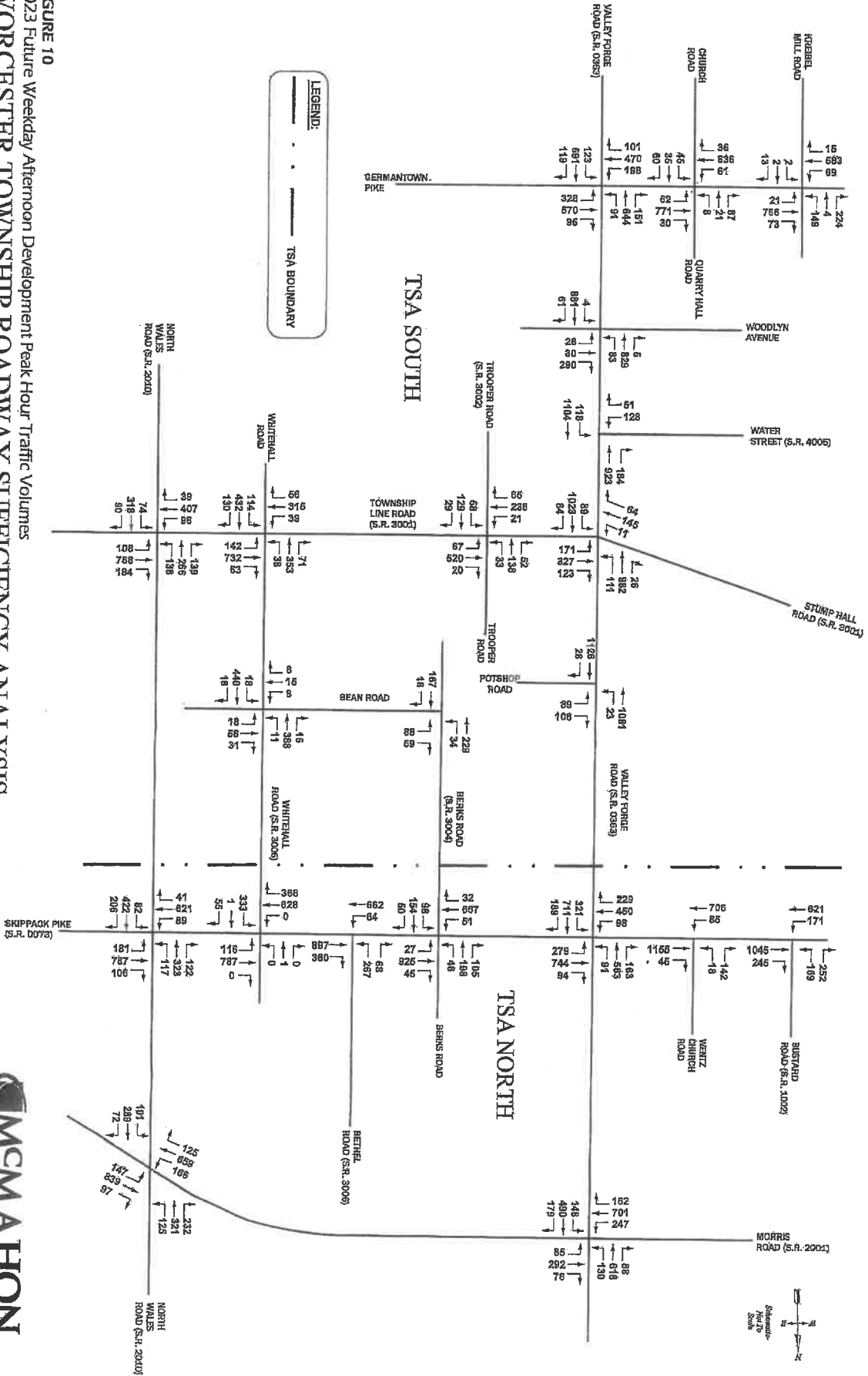


FIGURE 9
 2023 Future Pass Through Levels of Service with Improvements
WORCESTER TOWNSHIP ROADWAY SUFFICIENCY ANALYSIS
 WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PA

FIGURE 10
 2023 Future Weekday/Afternoon Development Peak Hour Traffic Volumes
 WORCESTER TOWNSHIP ROADWAY SUFFICIENCY ANALYSIS
 WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PA



LEGEND:

- A WEIGHWAY PM PEAK HOUR TSA BOUNDARY
- EXISTING LANEMOVEMENT
- EXISTING TRAFFIC SIGNAL
- EXISTING STOP SIGN
- PROGRAMMED IMPROVEMENT BY OTHERS
- LANE WARRANTED UNDER EXISTING CONDITIONS
- RECOMMENDED IMPROVEMENTS VIA GRANT FUNDING
- TRAFFIC SIGNAL WARRANTED UNDER EXISTING CONDITIONS WITH MODIFICATIONS UNDER PASS THROUGH CONDITIONS
- LANE WARRANTED UNDER PASS-THROUGH CONDITIONS
- SIGNAL WARRANTED UNDER PASS-THROUGH CONDITIONS
- EXISTING SIGNAL WITH MODIFICATIONS WARRANTED UNDER EXISTING AND PASS-THROUGH CONDITIONS
- EXISTING SIGNAL WITH MODIFICATIONS WARRANTED UNDER EXISTING AND PASS-THROUGH CONDITIONS
- EXISTING SIGNAL WITH MODIFICATIONS VIA GRANT FUNDING

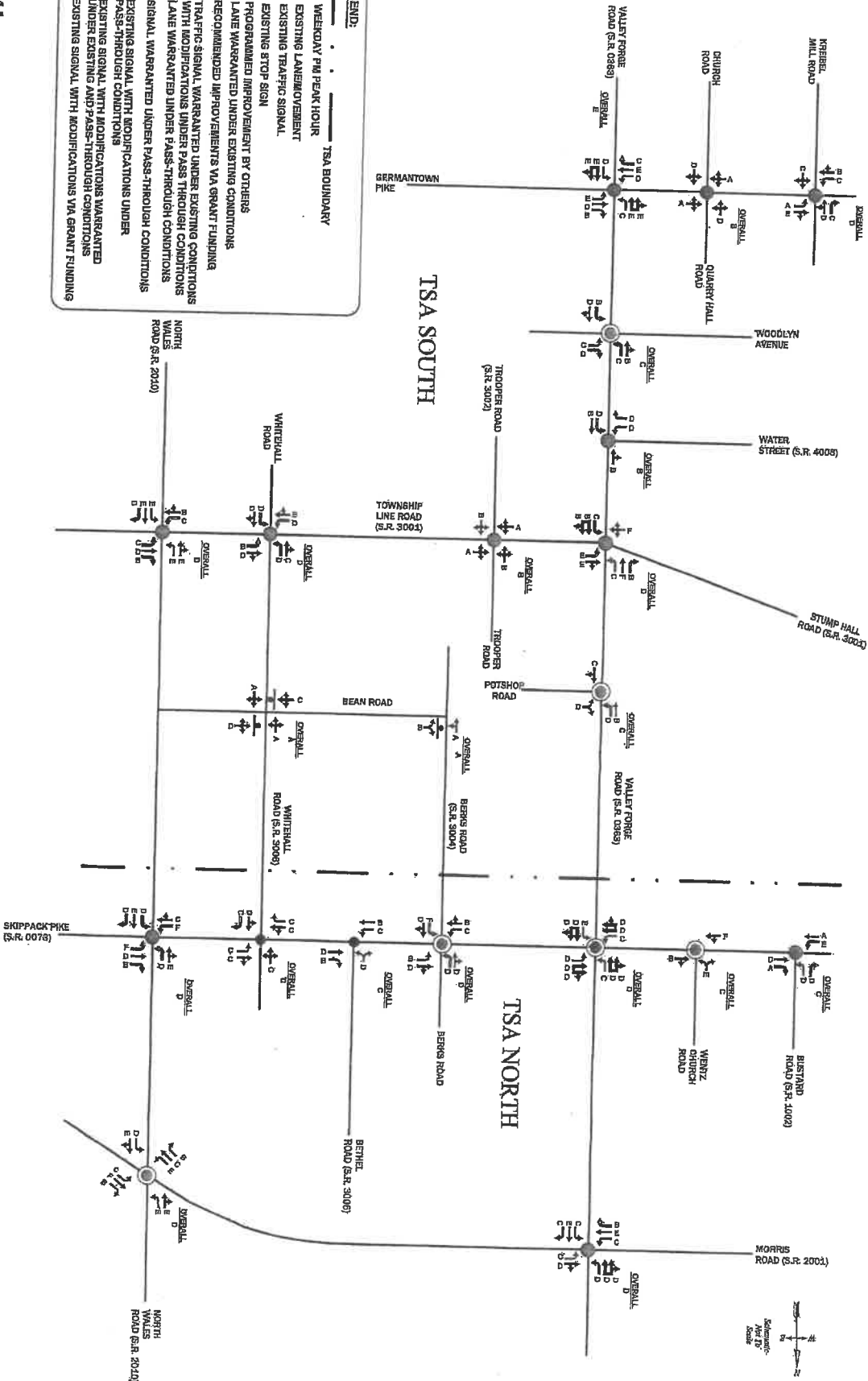


FIGURE 11
 2023 Future Development Levels of Service
WORCESTER TOWNSHIP ROADWAY SUFFICIENCY ANALYSIS
 WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PA



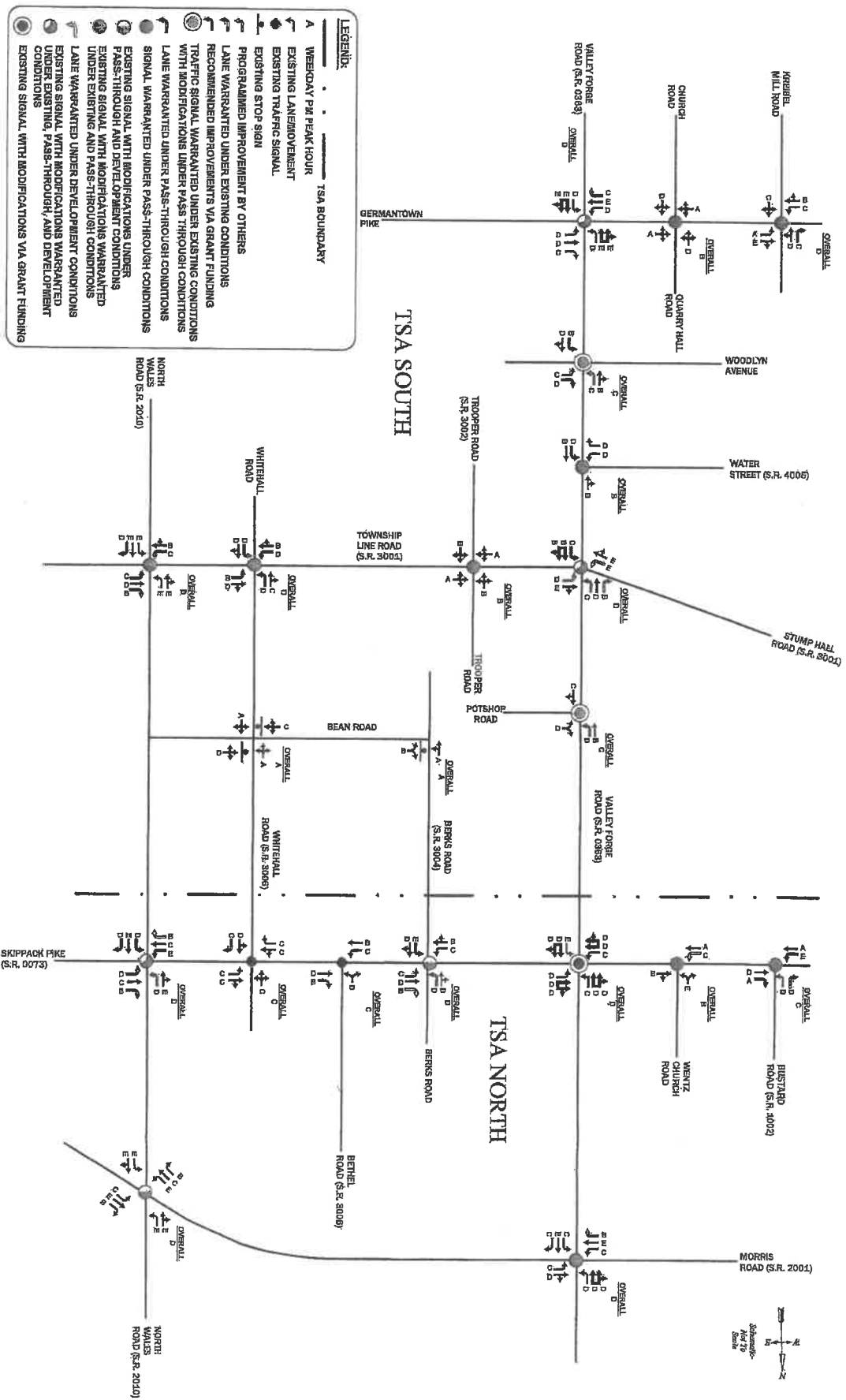
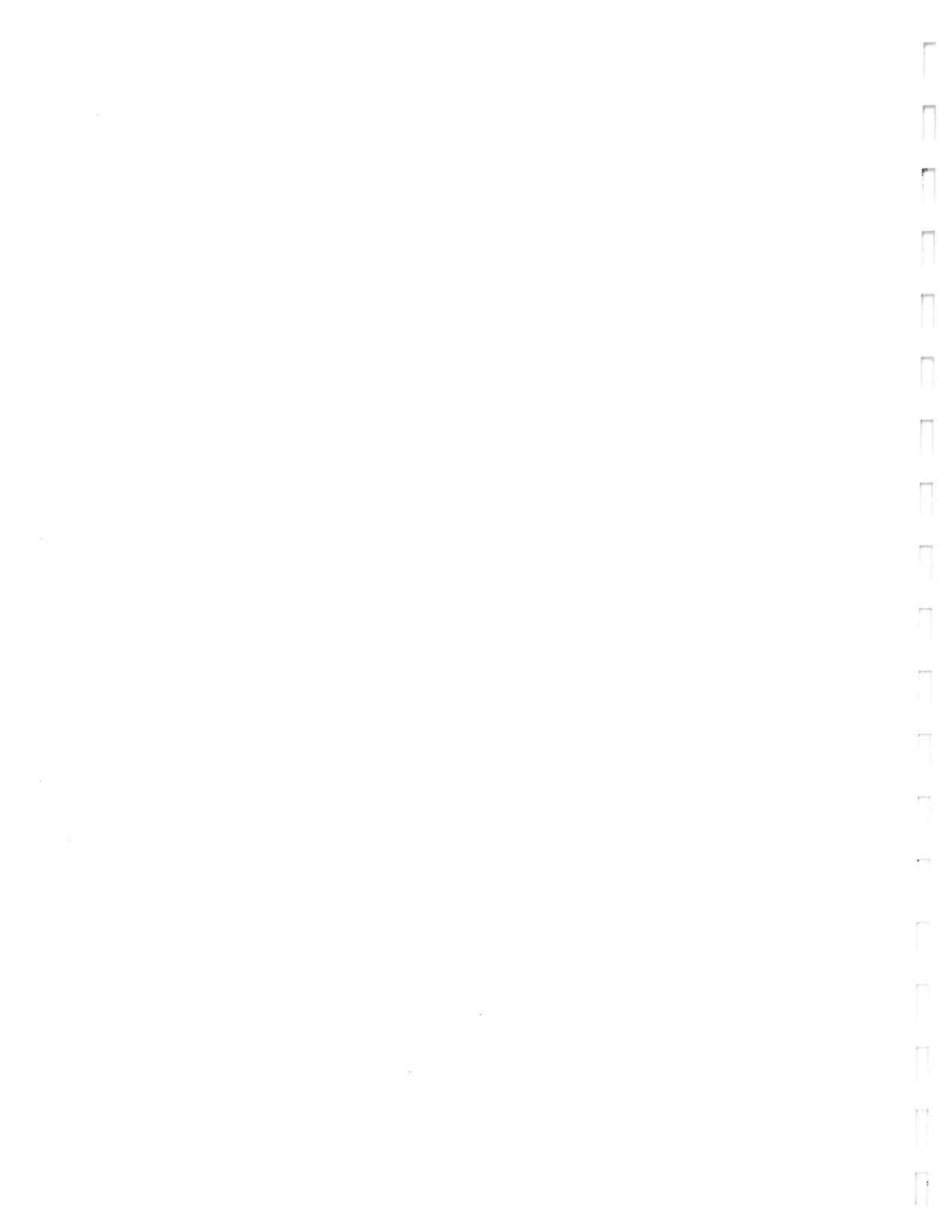


FIGURE 12

2023 Future Development Levels of Service With Improvements
 WORCESTER TOWNSHIP ROADWAY SUFFICIENCY ANALYSIS
 WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PA

APPENDIX A

Transportation Advisory Committee Meeting Agendas



**WORCESTER TOWNSHIP
TRAFFIC IMPACT FEE ADVISORY COMMITTEE MEETING
APRIL 18, 2013**

Agenda

- Introductions
 - Contact Information
 - Roles of Committee

- Act 209 Overview

- Study Area Intersections

- Land Use Assumptions Report (LUAR)
 - Zoning Ordinance Assumptions
 - Service Area Boundaries

- Project Schedule
 - Next Meeting Date



WORCESTER TOWNSHIP
TRAFFIC IMPACT FEE ADVISORY COMMITTEE MEETING
JUNE 12, 2013

Agenda

- 2013 Peak Hour Count Data
- Land Use Assumptions Report (LUAR)
 - Population and Housing Trends
 - Zoning Ordinance Assumptions
 - List of Developable Properties
 - Developable Properties by Subarea
- Project Schedule
 - Upcoming Steps

WORCESTER TOWNSHIP
TRAFFIC IMPACT FEE ADVISORY COMMITTEE MEETING
AUGUST 20, 2013

Agenda

- Land Use Assumptions Report (LUAR)
 - Developable Properties by Subarea

- Project Schedule – Upcoming steps
 - Public hearing of Committee on LUAR with proper notice in accordance with Section 107 of the MPC, including publishing notice once each week for two successive weeks in a newspaper of general circulation throughout the Township
 - Copies shall be forwarded to County Planning Commission, contiguous municipalities, and the local school district for comment at least 30 days prior to the public meeting.
 - Report must then be presented to the Board of Supervisors, which must by resolution approve, disapprove, or modify the report. (Note: The Committee public hearing and BOS approval can be done on the same night.)
 - Continue with Roadway Sufficiency Analysis and Transportation Capital Improvements Plan



WORCESTER TOWNSHIP
TRAFFIC IMPACT FEE ADVISORY COMMITTEE MEETING
APRIL 3, 2014

Agenda

- Land Use Assumptions Report (LUAR)
 - Traffic Generation

- Roadway Sufficiency Analysis (RSA)
 - Three Traffic Analysis Scenarios
 - 1 – Existing Conditions
 - 2 – Future Pass-Through Conditions (Without development in each service area)
 - 3 – Future With-Development Conditions

 - Preferred Level of Service – Iterative Process
 - Background Traffic Growth Rate
 - Preliminary Improvement Recommendations – Looking for Committee Feedback

- Next Steps (RSA)
 - Finalization of Improvement Recommendations
 - Preliminary Determination of Impact Fee
 - Set Next Meeting Date

- Potential Grant Opportunity for Future Improvements

WORCESTER TOWNSHIP
TRAFFIC IMPACT FEE ADVISORY COMMITTEE MEETING
JUNE 4, 2014

Agenda

- Roadway Sufficiency Analysis (RSA)
 - Background
 - Three Traffic Analysis Scenarios
 - 1 – Existing Conditions
 - 2 – Future Pass-Through Conditions (Without dev. in each service area)
 - 3 – Future With-Development Conditions
 - Preferred Level of Service – LOS D overall and LOS E for each movement for each traffic analysis scenario
 - Background Traffic Growth Rate – Regional growth rate reduced from prior meeting. Overall projected traffic growth with regional growth rate and from expected nearby developments still consistent with projected growth in area.
 - Revisions since last meeting – Reduced recommendations for additional through lanes to help maintain character of the community.
 - Updated Improvement Recommendations – Looking for Committee Feedback
- Transportation Capital Improvement Plan (TCIP)
 - Cost estimate for each recommended roadway improvement
 - Accounts for design, ROW acquisition, and construction, including utility relocation, ADA ramps, stormwater, and construction. Estimates are based on field views and projected traffic analysis, not detailed design.
 - Preliminary results
- Transportation Impact Fee
 - Determined by the estimated cost of developer-warranted improvements divided by the number of projected development trips in each service area
 - Preliminary results
- Next Steps (RSA)
 - Finalization of Improvement Recommendations
 - Draft Reports for Committee Review
 - Next Meeting Date – mid July to September?



WORCESTER TOWNSHIP
TRAFFIC IMPACT FEE ADVISORY COMMITTEE MEETING
NOVEMBER 11, 2014

Agenda

- Roadway Sufficiency Analysis (RSA)
 - Updated Improvement Recommendations – Looking for Committee Feedback
- Transportation Capital Improvement Plan (TCIP)
 - Cost estimate for each recommended roadway improvement
 - Accounts for design, ROW acquisition, and construction, including utility relocation, ADA ramps, stormwater, and construction. Estimates are based on field views and projected traffic analysis, not detailed design.
 - Preliminary results
- Transportation Impact Fee
 - Determined by the estimated cost of developer-warranted improvements divided by the number of projected development trips in each service area
 - Preliminary results
- Next Steps (RSA)
 - Finalization of Improvement Recommendations
 - Draft Reports for Committee Review
 - Next Meeting Date

WORCESTER TOWNSHIP
TRAFFIC IMPACT FEE ADVISORY COMMITTEE MEETING
FEBRUARY 11, 2015

Agenda

- Center Point Vision Plan Discussion
- Draft Roadway Sufficiency Analysis and Capital Improvements Plan
 - Committee Feedback from Draft Report
 - Discussion of Center Point Vision Plan and Intersection Improvements
- Next Steps
 - Finalization of Report
 - Public Hearing of Committee on Capital Improvements Plan
 - Supervisors Approval of Roadway Sufficiency Analysis report
 - Supervisors Adoption of Capital Improvements Plan *
 - Supervisors Adoption of Impact Fee Ordinance *

* - Public notice and ten-working day public inspection period required



WORCESTER TOWNSHIP
TRAFFIC IMPACT FEE ADVISORY COMMITTEE MEETING
JUNE 15, 2015

Agenda

- Finalization of the Roadway Sufficiency Analysis and Capital Improvements Plan
 - Committee Feedback from Draft Report
 - Discussion of Center Point Vision Plan and Intersection Improvements

- Next Steps
 - Public Hearing of Committee on Capital Improvements Plan
 - Supervisors Approval of Roadway Sufficiency Analysis report
 - Supervisors Adoption of Capital Improvements Plan *
 - Supervisors Adoption of Impact Fee Ordinance *

* - Public notice and ten-working day public inspection period required

APPENDIX B

Land Use Assumptions Report



**WORCESTER TOWNSHIP
BOARD OF SUPERVISORS**

MONTGOMERY COUNTY, COMMONWEALTH OF PENNSYLVANIA

RESOLUTION NO. 2014-15

A RESOLUTION OF THE BOARD OF SUPERVISORS OF WORCESTER TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA, APPROVING THE LAND USE ASSUMPTIONS REPORT SUBMITTED TO WORCESTER TOWNSHIP TRAFFIC IMPACT FEE ADVISORY COMMITTEE

WHEREAS, Worcester Township Board of Supervisors passed Resolution No. 2013- 30 creating the Township Traffic Impact Fee Advisory Committee ("TIFAC") pursuant to Act 209 of 1990; and

WHEREAS, the TIFAC has submitted a Land Use Assumptions Report to the Worcester Township Board of Supervisors for the implementation of impact fees for capital improvements; and


WHEREAS, Worcester Township Board of Supervisors desires to take action on the Land Use Assumptions Report.

NOW THEREFORE, Worcester Township Board of Supervisors hereby resolves as follows:

1. The Land Use Assumptions Report prepared by the Worcester Township Transportation Impact Fee Advisory Committee, David C. Babbitt, AICP, of David C. Babbitt & Associates, LLC, Daniel P. Olpere, AICP, of Local Government Management Services, LLC, and Ken O'Brien, P.E., of McMahon Associates, Inc. for the Worcester Township Advisory Committee is hereby Approved, with revisions.
2. This Resolution is enacted in order to comply with the requirements of the Pennsylvania Municipalities Planning Code, and in particular Section 504-A(c)(1) of the Code.

DULY RESOLVED, this 15th day of January 2014, by Worcester Township Board of Supervisors, Montgomery County, Pennsylvania, in lawful session duly assembled.

WORCESTER TOWNSHIP

By: 

Arthur C. Bustard, Chairman,
Board of Supervisors

Attest: 

F. Lee Mangan, Secretary
Worcester Township

LAND USE ASSUMPTIONS REPORT

Worcester Township
Montgomery County, Pennsylvania

DRAFT

January 15, 2014

Introduction

The purpose of this Land Use Assumptions Report is to project future development in Worcester Township for the next ten years. These growth projections will form the basis of a Traffic Capital Improvements Plan, which the Township will then use to determine the transportation impact fee to be charged to new residential and nonresidential development.

This Land Use Assumptions Report is prepared in compliance with Article V-A of the Pennsylvania Municipalities Planning Code.

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Acknowledgements

This Land Use Assumptions Report was prepared by the Worcester Township Transportation Impact Fee Advisory Committee, comprised of the following members, in alphabetical order:

- Carol Allen
- Sheila Bello
- Robert Cannon
- Joseph Gambone, Jr.
- Robert Hayes, Jr.
- Sal Paone
- Margie Sherr
- John Westrum
- Paul Ziegler

Technical assistance was provided by David C. Babbitt, AICP, of David C. Babbitt & Associates, LLC, Daniel P. Olpere, AICP, of Local Government Management Services, LLC, and Ken O'Brien, P.E., of McMahon Associates, Inc. The maps were prepared by Tim Carrigan and Kip Jansen of Carrigan Geo Services, Inc. Special thanks to Township Manager F. Lee Mangan, Township Zoning Officer Tiffany Loomis, Township Engineer Joseph J. Nolan, P.E., and Montgomery County Planning Commission representative Matthew Schelly, for providing valuable information and assistance to the Committee and consultants.

Transportation Service Areas

For the purposes of this Land Use Assumptions Report, Worcester Township is divided into two Transportation Service Areas (or TSA's), in accordance with Article V-A of the Pennsylvania Municipalities Planning Code. The North TSA is all land north of the PECO high tension line corridor that runs southwest of and roughly parallel to Skippack Pike (PA Route 73). The South TSA is all land south of the PECO line.

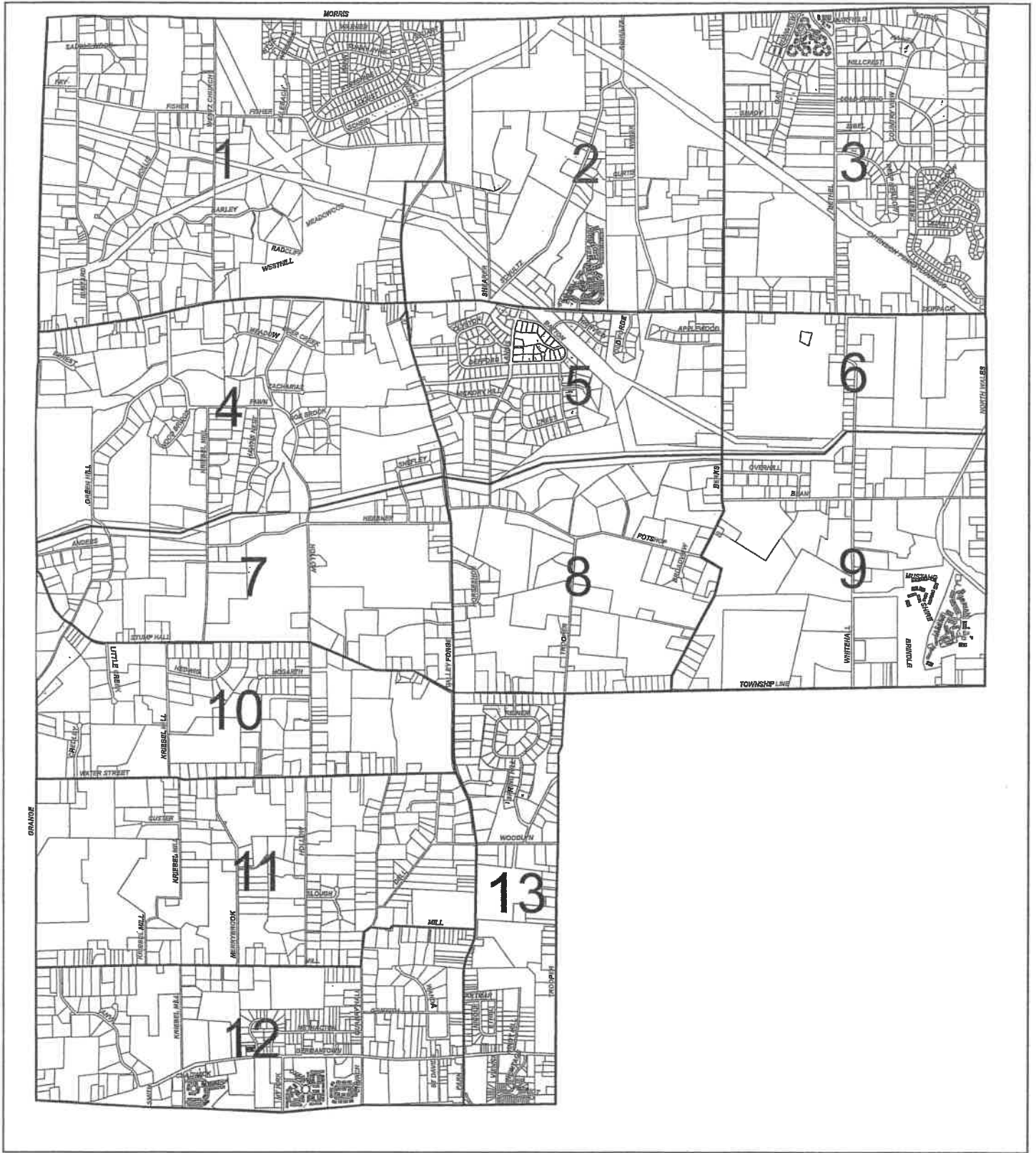
Each TSA has been further divided into subareas. The purpose of the subareas is to identify developable properties and relate them to nearby highways and intersections. The North TSA includes Subareas 1 through 6, and the South TSA includes Subareas 7 through 13. The subarea boundaries are either major roads, the Township boundaries, or the PECO line. The subareas are shown on the map on the following page, and again on the two maps in the section on Developable Properties, below.

Each TSA is limited by the Municipalities Planning Code to 7 square miles in size. Numerous areas have been excluded from the TSA's in order to limit them to this maximum size. Such areas include parcels owned by the Township, County, State, Methacton School District, and conservation organizations (e.g., Natural Lands Trust). They also include areas that have been previously developed and have no further development potential. By excluding such areas, the size of the North TSA is 6.6 square miles, and the size of the South TSA is 7.0 square miles (a few acres below the limit). The excluded areas are shown in grey on the maps on the following page and later in this report.

The only limited access expressway in Worcester Township is a 2.4 mile stretch of the Northeast Extension of the Pennsylvania Turnpike (I-476). However, there are no interchanges within the Township, the nearest being the Lansdale Interchange at mile marker 31, approximately 3.1 miles north of the Worcester Township line at Morris Road. A new interchange is under construction at U.S. Route 202 in Whitpain Township, approximately 1.4 miles south of the Worcester Township line at North Wales Road.

According to the Worcester Township Comprehensive Plan Update of 2008, the Township has three primary arterial highways: Skippack Pike (PA Route 73), Park Avenue/Valley Forge Road (PA Route 363) and Germantown Pike (former Route 422). The Township also has several minor arterial highways: Morris Road from North Wales Road to Valley Forge Road, Township Line Road, North Wales Road, Whitehall Road, Bethel Road, and Trooper Road from the Lower Providence Township line to Germantown Pike.

With one exception, all of the Township's primary and minor arterial highways (and several other roads) are under the jurisdiction of the Pennsylvania State Department of Transportation. The only exception is Germantown Pike, which is under the jurisdiction of Montgomery County.



Legend

Excluded from TSA Areas



SUBAREAS

Worcester Township Land Use Assumptions Report

01-15-2014

Previous Planning Efforts

Comprehensive Plan

The *Comprehensive Plan for Worcester Township* was prepared by the Montgomery County Planning Commission and adopted in 2008.

The Plan includes significant goals for rural preservation, growth and development, as well as environmental goals, and sewage disposal and water supply goals, all of which will in various ways affect the future development of the Township. Highlights of these goals include:

- Maintaining the rural character of the Township and classifying rural preservation areas for low density development.
- Concentrating higher density in areas with public sewers.
- Not extending public water service areas beyond the sewer growth areas or growth boundaries.
- Preserving farmland and encouraging farmers to join agricultural security districts.
- Encouraging cluster developments.
- Encouraging transfer of development rights.
- Achieving environmental goals by preserving steep slope areas, stream corridors, floodplains, wetlands, woodlands, and high priority open space.

Population projections were also made in the Plan and based largely on the Delaware Valley Regional Planning Commission's projections (see below).

Public Sewer and Water Planning

The Comprehensive Plan also addresses the issues of public sewer and water service areas, which are important considerations in this Land Use Assumptions Report. The Comprehensive Plan incorporates the concepts from the Worcester Township Act 537 Plan, which was adopted in 1995 and last revised in 2002.

Public sewer facilities exist in only a few areas of the Township: Center Point, Cold Spring (east of the Turnpike), Fairview Village, and Locust Corner (north of Center Point). Each of these areas is served by a different sewage treatment plant: Valley Green Plant (Worcester Township), Upper Gwynedd Plant, Berwick Place Plant (Worcester Township), and Upper Gwynedd/Towamencin Plant. Similarly, public water facilities exist in the same four areas as the sewer facilities, and are provided by the North Penn Water Authority and the Pennsylvania American Water Company.

In general, the 2008 Comprehensive Plan and 1995 Act 537 Plan show limited expansion of the public sewer and water facilities in the future. The Township recently began a preliminary sewer feasibility study for a limited expansion of public sewer service in the Center Point Village area. The purpose of this expansion is to provide service to properties in the area with existing malfunctioning systems, and to provide service to several properties along Skippack Pike and Valley Forge Road. Areas outside of the sewer growth area are designated as rural preservation low growth areas, and such areas comprise the majority of the Township.

As a result, most future development must provide on-lot sewer and water systems. Given the need for on-lot systems, most future development will be limited by the Township's soils, which are not ideal for such systems. Larger developments may reach an economy of scale to have community systems (see below).

Population and Housing Trends

The Land Use Assumptions Report is predicated on future residential and nonresidential development to determine the required road improvements and the costs of such improvements. Therefore, determining population and housing trends is a necessary step in the process.

The 2000 United States Census reported a population of 7,789 in Worcester Township, up 3,103 persons from 4,686 persons in 1990, an increase of 66.2 percent over that decade. This significant rate of population growth in the 1990's would not continue into the new millennium. The 2010 Census reported a population of 9,750, up 1,961 persons from 2000, an increase of 25.2 percent over that decade. The Census estimate was 9,808 persons in 2011, up 58 persons or 0.6 percent from 2010.

Population projections by the Delaware Valley Regional Planning Commission (2011, the most recent DVRPC projections) show Worcester Township with 10,137 persons in 2015, up 329 persons from the 2011 estimate. This increase of 329 over four years translates to an average annual increase of 82 persons between 2011 and 2015. Therefore, the 2013 interpolation is 9,973 persons. This figure represents the base year for the Land Use Assumptions Report.

DVRPC projections show the Township with 10,651 persons by the year 2020 for an average annual increase of 103, and 10,379 persons by the year 2025 for an average annual increase of 146. The 2023 population is interpolated as 11,088. Therefore, the 2013-2023 population increase is projected to be 1,115.

The Census reported a total of 3,026 housing units in Worcester Township in 2000, up 1,194 units from 1990, corresponding to the period of significant population growth in the Township. The count for 2010 was 3,774 units, up 748 units from 2000. An additional 172 units were built in the Township in 2011-2013, for a total of 3,946. It is clear that the rate of housing growth in the Township has declined substantially since the 1990's, when 119 units were built each year on average.

Year	Housing Totals	Annual Increase	
		Number	Percent
1990	1,832		
2000	3,026	119	6.5%
2010	3,774	75	2.5%
2011	3,874	100	2.6%
2012	3,911	37	1.0%
2013	3,946	35	0.9%

Residential development in the transportation service areas between 2013 and 2023 is projected to total 412 units, determined as follows. The Census Bureau reported that the average household size in Worcester Township was 2.71 persons in the 2010 Census. This average household size is across all dwelling types (singles, townhouses, apartments, etc.) and across all dwelling sizes (number of bedrooms). Since the projected 2013-2023 population increase of 1,115 persons will reside in various housing types, it is assumed that the average household size of the future Township population will be the same as in 2010. The projected population increase of 1,115 persons divided by the average household size of 2.71 persons per unit results in a projected growth of 412 housing units over the ten year horizon of this Land Use Assumptions Report.

Please note that the population and housing growth between 2013 and 2023 is projected to be significantly lower than that experienced between 1990 and 2000, and even between 2000 and 2010. The

1990's saw the Township grow by 66.2 percent in population and by 65.2 percent in housing units. The subsequent decade saw growth of 25.2 percent in population and 24.7 percent in housing units. By comparison, the growth between 2013 and 2023 is projected to be 11.2 percent in population and 10.4 percent in housing units.

The Census counts from 1990, 2000, and 2010, the Census estimate for 2011, the interpolated estimates for 2012 and 2013, and the DVRPC projections from 2015 through 2025 are shown on the table on the following page. The table also shows the annual population increase in number and percent for each of these years. The base year of 2013 and ten year horizon year of 2023 are shown in bold in the table. The projected population growth between 2013 and 2023, and the housing growth during that period, are shown at the bottom of the table.

POPULATION AND HOUSING TRENDS

Worcester Township Land Use Assumptions Report

Year	Population Count	Annual Increase		Source
		Number	Percent	
1990	4,686			Census Count
2000	7,789	310	6.6%	Census Count
2010	9,750	196	2.5%	Census Count
2011	9,808	58	0.6%	Census Estimate
2012	9,890	82	0.8%	Interpolation
2013	9,973	82	0.8%	Interpolation
2014	10,055	82	0.8%	Interpolation
2015	10,137	82	0.8%	DVRPC Projection
2016	10,240	103	1.0%	Interpolation
2017	10,343	103	1.0%	Interpolation
2018	10,445	103	1.0%	Interpolation
2019	10,548	103	1.0%	Interpolation
2020	10,651	103	1.0%	DVRPC Projection
2021	10,797	146	1.4%	Interpolation
2022	10,942	146	1.3%	Interpolation
2023	11,088	146	1.3%	Interpolation
2024	11,233	146	1.3%	Interpolation
2025	11,379	146	1.3%	DVRPC Projection
Projected Population Growth 2013 - 2023				1,115
Persons per Unit (2010 Census for Worcester Township)				2.71
Projected Housing Unit Growth 2013-2023				412

Zoning Ordinance Assumptions

The buildout analysis in the Land Use Assumptions Report is based largely on whether and how properties can be developed according to the zoning districts in which they are located, the presence of public sewer and water service, and the presence of environmental and other constraints to development.

For each zoning district, the list below shows their locations in the transportation service areas in the Township, the permitted uses and dwelling types, the maximum permitted intensity or density according to the Zoning Ordinance, and a formula to determine the buildout of each property in that district. Public water facilities are assumed to become available in the future throughout most but not all of the Township. Public sewer facilities are assumed to follow the Township's 537 Plan.

The Township has numerous lots with some existing development – typically an existing home or nonresidential building – but that can be further subdivided or developed. The list below also shows the minimum threshold for subdivision for such lots, which is the smallest size parcel with some existing development that can be further subdivided or developed according to the provisions of the zoning district in which it is located. For already developed parcels with some vacant land, the minimum threshold is assumed to be three times the minimum lot size in the district in which the property is located. The threshold is based on practical experience that at least three times the minimum lot size is required in order to be subdividable, to account for minimum frontage and lot width requirements, environmental constraints, and the design constraint of the existing building(s) on the lot.

The formula to determine the yield for a property or an area is calculated in two ways. For a zoning district that limits density by a minimum lot size, an efficiency ratio of 60 percent is necessary to account for various design constraints, including internal roads to be constructed, stormwater management facilities, oversized corner lots, or the presence of existing development that may reduce the yield on vacant land on each property. The efficiency ratio is also necessary to reflect the limited capability for on-lot sewer and water systems. For example, a 20 acre property in the R-150 District will not yield twenty-nine 30,000 square foot lots, but instead will likely yield around 17 such lots with the remaining lands used for internal roads, stormwater management areas, on-lot sewer and water systems, and the like. Also, the efficiency ratio is adjusted on a lot-by-lot basis in the developable properties tables, below, for individual properties with constraints such as the presence of wetlands, floodplain, and steep slopes.

The formula for a zoning district that regulates density using a straight calculation of units per acre instead of using a minimum lot size will have a different efficiency ratio, if it has one at all. If the district's minimum lot size multiplied by the maximum density calculation, added to the minimum open space quotient, is still well below 43,560 square feet, and public or community sewer and water facilities are present, then the density limit is assumed to be the yield per acre and no efficiency ratio is required. For example, the cluster development option in the R-AG-200 Residential-Agricultural District has a minimum lot size of 11,000 square feet (assuming public sewer and water), a density cap of 1.65 units per acre, and a minimum open space quotient of 30 percent. Since 1.65 units times 11,000 square feet (18,150 square feet) plus 30 percent (13,068 square feet) add up to 31,218 square feet (only 71.7 percent of an acre), there is considerable design flexibility in this district so that applicants will most likely be able to maximize the yield up to the density cap, and no further efficiency ratio is required.

However, if no public or community sewer or water facilities are present, the need for on-lot systems will likely reduce the yield. In zoning districts with smaller lot sizes and a density cap, but with on-lot systems, the efficiency ratio is assumed to be 70-80 percent. In such districts but with larger developments of 100 or more units (regardless of dwelling type), the efficiency ratio is assumed to be 85

percent, because developments of that size afford an economy of scale that presumes public or community sewer and water systems.

Below is a list of the existing zoning districts in Worcester Township. For each district, the list shows the location (if a mapped district), the uses permitted by right, by special exception and by conditional use, the pertinent development regulations (minimum lot size and width, maximum building and impervious surface coverage, maximum density, minimum open space, etc.), the minimum threshold for development on lots with existing development, and one or more formulas to determine the yield on each property. Please refer to the Township Zoning Ordinance for the complete regulations for each district; please refer to the Township Zoning Map for the location(s) of each district.

Residential Districts

ARTICLE IV AGR Agricultural District

Location: The AGR District is the Township's largest zoning district by acreage. It appears in the central, northeastern, southeastern and southwestern portions of the Township, but not the northwestern portion, where the LPD Land Preservation District is applied. This district has considerable developable land, in numerous locations.

The transfer of development rights is also permitted in this district, where both the sending and receiving properties are in the AGR District. However, the use of TDR's is projected to be very limited.

Permitted Uses:

By Right: agriculture, single family detached dwelling, conservation subdivision (according to Article XVIA), municipal use.

By Special Exception: none.

By Conditional Use: country club, school, noncommercial park and recreation, religious use, day camp, farm market, residential life-care facility.

Minimum lot area: 80,000 square feet.

Minimum lot width: 250 feet.

Maximum building coverage: 10 percent for all uses.

Maximum impervious surface coverage: 20 percent for all uses.

Minimum threshold for development on lots with existing development: 5.5 acres. $80,000 \text{ SF lots times } 3 = 240,000 \text{ SF} = 5.5 \text{ acres}$.

Formula for residential development less than 8 acres with no public or centralized sewers: Acres times 0.54 units per acre times 60 percent efficiency ratio (as adjusted for constraints) minus number of existing units = projected future units. $43,560 / 80,000 \text{ SF lots} = 0.54 \text{ units per acre}$.

Formula for residential development less than 8 acres with public or centralized sewers: Acres times 0.54 units per acre times 70 percent efficiency ratio (as adjusted for constraints) minus number of existing units = projected future units. $43,560 / 80,000 \text{ SF lots} = 0.54 \text{ units per acre}$.

All tracts 8 acres in size or larger are assumed to develop under the conservation subdivision option (see Article XVIA, below).

Formula for nonresidential development (especially institutional): Acres times 43,560 square feet per acre times 10 percent building coverage minus two-thirds of the square feet of any existing development =

projected future square feet. Only two-thirds of the square feet of existing development is subtracted based on the assumption that half of the existing development will be one story and the other half will be two stories, e.g., for existing churches.

Given the presence of two age restricted residential developments in the Township, it is assumed that no further residential life care facilities will be developed in the next 10 years.

ARTICLE V R-AG-200 Residential-Agricultural District

Location: The R-AG-200 District is applied to one small area of the Township, Long Meadow Road near North Wales Road, and has very little developable land. The district includes the Sunny Brook Park.

Permitted Uses:

By Right: agriculture, single family detached dwelling.

By Special Exception: none.

By Conditional Use: cluster development.

Standard development regulations:

- Minimum lot area: 80,000 square feet.
- Minimum lot width: 250 feet.
- Maximum building coverage: 10 percent for all uses.
- Maximum impervious surface coverage: 20 percent for all uses.

Cluster development regulations:

- Minimum tract size: 10 acres.
- Minimum lot area:
11,000 square feet for lots with public water and sewer.
60,000 square feet for lots without public water and sewer.
- Minimum lot width: 90 feet.
- Maximum building coverage: 15 percent.
- Maximum impervious surface coverage: 35 percent.
- Minimum open space: 30 percent of the tract.
- Maximum residential density: 1.65 dwellings per acre.

Minimum threshold for development on lots with existing development: 5.5 acres. $80,000 \text{ SF lots times } 3 = 240,000 \text{ SF} = 5.5 \text{ acres}$.

Formula for standard residential development with no public or centralized sewers: Acres times 0.54 units per acre times 60 percent efficiency ratio (as adjusted for constraints) minus number of existing units = projected future units. $43,560 / 80,000 \text{ SF lots} = 0.54 \text{ units per acre}$.

Formula for standard residential development with public or centralized sewers: Acres times 0.54 units per acre times 70 percent efficiency ratio (as adjusted for constraints) minus number of existing units = projected future units. $43,560 / 80,000 \text{ SF lots} = 0.54 \text{ units per acre}$.

Formula for cluster development: Acres times 1.65 units per acre (as adjusted for constraints and assuming public sewer and water). There are no developable properties more than 10 acres in size in this district; therefore, it is assumed that no properties will be developed as clusters.

ARTICLE VI R-AG-175 Residential-Agricultural District

Location: The R-AG-175 District is applied to one area of the Township, Wanda Lane near Griffiths Road, and has very little developable land. The entirety of this district is within the sewer service area.

Permitted Uses:

By Right: agriculture, single family detached dwelling, municipal use.

By Special Exception: country club, medical hospital, educational use, residential life care facility, recreation, research laboratory, religious use, post office.

By Conditional Use: none.

Minimum lot area: 60,000 square feet.

Minimum lot width: 175 feet.

Maximum building coverage: 10 percent for all uses.

Maximum impervious surface coverage: 20 percent for all residential uses, 40 percent for all other uses.

Minimum threshold for development on lots with existing development: 4.1 acres. 60,000 SF lots times 3 = 180,000 SF = 4.1 acres.

Formula for standard residential development with public or centralized sewers: Acres times 0.73 units per acre times 70 percent efficiency ratio (as adjusted for constraints) minus number of existing units = projected future units. $43,560 / 60,000 \text{ SF lots} = 0.73 \text{ units per acre}$.

Formula for nonresidential development: Acres times 43,560 square feet per acre times 10 percent building coverage = projected future square feet.

ARTICLE VII R-175 Residential District

Location: The R-175 District is applied to several areas of the Township: Cold Spring Road and Country View Lane; Schultz Road west of Weber Road; portions of Skippack Pike between North Wales Road and Berks Road; Fisher Road near Wentz Church and Valley Forge Road (some portions of which are also in the LPD Land Preservation District Overlay, see below); Valley Forge Road and Potshop Road; Bean Road near Berks and Whitehall Roads; Trooper Road near Woodland Avenue and Township Line Road; Valley Forge Road near Mohill Drive; Stump Hall Road between Frog Hollow and Green Hill Roads; Water Street between Kriebel Mill Road and Valley Forge Road; Dell Road near Quarry Hall Road; Merrybrook Road near Donna Lane; Mill Road between Merrybrook and Quarry Hall Roads; Mill Road between Kriebel Mill Road and Grange Avenue; and Griffith Road near Wanda Lane. This district has considerable developable land, in numerous locations.

Permitted Uses:

By Right: agriculture, single family detached dwelling, municipal use.

By Special Exception: post office.

By Conditional Use: none.

Minimum lot area: 60,000 square feet.

Minimum lot width: 175 feet.

Maximum building coverage: 15 percent for all uses.

Maximum impervious surface coverage: 20 percent for all residential uses, 40 percent for all other uses.

Minimum threshold for development on lots with existing development: 4.1 acres. 60,000 SF lots times 3 = 180,000 SF = 4.1 acres.

Formula for standard residential development with no public or centralized sewers: Acres times 0.73 units per acre times 60 percent efficiency ratio (as adjusted for constraints) minus number of existing units = projected future units. $43,560 / 60,000$ SF lots = 0.73 units per acre.

Formula for standard residential development with public or centralized sewers: Acres times 0.73 units per acre times 70 percent efficiency ratio (as adjusted for constraints) minus number of existing units = projected future units. $43,560 / 60,000$ SF lots = 0.73 units per acre.

ARTICLE IX R-150 Residential District

Location: The R-150 District is applied to three areas of the Township: Oak Terrace and Shady Lane; Hickory Hill Drive and Landis Road; and North Wales Road and Bean Road. This district has very little developable land. The second of these three areas is in the sewer service area, while the other two are not.

Permitted Uses:

By Right: agriculture, single family detached dwelling, municipal use.

By Special Exception: post office.

By Conditional Use: none.

Minimum lot area: 50,000 square feet.

Minimum lot width: 150 feet.

Maximum building coverage: 15 percent for all uses.

Maximum impervious surface coverage: 25 percent for all residential uses, 40 percent for all other uses.

Minimum threshold for development on lots with existing development: 3.4 acres. $50,000$ SF lots times 3 = $150,000$ SF = 3.4 acres.

Formula for residential development with no public or centralized sewers: Acres times 0.87 units per acre times 60 percent efficiency ratio (as adjusted for constraints) minus number of existing units = projected future units. $43,560 / 50,000$ SF lots = 0.87 units per acre.

Formula for residential development with public or centralized sewers: Acres times 0.87 units per acre times 70 percent efficiency ratio (as adjusted for constraints) minus number of existing units = projected future units. $43,560 / 50,000$ SF lots = 0.87 units per acre.

Formula for nonresidential development: Acres times 43,560 square feet per acre times 15 percent building coverage = projected future square feet.

ARTICLE XI R-100 Residential District

Location: The R-100 District is applied to numerous areas of the Township: stretches of Morris Road between Acorn Lane and Berks Road; Bethel Road across from Cold Spring Road; Highview Drive and Merion Way; Skippack Pike west of Valley Forge Road; three areas along or near Skippack Pike near Bustard Road (two of which are also in the LPD Land Preservation District Overlay, see below); Valley Forge Road and Mill Road; Windy Hill Drive; and Germantown Pike between Park Avenue and Adair Drive. This district has very little developable land. Most of this district is within the sewer service area.

Permitted Uses:

By Right: agriculture, single family detached dwelling, municipal use.

By Special Exception: none.

By Conditional Use: mobile home park (according to Article XV).

Minimum lot area: 30,000 square feet.

Minimum lot width: 100 feet.

Maximum building coverage: 20 percent for all uses.

Maximum impervious surface coverage: 30 percent for all residential uses, 40 percent for all other uses.

Minimum threshold for development on lots with existing development: 2.1 acres. $30,000 \text{ SF lots times } 3 = 90,000 \text{ SF} = 2.1 \text{ acres}$.

Formula for residential development with no public or centralized sewers: Acres times 1.45 units per acre times 60 percent efficiency ratio (as adjusted for constraints) minus number of existing units = projected future units. $43,560 / 30,000 \text{ SF lots} = 1.45 \text{ units per acre}$.

Formula for residential development with public or centralized sewers: Acres times 1.45 units per acre times 70 percent efficiency ratio (as adjusted for constraints) minus number of existing units = projected future units. $43,560 / 30,000 \text{ SF lots} = 1.45 \text{ units per acre}$.

Formula for nonresidential development: Acres times 43,560 square feet per acre times 20 percent building coverage = projected future square feet.

ARTICLE XII R-75 Residential District

Location: The R-75 District is applied to two areas of the Township: Morris Road and Valley Forge Road; and Valley Forge Road and Artmar Road. Both areas of this district are in the sewer service area, and have very little developable land.

Permitted Uses:

By Right: agriculture, single family detached dwelling, municipal use.

By Special Exception: none.

By Conditional Use: none.

Minimum lot area:

20,000 square feet for lots with public sewer and water.

40,000 square feet for lots with on-site sewer or water.

Minimum lot width: 100 feet.

Maximum building coverage: 15 percent for all uses.

Maximum impervious surface coverage: 40 percent for all uses.

Minimum threshold for development on lots with existing development: 1.4 acres for lots with public sewer and water, and 2.8 acres for lots with public sewer or water. $20,000 \text{ SF lots times } 3 = 60,000 \text{ SF} = 1.4 \text{ acres}$. $40,000 \text{ SF lots times } 3 = 120,000 \text{ SF} = 2.8 \text{ acres}$.

Formula for residential development with no public or centralized sewers: Acres times 1.09 units per acre times 60 percent efficiency ratio (as adjusted for constraints) minus number of existing units = projected future units. $43,560 / 40,000 \text{ SF lots} = 1.09 \text{ units per acre}$.

Formula for residential development with public or centralized sewers: Acres times 2.18 units per acre times 70 percent efficiency ratio (as adjusted for constraints) minus number of existing units = projected future units. $43,560 / 20,000 \text{ SF lots} = 2.18 \text{ units per acre}$.

ARTICLE XIII MR Multi-Residential District

Location: The MR District is a mapped overlay district along Germantown Pike between Trooper Road and Church Road. The underlying districts are the C Commercial District to the east and the AGR Agricultural District to the west. This district has very little developable land, and is entirely within the sewer service area.

Permitted Uses:

By Right: any use permitted in the underlying zoning district (subject to the regulations of that district), municipal use.

By Special Exception: none.

By Conditional Use: multifamily dwelling.

Development regulations for multifamily developments:

- Minimum tract size: 5 acres.
- Minimum lot area: none.
- Minimum lot width: none.
- Maximum building coverage: 20 percent.
- Maximum impervious surface coverage: 40 percent.
- Minimum open space: none.
- Maximum residential density: 4.0 dwellings per acre.

Formula for multifamily development: Acres times 4.0 units per acre (assumes public sewer and water, attached or multifamily dwelling types) as adjusted for constraints, minus number of existing units = projected future units. Only one property in this district has the minimum 5 acres to be eligible for the multi-family overlay district (Parcel 670001606001, at 2974 Germantown Pike). It is assumed that this property will be developed under the underlying C Commercial District.

ARTICLE XIV RO Residential Office District

Location: The RO District is applied to one area of the Township, Germantown Pike and Church Road. It has very little developable land, and is entirely within the sewer service area.

Permitted Uses:

By Right: single family detached dwelling, professional office or studio, municipal use.

By Special Exception: uses similar to permitted uses.

By Conditional Use: none.

Minimum lot area: 30,000 square feet.

Minimum lot width: 100 feet.

Maximum building coverage: 10 percent for all uses.

Maximum impervious surface coverage: 20 percent for all residential uses, 40 percent for all nonresidential uses.

Minimum threshold for development on lots with existing development: 2.1 acres. 30,000 SF lots times 3 = 90,000 SF = 2.1 acres.

Formula for each residential property: Acres times 1.45 units per acre times 70 percent efficiency ratio (assumes public sewer and water and as adjusted for constraints) minus number of existing units = projected future units. $43,560 / 30,000 \text{ SF lots} = 1.45 \text{ units per acre}$.

Formula for each nonresidential property: Acres times 43,560 square feet per acre times 10 percent building coverage = projected future square feet.

ARTICLE XV MHD Mobile Home Development District

Location: The MHD District is applied to one area of the Township, Germantown Pike and West Adair Drive. This district is entirely within the sewer service area, and has very little developable land.

Permitted Uses:

By Right: municipal use.

By Special Exception: none.

By Conditional Use: mobile home park.

Mobile home park regulations:

- Minimum tract size: 10 acres.
- Minimum lot area: 5,000 square feet.
- Minimum lot width: none.
- Maximum building coverage: none.
- Maximum impervious surface coverage: none.
- Minimum common areas: 20 percent of the tract.
- Maximum residential density: 5.0 dwellings per acre.

Formula for mobile home park development: Acres times 5.0 units per acre (as adjusted for constraints and assuming public sewer and water).

ARTICLE XVI R-50 Residential Alternative District

Location: The R-50 District is applied to several areas of the Township: North Wales Road and Crestline Drive; Bethel Road and Morris Road; Skippack Pike and Center Point Lane; Germantown Pike between Church Road and Mt. Kirk Avenue; and Germantown Pike and Kriebel Mill Road. This district has very little developable land, and is entirely within the sewer service area.

Permitted Uses:

By Right: agriculture, single family detached dwelling (according to regulations of the R-AG-200 District), townhouse, mobile home park (according to regulations of MHD District), municipal use, nursing home, multifamily dwelling.

By Special Exception: none.

By Conditional Use: none.

Multifamily development regulations:

- Minimum tract size: none.
- Minimum lot area: 8,000 square feet.
- Minimum lot width: none.
- Maximum building coverage: 20 percent.
- Maximum impervious surface coverage: none.
- Minimum open space: none.

Mobile home park development regulations (all other regulations according to MHP District except):

- Maximum residential density: 4.0 dwelling per acre.

Minimum threshold for development on lots with existing development: 5.5 acres (assuming single family detached). $80,000 \text{ SF lots} \times 3 = 240,000 \text{ SF} = 5.5 \text{ acres}$.

Formula for single family detached residential development: Acres times 0.54 units per acre times 70 percent efficiency ratio (as adjusted for constraints and assuming public sewer and water) minus number of existing units = projected future units. $43,560 / 80,000 \text{ SF lots} = 0.54 \text{ units per acre}$.

Formula for multifamily development: Acres times 5.4 units per acre times 90 percent efficiency ratio (as adjusted for constraints and assuming public sewer and water) = projected future units. $43,560 / 8,000 \text{ SF lots} = 5.4 \text{ units per acre}$.

Formula for mobile home park development: Acres times 4.0 units per acre (as adjusted for constraints and assuming public sewer and water) = projected future units.

ARTICLE XVIA Conservation Subdivisions

Location: Conservation subdivisions are permitted in the AGR Agricultural District.

Permitted Uses:

By Right: conservation subdivision in one of three design options.

By Special Exception: none.

By Conditional Use: none.

Option 1 Neighborhood Lot development regulations:

- Minimum tract size: 8 acres.
- Minimum lot area: 18,000 square feet (with centralized sewer and water).
- Minimum lot area: 30,000 square feet (with individual on-lot sewer and water).
- Minimum lot width: 40 feet.
- Maximum building coverage: none.
- Maximum impervious surface coverage: 25 percent.
- Minimum open space: 50 percent.
- Maximum residential density: 1 unit per 80,000 square feet (0.54 dwellings per acre).

Option 2 Estate Lot development regulations:

- Minimum tract size: 8 acres.
- Minimum lot area: 40,000 square feet.
- Minimum lot width: 100 feet.
- Maximum building coverage: none.
- Maximum impervious surface coverage: 24 percent.
- Minimum open space: none.
- Maximum residential density: 1 unit per 160,000 square feet (0.27 dwellings per acre).

Option 3 Country Property development regulations:

- Minimum tract size: 8 acres.
- Minimum lot area: 60,000 square feet.
- Minimum lot width: 150 feet.
- Maximum building coverage: none.
- Maximum impervious surface coverage: 22 percent.
- Minimum open space: none.
- Maximum residential density: 1 unit per 10 acres (0.1 dwellings per acre).

Formula for option 1 development with no public or centralized sewers: Acres times 0.54 units per acre times 70 percent efficiency ratio (as adjusted for constraints) minus number of existing units = projected future units. $43,560 / 80,000$ SF lots = 0.54 units per acre.

Formula for option 1 development with public or centralized sewers: Acres times 0.54 units per acre times 85 percent efficiency ratio (as adjusted for constraints) minus number of existing units = projected future units. $43,560 / 80,000$ SF lots = 0.54 units per acre.

Formula for option 2 development: Acres times 0.27 units per acre (as adjusted for constraints) minus number of existing units = projected future units. $43,560 / 160,000$ SF lots = 0.27 units per acre.

Formula for option 3 development: Acres times 0.1 units per acre (as adjusted for constraints) minus number of existing units = projected future units.

No further efficiency ratio is required for options 2 and 3 development which will require on-lot sewer and water systems, because the permitted densities of 0.27 units per acre and 0.1 units per acre, respectively, already account for the need for on-lot systems.

All tracts of minimum 8 acres in the AGR and LPD Districts are assumed to develop under the conservation subdivision option 1. Those tracts that either are within the existing sewer service areas of the Township, or are large enough to support a minimum of 100 homes, are assumed to have centralized (including public) sewer systems, and therefore will approach the maximized yield at 0.54 units per acre.

ARTICLE XVIB LPD Land Preservation District

Location: The LPD Land Preservation District is both a mapped district, and an overlay district. The mapped district applies to significant land, especially in the northwestern portion of the Township, and includes considerable developable land. The overlay district also applies to small areas of the R-175 and R-100 Districts.

Permitted Uses:

By Right: single family dwelling and nonresidential uses permitted in the AGR District (according to the AGR District).

By Special Exception: none.

By Conditional Use: land preservation cluster.

Land preservation cluster development regulations:

- Minimum tract size: 10 acres.
- Minimum lot area: 10,000 square feet (with public sewer and water).
- Minimum lot width: 75 feet.
- Maximum building coverage: 15 percent.
- Maximum impervious surface coverage: 25 percent.
- Minimum open space: 70 percent.
- Maximum residential density: as determined by yield plan according to AGR regulations (80,000 square foot lots; see below).

Formula for land preservation cluster: Acres times 0.54 units per acre (as adjusted for constraints) minus number of existing units = projected future units. $43,560 / 80,000$ SF lots = 0.54 units per acre.

All tracts up to 8 acres are assumed to develop under the AGR District (see Article IV, above).

All tracts larger than 8 acres are assumed to develop under the conservation subdivision option 1 (see Article XVIA, above).

Summary of Residential Densities and Efficiency Ratios

District	Site Acreage	Public Sewer	Density/Acre	% Efficiency Ratio
AGR	Under 8	Yes	0.54	70
AGR	Under 8	No	0.54	60
AGR	Above 8 (Cons. Subdiv.)	Yes	0.54	85
AGR	Above 8 (Cons. Subdiv.)	No	0.54	70
R-AG-200	All	Yes	0.54	70
R-AG-200	All	No	0.54	60
R-AG-175	All	Yes	0.73	70
R-175	All	Yes	0.73	70
R-175	All	No	0.73	60
R-150	All	Yes	0.87	70
R-150	All	No	0.87	60
R-100	All	Yes	1.45	70
R-100	All	No	1.45	60
R-75	All	Yes	2.18	70
R-75	All	No	1.09	60
MR	All	Yes	4.0	100
RO	All	Yes	1.45	70
MHD	All	Yes	5.0	100
R50 (SFD)	All	Yes	0.54	70
R50 (MF)	All	Yes	5.4	90
Cons. Subdiv.	Above 8	Yes	0.54	85
Cons. Subdiv.	Above 8	No	0.54	70
LPD	Under 8	Yes	0.54	70
LPD	Under 8	No	0.54	60
LPD	Above 8	Yes	0.54	85
LPD	Above 8	No	0.54	70

Nonresidential Districts

ARTICLE XVII C Commercial District

Location: The C District is applied to three areas in the Township: Valley Forge Road from the Township Building to north of Skippack Pike, in Center Point; North Wales Road and Township Line Road; and Germantown Pike from Trooper Road to Park Avenue, in Fairview Village. This third area in Fairview Village has the Multi-Residential Use Overlay District applied to it. This district has very little developable land. Except for the small property at North Wales Road and Township Line Road, the entire district is within the sewer service area.

Permitted Uses:

By Right: retail, office, bank, medical office, personal service, restaurant, municipal use.

By Special Exception: motor vehicle sales or repair, service station, hotel, wholesale merchandise establishment, multiple use office building, nursing home, hospital.

By Conditional Use: none.

Minimum lot area: 25,000 square feet.

Minimum lot width: 100 feet.

Maximum building coverage: 30 percent for all uses.

Maximum impervious surface coverage: 50 percent for all uses.

Maximum building area: 6,500 gross square feet.

Minimum threshold for development on lots with existing development: 1.7 acres. 25,000 SF lots times 3 = 75,000 SF = 1.7 acres.

Formula for Each Property: Acres times 43,560 square feet times 10 percent (as adjusted for constraints) minus existing development = projected future development. (10 percent is used instead of the higher building coverage of 30 percent because of the Township's retail parking requirement of 1 space per 100 square feet, and the relatively low 50 percent impervious surface coverage. At 10 percent, one acre yields 4,356 SF of retail space, which requires 44 spaces and about 17,424 square feet of paving, for a total of 21,780 square feet of impervious surface coverage, or 50 percent)

ARTICLE XVIII SC Shopping Center District

Location: The SC District is applied to one area in the Township: Skippack Pike just east of Valley Forge Road, in Center Point. This district has very little developable land, and is entirely within the sewer service area.

Permitted Uses:

By Right: retail, office, bank, medical office, personal service, restaurant, theater, municipal use.

By Special Exception: general service or repair uses (e.g., upholstering, clock repair, etc.).

By Conditional Use: none.

Minimum lot area: 5 acres.

Minimum lot width: 500 feet.

Maximum building coverage: 20 percent for all uses.

Maximum impervious surface coverage: 40 percent for all uses.

Maximum building area: 19,000 gross square feet.

Minimum threshold for development on lots with existing development: does not apply.

Formula for Each Property: Acres times 43,560 square feet times 12.5 percent (as adjusted for constraints) minus existing development = projected future development. (12.5 percent instead of the higher building coverage of 20 percent because of the Township's shopping center parking requirement of 5.5 spaces per 1,000 square feet, and the relatively low 40 percent impervious surface coverage. At 12.5 percent, one acre yields 5,445 SF of retail space, which requires 30 spaces and about 11,860 square feet of paving, for a total of 17,304 square feet of impervious surface coverage, or 39.7 percent).

ARTICLE XIX LI Limited Industrial District

Location: The LI District is applied to two areas of the Township: Trooper Road and Potshop Road; and Township Line Road and Whitehall Road. This district has some developable land, and is outside the sewer service area.

Permitted Uses:

By Right: manufacturing, warehouse, office, research facility, municipal use.

By Special Exception: uses similar to permitted uses.

By Conditional Use: any other legitimate use not permitted elsewhere.

Minimum lot area: 10 acres.

Minimum lot width: 200 feet.

Maximum building coverage: 20 percent for all uses.

Floor area ratio: 30 percent for all uses.

Maximum impervious surface coverage: 50 percent for all uses.

Minimum threshold for development on lots with existing development: 30 acres. 10 acre lots times 3 = 30 acres.

Formula for each office development: Acres times 43,560 square feet times 23 percent (assuming two story offices, and as adjusted for constraints) minus existing development = projected future development. (43,560 SF times 23 percent = around 10,000 SF of building on a 5,000 SF footprint, which requires 40 parking spaces and about 15,840 square feet of paving, for a total of 20,840 SF of impervious surface coverage, or 47.8 percent)

Formula for each industrial development: Acres times 43,560 square feet times 20 percent (as adjusted for constraints) minus existing development = projected future development.

ARTICLE XIX A Limited Industrial Research District

Location: The LIR District is applied to one area of the Township: Morris Road and Schultz Road, the former Ford plant. This district has almost no developable land, and is within the sewer service area.

Permitted Uses:

By Right: manufacturing, industrial, research, warehouse, administrative office, municipal use, any other legitimate use not permitted elsewhere.

Special Exception: none.

By Conditional Use: none.

Minimum lot area: 50 acres.

Minimum lot width: 200 feet.

Maximum building coverage: 20 percent for all uses.

Floor area ratio: 30 percent for all uses.

Maximum impervious surface coverage: 50 percent for all uses.

Minimum threshold for development on lots with existing development: none. Entire district is one lot, which is already developed.

Formula for each office development: Acres times 43,560 square feet times 23 percent (assuming two story offices, and as adjusted for constraints) minus existing development = projected future development. (43,560 SF times 23 percent = around 10,000 SF of building on a 5,000 SF footprint, which requires 40 parking spaces and about 15,840 square feet of paving, for a total of 20,840 SF of impervious surface coverage, or 47.8 percent)

Formula for each industrial development: Acres times 43,560 square feet times 20 percent (as adjusted for constraints) minus existing development = projected future development.

ARTICLE XXC AQR Age Qualified Residential District

Location: The AQR District is applied to one property in the Township, Brindle Court (Stony Creek Farms), and has very little developable land.

Permitted Uses:

By Right: age qualified residential community (including accessory uses), agriculture, municipal use, bed and breakfast.

By Special Exception: none.

By Conditional Use: none.

Age Qualified Residential Community development regulations:

- Minimum tract size: 75 acres.
- Minimum lot area: none.
- Minimum lot width: none.
- Maximum building coverage: 15 percent.
- Maximum impervious surface coverage: 30 percent.
- Minimum open space: 70 percent of the tract.
- Maximum residential density: 2.0 dwellings per acre.

Formula for each age qualified residential community development: Acres times 2.0 units per acre (as adjusted for constraints and assuming centralized sewer and water).

ARTICLE XXD Cedars Village Overlay District

Location: The Cedars Village Overlay District is an overlay district applied only to the Village of Cedars, where the underlying zoning is the LPD District or the R-100 District (see Articles XVIB and XI, respectively, above). This district has some developable land, all in Class 2 properties. Some of the district (especially land north of Skippack Pike) is within the sewer service area.

Class I Permitted Uses:

By Right: village style retail, personal service.

By Special Exception: similar uses to those permitted by right.

By Conditional Use: none.

Class I Development Regulations:

Minimum lot area: 30,000 square feet.

Minimum lot width: 100 feet.

Maximum building coverage: 15 percent for all uses.

Maximum impervious surface coverage: 40 percent for all uses.

Maximum nonresidential uses: 50 percent of total building area.

Class II Permitted Uses:

By Right: single family detached, village style retail, personal service, office, bank, restaurant, post office, municipal uses, temporary or seasonal uses, smaller bed and breakfast.

By Special Exception: similar uses to those permitted by right.

By Conditional Use: two family or multifamily uses in existing structures, larger bed and breakfast, relocation of historic buildings, drive through uses (not food or beverages).

Class II Development Regulations:

Minimum lot area: 30,000 square feet.

Minimum lot width: 80 feet.

Maximum building coverage: 15 percent for all uses (20 percent for lots below 80,000 square feet or using TDR).

Maximum impervious surface coverage: 45 percent for all uses (60 percent for lots below 80,000 square feet or using TDR).

Maximum building footprint: 8,000 square feet.

Formula for each Class 2 property larger than 80,000 square feet: Acres times 43,560 square feet times 9 percent (as adjusted for constraints) minus existing development = projected future development. (9 percent is used instead of the higher building coverage of 15 percent because of the Township's retail parking requirement of 1 space per 100 square feet, and the relatively low 45 percent impervious surface coverage. At 9 percent, one acre yields 3,920 SF of retail space, which requires 40 spaces and about 15,840 square feet of paving, for a total of 19,760 square feet of impervious surface coverage, or about 45 percent)

Formula for each Class 2 property smaller than 80,000 square feet: Acres times 43,560 square feet times 12 percent (as adjusted for constraints) minus existing development = projected future development. (12 percent is used instead of the higher building coverage of 20 percent because of the Township's retail parking requirement of 1 space per 100 square feet, and the 60 percent impervious surface coverage. At 12 percent, one acre yields 5,227 SF of retail space, which requires 53 spaces and about 20,988 square feet of paving, for a total of 26,215 square feet of impervious surface coverage, or about 60 percent)

Developable Properties

As noted above, the Township has been divided into two Transportation Service Areas (TSA's), called the North TSA and South TSA. The dividing line between the two TSA's is the PECO high tension line corridor that runs roughly parallel to and south of Skippack Pike. Each TSA has been further divided into subareas. The North TSA includes Subareas 1 through 6, and the South TSA includes Subareas 7 through 13, shown on the maps below.

The following pages (25-32) show tables of developable properties, differentiated by subarea. The properties are deemed to be developable according to the assumptions in this report, including their size, zoning district, existing land use(s), environmental constraints, etc. Within each subarea, the properties are listed by zoning district, then by land use code, then by acreage. The source of most of the data is the Montgomery County Board of Assessment, augmented by aerial photographs.

For each developable property in each subarea, the tables show the following information:

- Twelve digit parcel number
- Block and Unit number
- Owner's name, for purposes of identification of properties only
- Property street address
- Zoning district
- Land use code
- Existing land use description
- Square feet
- Acres
- Percent of environmental constraints, which is the total percentage of each property constrained by floodplain (according to FEMA maps), steep slopes over 15 percent (according to the Montgomery County soil survey), and wetlands (according to the National Wetlands Inventory)
- Location in the Township's sewer service area
- Potential yield at buildout in units or square feet of development
- Use or dwelling type of the yield
- Notes

Following the tables of developable properties are the two TSA maps (pages 33-34) showing those properties in blue. The last seven digits of the twelve digit parcel number of each developable property are also shown on the maps. The properties shown on the maps in white are currently developed, including ones that are partially developed yet are too small to be further subdivided or developed according to the zoning districts in which they are located, or if existing land uses prevent further subdivision or land development. Properties shown in grey are undevelopable properties, and are therefore excluded. Undevelopable properties include those with deed restrictions, conservation easements, sale of development rights, or any other legal mechanism that precludes further subdivision or land development.

Of the approximately 3,700 properties in the Township, 403 are deemed to be developable, comprising approximately 4,048 acres. Ultimate buildout on these developable properties is projected to total 1,142 housing units (1,106 SFD units and 36 SFA units), plus 1,176,034 square feet of nonresidential development, in various uses. Please note that ultimate buildout is not the same as the level of development that is projected by 2023. Ultimate buildout will require decades of development, and the Township will not even approach ultimate buildout within the ten year time frame of this Land Use Assumptions Report.

Please note that in addition to the properties on the tables are 13 properties that are also developable and have had applications for subdivision and land development submitted to the Township (see pages 35-36).

SUBAREA 1

Parcel Number	Block	Unit	Owners	Number	Street	Zoning	LU Code	Existing Land Use	SF	Acres	Constraints	Sewer	Yield	Use/Type	Notes
6700003175016	030	068	Arnott Bradley & Madeleine Hickey	0	Skippack	Pk	2104	vacant	21,780	0.50	0.0%		1	SFD	
6700003185006	028	037	Meadowood Corporation	3205	Skippack	Pk	5145	retirement home	4,889,174	112.24	2.0%	X	1	SFD	limited additional units
67000031364009	030A	028	Sickelberger Donna	3420	Fry	Rd	0319	pref assessment	233,046	5.35	0.0%		4	SFD	
6700003982001	028	011	Wetter Family Realty Partnership	2110	Wentz Church	Rd	0319	pref assessment	445,619	10.23	0.0%		4	SFD	
6700001162508	030A	015	Bustard Heatcher Trustee	3350	Fisher	Rd	0319	pref assessment	456,509	10.48	0.0%		4	SFD	
670000520007	030	032	Hepburn L Leroy & Margaret K Tr	2117	Bustard	Rd	0319	pref assessment	505,732	11.61	2.0%		4	SFD	
670000472001	030A	014	Bustard Charles R Jr & Jason Trs	2160	Bustard	Rd	0319	pref assessment	521,413	11.97	0.0%		5	SFD	
670000116447	028E	003	Singmaster Richard C & Mitzi J	3230	Barley	Ln	0319	pref assessment	543,629	12.48	10.0%		4	SFD	includes other parcels
670000517001	030	033	Zeller Mark G & Catherine E	2135	Bustard	Rd	0319	pref assessment	597,208	13.71	0.0%		5	SFD	
670000116465	028E	004	Dietrich Kurt E & Janet S	3220	Barley	Ln	0319	pref assessment	738,342	16.95	3.2%		7	SFD	
6700001144004	030A	022	Karcher Adolph J & Emma	3335	Fisher	Rd	0319	pref assessment	1,768,536	40.60	14.6%		14	SFD	includes other parcels
670000116582	028E	010	Miller Harry B Jr & Suzanne E	3239	Barley	Ln	0319	SFD	254,826	5.85	0.0%		1	SFD	
670000481109	030	041	Todd Gordon L & Elizabeth C	2116	Bustard	Rd	0319	SFD	265,716	6.10	5.6%		1	SFD	
670000116564	028E	009	Sultank Jeffrey & Clyman Judith	3229	Barley	Ln	0319	SFD	274,428	6.30	0.0%		1	SFD	
6700001186205	028E	013	Reimer Robert B & Patricia G	3214	Fisher	Rd	0319	SFD	331,927	7.62	0.0%		1	SFD	
6700001913396	030B	027	Wu Shuguang & Liu Bo	2029	Hollis	Rd	0319	SFD	331,927	7.62	0.0%	X	1	SFD	
670000116402	028E	001	Sciafani William & Norma M	3250	Barley	Ln	0319	SFD	352,836	8.10	0.0%		2	SFD	
6700003172001	030	056	Podulka Stanley F & Joanne Tr	3327	Skippack	Pk	0319	SFD	402,059	9.23	0.0%		2	SFD	
6700001190003	028	065	Smith C Bradford & Sandra B	3120	Fisher	Rd	0319	SFD	435,600	10.00	0.0%		2	SFD	
670000462182	030A	068	Wells David T & Katharine S	0	Saddle Wood	Ct	0319	vacant	3,484	0.08	0.0%		1	SFD	
670000462191	030A	069	Hartins Samuel Jr & Margaret K	0	Saddle Wood	Ct	0319	vacant	3,571	0.08	0.0%		1	SFD	
670000462173	030A	067	Terry Leonard J & Diane M	0	Saddle Wood	Ct	0319	vacant	4,094	0.09	0.0%		1	SFD	
670001170122	030A	049	Ciccarella Joseph P & Joan	0	Wentz Church	Rd	0319	vacant	29,775	0.68	0.0%		1	SFD	
670000484304	030	043	Campisi George J & Lynne M	0	Bustard	Rd	0319	vacant	69,600	1.60	0.0%		1	SFD	
670000529025	030	073	Bustard Arthur C & Barbara A	2089	Bustard	Rd	0319	vacant	80,035	1.84	0.0%		1	SFD	
670001913432	030B	026	Delgrippe Martin & Rosalyn P	2031	Hollis	Rd	0319	vacant	81,042	1.86	0.0%	X	1	SFD	
670003170003	030	058	Taylor Moya M	0	Skippack	Pk	0319	vacant	91,476	2.10	0.0%		1	SFD	
670001159502	028	055	Hayes Robert E & Wmifred S	0	Fisher	Rd	0319	vacant	99,317	2.28	0.0%	X	1	SFD	
670001141106	030A	044	Bustard Glenn	0	Fisher	Rd	0319	vacant	139,294	3.06	0.0%		1	SFD	
670000535109	030	023	Robertson Gregory H	2057	Bustard	Rd	0319	vacant	150,282	3.45	0.0%		1	SFD	
670000529016	030	074	Gaydos Joseph & Beverly	2083	Bustard	Rd	0319	vacant	165,964	3.81	0.0%		1	SFD	
6700004001009	030	069	Mahoney Sean E & Alice R	0	Wentz Church	Rd	0319	vacant	188,615	4.33	0.0%		1	SFD	
670001111001	028	016	Central Schwenkfelder Church	2067	Steelman	Rd	0319	church	370,260	8.50	0.0%		11,223	INST	38,705 SF of existing dev
670001117004	028	026	Central Schwenkfelder Church	2101	Valley Forge	Rd	0319	church	540,144	12.40	0.0%		30,213	INST	35,702 SF of existing dev
670002472008	028	067	Montgomery Presbyterian Church	3260	Morris	Rd	0319	church	1,605,186	36.85	0.0%	X	146,699	INST	20,730 SF of existing dev
670000671738	028A	036	Okeefe Shawn W & Janette A	3045	Conrad	Way	0319	SFD	60,134	1.38	0.0%	X	1	SFD	
670002961149	028D	045	Odonnell Mark & Dana	3062	Scheid	Way	0319	SFD	66,280	1.52	0.0%	X	1	SFD	
670002129684	028D	036	Kakkar Sachit K & Arpita	2252	Locust	DR	0319	SFD	71,526	1.64	0.0%	X	1	SFD	
670000671702	028A	033	Carrigan Kenneth & Margaret	3048	Conrad	Way	0319	SFD	76,316	1.75	0.0%	X	1	SFD	
670002476004	028	051	Thompson Bernard V & Karen C	3124	Morris	Rd	0319	SFD	87,120	2.00	0.0%	X	2	SFD	
670002961122	028D	046	Lauman George F & Agnes M	3064	Scheid	Way	0319	SFD	98,446	2.26	0.0%	X	2	SFD	
670002961005	028D	052	Loehr James S & Karen K	3111	Fisher	Rd	0319	SFD	98,881	2.27	0.0%	X	2	SFD	
670002475005	028	054	Capozzi Joseph V & Constance A	3128	Morris	Rd	0319	SFD	130,680	3.00	32.7%	X	2	SFD	
670003962048	028C	046	Guldotti Albert J & Nancy E	2292	Welgner	Rd	0319	vacant	27,513	0.63	18.7%	X	1	SFD	
670003154001	030	063	Markel David F	2000	Bustard	Rd	0319	vacant	122,404	2.81	0.0%	X	10,507	RET	5,661 SF of existing cov
670003130007	030	009	Markel David F	0	Skippack	Pk	0319	pref assessment	476,546	10.94	0.0%	X	42,889	RET	
670003148007	030	006	Tornambe Cirio & Rachel	3415	Skippack	Pk	0319	SFD	74,500	1.71	0.0%	X	6,311	RET	4,383 SF of existing cov
670003139007	030	003	Markel David F	0	Skippack	Pk	0319	vacant	20,000	0.46	0.0%	X	1,800	RET	
670003151004	030	008	Markel David F	3401	Skippack	Pk	0319	multi-use	500,940	11.50	0.0%	X	43,944	RET	12,668 SF of existing cov

SUBAREA 1 TOTALS

86
105,451
188,134

SFD
RET
INST

SUBAREA 2

Parcel Number	Block	Unit	Owners	Number	Street	Zoning	LU Code	Existing Land Use	SF	Acres	Constraints	Sewer	Yield	Use/Type	Notes
670000277007	024	006	Rhoads Real Estate Ventures	2119	Berks	Rd AGR	0319	pref assessment	471,319	6.32	0.0%		2	SFD	2 ex. lots, 1 new lot proposed remaining 13.4 ac developable
670003916409	024	103	Rhoads J David & Margaret	2062	Weber	Rd AGR	0319	pref assessment	504,425	7.08	0.0%		2	SFD	
670000280202	024	107	Kneeland Linda C	2021	Berks	Rd AGR	0319	pref assessment	486,565	11.17	0.0%		4	SFD	
670000279005	024	104	Maman Yoram & Concetta	2101	Berks	Rd AGR	0319	pref assessment	489,179	11.23	0.0%		4	SFD	Includes other parcels
670003915203	024	100	Rhoads W Thomas & Tara Diane	2042	Weber	Rd AGR	0319	pref assessment	568,458	13.05	0.0%		4	SFD	
670003241004	026	022	Ocellus Jeffrey G	2815	Skippack	Pk AGR	0319	pref assessment	1,269,338	29.14	2.1%		10	SFD	
6700039166004	024	008	Rhoads W Thomas & J David	0	Weber	Rd AGR	0319	pref assessment	1,558,141	35.77	0.1%		13	SFD	Includes other parcels
670003223004	027	010	Palmer & Wayne	2951	Skippack	Pk AGR	0319	pref assessment	2,042,770	46.90	0.0%	X	21	SFD	AGR District portion only
670000280508	024	009	Valeri Kenneth A & Debara A	2015	Berks	Rd AGR	1101	SFD	248,292	5.70	0.0%		1	SFD	
670000280085	024	106	Davey Francis L & Elaine B	0	Berks	Rd AGR	2108	vacant	90,605	2.08	0.0%		1	SFD	
670003931007	026	020	R & H Sports Lp	2115	Weber	Rd AGR	4295	tennis club	500,940	11.50	3.2%		4	SFD	
670002482007	026	008	Krauss Robert M & Norma K	0	Morris	Rd LPD	0319	pref assessment	1,448,806	33.26	0.0%		12	SFD	
670000946004	026	009	Rothenberger Family Partnership	2222	Valley Forge	Rd LPD	0319	pref assessment	1,754,597	40.28	0.0%		15	SFD	Includes other parcels
670002491007	026	005	Rothenberger Family Partnership	2858	Morris	Rd LPD	0319	pref assessment	3,261,337	74.87	0.0%		28	SFD	
670003112007	027	004	Moyer Sandra L & Carl L	2910	Shearer	Rd LPD	1101	SFD	250,470	5.75	0.0%		1	SFD	
670002509007	026	036	Puncher Robert M & Mary Jane	2806	Morris	Rd LPD	1101	SFD	326,700	7.50	0.0%		1	SFD	
670003961301	026	112	Kibblehouse John & Detwiler Joyce	0	Weber	Rd LPD	2103	vacant	15,478	0.36	0.0%		1	SFD	
67000280526	024	111	Kneeland Blake B	0	Berks	Rd LPD	2108	vacant	87,120	2.00	0.0%		1	SFD	
670003238115	026	094	Rothenberger Alvin K Jr	0	Skippack	Pk LPD	2108	vacant	93,654	2.15	0.0%		1	SFD	
670003244028	024	115	Kneeland Blake B & Vicki L	2725	Skippack	Pk LPD	2108	vacant	143,748	3.30	0.0%		1	SFD	
670000280517	024	110	Kneeland Linda C	0	Berks	Rd LPD	2900	assessed with	84,879	1.95	0.0%		1	SFD	
670003961103	026	113	Minehart Richard J & Gall F	0	Weber	Rd R175	2102	vacant	8,309	0.19	22.4%		1	SFD	
670003949025	026	118	Brunt Jason & Jynell	0	Weber	Rd R175	2104	vacant	24,212	0.56	0.0%		1	SFD	
670003223004	027	010	Palmer & Wayne	2951	Skippack	Pk C	0319	pref assessment	360,000	8.26	0.0%	X	36,000	RET	C District portion only

SUBAREA 2 TOTALS

126

SFD

36,000

RET

SUBAREA 3

Parcel Number	Block	Unit	Owners	Number	Street	Zoning	LU Code	Existing Land Use	SF	Acres	Constraints	Sewer	Yield	Use/Type	Notes
670000190409	024	095	Nelson David R & Joan M	2246	Berks	Rd AGR	0319	pref assessment	435,600	10.00	16.8%	X	3	SFD	
670000190004	024	018	Patterson Donna Lee & Joseph	2250	Berks	Rd AGR	0319	pref assessment	653,400	15.00	21.7%	X	5	SFD	
670003286004	023	026	Zacharczuk Borrys & Zwenyslawo O	0	Skippack	Pk AGR	0319	pref assessment	1,505,869	34.57	0.0%		13	SFD	
670000442004	024	013	Bethel Road Associates Lp	2045	Bethel	Rd AGR	0319	pref assessment	3,086,226	70.85	0.7%		26	SFD	
670002665049	023B	016	Sparango Land Partnership Lp	2215	North Wales	Rd AGR	1101	SFD	262,231	6.02	0.0%	X	1	SFD	
670000427001	024	017	Alessandrih Luciano & Teresa	2139	Bethel	Rd AGR	1101	SFD	303,613	6.97	0.0%		1	SFD	
670000433004	024	025	Heck Paul	2125	Bethel	Rd AGR	1101	SFD	331,056	7.60	0.0%	X	1	SFD	
670000430007	024	031	Mathews Wendy G	2131	Bethel	Rd AGR	1101	SFD	349,787	8.03	0.0%	X	2	SFD	
670000205007	024	050	Lee Kyung C	2106	Berks	Rd AGR	1101	SFD	568,894	13.06	0.0%		3	SFD	
670000208004	024	014	Sparango Josephine	2044	Berks	Rd AGR	1101	SFD	701,316	16.10	0.0%		5	SFD	
670000202001	024	015	Gruer Peter J K & Catherine M	2122	Berks	Rd AGR	1101	SFD	770,576	17.69	11.6%		4	SFD	
670002595004	023	010	Allan Margaret & Harman Gerry	2508	Morris	Rd AGR	1112	outbuilding	97,357	2.24	0.0%		1	SFD	
670002458004	023	012	Cheng James & Betty	2511	Morris	Rd AGR	2102	vacant	37,170	0.85	0.0%		1	SFD	
670002665013	023B	004	Thompson William & Maureen	2506	Spring Creek	Rd AGR	2107	vacant	85,909	1.97	0.0%	X	1	SFD	
670003500528	023B	003	Thompson William & Maureen	2504	Spring Creek	Rd AGR	2107	vacant	91,040	2.09	0.0%	X	1	SFD	
670000188006	024	088	Patterson Joseph & Donna Lee	0	Berks	Rd AGR	2108	vacant	146,797	3.37	4.8%	X	1	SFD	
670000191003	024	092	Nelson Realty Co	0	Berks	Rd AGR	2109	vacant	289,674	6.65	0.1%	X	1	SFD	
670001901498	023A	069	Levy David W & Terry W	2586	Hillcrest	Dr AGR	2401	vacant	2,523	0.06	0.0%	X	1	SFD	
670000418001	025	003	Byrnes Kevin	2205	Bethel	Rd R100	1101	SFD	261,360	6.00	0.0%	X	5	SFD	
670000421007	025	001	Lamphere George L & Henrietta J	2145	Bethel	Rd R100	1101	SFD	304,920	7.00	0.0%	X	6	SFD	
670002545007	024	020	Bergin Joseph J Jr & Donna L	2632	Morris	Rd R100	1108	more than 1 SFD	128,938	2.96	1.9%	X	1	SFD	
670002572007	023	005	Rodriguez Demetrio	2572	Morris	Rd R100	2105	vacant	30,700	0.70	0.0%		1	SFD	

Parcel Number	Block	Unit	Owners	Number	Street	Zoning	LU Code	Existing Land Use	SF	Acres	Constraints	Sewer	Yield	Use/Type	Notes	
670000328001	023	014	Allen Vicki L	0	Bethel	Rd	R100	2105	vacant	37,875	0.87	0.0%	1	SFD		
6700002746004	024	011	Cannon Charles & Antoinette	2015	Old Orchard	Rd	R175	1101	SFD	200,376	4.60	0.0%	1	SFD		
6700002731001	024	064	White George & Lavenia W	2014	Old Orchard	Rd	R175	1101	SFD	257,440	5.91	0.0%	1	SFD		
6700002659505	023C	048	Michini Alfred & Rosenberg Joan	2007	Hillside	Cir	R175	1160	res/commercial	226,076	5.19	0.0%	X	SFD		
670000731615	023D	019	Johnson Anita M	0	Deep Meadow	Ln	R175	2105	vacant	30,102	0.69	0.0%	X	SFD		
6700000346109	023	070	Pullit Martin & Geraldine	2114	Bethel	Rd	R175	2107	vacant	80,937	1.86	40.4%	X	SFD		
6700003313004	023	023	Pennsylvania American Water Co	2523	Skippack	Pk	R175	2108	vacant	148,104	3.40	0.0%	1	SFD		
SUBAREA 3 TOTALS														91	SFD	

SUBAREA 4

Parcel Number	Block	Unit	Owners	Number	Street	Zoning	LU Code	Existing Land Use	SF	Acres	Constraints	Sewer	Yield	Use/Type	Notes	
6700001729004	011	019	Mailon William K Jr & Judith S	1774	Green Hill	Rd	AGR	0319	pref assessment	492,664	11.31	21.0%	3	SFD		
6700003380009	014	034	Sparnono Land Partnership II Lp	0	Skippack	Pk	AGR	0319	pref assessment	511,394	11.74	0.0%	X	SFD		
6700002038001	011	031	Camponovo Ezlo J & Rosemary L	1631	Kriebel Mill	Rd	AGR	0319	pref assessment	1,379,981	31.68	9.3%	10	SFD		
6700001729022	011	006	Worcester Farms Inc	1600	Green Hill	Rd	AGR	0515	pref assessment	1,863,061	42.77	0.0%	16	SFD		
670000733406	013A	020	Brennan Daniel J & Linda D	3169	Deer Creek	Rd	AGR	1101	SFD	291,852	6.70	2.6%	1	SFD		
670000733109	013A	016	Mcmanus Kevin P & Andrea B	3160	Deer Creek	Rd	AGR	1101	SFD	331,056	7.60	33.7%	1	SFD		
6700002035004	011	007	Asher Lance & Cindy Jean	1621	Kriebel Mill	Rd	AGR	1101	SFD	396,832	9.11	0.0%	2	SFD		
6700003394004	014	005	Ryan T Scott	0	Skippack	Pk	AGR	1108	more than 1 SFD	435,600	10.00	28.8%	X	SFD		
6700001821065	013B	028	Harry Keith & Karen	1789	Hawks Nest	Ln	AGR	2107	vacant	72,077	1.65	0.0%	X	SFD		
6700001978079	013	045	Owen David W & Susan M	0	Kriebel Mill	Rd	AGR	2108	vacant	91,040	2.09	0.0%	1	SFD		
6700002057009	011	046	Crawford Donald B Trustee	0	Kriebel Mill	Rd	AGR	2108	vacant	137,650	3.16	0.0%	1	SFD		
6700003364007	013	002	Wentzs United Church Of Christ	0	Skippack	Pk	AGR	5901	church	426,888	9.80	0.0%	25,166	INST	26,284 SF of existing dev	
6700003343046	011	091	Millier Pump Systems Inc	0	Hunt Valley	Rd	LPD	2107	vacant	70,015	1.61	0.0%	1	SFD		
6700002135003	013A	006	Mje Builders Inc	3233	Meadow	Ln	LPD	2107	vacant	80,033	1.84	0.0%	1	SFD		
6700002135209	013A	032	Mje Builders Inc	3231	Meadow	Ln	LPD	2107	vacant	80,322	1.84	0.0%	1	SFD		
6700003376013	013A	026	Paddock Land Holdings Lic The	1891	Hollow	Rd	LPD	2107	vacant	82,640	1.90	0.0%	1	SFD		
6700003376002	013A	028	Paddock Land Holdings Lic The	1871	Hollow	Rd	LPD	2108	vacant	97,574	2.24	0.0%	1	SFD		
6700003376011	013A	029	Crist Richard C Jr & Cynthia L	3227	Meadow	Ln	LPD	2108	vacant	101,930	2.34	0.0%	1	SFD		
6700002135111	013A	031	Mje Builders Inc	3229	Meadow	Ln	LPD	2108	vacant	111,078	2.55	0.0%	1	SFD		
6700001075001	014	024	Bryant Russell Jr	1809	Valley Forge	Rd	LPD	0319	pref assessment	2,038,000	46.79	22.9%	X	SFD	LPD District portion only	
6700003412004	014	022	Ryan Leona F	0	Skippack	Pk	C	2110	vacant	460,429	10.57	19.9%	X	RET		
6700001075001	014	024	Bryant Russell Jr	1809	Valley Forge	Rd	C	0319	pref assessment	140,000	3.21	22.9%	X	RET		
6700001084001	014	025	Bustard Arthur C & Barbara	1921	Valley Forge	Rd	C	2201	vacant	2,000	0.05	0.0%	X	RET		
6700001084505	014	030	Ryan Leona F	0	Valley Forge	Rd	C	2102	vacant	11,340	0.26	0.0%	X	RET		
6700003337007	011	042	Markel David F	3406	Skippack	Pk	CVOD	1101	SFD	103,237	2.37	0.0%	9,172	RET	1,390 SF of existing cov	
6700003394001	011	014	Markel David F	3410	Skippack	Pk	CVOD	1101	SFD	87,120	2.00	0.0%	7,549	RET	3,240 SF of existing cov	
6700003331004	011	015	Markel David F	3414	Skippack	Pk	CVOD	1101	SFD	65,300	1.50	0.0%	5,707	RET	1,884 SF of existing cov	
6700003328007	011	016	Graf William J & Kathlene Rantz	3418	Skippack	Pk	CVOD	1101	SFD	87,120	2.00	0.0%	7,655	RET	2,068 SF of existing cov	
SUBAREA 4 TOTALS														65	SFD	
SUBAREA 4 TOTALS														79,081	RET	
SUBAREA 4 TOTALS														25,166	INST	

SUBAREA 5

Parcel Number	Block	Unit	Owners	Number	Street	Zoning	LU Code	Existing Land Use	SF	Acres	Constraints	Sewer	Yield	Use/Type	Notes
6700002831446	019	053	Stedman Hansell & Lisa E	1907	Berks	Rd	AGR	0319	pref assessment	319,730	7.34	0.0%	2	SFD	
6700001693004	019A	001	Blythe Sheree & Ventresca Mario	2836	Crest	Ter	AGR	1101	SFD	241,322	5.54	0.0%	1	SFD	
6700002833505	019	035	Rapoza Anthony J & Judee H	1857	Berks	Rd	AGR	1101	SFD	319,295	7.33	0.0%	1	SFD	
6700002808005	019	040	Burkey Marilyn	1743	Green Briar	DR	AGR	1101	SFD	1,089,000	25.00	0.0%	8	SFD	
6700002831555	019	055	Kirkpatrick Richard J & Sandra M	0	Berks	Rd	AGR	2009	vacant	254,826	5.85	0.0%	1	SFD	
6700003448201	019	078	Sparango Land Partnership	2703	Applewood	DR	AGR	2105	vacant	30,521	0.70	0.0%	1	SFD	
6700003448013	019	057	Sparango Land Partnership	1901	Old Forge	Way	AGR	2105	vacant	30,559	0.70	0.0%	1	SFD	
6700003448031	019	059	Sparango Land Partnership	1897	Old Forge	Way	AGR	2105	vacant	31,166	0.72	0.0%	1	SFD	

Developable Properties by Subarea

Parcel Number	Block	Unit	Owners	Number	Street	Zoning	LU Code	Existing Land Use	SF	Acres	Constraints	Sewer	Yield	Use/Type	Notes
670003448022	019	058	Sparango Land Partnership	1899	Old Forge	Way	AGR 2105	vacant	31,230	0.72	0.0%		1	SFD	
670003448049	019	060	Sparango Land Partnership	1895	Old Forge	Way	AGR 2105	vacant	32,441	0.74	0.0%		1	SFD	
670003448219	019	079	Sparango Land Partnership	2705	Appletwood	DR	AGR 2105	vacant	32,590	0.75	0.0%		1	SFD	
670003448191	019	077	Sparango Land Partnership	2701	Appletwood	DR	AGR 2105	vacant	34,925	0.80	0.0%		1	SFD	
670003448058	019	061	Wild Roger W & Maria	1890	Old Forge	Way	AGR 2105	vacant	35,224	0.81	0.0%		1	SFD	
670000906008	014A	026	Benner Gregory J & E Marie	0	Valley Forge	Rd	AGR 2108	vacant	112,385	2.58	3.4%		1	SFD	
670000910004	018	023	Ludwig David C & Susan L	1700	Valley Forge	Rd	R175 0319	pref assessment	522,720	12.00	3.3%	X	5	SFD	
670002080004	019	027	Constable Jane	1648	Landis	Rd	R175 1101	SFD	202,554	4.65	0.0%		1	SFD	
670003424001	018	018	Palmer (Stephen, Bruce, Wayne) & Body	0	Skippack	Pk	R175 2900	assessed with	136,336	3.13	74.4%	X	1	SFD	Includes other parcels
670003427007	018	004	Palmer (Stephen, Bruce, Wayne) & Body	2920	Skippack	Pk	R75 2900	assessed with	109,703	2.52	84.1%	X	1	SFD	Includes other parcels
6700034861007	018	046	Worcester Office Partners	0	Hickory Hill	DR	C 2103	vacant	19,200	0.44	0.0%	X	1,920	RET	
670001816007	018	047	Blum Richard & Howlin Eileen	0	Hickory Hill	DR	C 2103	vacant	17,200	0.39	0.0%	X	1,720	RET	
670003469001	022	022	Center Square Associates Inc	2620	Skippack	Pk	AGR 4261	vacant	34,800	0.80	0.0%	X	3,480	RET	
SUBAREA 5 TOTALS															
													30	SFD	
													7,120	RET	

SUBAREA 6

Parcel Number	Block	Unit	Owners	Number	Street	Zoning	LU Code	Existing Land Use	SF	Acres	Constraints	Sewer	Yield	Use/Type	Notes
670003490007	022	016	Pocklington William & Deborah	2564	Skippack	Pk	AGR 0319	pref assessment	1,711,037	39.28	1.1%		14	SFD	
670003496001	022	018	Perone Daniel & Charlene M	2520	Skippack	Pk	AGR 1101	SFD	287,496	6.60	0.0%		1	SFD	
670002650001	022	015	Zacharczuk Danylo B & Zenia A	1911	North Wales	Rd	AGR 1101	SFD	318,859	7.32	0.0%		1	SFD	
670004147007	022	039	Spiller Cathy	1853	Whitehall	Rd	AGR 1101	SFD	367,211	8.43	0.0%		2	SFD	
670003466004	022	031	Center Square Associates Inc	2620	Skippack	Pk	AGR 2107	vacant	65,000	1.45	0.0%		1	SFD	
670003463007	022	030	Center Square Associates Inc	0	Skippack	Pk	AGR 4261	golf course	62,988	1.45	0.0%		1	SFD	
670000211505	022	003	Center Square Associates Inc	2620	Skippack	Pk	AGR 4261	golf course	696,960	16.00	0.0%		6	SFD	
670003469001	022	022	Center Square Associates Inc	2620	Skippack	Pk	AGR 4261	golf course	6,314,022	144.95	0.7%		54	SFD	
SUBAREA 6 TOTALS															
													80	SFD	

SUBAREA 7

Parcel Number	Block	Unit	Owners	Number	Street	Zoning	LU Code	Existing Land Use	SF	Acres	Constraints	Sewer	Yield	Use/Type	Notes
670001807007	013	028	West Edna & Benedette Louis Tr	3241	Heebner	Rd	AGR 0319	pref assessment	435,600	10.00	0.0%		3	SFD	
670003540002	015	022	Jamieson Gordon W & Theresa B	3051	Stump Hall	Rd	AGR 0319	pref assessment	552,776	12.69	0.0%		4	SFD	Includes other parcels
670002017508	011	048	Martinez Laya R	1545	Kriebel Mill	Rd	AGR 0319	pref assessment	576,299	13.23	0.0%		5	SFD	
670001360004	013	009	Willow Creek Farms Lp	3220	Heebner	Rd	AGR 0319	pref assessment	5,846,623	32.22	2.3%		11	SFD	Remaining 102 ac preserved
670001810004	015	013	Evans Michael & Linda	3110	Heebner	Rd	AGR 0319	pref assessment	5,290,362	112.45	0.0%		42	SFD	2 ex. lots, 1 new lot, proposed remaining 112.45 ac developable
670001732136	011	080	Worcester Farms Inc	1570	Green Hill	Rd	AGR 0515	pref assessment	570,200	13.09	0.0%		4	SFD	
670001051007	015	001	Hynes Burton T Jr &	1591	Valley Forge	Rd	AGR 1101	SFD	250,906	5.76	0.0%		1	SFD	
670002026004	011	037	Miroz Joan A	1559	Kriebel Mill	Rd	AGR 1101	SFD	264,409	6.07	0.0%		1	SFD	
670001269005	015	011	Tatunchak Boris & Mary	1504	Hollow	Rd	AGR 1101	SFD	286,625	6.58	0.0%		1	SFD	
670001960007	013	010	Tal Joseph Y & Ann W	1530	Kriebel Mill	Rd	AGR 1101	SFD	718,740	16.50	0.0%		5	SFD	
670001036022	015	028	Delgrippo Leonard & Sandra	3003	Liberty	Ln	AGR 2107	vacant	80,365	1.84	0.0%		1	SFD	
670001036031	015	029	Delgrippo Martin & Roxanne	3001	Liberty	Ln	AGR 2108	vacant	94,525	2.17	0.0%		1	SFD	
670001726304	010	085	Mandraccia Mary T	0	Green Hill	Rd	AGR 2108	vacant	96,877	2.22	0.0%		1	SFD	
670001806908	013	039	West Edna E Trustee	0	Heebner	Rd	AGR 2109	vacant	128,502	2.95	0.0%		1	SFD	
670003522002	010	058	Mandraccia Augustus J	0	Stump Hall	Rd	AGR 2110	vacant	268,330	6.16	0.0%		1	SFD	
670003520004	010	046	Jonathan Eleanor K	3349	Stump Hall	Rd	AGR 0319	pref assessment	467,442	10.73	0.0%	X	4	SFD	
SUBAREA 7 TOTALS															
													95	SFD	

SUBAREA 8

Parcel Number	Block	Unit	Owners	Number	Street	Zoning	LU Code	Existing Land Use	SF	Acres	Constraints	Sewer	Yield	Use/Type	Notes
670002806007	019	004	Allen Carol V	2933	Potsthop	Rd	AGR 0319	pref assessment	435,600	10.00	4.5%		3	SFD	

Parcel Number	Block	Unit	Owners	Number	Street	Zoning	LU Code	Existing Land Use	SF	Acres	Constraints	Sewer	Yield	Use/Type	Notes
6700002807006	019	038	Allen Carol V & Richard S	2937	Potshop	Rd	AGR	0319	pref assessment	435,600	10.00	2.2%		SFD	
6700002800301	019	046	Weron Richard & Barbara	2775	Potshop	Rd	AGR	0319	pref assessment	435,600	10.00	0.0%	3	SFD	
6700005980001	017	035	Danella Sharon L	1534	Trooper	Rd	AGR	0319	pref assessment	1,005,365	23.08	3.1%	8	SFD	
6700006100007	017	018	Chambers (Drew, Samuel, Barbara) & Flier	0	Church	Rd	AGR	0319	pref assessment	318,750	7.32	0.0%	2	SFD	includes other parcels
6700006100007	017	017	Chambers (Drew, Samuel, Barbara) & Flier	0	Church	Rd	AGR	0319	pref assessment	1,205,850	27.68	0.0%	10	SFD	AGR portion, includes other parcels
6700003562007	017	007	Harris Ralph A	2905	Township Line	Rd	AGR	1101	SFD	261,360	6.00	0.0%	1	SFD	
6700003556004	017	021	Wolfenden Joan M	2967	Township Line	Rd	AGR	1101	SFD	304,920	7.00	0.0%	1	SFD	
6700002800004	019	002	Walsh Terrence P & Georganna M	2737	Potshop	Rd	AGR	1101	SFD	348,480	8.00	0.0%	2	SFD	
6700002804009	019	039	Verbitski Maryellen & Fegley Leonard	2909	Potshop	Rd	AGR	1101	SFD	435,600	10.00	0.0%	2	SFD	
6700002801309	019	044	Kimber Robert O C & Katherine L M	2795	Potshop	Rd	AGR	1101	SFD	435,600	10.00	0.0%	2	SFD	
6700002801003	019	047	Bookheimer Julie Ann	2785	Potshop	Rd	AGR	1101	SFD	435,600	10.00	0.0%	2	SFD	
6700002799005	019	048	Woznick Raymond T & Sheryl L	2715	Potshop	Rd	AGR	1101	SFD	435,600	10.00	0.0%	2	SFD	
6700002805008	019	037	Carney Dennis H & Lorna L	2915	Potshop	Rd	AGR	1101	SFD	455,637	10.46	0.0%	2	SFD	
6700005950004	017	037	Howarth Gregory	1524	Trooper	Rd	AGR	1101	SFD	513,572	11.79	6.7%	3	SFD	
6700002800103	019	045	Vocht Scott M & Shella M	2765	Potshop	Rd	AGR	1110	garage	435,600	10.00	0.0%	3	SFD	
6700006611118	017	074	Posen Benjamin G & Marlana	0	Township Line	Rd	AGR	2105	vacant	39,939	0.92	0.0%	1	SFD	
6700003100001	019	014	King Bernard F & Jeanmarie	1705	Berks	Rd	AGR	2106	vacant	43,536	1.00	0.0%	1	SFD	
6700003553007	017	005	Wolfenden Joan M	0	Township Line	Rd	AGR	2108	vacant	142,006	3.26	0.0%	1	SFD	
6700002821001	017	024	Danella Sharon L	1507	Potshop	Rd	AGR	2109	vacant	152,460	3.50	0.0%	1	SFD	
6700006700001	017	012	Philadelphia Variety Club Camp	0	Trooper	Rd	AGR	2112	vacant	1,891,375	43.42	4.8%	15	SFD	
6700002842007	017	001	Philadelphia Variety Club Camp	0	Potshop	Rd	AGR	5910	charitable org	435,600	10.00	0.0%	3	SFD	
6700002845004	017	022	Philadelphia Variety Club Camp	2950	Potshop	Rd	AGR	5980	club, frat org	470,012	10.79	0.0%	4	SFD	
6700006520001	017	028	Rondeau Vicque G & Shawna A	1515	Trooper	Rd	AGR	5980	club, frat org	1,865,675	42.83	0.0%	16	SFD	
6700003568001	017	018	Maida William F Jr & Donna M	1514	Trooper	Rd	R175	1101	SFD	230,868	5.30	0.0%	1	SFD	
6700006100007	017	018	Chambers (Drew, Samuel, Barbara) & Flier	1544	Church	Rd	LI	0319	SFD	239,144	5.49	0.0%	1	SFD	
6700006640007	017	025	T-Squared Realty L L C	1547	Trooper	Rd	LI	3341	pref assessment	2,245,518	51.55	0.0%	336,828	IND	LI portion, includes other parcels
6700006080009	017	051	Chambers & Flier	1570	Trooper	Rd	LI	1101	Industrial	1,126,026	25.85	0.0%	74,900	IND	1.15,308 SF of existing dev
										SUBAREA 8 TOTALS		93	SFD		
										SUBAREA 8 TOTALS		480,988	IND		

SUBAREA 9

Parcel Number	Block	Unit	Owners	Number	Street	Zoning	LU Code	Existing Land Use	SF	Acres	Constraints	Sewer	Yield	Use/Type	Notes
6700004039007	021	007	Allen R W P	0	Whitehall	Rd	AGR	0319	pref assessment	440,392	10.11	0.0%	3	SFD	
6700001840001	021	032	Ware Steven C	2530	Bean	Rd	AGR	0319	pref assessment	457,360	10.50	13.1%	3	SFD	
6700001360004	022	026	Kish Charles B & Kathryn Saponaro	0	Bean	Rd	AGR	0319	pref assessment	470,012	10.79	0.0%	4	SFD	
6700001420016	022	097	Kish Charles B & Kathryn Saponaro	0	Bean	Rd	AGR	0319	pref assessment	527,947	12.12	0.0%	4	SFD	
6700001300001	022	030	Allen Carol V	2617	Bean	Rd	AGR	0319	pref assessment	651,222	14.95	0.0%	5	SFD	
6700001780007	021	024	Mirabelle Joseph F & Lea A	2568	Bean	Rd	AGR	0319	pref assessment	770,576	17.69	34.9%	4	SFD	
6700004096004	020	009	Allen R W Pomeroy III & Carol	0	Whitehall	Rd	AGR	0319	pref assessment	1,276,744	29.31	5.4%	10	SFD	
6700002470001	020	002	Diprinzio Andre & Sandra L	1636	Berks	Rd	AGR	0319	pref assessment	1,424,848	32.71	25.6%	9	SFD	
6700003613001	020	011	Allen Carol B	0	Township Line	Rd	AGR	0319	pref assessment	5,602,687	128.62	0.4%	48	SFD	
6700001690007	021	002	Hires Charles R & Mary R	2576	Bean	Rd	AGR	1101	SFD	1,145,192	26.29	0.1%	9	SFD	
6700001509008	020	030	Derosato William J & Mary Jo	2656	Bean	Rd	AGR	2107	vacant	64,333	1.48	60.6%	1	SFD	
6700001330007	022	060	Giasgow Inc	0	Bean	Rd	AGR	2107	vacant	65,234	1.50	0.0%	1	SFD	
6700001390001	022	061	Kish Charles B & Kathryn Saponaro	0	Bean	Rd	AGR	2107	vacant	65,378	1.50	0.0%	1	SFD	
6700001450004	022	052	Bair George W	0	Bean	Rd	AGR	2108	vacant	199,505	4.58	0.0%	1	SFD	
6700001470002	021	005	Hires Charles R & Mary R	0	Whitehall	Rd	AGR	2109	vacant	333,234	7.65	0.0%	2	SFD	
6700004046009	021	028	McDonough Thomas J	0	Bean	Rd	AGR	2110	vacant	371,567	8.53	33.5%	2	SFD	
6700004052003	021	018	Hires Charles R & Mary R	0	Whitehall	Rd	AGR	2110	vacant	460,865	10.58	0.0%	3	SFD	
6700004045001	021	006	Stout G Thomas	1570	Whitehall	Rd	AGR	2110	vacant	708,721	16.27	12.5%	5	SFD	
6700002620103	021	035	Ware Steven	0	North Wales	Rd	AGR	2900	assessed with	958,320	22.00	0.0%	8	SFD	includes other parcels

Parcel Number	Block	Unit	Owners	Number	Street	Zoning	LU Code	Existing Land Use	SF	Acres	Constraints	Sewer	Yield	Use/Type	Notes
670000187007	021	014	Ware Steven	0	Bean	Rd	R150	0319	pref assessment	781,031	17.93	16.2%	7	SFD	
6700002785001	022	068	Dugan Paul & Debra	2666	Overhill	Dr	R175	2107	vacant	60,420	1.39	0.0%	1	SFD	
6700002608007	021	017	Stony Creek Village Lp	1501	North Wales	Rd	C	2108	vacant	196,020	4.50	0.0%	19,602	RET	
6700003619004	020	019	Handy & Harman Tube Co Inc	0	Township Line	Rd	LI	4275	parking lot	384,635	8.83	1.6%	56,751	IND	

SUBAREA 9 TOTALS

132 SFD
19,602 RET
56,751 IND

SUBAREA 10

Parcel Number	Block	Unit	Owners	Number	Street	Zoning	LU Code	Existing Land Use	SF	Acres	Constraints	Sewer	Yield	Use/Type	Notes
6700001951007	012	003	Burgoon Edward L & Lynne M	1440	Kriebel Mill	Rd	AGR	0319	pref assessment	625,957	14.37	0.0%	5	SFD	
6700001255514	010	042	Flanagan Kevin Jr & Elaine J	0	Hollow	Rd	AGR	0319	pref assessment	663,854	15.24	0.0%	5	SFD	
6700001714001	010	001	Shemongsk Robert & Margaret	1410	Grange	Ave	AGR	0319	pref assessment	696,960	16.00	0.0%	6	SFD	
6700003850007	012	005	Rieger Lauren & Daniel J Jr & Smith Lawrence S	3239	Water	St	AGR	0319	pref assessment	706,979	16.23	2.1%	6	SFD	
6700002017103	010	056	Smith Lawrence S	1447	Kriebel Mill	Rd	AGR	0319	pref assessment	725,274	16.65	0.0%	6	SFD	includes other parcels
6700001715009	010	003	Bittner Interprises Inc	1450	Green Hill	Rd	AGR	0319	pref assessment	947,866	21.76	13.6%	7	SFD	
6700003841601	010	011	Stevenson Donald F	3361	Water	St	AGR	0319	pref assessment	963,983	22.13	0.0%	8	SFD	
6700002011001	010	053	GLS Company	1415	Kriebel Mill	Rd	AGR	0319	pref assessment	1,068,527	24.53	0.6%	9	SFD	
6700001948001	012	002	Woods Farms Lp	1416	Kriebel Mill	Rd	AGR	0319	pref assessment	1,337,728	30.71	0.0%	11	SFD	
6700002014007	010	042	Varian Basil B Sr & Jane C Trust	1435	Kriebel Mill	Rd	AGR	1101	SFD	243,500	5.59	0.0%	1	SFD	
6700001322024	012	075	Stone George F III & Karen M	1439	Hollow	Rd	AGR	1101	SFD	252,648	5.80	0.0%	1	SFD	
6700003856001	012	006	Romano Jason S & Michele D	1401	Hollow	Rd	AGR	1101	SFD	262,231	6.02	0.0%	1	SFD	
6700001322015	012	056	Mullaney Gerald J Jr	1435	Hollow	Rd	AGR	1101	SFD	275,299	6.32	0.0%	1	SFD	
6700001318001	012	008	Wolford Thomas Livingston	0	Hollow	Rd	AGR	1101	SFD	283,140	6.50	0.0%	1	SFD	
6700002128064	010	075	Diener Richard S & Debra K	1455	Little Creek	Ln	AGR	1101	SFD	284,011	6.52	0.0%	1	SFD	
6700003667001	010	051	1477 Kriebel Mill Lp	1477	Kriebel Mill	Rd	AGR	1101	SFD	323,651	7.43	0.0%	1	SFD	
6700003850025	012	055	Trotter Matthew & Dorina	3233	Water	St	AGR	1101	SFD	371,567	8.53	6.5%	2	SFD	
6700003664004	010	012	Catagnus Vincent F & Lillian M	3350	Stump Hall	Rd	AGR	1101	SFD	396,852	9.11	0.0%	2	SFD	
6700001322042	012	077	Hahn Sam & Gretchen A	0	Hollow	Rd	AGR	2101	vacant	3,623	0.08	0.0%	1	SFD	
6700001321016	012	078	Mullaney Gerald J Jr	1435	Hollow	Rd	AGR	2101	vacant	3,623	0.08	0.0%	1	SFD	
6700003864902	016	040	Kelly John F & Carolyn J	0	Water	St	AGR	2103	vacant	19,602	0.45	0.0%	1	SFD	
6700003868403	016	034	Hansell George R & Margaret A	0	Water	St	AGR	2104	vacant	21,476	0.49	0.0%	1	SFD	
6700003874019	016	036	Raquet Mark & Jennifer	0	Water	St	AGR	2104	vacant	22,620	0.52	0.0%	1	SFD	
6700003850016	012	054	Marks George E & Sandra L	0	Water	St	AGR	2107	vacant	60,112	1.38	0.0%	1	SFD	
6700003863003	016	038	Kelly John & Carolyn	3127	Water	St	AGR	2107	vacant	64,978	1.49	0.0%	1	SFD	
6700003862409	016	039	Kelly John & Carolyn	3129	Water	St	AGR	2108	vacant	113,256	2.60	0.0%	1	SFD	
6700001716008	010	061	Gramm Harris D & Mary Patricia	0	Green Hill	Rd	AGR	2108	vacant	155,509	3.57	0.0%	1	SFD	
6700001322033	012	076	Rieger Lauren J & Daniel J Jr	1443	Hollow	Rd	AGR	2108	vacant	198,198	4.55	0.0%	1	SFD	
6700003721001	016	022	Myers Eric B & Shawna M	3040	Stump Hall	Rd	R100	1101	SFD	96,703	2.22	0.0%	1	SFD	
6700003692012	012	067	Reynolds Ian J & Daisy T	3280	Hedwig	Ln	R175	1101	SFD	192,100	4.41	0.0%	1	SFD	
6700001261004	016	019	Schioer Craig J & Felicia	1442	Hollow	Rd	R175	1110	garage	80,000	1.84	0.0%	1	SFD	

SUBAREA 10 TOTALS

87 SFD

SUBAREA 11

Parcel Number	Block	Unit	Owners	Number	Street	Zoning	LU Code	Existing Land Use	SF	Acres	Constraints	Sewer	Yield	Use/Type	Notes
6700001246001	008	009	Thompson James E	1226	Hollow	Rd	AGR	0319	pref assessment	518,364	11.90	0.0%	4	SFD	
6700003877403	008	099	McGinnis Patrick Jr & Susan S	3130	Water	St	AGR	0319	pref assessment	755,766	17.35	0.0%	6	SFD	
6700002137001	008	001	Markel David F	1110	Merrybrook	Rd	AGR	0319	pref assessment	779,724	17.90	1.8%	6	SFD	
6700003877502	009	054	Angstadt Martha L	3360	Water	St	AGR	0319	pref assessment	1,210,968	27.80	9.5%	9	SFD	
6700002350004	007	001	Mb Investments	0	Mill	Rd	AGR	0319	pref assessment	1,269,774	29.15	0.0%	11	SFD	
6700002170004	008	005	Markel David F	1306	Merrybrook	Rd	AGR	0319	pref assessment	1,525,471	35.02	6.9%	12	SFD	
6700001999004	009	002	Moran Carol-Lynn	1200	Grange	Ave	AGR	0319	pref assessment	2,238,984	51.4	3.5%	18	SFD	
6700001304006	008	085	Kavanaugh Arthur & Deborah	1207	Hollow	Rd	AGR	1101	SFD	249,163	5.72	0.0%	1	SFD	

Parcel Number	Block	Unit	Owners	Number	Street	Zoning	LU Code	Existing Land Use	SF	Acres	Constraints	Sewer	Yield	Use/Type	Notes
670003895007	008	006	Markel David F	3240	Water	St	AGR	1101	SFD	274,428	6.30	0.8%	1	SFD	
670003877106	009	057	Rininger Jack D & Edna M	3424	Water	St	AGR	1101	SFD	284,011	6.52	0.0%	1	SFD	
670002000502	009	059	Granieri Robert J & Dolores J	1301	Kriebel Mill	Rd	AGR	1101	SFD	297,079	6.82	0.0%	1	SFD	
670001315004	008	004	Himsworth James Jr & Patricia E	1325	Hollow	Rd	AGR	1101	SFD	409,464	9.40	0.0%	2	SFD	
670001303007	008	002	Schafer Richard W & Margaret R	1205	Hollow	Rd	AGR	1101	SFD	429,937	9.87	0.0%	2	SFD	
670003880004	009	014	Lysykanycz Alicia M	3330	Water	St	AGR	1101	SFD	506,167	11.62	4.1%	3	SFD	
6700001294007	008	020	Gambone Veronica M & Louis D	1121	Hollow	Rd	AGR	1108	more than 1 SFD	348,044	7.99	0.0%	1	SFD	
670001221908	008	097	Mcauliffe James & Axtmayer Ana	0	Hollow	Rd	AGR	2102	vacant	8,335	0.19	0.0%	1	SFD	
670002892009	007	048	Iannella Joseph J & Ann	0	Quarry Hall	Rd	AGR	2107	vacant	60,064	1.38	0.0%	1	SFD	
670002173505	009	072	Markley Richard R & Lisa S	1225	Merrybrook	Rd	AGR	2107	vacant	86,821	1.99	0.0%	1	SFD	
670001022441	007	063	Czop John G & Marissa G	0	Dell	Rd	AGR	2108	vacant	98,881	2.27	0.0%	1	SFD	
670001250006	008	076	Rieder Jeffrey S & Dawn Marie	1318	Hollow	Rd	AGR	2108	vacant	131,551	3.02	10.5%	1	SFD	
670000776003	007	049	Gehrt Allan Kent Jr	1270	Dell	Rd	AGR	2108	vacant	152,460	3.50	0.0%	1	SFD	
670002302007	009	004	Pama Charles M	0	Mill	Rd	AGR	2110	vacant	456,509	10.48	14.0%	3	SFD	
670002960006	008	013	Falth Church Of Worcester	1341	Quarry Hall	Rd	AGR	5901	church	304,920	7.00	0.0%	18,899	INST	17,930 SF of existing dev
670001244003	008	083	Thompson David R	1214	Hollow	Rd	R175	0319	pref assessment	496,584	11.40	0.0%	4	SFD	
670002932007	008	046	Riemer Janet S Trustees	1211	Quarry Hall	Rd	R175	1101	SFD	196,020	4.50	0.0%	1	SFD	
670002158007	008	066	Dewan Michael T & Kelly D	1222	Merrybrook	Rd	R175	1101	SFD	208,217	4.78	0.0%	1	SFD	
670002161004	008	065	Daddona Carl I & Lauren K	1220	Merrybrook	Rd	R175	1101	SFD	216,493	4.97	0.0%	1	SFD	
670001009004	007	002	Wisn Wendell Lynn	1243	Valley Forge	Rd	R175	1108	more than 1 SFD	256,133	5.88	0.0%	1	SFD	
670002308109	008	078	Lord Kenneth & Lord Christine S	0	Mill	Rd	R175	1110	garage	20,000	0.46	0.0%	1	SFD	
670002278013	009	079	Cifelli Michael	0	Mill	Rd	R175	2108	vacant	90,169	2.07	0.0%	1	SFD	
670002887007	007	006	Spacht David G & Carol A	1266	Quarry Hall	Rd	R175	4000	var commercial	174,240	4.00	0.0%	1	SFD	

SUBAREA 11 TOTALS

98 SFD
18,899 INST

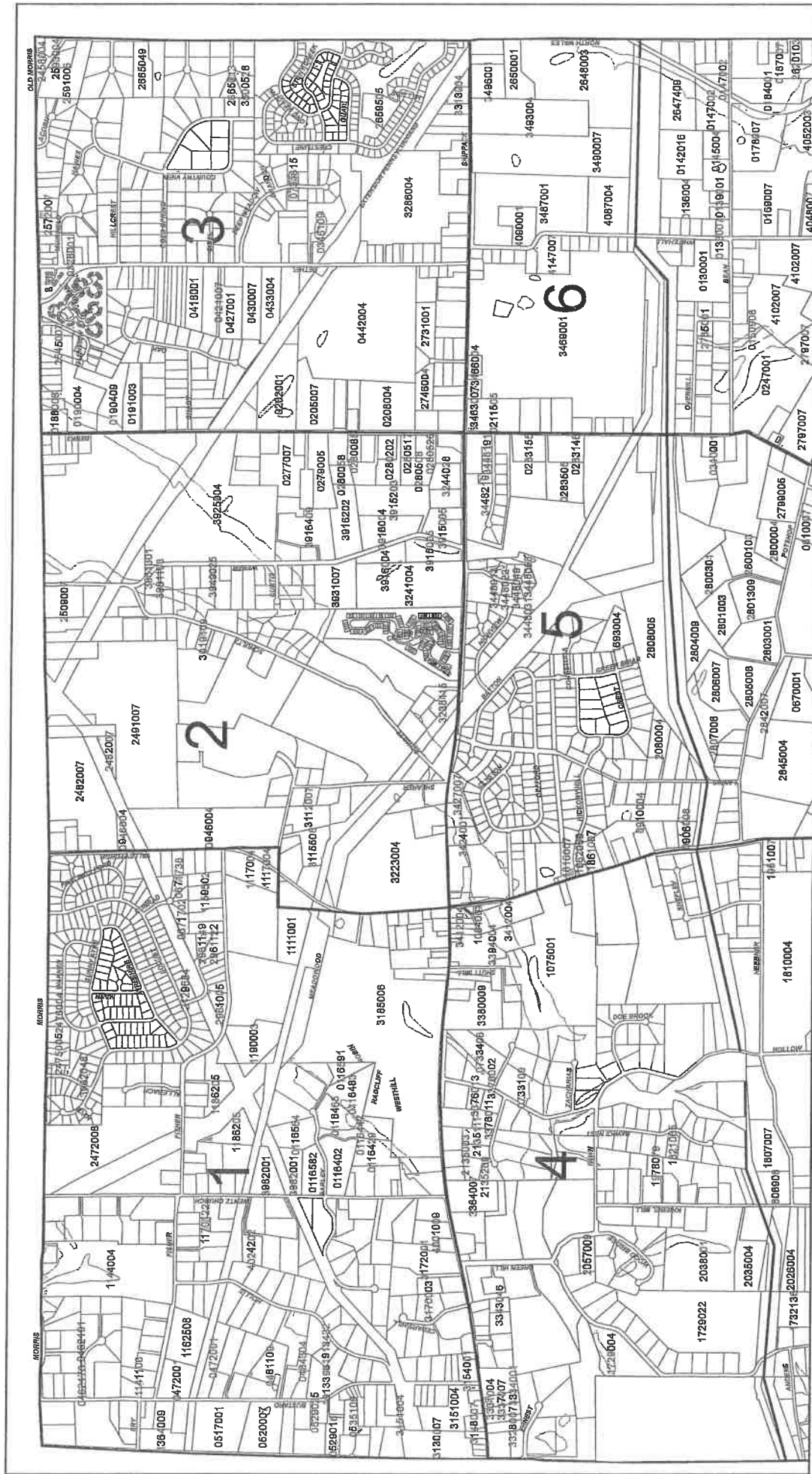
SUBAREA 12

Parcel Number	Block	Unit	Owners	Number	Street	Zoning	LU Code	Existing Land Use	SF	Acres	Constraints	Sewer	Yield	Use/Type	Notes
670001397003	002	017	Heritage Camp Grounds Inc	3243	Germentown	Pk	AGR	0319	pref assessment	432,115	9.92	0.0%	3	SFD	
670001642001	001	002	Steigenwalt George R & Jeannie R	1028	Grange	Ave	AGR	0319	pref assessment	467,399	10.73	0.0%	4	SFD	
670001399001	002	006	Mascaro Joseph P Jr Et Al	3229	Germentown	Pk	AGR	0319	pref assessment	762,300	17.50	0.0%	6	SFD	
670001369004	001	007	Kranich Frederick R & Charles A	3461	Germentown	Pk	AGR	0319	pref assessment	1,080,724	24.81	0.0%	9	SFD	
670002401007	002A	001	Stewart Mark L & Joanne	3130	Mill	Rd	AGR	0319	pref assessment	1,271,516	29.19	6.6%	10	SFD	
670001562009	002	020	Macnamara Vera F	3216	Germentown	Pk	AGR	1108	more than 1 SFD	457,816	10.51	17.2%	2	SFD	
670001375178	001	059	Grabenstein John D & Laurie A	999	Anvil	Dr	AGR	2103	vacant	14,868	0.34	0.0%	1	SFD	
670001591016	003	108	Cane Vincent & Barbara	0	Park	Ave	AGR	2108	vacant	113,692	2.61	0.0%	1	SFD	
670002425019	003	043	Gallo Ben & Cynthia	3050	Mill	Rd	AGR	2108	vacant	125,017	2.87	0.0%	1	SFD	
670002425028	003	107	Gallo Ben & Cynthia	3048	Mill	Rd	AGR	2108	vacant	133,294	3.06	0.0%	1	SFD	
670002395013	002A	102	Stewart Mark L & Joanne	0	Mill	Rd	AGR	2109	vacant	360,677	8.28	0.0%	3	SFD	
670001367006	001	026	3473 Germentown Pike Assoc	0	Germentown	Pk	AGR	2900	assessed with	100,188	2.30	0.0%	1	SFD	includes other parcels
670001396004	002	005	Pa Conf Of Seventh Day Adventists	3235	Germentown	Pk	AGR	5901	church	631,184	14.49	0.0%	48,952	INST	21,249 SF of existing dev
670001795001	003	003	Griffith William & Charlotte Trustee	0	Griffith	Rd	R100	0319	pref assessment	391,169	8.98	0.0%	9	SFD	
670001453001	003	009	Brouse Frederick W Jr	3067	Germentown	Pk	R100	1101	SFD	91,912	2.11	0.0%	1	SFD	
670001465007	003	012	Venezia Charles Jr & Toni A	3045	Germentown	Pk	R100	1101	SFD	109,771	2.52	0.0%	1	SFD	
670000988007	003	038	Digenova Marcello	1145	Valley Forge	Rd	R100	1101	SFD	138,956	3.19	0.0%	2	SFD	
670001462001	003	011	Caldwell Harry & Betty Lou Emel	3053	Germentown	Pk	R100	1101	SFD	169,884	3.90	0.0%	2	SFD	
670001459004	003	010	Place David & Connie & David	3059	Germentown	Pk	R100	1101	SFD	256,568	5.89	0.0%	4	SFD	
670001414400A	002A	096	Petrez Michael & Donna E	0	Germentown	Pk	R100	2103	vacant	15,000	0.34	0.0%	1	SFD	
670002209019	002A	105	Guardino Frank S	3141	Methacton	Ave	R100	2105	vacant	36,739	0.84	0.0%	1	SFD	
670002224013	002A	109	Nacarrelli Cindy & Guardino Donna	3157	Methacton	Ave	R100	2106	vacant	41,274	0.95	0.0%	1	SFD	
670001486004	003	018	Heyser John E & Ida Jane	3019	Germentown	Pk	R100	4100	multi-use	125,627	2.88	0.0%	1	SFD	
670002407001	002A	092	Sherry David J & Lynne	0	Mill	Rd	R175	2104	vacant	25,800	0.59	0.0%	1	SFD	
670001777001	003	071	Griffith Harry E & Charlotte	3067	Griffith	Rd	RAG175	1101	SFD	269,201	6.18	0.0%	2	SFD	

Parcel Number	Block	Unit	Owners	Number	Street	Zoning	LU Code	Existing Land Use	SF	Acres	Constraints	Sewer	Yield	Use/Type	Notes	
670003841142	003	081	Gambone Anthony R Sr Trust	1125	Wanda	Rd RAG175	1108	more than 1 SFD	212,573	4.88	0.0%	X	1	SFD		
670003841169	003	083	Gambone Anthony R Sr Trust	0	Wanda	Rd RAG175	2107	vacant	60,013	1.38	0.0%	X	1	SFD		
670003841124	003	079	Gambone Anthony R Sr Trust	0	Wanda	Rd RAG175	2107	vacant	77,442	1.78	0.0%	X	1	SFD		
670001576004	002A	016	Hershey William D & Constance V	3100	Germantown	Pk RO	1101	SFD	95,832	2.20	0.0%	X	1	SFD		
670001579007	002D	002	Diprinzio Michael & Teresa	3118	Germantown	Pk RO	1108	more than 1 SFD	196,891	4.52	0.0%	X	2	SFD		
670000961007	003	056	Kinetix Sports Club Ltd	951	Park	Ave C	4295	tennis club	170,320	3.91	0.0%	X	17,032	RET		
SUBAREA 12 TOTALS														74	SFD	
SUBAREA 13 TOTALS														17,032	RET	
SUBAREA 14 TOTALS														48,952	INST	

SUBAREA 13

Parcel Number	Block	Unit	Owners	Number	Street	Zoning	LU Code	Existing Land Use	SF	Acres	Constraints	Sewer	Yield	Use/Type	Notes	
6700004162001	004	040	Huganir John	1038	Windy Hill	Rd AGR	0319	pref assessment	775,368	17.80	0.4%	X	8	SFD		
670000874007	004A	003	M B Investments	0	Valley Forge	Rd AGR	0319	pref assessment	1,677,060	38.50	0.0%		14	SFD		
670000865004	004A	004	Plummer James H Jr	0	Valley Forge	Rd AGR	1132	duplex	454,766	10.44	17.1%	X	3	SFD		
670000879008	006	045	Gregory Kevin B & Lisa J	0	Valley Forge	Rd AGR	2104	vacant	20,268	0.47	0.0%		1	SFD		
670000616319	006A	036	Bell Kumpf Investment Lp	1403	Reiner	Rd AGR	2105	vacant	31,767	0.73	0.0%		1	SFD		
670004207604	004A	028	Stimmler Mary G	1249	Trooper	Rd AGR	2108	vacant	108,900	2.50	0.0%		1	SFD		
670003825275	004A	029	Evangelical Lutheran Church	1190	Valley Forge	Rd AGR	5901	church	1,089,000	25.00	14.4%	X	7,027	INST	7,027 SF dev proposed	
670003785009	004	002	Newsome David L	1101	Trooper	Rd R100	1101	SFD	140,263	3.22	0.0%	X	2	SFD		
670004186004	004	039	Draghici Joan & Angela	1047	Windy Hill	Rd R100	1101	SFD	174,240	4.00	0.0%	X	3	SFD		
670001540004	004	003	Odonnell James N	0	Germantown	Pk R100	1132	duplex	502,192	11.53	0.0%	X	9	SFD	R100 District portion only	
670001909001	005	020	Cane Vincent & Barbara	0	Hilltop	Ave R100	2101	vacant	990	0.02	0.0%	X	1	SFD		
670000105008	005	033	Straup Nancy B	0	Hilltop	Rd R100	2102	vacant	9,427	0.22	0.0%	X	1	SFD		
670001912001	005	010	Delgrippo Family Lp	0	Hilltop	Ave R100	2102	vacant	7,764	0.18	0.0%	X	1	SFD		
670003808004	004A	013	Young Paul O Jr	0	Trooper	Rd R175	1101	SFD	225,641	5.18	0.0%		1	SFD		
670003807005	004A	030	Young Paul O Jr	0	Trooper	Rd R175	2108	vacant	122,404	2.81	0.0%		1	SFD		
670001143005	005	058	Campisi Joseph G & Rhonda A	1036	Valley Forge	Rd R75	2101	vacant	2,899	0.07	0.0%	X	1	SFD		
670001379009	005	057	Cane Vincent & Barbara	0	Germantown	Pk R75	2102	vacant	7,631	0.18	0.0%	X	1	SFD		
670001540004	004	003	Odonnell James N	0	Germantown	Pk C	1132	duplex	156,000	3.58	0.0%	X	14,600	RET		
670001516001	005	016	Cane Vincent & Barbara	0	Germantown	Pk C	2103	vacant	12,480	0.29	0.0%	X	1,248	RET		
670003844007	004	023	Min Hung Sik & Somie	0	Vienna	Ave C	2106	vacant	43,200	0.99	0.0%	X	4,320	RET		
670003784028	004	061	Signore David J & Robert	0	Germantown	Pk C	2204	vacant	28,800	0.66	0.0%	X	2,880	RET		
670003778601	004	059	Allen William J & Beth E	0	Trooper	Rd C	2205	vacant	30,056	0.69	0.0%	X	3,006	RET		
670003778619	004	062	Allen William J & Beth E	0	Trooper	Rd C	2206	vacant	43,560	1.00	0.0%	X	4,356	RET		
670001537007	004	049	Arena Wayne & Stephen	0	Germantown	Pk C	2207	vacant	56,933	1.31	0.0%	X	5,693	RET		
670001606001	004	056	Dubner Reba Family Ltd Ptnrship	2974	Germantown	Pk C	4237	auto showroom	609,840	14.00	0.0%	X	41,803	RET	19,181 SF of existing dev	
670001612004	004	015	Giambrone Michael J & Sharon	2960	Germantown	Pk C	4325	office	184,259	4.23	11.7%	X	7,925	RET	8,343 SF of existing dev	
SUBAREA 13 TOTALS														49	SFD	
SUBAREA 14 TOTALS														85,831	RET	
SUBAREA 15 TOTALS														7,027	INST	



Legend

- Excluded from TSA Areas
- Constraint Area
- Developable Properties within Subareas



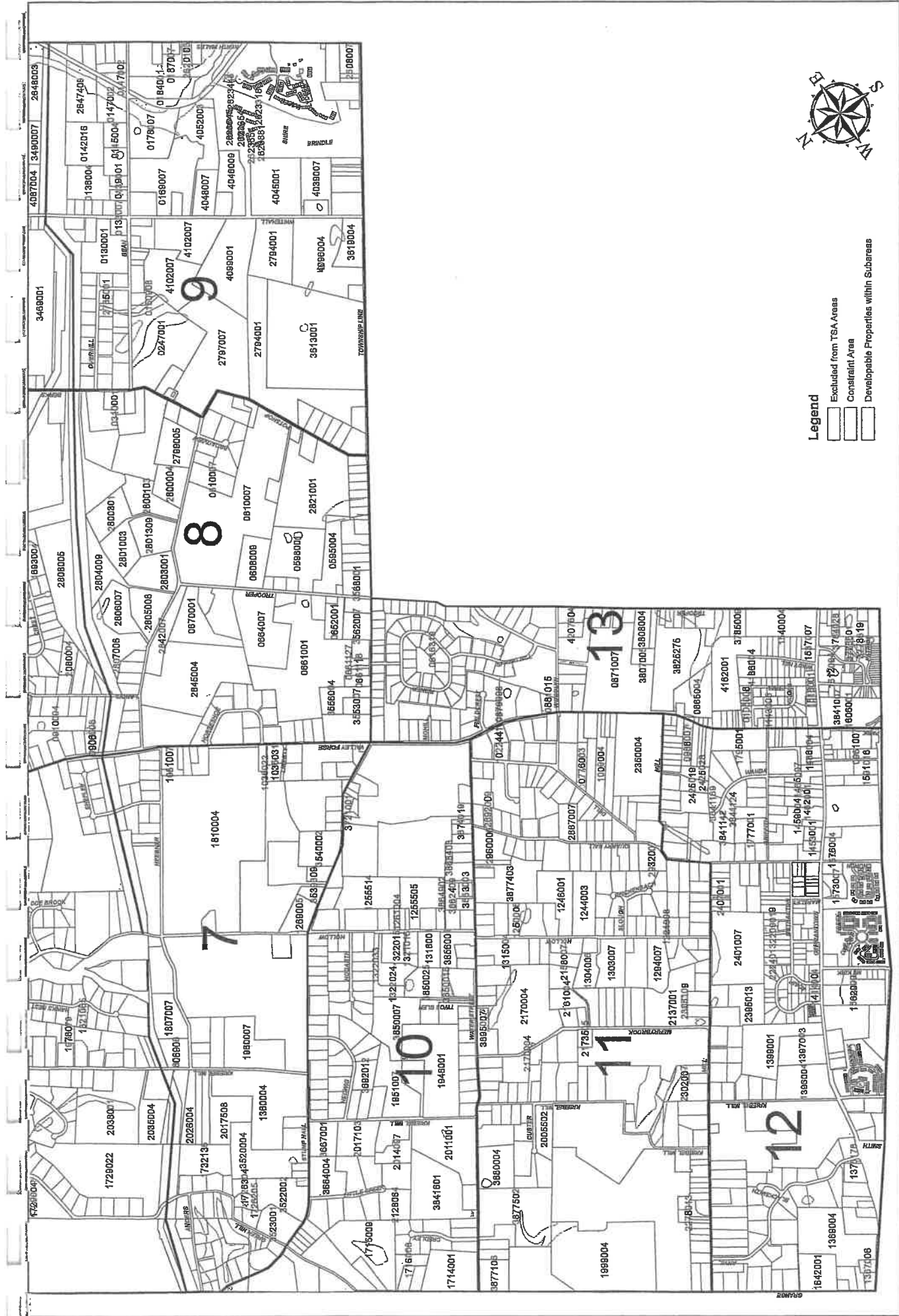
DEVELOPABLE PROPERTIES BY SUBAREA

Worcester Township Land Use Assumptions Report

NORTH TSA



Carrigan Geo Services
 168 W. Ridge Pk
 Limerick, PA 19468
 610-408-1942



DEVELOPABLE PROPERTIES BY SUBAREA

Worcester Township Land Use Assumptions Report

SOUTH TSA

0 500 1,000 2,000 3,000 4,000

Feet

Carriagan Geo Services
 168 W. Ridge Pk
 Limerick, PA 19468
 610-409-1942

01-15-2014

Proposed and Approved Subdivisions and Land Developments

In addition to the developable properties on the previous tables are 13 properties (totaling 58 parcels) that are also developable and have had applications for subdivision and land development submitted to the Township. Some of these proposed subdivisions and land developments have been granted preliminary or final plan approval, while others are still in the approvals process. No lots in these subdivisions have been issued building permits, even the ones that have been approved. If any lots would have had building permits issued, the existing Act 209 transportation impact fee would have been charged to them, and they therefore would have been deemed already developed for the purposes of the current LUAR.

The table on the following page shows all subdivisions and land developments that have been recently proposed and approved. For each of the applications, the table shows the name, location, parcel number(s), zoning district, acres, proposed residential units or square feet of nonresidential development, status, and subarea. The proposed subdivisions include some larger ones, such as the recently approved Preserve at Worcester and the Stony Creek Farms development now under construction, and several smaller ones of a few lots each. Again, these proposed and approved lots are in addition to those on the developable properties tables (pages 25-32), and are also shown on the maps of developable properties (pages 33-34).

In all, Worcester Township has pending or recently approved applications for 160 units (124 units single family detached dwellings and 36 single family attached dwellings), plus a 7,027 square foot expansion of the Trinity Evangelical Lutheran Church on Valley Forge Road. The units are widely distributed throughout the Township, in eight different subareas, some in the North TSA and some in the South TSA. The ultimate buildout of 1,142 units includes these 160 proposed and approved units, plus an additional 982 units.

Two proposed subdivisions involve two existing lots each and one proposed lot each, yet the acreage of each parcel is large enough to permit considerable future development. They are the Rhoads subdivision of 22.40 acres and the Evans subdivision of 121.45 acres. For each parcel, the two existing lots and one proposed lot are projected to require a total of 9 acres, and the remaining acreage is considered developable. These two properties appear on both the developable properties tables (pages 25-32) and the list of proposed and approved subdivisions (pages 35-36), as well as on the maps of developable properties (pages 33-34).

As noted above, Worcester Township is projected to have 412 units built between 2013 and 2023. Of that figure, the most likely units to be built during this period are the 160 units in these proposed subdivisions.

Worcester Township Proposed and Approved Subdivisions and Land Developments

Name	Location	Parcel(s)	Zoning	Acres	Proposed Units/SF	Status	Sub-area(s)
Rhoads	2062 Weber Road/	670003916409	AGR/LPD	22.40	1	Preliminary approval granted 2011	2
	2119 Berks Road	670000277007				Remaining 13.40 acres developable	
Kibblehouse	2160 Weber Road	670003925004	AGR/LPD	60.02	10	Approved and under construction	2
J.A.J.O.P.E.	North Wales & Morris Rds	670002591006	AGR	9.19	3	Approved 2011 but not recorded	3
Preserve at Worcester		670002648003	AGR	133.99	39	Final plan approval 2013	6, 9
		670004087004				(Note one property is in Subarea 9, but the development rights to that property were transferred to other properties in Subarea 6, so all 39 lots are counted in Subarea 6.)	
		670003487001					
		670004090001					
		670002647409					
		670003493004					
Evans	3110 Heebner Road	670001810004	AGR	121.45	1	PC recommended prelim/final approval 2013	7
Mandraccia	3425 Stump Road	670003523001	R175	8.12	3	Remaining 112.45 acres developable	7
			AGR	11.00	2	Approved 2012 but not recorded	8
Roman Brothers	2845 Potshop Road	670002803001	AGR	51.34	23	Approved 2013	8
Reserve at Center Point	1545 N. Trooper Road	670000661109	AGR			Preliminary approval 2005	8
		670000661001					
Stony Creek Farms	Brindle Court, etc.	various	AQRC	0.83	36	Remaining lots in development (all SFA)	9
Our Farm	1600 Potshop Road	670002797007	AGR	116.12	40	Sketch plan submitted 2012	9
		670004102007					
		670004099001					
Flanagan	1430 Hollow Road	670001255505	AGR	12.00	1	Preliminary approval granted 2011	10
Reeves	1300 Valley Forge Road	670000881006	AGR	6.14	1	Approved 2008, needs sewer module	13
		670000881015					
Trinity Luth. Church	1190 Valley Forge Road	670003825275	AGR	25.00	7,027	Preliminary plan submitted 2013	13
TOTALS							160/7,027

Projected 2013-2023 Development

As noted above, Worcester Township is projected to have 412 units built between 2013 and 2023. This figure includes 160 units in the proposed and approved subdivisions (see pages 35-36, above), leaving 252 units. This report assumes that these 252 units will be distributed among the 13 subareas in proportion to the number of units that can be developed in each subarea. If a given subarea has a great deal of developable land and a large number of potential future units, this report assumes that that subarea will have a larger proportion of the 2013-2023 development. For example, Subarea 11 has an ultimate buildout of 98 additional units, which represent 10.0 percent of the total of 982 future SFD units at buildout in the Township (all of the potential SFA units are accounted for in the Stony Creek Farms project in Subarea 9). Therefore, Subarea 11 is projected to see 10.0 percent of the 252 units to be built between 2013 and 2023 (beyond the 160 proposed or approved units), or 25 units.

These projected future units are added to the recently proposed or approved units, to find the total units in each subarea to be built between 2013 and 2023. Again, the total number of units projected in the Township during this period is 412.

The table on the following page shows the Worcester Township 2013-2023 future development by subarea. For each subarea, the table shows the following:

- Proposed and approved subdivisions, including SFD, SFA and total units.
- Ultimate buildout, including SFD, SFA, MF and total units. These figures do not include the proposed and approved units, above.
- 2013-2023 projected future development, including SFD, total SFD (which includes the proposed and approved subdivisions plus the projected future development for that subarea), SFA, MF, and total units.

The 2023 total units column includes the proposed and approved subdivisions (totaling 160 units), plus the projected future development (totaling 252 units), for a total of 412 units projected to be built in the next ten years.

The columns on the right half of the table show the nonresidential development for each subarea, both at buildout and by 2023. The buildout potential for nonresidential uses is considerable, totaling nearly 1.2 million square feet of retail, industrial and institutional development. However, the 2023 projection for nonresidential growth is very modest, totaling 10,027 square feet. This figure includes the following:

- 3,000 square feet of retail development, or 1,000 square feet in each of the three villages in the Township: Cedars (500 square feet in each of Subareas 1 and 4), Center Point (1,000 square feet in Subarea 2), and Fairview Village (500 square feet in each of Subareas 12 and 13).
- The 7,027 square foot expansion of the Trinity Evangelical Lutheran Church in Subarea 13.

These are the development projections that the traffic engineers will use to project the number of future vehicle trips on the Township's roadways. The vehicle trips will then be used to determine the road improvements necessary to accommodate the future development.

WORCESTER TOWNSHIP 2013-2023 FUTURE DEVELOPMENT BY SUBAREA

SUB AREA	RESIDENTIAL DEVELOPMENT (units)										2023				NONRESIDENTIAL DEVELOPMENT (square feet)								
	PROPOSED/APPROVED					BUILDOUT LESS PROPOSED/APPROVED					2023 PROJECTION				TOTAL			BUILDOUT			2023 PROJECTION		
	SFD	SFA	TOTAL	SFD	SFA	MIF	TOTAL	SFD	TOTAL SFD	SFA	MF	UNITS	RETAIL	INDUSTRY	OFFICE	INST	RETAIL	INDUSTRY	OFFICE	INST			
1			0	86		86	22	22				22	105,451			188,134	500						
2	11		11	115		115	30	41				41	36,000				1,000						
3	3		3	88		88	23	26				26											
4			0	65		65	17	17				17	79,081			25,166	500						
5			0	30		30	8	8				8	7,120										
6	39		39	41		41	11	50				50											
7	4		4	91		91	23	27				27											
8	25		25	68		68	17	42				42		480,988									
9	40	36	76	92		92	24	64	36			100	19,602	56,751									
10	1		1	86		86	22	23				23											
11			0	98		98	25	25				25				18,899							
12			0	74		74	19	19				19	17,032			48,952	500						
13	1		1	48		48	12	13				13	85,831			7,027	500				7,027		
TOTAL	124	36	160	982	0	0	982	252	376	36	0	412	350,117	537,739	0	288,179	3,000	0	0	0	7,027		

APPENDIX C

Manual Turning Movement Count Data

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Germantown Pike &
Kriebel Mill Road
Counter/Board #: LB

File Name : worcesterACT01w
Site Code : 81147601
Start Date : 5/7/2013
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles

Start Time	Kriebel Mill Rd Southbound				Germantown Pk Westbound				Kriebel Mill Rd Northbound				Germantown Pk Eastbound				Int. Total
	Left	Thru	ROR	Right	Left	Thru	ROR	Right	Left	Thru	ROR	Right	Left	Thru	ROR	Right	
07:00	14	0	0	15	0	54	3	42	3	0	0	5	40	140	0	2	318
07:15	46	1	1	27	4	77	3	110	0	3	0	7	84	121	0	7	491
07:30	71	5	1	50	0	79	8	45	2	29	0	8	49	125	0	10	482
07:45	7	1	1	5	1	72	0	20	1	2	0	6	18	157	0	1	292
Total	138	7	3	97	5	282	14	217	6	34	0	26	191	543	0	20	1583
08:00	13	1	0	7	1	86	0	5	3	1	0	8	10	137	0	0	272
08:15	9	1	0	2	0	96	0	2	2	2	0	4	11	149	0	0	278
08:30	11	3	0	6	1	73	0	14	3	0	1	11	11	131	0	1	266
08:45	12	0	0	6	2	74	1	22	0	1	0	8	11	138	1	1	277
Total	45	5	0	21	4	329	1	43	8	4	1	31	43	555	1	2	1093
*** BREAK ***																	
16:00	24	4	0	26	6	87	0	38	2	0	0	0	37	74	0	0	298
16:15	33	1	0	24	4	128	0	39	1	1	0	0	32	107	0	1	371
16:30	38	1	1	34	3	117	5	18	3	0	0	1	11	99	0	4	335
16:45	29	1	0	36	1	123	1	20	0	1	0	4	17	99	0	2	334
Total	124	7	1	120	14	455	6	115	6	2	0	5	97	379	0	7	1338
17:00	38	1	0	43	0	114	1	22	0	1	0	0	26	98	1	2	347
17:15	22	1	0	27	5	149	0	13	0	0	0	5	14	105	0	0	341
17:30	34	2	1	65	5	139	1	14	0	1	1	2	9	98	0	5	377
17:45	50	0	2	77	10	156	1	18	2	0	2	3	17	113	1	5	457
Total	144	4	3	212	20	558	3	67	2	2	3	10	66	414	2	12	1522
Grand Total	451	23	7	450	43	1624	24	242	22	42	4	72	397	1891	3	41	5536
Apprch %	48.4	2.5	0.8	48.3	2	76.1	1.1	20.7	15.7	30	2.9	51.4	17	81.1	0.1	1.8	
Total %	8.1	0.4	0.1	8.1	0.8	29.3	0.4	8	0.4	0.8	0.1	1.3	7.2	34.2	0.1	0.7	
Passenger Vehicles	425	19	7	428	41	1573	24	360	20	40	4	67	359	1842	3	39	5251
% Passenger Vehicles	94.2	82.6	100	95.1	95.3	96.9	100	81.4	90.9	95.2	100	93.1	90.4	97.4	100	95.1	94.9
Heavy Vehicles	26	4	0	22	2	51	0	82	2	2	0	5	38	49	0	2	285
% Heavy Vehicles	5.8	17.4	0	4.9	4.7	3.1	0	18.6	9.1	4.8	0	6.9	9.6	2.6	0	4.9	5.1

Zero Pedestrians were observed during this study.

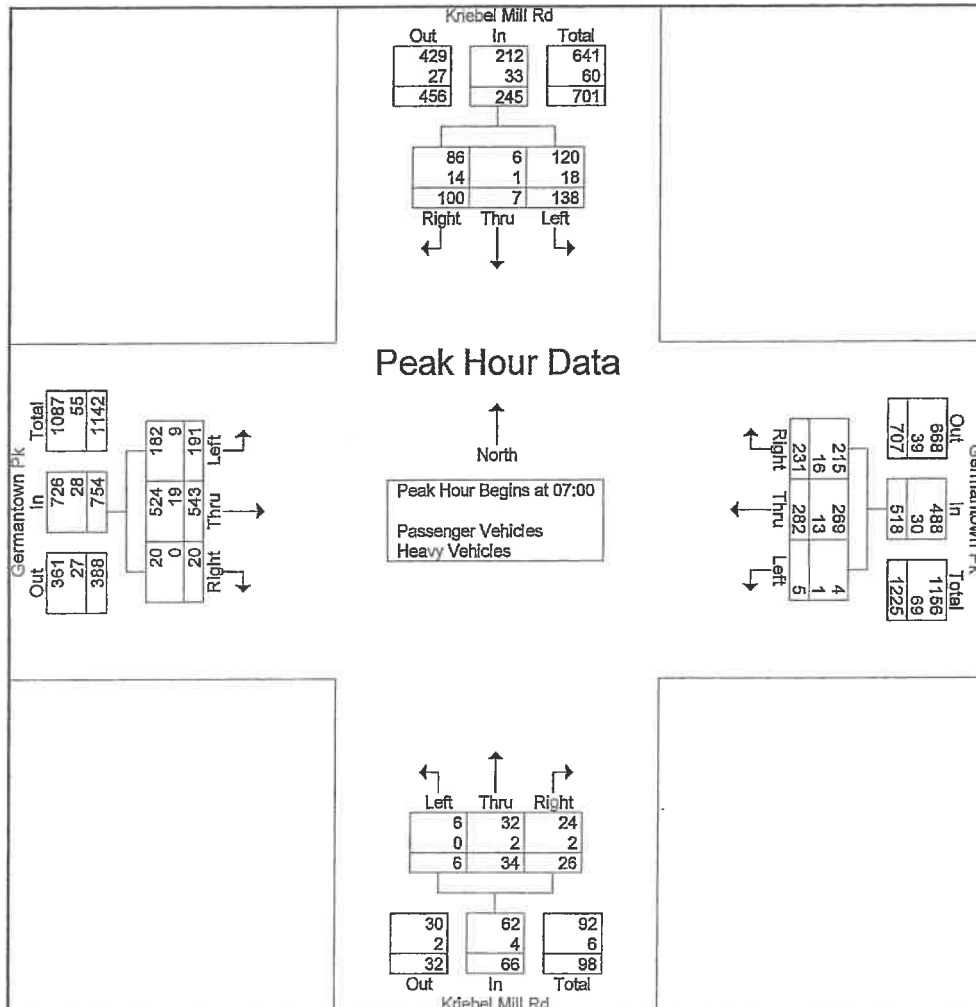
McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Germantown Pike &
Kriebel Mill Road
Counter/Board #: LB

File Name : worcesterACT01w
Site Code : 81147601
Start Date : 5/7/2013
Page No : 2

Start Time	Kriebel Mill Rd Southbound					Germantown Pk Westbound					Kriebel Mill Rd Northbound					Germantown Pk Eastbound					Int. Total
	Left	Thru	ROR	Right	App. Total	Left	Thru	RO R	Rig ht	App. Total	Left	Thru	RO R	Rig ht	App. Total	Left	Thru	RO R	Rig ht	App. Total	
Peak Hour Analysis From 07:00 to 11:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00																					
07:00	14	0	0	15	29	0	54	3	42	99	3	0	0	5	8	40	140	0	2	182	318
07:15	46	1	1	27	75	4	77	3	110	194	0	3	0	7	10	84	121	0	7	212	491
07:30	71	5	1	50	127	0	79	8	45	132	2	29	0	8	39	49	125	0	10	184	482
07:45	7	1	1	5	14	1	72	0	20	93	1	2	0	6	9	18	157	0	1	176	292
Total Volume	138	7	3	97	245	5	282	14	217	518	6	34	0	26	66	191	543	0	20	754	1583
% App. Total	56.3	2.9	1.2	39.6		1	54.4	2.7	41.9		9.1	51.5	0	39.4		25.3	72	0	2.7		
PHF	.486	.350	.750	.485	.482	.313	.892	.438	.493	.668	.500	.293	.000	.813	.423	.568	.865	.000	.500	.889	.806
Passenger Vehicles	87.0	85.7	100	85.6	86.5	80.0	95.4	100	92.6	94.2	100	94.1	0	92.3	93.9	95.3	96.5	0	100	96.3	94.0
Heavy Vehicles	13.0	14.3	0	14.4	13.5	20.0	4.6	0	7.4	5.8	0	5.9	0	7.7	6.1	4.7	3.5	0	0	3.7	6.0



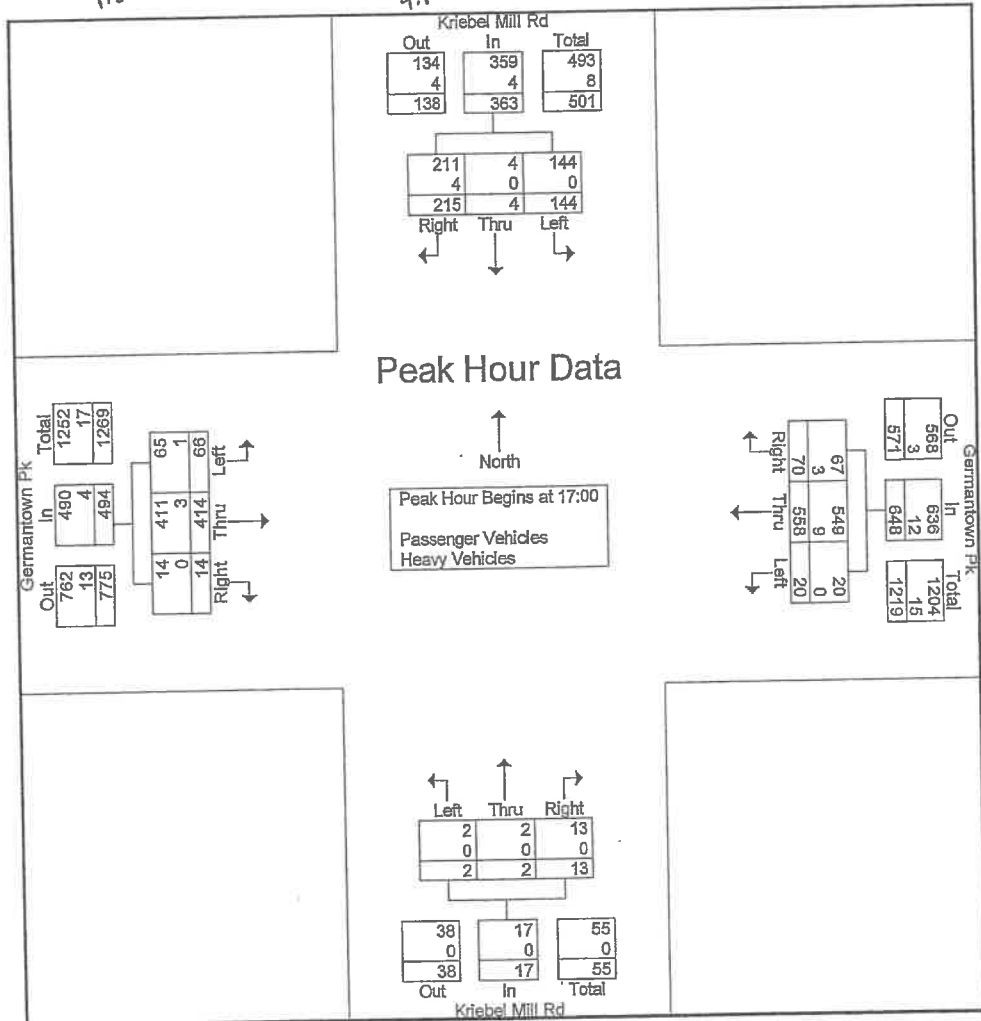
McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Germantown Pike &
Kriebel Mill Road
Counter/Board #: LB

File Name : worcesterACT01w
Site Code : 81147601
Start Date : 5/7/2013
Page No : 3

Start Time	Kriebel Mill Rd Southbound					Germantown Pk Westbound					Kriebel Mill Rd Northbound					Germantown Pk Eastbound					InL. Total
	Left	Thru	ROR	Right	App. Total	Left	Thru	ROR	Right	App. Total	Left	Thru	ROR	Right	App. Total	Left	Thru	ROR	Right	App. Total	
Peak Hour Analysis From 12:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 17:00																					
17:00	38	1	0	43	82	0	114	1	22	137	0	1	0	0	1	26	98	1	2	127	347
17:15	22	1	0	27	50	5	149	0	13	167	0	0	0	5	5	14	105	0	0	119	341
17:30	34	2	1	65	102	5	139	1	14	159	0	1	1	2	4	9	98	0	5	112	377
17:45	50	0	2	77	129	10	156	1	18	185	2	0	2	3	7	17	113	1	5	136	457
Total Volume	144	4	3	212	363	20	558	3	67	648	2	2	3	10	17	66	414	2	12	494	1522
% App. Total	39.7	1.1	0.8	58.4		3.1	86.1	0.5	10.3		11.8	11.8	17.6	58.8		13.4	83.8	0.4	2.4		
PHF	.720	.500	.375	.688	.703	.500	.894	.750	.761	.876	.250	.500	.375	.500	.607	.635	.916	.500	.600	.908	.833
Passenger Vehicles	100	100	100	98.1	98.9	100	98.4	100	95.5	98.1	100	100	100	100	100	98.5	99.3	100	100	99.2	98.7
% Passenger Vehicles																					
Heavy Vehicles	0	0	0	1.9	1.1	0	1.6	0	4.5	1.9	0	0	0	0	0	1.5	0.7	0	0	0.8	1.3
% Heavy Vehicles																					



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File Name : worcesterACT01w
Site Code : 81147601
Start Date : 5/7/2013
Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Kriebel Mill Rd Southbound				Germantown Pk Westbound				Kriebel Mill Rd Northbound				Germantown Pk Eastbound				Int. Total
	Left	Thru	ROR	Right	Left	Thru	ROR	Right	Left	Thru	ROR	Right	Left	Thru	ROR	Right	
07:00	12	0	0	11	0	53	3	40	3	0	0	4	37	135	0	2	300
07:15	35	0	1	23	3	72	3	97	0	2	0	7	78	116	0	7	444
07:30	68	5	1	44	0	76	8	44	2	28	0	7	49	120	0	10	462
07:45	5	1	1	5	1	68	0	20	1	2	0	6	18	153	0	1	282
Total	120	6	3	83	4	269	14	201	6	32	0	24	182	524	0	20	1488
08:00	10	0	0	7	1	81	0	3	3	1	0	8	10	136	0	0	260
08:15	7	1	0	1	0	93	0	1	1	2	0	4	11	140	0	0	261
08:30	8	1	0	6	1	68	0	8	2	0	1	10	9	128	0	0	242
08:45	12	0	0	6	1	67	1	4	0	1	0	6	4	133	1	0	236
Total	37	2	0	20	3	309	1	16	6	4	1	28	34	537	1	0	999
*** BREAK ***																	
16:00	24	4	0	26	6	83	0	24	2	0	0	0	32	70	0	0	271
16:15	33	1	0	23	4	125	0	21	1	1	0	0	22	104	0	1	336
16:30	38	1	1	32	3	116	5	17	3	0	0	1	10	97	0	4	328
16:45	29	1	0	36	1	122	1	17	0	1	0	4	14	99	0	2	327
Total	124	7	1	117	14	446	6	79	6	2	0	5	78	370	0	7	1262
17:00	38	1	0	43	0	112	1	20	0	1	0	0	26	98	1	2	343
17:15	22	1	0	27	5	146	0	13	0	0	0	5	14	105	0	0	338
17:30	34	2	1	65	5	136	1	14	0	1	1	2	9	97	0	5	373
17:45	50	0	2	73	10	155	1	17	2	0	2	3	16	111	1	5	448
Total	144	4	3	208	20	549	3	64	2	2	3	10	65	411	2	12	1502
Grand Total	425	19	7	428	41	1573	24	360	20	40	4	67	359	1842	3	39	5251
Apprch %	48.4	2.2	0.8	48.7	2.1	78.7	1.2	18	15.3	30.5	3.1	51.1	16	82.1	0.1	1.7	
Total %	8.1	0.4	0.1	8.2	0.8	30	0.5	6.9	0.4	0.8	0.1	1.3	6.8	35.1	0.1	0.7	

Zero Pedestrians were observed during this study.

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Germantown Pike &
Kriebel Mill Road
Counter/Board #: LB

File Name : worcesterACT01w
Site Code : 81147601
Start Date : 5/7/2013
Page No : 1

Groups Printed- Heavy Vehicles

Start Time	Kriebel Mill Rd Southbound				Germantown Pk Westbound				Kriebel Mill Rd Northbound				Germantown Pk Eastbound				Int. Total
	Left	Thru	ROR	Right	Left	Thru	ROR	Right	Left	Thru	ROR	Right	Left	Thru	ROR	Right	
07:00	2	0	0	4	0	1	0	2	0	0	0	1	3	5	0	0	18
07:15	11	1	0	4	1	5	0	13	0	1	0	0	6	5	0	0	47
07:30	3	0	0	6	0	3	0	1	0	1	0	1	0	5	0	0	20
07:45	2	0	0	0	0	4	0	0	0	0	0	0	0	4	0	0	10
Total	18	1	0	14	1	13	0	16	0	2	0	2	9	19	0	0	95
08:00	3	1	0	0	0	5	0	2	0	0	0	0	0	1	0	0	12
08:15	2	0	0	1	0	3	0	1	1	0	0	0	0	9	0	0	17
08:30	3	2	0	0	0	5	0	6	1	0	0	1	2	3	0	1	24
08:45	0	0	0	0	1	7	0	18	0	0	0	2	7	5	0	1	41
Total	8	3	0	1	1	20	0	27	2	0	0	3	9	18	0	2	94
*** BREAK ***																	
16:00	0	0	0	0	0	4	0	14	0	0	0	0	5	4	0	0	27
16:15	0	0	0	1	0	3	0	18	0	0	0	0	10	3	0	0	35
16:30	0	0	0	2	0	1	0	1	0	0	0	0	1	2	0	0	7
16:45	0	0	0	0	0	1	0	3	0	0	0	0	3	0	0	0	7
Total	0	0	0	3	0	9	0	36	0	0	0	0	19	9	0	0	76
17:00	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	4
17:15	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
17:30	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	4
17:45	0	0	0	4	0	1	0	1	0	0	0	0	1	2	0	0	9
Total	0	0	0	4	0	9	0	3	0	0	0	0	1	3	0	0	20
Grand Total	26	4	0	22	2	51	0	82	2	2	0	5	38	49	0	2	285
Apprch %	50	7.7	0	42.3	1.5	37.8	0	60.7	22.2	22.2	0	55.6	42.7	55.1	0	2.2	
Total %	9.1	1.4	0	7.7	0.7	17.9	0	28.8	0.7	0.7	0	1.8	13.3	17.2	0	0.7	

Zero Pedestrians were observed during this study.

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Germantown Pike &
Quarry Hall Road / Church Road
Counter/Board #: :LB

File Name : worcesterACT03w
Site Code : 81147603
Start Date : 5/8/2013
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles

Start Time	Quarry Hall Rd Southbound			Germantown Pk Westbound			Church Rd Northbound			Germantown Pk Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00	1	2	9	3	86	2	2	6	12	33	144	2	302
07:15	0	3	10	6	140	14	0	11	11	30	138	0	363
07:30	1	5	19	4	100	7	2	16	9	31	139	4	337
07:45	5	6	22	6	83	8	0	9	8	25	131	4	307
Total	7	16	60	19	409	31	4	42	40	119	552	10	1309
08:00	1	15	16	3	101	9	0	8	16	17	127	2	315
08:15	1	5	11	6	74	6	2	8	18	41	119	2	293
08:30	0	11	14	5	70	5	1	4	8	19	137	2	276
08:45	1	10	20	13	75	13	1	10	14	31	136	8	332
Total	3	41	61	27	320	33	4	30	56	108	519	14	1216
*** BREAK ***													
16:00	2	3	15	6	149	10	1	3	5	6	128	2	330
16:15	2	2	18	11	131	2	2	3	11	11	113	4	310
16:30	1	2	23	11	137	6	2	2	12	5	104	3	308
16:45	3	1	19	9	139	5	0	6	14	8	110	1	315
Total	8	8	75	37	556	23	5	14	42	30	455	10	1263
17:00	1	5	21	13	155	17	0	9	18	15	109	0	363
17:15	1	2	15	5	145	6	0	7	10	16	129	3	339
17:30	3	9	27	18	156	3	1	8	16	13	128	0	382
17:45	3	4	21	17	146	3	0	10	9	15	129	1	358
Total	8	20	84	53	602	29	1	34	53	59	495	4	1442
Grand Total	26	85	280	136	1887	116	14	120	191	316	2021	38	5230
Apprch %	6.6	21.7	71.6	6.4	88.2	5.4	4.3	36.9	58.8	13.3	85.1	1.6	
Total %	0.5	1.6	5.4	2.6	36.1	2.2	0.3	2.3	3.7	6	38.6	0.7	
Passenger Vehicles	25	83	272	131	1826	114	13	119	188	310	1952	36	5069
% Passenger Vehicles	96.2	97.6	97.1	96.3	96.8	98.3	92.9	99.2	98.4	98.1	96.6	94.7	96.9
Heavy Vehicles	1	2	8	5	61	2	1	1	3	6	69	2	161
% Heavy Vehicles	3.8	2.4	2.9	3.7	3.2	1.7	7.1	0.8	1.6	1.9	3.4	5.3	3.1

Zero Pedestrians were observed during this study.

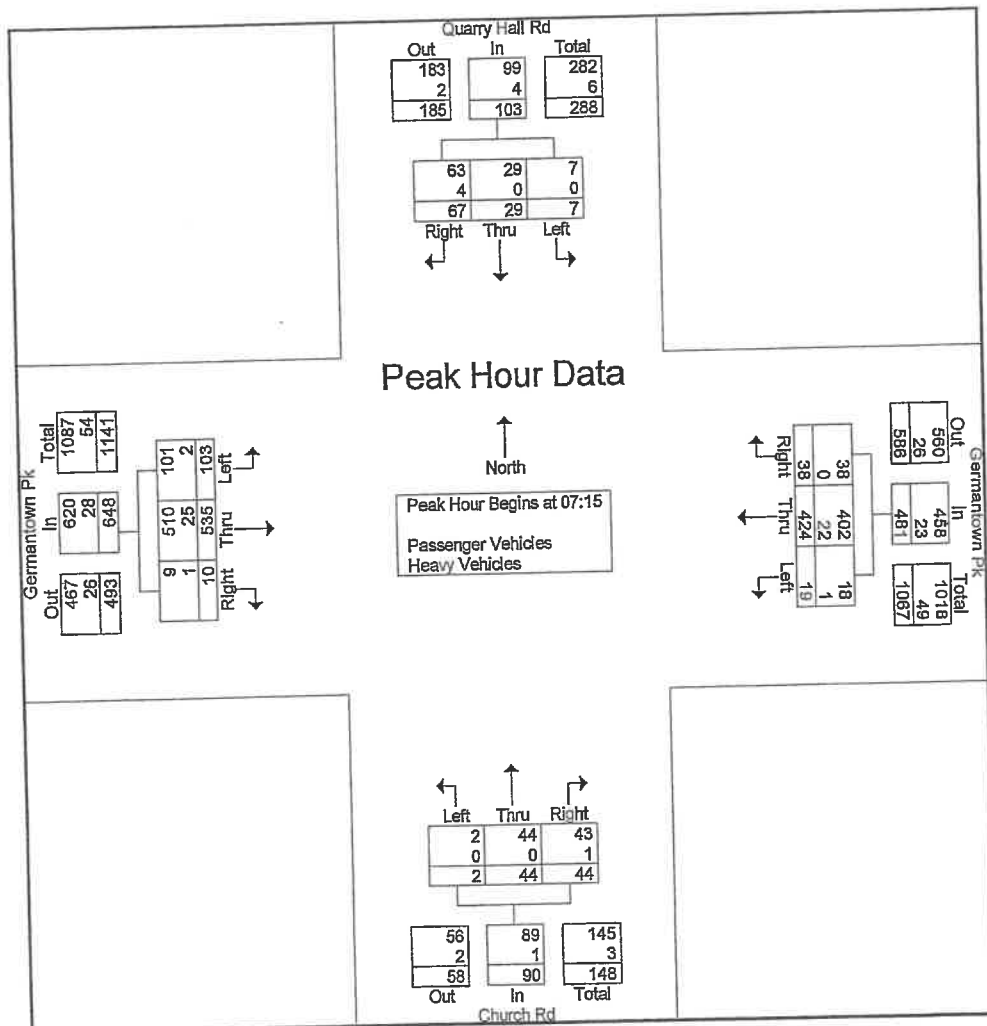
McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Germantown Pike &
Quarry Hall Road / Church Road
Counter/Board #: :LB

File Name : worcesterACT03w
Site Code : 81147603
Start Date : 5/8/2013
Page No : 2

Start Time	Quarry Hall Rd Southbound				Germantown Pk Westbound				Church Rd Northbound				Germantown Pk Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 to 12:30 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15																	
07:15	0	3	10	13	6	140	14	160	0	11	11	22	30	138	0	168	363
07:30	1	5	19	25	4	100	7	111	2	16	9	27	31	139	4	174	337
07:45	5	6	22	33	6	83	8	97	0	9	8	17	25	131	4	160	307
08:00	1	15	16	32	3	101	9	113	0	8	16	24	17	127	2	146	315
Total Volume	7	29	67	103	19	424	38	481	2	44	44	90	103	535	10	648	1322
% App. Total	6.8	28.2	65		4	88.1	7.9		2.2	48.9	48.9		15.9	82.6	1.5		
PHF	.350	.483	.761	.780	.792	.757	.679	.752	.250	.688	.688	.833	.831	.962	.625	.931	.910
Passenger Vehicles	7	29	63	99	18	402	38	458	2	44	43	89	101	510	9	620	1266
% Passenger Vehicles	100	100	94.0	96.1	94.7	94.8	100	95.2	100	100	97.7	98.9	98.1	95.3	90.0	95.7	95.8
Heavy Vehicles	0	0	4	4	1	22	0	23	0	0	1	1	2	25	1	28	56
% Heavy Vehicles	0	0	6.0	3.9	5.3	5.2	0	4.8	0	0	2.3	1.1	1.9	4.7	10.0	4.3	4.2



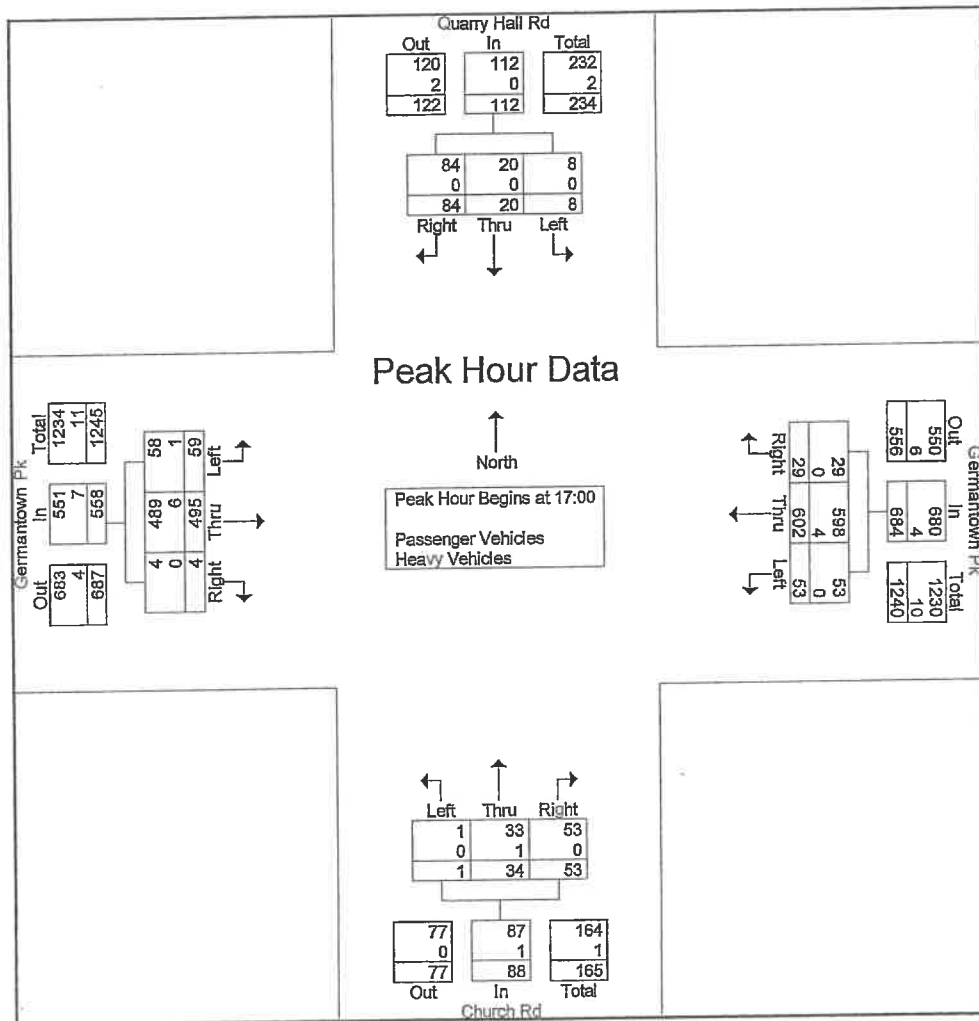
McMahon Associates Inc.

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Fort Washington, PA 19034

Municipality: Worcester Township
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File Name : worcesterACT03w
Site Code : 81147603
Start Date : 5/8/2013
Page No : 3

Start Time	Quarry Hall Rd Southbound				Germantown Pk Westbound				Church Rd Northbound				Germantown Pk Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 12:45 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 17:00																	
17:00	1	5	21	27	13	155	17	185	0	9	18	27	15	109	0	124	363
17:15	1	2	15	18	5	145	6	156	0	7	10	17	16	129	3	148	339
17:30	3	9	27	39	18	166	3	177	1	8	16	25	13	128	0	141	382
17:45	3	4	21	28	17	146	3	166	0	10	9	19	15	129	1	145	358
Total Volume	8	20	84	112	53	602	29	684	1	34	53	88	59	495	4	558	1442
% App. Total	7.1	17.9	75		7.7	88	4.2		1.1	38.6	60.2		10.6	88.7	0.7		
PHF	.667	.556	.778	.718	.736	.965	.426	.924	.250	.850	.736	.815	.922	.959	.333	.943	.944
Passenger Vehicles	8	20	84	112	53	598	29	680	1	33	53	87	58	489	4	551	1430
% Passenger Vehicles	100	100	100	100	100	99.3	100	99.4	100	97.1	100	98.9	98.3	98.8	100	98.7	99.2
Heavy Vehicles	0	0	0	0	0	4	0	4	0	1	0	1	1	6	0	7	12
% Heavy Vehicles	0	0	0	0	0	0.7	0	0.6	0	2.9	0	1.1	1.7	1.2	0	1.3	0.8



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Site Code : 81147603
Start Date : 5/8/2013
Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Quarry Hall Rd Southbound			Germantown Pk Westbound			Church Rd Northbound			Germantown Pk Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00	1	2	8	3	86	2	2	6	12	31	142	1	296
07:15	0	3	9	6	131	14	0	11	11	29	128	0	342
07:30	1	5	17	4	94	7	2	16	8	31	133	3	321
07:45	5	6	21	5	80	8	0	9	8	25	126	4	297
Total	7	16	55	18	391	31	4	42	39	116	529	8	1256
08:00	1	15	16	3	97	9	0	8	16	16	123	2	306
08:15	1	3	10	4	69	6	2	8	18	40	111	2	274
08:30	0	11	14	4	66	4	1	4	7	19	128	2	260
08:45	1	10	19	13	72	13	1	10	14	31	129	8	321
Total	3	39	59	24	304	32	4	30	55	106	491	14	1161

*** BREAK ***

16:00	1	3	15	6	138	10	0	3	4	6	123	2	311
16:15	2	2	17	10	123	2	2	3	11	11	111	4	298
16:30	1	2	23	11	134	5	2	2	12	5	104	3	304
16:45	3	1	19	9	138	5	0	6	14	8	105	1	309
Total	7	8	74	36	533	22	4	14	41	30	443	10	1222
17:00	1	5	21	13	155	17	0	9	18	14	106	0	359
17:15	1	2	15	5	144	6	0	7	10	16	127	3	336
17:30	3	9	27	18	154	3	1	8	16	13	127	0	379
17:45	3	4	21	17	145	3	0	9	9	15	129	1	356
Total	8	20	84	53	598	29	1	33	53	58	489	4	1430
Grand Total	25	83	272	131	1826	114	13	119	188	310	1952	36	5069
Apprch %	6.6	21.8	71.6	6.3	88.2	5.5	4.1	37.2	58.8	13.5	84.9	1.6	
Total %	0.5	1.6	5.4	2.6	36	2.2	0.3	2.3	3.7	6.1	38.5	0.7	

Zero Pedestrians were observed during this study.

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Germantown Pike &
Quarry Hall Road / Church Road
Counter/Board #: :LB

File Name : worcesterACT03w
Site Code : 81147603
Start Date : 5/8/2013
Page No : 1

Groups Printed- Heavy Vehicles

Start Time	Quarry Hall Rd Southbound			Germantown Pk Westbound			Church Rd Northbound			Germantown Pk Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00	0	0	1	0	0	0	0	0	0	2	2	1	6
07:15	0	0	1	0	9	0	0	0	0	1	10	0	21
07:30	0	0	2	0	6	0	0	0	1	0	6	1	16
07:45	0	0	1	1	3	0	0	0	0	0	5	0	10
Total	0	0	5	1	18	0	0	0	1	3	23	2	53
08:00	0	0	0	0	4	0	0	0	0	1	4	0	9
08:15	0	2	1	2	5	0	0	0	0	1	8	0	19
08:30	0	0	0	1	4	1	0	0	1	0	9	0	16
08:45	0	0	1	0	3	0	0	0	0	0	7	0	11
Total	0	2	2	3	16	1	0	0	1	2	28	0	55
*** BREAK ***													
16:00	1	0	0	0	11	0	1	0	1	0	5	0	19
16:15	0	0	1	1	8	0	0	0	0	0	2	0	12
16:30	0	0	0	0	3	1	0	0	0	0	0	0	4
16:45	0	0	0	0	1	0	0	0	0	0	5	0	6
Total	1	0	1	1	23	1	1	0	1	0	12	0	41
17:00	0	0	0	0	0	0	0	0	0	1	3	0	4
17:15	0	0	0	0	1	0	0	0	0	0	2	0	3
17:30	0	0	0	0	2	0	0	0	0	0	1	0	3
17:45	0	0	0	0	1	0	0	1	0	0	0	0	2
Total	0	0	0	0	4	0	0	1	0	1	6	0	12
Grand Total	1	2	8	5	61	2	1	1	3	6	69	2	161
Apprch %	9.1	18.2	72.7	7.4	89.7	2.9	20	20	60	7.8	89.6	2.6	
Total %	0.6	1.2	5	3.1	37.9	1.2	0.6	0.6	1.9	3.7	42.9	1.2	

Zero Pedestrians were observed during this study.

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Germantown Pike &
Valley Forge Rd (Rt 363)
Counter/Board #: JB

File Name : worcesterACT05w
Site Code : 81147605
Start Date : 5/9/2013
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles

Start Time	Valley Forge Rd (Rt 363) Southbound				Germantown Pk Westbound				Valley Forge Rd (Rt 363) Northbound				Germantown Pk Eastbound				Int. Total
	Left	Thru	ROR	Right	Left	Thru	ROR	Right	Left	Thru	ROR	Right	Left	Thru	ROR	Right	
07:00	27	151	0	12	13	66	5	5	18	94	3	35	19	115	1	5	569
07:15	20	132	2	12	15	68	8	9	42	105	1	35	23	119	1	7	599
07:30	47	123	2	11	31	54	7	10	21	113	2	30	19	102	1	11	584
07:45	49	138	1	20	24	87	3	8	9	83	0	26	16	132	0	7	603
Total	143	544	5	55	83	275	23	32	90	395	6	126	77	468	3	30	2355
08:00	39	147	2	21	16	75	7	6	9	104	2	36	18	111	0	8	601
08:15	28	129	0	26	28	68	6	9	9	84	2	32	22	112	0	7	562
08:30	20	126	0	18	37	79	6	12	18	85	3	21	31	116	0	9	581
08:45	41	146	0	23	34	52	7	24	12	90	0	36	33	99	1	8	606
Total	128	548	2	88	115	274	26	51	48	363	7	125	104	438	1	32	2350
*** BREAK ***																	
16:00	29	94	1	30	62	98	14	13	17	121	0	18	42	64	0	15	618
16:15	30	103	3	34	52	108	13	11	33	128	1	22	33	86	1	18	676
16:30	24	91	3	44	65	117	11	9	19	119	0	22	32	86	2	19	663
16:45	19	120	1	34	77	117	13	5	23	122	0	18	44	88	2	19	702
Total	102	408	8	142	256	440	51	38	92	490	1	80	151	324	5	71	2659
17:00	22	102	1	34	68	106	16	8	29	93	0	18	38	71	1	15	622
17:15	9	128	0	29	62	118	10	5	20	126	0	16	56	89	0	23	691
17:30	15	118	0	19	67	104	6	10	14	131	0	20	40	101	1	17	663
17:45	14	124	2	40	64	119	5	5	28	123	0	25	35	120	0	11	715
Total	60	472	3	122	261	447	37	28	91	473	0	79	169	381	2	66	2691
Grand Total	433	1972	18	407	715	1436	137	149	321	1721	14	410	501	1611	11	199	10055
Apprch %	15.3	69.7	0.6	14.4	29.3	58.9	5.6	6.1	13	69.8	0.6	16.6	21.6	69.4	0.5	8.6	
Total %	4.3	19.6	0.2	4	7.1	14.3	1.4	1.5	3.2	17.1	0.1	4.1	5	16	0.1	2	
Passenger Vehicles	409	1886	18	376	694	1384	137	129	306	1651	14	387	478	1560	11	181	9621
% Passenger Vehicles	94.5	95.6	100	92.4	97.1	96.4	100	86.6	95.3	95.9	100	94.4	95.4	96.8	100	91	95.7
Heavy Vehicles	24	86	0	31	21	52	0	20	15	70	0	23	23	51	0	18	434
% Heavy Vehicles	5.5	4.4	0	7.6	2.9	3.6	0	13.4	4.7	4.1	0	5.6	4.6	3.2	0	9	4.3

Zero Pedestrians were observed during this study.

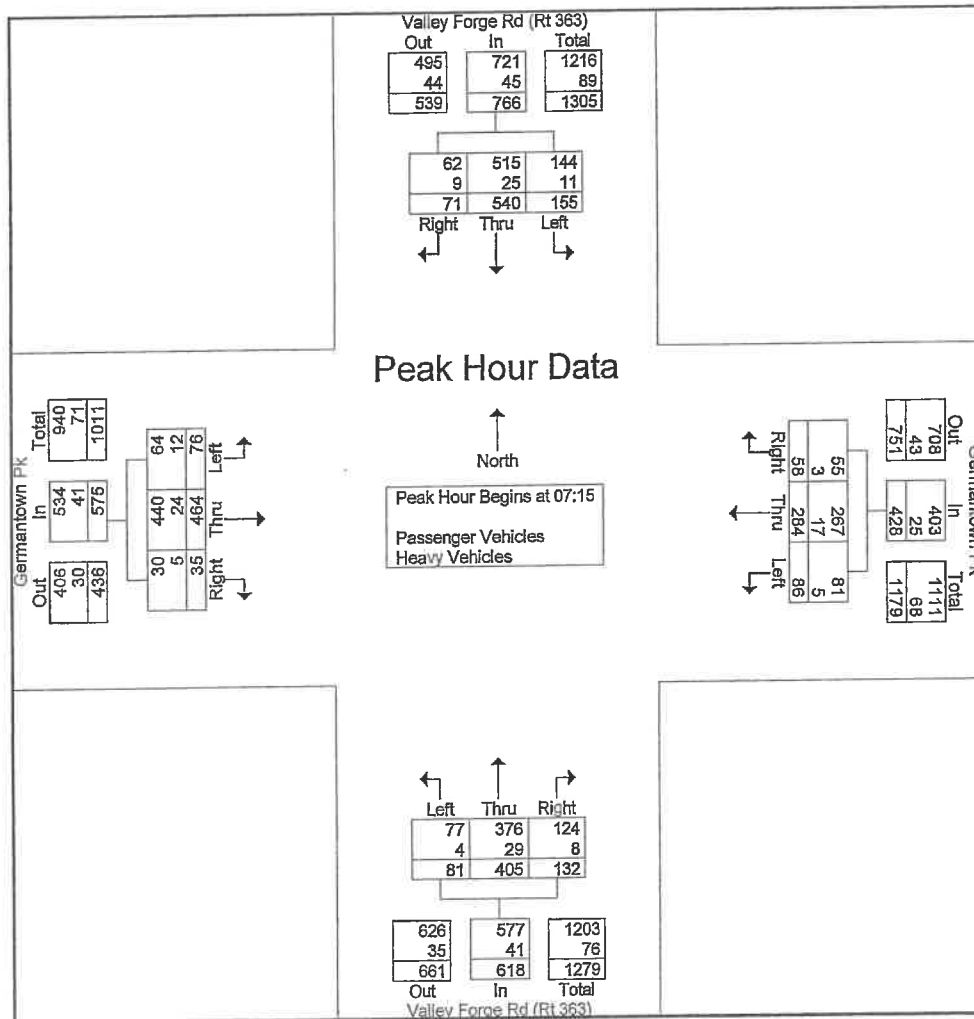
McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Germantown Pike &
Valley Forge Rd (Rt 363)
Counter/Board #: JB

File Name : worcesterACT05w
Site Code : 81147605
Start Date : 5/9/2013
Page No : 2

Start Time	Valley Forge Rd (Rt 363) Southbound					Germantown Pk Westbound					Valley Forge Rd (Rt 363) Northbound					Germantown Pk Eastbound					Int. Total
	Left	Thru	ROR	Right	App. Total	Left	Thru	RO R	Rig ht	App. Total	Left	Thru	RO R	Rig ht	App. Total	Left	Thru	RO R	Rig ht	App. Total	
Peak Hour Analysis From 07:00 to 11:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	20	132	2	12	166	15	68	8	9	100	42	105	1	35	183	23	119	1	7	150	599
07:30	47	123	2	11	183	31	54	7	10	102	21	113	2	30	166	19	102	1	11	133	584
07:45	49	138	1	20	208	24	87	3	8	122	9	83	0	26	118	16	132	0	7	155	603
08:00	39	147	2	21	209	16	75	7	6	104	9	104	2	36	151	18	111	0	8	137	601
Total Volume	155	540	7	64	766	86	284	25	33	428	81	405	5	127	618	76	464	2	33	575	2387
% App. Total	20.2	70.5	0.9	8.4		20.1	66.4	5.8	7.7		13.1	65.5	0.8	20.6		13.2	80.7	0.3	5.7		
PHF	.791	.918	.875	.762	.916	.694	.816	.781	.825	.877	.482	.896	.625	.882	.844	.826	.879	.500	.750	.927	.990
Passenger Vehicles	92.9	95.4	100	85.9	94.1	94.2	94.0	100	90.9	94.2	95.1	92.8	100	93.7	93.4	84.2	94.8	100	84.8	92.9	93.6
% Passenger Vehicles																					
Heavy Vehicles	7.1	4.6	0	14.1	5.9	5.8	6.0	0	9.1	5.8	4.9	7.2	0	6.3	6.6	15.8	5.2	0	15.2	7.1	6.4
% Heavy Vehicles																					



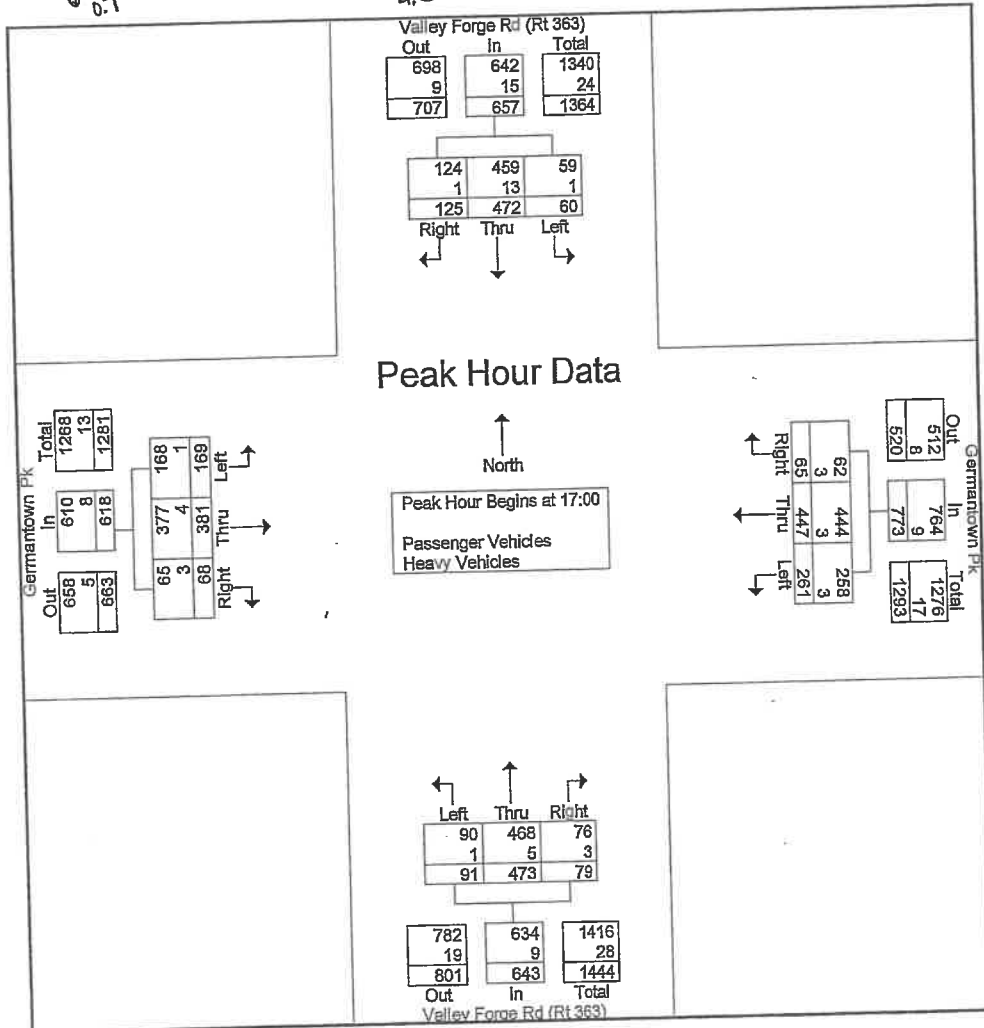
McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Germantown Pike &
Valley Forge Rd (Rt 363)
Counter/Board #: JB

File Name : worcesterACT05w
Site Code : 81147605
Start Date : 5/9/2013
Page No : 3

Start Time	Valley Forge Rd (Rt 363) Southbound					Germantown Pk Westbound					Valley Forge Rd (Rt 363) Northbound					Germantown Pk Eastbound					Int. Total
	Left	Thru	ROR	Right	App. Total	Left	Thru	ROR	Right	App. Total	Left	Thru	ROR	Right	App. Total	Left	Thru	ROR	Right	App. Total	
Peak Hour Analysis From 12:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 17:00																					
17:00	22	102	1	34	159	68	106	16	8	198	29	93	0	18	140	38	71	1	15	125	622
17:15	9	128	0	29	166	62	118	10	5	195	20	126	0	16	162	56	89	0	23	168	691
17:30	15	118	0	19	152	67	104	6	10	187	14	131	0	20	165	40	101	1	17	159	663
17:45	14	124	2	40	180	64	119	5	5	193	28	123	0	25	176	35	120	0	11	166	715
Total Volume	60	472	3	122	657	261	447	37	28	773	91	473	0	79	643	169	381	2	66	618	2691
% App. Total	9.1	71.8	0.5	18.6		33.8	57.8	4.8	3.6		14.2	73.6	0	12.3		27.3	61.7	0.3	10.7		
PHF	.682	.922	.375	.763	.913	.960	.939	.578	.700	.976	.784	.903	.000	.790	.913	.754	.794	.500	.717	.920	.941
Passenger Vehicles																					
% Passenger Vehicles	98.3	97.2	100	99.2	97.7	98.9	99.3	100	89.3	98.8	98.9	98.9	0	96.2	98.6	99.4	99.0	100	95.5	98.7	98.5
Heavy Vehicles	1.7	2.8	0	0.8	2.3	1.1	0.7	0	10.7	1.2	1.1	1.1	0	3.8	1.4	0.6	1.0	0	4.5	1.3	1.5
% Heavy Vehicles																					



McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Germantown Pike &
Valley Forge Rd (Rt 363)
Counter/Board #: JB

File Name : worcesterACT05w
Site Code : 81147605
Start Date : 5/9/2013
Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Valley Forge Rd (Rt 363) Southbound				Germantown Pk Westbound				Valley Forge Rd (Rt 363) Northbound				Germantown Pk Eastbound				Int. Total
	Left	Thru	ROR	Right	Left	Thru	ROR	Right	Left	Thru	ROR	Right	Left	Thru	ROR	Right	
07:00	26	136	0	11	12	63	5	4	18	85	3	28	18	102	1	4	516
07:15	17	127	2	9	15	64	8	9	39	98	1	30	20	109	1	6	555
07:30	42	120	2	10	26	53	7	9	20	105	2	28	15	100	1	10	550
07:45	48	130	1	17	24	81	3	8	9	77	0	25	13	125	0	6	567
Total	133	513	5	47	77	261	23	30	86	365	6	111	66	436	3	26	2188
08:00	37	138	2	19	16	69	7	4	9	96	2	36	16	106	0	6	563
08:15	27	123	0	19	27	66	6	7	7	82	2	32	21	109	0	5	533
08:30	18	118	0	14	35	69	6	7	17	79	3	21	30	114	0	6	537
08:45	37	142	0	22	32	50	7	19	9	86	0	34	31	98	1	6	574
Total	119	521	2	74	110	254	26	37	42	343	7	123	98	427	1	23	2207
*** BREAK ***																	
16:00	27	90	1	30	60	93	14	12	16	117	0	18	38	61	0	13	590
16:15	30	95	3	32	50	102	13	11	31	124	1	20	33	85	1	18	649
16:30	23	88	3	38	65	114	11	9	18	115	0	22	31	86	2	19	644
16:45	18	120	1	34	74	116	13	5	23	119	0	17	44	88	2	19	693
Total	98	393	8	134	249	425	51	37	88	475	1	77	146	320	5	69	2576
17:00	22	101	1	34	67	105	16	7	28	92	0	17	37	71	1	13	612
17:15	9	122	0	29	61	116	10	4	20	124	0	15	56	88	0	23	677
17:30	14	114	0	19	67	104	6	9	14	130	0	19	40	99	1	17	653
17:45	14	122	2	39	63	119	5	5	28	122	0	25	35	119	0	10	708
Total	59	459	3	121	258	444	37	25	90	468	0	76	168	377	2	63	2650
Grand Total	409	1886	18	376	694	1384	137	129	306	1651	14	387	478	1560	11	181	9621
Apprch %	15.2	70.1	0.7	14	29.6	59	5.8	5.5	13	70	0.6	16.4	21.4	70	0.5	8.1	
Total %	4.3	19.6	0.2	3.9	7.2	14.4	1.4	1.3	3.2	17.2	0.1	4	5	16.2	0.1	1.9	

Zero Pedestrians were observed during this study.

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Germantown Pike &
Valley Forge Rd (Rt 363)
Counter/Board #: JB

File Name : worcesterACT05w
Site Code : 81147605
Start Date : 5/9/2013
Page No : 1

Groups Printed- Heavy Vehicles

Start Time	Valley Forge Rd (Rt 363) Southbound				Germantown Pk Westbound				Valley Forge Rd (Rt 363) Northbound				Germantown Pk Eastbound				Int. Total
	Left	Thru	ROR	Right	Left	Thru	ROR	Right	Left	Thru	ROR	Right	Left	Thru	ROR	Right	
07:00	1	15	0	1	1	3	0	1	0	9	0	7	1	13	0	1	53
07:15	3	5	0	3	0	4	0	0	3	7	0	5	3	10	0	1	44
07:30	5	3	0	1	5	1	0	1	1	8	0	2	4	2	0	1	34
07:45	1	8	0	3	0	6	0	0	0	6	0	1	3	7	0	1	36
Total	10	31	0	8	6	14	0	2	4	30	0	15	11	32	0	4	167
08:00	2	9	0	2	0	6	0	2	0	8	0	0	2	5	0	2	38
08:15	1	6	0	7	1	2	0	2	2	2	0	0	1	3	0	2	29
08:30	2	8	0	4	2	10	0	5	1	6	0	0	1	2	0	3	44
08:45	4	4	0	1	2	2	0	5	3	4	0	2	2	1	0	2	32
Total	9	27	0	14	5	20	0	14	6	20	0	2	6	11	0	9	143
*** BREAK ***																	
16:00	2	4	0	0	2	5	0	1	1	4	0	0	4	3	0	2	28
16:15	0	8	0	2	2	6	0	0	2	4	0	2	0	1	0	0	27
16:30	1	3	0	6	0	3	0	0	1	4	0	0	1	0	0	0	19
16:45	1	0	0	0	3	1	0	0	0	3	0	1	0	0	0	0	9
Total	4	15	0	8	7	15	0	1	4	15	0	3	5	4	0	2	83
17:00	0	1	0	0	1	1	0	1	1	1	0	1	1	0	0	2	10
17:15	0	6	0	0	1	2	0	1	0	2	0	1	0	1	0	0	14
17:30	1	4	0	0	0	0	0	1	0	1	0	1	0	2	0	0	10
17:45	0	2	0	1	1	0	0	0	0	1	0	0	0	1	0	1	7
Total	1	13	0	1	3	3	0	3	1	5	0	3	1	4	0	3	41
Grand Total	24	86	0	31	21	52	0	20	15	70	0	23	23	51	0	18	434
Apprch %	17	61	0	22	22.6	55.9	0	21.5	13.9	64.8	0	21.3	25	55.4	0	19.6	
Total %	5.5	19.8	0	7.1	4.8	12	0	4.6	3.5	16.1	0	5.3	5.3	11.8	0	4.1	

Zero Pedestrians were observed during this study.

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Valley Forge Road (Route 363)
& Woodlyn Avenue
Counter/Board #: LB

File Name : worcesterACT06a
Site Code : 81147606
Start Date : 5/9/2013
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles

Start Time	Valley Forge Rd (Rt 363) Southbound			Woodlyn Ave Westbound			Valley Forge Rd (Rt 363) Northbound			Woodlyn Ave Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00	33	134	0	0	0	14	0	107	17	0	0	0	305
07:15	48	128	0	4	3	20	0	119	20	0	0	0	342
07:30	46	140	0	2	0	18	0	126	31	0	0	0	363
07:45	56	143	0	3	1	13	0	99	30	0	0	0	345
Total	183	545	0	9	4	65	0	451	98	0	0	0	1355
08:00	53	136	0	4	1	13	0	98	31	0	0	0	336
08:15	22	94	0	4	2	14	0	65	36	0	0	0	237
08:30	40	155	0	2	1	11	1	113	19	0	0	0	342
08:45	14	135	0	8	0	13	1	85	15	0	0	0	271
Total	129	520	0	18	4	51	2	361	101	0	0	0	1186
Grand Total	312	1065	0	27	8	116	2	812	199	0	0	0	2541
Apprch %	22.7	77.3	0	17.9	5.3	76.8	0.2	80.2	19.6	0	0	0	
Total %	12.3	41.9	0	1.1	0.3	4.6	0.1	32	7.8	0	0	0	
Passenger Vehicles	308	1003	0	27	.8	112	1	751	196	0	0	0	2406
% Passenger Vehicles	98.7	94.2	0	100	100	96.6	50	92.5	98.5	0	0	0	94.7
Heavy Vehicles	4	62	0	0	0	4	1	61	3	0	0	0	135
% Heavy Vehicles	1.3	5.8	0	0	0	3.4	50	7.5	1.5	0	0	0	5.3

Zero Pedestrians were observed during this study.

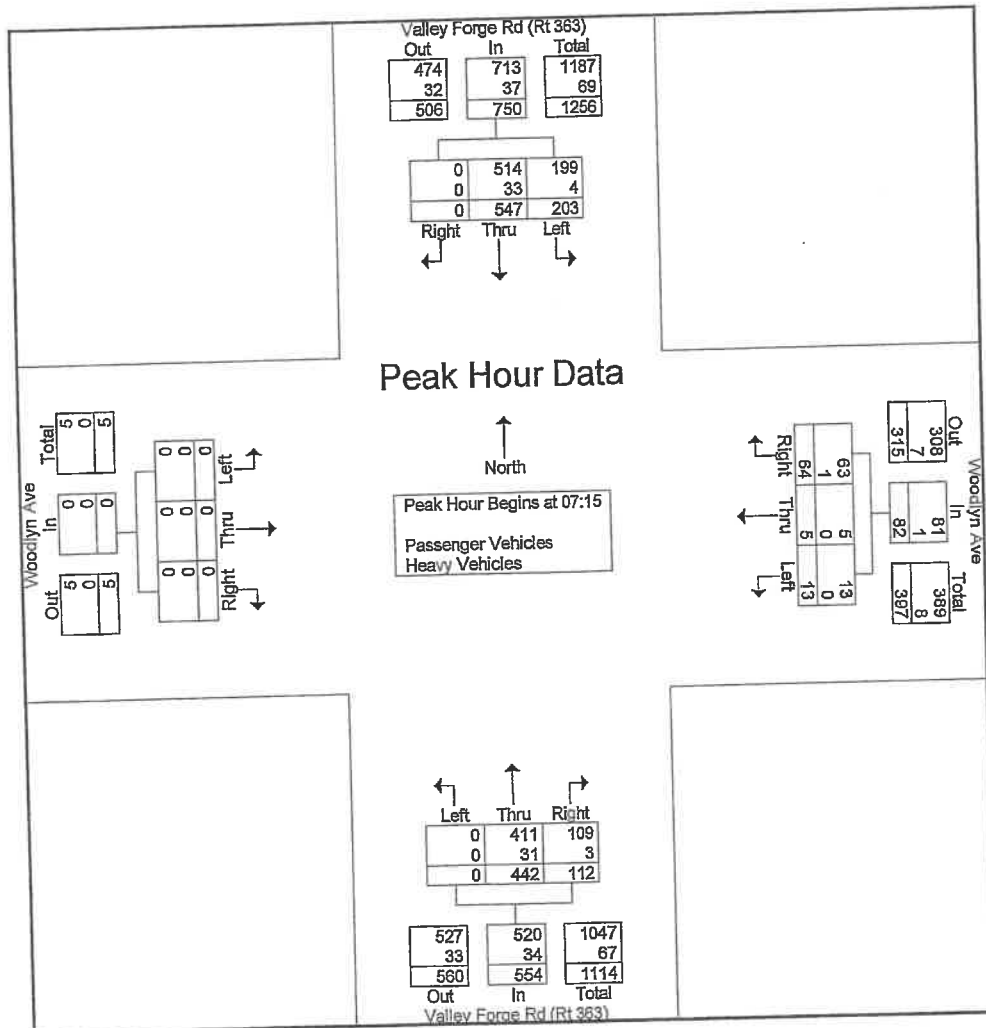
McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Valley Forge Road (Route 363)
& Woodlyn Avenue
Counter/Board #: LB

File Name : worcesterACT06a
Site Code : 81147606
Start Date : 5/9/2013
Page No : 2

Start Time	Valley Forge Rd (Rt 363) Southbound				Woodlyn Ave Westbound				Valley Forge Rd (Rt 363) Northbound				Woodlyn Ave Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15																	
07:15	48	128	0	176	4	3	20	27	0	119	20	139	0	0	0	0	342
07:30	46	140	0	186	2	0	18	20	0	126	31	157	0	0	0	0	363
07:45	56	143	0	199	3	1	13	17	0	99	30	129	0	0	0	0	345
08:00	53	136	0	189	4	1	13	18	0	98	31	129	0	0	0	0	336
Total Volume	203	547	0	750	13	5	64	82	0	442	112	554	0	0	0	0	1386
% App. Total	27.1	72.9	0		15.9	6.1	78		0	79.8	20.2		0	0	0		.955
PHF	.906	.956	.000	.942	.813	.417	.800	.759	.000	.877	.903	.882	.000	.000	.000	.000	1314
Passenger Vehicles	199	514	0	713	13	5	63	81	0	411	109	520	0	0	0	0	94.8
% Passenger Vehicles	98.0	94.0	0	95.1	100	100	98.4	98.8	0	93.0	97.3	93.9	0	0	0	0	72
Heavy Vehicles	4	33	0	37	0	0	1	1	0	31	3	34	0	0	0	0	5.2
% Heavy Vehicles	2.0	6.0	0	4.9	0	0	1.6	1.2	0	7.0	2.7	6.1	0	0	0	0	



McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Valley Forge Road (Route 363)
& Woodlyn Avenue
Counter/Board #: LB

File Name : worcesterACT06a
Site Code : 81147606
Start Date : 5/9/2013
Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Valley Forge Rd (Rt 363) Southbound			Woodlyn Ave Westbound			Valley Forge Rd (Rt 363) Northbound			Woodlyn Ave Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00	33	121	0	0	0	13	0	95	17	0	0	0	279
07:15	47	120	0	4	3	20	0	113	19	0	0	0	326
07:30	45	135	0	2	0	17	0	114	30	0	0	0	343
07:45	56	134	0	3	1	13	0	93	29	0	0	0	329
Total	181	510	0	9	4	63	0	415	95	0	0	0	1277
08:00	51	125	0	4	1	13	0	91	31	0	0	0	316
08:15	22	87	0	4	2	14	0	62	36	0	0	0	227
08:30	40	150	0	2	1	11	0	102	19	0	0	0	325
08:45	14	131	0	8	0	11	1	81	15	0	0	0	261
Total	127	493	0	18	4	49	1	336	101	0	0	0	1129
Grand Total	308	1003	0	27	8	112	1	751	196	0	0	0	2406
Apprch %	23.5	76.5	0	18.4	5.4	76.2	0.1	79.2	20.7	0	0	0	
Total %	12.8	41.7	0	1.1	0.3	4.7	0	31.2	8.1	0	0	0	

Zero Pedestrians were observed during this study.

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Valley Forge Road (Route 363)
& Woodlyn Avenue
Counter/Board #: LB

File Name : worcesterACT06a
Site Code : 81147606
Start Date : 5/9/2013
Page No : 1

Groups Printed- Heavy Vehicles

Start Time	Valley Forge Rd (Rt 363) Southbound			Woodlyn Ave Westbound			Valley Forge Rd (Rt 363) Northbound			Woodlyn Ave Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00	0	13	0	0	0	1	0	12	0	0	0	0	26
07:15	1	8	0	0	0	0	0	6	1	0	0	0	16
07:30	1	5	0	0	0	1	0	12	1	0	0	0	20
07:45	0	9	0	0	0	0	0	6	1	0	0	0	16
Total	2	35	0	0	0	2	0	36	3	0	0	0	78
08:00	2	11	0	0	0	0	0	7	0	0	0	0	20
08:15	0	7	0	0	0	0	0	3	0	0	0	0	10
08:30	0	5	0	0	0	0	1	11	0	0	0	0	17
08:45	0	4	0	0	0	2	0	4	0	0	0	0	10
Total	2	27	0	0	0	2	1	25	0	0	0	0	57
Grand Total	4	62	0	0	0	4	1	61	3	0	0	0	135
Approch %	6.1	93.9	0	0	0	100	1.5	93.8	4.6	0	0	0	
Total %	3	45.9	0	0	0	3	0.7	45.2	2.2	0	0	0	

Zero Pedestrians were observed during this study.

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Valley Forge Road (Route 363)
& Woodlyn Avenue
Counter/Board #: KB

File Name : worcesterACT06p
Site Code : 81147606
Start Date : 5/9/2013
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles

Start Time	Valley Forge Rd (Rt 363) Southbound			Woodlyn Ave Westbound			Valley Forge Rd (Rt 363) Northbound			Woodlyn Ave Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	8	128	0	7	6	56	0	154	12	0	0	0	371
16:15	20	147	0	11	3	43	0	172	3	0	0	0	399
16:30	9	166	0	8	2	62	0	154	12	0	0	0	413
16:45	17	137	1	12	6	58	1	145	9	0	0	0	386
Total	54	578	1	38	17	219	1	625	36	0	0	0	1569
17:00	21	149	0	9	8	62	0	138	9	0	0	0	396
17:15	23	150	1	5	6	63	1	160	20	0	0	0	429
17:30	11	161	0	9	8	74	2	157	19	0	0	0	441
17:45	15	138	1	4	7	72	0	150	11	0	0	0	398
Total	70	598	2	27	29	271	3	605	59	0	0	0	1664
Grand Total	124	1176	3	65	46	490	4	1230	95	0	0	0	3233
Apprch %	9.5	90.3	0.2	10.8	7.7	81.5	0.3	92.6	7.1	0	0	0	
Total %	3.8	36.4	0.1	2	1.4	15.2	0.1	38	2.9	0	0	0	
Passenger Vehicles	124	1152	3	65	46	489	4	1212	95	0	0	0	3190
% Passenger Vehicles	100	98	100	100	100	99.8	100	98.5	100	0	0	0	98.7
Heavy Vehicles	0	24	0	0	0	1	0	18	0	0	0	0	43
% Heavy Vehicles	0	2	0	0	0	0.2	0	1.5	0	0	0	0	1.3

Zero Pedestrians were observed during this study.

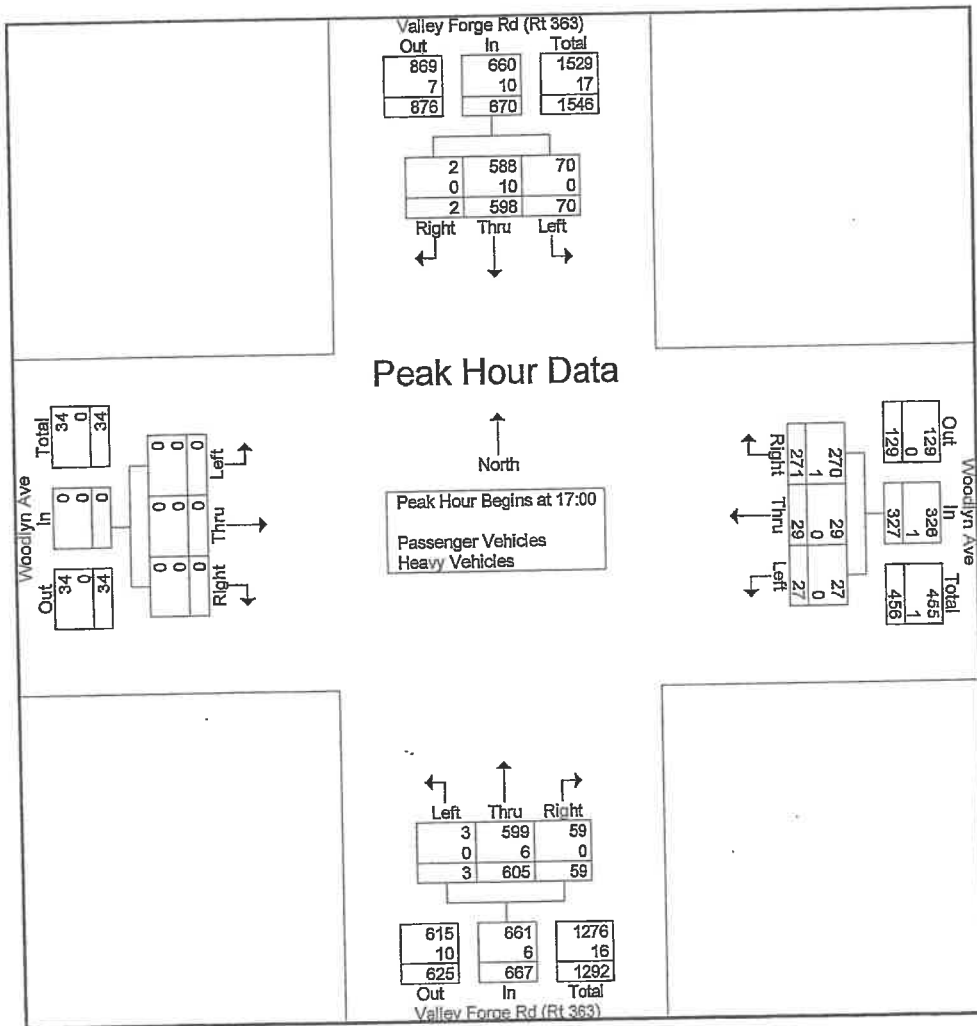
McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Valley Forge Road (Route 363)
& Woodlyn Avenue
Counter/Board #: KB

File Name : worcesterACT06p
Site Code : 81147606
Start Date : 5/9/2013
Page No : 2

Start Time	Valley Forge Rd (Rt 363) Southbound				Woodlyn Ave Westbound				Valley Forge Rd (Rt 363) Northbound				Woodlyn Ave Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 17:00																	
17:00	21	149	0	170	9	8	62	79	0	138	9	147	0	0	0	0	396
17:15	23	150	1	174	5	6	63	74	1	160	20	181	0	0	0	0	429
17:30	11	161	0	172	9	8	74	91	2	157	19	178	0	0	0	0	441
17:45	15	138	1	154	4	7	72	83	0	150	11	161	0	0	0	0	398
Total Volume	70	598	2	670	27	29	271	327	3	605	59	667	0	0	0	0	1664
% App. Total	10.4	89.3	0.3		8.3	8.9	82.9		0.4	90.7	8.8		0	0	0		
PHF	.761	.929	.500	.963	.750	.906	.916	.898	.375	.945	.738	.921	.000	.000	.000	.000	1647
Passenger Vehicles	70	588	2	660	27	29	270	326	3	599	59	661	0	0	0	0	99.0
% Passenger Vehicles	100	98.3	100	98.5	100	100	99.6	99.7	100	99.0	100	99.1	0	0	0	0	17
Heavy Vehicles	0	10	0	10	0	0	1	1	0	6	0	6	0	0	0	0	1.0
% Heavy Vehicles	0	1.7	0	1.5	0	0	0.4	0.3	0	1.0	0	0.9	0	0	0	0	



McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Valley Forge Road (Route 363)
& Woodlyn Avenue
Counter/Board #: KB

File Name : worcesterACT06p
Site Code : 81147606
Start Date : 5/9/2013
Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Valley Forge Rd (Rt 363) Southbound			Woodlyn Ave Westbound			Valley Forge Rd (Rt 363) Northbound			Woodlyn Ave Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	8	127	0	7	6	56	0	151	12	0	0	0	367
16:15	20	142	0	11	3	43	0	169	3	0	0	0	391
16:30	9	159	0	8	2	62	0	151	12	0	0	0	403
16:45	17	136	1	12	6	58	1	142	9	0	0	0	382
Total	54	564	1	38	17	219	1	613	36	0	0	0	1543
17:00	21	148	0	9	8	62	0	136	9	0	0	0	393
17:15	23	145	1	5	6	62	1	159	20	0	0	0	422
17:30	11	159	0	9	8	74	2	155	19	0	0	0	437
17:45	15	136	1	4	7	72	0	149	11	0	0	0	395
Total	70	588	2	27	29	270	3	599	59	0	0	0	1647
Grand Total	124	1152	3	65	46	489	4	1212	95	0	0	0	3190
Apprch %	9.7	90.1	0.2	10.8	7.7	81.5	0.3	92.4	7.2	0	0	0	
Total %	3.9	36.1	0.1	2	1.4	15.3	0.1	38	3	0	0	0	

Zero Pedestrians were observed during this study.

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Valley Forge Road (Route 363)
& Woodlyn Avenue
Counter/Board #: KB

File Name : worcesterACT06p
Site Code : 81147606
Start Date : 5/9/2013
Page No : 1

Groups Printed- Heavy Vehicles

Start Time	Valley Forge Rd (Rt 363) Southbound			Woodlyn Ave Westbound			Valley Forge Rd (Rt 363) Northbound			Woodlyn Ave Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	0	1	0	0	0	0	0	3	0	0	0	0	4
16:15	0	5	0	0	0	0	0	3	0	0	0	0	8
16:30	0	7	0	0	0	0	0	3	0	0	0	0	10
16:45	0	1	0	0	0	0	0	3	0	0	0	0	4
Total	0	14	0	0	0	0	0	12	0	0	0	0	26
17:00	0	1	0	0	0	0	0	2	0	0	0	0	3
17:15	0	5	0	0	0	1	0	1	0	0	0	0	7
17:30	0	2	0	0	0	0	0	2	0	0	0	0	4
17:45	0	2	0	0	0	0	0	1	0	0	0	0	3
Total	0	10	0	0	0	1	0	6	0	0	0	0	17
Grand Total	0	24	0	0	0	1	0	18	0	0	0	0	43
Apprch %	0	100	0	0	0	100	0	100	0	0	0	0	
Total %	0	55.8	0	0	0	2.3	0	41.9	0	0	0	0	

Zero Pedestrians were observed during this study.

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Valley Forge Road (Route 363)
& Water Street
Counter/Board #: TD

File Name : worcesterACT07w
Site Code : 81147607
Start Date : 5/9/2013
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles

Start Time	Valley Forge Rd (Rt 363) Southbound		Valley Forge Rd (Rt 363) Northbound		Water St Eastbound		Int. Total
	Thru	Right	Left	Thru	Left	Right	
07:00	161	13	1	139	70	26	410
07:15	146	18	2	155	87	41	449
07:30	156	9	2	140	108	44	459
07:45	168	10	1	131	90	55	455
Total	631	50	6	565	355	166	1773
08:00	154	12	1	139	82	54	442
08:15	160	11	2	138	65	29	405
08:30	192	13	3	131	70	30	439
08:45	162	11	4	123	46	15	361
Total	668	47	10	531	263	128	1647
*** BREAK ***							
15:45	46	5	3	79	14	2	149
Total	46	5	3	79	14	2	149
16:00	157	35	24	195	15	2	428
16:15	156	37	14	193	18	7	425
16:30	175	38	14	224	29	3	483
16:45	169	50	21	192	21	6	459
Total	657	160	73	804	83	18	1795
17:00	170	45	23	196	32	9	475
17:15	167	24	32	213	26	8	470
17:30	185	40	15	228	31	7	506
Grand Total	2524	371	162	2616	804	338	6815
Apprch %	87.2	12.8	5.8	94.2	70.4	29.6	
Total %	37	5.4	2.4	38.4	11.8	5	
Passenger Vehicles	2372	352	155	2468	784	326	6457
% Passenger Vehicles	94	94.9	95.7	94.3	97.5	96.4	94.7
Heavy Vehicles	152	19	7	148	20	12	358
% Heavy Vehicles	6	5.1	4.3	5.7	2.5	3.6	5.3

Zero Pedestrians were observed during this study.

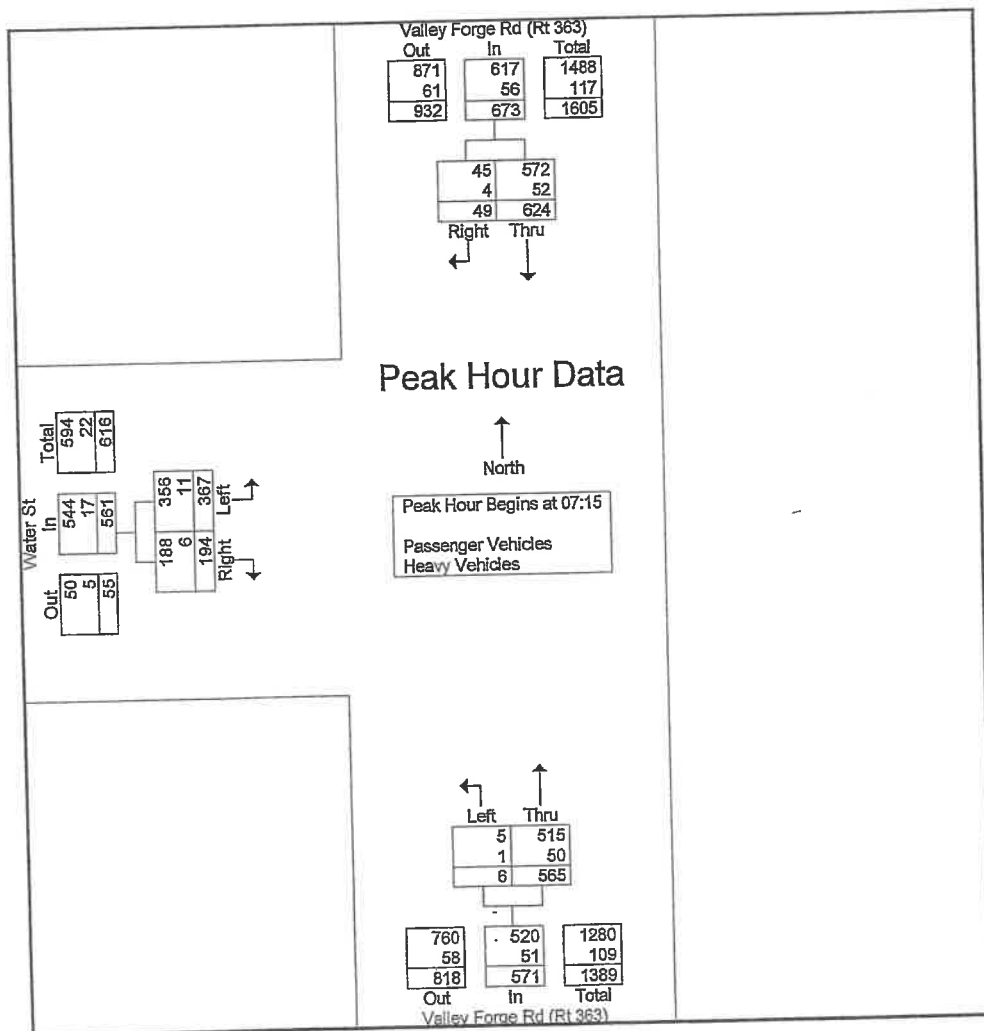
McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Valley Forge Road (Route 363)
& Water Street
Counter/Board #: TD

File Name : worcesterACT07w
Site Code : 81147607
Start Date : 5/9/2013
Page No : 2

Start Time	Valley Forge Rd (Rt 363) Southbound			Valley Forge Rd (Rt 363) Northbound			Water St Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
Peak Hour Analysis From 07:00 to 11:45 - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15										
07:15	146	18	164	2	155	157	87	41	128	449
07:30	156	9	165	2	140	142	108	44	152	459
07:45	168	10	178	1	131	132	90	55	145	455
08:00	154	12	166	1	139	140	82	54	136	442
Total Volume	624	49	673	6	565	571	367	194	561	1805
% App. Total	92.7	7.3	.945	1.1	98.9	.909	65.4	34.6	.923	.983
PHF	.929	.681	.945	.750	.911	.909	.850	.882	.923	.983
Passenger Vehicles	572	45	617	5	515	520	356	188	544	1681
% Passenger Vehicles	91.7	91.8	91.7	83.3	91.2	91.1	97.0	96.9	97.0	93.1
Heavy Vehicles	52	4	56	1	50	51	11	6	17	124
% Heavy Vehicles	8.3	8.2	8.3	16.7	8.8	8.9	3.0	3.1	3.0	6.9



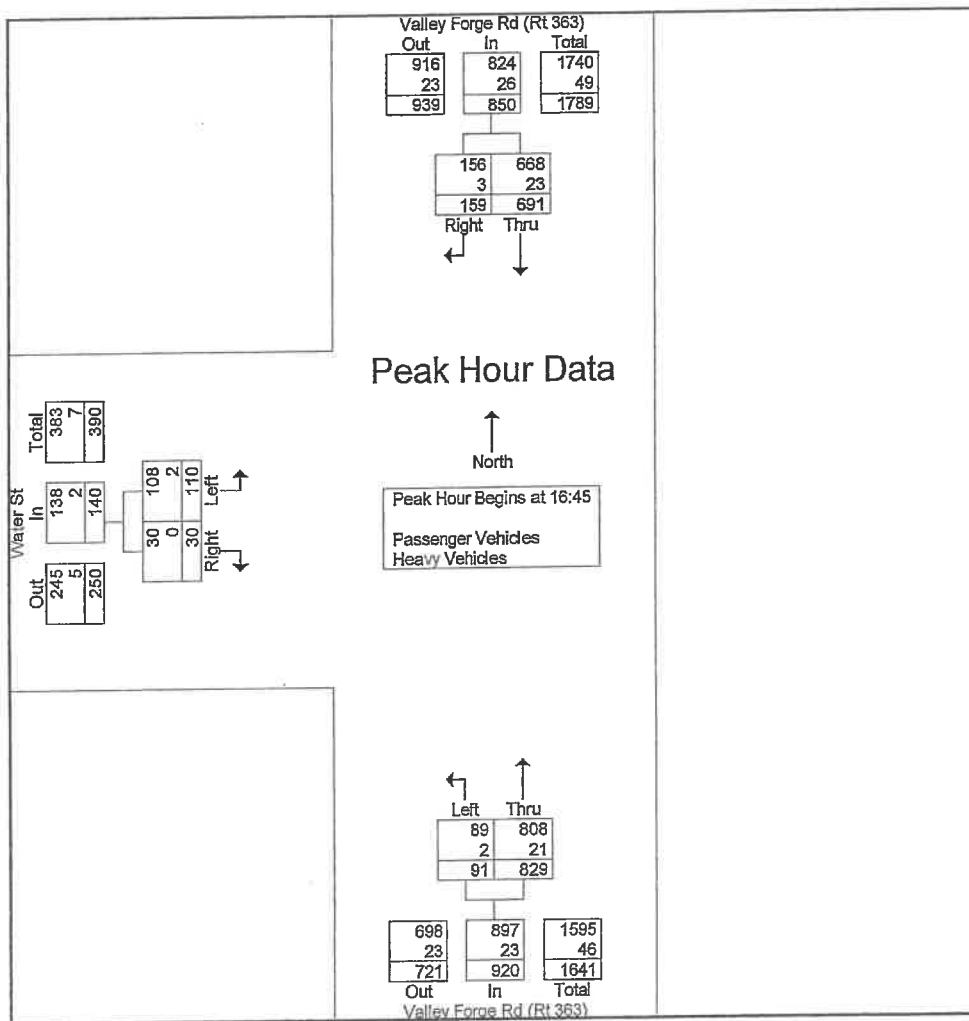
McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Valley Forge Road (Route 363)
& Water Street
Counter/Board #: TD

File Name : worcesterACT07w
Site Code : 81147607
Start Date : 5/9/2013
Page No : 3

Start Time	Valley Forge Rd (Rt 363) Southbound			Valley Forge Rd (Rt 363) Northbound			Water St Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
Peak Hour Analysis From 12:00 to 17:30 - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 16:45										
16:45	169	50	219	21	192	213	21	6	27	459
17:00	170	45	215	23	196	219	32	9	41	475
17:15	167	24	191	32	213	245	26	8	34	470
17:30	185	40	225	15	228	243	31	7	38	506
Total Volume	691	159	850	91	829	920	110	30	140	1910
% App. Total	81.3	18.7		9.9	90.1		78.6	21.4		
PHF	.934	.795	.944	.711	.909	.939	.859	.833	.854	.944
Passenger Vehicles	668	156	824	89	808	897	108	30	138	1859
% Passenger Vehicles	96.7	98.1	96.9	97.8	97.5	97.5	98.2	100	98.6	97.3
Heavy Vehicles	23	3	26	2	21	23	2	0	2	51
% Heavy Vehicles	3.3	1.9	3.1	2.2	2.5	2.5	1.8	0	1.4	2.7



McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Valley Forge Road (Route 363)
& Water Street
Counter/Board #: TD

File Name : worcesterACT07w
Site Code : 81147607
Start Date : 5/9/2013
Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Valley Forge Rd (Rt 363) Southbound		Valley Forge Rd (Rt 363) Northbound		Water St Eastbound		Int. Total
	Thru	Right	Left	Thru	Left	Right	
07:00	146	12	1	126	68	24	377
07:15	137	17	2	140	84	41	421
07:30	148	8	2	127	106	43	434
07:45	150	10	1	119	86	52	418
Total	581	47	6	512	344	160	1650
08:00	137	10	0	129	80	52	408
08:15	148	9	2	126	63	28	376
08:30	179	13	2	119	70	29	412
08:45	154	10	4	110	45	15	338
Total	618	42	8	484	258	124	1534
*** BREAK ***							
15:45	44	3	3	72	13	0	135
Total	44	3	3	72	13	0	135
16:00	150	31	23	190	15	2	411
16:15	141	35	12	187	17	7	399
16:30	170	38	14	215	29	3	469
16:45	167	49	21	185	20	6	448
Total	628	153	70	777	81	18	1727
17:00	163	44	22	188	31	9	457
17:15	159	23	31	208	26	8	455
17:30	179	40	15	227	31	7	499
Grand Total	2372	352	155	2468	784	326	6457
Apprch %	87.1	12.9	5.9	94.1	70.6	29.4	
Total %	36.7	5.5	2.4	38.2	12.1	5	

Zero Pedestrians were observed during this study.

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Valley Forge Road (Route 363)
& Water Street
Counter/Board #: TD

File Name : worcesterACT07w
Site Code : 81147607
Start Date : 5/9/2013
Page No : 1

Groups Printed- Heavy Vehicles

Start Time	Valley Forge Rd (Rt 363) Southbound		Valley Forge Rd (Rt 363) Northbound		Water St Eastbound		Int. Total
	Thru	Right	Left	Thru	Left	Right	
07:00	15	1	0	13	2	2	33
07:15	9	1	0	15	3	0	28
07:30	8	1	0	13	2	1	25
07:45	18	0	0	12	4	3	37
Total	50	3	0	53	11	6	123
08:00	17	2	1	10	2	2	34
08:15	12	2	0	12	2	1	29
08:30	13	0	1	12	0	1	27
08:45	8	1	0	13	1	0	23
Total	50	5	2	47	5	4	113
*** BREAK ***							
15:45	2	2	0	7	1	2	14
Total	2	2	0	7	1	2	14
16:00	7	4	1	5	0	0	17
16:15	15	2	2	6	1	0	26
16:30	5	0	0	9	0	0	14
16:45	2	1	0	7	1	0	11
Total	29	7	3	27	2	0	68
17:00	7	1	1	8	1	0	18
17:15	8	1	1	5	0	0	15
17:30	6	0	0	1	0	0	7
Grand Total	152	19	7	148	20	12	358
Apprch %	88.9	11.1	4.5	95.5	62.5	37.5	
Total %	42.5	5.3	2	41.3	5.6	3.4	

Zero Pedestrians were observed during this study.

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Valley Forge Road (Route 363)
& Township Line Road / Stump Road
Counter/Board #: M

File Name : worcesteract08w
Site Code :
Start Date : 5/30/2013
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles

Start Time	Valley Forge Rd (Rt 363) Southbound			Township Line Rd Westbound			Valley Forge Rd (Rt 363) Northbound			Stump Rd Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00	13	163	0	18	11	12	5	152	37	3	72	14	500
07:15	18	157	2	13	20	13	7	184	54	5	94	14	581
07:30	12	187	4	8	15	9	6	186	57	1	109	9	603
07:45	13	161	2	13	14	11	5	187	59	1	96	13	575
Total	56	668	8	52	60	45	23	709	207	10	371	50	2259
08:00	11	150	1	7	12	3	10	168	48	6	88	18	522
08:15	6	163	1	12	8	4	6	162	62	5	87	18	534
08:30	6	158	1	11	14	9	3	157	53	2	85	14	513
08:45	17	142	1	15	12	7	13	161	41	1	71	13	494
Total	40	613	4	45	46	23	32	648	204	14	331	63	2063
16:00	18	164	9	36	39	15	18	156	15	1	13	7	491
16:15	14	182	1	34	58	14	15	183	13	4	29	5	552
16:30	8	164	4	40	61	14	18	181	17	1	18	13	539
16:45	13	171	4	44	63	19	18	183	10	2	17	8	552
Total	53	681	18	154	221	62	69	703	55	8	77	33	2134
17:00	16	194	7	36	63	10	13	190	17	2	24	13	585
17:15	5	192	4	31	66	16	18	201	17	1	25	11	587
17:30	8	186	2	36	70	13	17	206	14	3	21	12	588
17:45	10	197	4	36	64	16	15	185	9	1	25	11	573
Total	39	769	17	139	263	55	63	782	57	7	95	47	2333
Grand Total	188	2731	47	390	590	185	187	2842	523	39	874	193	8789
Approch %	6.3	92.1	1.6	33.5	50.6	15.9	5.3	80	14.7	3.5	79	17.5	
Total %	2.1	31.1	0.5	4.4	6.7	2.1	2.1	32.3	6	0.4	9.9	2.2	
Passenger Vehicles	181	2583	45	384	578	184	183	2703	517	38	861	184	8441
% Passenger Vehicles	96.3	94.6	95.7	98.5	98	99.5	97.9	95.1	98.9	97.4	98.5	95.3	96
Heavy Vehicles	7	148	2	6	12	1	4	139	6	1	13	9	348
% Heavy Vehicles	3.7	5.4	4.3	1.5	2	0.5	2.1	4.9	1.1	2.6	1.5	4.7	4

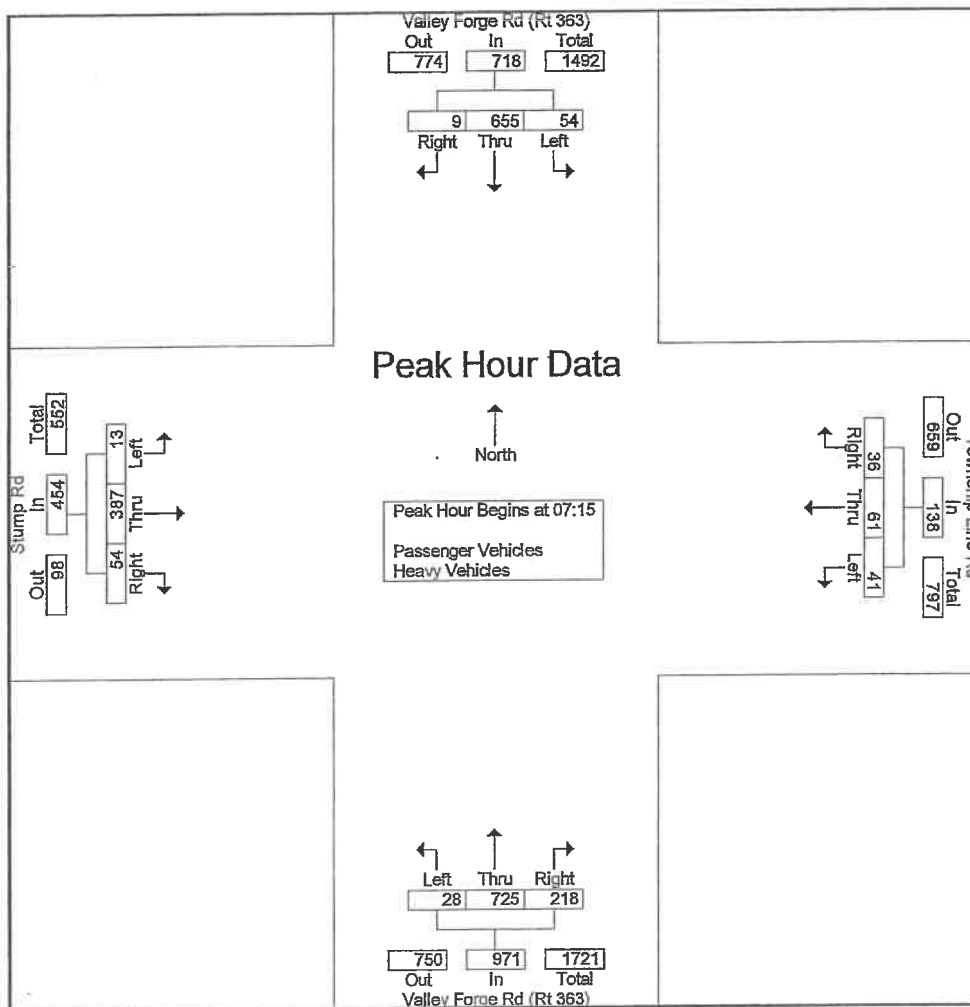
McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Valley Forge Road (Route 363)
& Township Line Road / Stump Road
Counter/Board #: M

File Name : worcesteract08w
Site Code :
Start Date : 5/30/2013
Page No : 2

Start Time	Valley Forge Rd (Rt 363) Southbound				Township Line Rd Westbound				Valley Forge Rd (Rt 363) Northbound				Stump Rd Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 to 11:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15																	
07:15	18	157	2	177	13	20	13	46	7	184	54	245	5	94	14	113	581
07:30	12	187	4	203	8	15	9	32	6	186	57	249	1	109	9	119	603
07:45	13	161	2	176	13	14	11	38	5	187	59	251	1	96	13	110	575
08:00	11	150	1	162	7	12	3	22	10	168	48	226	6	88	18	112	522
Total Volume	54	655	9	718	41	61	36	138	28	725	218	971	13	387	54	454	2281
% App. Total	7.5	91.2	1.3		29.7	44.2	26.1		2.9	74.7	22.5		2.9	85.2	11.9		
PHF	.750	.876	.563	.884	.788	.763	.692	.750	.700	.969	.924	.967	.542	.888	.750	.954	.946



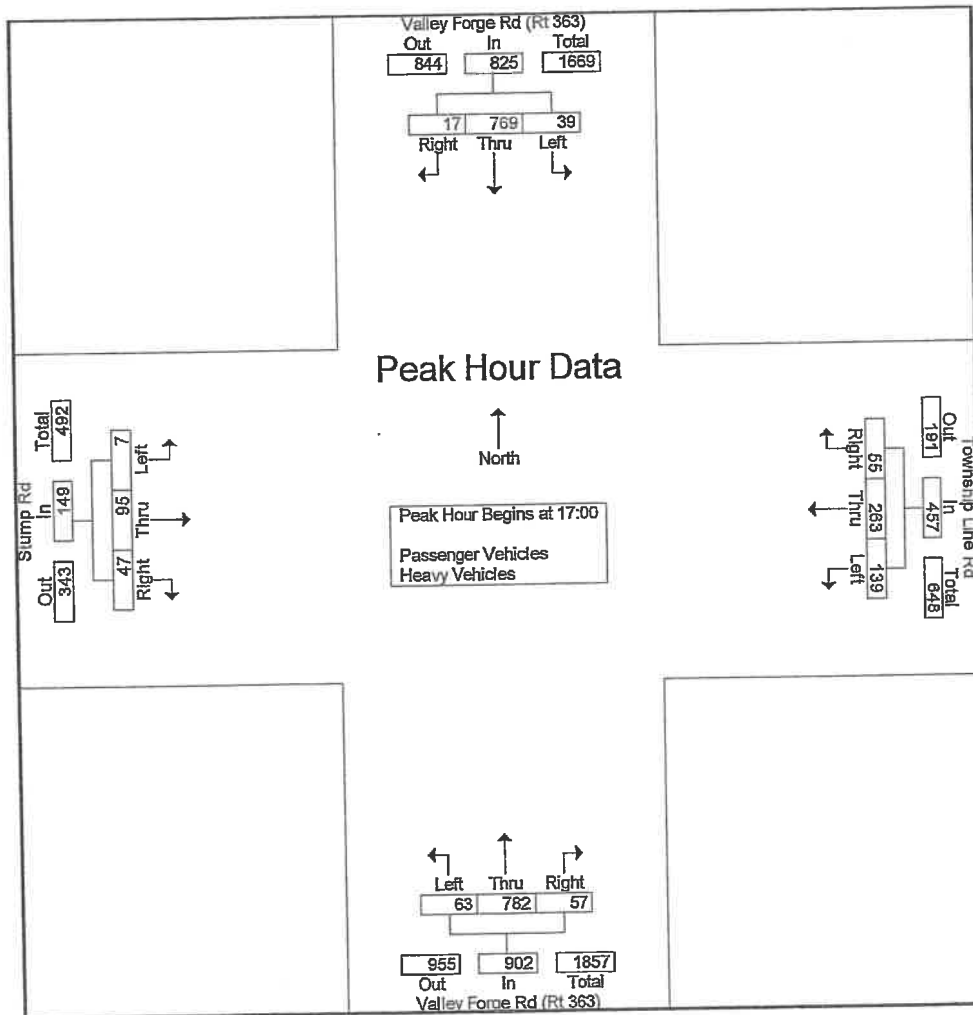
McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Valley Forge Road (Route 363)
& Township Line Road / Stump Road
Counter/Board #: M

File Name : worcesteract08w
Site Code :
Start Date : 5/30/2013
Page No : 3

Start Time	Valley Forge Rd (Rt 363) Southbound				Township Line Rd Westbound				Valley Forge Rd (Rt 363) Northbound				Stump Rd Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 12:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 17:00																	
17:00	16	194	7	217	36	63	10	109	13	190	17	220	2	24	13	39	585
17:15	5	192	4	201	31	66	16	113	18	201	17	236	1	25	11	37	587
17:30	8	186	2	196	36	70	13	119	17	206	14	237	3	21	12	36	588
17:45	10	197	4	211	36	64	16	116	15	185	9	209	1	25	11	37	573
Total Volume	39	769	17	825	139	263	55	457	63	782	57	902	7	95	47	149	2333
% App. Total	4.7	93.2	2.1		30.4	57.5	12		7	86.7	6.3		4.7	63.8	31.5		
PHF	.609	.976	.607	.950	.965	.939	.859	.960	.875	.949	.838	.951	.583	.950	.904	.955	.992



McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Valley Forge Road (Route 363)
& Township Line Road / Stump Road
Counter/Board #: M

File Name : worcesteract08w
Site Code :
Start Date : 5/30/2013
Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Valley Forge Rd (Rt 363) Southbound			Township Line Rd Westbound			Valley Forge Rd (Rt 363) Northbound			Stump Rd Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00	13	150	0	18	10	12	5	139	36	3	69	14	469
07:15	18	151	2	12	20	13	7	167	54	5	94	12	555
07:30	11	175	4	8	15	9	6	176	57	1	108	8	578
07:45	11	157	1	13	13	11	5	175	59	1	95	11	552
Total	53	633	7	51	58	45	23	657	206	10	366	45	2154
08:00	10	135	1	7	12	3	9	160	47	6	85	16	491
08:15	6	149	1	12	6	4	6	150	61	5	86	18	504
08:30	5	144	1	11	12	9	3	149	52	2	84	14	486
08:45	15	129	1	15	12	7	12	148	40	1	70	13	463
Total	36	557	4	45	42	23	30	607	200	14	325	61	1944
16:00	18	146	8	34	36	15	18	148	15	1	13	7	459
16:15	14	171	1	34	58	14	15	177	13	3	29	4	533
16:30	8	156	4	40	60	14	18	176	17	1	18	12	524
16:45	13	166	4	42	62	18	18	175	10	2	16	8	534
Total	53	639	17	150	216	61	69	676	55	7	76	31	2050
17:00	16	192	7	35	63	10	13	183	17	2	24	13	575
17:15	5	187	4	31	66	16	16	196	16	1	25	11	574
17:30	8	183	2	36	70	13	17	202	14	3	21	12	581
17:45	10	192	4	36	63	16	15	182	9	1	24	11	563
Total	39	754	17	138	262	55	61	763	56	7	94	47	2293
Grand Total	181	2583	45	384	578	184	183	2703	517	38	861	184	8441
Apprch %	6.4	92	1.6	33.5	50.4	16.1	5.4	79.4	15.2	3.5	79.5	17	
Total %	2.1	30.6	0.5	4.5	6.8	2.2	2.2	32	6.1	0.5	10.2	2.2	

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Valley Forge Road (Route 363)
& Township Line Road / Stump Road
Counter/Board #: M

File Name : worcesteract08w
Site Code :
Start Date : 5/30/2013
Page No : 1

Groups Printed- Heavy Vehicles

Start Time	Valley Forge Rd (Rt 363) Southbound			Township Line Rd Westbound			Valley Forge Rd (Rt 363) Northbound			Stump Rd Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00	0	13	0	0	1	0	0	13	1	0	3	0	31
07:15	0	6	0	1	0	0	0	17	0	0	0	2	26
07:30	1	12	0	0	0	0	0	10	0	0	1	1	25
07:45	2	4	1	0	1	0	0	12	0	0	1	2	23
Total	3	35	1	1	2	0	0	52	1	0	5	5	105
08:00	1	15	0	0	0	0	1	8	1	0	3	2	31
08:15	0	14	0	0	2	0	0	12	1	0	1	0	30
08:30	1	14	0	0	2	0	0	8	1	0	1	0	27
08:45	2	13	0	0	0	0	1	13	1	0	1	0	31
Total	4	56	0	0	4	0	2	41	4	0	6	2	119
16:00	0	18	1	2	3	0	0	8	0	0	0	0	32
16:15	0	11	0	0	0	0	0	6	0	1	0	1	19
16:30	0	8	0	0	1	0	0	5	0	0	0	1	15
16:45	0	5	0	2	1	1	0	8	0	0	1	0	18
Total	0	42	1	4	5	1	0	27	0	1	1	2	84
17:00	0	2	0	1	0	0	0	7	0	0	0	0	10
17:15	0	5	0	0	0	0	2	5	1	0	0	0	13
17:30	0	3	0	0	0	0	0	4	0	0	0	0	7
17:45	0	5	0	0	1	0	0	3	0	0	1	0	10
Total	0	15	0	1	1	0	2	19	1	0	1	0	40
Grand Total	7	148	2	6	12	1	4	139	6	1	13	9	348
Approch %	4.5	94.3	1.3	31.6	63.2	5.3	2.7	93.3	4	4.3	56.5	39.1	
Total %	2	42.5	0.6	1.7	3.4	0.3	1.1	39.9	1.7	0.3	3.7	2.6	

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Valley Forger Road (Route 363)
& Potshop Road
Counter/Board #: KB

File Name : worcesterACT21a
Site Code : 81147621
Start Date : 5/31/2013
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles

Start Time	Valley Forge Rd (Rt 363) Southbound		Potshop Rd Westbound		Valley Forge Rd (Rt 363) Northbound		Int. Total
	Left	Thru	Left	Right	Thru	Right	
07:00	6	155	3	9	166	10	349
07:15	9	188	3	14	167	30	411
07:30	14	176	5	11	159	25	390
07:45	11	134	1	5	207	22	380
Total	40	653	12	39	699	87	1530
08:00	16	160	4	11	175	16	382
08:15	8	160	0	5	157	18	348
08:30	5	155	2	9	143	21	335
08:45	13	137	5	9	153	4	321
Total	42	612	11	34	628	59	1386
Grand Total	82	1265	23	73	1327	146	2916
Apprch %	6.1	93.9	24	76	90.1	9.9	
Total %	2.8	43.4	0.8	2.5	45.5	5	
Passenger Vehicles	82	1236	23	73	1285	146	2845
% Passenger Vehicles	100	97.7	100	100	96.8	100	97.6
Heavy Vehicles	0	29	0	0	42	0	71
% Heavy Vehicles	0	2.3	0	0	3.2	0	2.4

Zero Pedestrians were observed during this study.

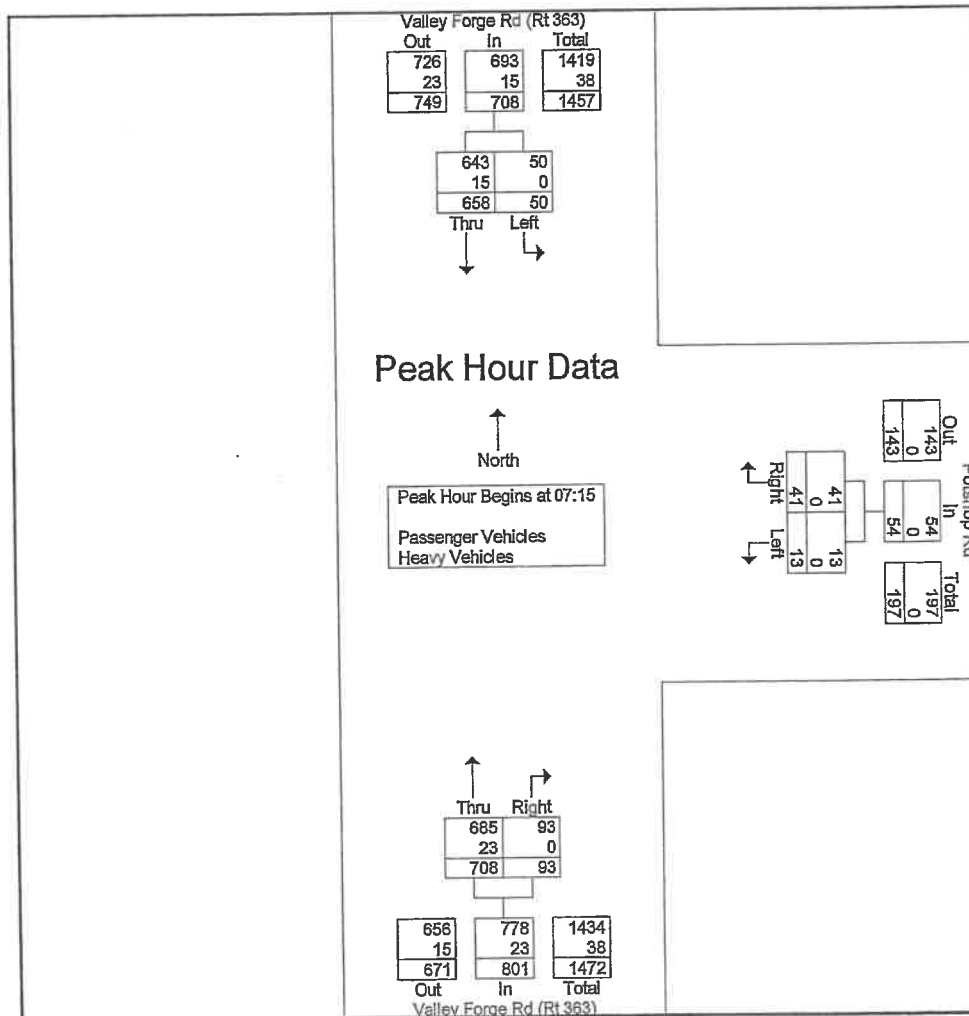
McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Valley Forge Road (Route 363)
& Potshop Road
Counter/Board #: KB

File Name : worcesterACT21a
Site Code : 81147621
Start Date : 5/31/2013
Page No : 2

Start Time	Valley Forge Rd (Rt 363) Southbound			Potshop Rd Westbound			Valley Forge Rd (Rt 363) Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15										
07:15	9	188	197	3	14	17	167	30	197	411
07:30	14	176	190	5	11	16	159	25	184	390
07:45	11	134	145	1	5	6	207	22	229	380
08:00	16	160	176	4	11	15	175	16	191	382
Total Volume	50	658	708	13	41	54	708	93	801	1563
% App. Total	7.1	92.9		24.1	75.9		88.4	11.6		
PHF	.781	.875	.898	.650	.732	.794	.855	.775	.874	.951
Passenger Vehicles	50	643	693	13	41	54	685	93	778	1525
% Passenger Vehicles	100	97.7	97.9	100	100	100	96.8	100	97.1	97.6
Heavy Vehicles	0	15	15	0	0	0	23	0	23	38
% Heavy Vehicles	0	2.3	2.1	0	0	0	3.2	0	2.9	2.4



McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Valley Forger Road (Route 363)
& Potshop Road
Counter/Board #: KB

File Name : worcesterACT21a
Site Code : 81147621
Start Date : 5/31/2013
Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Valley Forge Rd (Rt 363) Southbound		Potshop Rd Westbound		Valley Forge Rd (Rt 363) Northbound		Int. Total
	Left	Thru	Left	Right	Thru	Right	
07:00	6	155	3	9	159	10	342
07:15	9	182	3	14	160	30	398
07:30	14	171	5	11	154	25	380
07:45	11	130	1	5	200	22	369
Total	40	638	12	39	673	87	1489
08:00	16	160	4	11	171	16	378
08:15	8	154	0	5	152	18	337
08:30	5	151	2	9	137	21	325
08:45	13	133	5	9	152	4	316
Total	42	598	11	34	612	59	1356
Grand Total	82	1236	23	73	1285	146	2845
Apprch %	6.2	93.8	24	76	89.8	10.2	
Total %	2.9	43.4	0.8	2.6	45.2	5.1	

Zero Pedestrians were observed during this study.

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Valley Forger Road (Route 363)
& Potshop Road
Counter/Board #: KB

File Name : worcesterACT21a
Site Code : 81147621
Start Date : 5/31/2013
Page No : 1

Groups Printed- Heavy Vehicles

Start Time	Valley Forge Rd (Rt 363) Southbound		Potshop Rd Westbound		Valley Forge Rd (Rt 363) Northbound		Int. Total
	Left	Thru	Left	Right	Thru	Right	
07:00	0	0	0	0	7	0	7
07:15	0	6	0	0	7	0	13
07:30	0	5	0	0	5	0	10
07:45	0	4	0	0	7	0	11
Total	0	15	0	0	26	0	41
08:00	0	0	0	0	4	0	4
08:15	0	6	0	0	5	0	11
08:30	0	4	0	0	6	0	10
08:45	0	4	0	0	1	0	5
Total	0	14	0	0	16	0	30
Grand Total	0	29	0	0	42	0	71
Approch %	0	100	0	0	100	0	
Total %	0	40.8	0	0	59.2	0	

Zero Pedestrians were observed during this study.

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Valley Forge Road (Route 363)
& Potshop Road
Counter/Board #: AB

File Name : worcesterACT21p
Site Code : 81147621
Start Date : 5/21/2013
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles

Start Time	Valley Forge Rd (Rt 363) Southbound		Potshop Rd Westbound		Valley Forge Rd (Rt 363) Northbound		Int. Total
	Left	Thru	Left	Right	Thru	Right	
16:00	1	153	6	20	195	6	381
16:15	5	191	8	26	178	3	411
16:30	2	173	9	21	201	0	406
16:45	6	209	12	15	207	6	455
Total	14	726	35	82	781	15	1653
17:00	7	188	19	22	199	5	440
17:15	3	184	29	28	182	11	437
17:30	6	202	26	37	224	5	500
17:45	6	196	21	32	189	1	445
Total	22	770	95	119	794	22	1822
Grand Total	36	1496	130	201	1575	37	3475
Apprch %	2.3	97.7	39.3	60.7	97.7	2.3	
Total %	1	43.1	3.7	5.8	45.3	1.1	
Passenger Vehicles	36	1472	130	201	1546	35	3420
% Passenger Vehicles	100	98.4	100	100	98.2	94.6	98.4
Heavy Vehicles	0	24	0	0	29	2	55
% Heavy Vehicles	0	1.6	0	0	1.8	5.4	1.6

Zero Pedestrians were observed during this study.

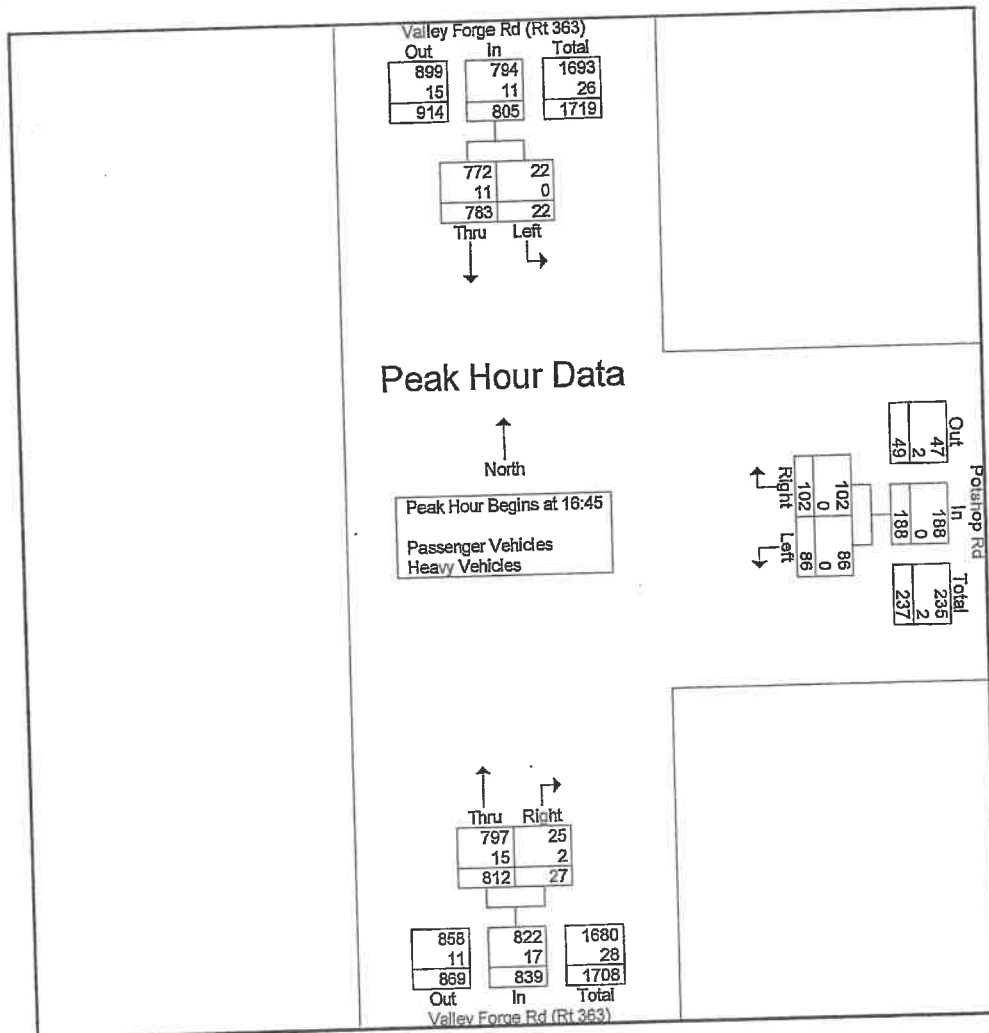
McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Valley Forge Road (Route 363)
& Potshop Road
Counter/Board #: AB

File Name : worcesterACT21p
Site Code : 81147621
Start Date : 5/21/2013
Page No : 2

Start Time	Valley Forge Rd (Rt 363) Southbound			Potshop Rd Westbound			Valley Forge Rd (Rt 363) Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 16:45										
16:45	6	209	215	12	15	27	207	6	213	455
17:00	7	188	195	19	22	41	199	5	204	440
17:15	3	184	187	29	28	57	182	11	193	437
17:30	6	202	208	26	37	63	224	5	229	500
Total Volume	22	783	805	86	102	188	812	27	839	1832
% App. Total	2.7	97.3		45.7	54.3		96.8	3.2		
PHF	.786	.937	.936	.741	.689	.746	.906	.614	.916	.916
Passenger Vehicles	22	772	794	86	102	188	797	25	822	1804
% Passenger Vehicles	100	98.6	98.6	100	100	100	98.2	92.6	98.0	98.5
Heavy Vehicles	0	11	11	0	0	0	15	2	17	28
% Heavy Vehicles	0	1.4	1.4	0	0	0	1.8	7.4	2.0	1.5



McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Valley Forge Road (Route 363)
& Potshop Road
Counter/Board #: AB

File Name : worcesterACT21p
Site Code : 81147621
Start Date : 5/21/2013
Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Valley Forge Rd (Rt 363) Southbound		Potshop Rd Westbound		Valley Forge Rd (Rt 363) Northbound		Int. Total
	Left	Thru	Left	Right	Thru	Right	
16:00	1	149	6	20	193	6	375
16:15	5	187	8	26	173	3	402
16:30	2	170	9	21	197	0	399
16:45	6	205	12	15	202	6	446
Total	14	711	35	82	765	15	1622
17:00	7	186	19	22	195	4	433
17:15	3	183	29	28	178	10	431
17:30	6	198	26	37	222	5	494
17:45	6	194	21	32	186	1	440
Total	22	761	95	119	781	20	1798
Grand Total	36	1472	130	201	1546	35	3420
Apprch %	2.4	97.6	39.3	60.7	97.8	2.2	
Total %	1.1	43	3.8	5.9	45.2	1	

Zero Pedestrians were observed during this study.

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Valley Forge Road (Route 363)
& Potshop Road
Counter/Board #: AB

File Name : worcesterACT21p
Site Code : 81147621
Start Date : 5/21/2013
Page No : 1

Groups Printed- Heavy Vehicles

Start Time	Valley Forge Rd (Rt 363) Southbound		Potshop Rd Westbound		Valley Forge Rd (Rt 363) Northbound		Int. Total
	Left	Thru	Left	Right	Thru	Right	
16:00	0	4	0	0	2	0	6
16:15	0	4	0	0	5	0	9
16:30	0	3	0	0	4	0	7
16:45	0	4	0	0	5	0	9
Total	0	15	0	0	16	0	31
17:00	0	2	0	0	4	1	7
17:15	0	1	0	0	4	1	6
17:30	0	4	0	0	2	0	6
17:45	0	2	0	0	3	0	5
Total	0	9	0	0	13	2	24
Grand Total	0	24	0	0	29	2	55
Apprch %	0	100	0	0	93.5	6.5	
Total %	0	43.6	0	0	52.7	3.6	

Zero Pedestrians were observed during this study.

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Township Line Road &
Trooper Road
Counter/Board #: JB

File Name : worcesterACT11a
Site Code : 81147611
Start Date : 5/31/2013
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles

Start Time	Trooper Rd Southbound			Township Line Rd Westbound			Trooper Rd Northbound			Township Line Rd Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00	3	16	5	1	25	3	2	22	4	5	120	1	207
07:15	1	23	9	2	24	3	0	20	8	11	137	2	240
07:30	4	22	2	4	22	5	0	35	10	19	148	3	274
07:45	1	21	6	4	23	10	1	26	5	19	142	2	260
Total	9	82	22	11	94	21	3	103	27	54	547	8	981
08:00	1	24	4	3	23	8	1	29	7	13	116	1	230
08:15	0	21	2	4	20	4	0	34	2	7	119	1	214
08:30	4	17	5	4	30	8	0	20	8	16	111	8	231
08:45	4	18	3	4	29	8	1	26	14	15	102	2	226
Total	9	80	14	15	102	28	2	109	31	51	448	12	901
Grand Total	18	162	36	26	196	49	5	212	58	105	995	20	1882
Apprch %	8.3	75	16.7	9.6	72.3	18.1	1.8	77.1	21.1	9.4	88.8	1.8	
Total %	1	8.6	1.9	1.4	10.4	2.6	0.3	11.3	3.1	5.6	52.9	1.1	
Passenger Vehicles	18	154	35	25	185	49	5	203	54	104	975	20	1827
% Passenger Vehicles	100	95.1	97.2	96.2	94.4	100	100	95.8	93.1	99	98	100	97.1
Heavy Vehicles	0	8	1	1	11	0	0	9	4	1	20	0	55
% Heavy Vehicles	0	4.9	2.8	3.8	5.6	0	0	4.2	6.9	1	2	0	2.9

Zero Pedestrians were observed during this study.

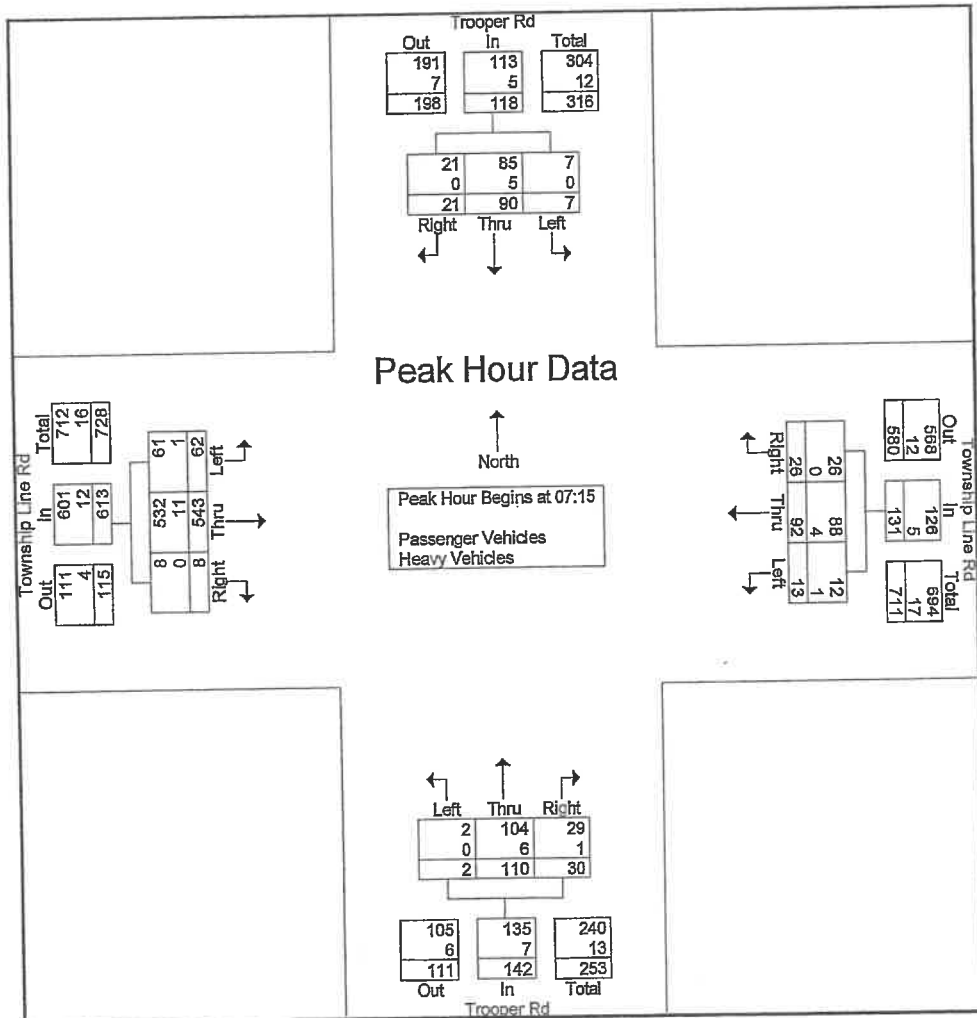
McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Township Line Road &
Trooper Road
Counter/Board #: JB

File Name : worcesterACT11a
Site Code : 81147611
Start Date : 5/31/2013
Page No : 2

Start Time	Trooper Rd Southbound				Township Line Rd Westbound				Trooper Rd Northbound				Township Line Rd Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15																	
07:15	1	23	9	33	2	24	3	29	0	20	8	28	11	137	2	150	240
07:30	4	22	2	28	4	22	5	31	0	35	10	45	19	148	3	170	274
07:45	1	21	6	28	4	23	10	37	1	26	5	32	19	142	2	163	260
08:00	1	24	4	29	3	23	8	34	1	29	7	37	13	116	1	130	230
Total Volume	7	90	21	118	13	92	26	131	2	110	30	142	62	543	8	613	1004
% App. Total	5.9	76.3	17.8		9.9	70.2	19.8		1.4	77.5	21.1		10.1	88.6	1.3		
PHF	.438	.938	.583	.894	.813	.958	.650	.885	.500	.786	.750	.789	.816	.917	.667	.901	.916
Passenger Vehicles	7	85	21	113	12	88	26	126	2	104	29	135	61	532	8	601	975
% Passenger Vehicles	100	94.4	100	95.8	92.3	95.7	100	96.2	100	94.5	96.7	95.1	98.4	98.0	100	98.0	97.1
Heavy Vehicles	0	5	0	5	1	4	0	5	0	6	1	7	1	11	0	12	29
% Heavy Vehicles	0	5.6	0	4.2	7.7	4.3	0	3.8	0	5.5	3.3	4.9	1.6	2.0	0	2.0	2.9



McMahon Associates Inc.

425 Commerce Drive, Suite 200
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Municipality: Worcester Township
Location: Township Line Road &
Trooper Road
Counter/Board #: JB

File Name : worcesterACT11a
Site Code : 81147611
Start Date : 5/31/2013
Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Trooper Rd Southbound			Township Line Rd Westbound			Trooper Rd Northbound			Township Line Rd Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00	3	14	5	1	23	3	2	20	4	5	120	1	201
07:15	1	23	9	2	23	3	0	17	7	10	135	2	232
07:30	4	20	2	4	22	5	0	33	10	19	146	3	268
07:45	1	20	6	4	23	10	1	26	5	19	140	2	257
Total	9	77	22	11	91	21	3	96	26	53	541	8	958
08:00	1	22	4	2	20	8	1	28	7	13	111	1	218
08:15	0	21	1	4	19	4	0	33	2	7	114	1	206
08:30	4	17	5	4	29	8	0	20	6	16	109	8	226
08:45	4	17	3	4	26	8	1	26	13	15	100	2	219
Total	9	77	13	14	94	28	2	107	28	51	434	12	869
Grand Total	18	154	35	25	185	49	5	203	54	104	975	20	1827
Approch %	8.7	74.4	16.9	9.7	71.4	18.9	1.9	77.5	20.6	9.5	88.7	1.8	
Total %	1	8.4	1.9	1.4	10.1	2.7	0.3	11.1	3	5.7	53.4	1.1	

Zero Pedestrians were observed during this study.

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Township Line Road &
Trooper Road
Counter/Board #: JB

File Name : worcesterACT11a
Site Code : 81147611
Start Date : 5/31/2013
Page No : 1

Groups Printed- Heavy Vehicles

Start Time	Trooper Rd Southbound			Township Line Rd Westbound			Trooper Rd Northbound			Township Line Rd Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00	0	2	0	0	2	0	0	2	0	0	0	0	6
07:15	0	0	0	0	1	0	0	3	1	1	2	0	8
07:30	0	2	0	0	0	0	0	2	0	0	2	0	6
07:45	0	1	0	0	0	0	0	0	0	0	2	0	3
Total	0	5	0	0	3	0	0	7	1	1	6	0	23
08:00	0	2	0	1	3	0	0	1	0	0	5	0	12
08:15	0	0	1	0	1	0	0	1	0	0	5	0	8
08:30	0	0	0	0	1	0	0	0	2	0	2	0	5
08:45	0	1	0	0	3	0	0	0	1	0	2	0	7
Total	0	3	1	1	8	0	0	2	3	0	14	0	32
Grand Total	0	8	1	1	11	0	0	9	4	1	20	0	55
Apprch %	0	88.9	11.1	8.3	91.7	0	0	69.2	30.8	4.8	95.2	0	
Total %	0	14.5	1.8	1.8	20	0	0	16.4	7.3	1.8	36.4	0	

Zero Pedestrians were observed during this study.

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Township Line Road &
Trooper Road
Counter/Board #: TD

File Name : worcesterACT11p
Site Code : 81147611
Start Date : 5/20/2013
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles

Start Time	Trooper Rd Southbound			Township Line Rd Westbound			Trooper Rd Northbound			Township Line Rd Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	4	18	11	7	116	1	0	31	2	1	28	2	221
16:15	2	27	10	7	85	2	0	18	4	4	34	2	195
16:30	3	23	9	4	110	2	4	21	6	2	46	1	231
16:45	10	34	13	6	117	3	0	34	4	2	34	1	258
Total	19	102	43	24	428	8	4	104	16	9	142	6	905
17:00	9	40	10	15	100	5	0	25	2	4	36	1	247
17:15	3	33	18	13	111	1	0	22	4	7	45	0	257
17:30	4	25	6	11	96	7	2	42	4	1	39	2	239
17:45	2	29	14	12	111	0	0	32	5	2	31	0	238
Total	18	127	48	51	418	13	2	121	15	14	151	3	981
Grand Total	37	229	91	75	846	21	6	225	31	23	293	9	1886
Apprch %	10.4	64.1	25.5	8	89.8	2.2	2.3	85.9	11.8	7.1	90.2	2.8	
Total %	2	12.1	4.8	4	44.9	1.1	0.3	11.9	1.6	1.2	15.5	0.5	
Passenger Vehicles	36	224	88	72	831	20	6	216	30	23	288	9	1843
% Passenger Vehicles	97.3	97.8	96.7	96	98.2	95.2	100	96	96.8	100	98.3	100	97.7
Heavy Vehicles	1	5	3	3	15	1	0	9	1	0	5	0	43
% Heavy Vehicles	2.7	2.2	3.3	4	1.8	4.8	0	4	3.2	0	1.7	0	2.3

Zero Pedestrians were observed during this study.

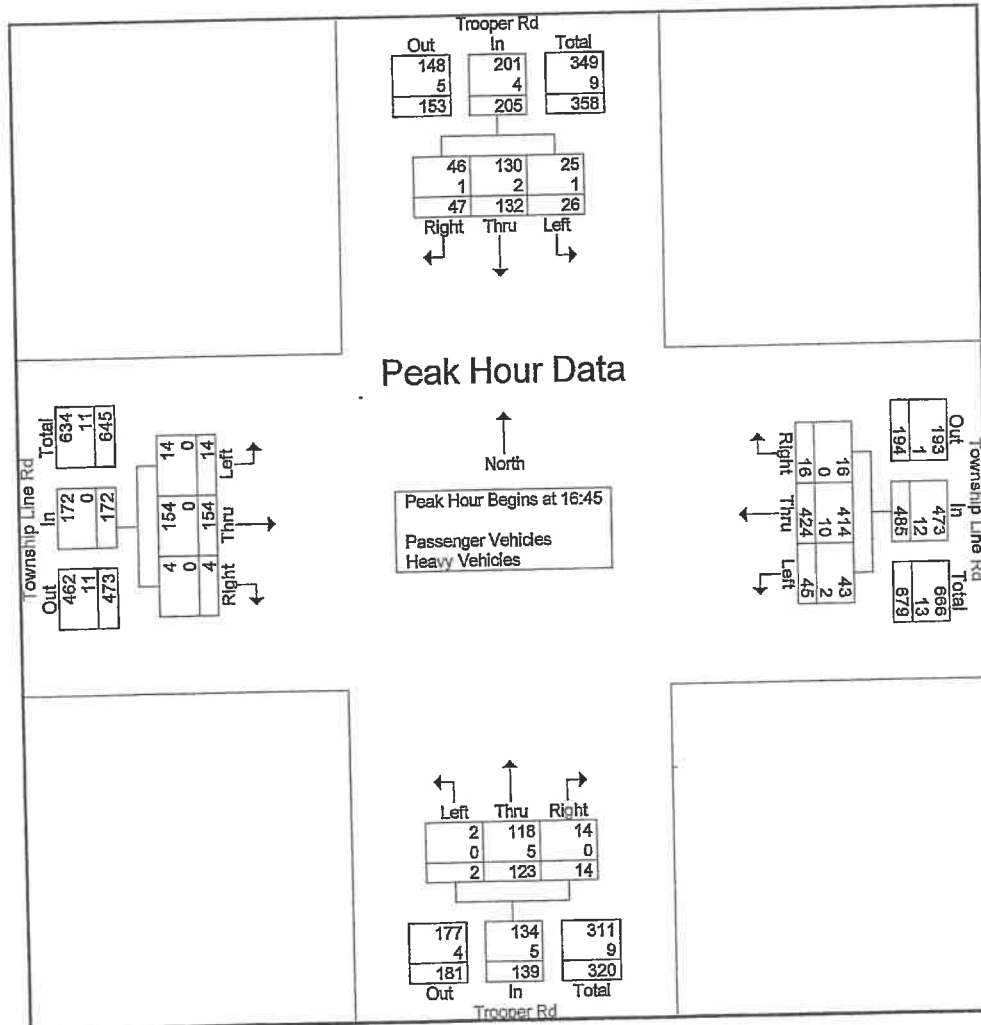
McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Township Line Road &
Trooper Road
Counter/Board #: TD

File Name : worcesterACT11p
Site Code : 81147611
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Page No : 2

Start Time	Trooper Rd Southbound				Township Line Rd Westbound				Trooper Rd Northbound				Township Line Rd Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:45																	
16:45	10	34	13	57	6	117	3	126	0	34	4	38	2	34	1	37	258
17:00	9	40	10	59	15	100	5	120	0	25	2	27	4	36	1	41	247
17:15	3	33	18	54	13	111	1	125	0	22	4	26	7	45	0	52	257
17:30	4	25	6	35	11	96	7	114	2	42	4	48	1	39	2	42	239
Total Volume	26	132	47	205	45	424	16	485	2	123	14	139	14	154	4	172	1001
% App. Total	12.7	64.4	22.9		9.3	87.4	3.3		1.4	88.5	10.1		8.1	89.5	2.3		
PHF	.650	.825	.653	.869	.750	.906	.571	.962	.250	.732	.875	.724	.500	.856	.500	.827	.970
Passenger Vehicles	25	130	46	201	43	414	16	473	2	118	14	134	14	154	4	172	980
% Passenger Vehicles	96.2	98.5	97.9	98.0	95.6	97.6	100	97.5	100	95.9	100	96.4	100	100	100	100	97.9
Heavy Vehicles	1	2	1	4	2	10	0	12	0	5	0	5	0	0	0	0	21
% Heavy Vehicles	3.8	1.5	2.1	2.0	4.4	2.4	0	2.5	0	4.1	0	3.6	0	0	0	0	2.1



McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Township Line Road &
Trooper Road
Counter/Board #: TD

File Name : worcesterACT11p
Site Code : 81147611
Start Date : 5/20/2013
Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Trooper Rd Southbound			Township Line Rd Westbound			Trooper Rd Northbound			Township Line Rd Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	4	17	11	7	114	0	0	29	2	1	26	2	213
16:15	2	26	9	7	85	2	0	17	3	4	34	2	191
16:30	3	23	8	4	107	2	4	21	6	2	43	1	224
16:45	10	34	12	6	116	3	0	32	4	2	34	1	254
Total	19	100	40	24	422	7	4	99	15	9	137	6	882
17:00	9	39	10	14	97	5	0	25	2	4	36	1	242
17:15	3	32	18	13	108	1	0	21	4	7	45	0	252
17:30	3	25	6	10	93	7	2	40	4	1	39	2	232
17:45	2	28	14	11	111	0	0	31	5	2	31	0	235
Total	17	124	48	48	409	13	2	117	15	14	151	3	961
Grand Total	36	224	88	72	831	20	6	216	30	23	288	9	1843
Apprch %	10.3	64.4	25.3	7.8	90	2.2	2.4	85.7	11.9	7.2	90	2.8	
Total %	2	12.2	4.8	3.9	45.1	1.1	0.3	11.7	1.6	1.2	15.6	0.5	

Zero Pedestrians were observed during this study.

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Township Line Road &
Trooper Road
Counter/Board #: TD

File Name : worcesterACT11p
Site Code : 81147611
Start Date : 5/20/2013
Page No : 1

Groups Printed- Heavy Vehicles

Start Time	Trooper Rd Southbound			Township Line Rd Westbound			Trooper Rd Northbound			Township Line Rd Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	0	1	0	0	2	1	0	2	0	0	2	0	8
16:15	0	1	1	0	0	0	0	1	1	0	0	0	4
16:30	0	0	1	0	3	0	0	0	0	0	3	0	7
16:45	0	0	1	0	1	0	0	2	0	0	0	0	4
Total	0	2	3	0	6	1	0	5	1	0	5	0	23
17:00	0	1	0	1	3	0	0	0	0	0	0	0	5
17:15	0	1	0	0	3	0	0	1	0	0	0	0	5
17:30	1	0	0	1	3	0	0	2	0	0	0	0	7
17:45	0	1	0	1	0	0	0	1	0	0	0	0	3
Total	1	3	0	3	9	0	0	4	0	0	0	0	20
Grand Total	1	5	3	3	15	1	0	9	1	0	5	0	43
Approch %	11.1	55.6	33.3	15.8	78.9	5.3	0	90	10	0	100	0	
Total %	2.3	11.6	7	7	34.9	2.3	0	20.9	2.3	0	11.6	0	

Zero Pedestrians were observed during this study.

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Township Line Road &
Whitehall Road
Counter/Board #: BW

File Name : worcesterACT16a
Site Code : 81147616
Start Date : 5/31/2013
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles

Start Time	Whitehall Rd Southbound			Township Line Rd Westbound			Whitehall Rd Northbound			Township Line Rd Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00	16	28	5	8	36	24	10	127	25	8	67	1	355
07:15	12	31	16	8	69	15	15	152	26	3	82	6	435
07:30	11	36	8	4	60	26	13	167	29	7	98	12	471
07:45	22	41	12	12	60	25	20	180	24	12	99	4	511
Total	61	136	41	32	225	90	58	626	104	30	346	23	1772
08:00	18	45	6	6	54	25	12	157	20	17	87	7	454
08:15	30	47	4	5	52	26	15	133	23	9	93	9	446
08:30	22	46	7	5	41	25	9	129	17	10	68	11	390
08:45	28	41	6	8	41	27	17	125	20	6	54	7	380
Total	98	179	23	24	188	103	53	544	80	42	302	34	1670
Grand Total	159	315	64	56	413	193	111	1170	184	72	648	57	3442
Apprch %	29.6	58.6	11.9	8.5	62.4	29.2	7.6	79.9	12.6	9.3	83.4	7.3	
Total %	4.6	9.2	1.9	1.6	12	5.6	3.2	34	5.3	2.1	18.8	1.7	
Passenger Vehicles	148	293	64	53	403	179	107	1145	176	72	632	53	3325
% Passenger Vehicles	93.1	93	100	94.6	97.6	92.7	96.4	97.9	95.7	100	97.5	93	96.6
Heavy Vehicles	11	22	0	3	10	14	4	25	8	0	16	4	117
% Heavy Vehicles	6.9	7	0	5.4	2.4	7.3	3.6	2.1	4.3	0	2.5	7	3.4

Zero Pedestrians were observed during this study.

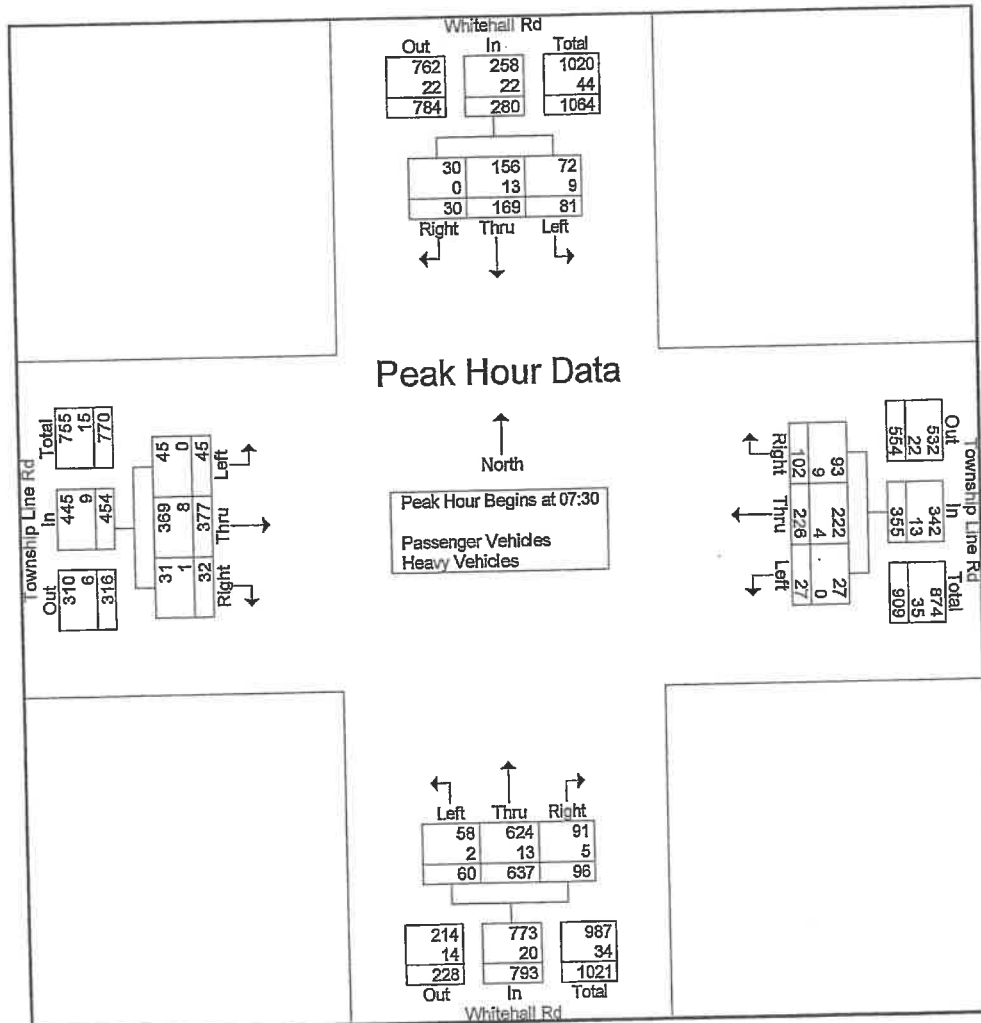
McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

File Name : worcesterACT16a
Site Code : 81147616
Start Date : 5/31/2013
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Municipality: Worcester Township
Location: Township Line Road &
Whitehall Road
Counter/Board #: BW

Start Time	Whitehall Rd Southbound				Township Line Rd Westbound				Whitehall Rd Northbound				Township Line Rd Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30																	
07:30	11	36	8	55	4	60	26	90	13	167	29	209	7	98	12	117	471
07:45	22	41	12	75	12	60	25	97	20	180	24	224	12	99	4	115	511
08:00	18	45	6	69	6	54	25	85	12	157	20	189	17	87	7	111	454
08:15	30	47	4	81	5	52	26	83	15	133	23	171	9	93	9	111	446
Total Volume	81	169	30	280	27	226	102	355	60	637	96	793	45	377	32	454	1882
% App. Total	28.9	60.4	10.7		7.6	63.7	28.7		7.6	80.3	12.1		9.9	83	7		
PHF	.675	.899	.625	.864	.563	.942	.981	.915	.750	.885	.828	.885	.662	.952	.667	.970	.921
Passenger Vehicles	72	156	30	258	27	222	93	342	58	624	91	773	45	369	31	445	1818
% Passenger Vehicles	88.9	92.3	100	92.1	100	98.2	91.2	96.3	96.7	98.0	94.8	97.5	100	97.9	96.9	98.0	96.6
Heavy Vehicles	9	13	0	22	0	4	9	13	2	13	5	20	0	8	1	9	64
% Heavy Vehicles	11.1	7.7	0	7.9	0	1.8	8.8	3.7	3.3	2.0	5.2	2.5	0	2.1	3.1	2.0	3.4



McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Township Line Road &
Whitehall Road
Counter/Board #: BW

File Name : worcesterACT16a
Site Code : 81147616
Start Date : 5/31/2013
Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Whitehall Rd Southbound			Township Line Rd Westbound			Whitehall Rd Northbound			Township Line Rd Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00	16	26	5	7	35	24	10	124	24	8	66	1	346
07:15	12	30	16	8	68	15	14	149	26	3	81	6	428
07:30	10	33	8	4	59	24	13	166	29	7	97	11	461
07:45	19	39	12	12	59	21	19	177	24	12	96	4	494
Total	57	128	41	31	221	84	56	616	103	30	340	22	1729
08:00	17	40	6	6	53	23	12	153	18	17	84	7	436
08:15	26	44	4	5	51	25	14	128	20	9	92	9	427
08:30	21	42	7	5	39	22	9	124	16	10	62	9	366
08:45	27	39	6	6	39	25	16	124	19	6	54	6	367
Total	91	165	23	22	182	95	51	529	73	42	292	31	1596
Grand Total	148	293	64	53	403	179	107	1145	176	72	632	53	3325
Apprch %	29.3	58	12.7	8.3	63.5	28.2	7.5	80.2	12.3	9.5	83.5	7	
Total %	4.5	8.8	1.9	1.6	12.1	5.4	3.2	34.4	5.3	2.2	19	1.6	

Zero Pedestrians were observed during this study.

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Township Line Road &
Whitehall Road
Counter/Board #: BW

File Name : worcesterACT16a
Site Code : 81147616
Start Date : 5/31/2013
Page No : 1

Groups Printed- Heavy Vehicles

Start Time	Whitehall Rd Southbound			Township Line Rd Westbound			Whitehall Rd Northbound			Township Line Rd Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00	0	2	0	1	1	0	0	3	1	0	1	0	9
07:15	0	1	0	0	1	0	1	3	0	0	1	0	7
07:30	1	3	0	0	1	2	0	1	0	0	1	1	10
07:45	3	2	0	0	1	4	1	3	0	0	3	0	17
Total	4	8	0	1	4	6	2	10	1	0	6	1	43
08:00	1	5	0	0	1	2	0	4	2	0	3	0	18
08:15	4	3	0	0	1	1	1	5	3	0	1	0	19
08:30	1	4	0	0	2	3	0	5	1	0	6	2	24
08:45	1	2	0	2	2	2	1	1	1	0	0	1	13
Total	7	14	0	2	6	8	2	15	7	0	10	3	74
Grand Total	11	22	0	3	10	14	4	25	8	0	16	4	117
Approch %	33.3	66.7	0	11.1	37	51.9	10.8	67.6	21.6	0	80	20	
Total %	9.4	18.8	0	2.6	8.5	12	3.4	21.4	6.8	0	13.7	3.4	

Zero Pedestrians were observed during this study.

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Township Line Road &
Whitehall Road
Counter/Board #: AB

File Name : worcesterACT16p
Site Code : 81147616
Start Date : 5/20/2013
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles

Start Time	Whitehall Rd Southbound			Township Line Rd Westbound			Whitehall Rd Northbound			Township Line Rd Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	14	57	9	17	130	15	25	68	28	4	54	12	433
16:15	12	59	10	19	121	10	26	61	17	7	52	11	405
16:30	7	68	16	23	136	11	21	80	30	2	66	12	472
16:45	5	52	11	23	162	14	19	67	34	8	57	10	462
Total	38	236	46	82	549	50	91	276	109	21	229	45	1772
17:00	11	54	22	27	141	18	27	80	17	7	56	7	467
17:15	10	54	15	36	179	9	22	68	36	4	65	10	508
17:30	6	66	18	28	141	15	26	74	25	14	55	14	482
17:45	17	48	13	20	147	12	19	69	26	4	42	10	427
Total	44	222	68	111	608	54	94	291	104	29	218	41	1884
Grand Total	82	458	114	193	1157	104	185	567	213	50	447	86	3656
Apprch %	12.5	70	17.4	13.3	79.6	7.2	19.2	58.8	22.1	8.6	76.7	14.8	
Total %	2.2	12.5	3.1	5.3	31.6	2.8	5.1	15.5	5.8	1.4	12.2	2.4	
Passenger Vehicles	82	422	114	193	1077	104	185	567	213	50	401	86	3494
% Passenger Vehicles	100	92.1	100	100	93.1	100	100	100	100	100	89.7	100	95.6
Heavy Vehicles	0	36	0	0	80	0	0	0	0	0	46	0	162
% Heavy Vehicles	0	7.9	0	0	6.9	0	0	0	0	0	10.3	0	4.4

Zero Pedestrians were observed during this study.

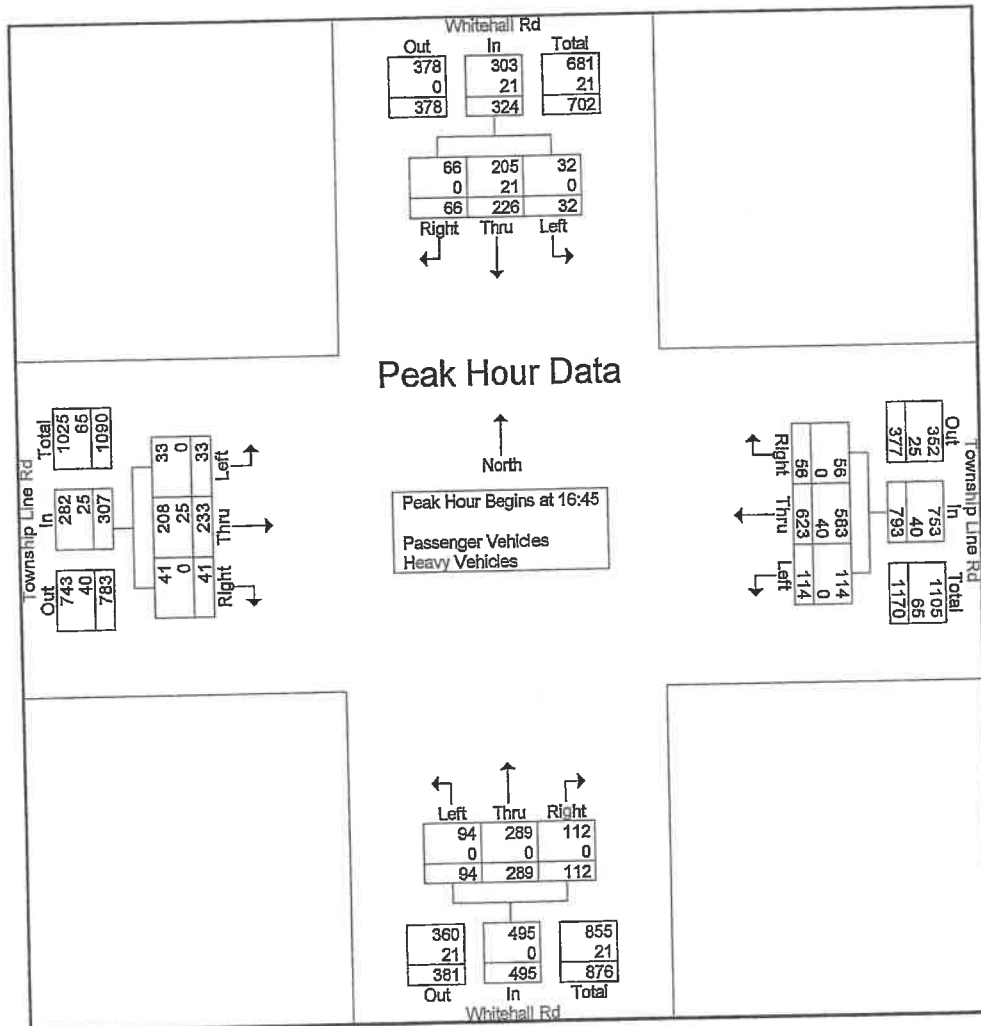
McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Township Line Road &
Whitehall Road
Counter/Board #: AB

File Name : worcesterACT16p
Site Code : 81147616
Start Date : 5/20/2013
Page No : 2

Start Time	Whitehall Rd Southbound				Township Line Rd Westbound				Whitehall Rd Northbound				Township Line Rd Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:45																	
16:45	5	52	11	68	23	162	14	199	19	67	34	120	8	57	10	75	462
17:00	11	54	22	87	27	141	18	186	27	80	17	124	7	56	7	70	467
17:15	10	54	15	79	36	179	9	224	22	68	36	126	4	65	10	79	508
17:30	6	66	18	90	28	141	15	184	26	74	25	125	14	55	14	83	482
Total Volume	32	226	66	324	114	623	56	793	94	289	112	495	33	233	41	307	1919
% App. Total	9.9	69.8	20.4		14.4	78.6	7.1		19	58.4	22.6		10.7	75.9	13.4		
PHF	.727	.856	.750	.900	.792	.870	.778	.885	.870	.903	.778	.982	.589	.896	.732	.925	.944
Passenger Vehicles	32	205	66	303	114	583	56	753	94	289	112	495	33	208	41	282	1833
% Passenger Vehicles	100	90.7	100	93.5	100	93.6	100	95.0	100	100	100	100	100	89.3	100	91.9	95.5
Heavy Vehicles	0	21	0	21	0	40	0	40	0	0	0	0	0	25	0	25	86
% Heavy Vehicles	0	9.3	0	6.5	0	6.4	0	5.0	0	0	0	0	0	10.7	0	8.1	4.5



McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Township Line Road &
Whitehall Road
Counter/Board #: AB

File Name : worcesterACT16p
Site Code : 81147616
Start Date : 5/20/2013
Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Whitehall Rd Southbound			Township Line Rd Westbound			Whitehall Rd Northbound			Township Line Rd Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	14	57	9	17	118	15	25	68	28	4	46	12	413
16:15	12	52	10	19	112	10	26	61	17	7	45	11	382
16:30	7	64	16	23	128	11	21	80	30	2	61	12	455
16:45	5	47	11	23	151	14	19	67	34	8	51	10	440
Total	38	220	46	82	509	50	91	276	109	21	203	45	1690
17:00	11	50	22	27	134	18	27	80	17	7	49	7	449
17:15	10	47	15	36	167	9	22	68	36	4	57	10	481
17:30	6	61	18	28	131	15	26	74	25	14	51	14	463
17:45	17	44	13	20	136	12	19	69	26	4	41	10	411
Total	44	202	68	111	568	54	94	291	104	29	198	41	1804
Grand Total	82	422	114	193	1077	104	185	567	213	50	401	86	3494
Apprch %	13.3	68.3	18.4	14	78.4	7.6	19.2	58.8	22.1	9.3	74.7	16	
Total %	2.3	12.1	3.3	5.5	30.8	3	5.3	16.2	6.1	1.4	11.5	2.5	

Zero Pedestrians were observed during this study.

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Township Line Road &
Whitehall Road
Counter/Board #: AB

File Name : worcesterACT16p
Site Code : 81147616
Start Date : 5/20/2013
Page No : 1

Groups Printed- Heavy Vehicles

Start Time	Whitehall Rd Southbound			Township Line Rd Westbound			Whitehall Rd Northbound			Township Line Rd Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	0	0	0	0	12	0	0	0	0	0	8	0	20
16:15	0	7	0	0	9	0	0	0	0	0	7	0	23
16:30	0	4	0	0	8	0	0	0	0	0	5	0	17
16:45	0	5	0	0	11	0	0	0	0	0	6	0	22
Total	0	16	0	0	40	0	0	0	0	0	26	0	82
17:00	0	4	0	0	7	0	0	0	0	0	7	0	18
17:15	0	7	0	0	12	0	0	0	0	0	8	0	27
17:30	0	5	0	0	10	0	0	0	0	0	4	0	19
17:45	0	4	0	0	11	0	0	0	0	0	1	0	16
Total	0	20	0	0	40	0	0	0	0	0	20	0	80
Grand Total	0	36	0	0	80	0	0	0	0	0	46	0	162
Apprch %	0	100	0	0	100	0	0	0	0	0	100	0	
Total %	0	22.2	0	0	49.4	0	0	0	0	0	28.4	0	

Zero Pedestrians were observed during this study.

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Township Line Road &
North Wales Road
Counter/Board #: AB

File Name : worcesterACT18w
Site Code : 81147618
Start Date : 5/21/2013
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles

Start Time	North Wales Rd Southbound			Township Line Rd Westbound			North Wales Rd Northbound			Township Line Rd Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00	28	20	10	2	58	15	9	20	5	26	159	11	363
07:15	39	52	10	8	55	17	6	27	10	23	172	10	429
07:30	29	49	9	7	82	14	10	31	10	30	187	12	470
07:45	31	58	9	9	65	20	2	22	12	36	167	12	443
Total	127	179	38	26	260	66	27	100	37	115	685	45	1705
08:00	35	53	9	14	68	14	6	22	21	27	144	14	427
08:15	28	50	9	9	85	9	5	27	20	23	174	12	451
08:30	25	46	20	6	64	24	7	20	7	27	167	8	421
08:45	21	40	9	10	52	20	4	22	10	28	129	12	357
Total	109	189	47	39	269	67	22	91	58	105	614	46	1656
*** BREAK ***													
16:00	17	25	13	17	154	30	8	27	6	19	82	6	404
16:15	26	23	20	10	135	28	9	31	5	17	75	7	386
16:30	29	26	23	10	154	41	13	51	5	20	74	3	449
16:45	37	26	22	8	157	39	21	36	9	21	84	5	465
Total	109	100	78	45	600	138	51	145	25	77	315	21	1704
17:00	17	25	23	9	170	46	10	39	9	14	84	6	452
17:15	31	26	23	18	173	46	18	51	12	15	93	5	511
17:30	43	33	40	11	165	38	14	35	7	24	73	11	494
17:45	31	26	18	16	150	31	4	39	17	14	98	4	448
Total	122	110	104	54	658	161	46	164	45	67	348	26	1905
Grand Total	467	578	267	164	1787	432	146	500	165	364	1962	138	6970
Approch %	35.6	44.1	20.4	6.9	75	18.1	18	61.7	20.3	14.8	79.6	5.6	
Total %	6.7	8.3	3.8	2.4	25.6	6.2	2.1	7.2	2.4	5.2	28.1	2	
Passenger Vehicles	456	548	251	153	1631	426	131	476	152	349	1809	121	6503
% Passenger Vehicles	97.6	94.8	94	93.3	91.3	98.6	89.7	95.2	92.1	95.9	92.2	87.7	93.3
Heavy Vehicles	11	30	16	11	156	6	15	24	13	15	153	17	467
% Heavy Vehicles	2.4	5.2	6	6.7	8.7	1.4	10.3	4.8	7.9	4.1	7.8	12.3	6.7

Zero Pedestrians were observed during this study.

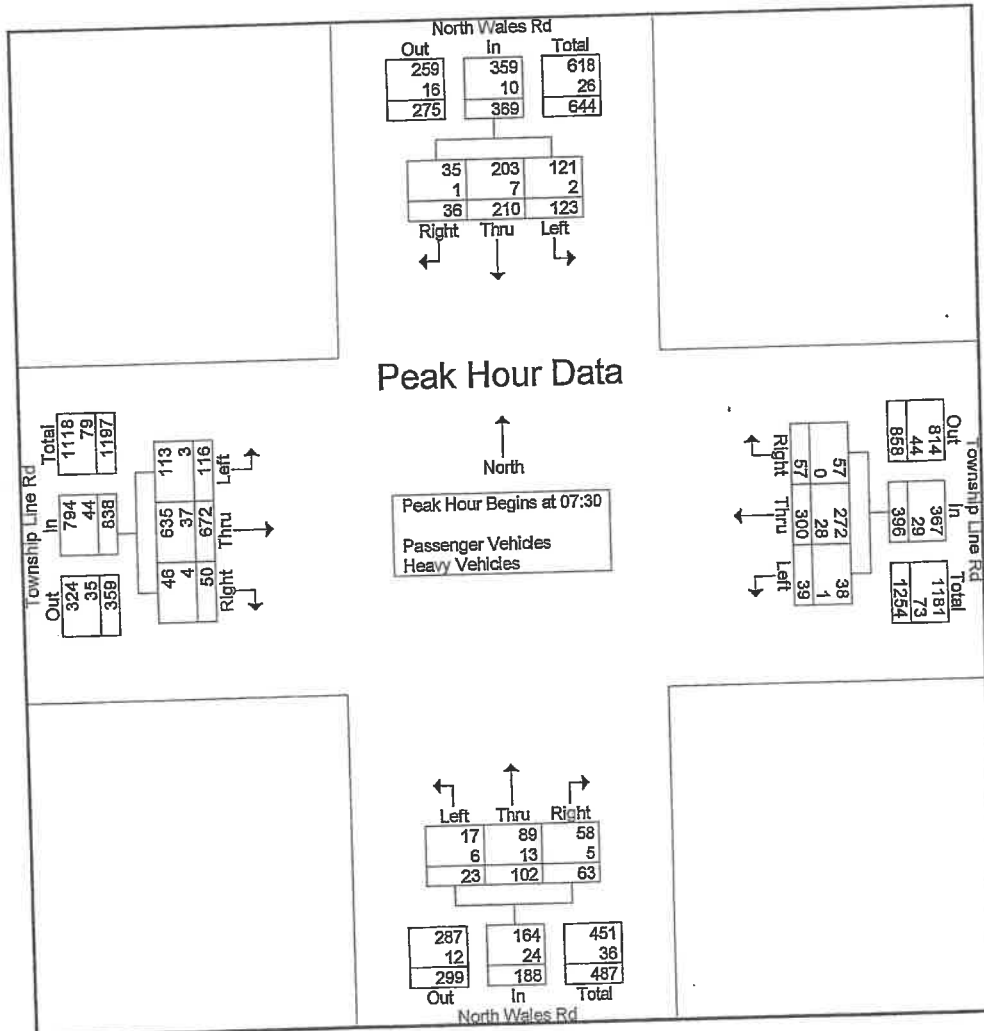
McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Township Line Road &
North Wales Road
Counter/Board #: AB

File Name : worcesterACT18w
Site Code : 81147618
Start Date : 5/21/2013
Page No : 2

Start Time	North Wales Rd Southbound				Township Line Rd Westbound				North Wales Rd Northbound				Township Line Rd Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 to 11:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30																	
07:30	29	49	9	87	7	82	14	103	10	31	10	51	30	187	12	229	470
07:45	31	58	9	98	9	65	20	94	2	22	12	36	36	167	12	215	443
08:00	35	53	9	97	14	68	14	96	6	22	21	49	27	144	14	185	427
08:15	28	50	9	87	9	85	9	103	5	27	20	52	23	174	12	209	451
Total Volume	123	210	36	369	39	300	57	396	23	102	63	188	116	672	50	838	1791
% App. Total	33.3	56.9	9.8		9.8	75.8	14.4		12.2	54.3	33.5		13.8	80.2	6		
PHF	.879	.905	1.00	.941	.696	.882	.713	.961	.575	.823	.750	.904	.806	.898	.893	.915	.953
Passenger Vehicles	121	203	35	359	38	272	57	367	17	89	58	164	113	635	46	794	1684
% Passenger Vehicles	98.4	96.7	97.2	97.3	97.4	90.7	100	92.7	73.9	87.3	92.1	87.2	97.4	94.5	92.0	94.7	94.0
Heavy Vehicles	2	7	1	10	1	28	0	29	6	13	5	24	3	37	4	44	107
% Heavy Vehicles	1.6	3.3	2.8	2.7	2.6	9.3	0	7.3	26.1	12.7	7.9	12.8	2.6	5.5	8.0	5.3	6.0



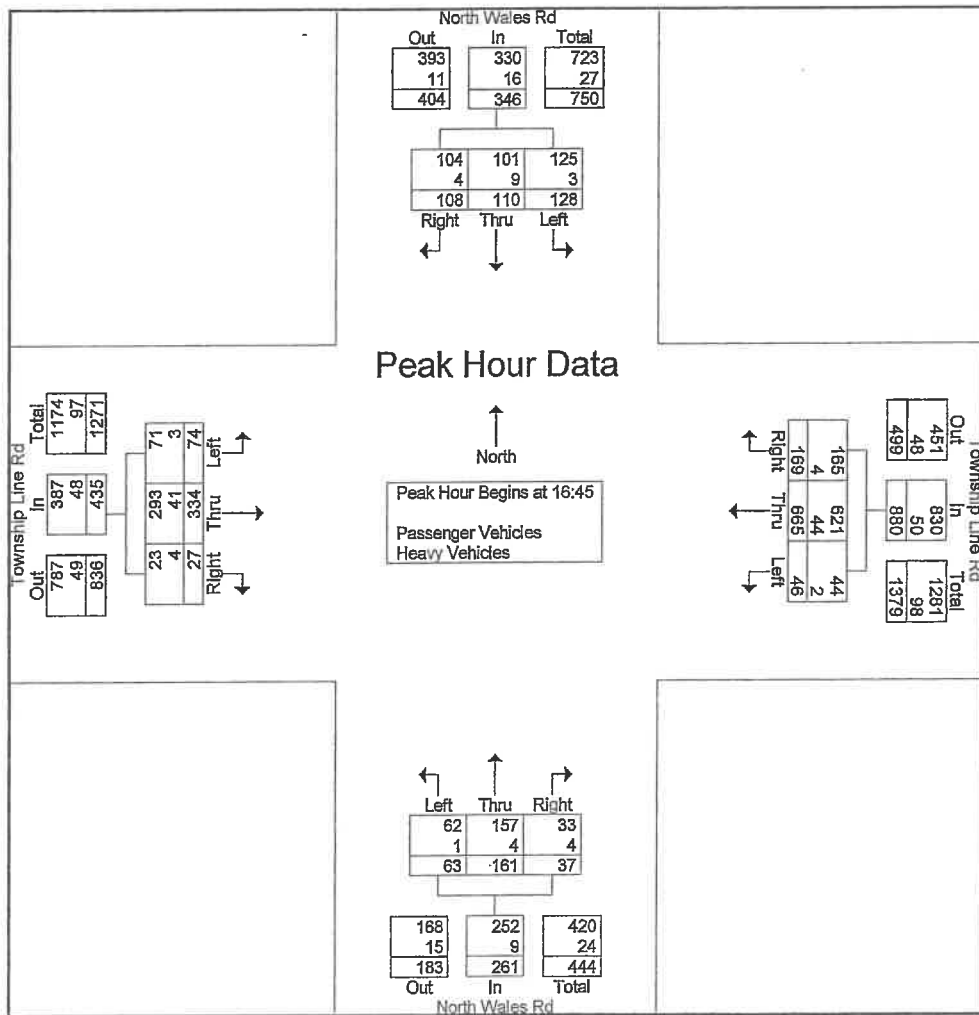
McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Township Line Road &
North Wales Road
Counter/Board #: AB

File Name : worcesterACT18w
Site Code : 81147618
Start Date : 5/21/2013
Page No : 3

Start Time	North Wales Rd Southbound				Township Line Rd Westbound				North Wales Rd Northbound				Township Line Rd Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 12:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:45																	
16:45	37	26	22	85	8	157	39	204	21	36	9	66	21	84	5	110	465
17:00	17	25	23	65	9	170	46	225	10	39	9	58	14	84	6	104	452
17:15	31	26	23	80	18	173	46	237	18	51	12	81	15	93	5	113	511
17:30	43	33	40	116	11	165	38	214	14	35	7	56	24	73	11	108	494
Total Volume	128	110	108	346	46	665	169	880	63	161	37	261	74	334	27	435	1922
% App. Total	37	31.8	31.2		5.2	75.6	19.2		24.1	61.7	14.2		17	76.8	6.2		
PHF	.744	.833	.675	.746	.639	.961	.918	.928	.750	.789	.771	.806	.771	.898	.614	.962	.940
Passenger Vehicles	125	101	104	330	44	621	165	830	62	157	33	252	71	293	23	387	1799
% Passenger Vehicles	97.7	91.8	96.3	95.4	95.7	93.4	97.6	94.3	98.4	97.5	89.2	96.6	95.9	87.7	85.2	89.0	93.6
Heavy Vehicles	3	9	4	16	2	44	4	50	1	4	4	9	3	41	4	48	123
% Heavy Vehicles	2.3	8.2	3.7	4.6	4.3	6.6	2.4	5.7	1.6	2.5	10.8	3.4	4.1	12.3	14.8	11.0	6.4



McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

File Name : worcesterACT18w

Site Code : 81147618

Start Date : 5/21/2013

Page No : 1

Municipality: Worcester Township
Location: Township Line Road &
North Wales Road
Counter/Board #: AB

Groups Printed- Passenger Vehicles

Start Time	North Wales Rd Southbound			Township Line Rd Westbound			North Wales Rd Northbound			Township Line Rd Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00	27	20	8	1	46	15	8	20	4	23	150	8	330
07:15	39	48	9	8	44	17	6	23	10	21	161	8	394
07:30	29	46	9	7	75	14	8	27	10	30	177	10	442
07:45	30	58	9	8	57	20	2	17	10	34	160	12	417
Total	125	172	35	24	222	66	24	87	34	108	648	38	1583
08:00	35	49	8	14	63	14	4	22	21	27	135	12	404
08:15	27	50	9	9	77	9	3	23	17	22	163	12	421
08:30	24	44	19	4	53	24	6	20	7	27	160	8	396
08:45	21	36	9	10	52	20	4	22	10	28	123	12	347
Total	107	179	45	37	245	67	17	87	55	104	581	44	1568

*** BREAK ***

16:00	17	24	13	16	143	30	7	27	6	19	72	5	379
16:15	25	23	16	8	122	27	7	29	4	16	64	6	347
16:30	27	23	20	9	137	41	11	51	4	18	65	2	408
16:45	37	22	22	8	142	38	21	35	8	20	76	3	432
Total	106	92	71	41	544	136	46	142	22	73	277	16	1566
17:00	16	23	21	9	159	44	9	39	8	13	77	5	423
17:15	29	26	22	16	163	46	18	49	10	15	78	5	477
17:30	43	30	39	11	157	37	14	34	7	23	62	10	467
17:45	30	26	18	15	141	30	3	38	16	13	86	3	419
Total	118	105	100	51	620	157	44	160	41	64	303	23	1786
Grand Total	456	548	251	153	1631	426	131	476	152	349	1809	121	6503
Approch %	36.3	43.7	20	6.9	73.8	19.3	17.3	62.7	20	15.3	79.4	5.3	
Total %	7	8.4	3.9	2.4	25.1	6.6	2	7.3	2.3	5.4	27.8	1.9	

Zero Pedestrians were observed during this study.

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Township Line Road &
North Wales Road
Counter/Board #: AB

File Name : worcesterACT18w
Site Code : 81147618
Start Date : 5/21/2013
Page No : 1

Groups Printed- Heavy Vehicles

Start Time	North Wales Rd Southbound			Township Line Rd Westbound			North Wales Rd Northbound			Township Line Rd Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00	1	0	2	1	12	0	1	0	1	3	9	3	33
07:15	0	4	1	0	11	0	0	4	0	2	11	2	35
07:30	0	3	0	0	7	0	2	4	0	0	10	2	28
07:45	1	0	0	1	8	0	0	5	2	2	7	0	26
Total	2	7	3	2	38	0	3	13	3	7	37	7	122
08:00	0	4	1	0	5	0	2	0	0	0	9	2	23
08:15	1	0	0	0	8	0	2	4	3	1	11	0	30
08:30	1	2	1	2	11	0	1	0	0	0	7	0	25
08:45	0	4	0	0	0	0	0	0	0	0	6	0	10
Total	2	10	2	2	24	0	5	4	3	1	33	2	88

*** BREAK ***

16:00	0	1	0	1	11	0	1	0	0	0	10	1	25
16:15	1	0	4	2	13	1	2	2	1	1	11	1	39
16:30	2	3	3	1	17	0	2	0	1	2	9	1	41
16:45	0	4	0	0	15	1	0	1	1	1	8	2	33
Total	3	8	7	4	56	2	5	3	3	4	38	5	138
17:00	1	2	2	0	11	2	1	0	1	1	7	1	29
17:15	2	0	1	2	10	0	0	2	2	0	15	0	34
17:30	0	3	1	0	8	1	0	1	0	1	11	1	27
17:45	1	0	0	1	9	1	1	1	1	1	12	1	29
Total	4	5	4	3	38	4	2	4	4	3	45	3	119
Grand Total	11	30	16	11	156	6	15	24	13	15	153	17	467
Apprch %	19.3	52.6	28.1	6.4	90.2	3.5	28.8	46.2	25	8.1	82.7	9.2	
Total %	2.4	6.4	3.4	2.4	33.4	1.3	3.2	5.1	2.8	3.2	32.8	3.6	

Zero Pedestrians were observed during this study.

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Whitehall Road &
Bean Road
Counter/Board #: BW

File Name : worcesterACT14pR
Site Code : 81147614
Start Date : 2/11/2014
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles

Start Time	Whitehall Rd Southbound			Bean Rd Westbound			Whitehall Rd Northbound			Bean Rd Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	2	57	2	2	5	5	4	58	4	2	5	1	147
16:15	4	64	3	3	7	2	3	55	2	0	1	1	145
16:30	4	76	1	3	3	7	1	71	1	1	4	1	173
16:45	1	56	1	3	3	4	3	75	2	0	5	3	156
Total	11	253	7	11	18	18	11	259	9	3	15	6	621
17:00	4	50	2	5	4	4	4	75	4	0	1	2	155
17:15	2	62	2	6	5	15	8	69	9	1	3	1	183
17:30	3	51	1	8	6	21	3	62	6	2	3	2	168
17:45	4	53	2	4	4	9	5	57	7	2	4	2	153
Total	13	216	7	23	19	49	20	263	26	5	11	7	659
Grand Total	24	469	14	34	37	67	31	522	35	8	26	13	1280
Apprch %	4.7	92.5	2.8	24.6	26.8	48.6	5.3	88.8	6	17	55.3	27.7	
Total %	1.9	36.6	1.1	2.7	2.9	5.2	2.4	40.8	2.7	0.6	2	1	
Passenger Vehicles	24	446	14	32	36	65	28	495	33	6	24	10	1213
% Passenger Vehicles	100	95.1	100	94.1	97.3	97	90.3	94.8	94.3	75	92.3	76.9	94.8
Heavy Vehicles	0	23	0	2	1	2	3	27	2	2	2	3	67
% Heavy Vehicles	0	4.9	0	5.9	2.7	3	9.7	5.2	5.7	25	7.7	23.1	5.2

Zero Pedestrians were observed during this study.

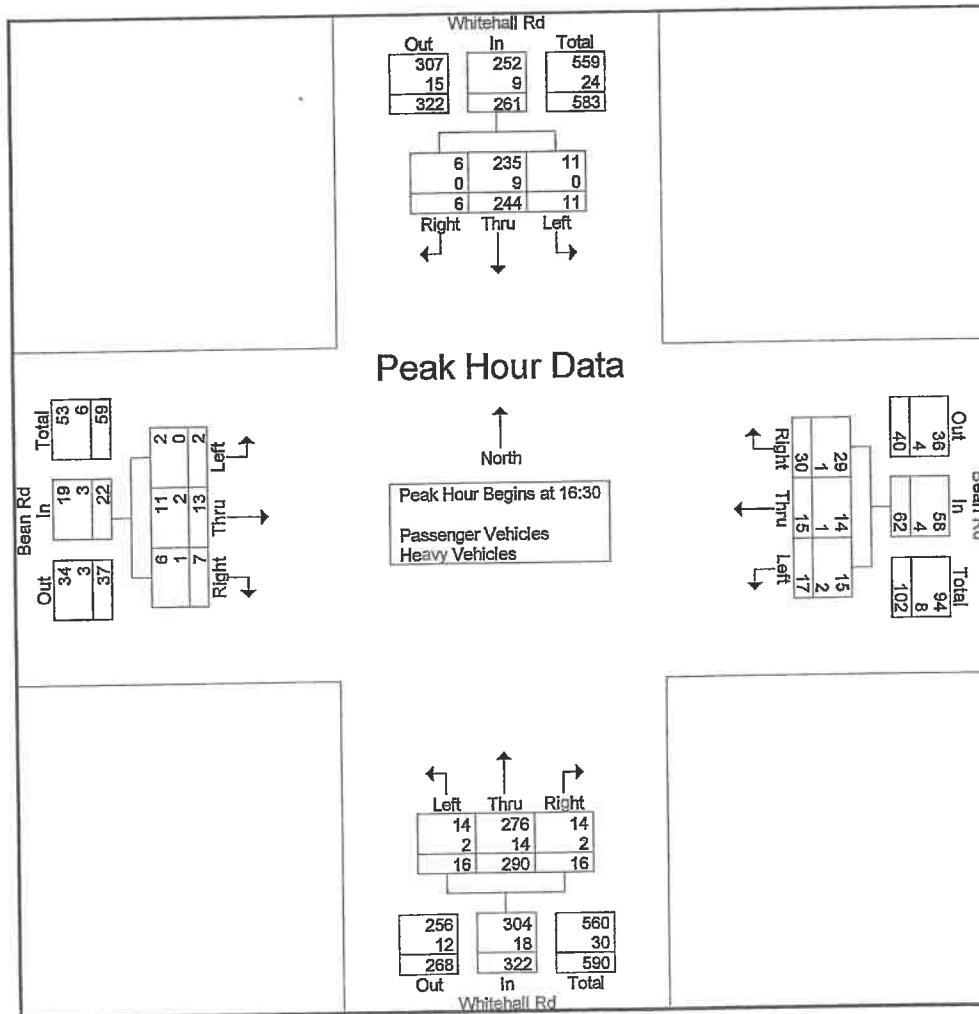
McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Whitehall Road &
Bean Road
Counter/Board #: BW

File Name : worcesterACT14pR
Site Code : 81147614
Start Date : 2/11/2014
Page No : 2

Start Time	Whitehall Rd Southbound				Bean Rd Westbound				Whitehall Rd Northbound				Bean Rd Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:30																	
16:30	4	76	1	81	3	3	7	13	1	71	1	73	1	4	1	6	173
16:45	1	56	1	58	3	3	4	10	3	75	2	80	0	5	3	8	156
17:00	4	50	2	56	5	4	4	13	4	75	4	83	0	1	2	3	155
17:15	2	62	2	66	6	5	15	26	8	69	9	86	1	3	1	5	183
Total Volume	11	244	6	261	17	15	30	62	16	290	16	322	2	13	7	22	667
% App. Total	4.2	93.5	2.3		27.4	24.2	48.4		5	90.1	5		9.1	59.1	31.8		
PHF	.688	.803	.750	.806	.708	.750	.500	.596	.500	.967	.444	.936	.500	.650	.583	.688	.911
Passenger Vehicles	11	235	6	252	15	14	29	58	14	276	14	304	2	11	6	19	633
% Passenger Vehicles	100	96.3	100	96.6	88.2	93.3	96.7	93.5	87.5	95.2	87.5	94.4	100	84.6	85.7	86.4	94.9
Heavy Vehicles	0	9	0	9	2	1	1	4	2	14	2	18	0	2	1	3	34
% Heavy Vehicles	0	3.7	0	3.4	11.8	6.7	3.3	6.5	12.5	4.8	12.5	5.6	0	15.4	14.3	13.6	5.1



McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Whitehall Road &
Bean Road
Counter/Board #: BW

File Name : worcesterACT14pR
Site Code : 81147614
Start Date : 2/11/2014
Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Whitehall Rd Southbound			Bean Rd Westbound			Whitehall Rd Northbound			Bean Rd Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	2	55	2	2	5	5	4	55	4	1	5	1	141
16:15	4	61	3	3	7	1	2	51	2	0	1	0	135
16:30	4	71	1	2	3	7	1	66	1	1	3	1	161
16:45	1	55	1	3	2	3	2	71	1	0	5	2	146
Total	11	242	7	10	17	16	9	243	8	2	14	4	583
17:00	4	48	2	4	4	4	4	73	4	0	1	2	150
17:15	2	61	2	6	5	15	7	66	8	1	2	1	176
17:30	3	44	1	8	6	21	3	58	6	2	3	2	157
17:45	4	51	2	4	4	9	5	55	7	1	4	1	147
Total	13	204	7	22	19	49	19	252	25	4	10	6	630
Grand Total	24	446	14	32	36	65	28	495	33	6	24	10	1213
Apprch %	5	92.1	2.9	24.1	27.1	48.9	5	89	5.9	15	60	25	
Total %	2	36.8	1.2	2.6	3	5.4	2.3	40.8	2.7	0.5	2	0.8	

Zero Pedestrians were observed during this study.

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Whitehall Road &
Bean Road
Counter/Board #: BW

File Name : worcesterACT14pR
Site Code : 81147614
Start Date : 2/11/2014
Page No : 1

Groups Printed- Heavy Vehicles

Start Time	Whitehall Rd Southbound			Bean Rd Westbound			Whitehall Rd Northbound			Bean Rd Eastbound			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	0	2	0	0	0	0	0	3	0	1	0	0	6
16:15	0	3	0	0	0	1	1	4	0	0	0	1	10
16:30	0	5	0	1	0	0	0	5	0	0	1	0	12
16:45	0	1	0	0	1	1	1	4	1	0	0	1	10
Total	0	11	0	1	1	2	2	16	1	1	1	2	38
17:00	0	2	0	1	0	0	0	2	0	0	0	0	5
17:15	0	1	0	0	0	0	1	3	1	0	1	0	7
17:30	0	7	0	0	0	0	0	4	0	0	0	0	11
17:45	0	2	0	0	0	0	0	2	0	1	0	1	6
Total	0	12	0	1	0	0	1	11	1	1	1	1	29
Grand Total	0	23	0	2	1	2	3	27	2	2	2	3	67
Apprch %	0	100	0	40	20	40	9.4	84.4	6.2	28.6	28.6	42.9	
Total %	0	34.3	0	3	1.5	3	4.5	40.3	3	3	3	4.5	

Zero Pedestrians were observed during this study.

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Skippack Pike (Route 73) &
Bustard Rd
Counter/Board #: LB

File Name : worcesterACT02a
Site Code : 81147602
Start Date : 5/23/2013
Page No : 1

Groups Printed - Passenger Vehicles - Heavy Vehicles

Start Time	Bustard Rd Southbound		Skippack Pk (Rt 73) Westbound		Skippack Pk (Rt 73) Eastbound		Int. Total
	Left	Right	Thru	Right	Left	Thru	
07:00	48	19	67	23	32	176	365
07:15	54	12	70	26	29	199	390
07:30	42	17	87	23	43	178	390
07:45	51	16	87	31	34	141	360
Total	195	64	311	103	138	694	1505
08:00	17	15	68	31	26	162	319
08:15	38	19	67	26	35	167	352
08:30	38	14	97	39	34	165	387
08:45	41	26	62	25	33	174	361
Total	134	74	294	121	128	668	1419
Grand Total	329	138	605	224	266	1362	2924
Apprch %	70.4	29.6	73	27	16.3	83.7	
Total %	11.3	4.7	20.7	7.7	9.1	46.6	
Passenger Vehicles	313	127	562	211	247	1302	2762
% Passenger Vehicles	95.1	92	92.9	94.2	92.9	95.6	94.5
Heavy Vehicles	16	11	43	13	19	60	162
% Heavy Vehicles	4.9	8	7.1	5.8	7.1	4.4	5.5

Zero Pedestrians were observed during this study.

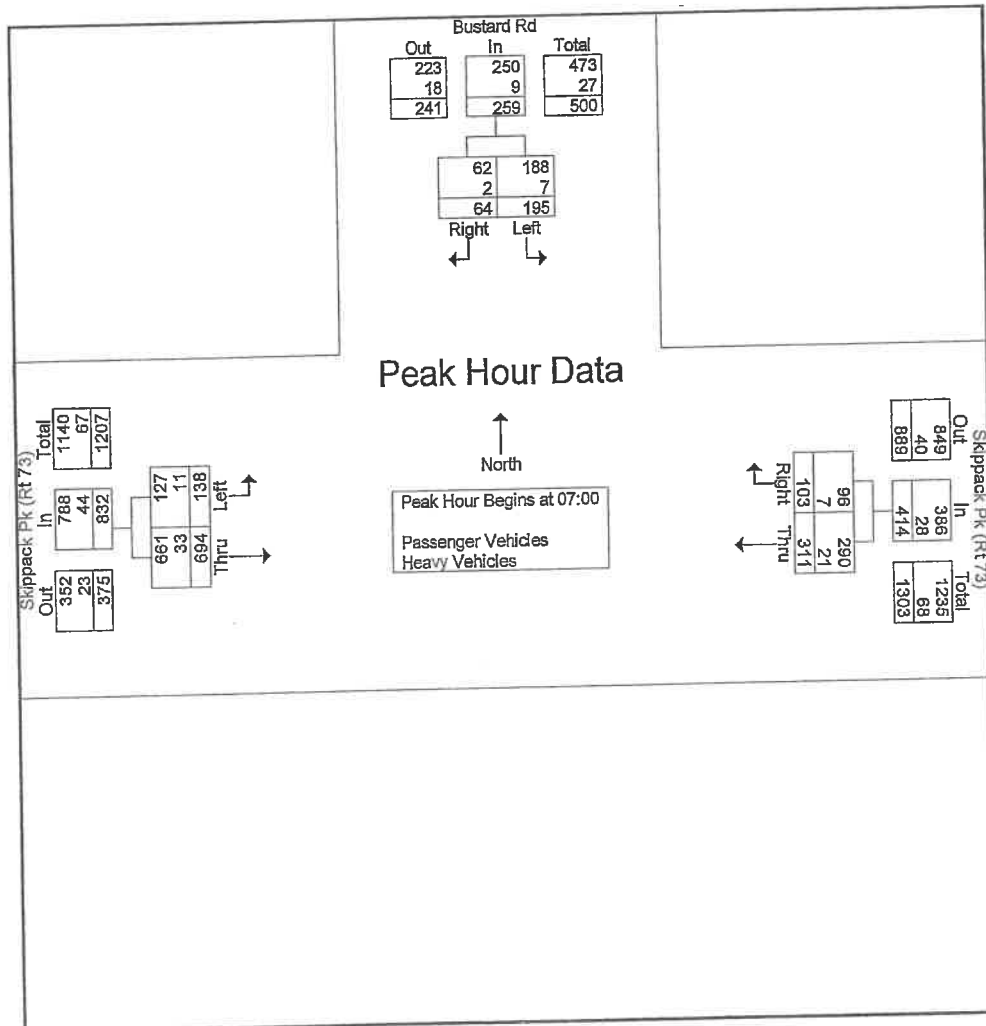
McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Skippack Pike (Route 73) &
Bustard Rd
Counter/Board #: LB

File Name : worcesterACT02a
Site Code : 81147602
Start Date : 5/23/2013
Page No : 2

Start Time	Bustard Rd Southbound			Skippack Pk (Rt 73) Westbound			Skippack Pk (Rt 73) Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00										
07:00	48	19	67	67	23	90	32	176	208	365
07:15	54	12	66	70	26	96	29	199	228	390
07:30	42	17	59	87	23	110	43	178	221	390
07:45	51	16	67	87	31	118	34	141	175	360
Total Volume	195	64	259	311	103	414	138	694	832	1505
% App. Total	75.3	24.7		75.1	24.9		16.6	83.4		
PHF	.903	.842	.966	.894	.831	.877	.802	.872	.912	.965
Passenger Vehicles	188	62	250	290	96	386	127	661	788	1424
% Passenger Vehicles	96.4	96.9	96.5	93.2	93.2	93.2	92.0	95.2	94.7	94.6
Heavy Vehicles	7	2	9	21	7	28	11	33	44	81
% Heavy Vehicles	3.6	3.1	3.5	6.8	6.8	6.8	8.0	4.8	5.3	5.4



McMahon Associates Inc.
 425 Commerce Drive, Suite 200
 Fort Washington, PA 19034

Municipality: Worcester Township
 Location: Skippack Pike (Route 73) &
 Bustard Rd
 Counter/Board #: LB

File Name : worcesterACT02a
 Site Code : 81147602
 Start Date : 5/23/2013
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Bustard Rd Southbound		Skippack Pk (Rt 73) Westbound		Skippack Pk (Rt 73) Eastbound		Int. Total
	Left	Right	Thru	Right	Left	Thru	
07:00	47	19	65	22	27	162	342
07:15	52	11	67	21	29	196	376
07:30	41	16	76	23	39	169	364
07:45	48	16	82	30	32	134	342
Total	188	62	290	96	127	661	1424
08:00	14	13	66	31	24	157	305
08:15	37	16	60	25	34	161	333
08:30	37	13	90	35	31	157	363
08:45	37	23	56	24	31	166	337
Total	125	65	272	115	120	641	1338
Grand Total	313	127	562	211	247	1302	2762
Apprch %	71.1	28.9	72.7	27.3	15.9	84.1	
Total %	11.3	4.6	20.3	7.6	8.9	47.1	

Zero Pedestrians were observed during this study.

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Skippack Pike (Route 73) &
Bustard Rd
Counter/Board #: LB

File Name : worcesterACT02a
Site Code : 81147602
Start Date : 5/23/2013
Page No : 1

Groups Printed- Heavy Vehicles

Start Time	Bustard Rd Southbound		Skippack Pk (Rt 73) Westbound		Skippack Pk (Rt 73) Eastbound		Int. Total
	Left	Right	Thru	Right	Left	Thru	
07:00	1	0	2	1	5	14	23
07:15	2	1	3	5	0	3	14
07:30	1	1	11	0	4	9	26
07:45	3	0	5	1	2	7	18
Total	7	2	21	7	11	33	81
08:00	3	2	2	0	2	5	14
08:15	1	3	7	1	1	6	19
08:30	1	1	7	4	3	8	24
08:45	4	3	6	1	2	8	24
Total	9	9	22	6	8	27	81
Grand Total	16	11	43	13	19	60	162
Apprch %	59.3	40.7	76.8	23.2	24.1	75.9	
Total %	9.9	6.8	26.5	8	11.7	37	

Zero Pedestrians were observed during this study.

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Skippack Pike (Route 73) &
Bustard Road
Counter/Board #: LB

File Name : worcesterACT02p
Site Code : 81147602
Start Date : 5/20/2013
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles

Start Time	Bustard Rd Southbound		Skippack Pk (Rt 73) Westbound		Skippack Pk (Rt 73) Eastbound		Int. Total
	Left	Right	Thru	Right	Left	Thru	
16:00	22	26	119	32	13	79	291
16:15	28	31	203	43	20	96	421
16:30	24	28	209	42	16	98	417
16:45	30	40	196	48	21	118	453
Total	104	125	727	165	70	391	1582
17:00	32	27	198	40	18	102	417
17:15	26	35	216	51	17	132	477
17:30	26	34	179	40	28	101	408
17:45	28	36	183	44	18	69	378
Total	112	132	776	175	81	404	1680
Grand Total	216	257	1503	340	151	795	3262
Approch %	45.7	54.3	81.6	18.4	16	84	
Total %	6.6	7.9	46.1	10.4	4.6	24.4	
Passenger Vehicles	208	253	1468	333	148	766	3176
% Passenger Vehicles	96.3	98.4	97.7	97.9	98	96.4	97.4
Heavy Vehicles	8	4	35	7	3	29	86
% Heavy Vehicles	3.7	1.6	2.3	2.1	2	3.6	2.6

Zero Pedestrians were observed during this study.

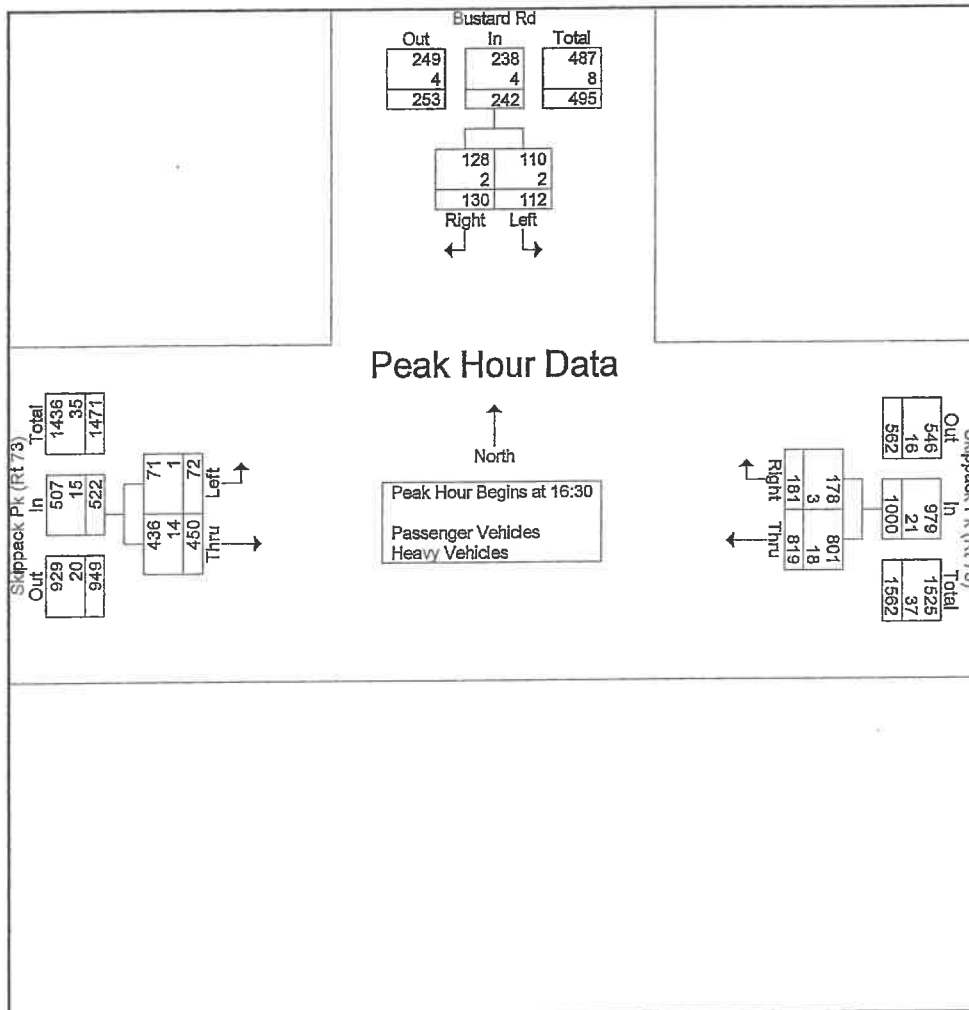
McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Skippack Pike (Route 73) &
Bustard Road
Counter/Board #: LB

File Name : worcesterACT02p
Site Code : 81147602
Start Date : 5/20/2013
Page No : 2

Start Time	Bustard Rd Southbound			Skippack Pk (Rt 73) Westbound			Skippack Pk (Rt 73) Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 16:30										
16:30	24	28	52	209	42	251	16	98	114	417
16:45	30	40	70	196	48	244	21	118	139	453
17:00	32	27	59	198	40	238	18	102	120	417
17:15	26	35	61	216	51	267	17	132	149	477
Total Volume	112	130	242	819	181	1000	72	450	522	1764
% App. Total	46.3	53.7		81.9	18.1		13.8	86.2		
PHF	.875	.813	.864	.948	.887	.936	.857	.852	.876	.925
Passenger Vehicles	110	128	238	801	178	979	71	436	507	1724
% Passenger Vehicles	98.2	98.5	98.3	97.8	98.3	97.9	98.6	96.9	97.1	97.7
Heavy Vehicles	2	2	4	18	3	21	1	14	15	40
% Heavy Vehicles	1.8	1.5	1.7	2.2	1.7	2.1	1.4	3.1	2.9	2.3



McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Skippack Pike (Route 73) &
Bustard Road
Counter/Board #: LB

File Name : worcesterACT02p
Site Code : 81147602
Start Date : 5/20/2013
Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Bustard Rd Southbound		Skippack Pk (Rt 73) Westbound		Skippack Pk (Rt 73) Eastbound		Int. Total
	Left	Right	Thru	Right	Left	Thru	
16:00	18	26	115	31	13	75	278
16:15	27	29	193	40	20	90	399
16:30	23	28	202	42	16	94	405
16:45	30	39	192	47	20	114	442
Total	98	122	702	160	69	373	1524
17:00	31	27	193	38	18	99	406
17:15	26	34	214	51	17	129	471
17:30	26	34	178	40	27	99	404
17:45	27	36	181	44	17	66	371
Total	110	131	766	173	79	393	1652
Grand Total	208	253	1468	333	148	766	3176
Apprch %	45.1	54.9	81.5	18.5	16.2	83.8	
Total %	6.5	8	46.2	10.5	4.7	24.1	

Zero Pedestrians were observed during this study.

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Skippack Pike (Route 73) &
Bustard Road
Counter/Board #: LB

File Name : worcesterACT02p
Site Code : 81147602
Start Date : 5/20/2013
Page No : 1

Groups Printed- Heavy Vehicles

Start Time	Bustard Rd Southbound		Skippack Pk (Rt 73) Westbound		Skippack Pk (Rt 73) Eastbound		Int. Total
	Left	Right	Thru	Right	Left	Thru	
16:00	4	0	4	1	0	4	13
16:15	1	2	10	3	0	6	22
16:30	1	0	7	0	0	4	12
16:45	0	1	4	1	1	4	11
Total	6	3	25	5	1	18	58
17:00	1	0	5	2	0	3	11
17:15	0	1	2	0	0	3	6
17:30	0	0	1	0	1	2	4
17:45	1	0	2	0	1	3	7
Total	2	1	10	2	2	11	28
Grand Total	8	4	35	7	3	29	86
Apprch %	66.7	33.3	83.3	16.7	9.4	90.6	
Total %	9.3	4.7	40.7	8.1	3.5	33.7	

Zero Pedestrians were observed during this study.

McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Skippack Pike (Route 73) &
Wentz Church Road / Church Access
Counter/Board #: JB

File Name : worcesterACT04wR
Site Code : 81147604
Start Date : 5/8/2013
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles

Start Time	Wentz Church Rd Southbound		Skippack Pk (Rt 73) Westbound		Skippack Pk (Rt 73) Eastbound		Int. Total
	Left	Right	Thru	Right	Left	Thru	
07:00	2	14	70	8	64	182	340
07:15	2	43	84	4	63	195	391
07:30	1	30	87	1	58	173	350
07:45	1	38	89	4	63	206	401
Total	6	125	330	17	248	756	1482
08:00	7	20	84	3	53	169	336
08:15	3	28	81	3	63	163	341
08:30	7	27	73	1	58	156	322
08:45	6	28	82	0	67	144	327
Total	23	103	320	7	241	632	1326
*** BREAK ***							
16:00	2	40	164	7	15	91	319
16:15	3	33	213	11	17	115	392
16:30	0	38	224	9	15	107	393
16:45	0	48	206	9	30	88	381
Total	5	159	807	36	77	401	1485
17:00	2	23	208	5	14	107	359
17:15	1	40	224	12	20	121	418
17:30	2	32	222	7	24	128	415
17:45	3	38	217	6	20	126	410
Total	8	133	871	30	78	482	1602
Grand Total	42	520	2328	90	644	2271	5895
Apprch %	7.5	92.5	96.3	3.7	22.1	77.9	
Total %	0.7	8.8	39.5	1.5	10.9	38.5	
Passenger Vehicles	35	503	2256	85	630	2180	5689
% Passenger Vehicles	83.3	96.7	96.9	94.4	97.8	96	96.5
Heavy Vehicles	7	17	72	5	14	91	206
% Heavy Vehicles	16.7	3.3	3.1	5.6	2.2	4	3.5

Zero Pedestrians were observed during this study.

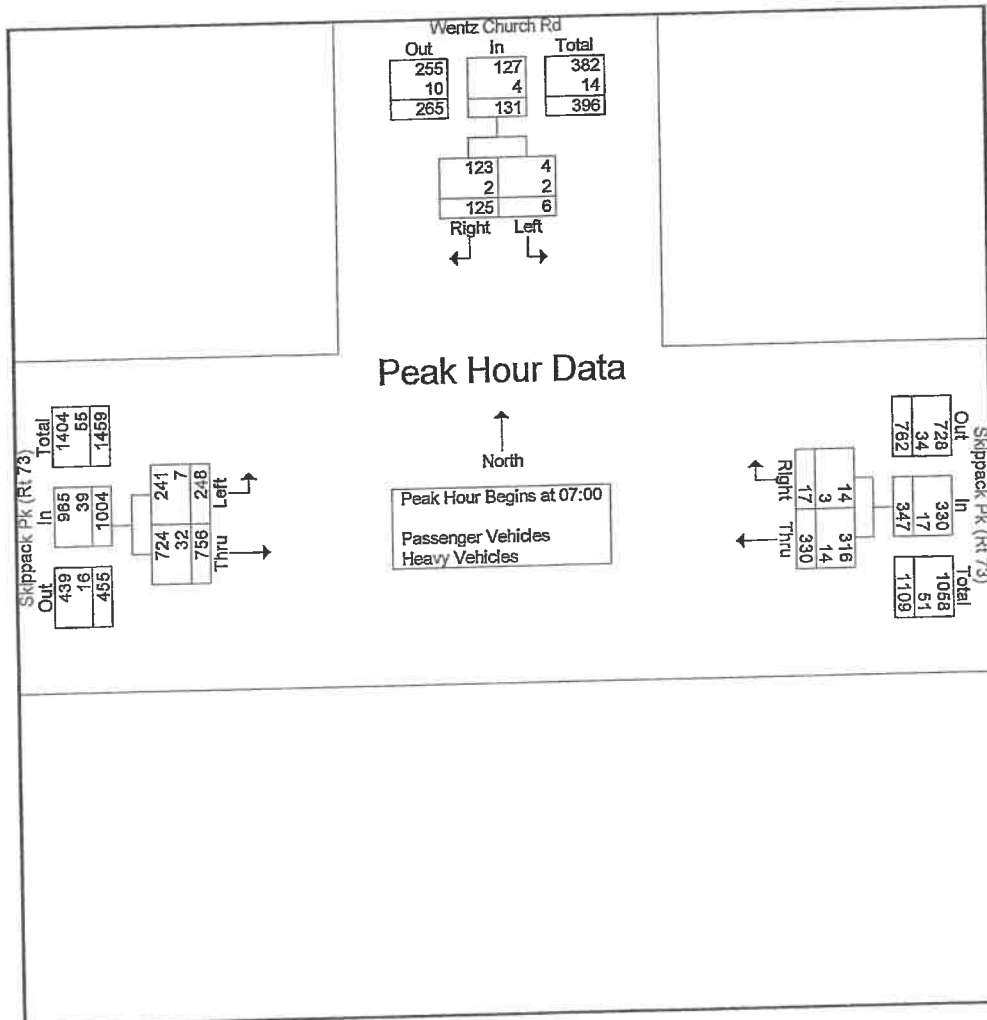
McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Skippack Pike (Route 73) &
Wentz Church Road / Church Access
Counter/Board #: JB

File Name : worcesterACT04wR
Site Code : 81147604
Start Date : 5/8/2013
Page No : 2

Start Time	Wentz Church Rd Southbound			Skippack Pk (Rt 73) Westbound			Skippack Pk (Rt 73) Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 07:00 to 11:45 - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00										
07:00	2	14	16	70	8	78	64	182	246	340
07:15	2	43	45	84	4	88	63	195	258	391
07:30	1	30	31	87	1	88	58	173	231	350
07:45	1	38	39	89	4	93	63	206	269	401
Total Volume	6	125	131	330	17	347	248	756	1004	1482
% App. Total	4.6	95.4		95.1	4.9		24.7	75.3		
PHF	.750	.727	.728	.927	.531	.933	.969	.917	.933	.924
Passenger Vehicles	4	123	127	316	14	330	241	724	965	1422
% Passenger Vehicles	66.7	98.4	96.9	95.8	82.4	95.1	97.2	95.8	96.1	96.0
Heavy Vehicles	2	2	4	14	3	17	7	32	39	60
% Heavy Vehicles	33.3	1.6	3.1	4.2	17.6	4.9	2.8	4.2	3.9	4.0



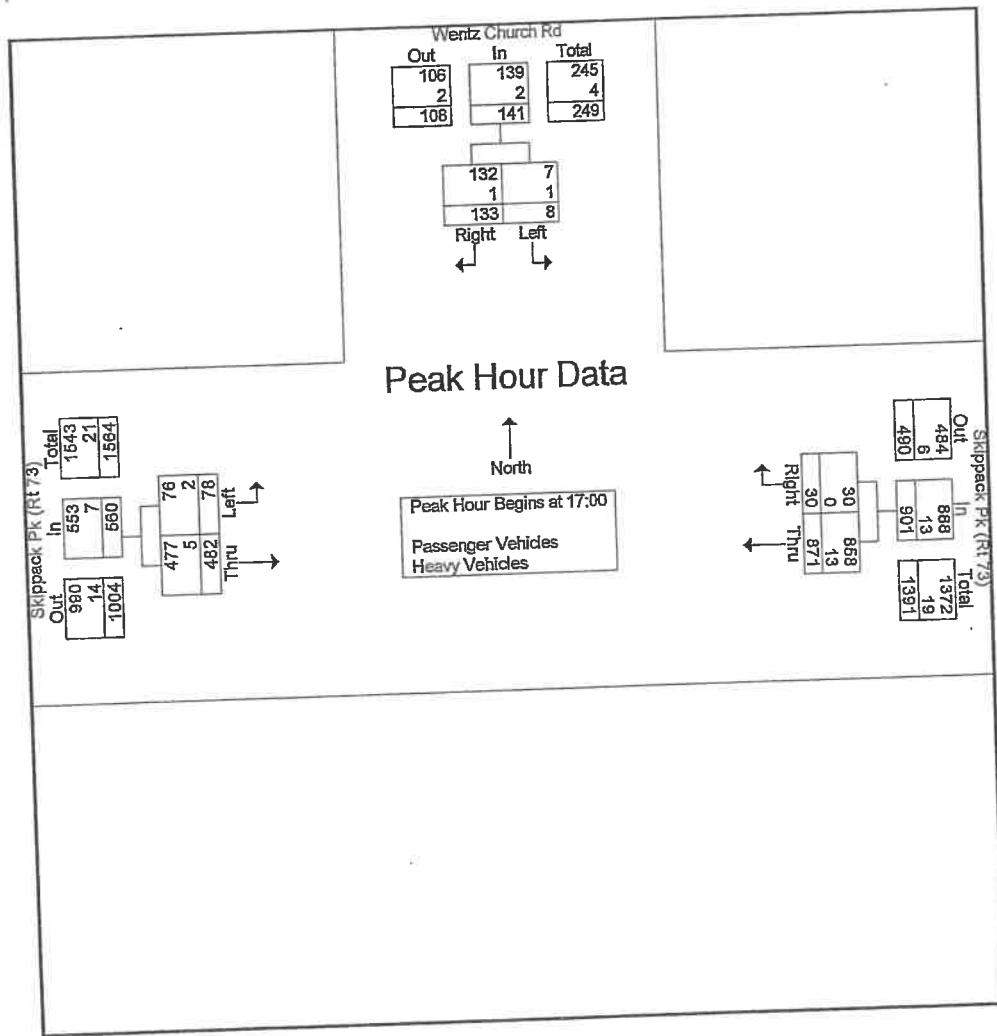
McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Skippack Pike (Route 73) &
Wentz Church Road / Church Access
Counter/Board #: JB

File Name : worcesterACT04wR
Site Code : 81147604
Start Date : 5/8/2013
Page No : 3

Start Time	Wentz Church Rd Southbound			Skippack Pk (Rt 73) Westbound			Skippack Pk (Rt 73) Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 12:00 to 17:45 - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 17:00										
17:00	2	23	25	208	5	213	14	107	121	359
17:15	1	40	41	224	12	236	20	121	141	418
17:30	2	32	34	222	7	229	24	128	152	415
17:45	3	38	41	217	6	223	20	126	146	410
Total Volume	8	133	141	871	30	901	78	482	560	1602
% App. Total	5.7	94.3		96.7	3.3		13.9	86.1		.958
PHF	.667	.831	.860	.972	.625	.954	.813	.941	.921	1580
Passenger Vehicles	7	132	139	858	30	888	76	477	553	98.6
% Passenger Vehicles	87.5	99.2	98.6	98.5	100	98.6	97.4	99.0	98.8	22
Heavy Vehicles	1	1	2	13	0	13	2	5	7	1.4
% Heavy Vehicles	12.5	0.8	1.4	1.5	0	1.4	2.6	1.0	1.3	



McMahon Associates Inc.

425 Commerce Drive, Suite 200
Fort Washington, PA 19034

Municipality: Worcester Township
Location: Skippack Pike (Route 73) &
Wentz Church Road / Church Access
Counter/Board #: JB

File Name : worcesterACT04wR
Site Code : 81147604
Start Date : 5/8/2013
Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Wentz Church Rd Southbound		Skippack Pk (Rt 73) Westbound		Skippack Pk (Rt 73) Eastbound		Int. Total
	Left	Right	Thru	Right	Left	Thru	
07:00	2	14	68	6	62	175	327
07:15	2	42	79	3	61	190	377
07:30	0	30	84	1	57	160	332
07:45	0	37	85	4	61	199	386
Total	4	123	316	14	241	724	1422
08:00	7	19	81	3	52	163	325
08:15	3	23	74	2	62	153	317
08:30	7	25	68	1	56	144	301
08:45	4	27	78	0	67	136	312
Total	21	94	301	6	237	596	1255
*** BREAK ***							
16:00	2	39	157	7	15	83	303
16:15	1	32	205	10	16	111	375
16:30	0	35	217	9	15	102	378
16:45	0	48	202	9	30	87	376
Total	3	154	781	35	76	383	1432
17:00	2	23	203	5	14	104	351
17:15	1	40	221	12	19	119	412
17:30	1	31	219	7	24	128	410
17:45	3	38	215	6	19	126	407
Total	7	132	858	30	76	477	1580
Grand Total	35	503	2256	85	630	2180	5689
Apprch %	6.5	93.5	96.4	3.6	22.4	77.6	
Total %	0.6	8.8	39.7	1.5	11.1	38.3	

Zero Pedestrians were observed during this study.