

**CITY OF LANCASTER  
WORK SESSION  
TUESDAY, JULY 11, 2023**



**CITY OF LANCASTER  
WORK SESSION  
TUESDAY, JULY 11, 2023  
7:00 P.M.**

- I. Invocation & Pledge of Allegiance – Council Member Marsh**
- II. Roll Call**
- III. Citizen Comments\***
- IV. Employee Comments**
- V. Approval of Minutes**
  - A. Regular Meeting – June 27, 2023 **Pg. 1**
- VI. Resolution**
  - A. R23-12 A Resolution Authorizing the City Administrator to Execute a Turn Lane Agreement With the Basildon at Lancaster Subdivision on Behalf of The City of Lancaster, South Carolina **Pg. 6**
- VII. Adjournment**

\*Persons desiring to speak should notify the City Clerk prior to the beginning of the meeting. All persons wishing to speak must be signed in and present prior to the start of the meeting. Please begin by stating your name and address. You will have up to 3 minutes to address Council. The entire Citizen Comments portion of the agenda shall not extend longer than thirty (30) minutes. All statements should be addressed to Council as a body and not to individual Council Members. Please be advised that this is not a period of dialogue with Council or a question-and-answer period.



Any person requiring special accommodations should contact the Office of the City Administrator at (803) 289-1453 at least 24 hours prior to the scheduled meeting.

**CITY OF LANCASTER  
REGULAR MEETING  
TUESDAY, JUNE 27, 2023**

P1

A meeting of the Lancaster City Council was held in the City Hall Council Chambers on Tuesday, June 27, 2023, at 7:00 p.m.

Mayor T. Alston DeVenny called the meeting to order. A notice of the meeting was posted at City Hall and placed on the City's website. The local news media was contacted about the meeting time and place. The meeting was open to the public and streamed live on the City's YouTube channel.

**I. Invocation & Pledge of Allegiance**

Council Member Harris offered the Invocation and led the Pledge of Allegiance.

**II. Roll Call**

**Present:** Mayor Alston DeVenny, Council Member Harris, Council Member Hood, Council Member Jones, Council Member Marsh, and Council Member Sowell

**Absent:** Council Member Taylor

**Others Present:** City Administrator Flip Hutfles, Mandy Powers Norrell for City Attorney Mitch Norrell, City Clerk Tracy Rabon, Finance Director Kirk Medlin, Fire Chief Justin McLellan, Police Chief Don Roper, Public Utilities Director Donnie Ledford, Public Works Director Rendell Mingo, Sanitation & Maintenance Operations Director Matt Berry, Human Resource Director Angela Roberson, IT Director Melissa Izzard, and Haley Jones with the Lancaster News.

**III. Special Presentation**

*A. Presenting the Downtown Traffic Control Box Wrap Designs*

Alize Thomas, Marketing and Development Manager presented Council with the recommended Downtown traffic control box wrap designs on Main Street. Christina Chastain of Chastain Studios presented the five artistic ideas that she created for the wrap designs. Mayor DeVenny asked if the Department of Transportation (DOT) agreed to placement of the wraps. Ms. Thomas confirmed that DOT has agreed to the placement of the wraps contingent on the boxes not being painted, and that a permit be obtained.

Council Member Harris asked if the wrap designs could have different art on each side. Ms. Chastain confirmed that each side could be its individual design. Ms. Chastain stated that each piece would be an original and would be owned by the City. Ms. Chastain also noted that the material for the wraps were tested in the Florida sun and will last five to seven years in direct sunlight.

Council Member Jones asked about the representation of the African American community. Ms. Chastain stated that each piece represents the community as a whole. Council Member Jones expressed concern about not hearing about the project until tonight's Council meeting. Council Member Harris agreed with Council Member Jones and expressed concern with Council not being informed prior to the Council meeting, and also mentioned that she would like the City to have one standard logo instead of various renderings of the current logo. Mr. Hutfles stated that this project was in the Downtown Revitalization Plan and would be funded through Hospitality Tax funds.

Council Member Sowell recommended using Nina McKinney, Preston Blackmon, Maurice Williams and the Zodiacs as inspiration for the wraps. Council Member Harris asked if the QR codes would integrate with the City website. Mr. Hutfles confirmed the QR code would be able to link to the website. Mayor DeVenny thanked Ms. Chastain for work on the project.

Council Member Harris asked for a Monthly report from the See Lancaster Department so Council could be aware of the projects in development.

**IV. Citizen Comments**

Mark Kahn of 706 W. Barr Street addressed Council noting that he is a member of the Lancaster County Community Relations Board. Mr. Kahn noted this Board can assist citizens in numerous ways including, remediation and disputes, landlord disputes, obtaining insurance, and discrimination concerns, among others. Mr. Kahn also asked Council to begin researching the opportunity for funding to assist the homeless community and to work with Wal-Mart and the Police Department to address theft at Wal-Mart.

Yokima Cureton of 406 Isom Street addressed Council with her concerns. Per request, the following is a verbatim report of Ms. Cureton's concerns:

"Good evening, Council members, my name is Yokima Cureton and I currently reside at 406 Isom Street. I stand before you today to convey a message of great significance. It will be a blistering hot summer in Lancaster because the well is about to run dry. Every individual, every family, every non-profit, every public and private organization that benefits from the exploitation of people in this community, in particular its illiterate, mentally challenged, underserved, and disenfranchised will crumble. Funds that have been acquired illegitimately through the suffering of those already under siege which never trickle down to benefit them will vanish entirely. The time for silence is over. And the grip of those in power will be shattered. Tongues will be loosed. Truths that have been long concealed will finally come to light, unveiling every misused dollar, clandestine schemes, bribery, and underhanded deal. Even your most carefully guarded secrets will be exposed. You who have forsaken your duty and sworn oath in pursuit of personal wealth and gain will face judgement for your actions. Your audacious behavior has not gone unnoticed, and your reckoning is at hand, oh, and the extra year in office that you have given yourself will prove futile as not one single one of you will remain in these seats. God will replace you with a new era of leadership, guided by compassionate principles that honor him. I'm sure you have seen it written, maybe on a poster or sign somewhere, but hear the word of the Lord. Now's the time. Deliver your people Lord, Amen. Thank you for your time."

**V. Employee Comments**

There were no employee comments

**VI. Approval of Minutes**

*A. Work Session – June 13, 2023*

**Motion:** To approve the minutes for the Work Session June 13, 2023

**Moved by** Council Member Jones, **Seconded by** Council Member Sowell

**Vote:** Motion carried by unanimous roll call vote

**Action:** Approved

*B. Special Meeting – June 20, 2023*

**Motion:** To approve the minutes for the Special Meeting June 20, 2023

**Moved by** Council Member Harris, **Seconded by** Council Member Hood

**Vote:** Motion carried by unanimous roll call vote

**Action:** Approved

**VII. Monthly Reports for May 2023**

Council Member Harris thanked Events Manager Lisa Roddey for a successful Juneteenth Celebration. Mayor DeVenny also thanked the Fire Department for successfully managing two difficult situations this past weekend. Council Member Harris thanked the Building, Planning and Zoning Department for continued work on assisting with the growth of the City.

Council Member Harris asked Police Chief Roper if Palmetto Executive Solutions has been successful in assisting the Police Department in the accreditation process. Chief Roper stated they have been instrumental in the process and the Department looks forward to working with the company in achieving accreditation.

Council had no further questions or concerns regarding the Monthly Report for May 2023. The complete report is available for review in the City Clerk's office.

#### **VIII. Cash Management and Finance Report for May 2023**

Finance Director Kirk Medlin presented the May 2023 Cash Management and Finance Report. Mayor DeVenny asked for an update on the FY 2021/2022 Audit. Mr. Medlin reported that the auditors Greene Finney Cauley are working on a draft and will be completed soon.

Council Member Harris asked for clarification about the revenue sources that have not been received. Mr. Hutfles stated that in the General Fund business licenses for insurance companies and telecommunication companies are collected by the Municipal Association in mid-June. Mr. Hutfles noted that last year the amount received in June was \$1.8 million.

Council Member Harris asked about the reduction in the FY 23 Capital Improvement Plan (CIP) Summary for the Barr Street Fields from \$150,000 to the \$140,000 listed under the FY 23 CIP Summary. Mr. Hutfles stated the \$10,000 difference was for the appraisal that was requested by the Lancaster County School District (LCSD). Mr. Hutfles stated that in the draft budget, the funding is not allocated due to the actual cost being unknown. Mr. Hutfles stated that if the City received the approval from LCSD to add lighting, then a budget amendment could be made at that time. Council Member Harris expressed concerns that deductions have already been made to meet this expenditure, and stated this investment is a need in the community. Council Member Harris noted the lack of communication with LCSD.

Council Member Harris stated that progress should be made, and updates should be provided to Council. Mr. Hutfles noted that the City is also working with Lancaster County to obtain financial assistance as the cost is unknown but could be approximately \$2 million to rehabilitate the fields. Mr. Hutfles reported that LCSD has requested the City purchase more property to allow for parking as they were not in favor of the City utilizing the parking at the Hope on the Hill/Barr Street facility. Council Member Harris and Marsh stated they were not aware of that and requested continued updates. Mayor DeVenny recommended adding funding in the budget for future rehabilitation/purchase of the Barr Street fields.

Council Member Jones asked why the City has not purchased the field. Mr. Hutfles stated the Lancaster County School Board has not provided an offer to sell the property. Council Member Harris asked if the LCSD Board would be willing to lease the property to the City. Mr. Hutfles stated that was not an option, that the City has to purchase the property. Mayor DeVenny stated that Council needs to see the appraisal of the property to make an informed decision on how to proceed. Council Member Harris expressed concern with securing the funding since that money has not been added to the budget. Mr. Hutfles stated the funding can come from the carryover in the CIP budget. Mayor Council Member Harris noted that there is limited recreational opportunities for children, and this should be a priority. Council Member Harris noted that with the growth of the City, we need to have amenities to offer those that move into the City.

#### **IX. Resolution**

##### **A. *R23-11 A Resolution Authorizing the Consumption of Beer and Wine at the 2023 Finally Friday Summer Concert Crusin' Series***

Events Manager Lisa Roddey presented R23-11 to authorize the consumption of beer and wine at the 2023 Finally Friday Summer Concert Crusin' Series. The event dates will be July 21<sup>st</sup>, August 18<sup>th</sup>, and September 15<sup>th</sup> beginning at 6:00 p.m. with the street closing at 4:00

p.m. Ms. Roddey reported that Main Street would not be closed to allow for the cruising. The beer and wine will be sold at LA Tap Room and 521 BBQ

Council Member Harris stated that all Downtown businesses need to be included in the promotion of each event. Council Member Harris also asked if each event would be cruising or if they would all have different themes. Ms. Roddey stated that each event will have a different theme that will add to the cruising event. Council Member Jones expressed concern with the cruising participants drinking and driving. Mayor DeVenny deferred to Police Chief Roper for an opinion of control. Chief Roper stated the Police Department will be prepared to address any concerns that arise, and that all traffic laws will remain in effect.

**Motion:** To approve R23-11 a Resolution authorizing the consumption of beer and wine at the 2023 Finally Friday Summer Concert Crusin' Series

**Moved by** Council Member Harris, **Seconded by** Council Member Hood

**Vote:** Council Members Harris, Hood, Marsh, Sowell, and Mayor DeVenny voted **yes**; Council Member Jones voted **no**

**Action:** Approved

#### X. Ordinance

- A. *023-16 (Second Reading) An Ordinance Annexing into the City of Lancaster, South Carolina One Parcel of Land Totaling 0.17 Acres Located at 1135 1<sup>st</sup> Street, and Owned by Andres Astudillo*

**Motion:** To approve the second reading of 023-16 an Ordinance annexing into the City of Lancaster, South Carolina one parcel of land totaling 0.17 acres located at 1135 1<sup>st</sup> Street, and owned by Andres Astudillo

**Moved by** Council Member Harris, **Seconded by** Council Member Jones

**Vote:** Motion carried by unanimous roll call vote

**Action:** Approved

- B. *023-17 (Second Reading) An Ordinance Adopting the Operating Budget and Establishing Certain Fees and Charges for Fiscal Year 2023-2024*

Mr. Medlin presented Council with the 2023-2024 Operating Budget. A memo was presented to Council prior to the beginning of the meeting noting the following additions were added to the final draft of the FY 23/24 budget.

##### Capital Projects:

- \$390,000 added for the purchase of land for Fire Station Three
- \$240,000 for the purchase of six patrol vehicles that have not been received.
- \$150,000 for the outfitting of the five patrol vehicles that have been received.
- An increase in the Chamber Audio/Visual upgrade from \$42,000 to \$55,000 due to an updated quote

##### Line-item additions:

- \$4,000 for carry over for a façade grant
- \$18,000 for downtown Christmas decorations
- \$12,100 for traffic box wraps
- \$12,100 for the replacement of current signage at both Fire Station One and Two

**Motion:** To amend the 2023-2024 Operating Budget to include \$150,000 for the refurbishment of the Barr Street ball fields.

**Moved by** Council Member Harris, **Seconded by** Council Member Marsh

**Vote:** Motion carried by unanimous roll call vote

**Action:** Approved

**Motion:** To amend the 2023 -2024 Operating Budget to include the specific CIP and Line items as presented by the Finance Director

**Moved by** Council Member Harris, **Seconded by** Council Member Sowell

**Vote:** Motion carried by unanimous roll call vote

**Action:** Approved

**Motion:** To approve the amended second reading of O23-17 an Ordinance adopting the Operating Budget and establishing certain fees and charges for Fiscal Year 2023-2024

**Moved by** Council Member Hood, **Seconded by** Council Member Marsh

**Vote:** Motion carried by unanimous roll call vote

**Action:** Approved

**XI. Adjournment**

**Motion:** To adjourn

**Moved by** Council Member Jones, **Seconded by** Council Member Marsh

**Vote:** Motion carried by unanimous roll call vote

**Action:** Adjourned

There being no further business, Council adjourned at 8:39 p.m.

Respectfully submitted,

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Tracy Rabon  
City Clerk

## Agenda Item VI.A

**City of Lancaster  
City Council Meeting  
July 11, 2023**

**TO:** City Council  
**SUBJECT:** Turn Lane Agreement  
**INITIATED BY:** Basildon at Lancaster, LLC  
**PREPARED BY:** City Administrator

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**Background:** In October 2021 the Lancaster Planning Commission unanimously approved the preliminary plat for the Basildon at Lancaster subdivision. This subdivision is located off University Drive, adjacent to Arrowood's Havenwood Drive entrance, and will consist of 357 single-family dwelling units in a cluster development. Also, in October 2021, the transportation engineering firm Kimley-Horn performed a traffic impact assessment that concluded entrance turn lanes will be need on University Drive along with northbound and southbound left-turn lanes on Hubbard Drive.

In order for Basildon at Lancaster to receive a SCDOT encroachment permit to construct the entrance turn lanes, SCDOT is requiring an agreement between the City and Basildon at Lancaster stating that the City will issue no more than 250 building permits until the Hubbard Drive turn lanes have been constructed and approved by SCDOT.

**Financial:** There is no direct cost to the City. Basildon at Lancaster and possible future developments will be responsible for constructing the turn lanes to SCDOT standards.

**Recommendations/Actions:** Approve Resolution R23-12.

**Attachments:** Resolution R23-12, Turn Lane Agreement, transportation technical memo from Kimley-Horn, and location map.



**RESOLUTION R23-12**

**A RESOLUTION AUTHORIZING THE CITY ADMINISTRATOR TO EXECUTE A  
TURN LANE AGREEMENT WITH THE BASILDON AT LANCASTER SUBDIVISION  
ON BEHALF OF THE CITY OF LANCASTER, SOUTH CAROLINA**

**WHEREAS**, on October 5, 2021 Lancaster Planning Commission unanimously approved the preliminary plat for the Basildon at Lancaster Subdivision; and

**WHEREAS**, Kimley-Horn performed a traffic impact assessment (TIA) for the Basildon at Lancaster development, which called for the construction of entrance turn lanes on University Drive, and the construction of a northbound left-turn lane and a southbound left-turn lane at the intersection of Hubbard Drive and University Drive; and

**WHEREAS**, the South Carolina Department of Transportation will not issue an encroachment permit to Basildon at Lancaster unless the City of Lancaster agrees to issue no more than 250 building permits for the development until the conditions of the TIA are met; and

**WHEREAS**, the Lancaster City Council has a responsibility for balancing growth and development while ensuring the public health, safety, and general welfare of the residents are met.

**NOW THEREFORE, BE IT RESOLVED**, by the Mayor and Council of the City of Lancaster, South Carolina, in Council assembled, that the City Administrator is authorized to execute the turn lane agreement with Basildon at Lancaster, LLC and sign any other such necessary documents.

**DONE IN MEETING ASSEMBLED** on the 11<sup>th</sup> day of July 2023, and to become effective July 11, 2023.

Yeas \_\_\_\_\_ Nays \_\_\_\_\_

Requested by:

Basildon at Lancaster, LLC

\_\_\_\_\_  
T. Alston DeVenny, Mayor

Approved as to form:

\_\_\_\_\_  
Mitch Norrell, City Attorney

\_\_\_\_\_  
Tracy Rabon, City Clerk

**TURN LANE AGREEMENT**

This TURN LANE AGREEMENT (“Agreement”) is made and entered into this \_\_\_\_ day of May 2023 (the “Effective Date”), by and between BASILDON AT LANCASTER, LLC, a South Carolina limited liability company (“Basildon”), and the CITY OF LANCASTER, a political subdivision of the State of South Carolina (“City”).

WHEREAS, Basildon is the fee simple owner of Lancaster County Tax Parcel ID # 00062-00-086.00 (the “Basildon Property”); and

WHEREAS, in connection with the development of the Basildon Property, the City is requiring the construction of (i) a northbound left-turn lane with a storage length of 150’ and (ii) a southbound left-turn lane with a storage length of 150’ (collectively, the “Turn Lanes”), which Turn Lanes are more particularly described in the Memorandum attached hereto as Exhibit A and incorporated herein by this reference (the “Memorandum”); and

WHEREAS, the City has agreed to oversee Basildon’s construction of the Turn Lanes, instead of SCDOT, in exchange for Basildon agreeing to the terms and conditions set forth in more detail below.

NOW THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, City and Basildon agree as follows:

1. City Obligations. The City agrees to oversee the construction of the Turn Lanes instead of SCDOT.

2. Basildon Obligations. Basildon agrees to construct the Turn Lanes, at its sole cost and expense, in accordance with the timeframe(s) recommended by Kimley-Horn in the Memorandum. If Basildon fails to timely construct the Turn Lanes pursuant to this paragraph, then the City shall have the right to withhold home building permits pertaining to the Basildon Property until the Turn Lanes have been constructed. For avoidance of any doubt, the City’s oversight obligations shall be limited to restricting the issuance of building permits for development within the Basildon Property until such time that the Turn Lanes have been completed. Specifically, only 250 building permits shall be issued for the Basildon Property prior to the completion of the Turn Lanes. SCDOT shall be permitted to perform its normal and customary inspections of the Turn Lanes as deemed necessary.

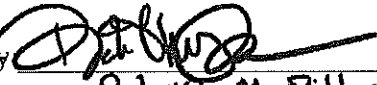
3. Miscellaneous. Except as otherwise provided herein, the parties will each bear its own costs and expenses in executing this Agreement. This Agreement shall be construed in accordance with the laws of the State of South Carolina, and the rights and obligations created herein shall be governed by the laws of the State of South Carolina. This Agreement may be executed in counterparts and/or with counterpart signature pages, all of which together shall constitute a single agreement. Electronic facsimiles of signatures shall be acceptable and binding upon the parties hereto.

[signatures appear on the following page(s)]

IN WITNESS WHEREOF, the parties hereto execute this document as of the date and year first above written.

**ACKNOWLEDGED AND AGREED:**

**BASILDON AT LANCASTER, LLC**

By:   
Name: Robert M. Pittenger, Jr.  
Title: Manager

**CITY OF LANCASTER**

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

Exhibit A  
Memorandum

[see attached]



*Laura N. Reid*  
3/14/23

## TRANSPORTATION TECHNICAL MEMORANDUM

To: Allison C. Love, AICP – South Carolina Department of Transportation

From: Laura Reid, PE – Kimley-Horn

Date: March 14, 2023

Subject: ***Lancaster Landing Transportation Technical Memorandum  
Phased Analysis  
Lancaster, South Carolina***

Kimley-Horn previously performed the TIA for the Lancaster Landing development (now called Basildon at Lancaster) in October 2021. Since the completion of the TIA, the site is proposed to be split into 2 phases: 202 homes in Phase 1 and 155 homes in Phase 2. For the purposes of this memorandum, Phase 1 was further broken down into Phase 1 A (100 homes) and Phase 1B (150 homes).

Based on coordination with South Carolina Department of Transportation (SCDOT) and City of Lancaster, Kimley-Horn has performed a phased analysis at the intersection of University Drive and Hubbard Drive to determine when the following off-site improvements should be required:

### ***Hubbard Drive and University Drive***

- Construction of a northbound left-turn lane with a storage length of 150 feet
- Construction of a southbound left-turn lane with a storage length of 150 feet

Per coordination with the development team, the required improvements at the site access points as outlined in the TIA will be constructed in Phase 1.

## PHASED ANALYSIS

A phased analysis was performed for three interim phases of the Lancaster Landing development. These three phases are planned and scheduled as follows:

- Phase 1A – 100 lots (2026)
- Phase 1B – 150 lots (2027)
- Phase 1 – 202 lots (2028)

The current phasing plan is **attached**.

Traffic volume projections were developed at the one study intersection for the following scenarios:

- 2026 Background
- 2026 Build-out (Phase 1A)
- 2027 Background

- 2027 Build-out (Phase 1B)
- 2028 Background
- 2028 Build-out (Phase 1)

The 2021 existing traffic volumes from the TIA were grown at 1.5% per year to account for non-specific background growth between existing and background conditions. This methodology is consistent with the approved TIA.

The 2026, 2027, and 2028 background AM and PM peak-hour traffic volumes are shown on **Figure 1**.

Three trip generation analyses were performed based on the proposed interim phases. Traffic generation is based on data provided by the Institute of Transportation Engineers' (ITE) *Trip Generation, 10<sup>th</sup> Edition* for consistency with the TIA. **Table 1** summarizes the projected trip generation for each proposed phase of the development. Note that the trip generations shown are cumulative (Phase 1B includes Phase 1A, Phase 1 includes Phases 1A & 1B).

Table 1 - Trip Generation									
Phase	Land Use	Intensity	Daily	AM Peak Hour			PM Peak Hour		
				Total	In	Out	Total	In	Out
1A	Single-Family Homes	100 DU	1,040	76	19	57	102	64	38
1B	Single-Family Homes	150 DU	1,510	111	28	83	150	95	55
1	Single-Family Homes	202 DU	1,985	148	37	111	200	126	74

Site traffic was assigned to the study intersection using the trip generation and approved distribution and assignment percentages included in the TIA.

Build-out traffic was calculated as the sum of historical growth traffic and proposed site traffic. Phase 1A, Phase 1B, and Phase 1 build-out traffic volumes for are shown in **Figure 2**, attached.

Synchro Version 11 capacity and queueing analyses were prepared for the 2026, 2027, and 2028 horizon years. Results of the analyses are summarized below. Synchro reports are **attached**.

**University Drive and Hubbard Drive**

Table 2 summarizes the LOS, control delay and 95<sup>th</sup> percentile queue lengths at the unsignalized intersection of University Drive and Hubbard Drive.

Table 2 - University Drive and Hubbard Drive					
Condition	Measure	EB	WB	NB	SB
		EBLTR	WBLTR	NBLTR	SBLTR
<b>AM Peak Hour</b>					
<b>Phase 1A</b>					
2026 Background	LOS (Delay)	A (8.6)	A (8.7)	A (8.8)	A (8.7)
	Synchro 95th Q	18'	13'	18'	15'
2026 Build-out	LOS (Delay)	A (9.1)	A (8.8)	A (9.1)	A (8.9)
	Synchro 95th Q	25'	13'	20'	18'
<b>Phase 1B</b>					
2027 Background	LOS (Delay)	A (8.7)	A (8.7)	A (8.8)	A (8.8)
	Synchro 95th Q	18'	13'	18'	18'
2027 Build-out	LOS (Delay)	A (9.3)	A (8.9)	A (9.3)	A (9.1)
	Synchro 95th Q	28'	13'	20'	18'
<b>Phase 1</b>					
2028 Background	LOS (Delay)	A (8.7)	A (8.7)	A (8.8)	A (8.8)
	Synchro 95th Q	18'	13'	18'	18'
2028 Build-out	LOS (Delay)	A (9.7)	A (9.1)	A (9.5)	A (9.2)
	Synchro 95th Q	33'	13'	23'	18'
<b>PM Peak Hour</b>					
<b>Phase 1A</b>					
2026 Background	LOS (Delay)	B (10.7)	B (11.1)	B (12.9)	B (11.1)
	Synchro 95th Q	30'	30'	63'	35'
2026 Build-out	LOS (Delay)	B (11.6)	B (11.8)	B (14.8)	B (11.7)
	Synchro 95th Q	38'	35'	80'	38'
<b>Phase 1B</b>					
2027 Background	LOS (Delay)	B (10.9)	B (11.2)	B (13.2)	B (11.2)
	Synchro 95th Q	30'	30'	65'	35'
2027 Build-out	LOS (Delay)	B (12.3)	B (12.4)	C (16.4)	B (12.1)
	Synchro 95th Q	43'	40'	95'	40'
<b>Phase 1</b>					
2028 Background	LOS (Delay)	B (11.0)	B (11.3)	B (13.4)	B (11.4)
	Synchro 95th Q	30'	33'	68'	38'
2028 Build-out	LOS (Delay)	B (13.4)	B (13.3)	C (19.1)	B (12.8)
	Synchro 95th Q	50'	45'	118'	43'

Under all background conditions, all the stop-controlled approaches are expected to operate with short delays. With the addition of site traffic of each phase, the stop-controlled approaches are expected continue operating with short delay.

In the PM peak hour, the northbound approach is expected to drop from LOS B to LOS C with the addition of Phase 1B and Phase 1 site traffic. However, in both instances, the overall increase in delay is 6 seconds or less. Further, the addition of the site traffic resulted in an increase in queue of only 30 to 50 feet (1 to 2 cars).

Therefore, no improvements are recommended for capacity purposes in Phase 1A, Phase 1B, or Phase 1. All improvements identified at this intersection should be required in Phase 2.

## **RECOMMENDATIONS**

Based on the additional analyses contained herein, the following improvements (previously identified in the Lancaster Landing TIA) are recommended to be required in Phase 2 of the proposed development:

### ***Hubbard Drive and University Drive***

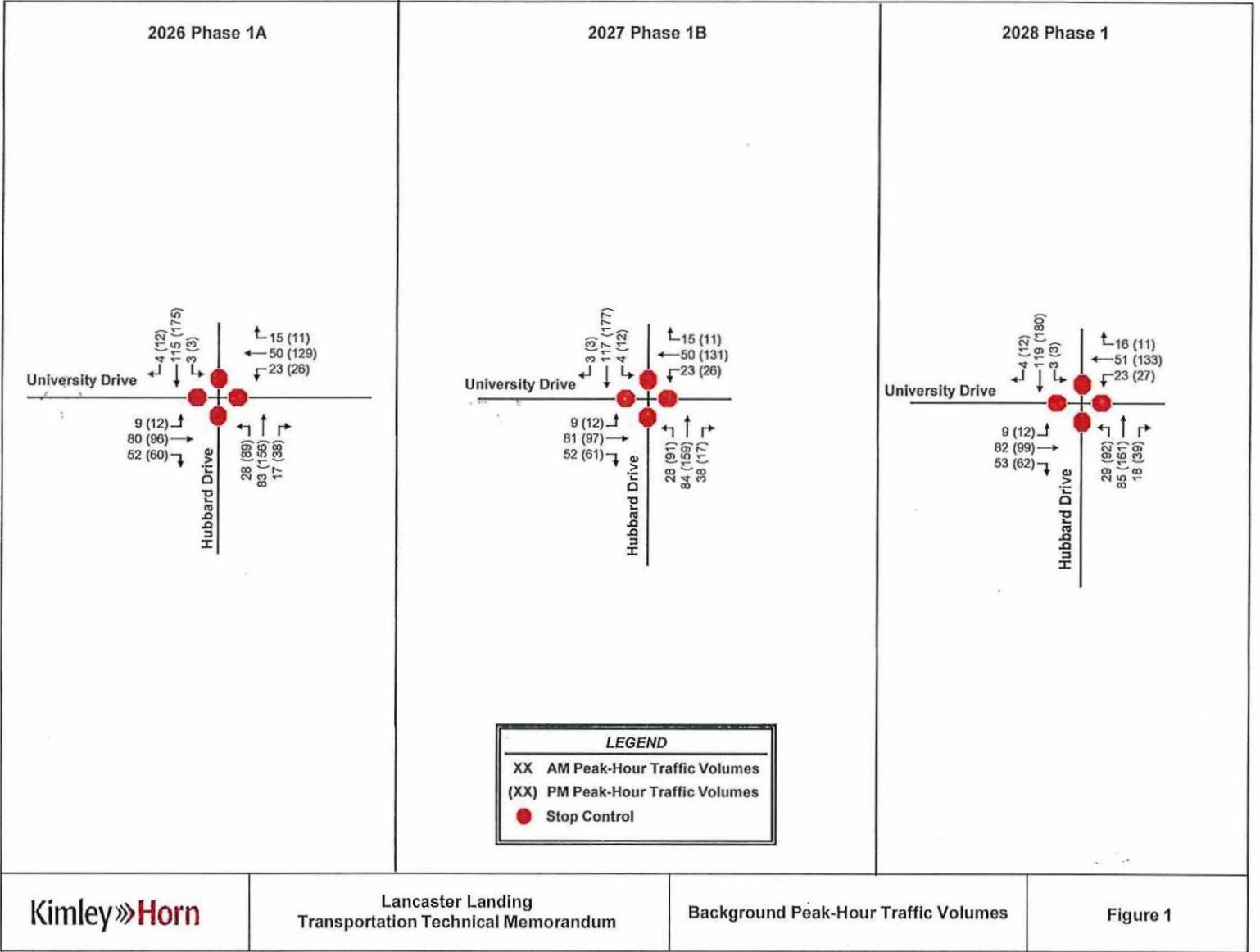
- Construction of a northbound left-turn lane with a storage length of 150 feet
- Construction of a southbound left-turn lane with a storage length of 150 feet

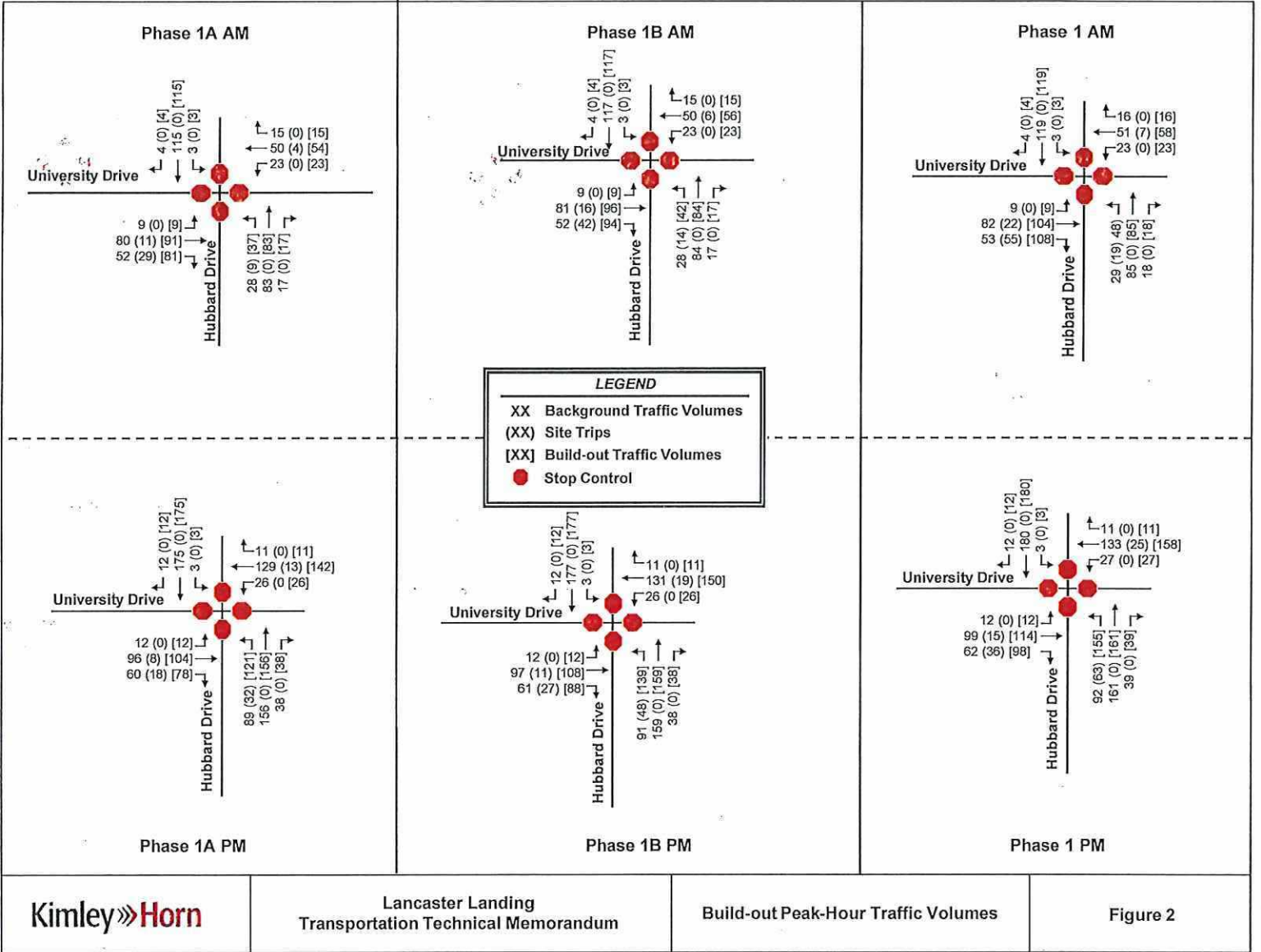
## **ATTACHMENTS**

- Phasing Plan
- Figures
  1. Background Peak-Hour Traffic Volumes
  2. Build-out Peak-Hour Traffic Volumes
- Intersection Volume Development
- Capacity Analysis reports









**INTERSECTION VOLUME DEVELOPMENT**

**Hubbard Drive and University Drive  
AM PEAK HOUR**

Description	Hubbard Drive Northbound				Hubbard Drive Southbound				University Drive Eastbound				University Drive Westbound			
	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
Observed Volumes	26	77	16	0	3	107	4	0	8	74	48	0	21	46	14	0
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	26	77	16	0	3	107	4	0	8	74	48	0	21	46	14	0
2021 PHF	0.93	0.84	0.80	0.90	0.38	0.89	0.50	0.90	0.50	0.88	0.67	0.90	0.66	0.77	0.39	0.90
2026 PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	2%	13%	2%	2%	6%	2%	2%	2%	4%	6%	2%	10%	2%	14%	2%
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor #1	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077
2026 Background Traffic	28	83	17	0	3	115	4	0	9	80	52	0	23	50	15	0
Percent Inbound Assignment	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	50%	0%	0%	0%	0%	0%
Project Trips	10	0	0	0	0	0	0	0	0	11	29	0	0	4	0	0
Project Trips (Total)	9	0	0	0	0	0	0	0	0	11	29	0	0	4	0	0
2026 Buildout Total	37	83	17	0	3	115	4	0	9	91	81	0	23	54	15	0

**PM PEAK HOUR**

Description	Hubbard Drive Northbound				Hubbard Drive Southbound				University Drive Eastbound				University Drive Westbound			
	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
Observed Volumes	83	145	35	0	3	162	11	0	11	89	56	0	24	120	10	0
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	83	145	35	0	3	162	11	0	11	89	56	0	24	120	10	0
2021 PHF	0.87	0.86	0.63	0.90	0.75	0.86	0.69	0.90	0.55	0.89	0.67	0.90	0.75	0.88	0.63	0.90
2026 PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	2%	3%	2%	2%	2%	2%	2%	2%	3%	4%	2%	2%	3%	2%	2%
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor #1	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077
2026 Background Traffic	89	156	38	0	3	175	12	0	12	96	60	0	26	129	11	0
Percent Inbound Assignment	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	50%	0%	0%	0%	0%	0%
Project Trips	32	0	0	0	0	0	0	0	0	8	19	0	0	13	0	0
Project Trips (Total)	32	0	0	0	0	0	0	0	0	8	18	0	0	13	0	0
2026 Buildout Total	121	156	38	0	3	175	12	0	12	104	78	0	26	142	11	0

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**INTERSECTION VOLUME DEVELOPMENT**

**Hubbard Drive and University Drive  
AM PEAK HOUR**

Description	Hubbard Drive Northbound				Hubbard Drive Southbound				University Drive Eastbound				University Drive Westbound			
	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
Observed Volumes	26	77	16	0	3	107	4	0	8	74	48	0	21	46	14	0
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	26	77	16	0	3	107	4	0	8	74	48	0	21	46	14	0
2021 PHF	0.93	0.84	0.80	0.90	0.38	0.89	0.50	0.90	0.50	0.88	0.67	0.90	0.66	0.77	0.39	0.90
2027 PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	2%	13%	2%	2%	6%	2%	2%	2%	4%	6%	2%	10%	2%	14%	2%
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor #1	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093
2027 Background Traffic	28	84	17	0	3	117	4	0	9	81	52	0	23	50	15	0
Percent Inbound Assignment	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	50%	0%	0%	0%	0%	0%
Project Trips	14	0	0	0	0	0	0	0	0	17	42	0	0	6	0	0
Project Trips (Total)	14	0	0	0	0	0	0	0	0	16	42	0	0	6	0	0
2027 Buildout Total	42	84	17	0	3	117	4	0	9	97	94	0	23	56	15	0

**PM PEAK HOUR**

Description	Hubbard Drive Northbound				Hubbard Drive Southbound				University Drive Eastbound				University Drive Westbound			
	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
Observed Volumes	83	145	35	0	3	162	11	0	11	89	56	0	24	120	10	0
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	83	145	35	0	3	162	11	0	11	89	56	0	24	120	10	0
2021 PHF	0.87	0.86	0.63	0.90	0.75	0.86	0.69	0.90	0.55	0.89	0.67	0.90	0.75	0.88	0.63	0.90
2027 PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	2%	3%	2%	2%	2%	2%	2%	2%	3%	4%	2%	2%	3%	2%	2%
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor #1	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093
2027 Background Traffic	91	159	38	0	3	177	12	0	12	97	61	0	26	131	11	0
Percent Inbound Assignment	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	50%	0%	0%	0%	0%	0%
Project Trips	48	0	0	0	0	0	0	0	0	11	28	0	0	19	0	0
Project Trips (Total)	48	0	0	0	0	0	0	0	0	11	27	0	0	19	0	0
2027 Buildout Total	139	159	38	0	3	177	12	0	12	108	88	0	26	150	11	0

**INTERSECTION VOLUME DEVELOPMENT**

**Hubbard Drive and University Drive  
AM PEAK HOUR**

















Description	Hubbard Drive Northbound				Hubbard Drive Southbound				University Drive Eastbound				University Drive Westbound			
	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
Observed Volumes	26	77	16	0	3	107	4	0	8	74	48	0	21	46	14	0
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	26	77	16	0	3	107	4	0	8	74	48	0	21	46	14	0
2021 PHF	0.93	0.84	0.80	0.90	0.38	0.89	0.50	0.90	0.50	0.88	0.67	0.90	0.66	0.77	0.39	0.90
2028 PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	2%	13%	2%	2%	6%	2%	2%	2%	4%	6%	2%	10%	2%	14%	2%
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor #1	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110
2028 Background Traffic	29	85	18	0	3	119	4	0	9	82	53	0	23	51	16	0
Percent Inbound Assignment	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	50%	0%	0%	0%	0%	0%
Project Trips	19	0	0	0	0	0	0	0	0	22	56	0	0	7	0	0
Project Trips (Total)	19	0	0	0	0	0	0	0	0	22	55	0	0	7	0	0
2028 Buildout Total	48	85	18	0	3	119	4	0	9	104	108	0	23	58	16	0

**PM PEAK HOUR**

Description	Hubbard Drive Northbound				Hubbard Drive Southbound				University Drive Eastbound				University Drive Westbound			
	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
Observed Volumes	83	145	35	0	3	162	11	0	11	89	56	0	24	120	10	0
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	83	145	35	0	3	162	11	0	11	89	56	0	24	120	10	0
2021 PHF	0.87	0.86	0.63	0.90	0.75	0.86	0.69	0.90	0.55	0.89	0.67	0.90	0.75	0.88	0.63	0.90
2028 PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	2%	3%	2%	2%	2%	2%	2%	2%	3%	4%	2%	2%	3%	2%	2%
Annual Growth Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Growth Factor #1	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110
2028 Background Traffic	92	161	39	0	3	180	12	0	12	99	62	0	27	133	11	0
Percent Inbound Assignment	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	50%	0%	0%	0%	0%	0%
Project Trips	63	0	0	0	0	0	0	0	0	15	37	0	0	25	0	0
Project Trips (Total)	63	0	0	0	0	0	0	0	0	15	36	0	0	25	0	0
2028 Buildout Total	155	161	39	0	3	180	12	0	12	114	98	0	27	158	11	0

Lanes, Volumes, Timings  
3: Hubbard Drive & University Drive

Lancaster Landing Phasing Analysis  
2026 Background AM-Phase 1A

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	80	52	23	50	15	28	83	17	3	115	4
Future Volume (vph)	9	80	52	23	50	15	28	83	17	3	115	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>		0.950			0.977			0.982			0.996	
Fl <sub>t</sub> Protected		0.997			0.987			0.989			0.999	
Satd. Flow (prot)	0	1720	0	0	1726	0	0	1783	0	0	1787	0
Fl <sub>t</sub> Permitted		0.997			0.987			0.989			0.999	
Satd. Flow (perm)	0	1720	0	0	1726	0	0	1783	0	0	1787	0
Link Speed (mph)		35			35			30			35	
Link Distance (ft)		1725			1363			3929			1208	
Travel Time (s)		33.6			26.6			89.3			23.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	4%	6%	10%	2%	14%	2%	2%	13%	2%	6%	2%
Adj. Flow (vph)	10	89	58	26	56	17	31	92	19	3	128	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	157	0	0	99	0	0	142	0	0	135	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	32.0%
ICU Level of Service	A
Analysis Period (min)	15

HCM 6th AWSC  
3: Hubbard Drive & University Drive

Lancaster Landing Phasing Analysis  
2026 Background AM-Phase 1A

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	80	52	23	50	15	28	83	17	3	115	4
Future Vol, veh/h	9	80	52	23	50	15	28	83	17	3	115	4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	4	6	10	2	14	2	2	13	2	6	2
Mvmt Flow	10	89	58	26	56	17	31	92	19	3	128	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.6	8.7	8.8	8.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	22%	6%	26%	2%
Vol Thru, %	65%	57%	57%	94%
Vol Right, %	13%	37%	17%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	128	141	88	122
LT Vol	28	9	23	3
Through Vol	83	80	50	115
RT Vol	17	52	15	4
Lane Flow Rate	142	157	98	136
Geometry Grp	1	1	1	1
Degree of Util (X)	0.184	0.196	0.132	0.177
Departure Headway (Hd)	4.66	4.505	4.863	4.689
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	768	794	735	763
Service Time	2.7	2.544	2.906	2.728
HCM Lane V/C Ratio	0.185	0.198	0.133	0.178
HCM Control Delay	8.8	8.6	8.7	8.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0.7	0.5	0.6



Lanes, Volumes, Timings  
 3: Hubbard Drive & University Drive

Lancaster Landing Phasing Analysis  
 2026 Background PM - Phase 1A



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	12	96	60	26	129	11	89	156	38	3	175	12
Future Volume (vph)	12	96	60	26	129	11	89	156	38	3	175	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.952			0.991			0.982			0.992	
Flt Protected		0.997			0.992			0.984			0.999	
Satd. Flow (prot)	0	1746	0	0	1817	0	0	1798	0	0	1846	0
Flt Permitted		0.997			0.992			0.984			0.999	
Satd. Flow (perm)	0	1746	0	0	1817	0	0	1798	0	0	1846	0
Link Speed (mph)		35			35			30			35	
Link Distance (ft)		1725			1363			3929			1208	
Travel Time (s)		33.6			26.6			89.3			23.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	3%	4%	2%	3%	2%	2%	2%	3%	2%	2%	2%
Adj. Flow (vph)	13	107	67	29	143	12	99	173	42	3	194	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	187	0	0	184	0	0	314	0	0	210	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	50.9%
ICU Level of Service	A
Analysis Period (min)	15

HCM 6th AWSC  
3: Hubbard Drive & University Drive

Lancaster Landing Phasing Analysis  
2026 Background PM - Phase 1A

Intersection	
Intersection Delay, s/veh	11.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	12	96	60	26	129	11	89	156	38	3	175	12
Future Vol, veh/h	12	96	60	26	129	11	89	156	38	3	175	12
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	3	4	2	3	2	2	2	3	2	2	2
Mvmt Flow	13	107	67	29	143	12	99	173	42	3	194	13
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.7	11.1	12.9	11.1
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	31%	7%	16%	2%
Vol Thru, %	55%	57%	78%	92%
Vol Right, %	13%	36%	7%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	283	168	166	190
LT Vol	89	12	26	3
Through Vol	156	96	129	175
RT Vol	38	60	11	12
Lane Flow Rate	314	187	184	211
Geometry Grp	1	1	1	1
Degree of Util (X)	0.465	0.285	0.291	0.32
Departure Headway (Hd)	5.318	5.498	5.685	5.464
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	676	651	631	657
Service Time	3.361	3.551	3.737	3.512
HCM Lane V/C Ratio	0.464	0.287	0.292	0.321
HCM Control Delay	12.9	10.7	11.1	11.1
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	2.5	1.2	1.2	1.4

Lanes, Volumes, Timings  
3: Hubbard Drive & University Drive

Lancaster Landing Phasing Analysis  
2026 Build AM - Phase 1A



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	9	91	81	23	54	15	37	83	17	3	115	4
Future Volume (vph)	9	91	81	23	54	15	37	83	17	3	115	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.940			0.978			0.983			0.996	
Flt Protected		0.998			0.988			0.987			0.999	
Satd. Flow (prot)	0	1701	0	0	1732	0	0	1783	0	0	1787	0
Flt Permitted		0.998			0.988			0.987			0.999	
Satd. Flow (perm)	0	1701	0	0	1732	0	0	1783	0	0	1787	0
Link Speed (mph)		35			35			30			35	
Link Distance (ft)		1725			1363			3929			1208	
Travel Time (s)		33.6			26.6			89.3			23.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	4%	6%	10%	2%	14%	2%	2%	13%	2%	6%	2%
Adj. Flow (vph)	10	101	90	26	60	17	41	92	19	3	128	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	201	0	0	103	0	0	152	0	0	135	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	33.9%
ICU Level of Service	A
Analysis Period (min)	15

HCM 6th AWSC  
3: Hubbard Drive & University Drive

Lancaster Landing Phasing Analysis  
2026 Build AM - Phase 1A

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

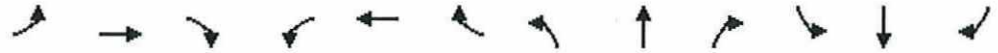
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	91	81	23	54	15	37	83	17	3	115	4
Future Vol, veh/h	9	91	81	23	54	15	37	83	17	3	115	4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	4	6	10	2	14	2	2	13	2	6	2
Mvmt Flow	10	101	90	26	60	17	41	92	19	3	128	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.1	8.8	9.1	8.9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	27%	5%	25%	2%
Vol Thru, %	61%	50%	59%	94%
Vol Right, %	12%	45%	16%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	137	181	92	122
LT Vol	37	9	23	3
Through Vol	83	91	54	115
RT Vol	17	81	15	4
Lane Flow Rate	152	201	102	136
Geometry Grp	1	1	1	1
Degree of Util (X)	0.203	0.251	0.141	0.181
Departure Headway (Hd)	4.793	4.5	4.956	4.82
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	746	794	720	740
Service Time	2.845	2.547	3.01	2.874
HCM Lane V/C Ratio	0.204	0.253	0.142	0.184
HCM Control Delay	9.1	9.1	8.8	8.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.8	1	0.5	0.7

Lanes, Volumes, Timings  
3: Hubbard Drive & University Drive

Lancaster Landing TIA  
2026 Build PM - Phase 1A



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	12	104	78	26	142	11	121	156	38	3	175	12
Future Volume (vph)	12	104	78	26	142	11	121	156	38	3	175	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.946			0.992			0.984			0.992	
Flt Protected		0.997			0.993			0.981			0.999	
Satd. Flow (prot)	0	1734	0	0	1821	0	0	1796	0	0	1846	0
Flt Permitted		0.997			0.993			0.981			0.999	
Satd. Flow (perm)	0	1734	0	0	1821	0	0	1796	0	0	1846	0
Link Speed (mph)		35			35			30			35	
Link Distance (ft)		1725			1363			3929			1208	
Travel Time (s)		33.6			26.6			89.3			23.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	3%	4%	2%	3%	2%	2%	2%	3%	2%	2%	2%
Adj. Flow (vph)	13	116	87	29	158	12	134	173	42	3	194	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	216	0	0	199	0	0	349	0	0	210	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	54.0%
ICU Level of Service	A
Analysis Period (min)	15

HCM 6th AWSC  
3: Hubbard Drive & University Drive

Lancaster Landing TIA  
2026 Build PM - Phase 1A

Intersection	
Intersection Delay, s/veh	12.8
Intersection LOS	B

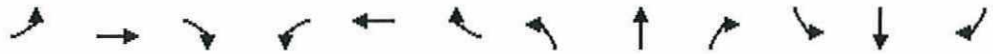
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	12	104	78	26	142	11	121	156	38	3	175	12
Future Vol, veh/h	12	104	78	26	142	11	121	156	38	3	175	12
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	3	4	2	3	2	2	2	3	2	2	2
Mvmt Flow	13	116	87	29	158	12	134	173	42	3	194	13
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.6	11.8	14.8	11.7
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	38%	6%	15%	2%
Vol Thru, %	50%	54%	79%	92%
Vol Right, %	12%	40%	6%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	315	194	179	190
LT Vol	121	12	26	3
Through Vol	156	104	142	175
RT Vol	38	78	11	12
Lane Flow Rate	350	216	199	211
Geometry Grp	1	1	1	1
Degree of Util (X)	0.536	0.339	0.326	0.335
Departure Headway (Hd)	5.518	5.665	5.906	5.715
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	651	632	605	625
Service Time	3.578	3.736	3.979	3.785
HCM Lane V/C Ratio	0.538	0.342	0.329	0.338
HCM Control Delay	14.8	11.6	11.8	11.7
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	3.2	1.5	1.4	1.5

Lanes, Volumes, Timings  
 3: Hubbard Drive & University Drive

Lancaster Landing Phasing Analysis  
 2027 Background AM - Phase 1B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	9	81	52	23	50	15	28	84	17	3	117	4
Future Volume (vph)	9	81	52	23	50	15	28	84	17	3	117	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>		0.950			0.977			0.982			0.996	
Fit Protected		0.997			0.987			0.989			0.999	
Satd. Flow (prot)	0	1720	0	0	1726	0	0	1784	0	0	1787	0
Fit Permitted		0.997			0.987			0.989			0.999	
Satd. Flow (perm)	0	1720	0	0	1726	0	0	1784	0	0	1787	0
Link Speed (mph)		35			35			30			35	
Link Distance (ft)		1725			1363			3929			1208	
Travel Time (s)		33.6			26.6			89.3			23.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	4%	6%	10%	2%	14%	2%	2%	13%	2%	6%	2%
Adj. Flow (vph)	10	90	58	26	56	17	31	93	19	3	130	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	158	0	0	99	0	0	143	0	0	137	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	35.3% ICU Level of Service A
Analysis Period (min)	15

HCM 6th AWSC  
3: Hubbard Drive & University Drive

Lancaster Landing Phasing Analysis  
2027 Background AM - Phase 1B

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	81	52	23	50	15	28	84	17	3	117	4
Future Vol, veh/h	9	81	52	23	50	15	28	84	17	3	117	4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	4	6	10	2	14	2	2	13	2	6	2
Mvmt Flow	10	90	58	26	56	17	31	93	19	3	130	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

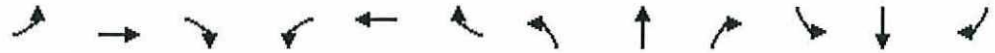
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.7	8.7	8.8	8.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	22%	6%	26%	2%
Vol Thru, %	65%	57%	57%	94%
Vol Right, %	13%	37%	17%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	129	142	88	124
LT Vol	28	9	23	3
Through Vol	84	81	50	117
RT Vol	17	52	15	4
Lane Flow Rate	143	158	98	138
Geometry Grp	1	1	1	1
Degree of Util (X)	0.186	0.198	0.132	0.18
Departure Headway (Hd)	4.667	4.515	4.873	4.694
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	767	792	733	762
Service Time	2.707	2.555	2.918	2.735
HCM Lane V/C Ratio	0.186	0.199	0.134	0.181
HCM Control Delay	8.8	8.7	8.7	8.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0.7	0.5	0.7



Lanes, Volumes, Timings  
3: Hubbard Drive & University Drive

Lancaster Landing Phasing Analysis  
2027 Background PM - Phase 1B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	12	97	61	26	131	11	91	159	38	3	177	12
Future Volume (vph)	12	97	61	26	131	11	91	159	38	3	177	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.951			0.991			0.982			0.992	
Flt Protected		0.997			0.992			0.984			0.999	
Satd. Flow (prot)	0	1744	0	0	1817	0	0	1798	0	0	1846	0
Flt Permitted		0.997			0.992			0.984			0.999	
Satd. Flow (perm)	0	1744	0	0	1817	0	0	1798	0	0	1846	0
Link Speed (mph)		35			35			30			35	
Link Distance (ft)		1725			1363			3929			1208	
Travel Time (s)		33.6			26.6			89.3			23.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	3%	4%	2%	3%	2%	2%	2%	3%	2%	2%	2%
Adj. Flow (vph)	13	108	68	29	146	12	101	177	42	3	197	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	189	0	0	187	0	0	320	0	0	213	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	51.4%
ICU Level of Service	A
Analysis Period (min)	15

HCM 6th AWSC  
3: Hubbard Drive & University Drive

Lancaster Landing Phasing Analysis  
2027 Background PM - Phase 1B

Intersection	
Intersection Delay, s/veh	11.8
Intersection LOS	B

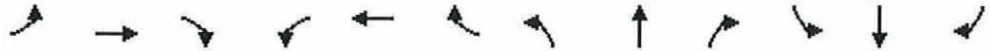
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	12	97	61	26	131	11	91	159	38	3	177	12
Future Vol, veh/h	12	97	61	26	131	11	91	159	38	3	177	12
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	3	4	2	3	2	2	2	3	2	2	2
Mvmt Flow	13	108	68	29	146	12	101	177	42	3	197	13
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.9	11.2	13.2	11.2
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	32%	7%	15%	2%
Vol Thru, %	55%	57%	78%	92%
Vol Right, %	13%	36%	7%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	288	170	168	192
LT Vol	91	12	26	3
Through Vol	159	97	131	177
RT Vol	38	61	11	12
Lane Flow Rate	320	189	187	213
Geometry Grp	1	1	1	1
Degree of Util (X)	0.475	0.29	0.297	0.326
Departure Headway (Hd)	5.344	5.532	5.719	5.494
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	672	648	625	653
Service Time	3.391	3.588	3.775	3.547
HCM Lane V/C Ratio	0.476	0.292	0.299	0.326
HCM Control Delay	13.2	10.9	11.2	11.2
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	2.6	1.2	1.2	1.4

Lanes, Volumes, Timings  
3: Hubbard Drive & University Drive

Lancaster Landing Phasing Analysis  
2027 Build AM - Phase 1B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	9	97	94	23	56	15	42	84	17	3	117	4
Future Volume (vph)	9	97	94	23	56	15	42	84	17	3	117	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fit		0.937			0.978			0.984			0.996	
Fit Protected		0.998			0.988			0.985			0.999	
Satd. Flow (prot)	0	1695	0	0	1733	0	0	1782	0	0	1787	0
Fit Permitted		0.998			0.988			0.985			0.999	
Satd. Flow (perm)	0	1695	0	0	1733	0	0	1782	0	0	1787	0
Link Speed (mph)		35			35			30			35	
Link Distance (ft)		1725			1363			3929			1208	
Travel Time (s)		33.6			26.6			89.3			23.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	4%	6%	10%	2%	14%	2%	2%	13%	2%	6%	2%
Adj. Flow (vph)	10	108	104	26	62	17	47	93	19	3	130	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	222	0	0	105	0	0	159	0	0	137	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	38.1%
ICU Level of Service	A
Analysis Period (min)	15

HCM 6th AWSC  
3: Hubbard Drive & University Drive

Lancaster Landing Phasing Analysis  
2027 Build AM - Phase 1B

Intersection	
Intersection Delay, s/veh	9.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	97	94	23	56	15	42	84	17	3	117	4
Future Vol, veh/h	9	97	94	23	56	15	42	84	17	3	117	4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	4	6	10	2	14	2	2	13	2	6	2
Mvmt Flow	10	108	104	26	62	17	47	93	19	3	130	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.3	8.9	9.3	9.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	29%	4%	24%	2%
Vol Thru, %	59%	48%	60%	94%
Vol Right, %	12%	47%	16%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	143	200	94	124
LT Vol	42	9	23	3
Through Vol	84	97	56	117
RT Vol	17	94	15	4
Lane Flow Rate	159	222	104	138
Geometry Grp	1	1	1	1
Degree of Util (X)	0.215	0.279	0.146	0.187
Departure Headway (Hd)	4.865	4.521	5.016	4.89
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	734	791	710	729
Service Time	2.924	2.572	3.077	2.952
HCM Lane V/C Ratio	0.217	0.281	0.146	0.189
HCM Control Delay	9.3	9.3	8.9	9.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.8	1.1	0.5	0.7

Lanes, Volumes, Timings  
3: Hubbard Drive & University Drive

Lancaster Landing TIA  
2027 Build PM - Phase 1B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	12	108	88	26	150	11	139	159	38	3	177	12
Future Volume (vph)	12	108	88	26	150	11	139	159	38	3	177	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.943			0.992			0.985			0.992	
Frt Protected		0.997			0.993			0.980			0.999	
Satd. Flow (prot)	0	1728	0	0	1821	0	0	1796	0	0	1846	0
Frt Permitted		0.997			0.993			0.980			0.999	
Satd. Flow (perm)	0	1728	0	0	1821	0	0	1796	0	0	1846	0
Link Speed (mph)		35			35			30			35	
Link Distance (ft)		1725			1363			3929			1208	
Travel Time (s)		33.6			26.6			89.3			23.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	3%	4%	2%	3%	2%	2%	2%	3%	2%	2%	2%
Adj. Flow (vph)	13	120	98	29	167	12	154	177	42	3	197	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	231	0	0	208	0	0	373	0	0	213	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	56.0%
ICU Level of Service	B
Analysis Period (min)	15

HCM 6th AWSC  
3: Hubbard Drive & University Drive

Lancaster Landing TIA  
2027 Build PM - Phase 1B

Intersection	
Intersection Delay, s/veh	13.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	12	108	88	26	150	11	139	159	38	3	177	12
Future Vol, veh/h	12	108	88	26	150	11	139	159	38	3	177	12
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	3	4	2	3	2	2	2	3	2	2	2
Mvmt Flow	13	120	98	29	167	12	154	177	42	3	197	13
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.3	12.4	16.4	12.1
HCM LOS	B	B	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	41%	6%	14%	2%
Vol Thru, %	47%	52%	80%	92%
Vol Right, %	11%	42%	6%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	336	208	187	192
LT Vol	139	12	26	3
Through Vol	159	108	150	177
RT Vol	38	88	11	12
Lane Flow Rate	373	231	208	213
Geometry Grp	1	1	1	1
Degree of Util (X)	0.585	0.371	0.349	0.348
Departure Headway (Hd)	5.639	5.786	6.055	5.875
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	635	617	588	606
Service Time	3.714	3.876	4.148	3.965
HCM Lane V/C Ratio	0.587	0.374	0.354	0.351
HCM Control Delay	16.4	12.3	12.4	12.1
HCM Lane LOS	C	B	B	B
HCM 95th-tile Q	3.8	1.7	1.6	1.6

Lanes, Volumes, Timings  
3: Hubbard Drive & University Drive

Lancaster Landing Phasing Analysis  
2028 Background AM - Phase 1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	9	82	53	23	51	16	29	85	18	3	119	4
Future Volume (vph)	9	82	53	23	51	16	29	85	18	3	119	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.950			0.976			0.982			0.996	
Flt Protected		0.997			0.987			0.989			0.999	
Satd. Flow (prot)	0	1720	0	0	1723	0	0	1783	0	0	1787	0
Flt Permitted		0.997			0.987			0.989			0.999	
Satd. Flow (perm)	0	1720	0	0	1723	0	0	1783	0	0	1787	0
Link Speed (mph)		35			35			30			35	
Link Distance (ft)		1725			1363			3929			1208	
Travel Time (s)		33.6			26.6			89.3			23.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	4%	6%	10%	2%	14%	2%	2%	13%	2%	6%	2%
Adj. Flow (vph)	10	91	59	26	57	18	32	94	20	3	132	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	160	0	0	101	0	0	146	0	0	139	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	35.8%
	ICU Level of Service A
Analysis Period (min)	15

HCM 6th AWSC  
3: Hubbard Drive & University Drive

Lancaster Landing Phasing Analysis  
2028 Background AM - Phase 1

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	82	53	23	51	16	29	85	18	3	119	4
Future Vol, veh/h	9	82	53	23	51	16	29	85	18	3	119	4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	4	6	10	2	14	2	2	13	2	6	2
Mvmt Flow	10	91	59	26	57	18	32	94	20	3	132	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

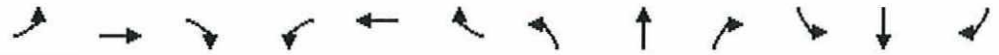
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.7	8.7	8.8	8.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	22%	6%	26%	2%
Vol Thru, %	64%	57%	57%	94%
Vol Right, %	14%	37%	18%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	132	144	90	126
LT Vol	29	9	23	3
Through Vol	85	82	51	119
RT Vol	18	53	16	4
Lane Flow Rate	147	160	100	140
Geometry Grp	1	1	1	1
Degree of Util (X)	0.191	0.201	0.136	0.183
Departure Headway (Hd)	4.68	4.532	4.886	4.711
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	764	790	732	759
Service Time	2.722	2.573	2.931	2.754
HCM Lane V/C Ratio	0.192	0.203	0.137	0.184
HCM Control Delay	8.8	8.7	8.7	8.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0.7	0.5	0.7



Lanes, Volumes, Timings  
3: Hubbard Drive & University Drive

Lancaster Landing Phasing Analysis  
2028 Background PM - Phase 1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	12	99	62	27	133	11	92	161	39	3	180	12
Future Volume (vph)	12	99	62	27	133	11	92	161	39	3	180	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>		0.951			0.991			0.982			0.992	
Fl <sub>t</sub> Protected		0.997			0.992			0.985			0.999	
Satd. Flow (prot)	0	1744	0	0	1817	0	0	1799	0	0	1846	0
Fl <sub>t</sub> Permitted		0.997			0.992			0.985			0.999	
Satd. Flow (perm)	0	1744	0	0	1817	0	0	1799	0	0	1846	0
Link Speed (mph)		35			35			30			35	
Link Distance (ft)		1725			1363			3929			1208	
Travel Time (s)		33.6			26.6			89.3			23.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	3%	4%	2%	3%	2%	2%	2%	3%	2%	2%	2%
Adj. Flow (vph)	13	110	69	30	148	12	102	179	43	3	200	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	192	0	0	190	0	0	324	0	0	216	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	52.3%
ICU Level of Service	A
Analysis Period (min)	15

HCM 6th AWSC  
3: Hubbard Drive & University Drive

Lancaster Landing Phasing Analysis  
2028 Background PM - Phase 1

Intersection	
Intersection Delay, s/veh	12
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	12	99	62	27	133	11	92	161	39	3	180	12
Future Vol, veh/h	12	99	62	27	133	11	92	161	39	3	180	12
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	3	4	2	3	2	2	2	3	2	2	2
Mvmt Flow	13	110	69	30	148	12	102	179	43	3	200	13
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11	11.3	13.4	11.4
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	32%	7%	16%	2%
Vol Thru, %	55%	57%	78%	92%
Vol Right, %	13%	36%	6%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	292	173	171	195
LT Vol	92	12	27	3
Through Vol	161	99	133	180
RT Vol	39	62	11	12
Lane Flow Rate	324	192	190	217
Geometry Grp	1	1	1	1
Degree of Util (X)	0.485	0.297	0.304	0.333
Departure Headway (Hd)	5.377	5.571	5.76	5.532
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	668	642	621	648
Service Time	3.426	3.63	3.819	3.589
HCM Lane V/C Ratio	0.485	0.299	0.306	0.335
HCM Control Delay	13.4	11	11.3	11.4
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	2.7	1.2	1.3	1.5

Lanes, Volumes, Timings  
3: Hubbard Drive & University Drive

Lancaster Landing Phasing Analysis  
2028 Build AM - Phase 1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (vph)	9	104	108	23	58	16	48	85	18	3	119	4
Future Volume (vph)	9	104	108	23	58	16	48	85	18	3	119	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>		0.934			0.977			0.984			0.996	
Fl <sub>t</sub> Protected		0.998			0.988			0.984			0.999	
Satd. Flow (prot)	0	1688	0	0	1731	0	0	1781	0	0	1787	0
Fl <sub>t</sub> Permitted		0.998			0.988			0.984			0.999	
Satd. Flow (perm)	0	1688	0	0	1731	0	0	1781	0	0	1787	0
Link Speed (mph)		35			35			30			35	
Link Distance (ft)		1725			1363			3929			1208	
Travel Time (s)		33.6			26.6			89.3			23.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	4%	6%	10%	2%	14%	2%	2%	13%	2%	6%	2%
Adj. Flow (vph)	10	116	120	26	64	18	53	94	20	3	132	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	246	0	0	108	0	0	167	0	0	139	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	39.2%
ICU Level of Service	A
Analysis Period (min)	15

HCM 6th AWSC  
3: Hubbard Drive & University Drive

Lancaster Landing Phasing Analysis  
2028 Build AM - Phase 1

Intersection	
Intersection Delay, s/veh	9.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	104	108	23	58	16	48	85	18	3	119	4
Future Vol, veh/h	9	104	108	23	58	16	48	85	18	3	119	4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	4	6	10	2	14	2	2	13	2	6	2
Mvmt Flow	10	116	120	26	64	18	53	94	20	3	132	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.7	9.1	9.5	9.2
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	32%	4%	24%	2%
Vol Thru, %	56%	47%	60%	94%
Vol Right, %	12%	49%	16%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	151	221	97	126
LT Vol	48	9	23	3
Through Vol	85	104	58	119
RT Vol	18	108	16	4
Lane Flow Rate	168	246	108	140
Geometry Grp	1	1	1	1
Degree of Util (X)	0.23	0.31	0.152	0.193
Departure Headway (Hd)	4.94	4.55	5.078	4.97
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	721	786	701	717
Service Time	3.008	2.606	3.147	3.041
HCM Lane V/C Ratio	0.233	0.313	0.154	0.195
HCM Control Delay	9.5	9.7	9.1	9.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.9	1.3	0.5	0.7

Lanes, Volumes, Timings  
3: Hubbard Drive & University Drive

Lancaster Landing Phasing Analysis  
2028 Build PM - Phase 1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	12	114	98	27	158	11	155	161	39	3	180	12
Future Volume (vph)	12	114	98	27	158	11	155	161	39	3	180	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.941			0.993			0.985			0.992	
Flt Protected		0.997			0.993			0.979			0.999	
Satd. Flow (prot)	0	1724	0	0	1822	0	0	1794	0	0	1846	0
Flt Permitted		0.997			0.993			0.979			0.999	
Satd. Flow (perm)	0	1724	0	0	1822	0	0	1794	0	0	1846	0
Link Speed (mph)		35			35			30			35	
Link Distance (ft)		1725			1363			3929			1208	
Travel Time (s)		33.6			26.6			89.3			23.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	3%	4%	2%	3%	2%	2%	2%	3%	2%	2%	2%
Adj. Flow (vph)	13	127	109	30	176	12	172	179	43	3	200	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	249	0	0	218	0	0	394	0	0	216	0
Sign Control		Stop			Stop			Stop			Stop	

**Intersection Summary**

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	58.4%
ICU Level of Service	B
Analysis Period (min)	15

HCM 6th AWSC  
3: Hubbard Drive & University Drive

Lancaster Landing Phasing Analysis  
2028 Build PM - Phase 1

Intersection	
Intersection Delay, s/veh	15.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	12	114	98	27	158	11	155	161	39	3	180	12
Future Vol, veh/h	12	114	98	27	158	11	155	161	39	3	180	12
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	3	4	2	3	2	2	2	3	2	2	2
Mvmt Flow	13	127	109	30	176	12	172	179	43	3	200	13
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13.4	13.3	19.1	12.8
HCM LOS	B	B	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	44%	5%	14%	2%
Vol Thru, %	45%	51%	81%	92%
Vol Right, %	11%	44%	6%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	355	224	196	195
LT Vol	155	12	27	3
Through Vol	161	114	158	180
RT Vol	39	98	11	12
Lane Flow Rate	394	249	218	217
Geometry Grp	1	1	1	1
Degree of Util (X)	0.647	0.417	0.383	0.371
Departure Headway (Hd)	5.909	6.034	6.334	6.17
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	615	595	566	583
Service Time	3.909	4.084	4.387	4.222
HCM Lane V/C Ratio	0.641	0.418	0.385	0.372
HCM Control Delay	19.1	13.4	13.3	12.8
HCM Lane LOS	C	B	B	B
HCM 95th-tile Q	4.7	2	1.8	1.7

