Perkasie Borough
Planning Commission Meeting
August 27, 2025

AGENDA

1. Meeting Convenes – 7:00 PM
2. Pledge of Allegiance
3. Approval of Minutes May 28, 2025
4. Public Forum
5. New Business – Perkasie Place LLC
6. Old Business (None)
7. Other Business
8. Adjournment

Minutes of Meeting
Perkasie Planning Commission
May 28, 2025

620 W. Chestnut Street
Perkasie, PA 18944

Attendance:

Planning Commission	Heather Nunn
	Maureen Knouse (Absent)
	Mairi Schuler
	Mary McKay (Absent)
	Dave Weaver
	Dale Schlegel
	Kim Bartells
	Kelly Laustsen
	Quinten Baker
Borough of Perkasie:	Cassandra L. Grillo, Borough Zoning Officer
	Linda J. Reid, Assistant Borough Manager
	Adrianne Blank, R.L.A., Borough Planner
	Timothy Wallace, Borough Engineer (absent
	Attorney Brandon Callahan, Borough Solicitor

Dale Schlegal called the meeting to order at 7:00PM. The Pledge of Allegiance was recited, and it was acknowledged there was a quorum and business before the Commission.

APPROVAL OF MINUTES:
Upon a motion by Mairi Schuler, and seconded by Dave Weaver, the Planning Commission meeting minutes of April 23, 2025 were unanimously approved.

Public Forum
None

NEW BUSINESS
None

Old Business

1. Keep of Fowl Ordinance Amendments

- Mr. Weaver asked if the construction material requirements could be easily enforced. Ms. Grillo confirmed that they could.

- Ms. Laustsen asked whether the ordinance requires a waste removal plan. Ms. Reid stated that while the ordinance requires chicken coops to be kept clean, dry, and odor-free, it does not currently require a formal plan. This could be added if desired.
- Ms. Nunn asked if plan information would be submitted with zoning permits. Ms. Reid noted that the draft ordinance does not require this but could be amended to recommend it.
- Mr. Baker requested clearer definitions of "rooster" and "male chicken."

Recommendation:
The Commission recommended approval to Borough Council with the following conditions:

1. The Solicitor clarifies the definitions section and specifically excludes male chickens.
2. A provision is added for waste disposal and removal requirements.

Motion made by Ms. Schuler, seconded by Ms. Nunn. The Commission approved the motion, with Ms. Laustsen opposed.

2. Roadside Stands Ordinance Amendments

- The Commission reviewed the ordinance.
- Ms. Laustsen questioned the distance requirement, noting that for residential uses it was amended from "distance to centerline" to "line-of-sight." Ms. Reid confirmed this change did not apply to commercial uses.
- Mr. Schlegel raised a concern regarding clarity on prohibiting roadside stands from being placed on sidewalks or within the street line.

Recommendation:
The Commission recommended approval to Borough Council with the condition that the Solicitor amend Paragraph 1 to clearly state: "No roadside stands shall be allowed on sidewalks or within the street line."

Adjournment

With no other business, Mairi Schuler made a motion to adjourn, seconded by Dave Weaver. The meeting was adjourned at 7:33 PM.

Adjournment

With no other business Mairi Schuler motioned to adjourn the meeting, Dave Weaver seconded. Meeting was adjourned at 7:33PM.

_____
Heather Nunn - Secretary

Borough of Perkasie

P. O. Box 96 620 W. Chestnut St. (215)257-5065
Perkasie, Pennsylvania 18944 Fax (215)257-6875

To: Perkasie Planning Commission
From: Cassandra L. Grillo, CZO
Date: September 18, 2025
Re: 505 Constitution Ave / Perkasie Square Shopping Center / Perkasie Place LLC

Background:

The Borough has received a sketch plan application from **Perkasie Place LLC** for a meeting to discuss the potential development of the **vacant lot adjacent to Mavis Tire on Constitution Avenue (505 Constitution Avenue, TMP #33-009-001)**. A small portion of the western corner of this tract, along Constitution Avenue, lies within Sellersville Borough.

The parcel is owned by **Pacaz Realty LLC** and is currently under **Agreement of Sale with Perkasie Place LLC**, a company that builds and manages rental residential apartment communities.

The lot remains part of the same parcel as the **Perkasie Square Shopping Center** that was developed in the 1980s. In 2016, an application was submitted by Carlyle Management to subdivide the parcel into two. Borough Council approved the subdivision by Resolution after Planning Commission review; however, the process was never completed. Perkasie Place LLC proposes to complete the minor subdivision as part of their acquisition.

Subdivision Conditions (2016):

- Easement to allow the developer of Perkasie Woods to complete pedestrian access (trail) between Perkasie Woods and the Shopping Center.
- Easement to allow connection between the two lots.

Zoning:

The property is currently zoned **I-2 Light Industrial District**, which permits:

- Planned Commercial Development (PCD)
- Various retail, office, and light industrial uses by right.

Proposal:

Perkasie Place LLC is exploring the possibility of rezoning a recently subdivided parcel for development as a managed rental residential community. The applicant had initially submitted a Zoning Hearing Board application seeking a use variance to permit multifamily residential use within the I-2 Industrial District.

As an alternative path, the applicant may also petition Borough Council directly to request a zoning map amendment to reclassify the parcel into a residential zoning district.

However, they have elected to present a sketch plan to the Planning Commission in order to gather feedback and public comment on the concept.

The preliminary concept design includes:

- **Five apartment buildings**,
- **Approximately 75 total apartment units**,
- **Primary vehicular access through Perkasie Square Shopping Center**.

Discussion Points:

- **Last Undeveloped Commercial Lot**
  This tract represents Perkasie's last remaining undeveloped, commercially zoned parcel. Its position at the Borough gateway, directly adjacent to Perkasie Square (a Planned Commercial Development), makes it strategically significant for potential commercial use. Rezoning the property to residential would remove the opportunity for future commercial development at this location.

- **Consistency with the Comprehensive Plan**
  The Borough's Comprehensive Plan (2014) designates this parcel for Planned Commercial Development, with a recommendation to rezone from I-2 Industrial to C-1 Business Professional District. The intent was to encourage shopping center–type uses while eliminating the potential for heavier industrial activity. C-1 zoning could also attract national retailers, similar to those found in the Glenwood Shopping Center area. However, the overall demand for commercial properties has shifted since the Comprehensive Plan was adopted, reflecting changes in national and regional market conditions.

- **Retail Market Challenges**
  Perkasie Square, like many neighborhood shopping centers, faces persistent vacancies. Broader retail trends show a decline in brick-and-mortar activity as consumers increasingly turn to online shopping, a shift that has accelerated in recent years. These pressures have contributed to underutilization within the center and present challenges for sustaining or expanding similar commercial development.

- **Regional Competition**
  In addition to e-commerce, Perkasie Square competes with larger, newer retail centers along Route 309. Shopping plazas in nearby Quakertown and Montgomeryville feature a broad mix of anchors and national tenants—including Buffalo Wild Wings, Five Below, Kohl's, and Lowe's—that draw steady regional traffic.

- **Transitional Location and Park Connectivity**
  The parcel sits at the transition between Constitution Avenue's commercial corridor and adjacent residential neighborhoods. It is also directly connected to the Borough's park system, with Lenape Park and its trail network along the East Branch Perkiomen Creek adjoining the site. This greenway links to Kulp Park and Menlo Park, providing access to athletic fields, trails, playgrounds, and the community pool.

BOROUGH OF PERKASIE

620 W. Chestnut St
P.O. Box 96
Perkasie, PA 18944

(215)257-5065
Fax (215)257-6875

SUBDIVISION/LAND DEVELOPMENT APPLICATION

Date of Application: 8/6/25 Date of Plan or Revision: 2/27/25

APPLICATION FOR:

☒ Subdivision ☒Sketch Plan _____ ☐ Lot Line Change_____
Formal or Informal (Circle One)

☒Land Development ☐Preliminary Plan _____ ☐Minor Subdivision_____

☐Final Plan_____

NAME of Subdivision or Land Development: Perkasie Place
To be the name for the Duration of the Project

Location: 503-545 Constitution Avenue

Tax Parcel No(s): 33-009-001 (a portion of)

Total Acreage Gross: 7.939 Net Buildable Site Area: 7.326

ZONING REQUIREMENTS:

Zoning District I-2 Minimum Lot Size 2 acres Maximum Density TBD

Yard Setbacks: Front 40 Side 40 Rear 40 Number of Lots or Dwelling Units: 75 proposed

Water Supply: ☐Private ☒Public

Sewer Service: ☐On-Lot ☒Public

EQUITABLE OWNER of Record of Land: Perkasie Place LLC

Address: P.O. Box 538, Doylestown, PA 18901 Phone: 215-429-4426

APPLICANT: Perkasie Place LLC

Email: mtulio@csacinc.net Phone:

Address: Same as Equitable Owner

REGISTERED ENGINEER OR SURVEYOR: C2C Design Group / Chuck Frantz, PE

Email: cfrantz@c2cdg.com Phone: 610-860-6050 Ext 101

Address: 37 East Penn Avenue, Wernersville, PA 19565

This is to certify that I have read the Perkasie Borough Subdivision and Land Development Ordinance and that the accompanying plan meets the requirements of the ordinance to the best of my knowledge.

Signature of Property Owner

Signature of Registered Engineer or Surveyor

BOROUGH OF PERKASIE

620 W. Chestnut St
P.O. Box 96
Perkasie, PA 18944

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Fax (215)257-6875

Subdivision & Land Development
Plan Submission Checklist

Date of Application: _____

Subdivision/Land Development Name: Perkasie Place

Address of Property: 503-545 Constitution Avenue

Owner(s) Name: PACAZ Realty, LLC

Applicants Name: Perkasie Place LLC

Tax Map Parcel Number: 33-009-001 (a portion of)

Plan Sets – Folded to 8 ½ x 11: (11 Total)

✓ Planning Commission – 8 Copies ✓ Boro File – 2 Copies

✓ Borough Engineer – 1 Copy

The applicant must show **proof of submission** to the outside agencies listed below, as applicable, (stamped copy or cover letters and copy of application form). The following plan sets are subject to the requirements of the outside agency and ***must be submitted to the outside agency by the applicant.***
To be supplied at a later date

_____ Bucks County Planning Commission (1 Copy)

_____ Bucks County Conservation District (1 Copy)

_____ Supplying Water Authority – (1 Copy)

_____ Bucks County Department of Health (1 Copy)

_____ Penn DOT (Highway Permit)

_____ Army Corps of Engineers (Wetlands)

APPLICATION FORMS & FEES ARE TO BE SUBMITTED TO THE BOROUGH. All applications must include these items or the application will be considered administratively incomplete and returned to the applicant.

BOROUGH OF PERKASIE

PLAN CHECKLIST

(To Be Completed by Applicant)

GENERAL SUBMISSION ITEMS - Does the submission include:

PLAN REQUIREMENTS - Do the Plans have:

Yes*	No	Sheet No.		
* Note (Insert NA if not applicable)				
✓			1.	Plan drawings at a size of 24" x 36"
	✓		2.	A scale of 1" = 50' or 1 = 100'?
✓			3.	Dimensions set in feet and decimal part thereof and bearings in degrees, minutes and seconds?
✓			4.	Sheets numbered and show relationship to the total number of sheets?
✓			5.	An adequate legend indicating clearly which features are existing and which are proposed?

GENERAL INFORMATION - Do the Plans have:

Yes*	No	Sheet No.		
✓			6.	Name and address of Owner?
✓			7.	Name and location of subdivision or land development?
✓			8.	Graphic and/or written scales?
✓			9.	Date of plan and all subsequent revision dates?
	✓		10.	Name and address, signature and seal of the licensed engineer or surveyor responsible for the Plan?
✓			11.	Location map at a minimum scale of 1" = 800'?
✓			12.	North arrow?
✓			13.	Site boundaries survey with tie-ins to all adjacent streets?
✓			14.	Location and type of existing monuments?
✓			15.	Forested areas?
✓			16.	Watercourses, lakes and wetlands (with names, if any)?

Do the plans include the location of the following existing features on the site being subdivided or developed and within 400 feet of the site:

Yes*	No	Sheet No.		
✓			17.	Streets and rights-of-way (including name and right-of-way widths)?
✓			18.	Existing lot layout on the site and on immediately adjacent tracts?
✓			19.	Property lines, building locations, driveway locations, and names of adjacent property owners?
✓			20.	Sewer lines, storm drains and easements, other utilities?
✓			21.	Pennsylvania One-Call Serial No. and note.

PROPOSED FEATURES - Do the Plans show:

N/A			22.	Layout of streets with center lines, cartways and right-of-ways, and proposed names?
✓			23.	Layout of lots and dimensions?
✓			24.	Building setback lines from all lot lines?
✓			25.	The arrangement and use of buildings and parking areas with all necessary dimensions and number of parking spaces?
N/A			26.	Rights-of-way and easements for all drainage, utilities, (electric, gas, telephone, and CATV) or other purpose which might affect development?
✓			27.	Open space areas, proposed use and maintenance?
	✓		28.	Proposed monuments and individual lot pins.
✓			29.	Applicable zoning requirements and the location of zoning district boundary lines affecting the subdivision.
TBD			30.	A reference to any land to be dedicated for parks, recreation areas, widening of streets or other public uses.
✓			31.	For multi-family developments, the total area, total dwelling units, number of buildings, proposed total parking spaces, building coverage and the bedroom ratio shall be on the plan.

Plan Checklist

Yes*	No	Sheet No.		
N/A			32.	An indication of any lots in which other than a residential use is intended.
✓			33.	For subdivisions, the total area, number of lots, average and minimum lot size shall be noted on the plan.
TBD			34.	The location and size of storm drains, stormwater management facilities, sanitary sewers, culverts, watercourses and all appurtenances thereof, on-site sewage disposal facilities, gas mains, electric facilities, water mains, fire hydrants, street lights, planting, special structures and other underground conduits or structures.
TBD			35.	Typical cross sections and centerline profiles for each proposed street. These plans may be submitted as separate sheets. Where the plan covers only a part of the owner's entire holding, a sketch shall be submitted of the prospective street layout for the remainder.
TBD			36.	A plan for planting is required for open space subdivision; this plan shall show the location of all existing trees greater than three (3) inches in caliper. All new plantings shall indicate species and size.
TBD			37.	The location of all trees to be saved.
TBD			38.	The tree protection zone.
TBD			39.	The location of proposed retaining walls.
✓			40.	A table showing open space ratio, density and impervious surface ratio.
TBD			41.	Estimated average and peak volumes of water needed to serve the proposed subdivision or land development and an indication of the available water volume for fire flow and the water volume required to satisfy the Insurance Services Office (ISO) standards for fire protection.
N/A			42.	Owners Statement of Acknowledgment

Plan Check List

Yes*	No	Sheet No.		
TBO			43.	The signature block for the Chairman and Secretary of the Borough Planning Commission?
TBO			44.	The signature block for Executive Director of the Bucks County Planning Commission.
TBO			45.	The signature block for the Borough Engineer.
TBO			46.	The signature block for the President and Secretary of the Borough Council.

Prepared By: David Shatzman

Date: 8/5/25

Signature: _____
Applicant or representative

Accepted by:

Date:

Signature: _____
Borough Official

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BOROUGH OF PERKASIE

620 W. Chestnut St
P.O. Box 96
Perkasie, PA 18944

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SUBDIVISION / LAND DEVELOPMENT 90-DAY REVIEW WAIVER

Date: 8/6/25

Borough Manager
Perkasie Borough
620 W. Chestnut St.
P.O. Box 96
Perkasie, PA 18944

Re: Subdivision/Land Development Plan of Perkasie Place, LLC

On 8/6, 20 25, I/We submitted for official filing, the above referenced plan of subdivision/land development.

Please be advised that, notwithstanding, any contrary provision of the Pennsylvania Municipalities Planning Code or the Perkasie Borough Code, this letter will serve as notice to Perkasie Borough that the requirement that action be taken on this subdivision proposal within ninety (90) days is hereby waived, without limitation as to time.

This Waiver can be revoked upon thirty (30) days written notice to Perkasie Borough.

Very truly yours,

David Shafkowitz
Attorney for Applicant

PURCHASE AND SALE AGREEMENT

THIS AGREEMENT ("Agreement") is made this _____ day of December 2024 ("Effective Date") by and between **PACAZ REALTY, LLC**, a Pennsylvania limited liability company with an address of c/o Gerald Simon, CFO, Carlyle Management Corporation, 5355 Town Center Rd, Suite 430 Boca Raton, FL 33486 ("Seller") and **PERKASIE PLACE LLC**, a Pennsylvania limited liability company with an address of P.O. Box 538, Doylestown, PA 18901, or its nominee or assignee ("Buyer"). For purposes of this Agreement, the "Effective Date" shall be the date this Agreement is last signed by the Buyer and Seller.

In consideration of the mutual promises and agreements herein contained, and intending to be legally bound hereby, the Buyer and Seller agree as follows:

1. **Agreement to Sell and Purchase.** Seller owns that certain lot or piece of ground located at 505 Constitution Avenue, Perkasie Borough, Bucks County, Pennsylvania, also known as Bucks County Tax Map Parcel No. 33-009-001 and consisting of approximately ± 22.18 acres as described on **Exhibit "A-1"** attached hereto. Seller hereby agrees to sell and convey to Buyer, who hereby agrees to purchase all that certain lot or piece of ground consisting of approximately ± 7.94 acres to be subdivided, at Buyer's expense, from the Seller's ± 22.18 acres which lot or piece of ground is legally described on **Exhibit "A-2"** and depicted as Lot 2 on the Survey prepared by Nave Newell, Inc. dated November 5, 2015 attached as **Exhibit "A-3"** (the "Property"), such that Seller shall retain approximately ± 14.24 acres of the land depicted as Lot 1 on the Survey as described on **Exhibit "A-3"** (the "Retained Lands"). Buyer acknowledges that the Property consists of undeveloped vacant land without any improvements thereon. Subject to Section 4(c) of this Agreement, the approximate location and approximate dimensions of the Property and Retained Lands shall be adjusted as needed to comply in all respects with the applicable subdivision and land development ordinances of Perkasie Borough. In addition, Seller shall grant and convey to Buyer at no additional fee to Buyer such easements across the Retained Lands or adjacent lands of Seller as are necessary to develop the Property in accordance with Buyer's Plan (as hereinafter defined), such easements to include, but not to be limited to, easements for ingress and egress, water service, sanitary sewer service, stormwater management facilities, electric, telephone, data, gas, access or cable television. Buyer shall pay for the cost to survey, engineer, document, and record necessary easements. Notwithstanding the foregoing, the subdivision, easements or any of the approvals to be obtained by the Buyer for Buyer's Intended Use of the Property as defined or described herein in no way shall prohibit or limit the Retained Lands from continuing to be used as a commercial shopping center, similar in size as depicted on **Exhibit "A-3"** or otherwise result in any changes to the existing zoning laws, use regulations, parking requirements, site and setbacks requirements, permits, approvals and license as presently existing for the use and operation of the Shopping Center or retained Lands. The provisions of this paragraph shall survive Settlement and the delivery of the Deed for the Property.

2. **Purchase Price.**

(a) **Purchase Price.** The purchase price for the Property, subject to adjustments as provided in this Agreement, shall be [redacted] and 00/100 Dollars ($[redacted]) ("Purchase Price"). The Purchase Price shall be paid by Buyer to Seller as follows:

(i) Buyer shall deposit the sum of [redacted] and 00/100 Dollars ($[redacted]) ("Deposit") with Escrow Agent within five (5) days of the complete execution of this Agreement, which shall be credited to the Purchase Price at Closing, should Closing occur; and

(ii) the balance of the Purchase Price shall be paid in full at the time of Closing by good funds, certified or cashier's check, or by wire transfer of immediately available federal funds.

3. **Due Diligence Contingency.**

(a) For a period of sixty (60) days from the Effective Date ("Due Diligence Period"), Subject to the provisions of paragraph 13, the Buyer shall have the absolute right to determine the feasibility of purchasing the Property and shall be entitled to conduct investigations and examinations of all documentation relating to the Property as well as documentation in possession of Seller for that purpose, which may include any or all of environmental (Phase I and II) investigation, zoning, economic feasibility studies, zoning, engineering, and any other feasibility study deemed necessary by Buyer at Buyer's sole discretion. Buyer shall have the right to terminate this Agreement at any time prior to the expiration of the Due Diligence Period if Buyer is not satisfied for any reason or no reason as a result of its investigation/examination. Should Buyer determine that the results of the investigation are unsatisfactory, Buyer shall notify Seller in writing of this election prior to the expiration of the Due Diligence Period and the Deposit shall be refunded to Buyer (subject to the provisions of paragraph 13), at which time the parties shall have no further liability to each other and this Agreement shall have no further effect.

(b) Intentionally Deleted.

(c) In the event Buyer notifies Seller prior to the end of the Due Diligence Period of its election to terminate the Agreement, Buyer shall be entitled to a refund of the Deposit from Escrow Agent.

4. **Zoning & Land Development Contingencies**. Buyer's purchase of the Property is expressly contingent upon Buyer obtaining zoning and land development approvals for Buyer's intended use of the Property, being multifamily apartment housing not exceeding two stories in height or seventy (70) units ("Buyer's Intended Use"). Following the Due Diligence Period, Buyer shall have the following contingency periods:

(a) Following the Due Diligence Period, Buyer shall have one-hundred-eighty (180) days to obtain the necessary zoning relief or approvals (the "Zoning Approvals") from the Borough to allow Buyer's Intended Use ("Zoning Approval Contingency Period"). Buyer shall use commercially reasonable efforts to obtain the necessary zoning relief or approvals for Buyer's Intended Use. In the event that Buyer is unable to obtain the necessary zoning relief or approvals prior to the end of the Zoning Approval Contingency Period, despite Buyer's commercially reasonable efforts, Buyer may notify Seller of its election to terminate this Agreement and Buyer shall be entitled to a refund of the Deposit from Escrow Agent. In the event an appeal to the Bucks Court of Common Pleas is necessary to for Buyer to obtain its Zoning Approval, Buyer shall have a day-for-day extension of the Zoning Approval

Contingency, and Buyer shall use commercially reasonable efforts to prosecute its appeal. If Buyer's appeal to the Court of Common Pleas is denied, Buyer shall be entitled to a refund of the Deposit.

(b) Following the Zoning Approval Contingency Period, Buyer shall have three-hundred (300) days to obtain final and unappealable subdivision and land development approvals from the Borough of Perkasie, inclusive of any and all necessary permits and approvals from utility providers, and any other outside agency including but not limited to the Pennsylvania Department of Transportation, the Pennsylvania Department of Environmental Protection, and any other agency having jurisdiction over the Property that requires approval for Buyer to record a final land development plan for Buyer's Intended Use ("Land Development Approvals"), for which Buyer shall use commercially reasonable efforts to obtain ("Land Development Contingency Period"). In the event Buyer is unable to obtain its Land Development Approvals prior to the end of the Land Development Approval Contingency Period, despite Buyer's commercially reasonable efforts, Buyer may (i) terminate this Agreement and receive a refund of the Deposit; or (ii) Buyer may exercise an extension of one-hundred-fifty (150) days to complete its Land Development Approvals ("Land Development Extension Period") by providing written notice of such exercise in writing to Seller prior to the conclusion of the Land Development Contingency Period ("Land Development Extension"). If Buyer exercises the Land Development Extension, Buyer shall make an additional deposit of ONE-HUNDRED-FIFTY-THOUSAND and xx/100 ($150,000.00) dollars to Escrow Agent ("Extension Payment"), which shall be refundable, but applicable to the Purchase Price at Closing. If Buyer is unable to obtain its obtain its Land Development Approvals prior to the end of the Land Development Extension Period, despite Buyer's commercially reasonable efforts, Buyer may (i) terminate this Agreement and receive a refund of the Deposit and Extension Payment. If Buyer fails to give such written notice of its election to terminate this Agreement prior to 5:00 PM on the expiration of the Land Development Contingency Period or if extended, the Development Extension Period, then Buyer shall be deemed to have waived its right to terminate this Agreement based upon this Section 4 and the Deposit shall thereafter be non-refundable to Buyer, except as otherwise expressly provided in this Agreement.

(c) Related to Buyer's Zoning Approvals or Land Development Approvals, Buyer shall complete the necessary subdivision of the Property from the Retained Lands consistent with **Exhibit A-3** at Buyer's sole cost and expense. Moreover, it shall be a condition precedent to Closing that Buyer provide confirmation reasonably satisfactory to the Seller that the subdivision, easements or any of the approvals to be obtained by the Buyer for Buyer's Intended Use of the Property as described herein in no way shall prohibit or limit the Retained Lands from continuing to be used as a commercial shopping center, similar in size as depicted on **Exhibit "A-3"**, or otherwise result in any changes to the existing zoning laws, use regulations, parking requirements, site and setbacks requirements, permits, approvals and license as presently existing for the use and operation of the shopping center or Retained Lands.

(d) The Buyer shall use all diligent and commercially reasonable efforts to satisfy the foregoing contingencies and obtain the Zoning Approvals and Land Development Approvals (collectively, the "Approvals")_required for Buyer's Intended Use under this Section 4. Buyer shall, at its sole expense, submit all necessary applications and documentation

to obtain the and shall provide the Seller with proof of such submittals for such Approvals, including but not limited to, copies of the applications, plans, and any other relevant documents, within ten (10) days of submission. The Buyer shall also provide written notice to the Seller of any material issues encountered during the approval process. If the Buyer fails to meet the foregoing due diligence obligations, including failing to apply for the necessary approvals in a timely manner the Seller may terminate this Contract and retain the Deposit as liquidated damages. Prior to exercising such termination right, Seller shall provide Buyer with Fifteen (15) days' notice with an opportunity to cure any failure on the part of Buyer in meeting its obligations under this Section 4.

5. **Status of Escrow Agent.** Land Services USA, ATTN: Art Keegan, Two Liberty Place, 1835 Market Street, Suite #420, Philadelphia, PA 19103, with an email address of (akeegan@lsutitle.com) shall be deemed the Escrow Agent ('Escrow Agent"). It is expressly understood, covenanted and agreed that:

(a) Escrow Agent is acting as an agent only, and will in no event whatsoever be held liable to either party for the performance of any term or covenant of this Agreement, or for damages for non-performance thereof;

(b) The duties of Escrow Agent are only as herein specifically provided and are purely ministerial in nature, and Agent shall incur no liability whatever except for willful misconduct or negligence, as long as Escrow Agent has acted in good faith;

(c) In the performance of its duties hereunder, Escrow Agent shall be entitled to rely upon any document, instrument or signatures believed by it to be genuine and signed by either of the other parties or their successors;

(d) Escrow Agent may assume that any person purporting to give any notice of instructions in accordance with the provisions hereof has been duly authorized to do so;

(e) Escrow Agent shall not be bound by any modification, cancellation or rescission of this Agreement unless in writing and signed by Seller, Buyer and Escrow Agent.

(f) The provisions of this Paragraph 5 shall survive the termination of this Agreement.

(g) Escrow Agent is acting as a stakeholder only with respect to the Deposit (the "Deposit Money"). If there is any dispute as to whether Escrow Agent is obligated to deliver the Deposit Money or as to whom the Deposit Money is to be delivered, Escrow Agent shall not be required to make any delivery, but in such event Escrow Agent may hold the same until receipt by Escrow Agent of an authorization in writing, signed by all of the parties having any interest in such dispute, directing the disposition of the Deposit Money and any interest accrued thereon or until the final determination of the rights of the parties in an appropriate proceeding. If such written authorization is not given, or proceedings for such determination are not begun within thirty (30) days after Settlement was to have occurred, Escrow Agent may, but is not required to, bring an appropriate action or proceeding for leave to deposit the Deposit Money in court pending such determination. Escrow Agent shall be reimbursed for all costs and expenses of such action or proceeding by Seller and Buyer including, without

limitation, reasonable attorneys' fees and disbursements. Upon making delivery of the Deposit Money in the manner provided in this Agreement, Escrow Agent shall have no further liability hereunder or to Buyer or Seller.

6. **Settlement.** Settlement/Closing of this Agreement ("Settlement" or "Closing") shall occur thirty (30) days after Buyer obtains its Land Development Approvals ("Settlement Date").

7. **Title.**

(a) Title to the Property conveyed shall be good and marketable, free and clear of any mortgages , liens, encumbrances, subject however to:

(i) The state of facts as would be shown on an accurate survey of the Property, provided such facts do not render title to the Property unmarketable;

(ii) Zoning regulations, and municipal building restrictions, and all other laws, ordinances, regulations and restrictions of any duly constituted public authority enacted prior to the closing date;

(iii) Other covenants, easements and restrictions which do not adversely affect the use of the Property as permitted by zoning and related ordinances and laws on the date hereof, as well as grants to utility and/or power companies, the rights of the public in sidewalks and abutting public rights-of-way, and easements given to the public for water course maintenance, slope rights or sight rights;

(iv) Current taxes not due and payable;

(v) Any other matter which would constitute an Objection (as hereinafter defined) that the Buyer does not waive pursuant to the following subsection of this Agreement, provided that a title insurance company authorized to do business in the State of Pennsylvania agrees (at normal rates to be paid by the Buyer) that it will insure title free of such Objection or with affirmative insurance against the enforcement of such Objection against the Property; and

(vi) Those items listed on Schedule B-Part II ALTA Commitment for Title Insurance issued by Chicago Title Insurance Company referenced under Issuing Office File No. SPA49106 CHI dated as of June 18, 2024 annexed hereto as Exhibit B to the extent that they affect the Property ("Permitted Exceptions"), but excluding an mortgages listed therein.

(b) The term "Objection" shall mean any title defect or encumbrance (including any lien), other than the matters referred to in subsection (a) above, which renders title to the Property unmarketable.

(c) Not later than ten (10) business days after the date of this Agreement, Buyer shall order, at the Buyer's expense, a title report or title commitment from a title insurance company authorized to do business in Pennsylvania. Within ten (10) days after its receipt of such title report or title commitment, the Buyer shall give written notice of any Objections to the Seller. The Buyer shall be deemed to have waived any Objection not specified in such

notice that is either set forth in such report or commitment or is otherwise known to the Buyer.

(d) The Seller shall have no obligation to bring any action or proceeding or otherwise to incur any expense or liability (contingent or otherwise) to remedy an Objection. If the Seller is unable to convey title in accordance with this Agreement or does not elect to remedy any Objection, the Buyer may elect in the case of non-monetary objections, either (i) to accept such title as the Seller is able to convey on the closing date, without any reduction of purchase price or any credit or allowance on account thereof or any other claim against the Seller, or (ii) to rescind this Agreement. In the case of objections, involving the existence of liens or judgments Buyer may elect either (i) to pay such lien or judgment in the event of the Seller's failure to do so and receive an appropriate reduction of Purchase Price or credit at the time of closing; or (ii) to rescind this Agreement. In either event, such election shall be made by the Buyer within five (5) business days of written notice by the Seller to the Buyer to the effect that the Seller is unable to convey title in accordance with this Agreement or does not elect to remedy an Objection.

(e) Seller shall have the right to remedy any Objection. For the purpose of remedying Objections, the Seller shall have the right to one or more adjournments of the closing date for an aggregate period not exceeding one hundred twenty (120)) days. If the Seller fails to remedy the Objections prior to the adjourned closing date, the provisions of subsection (d) above shall be applicable, and the Seller shall be deemed to have elected not to remedy the Objections.

(f) If, at the closing date, there are any other liens, taxes or encumbrances which Seller is obligated to pay and discharge, Seller specifically authorizes Buyer's closing agent to use such portion of the balance of the Purchase Price as is needed to satisfy the same, provided the Seller shall simultaneously either deliver to the Buyer at closing, title instruments in recordable form and sufficient to satisfy such liens and encumbrances of record, together with the cost of recording and filing said instruments; or, provided that the Seller has made arrangements with the title company, Seller may deposit with the title company sufficient monies, acceptable to and required by the title company to insure the obtaining and recording of such satisfactions and the issuance of title insurance to the Buyer either free of any such liens and encumbrances, or with insurance against enforcement of same against the insured Property. The Buyer, if request is made within a reasonable time prior to the date of Closing, agrees to provide at the Closing separate certified checks and wired funds as requested, aggregating the amount of the cash balance of the Purchase Price, to facilitate the satisfaction of any such liens or encumbrances. The existence of any taxes or other liens or encumbrances shall not be deemed Objections to title if the Seller shall comply with the foregoing requirements.

8. **Deliveries at Closing.**

(a) At Closing, Seller shall deliver to the Title Company or Buyer directly, as Seller may elect, the following original documents executed by Seller and in customary form as approved by Seller's counsel, which may include copies of electronically scanned signature documents where only electronic versions were provided to Seller:

(i) A special warranty deed (the "Deed") conveying to Buyer the Property, subject to the Objections (defined herein) not removed as per section 7. (b);

(ii) Bill of Sale and/or Assignment for the Property, if necessary, of any agreements, leases, security deposits, prorated rents as of Closing, approvals, development plans, and work product from Seller's engineering or other consultants related to the Property (the "Assignment and Assumption");

(iii) Certificate of Non-Foreign Status as required by Section 1445 of the Internal Revenue Code;

(iv) An executed closing statement prepared by Buyer's title company in a manner which reflects the terms and conditions, as applicable, of this Agreement and otherwise in a form reasonably acceptable to Buyer (the "Closing Statement");

(v) Any reasonable and customary documentation required by the Title Company in order for the Title Company to issue the Title Policy.

(b) At Closing, Buyer shall deliver to the Title Company or Seller the following:

(i) The balance of the Purchase Price in accordance with this Agreement, plus Buyer's share of closing costs;

(ii) An executed Assignment and Assumption;

(iii) An acknowledgement of Buyer's acceptance of the Closing Statement;

(iv) A certificate of Non-Foreign Status as required by Section 1445 of the Internal Revenue Code; and

(v) Any reasonable and customary documentation required by the Title Company in order for the Title Company to issue the Title Policy.

9. **Representations & Warranties of Seller.** The Buyer acknowledges and confirms that the Buyer, except as expressly set forth in this Agreement, is not relying on any representation or inducement which was or may have been made or implied by the Seller or any other party acting on behalf of the Seller with respect to the Property or any circumstances or conditions affecting the Property and Seller shall have no liability or obligation in connection with any such conditions. However, to the best of its actual knowledge, without investigation, Seller represents as follows:

(a) Seller is the legal owner of the Property and the person signing this Agreement has the requisite authority to bind the Seller.

(b) The Seller has not received or been the subject of any notices of violations or potential liability, claims, requests for information, suits or any other administrative civil or criminal proceedings or investigations with respect to the Property under any applicable environmental laws.

(c) Seller has not received notice of any pending condemnation proceedings affecting the Property, and no condemnation proceedings have been threatened that would adversely affect the Property;

(d) There are no leases, tenancies, licenses or other claims or rights of occupancy or use for any portion of the Property;

(e) No portion of the Property is currently being used, or to the best of Seller's knowledge, has been used, for the disposal, storage, treatment processing or other handling of waste, contaminants, toxic substances or other hazardous substances as set forth in applicable federal and state law;

(f) Seller will not further sell, encumber, convey, assign, or contract to sell, convey, assign, pledge, encumber or lease all or any part of the Property, nor take or cause to be taken any action in conflict with this Agreement unless this Agreement is terminated pursuant to its terms;

(g) To the best of Seller's knowledge, the Property and all operations conducted thereon, are now and, to the best of Seller's knowledge, always have been in compliance with all federal, state, and local statutes, ordinances, regulations, rules, standards, and requirements of common law concerning or relating to industrial hygiene and the protection of health and the environment (collectively, "Environmental Laws"). Seller has not received notice that there are conditions on, about, beneath or arising from the Land which might give right to liability, the imposition of a statutory lien or require "Response," "Removal" or "Remedial Action," as defined herein, under any of the Environmental Laws. As used in this Agreement, the terms "Response," "Removal" and "Remedial Action" shall be defined with reference to Sections 101(23) - 101(25) of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), as amended by the Superfund Amendments and Reauthorization Act ("SARA"), 42 U.S.C. §§ 9601(23) - 9601(25).

(h) Neither the entering into of this Agreement, nor the consummation of the transaction contemplated hereby will constitute or result in a violation or breach by Seller of any judgment, order, writ, injunction or decree issued against or imposed upon Seller, will result in the violation of any law, order, rule or regulation of any governmental authority binding upon and applicable to Seller.

(i) Seller has no actual knowledge of any actual, pending or threatened suits, actions, arbitrations, claims or proceedings, at law or in equity, affecting the Premises. Seller has no actual knowledge of the existence of any material violation or alleged violation of any rule, regulation, ordinance, law or similar matter that applies to the Premises.

10. **Representations of Buyer**. Buyer hereby represents, warrants and covenants to Seller as follows:

(a) That the persons signing this Agreement have full power and authority to bind Buyer and this Agreement constitutes a fully authorized binding legal obligation upon the Buyer according to the terms set forth herein, and shall not violate any existing agreements to which Buyer is a party;

(b) That to the best of Buyer's knowledge, Buyer is financially capable of performing this Agreement and shall be financially capable on the Closing Date; and

(c) That all requisites of the Buyer concerning such authorization have been duly met, and that no other person needs to execute this Agreement in order for the same to be binding upon and enforceable against the Buyer.

(d) That Buyer has sufficient funds necessary to (a) seek the Approvals at its sole cost and expense and (b) fund the Purchase Price necessary to close this transaction in accordance with this Agreement.

11. **Possession.** Possession shall be given to Buyer at the time of Closing by delivery of a Special Warranty Deed and the Property shall be free and clear of all other rights of possession.

12. **Adjustments.** At Closing, Buyer and the Seller shall adjust for real estate taxes, school taxes and assessments on the Property, municipal water and sewer charges, and/or fuel, if any, such adjustments to be calculated as of 11:59 p.m. as of the day immediately preceding the closing date.

13. **Entry on Property/Inspection.** For all purposes permitted herein, at all reasonable times prior to Closing, Seller shall allow Buyer and its agents to enter upon the Property for the purposes of conducting inspections and surveys. Buyer shall provide Seller with 24 hours' notice of intent to enter on the Property. Buyer shall hold Seller harmless and shall indemnify and defend Seller against any and all claims, including costs, fees, expenses and reasonable attorneys' fees, for or in respect of injuries (including death) or damage of any kind to the person or property of Seller, Buyer, or of any other person whomsoever caused by or in connection with Buyer's entry onto the Property. As a condition precedent to Buyer's entry onto the Property, Buyer shall deliver to Seller a Certificate of Insurance evidencing general liability insurance coverage with limits not less than one million ($1,000,000.00) dollars per person and per occurrence identifying the Property as an insured premises and naming Seller as an insured party. Buyer agrees to restore property to prior condition at the conclusion of such inspections and surveys. In the event that Buyer terminates this Agreement during the Due Diligence Period pursuant to paragraph 3, Buyer shall have no entitlement to a return of the Deposit unless the Property has been restored as required by this paragraph. The indemnification of this paragraph shall survive closing or earlier termination of this Agreement.

14. **Default.** If the Seller materially breaches this Agreement before the Closing, the sole liability of the Seller shall be (and the remedies of the Buyer shall be limited to) either, at the option of the Buyer and as the Buyer's sole remedy, (A) the return by the Seller to the Buyer of the Deposit, together with any additional sums paid pursuant to this Agreement (in which case this Agreement shall be terminated, and neither party shall have any further liability to the other), except in the event the deposit money has become non-refundable as set forth above, or (B) a suit by the Buyer against the Seller for specific performance only. If the Buyer materially breaches this Agreement before the Closing, the Seller shall be entitled to retain, as liquidated damages and not as a penalty, the Deposit, if paid, (the parties hereby agreeing that the amount of actual damages that would be incurred by the Seller would be difficult of proof, and that the amount of the Deposit herein, is a reasonable estimate thereof), and this Agreement shall be terminated and neither party shall have any further liability to the other. Additionally, upon breach by Buyer and at no cost to the Seller, Buyer shall deliver to Seller copies of all documentation, studies, inspection results, drawings, and the like pertaining to Property and assign over to the Seller Buyer's rights thereto.

15. **Condemnation.** If a condemnation proceeding is instituted against the Property or any portion thereof prior to closing, Seller is required to deliver ten (10) days prior written notice of the condemnation proceeding to the Buyer at which time either party may terminate this Agreement on written notice to the other, whereupon the Seller and Escrow Agent shall return the Deposit, to the Buyer and neither party shall have any further liability to the other. If neither party terminates this Agreement by reason of the taking, at the Buyer's sole option, this Agreement shall continue to be effective and the Seller shall assign to the Buyer at Closing all of the Seller's right to receive any award for such condemnation as a result of such damage, together with all of the Seller's rights to litigate such claim and to negotiate a settlement with the condemning authority.

16. **Fire/Casualty.** If, during the term of this Agreement and prior to Closing, either the Property or any of the improvements located thereon is damaged by fire or other casualty ("Casualty Event"), Seller shall either, in Seller's sole discretion, (a) assign to Buyer all Seller's right, title, and interest in and to any insurance proceeds with respect to such Casualty Event, or (b) pay to Buyer any proceeds actually received by Seller with respect to such Casualty Event.

17. **Brokerage.** Seller and Buyer each represent to the other that no brokers have represented either Buyer or Seller in this transaction. In the event that any real estate broker or agent asserts a claim for a commission, fee or other compensation relating to this transaction, the party against whom it is asserted by such real estate broker or agent dealt shall indemnify and hold the other party harmless against any such commission, fee or compensation, and shall defend all actions seeking same.

18. **Expenses.** Seller and Buyer shall each pay one-half (1/2) of the Pennsylvania and local transfer taxes in connection with the conveyance of the Property. Each party shall bear all other fees, charges and expenses incurred by it, without contribution from the other, including their own attorney's fees.

19. **Notices.** All communications under this Agreement shall be in writing, and shall be deemed to be sufficiently given when presented personally (including by Federal Express or other recognized courier for which receipt is given) or two (2) days after having been mailed by certified mail, return receipt requested, to a party at the following addresses, or to such other address as such party may designate to the other party in writing, or by electronic transmission, including e-mail, with confirmation of receipt, and hard carbon copy by USPS first class mail addressed to the parties as follows:

To the Seller:
PACAZ REALTY, LLC
Gerald Simon, CFO
Carlyle Management Corporation
5355 Town Center Rd, Suite 430
Boca Raton, FL 33486

With Copy to:
Louis J. Carbone, Esq,
Law Offices of Louis J. Carbone, P.A.
Attorneys at Law
90 SE 4th Avenue, Suite 1
Delray Beach, Florida 33483
E-mail: Louis@Carbonelegal.com

To the Buyer:	Perkasie Place LLC ATTN: Kevin Meadows and Michael Tulio P.O. Box 538 Doylestown, PA 18901 meadows6767@yahoo.com and mike@rockmead.com
With a copy to:	Obermayer Rebmann Maxwell & Hippel, LLP ATTN: Nate Fox, Esq. 2003 S. Easton Road; Suite 304 Doylestown, PA 18901 nate.fox@obermayer.com

20. **No Survival.** Except as otherwise provided, none of the provisions of this Agreement shall survive the delivery of the deed.

21. **Further Assurances.** From time to time at the request of either the Seller or the Buyer (whether before, at or after Closing), the other party shall execute, acknowledge and deliver such other and further documents as the requesting party may reasonably request to better effectuate the provisions of this Agreement.

22. **Entire Agreement; Merger Clause.** This Agreement constitutes the entire agreement of the parties hereto with respect to the subject matter hereof, and supersedes all prior and contemporaneous representations, agreements and understandings, whether written or oral.

23. **"As-Is" Conveyance.** Buyer specifically acknowledges and agrees that Seller is selling and Buyer is purchasing the Property and all existing improvements on an "As-Is with all faults" basis and that Buyer is not relying on any representations or warranties of any kind whatsoever, express or implied, from Seller, any Seller related parties, or their agents or brokers, or any other person acting or purporting to act on behalf of Seller, as to any matters concerning the Property, except as expressly set forth above. In addition as part of the consideration for Buyer's acquisition of the Property from Seller, buyer shall, upon Closing, expressly assume all risk and liability, including the presence of toxic or hazardous substances or waste or other environmental contamination on or within or under the surface of the Property, whether known or unknown, apparent or non-apparent or latent, and whether existing prior to, at, or subsequent to, transfer of the Property, whether contractual, tortious and whether to a governmental agency, a private entity or otherwise, with respect to a past, current or future violation of the Property with any Environmental Laws. Notwithstanding anything to the contrary contained herein, Buyer shall assume no liability for any violation of Environmental Laws arising from or caused by occupants on the Retained Lands, whether occurring before or after Closing.

24. **Assignment.** Buyer shall have the right to assign this Agreement to another entity for purposes of completing Closing with the written approval of Seller, which approval shall not be unreasonably withheld, conditioned, or delayed. However, no such Assignment shall relieve Buyer of its obligations under this Agreement. In addition, in the event that such Assignment results in the imposition of additional transfer tax by the Pennsylvania Department of Revenue, Buyer shall be responsible for such additional transfer tax, it being understood that at no time shall Seller be required to pay transfer tax related to any assignment. Buyer agrees to indemnify and hold Seller harmless from

any and all responsibility for additional transfer tax resulting from such Assignment. Notwithstanding anything to the contrary contained herein, in the event Buyer assigns this Agreement to a single purpose entity controlled by Buyer, the parties expressly acknowledge and agree that Buyer is entering into this Agreement for the benefit of a to-be-formed nominee (the "Nominee") that will be formed and disclosed to Seller prior to Closing. The Buyer named herein has no intent to obtain legal or equitable title to the Premises in its own name. Upon formation of the Nominee, the Buyer shall have the right to assign this Agreement to the Nominee, and such assignment shall repudiate and terminate Buyer's duties and obligations hereunder and shall result in a novation on the part of the Nominee to the duties and obligations of Buyer hereunder. Following such assignment, all references herein to "Buyer" shall be deemed to be to the Nominee. Upon request of the Buyer and/or the Nominee, Seller shall agree to terminate this Agreement and enter into a new agreement with the Nominee on the same terms and conditions as are set forth herein, except that the time periods set forth in this Agreement shall be adjusted to take into consideration the period of time that elapsed between the date of this Agreement and the date of the new agreement with the Nominee, and the deposits made under this Agreement shall remain in escrow. Until the assignment of this Agreement to a Nominee or the termination of this Agreement, the Buyer shall have the full legal right to enforce the terms of this Agreement. Buyer shall be solely responsible for the payment of any and all transfer taxes that may be imposed in connection with any such assignment and shall defend, indemnify and hold Seller harmless from and against any and all costs, liabilities, claims and expenses in connection therewith. Buyer's indemnification obligation shall survive Closing.

25. **Miscellaneous.**

(a) No provision of this Agreement may be changed or waived orally, but only by an instrument in writing signed by the party to be charged therewith.

(b) This Agreement shall be construed and enforced in accordance with the internal laws of Pennsylvania without giving effect to the principles of conflicts of law.

(c) This Agreement may be executed in two or more counterparts, each of which shall be deemed to be an original, but all of which taken together shall constitute the same Agreement.

(d) As used herein, the term "including" shall be deemed to mean "including without limitation".

(e) This Agreement shall not be considered in force, binding or in effect in any manner or to any extent until and unless duly executed and delivered by Buyer and Seller. Seller at all times prior to such execution and delivery by Buyer and Seller (and at all times subsequent to any default or breach by Buyer), shall be free to negotiate for the sale of the Property to any other prospective Buyer or for any other disposition of any interest in the Property without prior notice to Buyer.

(f) No person or entity other than a party to this Agreement or a legal representative, successor in interest or permitted assign of a party hereto shall be entitled to rely on this Agreement or the performance of Buyer or Seller hereunder, and this Agreement is not made for the benefit of any person or entity not a party hereto and no such person or entity shall be entitled to assert a claim arising out of or in connection with this Agreement.

(g) This Agreement contains the entire agreement between the parties with referenced to this transaction and it is agreed that any and all prior contemporaneous oral or written agreements or representations as to the Property and/or the sale, except as specifically herein set forth, are void.

(h) This Agreement shall extend to, and be binding upon, the parties hereto, their respective heirs, executors, administrators, successors and assigns.

[THIS SPACE INTENTIONALLY BLANK. SIGNATURE PAGE FOLLOWS.]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the day and year first above written, to be legally effective as of the date signature pages are delivered to each party by their respective counsel.

SELLER:

PACAZ REALTY, LLC
a Pennsylvania limited liability company

Sign: _____

Date: _____

BUYER:

PERKASIE PLACE, LLC, a Pennsylvania limited liability company

By: _____
Name: Kevin Meadows
Title: Authorized Signatory

ESCROW AGENT:

LAND SERVICES USA, INC.

By: _____
Name:
Title:

EXHIBIT "A-1"

Legal Description

LEGAL DESCRIPTION

ALL THAT CERTAIN tract or parcel of ground situate in Perkasie Borough and partly in Sellersville Borough, Bucks County, Pennsylvania, being shown on an ALTA/ACSM Land Title Survey prepared by Nave Newell, Inc., dated October 10, 2015, described as follows:

BEGINNING at a point in the Southeast line of Constitution Avenue, S.R. 0152 (56.50 feet wide, as widened to 40.00 feet along the Southeast side thereof), said point also being located the following two (2) courses from the point marking the intersection of the centerline of Constitution Avenue with the centerline of Spruce Street (33.00 feet wide): (1) as measured along the title line of Constitution Avenue in a Southwesterly direction 836 feet, more or less, to a point; (2) crossing the bed of Constitution Avenue, South 52° 39' 46" East, 40.00 feet to an iron pin found; thence, from said beginning point the following nine (9) courses and distances:

1. South 52° 39' 46" East, a distance of 966.50 feet to a concrete monument found; thence,
2. South 31° 37' 51" West, a distance of 317.85 feet to a concrete monument found; thence,
3. North 56° 55' 34" West, a distance of 235.60 feet to an iron pin found; thence,
4. South 38° 23' 55" West, a distance of 816.15 feet to a concrete monument found; thence,
5. North 51° 49' 44" West, a distance of 815.81 feet to a point of curvature being monumented by an iron pin found in the aforesaid Southeast line of Constitution Avenue; thence along said line,
6. Along a curve to the left having a radius of 5,689.87 feet and a central angle of 00 degrees 40' 16", an arc distance 66.65 feet, said arc subtended by a chord bearing North 42 degrees 30' 50" East a distance of 66.65 feet to a point of tangency being monumented by a concrete monument found; thence,
7. North 42° 10' 42" East, a distance of 571.55 feet to a point of curvature being monumented by a Mag nail set; thence,
8. Along a curve to the left having a radius of 2,904.79 feet and a central angle of 04 degrees 11' 59", an arc distance of 212.92 feet, said arc subtended by a chord bearing North 40 degrees 04' 43" East, a distance of 212.87 feet, to a point of tangency being monumented by a rebar set; thence,
9. North 37° 58' 43" East, a distance of 289.43 feet to the point and place of beginning.

CONTAINING 966,286 square feet or 22.1829 acres of land, more or less.

BEING known as 505 Constitution Avenue.

BEING Tax Parcel #33-9-1.

TOGETHER with an easement for storm drainage over lands now or formerly of John and Teresa Mains being part of Bucks County Uniform Parcel Identifier Tax Parcel No. 39-6-27, dated 8/19/1992 and recorded 4/28/1993 in Deed Book 656 page 1750, and also together with easement contained in Grant of Easement between Sellersville Borough and Berger-Epstein Associates, Inc., dated 1/11/1993 and recorded 4/28/1993 in Deed Book 656 page 1760.

BEING the same premises which Berger-Epstein Associates, a Pennsylvania corporation, Jeffry A. Epstein and William M. Berger, Co-Partners by Deed dated 5/16/2006 and recorded 6/5/2006 in the County of Bucks in Land Record Book 4971 page 1211, conveyed unto PACAZ Realty, LLC, a Pennsylvania limited liability company, in fee.

EXHIBIT "A-2"

Property Legal Description

SURVEYOR'S LAND DESCRIPTION - LOT 2

ALL THAT CERTAIN TRACT OR PARCEL OF GROUND SITUATE IN PERKASIE BOROUGH AND PARTLY IN SELLERSVILLE BOROUGH, BUCKS COUNTY, PENNSYLVANIA, BEING LOT 2 AS SHOWN ON A PLAN PREPARED BY NAVE NEWELL, INC., ENTITLED "LOT LINE ADJUSTMENT, MINOR SUBDIVISION PLAN", DATED NOVEMBER 5, 2015, BEGINNING AT A POINT IN THE SOUTHEAST LINE OF CONSTITUTION AVENUE, S.R. 0152 (56.50 FEET WIDE, AS WIDENED TO 40.00 FEET ALONG THE SOUTHEAST SIDE THEREOF AS PER DEED FOUND IN DEED BOOK 4971, PAGE 1211), SAID POINT ALSO BEING LOCATED THE FOLLOWING SIX (6) COURSES FROM THE POINT MARKING THE INTERSECTION OF THE CENTERLINE OF CONSTITUTION AVENUE WITH THE CENTERLINE OF SPRUCE STREET (33.00 FEET WIDE): (1) AS MEASURED ALONG THE TITLE LINE OF CONSTITUTION AVENUE IN A SOUTHWESTERLY DIRECTION 836 FEET, MORE OR LESS, TO A POINT; (2) CROSSING THE BED OF CONSTITUTION AVENUE, SOUTH 52°39' 46"EAST, A DISTANCE OF 40.00 FEET TO AN IRON PIN FOUND, (3)SOUTH 37°58' 43"WEST, A DISTANCE OF 289.43 FEET TO A POINT OF CURVATURE BEING MONUMENTED BY AN IRON PIN SET, (4) ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 2,904.79 FEET AND A CENTRAL ANGLE OF 04°11' 59", AN ARC DISTANCE OF 212.92 FEET, SAID ARC SUBTENDED BY A CHORD BEARING SOUTH 40°04' 43"WEST, A DISTANCE OF 212.87 FEET, TO A POINT OF TANGENCY BEING MONUMENTED BY A MAG NAIL SET, (5) SOUTH 42°10' 42"WEST, A DISTANCE OF 571.55 FEET TO A POINT OF CURVATURE BEING MONUMENTED BY A CONCRETE MONUMENT FOUND, (6) ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 5,68987 FEET AND A CENTRAL ANGLE OF 00°40' 16", AN ARC DISTANCE OF 66.65 FEET, SAID ARC SUBTENDED BY A CHORD BEARING SOUTH 42°30' 50"WEST, A DISTANCE OF 66.65 FEET, TO A CONCRETE MONUMENT FOUND BEING THE POINT AND PLACE OF BEGINNING; THENCE, FROM SAID BEGINNING POINT THE FOLLOWING SEVEN (7) COURSES AND DISTANCES:

1. ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 5,68987 FEET AND A CENTRAL ANGLE OF 00°40' 16", AN ARC DISTANCE OF 66.65 FEET, SAID ARC SUBTENDED BY A CHORD BEARING NORTH 42°30' 50"EAST, A DISTANCE OF 66.65 FEET, TO A POINT OF TANGENCY BEING MONUMENTED BY A CONCRETE MONUMENT FOUND; THENCE,
2. NORTH 42°10' 42"EAST, A DISTANCE OF 233.46 FEET TO A POINT; THENCE,
3. SOUTH 51°49' 44"EAST, A DISTANCE OF 170.34 FEET TO A POINT; THENCE
4. SOUTH 83°58' 05"EAST, A DISTANCE OF 453.25 FEET TO A POINT; THENCE,
5. SOUTH 51°52' 39"EAST, A DISTANCE OF 242.46 FEET TO A POINT; THENCE,
6. SOUTH 38°23' 55"WEST, A DISTANCE OF 540.67 FEET TO A CONCRETE MONUMENT FOUND; THENCE,
7. NORTH 51°49' 44"WEST, A DISTANCE OF 815.81 FEET TO THE POINT OF AND PLACE OF BEGINNING.

CONTAINING 345780 SQUARE FEET OR 7.9380 ACRES OF LAND.

TOGETHER WITH AN EASEMENT FOR STORM DRAINAGE OVER LANDS NOW OR FORMERLY OF JOHN AND TERESA MAINS BEING PART OF BUCKS COUNTY UNIFORM PARCEL IDENTIFIER TAX PARCEL NO. 39-6-27, DATED 8/19/1992 AND RECORDED 4/28/1993 IN DEED BOOK 656 PAGE 1750, AND ALSO TOGETHER WITH EASEMENT CONTAINED IN GRANT OF EASEMENT BETWEEN SELLERSVILLE BOROUGH AND BERGER-EPSTEIN ASSOCIATES, INC., DATED 1/11/1993 AND RECORDED 4/28/1993 IN DEED BOOK 656 PAGE 1760.

EXHIBIT "A-3"

SURVEY

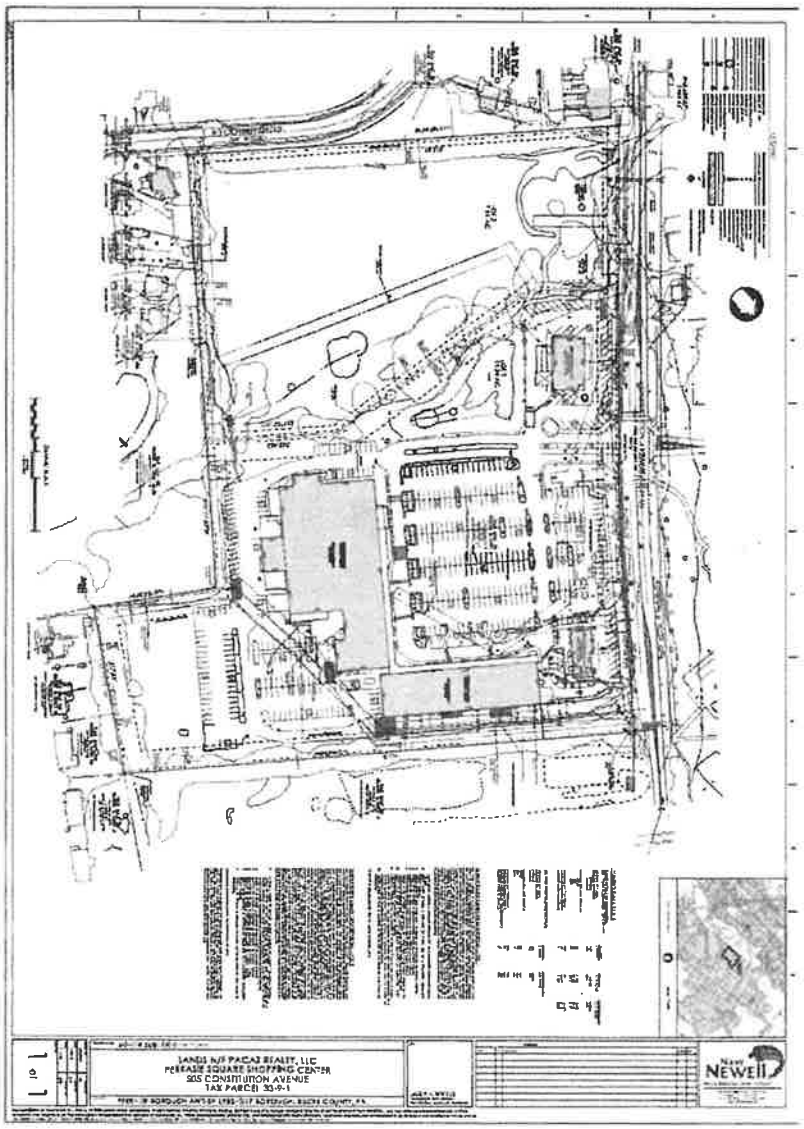


EXHIBIT "B"

Permitted Exceptions

Rights granted to Bell Telephone Company in Land Record Book 43 page 1709.

Rights granted to Bell Atlantic-Pennsylvania Inc. as in Land Record Books 746 page 1682 and 950 page 1365.

Rights of the public and others entitled thereto in and to the use of that portion of the premises within the bounds of Constitution Avenue.

Grant of Easement as in Land Record Book 177 page 1147 and Deed Book 742 page 116.

Covenants contained in: Grant of Easement John Mains and Teresa Mains and Berger/Epstein Associates, Inc. dated 8/19/1992 and recorded 4/28/1993 in Land Record Book 656 page 1750 .

Covenants contained in Grant of Easement between Sellersville Borough and Berger-Epstein Associates, Inc., dated 1/11/1993 and recorded 4/28/1993 in Land Record Book 656 page 1760 .

Conditions disclosed by survey made by Edward S. McConnell Associates dated March 19, 1993:- (a) Building set- back lines (b) Portion of premises within Wetlands boundary lines as verified by Army Corp. of Engineers on Oct. 29, 1992, reference CENAP-OP-R-87-0170-43 (JD). Remains valid until August 14, 1997 (c) New Right-of-Way Line of Constitution Avenue.

Land Development Agreement as in Land Record Book 672 page 843 .

Estoppel Certificate as in Land Record Book 686 page 1652 .

Provisions of Acts of Assembly authorizing PennDot to extend boundaries of State Roads (SR #0152).

Memorandum of Lease to Fleming Foods East, Inc., as in Land Record Book 672 page 830.

Short Form Lease to Thrift Drugs, Inc. as in Land Record Books 672 page 836, 862 page 321 and 1033 page 2305.

Grant of Easement to Borough of Perkasie as in Land Record Book 1041 page 1037.

Deed of Easement, Right of Way Grant to the Perkasie Borough Authority as in Land Record Book 1049 page 761.

Deed of Dedication to Borough of Perkasie as in Land Record Book 1056 page 761 .

Term Agreement with Thrift Drug, Inc. as in Land Record Book 1073 page 839.

Land Development Agreement by and between Borough of Perkasie and McDonald's Corporation as in Land Record Book 1956 page 662 .

Notes, conditions, setback lines, easements, reservations, covenants and restrictions as shown and set forth in Plan Book 298 page 71 and Instrument# 2023009809.

Memorandum of Lease to McDonald's Corporation as in Land Record Book 2047 page 1719.

Supplement to Lease as in Land Record Book 2178 page 1615; Amended and Restated Memorandum of Lease as Instrument No. 2024024193.

Notice of Covenant not to Compete as in Land Record Book 2047 page 1730.

Deed of Easement, Right of Way Grant as in Land Record Books 2051 page 1966 and 2051 page 1976.

Temporary Construction Easement Agreement as in Instrument# 2015062639 .

Land Development Agreement as in Instrument# 2023009810.

Stormwater Controls and Best Management Practices Operations and Maintenance Agreement as in Instrument #2023033894 . Plan Exhibit thereto in Instrument# 2023033895 .

NOTICE

PLEASE TAKE NOTICE that Perkasie Plance LLC, ("Applicant") has filed an application together with supporting materials ("Application") with the Borough of Perkasie for review and approval of a Formal Sketch Plan to subdivide an existing parcel consisting of 22.198 acres into two lots and develop residential apartment budlings comprising of five buildings containing of 75 units on proposed lot 2 located at 503-545 Constitution Avenue and designated as a portion of Tax Parcel No. 33-009-001.

PLEASE TAKE NOTICE that public meetings will be held to consider the Application and that the dates of the meetings where the Application will be considered can be obtained by contacting the Borough of Perkasie located at 620 W. Chestnut Street, Perkasie, PA 18944 or by phone at 215-257-5065 between the hours of 8:00 AM and 4:00 PM, Monday to Friday.

David M. Shafkowitz, Esq.
350 S. Main Street, Suite 308
Doylestown, PA 18901
(267) 422-3340

I, David M. Shafkowitz, hereby certify that first-class mail notice has been provided to the following owner(s) of record of abutting property:

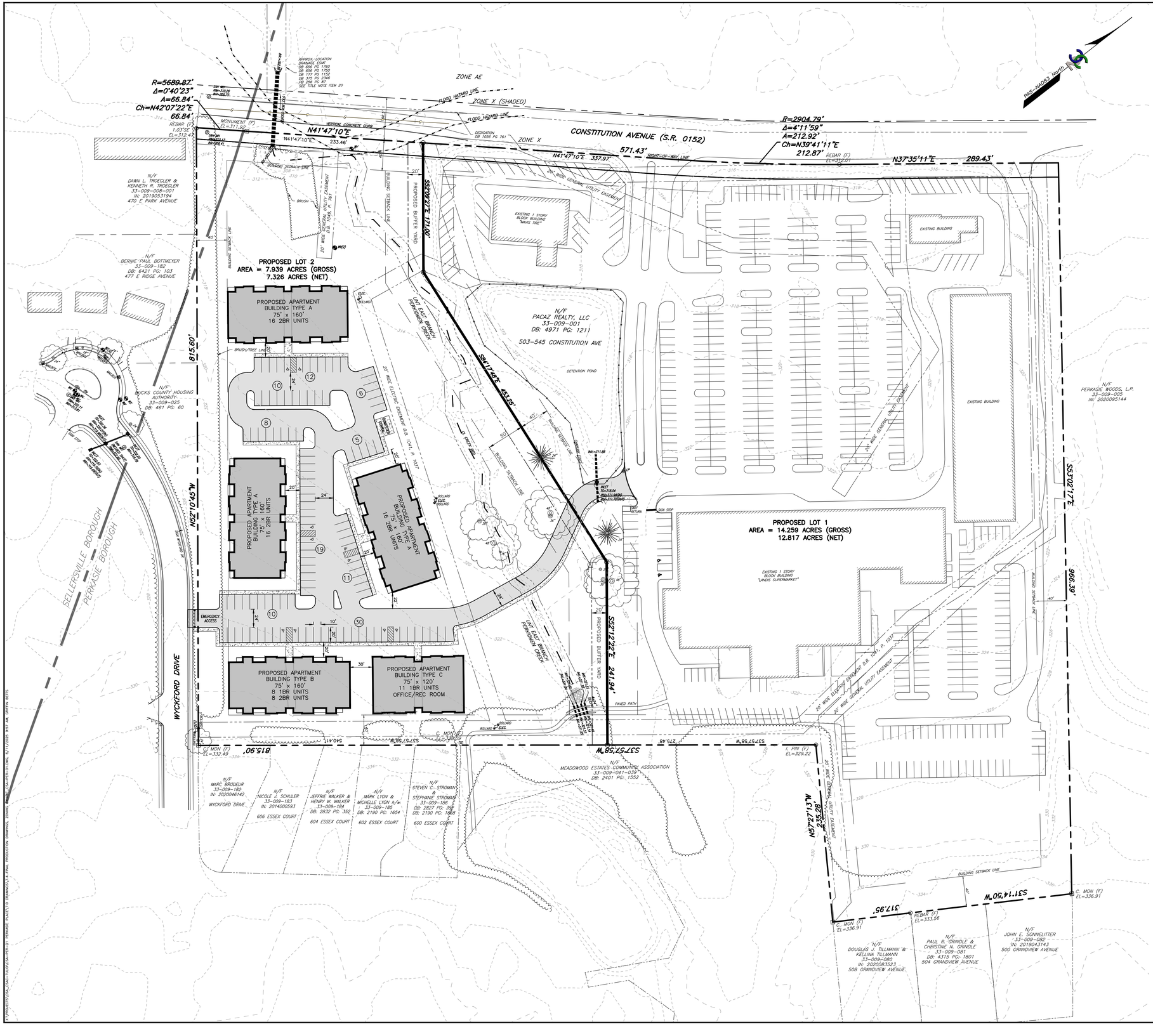
PARCEL NUM	ADDRESS	MUNICIPALITY	OWNER1	OWNER2	C/O - Mailing Address
39-009-025	E RIDGE AVE	Sellersville Borough	BUCKS CO HOUSING AUTH		25 E State St, Doylestown, PA 18901
39-009-015	101 E RIDGE AVE	Sellersville Borough	BUCKS CO HOUSING AUTH		25 E State St, Doylestown, PA 18901
39-009-009	477 E RIDGE AVE	Sellersville Borough	BOTTMEYER, BERNIE PAUL		
39-009-008-001	470 E PARK AVE	Sellersville Borough	TROEGLER, DAWN L & KENNETH R		
39-006-027	475 E PARK AVE	Sellersville Borough	MAINS, JOHN & TERESA		
33-009-186	600 ESSEX CT	Perkasie Borough	STROMAN, STEVEN C & STEPHANIE		
33-009-185	602 ESSEX CT	Perkasie Borough	LYON, MARK & MICHELLE		
33-009-184	604 ESSEX CT	Perkasie Borough	WALKER, JEFFRIE & HENRY W, JR		
33-009-183	606 ESSEX CT	Perkasie Borough	SCHULER, NICOLE J	PRZYCHOWICZ, MATTHEW L	
33-009-182	199 WYCKFORD DR	Perkasie Borough	BRODEUR, MARC & MELANIE		
33-009-181	198 WYCKFORD DR	Perkasie Borough	SHORT, JEFFERY P & SHANNON M		
33-009-082	500 GRANDVIEW AVE	Perkasie Borough	SONNELITTER, JOHN E		
33-009-081	504 GRANDVIEW AVE	Perkasie Borough	GRINDLE, PAUL R & CHRISTINE N		
33-009-080	508 GRANDVIEW AVE	Perkasie Borough	TILLMANN, DOUGLAS J & KELLINA		
33-009-041-039	ESSEX CT	Perkasie Borough	MEADOWOOD ESTATES COMM ASSN		975 Easton Rd, Suite 102, Warrington, PA 18976
33-009-008	424 GRANDVIEW AVE	Perkasie Borough	GETTY, MARK C & ALICIA L		
33-009-005-145	ARBOR BLVD	Perkasie Borough	PERKASIE WOODS		400 Campus Dr, Suite 101, Collegeville, PA 19426
33-009-005-144	400 ARBOR BLVD	Perkasie Borough	ROMANO, KATHERINE ANN		
33-009-005-143	402 ARBOR BLVD	Perkasie Borough	AA ASSOCIATES, LLC		3007 Tyler Way, Chalfont, PA 18914
33-009-005-142	404 ARBOR BLVD	Perkasie Borough	PRICE, RALPH		
33-009-005-141	406 ARBOR BLVD	Perkasie Borough	GARDNER, NATHANIEL DOMINIC	HINTON, NASHERRA MALIKA NICOLE	
33-009-005-140	408 ARBOR BLVD	Perkasie Borough	BOOTH, HAROLD HERBERT		
33-009-005-139	410 ARBOR BLVD	Perkasie Borough	BROWNE, CAROLE		
33-009-005-138	412 ARBOR BLVD	Perkasie Borough	PADMANABHUNI, SUBBARAJA	SIRAGAVARAPU, RAGHAVENDRA	3007 Tyler Way, Chalfont, PA 18914

33-009-005-137	414 ARBOR BLVD	Perkasie Borough	CROUSE, ROBERT		
33-009-005-136	416 ARBOR BLVD	Perkasie Borough	HATZENBELLER, MARILYN T		
33-009-005-135	418 ARBOR BLVD	Perkasie Borough	ANDERSON, PETER J		
33-009-005-134	420 ARBOR BLVD	Perkasie Borough	MANNO, CHRISTOPHER DANIEL	WOLFE, SARAH ELIZA	
33-009-005-130	428 ARBOR BLVD	Perkasie Borough	WOLFE, BRUCE L	MENDIETA, JULIA A	1071 Deer Run Rd, Ottsville, PA 18942
33-009-005-129	430 ARBOR BLVD	Perkasie Borough	MAURER, JAMES		
33-009-005-128	432 ARBOR BLVD	Perkasie Borough	WAXMAN, JORDAN N & COURTNEY L		
33-009-005-127	434 ARBOR BLVD	Perkasie Borough	FUNCHESS, ELLIS IV		
33-009-005-126	436 ARBOR BLVD	Perkasie Borough	FRANKENFIELD, STEPHANIE R	MEADE, SHANE	
33-009-005-125	438 ARBOR BLVD	Perkasie Borough	POINTEKAS, MICHAEL G	FELIX, RAQUEL BARRION	
33-009-005-124	440 ARBOR BLVD	Perkasie Borough	MCILLMURRAY, ERIC W	MULDOWNEY, JAMES M & SUSAN	
33-009-005-123	442 ARBOR BLVD	Perkasie Borough	NJINI, MIRABELLE	KOUBOU, RICHARD	
33-009-005-122	444 ARBOR BLVD	Perkasie Borough	DARAJI, KEVIN A		
33-009-005-121	446 ARBOR BLVD	Perkasie Borough	FAIX, CHRISTOPHER		
33-009-005-120	448 ARBOR BLVD	Perkasie Borough	MARCOLINI, SUSAN	DONOVAN, REBECCA	
33-009-005-119	450 ARBOR BLVD	Perkasie Borough	CAPECI, PD SR & JANINE		
33-009-005-118	452 ARBOR BLVD	Perkasie Borough	SUTCLIFFE, TIFFANY	BROCKINGTON, SEAN	
33-009-005-117	454 ARBOR BLVD	Perkasie Borough	MANCINO, ANTHONY		
33-009-005	499 CONSTITUTION AVE	Perkasie Borough	PERKASIE WOODS		400 Campus Dr, Collegeville, PA 19426
33-009-001	505 CONSTITUTION AVE	Perkasie Borough	PACAZ RTY L L C		5355 Town Center Rd, Suite 430, Boca Raton, FL 33486
33-004-096	620 CONSTITUTION AVE	Perkasie Borough	BROWN, KATHLEEN		
33-004-095	CONSTITUTION AVE	Perkasie Borough	PERKASIE BORO		620 W Chestnut St, PO Box 96, Perkasie, Pa 18944
33-004-092	425 ARTHUR AVE	Perkasie Borough	PERKASIE BORO		620 W Chestnut St, PO Box 96, Perkasie, Pa 18944
33-009-005-131	426 ARBOR BLVD	Perkasie Borough	BRILL, SHARON A		
33-009-005-132	424 ARBOR BLVD	Perkasie Borough	LANE, SUSAN		
33-009-005-133	422 ARBOR BLVD	Perkasie Borough	SISCOE, RON G		

The above are all of the owners of record of properties abutting the property that is the subject of this application. I verify that the statements made herein are true and correct. I understand that false statements herein are made subject to the penalties of 18 Pa.C.S.A. § 4904 relating to unsworn falsification to authorities.

Dated: August 8, 2025

David M. Shafkowitz, Esq.
350 S. Main Street, Suite 308
Doylestown, PA 18901



GRAPHIC SCALE

60 0 30 60 120

(IN FEET)
1 INCH = 60 FT.

LOCATION MAP

NOTES

1. OWNER
PACAZ REALTY, LLC

2. PLAN INTENT
SUBDIVIDE EXISTING 22.198 ACRE PARCEL INTO 2 LOTS AND DEVELOP PROPOSED LOT 2 FOR RESIDENTIAL APARTMENT BUILDINGS. (5 BUILDINGS; 19 1-BEDROOM UNITS; 56 2-BEDROOM UNITS)

3. UTILITIES
PROPOSED DEVELOPMENT TO BE SERVED BY PUBLIC WATER AND PUBLIC SEWER.

4. WETLANDS
THERE ARE NO KNOWN WETLANDS LOCATED WITHIN THE PROJECT SITE. THIS IS BASED ON AN AQUATIC RESOURCE INVESTIGATION PERFORMED BY NOVA CONSULTANTS LTD, CONDUCTED ON FEBRUARY 9, 2025

LOT NET AREA CALCULATIONS

PROPOSED LOT 1	
GROSS AREA	14.259 ACRES
– ULTIMATE R/W	0.373 ACRES
– UTILITY EASEMENT	1.061 ACRES
– STREAM EASEMENT	0.008 ACRES
NET AREA	12.817 ACRES
PROPOSED LOT 2	
GROSS AREA	7.939 ACRES
– ULTIMATE R/W	0.106 ACRES
– UTILITY EASEMENT	0.097 ACRES
– STREAM EASEMENT	0.410 ACRES
NET AREA	7.326 ACRES

BOROUGH OF PERKASIE
I-2 LIGHT INDUSTRIAL DISTRICT

	REQUIRED	LOT 1	LOT 2
MINIMUM LOT AREA	2 ACRES	14.26 ACRES	7.94 ACRES
MINIMUM LOT WIDTH	100 FEET	8400 FEET	±200 FEET
MINIMUM YARDS			
FRONT	40 FEET	40 FEET	40 FEET
SIDE (EACH)	40 FEET	40 FEET	40 FEET
REAR	40 FEET	40 FEET	50 FEET
MAX. LOT COVERAGE	25%	66.5%	34.5%
MAX. BLDG HEIGHT	40 FEET	N/A	<35 FEET

BOROUGH OF PERKASIE
A- APARTMENT DISTRICT

	REQUIRED	PROPOSED
MINIMUM LOT AREA	2 ACRES	7.94 ACRES
MIN. LOT AREA PER D.U.	3,630 S.F.	4,551 S.F.
MINIMUM LOT WIDTH	200 FEET	>200 FEET
MINIMUM YARDS		
FRONT	40 FEET	40 FEET
SIDE (EACH)	40 FEET	40 FEET
REAR	50 FEET	50 FEET
MAX. LOT COVERAGE	20%	34.5%
MAX. BLDG HEIGHT	35 FEET	<35 FEET

PARKING REQUIREMENTS
19 1-BR UNITS PROPOSED (1 SPACE REQUIRED)
56 2-BR UNITS PROPOSED (1.5 SPACES REQUIRED)

(19x1) + (56x1.5) = 103 SPACES REQUIRED

111 SPACES PROVIDED

REQUESTED VARIANCES FROM THE PERKASIE BOROUGH ZONING ORDINANCE OF 2012

SECTION 186-20.I.(1) – USE VARIANCE TO ALLOW THE PROPOSED B(5) MULTIFAMILY DWELLING USE IN THE I-2 LIGHT INDUSTRIAL DISTRICT

SECTION 186-18.B(5)(A)[1} – TO ALLOW THE MINIMUM HORIZONTAL DISTANCE BETWEEN FACING WALLS BE LESS THAN 50 FEET.

REV. NO.	DATE	DESCRIPTION	BY

DESIGN GROUP
Civil Engineering and Surveying Solutions from Concept to Construction

PLAN TITLE:
ZONING EXHIBIT

C2C DESIGN GROUP
37 East Penn Avenue
Wernersville, PA 19565
610.860.6050 www.c2cdg.com

PROJECT NAME:
PERKASIE PLACE

PERKASIE/SELLERSVILLE BOR. BUCKS COUNTY, PENNSYLVANIA

PROJECT #:	CSA-PER-01
SCALE:	1"=60'
DRAWN BY:	CAD
CHECKED BY:	
DATE:	2/27/2025
DWG. NO.:	1 OF 1
SHEET NO.:	ZE-1

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

☐ 3850 Sierra Circle, Suite 100 | **Center Valley**, PA 18034 | P: 610.366.8064 | F: 610.366.0433
☐ 12 Terry Drive, Suite 205 | **Newtown**, PA 18940 | P: 215.369.3955 | F: 610.968.1829
☒ 65 E. Butler Avenue, Suite 100 | **New Britain**, PA 18901 | P: 215.345.4330 | F: 215.948.9943
☐ 401 Plymouth Road, Suite 150 | **Plymouth Meeting**, PA 19462 | P: 610.489.4949 | F: 610.489.8447
☐ One Penn Center at Suburban Station, 1617 JFK Blvd., Suite 425 | **Philadelphia**, PA 19103 | P: 215.687.4246 | F: 215.564.1780

MEMORANDUM

Date:	August 4, 2025
To:	Doug Rossino, P.E.
From:	Leslie Bodnoff, P.E.
cc:	Kristin Norwood, P.E.
Reference:	505 Constitution Avenue - Perkasie Place Traffic Study Review 1 Perkasie Borough, Bucks County G&A 24-00991

Gilmore and Associates, Inc. has completed a review for the Traffic Impact Assessment associated with the above referenced project. The Applicant is proposing to construct five (5) apartment buildings with a total of 76 units. Access to the site is proposed to be provided via the existing Perkasie Square Shopping Center along Constitution Avenue.

We offer the following comments for your consideration:

A. Reviewed Documents

1. Traffic Impact Assessment for Perkasie Place, prepared by Horner & Canter Associates, dated July 9, 2025.

B. Traffic Impact Assessment Comments

1. Include the site plan for the proposed development in the revised traffic study. The plan should include internal roadway connections to the existing shopping plaza with site signage and pavement markings, as well as proposed pedestrian facilities as noted below.
2. We recommend pedestrian access be provided connecting to the Dog Park and Lenape Park, opposite the Perkasie Square Shopping Center.
3. We recommend providing upgraded pedestrian equipment, such as push buttons, pedestrian signal heads and high-visibility crosswalks, at the intersection of Constitution Avenue and Perkasie Place Shopping Center, given its close proximity to the shopping center, nearby residential areas, and the park.
4. The distribution of site trips onto Constitution Avenue does not appear to be consistent with the existing traffic volumes. Verify and revise the report accordingly.
5. Any existing individual movements with a level of service below C shall be noted as deficient within the study (per §164-41.2E(3)(c)). Recommendations for the elimination of the deficiencies shall be listed.

6. The following queues extend beyond the available storage and mitigation of these queues should be evaluated. The queues within the Perkasie Square shopping center block the internal intersection and should be addressed. At a minimum, the traffic signal timings should be optimized for the Build conditions.
    a. Constitution Avenue and Perkasie Square Shopping Center:
        i. Westbound left
        ii. Westbound right
    b. Constitution Avenue and Walnut Street
        i. Northbound left

TRAFFIC IMPACT ASSESSMENT

PERKASIE PLACE
RESIDENTIAL DEVELOPMENT

Perkasie/Sellersville Boroughs, Bucks County

Pennsylvania

July 9, 2025

HCA

Horner & Canter Associates A Professional Corporation

TRANSPORTATION AND TRAFFIC ENGINEERING

TRAFFIC IMPACT ASSESSMENT

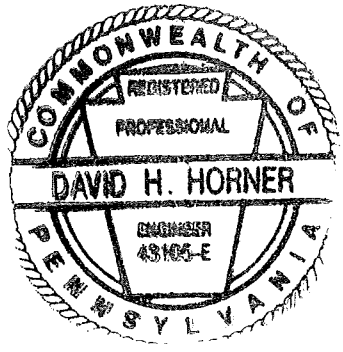
PERKASIE PLACE
RESIDENTIAL DEVELOPMENT

Constitution Avenue (SR 0152)

Perkasie/Sellersville Boroughs
Bucks County
Pennsylvania

Prepared by:

HORNER & CANTER ASSOCIATES
A Professional Corporation
Transportation and Traffic Engineering
4950 York Road, Suite 2G
P.O. Box 301
Holicong, Pennsylvania 18928



July 9, 2025

David H. Horner, P.E., PTOE
Professional Engineer
PA Lic. No. PE-043105-E

File No. 25-038

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APPENDIX F - No-Build Capacity/LOS Analysis Worksheets
APPENDIX G - Build Capacity/LOS Analysis Worksheets

INTRODUCTION

Horner & Canter Associates has prepared this Traffic Impact Assessment for the proposed Perkasie Place residential development located on the east side of Constitution Avenue (SR 0152) in Perkasie and Sellersville Boroughs, Bucks County, Pennsylvania, (Figure 1). The proposed residential development will consist of 76 apartment units with access provided via the existing Perkasie Square shopping center, which accesses Constitution Avenue at a signalized intersection.

For the purpose of this Traffic Impact Assessment, the completion and occupancy date of the proposed residential development is assumed to be 2028.

Scope of Study

The purpose of this Traffic Impact Assessment is to determine the traffic impact the proposed residential development will have with respect to the conditions on the adjacent roadways and intersections. The study scope includes the following:

- A site inspection and inventory of existing roadway features such as geometric layout, lane configurations, traffic control devices, and other pertinent physical characteristics.

- Conduct of Manual Turning Movement (MTM) counts for the weekday AM (7:00 AM - 9:00 AM), weekday PM (4:00 PM - 6:00 PM), and Saturday midday (11:00 AM – 1:00 PM) peak periods at the following intersections which constitute the study area:

    - Constitution Avenue (SR 0152)/Perkasie Square Access/Lenape Park Access
    - Constitution Avenue (SR 0152)/Walnut Street (SR 0152)

- Projection of development-generated traffic volumes and distribution of this traffic to the study area roadway network.

- Comparison of the development-generated traffic with a potential by-right retail build-out of the site.

- Analysis of existing, future No-Build (without development) and future Build (with development) traffic conditions at the study area intersections.
- Formulation of conclusions with regard to the traffic impact of the proposed development on traffic conditions in the study area.

EXISTING CONDITIONS

The study area roadway network was inventoried with regard to the existing physical and operating characteristics as they affect traffic flow. The study area roadway network is described in further detail below.

The site fronts on **Constitution Avenue**, a State roadway carrying the SR 0152 designation in a general north/south direction. In the vicinity of the site, Constitution Avenue provides one through travel lane in each direction with separate left-turn and/or right-turn lanes at various intersections. The posted speed limit on Constitution Avenue is 35 miles per hour.

Walnut Street carries the State roadway SR 0152 designation eastward from its intersection with Constitution Avenue. It is a local roadway west of its intersection with Constitution Avenue. Walnut Street provides one through travel lane in each direction with a posted speed limit of 35 miles per hour east of Constitution Avenue and 25 miles per hour west of Constitution Avenue.

The study area intersections of Constitution Avenue (SR 0152)/Perkasie Square Access/Lenape Park Access and Constitution Avenue (SR 0152)/Walnut Street (SR 0152) are both signalized. A reduced-size copy of the Traffic Signal Permit Plans for both intersections are provided for reference in Appendix A.

Existing Traffic Volumes

Since the peak hour traffic conditions reflect the critical periods for evaluation of operating conditions and traffic impact, existing traffic volumes were acquired at the study area intersections through the conduct of peak hour Manual Turning Movement (MTM) traffic counts. The counts were conducted during the weekday AM (7:00 – 9:00 AM), weekday PM (4:00 – 6:00 PM), and Saturday midday (11:00 AM – 1:00 PM) peak periods in May/June 2025. These count periods were selected to capture both the peak hours of adjacent street traffic and the peak periods of the proposed development. The summarized MTM counts are provided for reference in Appendix B.

The resultant existing peak hour traffic volumes are presented in Figures 2, 3 and 4 for the respective peak periods.

Existing Levels of Service

The operating conditions of the study area intersections were determined through the conduct of a capacity/Level of Service (LOS) analysis using the methodologies contained in the Highway Capacity Manual (HCM 7th Edition). Level of Service (LOS) is a measure of the quality of the traffic flow and generally is expressed as follows:

Level of Service
A - Excellent - Free flow
B - Very Good - Minor adjustments in traffic flows
C - Good - Stable flow of traffic
D - Satisfactory flow - Occasional short periods with minor delays
E – Approaching Capacity - Regular delays
F - Forced Flow - Significant delays and queuing

At signalized intersections, overall LOS is based on the average delay to all movements at the intersection. The delay thresholds for various Levels of Service are contained in Appendix C.

The existing LOS findings for the study area intersections are presented in Figure 5. The detailed capacity/LOS analysis worksheets are provided in Appendix D.

SITE TRAFFIC

The determination of the amount of traffic that a proposed development will generate can best be made by comparison with similar sites. The residential development of the site is proposed to comprise 76 apartments. The Institute of Transportation Engineers (ITE) publication *Trip Generation Manual, 11th Edition* is a compilation of trip generation studies for a variety of land uses and is considered the primary data source for use of trip generation projections. For the proposed apartment development, Land Use Code 220 – Multi-Family Housing (Low Rise) was selected as the most appropriate.

Table 1 presents the projected development-generated traffic for the site based on the ITE database. The trip generation worksheets are provided for reference in Appendix E.

Table 1
Site Trips

		AM Peak Hour			*PM Peak Hour*			*SAT Peak Hour*		
	Daily	***In***	***Out***	***Total***	***In***	***Out***	***Total***	***In***	***Out***	***Total***
Apartments (76 D.U.)	562	11	35	46	34	19	53	15	16	31

The development-generated traffic was distributed to the study area roadway network based on existing traffic patterns. The site traffic distribution percentages are summarized below:

Constitution Avenue (SR 0152)	
to/from the south	60%
Walnut Street (SR 0152)	
to/from the east	12%
to/from the west	28%
	100%

The resultant distributed site trips are depicted in Figure 6 for all three peak periods.

Trip Generation Comparison

The subject property is located within the Perkasie Borough's I-2 Light Industrial District, which requires a zoning variance for the proposed development of 76 apartment units. In support of the variance application it is valuable to compare traffic volumes generated by the proposed use (76 apartments) with a reasonable by-right build-out of the property. The I-2 zone allows a variety of commercial, retail, and industrial uses. Given that the property adjoins an existing shopping center, a reasonable by-right build-out would consist of retail uses. Based on the size of the property (7.32 net acres) and the Borough Code bulk standards, a build-out assumption of 25,000 square feet of retail use is reasonable.

Table 2 below presents a trip generation comparison of the proposed apartment use with a 25,000 square feet by-right retail development:

Table 2
Trip Generation Comparison

		AM Peak Hour			*PM Peak Hour*			*SAT Peak Hour*		
	Daily	***In***	***Out***	***Total***	***In***	***Out***	***Total***	***In***	***Out***	***Total***
Apartments (76 D.U.)	562	11	35	46	34	19	53	15	16	31
Retail (25,000 s.f.)[(1)]	1285	32	21	53	75	74	149	84	80	164

[(1)]LUC 822 – Strip Retail Plaza (<40k) per ITE Trip Generation Manual, 11th Edition.

As shown in Table 2 the proposed apartment development will generate significantly less traffic than a by-right build-out of 25,000 square feet of retail space.

FUTURE CONDITIONS

To assess the impact of the development-generated traffic volumes on the study area roadway network, the future traffic volumes in the anticipated build-out year of the site (2028) were determined. To account for regional growth that is expected to occur during the intervening period, a background traffic growth rate was applied to the existing traffic volumes. Based on PennDOT's growth rates for the area, a 0.12 percent per year background growth was applied (total 0.36 percent over three years) to the existing 2025 traffic volumes. It was confirmed with the Perkasie Borough engineer that there are no approved but not yet constructed developments that will impact the study area within the study horizon year.

The 2028 No-Build traffic volumes are presented in Figures 7, 8 and 9 for the respective peak periods. The total Build 2028 traffic volumes, which overlay the site-generated traffic volumes onto the No-Build traffic volumes, are presented in Figures 10, 11 and 12 for the three study peak periods, respectively.

Assessment

An assessment of the future 2028 No-Build and Build operating conditions within the study area was completed. The assessment included a Level of Service (LOS) analysis of the study area intersections in order to determine if the projected traffic volumes can be acceptably accommodated within the study area and whether any roadway or intersection improvements would be required. The future No-Build LOS results are presented in Figure 13. The future Build LOS results are presented in Figure 14. The detailed capacity analysis worksheets for the No-Build and Build conditions analyses are contained in Appendices F and G, respectively.

The Level of Service (LOS) results for each of the study locations are summarized in Table 3 at the end of this section and detailed below.

Constitution Avenue (SR 0152)/Perkasie Square Access/Lenape Park Access – This signalized intersection currently operates at overall LOS B/C with all movements at acceptable LOS D or better during all three peak hours. Under No-Build and Build conditions these acceptable LOS conditions remain.

There are no improvements required at this intersection in conjunction with the proposed residential development project.

Constitution Avenue (SR 0152)/Walnut Street (SR 0152)– This signalized intersection currently operates at overall LOS B/C with all movements at acceptable LOS D or better

during all three peak hours. Under No-Build and Build conditions these acceptable LOS conditions remain.

There are no improvements required at this intersection in conjunction with the proposed residential development project.

Queues

The 95th percentile queues for the study area intersections were calculated as part of the capacity/LOS analysis. Table 4 at the end of this section provides a summary of the 95th percentile queues for the existing, No-Build, and Build conditions at all locations. It is noted that the site traffic has very little effect on the queue conditions.

Table 3
Intersection Level of Service Summary

		Weekday AM Peak			Weekday PM Peak			Saturday Midday Peak		
Intersections	**Movement**	**Existing**	**No-Build**	**Build**	**Existing**	**No-Build**	**Build**	**Existing**	**No-Build**	**Build**
Constitution Ave (SR 0152)/Perkasie Square Access/Lenape Park Access	EB LTR	C (24.4)	C (24.4)	C (24.4)	C (33.0)	C (33.0)	C (33.0)	C (24.4)	C (24.4)	C (24.4)
	WB LT	C (25.1)	C (25.1)	C (25.6)	D (35.6)	D (35.6)	D (36.0)	C (25.9)	C (25.9)	C (26.2)
	WB R	C (24.8)	C (24.8)	C (25.0)	D (36.2)	D (36.3)	D (36.5)	C (26.8)	C (26.8)	C (27.0)
	NB L	B (14.2)	B (14.2)	B (14.2)	B (13.2)	B (13.2)	B (13.2)	B (14.2)	B (14.2)	B (14.2)
	NB T	C (20.9)	C (20.9)	C (20.9)	C (20.3)	C (20.3)	C (20.3)	C (21.6)	C (21.6)	C (21.6)
	NB R	B (19.7)	B (19.7)	B (19.8)	B (18.4)	B (18.4)	B (18.7)	C (20.3)	C (20.3)	C (20.4)
	SB L	A (7.2)	A (7.2)	A (7.2)	A (8.1)	A (8.1)	A (8.2)	A (7.8)	A (7.8)	A (7.8)
	SB TR	B (12.7)	B (12.7)	B (12.7)	B (12.0)	B (12.0)	B (12.0)	B (12.6)	B (12.6)	B (12.6)
	Overall	**B (16.9)**	**B (16.9)**	**B (17.4)**	**C (21.1)**	**C (21.1)**	**C (21.3)**	**B (18.6)**	**B (18.6)**	**B (18.8)**
Constitution Ave (SR 0152)/Walnut Street (SR 0152)	EB LTR	B (18.2)	B (18.2)	B (18.3)	B (19.5)	B (19.5)	B (19.7)	B (19.0)	B (19.0)	B (19.2)
	WB L	B (10.8)	B (10.8)	B (10.9)	A (9.0)	A (9.0)	A (9.2)	B (11.8)	B (11.9)	B (11.9)
	WB TR	A (8.4)	A (8.4)	A (8.4)	A (6.8)	A (6.8)	A (6.8)	A (8.6)	A (8.6)	A (8.6)
	NB L	C (24.2)	C (24.2)	C (24.3)	D (36.4)	D (36.5)	D (36.9)	C (25.9)	C (25.9)	C (26.0)
	NB TR	C (23.3)	C (23.3)	C (23.3)	C (31.5)	C (31.5)	C (31.6)	C (24.5)	C (24.5)	C (24.6)
	SB LTR	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
	Overall	**B (16.5)**	**B (16.5)**	**B (16.7)**	**C (20.1)**	**C (20.2)**	**C (20.4)**	**B (18.2)**	**B (18.2)**	**B (18.3)**

Table 4
95th Percentile Queue Summary (in feet)

			Weekday AM Peak			Weekday PM Peak			Saturday Midday Peak		
Intersections	**Movement**	**Storage Length**	**Existing**	**No-Build**	**Build**	**Existing**	**No-Build**	**Build**	**Existing**	**No-Build**	**Build**
Constitution Ave (SR 0152)/Perkasie Square Access/Lenape Park Access	EB LTR	n/a	13	13	13	25	25	25	16	16	16
	WB LT	**105'**	38	38	56	119	119	132	69	69	78
	WB R	**105'**	29	29	36	154	155	165	110	111	117
	NB L	**100'**	2	2	2	2	2	2	2	2	2
	NB T	n/a	78	78	78	176	177	177	113	114	114
	NB R	**150'**	25	25	30	64	64	79	54	54	60
	SB L	**220'**	22	22	23	60	60	66	47	47	49
	SB TR	n/a	82	83	83	90	90	90	75	75	75
Constitution Ave (SR 0152)/Walnut Street (SR 0152)	EB LTR	n/a	222	224	226	258	260	267	254	255	259
	WB L	**135'**	26	26	27	34	34	35	50	50	50
	WB TR	n/a	64	64	64	110	111	111	78	78	78
	NB L	**200'**	85	85	94	251	252	258	166	167	171
	NB TR	n/a	38	38	42	112	112	114	92	92	94
	SB LTR	n/a	0	0	0	0	0	0	0	0	0

n/a – storage length not applicable for movements without a designated turn lane

CONCLUSIONS

The conduct of this Traffic Impact Assessment for the proposed Perkasie Place residential development in Perkasie/Sellersville Boroughs, Bucks County, has led to the following conclusions and recommendations:

1. The proposed residential development will generate an estimated 562 daily trips with 46 trips in the AM peak hour, 53 trips in the PM peak hour, and 31 trips in the Saturday peak hour.

2. Access to the residential development will be provided via the existing signalized intersection of Perkasie Square shopping center with Constitution Avenue. The intersection will continue to operate at overall acceptable LOS B/C during all three peak periods.

3. The intersection of Constitution Avenue (SR 0152)/Walnut Street (SR 0152) will continue to operate at overall acceptable LOS B/C conditions during all three peak periods.

4. The site-generated traffic can be accommodated within the study area roadway network with no mitigation improvements required at the study area intersections.

5. The proposed apartment development will generate significantly less traffic than a reasonable by-right retail development of the site would generate.

HCA *Horner & Canter Associates*
TRANSPORTATION AND TRAFFIC ENGINEERING

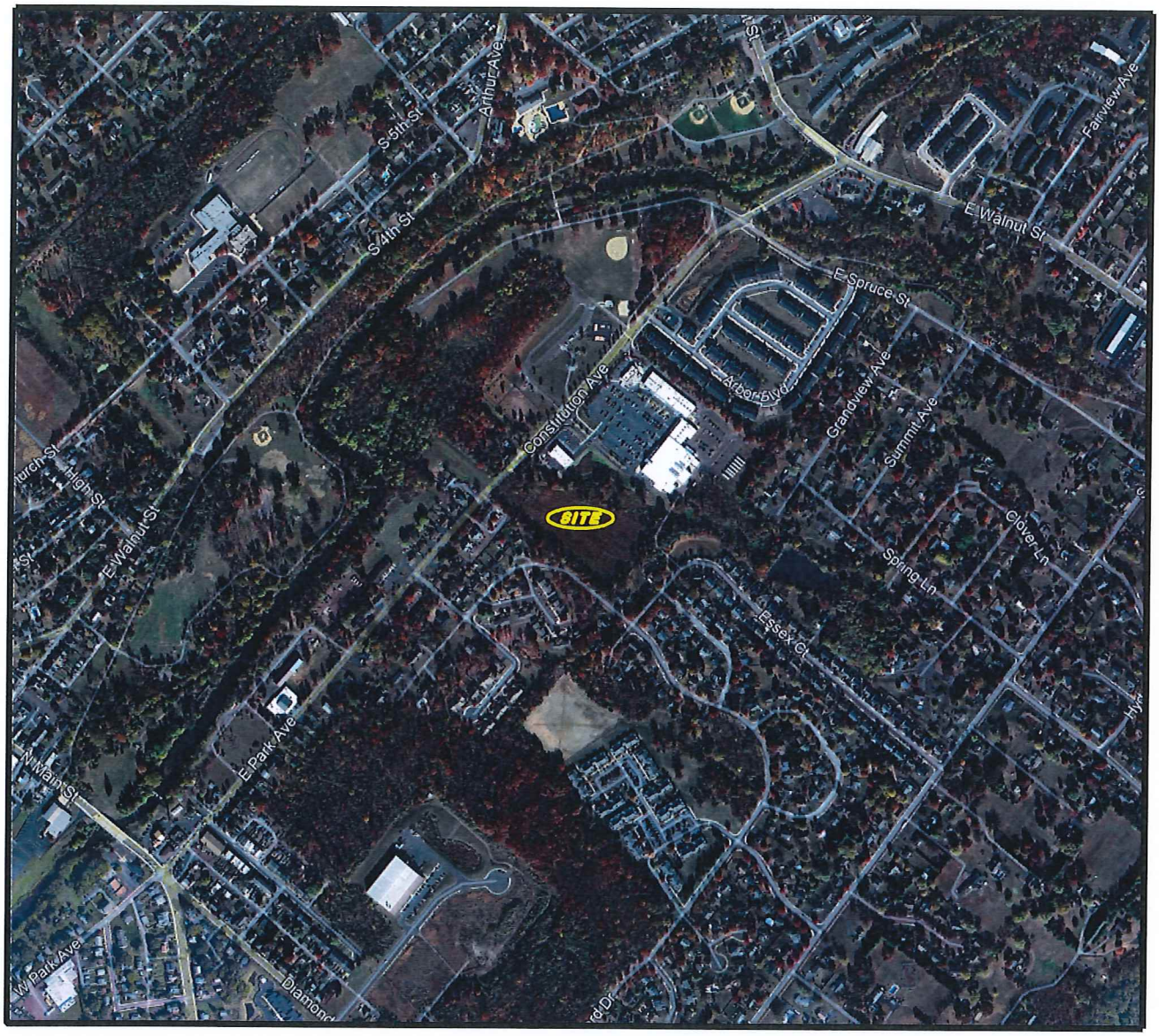

FIGURE 1
SITE LOCATION MAP

PERKASIE PLACE
RESIDENTIAL DEVELOPMENT
PERKASIE AND SELLERSVILLE BOROUGHS, BUCKS COUNTY, PA

25-038
JULY 2025

HCA *Horner & Canter Associates*

TRANSPORTATION AND TRAFFIC ENGINEERING

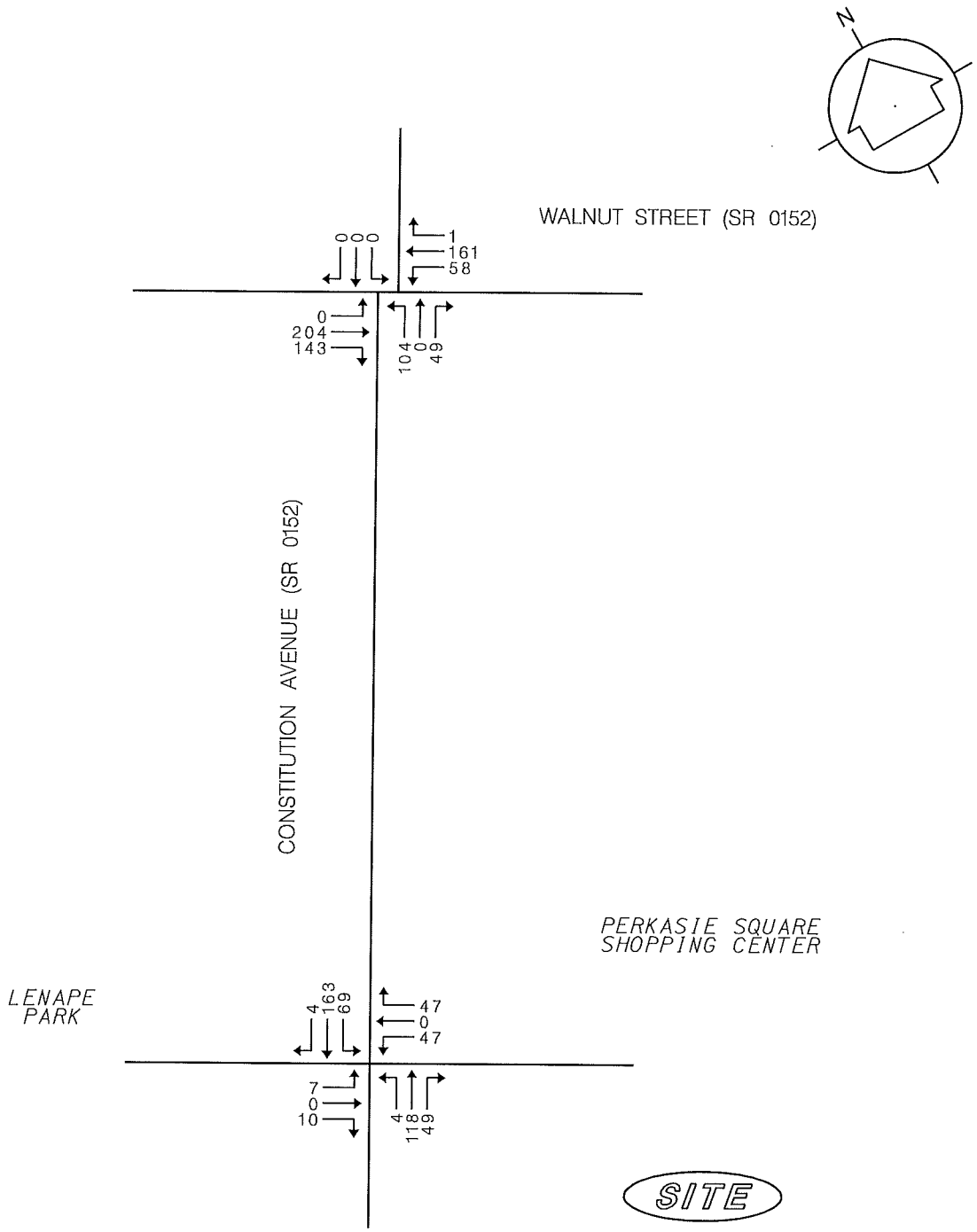

FIGURE 2
EXISTING WEEKDAY AM PEAK HOUR TRAFFIC VOLUMES

PERKASIE PLACE
RESIDENTIAL DEVELOPMENT

PERKASIE AND SELLERSVILLE BOROUGHS, BUCKS COUNTY, PA

25-038
JULY 2025

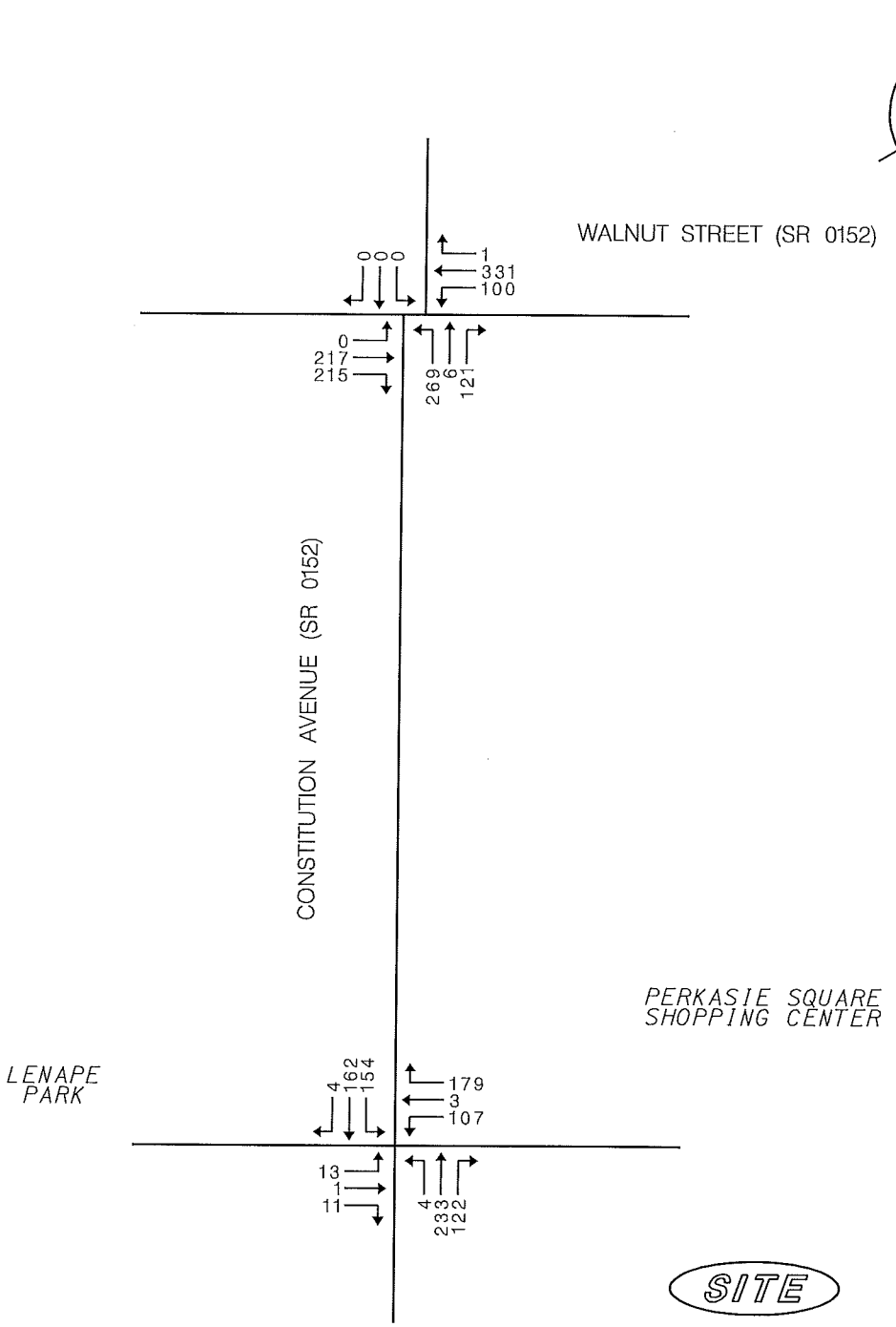

FIGURE 3
EXISTING WEEKDAY PM PEAK HOUR TRAFFIC VOLUMES

PERKASIE PLACE
RESIDENTIAL DEVELOPMENT

PERKASIE AND SELLERSVILLE BOROUGHS, BUCKS COUNTY, PA

25-038
JULY 2025

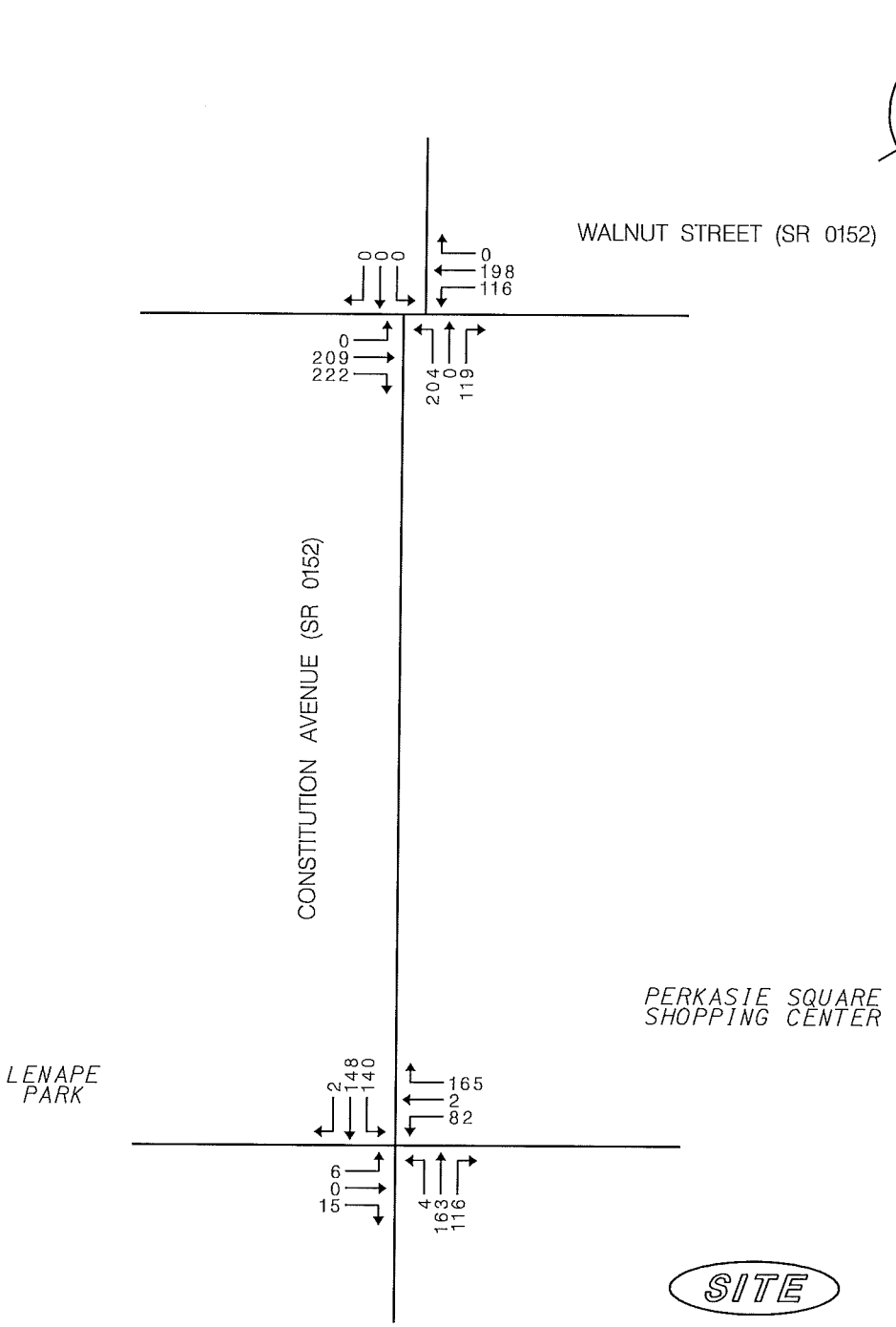

FIGURE 4
EXISTING SATURDAY MIDDAY PEAK HOUR TRAFFIC VOLUMES

PERKASIE PLACE
RESIDENTIAL DEVELOPMENT

PERKASIE AND SELLERSVILLE BOROUGHS, BUCKS COUNTY, PA

25-038
JULY 2025

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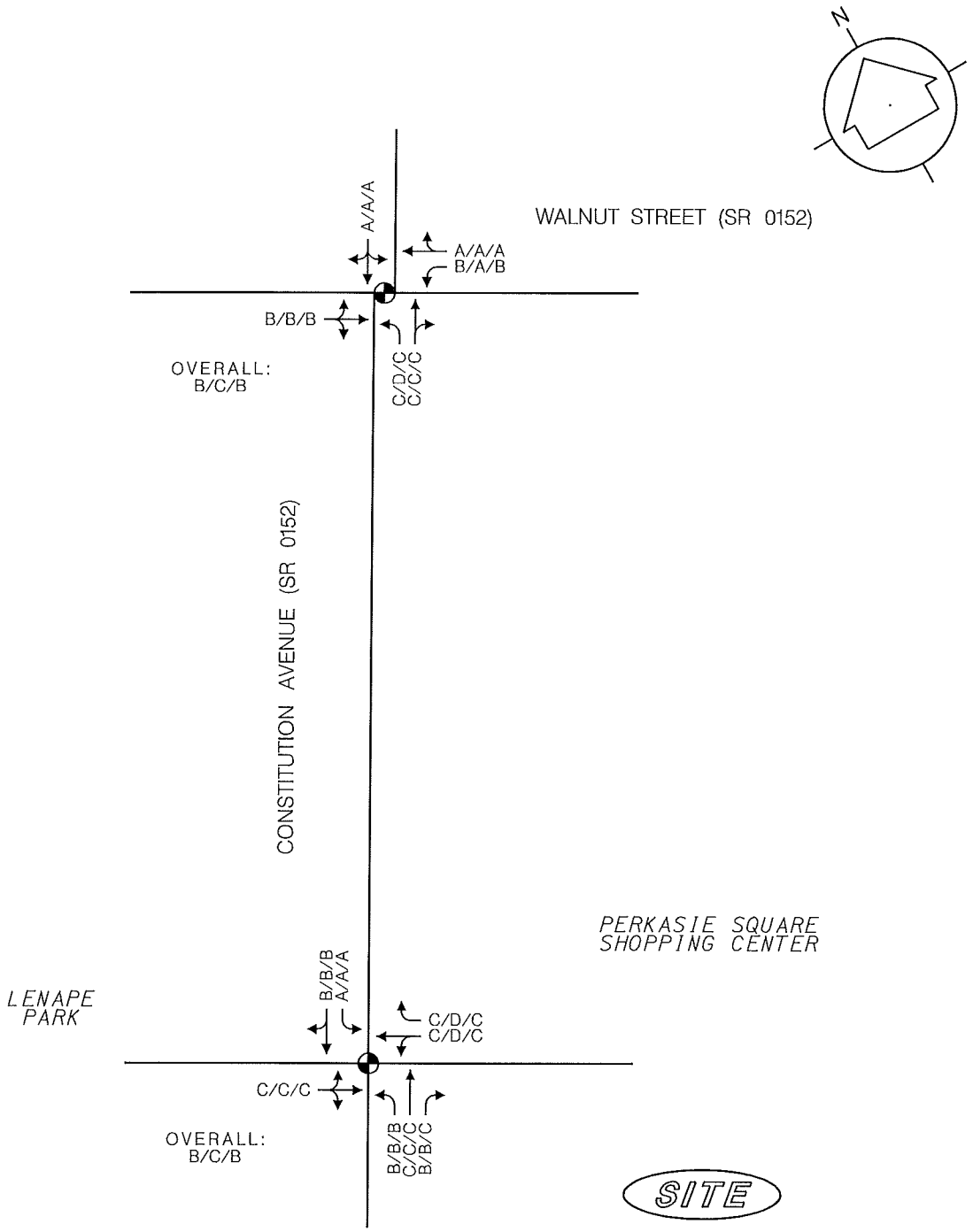
TRANSPORTATION AND TRAFFIC ENGINEERING



LEGEND:

AM/PM/SATURDAY PEAK HOUR

TRAFFIC SIGNAL

FIGURE 5
EXISTING LEVELS OF SEVICE

PERKASIE PLACE
RESIDENTIAL DEVELOPMENT

PERKASIE AND SELLERSVILLE BOROUGHS, BUCKS COUNTY, PA

25-038
JULY 2025

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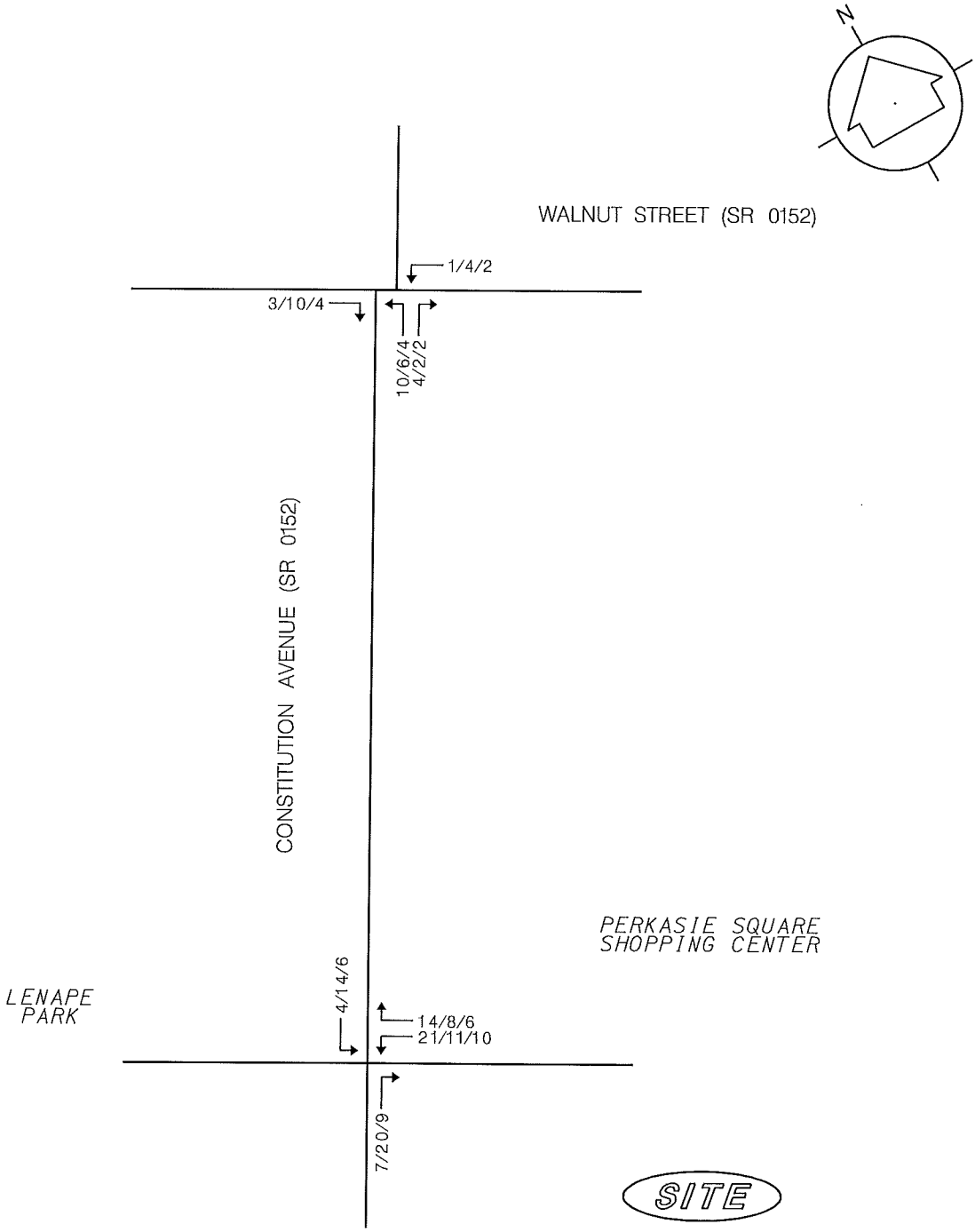
TRANSPORTATION AND TRAFFIC ENGINEERING



LEGEND:

← AM/PM/SATURDAY PEAK HOUR

FIGURE 6
SITE TRIPS

PERKASIE PLACE
RESIDENTIAL DEVELOPMENT
PERKASIE AND SELLERSVILLE BOROUGHS, BUCKS COUNTY, PA

25-038
JULY 2025

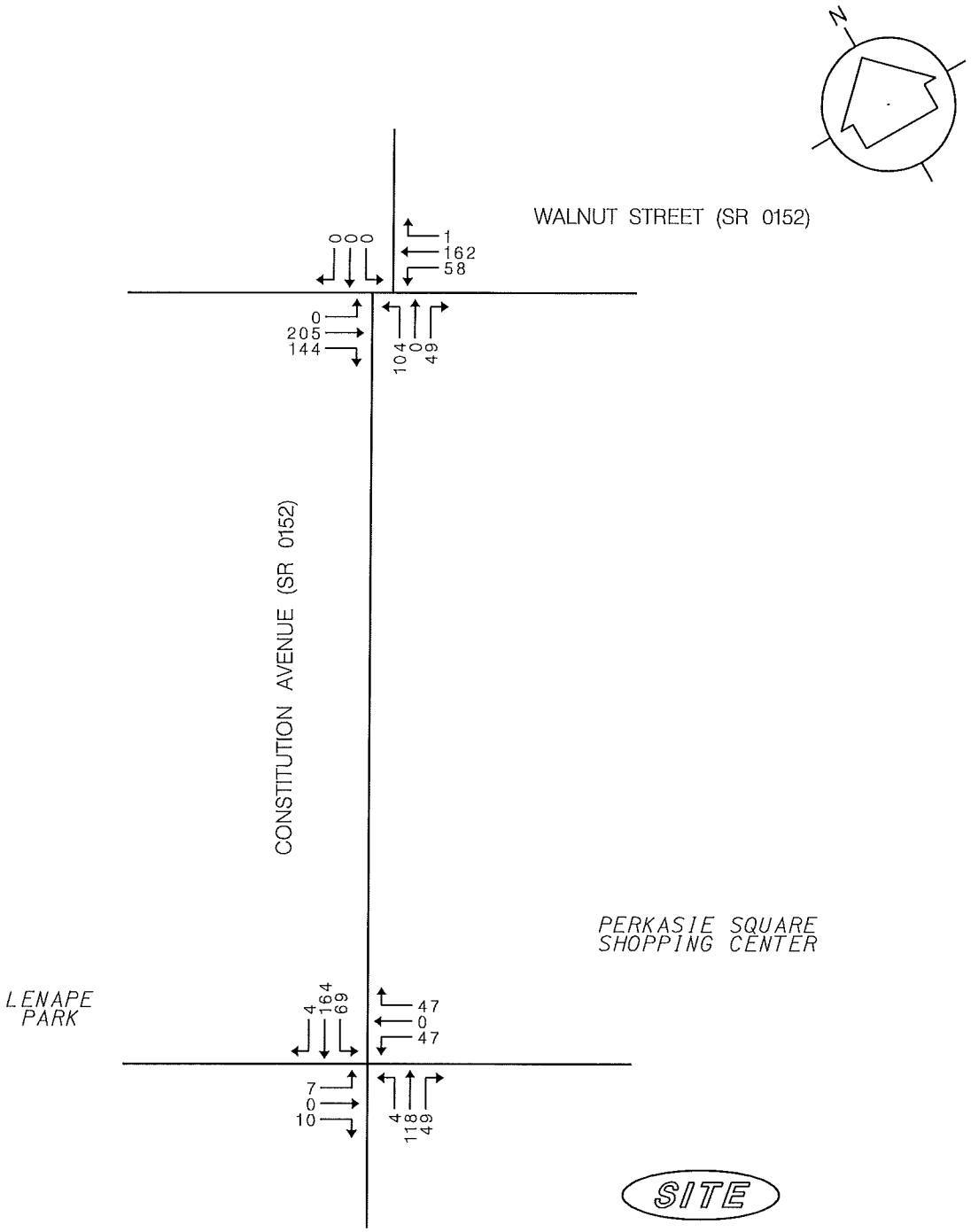


FIGURE 7
NO-BUILD WEEKDAY AM PEAK HOUR TRAFFIC VOLUMES

PERKASIE PLACE
RESIDENTIAL DEVELOPMENT

PERKASIE AND SELLERSVILLE BOROUGHS, BUCKS COUNTY, PA

25-038
JULY 2025

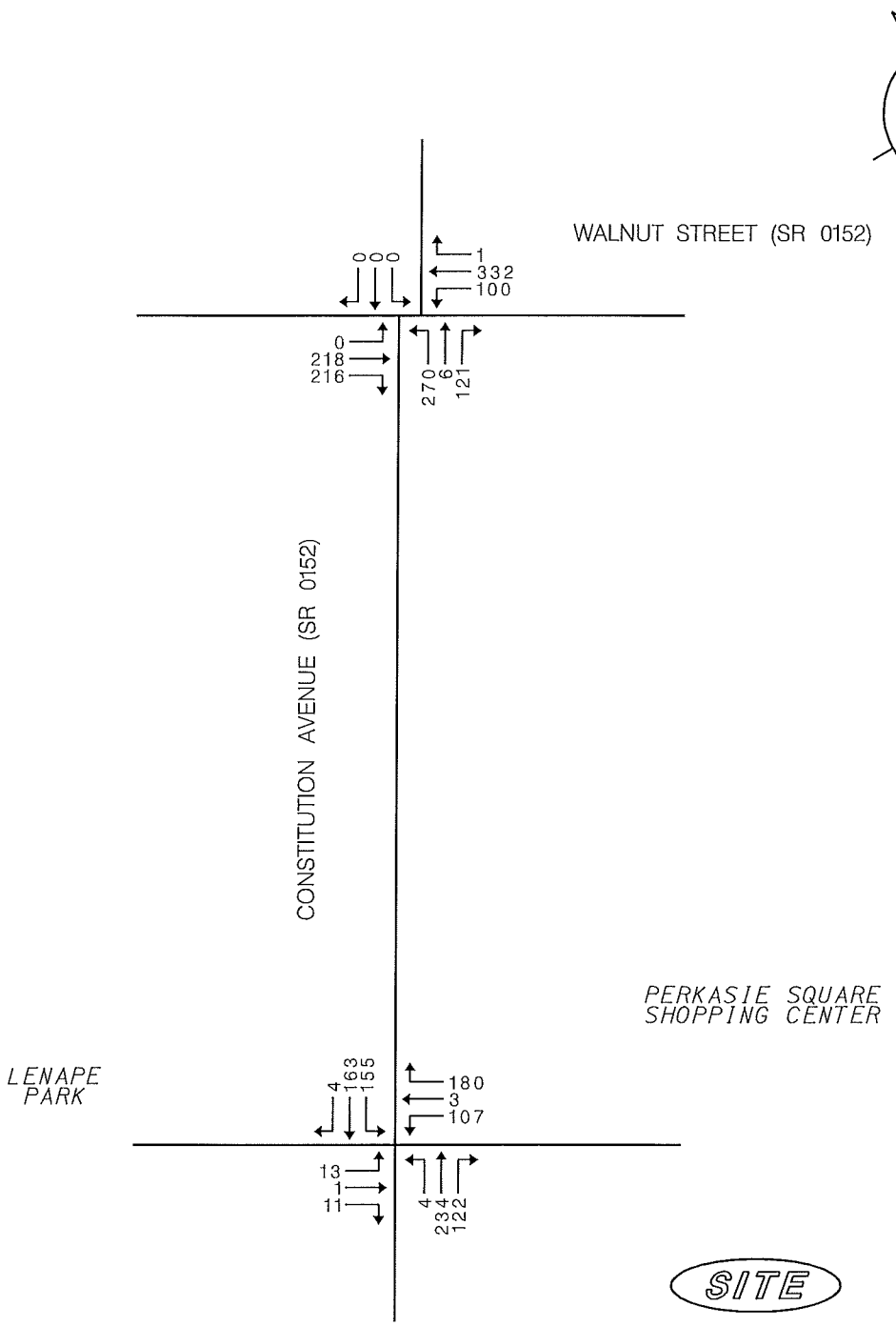


FIGURE 8
NO-BUILD WEEKDAY PM PEAK HOUR TRAFFIC VOLUMES

PERKASIE PLACE
RESIDENTIAL DEVELOPMENT

PERKASIE AND SELLERSVILLE BOROUGHS, BUCKS COUNTY, PA

25-038
JULY 2025

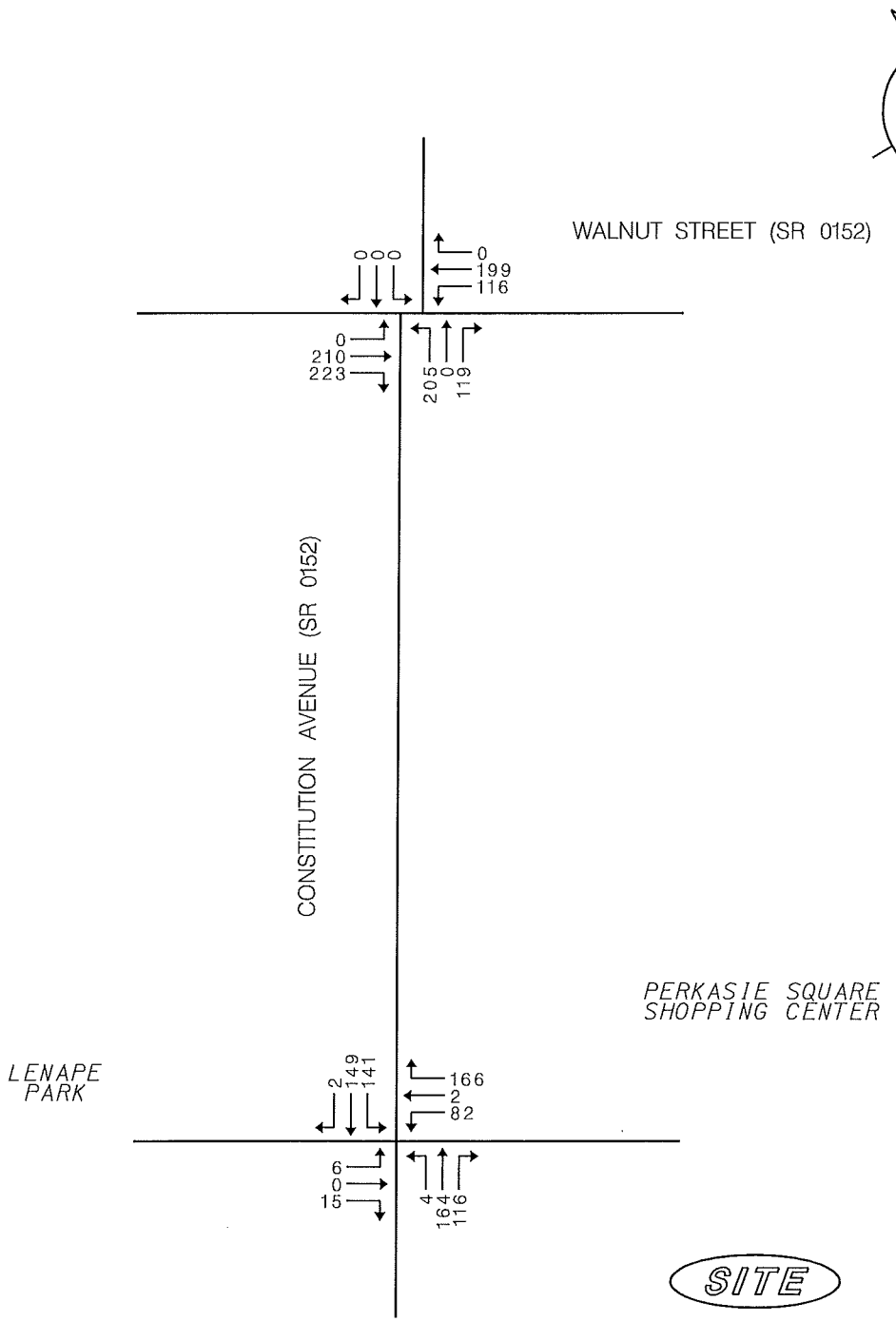


FIGURE 9
NO-BUILD SATURDAY MIDDAY PEAK HOUR TRAFFIC VOLUMES

PERKASIE PLACE
RESIDENTIAL DEVELOPMENT

PERKASIE AND SELLERSVILLE BOROUGHS, BUCKS COUNTY, PA

25-038
JULY 2025

HCA *Horner & Canter Associates*

TRANSPORTATION AND TRAFFIC ENGINEERING

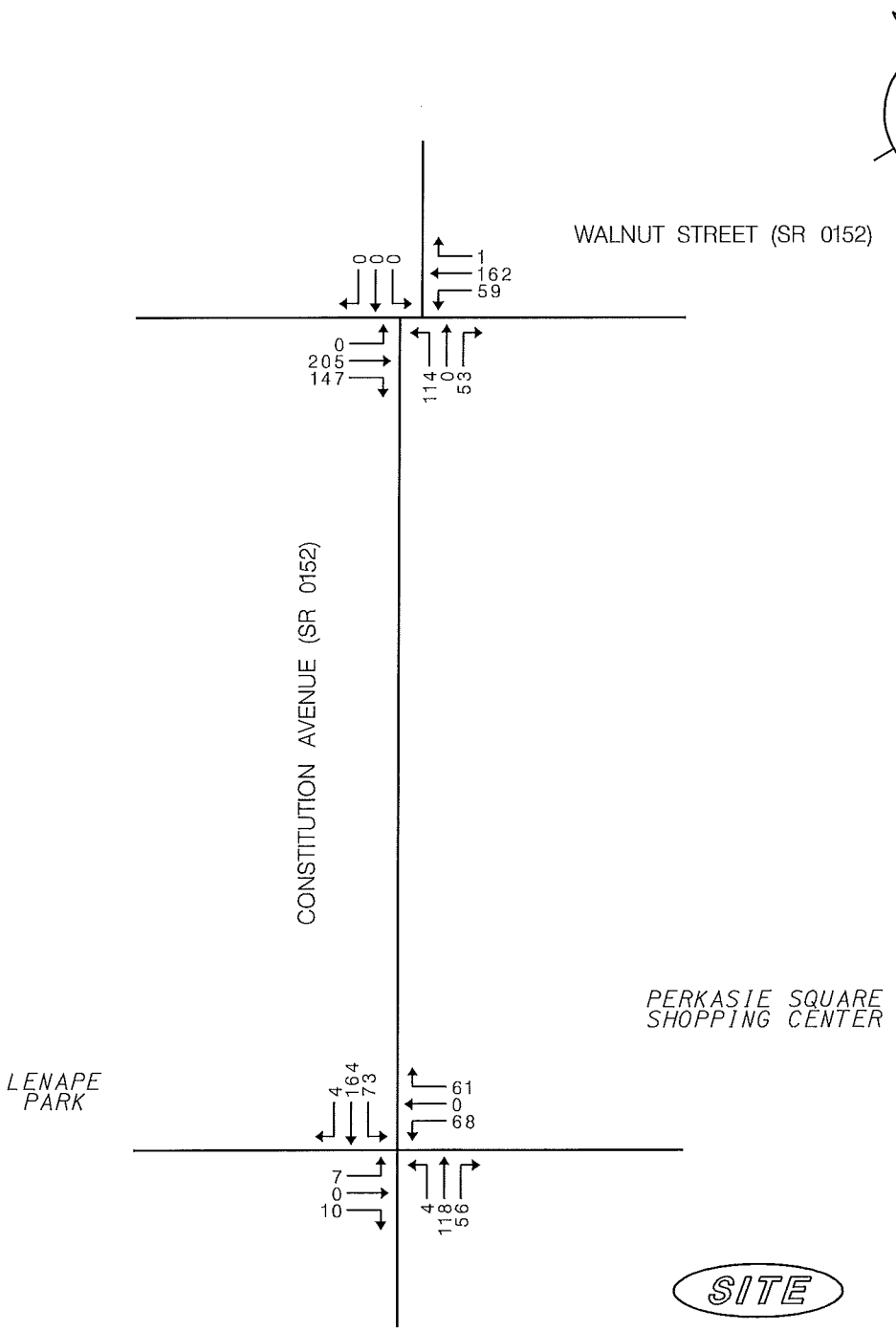


FIGURE 10

BUILD WEEKDAY AM PEAK HOUR TRAFFIC VOLUMES

PERKASIE PLACE

RESIDENTIAL DEVELOPMENT

PERKASIE AND SELLERSVILLE BOROUGHS, BUCKS COUNTY, PA

25-038
JULY 2025

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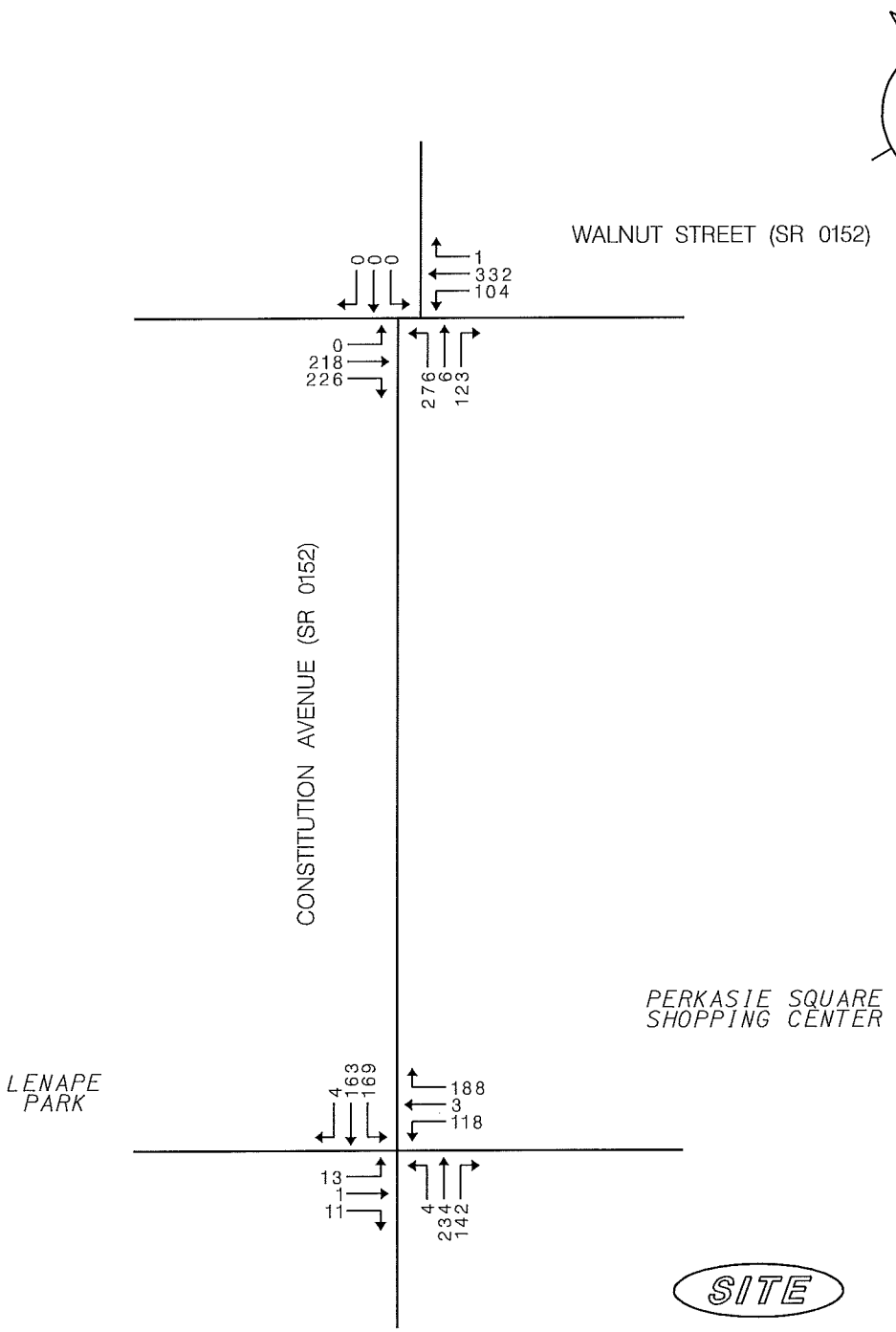
TRANSPORTATION AND TRAFFIC ENGINEERING



FUGRE 11

BUILD WEEKDAY PM PEAK HOUR TRAFFIC VOLUMES

PERKASIE PLACE

RESIDENTIAL DEVELOPMENT

PERKASIE AND SELLERSVILLE BOROUGHS, BUCKS COUNTY, PA

25-038
JULY 2025

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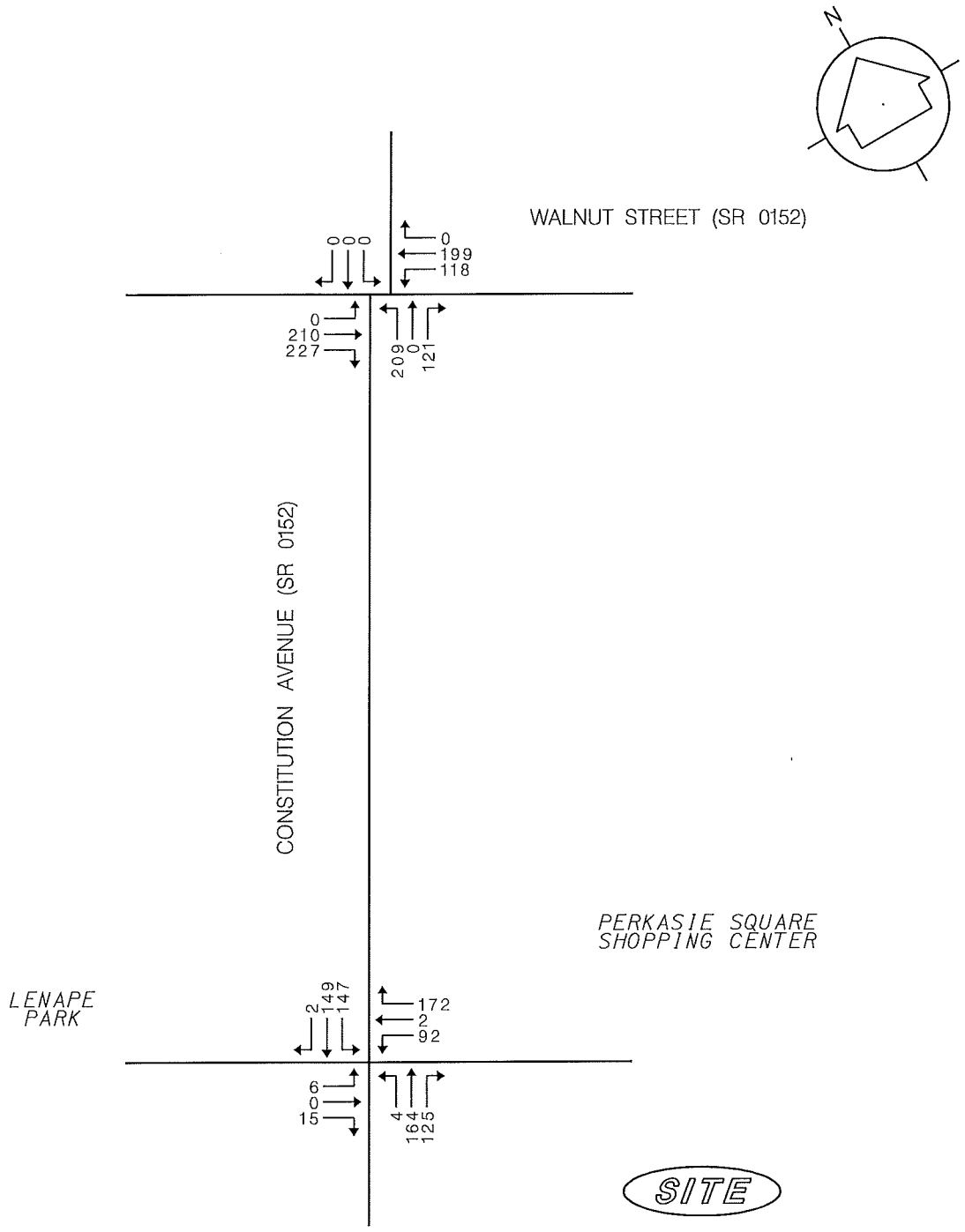


FIGURE 12

BUILD SATURDAY MIDDAY PEAK HOUR TRAFFIC VOLUMES

PERKASIE PLACE

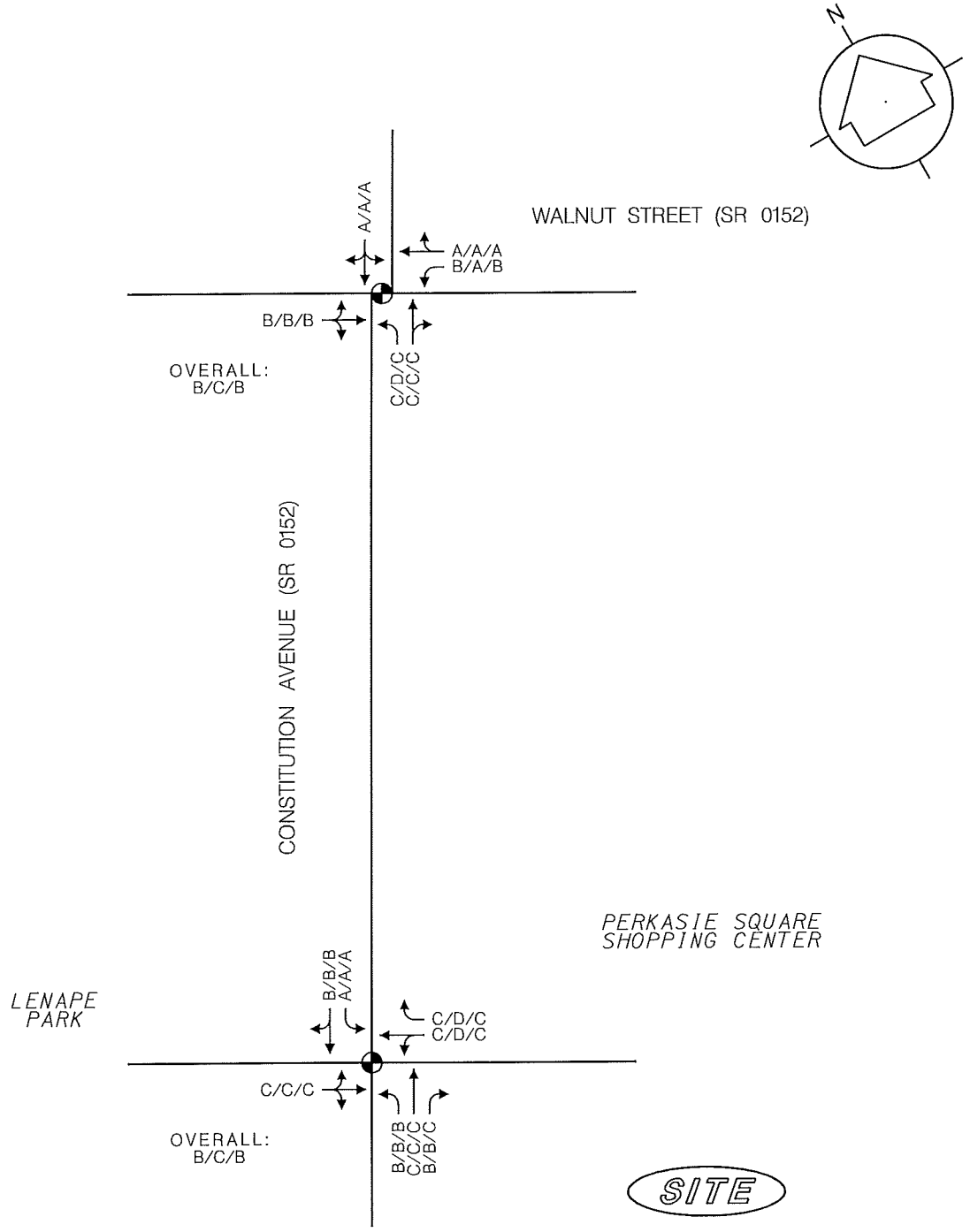
RESIDENTIAL DEVELOPMENT

PERKASIE AND SELLERSVILLE BOROUGHS, BUCKS COUNTY, PA

25-038
JULY 2025

HCA *Horner & Canter Associates*

TRANSPORTATION AND TRAFFIC ENGINEERING



LEGEND:

← AM/PM/SATURDAY PEAK HOUR

◓ TRAFFIC SIGNAL

FIGURE 13
NO-BUILD LEVELS OF SEVICE

PERKASIE PLACE

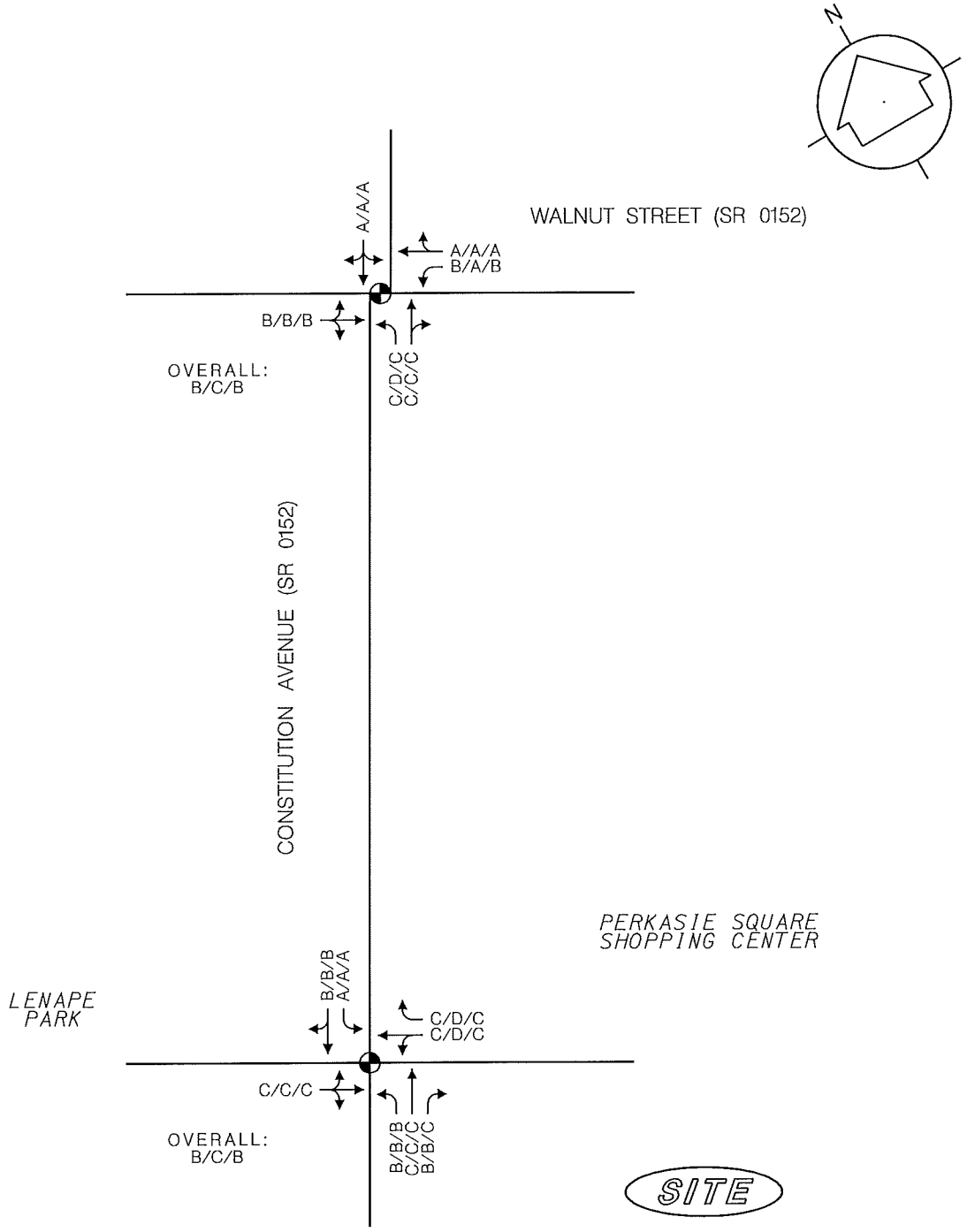
RESIDENTIAL DEVELOPMENT

PERKASIE AND SELLERSVILLE BOROUGHS, BUCKS COUNTY, PA

25-038
JULY 2025

HCA *Horner & Canter Associates*

TRANSPORTATION AND TRAFFIC ENGINEERING



LEGEND:

AM/PM/SATURDAY PEAK HOUR

TRAFFIC SIGNAL

FIGURE 14
BUILD LEVELS OF SEVICE

PERKASIE PLACE
RESIDENTIAL DEVELOPMENT

PERKASIE AND SELLERSVILLE BOROUGHS, BUCKS COUNTY, PA

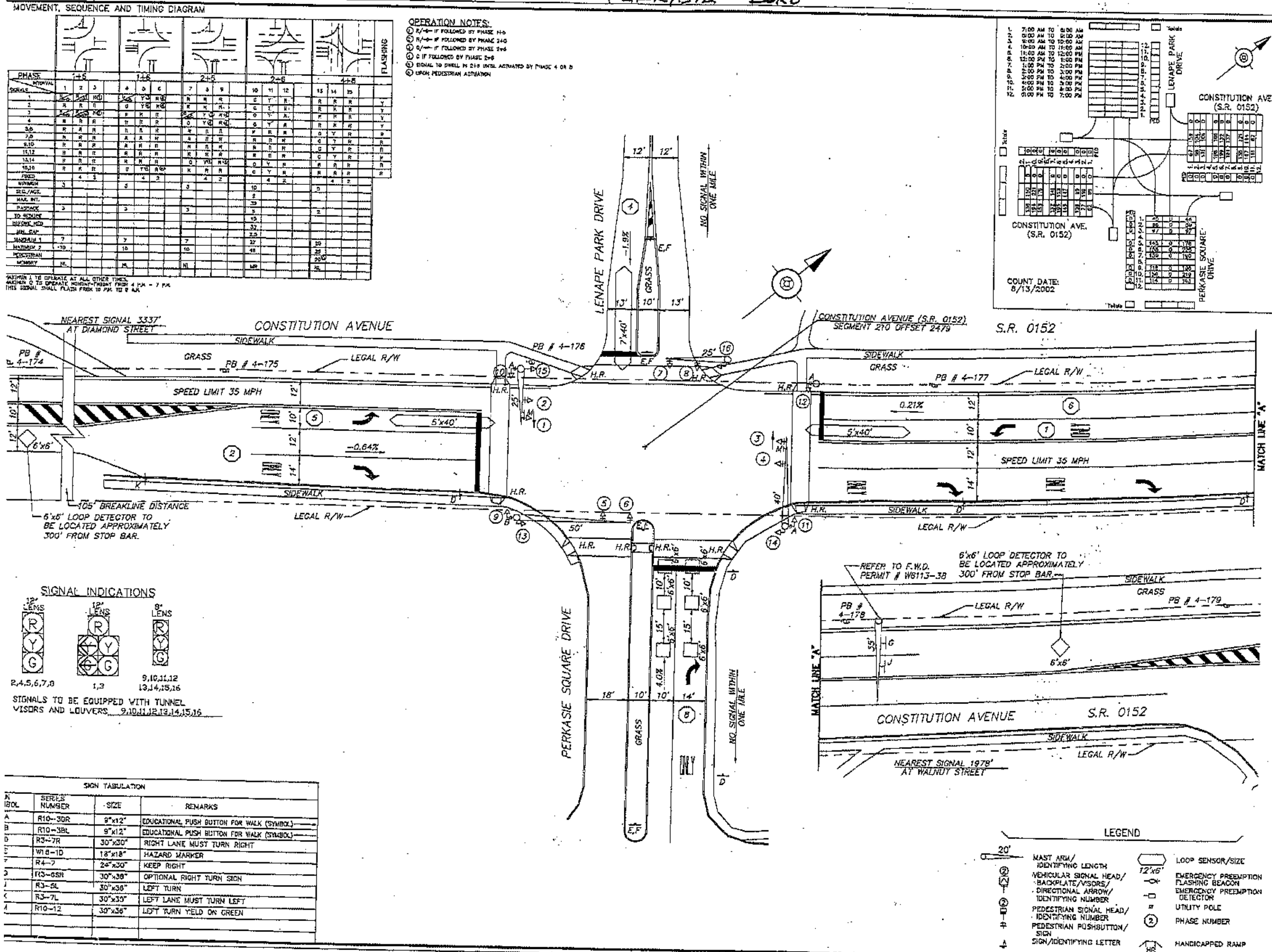
25-038
JULY 2025

APPENDIX A

Traffic Signal Plans

PERKASIE BORO

FILE 2525



SIGN TABULATION

SIGN SYMBOL	SERIES NUMBER	SIZE	REMARKS
A	R10-30R	9"x12"	EDUCATIONAL PUSH BUTTON FOR WALK (SYMBOL)
B	R10-38L	9"x12"	EDUCATIONAL PUSH BUTTON FOR WALK (SYMBOL)
D	R3-7R	30"x30"	RIGHT LANE MUST TURN RIGHT
E	W18-1D	18"x18"	HAZARD MARKER
F	R4-7	24"x30"	KEEP RIGHT
G	R3-6SR	30"x36"	OPTIONAL RIGHT TURN SIGN
J	R3-5L	30"x36"	LEFT TURN
K	R3-7L	30"x30"	LEFT LANE MUST TURN LEFT
M	R10-12	30"x36"	LEFT TURN YIELD ON GREEN

GENERAL NOTES

NO MODIFICATIONS OF THIS INSTALLATION ARE PERMITTED UNLESS PRIOR APPROVAL IS GRANTED IN WRITING BY A REPRESENTATIVE OF THE DEPARTMENT OF TRANSPORTATION.

ALL MAINTENANCE WORK INCLUDING TRIMMING OF TREES, NECESSARY FOR PROPER VISIBILITY OF THE SIGNALS IS THE RESPONSIBILITY OF THE PERMITTEE.

ALL SIGNS AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH PUBLICATION NO. 68.

POST MOUNTED SIGNALS SHALL BE INSTALLED WITH THE SIGNAL HEADS A MINIMUM OF 2 FEET BEHIND THE FACE OF CURB OR THE EDGE OF THE SHOULDER. SUPPORT POLES FOR OVERHEAD SIGNALS SHALL ALSO HAVE A MINIMUM CLEARANCE HORIZONTALLY OF 2 FEET.

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.

EXACT LOCATION OF DETECTORS SHALL BE DETERMINED PRIOR TO INSTALLATION BY A REPRESENTATIVE OF PENNDOT.

CURBING TO BE INSTALLED BY MUNICIPALITY AND WHERE NOTED, SHALL BE PLAIN CEMENT CONCRETE CURB OR GRANITE CURB, INSTALLED IN ACCORDANCE WITH DEPARTMENT SPECIFICATIONS FORM 408.

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 ACT 187, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES, EFFECTIVE DATE DECEMBER 19, 1986.

WHEN LIQUID FUELS MONEY IS USED, SIGNAL INSTALLATION MUST CONFORM TO FORM 408 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-7800 SERIES.

20 0 20

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6-0

COUNTY: BUCKS COUNTY
MUNICIPALITY: PERKASIE BOROUGH
INTERSECTION: CONSTITUTION AVENUE (S.R. 0152), PERKASIE SQUARE DRIVE, & LENAPE PARK DRIVE

REVIEWED:

DATE

MUNICIPAL OFFICIAL DATE

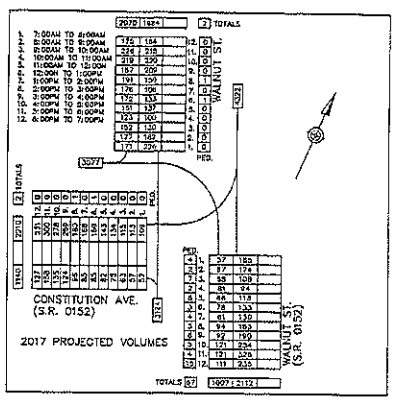
RECOMMENDED:

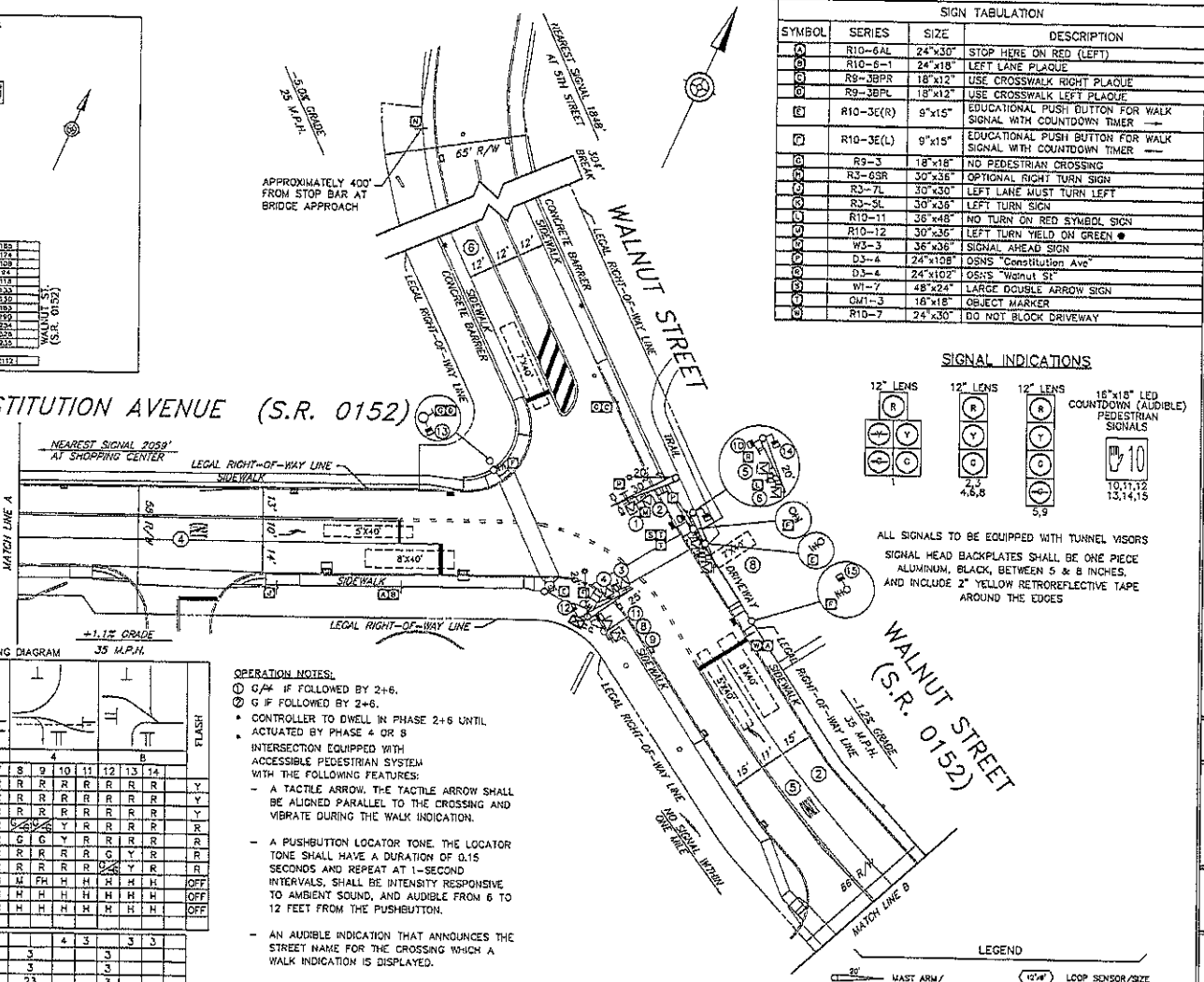
MARK L. KRAY 8/8/88 DATE

DOUGLAS MAY, DISTRICT TRAFFIC ENGINEER 8/8/88 DATE

NO.	REVISION	DES./REVW.	DATE	REVW.	DATE	RECOM.	DATE
1	ADDED RT. TURN LANE, ARROW, AND SIGN B	N.V.	3/8/94	MLK	3/8/94	DM	3/10/94
2	ADD GLUC AND PPW	R.F.W.	11/15/00	MLK	11/16/00	LRD	11/29/00
3	ADD LENAPE PARK DRIVE, LEFT TURN LANE, SIGNALS & SIGNAGE	RFW/ R.P.S.	5/27/03	MLK	5/6/03	[illegible]	[illegible]

SHEET 2 OF 2 | PERMIT # 61-2525 | FILE # 2525





SIGN TABULATION

SYMBOL	SERIES	SIZE	DESCRIPTION
A	R10-6AL	24"x30"	STOP HERE ON RED (LEFT)
B	R10-6-1	24"x18"	LEFT LANE PLAQUE
C	R9-3BPR	18"x12"	USE CROSSWALK RIGHT PLAQUE
D	R9-3BPL	18"x12"	USE CROSSWALK LEFT PLAQUE
E	R10-3E(R)	9"x15"	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER →
F	R10-3E(L)	9"x15"	EDUCATIONAL PUSH BUTTON FOR WALK SIGNAL WITH COUNTDOWN TIMER ←
G	R9-3	18"x18"	NO PEDESTRIAN CROSSING
H	R3-6SR	30"x36"	OPTIONAL RIGHT TURN SIGN
J	R3-7L	30"x30"	LEFT LANE MUST TURN LEFT
K	R3-5L	30"x36"	LEFT TURN SIGN
L	R10-11	36"x48"	NO TURN ON RED SYMBOL SIGN
M	R10-12	30"x36"	LEFT TURN YIELD ON GREEN ●
N	W3-3	36"x36"	SIGNAL AHEAD SIGN
P	D3-4	24"x108"	OSNS "Constitution Ave"
Q	D3-4	24"x102"	OSNS "Walnut St"
R	W1-7	48"x24"	LARGE DOUBLE ARROW SIGN
T	OM1-3	18"x18"	OBJECT MARKER
U	R10-7	24"x30"	DO NOT BLOCK DRIVEWAY

SIGNAL INDICATIONS

ALL SIGNALS TO BE EQUIPPED WITH TUNNEL VISORS

SIGNAL HEAD BACKPLATES SHALL BE ONE PIECE ALUMINUM, BLACK, BETWEEN 5 & 8 INCHES, AND INCLUDE 2" YELLOW RETROREFLECTIVE TAPE AROUND THE EDGES

GENERAL NOTES

NO MODIFICATIONS OF THIS INSTALLATION ARE PERMITTED UNLESS PRIOR APPROVAL IS GRANTED IN WRITING BY A REPRESENTATIVE OF THE DEPARTMENT OF TRANSPORTATION.

ALL MAINTENANCE WORK INCLUDING TRIMMING OF TREES, NECESSARY FOR PROPER VISIBILITY OF THE SIGNALS IS THE RESPONSIBILITY OF THE PERMITTEE.

ALL SIGNS AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH PUBLICATION NO. 212.

POST MOUNTED SIGNALS SHALL BE INSTALLED WITH THE SIGNAL HEADS A MINIMUM OF 2 FEET BEHIND THE FACE OF CURB OR THE EDGE OF THE SHOULDER. SUPPORT POLES FOR OVERHEAD SIGNALS SHALL ALSO HAVE A MINIMUM CLEARANCE HORIZONTALLY OF 2 FEET.

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CURBING TO BE INSTALLED BY MUNICIPALITY AND WHERE NOTED, SHALL BE PLAIN CEMENT CONCRETE CURB OR GRANITE CURB, INSTALLED IN ACCORDANCE WITH DEPARTMENT SPECIFICATIONS FORM 408.

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, DATED DECEMBER 20, 1974.

WHEN LIQUID FUELS MONEY IS USED, SIGNAL INSTALLATION MUST CONFORM TO FORM 408 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.

MOVEMENT, SEQUENCE AND TIMING DIAGRAM

PHASE	2+5			2+6				4				8			FLASH
INTERVAL / SIGNALS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
1	G	Y	R	G	G	Y	R	R	R	R	R	R	R	R	Y
2	G	Y	R	G	G	Y	R	R	R	R	R	R	R	R	Y
3,4	R	R	R	G	G	Y	R	R	R	R	R	R	R	R	Y
5	R	R	R	R	R	R	R	G	G	Y	R	R	R	R	R
6	R	R	R	R	R	R	R	G	G	Y	R	R	R	R	R
8	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R
9	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R
10,11	H	H	H	H	H	H	H	M	FH	H	H	H	H	H	OFF
12,13	H	H	H	M	FH	H	H	H	H	H	H	H	H	H	OFF
14,15	H	H	H	M	FH	H	H	H	H	H	H	H	H	H	OFF

FIXED TIME	4	3		4	3		4	3		3	3	
MINIMUM	3			10			3		3			
PASSAGE	3			3			3		3			
MAX. 1	7			35			23		3			
MAX. 2	14			39			19		3			
PEDESTRIAN*				7	15		7	13				
MEMORY	NL			SVR			NL		NL			

* UPON PEDESTRIAN ACTUATION

WEEKLY PROGRAM CHART

EVENT	DAY*	TIME	PROGRAM	CYCLE
1	1-5	00:00	MAX 1	FREE
2	1-5	15:00	MAX 2	FREE
3	1-7	21:00	MAX 1	FREE

* DAY 1 = MONDAY

OPERATION NOTES:

① G/P# IF FOLLOWED BY 2+6.

② G IF FOLLOWED BY 2+6.

* CONTROLLER TO DWELL IN PHASE 2+6 UNTIL ACTUATED BY PHASE 4 OR 8

INTERSECTION EQUIPPED WITH ACCESSIBLE PEDESTRIAN SYSTEM WITH THE FOLLOWING FEATURES:

- A TACTILE ARROW. THE TACTILE ARROW SHALL BE ALIGNED PARALLEL TO THE CROSSING AND VIBRATE DURING THE WALK INDICATION.
- A PUSHBUTTON LOCATOR TONE. THE LOCATOR TONE SHALL HAVE A DURATION OF 0.15 SECONDS AND REPEAT AT 1-SECOND INTERVALS, SHALL BE INTENSITY RESPONSIVE TO AMBIENT SOUND, AND AUDIBLE FROM 6 TO 12 FEET FROM THE PUSHBUTTON.
- AN AUDIBLE INDICATION THAT ANNOUNCES THE STREET NAME FOR THE CROSSING WHICH A WALK INDICATION IS DISPLAYED.

SCALE

25 0 25

LEGEND

- MAST ARM/ IDENTIFYING LENGTH
- VEHICULAR SIGNAL HEAD/ BACKPLATE/VISORS/ DIRECTIONAL ARROW/ IDENTIFYING NUMBER
- PEDESTRIAN SIGNAL HEAD/ IDENTIFYING NUMBER
- PEDESTRIAN PUSHBUTTON/ SIGN
- SIGN/IDENTIFYING LETTER
- FISH-EYE VIDEO DETECTOR
- LOOP SENSOR/SIZE
- ZONE OF DETECTION
- MICROWAVE PRESENCE DETECTOR
- EMERGENCY PRE-EMPTION FLASHING BEACON
- EMERGENCY PRE-EMPTION DEVICE
- CURB RAMP
- PHASE NUMBER
- LED LUMINAIRE/ IDENTIFYING NUMBER
- CONTROLLER CABINET

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6-0

COUNTY: BUCKS

MUNICIPALITY: PERKASIE BOROUGH

INTERSECTION: CONSTITUTION AVENUE (S.R. 0152) AND WALNUT STREET

REVIEWED:

ANDREA COAXUM — MUNICIPAL OFFICIAL — DATE 10/26/17

RECOMMENDED:

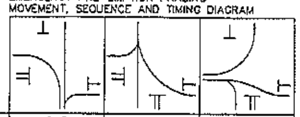
MARK L. KRAY — 6/29/09

DOUGLAS MAY — DISTRICT TRAFFIC ENGINEER — DATE 6/29/09

NO.	REVISION	DES/ DRW.	DATE	RDWG.	DATE	RECOM.	DATE
1	ADDED SIGN "J" & CHANGED PVM	RFW	9/17/08	DWM	9/17/08	DWM	9/17/08
2	NEW DRAWING	MKG	6/29/09	MKG	6/29/09	MKG	6/29/09
3	ADDED NEW ADA RAMP(ER 2013 SEC 2311)	CMX	9/30/10				
4	REVISED SW CORNER	MCM	1/7/14	NBP	2/11/14	APATEL	2/15/14
5	ADDED VIDEO DETECTION	BJD	5/13/15	"			
6	REDESIGN BRIDGE & REVISED ALL CORNERS	CEC	10/29/12	NBP	11/1/17	DLA	11/1/17
7	AS-BUILT (MAST ARM & LUMINAIRE LOCN.)	CEC	2/2/18	"	"	DLA	2/14/18
8							

SHEET 2 OF 3 | PERMIT # 61-1748 | FILE # 1748

EMERGENCY PRE-EMPTION PHASING
MOVEMENT, SEQUENCE AND TIMING DIAGRAM



PHASE	2+5				6				4			
SIGNALS \ INTERVAL	15	16	17	18	19	20	21	22	23	24	25	26
1	SELECTIVE CLEARANCE	G/G	Y①	R①	SELECTIVE CLEARANCE	R	R	R	SELECTIVE CLEARANCE	R	R	R
2		G	Y②	R②		R	R	R		R	R	R
3,4		R	R	R		G	Y	R		R	R	R
5,6		R	R	R		R	R	R		G	Y	R
7		R	R	R		R	R	R		G/G	Y	R
8		R	R	R		R	R	R		R	R	R
9		R	R	R		R	R	R		R	R	R
10,11		H	H	H		H	H	H		H	H	H
12,13		H	H	H		H	H	H		H	H	H
FIXED TIME		Δ	4	3		Δ	4	3		Δ	4	3

Δ FOR DURATION OF PRE-EMPTION

NOTE: IF PRE-EMPTION EQUIPMENT HAS ENCODING CAPABILITIES FOR VEHICLE IDENTIFICATION, IT IS RECOMMENDED TO HAVE THE ZERO "00" FEATURES ON TO GIVE UNCODED EMITTERS THE ABILITY TO ACTIVATE THE EMERGENCY PRE-EMPTION.

PRE-EMPTION OPERATION NOTES:

① G/-G IF FOLLOWED BY 2+6.
② G IF FOLLOWED BY 2+6.

EMERGENCY PRE-EMPTION NOTES:

* CONTROLLER TO BE EQUIPPED WITH EMERGENCY PRE-EMPTION FOR THE EASTBOUND AND WESTBOUND APPROACHES OF WALNUT STREET AND THE NORTHBOUND APPROACH OF CONSTITUTION AVENUE 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 THE EMERGENCY VEHICLE DETECTORS ARE TO BE FIELD ADJUSTED TO ACHIEVE MAXIMUM OPERATION.

* THE SIGNALS, WHEN ACTIVATED BY EMERGENCY VEHICLES, SHALL TERMINATE ALL GREEN INDICATIONS IMMEDIATELY, FOLLOWED BY THE COMPLETE YELLOW AND RED CLEARANCE INTERVALS, ACCORDINGLY. THEN THE GREEN INTERVAL FOR THE PRE-EMPTED PHASE SHALL FOLLOW. ONLY THOSE PHASES NOT POSING A YELLOW TRAP CONDITION MAY REMAIN GREEN (2+5) WHEN GOVERNED BY THE APPROACHING EMERGENCY VEHICLE.

* THE SIGNALS, WHEN ACTIVATED BY EMERGENCY VEHICLE SHALL TIME OUT ALL YELLOW, HAND/MAN AND RED INDICATIONS, FOLLOWED BY THE GREEN INTERVAL OF THE PRE-EMPTION PHASE COVERNED BY THE APPROACHING EMERGENCY VEHICLE.

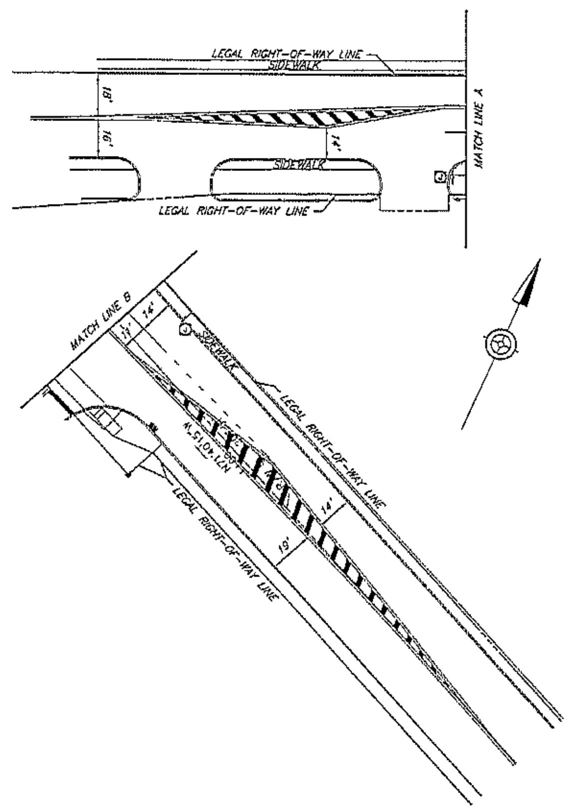
* IF THE SIGNAL HAS BEEN ACTUATED BY A PEDESTRIAN PUSH BUTTON AND THE SIGNAL IS PRE-EMPTED DURING THE "MAN" INTERVAL, THE MAN INTERVAL SHALL TERMINATE IMMEDIATELY FOLLOWED BY THE "FLASHING HAND" INDICATION IN ITS ENTIRETY, FOLLOWED BY THE APPROPRIATE SELECTIVE CLEARANCES BEFORE PROCEEDING TO THE PRE-EMPTION PHASE.

* IF THE SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE ARE FLASHING, ALL SIGNALS SHALL REMAIN FLASHING.

* IF ADDITIONAL PRE-EMPTION, PHASES ARE ACTIVATED WHILE IN PRE-EMPTION, THE ORIGINAL PRE-EMPTION PHASE SHALL TIME OUT BEFORE PROCEEDING TO THE NEXT PRE-EMPTION PHASE.

* UPON COMPLETION OF PRE-EMPTION PHASES 2, 4, OR 6 IN RETURNING TO NORMAL OPERATION, PHASE 2+6 INTERVAL 4 SHALL FOLLOW.

* IN EMERGENCY PRE-EMPTION, NO PRIORITY SHALL BE ESTABLISHED. PRE-EMPTION SHALL BE A "FIRST COME, FIRST SERVE" OPERATION.



108"

24" | Constitution Ave |

DETAIL SIGN P
N.T.S.

CLEARVIEW 1-W
REDUCED 35%
10.6" UPPER CASE
8" LOWER CASE
WHITE LEGEND ON REFLECTORIZED GREEN BACKGROUND

102"

24" | Walnut St |

DETAIL SIGN R
N.T.S.

CLEARVIEW 1-W
12" UPPER CASE
9" LOWER CASE
WHITE LEGEND ON REFLECTORIZED GREEN BACKGROUND

SCALE
25 0 25

GENERAL NOTES

NO MODIFICATIONS OF THIS INSTALLATION ARE PERMITTED UNLESS PRIOR APPROVAL IS GRANTED IN WRITING BY A REPRESENTATIVE OF THE DEPARTMENT OF TRANSPORTATION.

ALL MAINTENANCE WORK INCLUDING TRIMMING OF TREES, NECESSARY FOR PROPER VISIBILITY OF THE SIGNALS IS THE RESPONSIBILITY OF THE PERMITTEE.

ALL SIGNS AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH PUBLICATION NO. 212.

POST MOUNTED SIGNALS SHALL BE INSTALLED WITH THE SIGNAL HEADS A MINIMUM OF 2 FEET BEHIND THE FACE OF CURB OR THE EDGE OF THE SHOULDER. SUPPORT POLES FOR OVERHEAD SIGNALS SHALL ALSO HAVE A MINIMUM CLEARANCE HORIZONTALLY OF 2 FEET.

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.

EXACT LOCATION OF DETECTORS SHALL BE DETERMINED PRIOR TO INSTALLATION BY A REPRESENTATIVE OF PENNDOT.

CURBING TO BE INSTALLED BY MUNICIPALITY AND WHERE NOTED, SHALL BE PLAIN CEMENT CONCRETE CURB OR GRANITE CURB, INSTALLED IN ACCORDANCE WITH DEPARTMENT SPECIFICATIONS FORM 408.

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, DATED DECEMBER 20, 1974.

WHEN LIQUID FUELS MONEY IS USED, SIGNAL INSTALLATION MUST CONFORM TO FORM 408 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: BUCKS
MUNICIPALITY: PERKASIE BOROUGH
INTERSECTION: CONSTITUTION AVENUE (S.R. 0152)
AND WALNUT STREET

REVIEWED:

ANDREA COAXUM — 10/26/17
MUNICIPAL OFFICIAL — DATE

RECOMMENDED:

MARK L. KRAY — 6/29/09

DOUGLAS MAY — 6/29/09
DISTRICT TRAFFIC ENGINEER — DATE

NO.	REVISION	DES./REVW.	DATE	REVW.	DATE	RECOM.	DATE
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2	NEW DRAWING	MKG	6/29/09	MKG	6/29/09	MKG	6/29/09
3	ADDED NEW ADA RAMP(SR 0013 SEC CRT)	CMX	9/30/10				
4	REVISED SW CORNER	MCM	1/7/14	NBP	2/11/14	APATEL	2/15/14
5	ADDED VIDEO DETECTION	BJD	5/13/15				
6	REDESIGN BRIDGE & REVISED ALL CORNERS	CEC	10/28/17	NBP	11/1/17	DLA	11/1/17
7	AS-BUILT (MAST ARM & LUMINAIRE LCTN.)	CEC	7/2/19	NJT	7/9/19	DLA	7/4/19
8							

SHEET 3 OF 3 | PERMIT # 61-1748 | FILE # 1748

APPENDIX B

Traffic Counts

Horner & Canter Associates
Transportation and Traffic Engineering

4950 York Rd, Suite 2G, P.O. 301, Holicong, PA 18928-0301
105 Atsion Rd, Suite F, Medford, NJ 08055

NB/SB: Constitution Ave./ Business DW
EB/WB: Walnut St.
Perkasie Boro./ Bucks Co./ PA
Saturday/ Lt. Rain/ E-14/ GD

File Name : 25-038-011
Site Code : 25038011
Start Date : 6/7/2025
Page No : 1

Groups Printed- Passenger and 2 Axle Vehicles - Buses and Heavy Vehicles

	Business DW Southbound			Walnut St. Westbound			Constitution Ave. Northbound			Walnut St. Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
11:00 AM	0	0	0	23	49	0	44	0	27	0	54	59	256
11:15 AM	0	0	0	12	44	0	52	0	29	0	61	40	238
11:30 AM	0	0	0	22	42	0	45	0	26	0	51	53	239
11:45 AM	0	0	0	23	51	0	45	0	29	0	57	60	265
Total	0	0	0	80	186	0	186	0	111	0	223	212	998
12:00 PM	0	0	0	31	57	0	47	0	29	0	60	66	290
12:15 PM	0	0	0	27	39	0	45	0	31	0	62	48	252
12:30 PM	0	0	0	28	49	0	64	0	25	0	40	53	259
12:45 PM	0	0	0	30	53	0	48	0	34	0	47	55	267
Total	0	0	0	116	198	0	204	0	119	0	209	222	1068
Grand Total	0	0	0	196	384	0	390	0	230	0	432	434	2066
Apprch %	0	0	0	33.8	66.2	0	62.9	0	37.1	0	49.9	50.1	
Total %	0	0	0	9.5	18.6	0	18.9	0	11.1	0	20.9	21	
Passenger and 2 Axle Vehicles	0	0	0	193	376	0	381	0	224	0	424	428	2026
% Passenger and 2 Axle Vehicles	0	0	0	98.5	97.9	0	97.7	0	97.4	0	98.1	98.6	98.1
Buses and Heavy Vehicles	0	0	0	3	8	0	9	0	6	0	8	6	40
% Buses and Heavy Vehicles	0	0	0	1.5	2.1	0	2.3	0	2.6	0	1.9	1.4	1.9

	Business DW Southbound				Walnut St. Westbound				Constitution Ave. Northbound				Walnut St. Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:00 PM																	
12:00 PM	0	0	0	0	**31**	**57**	0	**88**	47	0	29	76	0	60	**66**	**126**	**290**
12:15 PM	0	0	0	0	27	39	0	66	45	0	31	76	0	**62**	48	110	252
12:30 PM	0	0	0	0	28	49	0	77	**64**	0	25	**89**	0	40	53	93	259
12:45 PM	0	0	0	0	30	53	0	83	48	0	**34**	82	0	47	55	102	267
Total Volume	0	0	0	0	116	198	0	314	204	0	119	323	0	209	222	431	1068
% App. Total	0	0	0		36.9	63.1	0		63.2	0	36.8		0	48.5	51.5		
PHF	.000	.000	.000	.000	.935	.868	.000	.892	.797	.000	.875	.907	.000	.843	.841	.855	.921
Passenger and 2 Axle Vehicles	0	0	0	0	113	192	0	305	200	0	115	315	0	203	220	423	1043
% Passenger and 2 Axle Vehicles	0	0	0	0	97.4	97.0	0	97.1	98.0	0	96.6	97.5	0	97.1	99.1	98.1	97.7
Buses and Heavy Vehicles	0	0	0	0	3	6	0	9	4	0	4	8	0	6	2	8	25
% Buses and Heavy Vehicles	0	0	0	0	2.6	3.0	0	2.9	2.0	0	3.4	2.5	0	2.9	0.9	1.9	2.3

Horner & Canter Associates
Transportation and Traffic Engineering

4950 York Rd, Suite 2G, P.O. 301, Holicong, PA 18928-0301
105 Atsion Rd, Suite F, Medford, NJ 08055

NB/SB: Constitution Ave.
EB/WB: Perkasie Place/ Park Access
Perkasie Boro/ Bucks Co./ PA
Tuesday/ Cloudy/ E-01/ LE

File Name : 25-038-002
Site Code : 25038002
Start Date : 5/27/2025
Page No : 1

Groups Printed- Passenger and 2 Axle Vehicles - Buses and Heavy Vehicles

	Constitution Ave. Southbound			Perkasie Place Westbound			Constitution Ave. Northbound			Park Access Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	16	38	1	4	0	6	1	23	13	1	0	2	105
07:15 AM	17	40	1	10	0	9	1	33	8	3	0	3	125
07:30 AM	15	44	1	12	0	10	0	30	14	1	0	1	128
07:45 AM	22	41	1	12	0	16	0	26	15	1	0	5	139
Total	70	163	4	38	0	41	2	112	50	6	0	11	497
08:00 AM	15	38	1	13	0	12	3	29	12	2	0	1	126
08:15 AM	9	39	3	11	0	9	2	35	11	4	0	1	124
08:30 AM	11	36	0	7	2	9	1	32	13	0	0	0	111
08:45 AM	18	33	0	11	0	17	0	26	16	3	0	2	126
Total	53	146	4	42	2	47	6	122	52	9	0	4	487
*** BREAK ***													
04:00 PM	27	34	1	27	5	36	1	54	33	1	0	2	221
04:15 PM	27	27	3	22	1	39	1	64	37	3	0	2	226
04:30 PM	40	39	0	18	0	39	1	73	22	2	1	4	239
04:45 PM	36	53	0	28	2	45	1	39	32	2	0	0	238
Total	130	153	4	95	8	159	4	230	124	8	1	8	924
05:00 PM	38	34	1	30	0	45	1	71	30	3	0	3	256
05:15 PM	42	38	2	20	0	48	2	67	29	4	1	3	256
05:30 PM	38	37	1	29	1	41	0	56	31	4	0	5	243
05:45 PM	21	38	1	25	2	35	0	55	25	2	1	2	207
Total	139	147	5	104	3	169	3	249	115	13	2	13	962
Grand Total	392	609	17	279	13	416	15	713	341	36	3	36	2870
Apprch %	38.5	59.8	1.7	39.4	1.8	58.8	1.4	66.7	31.9	48	4	48	
Total %	13.7	21.2	0.6	9.7	0.5	14.5	0.5	24.8	11.9	1.3	0.1	1.3	
Passenger and 2 Axle Vehicles	391	608	17	277	13	416	15	712	339	36	3	36	2863
% Passenger and 2 Axle Vehicles	99.7	99.8	100	99.3	100	100	100	99.9	99.4	100	100	100	99.8
Buses and Heavy Vehicles	1	1	0	2	0	0	0	1	2	0	0	0	7
% Buses and Heavy Vehicles	0.3	0.2	0	0.7	0	0	0	0.1	0.6	0	0	0	0.2

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Tuesday/ Cloudy/ E-01/ LE

File Name : 25-038-002
Site Code : 25038002
Start Date : 5/27/2025
Page No : 2

	Constitution Ave. Southbound				Perkasie Place Westbound				Constitution Ave. Northbound				Park Access Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	17	40	1	58	10	0	9	19	1	33	8	42	3	0	3	6	125
07:30 AM	15	44	1	60	12	0	10	22	0	30	14	44	1	0	1	2	128
07:45 AM	22	41	1	64	12	0	16	28	0	26	15	41	1	0	5	6	139
08:00 AM	15	38	1	54	13	0	12	25	3	29	12	44	2	0	1	3	126
Total Volume	69	163	4	236	47	0	47	94	4	118	49	171	7	0	10	17	518
% App. Total	29.2	69.1	1.7		50	0	50		2.3	69	28.7		41.2	0	58.8		
PHF	.784	.926	1.00	.922	.904	.000	.734	.839	.333	.894	.817	.972	.583	.000	.500	.708	.932
Passenger and 2 Axle Vehicles	69	163	4	236	45	0	47	92	4	118	48	170	7	0	10	17	515
% Passenger and 2 Axle Vehicles	100	100	100	100	95.7	0	100	97.9	100	100	98.0	99.4	100	0	100	100	99.4
Buses and Heavy Vehicles	0	0	0	0	2	0	0	2	0	0	1	1	0	0	0	0	3
% Buses and Heavy Vehicles	0	0	0	0	4.3	0	0	2.1	0	0	2.0	0.6	0	0	0	0	0.6
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	36	53	0	89	28	2	45	75	1	39	32	72	2	0	0	2	238
05:00 PM	38	34	1	73	30	0	45	75	1	71	30	102	3	0	3	6	256
05:15 PM	42	38	2	82	20	0	48	68	2	67	29	98	4	1	3	8	256
05:30 PM	38	37	1	76	29	1	41	71	0	56	31	87	4	0	5	9	243
Total Volume	154	162	4	320	107	3	179	289	4	233	122	359	13	1	11	25	993
% App. Total	48.1	50.6	1.2		37	1	61.9		1.1	64.9	34		52	4	44		
PHF	.917	.764	.500	.899	.892	.375	.932	.963	.500	.820	.953	.880	.813	.250	.550	.694	.970
Passenger and 2 Axle Vehicles	154	162	4	320	107	3	179	289	4	233	122	359	13	1	11	25	993
% Passenger and 2 Axle Vehicles	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Buses and Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses and Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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EB/WB: Perkasie Place/ Park Access
Perkasie Twp./ Bucks Co./ PA
Saturday/ Clear/ E-01/ LE

File Name : 25-038-012
Site Code : 25038012
Start Date : 5/31/2025
Page No : 1

Groups Printed- Passenger and 2 Axle Vehicles - Buses and Heavy Vehicles

	Constitution Ave. Southbound			Perkasie Place Westbound			Constitution Ave. Northbound			Park Access Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
11:00 AM	30	33	0	16	0	32	1	36	20	2	0	0	170
11:15 AM	33	39	0	24	0	34	1	31	30	2	0	4	198
11:30 AM	32	32	1	20	1	39	0	41	24	0	0	5	195
11:45 AM	35	39	0	20	0	37	2	40	29	4	0	3	209
Total	130	143	1	80	1	142	4	148	103	8	0	12	772
12:00 PM	33	38	0	21	0	33	0	42	24	1	0	4	196
12:15 PM	27	29	0	18	0	48	2	41	23	3	0	1	192
12:30 PM	44	35	0	21	1	42	1	38	38	2	0	5	227
12:45 PM	36	46	2	22	1	42	1	42	31	0	0	5	228
Total	140	148	2	82	2	165	4	163	116	6	0	15	843
Grand Total	270	291	3	162	3	307	8	311	219	14	0	27	1615
Apprch %	47.9	51.6	0.5	34.3	0.6	65	1.5	57.8	40.7	34.1	0	65.9	
Total %	16.7	18	0.2	10	0.2	19	0.5	19.3	13.6	0.9	0	1.7	
Passenger and 2 Axle Vehicles	270	289	3	162	3	307	8	311	219	14	0	27	1613
% Passenger and 2 Axle Vehicles	100	99.3	100	100	100	100	100	100	100	100	0	100	99.9
Buses and Heavy Vehicles	0	2	0	0	0	0	0	0	0	0	0	0	2
% Buses and Heavy Vehicles	0	0.7	0	0	0	0	0	0	0	0	0	0	0.1

	Constitution Ave. Southbound				Perkasie Place Westbound				Constitution Ave. Northbound				Park Access Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:00 PM																	
12:00 PM	33	38	0	71	21	0	33	54	0	**42**	24	66	1	0	4	5	196
12:15 PM	27	29	0	56	18	0	**48**	**66**	**2**	41	23	66	**3**	0	1	4	192
12:30 PM	**44**	35	0	79	21	**1**	42	64	1	38	**38**	**77**	2	0	**5**	**7**	227
12:45 PM	36	**46**	**2**	**84**	**22**	1	42	65	1	42	31	74	0	0	5	5	**228**
Total Volume	140	148	2	290	82	2	165	249	4	163	116	283	6	0	15	21	843
% App. Total	48.3	51	0.7		32.9	0.8	66.3		1.4	57.6	41		28.6	0	71.4		
PHF	.795	.804	.250	.863	.932	.500	.859	.943	.500	.970	.763	.919	.500	.000	.750	.750	.924
Passenger and 2 Axle Vehicles	140	147	2	289	82	2	165	249	4	163	116	283	6	0	15	21	842
% Passenger and 2 Axle Vehicles	100	99.3	100	99.7	100	100	100	100	100	100	100	100	100	0	100	100	99.9
Buses and Heavy Vehicles	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% Buses and Heavy Vehicles	0	0.7	0	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0.1

Horner & Canter Associates
Transportation and Traffic Engineering

4950 York Rd, Suite 2G, P.O. 301, Holicong, PA 18928-0301
105 Atsion Rd, Suite F, Medford, NJ 08055

NB/SB: Constitution Ave./ Business DW
EB/WB: Walnut St.
Perkasie Boro./ Bucks Co./ PA
Thursday/ Clear/ E- 06/ AC

File Name : 25-038-001 AM
Site Code : 25038001
Start Date : 6/5/2025
Page No : 1

Groups Printed- Passenger and 2 Axle Vehicle - Buses and Heavy Vehicles

	Business DW Southbound			Walnut St. Westbound			Constitution Ave. Northbound			Walnut St. Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	0	0	0	10	23	0	18	1	10	0	42	37	141
07:15 AM	0	0	0	19	43	0	31	0	12	0	50	42	197
07:30 AM	0	0	0	15	35	1	27	0	10	0	60	31	179
07:45 AM	0	0	0	18	50	0	24	0	14	0	51	43	200
Total	0	0	0	62	151	1	100	1	46	0	203	153	717
08:00 AM	0	0	0	6	33	0	22	0	13	0	43	27	144
08:15 AM	0	0	0	14	41	0	30	0	5	0	42	37	169
08:30 AM	0	0	0	19	34	0	27	0	13	0	43	37	173
08:45 AM	0	0	2	13	35	0	27	0	15	0	36	34	162
Total	0	0	2	52	143	0	106	0	46	0	164	135	648
Grand Total	0	0	2	114	294	1	206	1	92	0	367	288	1365
Apprch %	0	0	100	27.9	71.9	0.2	68.9	0.3	30.8	0	56	44	
Total %	0	0	0.1	8.4	21.5	0.1	15.1	0.1	6.7	0	26.9	21.1	
Passenger and 2 Axle Vehicle	0	0	2	103	286	1	190	1	88	0	357	272	1300
% Passenger and 2 Axle Vehicle	0	0	100	90.4	97.3	100	92.2	100	95.7	0	97.3	94.4	95.2
Buses and Heavy Vehicles	0	0	0	11	8	0	16	0	4	0	10	16	65
% Buses and Heavy Vehicles	0	0	0	9.6	2.7	0	7.8	0	4.3	0	2.7	5.6	4.8

	Business DW Southbound				Walnut St. Westbound				Constitution Ave. Northbound				Walnut St. Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	**19**	43	0	62	**31**	0	12	**43**	0	50	42	92	197
07:30 AM	0	0	0	0	15	35	**1**	51	27	0	10	37	0	**60**	31	91	179
07:45 AM	0	0	0	0	18	**50**	0	**68**	24	0	**14**	38	0	51	**43**	**94**	**200**
08:00 AM	0	0	0	0	6	33	0	39	22	0	13	35	0	43	27	70	144
Total Volume	0	0	0	0	58	161	1	220	104	0	49	153	0	204	143	347	720
% App. Total	0	0	0		26.4	73.2	0.5		68	0	32		0	58.8	41.2		
PHF	.000	.000	.000	.000	.763	.805	.250	.809	.839	.000	.875	.890	.000	.850	.831	.923	.900
Passenger and 2 Axle Vehicle	0	0	0	0	51	157	1	209	96	0	45	141	0	195	131	326	676
% Passenger and 2 Axle Vehicle	0	0	0	0	87.9	97.5	100	95.0	92.3	0	91.8	92.2	0	95.6	91.6	93.9	93.9
Buses and Heavy Vehicles	0	0	0	0	7	4	0	11	8	0	4	12	0	9	12	21	44
% Buses and Heavy Vehicles	0	0	0	0	12.1	2.5	0	5.0	7.7	0	8.2	7.8	0	4.4	8.4	6.1	6.1

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NB/SB: Constitution Ave./ Business DW
EB/WB: Walnut St.
Perkasie Boro./ Bucks Co./ PA
Thursday/ Clear/ E-01/ LE

File Name : 25-038-001 PM
Site Code : 25038001
Start Date : 6/5/2025
Page No : 1

Groups Printed- Passenger and 2 Axle Vehicles - Buses and Heavy Vehicles

	Business DW Southbound			Walnut St. Westbound			Constitution Ave. Northbound			Walnut St. Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
04:00 PM	0	0	0	21	78	3	65	0	26	0	53	46	292
04:15 PM	0	0	0	24	66	0	61	3	28	0	60	56	298
04:30 PM	0	0	0	21	76	2	64	0	36	0	68	51	318
04:45 PM	0	0	0	24	76	0	58	6	28	0	61	58	311
Total	0	0	0	90	296	5	248	9	118	0	242	211	1219
05:00 PM	0	0	0	21	83	1	77	0	29	0	49	54	314
05:15 PM	0	0	0	25	81	0	59	0	31	0	51	59	306
05:30 PM	0	0	0	30	91	0	75	0	33	0	56	44	329
05:45 PM	0	0	0	26	78	3	67	0	27	0	44	45	290
Total	0	0	0	102	333	4	278	0	120	0	200	202	1239
Grand Total	0	0	0	192	629	9	526	9	238	0	442	413	2458
Apprch %	0	0	0	23.1	75.8	1.1	68	1.2	30.8	0	51.7	48.3	
Total %	0	0	0	7.8	25.6	0.4	21.4	0.4	9.7	0	18	16.8	
Passenger and 2 Axle Vehicles	0	0	0	192	628	9	526	9	238	0	442	412	2456
% Passenger and 2 Axle Vehicles	0	0	0	100	99.8	100	100	100	100	0	100	99.8	99.9
Buses and Heavy Vehicles	0	0	0	0	1	0	0	0	0	0	0	1	2
% Buses and Heavy Vehicles	0	0	0	0	0.2	0	0	0	0	0	0	0.2	0.1

	Business DW Southbound				Walnut St. Westbound				Constitution Ave. Northbound				Walnut St. Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	24	76	0	100	58	**6**	28	92	0	**61**	58	**119**	311
05:00 PM	0	0	0	0	21	83	**1**	105	**77**	0	29	106	0	49	54	103	314
05:15 PM	0	0	0	0	25	81	0	106	59	0	31	90	0	51	**59**	110	306
05:30 PM	0	0	0	0	**30**	**91**	0	**121**	75	0	**33**	**108**	0	56	44	100	**329**
Total Volume	0	0	0	0	100	331	1	432	269	6	121	396	0	217	215	432	1260
% App. Total	0	0	0		23.1	76.6	0.2		67.9	1.5	30.6		0	50.2	49.8		
PHF	.000	.000	.000	.000	.833	.909	.250	.893	.873	.250	.917	.917	.000	.889	.911	.908	.957
Passenger and 2 Axle Vehicles	0	0	0	0	100	330	1	431	269	6	121	396	0	217	214	431	1258
% Passenger and 2 Axle Vehicles	0	0	0	0	100	99.7	100	99.8	100	100	100	100	0	100	99.5	99.8	99.8
Buses and Heavy Vehicles	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	2
% Buses and Heavy Vehicles	0	0	0	0	0	0.3	0	0.2	0	0	0	0	0	0	0.5	0.2	0.2

APPENDIX C

Level of Service Delay Thresholds

Level of Service Criteria

Level of Service at intersections is defined in terms of DELAY. Delay is a measure of driver discomfort, frustration, and lost travel time, thus the rating of delay from highly acceptable LOS A to unacceptable LOS F.

At traffic signals, delay is a complex measure and is dependent on a number of variables including signal progression, the cycle length, the green-time ratio, clearance times, trucks, pedestrians, parking, and signal phasing.

At unsignalized intersections, delay is dependent on the available gaps in the two-way flow of the uninterrupted traffic movement, intersection width, and queuing.

Intersection LOS

	Signalized	Unsignalized
LOS A	Less than 10.0 sec/veh	Less than 10.0 sec/veh
B	10.0 to 20.0 sec/veh	10.0 to 15.0 sec/veh
C	20.0 to 35.0 sec/veh	15.0 to 25.0 sec/veh
D	35.0 to 55.0 sec/veh	25.0 to 35.0 sec/veh
E	55.0 to 80.0 sec/veh	35.0 to 50.0 sec/veh
F	Greater than 80.0 sec/veh	Greater than 50.0 sec/veh

LEVEL OF SERVICE FOR SIGNALIZED INTERSECTIONS

Level of service for signalized intersections is defined in terms of delay. Delay is a measure of driver discomfort, frustration, fuel consumption, and lost travel time.

- **LEVEL-OF-SERVICE A** describes operations with very low delay, i.e., less than 10.0 sec per vehicle. This occurs when progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.

- **LEVEL-OF-SERVICE B** describes operations with delay in the range of 10.0 to 20.0 sec per vehicle. This generally occurs with good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.

- **LEVEL-OF-SERVICE C** describes operations with delay in the range of 20.0 to 35.0 sec per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.

- **LEVEL-OF-SERVICE D** describes operations with delay in the range of 35.0 to 55.0 sec per vehicle. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

- **LEVEL-OF-SERVICE E** describes operations with delay in the range of 55.0 to 80.0 sec per vehicle. This is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.

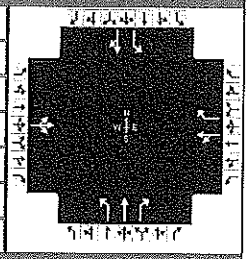
- **LEVEL-OF-SERVICE F** describes operations with delay in excess of 80.0 sec per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with over saturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high v/c ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

APPENDIX D

Existing Capacity/LOS Analysis Worksheets

HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Horner & Canter Assoc			Duration, h	0.250
Analyst	DHH	Analysis Date	Jul 7, 2025	Area Type	Other
Jurisdiction	Perkasie Borough	Time Period	AM Peak Hour	PHF	0.93
Urban Street		Analysis Year	Existing	Analysis Period	1> 7:00
Intersection	Constitution Ave/Perkasi...	File Name	Constitution Ave_Perkasie Square_ea.xus		
Project Description	25-038 Perkasie Place				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	7	0	10	47	0	47	4	118	49	69	163	4

Signal Information			
Cycle, s	85.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	7.0	7.0	27.0	20.0	0.0	0.0						
Yellow	4.0	4.0	4.0	4.0	0.0	0.0						
Red	2.0	2.0	2.0	2.0	0.0	0.0						

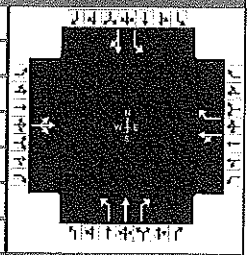
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		8.0		7.0	1.1	3.0	1.1	4.0
Phase Duration, s		26.0		26.0	13.0	33.0	26.0	46.0
Change Period, ($Y+R_c$), s		6.0		6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s		3.5		3.5	3.1	3.1	3.1	3.1
Queue Clearance Time (g_s), s		3.2		23.5	2.6	6.7	4.0	7.4
Green Extension Time (g_e), s		0.2		0.0	0.0	0.6	0.1	0.6
Phase Call Probability		1.00		1.00	1.00	1.00	1.00	1.00
Max Out Probability		0.00		1.00	0.03	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		18			51	40	4	127	42	74	180	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1767			1311	1508	1750	1837	1594	1714	1792	
Queue Service Time (g_s), s		0.0			1.9	1.7	0.1	4.2	1.5	1.5	4.9	
Cycle Queue Clearance Time (g_c), s		0.7			2.6	1.7	0.1	4.2	1.5	1.5	4.9	
Green Ratio (*g/C*)		0.25			0.25	0.25	0.42	0.33	0.33	0.61	0.48	
Capacity (*c*), veh/h		496			409	373	646	605	525	867	865	
Volume-to-Capacity Ratio (*X*)		0.037			0.124	0.107	0.007	0.210	0.080	0.086	0.208	
Back of Queue (*Q*), ft/ln (95 th percentile)		13			38	29	2	78	25	22	82	
Back of Queue (*Q*), veh/ln (95 th percentile)		0.5			1.5	1.2	0.1	3.1	1.0	0.9	3.3	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh		24.3			25.1	24.7	14.2	20.9	19.6	7.2	12.7	
Incremental Delay (d_2), s/veh		0.0			0.0	0.0	0.0	0.1	0.0	0.0	0.0	
Initial Queue Delay (d_3), s/veh		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh		24.4			25.1	24.8	14.2	20.9	19.7	7.2	12.7	
Level of Service (LOS)		C			C	C	B	C	B	A	B	
Approach Delay, s/veh / LOS	24.4	C		25.0	C		20.5	C		11.1	B	
Intersection Delay, s/veh / LOS	16.9						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.13	B	1.93	B	1.93	B	1.67	B
Bicycle LOS Score / LOS	0.52	A	0.64	A	0.77	A	0.91	A

HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Horner & Canter Assoc			Duration, h	0.250
Analyst	DHH	Analysis Date	Jul 7, 2025	Area Type	Other
Jurisdiction	Perkasie Borough	Time Period	PM Peak Hour	PHF	0.97
Urban Street		Analysis Year	Existing	Analysis Period	1> 7:00
Intersection	Constitution Ave/Perkasi...	File Name	Constitution Ave_Perkasie Square_ep.xus		
Project Description	25-038 Perkasie Place				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	13	1	11	107	3	179	4	233	122	154	162	4

Signal Information			
Cycle, s	111.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	7.0	7.0	48.0	25.0	0.0	0.0	1	2	3	4		
Yellow	4.0	4.0	4.0	4.0	0.0	0.0						
Red	2.0	2.0	2.0	2.0	0.0	0.0	5	6	7	8		

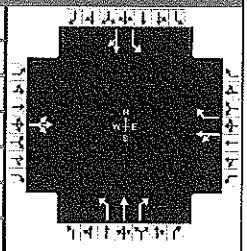
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		8.0		7.0	1.1	3.0	1.1	4.0
Phase Duration, s		31.0		31.0	13.0	54.0	26.0	67.0
Change Period, ($Y+R_c$), s		6.0		6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s		3.5		3.5	3.1	3.1	3.1	3.1
Queue Clearance Time (g_s), s		3.7		28.5	2.6	11.8	6.4	7.7
Green Extension Time (g_e), s		0.6		0.0	0.0	0.9	0.2	0.9
Phase Call Probability		1.00		1.00	1.00	1.00	1.00	1.00
Max Out Probability		0.00		1.00	0.03	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		26			113	143	4	240	95	159	171	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1728			1362	1508	1750	1837	1619	1714	1792	
Queue Service Time (g_s), s		0.0			6.5	8.9	0.1	9.3	3.9	3.9	5.2	
Cycle Queue Clearance Time (g_c), s		1.2			7.7	8.9	0.1	9.3	3.9	3.9	5.2	
Green Ratio (*g/C*)		0.23			0.23	0.23	0.51	0.44	0.44	0.65	0.56	
Capacity (*c*), veh/h		454			383	353	735	811	715	803	1001	
Volume-to-Capacity Ratio (*X*)		0.057			0.296	0.406	0.006	0.296	0.133	0.198	0.171	
Back of Queue (*Q*), ft/ln (95 th percentile)		25			119	154	2	176	64	60	90	
Back of Queue (*Q*), veh/ln (95 th percentile)		1.0			4.8	6.1	0.1	7.0	2.6	2.4	3.6	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh		33.0			35.5	36.0	13.2	20.2	18.4	8.1	12.0	
Incremental Delay (d_2), s/veh		0.0			0.2	0.3	0.0	0.1	0.0	0.0	0.0	
Initial Queue Delay (d_3), s/veh		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh		33.0			35.6	36.2	13.2	20.3	18.4	8.1	12.0	
Level of Service (LOS)		C			D	D	B	C	B	A	B	
Approach Delay, s/veh / LOS	33.0	C		36.0	D		19.7	B		10.1	B	
Intersection Delay, s/veh / LOS	21.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.17	B	1.94	B	1.97	B	1.67	B
Bicycle LOS Score / LOS	0.53	A	0.91	A	1.05	A	1.03	A

HCS Signalized Intersection Results Summary

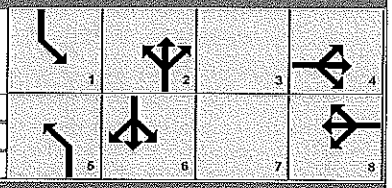
General Information				Intersection Information	
Agency	Horner & Canter Assoc			Duration, h	0.250
Analyst	DHH	Analysis Date	Jul 7, 2025	Area Type	Other
Jurisdiction	Perkasie Borough	Time Period	SAT Peak Hour	PHF	0.92
Urban Street		Analysis Year	Existing	Analysis Period	1> 7:00
Intersection	Constitution Ave/Perkasi...	File Name	Constitution Ave_Perkasie Square_es.xus		
Project Description	25-038 Perkasie Place				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	6	0	15	82	2	165	4	163	116	140	148	2

Signal Information			
Cycle, s	85.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	7.0	7.0	27.0	20.0	0.0	0.0	
Yellow	4.0	4.0	4.0	4.0	0.0	0.0	
Red	2.0	2.0	2.0	2.0	0.0	0.0	



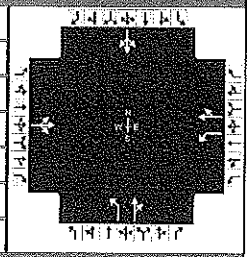
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		8.0		7.0	1.1	3.0	1.1	4.0
Phase Duration, s		26.0		26.0	13.0	33.0	26.0	46.0
Change Period, ($Y+R_c$), s		6.0		6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s		3.6		3.6	3.1	3.1	3.1	3.1
Queue Clearance Time (g_s), s		3.4		23.5	2.6	8.6	5.8	6.9
Green Extension Time (g_e), s		0.5		0.0	0.0	0.7	0.2	0.8
Phase Call Probability		1.00		1.00	1.00	1.00	1.00	1.00
Max Out Probability		0.00		1.00	0.03	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (v), veh/h		23			91	141	4	177	88	152	163	
Adjusted Saturation Flow Rate (s), veh/h/ln		1797			1356	1508	1750	1837	1619	1714	1782	
Queue Service Time (g_s), s		0.0			3.8	6.6	0.1	6.1	3.3	3.3	4.4	
Cycle Queue Clearance Time (g_c), s		0.9			4.6	6.6	0.1	6.1	3.3	3.3	4.4	
Green Ratio (g/C)		0.25			0.25	0.25	0.42	0.33	0.33	0.61	0.48	
Capacity (c), veh/h		498			419	373	652	605	533	824	859	
Volume-to-Capacity Ratio (X)		0.046			0.218	0.379	0.007	0.293	0.165	0.185	0.190	
Back of Queue (Q), ft/ln (95 th percentile)		16			69	110	2	113	54	47	75	
Back of Queue (Q), veh/ln (95 th percentile)		0.7			2.8	4.4	0.1	4.5	2.1	1.9	3.0	
Queue Storage Ratio (RQ) (95 th percentile)		0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh		24.4			25.8	26.6	14.2	21.5	20.2	7.7	12.5	
Incremental Delay (d_2), s/veh		0.0			0.1	0.2	0.0	0.1	0.1	0.0	0.0	
Initial Queue Delay (d_3), s/veh		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (d), s/veh		24.4			25.9	26.8	14.2	21.6	20.3	7.8	12.6	
Level of Service (LOS)		C			C	C	B	C	C	A	B	
Approach Delay, s/veh / LOS	24.4	C		26.5	C		21.0	C		10.3	B	
Intersection Delay, s/veh / LOS	18.6						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.17	B	1.93	B	1.97	B	1.67	B
Bicycle LOS Score / LOS	0.53	A	0.87	A	0.93	A	1.01	A

HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Horner & Canter Assoc			Duration, h	0.250
Analyst	DHH	Analysis Date	Jul 7, 2025	Area Type	Other
Jurisdiction	Perkasie Borough	Time Period	AM Peak Hour	PHF	0.90
Urban Street		Analysis Year	Existing	Analysis Period	1> 7:00
Intersection	Constitution Ave/Walnut...	File Name	Constitution Ave_Walnut Street_ea.xus		
Project Description	25-038 Perkasie Place				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	1	204	143	58	161	1	104	0	49	0	0	0

Signal Information			
Cycle, s	86.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

							1	2	3	4
Green	23.0	7.0	35.0	0.0	0.0	0.0	5	6	7	8
Yellow	4.0	4.0	4.0	0.0	0.0	0.0				
Red	3.0	3.0	3.0	0.0	0.0	0.0				

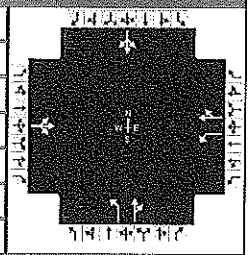
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4	3	8		2		6
Case Number		8.3	1.0	4.0		6.0		8.0
Phase Duration, s		42.0	14.0	56.0		30.0		30.0
Change Period, ($Y+R_c$), s		7.0	7.0	7.0		7.0		7.0
Max Allow Headway (MAH), s		3.2	3.1	3.2		3.1		0.0
Queue Clearance Time (g_s), s		14.6	4.2	6.3		26.5		
Green Extension Time (g_e), s		1.0	0.0	1.1		0.0		0.0
Phase Call Probability		1.00	1.00	1.00		1.00		
Max Out Probability		0.00	1.00	0.00		1.00		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (v), veh/h		348		64	180		116	54			0	
Adjusted Saturation Flow Rate (s), veh/h/ln		1789		1587	1864		1607	1483			1650	
Queue Service Time (g_s), s		0.0		1.7	3.8		4.8	2.4			0.0	
Cycle Queue Clearance Time (g_c), s		12.1		1.7	3.8		4.8	2.4			0.0	
Green Ratio (g/C)		0.42		0.54	0.58		0.28	0.28			0.37	
Capacity (c), veh/h		791		502	1084		532	414				
Volume-to-Capacity Ratio (X)		0.440		0.128	0.166		0.217	0.132			0.000	
Back of Queue (Q), ft/ln (95 th percentile)		222		26	64		85	38			0	
Back of Queue (Q), veh/ln (95 th percentile)		8.5		1.0	2.5		3.2	1.4			0.0	
Queue Storage Ratio (RQ) (95 th percentile)		0.00		0.00	0.00		0.00	0.00			0.00	
Uniform Delay (d_1), s/veh		18.0		10.8	8.3		24.1	23.2				
Incremental Delay (d_2), s/veh		0.1		0.0	0.0		0.1	0.1			0.0	
Initial Queue Delay (d_3), s/veh		0.0		0.0	0.0		0.0	0.0			0.0	
Control Delay (d), s/veh		18.2		10.8	8.4		24.2	23.3				
Level of Service (LOS)		B		B	A		C	C				
Approach Delay, s/veh / LOS	18.2	B		9.0	A		23.9	C		0.0		
Intersection Delay, s/veh / LOS	16.5						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.91	B	1.66	B	1.92	B	1.75	B
Bicycle LOS Score / LOS	1.06	A	0.89	A	0.77	A	0.49	A

HCS Signalized Intersection Results Summary

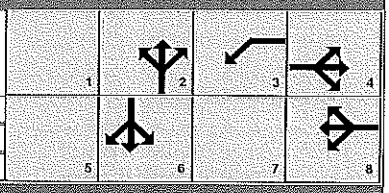
General Information				Intersection Information	
Agency	Horner & Canter Assoc			Duration, h	0.250
Analyst	DHH	Analysis Date	Jul 7, 2025	Area Type	Other
Jurisdiction	Perkasie Borough	Time Period	PM Peak Hour	PHF	0.96
Urban Street		Analysis Year	Existing	Analysis Period	1> 7:00
Intersection	Constitution Ave/Walnut...	File Name	Constitution Ave_Walnut Street_ep.xus		
Project Description	25-038 Perkasie Place				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	1	217	215	100	331	1	269	6	121	0	0	0

Signal Information			
Cycle, s	93.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	19.0	14.0	39.0	0.0	0.0	0.0
Yellow	4.0	4.0	4.0	0.0	0.0	0.0
Red	3.0	3.0	3.0	0.0	0.0	0.0



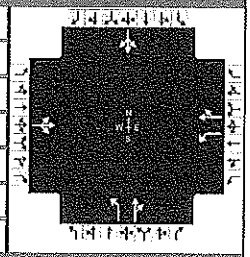
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4	3	8		2		6
Case Number		8.3	1.0	4.0		6.0		8.0
Phase Duration, s		46.0	21.0	67.0		26.0		26.0
Change Period, (*Y*+*R c*), s		7.0	7.0	7.0		7.0		7.0
Max Allow Headway (*MAH*), s		3.2	3.1	3.2		3.1		0.0
Queue Clearance Time (*g s*), s		17.3	4.7	9.6		16.8		
Green Extension Time (*g e*), s		1.5	0.1	1.6		0.2		0.0
Phase Call Probability		1.00	1.00	1.00		1.00		
Max Out Probability		0.00	0.00	0.00		1.00		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		399		104	346		280	132			0	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1830		1750	1910		1714	1593			0	
Queue Service Time (*g s*), s		0.0		2.2	7.1		14.3	6.6			0.0	
Cycle Queue Clearance Time (*g c*), s		14.8		2.2	7.1		14.3	6.6			0.0	
Green Ratio (*g*/*C*)		0.43		0.62	0.66		0.22	0.22				
Capacity (*c*), veh/h		826		637	1253		446	343				
Volume-to-Capacity Ratio (*X*)		0.483		0.163	0.276		0.628	0.386			0.000	
Back of Queue (*Q*), ft/ln (95 th percentile)		258		34	110		251	112			0	
Back of Queue (*Q*), veh/ln (95 th percentile)		10.3		1.3	4.4		10.0	4.5			0.0	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00		0.00	0.00		0.00	0.00			0.00	
Uniform Delay (*d 1*), s/veh		19.3		9.0	6.7		34.2	31.2				
Incremental Delay (*d 2*), s/veh		0.2		0.0	0.0		2.1	0.3			0.0	
Initial Queue Delay (*d 3*), s/veh		0.0		0.0	0.0		0.0	0.0			0.0	
Control Delay (*d*), s/veh		19.5		9.0	6.8		36.4	31.5				
Level of Service (LOS)		B		A	A		D	C				
Approach Delay, s/veh / LOS	19.5	B		7.3	A		34.8	C		0.0		
Intersection Delay, s/veh / LOS	20.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.91	B	1.64	B	1.93	B	1.78	B
Bicycle LOS Score / LOS	1.15	A	1.23	A	1.17	A	0.49	A

HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Horner & Canter Assoc			Duration, h	0.250
Analyst	DHH	Analysis Date	Jul 7, 2025	Area Type	Other
Jurisdiction	Perkasie Borough	Time Period	SAT Peak Hour	PHF	0.92
Urban Street		Analysis Year	Existing	Analysis Period	1> 7:00
Intersection	Constitution Ave/Walnut...	File Name	Constitution Ave_Walnut Street_es.xus		
Project Description	25-038 Perkasie Place				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	1	209	222	116	198	1	204	0	119	0	0	0

Signal Information			
Cycle, s	86.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

							1	2	3	4
Green	23.0	7.0	35.0	0.0	0.0	0.0				
Yellow	4.0	4.0	4.0	0.0	0.0	0.0				
Red	3.0	3.0	3.0	0.0	0.0	0.0	5	6	7	8

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4	3	8		2		6
Case Number		8.3	1.0	4.0		6.0		8.0
Phase Duration, s		42.0	14.0	56.0		30.0		30.0
Change Period, ($Y+R_c$), s		7.0	7.0	7.0		7.0		7.0
Max Allow Headway (MAH), s		3.2	3.1	3.2		3.2		0.0
Queue Clearance Time (g_s), s		17.1	5.6	7.2		11.9		
Green Extension Time (g_e), s		1.3	0.0	1.3		0.5		0.0
Phase Call Probability		1.00	1.00	1.00		1.00		
Max Out Probability		0.00	1.00	0.00		0.00		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (v), veh/h		410		126	216		222	129			0	
Adjusted Saturation Flow Rate (s), veh/h/ln		1813		1709	1865		1688	1544			0	
Queue Service Time (g_s), s		0.0		3.1	4.7		9.4	5.7			0.0	
Cycle Queue Clearance Time (g_c), s		14.6		3.1	4.7		9.4	5.7			0.0	
Green Ratio (g/C)		0.42		0.54	0.58		0.28	0.28				
Capacity (c), veh/h		801		489	1084		555	431				
Volume-to-Capacity Ratio (X)		0.512		0.258	0.200		0.400	0.300			0.000	
Back of Queue (Q), ft/ln (95 th percentile)		254		50	78		166	92			0	
Back of Queue (Q), veh/ln (95 th percentile)		10.0		1.9	3.0		6.5	3.6			0.0	
Queue Storage Ratio (RQ) (95 th percentile)		0.00		0.00	0.00		0.00	0.00			0.00	
Uniform Delay (d_1), s/veh		18.8		11.7	8.5		25.7	24.4				
Incremental Delay (d_2), s/veh		0.2		0.1	0.0		0.2	0.1			0.0	
Initial Queue Delay (d_3), s/veh		0.0		0.0	0.0		0.0	0.0			0.0	
Control Delay (d), s/veh		19.0		11.8	8.6		25.9	24.5				
Level of Service (LOS)		B		B	A		C	C				
Approach Delay, s/veh / LOS	19.0	B		9.8	A		25.4	C		0.0		
Intersection Delay, s/veh / LOS	18.2						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.91	B	1.66	B	1.92	B	1.77	B
Bicycle LOS Score / LOS	1.16	A	1.05	A	1.07	A	0.49	A

APPENDIX E

Trip Generation Worksheets

Multifamily Housing (Low-Rise)
Not Close to Rail Transit (220)

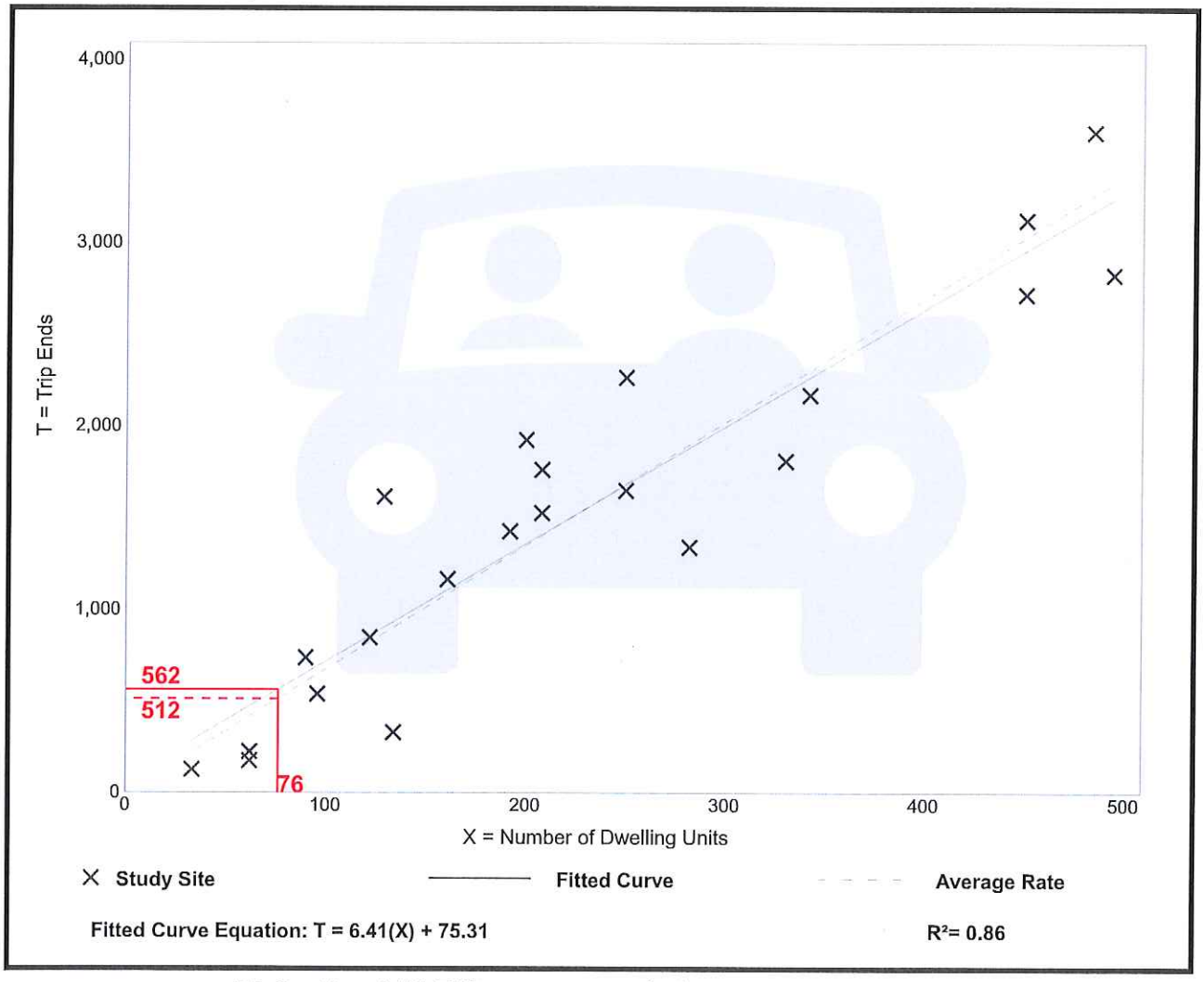
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 22
Avg. Num. of Dwelling Units: 229
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
6.74	2.46 - 12.50	1.79

Data Plot and Equation



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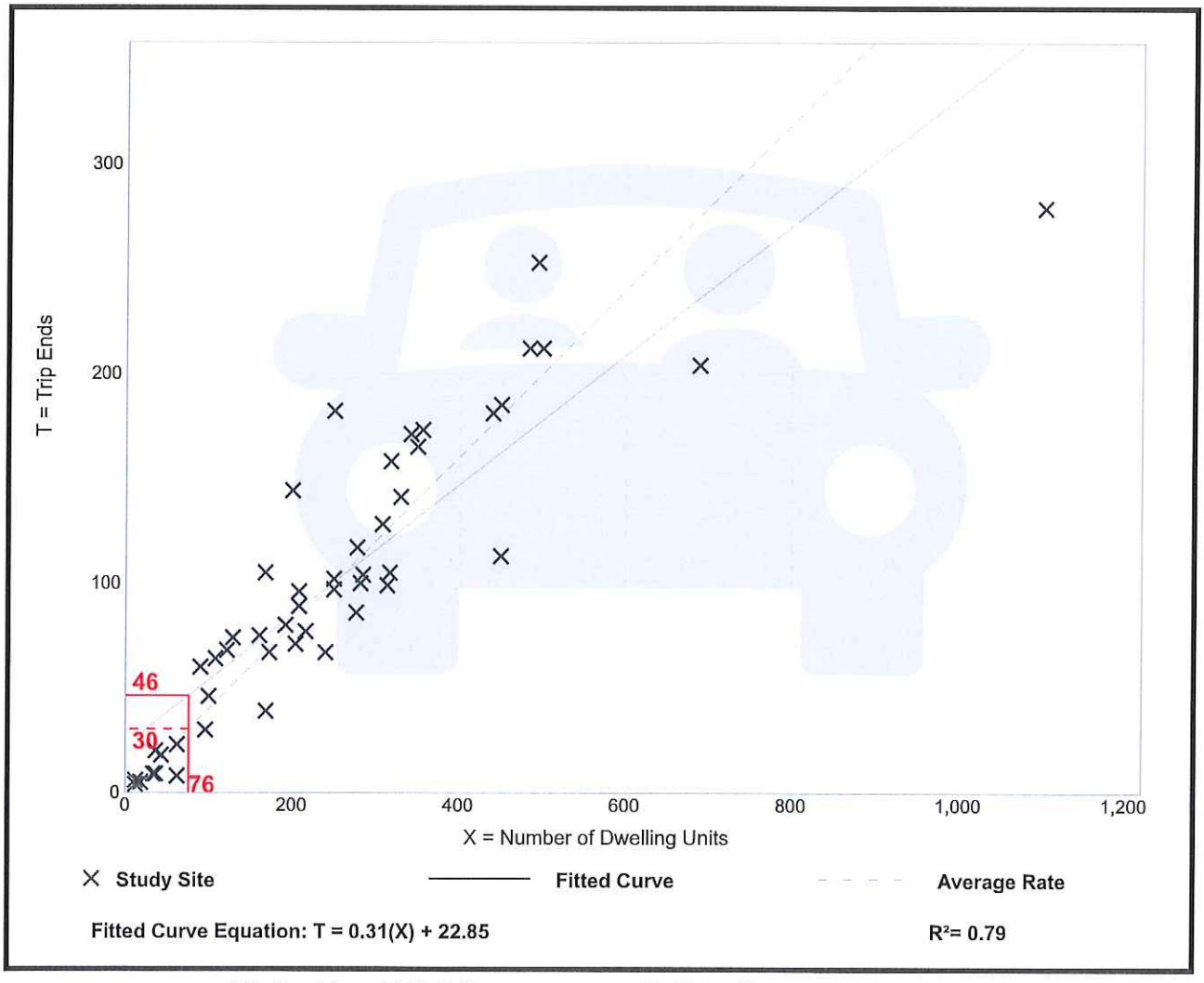
Multifamily Housing (Low-Rise)
Not Close to Rail Transit (220)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 49
Avg. Num. of Dwelling Units: 249
Directional Distribution: 24% entering, 76% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.40	0.13 - 0.73	0.12

Data Plot and Equation



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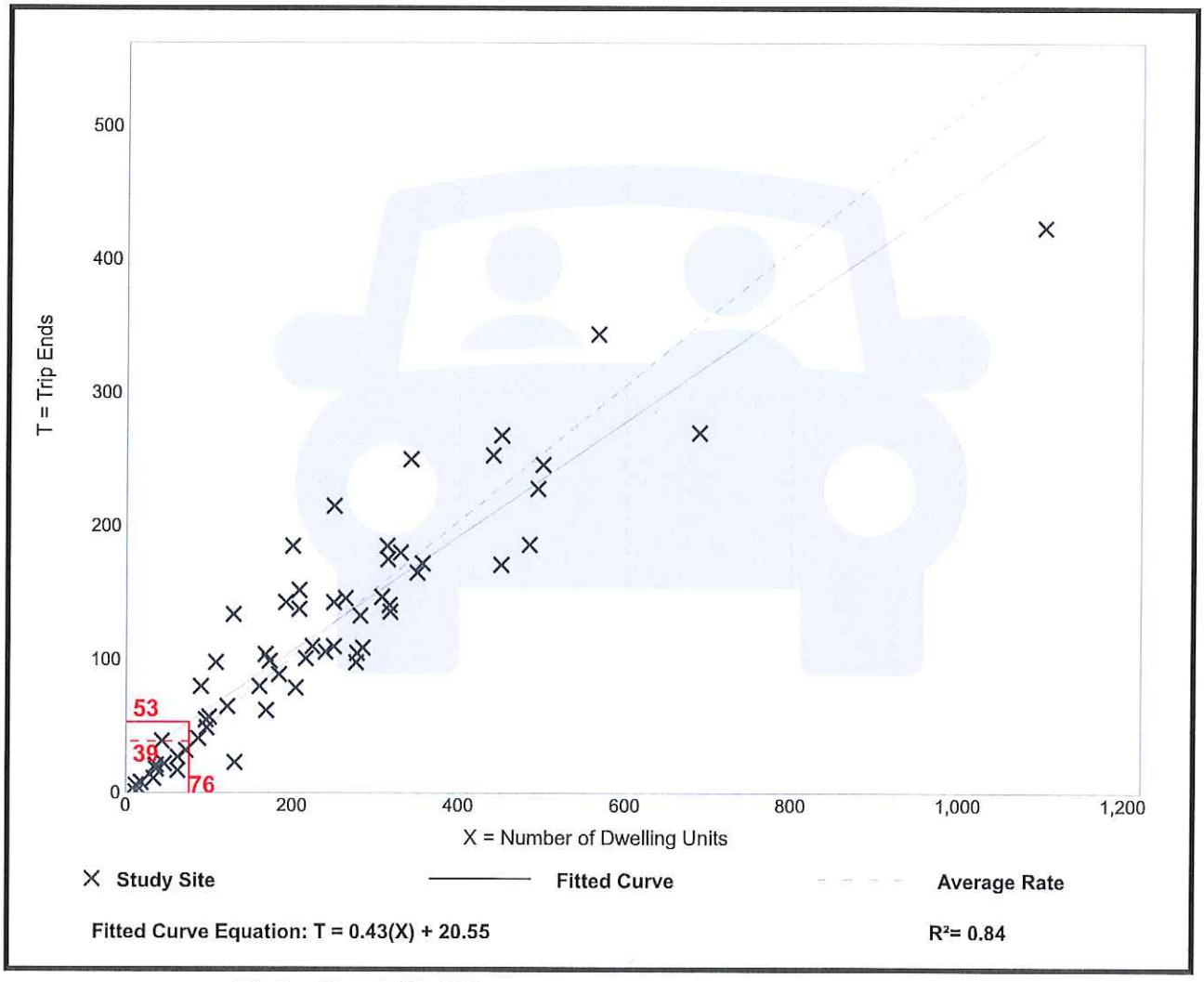
Multifamily Housing (Low-Rise)
Not Close to Rail Transit (220)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 59
Avg. Num. of Dwelling Units: 241
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.51	0.08 - 1.04	0.15

Data Plot and Equation



Multifamily Housing (Low-Rise)
Not Close to Rail Transit (220)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Saturday, Peak Hour of Generator**

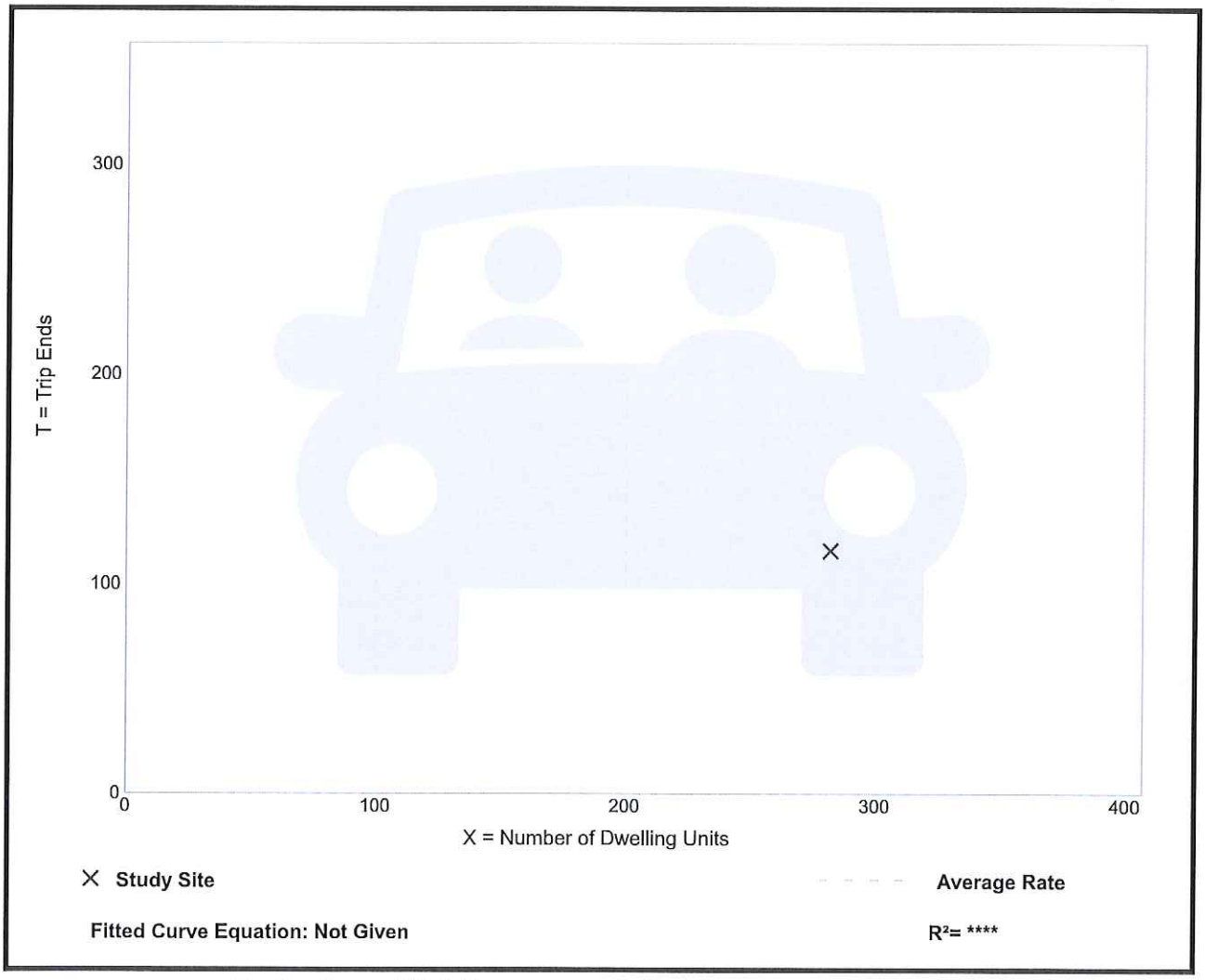
Setting/Location: **General Urban/Suburban**
Number of Studies: 1
Avg. Num. of Dwelling Units: 282
Directional Distribution: Not Available

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.41	0.41 - 0.41	*

Data Plot and Equation

Caution – Small Sample Size



Strip Retail Plaza (<40k)
(822)

Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday**

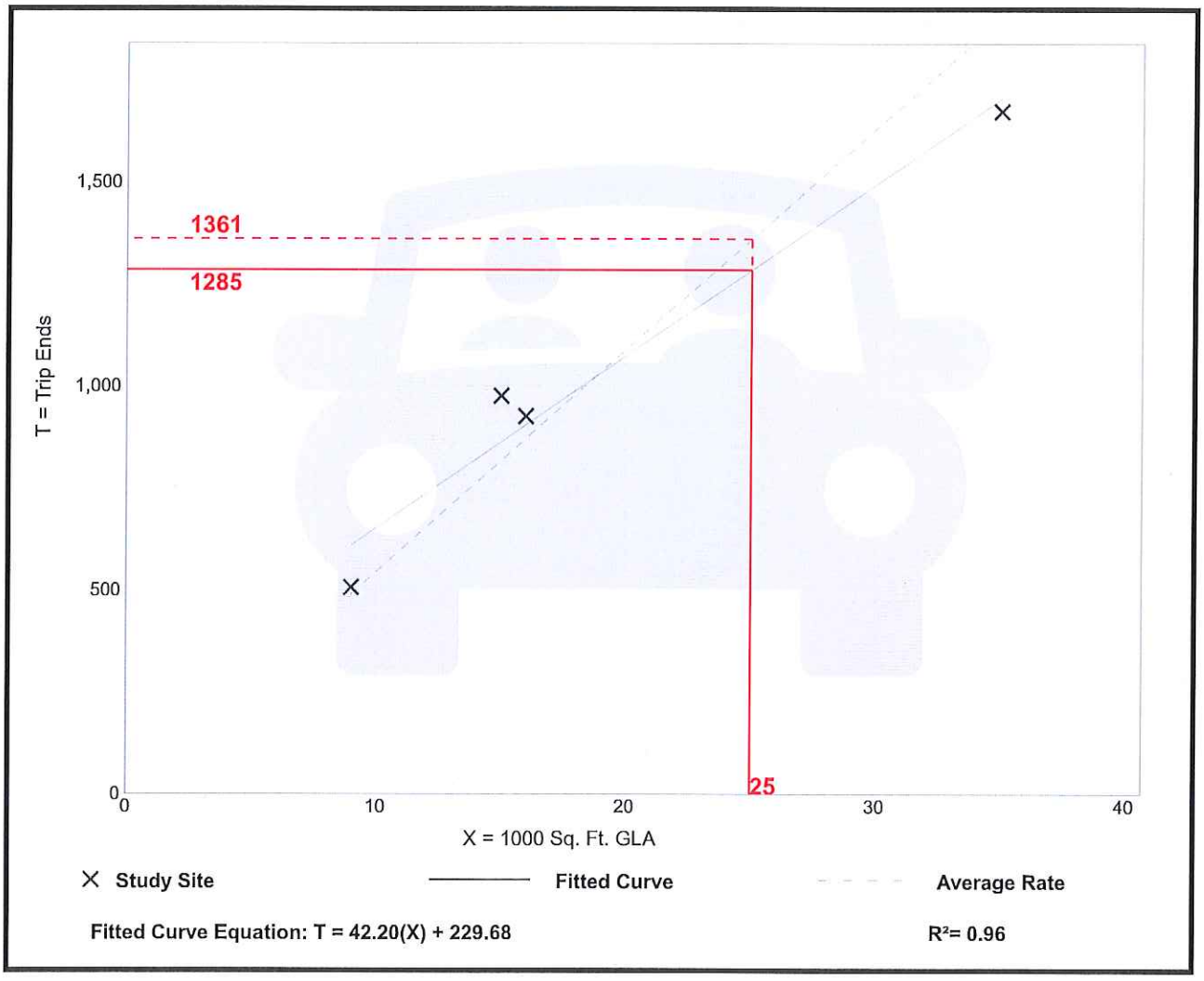
Setting/Location: **General Urban/Suburban**
Number of Studies: 4
Avg. 1000 Sq. Ft. GLA: 19
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
54.45	47.86 - 65.07	7.81

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: T = 42.20(X) + 229.68

R^2= 0.96

Strip Retail Plaza (<40k)
(822)

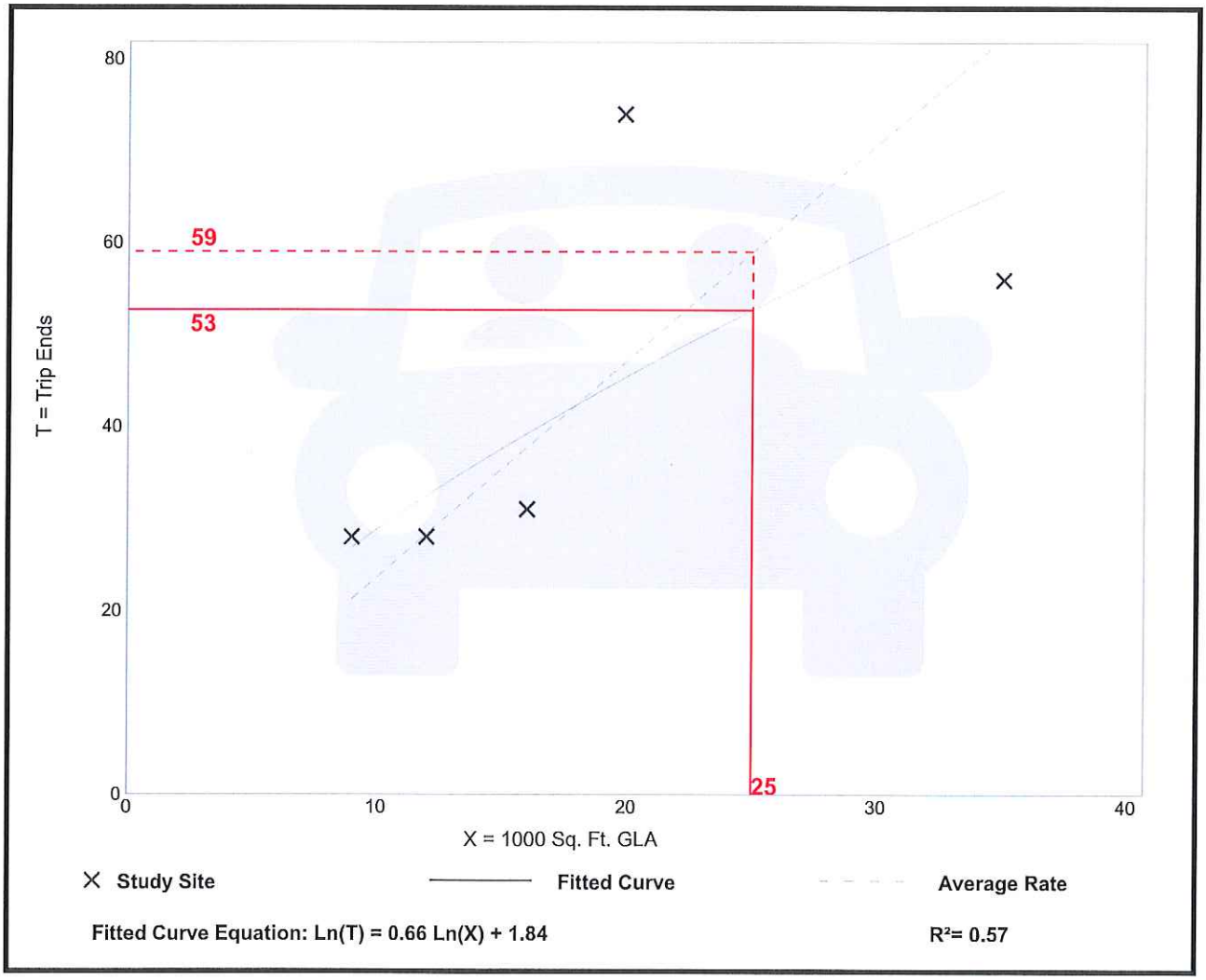
Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 5
Avg. 1000 Sq. Ft. GLA: 18
Directional Distribution: 60% entering, 40% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
2.36	1.60 - 3.73	0.94

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Ln(T) = 0.66 Ln(X) + 1.84

R^2= 0.57

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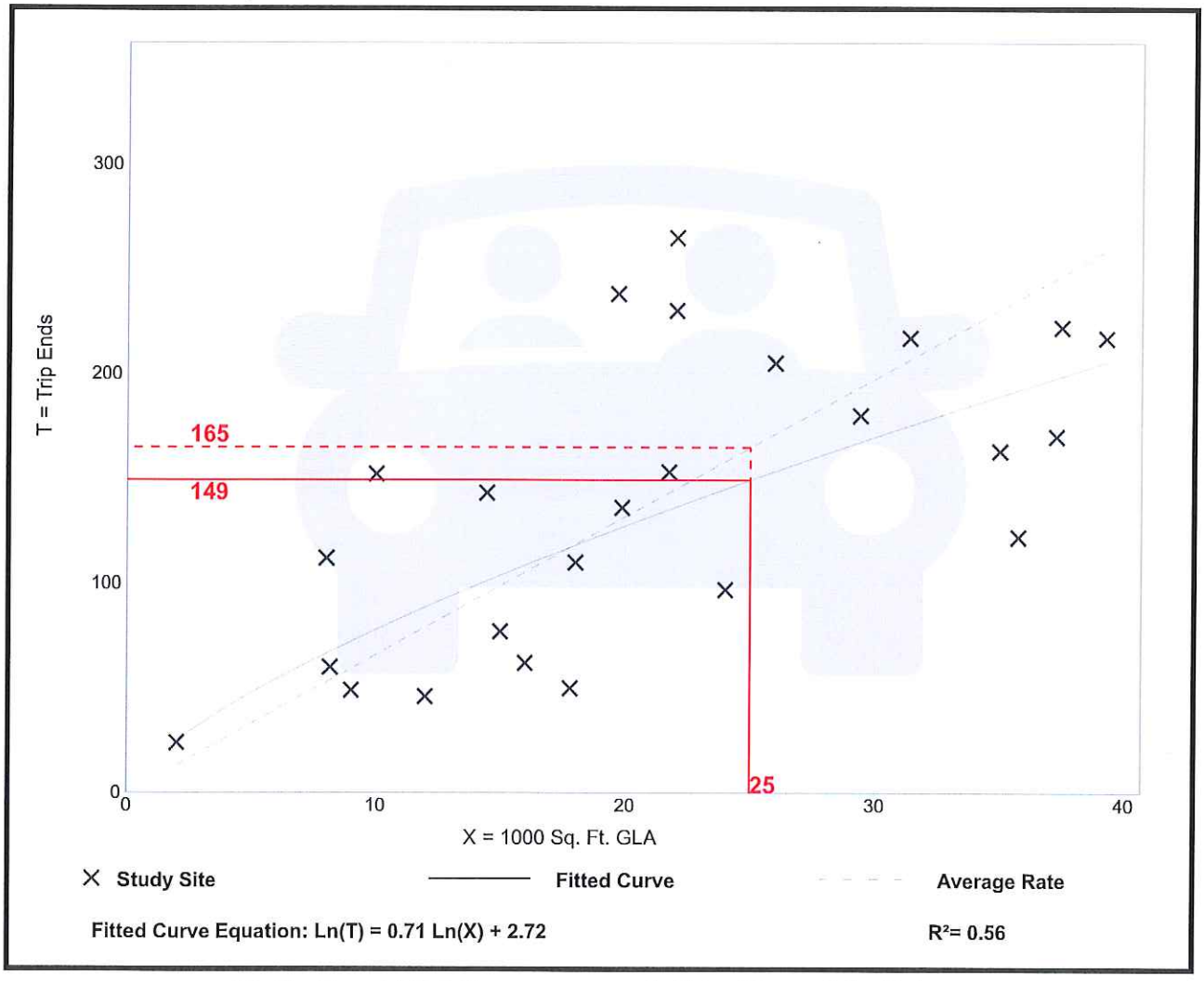
Strip Retail Plaza (<40k)
(822)

Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 25
Avg. 1000 Sq. Ft. GLA: 21
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
6.59	2.81 - 15.20	2.94

Data Plot and Equation



Strip Retail Plaza (<40k)
(822)

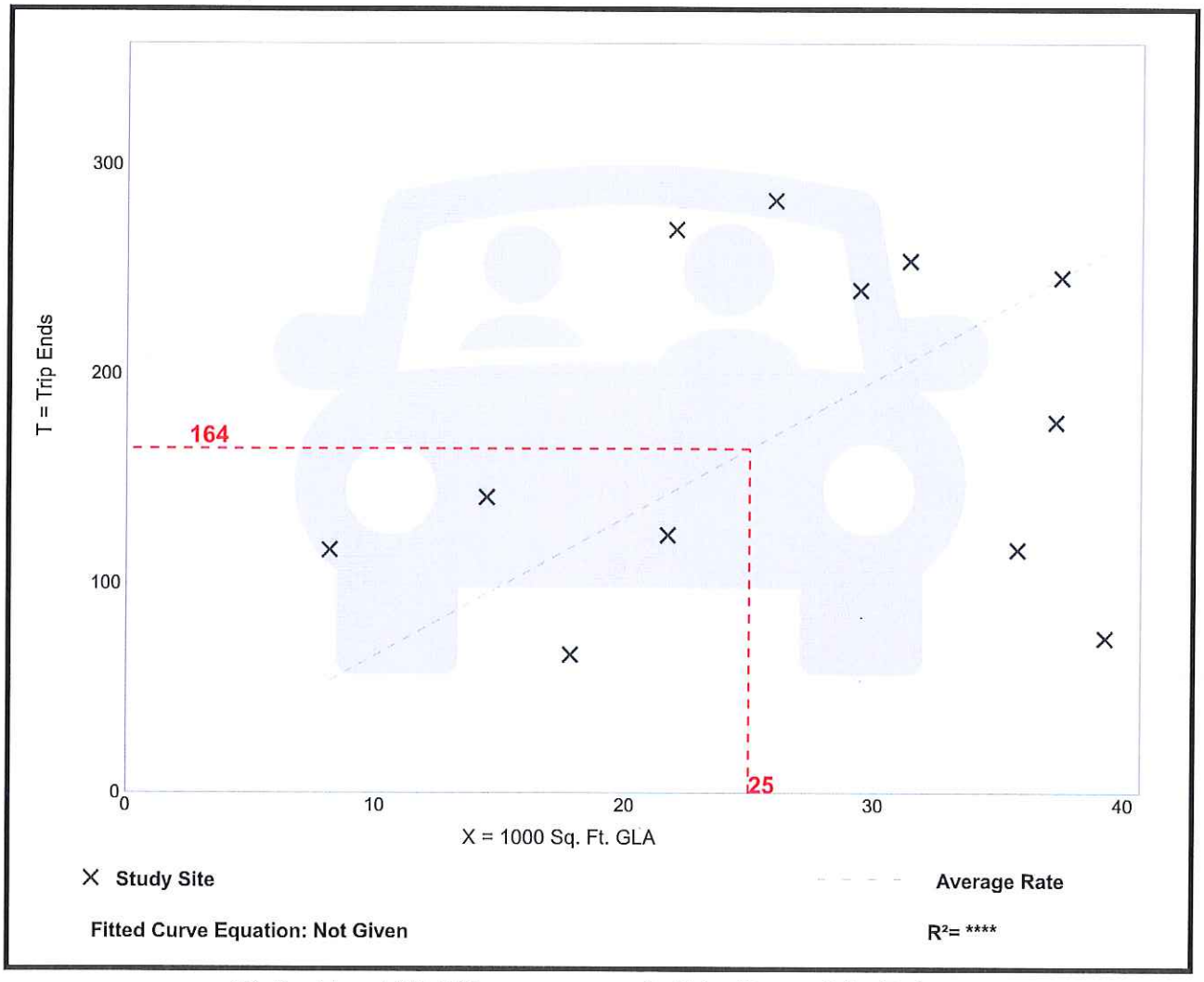
Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Saturday, Peak Hour of Generator**

Setting/Location: **General Urban/Suburban**
Number of Studies: 12
Avg. 1000 Sq. Ft. GLA: 27
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
6.57	1.88 - 14.23	3.45

Data Plot and Equation



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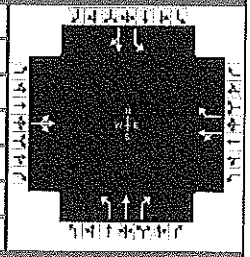
APPENDIX F

No-Build Capacity/LOS Analysis Worksheets

HCS Signalized Intersection Results Summary

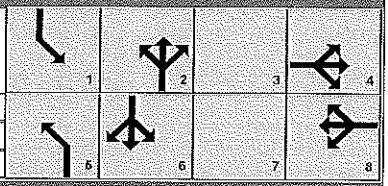
General Information				Intersection Information	
Agency	Horner & Canter Assoc			Duration, h	0.250
Analyst	DHH	Analysis Date	Jul 7, 2025	Area Type	Other
Jurisdiction	Perkasie Borough	Time Period	AM Peak Hour	PHF	0.93
Urban Street		Analysis Year	2028 No-Build	Analysis Period	1> 7:00
Intersection	Constitution Ave/Perkasi...	File Name	Constitution Ave_Perkasie Square_na.xus		
Project Description	25-038 Perkasie Place				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	7	0	10	47	0	47	4	118	49	69	164	4

Signal Information			
Cycle, s	85.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	7.0	7.0	27.0	20.0	0.0	0.0
Yellow	4.0	4.0	4.0	4.0	0.0	0.0
Red	2.0	2.0	2.0	2.0	0.0	0.0



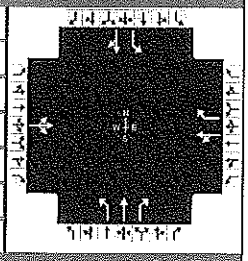
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		8.0		7.0	1.1	3.0	1.1	4.0
Phase Duration, s		26.0		26.0	13.0	33.0	26.0	46.0
Change Period, ($Y+R_c$), s		6.0		6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s		3.5		3.5	3.1	3.1	3.1	3.1
Queue Clearance Time (g_s), s		3.2		5.1	2.6	6.7	4.0	7.4
Green Extension Time (g_e), s		0.2		0.2	0.0	0.6	0.1	0.6
Phase Call Probability		1.00		1.00	1.00	1.00	1.00	1.00
Max Out Probability		0.00		0.00	0.03	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		18			51	40	4	127	42	74	181	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1633			1311	1508	1750	1837	1594	1714	1792	
Queue Service Time (g_s), s		0.0			1.9	1.7	0.1	4.2	1.5	1.5	4.9	
Cycle Queue Clearance Time (g_c), s		0.7			2.6	1.7	0.1	4.2	1.5	1.5	4.9	
Green Ratio (*g/C*)		0.25			0.25	0.25	0.42	0.33	0.33	0.61	0.48	
Capacity (*c*), veh/h		463			409	373	646	605	525	867	865	
Volume-to-Capacity Ratio (*X*)		0.039			0.124	0.107	0.007	0.210	0.080	0.086	0.209	
Back of Queue (*Q*), ft/ln (95 th percentile)		13			38	29	2	78	25	22	83	
Back of Queue (*Q*), veh/ln (95 th percentile)		0.5			1.5	1.2	0.1	3.1	1.0	0.9	3.3	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh		24.3			25.1	24.7	14.2	20.9	19.6	7.2	12.7	
Incremental Delay (d_2), s/veh		0.0			0.0	0.0	0.0	0.1	0.0	0.0	0.0	
Initial Queue Delay (d_3), s/veh		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh		24.4			25.1	24.8	14.2	20.9	19.7	7.2	12.7	
Level of Service (LOS)		C			C	C	B	C	B	A	B	
Approach Delay, s/veh / LOS	24.4	C		25.0	C		20.5	C		11.1	B	
Intersection Delay, s/veh / LOS	16.9						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.13	B	1.93	B	1.93	B	1.67	B
Bicycle LOS Score / LOS	0.52	A	0.64	A	0.77	A	0.91	A

HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Horner & Canter Assoc			Duration, h	0.250
Analyst	DHH	Analysis Date	Jul 7, 2025	Area Type	Other
Jurisdiction	Perkasie Borough	Time Period	PM Peak Hour	PHF	0.97
Urban Street		Analysis Year	2028 No-Build	Analysis Period	1> 7:00
Intersection	Constitution Ave/Perkasi...	File Name	Constitution Ave_Perkasie Square_np.xus		
Project Description	25-038 Perkasie Place				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	13	1	11	107	3	180	4	234	122	155	163	4

Signal Information			
Cycle, s	111.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	7.0	7.0	48.0	25.0	0.0	0.0	1	2	3	4		
Yellow	4.0	4.0	4.0	4.0	0.0	0.0						
Red	2.0	2.0	2.0	2.0	0.0	0.0	5	6	7	8		

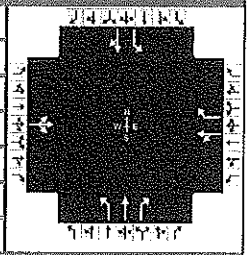
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		8.0		7.0	1.1	3.0	1.1	4.0
Phase Duration, s		31.0		31.0	13.0	54.0	26.0	67.0
Change Period, ($Y+R_c$), s		6.0		6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s		3.5		3.5	3.1	3.1	3.1	3.1
Queue Clearance Time (g_s), s		3.7		11.5	2.6	11.9	6.5	7.7
Green Extension Time (g_e), s		0.6		0.6	0.0	0.9	0.2	0.9
Phase Call Probability		1.00		1.00	1.00	1.00	1.00	1.00
Max Out Probability		0.00		0.00	0.03	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (v), veh/h		26			113	144	4	241	95	160	172	
Adjusted Saturation Flow Rate (s), veh/h/ln		1649			1362	1508	1750	1837	1619	1714	1792	
Queue Service Time (g_s), s		0.0			6.5	9.0	0.1	9.4	3.9	4.0	5.2	
Cycle Queue Clearance Time (g_c), s		1.2			7.7	9.0	0.1	9.4	3.9	4.0	5.2	
Green Ratio (g/C)		0.23			0.23	0.23	0.51	0.44	0.44	0.65	0.56	
Capacity (c), veh/h		436			383	353	735	811	715	802	1001	
Volume-to-Capacity Ratio (X)		0.059			0.296	0.409	0.006	0.297	0.133	0.199	0.172	
Back of Queue (Q), ft/ln (95 th percentile)		25			119	155	2	177	64	60	90	
Back of Queue (Q), veh/ln (95 th percentile)		1.0			4.8	6.2	0.1	7.1	2.6	2.4	3.6	
Queue Storage Ratio (RQ) (95 th percentile)		0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh		33.0			35.5	36.0	13.2	20.2	18.4	8.1	12.0	
Incremental Delay (d_2), s/veh		0.0			0.2	0.3	0.0	0.1	0.0	0.0	0.0	
Initial Queue Delay (d_3), s/veh		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (d), s/veh		33.0			35.6	36.3	13.2	20.3	18.4	8.1	12.0	
Level of Service (LOS)		C			D	D	B	C	B	A	B	
Approach Delay, s/veh / LOS	33.0	C		36.0	D		19.7	B		10.1	B	
Intersection Delay, s/veh / LOS	21.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.17	B	1.94	B	1.97	B	1.67	B
Bicycle LOS Score / LOS	0.53	A	0.91	A	1.05	A	1.04	A

HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Horner & Canter Assoc			Duration, h	0.250
Analyst	DHH	Analysis Date	Jul 7, 2025	Area Type	Other
Jurisdiction	Perkasie Borough	Time Period	SAT Peak Hour	PHF	0.92
Urban Street		Analysis Year	2028 No-Build	Analysis Period	1> 7:00
Intersection	Constitution Ave/Perkasi...	File Name	Constitution Ave_Perkasie Square_ns.xus		
Project Description	25-038 Perkasie Place				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	6	0	15	82	2	166	4	164	116	141	149	2

Signal Information			
Cycle, s	85.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	7.0	7.0	27.0	20.0	0.0	0.0	1	2	3	4		
Yellow	4.0	4.0	4.0	4.0	0.0	0.0	5	6	7	8		
Red	2.0	2.0	2.0	2.0	0.0	0.0						

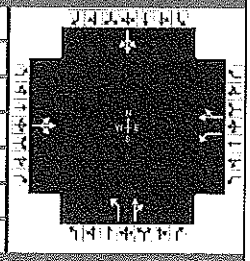
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		8.0		7.0	1.1	3.0	1.1	4.0
Phase Duration, s		26.0		26.0	13.0	33.0	26.0	46.0
Change Period, ($Y+R_c$), s		6.0		6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s		3.6		3.6	3.1	3.1	3.1	3.1
Queue Clearance Time (g_s), s		3.4		9.2	2.6	8.6	5.8	7.0
Green Extension Time (g_e), s		0.6		0.5	0.0	0.7	0.2	0.8
Phase Call Probability		1.00		1.00	1.00	1.00	1.00	1.00
Max Out Probability		0.00		0.00	0.03	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (v), veh/h		23			91	142	4	178	88	153	164	
Adjusted Saturation Flow Rate (s), veh/h/ln		1648			1356	1508	1750	1837	1619	1714	1782	
Queue Service Time (g_s), s		0.0			3.8	6.7	0.1	6.1	3.3	3.3	4.5	
Cycle Queue Clearance Time (g_c), s		0.9			4.6	6.7	0.1	6.1	3.3	3.3	4.5	
Green Ratio (g/C)		0.25			0.25	0.25	0.42	0.33	0.33	0.61	0.48	
Capacity (c), veh/h		462			419	373	652	605	533	824	859	
Volume-to-Capacity Ratio (X)		0.049			0.218	0.382	0.007	0.295	0.165	0.186	0.191	
Back of Queue (Q), ft/ln (95 th percentile)		16			69	111	2	114	54	47	75	
Back of Queue (Q), veh/ln (95 th percentile)		0.7			2.8	4.4	0.1	4.5	2.1	1.9	3.0	
Queue Storage Ratio (RQ) (95 th percentile)		0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh		24.4			25.8	26.6	14.2	21.5	20.2	7.7	12.5	
Incremental Delay (d_2), s/veh		0.0			0.1	0.2	0.0	0.1	0.1	0.0	0.0	
Initial Queue Delay (d_3), s/veh		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (d), s/veh		24.4			25.9	26.8	14.2	21.6	20.3	7.8	12.6	
Level of Service (LOS)		C			C	C	B	C	C	A	B	
Approach Delay, s/veh / LOS	24.4	C		26.5	C		21.1	C		10.3	B	
Intersection Delay, s/veh / LOS	18.6						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.17	B	1.93	B	1.97	B	1.67	B
Bicycle LOS Score / LOS	0.53	A	0.87	A	0.93	A	1.01	A

HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Horner & Canter Assoc			Duration, h	0.250
Analyst	DHH	Analysis Date	Jul 7, 2025	Area Type	Other
Jurisdiction	Perkasie Borough	Time Period	AM Peak Hour	PHF	0.90
Urban Street		Analysis Year	2028 No-Build	Analysis Period	1> 7:00
Intersection	Constitution Ave/Walnut...	File Name	Constitution Ave_Walnut Street_na.xus		
Project Description	25-038 Perkasie Place				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	1	205	144	58	162	1	104	0	49	0	0	0

Signal Information			
Cycle, s	86.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

							1	2	3	4
Green	23.0	7.0	35.0	0.0	0.0	0.0	5	6	7	8
Yellow	4.0	4.0	4.0	0.0	0.0	0.0				
Red	3.0	3.0	3.0	0.0	0.0	0.0				

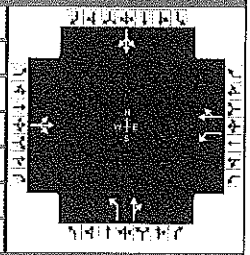
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4	3	8		2		6
Case Number		8.3	1.0	4.0		6.0		8.0
Phase Duration, s		42.0	14.0	56.0		30.0		30.0
Change Period, ($Y+R_c$), s		7.0	7.0	7.0		7.0		7.0
Max Allow Headway (*MAH*), s		3.2	3.1	3.2		3.1		0.0
Queue Clearance Time (g_s), s		14.7	4.2	6.4		7.3		
Green Extension Time (g_e), s		1.1	0.0	1.1		0.2		0.0
Phase Call Probability		1.00	1.00	1.00		1.00		
Max Out Probability		0.00	1.00	0.00		0.00		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		350		64	181		116	54			0	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1789		1587	1864		1607	1483			0	
Queue Service Time (g_s), s		0.0		1.7	3.9		4.8	2.4			0.0	
Cycle Queue Clearance Time (g_c), s		12.2		1.7	3.9		4.8	2.4			0.0	
Green Ratio (*g/C*)		0.42		0.54	0.58		0.28	0.28				
Capacity (*c*), veh/h		791		500	1084		532	414				
Volume-to-Capacity Ratio (*X*)		0.443		0.129	0.167		0.217	0.132			0.000	
Back of Queue (*Q*), ft/ln (95 th percentile)		224		26	64		85	38			0	
Back of Queue (*Q*), veh/ln (95 th percentile)		8.5		1.0	2.5		3.2	1.4			0.0	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00		0.00	0.00		0.00	0.00			0.00	
Uniform Delay (d_1), s/veh		18.1		10.8	8.3		24.1	23.2				
Incremental Delay (d_2), s/veh		0.1		0.0	0.0		0.1	0.1			0.0	
Initial Queue Delay (d_3), s/veh		0.0		0.0	0.0		0.0	0.0			0.0	
Control Delay (*d*), s/veh		18.2		10.8	8.4		24.2	23.3				
Level of Service (LOS)		B		B	A		C	C				
Approach Delay, s/veh / LOS	18.2	B		9.0	A		23.9	C		0.0		
Intersection Delay, s/veh / LOS	16.5						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.91	B	1.66	B	1.92	B	1.75	B
Bicycle LOS Score / LOS	1.07	A	0.89	A	0.77	A	0.49	A

HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Horner & Canter Assoc			Duration, h	0.250
Analyst	DHH	Analysis Date	Jul 7, 2025	Area Type	Other
Jurisdiction	Perkasie Borough	Time Period	PM Peak Hour	PHF	0.96
Urban Street		Analysis Year	2028 No-Build	Analysis Period	1> 7:00
Intersection	Constitution Ave/Walnut...	File Name	Constitution Ave_Walnut Street_np.xus		
Project Description	25-038 Perkasie Place				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	1	218	216	100	332	1	270	6	121	0	0	0

Signal Information			
Cycle, s	93.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

							1	2	3	4
Green	19.0	14.0	39.0	0.0	0.0	0.0	5	6	7	8
Yellow	4.0	4.0	4.0	0.0	0.0	0.0				
Red	3.0	3.0	3.0	0.0	0.0	0.0				

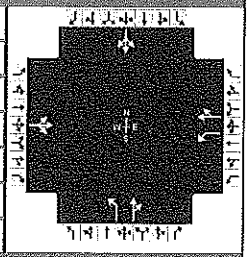
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4	3	8		2		6
Case Number		8.3	1.0	4.0		6.0		8.0
Phase Duration, s		46.0	21.0	67.0		26.0		26.0
Change Period, ($Y+R_c$), s		7.0	7.0	7.0		7.0		7.0
Max Allow Headway (MAH), s		3.2	3.1	3.2		3.1		0.0
Queue Clearance Time (g_s), s		17.4	4.7	9.6		16.8		
Green Extension Time (g_e), s		1.5	0.1	1.6		0.2		0.0
Phase Call Probability		1.00	1.00	1.00		1.00		
Max Out Probability		0.00	0.00	0.00		1.00		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (v), veh/h		401		104	347		281	132			0	
Adjusted Saturation Flow Rate (s), veh/h/ln		1830		1750	1910		1714	1593			0	
Queue Service Time (g_s), s		0.0		2.2	7.1		14.3	6.6			0.0	
Cycle Queue Clearance Time (g_c), s		14.9		2.2	7.1		14.3	6.6			0.0	
Green Ratio (g/C)		0.43		0.62	0.66		0.22	0.22				
Capacity (c), veh/h		826		636	1253		446	343				
Volume-to-Capacity Ratio (X)		0.486		0.164	0.277		0.630	0.386			0.000	
Back of Queue (Q), ft/ln (95 th percentile)		260		34	111		252	112			0	
Back of Queue (Q), veh/ln (95 th percentile)		10.3		1.3	4.4		10.1	4.5			0.0	
Queue Storage Ratio (RQ) (95 th percentile)		0.00		0.00	0.00		0.00	0.00			0.00	
Uniform Delay (d_1), s/veh		19.3		9.0	6.7		34.3	31.2				
Incremental Delay (d_2), s/veh		0.2		0.0	0.0		2.2	0.3			0.0	
Initial Queue Delay (d_3), s/veh		0.0		0.0	0.0		0.0	0.0			0.0	
Control Delay (d), s/veh		19.5		9.1	6.8		36.5	31.5				
Level of Service (LOS)		B		A	A		D	C				
Approach Delay, s/veh / LOS	19.5	B		7.3	A		34.9	C		0.0		
Intersection Delay, s/veh / LOS	20.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.91	B	1.64	B	1.93	B	1.78	B
Bicycle LOS Score / LOS	1.15	A	1.23	A	1.17	A	0.49	A

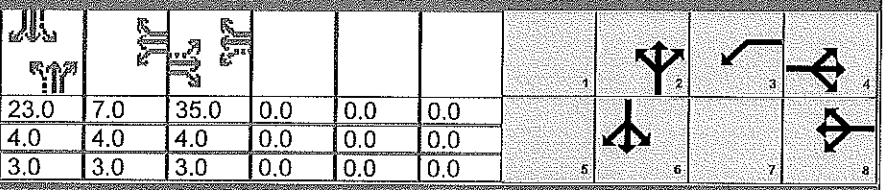
HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Horner & Canter Assoc			Duration, h	0.250
Analyst	DHH	Analysis Date	Jul 7, 2025	Area Type	Other
Jurisdiction	Perkasie Borough	Time Period	SAT Peak Hour	PHF	0.92
Urban Street		Analysis Year	2028 No-Build	Analysis Period	1> 7:00
Intersection	Constitution Ave/Walnut...	File Name	Constitution Ave_Walnut Street_ns.xus		
Project Description	25-038 Perkasie Place				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	1	210	223	116	199	1	205	0	119	0	0	0

Signal Information			
Cycle, s	86.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	23.0	7.0	35.0	0.0	0.0	0.0
Yellow	4.0	4.0	4.0	0.0	0.0	0.0
Red	3.0	3.0	3.0	0.0	0.0	0.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4	3	8		2		6
Case Number		8.3	1.0	4.0		6.0		8.0
Phase Duration, s		42.0	14.0	56.0		30.0		30.0
Change Period, ($Y+R_c$), s		7.0	7.0	7.0		7.0		7.0
Max Allow Headway (MAH), s		3.2	3.1	3.2		3.2		0.0
Queue Clearance Time (g_s), s		17.2	5.6	7.3		11.9		
Green Extension Time (g_e), s		1.3	0.0	1.3		0.5		0.0
Phase Call Probability		1.00	1.00	1.00		1.00		
Max Out Probability		0.00	1.00	0.00		0.00		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (v), veh/h		412		126	217		223	129			0	
Adjusted Saturation Flow Rate (s), veh/h/ln		1813		1709	1865		1688	1544			0	
Queue Service Time (g_s), s		0.0		3.1	4.8		9.4	5.7			0.0	
Cycle Queue Clearance Time (g_c), s		14.7		3.1	4.8		9.4	5.7			0.0	
Green Ratio (g/C)		0.42		0.54	0.58		0.28	0.28				
Capacity (c), veh/h		801		487	1084		555	431				
Volume-to-Capacity Ratio (X)		0.514		0.259	0.201		0.402	0.300			0.000	
Back of Queue (Q), ft/ln (95 th percentile)		255		50	78		167	92			0	
Back of Queue (Q), veh/ln (95 th percentile)		10.1		1.9	3.1		6.6	3.6			0.0	
Queue Storage Ratio (RQ) (95 th percentile)		0.00		0.00	0.00		0.00	0.00			0.00	
Uniform Delay (d_1), s/veh		18.8		11.8	8.5		25.7	24.4				
Incremental Delay (d_2), s/veh		0.3		0.1	0.0		0.2	0.1			0.0	
Initial Queue Delay (d_3), s/veh		0.0		0.0	0.0		0.0	0.0			0.0	
Control Delay (d), s/veh		19.1		11.9	8.6		25.9	24.5				
Level of Service (LOS)		B		B	A		C	C				
Approach Delay, s/veh / LOS	19.1	B		9.8	A		25.4	C		0.0		
Intersection Delay, s/veh / LOS	18.2						B					

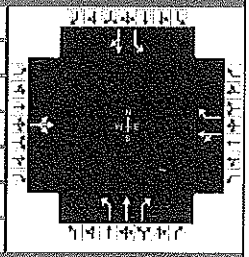
Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.91	B	1.66	B	1.92	B	1.77	B
Bicycle LOS Score / LOS	1.17	A	1.05	A	1.07	A	0.49	A

APPENDIX G

Build Capacity/LOS Analysis Worksheets

HCS Signalized Intersection Results Summary

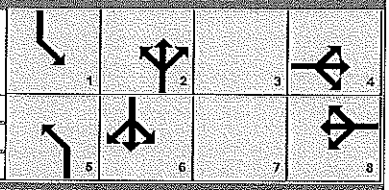
General Information				Intersection Information	
Agency	Horner & Canter Assoc			Duration, h	0.250
Analyst	DHH	Analysis Date	Jul 7, 2025	Area Type	Other
Jurisdiction	Perkasie Borough	Time Period	AM Peak Hour	PHF	0.93
Urban Street		Analysis Year	2028 Build	Analysis Period	1> 7:00
Intersection	Constitution Ave/Perkasi...	File Name	Constitution Ave_Perkasie Square_ba.xus		
Project Description	25-038 Perkasie Place				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	7	0	10	68	0	61	4	118	56	73	164	4

Signal Information			
Cycle, s	85.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	7.0	7.0	27.0	20.0	0.0	0.0	
Yellow	4.0	4.0	4.0	4.0	0.0	0.0	
Red	2.0	2.0	2.0	2.0	0.0	0.0	



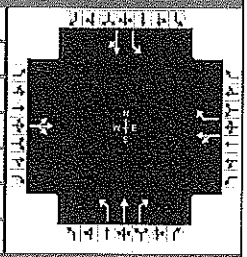
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		8.0		7.0	1.1	3.0	1.1	4.0
Phase Duration, s		26.0		26.0	13.0	33.0	26.0	46.0
Change Period, ($Y+R_c$), s		6.0		6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s		3.5		3.5	3.1	3.1	3.1	3.1
Queue Clearance Time (g_s), s		3.2		6.3	2.6	6.7	4.1	7.4
Green Extension Time (g_e), s		0.3		0.2	0.0	0.6	0.1	0.6
Phase Call Probability		1.00		1.00	1.00	1.00	1.00	1.00
Max Out Probability		0.00		0.00	0.03	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (v), veh/h		18			73	49	4	127	49	78	181	
Adjusted Saturation Flow Rate (s), veh/h/ln		1640			1311	1508	1750	1837	1594	1714	1792	
Queue Service Time (g_s), s		0.0			3.1	2.2	0.1	4.2	1.8	1.6	4.9	
Cycle Queue Clearance Time (g_c), s		0.7			3.8	2.2	0.1	4.2	1.8	1.6	4.9	
Green Ratio (g/C)		0.25			0.25	0.25	0.42	0.33	0.33	0.61	0.48	
Capacity (c), veh/h		465			409	373	646	605	525	867	865	
Volume-to-Capacity Ratio (X)		0.039			0.179	0.133	0.007	0.210	0.094	0.091	0.209	
Back of Queue (Q), ft/ln (95 th percentile)		13			56	36	2	78	30	23	83	
Back of Queue (Q), veh/ln (95 th percentile)		0.5			2.2	1.4	0.1	3.1	1.2	0.9	3.3	
Queue Storage Ratio (RQ) (95 th percentile)		0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh		24.3			25.5	24.9	14.2	20.9	19.7	7.2	12.7	
Incremental Delay (d_2), s/veh		0.0			0.1	0.1	0.0	0.1	0.0	0.0	0.0	
Initial Queue Delay (d_3), s/veh		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (d), s/veh		24.4			25.6	25.0	14.2	20.9	19.8	7.2	12.7	
Level of Service (LOS)		C			C	C	B	C	B	A	B	
Approach Delay, s/veh / LOS	24.4	C		25.3	C		20.4	C		11.0	B	
Intersection Delay, s/veh / LOS	17.4						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.13	B	1.93	B	1.94	B	1.67	B
Bicycle LOS Score / LOS	0.52	A	0.69	A	0.79	A	0.92	A

HCS Signalized Intersection Results Summary

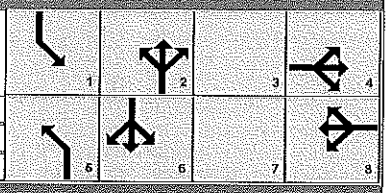
General Information				Intersection Information	
Agency	Horner & Canter Assoc			Duration, h	0.250
Analyst	DHH	Analysis Date	Jul 7, 2025	Area Type	Other
Jurisdiction	Perkasie Borough	Time Period	PM Peak Hour	PHF	0.97
Urban Street		Analysis Year	2028 Build	Analysis Period	1> 7:00
Intersection	Constitution Ave/Perkasi...	File Name	Constitution Ave_Perkasie Square_bp.xus		
Project Description	25-038 Perkasie Place				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	13	1	11	118	3	188	4	234	142	169	163	4

Signal Information			
Cycle, s	111.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	7.0	7.0	48.0	25.0	0.0	0.0						
Yellow	4.0	4.0	4.0	4.0	0.0	0.0						
Red	2.0	2.0	2.0	2.0	0.0	0.0						



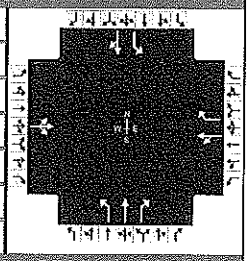
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		8.0		7.0	1.1	3.0	1.1	4.0
Phase Duration, s		31.0		31.0	13.0	54.0	26.0	67.0
Change Period, ($Y+R_c$), s		6.0		6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s		3.5		3.5	3.1	3.1	3.1	3.1
Queue Clearance Time (g_s), s		3.7		12.1	2.6	11.9	6.9	7.7
Green Extension Time (g_e), s		0.7		0.6	0.0	1.0	0.2	1.0
Phase Call Probability		1.00		1.00	1.00	1.00	1.00	1.00
Max Out Probability		0.00		0.00	0.03	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (v), veh/h		26			125	153	4	241	115	174	172	
Adjusted Saturation Flow Rate (s), veh/h/ln		1653			1361	1508	1750	1837	1619	1714	1792	
Queue Service Time (g_s), s		0.0			7.3	9.6	0.1	9.4	4.8	4.4	5.2	
Cycle Queue Clearance Time (g_c), s		1.2			8.6	9.6	0.1	9.4	4.8	4.4	5.2	
Green Ratio (g/C)		0.23			0.23	0.23	0.51	0.44	0.44	0.65	0.56	
Capacity (c), veh/h		436			383	353	735	811	715	802	1001	
Volume-to-Capacity Ratio (X)		0.059			0.326	0.432	0.006	0.297	0.162	0.217	0.172	
Back of Queue (Q), ft/ln (95 th percentile)		25			132	165	2	177	79	66	90	
Back of Queue (Q), veh/ln (95 th percentile)		1.0			5.3	6.6	0.1	7.1	3.2	2.6	3.6	
Queue Storage Ratio (RQ) (95 th percentile)		0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh		33.0			35.8	36.2	13.2	20.2	18.6	8.2	12.0	
Incremental Delay (d_2), s/veh		0.0			0.2	0.3	0.0	0.1	0.0	0.0	0.0	
Initial Queue Delay (d_3), s/veh		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (d), s/veh		33.0			36.0	36.5	13.2	20.3	18.7	8.2	12.0	
Level of Service (LOS)		C			D	D	B	C	B	A	B	
Approach Delay, s/veh / LOS	33.0	C		36.3	D		19.7	B		10.1	B	
Intersection Delay, s/veh / LOS	21.3						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.17	B	1.94	B	1.97	B	1.67	B
Bicycle LOS Score / LOS	0.53	A	0.95	A	1.08	A	1.06	A

HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Horner & Canter Assoc			Duration, h	0.250
Analyst	DHH	Analysis Date	Jul 7, 2025	Area Type	Other
Jurisdiction	Perkasie Borough	Time Period	SAT Peak Hour	PHF	0.92
Urban Street		Analysis Year	2028 Build	Analysis Period	1> 7:00
Intersection	Constitution Ave/Perkasi...	File Name	Constitution Ave_Perkasie Square_bs.xus		
Project Description	25-038 Perkasie Place				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	6	0	15	92	2	172	4	164	125	147	149	2

Signal Information			
Cycle, s	85.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	7.0	7.0	27.0	20.0	0.0	0.0	1	2	3	4		
Yellow	4.0	4.0	4.0	4.0	0.0	0.0	5	6	7	8		
Red	2.0	2.0	2.0	2.0	0.0	0.0						

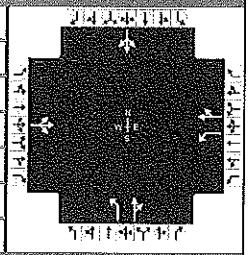
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		8.0		7.0	1.1	3.0	1.1	4.0
Phase Duration, s		26.0		26.0	13.0	33.0	26.0	46.0
Change Period, ($Y+R_c$), s		6.0		6.0	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s		3.6		3.6	3.1	3.1	3.1	3.1
Queue Clearance Time (g_s), s		3.4		9.5	2.6	8.6	5.9	7.0
Green Extension Time (g_e), s		0.6		0.5	0.0	0.8	0.2	0.8
Phase Call Probability		1.00		1.00	1.00	1.00	1.00	1.00
Max Out Probability		0.00		0.01	0.03	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		23			102	149	4	178	98	160	164	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1651			1355	1508	1750	1837	1619	1714	1782	
Queue Service Time (g_s), s		0.0			4.4	7.0	0.1	6.1	3.7	3.4	4.5	
Cycle Queue Clearance Time (g_c), s		0.9			5.2	7.0	0.1	6.1	3.7	3.4	4.5	
Green Ratio (*g/C*)		0.25			0.25	0.25	0.42	0.33	0.33	0.61	0.48	
Capacity (*c*), veh/h		462			419	373	652	605	533	824	859	
Volume-to-Capacity Ratio (*X*)		0.049			0.244	0.400	0.007	0.295	0.183	0.194	0.191	
Back of Queue (*Q*), ft/ln (95 th percentile)		16			78	117	2	114	60	49	75	
Back of Queue (*Q*), veh/ln (95 th percentile)		0.7			3.1	4.7	0.1	4.5	2.4	2.0	3.0	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh		24.4			26.1	26.7	14.2	21.5	20.3	7.8	12.5	
Incremental Delay (d_2), s/veh		0.0			0.1	0.3	0.0	0.1	0.1	0.0	0.0	
Initial Queue Delay (d_3), s/veh		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh		24.4			26.2	27.0	14.2	21.6	20.4	7.8	12.6	
Level of Service (LOS)		C			C	C	B	C	C	A	B	
Approach Delay, s/veh / LOS	24.4	C		26.7	C		21.1	C		10.2	B	
Intersection Delay, s/veh / LOS	18.8						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.17	B	1.93	B	1.97	B	1.67	B
Bicycle LOS Score / LOS	0.53	A	0.90	A	0.95	A	1.02	A

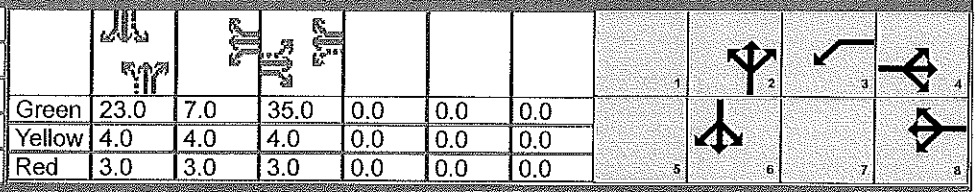
HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Horner & Canter Assoc			Duration, h	0.250
Analyst	DHH	Analysis Date	Jul 7, 2025	Area Type	Other
Jurisdiction	Perkasie Borough	Time Period	AM Peak Hour	PHF	0.90
Urban Street		Analysis Year	2028 Build	Analysis Period	1> 7:00
Intersection	Constitution Ave/Walnut...	File Name	Constitution Ave_Walnut Street_ba.xus		
Project Description	25-038 Perkasie Place				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	1	205	147	59	162	1	114	0	53	0	0	0

Signal Information			
Cycle, s	86.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



	EB		WB			NB			SB		
Green	23.0	7.0	35.0	0.0	0.0	0.0					
Yellow	4.0	4.0	4.0	0.0	0.0	0.0					
Red	3.0	3.0	3.0	0.0	0.0	0.0					

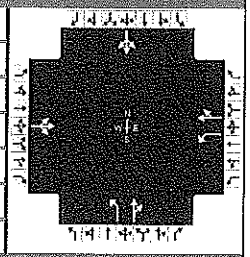
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4	3	8		2		6
Case Number		8.3	1.0	4.0		6.0		8.0
Phase Duration, s		42.0	14.0	56.0		30.0		30.0
Change Period, ($Y+R_c$), s		7.0	7.0	7.0		7.0		7.0
Max Allow Headway (*MAH*), s		3.2	3.1	3.2		3.1		0.0
Queue Clearance Time (g_s), s		14.8	4.2	6.4		7.8		
Green Extension Time (g_e), s		1.1	0.0	1.1		0.3		0.0
Phase Call Probability		1.00	1.00	1.00		1.00		
Max Out Probability		0.00	1.00	0.00		0.00		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		353		66	181		127	59			0	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1787		1587	1864		1607	1483			0	
Queue Service Time (g_s), s		0.0		1.7	3.9		5.3	2.6			0.0	
Cycle Queue Clearance Time (g_c), s		12.3		1.7	3.9		5.3	2.6			0.0	
Green Ratio (*g/C*)		0.42		0.54	0.58		0.28	0.28				
Capacity (*c*), veh/h		790		498	1084		532	414				
Volume-to-Capacity Ratio (*X*)		0.447		0.132	0.167		0.238	0.142			0.000	
Back of Queue (*Q*), ft/ln (95 th percentile)		226		27	64		94	42			0	
Back of Queue (*Q*), veh/ln (95 th percentile)		8.6		1.0	2.5		3.5	1.6			0.0	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00		0.00	0.00		0.00	0.00			0.00	
Uniform Delay (d_1), s/veh		18.1		10.8	8.3		24.3	23.3				
Incremental Delay (d_2), s/veh		0.1		0.0	0.0		0.1	0.1			0.0	
Initial Queue Delay (d_3), s/veh		0.0		0.0	0.0		0.0	0.0			0.0	
Control Delay (*d*), s/veh		18.3		10.9	8.4		24.3	23.3				
Level of Service (LOS)		B		B	A		C	C				
Approach Delay, s/veh / LOS	18.3	B		9.0	A		24.0	C		0.0		
Intersection Delay, s/veh / LOS	16.7						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.91	B	1.66	B	1.92	B	1.75	B
Bicycle LOS Score / LOS	1.07	A	0.89	A	0.79	A	0.49	A

HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Horner & Canter Assoc			Duration, h	0.250
Analyst	DHH	Analysis Date	Jul 7, 2025	Area Type	Other
Jurisdiction	Perkasie Borough	Time Period	PM Peak Hour	PHF	0.96
Urban Street		Analysis Year	2028 Build	Analysis Period	1> 7:00
Intersection	Constitution Ave/Walnut...	File Name	Constitution Ave_Walnut Street_bp.xus		
Project Description	25-038 Perkasie Place				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	1	218	226	104	332	1	276	6	123	0	0	0

Signal Information			
Cycle, s	93.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

							1	2	3	4
Green	19.0	14.0	39.0	0.0	0.0	0.0	5	6	7	8
Yellow	4.0	4.0	4.0	0.0	0.0	0.0				
Red	3.0	3.0	3.0	0.0	0.0	0.0				

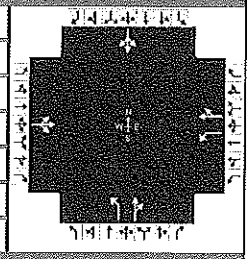
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4	3	8		2		6
Case Number		8.3	1.0	4.0		6.0		8.0
Phase Duration, s		46.0	21.0	67.0		26.0		26.0
Change Period, ($Y+R_c$), s		7.0	7.0	7.0		7.0		7.0
Max Allow Headway (MAH), s		3.2	3.1	3.2		3.1		0.0
Queue Clearance Time (g_s), s		17.9	4.8	9.6		17.2		
Green Extension Time (g_e), s		1.6	0.1	1.6		0.2		0.0
Phase Call Probability		1.00	1.00	1.00		1.00		
Max Out Probability		0.00	0.00	0.00		1.00		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (v), veh/h		411		108	347		288	134			0	
Adjusted Saturation Flow Rate (s), veh/h/ln		1825		1750	1910		1714	1593			0	
Queue Service Time (g_s), s		0.0		2.3	7.1		14.7	6.7			0.0	
Cycle Queue Clearance Time (g_c), s		15.4		2.3	7.1		14.7	6.7			0.0	
Green Ratio (g/C)		0.43		0.62	0.66		0.22	0.22				
Capacity (c), veh/h		824		627	1253		446	343				
Volume-to-Capacity Ratio (X)		0.499		0.173	0.277		0.645	0.392			0.000	
Back of Queue (Q), ft/ln (95 th percentile)		267		35	111		258	114			0	
Back of Queue (Q), veh/ln (95 th percentile)		10.6		1.4	4.4		10.3	4.6			0.0	
Queue Storage Ratio (RQ) (95 th percentile)		0.00		0.00	0.00		0.00	0.00			0.00	
Uniform Delay (d_1), s/veh		19.5		9.2	6.7		34.4	31.3				
Incremental Delay (d_2), s/veh		0.2		0.0	0.0		2.5	0.3			0.0	
Initial Queue Delay (d_3), s/veh		0.0		0.0	0.0		0.0	0.0			0.0	
Control Delay (d), s/veh		19.7		9.2	6.8		36.9	31.6				
Level of Service (LOS)		B		A	A		D	C				
Approach Delay, s/veh / LOS	19.7	B		7.4	A		35.2	D		0.0		
Intersection Delay, s/veh / LOS	20.4						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.91	B	1.64	B	1.93	B	1.78	B
Bicycle LOS Score / LOS	1.17	A	1.24	A	1.18	A	0.49	A

HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Horner & Canter Assoc			Duration, h	0.250
Analyst	DHH	Analysis Date	Jul 7, 2025	Area Type	Other
Jurisdiction	Perkasie Borough	Time Period	SAT Peak Hour	PHF	0.92
Urban Street		Analysis Year	2028 Build	Analysis Period	1> 7:00
Intersection	Constitution Ave/Walnut...	File Name	Constitution Ave_Walnut Street_bs.xus		
Project Description	25-038 Perkasie Place				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	1	210	227	118	199	1	209	0	121	0	0	0

Signal Information			
Cycle, s	86.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	23.0	7.0	35.0	0.0	0.0	0.0	1	2	3	4		
Yellow	4.0	4.0	4.0	0.0	0.0	0.0	5	6	7	8		
Red	3.0	3.0	3.0	0.0	0.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4	3	8		2		6
Case Number		8.3	1.0	4.0		6.0		8.0
Phase Duration, s		42.0	14.0	56.0		30.0		30.0
Change Period, (*Y+R c*), s		7.0	7.0	7.0		7.0		7.0
Max Allow Headway (*MAH*), s		3.2	3.1	3.2		3.2		0.0
Queue Clearance Time (*g s*), s		17.4	5.7	7.3		12.1		
Green Extension Time (*g e*), s		1.3	0.0	1.4		0.5		0.0
Phase Call Probability		1.00	1.00	1.00		1.00		
Max Out Probability		0.00	1.00	0.00		0.00		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		416		128	217		227	132			0	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1811		1709	1865		1688	1544			0	
Queue Service Time (*g s*), s		0.0		3.2	4.8		9.6	5.8			0.0	
Cycle Queue Clearance Time (*g c*), s		14.9		3.2	4.8		9.6	5.8			0.0	
Green Ratio (*g/C*)		0.42		0.54	0.58		0.28	0.28				
Capacity (*c*), veh/h		800		484	1084		555	431				
Volume-to-Capacity Ratio (*X*)		0.520		0.265	0.201		0.410	0.305			0.000	
Back of Queue (*Q*), ft/ln (95 th percentile)		259		50	78		171	94			0	
Back of Queue (*Q*), veh/ln (95 th percentile)		10.2		2.0	3.1		6.7	3.7			0.0	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00		0.00	0.00		0.00	0.00			0.00	
Uniform Delay (*d 1*), s/veh		18.9		11.8	8.5		25.8	24.4				
Incremental Delay (*d 2*), s/veh		0.3		0.1	0.0		0.2	0.1			0.0	
Initial Queue Delay (*d 3*), s/veh		0.0		0.0	0.0		0.0	0.0			0.0	
Control Delay (*d*), s/veh		19.2		11.9	8.6		26.0	24.6				
Level of Service (LOS)		B		B	A		C	C				
Approach Delay, s/veh / LOS	19.2	B		9.8	A		25.5	C		0.0		
Intersection Delay, s/veh / LOS	18.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.91	B	1.66	B	1.92	B	1.77	B
Bicycle LOS Score / LOS	1.17	A	1.06	A	1.08	A	0.49	A