



UPPER UWCHLAN TOWNSHIP
BOARD OF SUPERVISORS WORKSHOP,
CONDITIONAL USE HEARING

May 14, 2024
4:00 p.m.

AGENDA

LOCATION: Township Building, 140 Pottstown Pike, Chester Springs PA 19425

	Packet Page #
I. Call to Order	
A. Salute to the Flag	
B. Moment of Silence	
C. Inquire if any Attendee plans to audio or video record the Workshop	
D. An Executive Session was held April 30, 2024 regarding a legal matter related to the 241 Park Road Conditional Use Decision.	
II. Recognition ~ Father Mullin ~ Retirement	
III. Eagle Animal Hospital – Preliminary Land Development Plan Review draft conditions of approval for consideration at the May 20,2024 Board of Supervisors Meeting.	2
IV. Byers Station Parcel 5C Lot 2B – revised Amended PRD Plan Review and discuss Byers Station Amended Final PRD Plan (Final Plan for Lot 2B of Parcel 5C)" dated March 15, 2022, last revised April 18, 2024.	5
V. Verizon Cable Franchise Fee Audit and Renewal ~ Accept Cohen Law Group Proposal	31
VI. Ordinance Amendments ~ Review and Discuss Drafts A. C1, C3 and LI Zoning District Uses B. Short Term Rentals	47 57
VII. Open Session	
VIII. Adjournment	
IX. 5:00 p.m. Conditional Use Hearing ~ Planebrook Partners, LLC ~ 241 Park Road	60
X. 5:30 p.m. Conditional Use Hearing ~ Rockhill Real Estate Enterprises ~ 500 Pottstown Pike	69



UPPER UWCHLAN TOWNSHIP

MOTION OF APPROVAL FOR EAGLE ANIMAL HOSPITAL PRELIMINARY LAND DEVELOPMENT PLANS FOR 211 BYERS ROAD

9 Coffman Associates L.P. ("Applicant") is the owner of an approximately 1.40 acre parcel of land located on the north side of Byers Road with an address of 211 Byers Road, Chester Springs, PA 19425 and identified as Chester County Tax Parcel No. 32-4K-4 (the "Property"). The Property was previously improved with a two-story building and greenhouse which were used as the Eagle Animal Hospital. The building was classified as a Class I Historic Resource (Resource #57) and referred to as the A.M.F. Stiteler House. The two-story building was lost in a fire in the Fall of 2023. The Property has an existing paved access driveway from Byers Road and is located in the C-1 Village Zoning District and the Byers Station Historic District which is on the National Register of Historic Places.

On March 19, 2024, Applicant filed a preliminary land development application and preliminary plans titled, "Eagle Animal Hospital 211 Byers Road" prepared by Linn Architects dated March 4, 2024, consisting of nine sheets (the "Plans"). The Plans propose the construction of a new 5,334-square-foot building (3,340 square feet on the first floor and 1,250 square feet on the second floor) to replace the structures lost in the fire and to be used as a veterinary office. The Plans also propose 36 off-street parking spaces in the front of the new building. Applicant also intends to decommission the existing on lot septic system on the Property and connect to public sewer.

The Township Planning Commission reviewed the Plans at its meeting on April 11, 2024 and recommended that the Board approve the Plans subject to complying with the outstanding comments in the Township consultants' review letter issued by Gilmore & Associates, Inc. dated April 5, 2024.

Applicant prepared a Historical Narrative and Request for Determination of No Adverse Effect dated February 17, 2023 ("Historical Narrative") which was presented to the Township Historical Commission. The Board has reviewed the Historical Narrative and finds that it meets the requirements of Section 162-9.H(5) of the Township Subdivision and Land Development Ordinance ("SALDO") which requires an applicant to submit a historic resources impact statement for certain land development plans that impact historic resources. The Board will impose as a condition of preliminary land development approval that Applicant continue to work with its landscape architect to design a landscape plan which will mitigate the development's impact on historic resources within close proximity to the Property.

At the May 14, 2024 Board of Supervisors meeting, the Board voted to grant preliminary land development approval for the Plans subject to the conditions listed below. The Board also voted to grant the following waivers:

- A waiver from SALDO Section 162-28.A. to not require Applicant to widen the existing 23 foot cartway width of Byers Road.
- A waiver from SALDO Section 162-41.B. to not require Applicant to provide a sidewalk along Byers Road or ADA compliant curb ramps on either side of the existing driveway. In lieu of constructing the sidewalk, Applicant shall pay a fee in lieu of sidewalk in an amount to be determined by the Board as part of final land development approval. The amount shall be proportional to the cost of installing sidewalk along the frontage of the Property and based on an opinion of probable cost approved by the Township engineer.

CONDITIONS OF APPROVAL

1. Prior to the Plans being released for recording, the Plans shall be revised to comply with all outstanding comments in Gilmore & Associates, Inc. review letter dated April 5, 2024 with the following issues having been resolved:
 - (i) The Board understands that there are physical constraints that require the building to be located in the location depicted on the Plans. The Board accepts that location.
 - (ii) The Board understands that there are physical constraints on the Property that make it impracticable to provide parking for the new building in the rear of the building. Therefore, the Board finds that the Plans meet the requirements of Section 200-36.C(4).
 - (iii) Because the use of the Property is the same as the prior use, there shall be no traffic impact fee owed.
 - (iv) The Board will not require Applicant to seek a new permit from PennDOT for the existing driveway.
 - (v) The Board is satisfied with the proposed architecture of the new building as depicted on the architectural renderings prepared by Linn Architects dated March 14, 2024. Applicant shall design the building substantially in accordance with the design that is depicted on these renderings.
2. Applicant shall continue to work with its landscape architect to design a landscape plan which will mitigate the development's impact on historic resources within close proximity to the Property. The landscape plan shall at a minimum include the installation of shade trees on the south and west sides of the parking lot and the installation of a continuous row of bushes and low fence between Byers Road and the parking lot. The details for the landscape plan shall be approved by the Board as part of the approval of the final land development plans.

3. Applicant shall retain the 1875 privy and 1920 garden shed on the Property.
4. In lieu of constructing the sidewalk, Applicant shall pay a fee in lieu of sidewalk in an amount to be determined by the Board as part of final land development approval. The amount shall be proportional to the cost of installing sidewalk along the frontage of the Property and based on an opinion of probable cost approved by the Township engineer.

ALYSON ZARRO
alyson@rrhc.com
extension 202



April 19, 2024

Via email and hand delivery

Tony Scheivert, Township Manager
Upper Uwchlan Township
140 Pottstown Pike
Chester Springs, PA 19425
tscheivert@upperuwchlan-pa.gov

**Re: Prosperity Property Investments, LLC/Upper Uwchlan Township
Byers Station Parcel 5C Lot 2B
Amended Final Planned Residential Development Plan Application**

Dear Tony:

As you know, I represent Prosperity Property Investments, LLC ("Applicant") in connection with Lot 2B of Parcel 5C in the Byers Station Planned Residential Development ("Property"). Applicant is the legal owner of the Property which is approximately 3.887 acres and is further identified as UPI Number 32-4-1090.1. Applicant is the legal owner of the Property.

On September 22, 2022, Applicant received Amended Final Planned Residential Development Plan Approval for the development of the Property with a 1,820 sq. ft. eating and drinking establishment with a drive through, a 6,000 sq. ft. retail pad, a 7,200 sq. ft. retail pad, and a 10,500 sq. ft. daycare center with a 5,500 sq. ft. play area ("2022 Approval"). The plan depicting the improvements from the 2022 Approval has not been recorded. Subsequently, Applicant filed an application seeking to phase the 2022 Approval on January 9, 2024. Applicant is now hereby withdrawing the January 9, 2024 application.

Applicant is now filing an application to amend the Final PRD Plan for the Property. This new amended plan depicts the development of the 10,500 sq. ft. daycare center with the 5,500 sq. ft. outdoor play area, although the outdoor play area has been relocated on this plan. Additionally, the plan depicts the development of one 10,500 sq. ft. commercial building which assumes that the space will primarily be retail and may include at least 1,250 sq. ft. of eating and drinking establishment space. In connection with this amended plan, the Applicant is again proposing to utilize shared parking for the proposed uses pursuant to Section J.8 of the Tentative Approval for the Byers Station Planned Residential Development dated June 7, 1999.

Enclosed for filing in connection with this Amended Final PRD Plan Application ("Application") for the Property are the following materials:

rrhc.com

717 Constitution Drive, Suite 201 Exton, PA 19341 P. 610-458-4400 F. 610-458-4441
#1641541v1

April 19, 2024

Page 2

1. Four (4) copies of a plan entitled 'Byers Station' Amended Final PRD Plans (Final Plan for Lot 2B of Parcel 5C) prepared by Bohler dated March 15, 2022, and last revised April 18, 2024;
2. Four (4) copies of the General Project Description and Stormwater Management Calculations prepared by Bohler dated March 25, 2019, and last revised April 18, 2024;
3. Four (4) copies of a Parking and Traffic Analysis prepared by Traffic Planning and Design, Inc. dated April 18, 2024;
4. Four (4) copies of a schematic floor plan for the retail building prepared by JAM Architecture;
5. Four (4) copies of proposed building elevations for the retail building prepared by JAM Architecture dated March 15, 2024;
6. One (1) copy of the Chester County Act 247 Referral form;
7. A check in the amount of \$250 made payable to Upper Uwchlan Township, the final plan application fee; and
8. A check in the amount of \$1,467 made payable to the Chester County Planning Commission for its review.

The proposed daycare center remains unchanged, so a new elevation is not being submitted with this Application. Additionally, a Reimbursement Agreement has previously been submitted to the Township and an escrow established for consultant review fees.

The electronic version of this letter includes a link to download all of the materials comprising the Application.

As always, please feel free to contact me with any questions or if you require any additional information. Thank you for your assistance with this matter.

Very truly yours,

/s/ *Alyson M. Zarro*

Alyson M. Zarro

AMZ/kdj
Enclosures

cc: Gwen Jonik, Township Secretary (*via email, w/enclosure*)
Kristin Camp, Esquire, Township Solicitor (*via email, w/enclosure*)
Allan Greenberg, Prosperity Property Investments, LLC (*w/enclosures, via email*)
Gary Large (*w/enclosures, via email*)
Chris Puzinas, P.E., Bohler Engineering (*w/enclosures, via email*)
Guy DiMartino, P.E., TPD (*w/enclosures, via email*)
Weston Blaney, JAM Architecture (*w/enclosures, via email*)



May 3, 2024

File No. 03-0434.07

E-MAIL ONLY

Mr. Tony Scheivert
Upper Uwchlan Township Manager
140 Pottstown Pike
Chester Springs, PA 19425

Reference: Parcel 5C (Byers Station) – Lot 2B
Amended Final PRD Plans – Fourth Review
Upper Uwchlan Township, Chester County, PA

Dear Tony:

Gilmore & Associates, Inc. (G&A) is in receipt of the following documents from Bohler Engineering, unless otherwise noted:

- Plan set consisting of Thirty Five (35) sheets titled “Byers Station Amended Final PRD Plans (Final Plan for Lot 2B of Parcel 5C)” dated March 15, 2022, last revised April 18, 2024.
- Byers Station Lot 2B, Parcel 5C - Parking and Traffic Analysis, prepared by TPD, dated April 18, 2024.
- General Project Description and Stormwater Management Calculations, dated March 25, 2019, last revised April 18, 2024.
- Correspondence from Alyson Zarro, Esq., RRH&C, dated April 19, 2024.

G&A, as well as the Township Traffic Consultant, Bowman, have completed our fourth review of the above referenced Amended Final Plans for compliance with the Conditions of Tentative Approval Byers Station PRD, Township Zoning Ordinance, Subdivision and Land Development Ordinance, as well as the Stormwater Management Ordinance, and wish to submit the following comments for consideration.

I. OVERVIEW

The subject parcel is located at the northeastern corner of the intersection of Station Boulevard and Pottstown Pike. The tract is approximately 29.8 acres in size and is located in the R-4 Residential District and C-1 Village District, being developed under the Planned Residential Development Option as set forth in the Byers Station conditions of tentative approval. The parcel was subdivided into three lots; Lot 1, Lot 2A, and Lot 2B. Lots 1 and 2A consisting of

184 West Main Street | Suite 300 | Trappe, PA 19426 | Phone: 610-489-4949 | Fax: 610-489-8447

File No.: 03-0434.07

May 3, 2024

16.353 acres and 9.468 acres respectively, are now fully constructed. This application is for Lot 2B which is 3.971 acres in size and is proposed to be developed as follows:

- 10,500 SF Daycare Center
- 10,500 SF Retail Space

The project received Amended Final PRD Approval on September 19, 2022. Due to difficulty finding tenants for the project, the applicant would like to reduce the scope of the project. This includes the reduction in the amount of proposed retail space as well as the elimination of a previously proposed 1,820 SF drive-thru restaurant. The location and size of the previously proposed daycare center will remain unchanged.

**II. TOWNSHIP ENGINEERS COMMENTS
GILMORE & ASSOCIATES, INC.**

1. Please update the reference to the Parking Analysis Study in the Site Design Requirements Table on Sheet C-102 to indicate the current study date of April 18, 2024.
2. With the Iris Lane Extension to Pottstown Pike no longer proposed, if there are no immediate future plans for its intersection with Begonia Drive, we would recommend the existing curb radii along Begonia Drive be removed and a straight curb line be installed.
3. As Begonia Drive was paved less than a year ago, and Station Boulevard potentially being paved soon, extreme care must be taken with construction access to the site.

**III. TOWNSHIP TRAFFIC CONSULTANT COMMENTS
BOWMAN**

1. ZO Section 200-73.F – The Byers Station Conditions of Tentative Approval allow for a reduction in the sum total of the required parking if there are efficiencies derived by shared parking for uses with complementary peak demands based on parking generation data, which is consistent with the parking supply methodology previously approved by the Township for this site. The applicant is using this same approach for the current plan based on the specific proposed land uses, consisting of the day care center, Jersey Mike's, and other retail space. Based on the results of the submitted shared parking analysis, the total combined peak parking demand for the mix of uses on the site is 69 parking spaces. By comparison, the plan proposes 80 parking spaces, and an additional eight future reserve parking spaces, and therefore, the proposed parking supply is sufficient to serve the needs of the development.

File No.: 03-0434.07

May 3, 2024

2. Although the proposed parking supply meets the parking needs of the site based on the shared parking analysis, we recommend a condition of approval, whereby if the actual parking needs of the development exceeds the proposed 80 space parking supply, then at the request of the Township, the applicant will construct the eight future reserve parking spaces, and if needed, the applicant will construct additional parking spaces within the vacant space on the north side of the site. The number of future parking spaces shall be approved by the Township.
3. ZO Section 200-73.H(3) – The current plan includes a new access to Begonia Drive, as well as the previously proposed access to Begonia Drive. The available sight distances for exiting traffic (looking to the left and right), and for left-turn traffic entering (looking ahead and behind) should be labeled on the plan at both Begonia Drive driveway locations and the following note should be added to the plan:
 4. “All sight distance obstructions (including but not limited to embankments and vegetation) shall be removed by the applicant to provide a minimum of XXX sight distance to the left and XXX sight distance to the right for a driver exiting the proposed driveways onto the through highway. The driver must be considered to be positioned ten feet from the near edge of the closest highway through travel lane (from the curbline if curbing is present) at an eye height of three feet six inches (3' 6”) above the pavement surface located in the center of the closest highway travel lane designated for use by approaching traffic. This sight distance shall be maintained by the applicant.”
 5. For the ADA Garding Detail ‘D’ on Sheet C-402, please verify the existing top of curb elevations for the two proposed curb ramps at the newly proposed site access intersection with Begonia Drive in order to verify the ramp slopes meet ADA requirements.
 6. The current development proposal consists of less development space and eliminates the access to Route 100. The applicant’s trip generation evaluation concludes the proposed site generates fewer trips than the previously approved plans for the site, and will not adversely impact area traffic conditions. If there are future plans to develop the vacant space on the north side of the site, then a new traffic study will be required, which may require the addition of the new direct access to Route 100, as previously proposed.

This concludes our fourth review of the above referenced Amended Final Plans. If you have any questions, please do not hesitate to contact me.

Mr. Tony Scheivert
Upper Uwchlan Township Manager
Reference: Parcel 5C (Byers Station) – Lot 2B
Amended Final PRD Plans – Fourth Review
Upper Uwchlan Township, Chester County, PA

Page – 4 –

File No.: 03-0434.07
May 3, 2024

Sincerely,

David N. Leh

David N. Leh, P.E.
Vice President
Gilmore & Associates, Inc.

cc: Upper Uwchlan Township Planning Commission Members
Upper Uwchlan Township Board of Supervisors
Kristin S. Camp, Esq., BBM&M
Christopher J. Williams, P.E., Bowman
David Schlott, P.E., ARRO Consulting, Inc.
Matt Brown, P.E., DEE – UUTMA Authority Administrator
Alyson Zarro, Esq. – RRHC
Chris Puzinas, P.E., Bohler Engineering
Guy DiMartino, P.E., TPD
Allan Greenberg Applicant
Gwen Jonik, Township Secretary



PROJECT No.: PC211160
DRAWN BY: LGU
CHECKED BY: C.O.P
DATE: 03/15/2022
CAD ID: PC211160-LGV/P-5A

**AMENDED
FINAL PRD PLANS**
FOR
**PROSPERITY PROPERTY
INVESTMENTS, LLC**
"FINAL PLAN FOR LOT 2B OF
PARCEL 5C"
PROPOSED COMMERCIAL
DEVELOPMENT

GRAPHITE MINE ROAD &
STATION BOULEVARD
UPPER LUCKHORN TOWNSHIP
CHESTER COUNTY
COMMONWEALTH OF PENNSYLVANIA

BOHLER
1600 MANOR DRIVE, SUITE 200
CHALFONT, PA 18914
Phone: (215) 996-5100
Fax: (215) 996-8102
www.BohlerEngineering.com



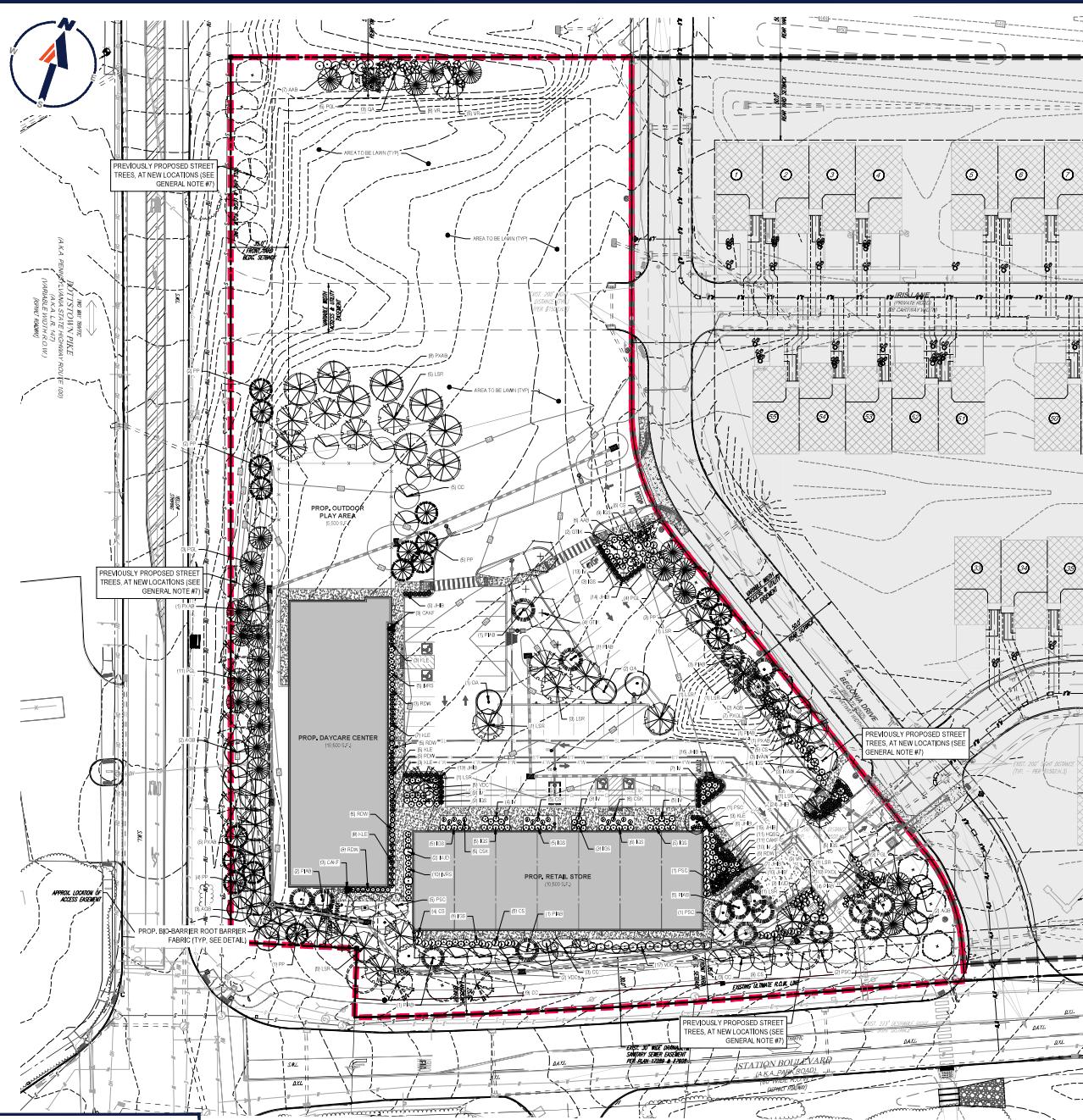
SUGGESTIONS:

SITE PLAN

SHEET NUMBER:

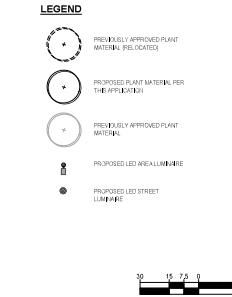
REVISION 5 - 04/18/2024

REVISION 5 - 04/18/2024



GENERAL NOTES:

1. THE PLANTING BEING REQUESTED FOR LANDSCAPE PURPOSES ONLY.
2. ALL DETERMINED UNPLANTED AREA, EXCLUDING PLANTED AREA, ARE TO BE INSTALLED AS DRAINED IN GROUNDWATER FOR LANDSCAPE SPECIFICATIONS, UNLESS OTHERWISE STATED ON THE DRAWING.
3. PLANT MATERIALS, WHICH ARE PLANTED IN PLANTING STALS, SHALL BE PLANTED IN A DRAINED IN GROUNDWATER PLOT, PRIOR TO PLACEMENT OF CURB TO ALLOW FOR BURPER OVERHANG.
4. IF PLANT MATERIAL IS OWNED BY THE OWNER OF ARREAS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLANTING AND MAINTENANCE OF THE PLANT MATERIAL, UNLESS OTHERWISE STATED ON THE DRAWING. PLANT MATERIALS MANUFACTURER, THE PLANT MATERIAL SHALL ACCORDING TO THE PLANT MATERIAL MANUFACTURER'S SPECIFICATIONS, ZONES TO MATCH WATER INfiltrATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLANTING AND MAINTENANCE OF THE PLANT MATERIALS, UNLESS OTHERWISE REQUESTED ON THE DRAWING FOR THE INSTALLATION OF INfiltrATION SYSTEM.
5. PLANT MATERIALS SUBSTITUTIONS MUST BE FORMALLY SUBMITTED TO THE ENGINEER AND THE ENGINEER AND THE MANUFACTURER UNLESS OTHERWISE STATED ON THE DRAWING. THE CONTRACTOR IS NOT RESPONSIBLE FOR PLANT MATERIALS SUBSTITUTIONS, UNLESS OTHERWISE STATED TO INSTALLATION. ANY PLANT MATERIAL THAT ARE TO BE INSTALLED AS PLANT MATERIALS, WHICH ARE NOT PLANTED IN PLANTING STALS, SHALL BE PLANTED IN DRAINED IN GROUNDWATER.
6. IN THE PLANTING AREA, WHICH ARE PLANTED IN PLANTING STALS, WHETHER IN A DRAINED IN GROUNDWATER, BERM PLOTS, OR INCLUDE GROUNDFLOOR INfiltrATION TRENCHES, VEGETATIVE BERM AND GROUNDFLOOR INfiltrATION TRENCHES ARE NOT TO BE PLANTED.
7. STREET TREES AND OTHER TALL AND UPRIGHT PLANT MATERIAL, SHOWN ON THE DRAWINGS, ARE PROPOSED AND APPROVED BY THE ENGINEER, THE CONTRACTOR IS NOT RESPONSIBLE FOR PLANTING OF SOME OF THE PLANT MATERIAL, HAS REQUESTED TO ACCOMMODATE CHANGES IN THE OVERALL DESIGN, THE SAME CAN NOT BE PLANTED IN THE PLANTING STALS, THE PLANT MATERIALS ARE NOT ACCOUNTED FOR IN THE LANDSCAPE CONTRACT.



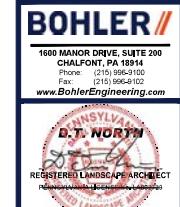
REVISIONS		
REV	DATE	COMMENT
1	05/25/2022	REV. PER TOWNSHIP COMMENTS
2	07/08/2022	REV. PER NPDES MNR MOD
3	12/07/2022	REV. PER TOWNSHIP COMMENTS
4	04/21/2023	REV. PER TOWNSHIP COMMENTS
5	04/18/2024	REV. PER CLIENT COMMENTS



Page 10

PROJECT No.: PC211160
DRAWN BY: LGU
CHECKED BY: C.D.P.
DATE: 03/15/2022
CAD LD.: PC211160-LLGT-5A

FOR
PROSPERITY PROPERTY
INVESTMENTS, LLC
"FINAL PLAN FOR LOT 2B OF
PARCEL 5C"
PROPOSED COMMERCIAL
DEVELOPMENT
GRAPHITE MINE ROAD &
STATION BOULEVARD
UPPER UWCHLAN TOWNSHIP
CHESTER COUNTY



SHEET TITLE: **LANDSCAPE**

SHEET NUMBER:

C-704

28 OF 35



TRAFFIC PLANNING AND DESIGN, INC.

WWW.TRAFFICPD.COM

April 18, 2024

Allan Greenberg, CFO
CELEBREE, Inc.
1306 Bellona Avenue
Lutherville, MD 21093

RE: Byers Station Lot 2B, Parcel 5C – Parking and Traffic Analysis

Upper Uwchlan Township, Chester County, PA

TPD No. CELE.00001

Dear Allan:

Traffic Planning and Design, Inc. (TPD) has completed a parking and traffic analysis for the proposed Byers Station Lot 2B, Parcel 5C, located on the northeast corner of the intersection of Pottstown Pike and Station Boulevard in Upper Uwchlan Township, Chester County, Pennsylvania. Land development for the entire site was previously approved. Under the current plan, only a portion of the site is proposed to be developed with no future phases/development under this application. As such, the purpose of this analysis is to evaluate the parking and traffic for the currently proposed development of the site. The development is proposed to consist of a daycare and 10,500 s.f. of commercial/retail space, as follows:

- 10,500 square foot (s.f.) daycare (140-student);
- 1,250 s.f. Jersey Mike's;
- 9,250 s.f. retail space with unknown users.

PARKING ANALYSIS

Under the current site plan proposes a total of 80 parking spaces. To determine if the proposed parking is sufficient to support the site, the peak demand of each use was evaluated based on the Institute of Transportation Engineers' (ITE) Parking Generation Manual, 6th Edition, 2023. For the current plan, Land Use Code 565 (Day Care), Land Use Code 930 (Fast Casual Restaurant), and Land Use Code 822 (Strip Retail Plaza) were used to calculate the peak parking demand. **Table 1** shows the average peak parking demand rates for each use.

TABLE 1
ITE PEAK PARKING DEMAND

Land Use	ITE #	X	Average Rate	Peak Parking Demand
Day Care	565	140 students	$P = 0.25*(X)$	35
Jersey Mike's	930	1.25 ksf	$P = 9.77*(X)$	12
Strip Retail	822	9.25 ksf	$P = 2.79*(X)$	26
Total Peak Parking Demand				73

P = Peak Parking Demand; X = Size

As shown in **Table 1**, if all the uses on-site experienced their peak parking demand simultaneously, the peak parking demand for the site would be 73 occupied spaces. However, mixed-use sites such as the proposed development have opportunities for shared parking. As such, the parking occupancy time of day from the ITE Parking Generation Manual methodology was utilized to evaluate the shared parking for the site. As shown in **Table 2**, the time-of-day parking demand distribution is summarized for the proposed uses. **Table 3** applies the time-of-day distributions to peak parking demand noted in **Table 1**, in order to determine the shared parking demand on an hourly basis.

TABLE 2
WEEKDAY TIME-OF-DAY VARIATION IN PARKING DEMAND (%)

Hour of Day	Percent of Peak Period		
	Day Care ¹	Jersey Mike's ²	Strip Retail ³
6:00 AM	11%	--	--
7:00 AM	45%	--	--
8:00 AM	89%	--	19%
9:00 AM	93%	--	33%
10:00 AM	100%	14%	47%
11:00 AM	100%	22%	55%
12:00 PM	97%	100%	89%
1:00 PM	93%	78%	100%
2:00 PM	88%	40%	73%
3:00 PM	82%	32%	73%
4:00 PM	88%	26%	66%
5:00 PM	96%	46%	70%
6:00 PM	61%	77%	75%
7:00 PM	30%	63%	70%
8:00 PM	--	34%	54%
9:00 PM	--	22%	48%
10:00 PM	--	14%	--
11:00 PM	--	--	--

1. Time-of-day data provided from 6 AM – 6 PM. 7PM assumed to be 50% of 6PM.

2. Time-of-day data provided from 8 AM – 10 PM, but assumed 0% for 8-10 AM since the store is not typically open.

3. Time-of-day data provided from 8 AM – 9 PM.

TABLE 3
WEEKDAY TIME-OF-DAY VARIATION IN PARKING DEMAND

Hour of Day	Occupied Parking Spaces			
	Day Care	Jersey Mike's	Strip Retail	Total
6:00 AM	4	0	0	4
7:00 AM	16	0	0	16
8:00 AM	31	0	5	37
9:00 AM	33	0	9	43
10:00 AM	35	2	12	49
11:00 AM	35	3	14	52
12:00 PM	34	12	23	69
1:00 PM	33	9	26	68
2:00 PM	31	5	19	55
3:00 PM	29	4	19	52
4:00 PM	31	3	17	51
5:00 PM	34	6	18	58
6:00 PM	21	9	20	50
7:00 PM	11	8	18	37
8:00 PM	0	4	14	18
9:00 PM	0	3	12	15
10:00 PM	0	2	0	2
11:00 PM	0	0	0	0

As shown in **Table 3**, per the referenced data, the maximum peak parking demand at any point during the day is anticipated to be 69 spaces, which is less than the proposed 80 parking spaces proposed for the current site. In addition, 8 additional potential (reserve) parking spaces are shown on the site plan, and will be constructed in the future if determined to be necessary.

TRAFFIC ANALYSIS

TPD previously submitted a Transportation Impact Study (TIS) for the site, dated October 29, 2019, that was approved by PennDOT and the Township. In 2022, the size and mix of land use for the site changed slightly relative to the 2019 TIS, but the overall site related roadway improvements remained consistent with the 2019 TIS. As noted, the current plan will consist of a 10,500 square foot (140-student) daycare, a 1,250 square foot (s.f.) Jersey Mike's and 9,250 s.f. of retail space. **Table 3** compares the peak hour trip generation of the current plan to former plans. Detailed trip generation data is **attached**.

TABLE 3
TRIP GENERATION COMPARISON

Time Period	Plan/Study	Total – New Trips	Enter	Exit
Weekday A.M. Peak Hour	2019 TIS	138	77	61
	2022 Plan	162	91	71
	Current Plan	108	52	56
	Difference	-54	-39	-15
Weekday P.M. Peak Hour	2019 TIS	64	30	34
	2022 Plan	125	62	63
	Current Plan	113	53	60
	Difference	-12	-9	-3
Saturday Midday Peak Hour	2019 TIS	125	64	61
	2022 Plan	142	73	69
	Current Plan	92	49	43
	Difference	-50	-24	-26

As shown in **Table 3**, the current plan will generate less traffic during the peak hours than the previously approved 2022 plan. The 2019 and 2022 plans accounted for the same site access to Station Boulevard (via Begonia Drive) and the internal site connections that provide additional access to Graphite Mine Road and Darrell Drive, plus an access to Route 100. The current plan will provide the same access as the prior plans, with the exception of the Route 100 access.

The prior TIS for the site showed that there was little to no material impact to the operations of the surrounding intersections, and the operations were well within PennDOT's level of service standards. Therefore, based on the above trip generation and the previous traffic analysis, it is TPD's opinion the surrounding intersections will operate at in a similar manner under the current proposed plan.

If you have any questions or comments, please feel free to contact us.

Sincerely,

TRAFFIC PLANNING AND DESIGN, INC.



Guido W. DiMartino, P.E.

Regional Leader – Transportation Planning

Trip Generation Information

TABLE 1
ITE TRIP GENERATION DATA

Land Use	ITE Code	Time Period	Equations/Rates	Enter %	Pass By %
55 Townhomes	215: Single Family Attached Housing	Weekday A.M. Peak Hour	$T = 0.48*(X)$	31%	--
		Weekday P.M. Peak Hour	$T = 0.57*(X)$	57%	--
		Saturday Midday Peak Hour	$\ln(T) = 0.82*\ln(X) + 0.43$	48%	--
10.5ksf Day Care	565: Day Care Center	Weekday A.M. Peak Hour	$T = 11.00*(X)$	53%	34% ¹
		Weekday P.M. Peak Hour	$T = 11.12*(X)$	47%	44%
		Saturday Midday Peak Hour	$T = 1.70*(X)$	63%	34% ¹
13.2ksf Retail/ Commercial Center ³	720: Medical/Dental Office Building	Weekday A.M. Peak Hour	$T = 3.10*(X)$	79%	--
		Weekday P.M. Peak Hour	$T = 3.93*(X)$	30%	--
		Saturday Midday Peak Hour	$T = 3.02*(X)$	57%	--
	822: Strip Retail Plaza <40k	Weekday A.M. Peak Hour	$T = 2.36*(X)$	60%	30% ^{1,2}
		Weekday P.M. Peak Hour	$T = 6.59*(X)$	50%	40%²
		Saturday Midday Peak Hour	$T = 6.57*(X)$	51%	31%²
1.82ksf Fast Food Restaurant with Drive-thru	934: Fast Food Restaurant	Weekday A.M. Peak Hour	$T = 44.61*(X)$	51%	50%
		Weekday P.M. Peak Hour	$T = 33.03*(X)$	52%	55%
		Saturday Midday Peak Hour	$T = 55.25*(X)$	51%	45% ¹

T = number of site-generated vehicular trips

X = independent variable (ksf, units)

¹No ITE data, used 10% less than PM Peak Hour

²No ITE data, used data for Land Use Code 821 (Shopping Plaza (40-150k)

³Utilized higher peak hour trip generation (bold text) between the two uses

*Excerpt from the Byers Station - Route 100 Driveway Analysis, dated 8/16/22, prepared by TPD
(Note: Current Plan referenced below refers to then current plan in 2022)*

TABLE 2
TRIP GENERATION SUMMARY

Land Use	Total	Enter	Exit	Internal	Pass By Trips			New Trips		
					Total	Enter	Exit	Total	Enter	Exit
Weekday A.M. Peak Hour										
Townhomes	26	8	18	-4	--	--	--	22	8	14
Retail/Commercial Space	41	32	9	-10	--	--	--	31	28	3
Day Care	116	61	55	--	40	20	20	76	41	35
Fast Food Restaurant	81	41	40	-14	34	17	17	33	14	19
<i>Total</i>	264	142	122	-28	74	37	37	162	91	71
Weekday P.M. Peak Hour										
Townhomes	31	18	13	-18	--	--	--	13	7	6
Retail/Commercial Space	87	43	44	-33	22	11	11	32	16	16
Day Care	117	55	62	--	52	26	26	65	29	36
Fast Food Restaurant	60	31	29	-27	18	9	9	15	10	5
<i>Total</i>	295	147	148	-78	92	46	46	125	62	63
Saturday Midday Peak Hour										
Townhomes	41	20	21	-7	--	--	--	34	17	17
Retail/Commercial Space	87	44	43	-15	22	11	11	50	25	25
Day Care	18	11	7	--	6	3	3	12	8	4
Fast Food Restaurant	101	51	50	-17	38	19	19	46	23	23
<i>Total</i>	247	126	121	-39	66	33	33	142	73	69

TABLE 3
TRIP GENERATION COMPARISON – CURRENT PLAN VS. OCTOBER 2019 TIS

Land Use	Total - New Trips	Enter	Exit
Weekday A.M. Peak Hour			
Current Plan	162	91	71
October 2019 TIS	138	77	61
<i>Difference</i>	24	14	10
Weekday P.M. Peak Hour			
Current Plan	125	62	63
October 2019 TIS	64	30	34
<i>Difference</i>	61	32	29
Saturday Midday Peak Hour			
Current Plan	142	73	69
October 2019 TIS	125	64	61
<i>Difference</i>	17	9	8

Trip Generation Data based on latest plan as of April 2024

TABLE 3
ITE TRIP GENERATION DATA

Land Use	ITE Code	Time Period	Equations/Rates	Enter %	Pass By %
Townhomes (55 units)	215: Single Family Attached Housing	Weekday A.M. Peak Hour	$T = 0.48*(X)$	31%	--
		Weekday P.M. Peak Hour	$T = 0.57*(X)$	57%	--
		Saturday Midday Peak Hour	$\ln(T) = 0.82*\ln(X) + 0.43$	48%	--
Day Care (10.5 ksf)	565: Day Care Center	Weekday A.M. Peak Hour	$T = 11.00*(X)$	53%	34% ¹
		Weekday P.M. Peak Hour	$T = 11.12*(X)$	47%	44%
		Saturday Midday Peak Hour	$T = 1.70*(X)$	63%	34% ¹
Retail (9.25 ksf)	822: Strip Retail Plaza <40k	Weekday A.M. Peak Hour	$T = 2.36*(X)$	60%	30% ^{1,2}
		Weekday P.M. Peak Hour	$T = 6.59*(X)$	50%	40% ²
		Saturday Midday Peak Hour	$T = 6.57*(X)$	51%	31% ²
Jersey Mike's (1.25 ksf)	930: Fast Casual Restaurant	Weekday A.M. Peak Hour	$T = 1.43*(X)$	50%	50%
		Weekday P.M. Peak Hour	$T = 12.55*(X)$	55%	55%
		Saturday Midday Peak Hour	$T = 32.64*(X)$	55%	45% ¹

T = number of site-generated vehicular trips

X = independent variable (ksf, units)

¹No ITE data, used 10% less than PM Peak Hour

²No ITE data, used data for Land Use Code 821 (Shopping Plaza (40-150k)

TABLE 4
TRIP GENERATION SUMMARY

Land Use	Total	Enter	Exit	Internal ³	Pass By Trips			New Trips		
					Total	Enter	Exit	Total	Enter	Exit
Weekday A.M. Peak Hour										
Townhomes ¹	26	7	19	0	--	--	--	26	7	19
Retail Space	22	13	9	0	7	4	3	15	9	6
Day Care	116	61	55	--	51	26	25	65	35	30
Jersey Mike's ²	2	1	1	0	34	17	17	33	14	19
<i>Total</i>	<i>166</i>	<i>82</i>	<i>84</i>	<i>0</i>	<i>58</i>	<i>30</i>	<i>28</i>	<i>108</i>	<i>52</i>	<i>56</i>
Weekday P.M. Peak Hour										
Townhomes ¹	31	18	13	-13	--	--	--	18	9	9
Retail Space	61	30	31	-17	18	9	9	26	13	13
Day Care	117	55	62	--	52	26	26	65	29	36
Jersey Mike's	16	9	7	-8	4	2	2	4	2	2
<i>Total</i>	<i>225</i>	<i>112</i>	<i>113</i>	<i>-38</i>	<i>74</i>	<i>37</i>	<i>37</i>	<i>113</i>	<i>53</i>	<i>60</i>
Saturday Midday Peak Hour										
Townhomes ¹	41	20	21	-9	--	--	--	32	16	16
Retail Space	61	31	30	-9	21	11	10	31	16	15
Day Care	18	11	7	--	6	3	3	12	8	4
Jersey Mike's	41	22	19	-10	14	7	7	17	9	8
<i>Total</i>	<i>161</i>	<i>84</i>	<i>77</i>	<i>-28</i>	<i>41</i>	<i>21</i>	<i>20</i>	<i>92</i>	<i>49</i>	<i>43</i>

1. Townhomes are approved, but included for comparison purposes since it was included in the prior trip generation evaluation for the site.

2. Jersey Mike's is closed during the morning peak hour, but assumed to be open in this evaluation.

3. Used the average of the AM+PM internal percentages by use for the Saturday midday peak hour.

NCHRP 684 Internal Trip Capture Estimation Tool					
Project Name:	CELE.01	Organization: Performed By: Date: Checked By: Date:	TPD		
Project Location:	Upper Uwchlan Township		PG		
Scenario Description:					
Analysis Year:					
Analysis Period:	AM Street Peak Hour				

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips ³		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail	822	9	KSF	22	13	9
Restaurant	930	1	KSF	2	1	1
Cinema/Entertainment				0		
Residential	215	55	DU	26	7	19
Hotel				0		
All Other Land Uses ²	565	11	KSF	116	61	55
				166	82	84

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ. ⁴	% Transit	% Non-Motorized	Veh. Occ. ⁴	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office	0	0	0	0	0	0
Retail	0	0	0	0	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	0	0	0	0	0
Hotel	0	0	0	0	0	0

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	166	82	84
Internal Capture Percentage	0%	0%	0%
External Vehicle-Trips ⁵	166	82	84
External Transit-Trips ⁶	0	0	0
External Non-Motorized Trips ⁶	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	0%	0%
Restaurant	0%	0%
Cinema/Entertainment	N/A	N/A
Residential	0%	0%
Hotel	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

³Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

⁴Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

⁵Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

⁶Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Project Name:	CELE.01
Analysis Period:	AM Street Peak Hour

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	13	13	1.00	9	9
Restaurant	1.00	1	1	1.00	1	1
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	7	7	1.00	19	19
Hotel	1.00	0	0	1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	3		1	0	1	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	4	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		4	0	0	0	0
Retail	0		1	0	0	0
Restaurant	0	1		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	2	0	0		0
Hotel	0	1	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	0	13	13	13	0	0
Restaurant	0	1	1	1	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	7	7	7	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	61	61	61	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	0	9	9	9	0	0
Restaurant	0	1	1	1	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	19	19	19	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	55	55	55	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

²Person-Trips

³Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool					
Project Name:	CELE.01	Organization: Performed By: Date: Checked By: Date:	TPD		
Project Location:	Upper Uwchlan Township		PG		
Scenario Description:					
Analysis Year:					
Analysis Period:	PM Street Peak Hour				

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips ³		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail	822	9	KSF	61	30	31
Restaurant	930	1	KSF	16	9	7
Cinema/Entertainment				0		
Residential	215	55	DU	31	18	13
Hotel				0		
All Other Land Uses ²	565	11	KSF	117	55	62
				225	112	113

Table 2-P: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ. ⁴	% Transit	% Non-Motorized	Veh. Occ. ⁴	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		3	0	8	0
Restaurant	0	3		0	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	3	1	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	225	112	113
Internal Capture Percentage	17%	17%	17%
External Vehicle-Trips ⁵	187	93	94
External Transit-Trips ⁶	0	0	0
External Non-Motorized Trips ⁶	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	20%	35%
Restaurant	44%	57%
Cinema/Entertainment	N/A	N/A
Residential	50%	31%
Hotel	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

³Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

⁴Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made.

⁵Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

⁶Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Project Name:	CELE.01
Analysis Period:	

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	0	0	1.00	0	0
Retail	1.00	30	30	1.00	31	31
Restaurant	1.00	9	9	1.00	7	7
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	18	18	1.00	13	13
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	1		9	1	8	2
Restaurant	0	3		1	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	5	3	0		0
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		2	0	0	1	0
Retail	0		3	0	8	0
Restaurant	0	15		0	3	0
Cinema/Entertainment	0	1	0		1	0
Residential	0	3	1	0		0
Hotel	0	1	0	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	6	24	30	24	0	0
Restaurant	4	5	9	5	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	9	9	18	9	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	55	55	55	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	0	0	0	0	0	0
Retail	11	20	31	20	0	0
Restaurant	4	3	7	3	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	4	9	13	9	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	62	62	62	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

²Person-Trips

³Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.



THE COUNTY OF CHESTER



COMMISSIONERS

Josh Maxwell
Marian D. Moskowitz
Eric M. Roe

Brian N. O'Leary, AICP
Executive Director

PLANNING COMMISSION

Government Services Center, Suite 270
601 Westtown Road
P. O. Box 2747
West Chester, PA 19380-0990
(610) 344-6285 Fax (610) 344-6515

May 7, 2024

Tony Scheivert, Manager
Upper Uwchlan Township
140 Pottstown Pike
Chester Springs, PA 19425

Re: Final Land Development - Byers Station Amended Final PRD Plans
Upper Uwchlan Township - LD-04-24-18077

Dear Mr. Scheivert:

A final land development plan entitled "Byers Station Amended Final PRD Plans", prepared by Bohler Engineering, dated May 25, 2022 and last revised on April 18, 2024, was received by this office on April 24, 2024. This plan is reviewed by the Chester County Planning Commission in accord with the provisions of Section 502 of the Pennsylvania Municipalities Planning Code. We offer the following comments on the proposed land development for your consideration.

PROJECT SUMMARY:

Location:	East side of Pottstown Pike (State Route 100), north of Station Boulevard
Site Acreage:	3.89 acres
Lots:	1 lot; two structures
Non-Res. Square Footage:	21,000 square feet
Proposed Land Use:	Child daycare, retail
New Parking Spaces:	80 spaces
Municipal Land Use Plan Designation:	Village (2014 Comprehensive Plan)
UPI#:	32-4-1090.1

PROPOSAL:

The applicant proposes the construction of two 10,500 square foot commercial buildings totaling 21,000 square feet and 80 parking spaces. The site, which will be served by public water and public sewer facilities, is located in the Upper Uwchlan Township PRD Planned Residential Development Overlay zoning district.

RECOMMENDATION: The County Planning Commission recommends that the issues raised in this letter should be addressed and all Upper Uwchlan Township issues should be resolved before action is taken on this land development plan.

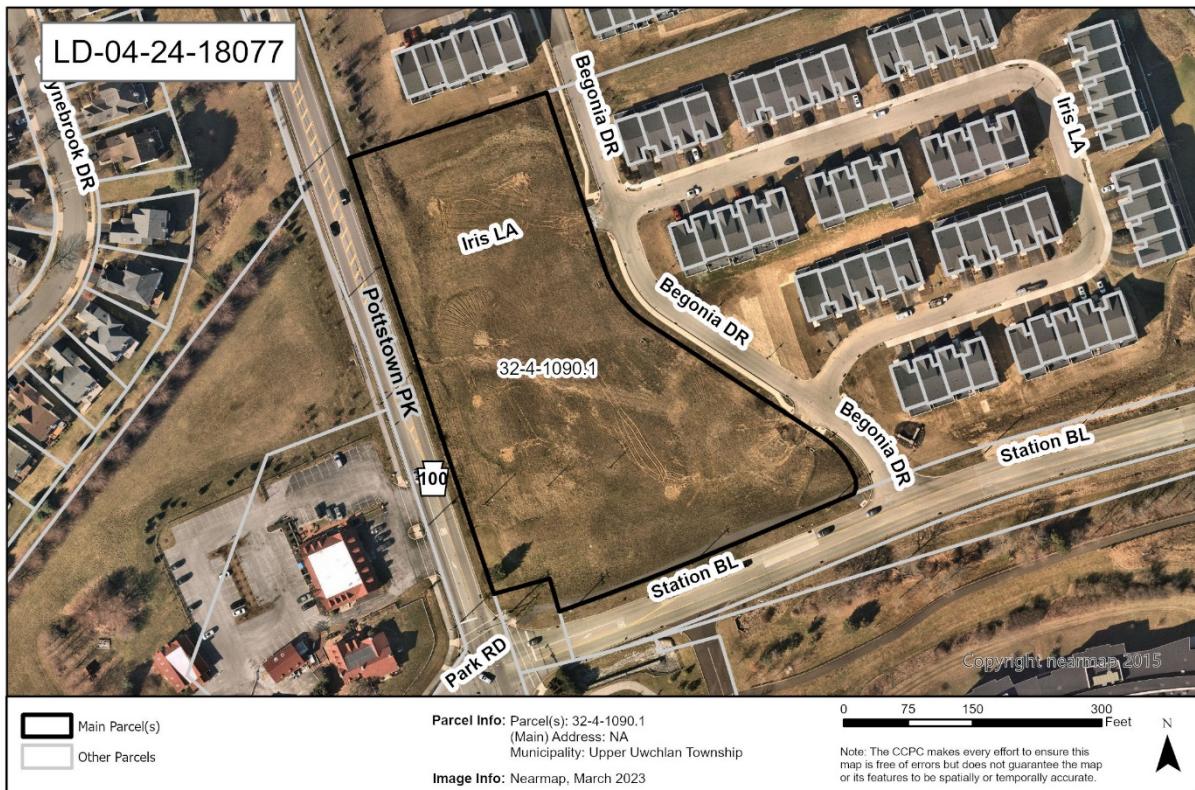
BACKGROUND:

1. The Chester County Planning Commission has previously reviewed a land development proposal for this site. Our review of that plan was submitted to the Township on April 12, 2022 (refer to CCPC# LD-03-22-17149). We have no record of Township action on that submission. This letter includes some of the previous comments that are still relevant to the current submission.

COUNTY POLICY:

LANDSCAPES:

2. The site is located within the **Suburban Center Landscape** designation of [Landscape 3](#), the 2018 County Comprehensive Plan. The vision for the **Suburban Center Landscape** is regional economic, population and transportation centers with varying land uses, accommodating substantial future growth of medium to high intensity. Repurposing obsolete structures and sites and encouraging sustainable development will be critical as suburban centers grow, and transportation infrastructure and amenities will need to expand to create an integrated multimodal network. The proposed land development is consistent with the objectives of the **Suburban Center Landscape**.

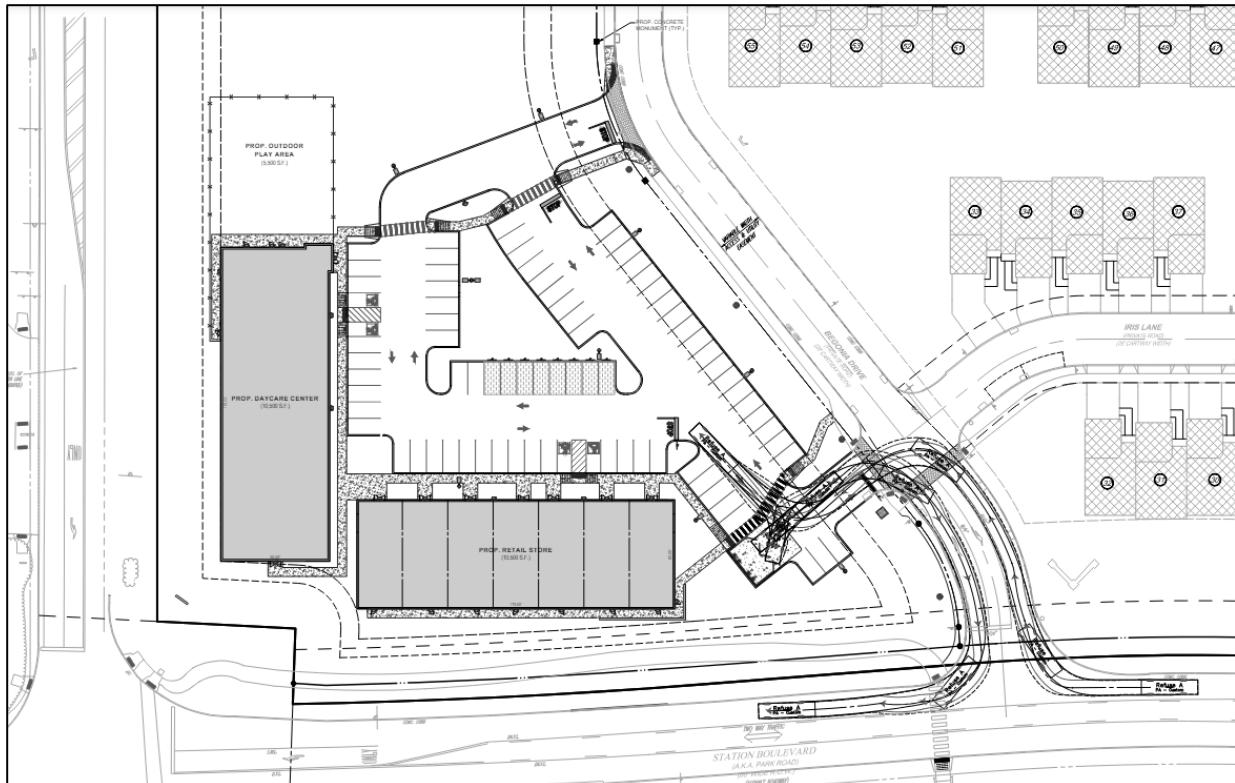


WATERSHEDS 2045:

3. **Watersheds 2045**, the County-wide integrated water resources plan and Act 167 Stormwater Management Plan, indicates the proposed development is located within the Pickering Creek watershed. The **Watersheds 2045** plan's highest priority objectives within this watershed are:

- protecting and restoring vegetated riparian buffers, first order streams, and floodplain connectivity;
- reducing storm water runoff and mitigating flooding; implementing source water protection measures; and
- encouraging holistic planning to reduce potential conflict between development and natural resources.

Watersheds 2045 can be accessed at www.chesco.org/watersheds2045.



***Detail of Byers Station Amended Final PRD Plan
Final Land Development Plan***

PRIMARY ISSUES:

4. The County Planning Commission's Multimodal Circulation Handbook (2016 Update), which is available online at www.chescoplanning.org/resources/PubsTransportation.cfm, classifies Pottstown Pike (State Route 100) as a Major Arterial roadway. The Handbook (page 183) recommends a 150-foot-wide right-of-way for Major Arterial roads to accommodate future road and infrastructure improvements. We recommend that the applicant and the Township contact PennDOT to determine the appropriate right-of-way to be reserved for this section of Pottstown Pike and that be offered to PennDOT for dedication.

5. Pedestrian connectivity between sidewalks and buildings is an important component of a complete sidewalk system in the **Suburban Center Landscape**. “Connect” Objective C of *Landscapes3*, the 2018 County Comprehensive Plan, is to provide universally accessible sidewalks, trails, and public transit connections to create a continuous active transportation network within designated growth areas. We endorse the provision of sidewalks on this site, which also connect to the adjacent residential areas. We also encourage the applicant to provide appropriate crosswalk connections from this site across Pottstown Pike as well as along the eastern portion of Pottstown Pike.

PennDOT’s Design Manual 2-Chapter 6: Pedestrian Facilities and the Americans with Disabilities Act (ADA) recommend that sidewalks be a minimum of 5 feet in width. Additional information on this topic is provided in the Pedestrian Facilities Design Element of the County Planning Commission’s Multimodal Circulation Handbook (2016 Update), which is available online at: www.chescoplanning.org/MuniCorner/MultiModal/02-PedFacs.cfm.

6. While we acknowledge the proposed landscaping along Pottstown Pike and Station Boulevard, we recommend that the applicant consider incorporating pitched roofs to mitigate the views of the rear elevations from the public right-of-way. We also suggest that the applicant avoid the use of flat roofs on the structures because many of the nearby structures have pitched roofs and especially because the site is at a lower elevation from Pottstown Pike and Station Boulevard.
7. The roof areas may also offer opportunities to improve the facility’s long-term sustainability and reduce its reliance on energy from the grid, such as designs that incorporate “green roofs,” “white roofs” and solar photovoltaic energy systems. Green roofs can reduce a building’s stormwater runoff, improve insulation, increase the longevity of the roof system, and reduce heating and cooling costs. White roofs can help reflect solar radiation and also reduce cooling costs. Photovoltaic energy systems can improve the facility’s long-term sustainability and reduce its reliance on energy from the grid. Additional information on green roofs is available at: <https://www.chescoplanning.org/MuniCorner/eTools/05-GreenRoofs.cfm>. Additional information on alternative energy systems such as photovoltaic systems is available at: <https://www.dvRPC.org/EnergyClimate/AEOWG/>.
8. The Stormwater Management Plans indicate that vegetated swales will be utilized to manage a portion of the site’s stormwater runoff. The applicant should submit the Operations and Management Plan for the stormwater facilities to the Township, which should be reviewed by the Township Engineer. To ensure this system continues to function as designed, the applicant and/or those responsible for future maintenance should strictly adhere to the inspection schedule included in the Operation and Maintenance Plan. Appropriate pre-treatment Best Management Practices (BMPs) should be installed to remove sediment and other debris from runoff before it discharges to the planned subsurface infiltration system. Sediment, oil, grease, or other debris should be regularly removed from these pretreatment BMPs.
9. The Township’s emergency service providers should be requested to review the plan to ensure that safe access and egress is provided for this site, especially to the structures’ rear areas.

ADMINISTRATIVE ISSUES:

10. The applicant should contact the office of the Chester County Conservation District (telephone #610-455-1360) for information and clarification on erosion control measures. The provisions of the Commonwealth Erosion Control Regulations may apply to the project and may require an Earth Disturbance Permit or a National Pollutant Discharge Elimination System permit for

Page: 5

Re: Final Land Development - Byers Station Amended Final PRD Plans

Upper Uwchlan Township - LD-04-24-18077

discharge of stormwater from construction activities. Additional information on this topic is provided online at: <https://www.chesco.org/284/ErosionStormwater>.

11. A minimum of four copies of the plan should be presented at the Chester County Planning Commission for endorsement to permit recording of the final plan in accord with the procedures of Act 247, the Pennsylvania Municipalities Planning Code, and to meet the requirements of the Recorder of Deeds and the Assessment Office.

This report does not review the plan for compliance to all aspects of your ordinance, as this is more appropriately done by agents of Upper Uwchlan Township. However, we appreciate the opportunity to review and comment on this plan. The staff of the Chester County Planning Commission is available to you to discuss this and other matters in more detail.

Sincerely,



Wes Bruckno, AICP
Senior Review Planner

cc: Bohler Engineering
Prosperity Property Investments, LLC
Anthony Antonelli, District Permits Manager, PennDOT
Francis J. Hanney, PennDOT
Chester County Conservation District

May 14, 2024

Daniel S. Cohen
Cohen Law Group
413 South Main Street
Pittsburgh, PA 15215

***RE: Chester County Consortium: Engagement of the Cohen Law Group to Perform
Cable Franchise Renewal Services***

Dear Mr. Cohen:

This is to inform you that Upper Uwchlan Township has decided to engage the services of the Cohen Law Group to assist in a franchise fee audit and cable franchise renewal negotiations with Verizon. This engagement is made pursuant to the Proposal to Perform Cable Franchise Renewal Services (“Proposal”) submitted to the Chester County Consortium (the “Consortium”) on November 30, 2023. The Proposal includes the scope of services for this project as well as the cost of services on a flat fee basis. The flat fee includes all expenses. We understand that CLG will bill one-third of the fee by invoice upon engagement, one-third at the middle of each project, and one-third at the end of each project.

While our municipality is engaging the Cohen Law Group individually and, upon conclusion of the project, we will obtain our own individual franchise fee report and franchise renewal agreement with Verizon, we understand that the negotiation with Verizon will be in conjunction with other participating municipalities in the Consortium. This joint effort will increase our negotiating leverage and reduce our attorneys’ fees. As described in the Proposal, our fee is discounted based on our municipality’s population and the number of municipalities that participate. We look forward to working with your firm on this project and obtaining all of the financial and other cable-related benefits to which we are entitled.

Sincerely yours,

Name: Tony Scheivert

Title: Township Manager

Date: May 14, 2024



PROPOSAL TO PERFORM

VERIZON CABLE FRANCHISE RENEWAL SERVICES

submitted to the

CHESTER COUNTY CONSORTIUM

by the

COHEN LAW GROUP

**413 South Main Street
Pittsburgh, PA 15215**

www.cohenlawgroup.org

(412) 447-0130

November 30, 2023

TABLE OF CONTENTS

	<u>PAGE</u>
I. INTRODUCTION	1
II. FRANCHISE RENEWAL BENEFITS	3
III. SCOPE OF SERVICES	6
IV. PROFESSIONAL BACKGROUND.....	10
V. COST OF SERVICES.....	12

I. INTRODUCTION

The Cohen Law Group (“CLG”) welcomes this opportunity to submit a proposal for legal services to assist the eligible municipalities in Chester County (“Chester County Consortium”) in a franchise fee audit and cable franchise renewal negotiations with Verizon of Pennsylvania, Inc. (“Verizon”). Based on our records and the Managers who have contacted our law firm after receiving renewal notices from Verizon, our understanding is that there are approximately 25-30 municipalities in the County that are eligible to negotiate cable franchise renewal with Verizon. The cable franchise agreements for these municipalities are set to expire within the next 2-2 ½ years.

As such, now is the time to begin the franchise renewal process. Franchise renewal is the best opportunity for local governments to obtain significant benefits and to assert their legal rights with their cable company. A multi-municipal negotiation also increases the negotiating leverage of each of the municipalities and, as detailed in Section V below, reduces their attorneys’ fees. Our law firm was privileged to represent 22 Chester County municipalities in the last multi-municipal franchise renewal negotiation with Verizon in 2019-21. We would welcome the opportunity to assist the group again in this upcoming franchise renewal.

There have been changes in video technology since the commencement of the municipalities’ current franchise agreements, especially the dramatic growth of internet-based video services (also referred to as video streaming) such as Netflix, Hulu and Disney+. In addition, there have been changes in the franchise operations of Verizon as the company is experiencing even more competition today than it did when the current agreements went into effect. Finally, there have been changes in federal law and regulations applicable to cable franchising in that time period.

As described in this proposal, we recommend that the Consortium: 1) **conduct a franchise fee audit** to ensure that each municipality has received all the franchise fee revenue to which it is

entitled from Verizon; and 2) **negotiate a new franchise agreement** that addresses the changes since the last franchise and secures increased financial and legal benefits for each municipality.

Municipal officials have two critical roles when it comes to renewing (or, in the rare circumstance, not renewing) a cable franchise. First, they are effectively the landlords of their cable company. The cable company utilizes the public rights-of-way to operate its cable system. Municipal officials manage those rights-of-way as a public trust and are entitled under law to a fair return for the cable company's use of those public properties.

Second, municipal officials have an obligation to protect and advance the interests of their residents. This means not only getting the best possible services from the cable operator today, but also doing everything possible to prepare for the future. Video and internet technology changes very rapidly. A cable franchise agreement must provide for the benefits available from existing technologies as well as those that may become available from future technologies.

CLG is uniquely qualified to represent the Chester County Consortium in cable franchise renewal negotiations. For 26 years, our firm has specialized in cable franchise matters on behalf of local governments, and we have negotiated more franchise agreements than any other law firm in Pennsylvania and surrounding states. We have represented over 500 municipalities in six states in negotiations with their cable companies. We have also negotiated over 200 franchise agreements with Verizon. We know Verizon's negotiators, their corporate policies, and their negotiating tactics.

The principal of the firm is Dan Cohen. Aside from his work as a telecommunications attorney, Mr. Cohen is especially qualified to represent municipalities because he was a municipal official himself. He has first-hand knowledge of the challenges and opportunities confronting municipal governments. With twelve years' experience in municipal government, he understands the practical needs and the financial constraints facing municipal officials. In addition, the Cohen Law

Group has a strong team that includes attorney Stacy Browdie, attorney Phil Fraga, attorney Mike Roberts, attorney Joel Winston, and Office Manager Victoria Novak.

CLG has developed a three-step approach to cable franchise renewal projects. The first step is identifying the clients' specific needs. Since these needs often become better defined as the negotiation progresses, we maintain flexibility throughout the process to achieve a franchise agreement that accomplishes the client's specific goals. Second, we negotiate firmly and deliberately to reach agreement in a timely fashion. Third and finally, our attorneys work efficiently in a manner that is cost effective for our clients. We are keenly aware of the fiscal constraints facing municipalities, and focus, therefore, on keeping attorneys' fees and costs as low as possible.

II. POTENTIAL FRANCHISE BENEFITS

There are significant benefits available to municipalities in a cable franchise renewal agreement. The key to receiving these benefits is to know the law and regulations relating to each benefit and to negotiate firmly to obtain them from Verizon. The following is a list of some of the more important potential benefits:

1. Franchise Fee Revenue

Under federal law, municipalities may assess a franchise fee of up to five percent (5%) of the cable company's "gross revenues" for cable services derived from their municipality. The central subject of negotiation with the cable operator is the specific revenue sources to be included in the definition of "gross revenues." **CLG has developed a comprehensive list that now includes 27 eligible revenue sources. The addition of new revenue sources in the definition of "gross revenues" would increase franchise fee revenue to the municipalities provided their subscriber levels remain steady.** Please note that all franchise fees are passed through to cable subscribers as a separate line item on their bills.

2. Franchise Fee Accountability

In addition to franchise fee revenue, it is essential for the municipalities to require franchise fee protection and accountability. In a franchise agreement, these include detailed franchise fee reports, the right to conduct franchise fee audits without unreasonable impediments, penalties for franchise fee underpayments, and new protections against fee reductions due to bundled service packages (also referred to as the “triple play” of television, internet, and phone).

3. Service to Unserved Areas

Depending on whether there are areas that are unserved by Verizon in certain municipalities, it is important to include requirements that the cable operator extend the cable system to those areas. These include, but are not limited to, negotiating an expansion of the cable system within a specified time frame, inserting a low density number (the number of homes per mile necessary for Verizon to extend the system to those homes) in the franchise agreement, and securing a strong line extension requirement for homes with long setbacks.

4. Legal Protections of the Rights-of-Way

Because cable companies place wires and equipment in the public rights-of-way, it is critical that a franchise agreement include legal protections for any damages or injuries that may occur. These protections include requirements for repair and restoration of property damage within a specified time frame, access to service area maps, emergency removal of equipment, disconnection of wires and equipment, indemnification of the municipality and full insurance coverage.

5. Customer Service Standards

In a franchise agreement, municipalities may impose customer service standards on the cable company to which the company must adhere. It is important to include comprehensive and enforceable standards, including but not limited to, telephone answering time limits for customer

service representatives, refunds for service interruptions, rules for resolving customer disputes, appointment windows for cable technicians to arrive at your home, and a prohibition against the premature application of late fees.

6. Services to Community Facilities

It is common in a franchise agreement for cable companies to agree to provide complimentary cable services to municipal facilities, schools and libraries. The major subjects of negotiation are the number of facilities (including municipal buildings, fire stations, public and private schools, and public libraries) that obtain the service, and the level of service obtained. Please note that this benefit will be significantly impacted by the FCC's 2019 *Third Report and Order*.

7. PEG Channels and PEG Financial Support

Municipalities have a legal right to dedicated channel space for public, educational and governmental ("PEG") programming. A PEG channel may be used to inform citizens by cablecasting government meetings, public safety alerts, local announcements and/or athletic events. Depending on whether a municipality currently administers a PEG channel, the renewal agreement may require improvements such as high definition (HD) or it may reserve the right for a channel in the future. A cash grant may also be available from Verizon for capital costs related to the channel.

8. Reporting Requirements

It can be helpful for municipalities to obtain periodic information from the cable operator related to financial and customer service issues. Depending on the municipalities' specific needs, a franchise agreement may require the cable operator to provide written reports to the municipality on such matters as franchise fee verification, customer complaints, service interruptions, and construction activity in the public rights-of-way.

9. Competitive Equity

Cable operators typically request that, if the municipality grants a franchise to another cable company (e.g. Comcast), then that franchise agreement cannot be more favorable or less burdensome to the competitor than the new agreement is to Verizon. While in theory this is a fair principle, in practice it can have the effect of impeding cable and internet competition. We will ensure that any such provision does not result in such an outcome.

10. Enforcement

Once the cable operator agrees to provide certain benefits, the municipalities must be able to enforce these obligations. It is important to include practical enforcement tools to ensure the company's faithful performance of its obligations under the agreement. These may include, but are not limited to, predetermined monetary fines (also known as liquidated damages), a substantial performance bond, and the right to revoke the franchise in extreme circumstances.

11. Length of Term

Because cable technology changes so rapidly, municipalities typically seek a shorter length of term in the franchise renewal agreement and cable companies typically seek longer terms to protect their capital investment in the cable system. Verizon, however, does not embrace this industry standard and, to date, has sought shorter terms due to business conditions and changes in video technology. This issue will be resolved through negotiation.

III. SCOPE OF SERVICES

The following is the scope of services that the Cohen Law Group will perform if hired to assist the Chester County Consortium municipalities in cable franchise renewal with Verizon.

A. Preliminary Setting of Priorities

We will first arrange an initial kickoff meeting (either in-person or virtual) with at least one representative from each participating municipality. During the meeting, we will describe the franchise fee audit and franchise renewal process, including both the formal and informal processes prescribed by the federal Cable Act. We will inform the officials regarding their legal rights, including the substantive areas in which they have legal authority over the cable operator and those areas in which their legal authority is limited. We will also outline the potential benefits available to the municipalities as well as solicit the concerns of the officials with respect to Verizon.

In addition, we will provide the municipalities with public notice and written talking points for a public hearing on cable franchise renewal. Section 626 of the Cable Act includes a “notice and comment” requirement, and we typically recommend that this requirement be satisfied by a public hearing inviting citizen comment. We will also advise the municipalities with respect to any other legal and regulatory requirements pertaining to franchise renewal.

B. Franchise Fee Audit

During the preliminary stage, we recommend a franchise fee audit of Verizon for each of the municipalities. Our firm conducts such audits on a regular basis. In 2021-23, we conducted over 120 audits and discovered underpayments approximately 65% of the time. Of course, we cannot guarantee that we will find franchise fee underpayments for every municipality in the Consortium. It will depend on the specific financial records that Verizon maintains for each municipality. **Note that we did not conduct franchise fee audits as part of the last Verizon franchise renewal.**

Section 626 of the federal Cable Act requires that municipalities, as part of cable franchise renewal, review the cable operator’s past performance. A franchise fee audit is a key component of assessing past performance. It is the best method to hold the operator accountable for past franchise

fees and to ensure the municipality receives the future revenues to which it is entitled.

The federal Cable Act allows municipalities to assess up to five percent 5% of the cable operator’s “gross revenues” for cable services derived from the municipality. “Gross revenues” consists of numerous revenue sources, including both subscriber and non-subscriber revenues, that the cable operator collects from cable customers. We will prepare a written Request for Information and Documents (“RFID”) to Verizon for specific franchise fee information and worksheets relevant to each municipality. CLG will then undertake the following activities:

- Make a determination of all eligible revenue sources for each municipality based upon the municipality’s current definition of “gross revenues.” There are currently 27 eligible revenue categories and many sub-categories.
- Review Verizon’s supporting documentation for franchise fee revenue, including quarterly spreadsheets, worksheets, and other revenue reports for each municipality.
- Identify the revenue sources that Verizon has included in its franchise fee documentation for each municipality. Determine whether the cable operator has applied the fee to all eligible revenue sources. Identify any revenue sources that the cable operator did not include in calculating “gross revenues.”
- Ensure that all eligible revenues recorded in Verizon’s financial records are accurately included in the franchise fee payments in accordance with each municipality’s franchise agreement.
- Determine whether non-subscriber revenues, such as advertising and home shopping commissions, which are typically recorded on a regional rather than a local basis, have been properly calculated and properly apportioned to each municipality.
- Review certain special revenue sources, such as “trouble call” fees, video downgrade fees, broadcast retransmission fees, franchise fee-on-fees, and others to determine proper inclusion in the determination of franchise fees for the time period under review.
- Re-perform a select number of cable operator calculations determining franchise fee revenues for the period under review. These calculations include, but are not limited to, figures underlying the amounts reported for revenue sources and calculations on specific items comprising general franchise fee categories such as “miscellaneous revenues” and “installation revenues” (which include, for example, installation, disconnection, reconnection, relocation and change-in-service fees).

- Ascertain trends of major revenue categories to spot discrepancies and/or inconsistencies in the reporting of revenues over time and making inquiries with the cable operator to explain such discrepancies and/or inconsistencies.
- Report trends in the number of Verizon subscribers in each municipality for the period under review.
- Determine whether there are franchise fee underpayments to the municipalities for the period under review, the amount of any underpayment, and whether any penalties and/or interest apply in accordance with each municipality's franchise agreement.

We expect to review four (4) years' worth of financial information, which is the period permitted by the current franchise agreements we have in our possession. Typically, our investigation includes follow-up requests for further information and discussions with the cable operator. Once the audit is completed, we will prepare a report that summarizes the results of the audit, including any franchise fee underpayments, describes the areas of inquiry, and provides charts showing subscriber and revenue trends. While CLG is fully qualified to file legal action against Verizon to collect underpayments, the flat fee for this project does not include litigation (or mediation or arbitration). Such actions would require a separate engagement.

C. Drafting of Proposed Agreement

After the setting of priorities stage is completed, we will draft a proposed master franchise agreement with Verizon (or redline Verizon's proposed agreement) to provide the municipalities with all of the benefits and legal protections to which they are entitled under current law and technology. The agreement will include the results of the setting of priorities stage discussed above, as well as our judgment as to the legal provisions that would advance the municipalities' interests and meet their future cable-related needs. We will then submit the draft agreement to the municipalities for informal review and comment. Suggested changes will be incorporated into the agreement and the proposed agreement will be presented to representatives of Verizon.

D. Negotiation with Cable Operator

The most important stage in the process is negotiating a franchise renewal agreement with representatives of Verizon. CLG has negotiated over 200 franchise renewal agreements with Verizon. We know Verizon attorney assigned to Chester County and the company's franchise policies. The working document for the negotiations will be the draft franchise agreement informally approved by the Consortium. We will preserve the municipalities' legal rights under the formal process, but negotiate with Verizon under the informal process outlined in the federal Cable Act.

The negotiation typically consists of many negotiation sessions with representatives of the cable operator, status conferences with the clients, multiple revisions of the proposed franchise agreement, redrafting specific franchise agreement provisions, and editing the final draft of the master agreement. We will then proceed to customize the master agreement to each municipality.

E. Consideration by the Municipal Governing Bodies

After tentative agreement with Verizon has been reached, CLG will report to each municipality on the substantive provisions of the deal. Specifically, we will present each municipality with its final customized franchise agreement negotiated by the parties and recommended by CLG. We will also draft an executive summary of the final agreement. Finally, we will draft an approval ordinance or resolution (depending on the classification of the municipality) for consideration by each Township Board and Borough Council.

IV. PROFESSIONAL BACKGROUND

For 26 years, the Cohen Law Group has specialized in representing municipalities in cable, wireless, and broadband matters. Collectively, our attorneys have worked on cable franchise issues on behalf of municipalities for over 70 years. CLG has represented over 500 local governments in

six states in negotiations with cable companies. CLG's full array of legal services includes the following:

- Drafting cable franchise agreements
- Review of current and proposed franchise agreements/ordinances
- Cable franchise renewal negotiations with cable companies
- Franchise fee audits
- Cable compliance reviews
- Broadband expansion planning and implementation
- Drafting of wireless facilities ordinances and design standards
- Negotiation with cellular tower and antenna companies
- Wireless facility litigation
- Drafting of right-of-way ordinances and development of right-of-way fees
- Drafting of pole attachment agreements and pole attachment negotiations

As an active member of the National Association of Telecommunications Officers and Advisors (NATOA) and other professional organizations, CLG stays current with frequent changes in cable, wireless, and broadband law. Dan Cohen served on the NATOA Board of Directors from 2017-21 and was Co-Chair of NATOA's Policy and Legal Committee from 2021-22. CLG attorneys have written articles on cable and wireless matters that have been published in the *Pennsylvania Township News*, *Pennsylvania Borough News*, and the *Pennsylvania Municipal Reporter*. They are also frequent speakers at municipal conferences.

Mr. Cohen is especially qualified to represent municipalities because he was a municipal official himself. He served as an elected official on the Pittsburgh City Council for 12 years. He has firsthand knowledge of the challenges and opportunities confronting municipal governments. Mr. Cohen served as Chair of City Council's Cable Television Committee for 10 years and also served on the Mayor's Telecommunications Committee. Mr. Cohen led Pittsburgh's efforts to regulate cable rates, which resulted in a refund ordered by the FCC for all City of Pittsburgh cable customers. Mr. Cohen graduated from Yale University and Stanford Law School.

In addition to Mr. Cohen, CLG has a strong team that includes attorney Stacy Browdie, attorney Phil Fraga, attorney Mike Roberts and attorney Joel Winston. Our office Manager is Victoria Novak.

V. COST OF SERVICES

The following represents CLG's cost of services to perform **both franchise fee audits and franchise renewal negotiations with Verizon**. We propose to perform these services on a flat fee basis, because our significant experience in performing these projects lends predictability to our efforts on behalf of the Chester County Consortium. In addition, a flat fee provides "price certainty" to the municipalities. We are offering our services to the Consortium municipalities at a discounted rate depending on the population of each municipality and the number of municipalities that participate. The chart below shows our standard single-municipality flat fees based on population followed by discounts based on the number of municipalities that participate in the project.

FLAT FEES FOR FRANCHISE FEE AUDIT AND FRANCHISE RENEWAL NEGOTIATIONS WITH VERIZON

Standard Single Municipality Fees (based on population prior to discount)

< 5,000	\$8,000
5,001-10,000	\$9,500
10,001-15,000	\$10,500
> 15,001	\$11,500

Consortium Discounted Fees (by population and number of participating municipalities)

20+ Municipalities - 20% Discount from the Single Municipality Fee

< 5,000	\$6,400
5,001-10,000	\$7,600
10,001-15,000	\$8,400
> 15,001	\$9,200

14-19 Municipalities - 15% Discount from the Single Municipality Fee

< 5,000	\$6,800
5,001-10,000	\$8,075
10,001-15,000	\$8,925
> 15,001	\$9,775

8-13 Municipalities - 10% Discount from the Single Municipality Fee

< 5,000	\$7,200
5,001-10,000	\$8,550
10,001-15,000	\$9,450
> 15,001	\$10,350

2-7 Municipalities - 5% Discount from the Single Municipality Fee

< 5,000	\$7,600
5,001-10,000	\$9,025
10,001-15,000	\$9,975
> 15,001	\$10,925

The flat fees above include all expenses. They do not include the unlikely possibility of extraordinary services outside the scope of services contained in this proposal or any significant unforeseeable developments. In the event of such extraordinary or unforeseeable developments, CLG will contact the affected municipality to discuss such developments prior to rendering services related to them. If such services were authorized, CLG would charge a fee of \$320 per hour, including travel time. Please note that our normal billing policy is to bill one-third of the fee at the commencement of the project, one-third at the middle of each project, and one-third at the conclusion of each project. Thank you for the opportunity to submit this proposal.

UPPER UWCHLAN TOWNSHIP
CHESTER COUNTY, PENNSYLVANIA

ORDINANCE _____ - _____

AN ORDINANCE OF THE TOWNSHIP OF UPPER UWCHLAN, CHESTER COUNTY, PENNSYLVANIA, AMENDING CHAPTER 200 OF THE UPPER UWCHLAN TOWNSHIP CODE TITLED "ZONING" TO ADD DEFINITIONS OF ATHLETIC CLUB, AUTOMOBILE SERVICE ESTABLISHMENT, CONTRACTOR'S ESTABLISHMENT, HOOKAH BAR/LOUNGE, MICROBREWERY, MINI WAREHOUSE/SELF STORAGE, MUNICIPAL USE, OFFICE BUILDING, PERSONAL SERVICE ESTABLISHMENT, PUBLIC PLACE OF AMUSEMENT OR RECREATION AND RECREATIONAL USES IN SECTION 200-7; TO AMEND THE DEFINITION OF EDUCATIONAL USE IN SECTION 200-7; TO AMEND THE DEFINITION OF AND RETAIL TRADE TO BE RETAIL STORE IN SECTION 200-7; TO DELETE THE DEFINITIONS OF RECREATION, ACTIVE AND RECREATION, PASSIVE IN SECTION 200-7; TO AMEND THE USE REGULATIONS FOR THE C-1 VILLAGE DISTRICT IN SECTION 200-33; TO AMEND THE USE REGULATIONS FOR THE C-3 HIGHWAY COMMERCIAL DISTRICT IN SECTION 200-39; AND TO AMEND THE USE REGULATIONS FOR THE LI-LIMITED INDUSTRIAL DISTRICT IN SECTION 200-44.

NOW THEREFORE, BE IT ENACTED AND ORDAINED by the Board of Supervisors of Upper Uwchlan Township that Chapter 200 of the Upper Uwchlan Township Code, titled "Zoning", shall be amended as follows:

SECTION 1. The following definitions shall be added to Section 200-7, titled, "Definitions and word usage":

ATHLETIC CLUB- An enterprise operating as a business or club which charges an admission, entry or membership fee or combination thereof, whether owned by a public or private entity, which is open to the public and provides various athletic or health facilities for its members, including but not limited to the following: gymnasium, swimming pool, nutilus, weights and similar conditioning equipment, tennis, handball, racquetball and similar ball courts and similar athletic facilities which are used to promote fitness and good health.

AUTOMOBILE SERVICE ESTABLISHMENT- A facility for the repair, reconditioning and lubrication of motor vehicles and the replacement or installation of motor vehicle parts and accessories when conducted in a repair shop offering a full range of services including body and fender repair, collision repair service and spray painting.

CONTRACTOR'S ESTABLISHMENT- A commercial use which involves offices and/or the storage of supplies, equipment, machinery and materials for contractors and tradesmen such as builders, masons, carpenters and landscapers. Such use does not include retail sales of products or materials.

HOOKAH BAR/LOUNGE- Any establishment that is dedicated, in whole or in part, to the smoking of a water pipe with a smoke chamber, a bowl, a pipe and a hose, commonly referred to as a "hookah."

MICROBREWERY- A facility where more than 250 barrels and less than 15,000 barrels of malt or brewed beverages are produced on-premises on an annual basis and then sold or distributed for off-premises consumption, which is not a restaurant use. A microbrewery must be licensed by the Pennsylvania Liquor Control Board or any successor agency of the commonwealth.

MINI WAREHOUSE-SELF STORAGE- A building or group of buildings that are divided into individual units, each of which unit is available for rent or lease to the public for the self-storage of tangible personal property. Outdoor storage is only permitted in designated locations on the property if approved in the land development plan for such use.

MUNICIPAL USE- Any use conducted by Upper Uwchlan Township, an agency of Upper Uwchlan Township or any authority created by Upper Uwchlan Township for administrative buildings, equipment or material storage, public park or recreational areas, public sewage treatment and/or water supply collection, treatment, storage and/or distribution facilities, stormwater management facilities, public parking garages and lots, public libraries or any similar use owned and operated by Upper Uwchlan Township, an agency of the Township or any authority created by the Upper Township. The definition of "municipal use" expressly excludes any use by any governmental agency or authority other than those of Upper Uwchlan Township.

OFFICE BUILDING- A building used primarily for business services, medical services, professional and personal services, financial services, government functions or for administrative, managerial or clerical functions.

PERSONAL SERVICE ESTABLISHMENT- An establishment that offers a type of service oriented to personal needs of members of the general public, but not one involving either a professional service or the retail or wholesale sales of products. Personal services include but are not limited to a barber, hairdresser, beautician, photographer, tailor, cleaning and pressing establishment, laundromat, shoe repair, household appliance repair, locksmith, massage therapy, pet groomer and similar services.

PUBLIC PLACE OF AMUSEMENT OR RECREATION- Any facility providing recreation and/or amusement to the general public and which may or may not charge an admission or use fee. A public place of amusement or recreation includes, but is not limited to, movie theaters, live theaters, dinner theaters, concert halls, arcades, bowling alleys, amusement parks, fairgrounds, hockey rinks, roller- or ice-skating rinks, moonbounce facilities, batting cages, public golf courses, driving ranges, miniature golf courses, chip-and-putt golf courses, tennis courts, paddle tennis courts, squash courts, handball courts, facilities

providing table games, such as billiards, pool and table tennis or any facility of the same general character.

RECREATIONAL USES- An active or passive recreational use designed to accommodate physical, leisure, sporting or relaxation activities on land or water. Recreational uses may include, basketball, baseball, football, bicycling, walking, jogging, running, golfing, fishing, boating, hunting, hockey, skating, skateboarding, soccer, swimming, tennis, volleyball, racquetball, exercise/fitness, bowling, billiards, bird watching, picnicking or any other similar recreational uses, as determined by the Zoning Officer.

SECTION 2. The definition of “Educational use” in Section 200-7 titled, “Definitions and word usage”, shall be revised as follows:

“EDUCATIONAL USE- Land or buildings used for the establishment and maintenance of a public or private secondary or elementary school or other educational institution which is used for the primary purpose of instruction and learning. The term shall exclude driver training schools, heavy equipment training, riding schools and day-care centers.”

SECTION 3. The definition of “Retail Trade” in Section 200-7 titled, “Definitions and word usage”, shall be revised to be “Retail Store.”

SECTION 4. The following definitions in Section 200-7 titled, “Definitions and word usage”, shall be deleted:

RECREATION, ACTIVE-Those recreational pursuits which require physical alteration to the area in which they are performed. Such areas are intensively used and include, but are not limited to, playgrounds, ball courts, and swimming pools.

RECREATION, PASSIVE-Recreational pursuits which can be carried out with little alteration or disruption to the area in which they are performed. Such uses include, but are not limited to, hiking, biking and picnicking.

SECTION 5. The definition of “Dwelling unit” shall be revised as follows:

“DWELLING UNIT- One or more rooms in a building, designed for occupancy by one family for living purposes and having its own permanently installed cooking and sanitary facilities, with no enclosed space (other than vestibules, entrances or other hallways or porches) in common with any other dwelling unit.”

SECTION 6. Section 200-32, titled, “Purpose” for the C-1 Village District shall be amended as follows:

“§ 200-32. Purpose .

The regulations for the C-1 Village District are intended to preserve the historical development patterns of the villages of Eagle and Byers Station Historic District, and establish standards for development and coordinated street, parking, landscape

improvements and pedestrian amenities, so as to complement the village setting and provide for safe and convenient access. They are also intended to provide for a variety of uses in a manner which facilitates and promotes pedestrian travel within the village setting.

SECTION 7. Section 200-33, titled “Use Regulations” for the C-1 Village District shall be amended as follows:

“§ 200-33. Use regulations.

- A. **Uses by right.** In the C-1 Village District, a building may be erected, altered or used, and a lot may be used or occupied by right, for the following principal purposes, and no other:
 - (1) Office building.
 - (2) Bank or other financial institution.
 - (3) Retail store, provided that no adult-oriented use and no dispensing of gasoline shall be permitted.
 - (4) Personal service establishment
 - (5) Medical marijuana dispensary.
 - (6) Restaurant, drive-through restaurant, but excluding hookah bar/lounge.
 - (7) Bed and breakfast inn.
 - (8) Cultural studio.
 - (9) Municipal uses.
 - (10) Public place of amusement or recreation and athletic club in a building or buildings with 10,000 square feet or less.
- B. **Conditional uses.** In the C-1 Village District, a building may be erected, altered or used, and a lot may be used or occupied, for any of the following principal purposes when authorized as a conditional use by the Board of Supervisors, subject to § 200-116 of this chapter. Conditional use approval in the C-1 Village District shall require full compliance with all applicable design standards set forth in § 200-36, except where, as a specific condition of approval, the Board provides for modification to such standards upon satisfactory demonstration by the applicant that full compliance is not practicable, based upon a preponderance of evidence.
 - (1) Educational or religious use.
 - (2) Cultural facility.

- (3) Day-care center.
- (4) Mixed-use dwelling.
- (5) Adaptive reuse for historic preservation where permitted as a use subject to approval by the Board of Supervisors as a conditional use in accordance with § 200-72.1.

C. Special exceptions. In the C-1 Village District, a building may be erected, altered or used, and a lot may be used or occupied for any of the following principal uses when authorized as a special exception by the Zoning Hearing Board, subject to Article XX of this chapter.

- (1) Governmental or public utility building or uses.

D. Accessory uses. In the C-1 Village District, a building may be erected, altered or used, and a lot may be used or occupied for any customary commercial accessory use, subject to all applicable provisions of § 200-62.

SECTION 8. Section 200-39, titled, "Use regulations" for the C-3 Highway Commercial District shall be amended as follows:

"§ 200-39. Use regulations.

On any lot or tract in the C-3 Highway Commercial District with direct frontage on Route 100 (Pottstown Pike) and located north of Ticonderoga Boulevard and south of Byers Road, the use regulations set forth in § 200-33 for the C-1 Village District shall apply. On all other lots or tracts in the C-3 Highway Commercial District, the following regulations shall apply:

A. Uses by right. In the C-3 Highway Commercial District, a building may be erected, altered or used, and a lot may be used or occupied by right, for any one, but only one, of the following principal purposes, and no other:

- (1) Office building.
- (2) Bank or other financial institution.
- (3) Passenger station for public transportation.
- (4) Retail store, provided that no sale or dispensing of gasoline or other fuels and no adult-oriented use shall be permitted.
- (5) Restaurant, drive-through restaurant.
- (6) Personal service establishment.

- (7) Educational or religious use.
- (8) Cultural studio or cultural facility.
- (9) Medical marijuana dispensary.

B. Conditional uses. In the C-3 Highway Commercial District, a building may be erected, altered or used, and a lot may be used or occupied, for any one of the following principal purposes when authorized as a conditional use by the Board of Supervisors, subject to § 200-116 of this chapter. At the reasonable discretion of the Board of Supervisors, conditional uses in the C-3 Highway Commercial District may be approved subject to compliance with any applicable design standard(s) set forth in § 200-36.

- (1) Any two or more principal uses otherwise permitted by right, conditional use, or special exception as provided herein. As a condition of conditional use approval, the Board of Supervisors may require that any application for a combination of two or more principal uses comply with the provisions of § 200-70 of this chapter, as deemed applicable by the Board.
- (2) Day-care center.
- (3) Hotel or motel.
- (4) Bed-and-breakfast inn.
- (5) Public place of amusement or recreation provided such use is exclusively indoors.
- (6) Sale or dispensing of gasoline as a principal or accessory use.
- (7) Vehicular sales establishment and sale of farming equipment.
- (8) Automobile service establishment.
- (9) Car wash.
- (10) Adaptive reuse for historic preservation where permitted as a use subject to approval by the Board of Supervisors as a conditional use in accordance with Section 200-72.1.
- (11) Laboratory for scientific research and development.
- (12) Hookah bar/lounge.

C. Special exceptions. In the C-3 Highway Commercial District, a building may be erected, altered or used, and a lot may be used or occupied for any one of the

following principal uses when authorized as a special exception by the Zoning Hearing Board, subject to Article XX of this chapter:

- (1) Municipal or public uses; governmental or public utility building or uses.
- D. Accessory uses. In the C-3 Highway Commercial District, a building may be erected, altered or used, and a lot may be used or occupied for any customary commercial accessory use(s) provided that they are incidental to any permitted principal use.

SECTION 9. Section 200-43, titled, “Purpose” for the LI-Limited Industrial District shall be amended as follows:

“§ 200-43. Purpose. It is the intent of the LI District, as outlined by the Upper Uwchlan Township Comprehensive Plan, to provide for limited industrial and other related intensive activities in the Township, to encourage the establishment of industrial uses which will offer additional employment opportunities to establish reasonable standards governing industrial development to ensure its compatibility with the character of the area and adjacent land uses, and to locate industrial uses within close proximity to major roads in order to provide safe and efficient access by industrial-related traffic.”

SECTION 10. Section 200-44, titled, “Use regulations” for the LI-Limited Industrial District shall be amended as follows:

§ 200-44. Use regulations. A building may be erected, altered or used, and a lot may be used or occupied, for any of the following purposes, and no other:

A. Uses by right.

- (1) Assembly and manufacture of light industrial products.
- (2) Medical marijuana grower/processor.
- (3) Research, engineering, or testing laboratories.
- (4) Public utility operating facilities.
- (5) Printing or publishing establishment.
- (6) Office building.
- (7) Wholesale sales, storage and distribution in a building or buildings of 20,000 square feet or less.
- (8) Religious uses.

- (9) Public place of amusement or recreation and athletic club in a building of 10,000 square feet or less.
- (10) Mini-warehouse/self storage facility.
- (11) Contractor's establishment.

B. Conditional uses. Any one of the following uses when authorized as a conditional use by the Board of Supervisors, subject to § 200-116 of this chapter:

- (1) Surface mining operations.
- (2) Sanitary landfills.
- (3) Junkyard.
- (4) Recycling collection center, excluding processing or transfer station.
- (5) Automobile service establishment.
- (6) Public place of amusement or recreation and athletic club in a building or buildings larger than 10,000 square feet.
- (7) Tower-based wireless communication facilities.
- (8) Adult-oriented use, where located not less than 500 feet from any similar use and from any residence, church, or public or private school or day-care facility.
- (9) Municipal or public uses; governmental or public utility building or uses.
- (10) Wholesale sales, storage and distribution in a building or buildings larger than 20,000 square feet or less.
- (11) Microbrewery.
- (12) The following additional uses shall be permitted when established on a property designated by the Township as a Historic Resource on the Historic Resource Inventory, where historical building(s) shall be adaptively re-used:
 - (a) Restaurants.
 - (b) Retail sales.

C. Special exception. Any one of the following uses when authorized as a special exception by the Zoning Hearing Board, subject to Article XX of this chapter:

- (1) Any use similar to the above permitted uses not specifically provided for herein, provided that the use meets the performance requirements of § 200-82 of this chapter.

D. Accessory uses. The following accessory uses shall be permitted provided that they are incidental to any of the foregoing permitted uses:

- (1) Customary industrial accessory uses.
- (2) A helicopter landing pad as an accessory use to any of the uses permitted by right, by conditional use or by special exception, when such accessory use is authorized by conditional use procedure and providing that any such accessory use shall comply with the following:
 - (a) No helicopter shall take off or land over areas zoned other than Limited Industrial.
 - (b) No helicopter landing pad shall be located within 1,000 feet of any area zoned other than Limited Industrial.
 - (c) There shall be a minimum front yard setback of 300 feet for any helicopter landing pad.
 - (d) There shall be a minimum side and rear yard setback of 200 feet for any helicopter landing pad.
 - (e) The owner and operator of the facility shall enter into an agreement with the Township with respect to the following: fixing the flight for helicopter taking off and/or landing patterns.
 - (f) All helicopter flights shall comply with FAR 91.119, pertaining to minimum safe altitude.

SECTION 11. Section 200-63, titled, "Conversion of dwellings" shall be deleted and the section number reserved.

SECTION 129. Section 200-88.C shall be amended as follows:

"All swimming pools, excluding portable or aboveground pools less than three feet in depth, shall be completely enclosed by a contiguous fence no less than four feet in height that completely surrounds the pool, that serves as a restricted barrier against trespass. All swimming pool fences shall adhere to applicable Building Code regulations, and shall be maintained in good condition. A dwelling, accessory building, or other structure allowed by this chapter may be used as part of such enclosure. All gates and doors opening through any swimming pool enclosure shall be equipped with a self-closing and self-latching device for keeping such gate or door securely closed and latched at all times when not in use."

SECTION 13. Severability. If any sentence, clause, section, or part of this Ordinance is for any reason found to be unconstitutional, illegal, or invalid, such unconstitutionality, illegality or invalidity shall not affect or impair any of the remaining provisions, sentences, clauses, sections, or parts hereof. It is hereby declared as the intent of the Board of Supervisors that this Ordinance would have been adopted had such unconstitutional, illegal, or invalid sentence, clause, section, or part thereof not been included herein.

SECTION 14. Repealer. All ordinances or parts of ordinances conflicting with any provision of this Ordinance are hereby repealed insofar as the same affects this Ordinance.

SECTION 15. Effective Date. This Ordinance shall become effective five (5) days following the enactment as by law provided.

ENACTED AND ORDAINED this _____ day of _____, 2024.

ATTEST:

**UPPER UWCHLAN TOWNSHIP
BOARD OF SUPERVISORS**

Gwen A. Jonik, Secretary

Jennifer F. Baxter, Chair

Andrew P. Durkin, Vice-Chair

Sandra M. D'Amico, Member

UPPER UWCHLAN TOWNSHIP
CHESTER COUNTY, PENNSYLVANIA

ORDINANCE _____ - _____

AN ORDINANCE OF THE TOWNSHIP OF UPPER UWCHLAN, CHESTER COUNTY, PENNSYLVANIA, AMENDING CHAPTER 200 OF THE UPPER UWCHLAN TOWNSHIP CODE TITLED "ZONING" TO DELETE THE DEFINITION OF "HOTEL/MOTEL/MOTOR INN" AND TO ADD DEFINITIONS OF HOTEL, MOTEL AND SHORT TERM RENTAL IN SECTION 200-7; TO AMEND SECTION 200-13.C TO ALLOW A SHORT TERM RENTAL IN THE R-1 DISTRICT BY CONDITIONAL USE; SECTION 200-17.B TO ALLOW A SHORT TERM RENTAL IN THE R-2 DISTRICT BY CONDITIONAL USE AND TO ADOPT A NEW SECTION 200-72.3 TO ADOPT CRITERIA FOR A SHORT TERM RENTAL.

NOW THEREFORE, BE IT ENACTED AND ORDAINED by the Board of Supervisors of Upper Uwchlan Township that Chapter 200 of the Upper Uwchlan Township Code, titled "Zoning", shall be amended as follows:

SECTION 1. The definition of "Hotel, Motel and Motor Inn" in Section 200-7, titled, "Definitions and word usage" shall be deleted.

SECTION 2. The following definitions shall be added to Section 200-7, titled, "Definitions and word usage":

HOTEL- A facility offering transient lodging accommodations to the general public, which rooms are entered exclusively from an interior lobby, corridor or hallway from a common entrance, and which may include additional facilities and services, such as restaurants, lounges, meeting rooms and other common areas, or recreation facilities for use only by registered hotel guests.

MOTEL- Building or series of buildings in which transient lodging is offered for compensation, and which is distinguished from a hotel primarily by reason of providing direct independent access to, and adjoining parking for, each rental unit.

SHORT TERM RENTAL – Any single family detached dwelling unit rented for the purpose of overnight transient lodging for a period of less than 30 days. The leasing of one or more bedrooms in a dwelling unit shall not be permitted as a short term rental.

SECTION 3. Section 200-13, titled "Use Regulations" for the R-1 Residential District shall be amended in Section 200-13.C to add a new subparagraph (7) as follows:

(7) Short term rental subject to the criteria in Section 200-72.3.

SECTION 4. Section 200-17, titled “Use Regulations” for the R-2 Residential District shall be amended in Section 200-17.B to add a new subparagraph (4) as follows:

- (4) Short term rental subject to the criteria in Section 200-72.3.

SECTION 5. A new Section 200-72.3 titled, “Standards and criteria for short term rentals” shall be added and provide as follows:

“§200-72.3. Standards and criteria for short term rentals.

- A. In addition to the requirements in Section 200-116 that apply to all uses permitted by conditional use, short term rentals shall also comply with the standards and criteria in this Section.
- B. Standards and criteria.
 - (1) Short term rentals shall be permitted in single family detached dwelling units in the R-1 Residential District and the R-2 Residential District by conditional use.
 - (2) The leasing of one or more bedrooms in a dwelling unit shall not be permitted as a short term rental.
 - (3) The short term rental must provide one off-street parking space per bedroom.
 - (4) The owner of a short term rental shall be required to obtain an annual rental permit and pay the applicable annual rental permit fee as established by Resolution of the Board. In order to obtain the rental permit, the short term rental shall be inspected on an annual basis by the Township Code Department. The short term rental shall demonstrate proof of the following:
 - a) working smoke detector in each bedroom;
 - b) working smoke detector outside each bedroom in a common hallway;
 - c) working smoke detector on each floor;
 - d) GFI outlet for all outlets located within 6 feet of a water source;
 - e) aluminum or metal exhaust from the dryer;
 - f) carbon monoxide detector if open flame furnace or gas fireplace is used;
 - g) carbon monoxide detector if a garage is attached;
 - h) fire extinguisher located in a conspicuous location in the kitchen; and
 - i) All indoor and outdoor staircases in good condition.

- (5) Short term rentals shall comply with all applicable federal, state and local governmental laws, rules, ordinances, resolutions and regulations including the Upper Uwchlan Township Code.
- (6) The maximum number of guests that may stay overnight in the short term rental shall be limited to two per bedroom.
- (7) A short term rental advertising more than three bedrooms shall provide proof to the Zoning Officer that the dwelling is connected to public sewer or in the case where the dwelling is served by a private septic system, the septic system is adequate to handle the additional flows estimated by the additional bedrooms. If the septic system malfunctions, the short term rental use shall be discontinued until such time as the septic system is repaired or replaced.

SECTION 6. Severability. If any sentence, clause, section, or part of this Ordinance is for any reason found to be unconstitutional, illegal, or invalid, such unconstitutionality, illegality or invalidity shall not affect or impair any of the remaining provisions, sentences, clauses, sections, or parts hereof. It is hereby declared as the intent of the Board of Supervisors that this Ordinance would have been adopted had such unconstitutional, illegal, or invalid sentence, clause, section, or part thereof not been included herein.

SECTION 7. Repealer. All ordinances or parts of ordinances conflicting with any provision of this Ordinance are hereby repealed insofar as the same affects this Ordinance.

SECTION 8. Effective Date. This Ordinance shall become effective five (5) days following the enactment as by law provided.

ENACTED AND ORDAINED this _____ day of _____, 2024.

ATTEST:

**UPPER UWCHLAN TOWNSHIP
BOARD OF SUPERVISORS**

Gwen A. Jonik, Secretary

Jennifer F. Baxter, Chair

Andrew P. Durkin, Vice-Chair

Sandra M. D'Amico, Member

**UPPER UWCHLAN TOWNSHIP
CHESTER COUNTY, PENNSYLVANIA
CONDITIONAL USE APPLICATION**

Applicant, Planebrook Partners, LLC seeks conditional use approval pursuant to Section 200-33.B(3) of the Upper Uwchlan Township Zoning Ordinance to construct a two-story, 6,000 SF daycare facility on two parcels of property located at 241 Park Road (Chester County Tax Parcel No. 32-4-37) and 235 Park Road (Chester County Tax Parcel No. 32-4-38.8 (the “Properties”). The Properties are owned by 241 Park Avenue, LLC and are located in the C-1 Village District.

Hearing Date: Tuesday, April 9, 2024 at 5:30 p.m.; continued to Tuesday, May 14, 2024 at 5:00 p.m.

BOARD EXHIBITS:

- B-1: Conditional Use Application and Impact Statement dated December 4, 2023
- B-2: Email from Victor Kelly dated December 21, 2023 waiving time frame to hold hearing
- B-3: Letter to Michael Malloy, Esquire dated March 7, 2024 confirming date and time of hearing
- B-4: Proof of publication in *Daily Local News* on March 28, 2024 and April 1, 2024
- B-5: Affidavit of Posting on March 15, 2024
- B-6: Preliminary/Final Land Development Plans prepared by Commonwealth Engineers, Inc. dated December 4, 2023 consisting of 12 sheets
- B-7: Presentation Plan prepared by Commonwealth Engineers Inc. dated December 14, 2023
- B-8: Fiscal Impact Analysis prepared by EH Creative Services LLC dated November 15, 2023
- B-9: Trip Generation Analysis prepared by Heinrich & Klein Associates, Inc. dated November 27, 2023
- B-10: Architectural Plan prepared by Scull Architecture, LLC dated December 13, 2023
- B-11: Review Letter from Gilmore & Associates, Inc. dated April 5, 2024
- B-12: Draft Planning Commission Minutes from March 14, 2024 meeting

B-13: Historical Commission Recommendations dated April 2, 2024

B-14: Aerial Tax Map of Properties

May 14, 2024

B-15: Correspondence from Michael Malloy re: Request to Reopen Hearing received May 1, 2024

B-16: Proof of publication in *Daily Local News* on May 3, 2024 and May 6, 2024

B-17: Affidavit of Posting on May 2, 2024



Michael P. Malloy, Jr.
Direct Dial: 610-234-4875
Cell: 610-554-6604
E-mail: mike.malloy@obermayer.com

2 West Market Street
Suite 100
West Chester, PA 19382
T:484-473-8392
F:215-665-3165
www.obermayer.com

VIA EMAIL ONLY (kcamp@buckleyllp.com)

Kristin S. Camp, Esquire
Buckley Brion McGuire & Morris LLP
118 W. Market Street, Suite 300
West Chester, PA 19382-2928

**Re: Conditional Use Application
Planebrook Partners, LLC
Request to Reopen Record**

Dear Ms. Camp:

As you know, I represent the applicant Planebrook Partners, LLC (“Landowner”) in the above-referenced conditional use application currently awaiting decision before the Board of Supervisors of Upper Uwchlan Township (“Township”). After the record was closed at the April 9, 2024 hearing, it came to our attention that the Landowner needs to offer additional evidence to support any potential approval of the application.

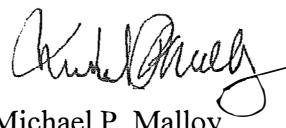
Accordingly, Landowner respectfully requests that the Township reopen the hearing at its May 14, 2024 meeting to give Landowner the opportunity to present additional testimony and documentary evidence to demonstrate full compliance with the applicable sections of the Upper Uwchlan Township Zoning Ordinance.

Please feel free to call me should you have any questions, and kindly confirm whether we will be able to proceed at the May 14 meeting.

Thank you.

Very truly yours,

OBERMAYER REBMAN MAXWELL
& HIPPEL LLP


Michael P. Malloy

MPM:kyd

cc: Vic Kelly (via e-mail only - Vkelly@ce-l.com)

ALL AROUND PHILLY

MARKETPLACE *Classifieds*

NOTICE IS GIVEN that the

NOTICE IS GIVEN that the Board of Supervisors of Upper Uwchlan Township will conduct a public hearing on May 14, 2024 at 5:00 p.m. at the Upper Uwchlan Township Building, 140 Pottstown Pike, Chester Springs, PA 19425, to reopen and consider the conditional use application filed by Planebrook Partners, LLC ("Applicant"). Applicant seeks conditional use approval pursuant to Section 200-33.B(3) of the Upper Uwchlan Township Zoning Ordinance to construct a two-story, 6,000 SF daycare facility on two parcels located at 241 Park Road (Chester County Tax Parcel No. 32-4-37) and 235 Park Road (Chester County Tax Parcel No. 32-4-38.8 (the "Properties"). The Properties are located in the C-1 Village District. Applicant also seeks conditional use approval pursuant to Section 200-36.B(1)(a) to allow the facade for the daycare building to be greater than 60 feet in length along Park Rd; a conditional use pursuant to Section 200-34.A to allow a lot area of 34,404 square feet; and a conditional use pursuant to Sections 200-73.K(2) and (4) to modify the minimum number of off-street parking spaces to 39. The conditional use application is available for public inspection and may be examined without charge or obtained for a charge not greater than the cost thereof at the Township Building, located at 140 Pottstown Pike, Chester Springs, PA 19425, during normal business hours. The public is invited to attend the hearing. Any person wishing to attend the hearing who has a disability or requires auxiliary aid, service or other accommodation to observe or participate in the hearing, should contact the Township Secretary at (610) 458-9400 to discuss how those needs may be accommodated. Upper Uwchlan Township Kristin S. Camp, Township Solicitor DLN May 3, 6; 1a

Post Date: 05/03 12:00 AM

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NOTICE IS GIVEN that the Board of Supervisors of Upper Uwchlan Township will conduct a public hearing on **May 14, 2024 at 5:00 p.m.** at the Upper Uwchlan Township Building, 140 Pottstown Pike, Chester Springs, PA 19425, to reopen and consider the conditional use application filed by Planebrook Partners, LLC ("Applicant"). Applicant seeks conditional use approval pursuant to Section 200-33.B(3) of the Upper Uwchlan Township Zoning Ordinance to construct a two-story, 6,000 SF daycare facility on two parcels located at 241 Park Road (Chester County Tax Parcel No. 32-4-37) and 235 Park Road (Chester County Tax Parcel No. 32-4-38.8 (the "Properties"). The Properties are located in the C-1 Village District. Applicant also seeks conditional use approval pursuant to Section 200-36.B(1) (a) to allow the facade for the daycare building to be greater than 60 feet in length along Park Rd; a conditional use pursuant to Section 200-34.A to allow a lot area of 34,404 square feet; and a conditional use pursuant to Sections 200-73.K(2) and (4) to modify the minimum number of off-street parking spaces to 39.

The conditional use applica-

tion is available for public inspection and may be examined without charge or obtained for a charge not greater than the cost thereof at the Township Building, located at 140 Pottstown Pike, Chester Springs, PA 19425, during normal business hours. The public is invited to attend the hearing. Any person wishing to attend the hearing who has a disability or requires auxiliary aid, service or other accommodation to observe or participate in the hearing, should contact the Township Secretary at (610) 458-9400 to discuss how those needs may be accommodated.

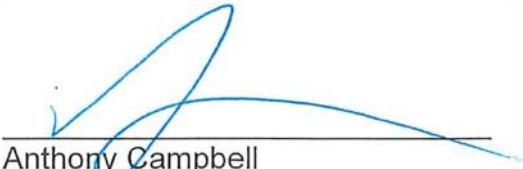
Upper Uwchlan Township
Kristin S. Camp, Township
Solicitor
DLN May 3, 6; 1a

AFFIDAVIT OF POSTING

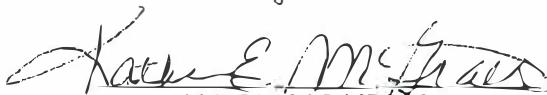
I, Anthony Campbell, Zoning and Code Officer, hereby attest that on May 2nd, 2024, I posted notice of a conditional use hearing of the Board of Supervisors of Upper Uwchlan Township scheduled for May 14, 2024 at 5:00 p.m. to reopen and consider the application filed by Planebrook Partners, LLC to construct a two-story, 6,000 SF daycare facility on two parcels located at 241 Park Road (Chester County Tax Parcel No. 32-4-37) and 235 Park Road (Chester County Tax Parcel No. 32-4-38.8).

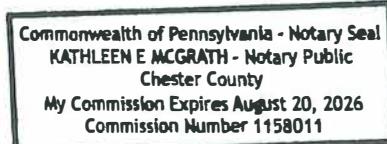
Photographs of the posting are attached hereto.

The statement is made subject to the Penalties of 18 Pa C.S.A. Section 4904, relating to unsworn falsification to authorities.


Anthony Campbell
Zoning & Code Officer

Sworn to and subscribed
before me this 3
day of May, 2024


KATHLEEN E. MCGRATH
NOTARY PUBLIC



My Commission Expires: Aug 20, 2026



PUBLIC NOTICE



A white, single-story house with a grey roof and a chimney, situated in a grassy yard. A white 'PUBLIC NOTICE' sign is positioned in the foreground. The house is surrounded by trees and bushes. The sky is clear and blue.

PUBLIC NOTICE



The
Flynn
Company
SALE
COMMERCIAL LAND
0.500 SF Office Approved
Andy Pascato
www.Flynnreal.com
(215) 561-6565

PUBLIC NOTICE

ALYSON M. ZARRO
E-MAIL: alyson@rrhc.com
Ext. 202



March 11, 2024

Via hand delivery and e-mail

Tony Scheivert, Township Manager
Upper Uwchlan Township
140 Pottstown Pike
Chester Springs, PA 19425

**Re: Rockhill Real Estate Enterprises XVII LP/500 Pottstown Pike
Conditional Use Application**

Dear Tony:

This firm represents Rockhill Real Estate Enterprises XVII LP (“Applicant”) in connection with its property located at 500 Pottstown Pike and identified as Chester County UPI No. 32-1-34.1C (“Property”). The Property is current vacant and is zoned C-3 Highway Commercial District. Applicant seeks to construct an approximately 36,380 square foot vehicular service establishment and parking. Applicant also intends to store vehicles on the Property as inventory for local dealerships.

Pursuant to Sections 200-39.B(7), and (9) of the Upper Uwchlan Township Zoning Ordinance (“Zoning Ordinance”), the Applicant must obtain conditional use approval to operate the proposed vehicular sales establishment and vehicular service establishment uses, respectively. Additionally, Section 200-39.B(1) of the Zoning Ordinance requires conditional use approval to operate any two or more principal uses permitted by right, conditional use, or special exception. Lastly, manmade precautionary steep slopes affect a portion of the proposed vehicle service center on the Property, which necessitates conditional use approval pursuant to Sections 200-107.D(3)(b)[1] and [4] of the Zoning Ordinance. Therefore, Applicant is hereby submitting its conditional use application (“Application”) seeking approval for such uses.

Enclosed for filing in connection with the Application are the following materials:

1. One (1) copy of the Conditional Use Application form with the attached Addendum;
2. Four (4) copies of the Conditional Use Plan prepared by T&M Associates, dated February 16, 2023;

Tony Scheivert, Township Manager

Upper Uwchlan Township

March 11, 2024

Page 2

3. Three (3) copies of a Transportation Impact Assessment prepared by Traffic Planning and Design, Inc., dated March 4, 2024;
4. Three (3) copies of a TIS Scoping Review Response prepared by Traffic Planning & Design, Inc. dated March 4, 2024;
5. Three (3) copies of a Fiscal Impact Analysis prepared by EH Creative Services LLC dated March 4, 2024; and
6. A check in the amount of \$1,000.00 made payable to Upper Uwchlan Township, the Conditional Use Application fee.

A link to download electronic copies of all materials submitted with this Application has been included with the email version of this letter.

Section 200-117.I of the Zoning Ordinance requires submission of certain impact statements in connection with Conditional Use Applications. Section 200-117.I incorporates Section 162-9.H of the Subdivision and Land Development Ordinance, which in Subsection (1)(c) allows the Board of Supervisors to waive the requirements of impact statements if they are determined not to be applicable. In this instance, the property identified as UPI No. 32-1-31 to the west of the Property is listed as a Class II Historic Resource on the Upper Uwchlan Township Historic Resources Inventory. The proposed development is not anticipated to have any impact on the historic resource, as the service facility will be located more than 200 feet from the historic structure and the properties are separated by Pottstown Pike, a major thoroughfare. To the extent that an historic resource impact study would be required, Applicant is seeking a waiver of this requirement.

Kindly forward the enclosed materials to the Township Consultants and Township Planning Commission for review.

As always, please feel free to contact us with any questions or if you need additional information. Thank you for your attention to this matter.

Very truly yours,

/s/ *Alyson M. Zarro*

ALYSON M. ZARRO

AMZ/cpw
Enclosures

cc: Kristin Camp, Esquire, Township Solicitor (*via email w/enclosures*)
Gwen Jonik, Township Secretary (*via email w/enclosures*)

Tony Scheivert, Township Manager

Upper Uwchlan Township

March 11, 2024

Page 3

Robert DiStanislao, RDS (*via email w/enclosures*)

Keith Lieberman, P.E., T&M Associates (*via email w/enclosures*)

Jacob Tackett, T&M Associates (*via email w/enclosures*)

Matt Hammond, P.E., TPD (*via email w/enclosures*)

Erik Hetzel, EH Creative (*via email w/enclosures*)

Cameron P. Wolfson, Esquire, (*via email w/enclosures*)



UPPER UWCHLAN TOWNSHIP

140 Pottstown Pike

Chester Springs, PA 19425

610-458-9400 Fax 610-458-0307

CONDITIONAL USE APPLICATION

Tax Parcel Number: 32-1-34.1C Date: March 11, 2024

Name of Applicant: Rockhill Real Estate Enterprises XVII LP

Address: 4005 West Chester Pike, Newtown Square, PA 19073

Telephone: _____ Email: rd@rdsautogroup.com

Owner of Parcel: Rockhill Real Estate Enterprises XVII LP

Address / Location of Parcel: 500 Pottstown Pike

Zoning District: C-3 Highway Commercial Existing Use: Vacant

Article / Section Authorizing Conditional Use: §§ 200-39.B(1), (7), and (9) and §§ 200-107.D(3)(b)[1] and [4]

Description of Proposed Conditional Use: See addendum.

This Application shall be accompanied by:

1. A fee of \$500.00 for Non-Commercial or \$1,000.00 for Commercial/Industrial;
2. Four (4) printed copies and an electronic copy of:
 - parcel plot plans (half of which can be of reduced size, i.e. 11 x 17)
3. Three (3) printed copies and an electronic copy of:
 - impact statements (if applicable pursuant to the Township's Zoning Ordinance §200-83),
 - and any other information pursuant to Zoning Ordinance §200-116, §200-117 (Conditional Uses, Conditional Use Standards).

• The Applicant will be responsible for reimbursing the Township for Consultants' Fees and Legal Fees, and if additional Hearings are necessary, a Fee will be charged for each Additional Hearing:
Non-Commercial \$250.00/Hearing; Commercial/Industrial \$500.00/Hearing

I hereby depose and say that all of the above statements, and the statements contained in any papers submitted herewith, are true to the best of my knowledge and belief.

A handwritten signature in black ink.

Signature of Applicant

Alyson M. Zarro, Esq., Attorney/Authorized Agent for Applicant

Printed Name of Applicant

COMMONWEALTH OF PENNSYLVANIA

COUNTY OF CHESTER

Sworn to and subscribed before me this

14th day of March, 2024.

A handwritten signature in blue ink.

Notary Public

Form Revised August 2021

Commonwealth of Pennsylvania - Notary Seal
CARLA CAPONE - Notary Public
Chester County
My Commission Expires September 23, 2024
Commission Number 1022933

500 POTTSTOWN PIKE CONDITIONAL USE APPLICATION ADDENDUM

March 11, 2024

Rockhill Real Estate Enterprises XVII LP (“Applicant”) is the owner of an approximately 13.79 acre property located at 500 Pottstown Pike and further identified as Chester County UPI No. 32-1-34.1C (“Property”). The Property is situated east of the intersection of Pottstown Pike (S.R. 0100) and Font Road and is zoned C-3 Highway Commercial District. The Property is a vacant lot, which was previously used as a tank farm, and is surrounded by existing commercial and industrial uses.

Applicant requests conditional use approval to operate vehicular sales and service uses on the Property, pursuant to Sections 200-39.B(7) and (9) of the Upper Uwchlan Township Zoning Ordinance (“Zoning Ordinance”). Specifically, Applicant plans to construct an approximately 36,380 square foot vehicle service center with associated parking and stormwater management facilities, as shown on the enclosed Conditional Use Plan prepared by T&M Associates, dated February 16, 2023, consisting of six (6) sheets (“Plan”). Additionally, Applicant proposes to install additional paved parking areas to store vehicles on the Property as inventory for off-site local dealerships owned by RDS Automotive Group. Therefore, 415 parking spaces are proposed for both uses. Access to the site is proposed through a single access driveway connecting to Pottstown Pike. This driveway is aligned with the existing intersection of Pottstown Pike and Font Road.

As noted above, vehicular sales and service establishments are permitted by conditional use in the C-3 District, in accordance with Sections 200-39.B(7) and (9). Additionally, Section 200-39.B(1) requires conditional use approval for any two or more principal uses otherwise permitted by right, conditional use, or special exception. Therefore, Applicant is requesting conditional use approval from Sections 200-39.B(1), (7), and (9) of the Zoning Ordinance to operate vehicular sales and service establishments on the Property.

The Property is also affected by manmade precautionary and prohibitive steep slopes, as shown on Sheet 3 of the Plan. A portion of the proposed service center and sanitary and storm sewers are located within the existing manmade precautionary slopes. Accordingly, Applicant is requesting conditional use approval from Sections 200-107.D(3)(b)[1] and [4] of the Zoning Ordinance to construct a portion vehicle service center and install sanitary and storm sewers in the manmade precautionary steep slopes. Sheet 3 of the Plan also identifies uses within manmade prohibitive steep slope areas. Applicant intends to seek variance relief from the appropriate sections of the Zoning Ordinance for disturbance of and uses in the manmade prohibitive steep slope areas.



GRAPHIC SCALE
200' 100' 0 100' 200'
(IN FEET)
1 inch = 200 ft.

DESIGNED BY JDT
CHECKED BY JDT/KAL
DRAWN BY SEE
DATE 02/16/2023
SCALE AS SHOWN
PROJ. NO. PO50021
1 OF 6

T AND M
YOUR GOALS. OUR MISSION.
1700 MARKET STREET, SUITE 3100
PHILADELPHIA, PA 19103
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DRAWING
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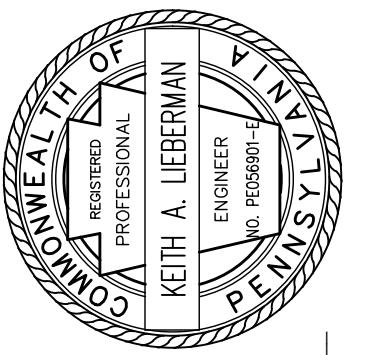
COMMONWEALTH OF PENNSYLVANIA
LICENSE NO. 05961-E

COMMONWEALTH OF PENNSYLVANIA
LICENSED PROFESSIONAL ENGINEER
KEITH A. LIEBERMAN
P.E.
REGISTRATION NO. PE56901
ENGINEER
PA STATE
LIEBERMAN
Keith A. Lieberman

DATE
LIEBERMAN
Keith A. Lieberman



LOCATION MAP
SCALE: 1"=300'



KEITH A. LIEBERMAN, P.E.
LICENSED PROFESSIONAL ENGINEER
Keith Lieberman

COMMONWEALTH OF PENNSYLVANIA
LICENSE NO. 05961-E
DATE
10/11/22

RPS AUTOMOTIVE GROUP
PORSCHE SERVICE: CHESTER SPRINGS
500 POTTSTOWN PIKE, CHESTER SPRINGS, PA 19422
UPCHLAN TOWNSHIP, CHESTER COUNTY, PA

CONDITIONAL USE PLANS:
EXISTING CONDITIONS

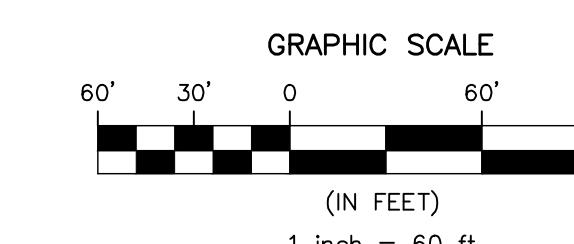
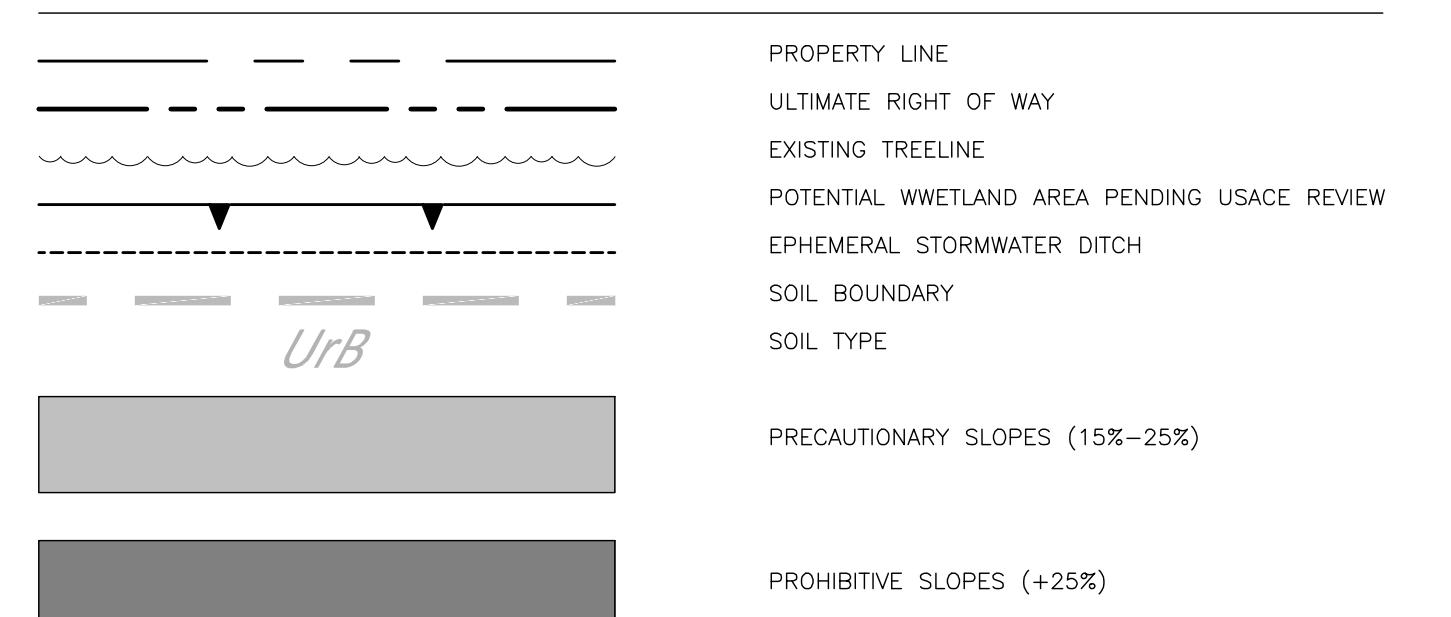
GENERAL NOTES:

1. RECORD OWNER: ROCKHILL REAL ESTATE ENTERPRISES XVII LP
2. SOURCE OF TITLE: DEED BOOK 7070, PAGE 1552 & PLAN BOOK 16231, PAGE 1
3. TAX PARCEL (APN): 32-1-34.1C
4. LOT AREA: GROSS 600,739 SF (13.79 AC)
AREA WITHIN R/W: 7,768 SF (0.18 AC)
NET: 592,971 SF (13.61 AC)
5. EXISTING FEATURES ARE SHOWN ON THE PLANS AND TAKEN FROM THE PLAN "ALTA/NPS LAND TITLE SURVEY CHESTER SPRINGS VENTURES, LLC" BY ASH ASSOCIATES, INC. LAST REVISED 10/11/22.
6. VERTICAL DATUM IS NAD 1988 AND ESTABLISHED BY GPS OBSERVATIONS REFERENCED TO THE NGS CORS NETWORK. SITE BENCHMARK IS A METAL SPIKE SET AS SHOWN. SITE BENCHMARK ELEVATION=509.22'.
7. HORIZONTAL DATUM IS NAD 83, STATE PLANE COORDINATES OF PENNSYLVANIA AND ESTABLISHED GPS OBSERVATIONS REFERENCED TO THE NGS CORS NETWORK. BOTH DEED BEARINGS AND NAD 83 PENNSYLVANIA STATE PLANS BEARINGS ARE SHOWN. PARENTHESIS () INDICATES DEED BEARINGS.
8. THE SITE IS INTENDED TO BE SERVICED BY PUBLIC WATER AND SEWER

REFERENCE PLANS:

1. REFERENCE PLAN: LOT 3 ON "TITLE PLAN, FINAL MINOR SUBDIVISION PLAN FOR TOLL BROS. INC." PREPARED BY COMMONWEALTH ENGINEERS, INC. DATED FEBRUARY 2, 2001, LAST REVISED MARCH 11, 2002 AND RECORDED IN THE CHESTER COUNTY RECORDER OF DEEDS AS PLAN BOOK 16231, PAGE 1 ON MAY 30, 2002.
2. "FINAL PLAN, TITLE PLAN, REFSNEIDER TRANSPORTATION, INC." PREPARED BY HARRY STRONG ENG. & LAND SURVEYING, DATED DECEMBER 3 1997, LAST REVISED JANUARY 27, 1998 AND RECORDED IN THE CHESTER COUNTY RECORDER OF DEEDS AS PLAN BOOK 14828, PAGE 1.
3. "SITE PLAN, FELLOWSHIP FIELDS", PREPARED BY TAYLOR WISEMAN & TAYLOR, AND RECORDED IN THE CHESTER COUNTY RECORDER OF DEEDS AS BOOK 9186, PAGE 876.
4. "PRELIMINARY/FINAL LAND DEVELOPMENT PLAN, LAND DEVELOPMENT PLAN OVERALL TRACT" PREPARED BY HARRIS COMMUNICATIONS DIVISION, AND RECORDED IN THE CHESTER COUNTY RECORDER OF DEEDS AS PLAN BOOK 19822, PAGE 1.
5. "PROPOSED WAREHOUSE BUILDING, PLAN OF PROPERTY FOR F. BRIAN FORCINE", PREPARED BY JMR ENGINEERING, LLC, DATED AUGUST 18, 2017, AND RECORDED IN THE CHESTER COUNTY RECORDER OF DEEDS AS PLAN BOOK 15752, PAGE 1.
6. "MINOR LAND DEVELOPMENT PLAN FOR DUKE ENERGY GAS TRANSMISSION, GENERAL SITE PLAN", PREPARED BY COMMONWEALTH ENGINEERS, INC., DATED SEPTEMBER 5, 2000, LAST REVISED DECEMBER 13, 2001, AND RECORDED IN THE CHESTER COUNTY RECORDER OF DEEDS AS PLAN BOOK 15752, PAGE 1.

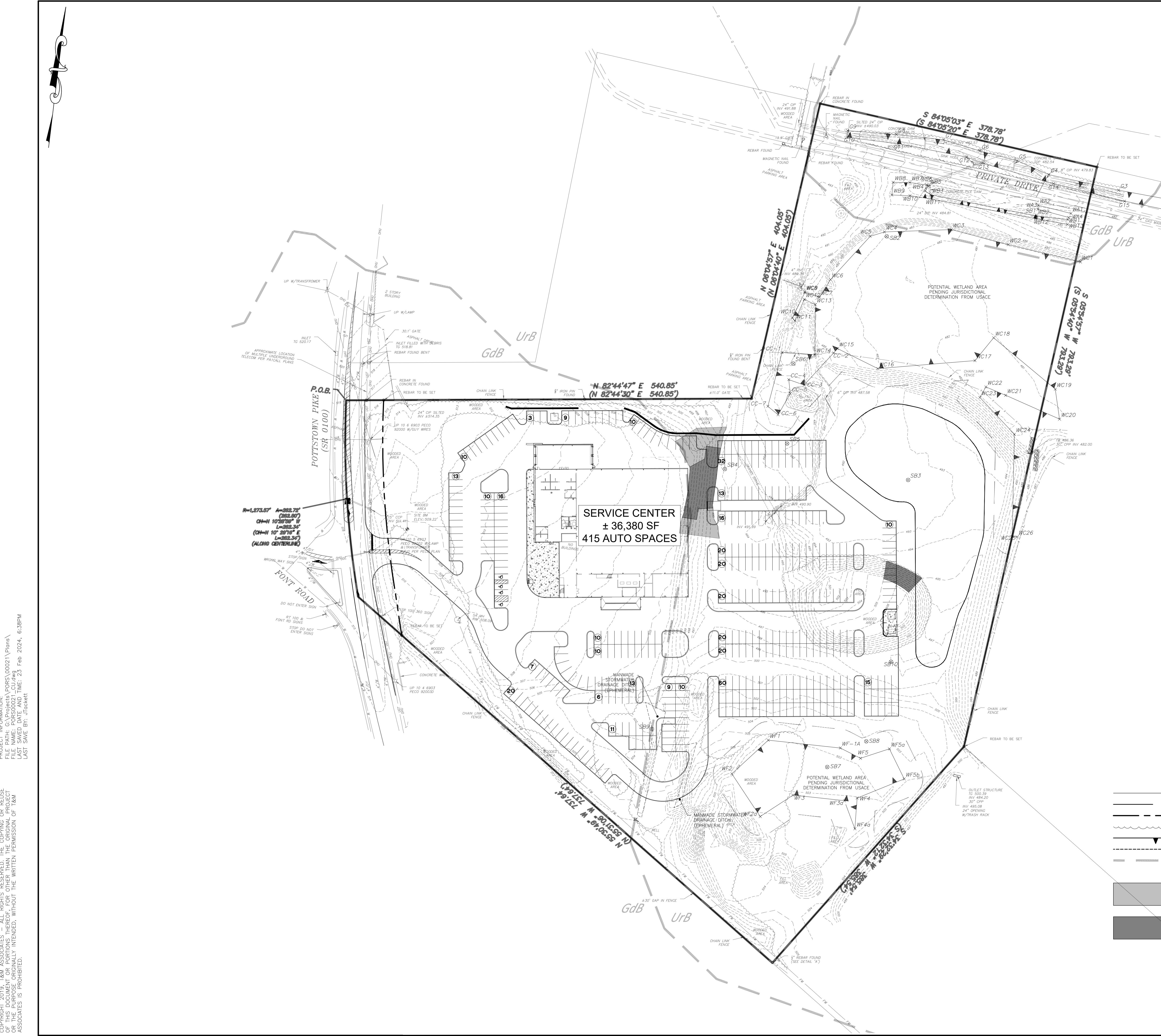
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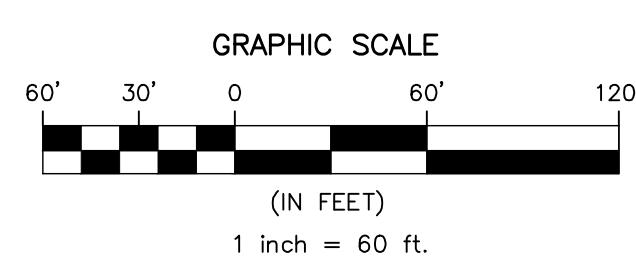
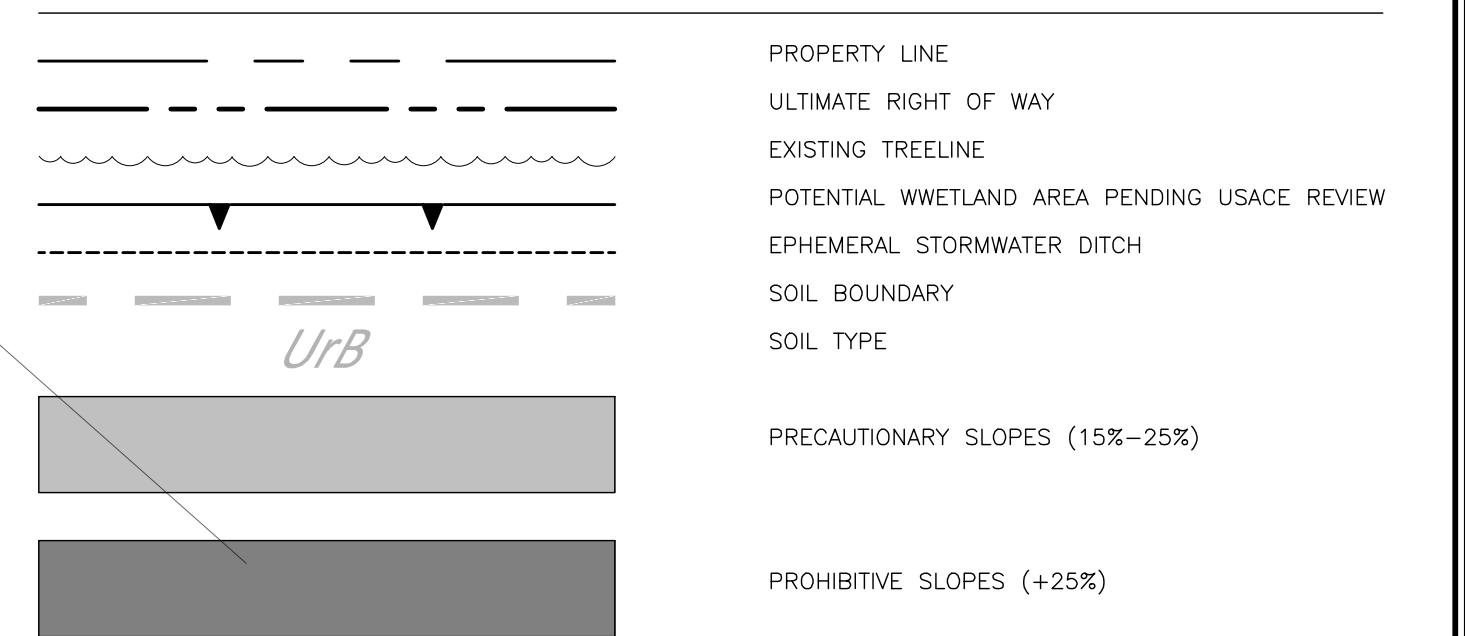
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OHIO AND PENNSYLVANIA

DESIGNED BY	JDT
CHECKED BY	JDT/KAL
DRAWN BY	SEE
DATE	02/16/2023
SCALE	AS SHOWN
PROJ. NO.	PORS0021

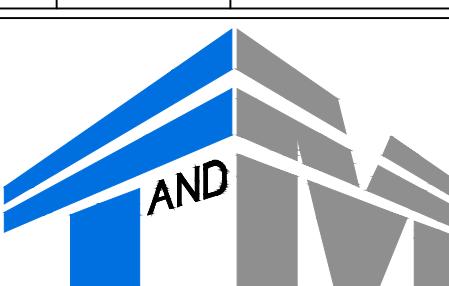


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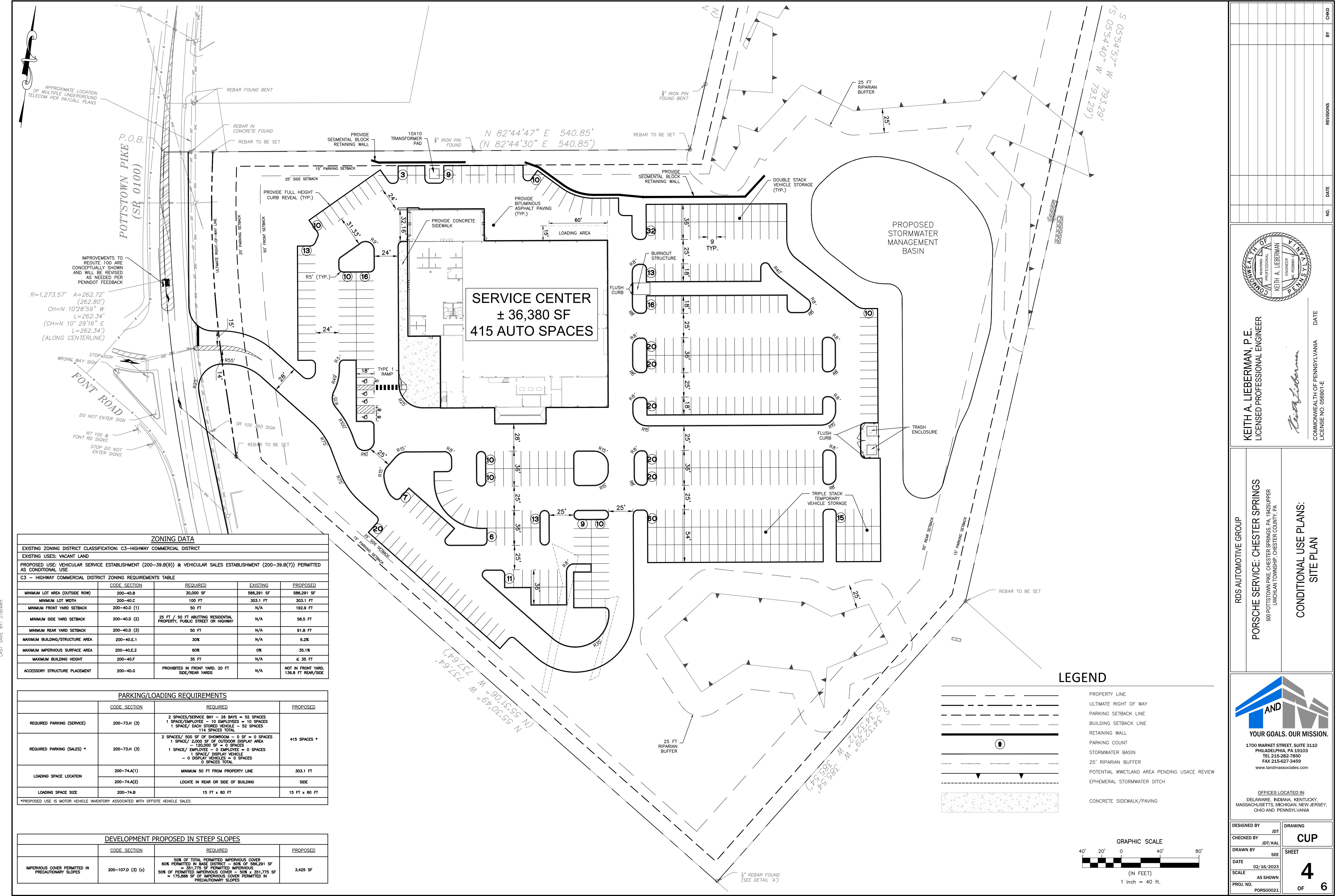


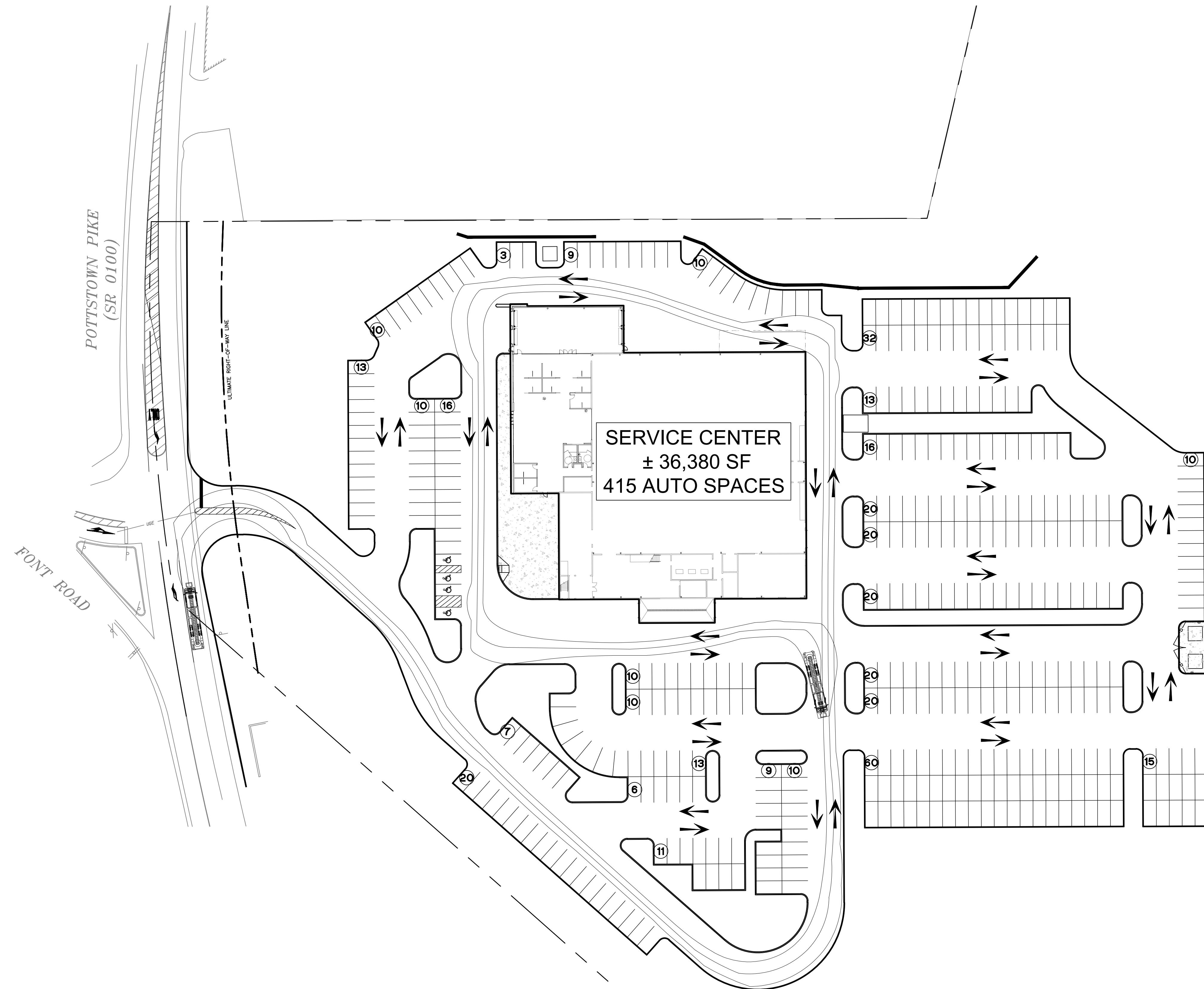
KEITH A. LIEBERMAN, P.E.
LICENSED PROFESSIONAL ENGINEER
COMMONWEALTH OF PENNSYLVANIA
LICENSE NO. 05961-E

DATE
LICENSURE NO. 05961-E



DESIGNED BY	JDT
CHECKED BY	JDT/KAL
DRAWN BY	SEE
DATE	02/16/2023
SCALE	AS SHOWN
PROJ. NO.	PORS00021



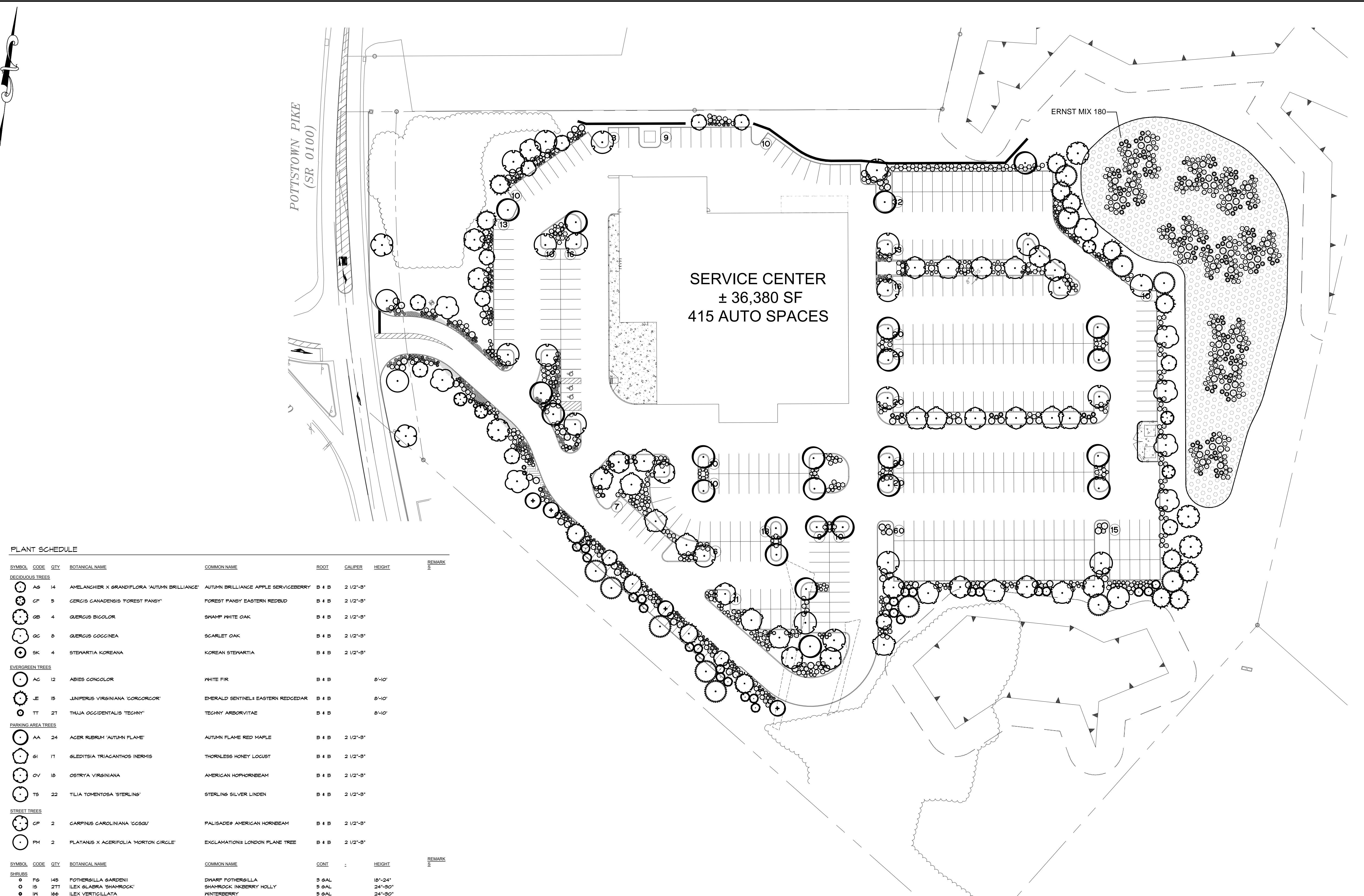


SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE	SPACING	REMARK
DECIDUOUS TREES								
AS	14	14	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE APPLE SERVICEBERRY	B & B	2 1/2"-3"		
CF	5	5	CERCIS CANADENSIS 'FOREST PANSY'	FOREST PANSY EASTERN REDBUD	B & B	2 1/2"-3"		
GB	4	4	QUERCUS BICOLOR	SWAMP WHITE OAK	B & B	2 1/2"-3"		
QC	8	8	QUERCUS COCCINEA	SCARLET OAK	B & B	2 1/2"-3"		
SK	4	4	STENARTIA KOREANA	KOREAN STEWARTIA	B & B	2 1/2"-3"		
EVERGREEN TREES								
AG	12	12	ABIES CONCOLOR	WHITE FIR	B & B	8'-10'		
JE	15	15	JUNIPERUS VIRGINIANA 'CORCORCOR'	EMERALD SENTINEL® EASTERN REDCEDAR	B & B	8'-10'		
TT	27	27	THUJA OCCIDENTALIS 'TECHNY'	TECHNY ARBORVITAE	B & B	8'-10'		
PARKING AREA TREES								
AA	24	24	ACER RUBRUM 'AUTUMN FLAME'	AUTUMN FLAME RED MAPLE	B & B	2 1/2"-3"		
GI	17	17	GLEDTISIA TRIACANTHOS INERMIS	THORNLESS HONEY LOCUST	B & B	2 1/2"-3"		
OV	18	18	OSTRYA VIRGINIANA	AMERICAN HOPHORNBEAM	B & B	2 1/2"-3"		
TS	22	22	TLIA TOMENTOSA 'STERLING'	STERLING SILVER LINDEN	B & B	2 1/2"-3"		
STREET TREES								
CP	2	2	CARPINUS CAROLINIANA 'COSCO'	PALISADE® AMERICAN HORNBEAM	B & B	2 1/2"-3"		
PM	2	2	PLATANUS X ACERIFOLIA 'MORTON CIRCLE'	EXCLAMATION® LONDON PLANE TREE	B & B	2 1/2"-3"		
SHRUBS								
FG	145	145	FOTHERGILLA GARDENII	DWARF FOTHERGILLA	3 GAL	18"-24"		
IS	277	277	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY HOLLY	5 GAL	24"-30"		
IV	66	66	ILEX VERTICILLATA	WINTERBERRY	5 GAL	24"-30"		
MN	154	154	MORELLA PENNSYLVANICA	NORTHERN BAYBERRY	7 GAL	30"-36"		
PH	282	282	PANICUM VIRGATUM 'HEAVY METAL'	HEAVY METAL SWITCH GRASS	3 GAL	18"-24"		
PH2	157	157	PENNISETUM ALOPECUROIDES 'HAMELN'	HAMELN FOUNTAIN GRASS	5 GAL	24"-36"		
SS2	24	24	SPRAEA JAPONICA 'ANTHONY WATERER'	ANTHONY WATERER JAPANESE SPIREA	5 GAL	18"-24"		
PERENNIALS								
HO	45	45	HEMEROCALLIS X 'STELLA DE ORO'	STELLA DE ORO DAYLILY	1 GAL			
HP	155	155	HOSTA X 'PATRIOT'	PATRIOT HOSTA	1 GAL			
GROUND COVERS								
CM	263	263	COTONEASTER DAMMERI 'MOONCREEPER'	MOONCREEPER COTONEASTER	2" PLUG	12" o.c.		
LB	241	241	LIRIOPE MUSCARI 'BIG BLUE'	BIG BLUE LILYTURF	2" PLUG	12" o.c.		

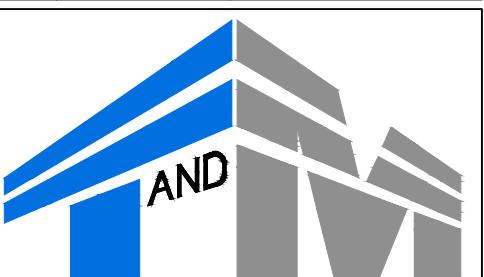
POTTSTOWN PIKE
(SR 0100)

SERVICE CENTER
± 36,380 SF
415 AUTO SPACES

ERNST MIX 180



GRAPHIC SCALE
40' 20' 10' 40' 80'
(IN FEET)
1 inch = 40 ft.
PROJ. NO. POR50021
OF 6
6 OF 6



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DESIGNED BY JDT
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SCALE AS SHOWN
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OF 6
6 OF 6

COMMONWEALTH OF PENNSYLVANIA
LICENSE NO. 05961-E
DATE
LICENSING BOARD
PROFESSIONAL ENGINEER
KEITH A. LIEBERMAN
P.E.
LICENSED PROFESSIONAL ENGINEER
T. Lieberman

500 POTTSTOWN PIKE, CHESTER SPRINGS, PA 19424
UPCHLAN TOWNSHIP, CHESTER COUNTY, PA

EH CREATIVE SERVICES LLC
16 MANOR ROAD
PAOLI, PA 19301
610.322.7154
erik@erikhetzel.com

Memorandum

To: Jacob Tackett, Principal Staff Designer
T and M Associates

From: Erik Hetzel, AICP/PP, LEED AP

Date: March 4, 2024

Re: Fiscal Impact Analysis – Proposed Automotive Service Center, 500 Pottstown Pike, Upper Uwchlan Township

RDS Automotive Group is proposing to construct a 36,380-square-foot automotive service center on the property located at 500 Pottstown Pike in Upper Uwchlan Township, Chester County, Pennsylvania. Along with site improvements that will generate additional real estate tax revenue for the Township and School District, the applicant expects to create approximately 10 full-time equivalent jobs at the site. It is projected that the proposed development will result in beneficial, net-positive annual fiscal impacts to both Upper Uwchlan Township and the Downingtown Area School District, as described in Table 1.

Table 1
Summary of Annual Fiscal Impacts

	Tax Revenues	Expenditures	Net Fiscal Impact
Upper Uwchlan Township	\$4,013	(\$1,091)	\$2,922
Downingtown Area School District	\$85,946	\$0	\$85,946
TOTAL	\$89,959	(\$1,091)	\$88,869

Fiscal impacts presented in this analysis were estimated using a methodology developed by the Rutgers University Center for Urban Policy Research, as originally

described in The New Practitioner's Guide to Fiscal Analysis¹ and further developed in a later publication by the same authors entitled Development Impact Assessment Handbook².

Revenue Impacts

Real Estate Property Tax - At project completion, the improvements are anticipated to have a total market value of approximately \$8 million, which translates to an assessed value of approximately \$2,877,698. This assessment calculation is based on the current (2023-2024) Chester County common-level ratio of 2.78, which estimates assessed value at approximately 35.97% of market value. The Township levies the real estate tax at the rate of 1.121 mills, which will generate approximately \$3,226 annually to the Township. The School District millage rate is currently 29.558 mills, which applied the assessment describe above, will generate approximately \$85,059 in real estate taxes to the School District annually.

Earned Income Tax (EIT) Revenues – Workers who reside in Upper Uwchlan Township pay the EIT at the rate of 1.0%, with 0.5% going to each the Township and School District. The EIT is also levied at the rate of 1.0% on non-residents who do not pay the EIT in their home jurisdictions with the full amount of the tax going only to the Township. The applicant estimates that the proposed use will create 10 full-time equivalent jobs at this location with an estimated mean annual wage of \$52,480 per employee³. We cannot predict where these employees will reside, nor whether they will be paying the EIT to their home jurisdictions. Hence, we conservatively assume that 25% of the workers (or, 3 of the total 10 workers) will be eligible to pay the EIT as Township residents. Under the foregoing assumptions, the EIT will generate revenues totaling \$787 to the Township and \$787 to the School District.

Local Services Tax (LST) Revenues – The LST is paid only to the School District at the rate of \$10 per employee. With an estimated 10 employees, the proposed development would generate approximately \$100 annually in LST revenues to the School District.

¹ Burchell, Robert W., David Listokin, et al. *The New Practitioner's Guide to Fiscal Impact Analysis*, New Brunswick, NJ: Rutgers, The State University of New Jersey, 1985.

² Burchell, Robert W., David Listokin, et al. *Development Impact Assessment Handbook*. Washington, D.C.: ULI-the Urban Land Institute, 1994.

³ Occupation title “Automotive Service Technicians and Mechanics” from U.S. Bureau of Labor Statistics, *Occupational Employment and Wage Statistics, May 2022 Metropolitan and Nonmetropolitan Area Occupational Employment and Wage Estimates, Philadelphia-Camden-Wilmington, PA-NJ-DE-MD* <https://www.bls.gov/oes/current/oes_37980.htm#49-0000>

Regional Economic Impacts

The proposed development will have a beneficial economic “ripple effect” in the local economy, as the new employees use goods and services in and around Upper Uwchlan Township. In addition, the development phase of the project will provide construction jobs and result in construction-related consumption expenditures in the local and regional economies. These impacts are not reflected in the summary table included in this memorandum but will provide economic benefits over and above the annual revenues described therein.

Cost Analysis

The cost analysis includes expenses from the Township budget for services most likely to be impacted by the proposed development. These expense items are described in Table 2.

Table 2
Upper Uwchlan Township Budget
General Fund Expenses

Expenditure Line Item	Budget Amount	Amount Used in Analysis	
Tax Collection	\$11,000	100%	\$11,000
Legal	\$55,000	100%	\$55,000
Police Expenses	\$3,453,424	100%	\$3,453,424
Fire & Ambulance	\$507,870	100%	\$507,870
Codes Administration	\$425,501	10%	\$42,550
Emergency Operations/Other	\$60,548	100%	\$60,548
Public Works	\$1,285,281	100%	\$1,285,281
TOTAL	\$5,798,624		\$5,415,673

Cost attributable to the proposed development were projected using the “Per Capita Multiplier” methodology from the [Development Impact Assessment Handbook](#). That method differentiates how services are distributed among residential and nonresidential portions of Upper Uwchlan Township on the basis of a ratio of residential to nonresidential uses as described in County assessment data for the Township, using a blended average of total assessments and number of parcels for residential and nonresidential land use classifications. Assessment information for Upper Uwchlan Township was obtained from the Chester County Board of Assessment for this analysis. Details of the cost calculations are described in Table 3 on the next page.

Table 2
Per-Capita Cost Calculation Methodology

A	Number of residential parcels in Township	4,275
B	Number of nonresidential parcels in Township	245
C	TOTAL PARCELS (A + B)	4,520
D	Percentage of nonresidential parcels in Township (B / C)	5.42%
E	Total residential assessment in Township	\$992,503,225
F	Total nonresidential assessment in Township	\$172,997,590
G	TOTAL ASSESSMENT (E + F)	\$1,165,500,815
H	Percentage of nonresidential assessment in Township (F / G)	14.84%
I	Blended average of parcels and assessment, Nonresidential percentage of Township ((D + H) / 2))	10.13%
J	Cost for services likely to impacted by new development	\$5,415,673
K	Cost of Township services allocated to nonresidential uses (I x J)	\$548,704
L	Total employment (number of employees working in Township)	5,031
M	Per capita cost per employee working in Township (K / L)	\$109.06
N	Projected employees working at proposed development	10
O	Township costs attributable to proposed development (M x N)	\$1,090.65

NOTES:

1. Parcel and assessment information obtained from Chester County Board of Assessment.
2. Township cost information from Upper Uwchlan Township Budget, 2024.
3. Township employment estimate from Delaware Valley Regional Planning Commission, Municipal and County-Level Population and Employment Forecasts, 2015-2050 (<https://www.dvRPC.org/webmaps/popempforecasts/>)
4. Projected number of new employees working at proposed automotive service facility estimated by applicant/operator.

The proposed development of this non-residential use will not generate any school-aged children and hence, will not result in additional costs for the School District.

Erik Hetzel (the author of this report) spoke with Township Manager Tony Scheivert on March 4, 2024 to discuss potential public service demands from the proposed development. Mr. Scheivert noted that, as with any new development there will likely be some additional need for public services; however, based on his understanding of the use and the cost analysis described herein, demand from the proposed development is not anticipated to exceed existing capacity for such Township functions as administration, public works, police, fire and emergency services, and parks and recreation. Mr. Scheivert mentioned that, if a traffic signal is required as part of access to the development, maintenance of that equipment could pose a potential future cost for the Township and might necessitate a shared maintenance arrangement between the applicant and the Township.

Published demand factors are available for Police, Fire and Emergency Medical Services (EMS) personnel, vehicles, and facilities. These factors and the resulting estimated demands for each service are presented in Table 4 on the next page. Planning standards for these calculations are from the Development Impact Assessment Handbook and the Pennsylvania Department of Health, Bureau of Emergency Medical Services⁴ based on a non-residential use with a daytime population of approximately 10 employees. Personnel, vehicles, and facilities for Police and Fire are based on the noted planning standards per 1,000 population per year. EMS planning standards for personnel and vehicles are per 30,000 population per year, and the planning standard for EMS calls is per 1,000 population per year.

⁴ 2021 EMS Data Report, 2022

<https://www.health.pa.gov/topics/Documents/EMS/2021%20EMS%20Data%20Report.pdf>

Table 4
Public Safety Demand Factors and
Projected Demand from Proposed Development

	Planning Standard	Projected Demand
<i>Police</i>		
Personnel	0.50	0.005
Vehicles	0.15	0.002
Facilities (square feet)	50	0.500
<i>Fire</i>		
Personnel	0.41	0.004
Vehicles	0.05	0.001
Facilities (square feet)	62.5	0.625
<i>EMS</i>		
Personnel	1.03	0.0003
Vehicles	0.25	0.0001
Calls (per year)	31.13	0.31

Conclusions and Summary

In conclusion, the net positive fiscal impact in terms of projected revenues over costs for Upper Uwchlan Township is expected to be approximately \$2,922 annually at project completion, essentially paying for itself in terms of Township services. The projected net positive fiscal impact on the Downingtown Area School District is projected to be more significant at nearly \$86,000 per year. The combined net positive fiscal impact for both taxing authorities is estimated at over \$88,000 annually. Table 5 on the next page summarizes the project details and fiscal impacts to the Township and School District.

Table 5
Summary of Project Details and Fiscal Impacts

Project Details - 500 Pottstown Pike Auto Svc. Facility	
Non-Residential Square Feet	36,380
Market Value of Proposed Development	\$8,000,000
Assessed Value (approx. 35.97% of market value)	\$2,877,698
New Residential Population	0
New School-Aged Children	0
New Full-Time Equivalent Employees	10
Annual Wages per Employee	\$52,480
Upper Uwchlan Township Fiscal Impacts	
Real Estate Tax Revenue (1.121 mills)	\$ 3,226
Earned Income Tax Revenue (0.5%)	\$ 787
Total Township Revenues	\$ 4,013
Total Township Expenditures	\$ (1,091)
Net Township Fiscal Impact	\$ 2,922
Downington Area School District Fiscal Impacts	
Real Estate Tax Revenue (29.558 mills)	\$ 85,059
Earned Income Tax Revenue (0.5%)	\$ 787
Local Services Tax (\$10 per resident worker)	\$ 100
Total School District Revenues	\$ 85,946
Total School District Expenditures	\$ -
Net School District Fiscal Impact	\$ 85,946
Total Development-Generated Revenues (Township + School District)	\$ 89,959
Total Development-Generated Expenditures (Township + School District)	\$ (1,091)
Total Net Annual Fiscal Impact (Township + School District)	\$ 88,869



WWW.TRAFFICPD.COM

March 4, 2024

Mr. Tony Scheivert, Township Manager
Upper Uwchlan Township
140 Pottstown Pike
Chester Springs, PA 19425

RE: Upper Uwchlan Township – TIS Scoping Review

Automotive Service Center Development
Upper Uwchlan Township, Chester County, PA
TPD Job # TMAS.00013

Dear Mr. Scheivert:

This letter pertains to the Proposed Automotive Service Center Development located along Pottstown Pike (SR 0100), opposite Font Road in Upper Uwchlan Township, Chester County, Pennsylvania. Traffic Planning and Design, Inc. (TPD) has prepared this response letter to address the review comments from Bowman on behalf of the Township, dated February 5, 2024. (Attached for reference). For the discussion below, the review comments are shown in italic type, with the corresponding TPD response shown in bold type.

COMMENTS

1. *As part of the traffic study, with the addition of the access as a fourth leg of the Route 100/Font Road intersection, please evaluate the need for traffic control improvements. This intersection has been on the Township's watch list for traffic control/pedestrian improvements to occur when this site is developed.*

Response: So noted. Per PennDOT Policies, an ICE Evaluation was conducted and included within the Traffic Study.

2. *Verify the availability of sight distance at the new access location, which may be limited due to the alignment of Route 100 to the north, as well as the presence of the building close to the edge of the road north of the proposed access.*

Response: Will Comply. Sight Distance is evaluated in the Traffic Study

3. *The trip generation estimates for the site indicate the proposed 36,380 square-foot auto service center will generate approximately 69 weekday morning peak hour trips and approximately 75 weekday afternoon peak hour trips, based on the ITE publication Trip Generation, 11th Edition. We do not disagree with this calculation based on ITE; however, the plans show 412 parking spaces, which may indicate additional traffic activity will occur at this site beyond the ITE estimates for an*

auto service center. Please provide a detailed description of the operations of the proposed use of the site, including whether the site is proposed for off-site storage of vehicles.

Response: Based on TPD's current understanding of the proposed use, ITE Land Use #943 is the most appropriate land use for the main portion of the Proposed Site. The additional parking spaces shown on the Proposed Site, beyond those needed/required for the Automotive Service Center, are anticipated for new/used vehicle inventory storage associated with the Applicant's other auto dealerships. It is anticipated that these vehicle inventory storage spaces will be a passive use, with any associated trips occurring during off-peak time periods. However, this passive use has also been accounted for in the TIA.

4. *The planned and proposed developments that should be included in the background traffic growth projections for the study should include the following:*
 - a. *McKee/Fetters – The full-build-out of this development includes 161 single family age-restricted homes and 259 age-restricted townhomes located along Milford Road between Little Conestoga Road and Font Road. However, this development is currently under construction and the applicant should contact the Township to determine the number and type of units that remain to be constructed.*
 - b. *Byers Station Parcel 5C Lot 2B – A 10,500 square-foot (140-student) day care, a 1,820 square-foot fast food restaurant with drive-through, and 13,200 square feet of retail space located on the northeast corner of the Pottstown Pike/Park Road/Station Boulevard intersection.*
 - c. *Byers Station Parcel 6C (Vantage Point) – A 106-unit assisted living facility located on the northeast corner of the Graphite Mine Road/Byers Road intersection.*
 - d. *100 Greenridge Road Residential Development – A 64-unit single family home community located on the north side of Greenridge Road just west of Font Road.*

Response: These developments have been included in the Traffic Study as background developments.

5. *The Township's Active Transportation Plan (ATP) envisions a shared use path on the east side of Route 100 in this area, which should be incorporated into the site plan, as well as a pedestrian crossing of Route 100 at the site access location, assuming intersection traffic control improvements. Also, an alternative option may be to locate the trail through the rear of the property, but this would require further coordination between the applicant, the Township and coordination with the adjacent property owners. Furthermore, the ATP envisions a "Yield Roadway" to the north, which could traverse through the northern edge of the property near the border with the Texas Eastern property. This should be discussed with the Township as the land development project moves forward.*

Response: The Applicant will coordinate with the Township on the potential for pedestrian accommodations during the Conditional Use and Land Development processes.

We hope that these responses are helpful. If you require additional information, please feel free to contact us.

Sincerely,
TRAFFIC PLANNING AND DESIGN, INC.



Matthew I. Hammond, P.E.
Executive Vice President

mhammond@trafficpd.com

Attachment: 02/05/2024 Township (Bowman) Review

cc: Upper Uwchlan Township
Project Team (via Email)
TPD File

Hammond, Matt

From: Chris Williams <cwilliams@bowman.com>
Sent: Monday, February 5, 2024 4:11 PM
To: Bressler, Matt; Jacob Tackett; Hammond, Matt; Haesler, Brian
Cc: Tony Scheivert; Jeff Gehman; Natasha Manbeck; Drew E. Sirianni
Subject: RE: EPS Scoping Submission - 500 Pottstown Pike - Upper Uwchlan Township

Good afternoon

Below are our comments on behalf of the Township for the TIS scope review.

1. As part of the traffic study, with the addition of the access as a fourth leg of the Route 100/Font Road intersection, please evaluate the need for traffic control improvements. This intersection has been on the Township's watch list for traffic control/pedestrian improvements to occur when this site is developed.
2. Verify the availability of sight distance at the new access location, which may be limited due to the alignment of Route 100 to the north, as well as the presence of the building close to the edge of the road north of the proposed access.
3. The trip generation estimates for the site indicate the proposed 36,380 square-foot auto service center will generate approximately 69 weekday morning peak hour trips and approximately 75 weekday afternoon peak hour trips, based on the ITE publication *Trip Generation, 11th Edition*. We do not disagree with this calculation based on ITE; however, the plans show 412 parking spaces, which may indicate additional traffic activity will occur at this site beyond the ITE estimates for an auto service center. Please provide a detailed description of the operations of the proposed use of the site, including whether the site is proposed for off-site storage of vehicles.
4. The planned and proposed developments that should be included in the background traffic growth projections for the study should include the following:
 - a. McKee/Fetters – The full-build-out of this development includes 161 single family age-restricted homes and 259 age-restricted townhomes located along Milford Road between Little Conestoga Road and Font Road. However, this development is currently under construction and the applicant should contact the Township to determine the number and type of units that remain to be constructed.
 - b. Byers Station Parcel 5C Lot 2B – A 10,500 square-foot (140-student) day care, a 1,820 square-foot fast food restaurant with drive-through, and 13,200 square feet of retail space located on the northeast corner of the Pottstown Pike/Park Road/Station Boulevard intersection.
 - c. Byers Station Parcel 6C (Vantage Point) – A 106-unit assisted living facility located on the northeast corner of the Graphite Mine Road/Byers Road intersection.
 - d. 100 Greenridge Road Residential Development – A 64-unit single family home community located on the north side of Greenridge Road just west of Font Road.
5. The Township's Active Transportation Plan (ATP) envisions a shared use path on the east side of Route 100 in this area, which should be incorporated into the site plan, as well as a pedestrian crossing of Route 100 at the site access location, assuming intersection traffic control improvements. Also, an alternative option may be to locate the trail through the rear of the property, but this would require further coordination between the applicant, the Township and coordination with the adjacent property owners. Furthermore, the ATP envisions a "Yield Roadway" to the north, which could traverse through the northern edge of the property near the border

with the Texas Eastern property. This should be discussed with the Township as the land development project moves forward.

Please contact our office if you have any questions.

Thanks,
Chris

CHRISTOPHER J. WILLIAMS, P.E.

Regional Manager - Mid-Atlantic | **BOWMAN**

O: (610) 594-9995 | D: (484) 872-2274 | M: (215) 680-0245

cwilliams@bowman.com | bowman.com

From: Bressler, Matt <mbressler@trafficpd.com>
Sent: Wednesday, January 17, 2024 11:56 AM
To: Chris Williams <cwilliams@bowman.com>
Cc: Jacob Tackett <JTackett@tandmassociates.com>; Hammond, Matt <mhammond@trafficpd.com>; Haesler, Brian <bhaesler@trafficpd.com>
Subject: [EXTERNAL] EPS Scoping Submission - 500 Pottstown Pike - Upper Uwchlan Township

Chris,

Attached is TPD's Scoping Application for 500 Pottstown Pike for your review.

Thanks in advance

Matthew Bressler, Project Manager

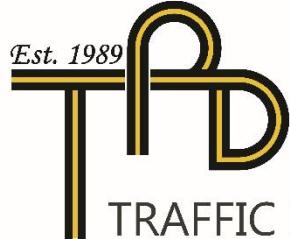


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AUTOMOTIVE SERVICE CENTER DEVELOPMENT

Transportation Impact Assessment
Upper Uwchlan Township, Chester County

For Submission To:

PennDOT District 6-0 & Upper Uwchlan Township,
Chester County

AUTOMOTIVE SERVICE CENTER DEVELOPMENT TRANSPORTATION IMPACT ASSESSMENT

FOR SUBMISSION TO:

Upper Uwchlan Township, Chester County, PA
& PennDOT 6-0

Prepared For:

T and M Associates

Mr. Jacob Tackett
1700 Market Street, Suite 3110
Philadelphia, PA 19103

March 4, 2024

TPD # TMAS.00013

Prepared By:

Traffic Planning and Design, Inc.

Sanatoga Commons
2500 East High Street, Suite 650
Pottstown, Pennsylvania 19464

Phone: (610) 326-3100
Fax: (610) 326-9410
E-mail: TPD@TrafficPD.com
Web Site: www.trafficpd.com



Matthew I. Hammond, P.E.
Executive Vice President
Pennsylvania License Number 071037

Table of Contents

EXECUTIVE SUMMARY	1
INTRODUCTION	3
EXISTING ROADWAY NETWORK.....	3
EXISTING TRAFFIC CONDITIONS.....	4
BASE (NO-BUILD) CONDITIONS.....	5
SCHEDULED ROADWAY IMPROVEMENTS	5
PROPOSED SITE ACCESS.....	6
TRIP DISTRIBUTION.....	7
PROJECTED (BUILD) CONDITION TRAFFIC VOLUMES	8
LEVELS OF SERVICE FOR AN INTERSECTION	8
LEVELS OF SERVICE IN THE STUDY AREA	9
95TH PERCENTILE QUEUE ANALYSIS.....	11
SIGNAL WARRANT ANALYSIS.....	11
GAP ANALYSIS.....	11
AUXILIARY TURN LANE ANALYSIS.....	12
RECOMMENDATIONS	13
CONCLUSIONS	13

FIGURES 1 – 6

TECHNICAL APPENDICES

- Appendix A: Project Correspondence
- Appendix B: Study Area Photographs
- Appendix C: Manual Traffic Count Printouts
- Appendix D: Nearby Development Data
- Appendix E: Volume Development Spreadsheets & Trip Assignment Data
- Appendix F: Critical/Follow-Up Gap Data
- Appendix G: Capacity Analyses
- Appendix H: PennDOT Traffic Signal Plans
- Appendix I: PennDOT ICE Form
- Appendix J: Traffic Signal Warrant Analysis
- Appendix K: Gap Analysis
- Appendix L: Auxiliary Turn Lane Warrant Analysis

EXECUTIVE SUMMARY

The purpose of this Transportation Impact Assessment (TIA) is to examine the potential traffic impact associated with the Proposed Automotive Service Center Development on the roadway network in Upper Uwchlan Township, Chester County, PA. Based on this evaluation, the following conclusions were reached:

- » The Project Site is located on the eastern side of Pottstown Pike (SR 0100), opposite Font Road. The Proposed Site will consist of a 36,380 s.f. Automotive Service Center. In addition, the Proposed Site will provide a parking area for Car Storage associated with the local dealerships under the RDS Automotive Group.
- » The Proposed Site will be served by one (1) full-access driveway that will create the fourth leg of the intersection of Pottstown Pike (SR 0100) and Font Road.
- » With the removal of on-site vegetation, the measured sight distances at the Proposed Site Driveway will exceed PennDOT Safe Stopping Sight Distances (SSSD) and in most cases will exceed the Desirable Sight Distance Standards.
- » The Proposed Site will generate **71 new trips** during the weekday A.M. peak hour and **77 new trips** during the weekday P.M. peak hour.
- » Under all projected (build) conditions with the development of the proposed site and with site-related recommendations outlined in Table II, all study area intersections will satisfy PennDOT ILOS Standards, except for the intersection of Pottstown Pike (SR 0100) and Font Road/Proposed Driveway during the weekday P.M. peak hour, which will go from ILOS A to ILOS D due to the addition of the 4th leg (driveway) of the intersection. In addition, the Proposed Driveway approach will operate deficiently (LOS F during the weekday A.M. and weekday P.M.).
- » Levels of Service (LOS) for the study area intersections have been summarized in matrix form. **Table I** details the overall intersection LOS for each study area intersection:

TABLE I
LEVEL OF SERVICE DELAY (SECONDS) SUMMARY

Intersection	Peak Hour	2024 Exist	2027			Satisfied ILOS Standards?
			Base	Proj.	Proj. ¹	
Pottstown Pike (SR 0100) & Font Road/Proposed Site Driveway	AM Peak	A (4.6)	A (6.0)	A (7.6)	A (7.6)	No
	PM Peak	A (3.7)	A (4.5)	D (28.8)	D (28.8)	
Pottstown Pike (SR 0100) & Reserve Drive/Fellowship Road	AM Peak	C (20.7)	C (23.9)	C (24.4)	--	Yes
	PM Peak	B (14.1)	B (14.9)	B (15.2)	--	
Pottstown Pike (SR 0100) & Milford Road/Garrison Drive	AM Peak	A (2.2)	A (2.4)	A (2.5)	--	Yes
	PM Peak	A (2.7)	A (3.0)	A (3.1)	--	

Exist. = Existing Condition, Base = No-Build scenario, Proj. = Build scenario

- » Site-related recommendations are summarized in **Table II**:

TABLE II
RECOMMENDATIONS

Intersection	Recommendation
Pottstown Pike (SR 0100) & Font Road/Proposed Site Driveway	Provide adequate turning ingress/egress radii
	Provide a "STOP" sign on the WB approach
	Provide a 125' Southbound Left Turn Lane
	Provide a Northbound Right Deceleration Taper
	Removal and maintenance of on-site vegetation to maximize available sight distance

INTRODUCTION

Traffic Planning and Design, Inc. (TPD) has completed a Transportation Impact Assessment (TIA) for the proposed Automotive Service Center Development in Upper Uwchlan Township, Chester County, Pennsylvania. As shown in **Figure 1**, the Project Site is located on the eastern side of Pottstown Pike (SR 0100), opposite Font Road. As shown in **Figure 2**, the Proposed Site will consist of a 36,380 s.f. Automotive Service Center. In addition, the Proposed Site will provide a parking area for Car Storage associated with the local dealerships under the RDS Automotive Group. The Proposed Site will be served by one (1) full-access driveway that will create the fourth leg of the intersection of Pottstown Pike (SR 0100) and Font Road. TPD assumed an opening year of 2027.

This report has been prepared in accordance with PennDOT's *Policies and Procedures for Transportation Impact Studies*, found in PennDOT's Publication 282, Appendix A, dated July 2017. The scope of this TIA was based on the Scoping Application, submitted to Upper Uwchlan Township and PennDOT 6-0 on January 17, 2024 and the subsequent reviews. The project correspondence is included in **Appendix A**.

EXISTING ROADWAY NETWORK

A field review of the existing roadway system in the study area was conducted. The existing roadway characteristics within the study area are summarized in **Table 1**. Photographs of the study area intersections are included in **Appendix B**.

TABLE 1
ROADWAY CHARACTERISTICS WITHIN STUDY AREA

Roadway	Route Ownership	Functional Classification/Roadway Type	Predominant Directional Orientation	Average Daily Traffic ¹	Posted Speed Limit
Pottstown Pike	State (SR 0100)	Other Principal Arterial Highway	North-South	12,675	35/45 mph
Font Road	Township	Local Road	East-West	--	25 mph
Fellowship Road	Township	Local Road	East-West	--	35 mph
Reserve Drive	Township	Local Road	East-West	--	35 mph
Milford Road	Township	Local Road	East-West	--	25 mph
Garrison Drive	Township	Local Road	East-West	--	25 mph

¹ = PennDOT TIRe website (January 2023)

Bicycle and Pedestrian Facilities

Based on observations during field visits, there are no specific bicycle facilities in the Study Area outside of paved shoulders. Pedestrian accommodations are detailed below:

- » Pottstown Pike (SR 0100) and Font Road – The un-signalized intersection does not have any pedestrian accommodations besides paved shoulders.
- » Pottstown Pike (SR 0100) and Reserve Drive/Fellowship Road – The signalized intersection has pedestrian curb ramps, pedestrian push buttons and crosswalks on all approach legs.
- » Pottstown Pike (SR 0100) and Milford Road/Garrison Drive - The un-signalized intersection has a walking trail and crosswalk along the eastern side of Pottstown Pike (SR 0100). Pedestrians are prohibited from crossing Pottstown Pike (SR 0100) via signage.

Mass Transit Facilities

There is no bus service or train service within 2 miles of the Study Area.

Crash Data Investigation

Crash data were obtained from PennDOT for the study area intersections. PennDOT defines a reportable crash as follows, "A reportable (crash) is one in which an injury or fatality occurs or if at least one of the vehicles involved requires towing from the scene." Reportable crashes were tabulated for the five-year time period beginning 01/01/2018 and ending 12/31/2022. For a given intersection, PennDOT considers a crash occurrence of 5 reportable, correctable crashes over a continuous twelve-month period during the past five years to be a threshold value, above which the intersection design should be reviewed to examine if corrective measures can be taken to enhance safety. The number of reportable crashes at the study area intersections is shown in **Table 2**.

TABLE 2
PENNDOT TOTAL REPORTABLE CRASH DATA

Study Area Intersections	Total Number of Reportable Crashes				
	2018	2019	2020	2021	2022
Pottstown Pike (SR 0100) & Font Road	0	0	0	0	0
Pottstown Pike (SR 0100) & Reserve Drive/Fellowship Road	1	2	0	1	2
Pottstown Pike (SR 0100) & Milford Road/Garrison Drive	0	0	0	0	2

Based on a review of the crash data in **Table 2**, there were no twelve-month periods during the past five years at the Study Area intersections where 5 or more crashes occurred that were deemed correctable.

EXISTING TRAFFIC CONDITIONS

Manual Turning Movement Counts

Manual traffic counts were conducted on 15-minute intervals during the weekday morning (7:00 to 9:00 A.M.) and weekday evening (4:00 to 6:00 P.M.) peak periods. Data pertaining to heavy vehicles, pedestrians and transit vehicles were observed during the manual counts. Peak hours and count dates for the study area intersections are identified in **Table 3**.

TABLE 3
MANUAL TRAFFIC COUNT INFORMATION

Intersection	Date of Traffic Counts	Time Period	Intersection Peak Hour ¹
Pottstown Pike (SR 0100) & Font Road	Thursday, June 8, 2023	Weekday A.M.	7:00 to 8:00 A.M.
Weekday P.M.		4:45 to 5:45 P.M.	
Weekday A.M.		7:45 to 8:45 A.M.	
Weekday P.M.		4:45 to 5:45 P.M.	
Weekday A.M.		7:00 to 8:00 A.M.	
Weekday P.M.		4:15 to 5:15 P.M.	

¹ =Peak Hour consists of the four consecutive 15-minute intervals where the highest traffic volumes occur

The existing counts performed in 2023 were increased using PennDOT BPR Growth to develop 2024 conditions. 2024 Existing Condition traffic volumes for the weekday A.M. and weekday P.M. peak hours are illustrated in **Figure 3**. The traffic count data sheets are provided in **Appendix C**.

BASE (NO-BUILD) CONDITIONS

Annual Background Growth

A background growth factor for the roadways in the study area was developed based on growth factors for September 2023 to July 2024 obtained from the PennDOT Bureau of Planning and Research (BPR). The PennDOT BPR suggests using a background growth trend factor of 0.48% per year in Chester County for urban non-interstate roadways. As such, the background growth factor was applied annually to yield an overall growth percentage of 1.45% (0.48% per year compounded over 3 years) for the 2027 Opening Year.

Nearby Planned Developments

Based on the Township Scoping Review, TPD included traffic associated with the following developments, which may be built and operational by the time the Proposed Site is completed in the future:

- » McKee-Fetters Tract - The full-build-out of this development includes 161 single family age-restricted homes and 259 age-restricted townhomes located along Milford Road between Little Conestoga Road and Font Road. Based on TPD's knowledge, the site is approximately 40% built/occupied at the time the traffic counts were conducted.
- » Byers Station Parcel 5C Lot 2B – A 10,500 square-foot (140-student) day care, a 1,820 square-foot fast food restaurant with drive-through, and 13,200 square feet of retail space located on the northeast corner of the Pottstown Pike/Park Road/Station Boulevard intersection.
- » Byers Station Parcel 6C (Vantage Point) - A 106-unit assisted living facility located on the northeast corner of the Graphite Mine Road/Byers Road intersection.
- » 100 Greenridge Road Residential Development - A 64-unit single family home community located on the north side of Greenridge Road just west of Font Road.

The additional traffic volumes due to background growth and nearby planned developments were added to the existing traffic data to produce the 2027 Base Conditions, as illustrated in **Figure 4**. Nearby Planned Development Trip Distribution is included in **Appendix D**.

SCHEDULED ROADWAY IMPROVEMENTS

Based on a review of the PennDOT 12-Year Plan and the DVRPC Transportation Improvement Program (TIP), there were no planned roadway improvements in the vicinity of the proposed site.

Furthermore, based on a review of the Upper Uwchlan Township ACT 209/CIP/RSA, no improvements are contemplated at the Intersection of Pottstown Pike (SR 0100) and Font Road. Also based on a review of the Upper Uwchlan Township ACT 209/CIP/RSA, roadway improvements are contemplated at the off-site intersection of Pottstown Pike (SR 0100) and Fellowship Road/Reserve Drive. These improvements include the addition of a NBR and a SBTR lane on Pottstown Pike (SR 0100). However, based on the results shown later in this TIA, the Proposed Site is anticipated to have negligible impact on this off-site intersection.

PROPOSED SITE ACCESS

The site will be served by one (1) driveway to Pottstown Pike (SR 0100), which form the fourth leg of the Pottstown Pike (SR 0100) and Font Road intersection.

Sight Distance Analysis

A sight distance analysis was prepared for the proposed site driveway location. In general, recommended safe sight distances depend upon the posted speed limit and roadway grades. The existing sight distances at the proposed driveways were measured in accordance with PennDOT Publication 282 Highway Occupancy Permit Guidelines and compared to PennDOT's desirable sight distance standard, which is identified in 67 PA Code Chapter 441.8(h), "Access to and Occupancy of Highways by Driveways and Local Roads." In addition, measured sight distances at the proposed driveways were compared to PennDOT's safe stopping sight distance standard, which is calculated by the following equation:

$$SSSD = 1.47VT + V^2/[30(f \pm g)]$$

SSSD = safe stopping sight distance (acceptable sight distance)

V = Vehicle Speed

T = Perception Reaction Time of Driver (2.5 seconds)

f = Coefficient of Friction for Wet Pavements

g = Percent of Roadway Grade Divided by 100

Table 4 shows the measured, desirable, and acceptable (SSSD) sight distances at the site driveways for vehicles entering and exiting the site.

TABLE 4
SIGHT DISTANCE ANALYSIS

	Direction	Posted Speed (mph)	Sight Distances (feet)			
			Grade ¹ (%)	DES ²	SSSD ²	EXIST ³
Pottstown Pike (SR 0100) - Proposed Driveway						
Exiting Movements	To the left	45	0%	635'	383'	1000'+
	To the Right	45	-1%	570'	390'	460' ⁴
Entering Left Turns	Approaching same direction	45	-1%	N/A	390'	775'
	Approaching opposite direction	45	0%	445'	383'	1000'+

DES = PennDOT Desirable Sight Distance

1 = Roadway Grade Approaching Driveway

SSSD = PennDOT Acceptable Sight Distance

2 = Based on the posted speed

EXIST = Existing (measured) Sight Distance

3 = With On-Site Vegetation Removal

4 = Limited by Horizontal Curvature and Building on Adjacent Property

As shown in **Table 4** above, with the removal of on-site vegetation, the measured sight distances at the Proposed Site Driveway will exceed PennDOT Safe Stopping Sight Distances (SSSD) and in most cases will exceed the Desirable Sight Distance Standards.

TRIP GENERATION

The trip generation rates for the Automotive Service Center portion of the Proposed Site were obtained from the manual Trip Generation, eleventh Edition, 2021, an Institute of Transportation Engineers (ITE) Informational Report. Land Use Code #943 (Automotive Service Center) was utilized for this portion of the Proposed Site for all time periods.

There is no specific ITE Land Use for a Proposed Car Storage Lot. Based on discussions with the Applicant, this lot will be used for storage of vehicle inventory for the local dealerships under the RDS Automotive Group. The Applicant anticipates that approximately 3-5 vehicles will be moved from the subject property, each day, to replenish inventory at the associated dealerships. It is also TPD's understanding the site will be visited by one (1) car carrier per week, however TPD took a conservative approach and assumed the site would be visited by one (1) car carrier per day. Therefore, TPD assumed approximately 10 trips per day (5 enter/5 exit), and 1-2 trips in each of the peak hours for the Proposed Car Storage portion of the subject property.

Table 5 shows the rates and directional percentages for the analyzed time periods.

TABLE 5
TRIP GENERATION DATA

Land Use (ITE #)	Time Period	Size (X)	Rate	Enter %
Automotive Service Center (ITE #943)	Average Weekday	36.38 ksf	T = 16.60*(X)	50%
	Weekday AM Peak Hour		T = 1.91*(X)	72%
	Weekday PM Peak Hour		T = 2.06*(X)	39%
New Car Storage Lot ¹ (No ITE #)	Average Weekday	+/- 300 spaces	T = 10	50%
	Weekday AM Peak Hour			
	Weekday PM Peak Hour		T = 2	

T = Total Trips; X = Independent Variable (ksf = 1000 sf)

1 = No ITE Data. Based on Site-Specific Operations Outlined Above

Table 6 also shows the total trip generation of the Proposed Site.

TABLE 6
TRIP GENERATION – PROPOSED SITE

Land Use	Size (X)	New Trips		
		Total	Enter	Exit
Average Weekday				
Automotive Service Center	36.38 ksf	604	302	302
New Car Storage Lot	+/-300 Spaces	10	5	5
Total	--	614	307	307
Weekday AM				
Automotive Service Center	36.38 ksf	69	50	19
New Car Storage Lot	+/-300 Spaces	2	1	1
Total	--	71	51	20
Weekday PM				
Automotive Service Center	36.38 ksf	75	29	46
New Car Storage Lot	+/-300 Spaces	2	1	1
Total	--	77	30	47

Based on the information contained in **Table 6**, the Proposed Site will generate **71 new trips** during the weekday A.M. peak hour and **77 new trips** during the weekday P.M. peak hour.

TRIP DISTRIBUTION

The distribution and assignment of new trips generated by the proposed development were based upon existing traffic patterns in the Study Area. Based on this evaluation, the new trips for the proposed development were distributed to the local roadway network based on the percentages shown in **Table 7**.

TABLE 7
TRIP DISTRIBUTION PERCENTAGES – NEW TRIPS

Direction - To/From	Assignment - To/From	Distribution Percentage
		AM/PM
South	via Pottstown Pike (SR 0100)	52%
North	via Pottstown Pike (SR 0100)	33%
West	via Font Road	10%
East	via Fellowship Road	5%

The distribution of site-generated trips for the proposed development during the weekday A.M. and weekday P.M. peak hours are shown in **Figure 5**. The trip assignment percentage information is included in **Appendix E**.

PROJECTED (BUILD) CONDITION TRAFFIC VOLUMES

The site-generated trips for the proposed development were added to the base (no-build) conditions to develop the 2027 projected (build) condition traffic volumes, as shown in **Figure 6**. Volume development spreadsheets are also contained in **Appendix E**.

LEVELS OF SERVICE FOR AN INTERSECTION

For analysis of intersections, level of service is defined in terms of delay, which is a measure of driver discomfort and frustration, fuel consumption, and lost travel time. LOS criteria is stated in terms of control delay per vehicle for a one-hour analysis period. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The criteria are shown in **Table 8**. Delay, as it relates to level of service, is a complex measure and is dependent upon a number of variables. For signalized intersections, these variables include the quality of vehicle progression, the cycle length, the green time ratio, and the volume/capacity ratio for the lane group in question. For unsignalized intersections, delay is related to the availability of gaps in the flow of traffic on the major street and the driver's discretion in selecting an appropriate gap for a particular movement from the minor street (straight across, left or right turn).

TABLE 8
LEVEL OF SERVICE CRITERIA
UN SIGNALIZED AND SIGNALIZED INTERSECTIONS¹

Level of Service	Control Delay Per Vehicle (Seconds)	
	Signalized	Unsignalized
A	< 10	< 10
B	> 10 and < 20	> 10 and < 15
C	> 20 and < 35	> 15 and < 25
D	> 35 and < 55	> 25 and < 35
E	> 55 and < 80	> 35 and < 50
F	> 80 or v/c > 1.0	> 50 or v/c > 1.0

¹Obtained from Exhibits 18-4 and 19-1 of the Transportation Research Board's Highway Capacity Manual 2010

CAPACITY ANALYSIS METHODOLOGY

Capacity analyses were conducted for the weekday A.M. and weekday P.M. peak hours at the study area intersections. These analyses were conducted according to the methodologies contained in the *Highway Capacity Manual* (HCM) 6th edition using *Synchro 12* software, a Trafficware product.

The following conditions were analyzed, as applicable:

- » 2024 Existing conditions;
- » 2027 Base conditions (Build-out year without development);
- » 2027 Projected conditions (Build-out year with development).

It should be noted that based on methodologies contained in Chapter 10 of PennDOT's Publication 46, TPD adjusted the following 2010 HCM default values in the *Synchro 12* capacity analysis. These adjustments were made at the signalized intersections within the study area for all time periods based on the study area location being classified as Suburban:

- » Base saturation flow rates for signalized intersections. The saturation flow rate was changed from the default value of 1900 to 1800 based on Exhibit 10-9.
- » Start-up lost time and extension of effective green time for signalized intersections. The startup lost time was changed from the default value of 2.0 seconds to 2.5 seconds. Based on the total clearance time (yellow plus all-red time) being greater than 5 seconds, the extension of green time was changed from the default value of 2 seconds to 3.5 seconds. These adjusted values are based on Exhibit 10-10.
- » Critical and Follow-Up Gap times were adjusted relative to the difference between default and PA Default values contained in Exhibits 10-11 and 10-12. As requested by PennDOT, worksheets/tables showing how these values were calculated are included in **Appendix F**.

In addition, capacity analyses were conducted at the proposed site driveway intersection under the projected conditions. The capacity analysis worksheets are included in **Appendix G**. The PennDOT traffic signal plans for existing conditions are included in **Appendix H**.

PennDOT's Transportation Impact Study Guidelines outlined in Strike-Off Letter 470-09-4, dated February 12, 2009 contain the following criteria regarding levels of service:

- » Page 29 of the Guidelines state that if evaluation of the With Development Horizon Year Scenario to the Without Development Horizon Year Scenario indicates that the overall intersection level of service has dropped, the applicant will be required to mitigate the level of service if the increase in overall intersection delay is greater than 10-seconds. If the overall intersection delay increase is less than or equal to 10-seconds, mitigation of the intersection will not be required.
- » Page 29 of the Guidelines state that for mitigation scenarios, applicants are expected to mitigate the overall intersection LOS to the original Without Development LOS; the 10-second delay variance is not applied to mitigation scenarios. Applicants may be required to address available storage and queue lengths at critical movements or approaches even if the overall LOS requirements are met.
- » Page 31 of the Guidelines state that if signalization is the preferred alternative for mitigation, overall intersection LOS C in rural areas and LOS D in urban areas is acceptable.
- » Page 31 of the Guidelines states new signalized or unsignalized intersection established to serve as access to the development shall be designed to operate at minimum LOS C for rural areas, and minimum LOS D for urban areas.

LEVELS OF SERVICE IN THE STUDY AREA

Level of service (LOS) matrices for the study area intersections are shown in **Table 9**.

TABLE 9
LEVEL OF SERVICE DELAY (SECONDS) SUMMARY

Intersection	Movement	Weekday AM				Weekday PM			
		2024 Exist.	2027			2024 Exist.	2027		
			Base	Proj.	Proj. ¹		Base	Proj.	Proj. ¹
Pottstown Pike (SR 0100) & Font Road/Proposed Site Driveway	EB LT	D	E (38.8)	F (54.2)	F (53.5)	F (107.9)	F (163.6)	F (387.5)	F (387.5)
	EB R	D	D	D	D	B	B	B	B
	WB LTR	--	--	F (116.3)	F (116.3)	--	--	F (954.4)	F (954.4)
	NB L	B	B	B	B	B	B	B	B
	SB L	--	--	A	A	--	--	B	B
	ILOS	A (4.6)	A (6.0)	A (7.6)	A (7.6)	A (3.7)	A (4.5)	D (28.8)	D (28.8)
Pottstown Pike (SR 0100) & Reserve Drive/Fellowship Road	EB L	A	C	C	--	C	C	C	--
	EB TR	C	C	C	--	C	C	C	--
	WB L	E	E	E	--	C	C	C	--
	WB TR	C	C	C	--	C	C	C	--
	NB L	B	B	B	--	A	A	B	--
	NB T	A	A	A	--	B	B	B	--
	NB TR	A	A	A	--	B	B	B	--
	SB L	A	A	A	--	A	A	B	--
	SB T	B	C	C	--	B	B	B	--
	SB R	A	A	A	--	A	A	A	--
	ILOS	C (20.7)	C (23.9)	C (24.4)	--	B (14.1)	B (14.9)	B (15.2)	--
Pottstown Pike (SR 0100) & Milford Road/Garrison Drive	EB LTR	C	D	D	--	D	D	D	--
	WB LTR	D	D	E	--	E (49.1)	F (57.0)	F (60.8)	--
	NB L	B	B	B	--	A	A	A	--
	SB L	A	A	A	--	B	B	B	--
	ILOS	A (2.2)	A (2.4)	A (2.5)	--	A (2.7)	A (3.0)	A (3.1)	--

Exist. = Existing Condition, Base = No-Build scenario, Proj. = Build scenario

1 = Projected with turn lane improvements

As shown in **Table 9**, under all projected (build) conditions with the development of the proposed site and with site-related recommendations outlined in **Table 13**, all study area intersections will satisfy PennDOT ILOS Standards, with the exception of the intersection of Pottstown Pike (SR 0100) and Font Road/Proposed Driveway during the weekday P.M. peak hour, which will go from ILOS A to ILOS D due to the addition of the 4th leg (driveway) of the intersection. In addition, the Proposed Driveway approach will operate deficiently (LOS F during the weekday A.M. and weekday P.M.).

ICE Evaluation

Since the Proposed Driveway is being added to an existing intersection, TPD completed the PennDOT ICE Form. As shown in the ICE evaluation, included in **Appendix I**, the best intersection control would be a traffic signal followed by a roundabout option.

The roundabout option was not further pursued as an improvement because the site has limited ROW and the roundabout layout would not be physically feasible.

Therefore, TPD conducted a traffic signal warrant evaluation (summarized later in this TIA) for the 2027 Projected Conditions. However, as shown later in this TIA, warrants are not satisfied.

SIGNAL WARRANT ANALYSIS

TPD performed a signal warrant analysis at the intersection of Pottstown Pike (SR 0100) and Font Road/Site Driveway. To evaluate the warrants, TPD developed 4 hours of count data at the intersection, using a K-Factor methodology. Based on TPD's experience, in situations with high right-turn volumes and the existence of a separate right-turn lane on the minor street, PennDOT requests these right-turn movements to be excluded from the warrant analysis. This is the case for the EBR Font Road movement. Therefore, TPD excluded the EBR volume from the analysis. Consistent with Sections 4C.1-10 of the 2009 MUTCD and Section 4.2 of PennDOT Publication 46, Traffic Engineering Manual, TPD evaluated the Four-Hour Vehicular Volume, Pedestrian Volume, and crash experience. Based on this evaluation, signal warrants will be not satisfied. Signal Warrant Analysis and Associated K-Factor Traffic Volume Development are included in **Appendix J**. As stated previously in this TIA, the Upper Uwchlan Township's ACT 209/CIP/RSA also identified signalization as the ideal improvement at the intersection. However, the Upper Uwchlan Township's ACT 209/CIP/RSA also concluded the signal warrants would not be satisfied.

GAP ANALYSIS

TPD performed gap analyses at the intersection of Pottstown Pike (SR 0100) and Font Road/Proposed Site Driveway. To evaluate the capacity of Pottstown Pike (SR 0100), TPD performed gap studies utilizing Miovision Video. The gap studies were completed during the peak hours of the intersection (7:00 – 8:00 A.M. and 4:45 – 5:45 P.M.) for two-way gaps on Pottstown Pike (SR 0100).

The number and duration of gaps available for the movements were documented. The duration of gaps in traffic directly relates to the capacity (number of vehicles) that can make the identified movements at the specific intersections. TPD determined the necessary Critical Gap and Follow-Up Gap needed for the evaluated movements based on values contained in Exhibit 10-11 and Exhibit 10-12 of PennDOT Pub 46, and PA Default Values and shown in **Appendix F**. The number and time duration of gaps counted during the peak hours were compared to the standards outlined above, to determine the total number of vehicles that can be served during the peak hours.

The results of the gap studies are summarized below in **Table 10**.

TABLE 10
GAP ANALYSIS – TWO-WAY GAPS

Intersection	Peak Hour	Existing Gap Capacity ¹	Projected WB Left Turn Movements	Remaining Capacity
Pottstown Pike (SR 0100) & Font Road/Site Driveway	A.M. Peak Hour	100	11	+89
	P.M. Peak Hour	48	27	+21

¹ = Two-Way Gaps

As shown in **Table 10**, sufficient two-way gaps exist along Pottstown Pike (SR 0100) to serve the anticipated number of vehicles exiting the Proposed Site via a left-turn movement during the weekday AM and PM Peak Hours. The Gap study results are summarized in **Appendix K**.

95TH PERCENTILE QUEUE ANALYSIS

Queue analyses were conducted at the study area intersections using *Synchro 11* software. For this analysis, the 95th percentile queue is defined as the queue length that is exceeded in 5% of the signal cycles. As an example,

for a signal with a 90-second cycle, this means that the 95th percentile queue length will be exceeded during 2 of the 40 signal cycles that occur during the peak hour. The queue analysis results are summarized in **Table 11**.

TABLE 11
95TH PERCENTILE QUEUE (FEET) SUMMARY

Intersection	Movement	Available Storage	Weekday AM			Weekday PM		
			2024		2027	2024	2027	
			Exist.	Base	Proj.		Proj.	Proj. ¹
Pottstown Pike (SR 0100) & Font Road/Proposed Site Driveway	EB LT	940 ²	5'	8'	15'	15'	25'	33'
	EB R	85'	83'	115'	115'	115'	30'	38'
	WB LTR	--	--	38'	38'	--	--	160'
	NB L	300'	13'	15'	15'	15'	40'	50'
	SB L	1000 ² +	--	--	3'	3'	--	3'
Pottstown Pike (SR 0100) & Reserve Drive/Fellowship Road	EB L	125'	0'	3'	3'	--	3'	3'
	EB TR	330 ²	30'	38'	38'	--	23'	25'
	WB L	195'	263'	278'	285'	--	83'	98'
	WB TR	1000 ² +	13'	15'	18'	--	10'	13'
	NB L	90'	3'	5'	5'	--	10'	13'
	NB T	530 ²	70'	95'	103'	--	233'	265'
	NB TR	530 ²	70'	98'	105'	--	240'	275'
	SB L	340'	5'	5'	5'	--	5'	5'
	SB T	1000 ² +	298'	448'	460'	--	228'	263'
	SB R	190'	0'	0'	0'	--	0'	0'
Pottstown Pike (SR 0100) & Milford Road/Garrison Drive	EB LTR	150 ²	15'	20'	20'	--	13'	18'
	WB LTR	600 ²	28'	30'	33'	--	45'	53'
	NB L	125'	0'	0'	0'	--	3'	3'
	SB L	125'	0'	0'	0'	--	3'	3'

Exist. = Existing Condition, Base = No-Build scenario, Proj. = Build scenario

1 = Projected with turn lane improvements

2 = Storage to next public intersection

Queue analysis worksheets are included with the capacity analysis worksheets provided in the **Appendix G**.

AUXILIARY TURN LANE ANALYSIS

Methodology

TPD evaluated auxiliary turn lane warrants at the Proposed Driveway. The warrant analysis methodology contained within Chapter 11 of PennDOT's *Publication 46*, Section 11.17 and Strike-Off Letter 470-08-07 was utilized for this evaluation.

Findings

Table 12 summarizes the results of the auxiliary turn lane analysis at the site access intersections.

TABLE 12
AUXILIARY TURN LANE ANALYSIS SUMMARY

Intersection	Auxiliary Lane	Warrant Satisfied?	Proposed Storage
Pottstown Pike (SR 0100) & Font Road/Proposed Site Driveway	SB Left-Turn Lane	125'	125'
	NB Right-Turn Lane	125'	Deceleration Taper

As shown in **Table 12**, warrants for a 125' SBL lane and a 125' NBR lane are satisfied at the Proposed Site Driveway. In regards to the warranted NBR and given the limited site frontage along Pottstown Pike (SR 0100), TPD recommends a deceleration taper in lieu of the NBR Lane. The calculations for the auxiliary turn lane warrants are included in **Appendix L**.

RECOMMENDATIONS

TPD has made the following recommendations in relation to the Proposed Automotive Service Center Development in Upper Uwchlan Township, Chester County, as outlined in **Table 13**.

TABLE 13
RECOMMENDATIONS

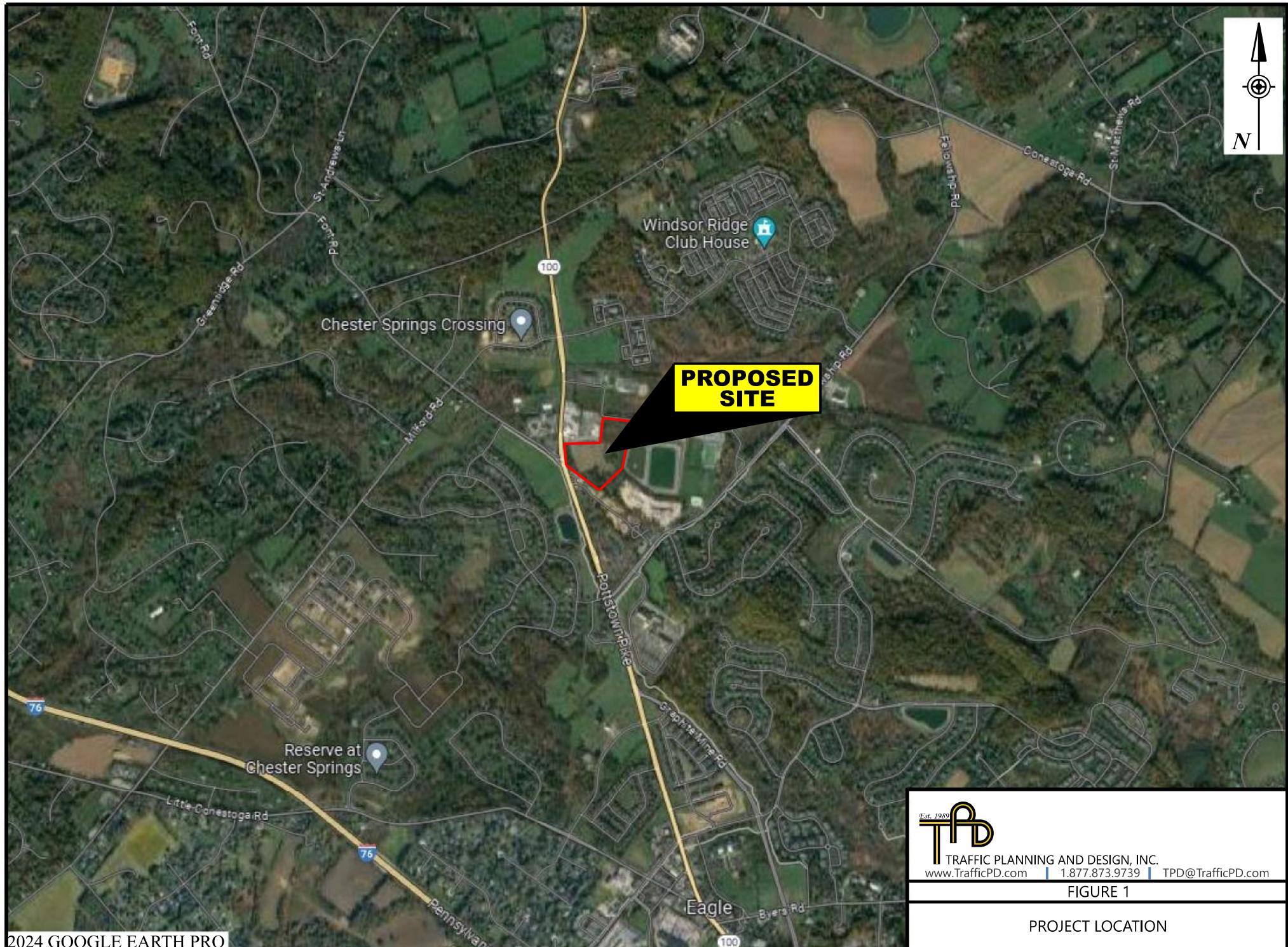
Intersection	Recommendation
Pottstown Pike (SR 0100) & Font Road/Proposed Site Driveway	Provide adequate turning ingress/egress radii
	Provide a "STOP" sign on the WB approach
	Provide a 125' Southbound Left Turn Lane
	Provide a Northbound Right Deceleration Taper
	Removal and maintenance of on-site vegetation to maximize available sight distance

CONCLUSIONS

Based on the results of the transportation impact study, TPD offers the following conclusions:

- » The Project Site is located on the eastern side of Pottstown Pike (SR 0100), opposite Font Road. The Proposed Site will consist of a 36,380 s.f. Automotive Service Center. In addition, the Proposed Site will provide a parking area for Car Storage associated with the local dealerships under the RDS Automotive Group.
- » The Proposed Site will be served by one (1) full-access driveway that will create the fourth leg of the intersection of Pottstown Pike (SR 0100) and Font Road.
- » With the removal of on-site vegetation, the measured sight distances at the Proposed Site Driveway will exceed PennDOT Safe Stopping Sight Distances (SSSD) and in most cases will exceed the Desirable Sight Distance Standards.
- » The Proposed Site will generate **71 new trips** during the weekday A.M. peak hour and **77 new trips** during the weekday P.M. peak hour.
- » Under all projected (build) conditions with the development of the proposed site and with site-related recommendations outlined in Table 9, all study area intersections will satisfy PennDOT ILOS Standards,

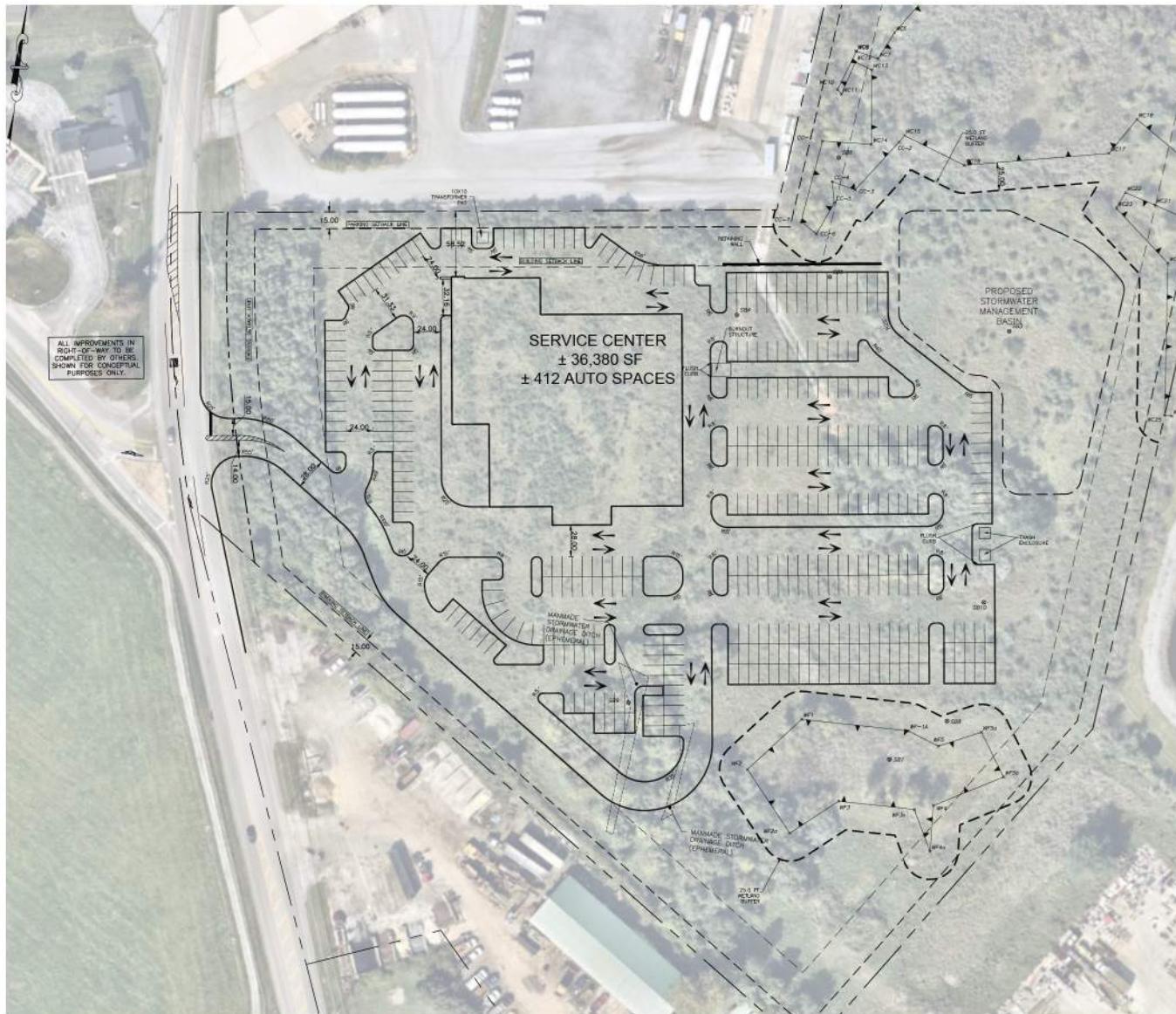
except for the intersection of Pottstown Pike (SR 0100) and Font Road/Proposed Driveway during the weekday P.M. peak hour, which will go from ILOS A to ILOS D due to the addition of the 4th leg (driveway) of the intersection. In addition, the Proposed Driveway approach will operate deficiently (LOS F during the weekday A.M. and weekday P.M.).



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FIGURE 1

PROJECT LOCATION



KEY:
SCHEMATIC DRAWING:NOT TO SCALE

FIGURE 2

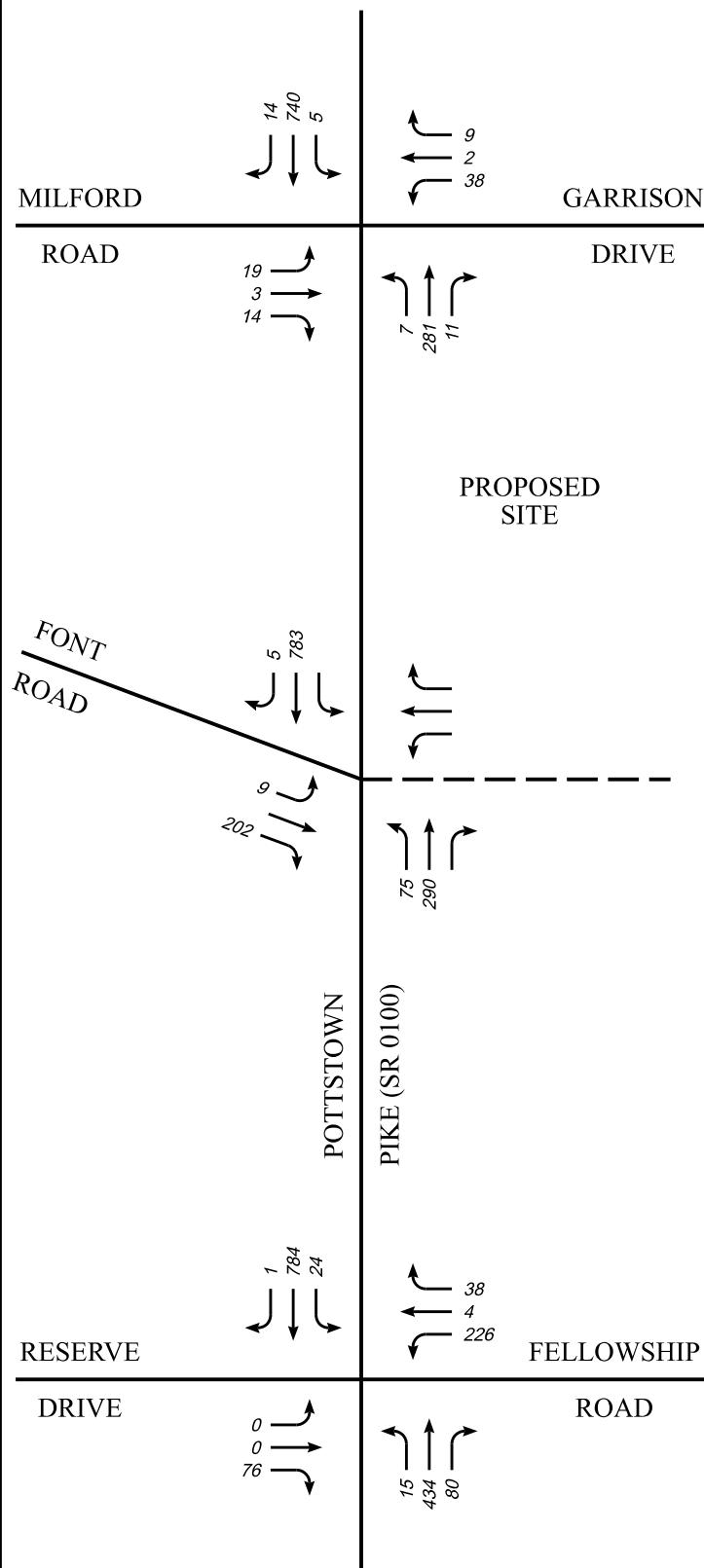
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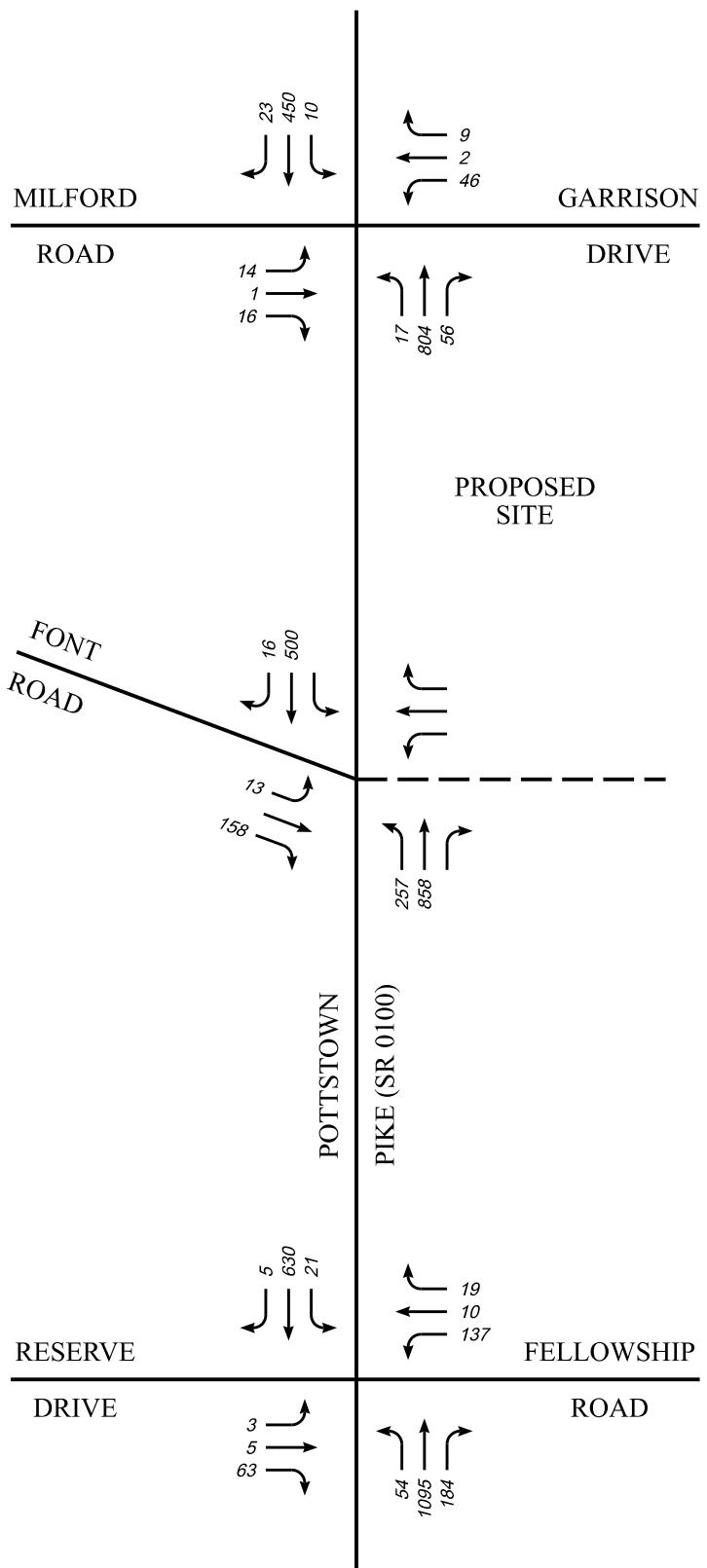
FIGURE 2

SITE PLAN

WEEKDAY A.M. PEAK HOUR



WEEKDAY P.M. PEAK HOUR



KEY:

----- PROPOSED DRIVEWAY
SCHEMATIC DRAWING: NOT TO SCALE



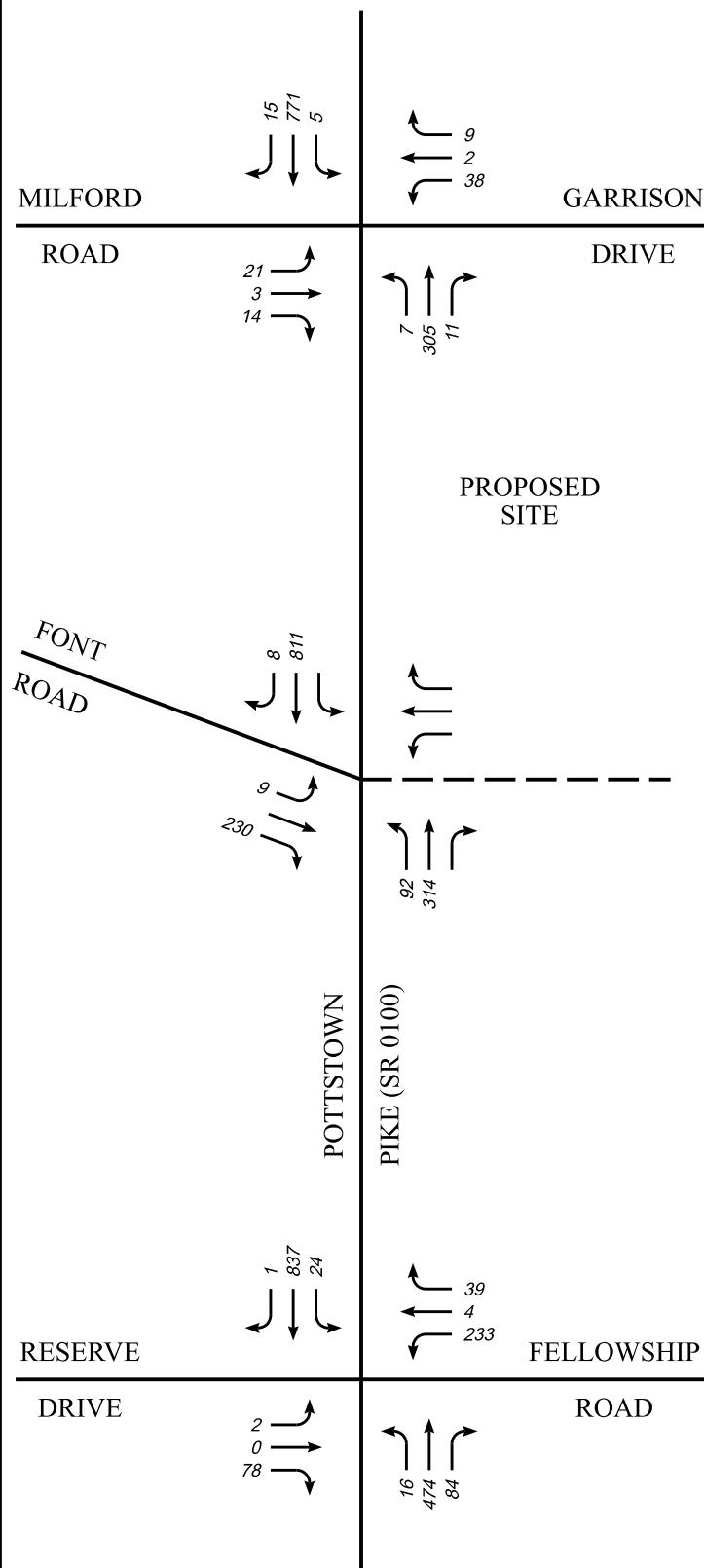
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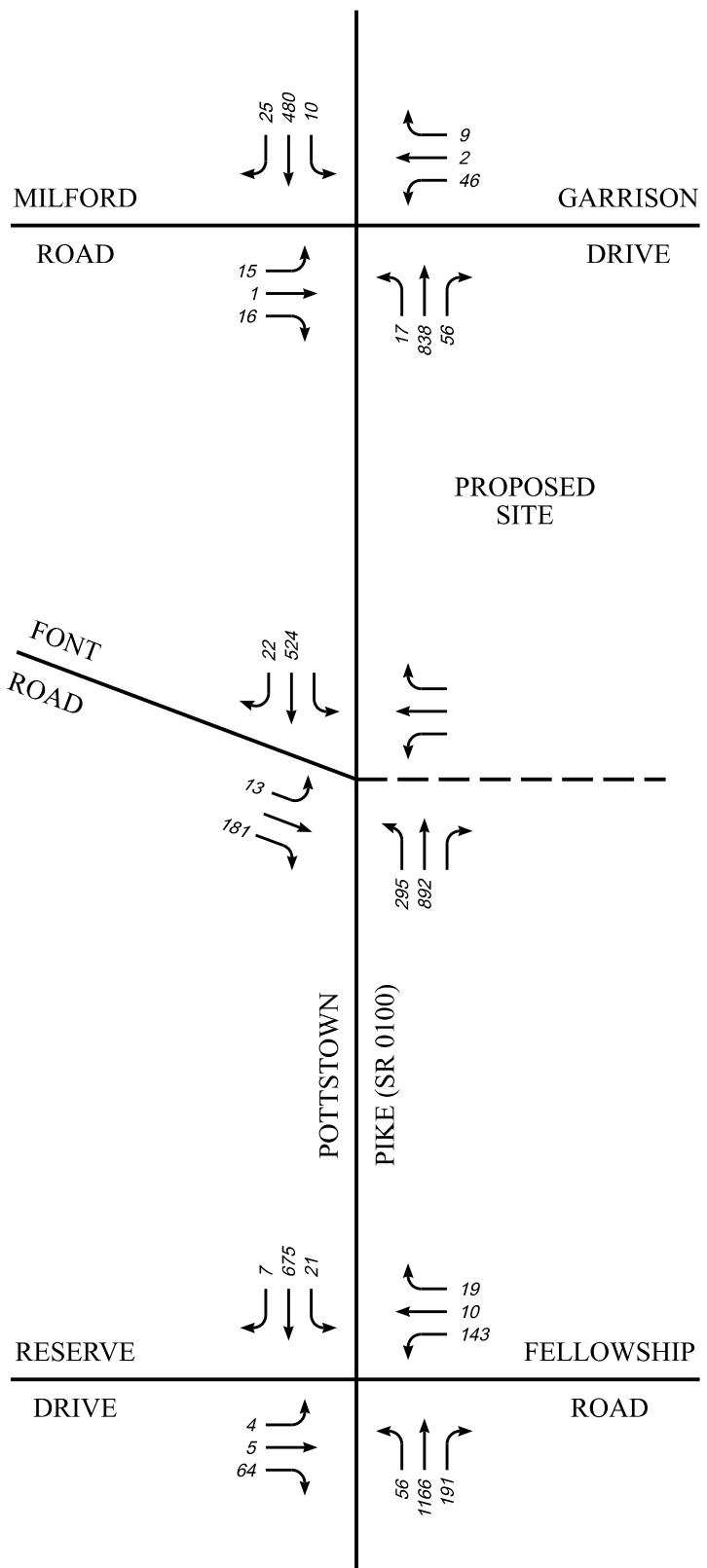
FIGURE 3

2024 EXISTING CONDITIONS
WEEKDAY PEAK HOUR
TRAFFIC VOLUMES

WEEKDAY A.M. PEAK HOUR



WEEKDAY P.M. PEAK HOUR



KEY:

----- PROPOSED DRIVEWAY
SCHEMATIC DRAWING: NOT TO SCALE

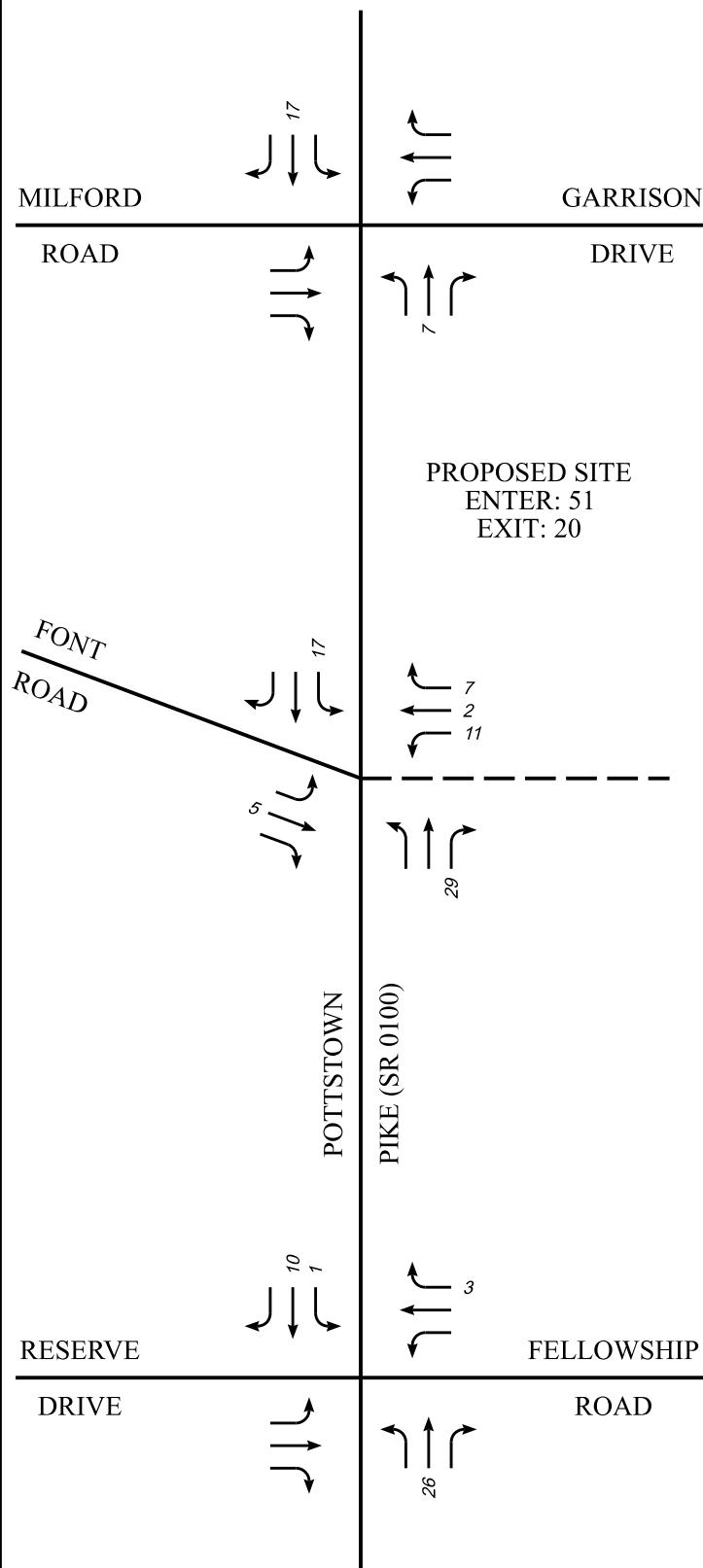


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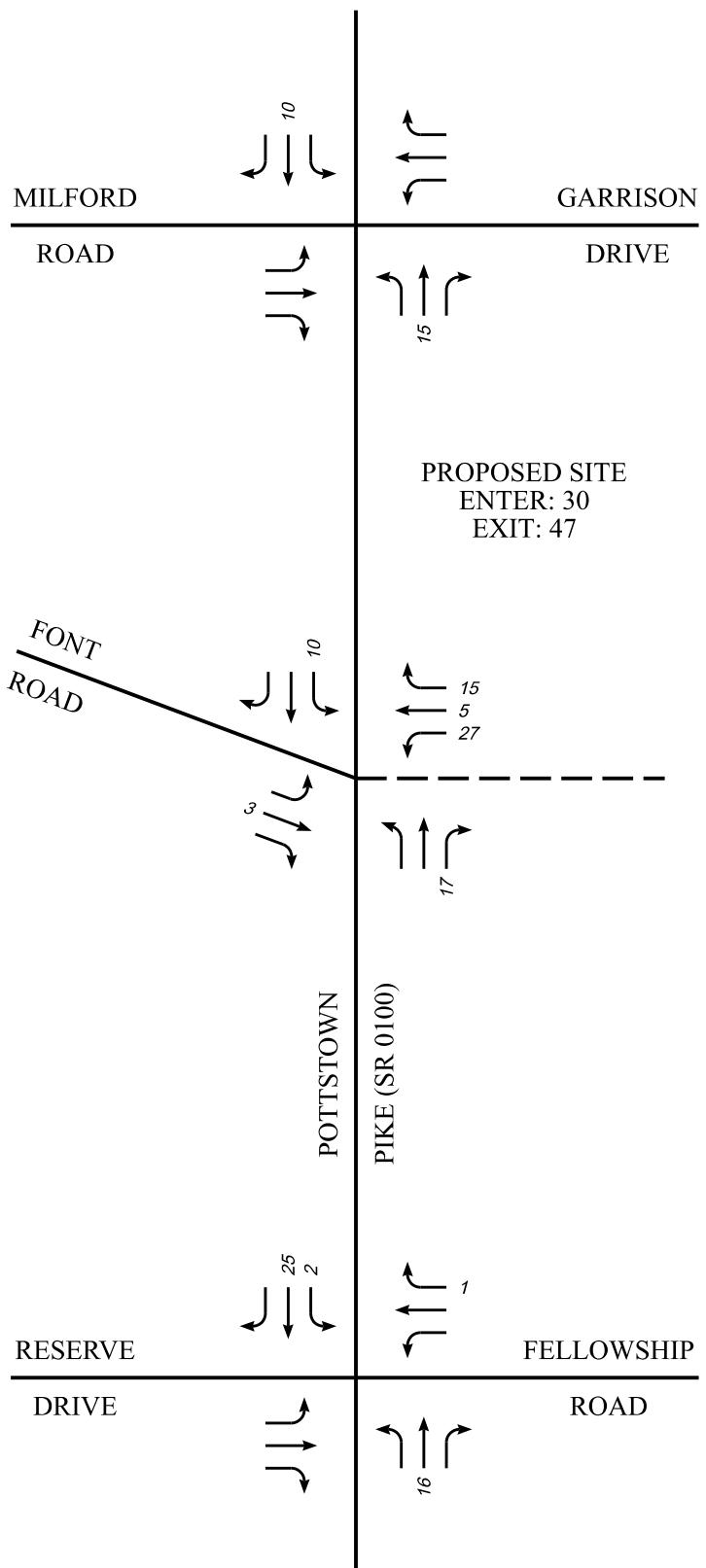
FIGURE 4

2027 BASE CONDITIONS
WEEKDAY PEAK HOUR
TRAFFIC VOLUMES

WEEKDAY A.M. PEAK HOUR



WEEKDAY P.M. PEAK HOUR



KEY:

----- PROPOSED DRIVEWAY
SCHEMATIC DRAWING: NOT TO SCALE

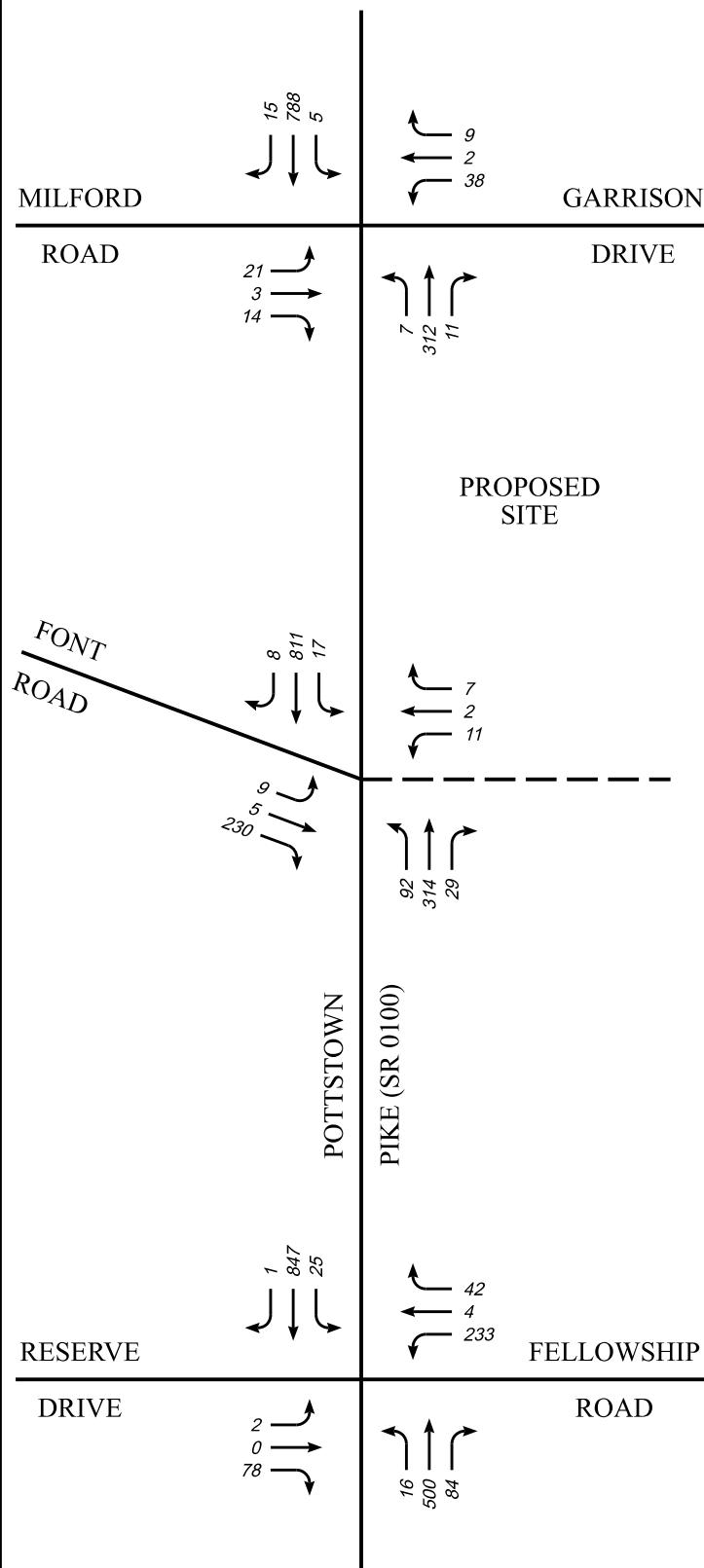


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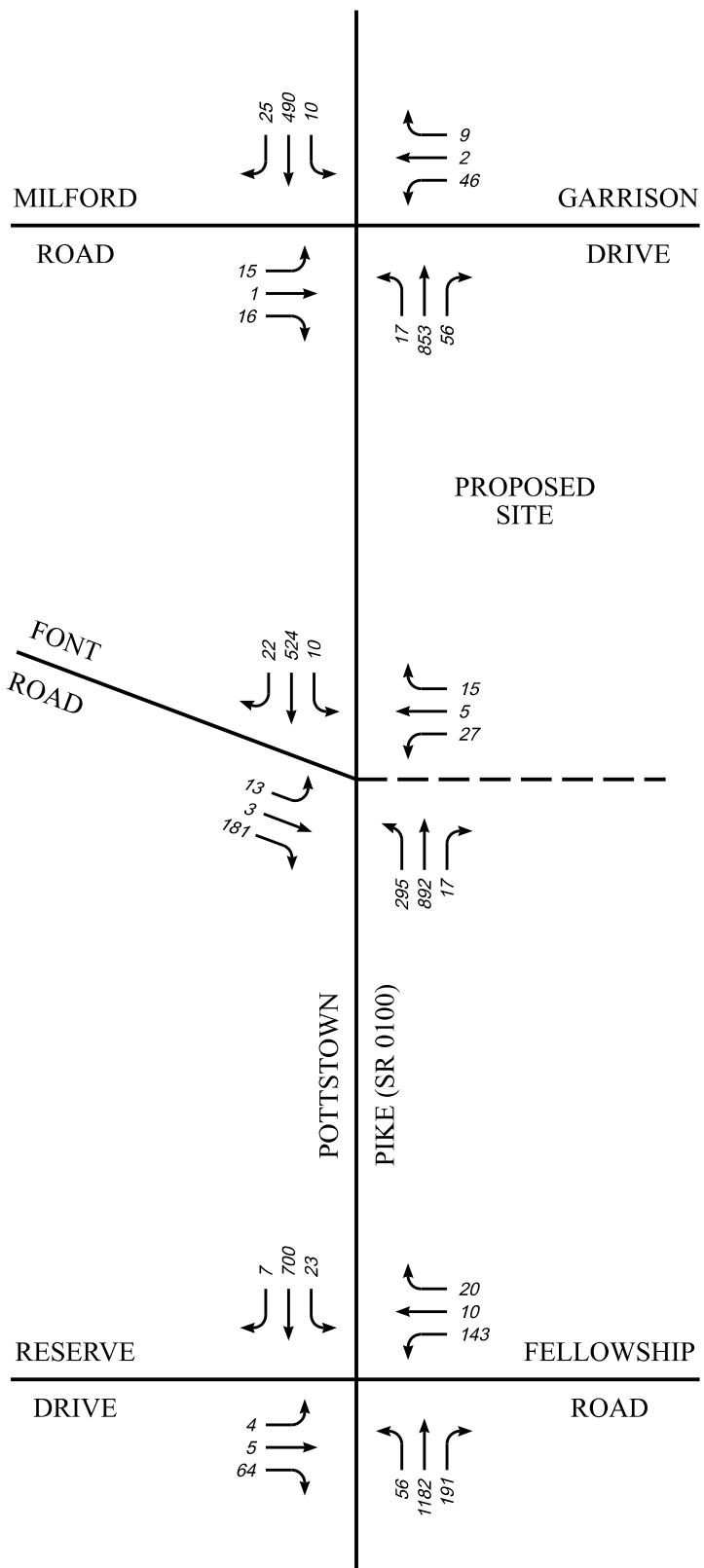
FIGURE 5

AUTOMOTIVE SERVICE CENTER
WEEKDAY PEAK HOUR
TRIP DISTRIBUTIONS

WEEKDAY A.M. PEAK HOUR



WEEKDAY P.M. PEAK HOUR



KEY:

----- PROPOSED DRIVEWAY
SCHEMATIC DRAWING: NOT TO SCALE



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FIGURE 6

2027 PROJECTED CONDITIONS
WEEKDAY PEAK HOUR
TRAFFIC VOLUMES

APPENDIX A:
Project Correspondence

From: Chris Williams <cwilliams@bowman.com>
Sent: Monday, February 5, 2024 4:11 PM
To: Bressler, Matt; Jacob Tackett; Hammond, Matt; Haesler, Brian
Cc: Tony Scheivert; Jeff Gehman; Natasha Manbeck; Drew E. Sirianni
Subject: RE: EPS Scoping Submission - 500 Pottstown Pike - Upper Uwchlan Township
[Filed 05 Feb 2024 16:12]

Follow Up Flag: Follow up

Flag Status: Flagged

Categories: Filed by Mail Manager

Good afternoon

Below are our comments on behalf of the Township for the TIS scope review.

1. As part of the traffic study, with the addition of the access as a fourth leg of the Route 100/Font Road intersection, please evaluate the need for traffic control improvements. This intersection has been on the Township's watch list for traffic control/pedestrian improvements to occur when this site is developed.
2. Verify the availability of sight distance at the new access location, which may be limited due to the alignment of Route 100 to the north, as well as the presence of the building close to the edge of the road north of the proposed access.
3. The trip generation estimates for the site indicate the proposed 36,380 square-foot auto service center will generate approximately 69 weekday morning peak hour trips and approximately 75 weekday afternoon peak hour trips, based on the ITE publication *Trip Generation, 11th Edition*. We do not disagree with this calculation based on ITE; however, the plans show 412 parking spaces, which may indicate additional traffic activity will occur at this site beyond the ITE estimates for an auto service center. Please provide a detailed description of the operations of the proposed use of the site, including whether the site is proposed for off-site storage of vehicles.
4. The planned and proposed developments that should be included in the background traffic growth projections for the study should include the following:
 - a. McKee/Fetters – The full-build-out of this development includes 161 single family age-restricted homes and 259 age-restricted townhomes located along Milford Road between Little Conestoga Road and Font Road. However, this development is currently under construction and the applicant should contact the Township to determine the number and type of units that remain to be constructed.
 - b. Byers Station Parcel 5C Lot 2B – A 10,500 square-foot (140-student) day care, a 1,820 square-foot fast food restaurant with drive-through, and 13,200 square feet of retail space located on the northeast corner of the Pottstown Pike/Park Road/Station Boulevard intersection.
 - c. Byers Station Parcel 6C (Vantage Point) – A 106-unit assisted living facility located on the northeast corner of the Graphite Mine Road/Byers Road intersection.

- d. 100 Greenridge Road Residential Development – A 64-unit single family home community located on the north side of Greenridge Road just west of Font Road.
- 5. The Township's Active Transportation Plan (ATP) envisions a shared use path on the east side of Route 100 in this area, which should be incorporated into the site plan, as well as a pedestrian crossing of Route 100 at the site access location, assuming intersection traffic control improvements. Also, an alternative option may be to locate the trail through the rear of the property, but this would require further coordination between the applicant, the Township and coordination with the adjacent property owners. Furthermore, the ATP envisions a "Yield Roadway" to the north, which could traverse through the northern edge of the property near the border with the Texas Eastern property. This should be discussed with the Township as the land development project moves forward.

Please contact our office if you have any questions.

Thanks,
Chris

CHRISTOPHER J. WILLIAMS, P.E.

Regional Manager - Mid-Atlantic | **BOWMAN**

O: (610) 594-9995 | D: (484) 872-2274 | M: (215) 680-0245

cwilliams@bowman.com | bowman.com

From: Bressler, Matt <mbressler@trafficpd.com>
Sent: Wednesday, January 17, 2024 11:56 AM
To: Chris Williams <cwilliams@bowman.com>
Cc: Jacob Tackett <JTackett@tandmassociates.com>; Hammond, Matt <mhammond@trafficpd.com>; Haesler, Brian <bhaesler@trafficpd.com>
Subject: [EXTERNAL] EPS Scoping Submission - 500 Pottstown Pike - Upper Uwchlan Township

Chris,

Attached is TPD's Scoping Application for 500 Pottstown Pike for your review.

Thanks in advance

Matthew Bressler, Project Manager



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**TRANSPORTATION IMPACT STUDY (TIS)
DETERMINATION & SCOPING MEETING
APPLICATION**

Scoping Meeting Application:

Submitted

Scoping Meeting Date: _____ Scoping Number: S0620230072

Tax Parcel Number: _____

Project/Development Name: 500 Pottstown Pike - Automotive Service Center

Applicant Information:

Business Partner ID: _____

Applicant Name: ROCKHILL REAL ESTATE ENTERPRISES XVII LP

Phone: 6108861000 Email 1: jhediger@porschemainline.com

Primary Contact: John Hediger Email 2: JTackett@tandmassociates.com

Additional Engineering Firm Information:

Business Partner ID: _____

Engineering Firm: _____

Phone: _____ Email 1: _____

Primary Contact: _____ Email 2: _____

Creator Information:

Business Partner ID: 000094 Firm Name: Traffic Planning and Design, Inc.

Phone: 610-326-3100 Email 1: ekramer@trafficpd.com

(1) LOCATION OF PROPOSED DEVELOPMENT:

PennDOT Engineering District: 06 Email: _____

County: Chester Email: _____

Municipality: UPPER UWCHLAN Email: cwilliams@bowman.com

NO.	SR	Segment	Offset	Average Daily Trips	Driveway Classification	Local Road
1	0100	0370	0370	604	Low Volume	No

Are there any vehicle weight or size restrictions along the SR in accordance with 75 PA C.S. ss 4902? : No

(2) DESCRIPTION OF PROPOSED DEVELOPMENT (Attach site plan if available):

Proposed site access:

Access to the proposed site will include one (1) proposed full-access driveway to Pottstown Pike (S.R. 0100), opposite Font Road.

Proposed land uses:

The proposed development will consist of a 36.38 ksf (approximate) Automotive Service Center.

Community linkages (access to neighboring properties, cross easements, pedestrian and transit accommodations):

Not applicable.

(3) DEVELOPMENT SCHEDULE AND STAGING:

Anticipated Opening Date: 06-01-2026

Full Buildout Date: 08-03-2026

Describe Proposed Development Schedule/Staging:

Full Build-out of site by 2027.

(4) TRIP GENERATION:

Land Use & Size	Land Use Code	Were ITE results used?	Daily Trips	AM Peak Hour		PM Peak Hour		Saturday Peak Hour	
				Enter	Exit	Enter	Exit	Enter	Exit
36.38 ksf Automotive Service Center	943	Yes	604	50	19	29	46		
		TOTAL:	604	50	19	29	46	0	0

(5) TRANSPORTATION IMPACT STUDY REQUIRED?

Transportation Impact Study Required? No

If Yes, based on:

Other considerations as described below:

(6) TRANSPORTATION IMPACT ASSESSMENT REQUIRED?

Transportation Impact Assessment Required? Yes

(7) STUDY AREA:

Roadway and Study Intersections:

1. Pottstown Pike (S.R. 0100) & Font Road
2. Pottstown Pike (S.R. 0100) & Fellowship Road/Reserve Drive
3. Pottstown Pike (S.R. 0100) & Milford Road/Garrison Drive

Land use context (Refer to PennDOT Design Manual, Part 1X, Appendix B):

Suburban Corridor

Known Congestion Areas:

To be determined during the TIA.

Known Safety Concerns:

To be determined during the TIA.

Known Environmental Constraints:

To be determined during the TIA.

Pedestrian/Bike Review (Community Centers, Parks, Schools, etc.):

Will be included in TIA.

Transit Review (Current routes/stops):

Will be included in TIA.

(8) STUDY AREA TYPE:

Study Area Type: Urban

(9) TIS ANALYSIS PERIODS AND TIMES:**Analysis period and times notes:**

Existing conditions, Base (No-Build) condition opening year without development, and Projected (Build) opening year with development. Weekday A.M. and P.M. peak hour of adjacent street traffic

(10) TRAFFIC ADJUSTMENT FACTORS:**(a) Seasonal Adjustment (Identify counts requiring adjustment and methodology):**

Not applicable.

PennDOT Planning and Research

(b) Annual Base Traffic Growth: 0.54

%/yr. **Source:** (BPR) Data 2022-2023

(c) Pass-By Trips (Attach justification where required):

NO.	Land Use	%	Source

(d) Captured Trips for Multi-Use Sites:

Not applicable.

(e) Modal Split Reductions:

Not applicable.

(f) Other Reductions:

Not applicable.

(11) OTHER PROJECTS WITHIN STUDY AREA TO BE ADDED TO BASE TRAFFIC:**Notes:**

Village at Byers Station (5C) ♦ residential development consisting of 121 townhomes. The Frame Property - residential development consisting of 61 single-family homes (sfh). McKee-Fetters Tract - residential development consisting of 116 age-restricted sfh and 259 age-restricted townhomes. Byers Station - mixed-use development. Upper Uwchlan residential development - consisting of 55 sfh.

(12) TRIP DISTRIBUTION AND ASSIGNMENT:**Trip Distribution Notes:**

To be based on existing traffic patterns from current traffic counts.

(13) APPROVAL OF DATA COLLECTION ELEMENTS AND METHODOLOGIES:

NO.	Location	Period	Type
1	Pottstown Pike (S.R. 0100) & Font Road	AM Peak Adj. and PM Peak Adj.	Turning Movement Counts
2	Pottstown Pike (S.R. 0100) & Fellowship Road	AM Peak Adj. and PM Peak Adj.	Turning Movement Counts

3	Pottstown Pike (S.R. 0100) & Milford Road	AM Peak Adj. and PM Peak Adj.	Turning Movement Counts
---	---	-------------------------------	-------------------------

(14) CAPACITY/LOS ANALYSIS:

NO.	Location	Period	Type
1	Pottstown Pike (S.R. 0100) & Font Road/ Site Drive	AM Peak Adj. St and PM Peak Adj. St	HCM 6th Edition from Synchro 11
2	Pottstown Pike (S.R. 0100) & Fellowship Road	AM Peak Adj. St and PM Peak Adj. St	HCM 6th Edition from Synchro 11
3	Pottstown Pike (S.R. 0100) & Milford Drive	AM Peak Adj. St, PM Peak Adj. St, Sat. Midday	HCM 6th Edition from Synchro 11

(15) ROADWAY IMPROVEMENTS/MODIFICATIONS BY OTHERS TO BE INCLUDED:

Roadway Improvements:

Not applicable within the study area.

(16) OTHER NEEDED ANALYSES:

(a) Sight Distance Analysis:

To be performed during the TIA.

(b) Signal Warrant Analysis (Identify locations):

To be determined during the TIA.

(c) Required Signal Phasing/Timing Modifications (Determine for all signalized intersections; specify methodology):

As needed

(d) Traffic Signal Corridor/Network Analysis (Identify locations/methodology):

Not applicable.

(e) Analysis of the Need for Turning Lanes (Identify locations/methodology):

To be performed during the TIA.

(f) Turning Lane Lengths (Identify methodology to be used):

Pub 46

(g) Left Turn Signal Phasing Analysis (Identify locations/methodology):

As needed

(h) Queuing Analysis (Identify locations/methodology):

To be performed during the TIA.

(i) Gap Studies (Identify locations/methodology):

As needed

(j) Crash Analysis (Identify locations):

To be performed during the TIA.

(k) Weaving Analysis (Identify locations):

Not applicable.

(l) Other Required Studies (Specify locations/methodology):

ICE Evaluation will be performed for the intersection of Pottstown Pike (S.R. 0100) & Font Road/ Proposed Driveway

(17) ADDITIONAL COMMENTS OR RECOMMENDATIONS RELATIVE TO THE SCOPE OF THE TIS:

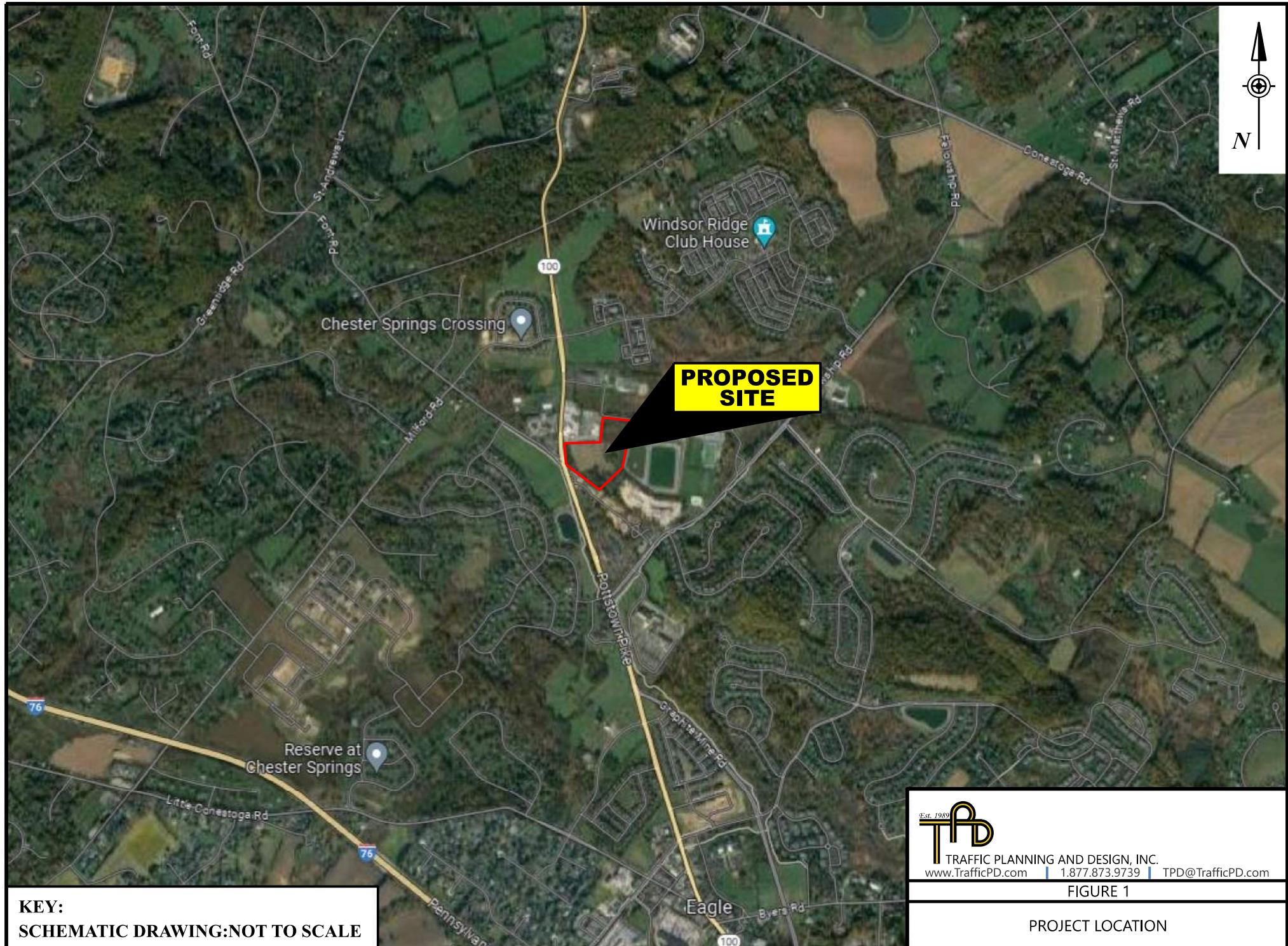
Additional Comments:

Not applicable.

PennDOT Review Comments: (Current Cycle Comments)

After review of the scoping meeting application, the Department will contact the applicant regarding the need for a scoping meeting prior to applying for a highway occupancy permit.

This Electronic Copy Created on: 2024-01-17 11:45:04



KEY:
SCHEMATIC DRAWING:NOT TO SCALE

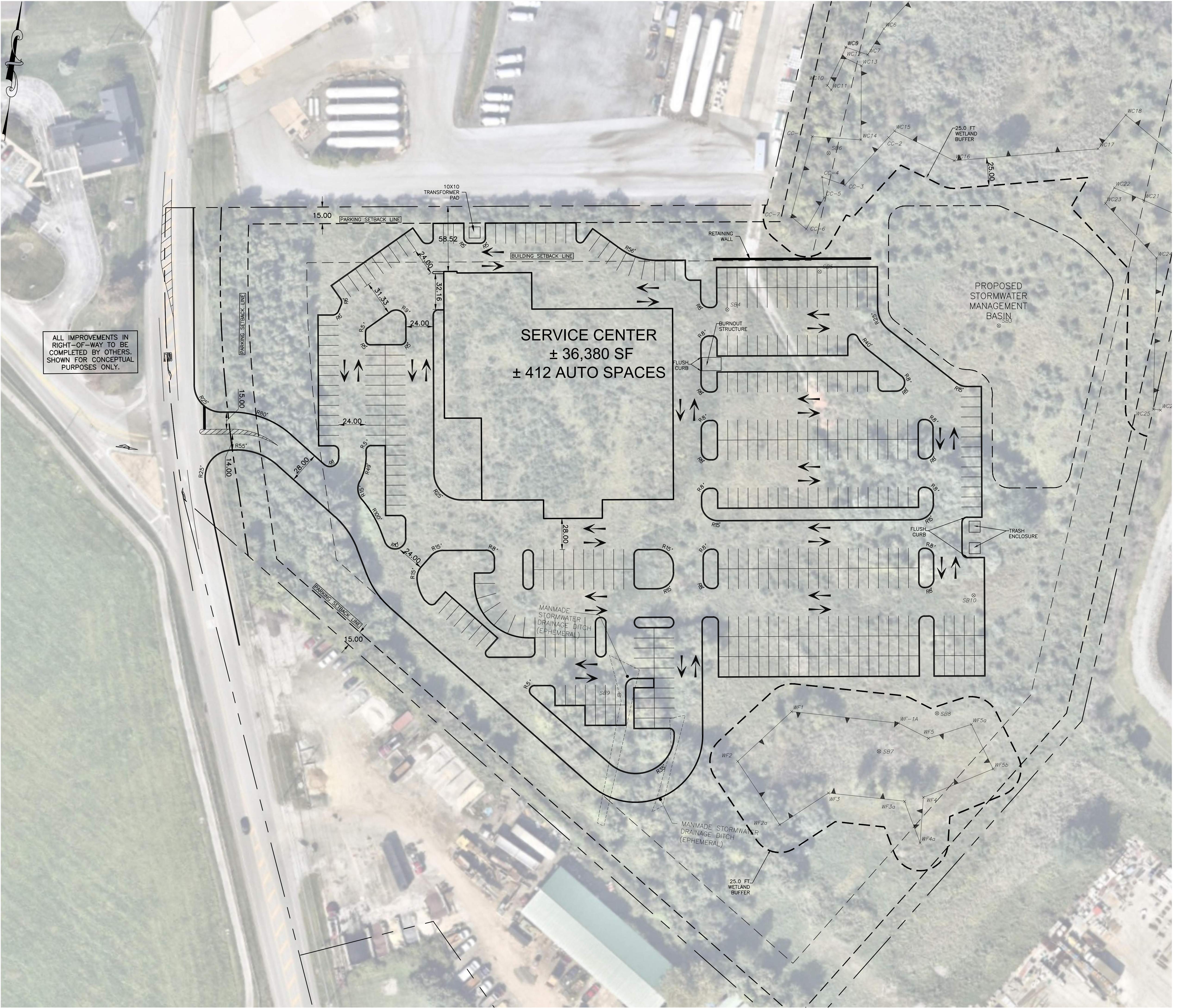


TPD TRAFFIC

TRAFFIC PLANNING AND DESIGN, INC.
www.TrafficPD.com 1.877.873.9739 TPD@TrafficPD.com

FIGURE 1

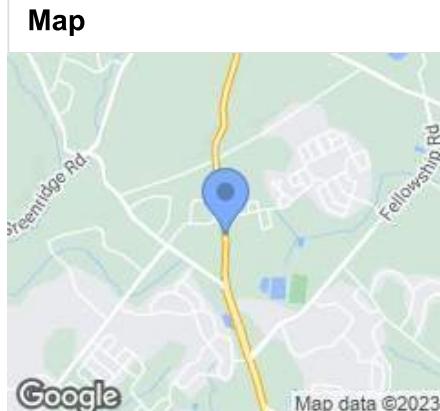
PROJECT LOCATION





TMS Site 24374: Traffic Monitoring Report

Location Description: Segment 0370/1400 between telephone poles

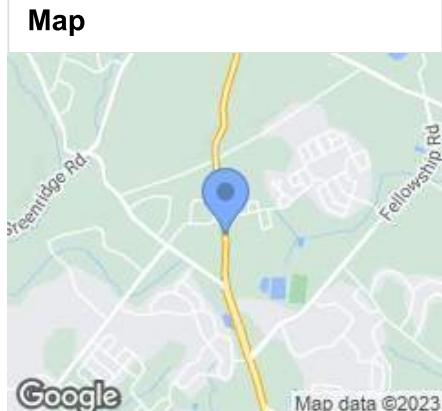
Details		Location		Map
Type of Count	MACHINE CLASS	County	CHESTER (15)	
Type of Site	Portable	Route	0100	
Schedule	1 TIME/YR	Segment	0370	
Duration	24 HRS	Offset	1400	
Frequency Cycle	03	Latitude	40.09864	
Cycle Year	02	Longitude	-75.69506	 Map data ©2023

Traffic Data				
Date	Volume	Truck Volume	Truck %	Volume Graph
Aug 16, 2022	15,036	940	6.3	
Aug 20, 2019	15,296	1,891	12.4	
Sep 22, 2015	17,468			
Aug 29, 2012	16,629	1,313	7.9	
Oct 14, 2009	16,848	1,288	7.6	
Oct 24, 2006	16,019	1,389	8.7	
Sep 01, 2005	15,689	1,117	7.1	
Oct 30, 2003	16,833			
Sep 06, 2000	11,608			
Oct 21, 1997	12,357			
July 20, 1995	14,462			
Aug 11, 1994	14,010			
May 25, 1993	13,602			



TMS Site 24374: Traffic Monitoring Report

Location Description: Segment 0370/1400 between telephone poles

Details		Location		Map
Type of Count	MACHINE CLASS	County	CHESTER (15)	
Type of Site	Portable	Route	0100	
Schedule	1 TIME/YR	Segment	0370	
Duration	24 HRS	Offset	1400	
Frequency Cycle	03	Latitude	40.09864	
Cycle Year	02	Longitude	-75.69506	 Map data ©2023

Traffic Data				
Hour	Volume	Trucks	Truck %	Volume Graph
12:00 AM	54	1	1.9	
01:00 AM	44	4	9.1	
02:00 AM	33	5	15.2	
03:00 AM	63	14	22.2	
04:00 AM	128	17	13.3	
05:00 AM	382	57	14.9	
06:00 AM	738	88	11.9	
07:00 AM	905	61	6.7	
08:00 AM	699	42	6	
09:00 AM	868	76	8.8	
10:00 AM	866	69	8	
11:00 AM	1,028	72	7	
12:00 PM	927	67	7.2	
01:00 PM	894	58	6.5	
02:00 PM	938	52	5.5	
03:00 PM	1,145	77	6.7	
04:00 PM	1,205	56	4.6	
05:00 PM	1,273	45	3.5	
06:00 PM	870	19	2.2	
07:00 PM	667	17	2.5	
08:00 PM	580	18	3.1	
09:00 PM	406	15	3.7	
10:00 PM	214	7	3.3	
11:00 PM	109	3	2.8	

APPENDIX B:
Study Area Photographs



Direction / Road: EB Font Road
Approach / Departure: Approach
Distance: 50 feet



Direction / Road: EB Font Road
Approach / Departure: Approach
Distance: 200 Feet



Direction / Road: NB Route 100
Approach / Departure: Approach
Distance: 50 feet



Direction / Road: NB Route 100
Approach / Departure: Approach
Distance: 200 Feet



Direction / Road: SB Route 100
Approach / Departure: Approach
Distance: 50 feet



Direction / Road: SB Route 100
Approach / Departure: Approach
Distance: 200 Feet



Direction / Road: EB Fellowship Road
Approach / Departure: Approach
Distance: 50 feet



Direction / Road: EB Fellowship Road
Approach / Departure: Approach
Distance: 200 Feet



Direction / Road: WB Reserve Drive
Approach / Departure: Approach
Distance: 50 feet



Direction / Road: WB Reserve Drive
Approach / Departure: Approach
Distance: 200 Feet



Direction / Road: NB Route 100
Approach / Departure: Approach
Distance: 50 feet



Direction / Road: NB Route 100
Approach / Departure: Approach
Distance: 200 Feet



Direction / Road: SB Route 100
Approach / Departure: Approach
Distance: 50 feet



Direction / Road: SB Route 100
Approach / Departure: Approach
Distance: 200 Feet



Direction / Road: EB Garrison Road
Approach / Departure: Approach
Distance: 50 feet



Direction / Road: EB Garrison Road
Approach / Departure: Approach
Distance: 200 Feet



Direction / Road: WB Milford Road
Approach / Departure: Approach
Distance: 50 feet



Direction / Road: WB Milford Road
Approach / Departure: Approach
Distance: 200 Feet



Direction / Road: NB Route 100
Approach / Departure: Approach
Distance: 50 feet



Direction / Road: NB Route 100
Approach / Departure: Approach
Distance: 200 Feet



Direction / Road: SB Route 100
Approach / Departure: Approach
Distance: 50 feet



Direction / Road: SB Route 100
Approach / Departure: Approach
Distance: 200 Feet

APPENDIX C:
Manual Traffic Count Data



Counter: MIO:
Set up By JB:

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Count Name: 1 Route 100 &
Font Road
Site Code:
Start Date: 06/08/2023
Page No: 1

Turning Movement Data

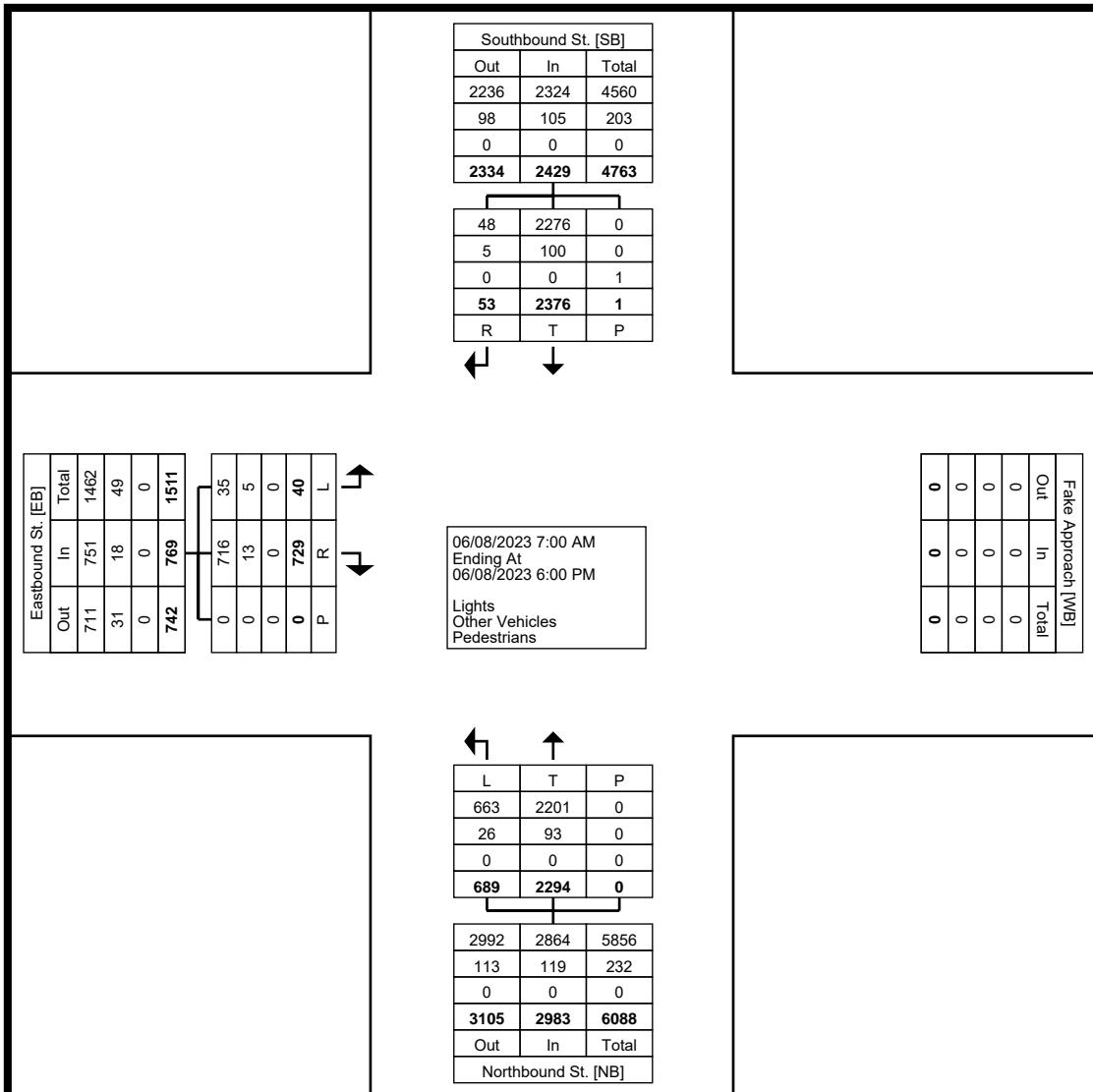
Start Time	Eastbound St. Eastbound				Northbound St. Northbound				Southbound St. Southbound				Int. Total	
	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total		
7:00 AM	2	57	0	59	15	56	0	71	175	1	0	176	306	
7:15 AM	2	53	0	55	13	56	0	69	208	3	0	211	335	
7:30 AM	2	45	0	47	24	72	0	96	209	1	0	210	353	
7:45 AM	3	46	0	49	23	105	0	128	187	0	0	187	364	
Hourly Total	9	201	0	210	75	289	0	364	779	5	0	784	1358	
8:00 AM	3	55	0	58	27	74	0	101	128	1	1	129	288	
8:15 AM	0	59	0	59	32	75	0	107	162	0	0	162	328	
8:30 AM	2	60	0	62	31	98	0	129	182	4	0	186	377	
8:45 AM	4	39	0	43	29	100	0	129	127	7	0	134	306	
Hourly Total	9	213	0	222	119	347	0	466	599	12	1	611	1299	
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	
4:00 PM	4	47	0	51	61	210	0	271	117	6	0	123	445	
4:15 PM	1	34	0	35	56	217	0	273	127	1	0	128	436	
4:30 PM	3	30	0	33	63	216	0	279	138	3	0	141	453	
4:45 PM	4	38	0	42	48	208	0	256	134	3	0	137	435	
Hourly Total	12	149	0	161	228	851	0	1079	516	13	0	529	1769	
5:00 PM	3	32	0	35	62	219	0	281	106	5	0	111	427	
5:15 PM	3	45	0	48	85	213	0	298	128	4	0	132	478	
5:30 PM	3	42	0	45	61	214	0	275	130	4	0	134	454	
5:45 PM	1	47	0	48	59	161	0	220	118	10	0	128	396	
Hourly Total	10	166	0	176	267	807	0	1074	482	23	0	505	1755	
Grand Total	40	729	0	769	689	2294	0	2983	2376	53	1	2429	6181	
Approach %	5.2	94.8	-	-	23.1	76.9	-	-	97.8	2.2	-	-	-	
Total %	0.6	11.8	-	-	11.1	37.1	-	-	38.4	0.9	-	-	-	
Lights	35	716	-	-	751	663	2201	-	2864	2276	48	-	2324	5939
% Lights	87.5	98.2	-	-	97.7	96.2	95.9	-	96.0	95.8	90.6	-	95.7	96.1
Other Vehicles	5	13	-	-	18	26	93	-	119	100	5	-	105	242
% Other Vehicles	12.5	1.8	-	-	2.3	3.8	4.1	-	4.0	4.2	9.4	-	4.3	3.9
Pedestrians	-	-	0	-	-	-	-	0	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-



Counter: MIO:
Set up By JB:

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Count Name: 1 Route 100 &
Font Road
Site Code:
Start Date: 06/08/2023
Page No: 2



Turning Movement Data Plot



Counter: MIO:
Set up By JB:

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Count Name: 1 Route 100 &
Font Road
Site Code:
Start Date: 06/08/2023
Page No: 3

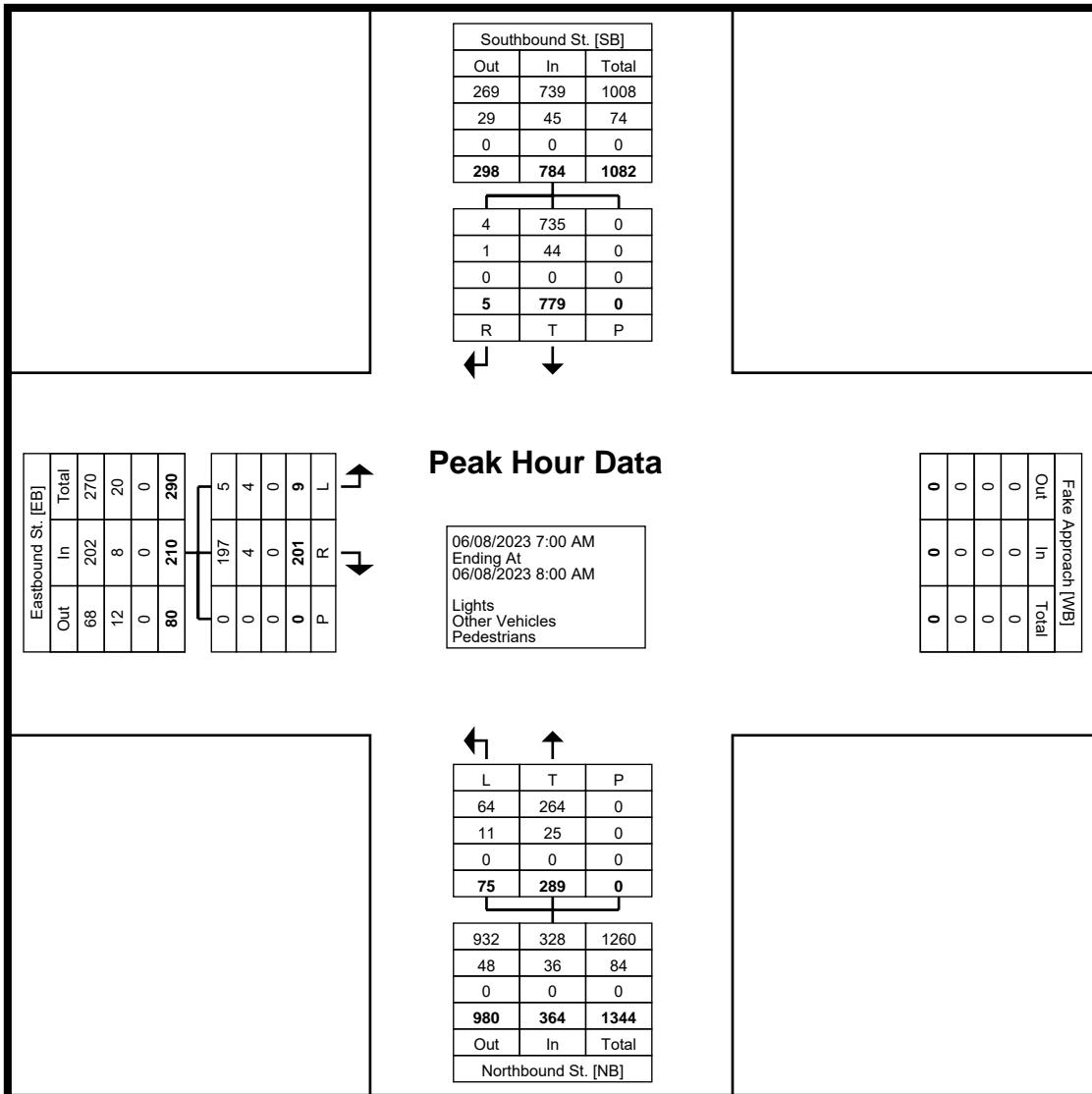
Turning Movement Peak Hour Data (7:00 AM)



Counter: MIO:
Set up By JB:

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Count Name: 1 Route 100 &
Font Road
Site Code:
Start Date: 06/08/2023
Page No: 4



Turning Movement Peak Hour Data Plot (7:00 AM)



Counter: MIO:
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2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Count Name: 1 Route 100 &
Font Road
Site Code:
Start Date: 06/08/2023
Page No: 5

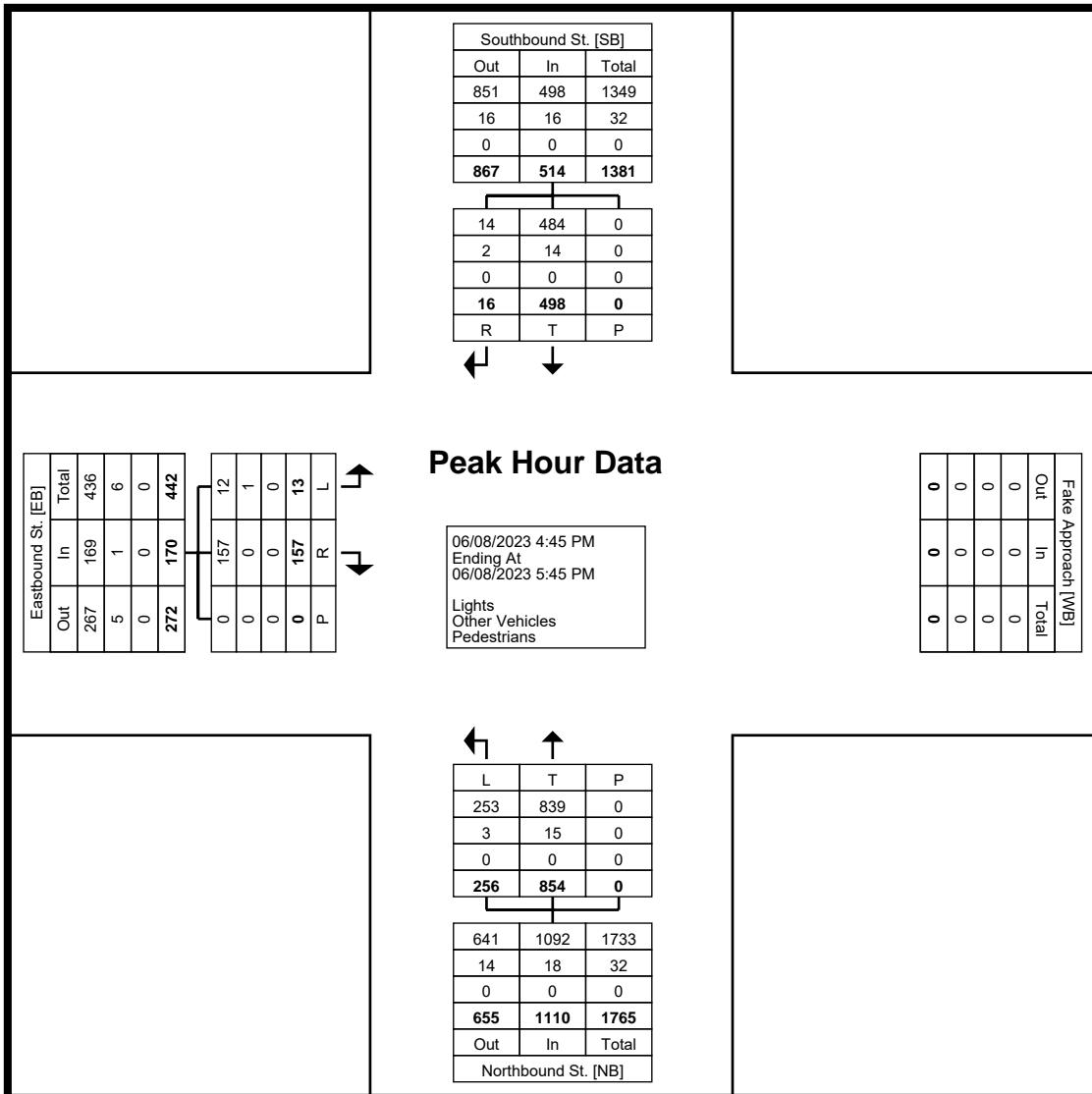
Turning Movement Peak Hour Data (4:45 PM)



Counter: MIO:
Set up By JB:

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Count Name: 1 Route 100 &
Font Road
Site Code:
Start Date: 06/08/2023
Page No: 6



Turning Movement Peak Hour Data Plot (4:45 PM)



Counter: MIO:
Set up By JB:

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Count Name: 2 Route 100 &
Fellowship Road
Site Code:
Start Date: 06/08/2023
Page No: 1

Turning Movement Data

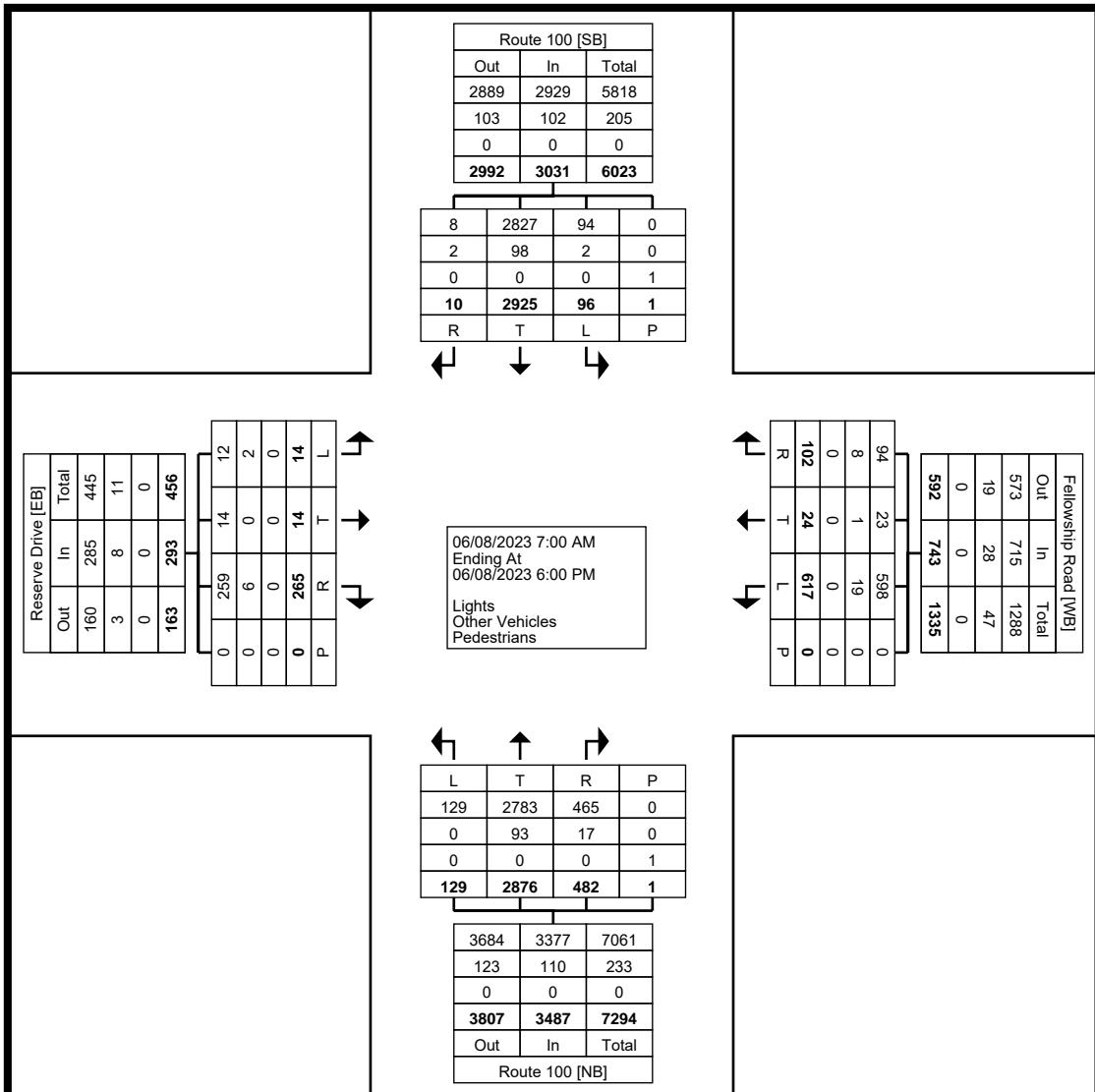
Start Time	Reserve Drive							Fellowship Road							Route 100							Route 100							
	Eastbound							Westbound							Northbound							Southbound							
	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds
7:00 AM	0	0	19	3	0	22	31	0	4	0	0	35	2	72	7	0	0	81	5	225	2	0	0	0	232	370			
7:15 AM	0	0	15	1	0	16	34	0	4	0	0	38	3	66	13	5	1	87	10	233	1	0	0	0	244	385			
7:30 AM	3	0	11	1	0	15	21	0	3	0	0	24	7	90	11	1	0	109	3	230	0	0	0	0	233	381			
7:45 AM	0	0	19	0	0	19	60	2	8	1	0	71	7	120	16	4	0	147	5	211	0	0	0	0	216	453			
Hourly Total	3	0	64	5	0	72	146	2	19	1	0	168	19	348	47	10	1	424	23	899	3	0	0	0	925	1589			
8:00 AM	0	0	8	7	0	15	60	1	6	7	0	74	4	93	13	3	0	113	9	176	0	0	0	0	185	387			
8:15 AM	0	0	10	15	0	25	55	1	1	8	0	65	3	97	8	6	0	114	4	191	0	0	0	0	195	399			
8:30 AM	0	0	11	6	0	17	50	0	2	5	0	57	1	122	26	4	0	153	6	202	0	1	0	0	209	436			
8:45 AM	2	0	9	7	0	18	43	1	3	2	0	49	8	123	18	9	0	158	13	179	0	0	0	0	192	417			
Hourly Total	2	0	38	35	0	75	208	3	12	22	0	245	16	435	65	22	0	538	32	748	0	1	0	0	781	1639			
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
4:00 PM	0	3	10	1	0	14	24	3	9	2	0	38	7	257	36	9	0	309	4	155	0	0	0	0	159	520			
4:15 PM	3	2	7	5	0	17	30	5	2	3	0	40	7	267	30	6	0	310	2	169	0	0	0	0	171	538			
4:30 PM	2	2	22	2	0	28	30	0	4	5	0	39	17	263	27	1	0	308	3	165	0	0	0	0	168	543			
4:45 PM	0	1	10	2	0	13	38	0	4	1	0	43	16	246	27	2	0	291	5	160	1	1	0	0	167	514			
Hourly Total	5	8	49	10	0	72	122	8	19	11	0	160	47	1033	120	18	0	1218	14	649	1	1	0	0	665	2115			
5:00 PM	1	1	8	11	0	21	40	4	2	1	0	47	13	278	37	4	0	332	5	129	0	1	1	1	135	535			
5:15 PM	1	3	8	10	0	22	28	1	3	4	0	36	9	292	51	4	0	356	5	178	0	0	0	0	183	597			
5:30 PM	1	0	8	6	0	15	30	5	2	2	0	39	16	274	44	14	0	348	6	160	1	1	0	0	168	570			
5:45 PM	1	2	7	6	0	16	43	1	3	1	0	48	9	216	40	6	0	271	11	162	0	1	0	0	174	509			
Hourly Total	4	6	31	33	0	74	141	11	10	8	0	170	47	1060	172	28	0	1307	27	629	1	3	1	1	660	2211			
Grand Total	14	14	182	83	0	293	617	24	60	42	0	743	129	2876	404	78	1	3487	96	2925	5	5	1	1	3031	7554			
Approach %	4.8	4.8	62.1	28.3	-	-	83.0	3.2	8.1	5.7	-	-	3.7	82.5	11.6	2.2	-	-	3.2	96.5	0.2	0.2	-	-	-	-			
Total %	0.2	0.2	2.4	1.1	-	3.9	8.2	0.3	0.8	0.6	-	9.8	1.7	38.1	5.3	1.0	-	46.2	1.3	38.7	0.1	0.1	-	40.1	-				
Lights	12	14	178	81	-	285	598	23	53	41	-	715	129	2783	390	75	-	3377	94	2827	3	5	-	2929	7306				
% Lights	85.7	100.0	97.8	97.6	-	97.3	96.9	95.8	88.3	97.6	-	96.2	100.0	96.8	96.5	96.2	-	96.8	97.9	96.6	60.0	100.0	-	96.6	96.7				
Other Vehicles	2	0	4	2	-	8	19	1	7	1	-	28	0	93	14	3	-	110	2	98	2	0	-	102	248				
% Other Vehicles	14.3	0.0	2.2	2.4	-	2.7	3.1	4.2	11.7	2.4	-	3.8	0.0	3.2	3.5	3.8	-	3.2	2.1	3.4	40.0	0.0	-	3.4	3.3				
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	1	-				
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-				



Counter: MIO:
Set up By JB:

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Count Name: 2 Route 100 &
Fellowship Road
Site Code:
Start Date: 06/08/2023
Page No: 2



Turning Movement Data Plot



Counter: MIO:
Set up By JB:

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Count Name: 2 Route 100 &
Fellowship Road
Site Code:
Start Date: 06/08/2023
Page No: 3

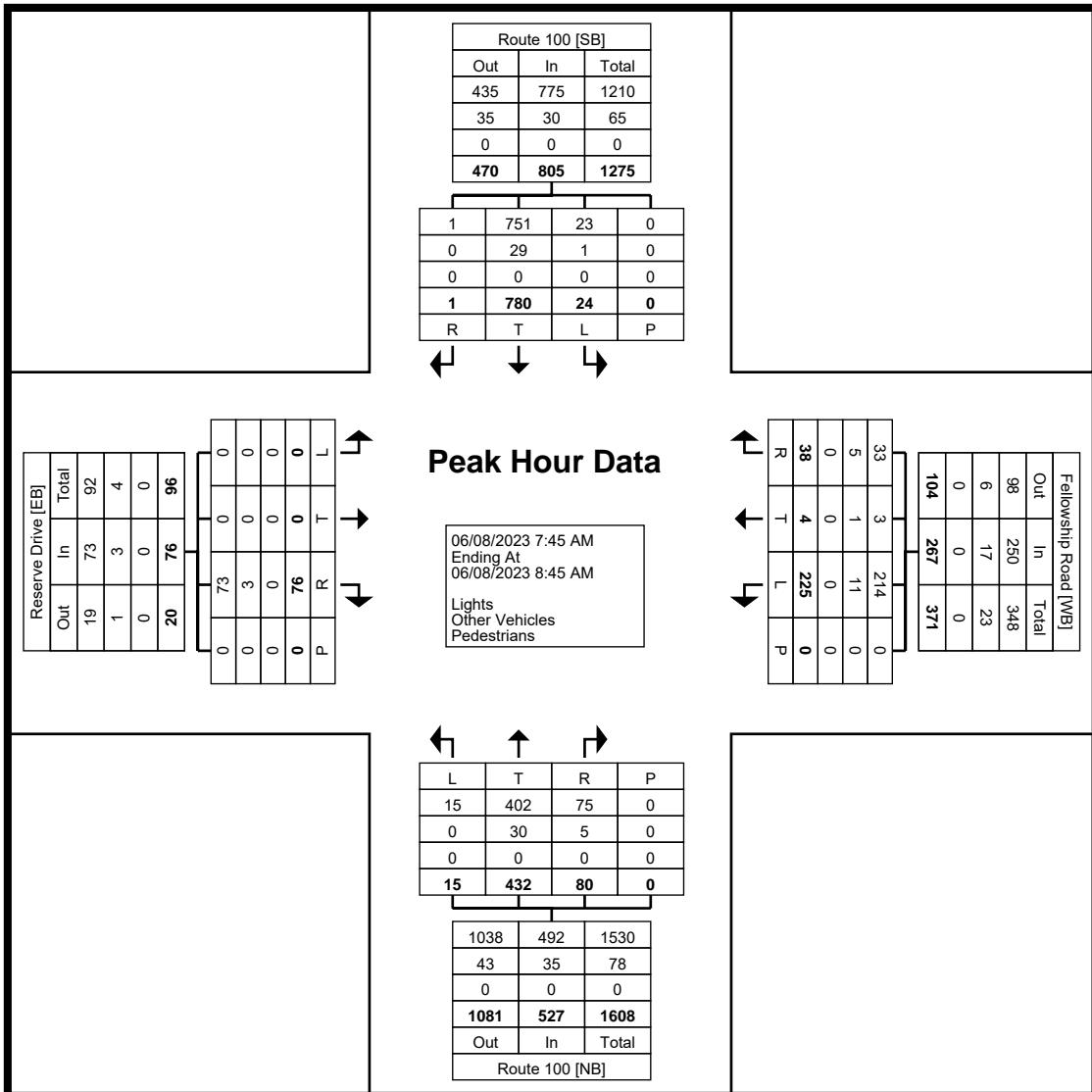
Turning Movement Peak Hour Data (7:45 AM)



Counter: MIO:
Set up By JB:

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Count Name: 2 Route 100 &
Fellowship Road
Site Code:
Start Date: 06/08/2023
Page No: 4



Turning Movement Peak Hour Data Plot (7:45 AM)



Counter: MIO:
Set up By JB:

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Count Name: 2 Route 100 &
Fellowship Road
Site Code:
Start Date: 06/08/2023
Page No: 5

Turning Movement Peak Hour Data (4:45 PM)

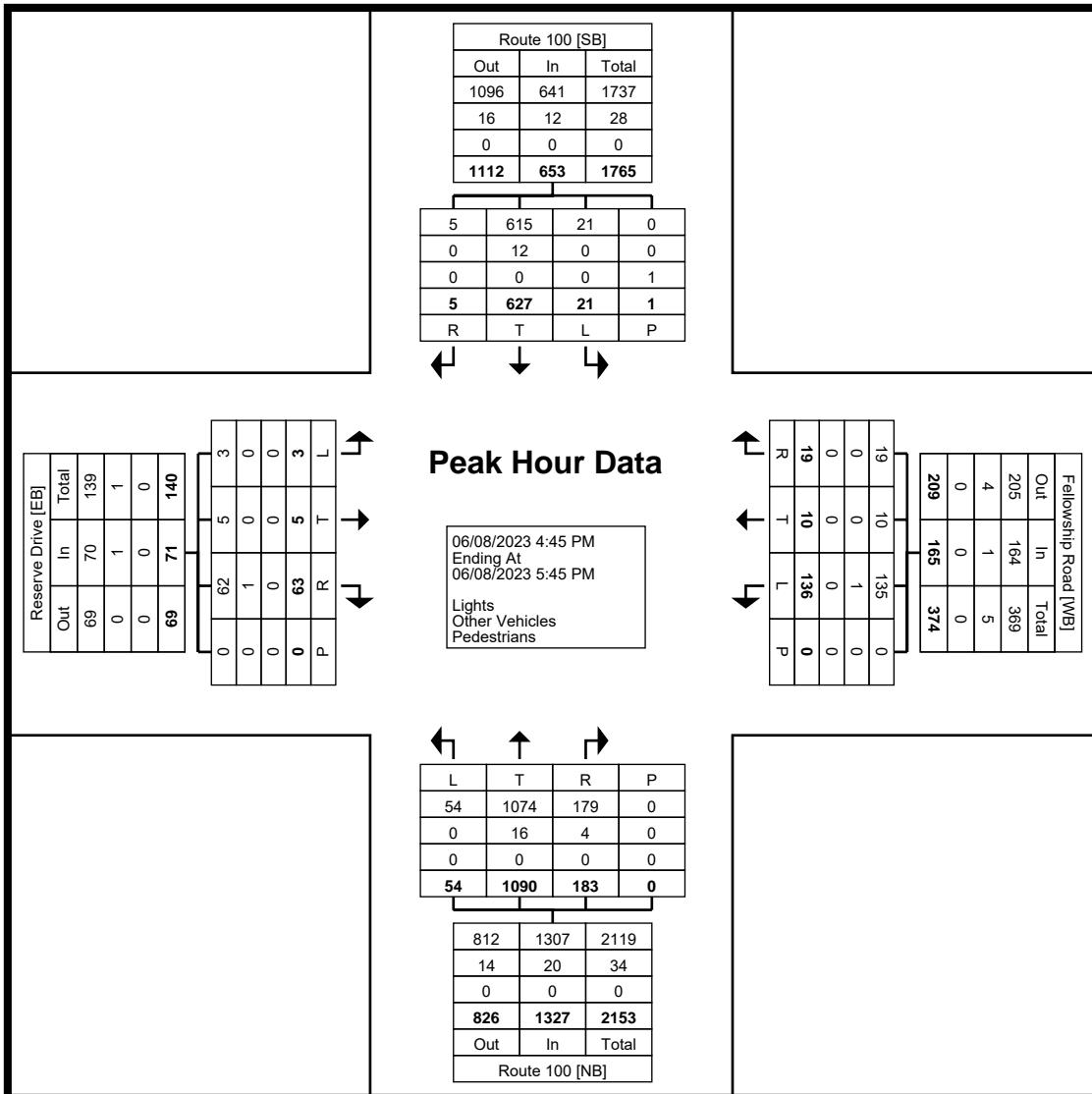
Start Time	Reserve Drive							Fellowship Road							Route 100							Route 100							Int. Total
	Eastbound							Westbound							Northbound							Southbound							
	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru	Right	Right on Red	Peds	App. Total	Left	Thru			
4:45 PM	0	1	10	2	0	13	38	0	4	1	0	43	16	246	27	2	0	291	5	160	1	1	0	167	514				
5:00 PM	1	1	8	11	0	21	40	4	2	1	0	47	13	278	37	4	0	332	5	129	0	1	1	135	535				
5:15 PM	1	3	8	10	0	22	28	1	3	4	0	36	9	292	51	4	0	356	5	178	0	0	0	183	597				
5:30 PM	1	0	8	6	0	15	30	5	2	2	0	39	16	274	44	14	0	348	6	160	1	1	0	168	570				
Total	3	5	34	29	0	71	136	10	11	8	0	165	54	1090	159	24	0	1327	21	627	2	3	1	653	2216				
Approach %	4.2	7.0	47.9	40.8	-	-	82.4	6.1	6.7	4.8	-	-	4.1	82.1	12.0	1.8	-	-	3.2	96.0	0.3	0.5	-	-	-				
Total %	0.1	0.2	1.5	1.3	-	3.2	6.1	0.5	0.5	0.4	-	7.4	2.4	49.2	7.2	1.1	-	59.9	0.9	28.3	0.1	0.1	-	29.5	-				
PHF	0.750	0.417	0.850	0.659	-	0.807	0.850	0.500	0.688	0.500	-	0.878	0.844	0.933	0.779	0.429	-	0.932	0.875	0.881	0.500	0.750	-	0.892	0.928				
Lights	3	5	34	28	-	70	135	10	11	8	-	164	54	1074	156	23	-	1307	21	615	2	3	-	641	2182				
% Lights	100.0	100.0	100.0	96.6	-	98.6	99.3	100.0	100.0	100.0	-	99.4	100.0	98.5	98.1	95.8	-	98.5	100.0	98.1	100.0	100.0	-	98.2	98.5				
Other Vehicles	0	0	0	1	-	1	1	0	0	0	-	1	0	16	3	1	-	20	0	12	0	0	-	12	34				
% Other Vehicles	0.0	0.0	0.0	3.4	-	1.4	0.7	0.0	0.0	0.0	-	0.6	0.0	1.5	1.9	4.2	-	1.5	0.0	1.9	0.0	0.0	-	1.8	1.5				
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-				
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-				



Counter: MIO:
Set up By JB:

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Count Name: 2 Route 100 &
Fellowship Road
Site Code:
Start Date: 06/08/2023
Page No: 6



Turning Movement Peak Hour Data Plot (4:45 PM)



Counter: MIO:
Set up By JB:

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Count Name: 3 Route 100 & Garrison Road-Milford Road
Site Code:
Start Date: 06/08/2023
Page No: 1

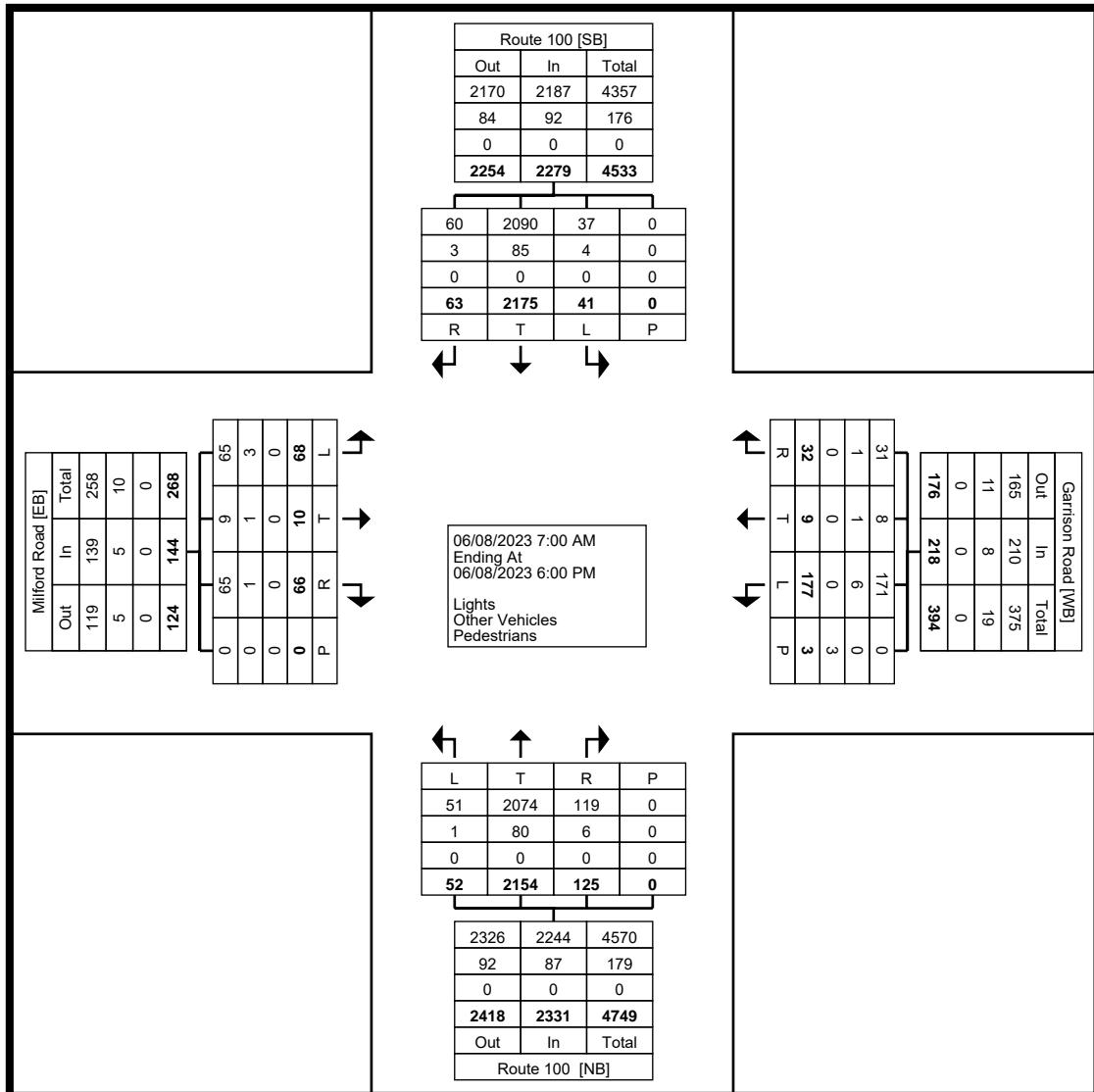
Turning Movement Data



Counter: MIO:
Set up By JB:

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Count Name: 3 Route 100 &
Garrison Road-Milford Road
Site Code:
Start Date: 06/08/2023
Page No: 2





Counter: MIO:
Set up By JB:

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Count Name: 3 Route 100 & Garrison Road-Milford Road
Site Code:
Start Date: 06/08/2023
Page No: 3

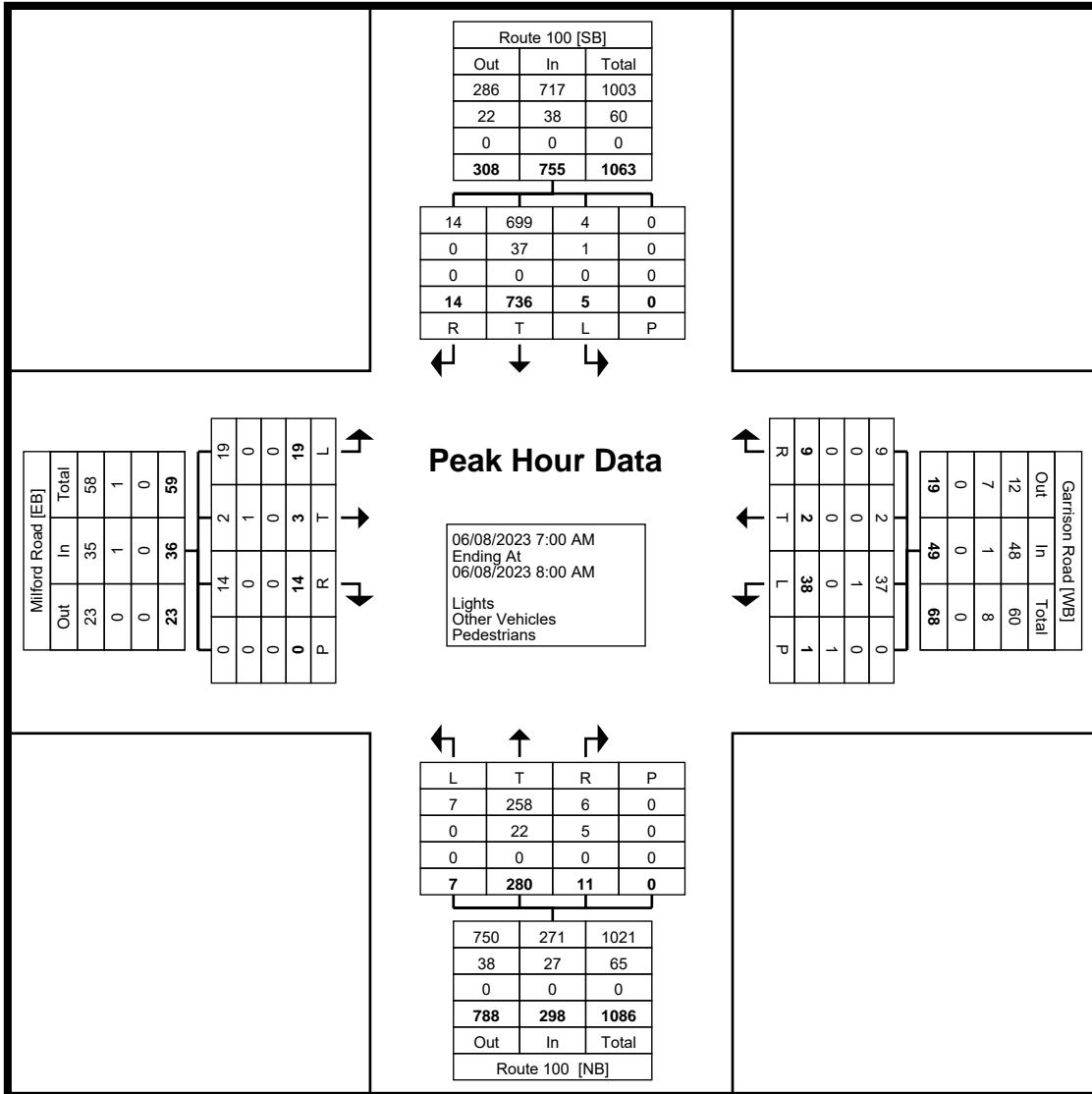
Turning Movement Peak Hour Data (7:00 AM)



Counter: MIO:
Set up By JB:

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Count Name: 3 Route 100 &
Garrison Road-Milford Road
Site Code:
Start Date: 06/08/2023
Page No: 4



Turning Movement Peak Hour Data Plot (7:00 AM)



Counter: MIO:
Set up By JB:

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Count Name: 3 Route 100 & Garrison Road-Milford Road
Site Code:
Start Date: 06/08/2023
Page No: 5

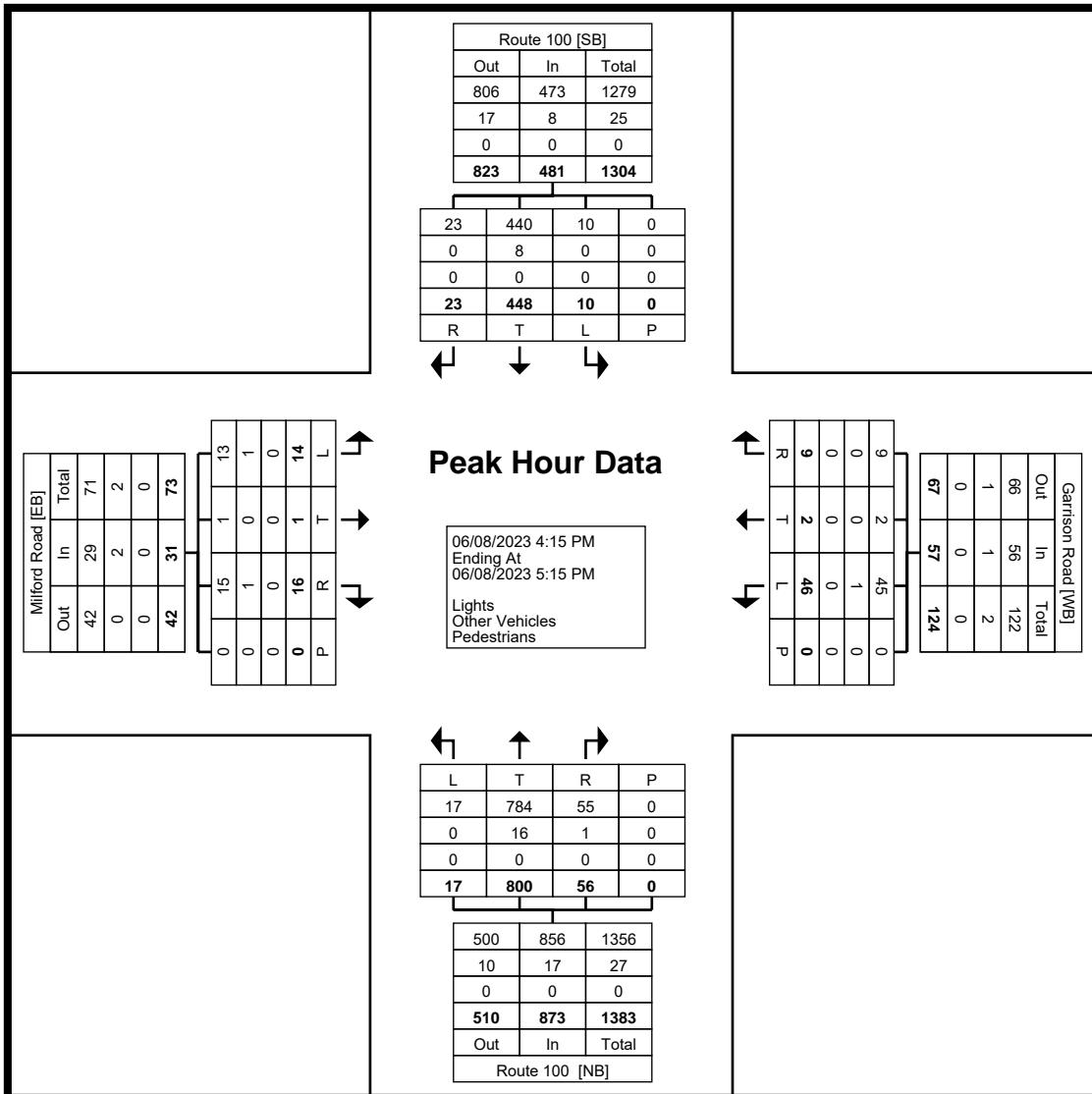
Turning Movement Peak Hour Data (4:15 PM)



Counter: MIO:
Set up By JB:

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100

Count Name: 3 Route 100 &
Garrison Road-Milford Road
Site Code:
Start Date: 06/08/2023
Page No: 6

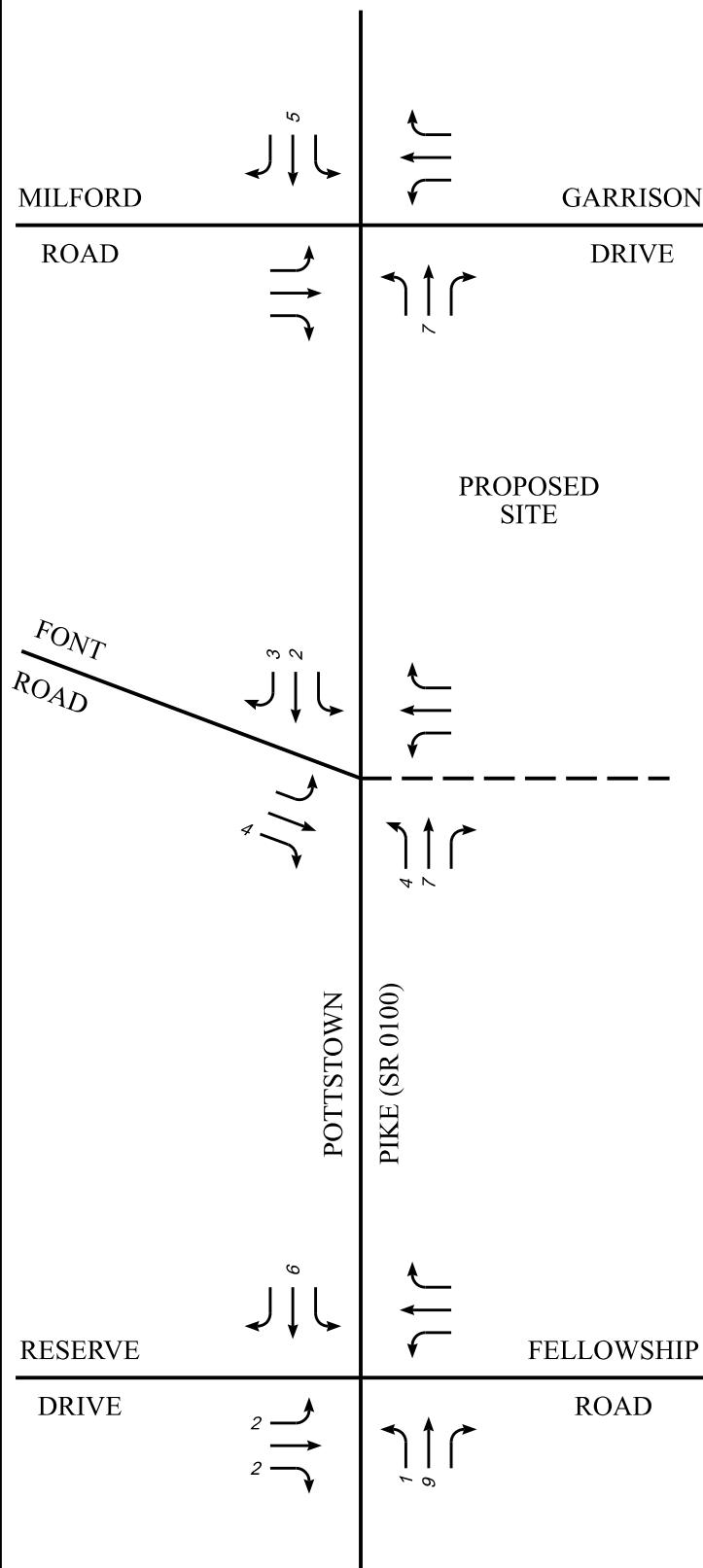


Turning Movement Peak Hour Data Plot (4:15 PM)

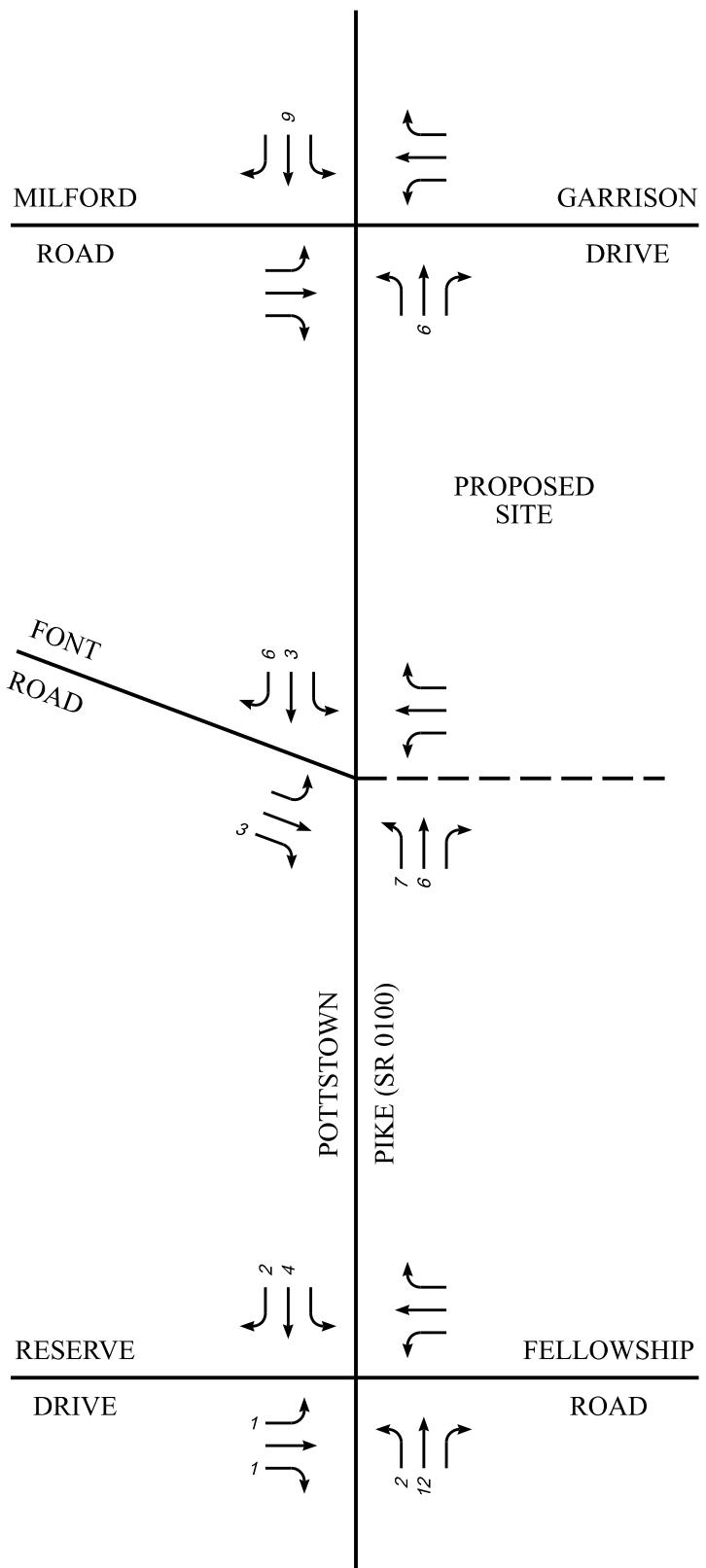
APPENDIX D:
Nearby Development Data

McKee-Fetters Tract

WEEKDAY A.M. PEAK HOUR



WEEKDAY P.M. PEAK HOUR



KEY:

----- PROPOSED DRIVEWAY
SCHEMATIC DRAWING: NOT TO SCALE



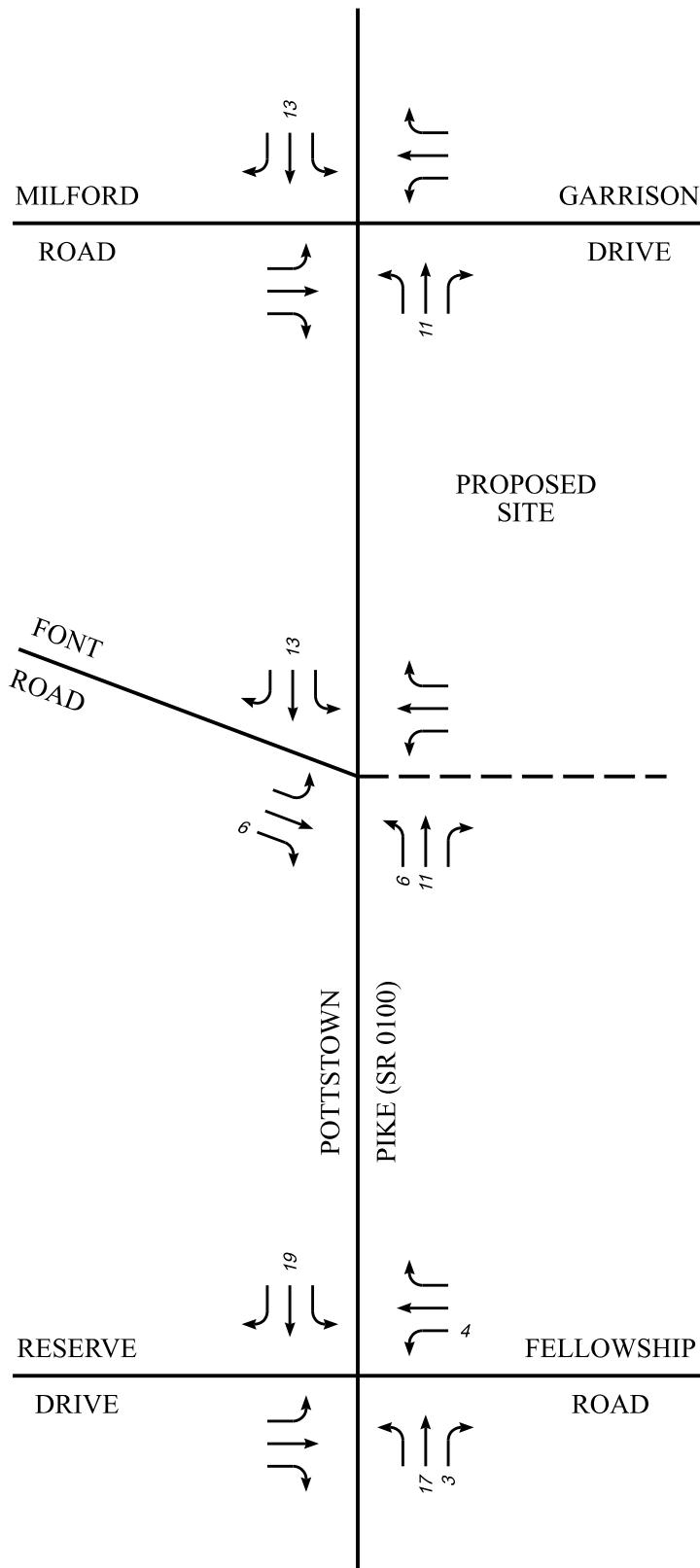
TRAFFIC PLANNING AND DESIGN, INC.
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FIGURE D-1

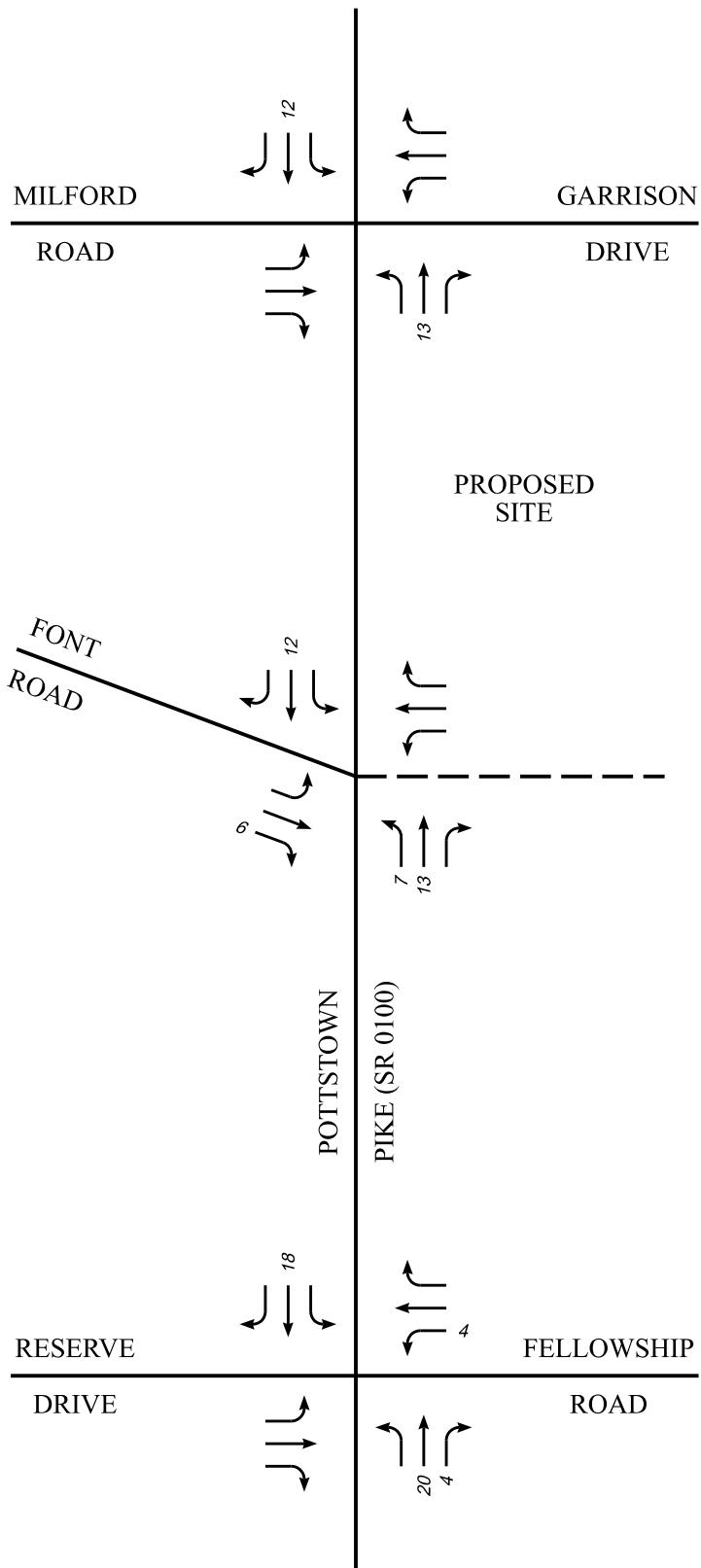
MCKEE FETTERS TRACT
WEEKDAY PEAK HOUR
NEARBY TRIP DISTRIBUTIONS

Byers Station Parcel 5C Lot 2B

WEEKDAY A.M. PEAK HOUR

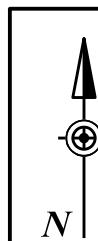


WEEKDAY P.M. PEAK HOUR



KEY:

**----- PROPOSED DRIVEWAY
SCHEMATIC DRAWING:NOT TO SCALE**



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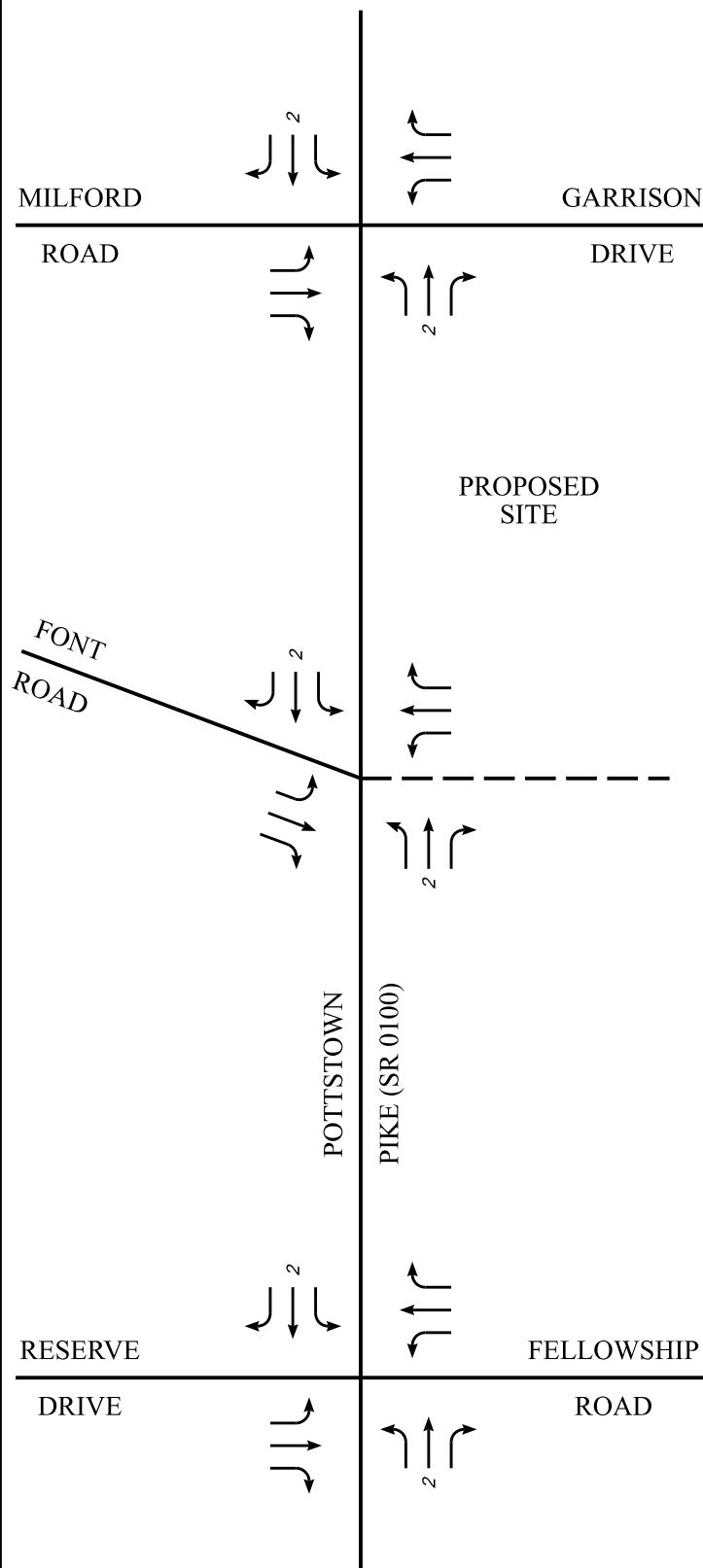
www.flameiD.com 1.877.873.5755 ID@flameiD.com

FIGURE D-2

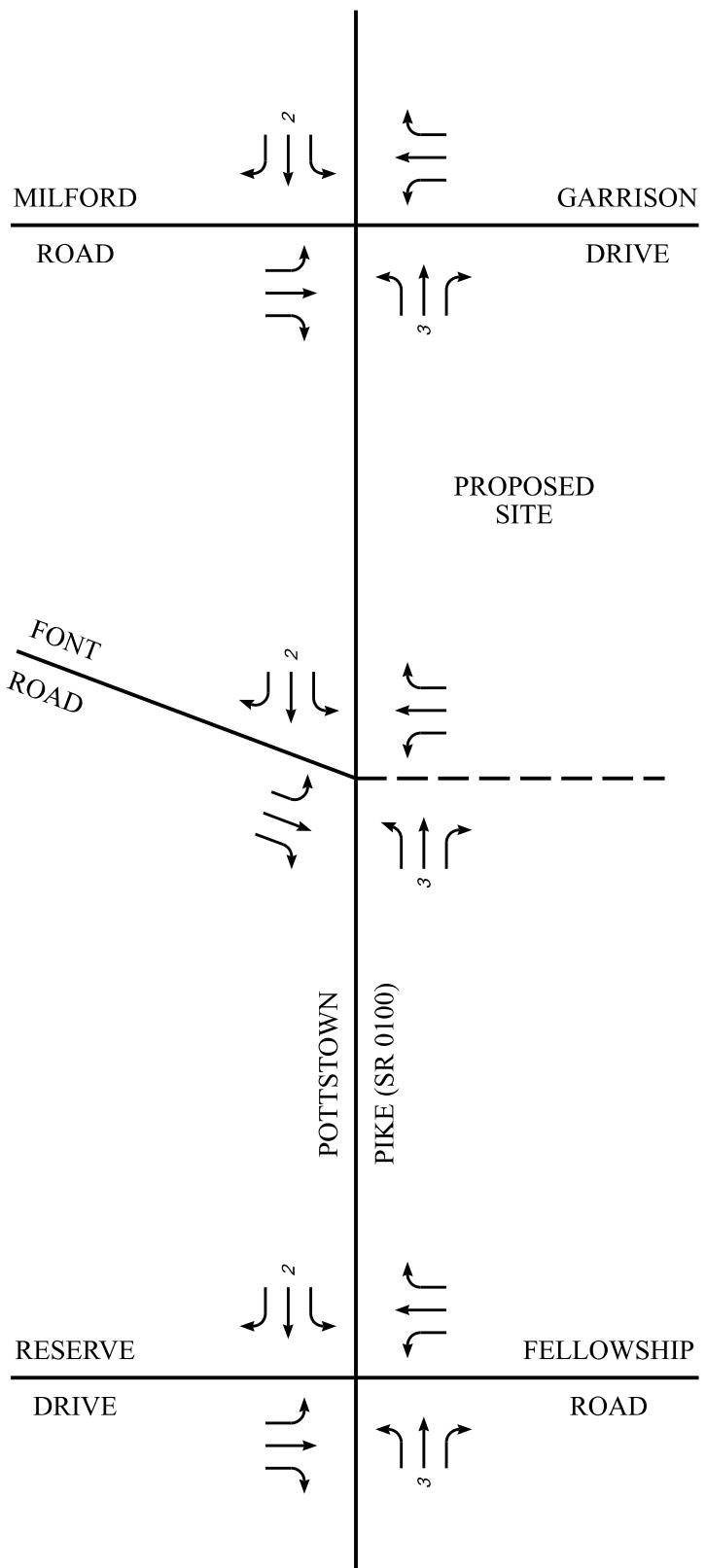
BYERS STATION PARCEL 5C LOT 2B
WEEKDAY PEAK HOUR
NEARBY TRIP DISTRIBUTIONS

Byers Station Parcel 6C

WEEKDAY A.M. PEAK HOUR



WEEKDAY P.M. PEAK HOUR



KEY:

----- PROPOSED DRIVEWAY
SCHEMATIC DRAWING: NOT TO SCALE



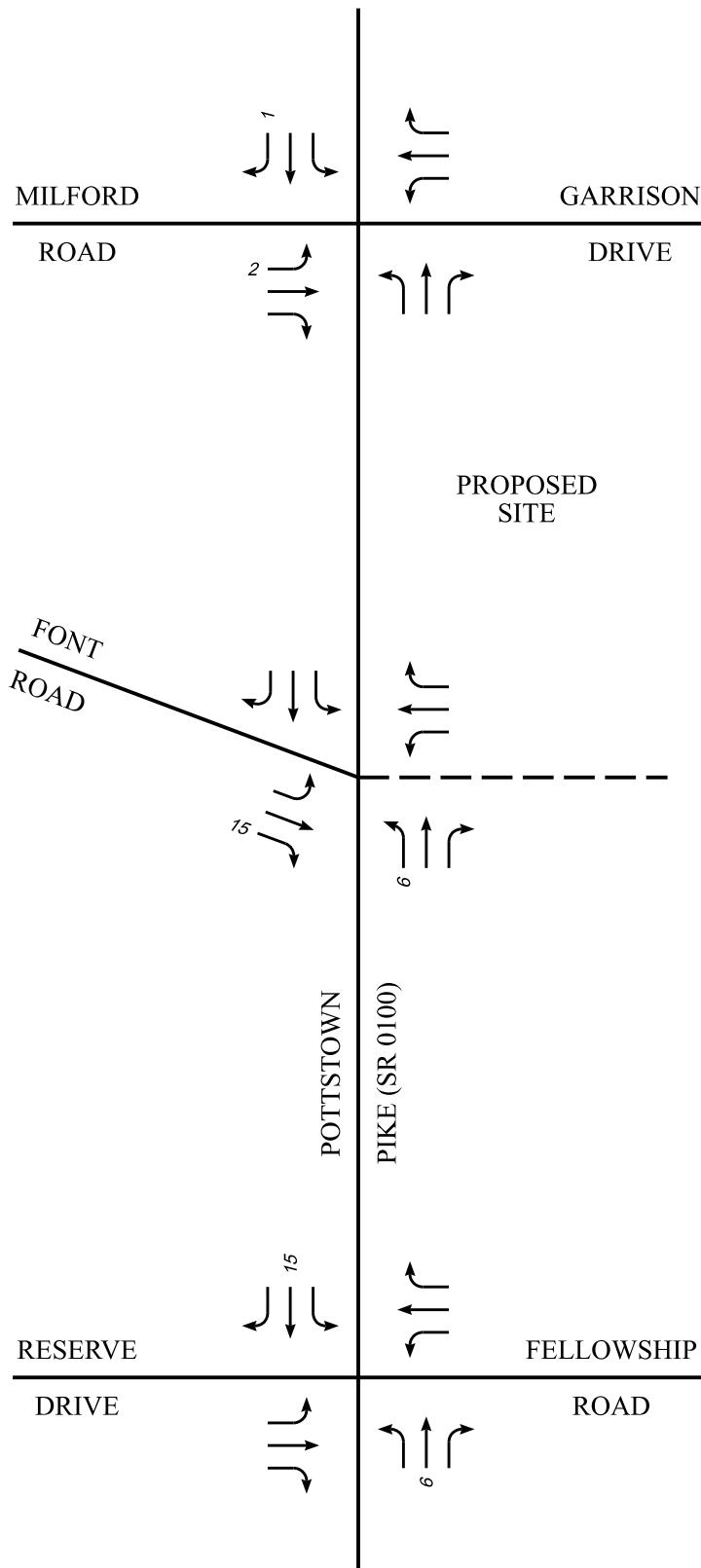
TRAFFIC PLANNING AND DESIGN, INC.
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FIGURE D-3

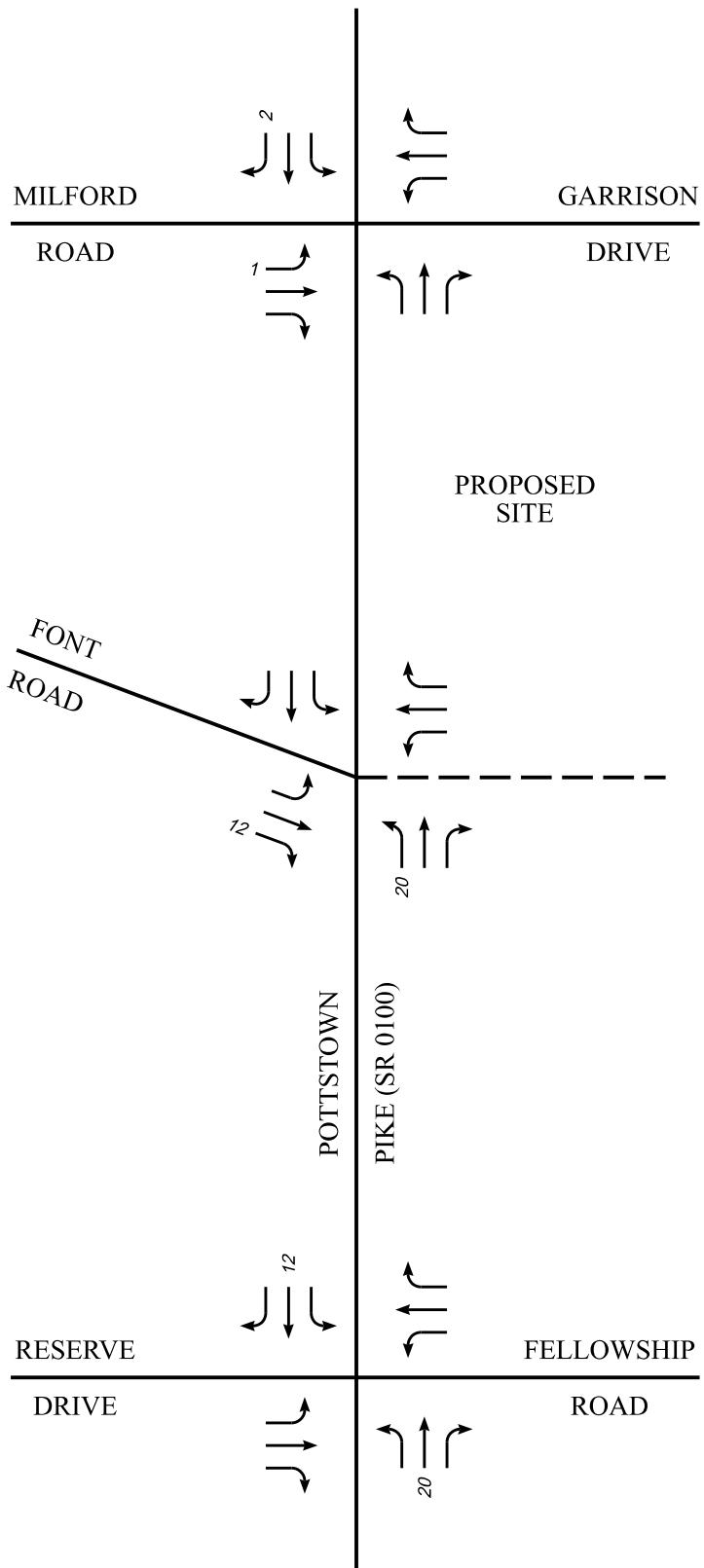
BYERS STATION PARCEL 6C
WEEKDAY PEAK HOUR
NEARBY TRIP DISTRIBUTIONS

***100 Greenridge Road
Residential Development***

WEEKDAY A.M. PEAK HOUR



WEEKDAY P.M. PEAK HOUR



KEY:

**----- PROPOSED DRIVEWAY
SCHEMATIC DRAWING:NOT TO SCALE**



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FIGURE D-4

100 GREENRIDGE ROAD RESIDENTIAL WEEKDAY PEAK HOUR NEARBY TRIP DISTRIBUTIONS

APPENDIX E:
Volume Development Spreadsheets
& Trip Assignment Data

Volume Development Spreadsheets

TPD# TMAS.00013

3/4/2024

Traffic Volumes Worksheet

Intersection:

Pottstown Pike (S.R. 0100) & Font Road/Proposed Driveway

Synchro Node:

1 Adjacent intersections: West 0 East 0 North 0 South 0

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection Volume
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	
2023 Existing Counts	9	201					75	289		779	5	1358	
Balancing (0.48% compounded for 1 yr)	0	1					0	1		4	0	6	
2024 Existing Volumes (Balanced)	9	202					75	290		783	5	1364	

Base growth (0.48% compounded for 3 yrs)	0	3					1	4			11	0	19
McKee-Fetters Tract (~40% Built/Occupied)		4					4	7			2	3	20
Byers Station Parcel 5C Lot 2B		6					6	11			13		36
Byers Station Parcel 6C								2			2		4
100 Greenridge Road Residential		15					6						21

2027 Base Volumes	9	230					92	314			811	8	1464
--------------------------	----------	------------	--	--	--	--	-----------	------------	--	--	------------	----------	-------------

ENTER = **51**
EXIT = **20**

Trip Assignment % - New Enter		10.0%								57.0%	33.0%		
Trip Assignment % - New Exit			57.0%	10.0%	33.0%								
New Trips		5		11	2	7			29	17			71
2027 Projected Volumes	9	5	230	11	2	7	92	314	29	17	811	8	1535

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection Volume
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	
2023 Existing Counts	13	157					256	854		498	16	1794	
Balancing (0.48% compounded for 1 yr)	0	1					1	4			2	0	8
2024 Existing Volumes (Balanced)	13	158					257	858		500	16	1802	

Base growth (0.48% compounded for 3 yrs)	0	2					4	12			7	0	25
McKee-Fetters Tract (~40% Built/Occupied)		3					7	6			3	6	25
Byers Station Parcel 5C Lot 2B		6					7	13			12		38
Byers Station Parcel 6C								3			2		5
100 Greenridge Road Residential		12					20						32

2027 Base Volumes	13	181					295	892			524	22	1927
--------------------------	-----------	------------	--	--	--	--	------------	------------	--	--	------------	-----------	-------------

ENTER = **30**
EXIT = **47**

Trip Assignment % - New Enter		10.0%								57.0%	33.0%		
Trip Assignment % - New Exit			57.0%	10.0%	33.0%								
New Trips		3		27	5	15			17	10			77
2027 Projected Volumes	13	3	181	27	5	15	295	892	17	10	524	22	2004

TPD# TMAS.00013

3/4/2024

Traffic Volumes Worksheet

Intersection:

Pottstown Pike (S.R. 0100) & Reserve Drive/Fellowship Drive

Synchro Node:

2 Adjacent intersections: West 0 East 0 North 0 South 0

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection Volume
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	
2023 Existing Counts	0	0	76	225	4	38	15	432	80	24	780	1	1675
Balancing (0.48% compounded for 1 yr)	0	0	0	1	0	0	0	2	0	0	4	0	7
2024 Existing Volumes (Balanced)	0	0	76	226	4	38	15	434	80	24	784	1	1682

Base growth (0.48% compounded for 3 yrs)				3		1		6	1	0	11		22
McKee-Fetters Tract (~40% Built/Occupied)	2		2				1	9			6		20
Byers Station Parcel 5C Lot 2B				4				17	3		19		43
Byers Station Parcel 6C							2				2		4
100 Greenridge Road Residential							6				15		21

2027 Base Volumes	2	0	78	233	4	39	16	474	84	24	837	1	1792
-------------------	---	---	----	-----	---	----	----	-----	----	----	-----	---	------

ENTER = 51
EXIT = 20

Trip Assignment % - New Enter					5.0%		52.0%						
Trip Assignment % - New Exit													
New Trips					3		26		1	10			40
2027 Projected Volumes	2	0	78	233	4	42	16	500	84	25	847	1	1832

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection Volume
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	
2023 Existing Counts	3	5	63	136	10	19	54	1090	183	21	627	5	2216
Balancing (0.48% compounded for 1 yr)	0	0	0	1	0	0	0	5	1	0	3	0	10
2024 Existing Volumes (Balanced)	3	5	63	137	10	19	54	1095	184	21	630	5	2226

Base growth (0.48% compounded for 3 yrs)				2		0		16	3	0	9		30
McKee-Fetters Tract (~40% Built/Occupied)	1		1				2	12			4	2	22
Byers Station Parcel 5C Lot 2B				4				20	4		18		46
Byers Station Parcel 6C							3				2		5
100 Greenridge Road Residential							20				12		32

2027 Base Volumes	4	5	64	143	10	19	56	1166	191	21	675	7	2361
-------------------	---	---	----	-----	----	----	----	------	-----	----	-----	---	------

ENTER = 30
EXIT = 47

Trip Assignment % - New Enter					5.0%		52.0%						
Trip Assignment % - New Exit													
New Trips					1		16		2	25			44
2027 Projected Volumes	4	5	64	143	10	20	56	1182	191	23	700	7	2405

TPD# TMAS.00013

3/4/2024

Traffic Volumes Worksheet

Intersection:

Pottstown Pike (S.R. 0100) & Milford Road/Garrison Drive

Synchro Node:

3 Adjacent intersections: West 0 East 0 North 0 South 0

Time Period: Weekday A.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection Volume
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	
2023 Existing Counts	19	3	14	38	2	9	7	280	11	5	736	14	1138
Balancing (0.48% compounded for 1 yr)	0	0	0	0	0	0	0	1	0	0	4	0	5
2024 Existing Volumes (Balanced)	19	3	14	38	2	9	7	281	11	5	740	14	1143

Base growth (0.48% compounded for 3 yrs)							4			11			15
McKee-Fetters Tract (~40% Built/Occupied)							7			5			12
Byers Station Parcel 5C Lot 2B							11			13			24
Byers Station Parcel 6C							2			2			4
100 Greenridge Road Residential		2								1			3

2027 Base Volumes	21	3	14	38	2	9	7	305	11	5	771	15	1201
--------------------------	----	---	----	----	---	---	---	-----	----	---	-----	----	------

ENTER = **51**
EXIT = **20**

Trip Assignment % - New Enter										33.0%			
Trip Assignment % - New Exit								33.0%					
New Trips							7			17			24
2027 Projected Volumes	21	3	14	38	2	9	7	312	11	5	788	15	1225

Time Period: Weekday P.M. Peak Hour

	Eastbound			Westbound			Northbound			Southbound			Intersection Volume
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	
2023 Existing Counts	14	1	16	46	2	9	17	800	56	10	448	23	1442
Balancing (0.48% compounded for 1 yr)	0	0	0	0	0	0	0	4	0	0	2	0	6
2024 Existing Volumes (Balanced)	14	1	16	46	2	9	17	804	56	10	450	23	1448

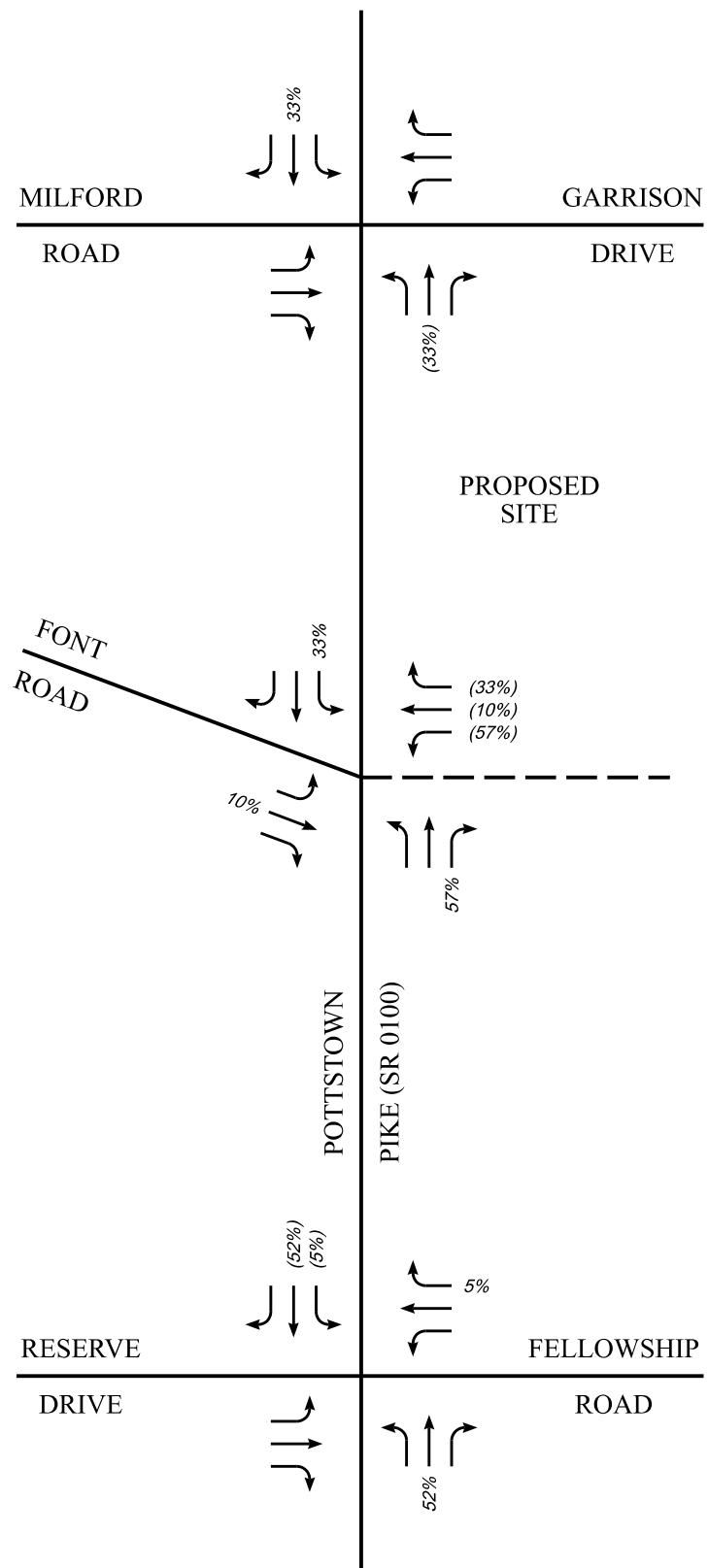
Base growth (0.48% compounded for 3 yrs)							12			7			19
McKee-Fetters Tract (~40% Built/Occupied)							6			9			15
Byers Station Parcel 5C Lot 2B							13			12			25
Byers Station Parcel 6C							3			2			5
100 Greenridge Road Residential		1								2			3

2027 Base Volumes	15	1	16	46	2	9	17	838	56	10	480	25	1515
--------------------------	----	---	----	----	---	---	----	-----	----	----	-----	----	------

ENTER = **30**
EXIT = **47**

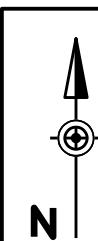
Trip Assignment % - New Enter										33.0%			
Trip Assignment % - New Exit							33.0%						
New Trips							15			10			25
2027 Projected Volumes	15	1	16	46	2	9	17	853	56	10	490	25	1540

Trip Assignment Data



KEY:

----- PROPOSED DRIVEWAY
SCHEMATIC DRAWING: NOT TO SCALE



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FIGURE E-1

AUTOMOTIVE SERVICE CENTER
WEEKDAY PEAK HOUR
TRAFFIC VOLUMES

APPENDIX F:
Critical/Follow-up Gap Data

**CRITICAL HEADWAY CALCULATIONS FOR TWSC INTERSECTION WITHIN SUBURBAN LAND USE CONTEXT
BASED ON PENNSYLVANIA DEFAULT VALUES FROM CHAPTER 10 OF PENNDOT PUBLICATION 46**

$$t_{c,x} = t_{c,base} + t_{c,HV} * P_{HV} + t_{c,G} * G - t_{3,LT}$$

where:

- $t_{c,x}$ = critical headway for movement x (s)
- $t_{c,base}$ = base critical headway from Chapter 10 of PennDOT Publication 46
- $t_{c,HV}$ = adjustment factor for heavy vehicles (1.0 for major streets with one lane in each direction; 2.0 for major streets with two or three lanes in each direction) (s)
- P_{HV} = proportion of heavy vehicles for movement (expressed as a decimal; e.g., $P_{HV}=0.02$ for 2% heavy vehicles)
- $t_{c,G}$ = adjustment factor for grade (0.1 for Movement 9 and 12; 0.2 for Movements 7,8,10, and 11) (s)
- G = percent grade (expressed as an integer; e.g., $G= -2$ for a 2% downhill grade)
- $t_{c,base}$ = adjustment factor for intersection geometry (0.7 for minor street left-turn movement at three-leg intersections; 0.0 otherwise) (s)

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
LEFT TURN FROM MAJOR ROADWAY - TWO LANES ($t_{c,base} = 4.3$)																					
HV %																					
0	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	
1	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	
2	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	
3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	
4	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	
5	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	
6	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	
7	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	
8	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	
9	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	
10	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
LEFT TURN FROM MINOR ROADWAY - TWO LANES - 4-LEG INTERSECTION ($t_{c,base} = 7.1$)																					
HV %																					
0	7.1	6.9	7.3	6.7	7.5	6.5	7.7	6.3	7.9	6.1	8.1	5.9	8.3	5.7	8.5	5.5	8.7	5.3	8.9	5.1	9.1
1	7.1	6.9	7.3	6.7	7.5	6.5	7.7	6.3	7.9	6.1	8.1	5.9	8.3	5.7	8.5	5.5	8.7	5.3	8.9	5.1	9.1
2	7.1	6.9	7.3	6.7	7.5	6.5	7.7	6.3	7.9	6.1	8.1	5.9	8.3	5.7	8.5	5.5	8.7	5.3	8.9	5.1	9.1
3	7.1	6.9	7.3	6.7	7.5	6.5	7.7	6.3	7.9	6.1	8.1	5.9	8.3	5.7	8.5	5.5	8.7	5.3	8.9	5.1	9.1
4	7.1	6.9	7.3	6.7	7.5	6.5	7.7	6.3	7.9	6.1	8.1	5.9	8.3	5.7	8.5	5.5	8.7	5.3	8.9	5.1	9.1
5	7.2	7.0	7.4	6.8	7.6	6.6	7.8	6.4	8.0	6.2	8.2	6.0	8.4	5.8	8.6	5.6	8.8	5.4	9.0	5.2	9.2
6	7.2	7.0	7.4	6.8	7.6	6.6	7.8	6.4	8.0	6.2	8.2	6.0	8.4	5.8	8.6	5.6	8.8	5.4	9.0	5.2	9.2
7	7.2	7.0	7.4	6.8	7.6	6.6	7.8	6.4	8.0	6.2	8.2	6.0	8.4	5.8	8.6	5.6	8.8	5.4	9.0	5.2	9.2
8	7.2	7.0	7.4	6.8	7.6	6.6	7.8	6.4	8.0	6.2	8.2	6.0	8.4	5.8	8.6	5.6	8.8	5.4	9.0	5.2	9.2
9	7.2	7.0	7.4	6.8	7.6	6.6	7.8	6.4	8.0	6.2	8.2	6.0	8.4	5.8	8.6	5.6	8.8	5.4	9.0	5.2	9.2
10	7.2	7.0	7.4	6.8	7.6	6.6	7.8	6.4	8.0	6.2	8.2	6.0	8.4	5.8	8.6	5.6	8.8	5.4	9.0	5.2	9.2

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
THROUGH TRAFFIC ON MINOR ROADWAY - TWO LANES ($t_{c,base} = 6.5$)																					
HV %																					
0	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
1	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
2	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
3	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
4	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
5	6.6	6.4	6.8	6.2	7.0	6.0	7.2	5.8	7.4	5.6	7.6	5.4	7.8	5.2	8.0	5.0	8.2	4.8	8.4	4.6	8.6
6	6.6	6.4	6.8	6.2	7.0	6.0	7.2	5.8	7.4	5.6	7.6	5.4	7.8	5.2	8.0	5.0	8.2	4.8	8.4	4.6	8.6
7	6.6	6.4	6.8	6.2	7.0	6.0	7.2	5.8	7.4	5.6	7.6	5.4	7.8	5.2	8.0	5.0	8.2	4.8	8.4	4.6	8.6
8	6.6	6.4	6.8	6.2	7.0	6.0	7.2	5.8	7.4	5.6	7.6	5.4	7.8	5.2	8.0	5.0	8.2	4.8	8.4	4.6	8.6
9	6.6	6.4	6.8	6.2	7.0	6.0	7.2	5.8	7.4	5.6	7.6	5.4	7.8	5.2	8.0	5.0	8.2	4.8	8.4	4.6	8.6
10	6.6	6.4	6.8	6.2	7.0	6.0	7.2	5.8	7.4	5.6	7.6	5.4	7.8	5.2	8.0	5.0	8.2	4.8	8.4	4.6	8.6

GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
RIGHT TURN FROM MINOR ROADWAY - TWO LANES ($t_{c,base} = 6.2$)																					
HV %																					
0	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
1	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
2	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
3	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
4	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
5	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
6	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
7	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
8	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
9	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8										

**CRITICAL HEADWAY CALCULATIONS FOR TWSC INTERSECTION WITHIN SUBURBAN LAND USE CONTEXT
BASED ON PENNSYLVANIA DEFAULT VALUES FROM CHAPTER 10 OF PENNDOT PUBLICATION 46**

$$t_{c,x} = t_{c,base} + t_{c,HV} * P_{HV} + t_{c,G} * G - t_{3,LT}$$

where:

- $t_{c,x}$ = critical headway for movement x (s)
- $t_{c,base}$ = base critical headway from Chapter 10 of PennDOT Publication 46
- $t_{c,HV}$ = adjustment factor for heavy vehicles (1.0 for major streets with one lane in each direction; 2.0 for major streets with two or three lanes in each direction) (s)
- P_{HV} = proportion of heavy vehicles for movement (expressed as a decimal; e.g., $P_{HV}=0.02$ for 2% heavy vehicles)
- $t_{c,G}$ = adjustment factor for grade (0.1 for Movement 9 and 12; 0.2 for Movements 7,8,10, and 11) (s)
- G = percent grade (expressed as an integer; e.g., $G= -2$ for a 2% downhill grade)
- $t_{c,base}$ = adjustment factor for intersection geometry (0.7 for minor street left-turn movement at three-leg intersections; 0.0 otherwise) (s)

LEFT TURN FROM MAJOR ROADWAY - TWO LANES ($t_{c,base} = 4.3$)																					
GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	
1	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	
2	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	
3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	
4	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	
5	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	
6	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	
7	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	
8	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	
9	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	
10	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	

LEFT TURN FROM MINOR ROADWAY - TWO LANES - 3-LEG INTERSECTION ($t_{c,base} = 7.1$)																					
GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	6.4	6.2	6.6	6.0	6.8	5.8	7.0	5.6	7.2	5.4	7.4	5.2	7.6	5.0	7.8	4.8	8.0	4.6	8.2	4.4	8.4
1	6.4	6.2	6.6	6.0	6.8	5.8	7.0	5.6	7.2	5.4	7.4	5.2	7.6	5.0	7.8	4.8	8.0	4.6	8.2	4.4	8.4
2	6.4	6.2	6.6	6.0	6.8	5.8	7.0	5.6	7.2	5.4	7.4	5.2	7.6	5.0	7.8	4.8	8.0	4.6	8.2	4.4	8.4
3	6.4	6.2	6.6	6.0	6.8	5.8	7.0	5.6	7.2	5.4	7.4	5.2	7.6	5.0	7.8	4.8	8.0	4.6	8.2	4.4	8.4
4	6.4	6.2	6.6	6.0	6.8	5.8	7.0	5.6	7.2	5.4	7.4	5.2	7.6	5.0	7.8	4.8	8.0	4.6	8.2	4.4	8.4
5	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
6	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
7	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
8	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
9	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5
10	6.5	6.3	6.7	6.1	6.9	5.9	7.1	5.7	7.3	5.5	7.5	5.3	7.7	5.1	7.9	4.9	8.1	4.7	8.3	4.5	8.5

RIGHT TURN FROM MINOR ROADWAY - TWO LANES ($t_{c,base} = 6.2$)																					
GRADE	0	-1	1	-2	2	-3	3	-4	4	-5	5	-6	6	-7	7	-8	8	-9	9	-10	10
HV %																					
0	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
1	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
2	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
3	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
4	6.2	6.1	6.3	6.0	6.4	5.9	6.5	5.8	6.6	5.7	6.7	5.6	6.8	5.5	6.9	5.4	7.0	5.3	7.1	5.2	7.2
5	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
6	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
7	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
8	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
9	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3
10	6.3	6.2	6.4	6.1	6.5	6.0	6.6	5.9	6.7	5.8	6.8	5.7	6.9	5.6	7.0	5.5	7.1	5.4	7.2	5.3	7.3

FOLLOW-UP HEADWAY CALCULATIONS FOR TWSC INTERSECTION WITHIN SUBURBAN LAND USE CONTEXT BASED ON PENNSYLVANIA DEFAULT VALUES FROM CHAPTER 10 OF PENNDOT PUBLICATION 46

$$t_{f,x} = t_{f, \text{base}} + t_{f,HV} * P_{HV}$$

where:

$t_{f,x}$ = follow-up headway for movement x (s)

$t_{f,base}$ = base follow-up headway from Chapter 10 of PennDOT Publication 46

$t_{f,HV}$ = adjustment factor for heavy vehicles (0.9 for major streets with one lane in each direction;

1.0 for major streets with two or three lanes in each direction) (s)

P_{HV} = proportion of heavy vehicles for movement (expressed as a decimal; e.g., $P_{HV}=0.02$ for 2% heavy vehicles)

APPENDIX G:
Capacity Analysis Worksheets

Existing Conditions



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	1	1	1	1	1	1
Traffic Volume (vph)	9	202	75	290	783	5
Future Volume (vph)	9	202	75	290	783	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	13	11	12	11	12
Grade (%)	-1%			1%	-1%	
Storage Length (ft)	0	85	300			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.850			0.999	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1114	1558	1430	1643	1647	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1114	1558	1430	1643	1647	0
Link Speed (mph)	25		45	45		
Link Distance (ft)	380		1166	1743		
Travel Time (s)	10.4			17.7	26.4	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	44%	2%	15%	9%	6%	20%
Adj. Flow (vph)	10	217	81	312	842	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	217	81	312	847	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 4.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	9	202	75	290	783	5
Future Vol, veh/h	9	202	75	290	783	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	85	300	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-1	-	-	1	-1	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	44	2	15	9	6	20
Mvmt Flow	10	217	81	312	842	5

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1319	845	847	0	-	0
Stage 1	845	-	-	-	-	-
Stage 2	474	-	-	-	-	-
Critical Hdwy	6.64	6.12	4.5	-	-	-
Critical Hdwy Stg 1	5.64	-	-	-	-	-
Critical Hdwy Stg 2	5.64	-	-	-	-	-
Follow-up Hdwy	3.4	3.1	3.1	-	-	-
Pot Cap-1 Maneuver	163	389	567	-	-	-
Stage 1	409	-	-	-	-	-
Stage 2	625	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	140	389	567	-	-	-
Mov Cap-2 Maneuver	140	-	-	-	-	-
Stage 1	351	-	-	-	-	-
Stage 2	625	-	-	-	-	-

Approach EB NB SB

HCM Control Delay, s/v 25.6 2.5 0

HCM LOS D

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	567	-	140	389	-	-
HCM Lane V/C Ratio	0.142	-	0.069	0.558	-	-
HCM Control Delay (s/veh)	12.4	-	32.6	25.3	-	-
HCM Lane LOS	B	-	D	D	-	-
HCM 95th %tile Q (veh)	0.5	-	0.2	3.3	-	-

2: Pottstown Pike (SR 0100) & Reserve Drive/Fellowship Road

2024 Existing Conditions

Timing Plan: Weekday AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1		
Traffic Volume (vph)	0	0	76	226	4	38	15	434	80	24	784	1		
Future Volume (vph)	0	0	76	226	4	38	15	434	80	24	784	1		
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800		
Lane Width (ft)	10	13	12	12	12	12	12	12	12	12	12	12		
Grade (%)	0%			-1%			2%			0%				
Storage Length (ft)	125			0			195			0				
Storage Lanes	1			0			1			0				
Taper Length (ft)	25			25			25			25				
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00		
Fr _t	0.850			0.863			0.977			0.850				
Flt Protected				0.950			0.950			0.950				
Satd. Flow (prot)	1680	1520	0	1637	1369	0	1693	3096	0	1644	1731	1530		
Flt Permitted				0.703			0.168			0.429				
Satd. Flow (perm)	1680	1520	0	1211	1369	0	299	3096	0	742	1731	1530		
Right Turn on Red				Yes			Yes			Yes				
Satd. Flow (RTOR)	288			41			46			119				
Link Speed (mph)	35			35			35			45				
Link Distance (ft)	229			662			548			828				
Travel Time (s)	4.5			12.9			10.7			12.5				
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92		
Heavy Vehicles (%)	0%	0%	4%	5%	25%	13%	0%	7%	6%	4%	4%	0%		
Adj. Flow (vph)	0	0	83	246	4	41	16	472	87	26	852	1		
Shared Lane Traffic (%)														
Lane Group Flow (vph)	0	83	0	246	45	0	16	559	0	26	852	1		
Turn Type	Perm	NA			Perm	NA	pm+pt		NA	pm+pt		Perm		
Protected Phases	8			4			1			5				
Permitted Phases	8			4			6			2				
Detector Phase	8			4			1			5				
Switch Phase														
Minimum Initial (s)	5.0	5.0			5.0	5.0	5.0		15.0	5.0		15.0		
Minimum Split (s)	11.0	11.0			11.0	11.0	12.0		22.0	12.0		22.0		
Total Split (s)	13.0	13.0			13.0	13.0	14.0		65.0	14.0		65.0		
Total Split (%)	14.1%	14.1%			14.1%	14.1%	15.2%		70.7%	15.2%		70.7%		
Yellow Time (s)	4.0	4.0			4.0	4.0	5.0		5.0	5.0		5.0		
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0		2.0	2.0		2.0		
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0	-1.0		-1.0	-1.0		-1.0		
Total Lost Time (s)	5.0	5.0			5.0	5.0	6.0		6.0	6.0		6.0		
Lead/Lag							Lead		Lag	Lead		Lag		
Lead-Lag Optimize?							Yes		Yes	Yes		Yes		
Recall Mode	None	None			None	None	None		Min	None		Min		

Intersection Summary

Area Type: Other

Cycle Length: 92

Actuated Cycle Length: 58.1

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Splits and Phases: 2: Pottstown Pike (SR 0100) & Reserve Drive/Fellowship Road



2: Pottstown Pike (SR 0100) & Reserve Drive/Fellowship Road

2024 Existing Conditions

Timing Plan: Weekday AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑		↑	↑		↑	↑↑		↑	↑	↑
Traffic Volume (veh/h)	0	0	76	226	4	38	15	434	80	24	784	1
Future Volume (veh/h)	0	0	76	226	4	38	15	434	80	24	784	1
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1872	1744	1766	1482	1652	1778	1679	1693	1744	1744	1800
Adj Flow Rate, veh/h	0	0	53	246	4	18	16	472	69	26	852	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	4	5	25	13	0	7	6	4	4	0
Cap, veh/h	119	0	210	259	31	140	255	1512	220	556	960	840
Arrive On Green	0.00	0.00	0.12	0.13	0.13	0.12	0.04	0.54	0.52	0.05	0.55	0.00
Sat Flow, veh/h	1337	0	1586	1276	235	1057	1693	2795	407	1661	1744	1525
Grp Volume(v), veh/h	0	0	53	246	0	22	16	268	273	26	852	0
Grp Sat Flow(s), veh/h/ln	1337	0	1586	1276	0	1292	1693	1595	1606	1661	1744	1525
Q Serve(g_s), s	0.0	0.0	1.8	6.7	0.0	0.9	0.2	5.6	5.7	0.4	26.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	1.8	8.0	0.0	0.9	0.2	5.6	5.7	0.4	26.0	0.0
Prop In Lane	1.00		1.00	1.00		0.82	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	119	0	210	259	0	171	255	863	869	556	960	840
V/C Ratio(X)	0.00	0.00	0.25	0.95	0.00	0.13	0.06	0.31	0.31	0.05	0.89	0.00
Avail Cap(c_a), veh/h	119	0	210	259	0	171	418	1556	1566	700	1701	1488
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	24.0	28.3	0.0	23.5	10.9	7.7	7.8	5.5	11.9	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.6	41.8	0.0	0.3	0.1	0.2	0.2	0.0	3.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	1.2	10.5	0.0	0.5	0.1	2.8	2.8	0.2	11.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	0.0	24.7	70.1	0.0	23.9	11.0	7.9	8.0	5.6	15.0	0.0
LnGrp LOS			C	E		C	B	A	A	A	B	
Approach Vol, veh/h		53			268			557			878	
Approach Delay, s/veh		24.7			66.3			8.0			14.7	
Approach LOS		C			E			A			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+R _c), s	8.2	39.3		13.0	8.8	38.7		13.0				
Change Period (Y+R _c), s	7.0	7.0		6.0	7.0	7.0		6.0				
Max Green Setting (Gmax), s	7.0	58.0		7.0	7.0	58.0		7.0				
Max Q Clear Time (g_c+l1), s	2.7	28.5		10.5	2.9	8.1		3.8				
Green Ext Time (p_c), s	0.0	3.9		0.0	0.0	2.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh			20.7									
HCM 6th LOS			C									



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	3	14	38	2	9	7	281	11	5	740	14
Future Volume (vph)	19	3	14	38	2	9	7	281	11	5	740	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	13	12	12	13	12	11	13	11	11	12	11
Grade (%)		1%			1%			1%			-2%	
Storage Length (ft)	0		0	0		0	125		250	125		150
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Fr _t		0.948			0.975				0.850			0.850
Fl _t Protected		0.974			0.963		0.950			0.950		
Satd. Flow (prot)	0	1667	0	0	1698	0	1645	1714	1008	1391	1731	1494
Fl _t Permitted		0.974			0.963		0.950			0.950		
Satd. Flow (perm)	0	1667	0	0	1698	0	1645	1714	1008	1391	1731	1494
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		215			346			1743			721	
Travel Time (s)		5.9			9.4			26.4			10.9	
Confl. Peds. (#/hr)				1		1						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	33%	0%	3%	0%	0%	0%	8%	46%	20%	5%	0%
Adj. Flow (vph)	21	3	15	41	2	10	8	305	12	5	804	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	39	0	0	53	0	8	305	12	5	804	15
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	+	+	+	+	+	+	+	↑	↑	+	↑	↑
Traffic Vol, veh/h	19	3	14	38	2	9	7	281	11	5	740	14
Future Vol, veh/h	19	3	14	38	2	9	7	281	11	5	740	14
Conflicting Peds, #/hr	0	0	0	1	0	1	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	125	-	250	125	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	1	-	-	1	-	-	-2	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	33	0	3	0	0	0	8	46	20	5	0
Mvmt Flow	21	3	15	41	2	10	8	305	12	5	804	15

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	1148	1147	805	1153	1150	306	819	0	0	317	0	0
Stage 1	814	814	-	321	321	-	-	-	-	-	-	-
Stage 2	334	333	-	832	829	-	-	-	-	-	-	-
Critical Hdwy	7.3	7.03	6.3	7.33	6.7	6.3	4.3	-	-	4.5	-	-
Critical Hdwy Stg 1	6.3	6.03	-	6.33	5.7	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.3	6.03	-	6.33	5.7	-	-	-	-	-	-	-
Follow-up Hdwy	3	4.297	3.1	3	4	3.1	3	-	-	3.2	-	-
Pot Cap-1 Maneuver	182	164	394	179	188	773	622	-	-	869	-	-
Stage 1	398	335	-	778	644	-	-	-	-	-	-	-
Stage 2	766	581	-	385	371	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	175	161	394	167	184	772	622	-	-	869	-	-
Mov Cap-2 Maneuver	175	161	-	167	184	-	-	-	-	-	-	-
Stage 1	393	333	-	768	636	-	-	-	-	-	-	-
Stage 2	743	573	-	364	369	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	24.8	30.1	0.3	0.1
HCM LOS	C	D		
<hr/>				
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1
Capacity (veh/h)	622	-	-	221 196
HCM Lane V/C Ratio	0.012	-	-	0.177 0.272
HCM Control Delay (s/veh)	10.9	-	-	24.8 30.1
HCM Lane LOS	B	-	-	C D
HCM 95th %tile Q (veh)	0	-	-	0.6 1.1



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	1	1	1	1	1	1
Traffic Volume (vph)	13	158	257	858	500	16
Future Volume (vph)	13	158	257	858	500	16
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	13	11	12	11	12
Grade (%)	-1%			1%	-1%	
Storage Length (ft)	0	85	300			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.850			0.996	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1485	1589	1628	1756	1686	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1485	1589	1628	1756	1686	0
Link Speed (mph)	25		45	45		
Link Distance (ft)	380		1166	1743		
Travel Time (s)	10.4			17.7	26.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	8%	0%	1%	2%	3%	13%
Adj. Flow (vph)	14	168	273	913	532	17
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	168	273	913	549	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 3.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	13	158	257	858	500	16
Future Vol, veh/h	13	158	257	858	500	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	85	300	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-1	-	-	1	-1	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	8	0	1	2	3	13
Mvmt Flow	14	168	273	913	532	17

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	2000	541	549	0	-	0
Stage 1	541	-	-	-	-	-
Stage 2	1459	-	-	-	-	-
Critical Hdwy	6.28	6.1	4.3	-	-	-
Critical Hdwy Stg 1	5.28	-	-	-	-	-
Critical Hdwy Stg 2	5.28	-	-	-	-	-
Follow-up Hdwy	3.1	3.1	3	-	-	-
Pot Cap-1 Maneuver	74	581	776	-	-	-
Stage 1	657	-	-	-	-	-
Stage 2	240	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	48	581	776	-	-	-
Mov Cap-2 Maneuver	48	-	-	-	-	-
Stage 1	426	-	-	-	-	-
Stage 2	240	-	-	-	-	-

Approach EB NB SB

HCM Control Delay, s/v 20.9 2.8 0

HCM LOS C

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	776	-	48	581	-	-
HCM Lane V/C Ratio	0.352	-	0.288	0.289	-	-
HCM Control Delay (s/veh)	12.1	-	107.9	13.7	-	-
HCM Lane LOS	B	-	F	B	-	-
HCM 95th %tile Q (veh)	1.6	-	1	1.2	-	-

2: Pottstown Pike (SR 0100) & Reserve Drive/Fellowship Road

2024 Existing Conditions

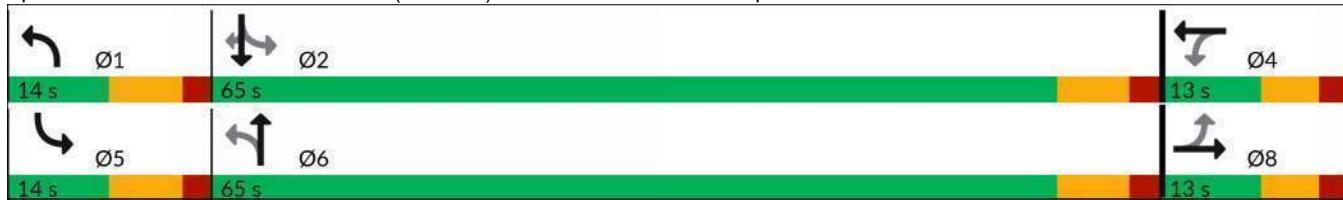
Timing Plan: Weekday PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR								
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1								
Traffic Volume (vph)	3	5	63	137	10	19	54	1095	184	21	630	5								
Future Volume (vph)	3	5	63	137	10	19	54	1095	184	21	630	5								
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800								
Lane Width (ft)	10	13	12	12	12	12	12	12	12	12	12	12								
Grade (%)	0%			-1%			2%			0%										
Storage Length (ft)	125		0		195		0		90		0									
Storage Lanes	1		0		1		0		1		0									
Taper Length (ft)	25			25			25			25										
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00								
Ped Bike Factor												0.99								
Fr _t	0.860			0.903			0.978			0.850										
Flt Protected	0.950			0.950			0.950			0.950										
Satd. Flow (prot)	1596	1570	0	1702	1634	0	1693	3246	0	1710	1765	1530								
Flt Permitted	0.737	0.709			0.265			0.134												
Satd. Flow (perm)	1238	1570	0	1270	1634	0	472	3246	0	241	1765	1498								
Right Turn on Red	Yes			Yes			Yes			Yes										
Satd. Flow (RTOR)	68			20			41			119										
Link Speed (mph)	35			35			35			45										
Link Distance (ft)	229			662			548			828										
Travel Time (s)	4.5			12.9			10.7			12.5										
Confl. Peds. (#/hr)												1								
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93								
Heavy Vehicles (%)	0%	0%	2%	1%	0%	0%	0%	2%	2%	0%	2%	0%								
Adj. Flow (vph)	3	5	68	147	11	20	58	1177	198	23	677	5								
Shared Lane Traffic (%)																				
Lane Group Flow (vph)	3	73	0	147	31	0	58	1375	0	23	677	5								
Turn Type	Perm	NA	Perm		NA	pm+pt		NA	pm+pt		NA	Perm								
Protected Phases	8			4			1			5										
Permitted Phases	8			4			6			2										
Detector Phase	8			4			1			5										
Switch Phase																				
Minimum Initial (s)	5.0	5.0	5.0		5.0	15.0		5.0	15.0		15.0									
Minimum Split (s)	11.0	11.0	11.0		11.0	22.0		12.0	22.0		22.0									
Total Split (s)	13.0	13.0	13.0		13.0	65.0		14.0	65.0		65.0									
Total Split (%)	14.1%	14.1%	14.1%		14.1%	70.7%		15.2%	70.7%		15.2%									
Yellow Time (s)	4.0	4.0	4.0		4.0	5.0		5.0	5.0		5.0									
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0		2.0	2.0		2.0									
Lost Time Adjust (s)	-1.0	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0									
Total Lost Time (s)	5.0	5.0	5.0		5.0	6.0		6.0	6.0		6.0									
Lead/Lag							Lead	Lag			Lead	Lag								
Lead-Lag Optimize?							Yes	Yes			Yes	Yes								
Recall Mode	None	None	None		None	Min		None	Min		Min									
Intersection Summary																				
Area Type:	Other																			
Cycle Length: 92																				
Actuated Cycle Length: 62.4																				
Natural Cycle: 60																				

Control Type: Actuated-Uncoordinated

Splits and Phases: 2: Pottstown Pike (SR 0100) & Reserve Drive/Fellowship Road



2: Pottstown Pike (SR 0100) & Reserve Drive/Fellowship Road

2024 Existing Conditions

Timing Plan: Weekday PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1
Traffic Volume (veh/h)	3	5	63	137	10	19	54	1095	184	21	630	5
Future Volume (veh/h)	3	5	63	137	10	19	54	1095	184	21	630	5
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1872	1772	1823	1837	1837	1778	1750	1750	1800	1772	1800
Adj Flow Rate, veh/h	3	5	37	147	11	11	58	1177	172	23	677	2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	2	1	0	0	0	2	2	0	2	0
Cap, veh/h	314	27	202	298	120	120	368	1489	217	275	860	740
Arrive On Green	0.14	0.14	0.12	0.14	0.14	0.12	0.07	0.51	0.49	0.04	0.49	0.49
Sat Flow, veh/h	1337	192	1423	1330	843	843	1693	2912	424	1714	1772	1524
Grp Volume(v), veh/h	3	0	42	147	0	22	58	670	679	23	677	2
Grp Sat Flow(s), veh/h/ln	1337	0	1616	1330	0	1686	1693	1662	1673	1714	1772	1524
Q Serve(g_s), s	0.1	0.0	1.3	6.1	0.0	0.6	0.9	18.6	18.8	0.4	17.9	0.0
Cycle Q Clear(g_c), s	0.3	0.0	1.3	6.9	0.0	0.6	0.9	18.6	18.8	0.4	17.9	0.0
Prop In Lane	1.00		0.88	1.00		0.50	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	314	0	230	298	0	239	368	850	856	275	860	740
V/C Ratio(X)	0.01	0.00	0.18	0.49	0.00	0.09	0.16	0.79	0.79	0.08	0.79	0.00
Avail Cap(c_a), veh/h	314	0	230	298	0	239	489	1741	1753	442	1857	1597
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.9	0.0	21.7	24.1	0.0	21.2	8.8	11.3	11.4	9.1	12.1	7.5
Incr Delay (d2), s/veh	0.0	0.0	0.4	1.3	0.0	0.2	0.2	1.7	1.7	0.1	1.6	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	0.9	3.3	0.0	0.4	0.4	9.3	9.6	0.2	9.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	20.9	0.0	22.1	25.4	0.0	21.4	9.0	12.9	13.1	9.2	13.7	7.5
LnGrp LOS	C		C	C		C	A	B	B	A	B	A
Approach Vol, veh/h		45			169			1407			702	
Approach Delay, s/veh		22.0			24.8			12.9			13.5	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+R _c), s	10.0	33.3		13.0	8.5	34.8		13.0				
Change Period (Y+R _c), s	7.0	7.0		6.0	7.0	7.0		6.0				
Max Green Setting (Gmax), s	7.0	58.0		7.0	7.0	58.0		7.0				
Max Q Clear Time (g_c+l1), s	3.4	20.4		9.4	2.9	21.1		3.3				
Green Ext Time (p_c), s	0.0	2.8		0.0	0.0	6.7		0.0				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh			14.1									
HCM 6th LOS			B									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	1	16	46	2	9	17	804	56	10	450	23
Future Volume (vph)	14	1	16	46	2	9	17	804	56	10	450	23
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	13	12	12	13	12	11	13	11	11	12	11
Grade (%)												-2%
Storage Length (ft)	0		0	0		0	125		250	125		150
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.930				0.979				0.850		0.850
Flt Protected		0.978				0.961		0.950		0.950		
Satd. Flow (prot)	0	1584	0	0	1714	0	1645	1814	1443	1670	1782	1494
Flt Permitted		0.978			0.961		0.950			0.950		
Satd. Flow (perm)	0	1584	0	0	1714	0	1645	1814	1443	1670	1782	1494
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		215			346			1743			721	
Travel Time (s)		5.9			9.4			26.4			10.9	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	7%	0%	6%	2%	0%	0%	0%	2%	2%	0%	2%	0%
Adj. Flow (vph)	14	1	16	46	2	9	17	812	57	10	455	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	31	0	0	57	0	17	812	57	10	455	23
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	1	16	46	2	9	17	804	56	10	450	23
Future Vol, veh/h	14	1	16	46	2	9	17	804	56	10	450	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	125	-	250	125	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	1	-	-	1	-	-	-2	-
Peak Hour Factor	99	99	99	99	99	99	99	99	99	99	99	99
Heavy Vehicles, %	7	0	6	2	0	0	0	2	2	0	2	0
Mvmt Flow	14	1	16	46	2	9	17	812	57	10	455	23

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	1355	1378	455	1341	1344	812	478	0	0	869	0	0
Stage 1	475	475	-	846	846	-	-	-	-	-	-	-
Stage 2	880	903	-	495	498	-	-	-	-	-	-	-
Critical Hdwy	7.37	6.7	6.36	7.32	6.7	6.3	4.3	-	-	4.3	-	-
Critical Hdwy Stg 1	6.37	5.7	-	6.32	5.7	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.37	5.7	-	6.32	5.7	-	-	-	-	-	-	-
Follow-up Hdwy	3.1	4	3.2	3	4	3.1	3	-	-	3	-	-
Pot Cap-1 Maneuver	123	135	612	130	142	390	822	-	-	597	-	-
Stage 1	611	546	-	379	364	-	-	-	-	-	-	-
Stage 2	349	341	-	614	533	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	115	130	612	122	137	390	822	-	-	597	-	-
Mov Cap-2 Maneuver	115	130	-	122	137	-	-	-	-	-	-	-
Stage 1	598	537	-	371	356	-	-	-	-	-	-	-
Stage 2	332	334	-	587	524	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	26.4	49.1	0.2	0.2
HCM LOS	D	E		
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1
Capacity (veh/h)	822	-	-	199 137
HCM Lane V/C Ratio	0.021	-	-	0.157 0.42
HCM Control Delay (s/veh)	9.5	-	-	26.4 49.1
HCM Lane LOS	A	-	-	D E B
HCM 95th %tile Q (veh)	0.1	-	-	0.5 1.8 0.1

2027 Base Conditions



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Volume (vph)	9	230	92	314	811	8
Future Volume (vph)	9	230	92	314	811	8
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	13	11	12	11	12
Grade (%)	-1%			1%	-1%	
Storage Length (ft)	0	85	300			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.850			0.999	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1114	1558	1430	1643	1646	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1114	1558	1430	1643	1646	0
Link Speed (mph)	25		45	45		
Link Distance (ft)	380		1166	1743		
Travel Time (s)	10.4			17.7	26.4	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	44%	2%	15%	9%	6%	20%
Adj. Flow (vph)	10	247	99	338	872	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	247	99	338	881	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 6

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations ↗ ↗ ↗ ↗ ↗ ↗

Traffic Vol, veh/h 9 230 92 314 811 8

Future Vol, veh/h 9 230 92 314 811 8

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Free Free

RT Channelized - Stop - None - None

Storage Length 0 85 300 - - -

Veh in Median Storage, # 0 - - 0 0 -

Grade, % -1 - - 1 -1 -

Peak Hour Factor 93 93 93 93 93 93

Heavy Vehicles, % 44 2 15 9 6 20

Mvmt Flow 10 247 99 338 872 9

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 1413 877 881 0 - 0

Stage 1 877 - - - - -

Stage 2 536 - - - - -

Critical Hdwy 6.64 6.12 4.5 - - -

Critical Hdwy Stg 1 5.64 - - - - -

Critical Hdwy Stg 2 5.64 - - - - -

Follow-up Hdwy 3.4 3.1 3.1 - - -

Pot Cap-1 Maneuver 142 373 551 - - -

Stage 1 394 - - - - -

Stage 2 583 - - - - -

Platoon blocked, % - - - - -

Mov Cap-1 Maneuver 116 373 551 - - -

Mov Cap-2 Maneuver 116 - - - - -

Stage 1 323 - - - - -

Stage 2 583 - - - - -

Approach EB NB SB

HCM Control Delay, s/v 32 2.9 0

HCM LOS D

Minor Lane/Major Mvmt NBL NBT EBLn1 EBLn2 SBT SBR

Capacity (veh/h) 551 - 116 373 - -

HCM Lane V/C Ratio 0.18 - 0.083 0.663 - -

HCM Control Delay (s/veh) 13 - 38.8 31.7 - -

HCM Lane LOS B - E D - -

HCM 95th %tile Q (veh) 0.6 - 0.3 4.6 - -

2: Pottstown Pike (SR 0100) & Reserve Drive/Fellowship Road

2027 Base Conditions

Timing Plan: Weekday AM Peak Hour

	↑	→	↓	↑	←	↑	↓	↑	→	↓	↑	
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑		↑	↑		↑	↑	↑	↑	↑	↑
Traffic Volume (vph)	2	0	78	233	4	39	16	474	84	24	837	1
Future Volume (vph)	2	0	78	233	4	39	16	474	84	24	837	1
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	13	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%			-1%			2%			0%		
Storage Length (ft)	125		0	195		0	90		0	340		190
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Fr _t	0.850			0.863			0.977			0.850		
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1596	1520	0	1637	1369	0	1693	3096	0	1644	1731	1530
Flt Permitted	0.727			0.702			0.112			0.412		
Satd. Flow (perm)	1221	1520	0	1209	1369	0	200	3096	0	713	1731	1530
Right Turn on Red	Yes			Yes			Yes			Yes		
Satd. Flow (RTOR)	255			42			39			119		
Link Speed (mph)	35			35			35			45		
Link Distance (ft)	229			662			548			828		
Travel Time (s)	4.5			12.9			10.7			12.5		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	4%	5%	25%	13%	0%	7%	6%	4%	4%	0%
Adj. Flow (vph)	2	0	85	253	4	42	17	515	91	26	910	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	85	0	253	46	0	17	606	0	26	910	1
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	8			4			1			5		
Permitted Phases	8			4			6			2		
Detector Phase	8			4			1			5		
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	11.0	11.0		11.0	11.0		12.0	22.0		12.0	22.0	22.0
Total Split (s)	17.0	17.0		17.0	17.0		14.0	61.0		14.0	61.0	61.0
Total Split (%)	18.5%	18.5%		18.5%	18.5%		15.2%	66.3%		15.2%	66.3%	66.3%
Yellow Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	5.0		5.0	5.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None		None	Min		None	Min	Min
Intersection Summary												
Area Type:	Other											
Cycle Length: 92												
Actuated Cycle Length: 70.2												
Natural Cycle: 90												
Control Type: Actuated-Uncoordinated												

Splits and Phases: 2: Pottstown Pike (SR 0100) & Reserve Drive/Fellowship Road



2: Pottstown Pike (SR 0100) & Reserve Drive/Fellowship Road

2027 Base Conditions

Timing Plan: Weekday AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1
Traffic Volume (veh/h)	2	0	78	233	4	39	16	474	84	24	837	1
Future Volume (veh/h)	2	0	78	233	4	39	16	474	84	24	837	1
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1872	1744	1766	1482	1652	1778	1679	1693	1744	1744	1800
Adj Flow Rate, veh/h	2	0	55	253	4	19	17	515	73	26	910	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	4	5	25	13	0	7	6	4	4	0
Cap, veh/h	306	0	260	277	37	175	214	1577	223	526	994	869
Arrive On Green	0.16	0.00	0.15	0.16	0.16	0.15	0.03	0.56	0.55	0.04	0.57	0.00
Sat Flow, veh/h	1336	0	1586	1274	224	1066	1693	2807	396	1661	1744	1525
Grp Volume(v), veh/h	2	0	55	253	0	23	17	292	296	26	910	0
Grp Sat Flow(s), veh/h/ln	1336	0	1586	1274	0	1290	1693	1595	1608	1661	1744	1525
Q Serve(g_s), s	0.1	0.0	2.2	10.3	0.0	1.1	0.3	7.2	7.3	0.5	34.3	0.0
Cycle Q Clear(g_c), s	0.7	0.0	2.2	12.0	0.0	1.1	0.3	7.2	7.3	0.5	34.3	0.0
Prop In Lane	1.00		1.00	1.00		0.83	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	306	0	260	277	0	212	214	896	903	526	994	869
V/C Ratio(X)	0.01	0.00	0.21	0.91	0.00	0.11	0.08	0.33	0.33	0.05	0.92	0.00
Avail Cap(c_a), veh/h	306	0	260	277	0	212	342	1200	1210	638	1312	1147
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	26.1	0.0	26.9	32.9	0.0	26.4	14.1	8.6	8.7	6.2	14.2	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.4	32.0	0.0	0.2	0.2	0.2	0.2	0.0	8.4	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	1.5	11.1	0.0	0.6	0.2	3.8	3.9	0.2	17.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.1	0.0	27.3	64.9	0.0	26.6	14.2	8.8	8.9	6.2	22.5	0.0
LnGrp LOS	C		C	E		C	B	A	A	A	C	
Approach Vol, veh/h		57			276			605			936	
Approach Delay, s/veh		27.3			61.7			9.0			22.1	
Approach LOS		C			E			A			C	
Timer - Assigned Phs	1	2	4	5	6			8				
Phs Duration (G+Y+R _c), s	8.5	47.7		17.0	9.1	47.1		17.0				
Change Period (Y+R _c), s	7.0	7.0		6.0	7.0	7.0		6.0				
Max Green Setting (Gmax), s	7.0	54.0		11.0	7.0	54.0		11.0				
Max Q Clear Time (g_c+l1), s	2.8	36.8		14.5	3.0	9.7		4.2				
Green Ext Time (p_c), s	0.0	3.8		0.0	0.0	2.2		0.1				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh			23.9									
HCM 6th LOS			C									



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	3	14	38	2	9	7	305	11	5	771	15
Future Volume (vph)	21	3	14	38	2	9	7	305	11	5	771	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	13	12	12	13	12	11	13	11	11	12	11
Grade (%)		1%			1%			1%			-2%	
Storage Length (ft)	0		0	0		0	125		250	125		150
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Fr _t		0.951			0.975				0.850			0.850
Fl _t Protected		0.973			0.963		0.950			0.950		
Satd. Flow (prot)	0	1672	0	0	1698	0	1645	1714	1008	1391	1731	1494
Fl _t Permitted		0.973			0.963		0.950			0.950		
Satd. Flow (perm)	0	1672	0	0	1698	0	1645	1714	1008	1391	1731	1494
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		215			346			1743			721	
Travel Time (s)		5.9			9.4			26.4			10.9	
Confl. Peds. (#/hr)				1		1						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	33%	0%	3%	0%	0%	0%	8%	46%	20%	5%	0%
Adj. Flow (vph)	23	3	15	41	2	10	8	332	12	5	838	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	41	0	0	53	0	8	332	12	5	838	16
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	3	14	38	2	9	7	305	11	5	771	15
Future Vol, veh/h	21	3	14	38	2	9	7	305	11	5	771	15
Conflicting Peds, #/hr	0	0	0	1	0	1	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	125	-	250	125	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	1	-	-	1	-	-	-2	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	33	0	3	0	0	0	8	46	20	5	0
Mvmt Flow	23	3	15	41	2	10	8	332	12	5	838	16

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	1209	1208	839	1214	1212	333	854	0	0	344	0	0
Stage 1	848	848	-	348	348	-	-	-	-	-	-	-
Stage 2	361	360	-	866	864	-	-	-	-	-	-	-
Critical Hdwy	7.3	7.03	6.3	7.33	6.7	6.3	4.3	-	-	4.5	-	-
Critical Hdwy Stg 1	6.3	6.03	-	6.33	5.7	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.3	6.03	-	6.33	5.7	-	-	-	-	-	-	-
Follow-up Hdwy	3	4.297	3.1	3	4	3.1	3	-	-	3.2	-	-
Pot Cap-1 Maneuver	164	150	376	161	172	746	605	-	-	849	-	-
Stage 1	379	322	-	750	625	-	-	-	-	-	-	-
Stage 2	739	564	-	367	356	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	158	147	376	150	169	745	605	-	-	849	-	-
Mov Cap-2 Maneuver	158	147	-	150	169	-	-	-	-	-	-	-
Stage 1	374	320	-	740	617	-	-	-	-	-	-	-
Stage 2	716	557	-	346	354	-	-	-	-	-	-	-

Approach	EB	WB			NB		SB	
HCM Control Delay, s/v	27.8	33.9			0.2		0.1	
HCM LOS	D	D						
<hr/>								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	605	-	-	199	177	849	-	-
HCM Lane V/C Ratio	0.013	-	-	0.208	0.301	0.006	-	-
HCM Control Delay (s/veh)	11	-	-	27.8	33.9	9.3	-	-
HCM Lane LOS	B	-	-	D	D	A	-	-
HCM 95th %tile Q (veh)	0	-	-	0.8	1.2	0	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Volume (vph)	13	181	295	892	524	22
Future Volume (vph)	13	181	295	892	524	22
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	13	11	12	11	12
Grade (%)	-1%			1%	-1%	
Storage Length (ft)	0	85	300			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.850			0.995	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1485	1589	1628	1756	1683	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1485	1589	1628	1756	1683	0
Link Speed (mph)	25			45	45	
Link Distance (ft)	380			1166	1743	
Travel Time (s)	10.4			17.7	26.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	8%	0%	1%	2%	3%	13%
Adj. Flow (vph)	14	193	314	949	557	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	193	314	949	580	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 4.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	13	181	295	892	524	22
Future Vol, veh/h	13	181	295	892	524	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	85	300	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-1	-	-	1	-1	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	8	0	1	2	3	13
Mvmt Flow	14	193	314	949	557	23

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	2146	569	580	0	-	0
Stage 1	569	-	-	-	-	-
Stage 2	1577	-	-	-	-	-
Critical Hdwy	6.28	6.1	4.3	-	-	-
Critical Hdwy Stg 1	5.28	-	-	-	-	-
Critical Hdwy Stg 2	5.28	-	-	-	-	-
Follow-up Hdwy	3.1	3.1	3	-	-	-
Pot Cap-1 Maneuver	60	560	757	-	-	-
Stage 1	638	-	-	-	-	-
Stage 2	210	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	35	560	757	-	-	-
Mov Cap-2 Maneuver	35	-	-	-	-	-
Stage 1	373	-	-	-	-	-
Stage 2	210	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	24.8	3.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	757	-	35	560	-	-
HCM Lane V/C Ratio	0.415	-	0.395	0.344	-	-
HCM Control Delay (s/veh)	13.1	-	163.6	14.8	-	-
HCM Lane LOS	B	-	F	B	-	-
HCM 95th %tile Q (veh)	2	-	1.3	1.5	-	-

2: Pottstown Pike (SR 0100) & Reserve Drive/Fellowship Road

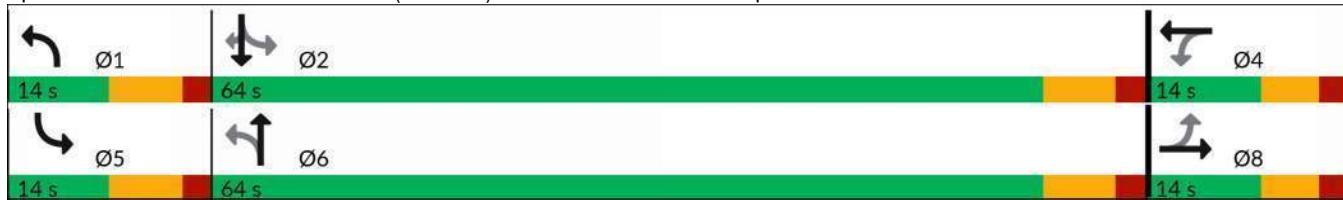
2027 Base Conditions

Timing Plan: Weekday PM Peak Hour

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR						
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1						
Traffic Volume (vph)	4	5	64	143	10	19	56	1166	191	21	675	7						
Future Volume (vph)	4	5	64	143	10	19	56	1166	191	21	675	7						
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800						
Lane Width (ft)	10	13	12	12	12	12	12	12	12	12	12	12						
Grade (%)	0%			-1%			2%			0%								
Storage Length (ft)	125			0			195			0								
Storage Lanes	1			0			1			0								
Taper Length (ft)	25			25			25			25								
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00						
Ped Bike Factor												0.99						
Fr1	0.860			0.903			0.979			0.850								
Flt Protected	0.950			0.950			0.950			0.950								
Satd. Flow (prot)	1596	1570	0	1702	1634	0	1693	3250	0	1710	1765	1530						
Flt Permitted	0.737			0.709			0.240			0.117								
Satd. Flow (perm)	1238	1570	0	1270	1634	0	428	3250	0	211	1765	1498						
Right Turn on Red	Yes			Yes			Yes			Yes								
Satd. Flow (RTOR)	69			20			39			119								
Link Speed (mph)	35			35			35			45								
Link Distance (ft)	229			662			548			828								
Travel Time (s)	4.5			12.9			10.7			12.5								
Confl. Peds. (#/hr)												1						
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93						
Heavy Vehicles (%)	0%	0%	2%	1%	0%	0%	0%	2%	2%	0%	2%	0%						
Adj. Flow (vph)	4	5	69	154	11	20	60	1254	205	23	726	8						
Shared Lane Traffic (%)																		
Lane Group Flow (vph)	4	74	0	154	31	0	60	1459	0	23	726	8						
Turn Type	Perm	NA	Perm		NA	pm+pt		NA	pm+pt		NA	Perm						
Protected Phases	8			4			1			5								
Permitted Phases	8			4			6			2								
Detector Phase	8	8	4		4	1		6	5		2	2						
Switch Phase																		
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0		15.0	5.0		15.0	15.0						
Minimum Split (s)	11.0	11.0	11.0		11.0	12.0		22.0	12.0		22.0	22.0						
Total Split (s)	14.0	14.0	14.0		14.0	14.0		64.0	14.0		64.0	64.0						
Total Split (%)	15.2%	15.2%	15.2%		15.2%	15.2%		69.6%	15.2%		69.6%	69.6%						
Yellow Time (s)	4.0	4.0	4.0		4.0	5.0		5.0	5.0		5.0	5.0						
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0						
Lost Time Adjust (s)	-1.0	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0						
Total Lost Time (s)	5.0	5.0	5.0		5.0	6.0		6.0	6.0		6.0	6.0						
Lead/Lag							Lead	Lag	Lead		Lag	Lag						
Lead-Lag Optimize?							Yes	Yes	Yes		Yes	Yes						
Recall Mode	None	None	None		None	None		Min	None		Min	Min						
Intersection Summary																		
Area Type:	Other																	
Cycle Length:	92																	
Actuated Cycle Length:	67.8																	
Natural Cycle:	65																	

Control Type: Actuated-Uncoordinated

Splits and Phases: 2: Pottstown Pike (SR 0100) & Reserve Drive/Fellowship Road



2: Pottstown Pike (SR 0100) & Reserve Drive/Fellowship Road

2027 Base Conditions

Timing Plan: Weekday PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1
Traffic Volume (veh/h)	4	5	64	143	10	19	56	1166	191	21	675	7
Future Volume (veh/h)	4	5	64	143	10	19	56	1166	191	21	675	7
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1872	1772	1823	1837	1837	1778	1750	1750	1800	1772	1800
Adj Flow Rate, veh/h	4	5	38	154	11	11	60	1254	179	23	726	5
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	2	1	0	0	0	2	2	0	2	0
Cap, veh/h	312	28	211	295	125	125	344	1547	220	256	892	767
Arrive On Green	0.15	0.15	0.13	0.15	0.15	0.13	0.07	0.53	0.51	0.04	0.50	0.50
Sat Flow, veh/h	1337	188	1427	1329	843	843	1693	2922	415	1714	1772	1524
Grp Volume(v), veh/h	4	0	43	154	0	22	60	710	723	23	726	5
Grp Sat Flow(s), veh/h/ln	1337	0	1615	1329	0	1686	1693	1662	1675	1714	1772	1524
Q Serve(g_s), s	0.2	0.0	1.4	6.9	0.0	0.7	1.0	21.4	21.8	0.4	21.0	0.1
Cycle Q Clear(g_c), s	0.3	0.0	1.4	7.8	0.0	0.7	1.0	21.4	21.8	0.4	21.0	0.1
Prop In Lane	1.00		0.88	1.00		0.50	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	312	0	239	295	0	250	344	880	887	256	892	767
V/C Ratio(X)	0.01	0.00	0.18	0.52	0.00	0.09	0.17	0.81	0.82	0.09	0.81	0.01
Avail Cap(c_a), veh/h	312	0	239	295	0	250	451	1586	1598	408	1691	1454
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.3	0.0	23.1	25.9	0.0	22.6	9.7	11.8	12.0	9.8	12.7	7.5
Incr Delay (d2), s/veh	0.0	0.0	0.4	1.7	0.0	0.2	0.2	1.8	1.9	0.1	1.9	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	1.0	3.9	0.0	0.5	0.5	10.6	11.0	0.2	10.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	22.3	0.0	23.4	27.5	0.0	22.7	10.0	13.6	13.8	9.9	14.6	7.5
LnGrp LOS	C		C	C		C	A	B	B	A	B	A
Approach Vol, veh/h		47			176			1493			754	
Approach Delay, s/veh		23.3			26.9			13.6			14.4	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2	4	5	6		8					
Phs Duration (G+Y+R _c), s	10.2	36.6		14.0	8.6	38.2		14.0				
Change Period (Y+R _c), s	7.0	7.0		6.0	7.0	7.0		6.0				
Max Green Setting (Gmax), s	7.0	57.0		8.0	7.0	57.0		8.0				
Max Q Clear Time (g_c+l1), s	3.5	23.5		10.3	2.9	23.9		3.4				
Green Ext Time (p_c), s	0.0	3.0		0.0	0.0	7.3		0.0				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh			14.9									
HCM 6th LOS			B									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	1	16	46	2	9	17	838	56	10	480	25
Future Volume (vph)	15	1	16	46	2	9	17	838	56	10	480	25
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	13	12	12	13	12	11	13	11	11	12	11
Grade (%)		1%			1%			1%			-2%	
Storage Length (ft)	0		0	0		0	125		250	125		150
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.932			0.979				0.850			0.850
Flt Protected		0.977			0.961		0.950		0.950			
Satd. Flow (prot)	0	1586	0	0	1714	0	1645	1814	1443	1670	1782	1494
Flt Permitted		0.977			0.961		0.950		0.950			
Satd. Flow (perm)	0	1586	0	0	1714	0	1645	1814	1443	1670	1782	1494
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		215			346			1743			721	
Travel Time (s)		5.9			9.4			26.4			10.9	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	7%	0%	6%	2%	0%	0%	0%	2%	2%	0%	2%	0%
Adj. Flow (vph)	15	1	16	46	2	9	17	846	57	10	485	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	32	0	0	57	0	17	846	57	10	485	25
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	1	16	46	2	9	17	838	56	10	480	25
Future Vol, veh/h	15	1	16	46	2	9	17	838	56	10	480	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	125	-	250	125	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	1	-	-	1	-	-	-2	-
Peak Hour Factor	99	99	99	99	99	99	99	99	99	99	99	99
Heavy Vehicles, %	7	0	6	2	0	0	0	2	2	0	2	0
Mvmt Flow	15	1	16	46	2	9	17	846	57	10	485	25

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	1419	1442	485	1406	1410	846	510	0	0	903	0	0
Stage 1	505	505	-	880	880	-	-	-	-	-	-	-
Stage 2	914	937	-	526	530	-	-	-	-	-	-	-
Critical Hdwy	7.37	6.7	6.36	7.32	6.7	6.3	4.3	-	-	4.3	-	-
Critical Hdwy Stg 1	6.37	5.7	-	6.32	5.7	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.37	5.7	-	6.32	5.7	-	-	-	-	-	-	-
Follow-up Hdwy	3.1	4	3.2	3	4	3.1	3	-	-	3	-	-
Pot Cap-1 Maneuver	110	123	588	117	129	372	801	-	-	581	-	-
Stage 1	586	529	-	361	350	-	-	-	-	-	-	-
Stage 2	333	329	-	589	515	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	103	118	588	110	124	372	801	-	-	581	-	-
Mov Cap-2 Maneuver	103	118	-	110	124	-	-	-	-	-	-	-
Stage 1	574	520	-	353	343	-	-	-	-	-	-	-
Stage 2	316	322	-	562	506	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	30	57	0.2	0.2
HCM LOS	D	F		
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1
Capacity (veh/h)	801	-	-	176 124 581
HCM Lane V/C Ratio	0.021	-	-	0.184 0.464 0.017
HCM Control Delay (s/veh)	9.6	-	-	30 57 11.3
HCM Lane LOS	A	-	-	D F B
HCM 95th %tile Q (veh)	0.1	-	-	0.7 2.1 0.1

2027 Projected Conditions

1: Pottstown Pike (SR 0100) & Font Road/Site Driveway

2027 Projected Conditions

Timing Plan: Weekday AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	5	230	11	2	7	92	314	29	17	811	8
Future Volume (vph)	9	5	230	11	2	7	92	314	29	17	811	8
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	10	13	12	12	12	11	12	12	12	11	12
Grade (%)	-1%			0%			1%			-1%		
Storage Length (ft)	0		85	0		0	300		0	0		0
Storage Lanes	1		1	0		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t			0.850			0.951			0.987			0.999
Flt Protected			0.968			0.973			0.950			0.999
Satd. Flow (prot)	0	1257	1558	0	1633	0	1430	1631	0	0	1645	0
Flt Permitted		0.968			0.973		0.950				0.999	
Satd. Flow (perm)	0	1257	1558	0	1633	0	1430	1631	0	0	1645	0
Link Speed (mph)			25			25			45			45
Link Distance (ft)			380			289			1166			1743
Travel Time (s)			10.4			0.0			17.7			26.4
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	44%	2%	2%	2%	2%	2%	15%	9%	2%	2%	6%	20%
Adj. Flow (vph)	10	5	247	12	2	8	99	338	31	18	872	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	15	247	0	22	0	99	369	0	0	899	0
Sign Control			Stop			Stop			Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 7.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	5	230	11	2	7	92	314	29	17	811	8
Future Vol, veh/h	9	5	230	11	2	7	92	314	29	17	811	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	0	-	85	-	-	-	300	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	0	-	-	1	-	-	-1	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	44	2	2	2	2	2	15	9	2	2	6	20
Mvmt Flow	10	5	247	12	2	8	99	338	31	18	872	9

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	1470	1480	877	1467	1469	354	881	0	0	369	0	0
Stage 1	913	913	-	552	552	-	-	-	-	-	-	-
Stage 2	557	567	-	915	917	-	-	-	-	-	-	-
Critical Hdwy	7.34	6.32	6.12	7.12	6.52	6.22	4.5	-	-	4.3	-	-
Critical Hdwy Stg 1	6.34	5.32	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.34	5.32	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.4	4.018	3.1	3	4.018	3.1	3.1	-	-	3	-	-
Pot Cap-1 Maneuver	98	136	373	114	127	731	551	-	-	897	-	-
Stage 1	317	371	-	586	515	-	-	-	-	-	-	-
Stage 2	511	523	-	362	351	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	80	107	373	31	100	731	551	-	-	897	-	-
Mov Cap-2 Maneuver	80	107	-	31	100	-	-	-	-	-	-	-
Stage 1	260	357	-	481	422	-	-	-	-	-	-	-
Stage 2	413	429	-	115	337	-	-	-	-	-	-	-

Approach	EB	WB			NB			SB		
HCM Control Delay, s/v	33	116.3			2.7			0.2		
HCM LOS	D	F								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR	
Capacity (veh/h)	551	-	-	88	373	52	897	-	-	
HCM Lane V/C Ratio	0.18	-	-	0.171	0.663	0.414	0.02	-	-	
HCM Control Delay (s/veh)	13	-	-	54.2	31.7	116.3	9.1	0	-	
HCM Lane LOS	B	-	-	F	D	F	A	A	-	
HCM 95th %tile Q (veh)	0.6	-	-	0.6	4.6	1.5	0.1	-	-	

2: Pottstown Pike (SR 0100) & Reserve Drive/Fellowship Road

2027 Projected Conditions

Timing Plan: Weekday AM Peak Hour

	↑	→	↓	↗	↖	↙	↖	↑	↗	↙	↓	↗
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑		↑	↑		↑	↑	↑	↑	↑	↑
Traffic Volume (vph)	2	0	78	233	4	42	16	500	84	25	847	1
Future Volume (vph)	2	0	78	233	4	42	16	500	84	25	847	1
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	10	13	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%			-1%			2%			0%
Storage Length (ft)	125		0	195		0	90		0	340		190
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Fr _t		0.850			0.862			0.978				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1596	1520	0	1637	1368	0	1693	3099	0	1644	1731	1530
Flt Permitted	0.724			0.702			0.110			0.396		
Satd. Flow (perm)	1216	1520	0	1209	1368	0	196	3099	0	685	1731	1530
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)	252			46			36					119
Link Speed (mph)	35			35			35			45		
Link Distance (ft)	229			662			548			828		
Travel Time (s)	4.5			12.9			10.7			12.5		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	4%	5%	25%	13%	0%	7%	6%	4%	4%	0%
Adj. Flow (vph)	2	0	85	253	4	46	17	543	91	27	921	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	85	0	253	50	0	17	634	0	27	921	1
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	8				4		1	6		5	2	
Permitted Phases	8			4			6			2		2
Detector Phase	8	8		4	4		1	6		5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	11.0	11.0		11.0	11.0		12.0	22.0		12.0	22.0	22.0
Total Split (s)	17.0	17.0		17.0	17.0		14.0	61.0		14.0	61.0	61.0
Total Split (%)	18.5%	18.5%		18.5%	18.5%		15.2%	66.3%		15.2%	66.3%	66.3%
Yellow Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	5.0		5.0	5.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None		None	Min		None	Min	Min
Intersection Summary												
Area Type:	Other											
Cycle Length:	92											
Actuated Cycle Length:	71											
Natural Cycle:	90											
Control Type:	Actuated-Uncoordinated											

Splits and Phases: 2: Pottstown Pike (SR 0100) & Reserve Drive/Fellowship Road



2: Pottstown Pike (SR 0100) & Reserve Drive/Fellowship Road

2027 Projected Conditions

Timing Plan: Weekday AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑		↑	↑		↑	↑↑		↑	↑	↑
Traffic Volume (veh/h)	2	0	78	233	4	42	16	500	84	25	847	1
Future Volume (veh/h)	2	0	78	233	4	42	16	500	84	25	847	1
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1872	1744	1766	1482	1652	1778	1679	1693	1744	1744	1800
Adj Flow Rate, veh/h	2	0	55	253	4	23	17	543	73	27	921	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	4	5	25	13	0	7	6	4	4	0
Cap, veh/h	298	0	257	273	31	177	211	1600	215	516	1002	877
Arrive On Green	0.16	0.00	0.15	0.16	0.16	0.15	0.03	0.57	0.55	0.04	0.57	0.00
Sat Flow, veh/h	1331	0	1586	1274	190	1094	1693	2828	379	1661	1744	1525
Grp Volume(v), veh/h	2	0	55	253	0	27	17	306	310	27	921	0
Grp Sat Flow(s), veh/h/ln	1331	0	1586	1274	0	1285	1693	1595	1611	1661	1744	1525
Q Serve(g_s), s	0.1	0.0	2.3	10.2	0.0	1.3	0.3	7.6	7.7	0.5	35.2	0.0
Cycle Q Clear(g_c), s	0.9	0.0	2.3	12.0	0.0	1.3	0.3	7.6	7.7	0.5	35.2	0.0
Prop In Lane	1.00		1.00	1.00		0.85	1.00		0.24	1.00		1.00
Lane Grp Cap(c), veh/h	298	0	257	273	0	208	211	903	912	516	1002	877
V/C Ratio(X)	0.01	0.00	0.21	0.93	0.00	0.13	0.08	0.34	0.34	0.05	0.92	0.00
Avail Cap(c_a), veh/h	298	0	257	273	0	208	337	1185	1197	625	1295	1133
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	26.7	0.0	27.4	33.5	0.0	26.9	14.3	8.6	8.7	6.2	14.2	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.4	35.1	0.0	0.3	0.2	0.2	0.2	0.0	8.9	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	1.5	11.4	0.0	0.7	0.2	4.1	4.2	0.2	18.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.8	0.0	27.8	68.6	0.0	27.2	14.5	8.8	8.9	6.2	23.1	0.0
LnGrp LOS	C		C	E		C	B	A	A	A	C	
Approach Vol, veh/h		57			280			633			948	
Approach Delay, s/veh		27.7			64.6			9.0			22.6	
Approach LOS		C			E			A			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+R _c), s	8.5	48.6		17.0	9.1	47.9		17.0				
Change Period (Y+R _c), s	7.0	7.0		6.0	7.0	7.0		6.0				
Max Green Setting (Gmax), s	7.0	54.0		11.0	7.0	54.0		11.0				
Max Q Clear Time (g_c+l1), s	2.8	37.7		14.5	3.0	10.1		4.3				
Green Ext Time (p_c), s	0.0	3.8		0.0	0.0	2.4		0.1				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh			24.4									
HCM 6th LOS			C									

3: Pottstown Pike (SR 0100) & Milford Road/Garrison Drive

2027 Projected Conditions

Timing Plan: Weekday AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	3	14	38	2	9	7	312	11	5	788	15
Future Volume (vph)	21	3	14	38	2	9	7	312	11	5	788	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	13	12	12	13	12	11	13	11	11	12	11
Grade (%)												-2%
Storage Length (ft)	0		0	0		0	125		250	125		150
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Fr _t				0.951			0.975			0.850		0.850
Fl _t Protected				0.973			0.963		0.950		0.950	
Satd. Flow (prot)	0	1672	0	0	1698	0	1645	1714	1008	1391	1731	1494
Fl _t Permitted				0.973			0.963		0.950		0.950	
Satd. Flow (perm)	0	1672	0	0	1698	0	1645	1714	1008	1391	1731	1494
Link Speed (mph)				25			25		45		45	
Link Distance (ft)				215			346		1743		721	
Travel Time (s)				5.9			9.4		26.4		10.9	
Confl. Peds. (#/hr)					1		1					
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	33%	0%	3%	0%	0%	0%	8%	46%	20%	5%	0%
Adj. Flow (vph)	23	3	15	41	2	10	8	339	12	5	857	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	41	0	0	53	0	8	339	12	5	857	16
Sign Control				Stop			Stop		Free		Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	3	14	38	2	9	7	312	11	5	788	15
Future Vol, veh/h	21	3	14	38	2	9	7	312	11	5	788	15
Conflicting Peds, #/hr	0	0	0	1	0	1	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	125	-	250	125	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	1	-	-	1	-	-	-2	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	33	0	3	0	0	0	8	46	20	5	0
Mvmt Flow	23	3	15	41	2	10	8	339	12	5	857	16

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	1235	1234	858	1240	1238	340	873	0	0	351	0	0
Stage 1	867	867	-	355	355	-	-	-	-	-	-	-
Stage 2	368	367	-	885	883	-	-	-	-	-	-	-
Critical Hdwy	7.3	7.03	6.3	7.33	6.7	6.3	4.3	-	-	4.5	-	-
Critical Hdwy Stg 1	6.3	6.03	-	6.33	5.7	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.3	6.03	-	6.33	5.7	-	-	-	-	-	-	-
Follow-up Hdwy	3	4.297	3.1	3	4	3.1	3	-	-	3.2	-	-
Pot Cap-1 Maneuver	157	144	366	154	165	739	595	-	-	844	-	-
Stage 1	370	315	-	743	621	-	-	-	-	-	-	-
Stage 2	732	560	-	358	349	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	151	141	366	143	162	738	595	-	-	844	-	-
Mov Cap-2 Maneuver	151	141	-	143	162	-	-	-	-	-	-	-
Stage 1	365	313	-	733	613	-	-	-	-	-	-	-
Stage 2	709	553	-	337	347	-	-	-	-	-	-	-

Approach	EB	WB			NB			SB		
HCM Control Delay, s/v	29	35.8			0.2			0.1		
HCM LOS	D	E								
<hr/>										
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR		
Capacity (veh/h)	595	-	-	191	169	844	-	-		
HCM Lane V/C Ratio	0.013	-	-	0.216	0.315	0.006	-	-		
HCM Control Delay (s/veh)	11.1	-	-	29	35.8	9.3	-	-		
HCM Lane LOS	B	-	-	D	E	A	-	-		
HCM 95th %tile Q (veh)	0	-	-	0.8	1.3	0	-	-		

1: Pottstown Pike (SR 0100) & Font Road/Site Driveway

2027 Projected Conditions

Timing Plan: Weekday PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	3	181	27	5	15	295	892	17	10	524	22
Future Volume (vph)	13	3	181	27	5	15	295	892	17	10	524	22
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	10	13	12	12	12	11	12	12	12	11	12
Grade (%)	-1%				0%			1%			-1%	
Storage Length (ft)	0		85	0		0	300		0	0		0
Storage Lanes	1		1	0		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t			0.850		0.957			0.997			0.995	
Flt Protected			0.960		0.972		0.950				0.999	
Satd. Flow (prot)	0	1516	1589	0	1642	0	1628	1751	0	0	1682	0
Flt Permitted		0.960			0.972		0.950				0.999	
Satd. Flow (perm)	0	1516	1589	0	1642	0	1628	1751	0	0	1682	0
Link Speed (mph)			25		25			45			45	
Link Distance (ft)			380		235			1166			1743	
Travel Time (s)			10.4		0.0			17.7			26.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	8%	2%	0%	2%	2%	2%	1%	2%	2%	2%	3%	13%
Adj. Flow (vph)	14	3	193	29	5	16	314	949	18	11	557	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	17	193	0	50	0	314	967	0	0	591	0
Sign Control			Stop			Stop			Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 28.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	3	181	27	5	15	295	892	17	10	524	22
Future Vol, veh/h	13	3	181	27	5	15	295	892	17	10	524	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	0	-	85	-	-	-	300	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	0	-	-	1	-	-	-1	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	8	2	0	2	2	2	1	2	2	2	3	13
Mvmt Flow	14	3	193	29	5	16	314	949	18	11	557	23

Major/Minor	Minor2	Minor1			Major1			Major2		
Conflicting Flow All	2188	2186	569	2178	2188	958	580	0	0	967
Stage 1	591	591	-	1586	1586	-	-	-	-	-
Stage 2	1597	1595	-	592	602	-	-	-	-	-
Critical Hdwy	6.98	6.32	6.1	7.12	6.52	6.22	4.3	-	-	4.3
Critical Hdwy Stg 1	5.98	5.32	-	6.12	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.98	5.32	-	6.12	5.52	-	-	-	-	-
Follow-up Hdwy	3.1	4.018	3.1	3	4.018	3.1	3	-	-	3
Pot Cap-1 Maneuver	37	52	560	35	46	326	757	-	-	551
Stage 1	555	511	-	146	168	-	-	-	-	-
Stage 2	151	182	-	556	489	-	-	-	-	-
Platoon blocked, %							-	-	-	-
Mov Cap-1 Maneuver	20	29	560	~ 14	26	326	757	-	-	551
Mov Cap-2 Maneuver	20	29	-	~ 14	26	-	-	-	-	-
Stage 1	325	496	-	85	98	-	-	-	-	-
Stage 2	79	106	-	352	474	-	-	-	-	-

Approach	EB	WB			NB			SB		
HCM Control Delay, s/v	45.1	\$ 954.4			3.2			0.2		
HCM LOS	E	F								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR	
Capacity (veh/h)	757	-	-	21	560	22	551	-	-	
HCM Lane V/C Ratio	0.415	-	-	0.811	0.344	2.273	0.019	-	-	
HCM Control Delay (s/veh)	13.1	-	-	\$ 387.5	14.8	\$ 954.4	11.7	0	-	
HCM Lane LOS	B	-	-	F	B	F	B	A	-	
HCM 95th %tile Q (veh)	2	-	-	2.3	1.5	6.4	0.1	-	-	

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

2: Pottstown Pike (SR 0100) & Reserve Drive/Fellowship Road

2027 Projected Conditions

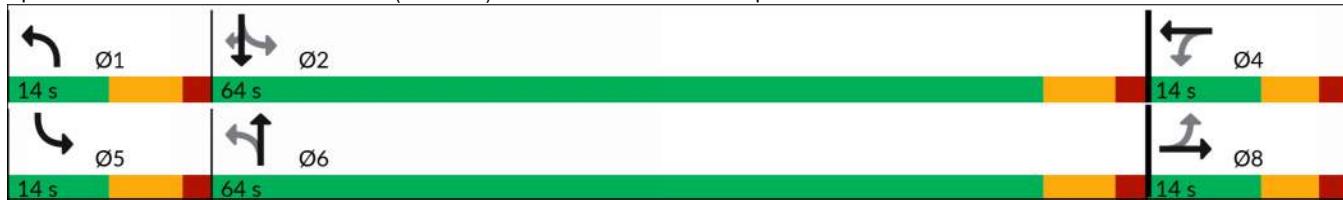
Timing Plan: Weekday PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR						
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1						
Traffic Volume (vph)	4	5	64	143	10	20	56	1182	191	23	700	7						
Future Volume (vph)	4	5	64	143	10	20	56	1182	191	23	700	7						
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800						
Lane Width (ft)	10	13	12	12	12	12	12	12	12	12	12	12						
Grade (%)	0%			-1%			2%			0%								
Storage Length (ft)	125			0			195			0								
Storage Lanes	1			0			1			0								
Taper Length (ft)	25			25			25			25								
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00						
Ped Bike Factor	0.99																	
Fr _t	0.860			0.900			0.979			0.850								
Fl _t Protected	0.950			0.950			0.950			0.950								
Satd. Flow (prot)	1596	1570	0	1702	1628	0	1693	3250	0	1710	1765	1530						
Fl _t Permitted	0.736			0.709			0.227			0.115								
Satd. Flow (perm)	1236	1570	0	1270	1628	0	405	3250	0	207	1765	1498						
Right Turn on Red	Yes			Yes			Yes			Yes								
Satd. Flow (RTOR)	69			22			38			119								
Link Speed (mph)	35			35			35			45								
Link Distance (ft)	229			662			548			828								
Travel Time (s)	4.5			12.9			10.7			12.5								
Confl. Peds. (#/hr)	1																	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93						
Heavy Vehicles (%)	0%	0%	2%	1%	0%	0%	0%	2%	2%	0%	2%	0%						
Adj. Flow (vph)	4	5	69	154	11	22	60	1271	205	25	753	8						
Shared Lane Traffic (%)																		
Lane Group Flow (vph)	4	74	0	154	33	0	60	1476	0	25	753	8						
Turn Type	Perm	NA	Perm		NA	pm+pt		NA	pm+pt		NA	Perm						
Protected Phases	8			4			1			5								
Permitted Phases	8			4			6			2								
Detector Phase	8	8	4		4	1		6	5		2	2						
Switch Phase																		
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0		15.0	5.0		15.0	15.0						
Minimum Split (s)	11.0	11.0	11.0		11.0	12.0		22.0	12.0		22.0	22.0						
Total Split (s)	14.0	14.0	14.0		14.0	14.0		64.0	14.0		64.0	64.0						
Total Split (%)	15.2%	15.2%	15.2%		15.2%	15.2%		69.6%	15.2%		69.6%	69.6%						
Yellow Time (s)	4.0	4.0	4.0		4.0	5.0		5.0	5.0		5.0	5.0						
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0						
Lost Time Adjust (s)	-1.0	-1.0	-1.0		-1.0	-1.0		-1.0	-1.0		-1.0	-1.0						
Total Lost Time (s)	5.0	5.0	5.0		5.0	6.0		6.0	6.0		6.0	6.0						
Lead/Lag	Lead						Lag											
Lead-Lag Optimize?	Yes						Yes											
Recall Mode	None	None	None		None	None		Min	None		Min	Min						
Intersection Summary																		
Area Type:	Other																	
Cycle Length:	92																	
Actuated Cycle Length:	68.8																	
Natural Cycle:	65																	

Control Type: Actuated-Uncoordinated

Splits and Phases: 2: Pottstown Pike (SR 0100) & Reserve Drive/Fellowship Road



2: Pottstown Pike (SR 0100) & Reserve Drive/Fellowship Road

2027 Projected Conditions

Timing Plan: Weekday PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1
Traffic Volume (veh/h)	4	5	64	143	10	20	56	1182	191	23	700	7
Future Volume (veh/h)	4	5	64	143	10	20	56	1182	191	23	700	7
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1872	1772	1823	1837	1837	1778	1750	1750	1800	1772	1800
Adj Flow Rate, veh/h	4	5	38	154	11	13	60	1271	179	25	753	5
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	2	1	0	0	0	2	2	0	2	0
Cap, veh/h	306	27	209	291	112	133	331	1561	219	256	903	776
Arrive On Green	0.15	0.15	0.13	0.15	0.15	0.13	0.07	0.53	0.52	0.04	0.51	0.51
Sat Flow, veh/h	1335	188	1427	1329	767	907	1693	2928	410	1714	1772	1524
Grp Volume(v), veh/h	4	0	43	154	0	24	60	718	732	25	753	5
Grp Sat Flow(s), veh/h/ln	1335	0	1615	1329	0	1674	1693	1662	1676	1714	1772	1524
Q Serve(g_s), s	0.2	0.0	1.5	7.0	0.0	0.8	1.0	21.9	22.3	0.4	22.3	0.1
Cycle Q Clear(g_c), s	0.4	0.0	1.5	8.0	0.0	0.8	1.0	21.9	22.3	0.4	22.3	0.1
Prop In Lane	1.00		0.88	1.00		0.54	1.00		0.24	1.00		1.00
Lane Grp Cap(c), veh/h	306	0	236	291	0	245	331	886	894	256	903	776
V/C Ratio(X)	0.01	0.00	0.18	0.53	0.00	0.10	0.18	0.81	0.82	0.10	0.83	0.01
Avail Cap(c_a), veh/h	306	0	236	291	0	245	436	1566	1579	403	1669	1436
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.7	0.0	23.5	26.3	0.0	23.0	10.1	11.8	12.0	9.9	12.9	7.4
Incr Delay (d2), s/veh	0.0	0.0	0.4	1.8	0.0	0.2	0.3	1.8	1.9	0.2	2.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	1.0	4.0	0.0	0.5	0.5	10.8	11.2	0.2	11.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	22.8	0.0	23.8	28.1	0.0	23.2	10.4	13.6	13.9	10.0	15.0	7.4
LnGrp LOS	C		C	C		C	B	B	B	B	B	A
Approach Vol, veh/h		47			178			1510			783	
Approach Delay, s/veh		23.7			27.5			13.7			14.8	
Approach LOS		C			C			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+R _c), s	10.2	37.4		14.0	8.7	38.8		14.0				
Change Period (Y+R _c), s	7.0	7.0		6.0	7.0	7.0		6.0				
Max Green Setting (Gmax), s	7.0	57.0		8.0	7.0	57.0		8.0				
Max Q Clear Time (g_c+l1), s	3.5	24.8		10.5	2.9	24.4		3.5				
Green Ext Time (p_c), s	0.0	3.2		0.0	0.0	7.5		0.0				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh			15.2									
HCM 6th LOS			B									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	1	16	46	2	9	17	853	56	10	490	25
Future Volume (vph)	15	1	16	46	2	9	17	853	56	10	490	25
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	13	12	12	13	12	11	13	11	11	12	11
Grade (%)		1%			1%			1%			-2%	
Storage Length (ft)	0		0	0		0	125		250	125		150
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.932			0.979				0.850			0.850
Flt Protected		0.977			0.961		0.950		0.950			
Satd. Flow (prot)	0	1586	0	0	1714	0	1645	1814	1443	1670	1782	1494
Flt Permitted		0.977			0.961		0.950		0.950			
Satd. Flow (perm)	0	1586	0	0	1714	0	1645	1814	1443	1670	1782	1494
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		215			346			1743			721	
Travel Time (s)		5.9			9.4			26.4			10.9	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	7%	0%	6%	2%	0%	0%	0%	2%	2%	0%	2%	0%
Adj. Flow (vph)	15	1	16	46	2	9	17	862	57	10	495	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	32	0	0	57	0	17	862	57	10	495	25
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection

Int Delay, s/veh 3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	1	16	46	2	9	17	853	56	10	490	25
Future Vol, veh/h	15	1	16	46	2	9	17	853	56	10	490	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	125	-	250	125	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	1	-	-	1	-	-	1	-	-	-2	-
Peak Hour Factor	99	99	99	99	99	99	99	99	99	99	99	99
Heavy Vehicles, %	7	0	6	2	0	0	0	2	2	0	2	0
Mvmt Flow	15	1	16	46	2	9	17	862	57	10	495	25

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	1445	1468	495	1432	1436	862	520	0	0	919	0	0
Stage 1	515	515	-	896	896	-	-	-	-	-	-	-
Stage 2	930	953	-	536	540	-	-	-	-	-	-	-
Critical Hdwy	7.37	6.7	6.36	7.32	6.7	6.3	4.3	-	-	4.3	-	-
Critical Hdwy Stg 1	6.37	5.7	-	6.32	5.7	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.37	5.7	-	6.32	5.7	-	-	-	-	-	-	-
Follow-up Hdwy	3.1	4	3.2	3	4	3.1	3	-	-	3	-	-
Pot Cap-1 Maneuver	105	119	580	112	124	364	795	-	-	573	-	-
Stage 1	578	523	-	353	344	-	-	-	-	-	-	-
Stage 2	326	323	-	581	509	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	98	114	580	105	119	364	795	-	-	573	-	-
Mov Cap-2 Maneuver	98	114	-	105	119	-	-	-	-	-	-	-
Stage 1	566	514	-	346	337	-	-	-	-	-	-	-
Stage 2	309	316	-	554	500	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	31.3	60.8	0.2	0.2
HCM LOS	D	F		
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1
Capacity (veh/h)	795	-	-	169 119
HCM Lane V/C Ratio	0.022	-	-	0.191 0.484
HCM Control Delay (s/veh)	9.6	-	-	31.3 60.8
HCM Lane LOS	A	-	-	D F B
HCM 95th %tile Q (veh)	0.1	-	-	0.7 2.2 0.1

***2027 Projected Conditions
With Improvements***

1: Pottstown Pike (SR 0100) & Font Road/Site Driveway
With Improvements

2027 Projected Conditions
Timing Plan: Weekday AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	5	230	11	2	7	92	314	29	17	811	8
Future Volume (vph)	9	5	230	11	2	7	92	314	29	17	811	8
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	10	13	12	12	12	11	12	12	12	11	12
Grade (%)	-1%				0%			1%			-1%	
Storage Length (ft)	0		85	0		0	300		0	125		0
Storage Lanes	1		1	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t			0.850			0.951			0.987			0.998
Flt Protected			0.968			0.973			0.950			0.950
Satd. Flow (prot)	0	1257	1558	0	1633	0	1430	1631	0	1685	1644	0
Flt Permitted		0.968			0.973		0.950			0.950		
Satd. Flow (perm)	0	1257	1558	0	1633	0	1430	1631	0	1685	1644	0
Link Speed (mph)			25			25			45			45
Link Distance (ft)			380			289			1166			1743
Travel Time (s)			10.4			0.0			17.7			26.4
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	44%	2%	2%	2%	2%	2%	15%	9%	2%	2%	6%	20%
Adj. Flow (vph)	10	5	247	12	2	8	99	338	31	18	872	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	15	247	0	22	0	99	369	0	18	881	0
Sign Control			Stop			Stop			Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection												
Int Delay, s/veh	7.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	5	230	11	2	7	92	314	29	17	811	8
Future Vol, veh/h	9	5	230	11	2	7	92	314	29	17	811	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	0	-	85	-	-	-	300	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	0	-	-	1	-	-	-1	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	44	2	2	2	2	2	15	9	2	2	6	20
Mvmt Flow	10	5	247	12	2	8	99	338	31	18	872	9

Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	1470	1480	877	1467	1469	354	881	0	0	369	0	0
Stage 1	913	913	-	552	552	-	-	-	-	-	-	-
Stage 2	557	567	-	915	917	-	-	-	-	-	-	-
Critical Hdwy	7.34	6.32	6.12	7.12	6.52	6.22	4.5	-	-	4.3	-	-
Critical Hdwy Stg 1	6.34	5.32	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.34	5.32	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.4	4.018	3.1	3	4.018	3.1	3.1	-	-	3	-	-
Pot Cap-1 Maneuver	98	136	373	114	127	731	551	-	-	897	-	-
Stage 1	317	371	-	586	515	-	-	-	-	-	-	-
Stage 2	511	523	-	362	351	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	81	109	373	31	102	731	551	-	-	897	-	-
Mov Cap-2 Maneuver	81	109	-	31	102	-	-	-	-	-	-	-
Stage 1	260	364	-	481	422	-	-	-	-	-	-	-
Stage 2	413	429	-	118	344	-	-	-	-	-	-	-
Approach	EB	WB			NB			SB				
HCM Control Delay, s/v	33	116.3			2.7			0.2				
HCM LOS	D	F										
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR			
Capacity (veh/h)	551	-	-	89	373	52	897	-	-			
HCM Lane V/C Ratio	0.18	-	-	0.169	0.663	0.414	0.02	-	-			
HCM Control Delay (s/veh)	13	-	-	53.5	31.7	116.3	9.1	-	-			
HCM Lane LOS	B	-	-	F	D	F	A	-	-			
HCM 95th %tile Q (veh)	0.6	-	-	0.6	4.6	1.5	0.1	-	-			

1: Pottstown Pike (SR 0100) & Font Road/Site Driveway
With Improvements

2027 Projected Conditions
Timing Plan: Weekday PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	3	181	27	5	15	295	892	17	10	524	22
Future Volume (vph)	13	3	181	27	5	15	295	892	17	10	524	22
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Width (ft)	12	10	13	12	12	12	11	12	12	12	11	12
Grade (%)	-1%				0%			1%			-1%	
Storage Length (ft)	0		85	0		0	300		0	125		0
Storage Lanes	1		1	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t			0.850		0.957			0.997			0.994	
Flt Protected			0.960		0.972		0.950			0.950		
Satd. Flow (prot)	0	1516	1589	0	1642	0	1628	1751	0	1685	1681	0
Flt Permitted		0.960			0.972		0.950			0.950		
Satd. Flow (perm)	0	1516	1589	0	1642	0	1628	1751	0	1685	1681	0
Link Speed (mph)			25		25			45			45	
Link Distance (ft)			380		235			1166			1743	
Travel Time (s)			10.4		0.0			17.7			26.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	8%	2%	0%	2%	2%	2%	1%	2%	2%	2%	3%	13%
Adj. Flow (vph)	14	3	193	29	5	16	314	949	18	11	557	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	17	193	0	50	0	314	967	0	11	580	0
Sign Control			Stop			Stop			Free		Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

1: Pottstown Pike (SR 0100) & Font Road/Site Driveway
With Improvements

2027 Projected Conditions
Timing Plan: Weekday PM Peak Hour

Intersection

Int Delay, s/veh 28.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	3	181	27	5	15	295	892	17	10	524	22
Future Vol, veh/h	13	3	181	27	5	15	295	892	17	10	524	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	0	-	85	-	-	-	300	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-1	-	-	0	-	-	1	-	-	-1	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	8	2	0	2	2	2	1	2	2	2	3	13
Mvmt Flow	14	3	193	29	5	16	314	949	18	11	557	23

Major/Minor	Minor2	Minor1			Major1			Major2		
Conflicting Flow All	2188	2186	569	2178	2188	958	580	0	0	967
Stage 1	591	591	-	1586	1586	-	-	-	-	-
Stage 2	1597	1595	-	592	602	-	-	-	-	-
Critical Hdwy	6.98	6.32	6.1	7.12	6.52	6.22	4.3	-	-	4.3
Critical Hdwy Stg 1	5.98	5.32	-	6.12	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.98	5.32	-	6.12	5.52	-	-	-	-	-
Follow-up Hdwy	3.1	4.018	3.1	3	4.018	3.1	3	-	-	3
Pot Cap-1 Maneuver	37	52	560	35	46	326	757	-	-	551
Stage 1	555	511	-	146	168	-	-	-	-	-
Stage 2	151	182	-	556	489	-	-	-	-	-
Platoon blocked, %							-	-	-	-
Mov Cap-1 Maneuver	20	30	560	~ 14	26	326	757	-	-	551
Mov Cap-2 Maneuver	20	30	-	~ 14	26	-	-	-	-	-
Stage 1	325	501	-	85	98	-	-	-	-	-
Stage 2	79	106	-	355	479	-	-	-	-	-

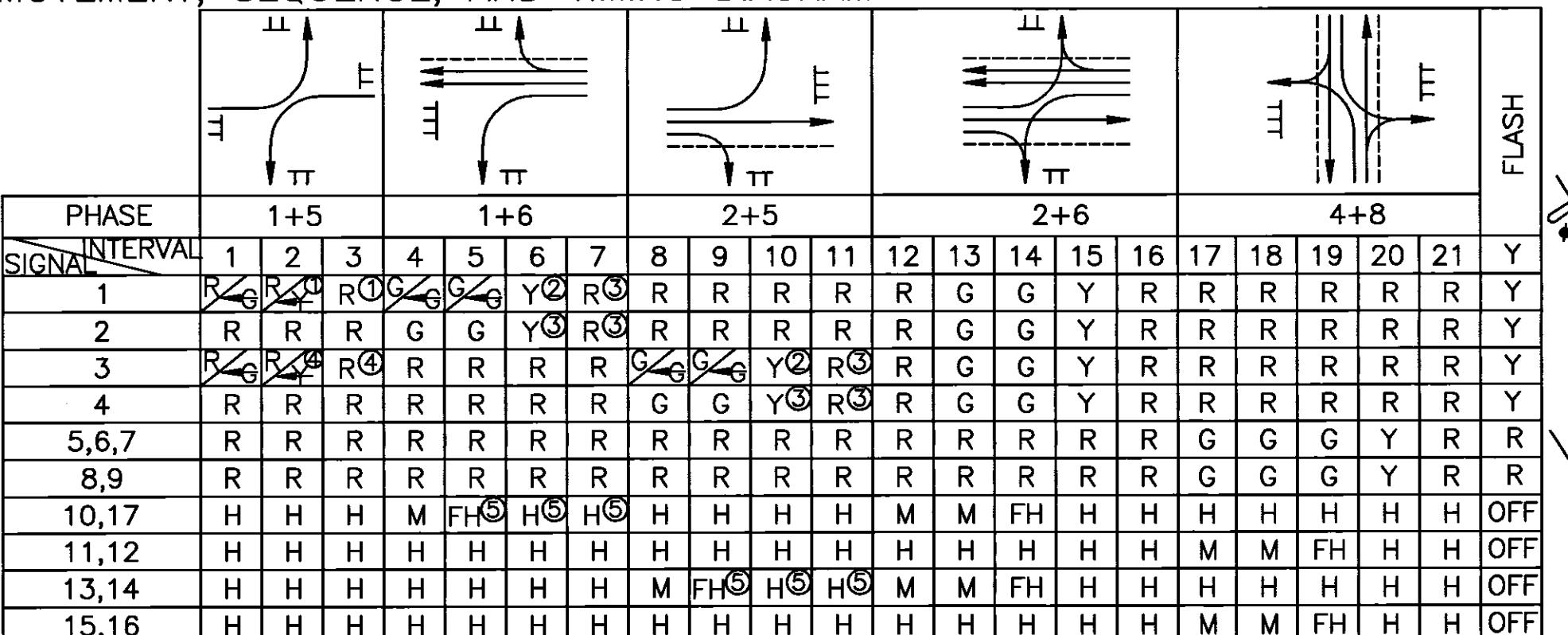
Approach	EB	WB	NB	SB
HCM Control Delay, s/v	45.1	\$ 954.4	3.2	0.2
HCM LOS	E	F		
Minor Lane/Major Mvmt	NBL	NBT	NBR	E BLn1 E BLn2 W BLn1 SBL SBT SBR
Capacity (veh/h)	757	-	-	21 560 22 551
HCM Lane V/C Ratio	0.415	-	-	0.811 0.344 2.273 0.019
HCM Control Delay (s/veh)	13.1	-	\$ 387.5	14.8 \$ 954.4 11.7
HCM Lane LOS	B	-	-	F B F B
HCM 95th %tile Q (veh)	2	-	-	2.3 1.5 6.4 0.1

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

APPENDIX H:
PennDOT Traffic Signal Plans

MOVEMENT, SEQUENCE, AND TIMING DIAGRAM



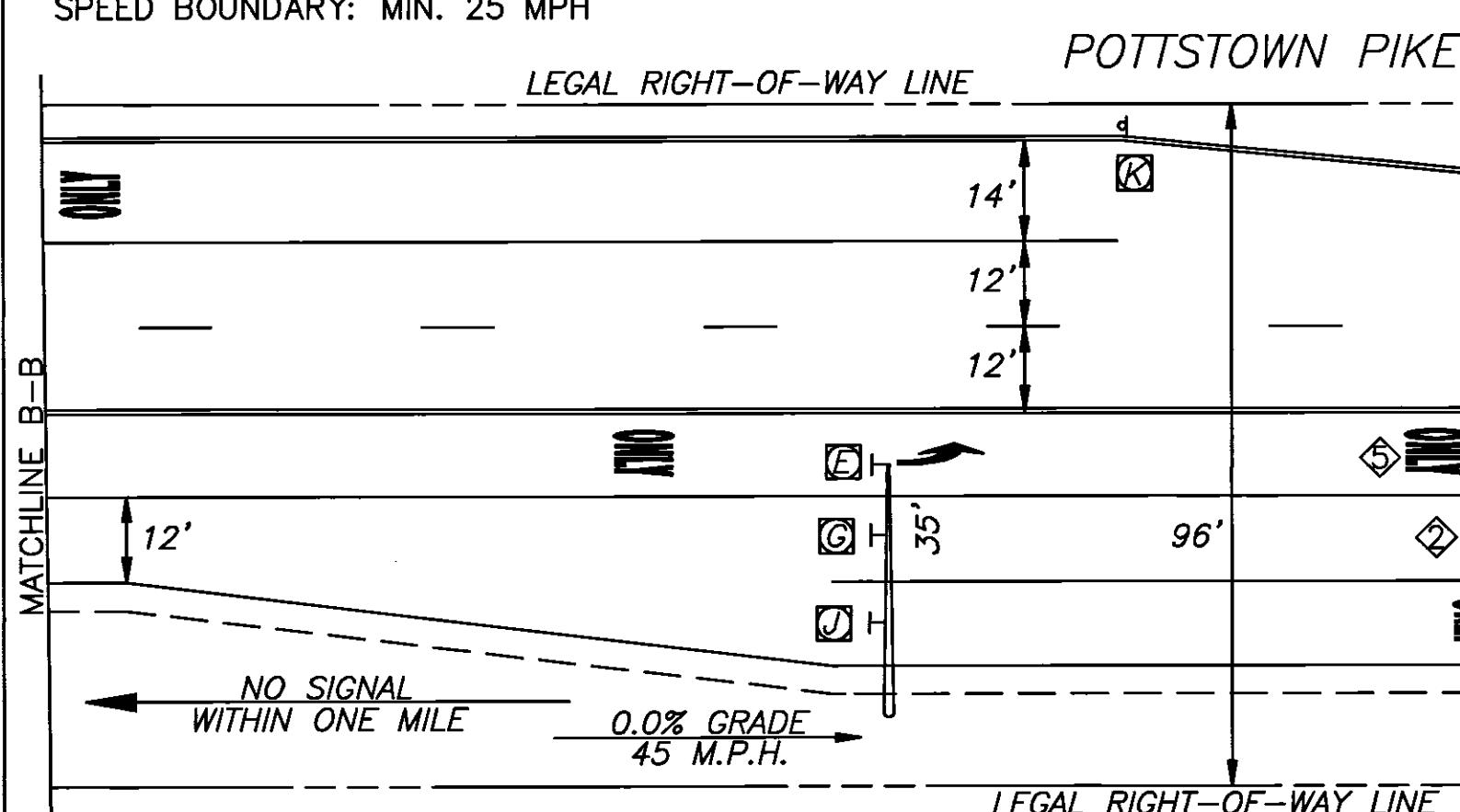
FIXED	5	2	5	2	5	2	4	2
MINIMUM	5		5		5		5	
PASSAGE	3		3		3		3	
MAXIMUM	7		7		58			
PEDESTRIAN*	⑥		⑥		3 4 24		3 4 22	
MEMORY	NL		NL		MN		NL	

- * UPON PEDESTRIAN ACTUATION ONLY
- CONTROLLER TO DWELL IN PHASE 2+6 UNTIL ACTUATED BY PHASE 4+8

- REFER TO SYSTEM PLAN #1-0014 FOR ADAPTIVE SIGNAL CONTROL OPERATION.
- PHASE 6 & 8 SHALL BE A PEDESTRIAN ADVANCE

**ADVANCE DILEMMA ZONE RADAR DETECTION SYSTEM NOTES

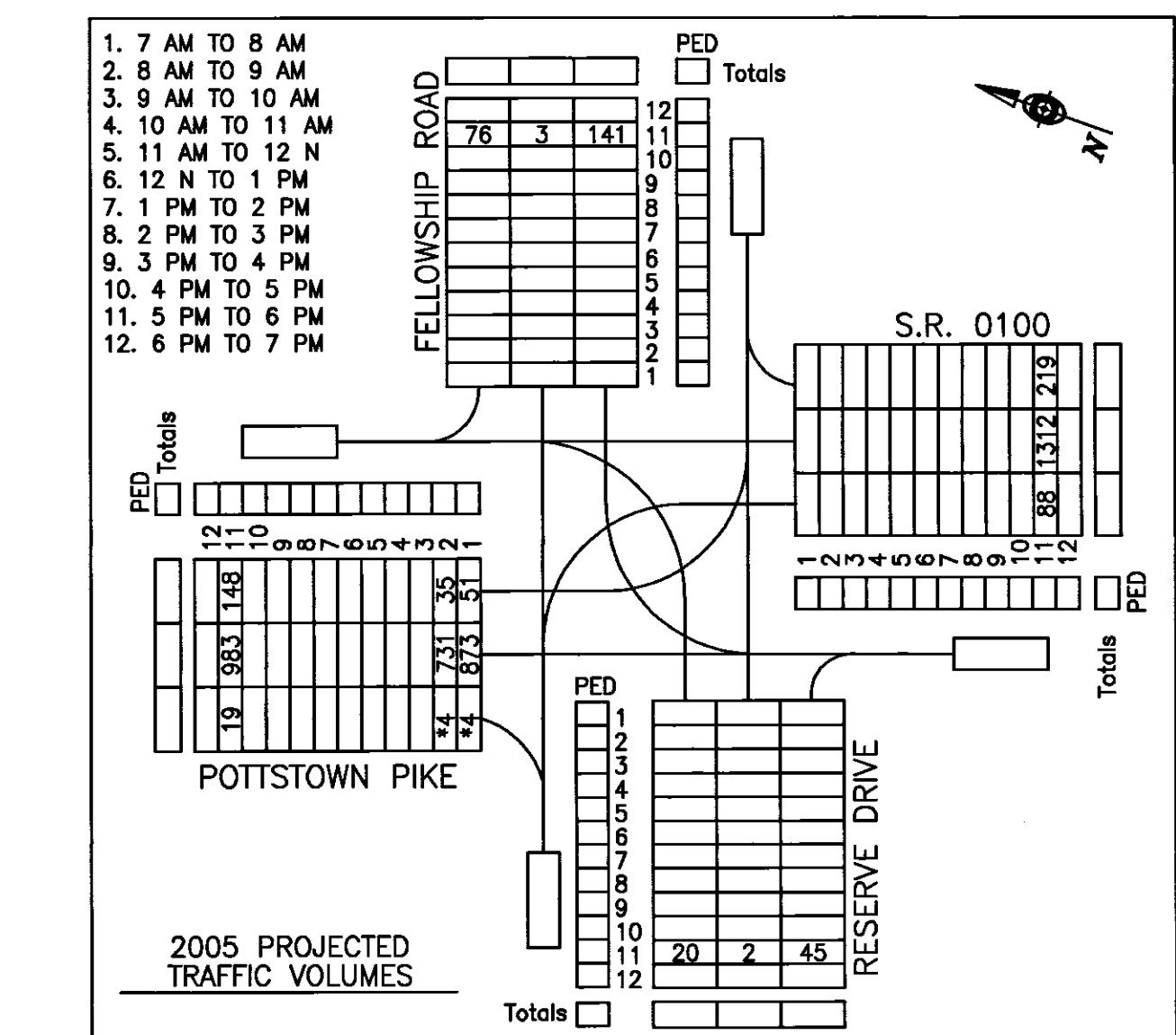
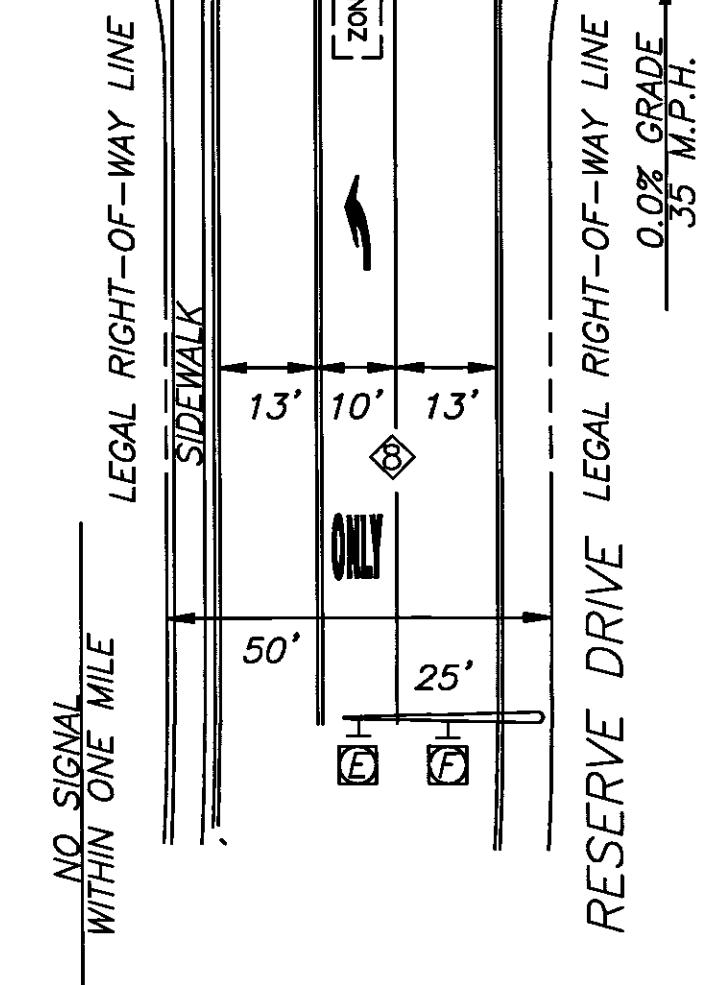
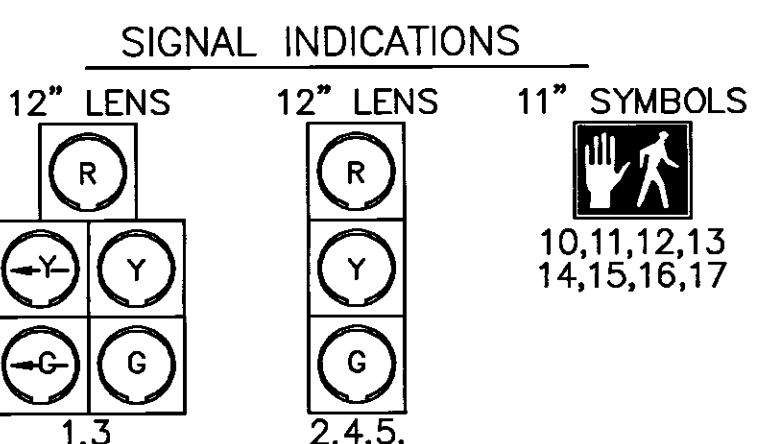
EST. TIME OF ARRIVAL: MIN. 2.5 - MAX. 5.5 SEC.
RANGE OF PROTECTION: MIN. 50 - MAX. 400 FT. FROM STOP BAR
SPEED BOUNDARY: MIN. 25 MPH



RANGE OF DETECTION: 0 - 100 FEET FROM STOP BAR
MINIMUM SPEED BOUNDARY: 5 MPH

POTTSTOWN PIKE (SR 0100)
SEG 0360, OFF 0000

SIGN TABULATION			
PLAN SYMBOL	SERIES	SIZE	MESSAGE
A	D3-4	78"x16"	STREET NAME SIGN "Route 100"
B	D3-5	96"x28"	STREET NAME SIGN "  Fellowship Rd  Reserve Dr 
C	D3-5	96"x28"	STREET NAME SIGN "  Reserve Dr  Fellowship Rd 
D	R10-3	9"x12"	EDUC. PUSH BUTTON FOR WALKING PERSON  OR 
E	R3-5L	30"x36"	LEFT TURN SIGN
F	R3-6SR	30"x36"	OPTIONAL RIGHT TURN SIGN
G	R3-5S	30"x36"	STRAIGHT THROUGH SIGN
H	R3-5R	30"x36"	RIGHT TURN SIGN
I	R3-7R	30"x30"	RIGHT LANE MUST TURN RIGHT
J	R3-7L	30"x30"	LEFT LANE MUST TURN LEFT
K	R10-12	30"x36"	LEFT TURN YIELD ON GREEN 
L	R10-15	30"x30"	TURNING TRAFFIC MUST YIELD TO PEDESTRIANS (RIGHT)



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SIGNALS ERECTED OVER THE ROADWAY SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 16 FT. ABOVE THE ROADWAY. POST MOUNTED SIGNALS SHALL BE A MINIMUM OF 8 FT. ABOVE THE SIDEWALK OR PAVEMENT.

ALL OVERHEAD SIGNALS MUST BE RIGIDLY MOUNTED, TOP AND BOTTOM, AND EQUIPPED WITH BACKPLATES.

THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNALS MEASURED AT RIGHT ANGLES TO THE APPROACH SHALL BE 8 FEET.

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PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT FOR ANY CHANGES IN INTERSECTION GEOMETRY REGARDING EXCAVATION.

CONDUT INSTALLED IN BITUMINOUS ROADWAY LESS THAN 5 YEARS OLD, OR CONCRETE ROADWAY REGARDLESS OF AGE, MUST BE BORED OR JACKED UNDER THE ROADWAY. INSTALL IN ACCORDANCE WITH TRAFFIC SIGNAL STANDARDS TC-8800 SERIES.

SYSTEM PERMIT #1-0014

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6-0
COUNTY: CHESTER
MUNICIPALITY: UPPER UWCHLAN TOWNSHIP
INTERSECTION: POTTSTOWN PIKE (SR 0100) & FELLOWSHIP ROAD / RESERVE DRIVE

REVIEWED:

DATE

MUNICIPAL OFFICIAL

DATE

RECOMMENDED:
MARK L. KRAY

2/13/02

LOUIS R. BELMONTE
DISTRICT TRAFFIC ENGINEER

DATE

NO

REVISION

DES/

REVW

DATE

RECOM

DATE

1

ADD 5 SEC. DELAY TO LOOP IN LTR OF WB FELLOWSHIP

JJS

1/7/04

MLK

1/9/04

LRB

1/15/04

2

ADD PEDESTRIAN HEADS, LEFT TURN PHASE NORTHBOUND RECEIVING LANE

LANGAN

5/3/05

3

REVISED PRE-EMPT NOTES AND TIMINGS PER VERBAL COMMENTS

LANGAN

7/25/05

4

REVISED PER EMAIL/VERBAL COMMENTS

LANGAN

8/17/05

MLK

8/23/05

LRB

8/24/05

5

ADAPTIVE SIGNAL SYSTEM REVISION

MCM

2/22/17

LUTZ

3/23/17

6

ADDED PEDESTRIAN ADVANCE INTERVAL TO PHASES 2&8

MCM

8/14/17

WZ

8/17/17

7

8

- ① G-/G IF FOLLOWED BY PHASE 1+6
- ② G- IF FOLLOWED BY PHASE 2+6
- ③ G IF FOLLOWED BY PHASE 2+6
- ④ G-/G IF FOLLOWED BY PHASE 2+5
- ⑤ M IF FOLLOWED BY PHASE 2+5
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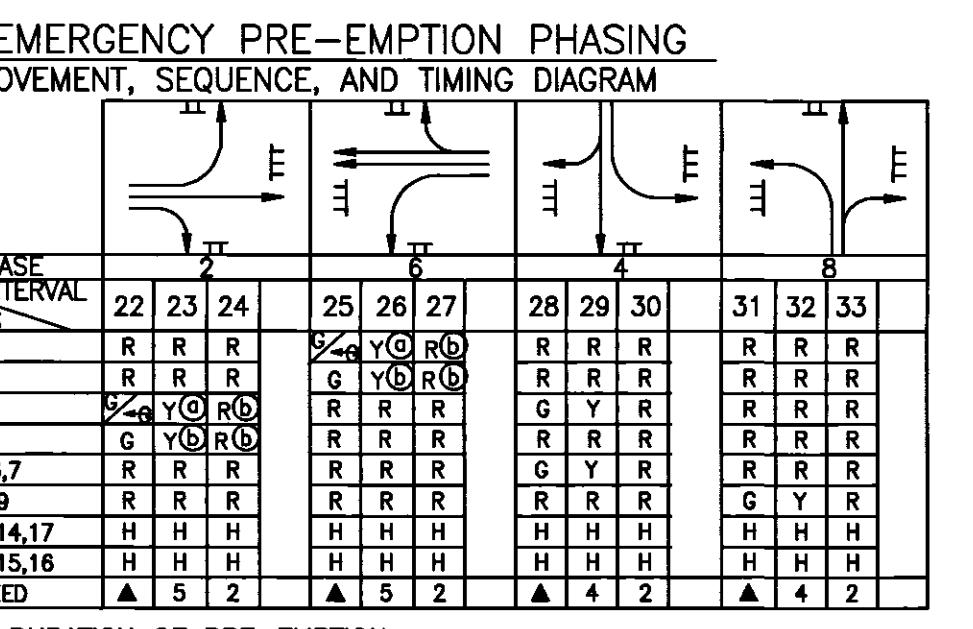
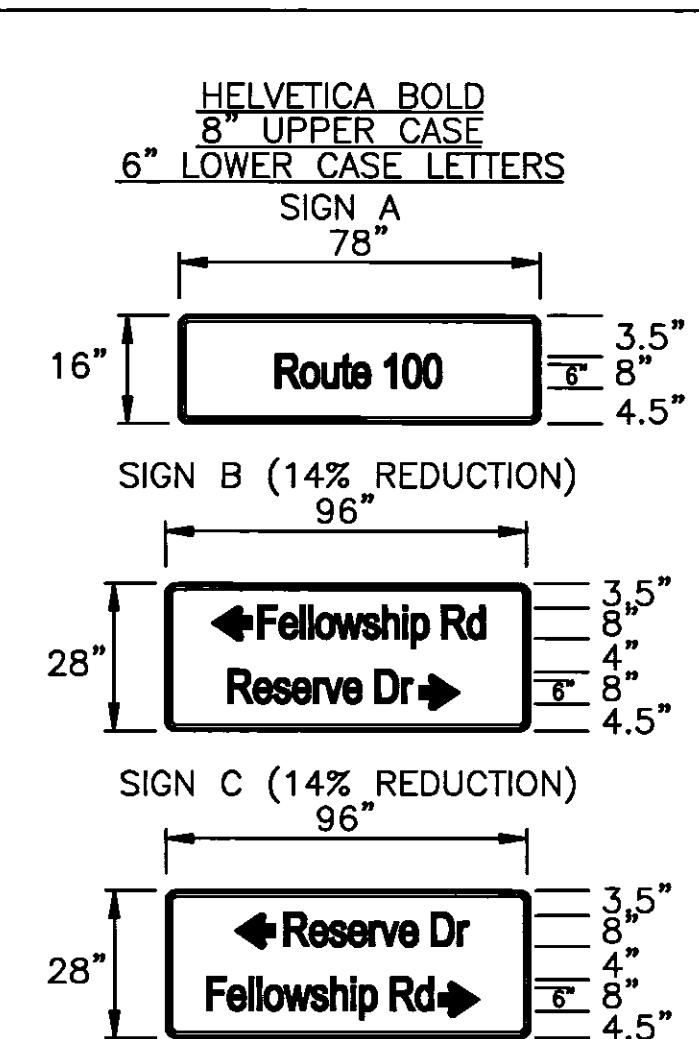
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- ① G-/G IF FOLLOWED BY PHASE 1+6
- ② G



▲ FOR DURATION OF PRE-EMPTION

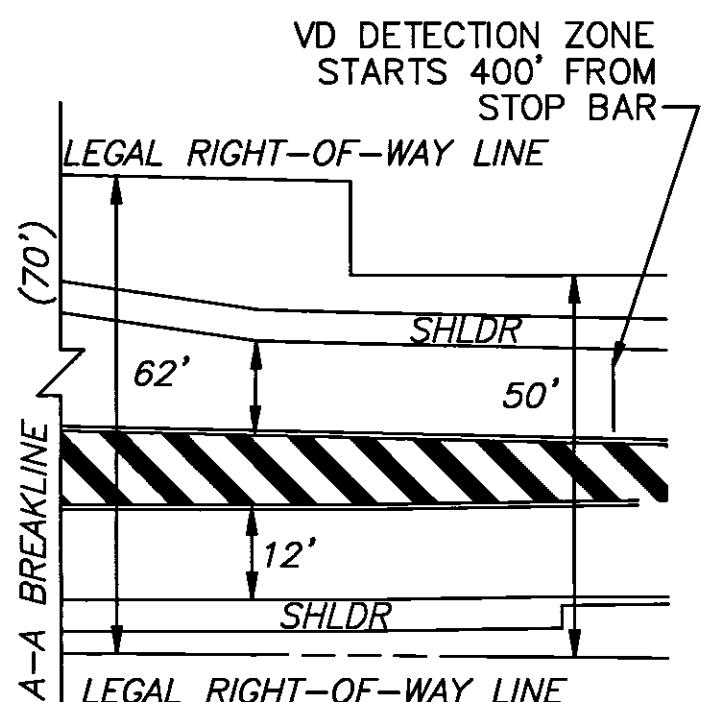
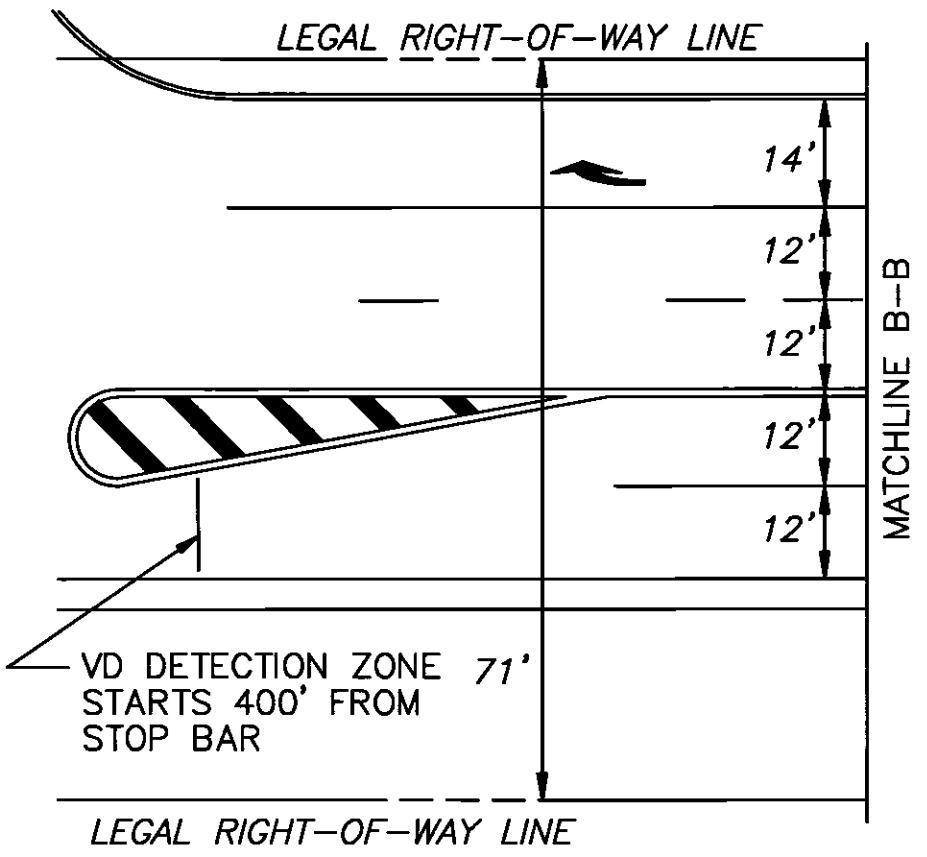
NOTE:

IF PREEMPTION EQUIPMENT HAS ENCODING CAPABILITIES FOR VEHICLE IDENTIFICATION, IT IS RECOMMENDED TO HAVE THE ZERO "00" FEATURE ON, TO GIVE UNCODED EMITTERS THE ABILITY TO ACTIVATE THE EMERGENCY PREEMPTION.

(a) G/Y WHEN RETURNING TO NORMAL OPERATION
(b) G WHEN RETURNING TO NORMAL OPERATION

EMERGENCY PREEMPTION NOTES:

- CONTROLLER TO BE EQUIPPED WITH EMERGENCY PREEMPTION FOR THE NORTHBOUND & SOUTHBOUND APPROACHES OF POTTSSTOWN PIKE AND THE EASTBOUND APPROACH OF RESERVE DRIVE & WESTBOUND APPROACH OF FELLOWSHIP ROAD WITH A FAIL SAFE DEVICE FOR EACH DIRECTION OF OPERATION. THIS EMERGENCY BEACON SHALL CONSIST OF A FLASHING WHITE FLOOD LIGHT, AND SHALL FLASH WHEN THE EMERGENCY VEHICLE HAS CONTROL OF THE INTERSECTION FOR THE APPROPRIATE APPROACH. LOCATION OF EMERGENCY VEHICLE DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.
- THE SIGNALS SHALL TERMINATE ALL GREEN INDICATIONS IMMEDIATELY, WHEN ACTIVATED BY AN EMERGENCY VEHICLE, FOLLOWED BY THE COMPLETE YELLOW AND RED CLEARANCE INTERVALS, ACCORDINGLY. THEN THE GREEN INTERVAL FOR THE PREEMPTED PHASE SHALL FOLLOW.
- THE SIGNALS SHALL TIME OUT ALL YELLOW AND RED INDICATIONS, WHEN ACTIVATED BY EMERGENCY VEHICLE, FOLLOWED BY THE GREEN INTERVAL OF THE PREEMPTION PHASE GOVERNED BY THE APPROACHING EMERGENCY VEHICLE.
- IF SIGNALS HAS BEEN ACTIVATED BY PEDESTRIAN PUSH BUTTON AND THE SIGNAL IS PREEMPTED DURING THE MAN INTERVAL, THE "MAN" INTERVAL SHALL TERMINATE IMMEDIATELY FOLLOWED BY THE "FLASHING HAND" INDICATION IN ITS ENTIRETY, FOLLOWED BY THE APPROPRIATE SELECTIVE CLEARANCES BEFORE PROCEEDING INTO THE PREEMPTION PHASE.
- IF THE SIGNALS ARE FLASHING WHEN ACTIVATED BY AN EMERGENCY VEHICLE, ALL SIGNALS SHALL REMAIN FLASHING.
- IF ADDITIONAL PRE-EMPTION PHASES ARE ACTIVATED WHILE IN PREEMPTION, THE ORIGINAL PREEMPTION PHASE SHALL TIME OUT BEFORE PROCEEDING TO THE NEXT PREEMPTION PHASE.
- UPON COMPLETION OF PREEMPTION, PHASE 2,4,6 OR 8 IN RETURNING TO NORMAL OPERATION, PHASE 2+6 INTERVAL 12 SHALL FOLLOW.
- IN EMERGENCY PRE-EMPTION, NO PRIORITY SHALL BE ESTABLISHED, PREEMPTION SHALL BE A "FIRST COME, FIRST SERVED" OPERATION.



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SIGNALS ERECTED OVER THE ROADWAY SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 16 FT. ABOVE THE ROADWAY. POST MOUNTED SIGNALS SHALL BE A MINIMUM OF 8 FT. ABOVE THE SIDEWALK OR PAVEMENT.

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SYSTEM PERMIT #I-0014

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6-0

COUNTY: CHESTER
MUNICIPALITY: UPPER UWCHLAN TOWNSHIP
INTERSECTION: POTTSSTOWN PIKE (SR 0100) &
FELLOWSHIP ROAD / RESERVE DRIVE

REVIEWED:

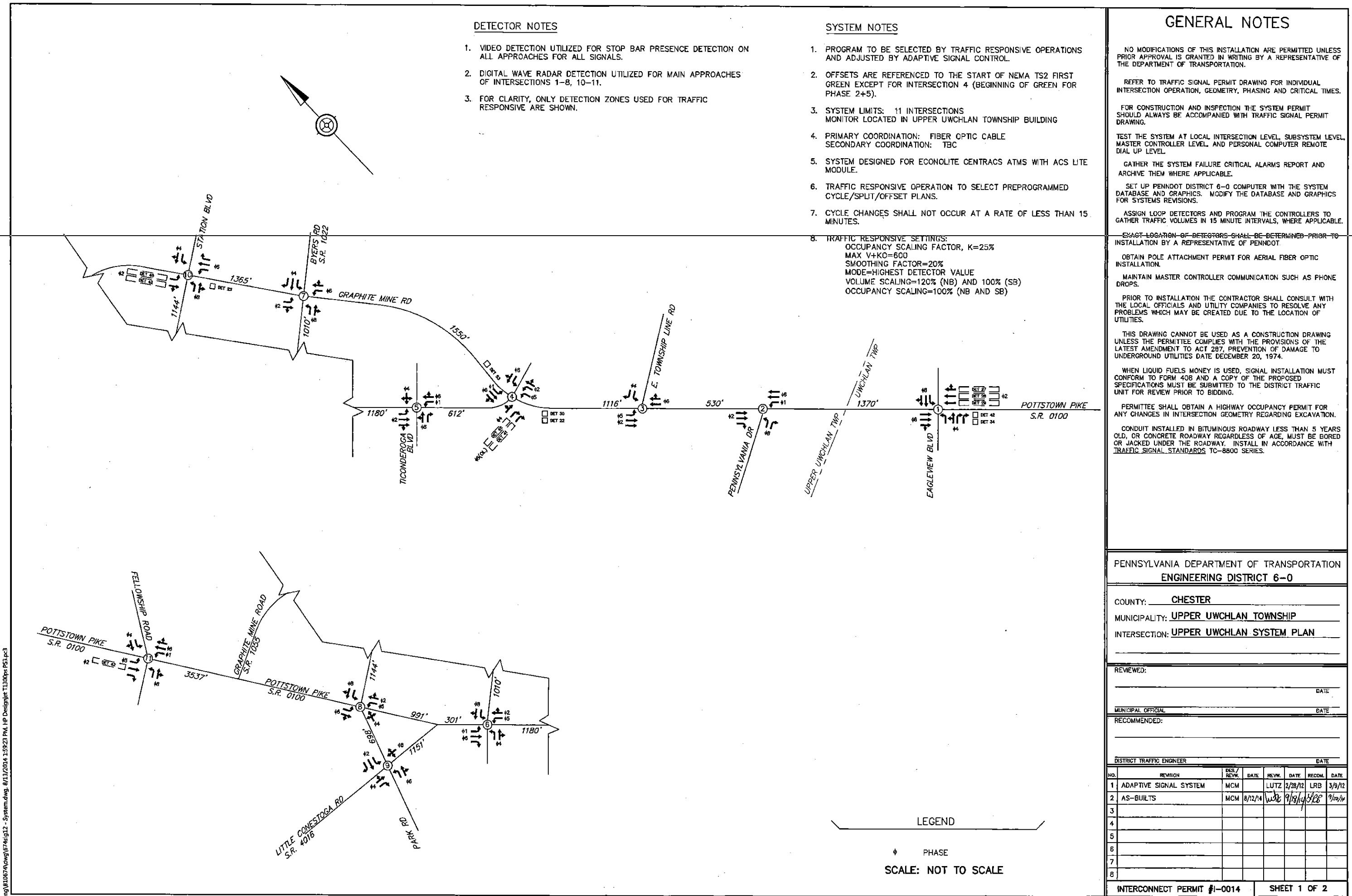
MUNICIPAL OFFICIAL DATE

RECOMMENDED:
MARK L. KRAY 2/13/02

LOUIS R. BELMONTE 2/14/02
DISTRICT TRAFFIC ENGINEER DATE

NO	REVISION	DES/REVW	DATE	REVW	DATE	RECOM	DATE
1	ADD 5 SEC. DELAY TO LOOP IN LTL OF WB FELLOWSHIP	JJS	1/7/04	MLK	1/9/04	LRB	1/15/04
2	ADD PED HEADS, LEFT TURN PHASE NORTHBOUND RECEIVING LANE	LANGAN	5/3/05				
3	REVISED PRE-EMPT NOTES AND TIMINGS PER VERBAL COMMENTS	LANGAN	7/25/05				
4	REVISED PER EMAIL/VERBAL COMMENTS	LANGAN	8/17/05	MLK	8/23/05	LRB	8/24/05
5	ADAPTIVE SIGNAL SYSTEM REVISION	MCM	2/22/17	LUTZ	3/23/17	ABP	3/31/17
6	ADDED PED ADVANCE INTERVAL TO PHASES 2&8	MCM	8/14/17	WJB	8/17/17	ABP	8/17/17
7							
8							

SHEET 3 OF 3 PERMIT # 62-3346 FILE # 3346



TRAFFIC RESPONSIVE DETECTOR ASSIGNMENT

CHANNELS	1	2	3	4	5	6	7	8	9	10	11	12	13	14
DIRECTION 1 (DR1)	1 (29)	1 (26)	1 (27)						1 (34)	4 (53)	1 (42)			
DIRECTION 2 (DR2)				10 (42)	11 (42)	10 (45)						4 (30)	4 (22)	10 (23)
GROUP 1 (GP1)														
GROUP 2 (GP2)														
SPLIT DEMAND 1 (NA1)														
SPLIT DEMAND 2 (NA2)														
OPTION 1														
OPTION 2														
SIDESTREET									4 (41)	4 (45)				

WEEKLY PROGRAM CHART

EVENT	DAY	TIME	TBC PROGRAM	REMARKS
1	1-5	06:00	LEVEL 1*	AM PEAK
2	1-5	06:30	LEVEL 1	AM PEAK
3	1-5	09:00	LEVEL 2	MIDDAY
4	1-5	13:30	LEVEL 3	PM PEAK
5	1-7	19:00	LEVEL 2*	EVENINGS
6	1-7	22:00	MAX 1	OVERNIGHTS
7	6-7	09:00	LEVEL 2	WEEKENDS

MONDAY = DAY 1

OFFSETS IN SECONDS

* INTERSECTIONS 7 AND 10 TO RUN MAX 1

GENERAL NOTES

NO MODIFICATIONS OF THIS INSTALLATION ARE PERMITTED UNLESS PRIOR APPROVAL IS GRANTED IN WRITING BY A REPRESENTATIVE OF THE DEPARTMENT OF TRANSPORTATION.

REFER TO TRAFFIC SIGNAL PERMIT DRAWING FOR INDIVIDUAL INTERSECTION OPERATION, GEOMETRY, PHASING AND CRITICAL TIMES.

FOR CONSTRUCTION AND INSPECTION THE SYSTEM PERMIT SHOULD ALWAYS BE ACCOMPANIED WITH TRAFFIC SIGNAL PERMIT DRAWING.

TEST THE SYSTEM AT LOCAL INTERSECTION LEVEL, SUBSYSTEM LEVEL, MASTER CONTROLLER LEVEL, AND PERSONAL COMPUTER REMOTE DIAL UP LEVEL.

GATHER THE SYSTEM FAILURE CRITICAL ALARMS REPORT AND ARCHIVE THEM WHERE APPLICABLE.

SET UP PENNDOT DISTRICT 6-0 COMPUTER WITH THE SYSTEM DATABASE AND GRAPHICS. MODIFY THE DATABASE AND GRAPHICS FOR SYSTEMS REVISIONS.

ASSIGN LOOP DETECTORS AND PROGRAM THE CONTROLLERS TO GATHER TRAFFIC VOLUMES IN 15 MINUTE INTERVALS, WHERE APPLICABLE.

EXACT LOCATION OF DETECTORS SHALL BE DETERMINED PRIOR TO INSTALLATION BY A REPRESENTATIVE OF PENNDOT.

OBTAIN POLE ATTACHMENT PERMIT FOR AERIAL FIBER OPTIC INSTALLATION.

Maintain master controller communication such as phone drops.

PRIOR TO INSTALLATION THE CONTRACTOR SHALL CONSULT WITH THE LOCAL OFFICIALS AND UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF UTILITIES.

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE PROVISIONS OF THE LATEST AMENDMENT TO ACT 287, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES DATE DECEMBER 20, 1974.

WHEN LIQUID FUELS MONEY IS USED, SIGNAL INSTALLATION MUST CONFORM TO FORM 402 AND A COPY OF THE PROPOSED SPECIFICATIONS MUST BE SUBMITTED TO THE DISTRICT TRAFFIC UNIT FOR REVIEW PRIOR TO BIDDING.

PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT FOR ANY CHANGES IN INTERSECTION GEOMETRY REGARDING EXCAVATION.

CONDUIT INSTALLED IN BITUMINOUS ROADWAY LESS THAN 5 YEARS OLD, OR CONCRETE ROADWAY REGARDLESS OF AGE, MUST BE BORED OR JACKED UNDER THE ROADWAY. INSTALL IN ACCORDANCE WITH TRAFFIC SIGNAL STANDARDS TC-8800 SERIES.

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6-0

COUNTY: CHESTER

MUNICIPALITY: UPPER UWCHLAN TOWNSHIP

INTERSECTION: UPPER UWCHLAN SYSTEM PLAN

REVIEWED:

DATE

MUNICIPAL OFFICIAL

DATE

RECOMMENDED:

DISTRICT TRAFFIC ENGINEER				DATE	
NO.	REVISION	DES./ REVN.	DATE	RECOM.	DATE
1	ADAPTIVE SIGNAL SYSTEM	MCM	LUTZ	2/28/12	LRB 3/1/12
2	AS-BUILTS	MCM	6/12/14	WTZ	9/16/14
3					
4					
5					
6					
7					
8					

INTERCONNECT PERMIT #I-0014 SHEET 2 OF 2

APPENDIX I:
PennDOT ICE Form

Pennsylvania Department of Transportation
Intersection Control Evaluation (ICE) Form
Stage I: Screening



To fulfill the requirements of Stage 1 (Screening) of PennDOT's ICE procedures, complete the following form and append all supporting documentation. Completed forms can be submitted to the District Traffic Engineer (DTE) for the project's location.

Project Information					
Project Name	TMAS.013	Project Setting	Suburban	Project ICE Reference Number	
Submitted By	BH	Agency/Company	TPD	Email	
Project Purpose and Goals (What is the catalyst for this project and the proposed site's access will form the fourth leg of the existing Font Road and Pottstown Pike (SR 0100) intersection. The goal is to evaluate the control options and determine the most effective control. what are the intended outcomes?)					
Project Setting Description (Describe the area surrounding the intersection) The proposed study area consists of Pottstown Pike (SR 0100) being an arterial highway surrounded primarily by residential developments.					
County	CHESTER	Project Locality (Township/Borough/City)	Upper Uwchlan Township		
PennDOT District	District 6	Project Type (select most appropriate)	Highway Occupancy Permit (HOP) Application		
Multimodal Context (Describe pedestrian, bicycle, and transit activity in the area and the potential for activity based on surrounding land uses and development pattern) There is no public transportation in the immediate vicinity of the site. At the site access, there is also no existing pedestrian or bicycle accommodations.					

Basic Intersection Information					
Major Street					
Major Street Route Number(s)	SR 0100	Major Street Route Name(s)	Pottstown Pike	SR Segment #	370
Primary Functional Classification	Principal Arterial	Secondary Functional Class. (if app.)		Existing AADT	12,675
Major Street Ownership	State		Sidewalks are present along:	Both sides of the roadway	
Crosswalks?	On-Street Bike Facilities?	Multi-Use Path?	Scheduled Bus Service?	Bus stop at intersection?	
Approach #1	Number of Lanes (Count Shared Lanes as Through):	Left-Turn	Through	Right-Turn	
	AM Peak Hour Traffic Volumes:	92	314	29	
	PM Peak Hour Traffic Volumes:	295	892	17	
Approach #2	Number of Lanes (Count Shared Lanes as Through):	Left-Turn	Through	Right-Turn	
	AM Peak Hour Traffic Volumes:	17	811	8	
	PM Peak Hour Traffic Volumes:	10	524	22	
Minor Street					
Existing	New				
Minor Street Route Number(s)	Minor Street Route Name(s)	Font Road-Site Driveway	SR Segment #	SR Offset	
Primary Functional Classification	Local Road	Secondary Functional Class. (if app.)		Existing AADT (if available)	
Minor Street Ownership	Township		Sidewalks are present along:	Neither side of the roadway	
Crosswalks?	On-Street Bike Facilities?	Multi-Use Path?	Scheduled Bus Service?	Bus stop at intersection?	
Approach #1	Number of Lanes (Count Shared Lanes as Through):	Left-Turn	Through	Right-Turn	
	AM Peak Hour Traffic Volumes:	9	5	230	
	PM Peak Hour Traffic Volumes:	13	3	181	
Approach #2	Number of Lanes (Count Shared Lanes as Through):	Left-Turn	Through	Right-Turn	
	AM Peak Hour Traffic Volumes:	11	2	7	
	PM Peak Hour Traffic Volumes:	27	5	15	
Approach #3	Number of Lanes (Count Shared Lanes as Through):	Left-Turn	Through	Right-Turn	
	AM Peak Hour Traffic Volumes:	Left-Turn	Through	Right-Turn	
	PM Peak Hour Traffic Volumes:	Left-Turn	Through	Right-Turn	

Crash History (Existing intersections Only)					
Append the most recent five-years of crash data for the intersection from the CDART. If the crash data evidences any issues relating to safety performance, discuss briefly here:					
There were no crashes in the most recent five years at the intersection of Pottstown Pike and Font Road.					

Screening Evaluation				
Provide a brief justification as to why each of the following control strategies should be advanced or not. Justification should consider potential environmental impacts.				
Note: FHWA's CAP-X tool is helpful for assessing the viability of alternative intersection forms.				
Control Strategy	Strategy Viable?	Justification		Strategy to be Advanced?
Two-way Stop-Controlled	Yes	Existing Control		Yes
All-way Stop-Controlled	Yes	Included as viable option		No
Signalized Control	Yes	Included as viable option but was not advanced due to the traffic signal not being warranted		No
Roundabout	No	Included as viable option but was not advanced due to lack of ROW and lack of physical space to fit a roundabout.		No
Median U-Turn	No			
Restricted Crossing U-Turn (RCUT) Signalized	No			
Restricted Crossing U-Turn (RCUT) Unsignalized	No			
Jughandle	No			
Displaced Left-Turn	No			
Continuous Green Tee	No			
Quadrant Roadway	No			
Other	No			

Resolution				
To be filled out by PennDOT District Traffic Engineer or designee only.				
Project Determination				
Comments				
DTE or Designee Name (Type)	Signature	Date		

CAP-X Results Report

3/4/2024 - 10:34 AM

Project Information

Project Name TMAS.013

Project Agency TPD

Project Analyst BH

County CHESTER

City Upper Uwchlan Township

Major Facility NORTH_SOUTH

East-West Facility Name Font Road-Site Driveway

North-South Facility Name Pottstown Pike (SR 0100)

Evaluation Type CAP_X

Additional Project Notes

Traffic Volumes

Opening Year - AM Peak

	Left	Through	Right	Truck %
Southbound	17	811	8	2
Eastbound	9	5	230	2
Westbound	11	2	7	2
Northbound	92	314	29	2

Opening Year - PM Peak

	Left	Through	Right	Truck %
Southbound	10	524	22	2
Eastbound	13	3	181	2
Westbound	27	5	15	2
Northbound	295	892	17	2

Opening Year - Weekend Peak

	Left	Through	Right	Truck %
Southbound	0	0	0	2
Eastbound	0	0	0	2
Westbound	0	0	0	2
Northbound	0	0	0	2

Design Year - AM Peak

	Left	Through	Right	Truck %
Southbound	0	0	0	2
Eastbound	0	0	0	2
Westbound	0	0	0	2
Northbound	0	0	0	2

Design Year - PM Peak

	Left	Through	Right	Truck %
Southbound	0	0	0	2
Eastbound	0	0	0	2
Westbound	0	0	0	2
Northbound	0	0	0	2

Design Year - Weekend Peak

	Left	Through	Right	Truck %
Southbound	0	0	0	2
Eastbound	0	0	0	2
Westbound	0	0	0	2
Northbound	0	0	0	2

Capacity Analysis

#	Name	Max V/C	Opening Year V/C			Design Year V/C		
			AM Peak	PM Peak	Weekend Peak	AM Peak	PM Peak	Weekend Peak
1	Conventional Signal	0.55	0.30	0.55	0.00	0.00	0.00	0.00
2	Roundabout	0.91	0.69	0.91	0.00	0.00	0.00	0.00
3	All-Way Stop Control	1.36	1.04	1.36	0.00	0.00	0.00	0.00
4	Two-Way Stop Control	1.31	0.41	1.31	0.00	0.00	0.00	0.00

APPENDIX J:
*Traffic Signal Warrant
Analysis Worksheets*

Job #: TMAS.00013
 Intersection: Pottstown Pike (SR 0100) and Font Road-Site Driveway

Volume Development (2027 Projected Conditions)

2023 Existing Counts:

Movement	Time Period (Weekday)					
	7-8 A.M.	8-9 A.M.	A.M. Peak	4-5 P.M.	5-6 P.M.	P.M. Peak
EBL	9	9	9	12	10	13
EBT						
EBR	201	213	201	149	166	157
WBL						
WBT						
WBR						
NBL	75	119	75	228	267	256
NBT	289	347	289	851	807	854
NBR						
SBL						
SBT	779	599	779	516	482	498
SBR	5	12	5	13	23	16
Total	1358	1299	1358	1769	1755	1794

K-Factor Calculations

EB K-Factor	1.00	1.06	---	0.95	1.04	---
WB K-Factor	0.90	0.90	---	0.90	0.90	---
NB K-Factor	1.00	1.28	--	0.97	0.97	--
SB K-Factor	1.00	0.78	---	1.03	0.98	---

K-Factor = Hourly Volume

2027 Projected Conditions

Movement	Time Period					
	A.M. Peak	7-8 A.M.	8-9 A.M.	P.M. Peak	4-5 P.M.	5-6 P.M.
EBL	9	9	10	13	12	13
EBT	5	5	5	3	3	3
EBR		0	0		0	0
WBL	11	10	10	27	24	24
WBT	2	2	2	5	5	5
WBR	7	6	6	15	14	14
NBL	92	92	118	295	287	285
NBT	314	314	402	892	867	863
NBR	29	29	37	17	17	16
SBL	17	17	13	10	10	10
SBT	811	811	632	524	539	515
SBR	8	8	6	22	23	22
Total	1305	1303	1241	1823	1801	1770

STUDY AND ANALYSIS INFORMATION

Municipality:	Upper Uwchlan Twp
County:	Chester County
PennDOT Engineering District:	6

Analysis Date:	3/1/2024
Conducted By:	MB
Agency/Company Name:	TPD

Analysis Information

Data Collection Date:	6/8/2023
Day of the Week:	Thursday

Is the intersection in a built-up area of an isolated community of <10,000 population?	No
--	----

Major Street Information

Major Street Name and Route Number:	Pottstown Pike (SR 0100)
Major Street Approach #1 Direction:	N-Bound
Major Street Approach #2 Direction:	S-Bound

Number of Lanes for Moving Traffic on Each Major Street Approach:	1	LANE(S)
Speed Limit or 85th Percentile Speed on the Major Street:	45	MPH

Minor Street Information

Minor Street Name and Route Number:	Font Road - Site Driveway
Minor Street Approach #1 Direction:	E-Bound
Minor Street Approach #2 Direction:	W-Bound

Number of Lanes for Moving Traffic on Each Minor Street Approach:	1	LANE(S)
---	---	---------

TRAFFIC SIGNAL WARRANT ANALYSIS FINDINGS

	Applicable?	Warrant Met?
Warrant 1, Eight-Hour Vehicular Volume	No	N/A
Warrant 2, Four-Hour Vehicular Volume	Yes	No
Warrant 3, Peak Hour	No	N/A
Warrant 4, Pedestrian Volume	Yes	No
Warrant 5, School Crossing	No	N/A
Warrant 6, Coordinated Signal System	No	N/A
Warrant 7, Crash Experience	Yes	No
Warrant 8, Roadway Network	No	N/A
Warrant 9, Intersection Near a Grade Crossing	No	N/A
Warrant PA-1, ADT Volume Warrant	No	N/A
Warrant PA-2, Midblock and Trail Crossings	No	N/A

ENTER VOLUME DATA PER 15 MINUTE INTERVAL, PER APPROACH

Time Interval		Major Street Approach #1 (N-Bound)	Major Street Approach #2 (S-Bound)	Major Street Combined	Minor Street Approach #1 (E-Bound)	Minor Street Approach #2 (W-Bound)
Begin At	End Of	Volume	Volume	Total Volume	Volume	Volume
12:00 AM	12:14 AM			0		
12:15 AM	12:29 AM			0		
12:30 AM	12:44 AM			0		
12:45 AM	12:59 AM			0		
1:00 AM	1:14 AM			0		
1:15 AM	1:29 AM			0		
1:30 AM	1:44 AM			0		
1:45 AM	1:59 AM			0		
2:00 AM	2:14 AM			0		
2:15 AM	2:29 AM			0		
2:30 AM	2:44 AM			0		
2:45 AM	2:59 AM			0		
3:00 AM	3:14 AM			0		
3:15 AM	3:29 AM			0		
3:30 AM	3:44 AM			0		
3:45 AM	3:59 AM			0		
4:00 AM	4:14 AM			0		
4:15 AM	4:29 AM			0		
4:30 AM	4:44 AM			0		
4:45 AM	4:59 AM			0		
5:00 AM	5:14 AM			0		
5:15 AM	5:29 AM			0		
5:30 AM	5:44 AM			0		
5:45 AM	5:59 AM			0		
6:00 AM	6:14 AM			0		
6:15 AM	6:29 AM			0		
6:30 AM	6:44 AM			0		
6:45 AM	6:59 AM			0		
7:00 AM	7:14 AM	435	836	1271	14	18
7:15 AM	7:29 AM			0		
7:30 AM	7:44 AM			0		
7:45 AM	7:59 AM			0		
8:00 AM	8:14 AM	557	651	1208	15	18
8:15 AM	8:29 AM			0		
8:30 AM	8:44 AM			0		
8:45 AM	8:59 AM			0		
9:00 AM	9:14 AM			0		
9:15 AM	9:29 AM			0		
9:30 AM	9:44 AM			0		
9:45 AM	9:59 AM			0		
10:00 AM	10:14 AM			0		
10:15 AM	10:29 AM			0		
10:30 AM	10:44 AM			0		
10:45 AM	10:59 AM			0		
11:00 AM	11:14 AM			0		
11:15 AM	11:29 AM			0		
11:30 AM	11:44 AM			0		
11:45 AM	11:59 AM			0		

ENTER VOLUME DATA PER 15 MINUTE INTERVAL, PER APPROACH						
Time Interval		Major Street Approach #1 (N-Bound)	Major Street Approach #2 (S-Bound)	Major Street Combined	Minor Street Approach #1 (E-Bound)	Minor Street Approach #2 (W-Bound)
Begin At	End Of	Volume	Volume	Total Volume	Volume	Volume
12:00 PM	12:14 PM			0		
12:15 PM	12:29 PM			0		
12:30 PM	12:44 PM			0		
12:45 PM	12:59 PM			0		
1:00 PM	1:14 PM			0		
1:15 PM	1:29 PM			0		
1:30 PM	1:44 PM			0		
1:45 PM	1:59 PM			0		
2:00 PM	2:14 PM			0		
2:15 PM	2:29 PM			0		
2:30 PM	2:44 PM			0		
2:45 PM	2:59 PM			0		
3:00 PM	3:14 PM			0		
3:15 PM	3:29 PM			0		
3:30 PM	3:44 PM			0		
3:45 PM	3:59 PM			0		
4:00 PM	4:14 PM	1171	572	1743	15	43
4:15 PM	4:29 PM			0		
4:30 PM	4:44 PM			0		
4:45 PM	4:59 PM			0		
5:00 PM	5:14 PM			0		
5:15 PM	5:29 PM	1164	547	1711	16	43
5:30 PM	5:44 PM			0		
5:45 PM	5:59 PM			0		
6:00 PM	6:14 PM			0		
6:15 PM	6:29 PM			0		
6:30 PM	6:44 PM			0		
6:45 PM	6:59 PM			0		
7:00 PM	7:14 PM			0		
7:15 PM	7:29 PM			0		
7:30 PM	7:44 PM			0		
7:45 PM	7:59 PM			0		
8:00 PM	8:14 PM			0		
8:15 PM	8:29 PM			0		
8:30 PM	8:44 PM			0		
8:45 PM	8:59 PM			0		
9:00 PM	9:14 PM			0		
9:15 PM	9:29 PM			0		
9:30 PM	9:44 PM			0		
9:45 PM	9:59 PM			0		
10:00 PM	10:14 PM			0		
10:15 PM	10:29 PM			0		
10:30 PM	10:44 PM			0		
10:45 PM	10:59 PM			0		
11:00 PM	11:14 PM			0		
11:15 PM	11:29 PM			0		
11:30 PM	11:44 PM			0		
11:45 PM	11:59 PM			0		

Approach Totals:

3327

2606

5933

60

122

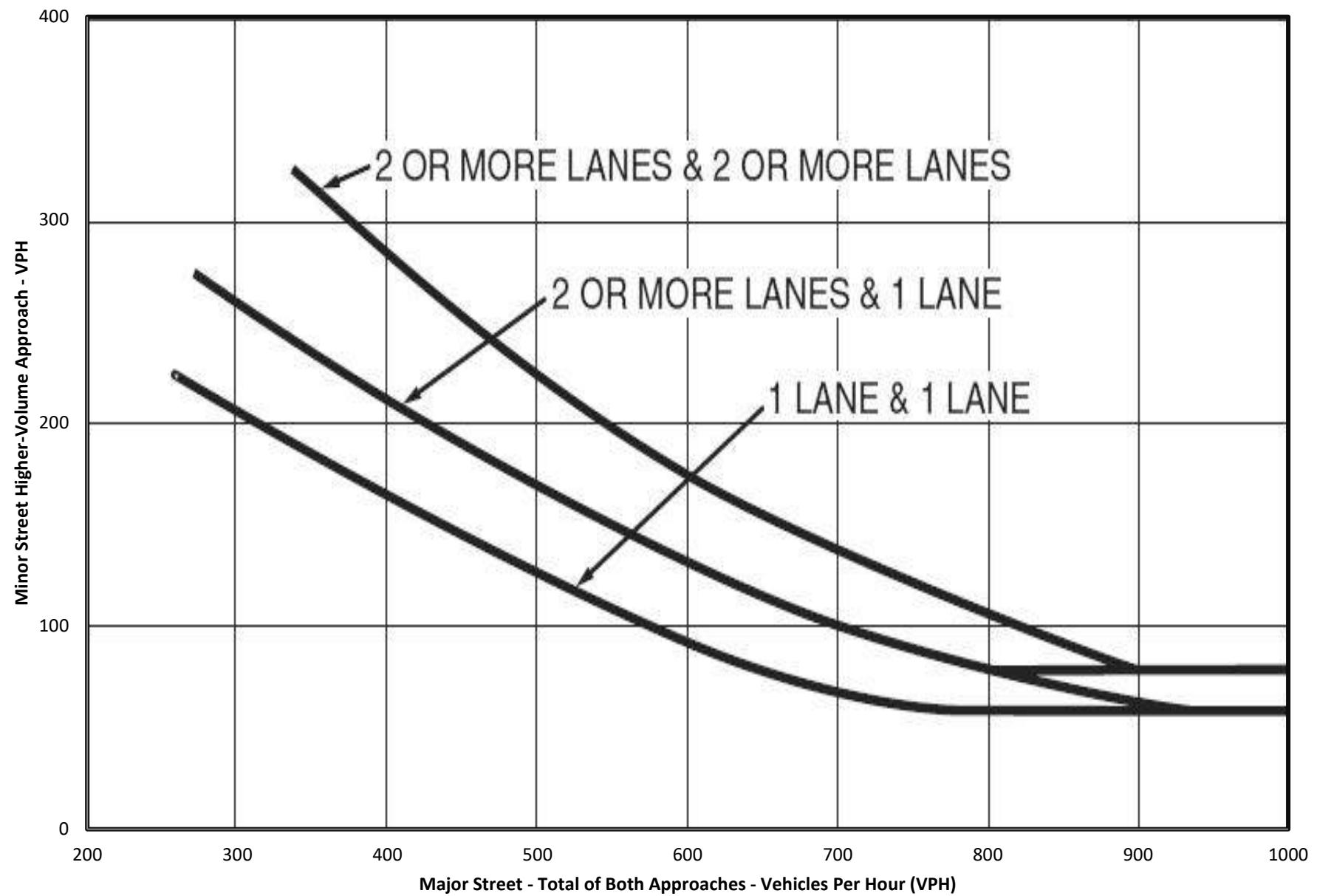
MUTCD WARRANT 2, FOUR-HOUR VEHICULAR VOLUME

Number of Lanes for Moving Traffic on Each Approach		Total Number of Unique Hours Met On Figure 4C-2
Major Street:	1 Lane	
Minor Street:	1 Lane	0

Built-up Isolated Community With Less Than 10,000 Population or Above 40 MPH on Major Street?	Yes
---	-----

Hour Interval Beginning At	Hourly Vehicular Volume		Hour Met?
	Major Street Combined Vehicles Per Hour (VPH)	Highest Minor Street Approach Vehicles Per Hour (VPH)	
12:00 AM	0	0	
12:15 AM	0	0	
12:30 AM	0	0	
12:45 AM	0	0	
1:00 AM	0	0	
1:15 AM	0	0	
1:30 AM	0	0	
1:45 AM	0	0	
2:00 AM	0	0	
2:15 AM	0	0	
2:30 AM	0	0	
2:45 AM	0	0	
3:00 AM	0	0	
3:15 AM	0	0	
3:30 AM	0	0	
3:45 AM	0	0	
4:00 AM	0	0	
4:15 AM	0	0	
4:30 AM	0	0	
4:45 AM	0	0	
5:00 AM	0	0	
5:15 AM	0	0	
5:30 AM	0	0	
5:45 AM	0	0	
6:00 AM	0	0	
6:15 AM	1271	18	
6:30 AM	1271	18	
6:45 AM	1271	18	
7:00 AM	1271	18	
7:15 AM	1208	18	
7:30 AM	1208	18	
7:45 AM	1208	18	
8:00 AM	1208	18	
8:15 AM	0	0	
8:30 AM	0	0	
8:45 AM	0	0	
9:00 AM	0	0	
9:15 AM	0	0	
9:30 AM	0	0	
9:45 AM	0	0	
10:00 AM	0	0	
10:15 AM	0	0	
10:30 AM	0	0	
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11:00 AM	0	0	
11:15 AM	0	0	
11:30 AM	0	0	
11:45 AM	0	0	
12:00 PM	0	0	
12:15 PM	0	0	
12:30 PM	0	0	
12:45 PM	0	0	
1:00 PM	0	0	
1:15 PM	0	0	
1:30 PM	0	0	
1:45 PM	0	0	
2:00 PM	0	0	
2:15 PM	0	0	
2:30 PM	0	0	
2:45 PM	0	0	
3:00 PM	0	0	
3:15 PM	1743	43	
3:30 PM	1743	43	
3:45 PM	1743	43	
4:00 PM	1743	43	
4:15 PM	0	0	
4:30 PM	1711	43	
4:45 PM	1711	43	
5:00 PM	1711	43	
5:15 PM	1711	43	
5:30 PM	0	0	
5:45 PM	0	0	
6:00 PM	0	0	
6:15 PM	0	0	
6:30 PM	0	0	
6:45 PM	0	0	
7:00 PM	0	0	
7:15 PM	0	0	
7:30 PM	0	0	
7:45 PM	0	0	
8:00 PM	0	0	
8:15 PM	0	0	
8:30 PM	0	0	
8:45 PM	0	0	
9:00 PM	0	0	
9:15 PM	0	0	
9:30 PM	0	0	
9:45 PM	0	0	
10:00 PM	0	0	
10:15 PM	0	0	
10:30 PM	0	0	
10:45 PM	0	0	
11:00 PM	0	0	

MUTCD Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)



MUTCD WARRANT 4, PEDESTRIAN VOLUME

Built-up Isolated Community With Less Than 10,000 Population or Above 35 MPH on Major Street?	Yes
---	-----

15th Percentile Pedestrian Crossing Speed Less than 3.5 f/s?*

No

**If applicable, attach all supporting calculations, documentation, and findings.*

Is the distance to the nearest traffic control signal or STOP sign controlling the major street that pedestrians desire to cross less than 300 feet?

No

If the distance to the nearest traffic control signal or STOP sign controlling the major street that pedestrians desire to cross is less than 300 feet, will the proposed traffic control signal

restrict the progressive movement of traffic?*

N/A

**If applicable, attach supporting justification.*

Total Number of Unique Hours Met for Criterion A:

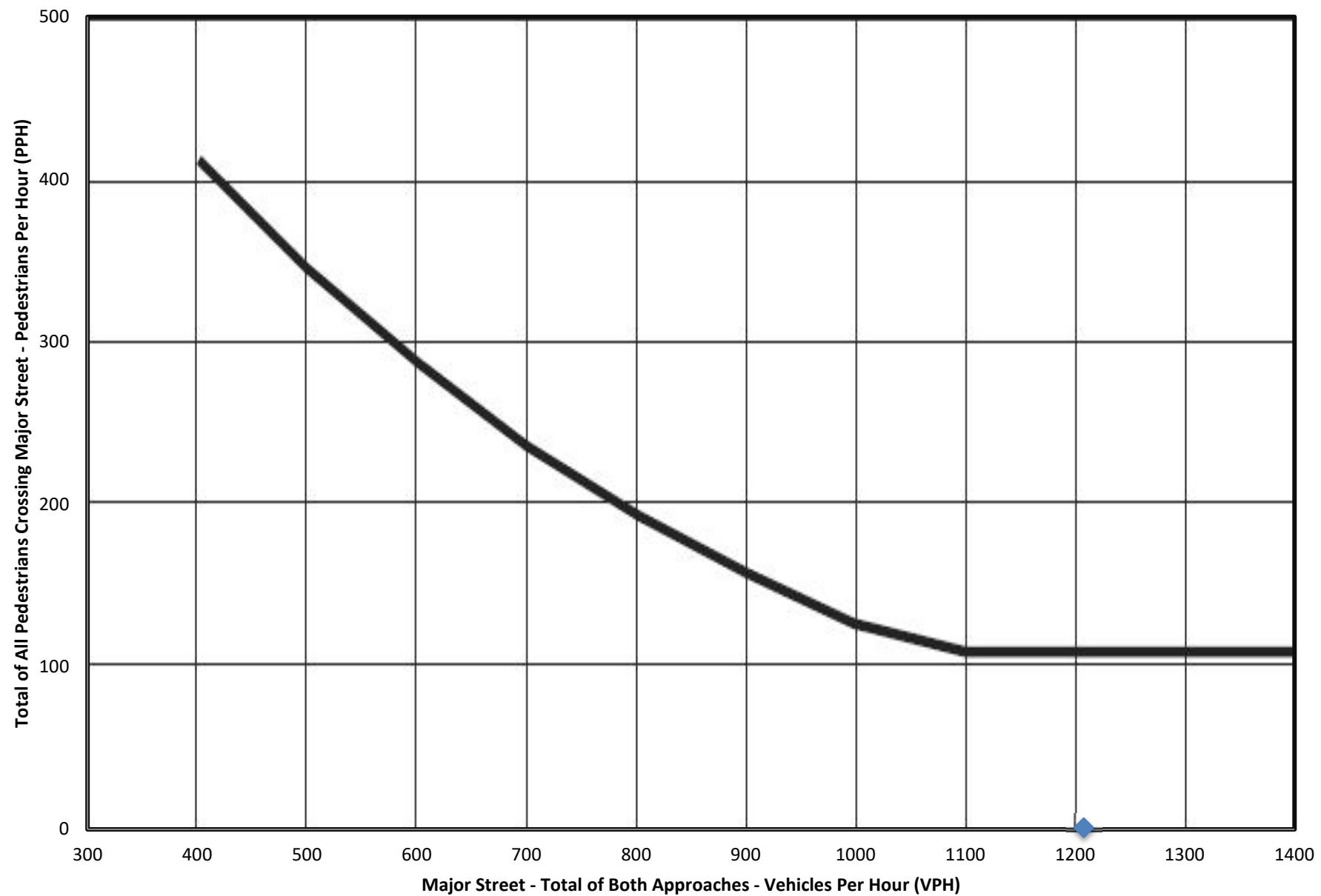
0

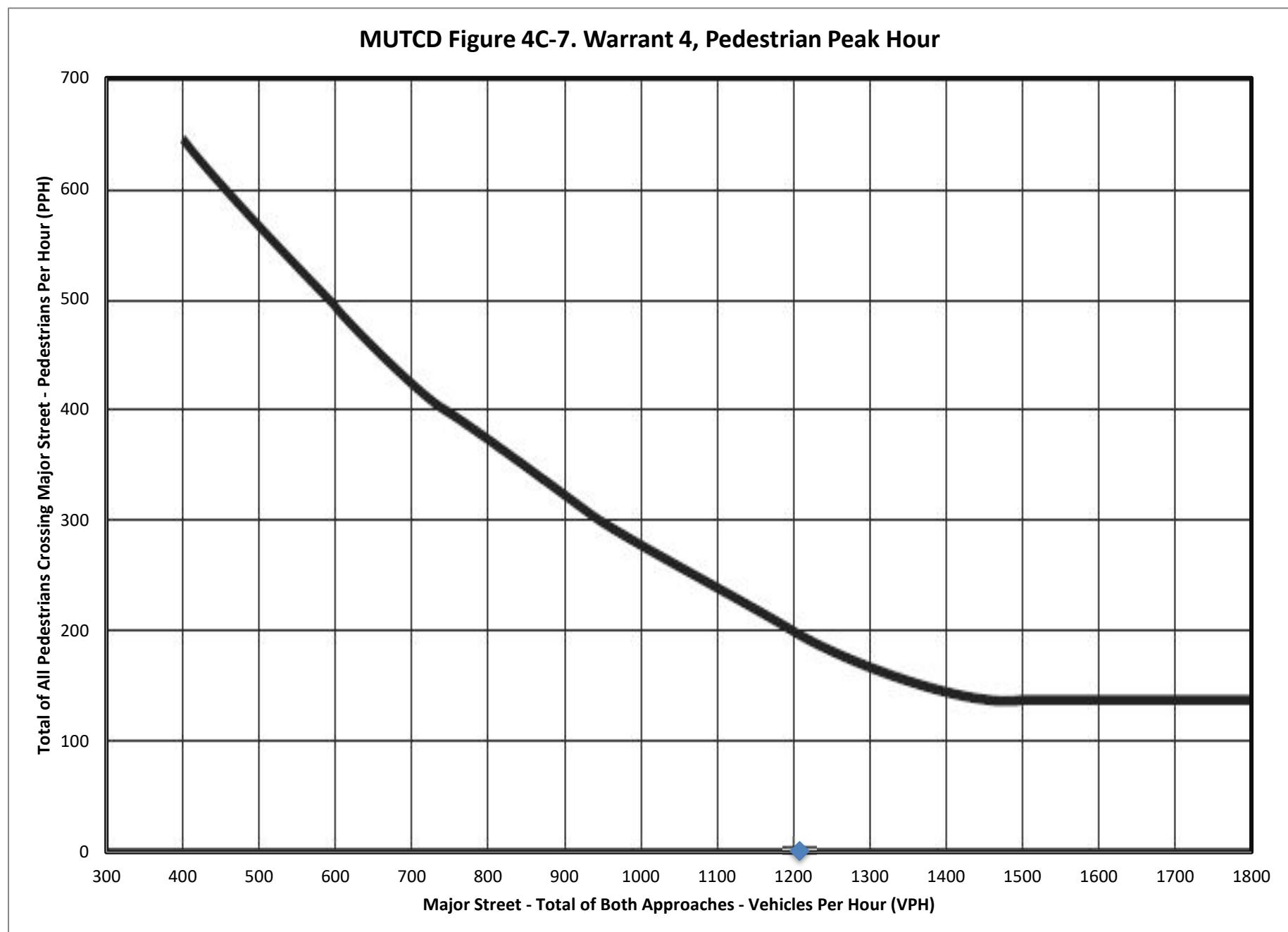
Total Number of Unique Hours Met for Criterion B:

0

Hourly Vehicular & Pedestrian Volume				
Hour Interval	Major Street Combined	Total of All Pedestrians Crossing Major Street	Criterion A: 4-Hour	Criterion B: 1-Hour
Beginning At	Vehicles Per Hour (VPH)	Pedestrians Per Hour (PPH)	Hour Met on Figure 4C-6?	Hour Met on Figure 4C-8?
12:00 AM	0			
12:15 AM	0			
12:30 AM	0			
12:45 AM	0			
1:00 AM	0			
1:15 AM	0			
1:30 AM	0			
1:45 AM	0			
2:00 AM	0			
2:15 AM	0			
2:30 AM	0			
2:45 AM	0			
3:00 AM	0			
3:15 AM	0			
3:30 AM	0			
3:45 AM	0			
4:00 AM	0			
4:15 AM	0			
4:30 AM	0			
4:45 AM	0			
5:00 AM	0			
5:15 AM	0			
5:30 AM	0			
5:45 AM	0			
6:00 AM	0			
6:15 AM	1271			
6:30 AM	1271			
6:45 AM	1271			
7:00 AM	1271			
7:15 AM	1208			
7:30 AM	1208			
7:45 AM	1208			
8:00 AM	1208	1		
8:15 AM	0			
8:30 AM	0			
8:45 AM	0			
9:00 AM	0			
9:15 AM	0			
9:30 AM	0			
9:45 AM	0			

Hourly Vehicular & Pedestrian Volume				
Hour Interval	Major Street Combined	Total of All Pedestrians Crossing Major Street	Criterion A: 4-Hour	Criterion B: 1-Hour
Beginning At	Vehicles Per Hour (VPH)	Pedestrians Per Hour (PPH)	Hour Met on Figure 4C-6?	Hour Met on Figure 4C-8?
10:00 AM	0			
10:15 AM	0			
10:30 AM	0			
10:45 AM	0			
11:00 AM	0			
11:15 AM	0			
11:30 AM	0			
11:45 AM	0			
12:00 PM	0			
12:15 PM	0			
12:30 PM	0			
12:45 PM	0			
1:00 PM	0			
1:15 PM	0			
1:30 PM	0			
1:45 PM	0			
2:00 PM	0			
2:15 PM	0			
2:30 PM	0			
2:45 PM	0			
3:00 PM	0			
3:15 PM	1743			
3:30 PM	1743			
3:45 PM	1743			
4:00 PM	1743			
4:15 PM	0			
4:30 PM	1711			
4:45 PM	1711			
5:00 PM	1711			
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7:00 PM	0			
7:15 PM	0			
7:30 PM	0			
7:45 PM	0			
8:00 PM	0			
8:15 PM	0			
8:30 PM	0			
8:45 PM	0			
9:00 PM	0			
9:15 PM	0			
9:30 PM	0			
9:45 PM	0			
10:00 PM	0			
10:15 PM	0			
10:30 PM	0			
10:45 PM	0			
11:00 PM	0			

MUTCD Figure 4C-5. Warrant 4, Pedestrian Four-Hour Volume



MUTCD WARRANT 7, CRASH EXPERIENCE

Built-up Isolated Community With Less Than 10,000 Population or Above 40 MPH on Major Street?	Yes
---	-----

Number of Lanes for Moving Traffic on Each Approach	
Major Street:	1 Lane
Minor Street:	1 Lane

Has adequate trial of alternatives with satisfactory observance and enforcement failed to reduce the crash frequency? N/A

Five or more reportable and/or non-reportable crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period during the most recent 3 years of available crash data.* No

*If applicable, attach a summary of the crash data analysis used for this criterion.

For each of any 8 hours of an average day, the vehicles per hour given in both the 80% columns of Condition A in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection. No

For each of any 8 hours of an average day, the vehicles per hour given in both the 80% columns of Condition B in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection. No

The volume of pedestrian traffic is not less than 80% of the requirements specified in Warrant 4, the Pedestrian Volume warrant.* No

*If applicable, attach all supporting calculations and documentation.

MUTCD WARRANT 8, ROADWAY NETWORK*

Is the major street classified as an Urban Extension, Principal Arterial, or Minor Arterial that is a reasonable connection between two Principal Arterials and/or Urban Extensions as shown on the official Functional Classification Map? No

Does the intersection have a total existing, or immediately projected, entering volume of at least 1,000 vehicles per hour during the peak hour of a typical weekday and has 5-year projected traffic volumes, based on an engineering study, that meet one or more of Warrants 1,2, and 3 during an average weekday? No

Does the intersection have a total existing or immediately projected entering volume of at least 1,000 vehicles per hour for each of any 5 hours of a non-normal business day (Saturday or Sunday)? No

Is the major street part of the street or highway system that serves as the principal roadway network for through traffic flow? No

Does the major street include rural or suburban highways outside, entering, or traversing a city? No

Does the major street appear as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study? No

*Refer to Section 4.3 of PennDOT Publication 46 (Traffic Engineering Manual) for additional Department documentation requirements to justify the installation of a signal under Warrant 8. Attach all supplementary documentation and calculations, especially those relating to traffic volume projections and subsequent Warrant analyses.

APPENDIX K:
Gap Analysis

Gap Calculation for Unsignalized Intersection Left Turn from Minor Road to 2-Lane Major Road

Intersection: Major St. Pottstown Pike (SR 0100)
Minor St. Font Road - Proposed Site Driveway

Time Studied: Weekday A.M. Peak Hour

Date of Study: Thursday, June 8, 2023

Critical Gap: 7.1
Follow-Up Time: 3.0

Length of Gap (seconds)	Vehicles Accommodated	Number of Gaps Observed	Total Vehicles
0 - 7.0	0	0	0
7.1 - 10.0	1	21	21
10.1 - 13.0	2	9	18
13.1 - 16.0	3	4	12
16.1 - 19.0	4	3	12
19.1 - 22.0	5	1	5
22.1 - 25.0	6	4	24
25.1 - 28.0	7	0	0
28.1+	8	1	8
Total Vehicles Accommodated		100	

Minimum Gap	Number of Cars
0	0
7.1	1
10.1	2
13.1	3
16.1	4
19.1	5
22.1	6
25.1	7
28.1	8

Gap Calculation for Unsignalized Intersection Left Turn from Minor Road to 2-Lane Major Road

Intersection: Major St. Pottstown Pike (SR 0100)
Minor St. Font Road - Proposed Site Driveway

Time Studied: Weekday P.M. Peak Hour
Date of Study: Thursday, June 8, 2023

Critical Gap: 7.1
Follow-Up Time: 3.0

Length of Gap (seconds)	Vehicles Accommodated	Number of Gaps Observed	Total Vehicles
0 - 7.0	0	0	0
7.1 - 10.0	1	11	11
10.1 - 13.0	2	4	8
13.1 - 16.0	3	5	15
16.1 - 19.0	4	1	4
19.1 - 22.0	5	2	10
22.1 - 25.0	6	0	0
25.1 - 28.0	7	0	0
28.1+	8	0	0
Total Vehicles Accommodated		48	

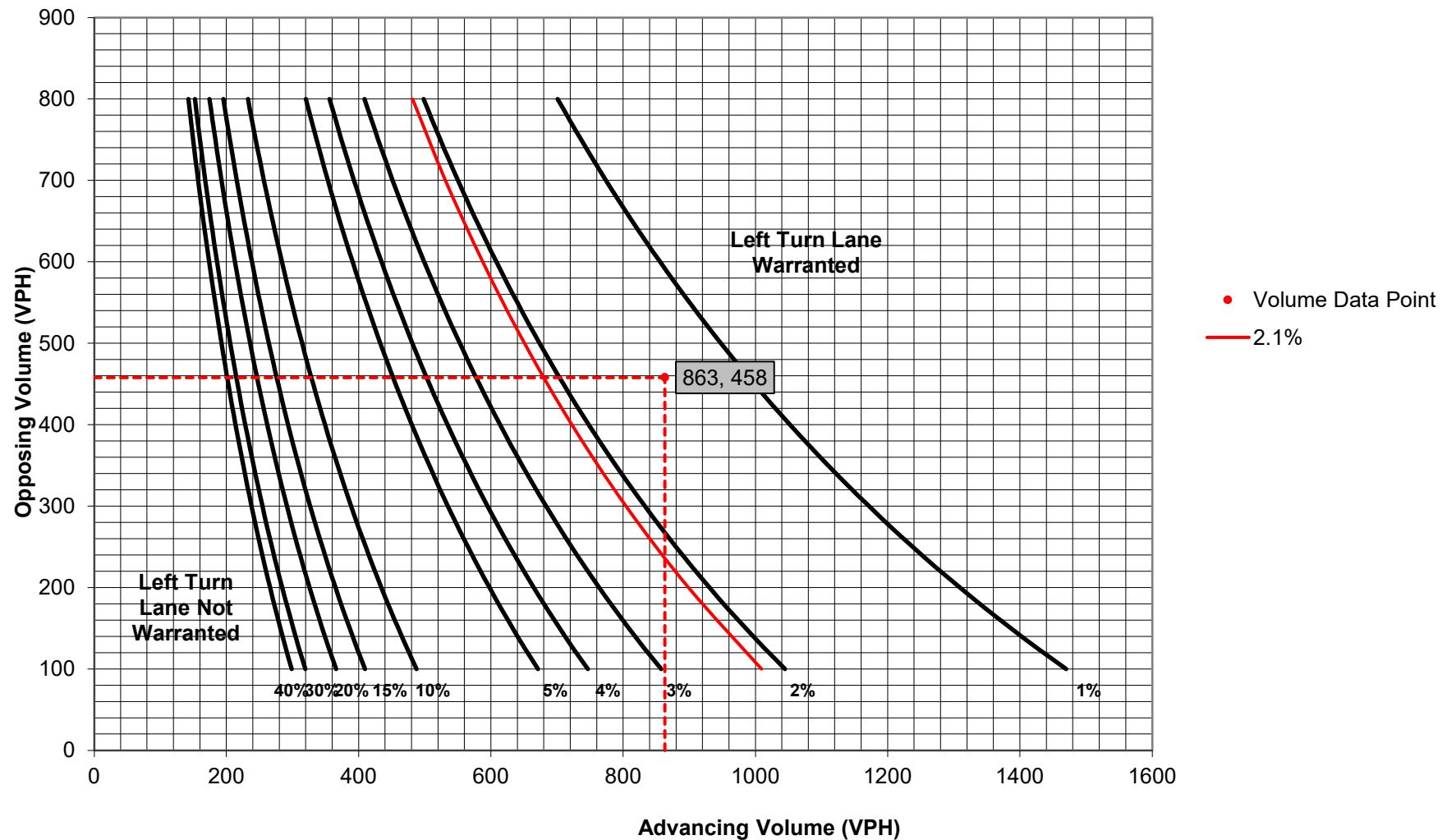
Minimum Gap	Number of Cars
0	0
7.1	1
10.1	2
13.1	3
16.1	4
19.1	5
22.1	6
25.1	7
28.1	8

APPENDIX L:
Auxiliary Turn Lane
Warrant Analysis

Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION																																											
Municipality:	Upper Uwchlan Township		Analysis Date:	3/1/2024																																							
County:	Chester County		Conducted By:	BH																																							
PennDOT Engineering District:	6		Checked By:	MB																																							
			Agency/Company Name:	Traffic Planning and Design, Inc.																																							
Intersection & Approach Description: Pottstown Pike (SR 0100) and Font Road/Site Driveway																																											
Analysis Period: 2027 Build			Number of Approach Lanes: 1																																								
Design Hour: AM Peak Hour			Undivided or Divided Highway: Undivided																																								
Intersection Control: Unsignalized																																											
Posted Speed Limit (MPH): 45																																											
Type of Terrain: Level			Type of Analysis																																								
Left or Right-Turn Lane Analysis?: Left Turn Lane																																											
VOLUME CALCULATIONS																																											
Left Turn Lane Volume Calculations																																											
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Movement</th> <th>Include?</th> <th>Volume</th> <th>% Trucks</th> <th>PCEV</th> <th></th> </tr> </thead> <tbody> <tr> <td rowspan="3">Advancing</td> <td>Left</td> <td>Yes</td> <td>17</td> <td>2.0%</td> <td>18</td> </tr> <tr> <td>Through</td> <td>-</td> <td>811</td> <td>6.0%</td> <td>836</td> </tr> <tr> <td>Right</td> <td>Yes</td> <td>8</td> <td>20.0%</td> <td>9</td> </tr> <tr> <td rowspan="3">Opposing</td> <td>Left</td> <td>Yes</td> <td>92</td> <td>15.0%</td> <td>99</td> </tr> <tr> <td>Through</td> <td>-</td> <td>314</td> <td>9.0%</td> <td>329</td> </tr> <tr> <td>Right</td> <td>Yes</td> <td>29</td> <td>2.0%</td> <td>30</td> </tr> </tbody> </table>						Movement	Include?	Volume	% Trucks	PCEV		Advancing	Left	Yes	17	2.0%	18	Through	-	811	6.0%	836	Right	Yes	8	20.0%	9	Opposing	Left	Yes	92	15.0%	99	Through	-	314	9.0%	329	Right	Yes	29	2.0%	30
Movement	Include?	Volume	% Trucks	PCEV																																							
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	Through	-	811	6.0%	836																																						
	Right	Yes	8	20.0%	9																																						
Opposing	Left	Yes	92	15.0%	99																																						
	Through	-	314	9.0%	329																																						
	Right	Yes	29	2.0%	30																																						
			Advancing Volume:	863																																							
			Opposing Volume:	458																																							
			Left Turn Volume:	18																																							
% Left Turns in Advancing Volume: 2.09%																																											
Right Turn Lane Volume Calculations																																											
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			Advancing Volume:	N/A																																							
			Right Turn Volume:	N/A																																							
TURN LANE WARRANT FINDINGS																																											
Left Turn Lane Warrant Findings			Right Turn Lane Warrant Findings																																								
Applicable Warrant Figure: Figure 3			Applicable Warrant Figure: N/A																																								
Warrant Met?: Yes			Warrant Met?: N/A																																								
TURN LANE LENGTH CALCULATIONS																																											
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Intersection Control:</td> <td colspan="2">Unsignalized</td> <td colspan="3"></td> </tr> <tr> <td>Design Hour Volume of Turning Lane:</td> <td colspan="2">18</td> <td colspan="3"></td> </tr> <tr> <td>Cycles Per Hour (Assumed):</td> <td colspan="2">60</td> <td colspan="3"></td> </tr> <tr> <td>Cycles Per Hour (If Known):</td> <td colspan="2"></td> <td colspan="3"></td> </tr> <tr> <td colspan="3"></td> <td colspan="3">Average # of Vehicles/Cycle: 1.0</td> </tr> </table>						Intersection Control:	Unsignalized					Design Hour Volume of Turning Lane:	18					Cycles Per Hour (Assumed):	60					Cycles Per Hour (If Known):									Average # of Vehicles/Cycle: 1.0										
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Type of Traffic Control	Speed (MPH)																																										
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Signalized	High	Low	High	Low	High	Low																																					
Unsignalized	A	A	B or C	B or C	B or C	B or C																																					
Left Turn Lane Storage Length, Condition A: N/A Feet																																											
Condition B: 125 Feet																																											
Condition C: N/A Feet																																											
Required Left Turn Lane Storage Length: 125 Feet																																											
Additional Findings: N/A																																											
Additional Comments / Justifications:																																											

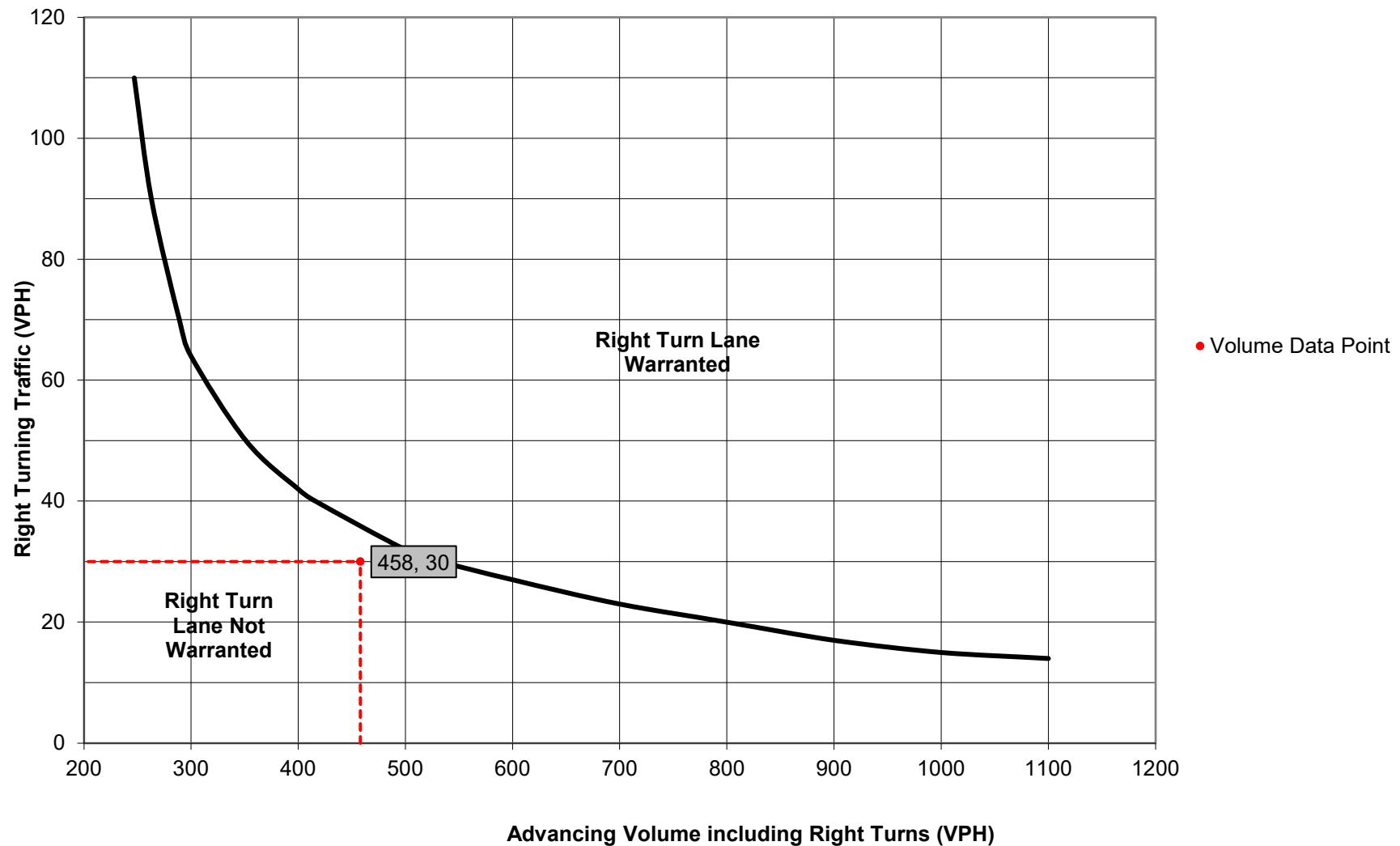
**Figure 3. Warrant for left turn lanes on two-lane highways
(45 mph speed, unsignalized and signalized intersections)**
(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION																																												
Municipality:	Upper Uwchlan Township		Analysis Date:	3/1/2024																																								
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Intersection & Approach Description: Pottstown Pike (SR 0100) and Font Road/Site Driveway																																												
Analysis Period:	2027 Build		Number of Approach Lanes:	1																																								
Design Hour:	AM Peak Hour		Undivided or Divided Highway:	Undivided																																								
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Type of Terrain:	Level		Left or Right-Turn Lane Analysis?: Right Turn Lane																																									
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Movement	Include?	Volume	% Trucks	PCEV																																								
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	Right	-	29	2.0%	30																																							
			Advancing Volume:	458																																								
			Right Turn Volume:	30																																								
TURN LANE WARRANT FINDINGS																																												
Left Turn Lane Warrant Findings			Right Turn Lane Warrant Findings																																									
Applicable Warrant Figure:			N/A																																									
Warrant Met?:			N/A																																									
Right Turn Lane Warrant Findings																																												
Applicable Warrant Figure:			Figure 10																																									
Warrant Met?:			No																																									
TURN LANE LENGTH CALCULATIONS																																												
Intersection Control: Unsignalized Design Hour Volume of Turning Lane: 30 Cycles Per Hour (Assumed): 60 Cycles Per Hour (If Known):																																												
Average # of Vehicles/Cycle: N/A																																												
PennDOT Publication 46, Exhibit 11-6																																												
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="3" style="width: 20%;">Type of Traffic Control</th> <th colspan="6" style="background-color: #f2e0d2; text-align: center;">Speed (MPH)</th> </tr> <tr> <th colspan="2">25-35</th> <th colspan="2">40-45</th> <th colspan="2">50-60</th> </tr> <tr> <th colspan="6" style="background-color: #f2e0d2; text-align: center;">Turn Demand Volume</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Signalized</td> <td>High</td> <td>Low</td> <td>High</td> <td>Low</td> <td>High</td> <td>Low</td> </tr> <tr> <td>A</td> <td>A</td> <td>B or C</td> <td>B or C</td> <td>B or C</td> <td>B or C</td> </tr> <tr> <td>Unsignalized</td> <td>A</td> <td>A</td> <td>C</td> <td>B</td> <td>B or C</td> <td>B</td> </tr> </tbody> </table>						Type of Traffic Control	Speed (MPH)						25-35		40-45		50-60		Turn Demand Volume						Signalized	High	Low	High	Low	High	Low	A	A	B or C	B or C	B or C	B or C	Unsignalized	A	A	C	B	B or C	B
Type of Traffic Control	Speed (MPH)																																											
	25-35		40-45		50-60																																							
	Turn Demand Volume																																											
Signalized	High	Low	High	Low	High	Low																																						
	A	A	B or C	B or C	B or C	B or C																																						
Unsignalized	A	A	C	B	B or C	B																																						
Right Turn Lane Storage Length, Condition A: N/A Feet Condition B: N/A Feet Condition C: N/A Feet Required Right Turn Lane Storage Length: N/A Feet																																												
Additional Findings: N/A																																												
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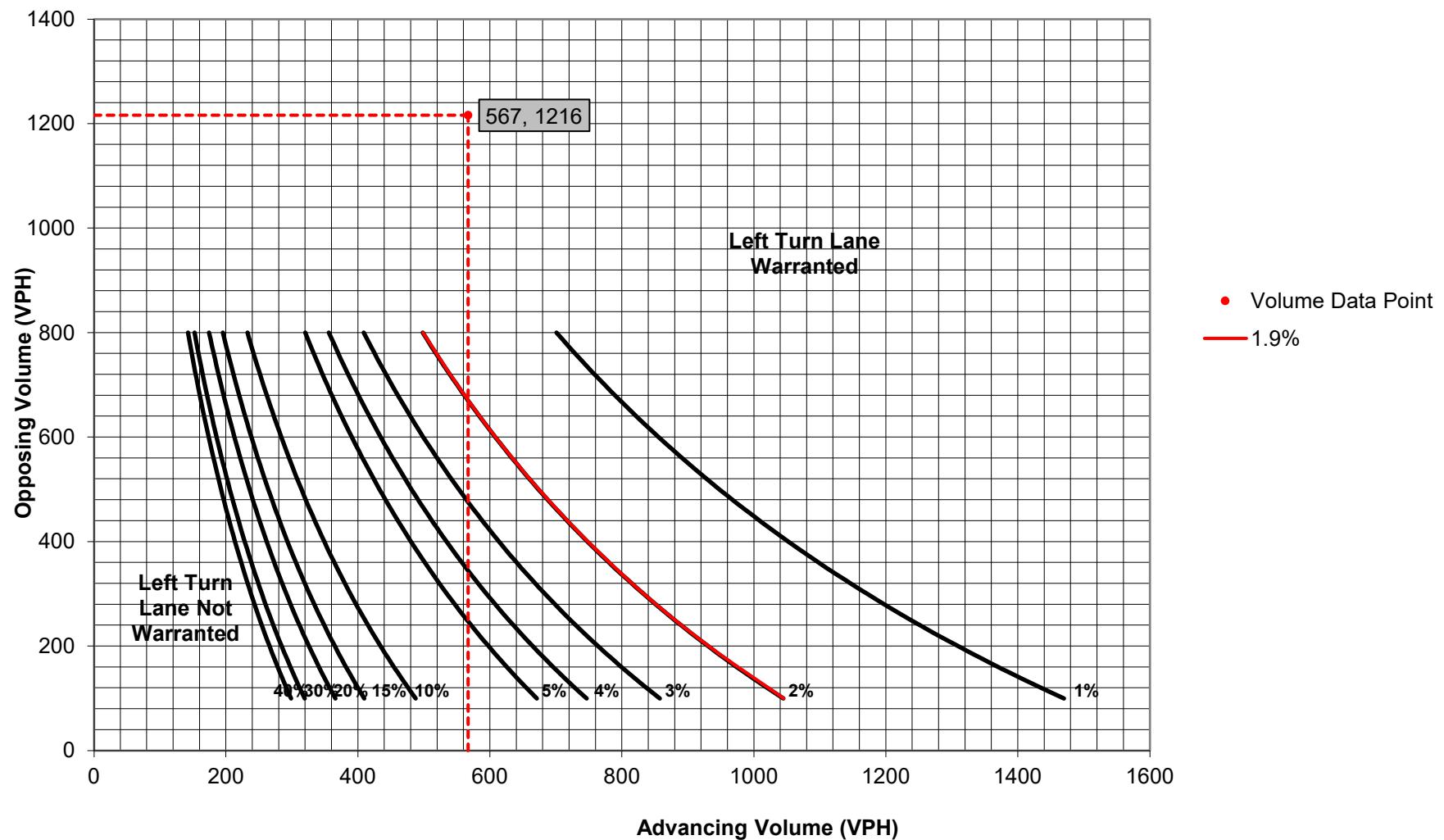
**Figure 10. Warrant for right turn lanes on two-lane roadways
(45 mph or greater speeds, unsignalized and signalized intersections)**



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION																																											
Municipality:	Upper Uwchlan Township		Analysis Date:	3/1/2024																																							
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Analysis Period: 2027 Build			Number of Approach Lanes: 1																																								
Design Hour: PM Peak Hour			Undivided or Divided Highway: Undivided																																								
Intersection Control: Unsignalized																																											
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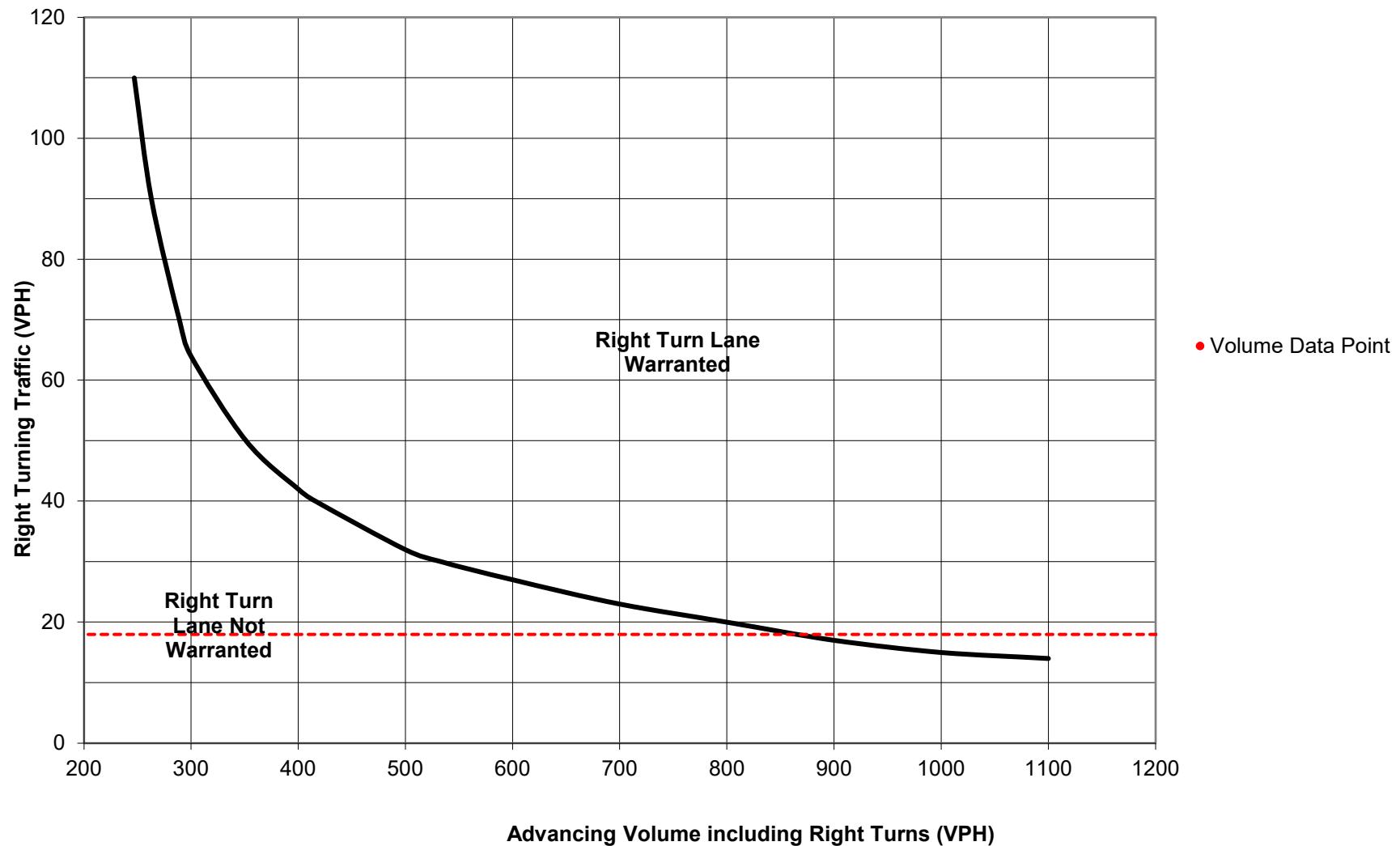
**Figure 3. Warrant for left turn lanes on two-lane highways
(45 mph speed, unsignalized and signalized intersections)**
(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis Workbook

STUDY LOCATION AND ANALYSIS INFORMATION																																											
Municipality:	Upper Uwchlan Township		Analysis Date:	3/1/2024																																							
County:	Chester County		Conducted By:	BH																																							
PennDOT Engineering District:	6		Checked By:	MB																																							
			Agency/Company Name:	Traffic Planning and Design, Inc.																																							
Intersection & Approach Description: Pottstown Pike (SR 0100) and Font Road/Site Driveway																																											
Analysis Period: 2027 Build			Number of Approach Lanes: 1																																								
Design Hour: PM Peak Hour			Undivided or Divided Highway: Undivided																																								
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**Figure 10. Warrant for right turn lanes on two-lane roadways
(45 mph or greater speeds, unsignalized and signalized intersections)**



Upper Uwchlan Township Historical Commission

**500 Pottstown Pike Conditional Use Application and Plan —
Approved Recommendations**

For April 2, 2024 Meeting — Prepared by Vivian S. McCardell, Chair Historical Commission

Approved Recommendations for April 2, 2024 HC Meeting

Background:

- ▶ Rockhill Real Estate Enterprises XVII LP submitted a Conditional Use Application and Plan, along with various other documents for 500 Pottstown Pike which is a vacant lot located in the C-3 Highway Commercial District
- ▶ Rockhill proposes to construct a 36,380 sq ft vehicle service center with 415 parking spaces for the service center and to store vehicles as inventory for off-site local dealerships, with a driveway aligned with the intersection of Pottstown Pike and Font Road
- ▶ Conditional use approval is needed from Board of Supervisors to operate vehicular sales and service uses in the C-3 Highway Commercial District and variance relief is needed for disturbance and use of steep slope areas
- ▶ 500 Pottstown Pike is across the Pike from the historic 1819 John Keeley House which is historic resource # 30 on the Township's Historic Resource Inventory and a Class II resource and adjacent to the subdivided historic 1820 John Keeley Barn which is proposed to be historic resource #30A. Both the house and the barn are important historic resources. Both are illustrated in Futhey and Cope's iconic *History of Chester County, Pennsylvania (1881)* and the house's restoration won an award.
- ▶ Township ordinance Section 162-9H(5) requires an applicant to provide an historic resources impact statement under certain circumstances to better inform the Planning and Historical Commission and the Board on the proposed project and its impact on nearby historic resources
- ▶ Township ordinance Section 200-39 provides the use regulations of Section 200-33 (which requires compliance with the design standards in Section 200-36) for the C-1 Village District apply to any lot in the C-3 Highway Commercial District with direct frontage on old Route 100 (Pottstown Pike) and located north of Ticonderoga Boulevard and south of Byers Road, for all other lots, at the reasonable discretion of the Board, conditional uses may be approved subject to compliance with the design standards in Section 200-36 for the C-1 Village District (Note: Rockhill cites only the later part of the ordinance)

Approved Recommendations for April 2, 2024 HC Meeting (con't)

Recommendations to Planning Commission and Board of Supervisors, as applicable:

- ▶ Approve proposed uses
- ▶ Request the Township engineer to confirm that the 500 Pottstown Pike property line is within 250 ft of the John Keeley House which will trigger the historic resources impact statement requirement
- ▶ If the John Keeley House is not within 250 ft of the property line, condition the approval of the conditional use and variance requests on Rockhill preparing an historic resources impact statement given that the historic Keeley House is across the Pike and the historic Keeley Barn is adjacent to the property (Note: The Barn appears to have been subdivided from the House sometime in the 1950s and not recorded as an historic resource on the Township's Inventory. The Barn is currently proposed to be added as historic resource #30A and it is unclear if it, alone, would trigger the historic resources impact statement)
- ▶ As a condition of the conditional use and variance requests, require Rockhill to comply with the design standards of Section 200-36 for construction of its service center, if Section 200-36 is not otherwise found to apply; locate as many of the parking spaces as practicable in the rear of the property; and design landscaping to shield the Keeley Barn and House from the new construction and parking areas



GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

April 8, 2024

File No. 23-01103

Upper Uwchlan Township Manager
140 Pottstown Pike
Chester Springs, PA 19425

VIA E-MAIL ONLY

Attention: Tony Scheivert, Township Manager

Reference: Rockhill Real Estate Enterprises XVII LLP (500 Pottstown Pike)
Conditional Use Application Review
Upper Uwchlan Township, Chester County, PA

Dear Tony:

The Township Consultants are in receipt of the following information regarding the above referenced application:

- Plan titled "RDS Automotive Group Conditional Use Plans" prepared by T&M Associates Inc., dated February 16, 2024.
- Conditional Use Application with addendum dated March 11, 2024.
- Fiscal Impact Analysis prepared by EH Creative Services LL dated March 4, 2024.
- TIS Scoping Review prepared by Traffic Planning & Design, Inc., dated March 4, 2024

G&A, along with the other Township Consultants, have completed our first review of the above referenced conditional use application and wish to submit the following comments for your consideration.

I. OVERVIEW

The Applicant, is proposing to construct a 36,380 SF Vehicle Service Center with associated parking. The property is located at 500 Pottstown Pike and in the C3 (Highway Commercial) Zoning District. The applicant is requesting a conditional use for proposed use, as well as to

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permit multiple uses on one property, and finally, for the disturbance of Precautionary Steep Slopes.

II. TOWNSHIP ZONING OFFICER COMMENTS

During the conditional use process, the applicant should clarify the type of work being done on the site. Specifically body work on any vehicles, etc.

III. TOWNSHIP ENGINEER COMMENTS – ZONING ORDINANCE

GILMORE & ASSOCIATES

1. Section 200-39.B.(7)&(9). – These sections permit the sale and repair of vehicles as a conditional use respectively. The applicant is request same. Based on the conditional use application, it is not the applicant's intent to sell cars from this facility, but rather to store them for sale at other dealerships owned by the applicant. We would recommend conditions be provided in any decision prohibiting sales of vehicles from this site without seeking a modification to the approval.
2. Section 200-73.D.(5).(a). – The conditional use plan proposes four (4) ADA accessible parking spaces. Based on the number of overall spaces provided, nine (9) are required. The Zoning Officer should confirm how many spaces should be required for this use.
3. Section 200-74 – The applicant has provided a loading / unloading berth as required under this section. However, if the space is being utilized, it will prohibit circulation around the building. The space should be relocated, or the site layout modified to permit circulation around the building.
4. Section 200-78.A.(2). – Based on the conditional use plan it appears there will be sufficient room to meet the Townships landscaping requirements. However, some of the landscaping appears to be in conflict with the proposed parking. This should be reviewed by the Applicant. We would recommend the Applicant work with Township Planning Commission and our office to potentially exceed these requirements, specifically along the Pottstown Pike frontage to maximize buffering of the parking areas.
5. Section 200-79 – A condition should be provided in the conditional use decision requiring a lighting plan be provided which complies with the requirements of this section.

Reference: Rockhill Real Estate Enterprises XVII LLP (500 Pottstown Pike)
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6. 200-107.C.(2). – A plan has been provided which indicates the existing steep slopes on the site. There is a note on the plan which states the source of the topography is from a separate plan which is not provided with this submission, so it is not clear whether the information was gathered via field survey or some other method. This plan should be provided. In addition, if the contouring is correct, it appears there should be significantly greater areas of steep slopes delineated.
7. Section 200-107.D.(2). – The application proposes disturbance of prohibitive steep slope areas which will require a variance from the Zoning Hearing Board. The applicant has acknowledged this and will be seeking a variance.
8. Section 200-107.D.(3).(b).[1] & [4] – These sections require conditional use approval for construction of structures and sanitary and storm sewer facilities within Precautionary Steep Slopes. The applicant has requested a conditional use under this section.
9. Section 200-107.D.3.(c). – This section limits the amount of impervious surface which may be installed within precautionary slope areas. Computations should be provided demonstrating compliance with this section.
10. Section 200-117.I. – An Historic Impact Statement is required per this section. The Applicant is requesting a waiver from providing.

IV. TOWNSHIP ENGINEER COMMENTS – SUBDIVISION AND LAND DEVELOPMENT ORDINANCE
GILMORE & ASSOCIATES

1. Section 162-9.D.(1).[f]. – The plans should indicate if the wetlands as well as Waters of The Commonwealth have been recently delineated for the site and if so, by whom and when the evaluation was completed.
2. Section 162-9.H.(4) – The following is our review of the provided Fiscal Impact Study:
 - a. The Fiscal Impact Analysis should provide a source or data supporting the indicated total market value of approximately \$8 million for the improved property.

Reference: Rockhill Real Estate Enterprises XVII LLP (500 Pottstown Pike)
Conditional Use Application Review
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- b. As per the Upper Uwchlan Township 2024 Adopted Budget, the budgeted expenditures for Codes Administration is \$427,501. Table 2 in the Fiscal Impact Analysis shows Codes Administration as \$425,501. The Fiscal Impact Analysis should be revised to accurately reflect the 2024 Adopted Budget figures.
- c. Not all expenditure line items shown in the Upper Uwchlan Township 2024 Budget were included in Table 2, General Fund Expenses. A methodology/justification should be provided explaining why certain line items were excluded from the analysis.
- d. As per the 2024 Upper Uwchlan Township Budget, there is a real estate transfer tax, as 1% tax collected, and shared equally between the Township and the School District. The report should indicate whether this transfer tax is applicable, and if so, include revenue from the transfer tax as a one-time revenue in the calculation of revenues.
- e. The Fiscal Impact Analysis has two separate tables labeled as "Table 2." The Per-Capita Cost Calculation Methodology Table on page 4 should be revised to be titled "Table 3."
- f. Table 4 provides Planning Standards for EMS Calls (per year) of 31.31 that do not align with the Development Impact Assessment Handbook, 1994 provided planning standards of 36.5, or the apportioned 9.125 for non-residential. The Fiscal Impact Assessment should provide reasoning for using alternate planning standards.

V. TOWNSHIP TRAFFIC CONSULTANT COMMENTS

BOWMAN

1. ZO Section 200-75.H(3) – The following comments pertain to the sight distances at the proposed site access intersection:
 - a. The traffic study indicates adequate sight distance can be provided at the site access intersection based on the posted 45 miles per hour speed limit along Pottstown Pike. However, the available sight distance for traffic exiting the access looking to the right may be limited due to the presence of a building north of the site access located on an adjacent property. The available sight distance may not be sufficient based on PennDOT's safe stopping sight distance criteria if traffic is traveling above the posted speed limit. A speed study should be conducted along Pottstown Pike to determine the prevailing (i.e., 85th percentile) speed of traffic for use in calculating the required safe stopping sight distances. This evaluation should

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be provided as part of the conditional use review to confirm whether safe access to the site can be provided.

- b. The plans should dimension and label the sight distances for exiting traffic (looking to the left and right), as well as left-turn vehicles entering the proposed driveway looking ahead and behind.
- c. During land development, the plans should include a PennDOT-style sight distance note which states the required sight distances, as follows. The required sight distances should be based on the results of the speed study.

“All sight distance obstructions (including but not limited to embankments and vegetation) shall be removed by the permittee to provide a minimum of XXX sight distance to the left and XXX sight distance to the right for a driver exiting the proposed driveways onto the through highway. The driver must be considered to be positioned ten feet from the near edge of the closest highway through travel lane (from the curbline if curbing is present) at an eye height of three feet six inches (3' 6") above the pavement surface located in the center of the closest highway travel lane designated for use by approaching traffic. This sight distance shall be maintained by the permittee.”

- 2. SALDO Section 169-9.H(1)(a) – The traffic counts were completed on the last day of the 2022-2023 school year for Downingtown Area School District, which was a half day, and seniors may not have had school that day. The traffic counts should be updated to capture normal traffic conditions when school is in regular session.
- 3. SALDO Section 169-9.H(1)(a) – Our office previously reviewed the TIS scoping application and we preliminarily agreed with the method of estimating the site trip generation; however, additional information is provided with this submission which results in questions regarding the trip generation methodology. The traffic study uses the Automobile Parts and Service Center (ITE Land Use Code 943) land use to calculate the trip generation for the proposed site. The traffic study also notes the site will be used for an automotive service center and new car storage. However, based on the conditional use application, the applicant is “requesting conditional use approval from Section 200-39.B(1), (7), and (9) of the Zoning Ordinance to operate vehicular sales and service establishments on the property”. The applicant should provide more information about the uses proposed on the site, and also provide additional information regarding the proposed operation of the new car storage on the site in order to justify the trip generation calculation. Subject to review of this additional

Reference: Rockhill Real Estate Enterprises XVII LLP (500 Pottstown Pike)
Conditional Use Application Review
Upper Uwchlan Township, Chester County, PA

File No. 23-01103

April 8, 2024

information, Automobile Parts and Service Center may not be the most appropriate land use for the site. Other potentially more appropriate land uses may result in higher trip generation.

4. SALDO Section 169-9.H(1)(a) – The crash evaluation should be updated to include non-reportable crash data, and especially for the Pottstown Pike/Font Road intersection.
5. SALDO Section 169-9.H(1)(a) – Based on the results of the traffic signal warrant evaluation provided in the traffic study, a traffic signal is not warranted at the intersection of Pottstown Pike and Font Road. The following comments apply to the traffic signal warrant evaluation:
 - a. Additional and updated traffic count data should be used to evaluate the need for a traffic signal at this intersection. As such, please complete a continuous 11-hour traffic count (7:00 AM to 6:00 PM).
 - b. The traffic volumes used in the traffic signal warrant analysis do not include the Font Road side street right-turn movement, which is typically an appropriate assumption when the right-turn traffic occurs in a channelized right-turn lane. However, in this case, the channelized right-turn movement represents a significant amount of traffic (between 149 and 213 existing vehicles) with minimal storage provided for the right-turn channelized movement, and in our judgement, this traffic should be considered.
 - c. Due to the high volume of northbound Pottstown Pike left-turn traffic (between 75 and 267 existing vehicles), the traffic signal warrant analysis should evaluate a scenario using the southbound Pottstown Pike through movement as the major street traffic volume and the northbound Pottstown Pike left-turn movement as the minor street traffic volume.
 - d. Evaluate Warrant 7 (Crash Experience) using the non-reportable crash data.
 - e. Evaluate Warrant PA-1 (ADT Warrant).
6. SALDO Section 169-9.H(1)(a) – The traffic study indicates the eastbound Font Road shared through/left-turn movement, and the westbound site access approach to their intersection with Pottstown Pike operates with delay (LOS F) during both peak hours. The traffic study includes a gap study evaluation for this intersection. The following comments pertain to the provided gap study:

Reference: Rockhill Real Estate Enterprises XVII LLP (500 Pottstown Pike)
Conditional Use Application Review
Upper Uwchlan Township, Chester County, PA

File No. 23-01103

April 8, 2024

- a. The gap study uses the critical and follow up headways for left-turn traffic to determine the number of effective gaps for use by side street traffic, and concludes that there are 100 weekday morning and 48 weekday afternoon peak hour combined gaps for use by side street, which exceeds the total left-turn volume of 20 vehicles (total of both side street approaches) during the weekday morning peak hour and 40 vehicles (total of both side street approaches) during the weekday afternoon peak hour. However, since the difference between the number of available gaps and the left-turn traffic is so close (80 gaps in the weekday morning peak hour and 8 gaps during the weekday afternoon peak hour), and given the high volume of northbound Pottstown Pike left-turn traffic and eastbound Font Road right-turn traffic, it is not clear that adequate gaps will be available for side street traffic.
- b. It is not clear whether the counted gap information assumes use of major street gaps by existing turning movements, especially the eastbound Font Road right-turn movement and the northbound Pottstown Pike left-turn movement.
- c. The gap study should be updated using new traffic counts.

7. SALDO Section 169-9.H(1)(a) – Due to the sight distance and traffic operational concerns at the Pottstown Pike/Font Road/Site Access intersection noted above, we question the viability of this access intersection as proposed. As such, we recommend a more detailed evaluation of future traffic control at the intersection through PennDOT's Intersection Control Evaluation (ICE) process, including capacity analysis and conceptual improvement plans (especially for the roundabout option) for all alternatives considered. At this time, the Township recommends a traffic signal or a roundabout at this intersection to accommodate the new access. The applicant should arrange a meeting with PennDOT and the Township to discuss the future intersection traffic control.

8. SALDO Section 162-9.H(1)(a) – The traffic study recommends a 125-foot southbound Pottstown Pike left-turn lane for traffic entering the proposed site access. However, the conditional use plan shows only a 75-foot southbound Pottstown Pike left-turn lane. The conditional use plan should be revised to show a 125-foot southbound Pottstown Pike left-turn lane as recommended in the traffic study.

9. SALDO Section 162-9.H(1)(a) – The traffic study indicates a 125-foot northbound Pottstown Pike right-turn lane is warranted for traffic entering the proposed site access based on PennDOT's turn lane warrant criteria. However, the study recommends

Reference: Rockhill Real Estate Enterprises XVII LLP (500 Pottstown Pike)
Conditional Use Application Review
Upper Uwchlan Township, Chester County, PA

File No. 23-01103

April 8, 2024

installation of only a deceleration taper for northbound Pottstown Pike. A concept plan should be prepared which shows the necessary access improvements.

10. SALDO Section 162-28.A – The plans should clearly label and dimension the existing legal right-of-way along the Pottstown Pike site frontage.
11. The Township's Active Transportation Plan (ATP) envisions a shared use path on the east side of Route 100 in this area, which should be incorporated into the site plan, as well as a pedestrian crossing of Route 100 at the site access location, assuming intersection traffic control improvements. Also, an alternative option may be to locate the trail through the rear of the property, but this would require further coordination between the applicant, the Township and coordination with the adjacent property owners. Furthermore, the ATP envisions a "Yield Roadway" to the north, which could traverse through the northern edge of the property near the border with the Texas Eastern property. This should be discussed with the Township as the land development project moves forward.
12. ZO Section 200-73.H and 200-73.K – According to the parking/loading requirements table on sheet 4, the site only requires 114 parking spaces, including 52 spaces for stored vehicles. However, the site provides 415 parking spaces, which exceeds the Township's parking supply requirements by 301 parking spaces. The applicant should provide additional justification for the proposed parking supply. The plans also indicate there are 91 double and triple stacked parking spaces, which indicates that it is proposed to store more than 52 vehicles on the site at one time. The proposed number of stored vehicles on the site should be accurately reflected in the parking calculation.
13. ZO Section 200-74.A(1) – The proposed loading area on the northeast corner of the building will extend into the adjacent parking aisle, and reduce the parking aisle width to approximately 9.5 feet. The plans should be revised to shift the loading area so it does not obstruct the required 25-foot wide parking aisle for 90 degree parking spaces.
14. Sheet 5 includes a truck turning template for a fire truck circulating through the site. In addition, the plans should include a truck turning template for the largest delivery vehicle anticipated to visit the site, such as a car carrier tractor trailer.
15. Chapter 79-8.C – The proposed development is located in the Township's Act 209 Transportation Service Area, and as such, this development is subject to the Township's Transportation Impact Fee of **\$2,334** per weekday afternoon peak hour trip. The

Reference: Rockhill Real Estate Enterprises XVII LLP (500 Pottstown Pike)
Conditional Use Application Review
Upper Uwchlan Township, Chester County, PA

File No. 23-01103

April 8, 2024

Transportation Impact Fee will be calculated once the trip generation comments above are addressed.

VI. TOWNSHIP LAND PLANNER COMMENTS

BRANDYWINE CONSERVANCY

1. The area of the proposed project is designated as Suburban Employment on the Future Land Use Map contained in the Township's 2014 Comprehensive Plan. The proposed use of the site is in general alignment with the proposed future land use of this area and other existing dealership businesses in the same future land use category.
2. The Conservancy notes the applicant plans to seek variance relief from Sections 200-107.D(3)(b)[1] and [4] of the Zoning Ordinance with respect to manmade precautionary and prohibitive steep slopes. Assuming the Township's engineer can sufficiently determine the precautionary and prohibitive steep slopes are manmade because of prior land use, the Conservancy is in support of this variance request.
3. The recently completed Active Transportation Plan (ATP) for Upper Uwchlan Township recommends a 'shared use path' along the east side of Route 100 in front of the proposed development. The Plan also proposes crossing improvements at the intersection of Route 100 and Font Road as part of the broader implementation of the Active Transportation Plan and trail network. The Brandywine Conservancy encourages the Township to seek the implementation of the 'shared use path' along Route 100 as part of this Conditional Use application and seek advice from the Township's transportation consultant on possible crossing improvements at this intersection. In addition, the Brandywine Conservancy encourages the applicants to provide a connection from the 'shared use path' to the service center, allowing customers the option of walking to nearby recreational areas and commercial establishments while waiting for their vehicle to be serviced.
 - A shared use path in the ATP is defined as a combined bikeway and walkway that is designed for shared use by bicyclists and pedestrians of all abilities. Shared use paths along or adjacent to a roadway are physically separated from vehicular traffic by a verge, fencing, or other barrier. A shared use path has dimensions of 10-12 feet wide (8 feet is permissible where there are constraints). When a shared use path is adjacent to a roadway, a 5-foot-wide verge is recommended between the edge of the shoulder and the path. If this width is not feasible, a suitable physical barrier is recommended.

Reference: Rockhill Real Estate Enterprises XVII LLP (500 Pottstown Pike)
Conditional Use Application Review
Upper Uwchlan Township, Chester County, PA

File No. 23-01103
April 8, 2024

4. The Brandywine Conservancy is encouraged to see the proposed vegetated stormwater management basin as part of the stormwater management system. The inclusion of the native perennial seed mix will greatly enhance pollinator habitat and enhance infiltration at the site over a traditional grass basin. Realizing this is a preliminary landscape plan, the Conservancy does suggest the applicant site the proposed shrubs for the stormwater basin in compatible locations that meet the requirements of the species selected. The Conservancy also suggests the Township receives arrangements acceptable to them that ensures the stormwater basin will be maintained in a healthy and/or sound condition.
5. The proposed plant material includes several non-native species. The Conservancy encourages the applicant to seek alternative native plants for those non-native species, specifically the Pennisetum, Spirea, Hosta, Hemerocallis, Cotoneaster, and Liriope.
6. Whilst only a preliminary plan for Conditional Use approval, the Conservancy encourages the applicant to ensure they meet the landscaping and tree replacement and planting requirements of the Township's Zoning Ordinance and Subdivision and Land Development Ordinance upon application for full Land Development.

VI. TOWNSHIP SEWER CONSULTANT COMMENTS

ARRO CONSULTING, INC.

1. The plans propose the construction of a 36,380 square foot (SF) service center, with vehicular lot and parking lot for vehicular sales and service uses on the site. The site is not currently connected to public sewer, although the applicant proposes the site to be connected. The applicant will need to meet with the Authority Administrator and the Authority Engineer to discuss how public sanitary sewer will be extended to this site. The applicant will need to provide estimated wastewater usage data from similar sized facilities, to determine the required capacity. The required capacity will need to be purchased by the applicant.
2. The following notes shall be on the plan:
 - All sanitary sewer improvements must be provided and constructed in accordance with the Upper Uwchlan Township Municipal Authority Technical Specifications for the Construction of Sewer Mains and Appurtenances to be connected to the public sewer system.

Tony Scheivert, Township Manager
Upper Uwchlan Township Manager

Page - 11 -

Reference: Rockhill Real Estate Enterprises XVII LLP (500 Pottstown Pike)
Conditional Use Application Review
Upper Uwchlan Township, Chester County, PA

File No. 23-01103
April 8, 2024

- The Authority Engineer shall be notified 48 hours prior to the beginning of sanitary sewer construction.
- The existing on-lot septic system shall be decommissioned in accordance with the Chester County Health Department requirements.
- Wastewater discharge shall be in compliance with the Regulations for the Discharge of Non-Residential Waste into the Upper Uwchlan Township Municipal Authority's Sewerage System, Resolution #10-20-04-15, dated October 20, 2004. The Township personnel and/or agents shall have access to site for implementation of this resolution.
- A record (as-built) plan must be submitted to the Authority Engineer.

3. Sewage facilities planning module (SFPM) approval will need to be obtained by the Pennsylvania Department of Environmental Protection (PADEP).
4. An appropriately sized oil grease interceptor shall be provided for service center.
5. The necessary financial security shall be posted with the Township, which shall be in a form and amount acceptable to the Township.

It is our hope that the Township finds the above comments useful in their review of the above reference application. Should you have any questions, please do not hesitate to contact me.

Sincerely,

David N. Leh

David N. Leh, P.E.
Vice President
Gilmore & Associates, Inc.

Tony Scheivert, Township Manager
Upper Uwchlan Township Manager

Page - 12 -

Reference: Rockhill Real Estate Enterprises XVII LLP (500 Pottstown Pike)
Conditional Use Application Review
Upper Uwchlan Township, Chester County, PA

File No. 23-01103

April 8, 2024

cc: Upper Uwchlan Township Board of Supervisors
Upper Uwchlan Planning Commission
Gwen Jonik – Township Secretary
Rhys Lloyd – Director of Code Enforcement
Anthony Campbell – Zoning Officer
Mathew Brown, PE – Upper Uwchlan Township Authority
Kristin Camp, Esq. – BBM&M, LLC
Chris Williams, PE Bowman Associates
Dave Schlott, PE – Arro Consulting
Robert DiStanislao – RDS (Applicant)
Alyson Zarro, Esq. – RRH&C
Erik Hetzel AICP/PP - EH Creative Services LLC.
Matt Hammond, PE – TPD
Jacob Tackett – T&M Associates, Inc.