

# Interchange Development LLC

152 Morrill Road  
Canterbury, NH 03224  
(603) 783-0400

September 15, 2021

Beth Fenstermacher, PLA, LEED AP  
Assistant City Planner, City of Concord  
Planning & Community Development Dept.  
41 Green St, 3<sup>rd</sup> Floor  
Concord NH 03301

Re: Interchange Development, Major Site Plan #2020-40  
1 Whitney Rd

Dear Ms. Fenstermacher:

On December 18, 2020, the Concord Planning Board gave conditional Major Site Plan approval for a multi-phased development including a Market Basket supermarket with attached retail and a 13,387 square foot NH Liquor & Wine Outlet currently under construction at 11 Merchants Way.

As part of that approval, Subsequent Conditions #4 and #5 required that all off-site improvements to be completed before the issuance of the first Certificate of Occupancy. At the time, it was anticipated that the City's vehicular and pedestrian improvements to Hoit and Whitney Roads would be substantially completed in December 2021. Due to state permitting issues, the Hoit/Whitney Road roundabout will not be complete until sometime in early summer of 2022.

The NH Liquor & Wine Outlet is under construction and expected to be completed in November 2021. We are requesting relief from Subsequent Conditions #4 and #5 such that a CO may be issued for the NH Liquor & Wine Outlet prior to the completion of City improvements. In support of this request, TF Moran prepared a memorandum dated August 17, 2021 analyzing the traffic operations of the Hoit/Whitney Road intersection under temporary conditions with the NH Liquor & Wine Outlet open prior to the completion of the Hoit/Whitney Road roundabout (see attached). The TF Moran memo was reviewed by City staff and forwarded to NHDOT for their review and concurrence. On September 8, 2021, NHDOT issued an amended driveway permit to the City allowing for the opening of the NH Liquor & Wine Outlet under the existing conditions without the roundabout (see attached).

We appreciate your consideration of this request.

Sincerely,



David S. Rauseo



Laurie M. Rauseo



Civil Engineers  
Structural Engineers  
Traffic Engineers  
Land Surveyors  
Landscape Architects  
Scientists

October 12, 2021

Beth Fenstermacher  
Planning Department  
41 Green Street, 3<sup>rd</sup> floor  
Concord, NH 03301

Re: Interchange Development LLC  
Commercial Development  
1 Whitney Road  
Concord, New Hampshire

Dear Beth,

On behalf of our client, Interchange Development LLC, TFMoran is submitting this waiver request in connection with the proposed NH Liquor & Wine Outlet store within its commercial development "Concord Crossing" located at 1 Whitney Road.

City of Concord, NH Site Plan Regulations, Section 7.08(7) to allow for the issuance of the CO prior to all public and private improvements being completed.

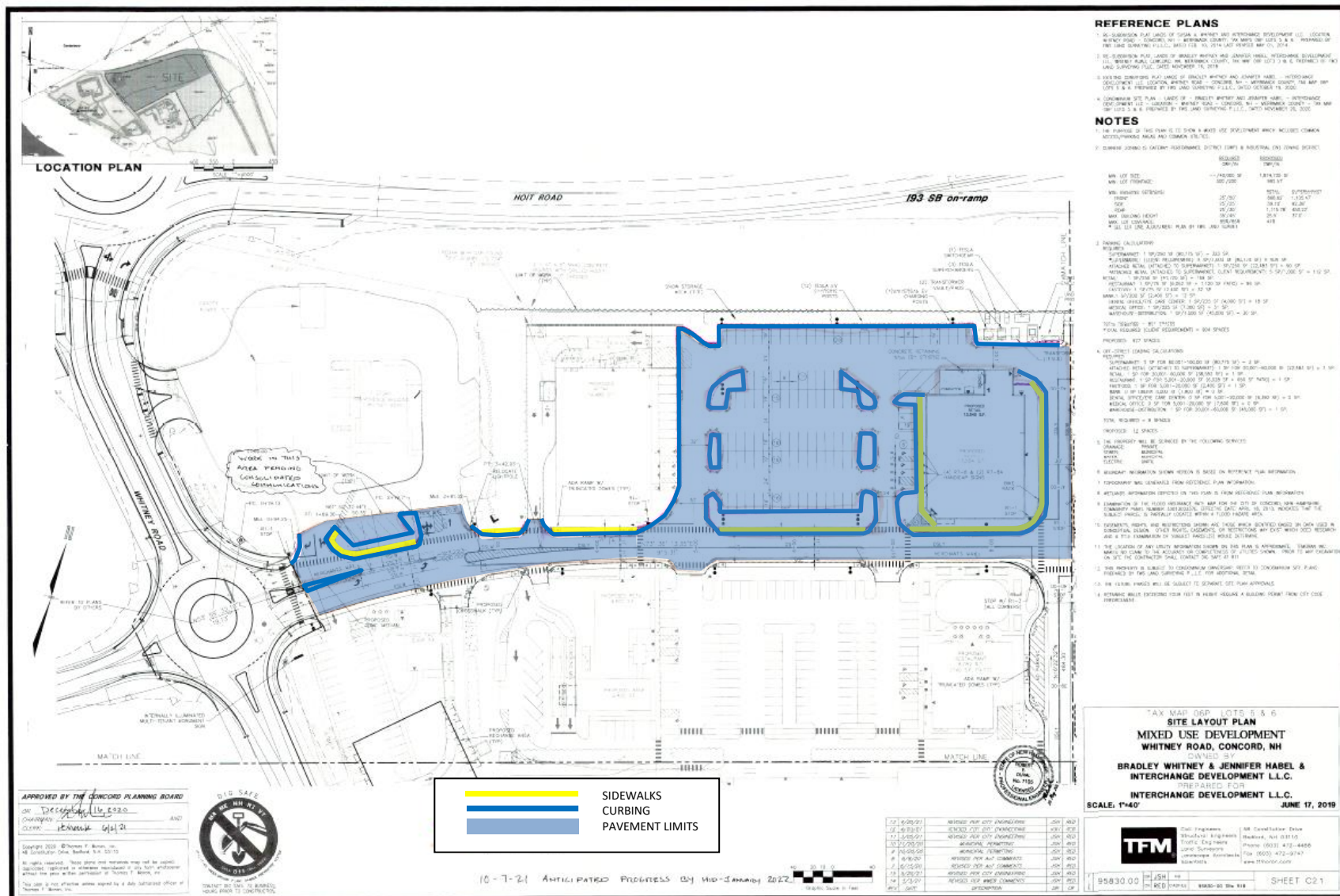
The NH Liquor & Wine Outlet (NHLWO) anticipates opening in late 2021. As such, the proposed Roundabouts at Whitney Road and Hoyt Road will not be completed by this date. Additionally, other on-site private improvements Concord Crossing will not be completed. However, all proposed infrastructure serving the NHLWO facility will be completed including necessary access and egress. For these reasons, the granting of the waiver will be consistent with the spirit of the ordinance. Denial of the waiver would result in an unnecessary hardship to the NHLWO because it would preclude them from opening for business whereas its requisite site improvements have been completed.

Sincerely,  
TFMORAN INC.

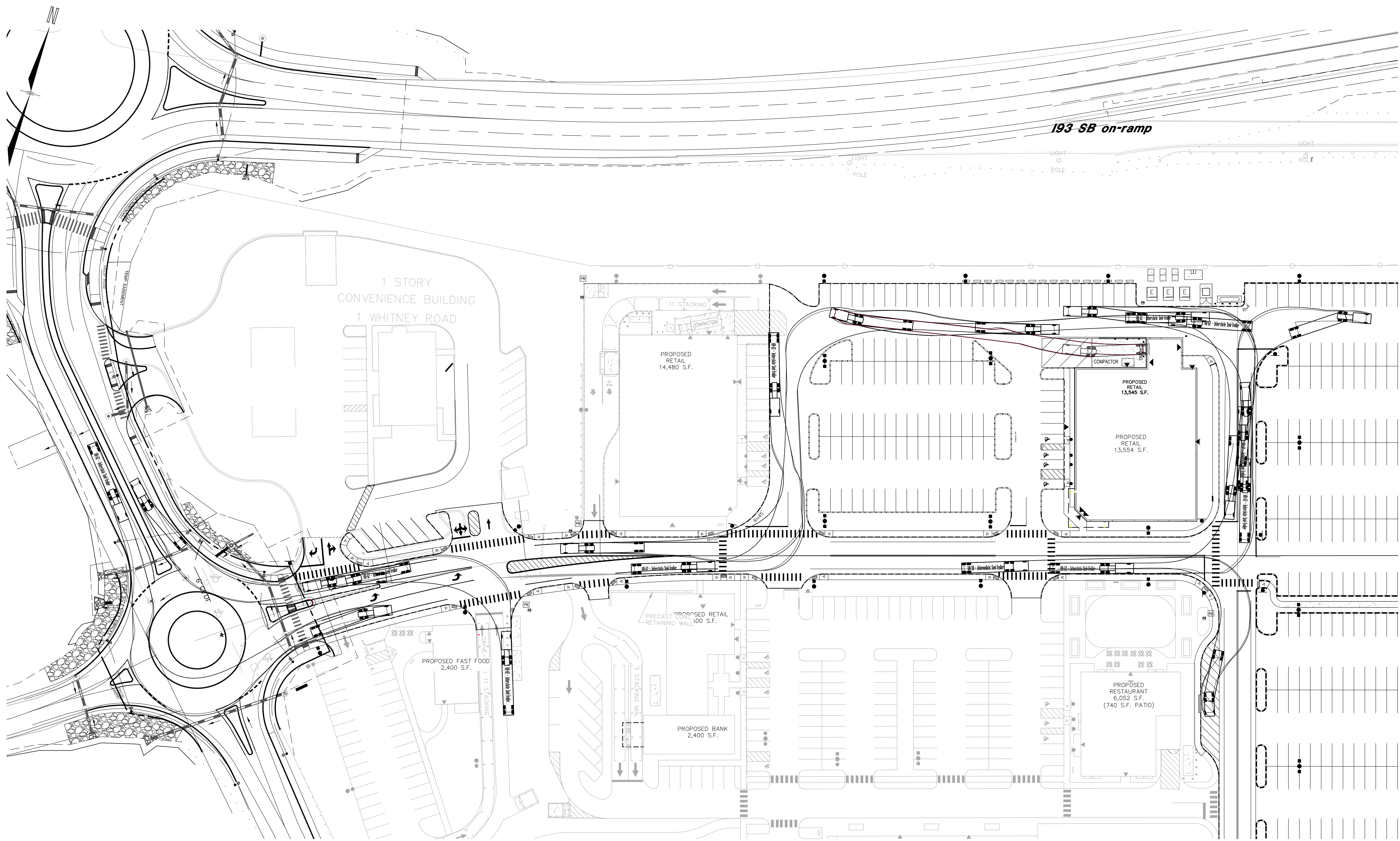
Jason S. Hill, P.E.  
Project Manager

48 Constitution Drive  
Bedford, NH 03110  
Phone (603) 472-4488  
Fax (603) 472-9747  
[www.tfmoran.com](http://www.tfmoran.com)

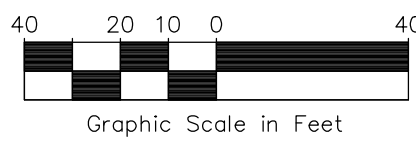
## EXPECTED SITE IMPROVEMENTS TO BE COMPLETED BY MID JANUARY 2022








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This plan is not effective unless signed by a duly authorized officer of Thomas F. Moran, Inc.



13	4/20/21	REVISED PER CITY ENGINEERING	JSH	RED
12	4/05/21	REVISED PER CITY ENGINEERING	JSH	RED
11	3/05/21	REVISED PER CITY ENGINEERING	JSH	RED
10	11/20/20	MUNICIPAL PERMITTING	JSH	RED
9	10/20/20	MUNICIPAL PERMITTING	JSH	RED
8	6/8/20	REVISED PER AGT COMMENTS	JSH	RED
7	6/15/20	REVISED PER AGT COMMENTS	JSH	RED
15	5/20/21	REVISED PER CITY ENGINEERING	JSH	RED
14	5/3/21	REVISED PER WWEB COMMENTS	JSH	RED
REV.	DATE	DESCRIPTION	DR	CK

TAX MAP 06P LOTS 5 & 6  
**TURNING MOVEMENT PLAN (WB-62)**  
**MIXED USE DEVELOPMENT**  
**WHITNEY ROAD, CONCORD, NH**  
OWNED BY  
**BRADLEY WHITNEY & JENNIFER HABEL & INTERCHANGE DEVELOPMENT L.L.C.**  
PREPARED FOR  
**INTERCHANGE DEVELOPMENT L.L.C.**  
**SCALE: 1"=40'** **JUNE 17, 2019**



Civil Engineers  
Structural Engineers  
Traffic Engineers  
Land Surveyors  
Landscape Architects  
Scientists

48 Constitution Drive  
Bedford, NH 03110  
Phone (603) 472-4488  
Fax (603) 472-9747  
www.tfmoran.com

95830.00

DR JSH FB  
CK RED CADFILE

95830-00 Site R18

SHEET T2.1





Civil Engineers  
Structural Engineers  
Traffic Engineers  
Land Surveyors  
Landscape Architects  
Scientists

## MEMORANDUM

**Date:** August 17, 2021  
**To:** Karen Hill, City of Concord Transportation Engineer  
**From:** Bob Duval, PE  
Jen Porter, PE  
**Project:** Interchange Development,  
Whitney Road, Concord, NH  
**Subject:** Temporary Traffic Condition – Liquor Store Only on Merchants Way

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### Introduction:

The proposed Phase 1 Interchange Development included a 79,895 sf Supermarket and 48,902 sf of retail/shopping center space. Current construction schedules show that the 13,554 sf Liquor Store portion of the shopping center will be ready for occupancy in November 2021, before the roundabout at US4/Whitney Road is completed. The offsite improvements are expected to be constructed between April and July of 2022.

This memo analyzes how the existing unsignalized intersection at US4/Whitney Road will operate if the liquor store opens prior to completion of the roundabout improvements. Since the liquor store does not open until 10am, and Saturday volumes on US4 are substantially (25%) lower, only the weekday PM condition was evaluated. Trip generation and distribution and resulting operational metrics for these temporary conditions are described below:

### Trip Generation:

Trip generation calculations for the liquor store are based on LUC 820 rates (rather than equations due to small size) as most representative for a stand-alone store. Since only Merchants Way will be open, trip distribution has been revised to show 100% of trips entering and exiting Merchants Way. An internal capture deduction of 12% is included to represent interaction between the liquor store and the existing gas/convenience/coffee shop.

The liquor store is scheduled to be ready for occupancy by November of 2021 and the offsite improvements are slated to be completed by June/July of 2022. The original TIAS volumes are based on counts done in June and August of 2019, the peak months based on 2018 Group 4 data. For the months of November – April, when the liquor store will be open, actual volumes will be significantly less, with seasonal adjustment factors ranging from 12% to 24% less than peak month volumes. We therefore adjusted background volumes downward by 12% to conservatively represent the actual traffic conditions during the November to April period when the store will be open.

### Traffic Operations:

The table below shows the temporary operating conditions of the existing unsignalized intersection of US4/Whitney Road with the liquor store open during the 6-month period from November 2021 to April 2022.

**US4/Whitney  
Existing Intersection Operations  
2021 PM Peak Hour**

<b>No Build (Liquor Store only) Nov 2021 - Apr 2022</b>					<b>Build (Liquor Store only) Nov 2021 - Apr 2022</b>				
	v/c	Delay	LOS	Queue		v/c	Delay	LOS	Queue
<b>PM OVERALL</b>	-	<b>5.9</b>	<b>A</b>	-	<b>PM OVERALL</b>	-	<b>8.2</b>	<b>A</b>	-
EB L	0.01	9.9	A	0	EB L	0.01	9.9	A	0
WB L	0.09	9.4	A	8	WB L	0.11	9.5	A	10
NB LT	0.62	135.5	F	63	NB LT	0.81	184.1	F	88
NB R	0.26	15.0	C	25	NB R	0.29	15.4	C	30
SB L	0.53	119.3	F	53	SB L	0.59	141.6	F	58

\*Queues expressed in feet

While there are expected modest increases in delay and queues for the Whitney and Old Boyce approaches, the EB and WB approaches are essentially unaffected, all movements remain well under capacity, and the overall intersection functions at a favorable level of service.

During the months of April – July of 2022, the roundabout will be under construction, and therefore the traffic conditions at the intersection will be dictated by the roundabout traffic control plan. Although the summer months are typically the peak month for US4, the additional 39 trips in the PM peak hour would not be expected to make any measurable difference in overall operations of the Traffic Control Plan at this intersection.

We therefore find that the intersection will function without significant degradation in operating conditions until the roundabout can be completed in April 2022.

Respectfully submitted,  
**TFMoran, Inc.**

Robert Duval, PE  
Jen Porter, PE



Civil Engineers  
Structural Engineers  
Traffic Engineers  
Land Surveyors  
Landscape Architects  
Scientists

## ATTACHMENTS

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- Trip Generation – Liquor Store Only
- PM Site Trip Distribution
- PM Site Trip Distribution Diagrams
- 2018 Peak Month – NHDOT Group 4
- PM Volume Calculations: non-peak month
- PM Volume Diagrams: non-peak month
- PM Synchro
  - 2021 No-Build Temp
  - 20221 Build Liquor Only Temp

ITE Trip Generation Manual, 10th Edition  
Setting/Location: General Urban/Suburban

Proposed Trip Generation - Interchange Development: Liquor Store Only

Land Use - Liquor Store

ITE LUC 820 - Shopping Center: 13,554 sf

Time Period	Rate/Equin		Rate/ Eq Used	Trip Ends	Directional Split		Directional Distribution		12% Internal Capture*		Site Trips after capture	
	X	Rate			In	Out	In	Out	In	Out	In	Out
Weekday AM Peak Hour Adjacent Street	13.6	+see below		0	62%	38%	0	0	0	0	0	0
Weekday PM Peak Hour Adjacent Street	13.6	3.81	Rate	52	48%	52%	25	27	-3	-3	22	24
Weekend SAT Peak Hour of the Generator	13.6	4.5	Rate	61	52%	48%	32	29	-4	-3	28	26

AM: + Liquor Store opens at 10a, no AM trips  
\* 12% Internal Capture (Per TIAS) expected between Liquor Store and Existing Gas

Proposed Total Site Trip Generation - Interchange Development Liquor Store Only

					Total Site Trips after capture	
		Trip Ends		In		Out
Weekday AM Peak Hour Adjacent Street		0		0		0
Weekday PM Peak Hour Adjacent Street		52		25		27
Weekend SAT Peak Hour of the Generator		61		32		29

ITE Trip Generation Handbook, 3rd Edition

Proposed Trip Generation - Interchange Development: Liquor Store Only

ITE LUC 820 - Shopping Center: 13,554 sf

	Primary				Pass-By				Diverted Link			
	% In	# In	% Out	# Out	% In	# In	% Out	# Out	% In	# In	% Out	# Out
AM	40%	0	40%	0	34%	0	34%	0	26%	0	26%	0
PM	40%	9	40%	10	34%	7	34%	8	26%	6	26%	6
SAT	39%	11	39%	10	26%	7	26%	7	35%	10	35%	9

\*\*LUC 820 Shopping Center: Table E.9 (PM)  
\*\*LUC 820 Shopping Center: Table E.10 (SAT)

Proposed Total Site Composition - Interchange Development Liquor Store Only

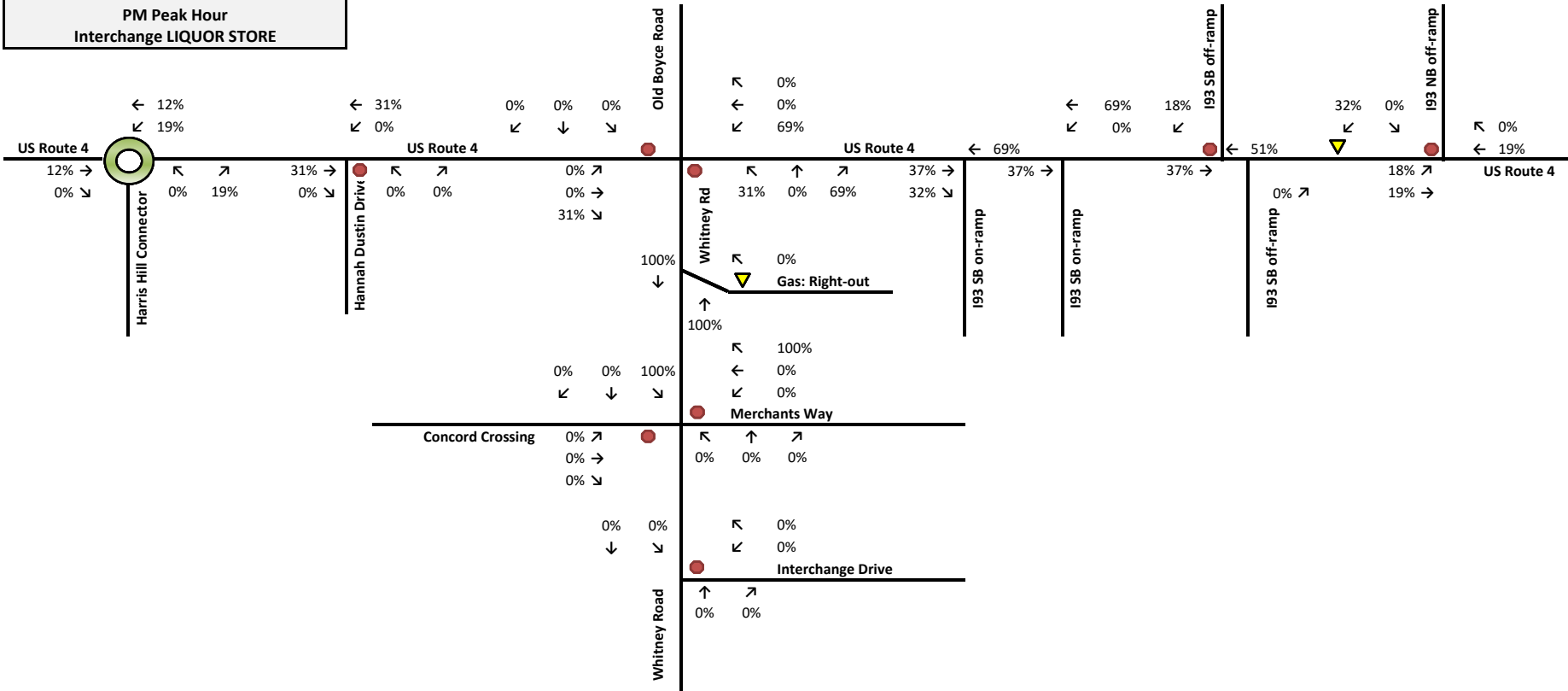
	Primary			Pass-By			Diverted Link		
	%	# In	# Out	%	# In	# Out	%	# In	# Out
AM	-	0	0	-	0	0	-	0	0
PM	37%	9	10	29%	7	8	23%	6	6
SAT	34%	11	10	23%	7	7	31%	10	9



PM Distribution - Interchange - LIQUOR STORE ONLY																			
Primary					Pass-By					Diverted Link					PM Total Site Trips				
In Out					In Out					In Out					TOTAL: 46				
PM 9 10					PM 7 8					PM 6 6									
Note: Primary % per Gravity Model					Note: Pass-By % per Pro-Rata US Route 4					Note: DL % per NHDOT AADT for US3/193/1H132 [193 directional per Pro-Rata of 193 minus Exit 17 ramped]									
(29) US Route 4 at I93 NB on/off-ramp					(29) US Route 4 at I93 NB on/off-ramp					(29) US Route 4 at I93 NB on/off-ramp					(29) US Route 4 at I93 NB on/off-ramp				
PERCENTAGES					PERCENTAGES					PERCENTAGES									
Movement	In	Out	In	Out	Movement	In	Out	In	Out	Movement	In	Out	In	Out	Movement	TRIPS			
EBL		18%	0	2	EBL			0	0	EBL		56%	0	3	EBL	5			
EBT		19%	0	2	EBT					EBT		4%	0	0	EBT	2			
WBT	19%		2	0	WBT					WBT	4%		0	0	WBT	2			
WBR			0	0	WBR					WBR			0	0	WBR	0			
SBL			0	0	SBL					SBL			0	0	SBL	0			
(28) US Route 4 at I93 NB off-ramp					(28) US Route 4 at I93 NB off-ramp					(28) US Route 4 at I93 NB off-ramp					(28) US Route 4 at I93 NB off-ramp				
PERCENTAGES					PERCENTAGES					PERCENTAGES									
Movement	In	Out	In	Out	Movement	In	Out	In	Out	Movement	In	Out	In	Out	Movement	TRIPS			
EBT		37%	0	4	EBT					EBT		60%	0	4	EBT	8			
WBT	19%		2	0	WBT					WBT	4%		0	0	WBT	2			
SBR	32%		3	0	SBR					SBR	56%		3	0	SBR	6			
(26) US Route 4 at I93 SB off-ramp					(26) US Route 4 at I93 SB off-ramp					(26) US Route 4 at I93 SB off-ramp					(26) US Route 4 at I93 SB off-ramp				
PERCENTAGES					PERCENTAGES					PERCENTAGES									
Movement	In	Out	In	Out	Movement	In	Out	In	Out	Movement	In	Out	In	Out	Movement	TRIPS			
EBT		37%	0	4	EBT					EBT		60%	0	4	EBT	8			
WBT	51%		5	0	WBT					WBT	60%		4	0	WBT	9			
NER			0	0	NER					NER			0	0	NER	0			
(24) US Route 4 at I93 SB off-ramp					(24) US Route 4 at I93 SB off-ramp					(24) US Route 4 at I93 SB off-ramp					(24) US Route 4 at I93 SB off-ramp				
PERCENTAGES					PERCENTAGES					PERCENTAGES									
Movement	In	Out	In	Out	Movement	In	Out	In	Out	Movement	In	Out	In	Out	Movement	TRIPS			
EBT		37%	0	4	EBT					EBT		60%	0	4	EBT	8			
WBT	51%		5	0	WBT					WBT	60%		4	0	WBT	9			
SBR	18%		2	0	SBR					SBR	32%		2	0	SBR	4			
(21) US Route 4 at I93 SB on-ramp					(21) US Route 4 at I93 SB on-ramp					(21) US Route 4 at I93 SB on-ramp					(21) US Route 4 at I93 SB on-ramp				
PERCENTAGES					PERCENTAGES					PERCENTAGES									
Movement	In	Out	In	Out	Movement	In	Out	In	Out	Movement	In	Out	In	Out	Movement	TRIPS			
EBT		37%	0	4	EBT					EBT		60%	0	4	EBT	8			
WBL			0	0	WBL					WBL			0	0	WBL	0			
WBT	69%		6	0	WBT					WBT	92%		6	0	WBT	12			
(20) US Route 4 at I93 SB on-ramp					(20) US Route 4 at I93 SB on-ramp					(20) US Route 4 at I93 SB on-ramp					(20) US Route 4 at I93 SB on-ramp				
PERCENTAGES					PERCENTAGES					PERCENTAGES									
Movement	In	Out	In	Out	Movement	In	Out	In	Out	Movement	In	Out	In	Out	Movement	TRIPS			
EBL		37%	0	4	EBL					EBL		60%	0	4	EBL	8			
EBT		32%	0	3	EBT					EBT		32%	0	2	EBT	5			
SWR	69%		6	0	SWR					SWR	92%		6	0	SWR	12			

PM Distribution - Interchange - LIQUOR STORE ONLY																			
Primary					Pass-By					Diverted Link					PM Total Site Trips				
In Out					In Out					In Out					TOTAL: 46				
PM 9 10					PM 7 8					PM 6 6									
Note: Primary % per Gravity Model					Note: Pass-By % per Pro-Rate US Route 4					Note: DL % per NHDOT AADT for US3/193/1H132 (193 directional per Pro-Rate of 193 minus Exit 17 ramp)									
(3) NH Route 4 at Whitney Road/Old Boyce Road					(3) NH Route 4 at Whitney Road/Old Boyce Road					(3) NH Route 4 at Whitney Road/Old Boyce Road					(3) NH Route 4 at Whitney Road/Old Boyce Road				
PERCENTAGES TRIPS					PERCENTAGES TRIPS					PERCENTAGES TRIPS					PERCENTAGES TRIPS				
Movement	In	Out	In	Out	Movement	In	Out	In	Out	Movement	In	Out	In	Out	Movement	In	Out	In	Out
EBL			0	0	EBL			0	0	EBL			0	0	EBL			0	0
EBT			0	0	EBT	-37%		-3	0	EBT			0	0	EBT			-3	0
EBR	31%		3	0	EBR	37%		3	0	EBR	8%		0	0	EBR			6	0
WBL	69%		6	0	WBL	63%		4	0	WBL	92%		6	0	WBL			16	0
WBT			0	0	WBT	-63%		-4	0	WBT			0	0	WBT			-4	0
WBR			0	0	WBR			0	0	WBR			0	0	WBR			0	0
NBL	31%		0	3	NBL		63%	0	5	NBL	8%		0	0	NBL			8	0
NBT			0	0	NBT			0	0	NBT			0	0	NBT			0	0
NBR	69%		0	7	NBR		37%	0	3	NBR	92%		0	6	NBR			16	0
SBL			0	0	SBL			0	0	SBL			0	0	SBL			0	0
SBT			0	0	SBT			0	0	SBT			0	0	SBT			0	0
SBR			0	0	SBR			0	0	SBR			0	0	SBR			0	0
(4) Whitney Road at Gas: Right-out					(4) Whitney Road at Gas: Right-out					(4) Whitney Road at Gas: Right-out					(4) Whitney Road at Gas: Right-out				
PERCENTAGES TRIPS					PERCENTAGES TRIPS					PERCENTAGES TRIPS					PERCENTAGES TRIPS				
Movement	In	Out	In	Out	Movement	In	Out	In	Out	Movement	In	Out	In	Out	Movement	In	Out	In	Out
WBR			0	0	WBR			0	0	WBR			0	0	WBR			0	0
NBT		100%	0	10	NBT	100%		0	8	NBT	100%		0	6	NBT			24	0
SBT	100%		9	0	SBT	100%		7	0	SBT	100%		6	0	SBT			22	0
(5) Whitney Road at Merchants Way					(5) Whitney Road at Merchants Way					(5) Whitney Road at Merchants Way					(5) Whitney Road at Merchants Way				
PERCENTAGES TRIPS					PERCENTAGES TRIPS					PERCENTAGES TRIPS					PERCENTAGES TRIPS				
Movement	In	Out	In	Out	Movement	In	Out	In	Out	Movement	In	Out	In	Out	Movement	In	Out	In	Out
EBL			0	0	EBL			0	0	EBL			0	0	EBL			0	0
EBT			0	0	EBT			0	0	EBT			0	0	EBT			0	0
EBR			0	0	EBR			0	0	EBR			0	0	EBR			0	0
WBL			0	0	WBL			0	0	WBL			0	0	WBL			0	0
WBT			0	0	WBT			0	0	WBT			0	0	WBT			0	0
WBR		100%	0	10	WBR		100%	0	8	WBR		100%	0	6	WBR			24	0
NBL			0	0	NBL			0	0	NBL			0	0	NBL			0	0
NBT			0	0	NBT			0	0	NBT			0	0	NBT			0	0
NBR			0	0	NBR			0	0	NBR			0	0	NBR			0	0
SBL	100%		9	0	SBL	100%		7	0	SBL	100%		6	0	SBL			22	0
SBT			0	0	SBT			0	0	SBT			0	0	SBT			0	0
SBR			0	0	SBR			0	0	SBR			0	0	SBR			0	0
(7) Whitney Road at Interchange Drive					(7) Whitney Road at Interchange Drive					(7) Whitney Road at Interchange Drive					(7) Whitney Road at Interchange Drive				
PERCENTAGES TRIPS					PERCENTAGES TRIPS					PERCENTAGES TRIPS					PERCENTAGES TRIPS				
Movement	In	Out	In	Out	Movement	In	Out	In	Out	Movement	In	Out	In	Out	Movement	In	Out	In	Out
WBL			0	0	WBL			0	0	WBL			0	0	WBL			0	0
WBR			0	0	WBR			0	0	WBR			0	0	WBR			0	0
NBT			0	0	NBT			0	0	NBT			0	0	NBT			0	0
NBR			0	0	NBR			0	0	NBR			0	0	NBR			0	0
SBL			0	0	SBL			0	0	SBL			0	0	SBL			0	0
SBT			0	0	SBT			0	0	SBT			0	0	SBT			0	0
(9) US Route 4 at Hannah Dustin Drive					(9) US Route 4 at Hannah Dustin Drive					(9) US Route 4 at Hannah Dustin Drive					(9) US Route 4 at Hannah Dustin Drive				
PERCENTAGES TRIPS					PERCENTAGES TRIPS					PERCENTAGES TRIPS					PERCENTAGES TRIPS				
Movement	In	Out	In	Out	Movement	In	Out	In	Out	Movement	In	Out	In	Out	Movement	In	Out	In	Out
EBT	31%		3	0	EBT			0	0	EBT	8%		0	0	EBT			3	0
EBR			0	0	EBR			0	0	EBR			0	0	EBR			0	0
WBL			0	0	WBL			0	0	WBL			0	0	WBL			0	0
WBT	31%		0	3	WBT			0	0	WBT	8%		0	0	WBT			3	0
NBL			0	0	NBL			0	0	NBL			0	0	NBL			0	0
NBR			0	0	NBR			0	0	NBR			0	0	NBR			0	0
(11) US Route 4 at Harris Hill Connector					(11) US Route 4 at Harris Hill Connector					(11) US Route 4 at Harris Hill Connector					(11) US Route 4 at Harris Hill Connector				
PERCENTAGES TRIPS					PERCENTAGES TRIPS					PERCENTAGES TRIPS					PERCENTAGES TRIPS				
Movement	In	Out	In	Out	Movement	In	Out	In	Out	Movement	In	Out	In	Out	Movement	In	Out	In	Out
EBT	12%		1	0	EBT			0	0	EBT	8%		0	0	EBT			1	0
EBR			0	0	EBR			0	0	EBR			0	0	EBR			0	0
WBL		19%	0	2	WBL			0	0	WBL			0	0	WBL			2	0
WBT		12%	0	1	WBT			0	0	WBT	8%		0	0	WBT			1	0
NBL			0	0	NBL			0	0	NBL			0	0	NBL			0	0
NBR	19%		2	0	NBR			0	0	NBR			0	0	NBR			2	0

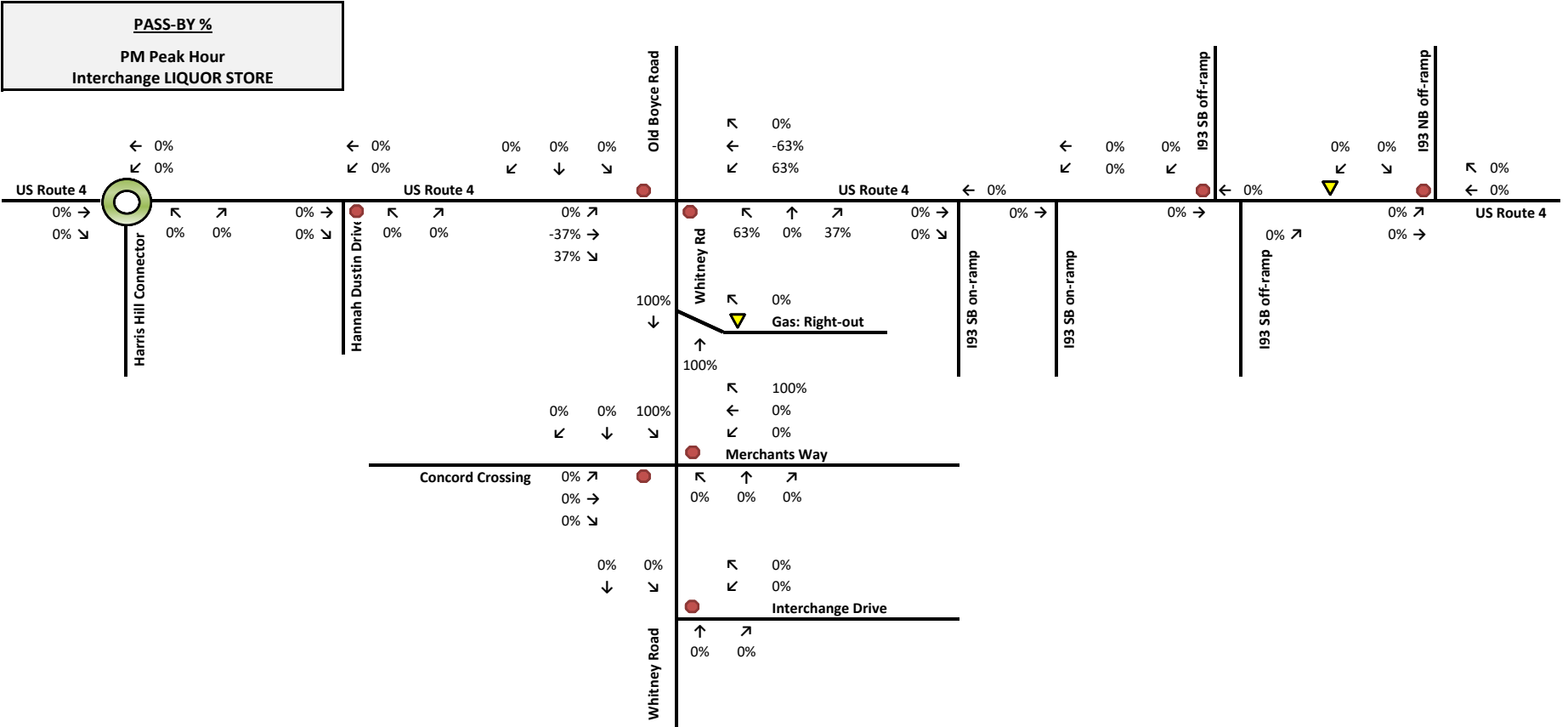
**PRIMARY %**  
**PM Peak Hour**  
**Interchange LIQUOR STORE**



<p align="center"><b><u>PASS-BY %</u></b></p> <p align="center"><b>PM Peak Hour</b></p> <p align="center"><b>Interchange LIQUOR STORE</b></p>
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<p align="center"><b><u>PASS-BY %</u></b></p> <p align="center"><b>PM Peak Hour</b></p> <p align="center"><b>Interchange LIQUOR STORE</b></p>
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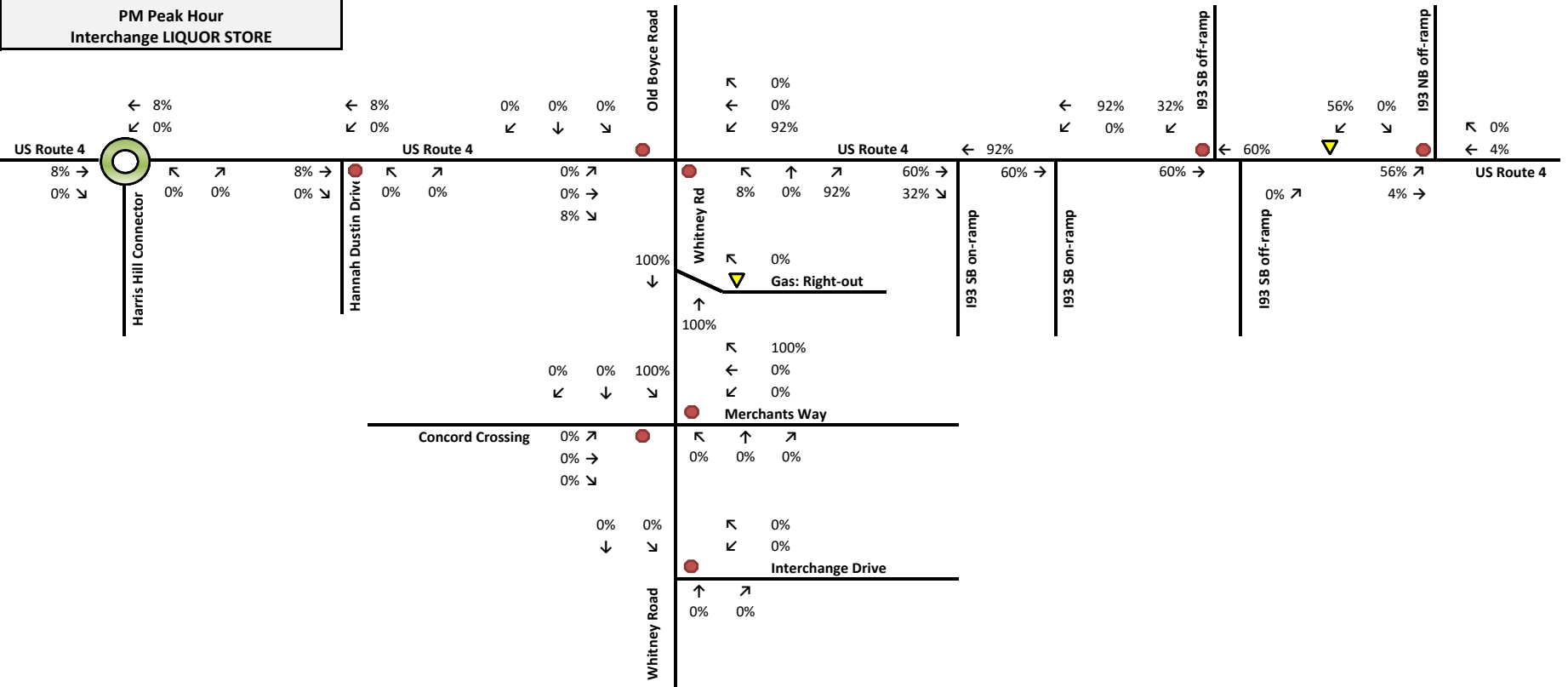
<p align="center"><b><u>PASS-BY %</u></b></p> <p align="center"><b>PM Peak Hour</b></p> <p align="center"><b>Interchange LIQUOR STORE</b></p>
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**DIVERTED LINK %**  
**PM Peak Hour**  
**Interchange LIQUOR STORE**

**DIVERTED LINK %**  
**PM Peak Hour**  
**Interchange LIQUOR STORE**

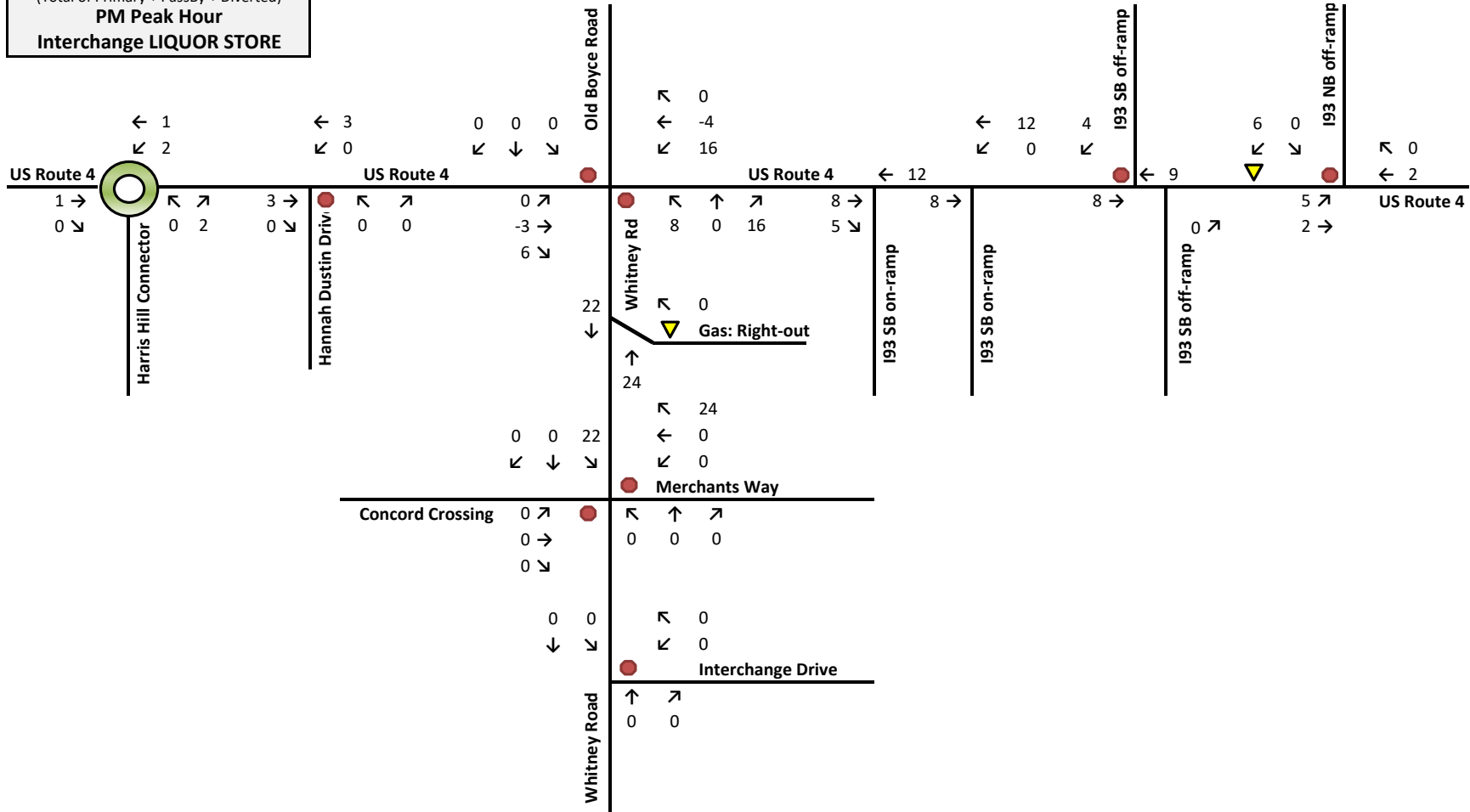


# **SITE TRIPS**

(Total of Primary + PassBy + Diverted)

**PM Peak Hour**

**Interchange LIQUOR STORE**



**PRIMARY TRIPS**

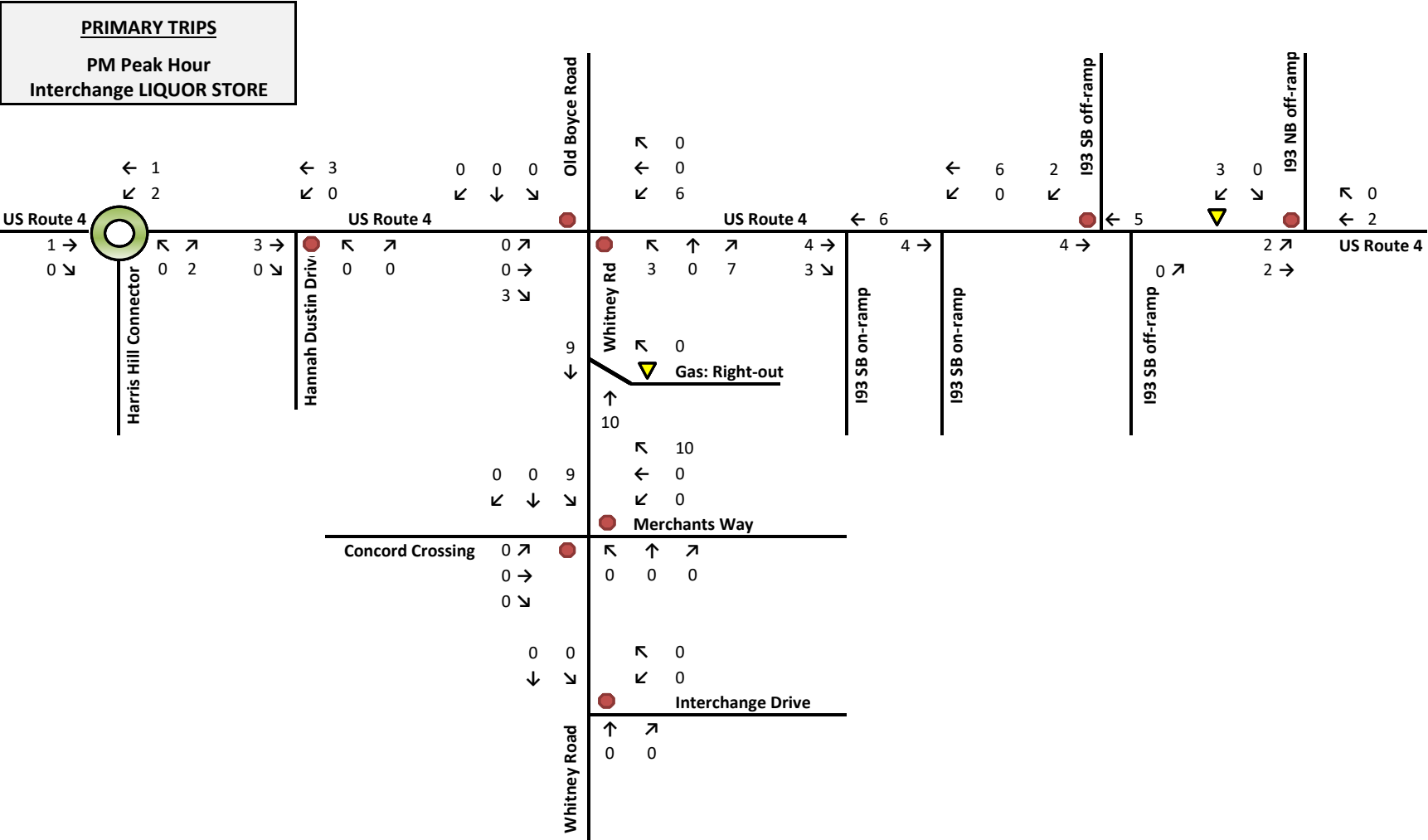
**PM Peak Hour**  
**Interchange LIQUOR STORE**

**PRIMARY TRIPS**

**PM Peak Hour**  
**Interchange LIQUOR STORE**

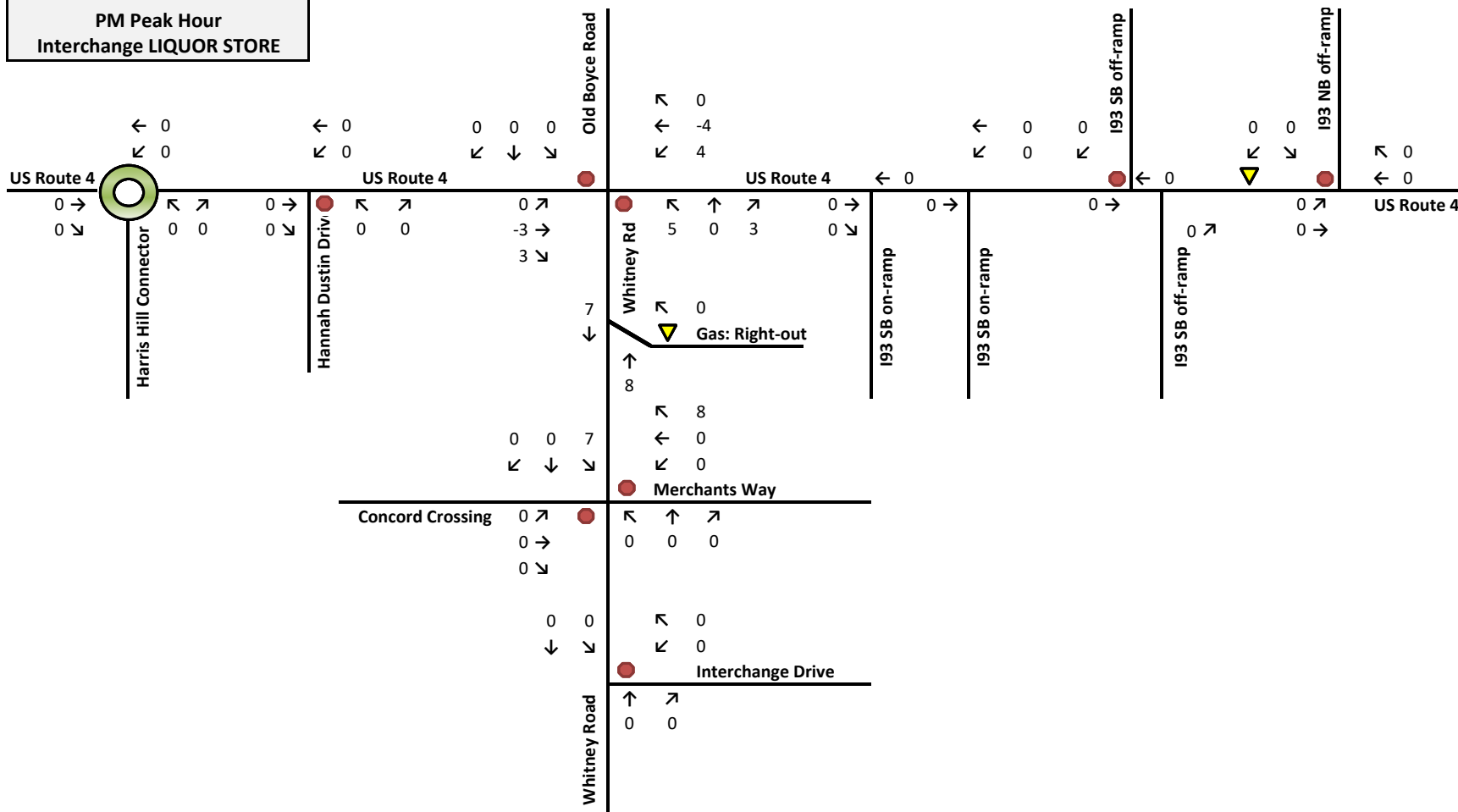
**PRIMARY TRIPS**

**PM Peak Hour**  
**Interchange LIQUOR STORE**



# PASS-BY TRIPS

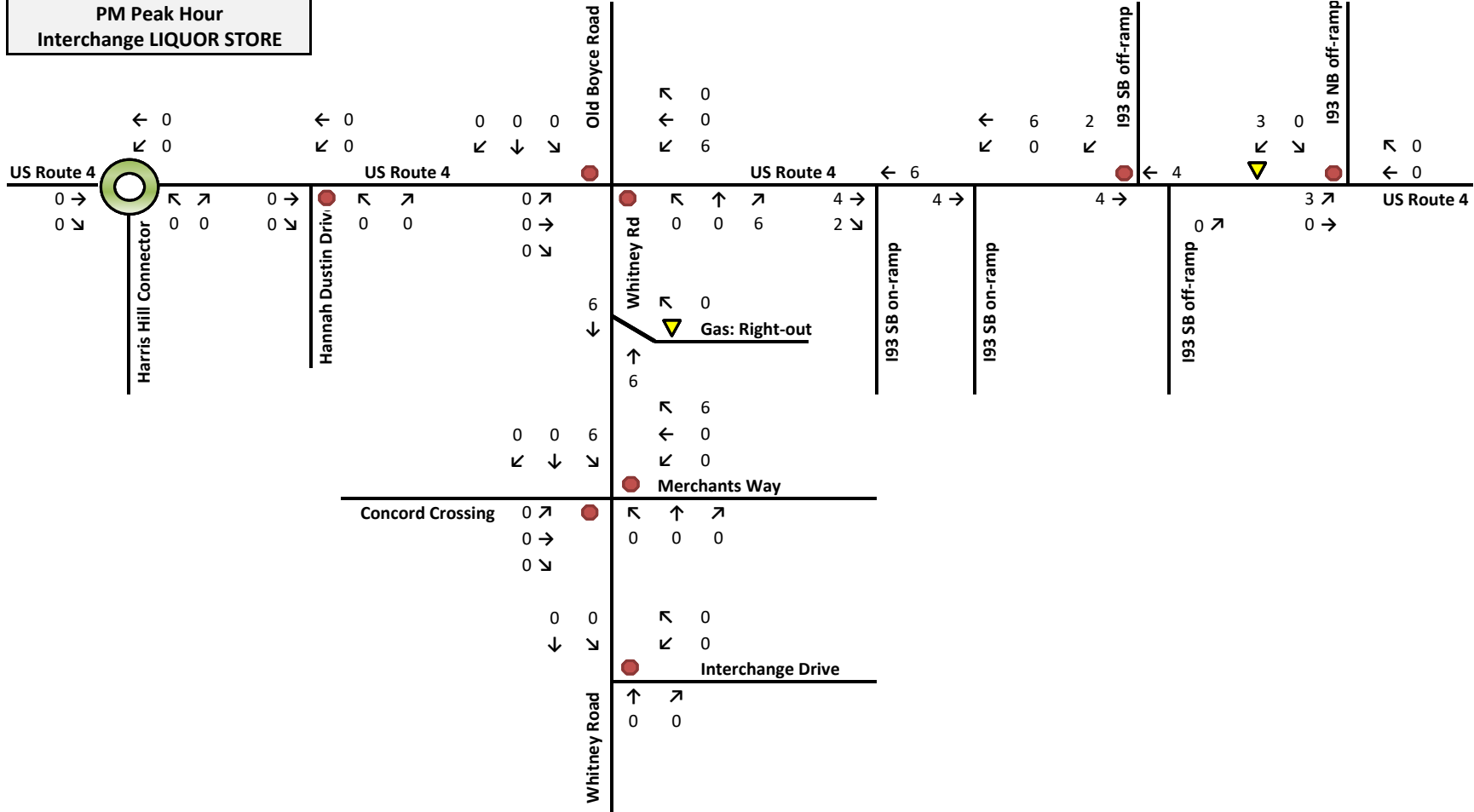
PM Peak Hour  
Interchange LIQUOR STORE





**DIVERTED LINK TRIPS**

**PM Peak Hour  
Interchange LIQUOR STORE**



Year 2018 Monthly Data

Group 4 Averages:            Urban Highways

<u>Month</u>	<u>ADT</u>	<u>Adjustment to</u>	
		<u>Average</u>	<u>Peak</u>
January	11,282	1.13	1.24
February	11,848	1.08	1.18
March	11,828	1.08	1.18
April	12,491	1.02	1.12
May	13,587	0.94	1.03
June	13,911	0.92	1.00
July	13,765	0.93	1.01
August	13,945	0.92	1.00
September	13,168	0.97	1.06
October	13,367	0.96	1.04
November	12,215	1.05	1.14
December	11,963	1.07	1.17
Average ADT:	12,781		
Peak ADT:	13,945		

Background Traffic Volumes																		
PM Peak data																		
Assumed growth rate (Route 4)		0.0125	[1.25%]	Per HDR Report														
Assumed growth rate (other roads)		0.01	[1%]															
NOV-APRIL 2018 SEASONAL		-0.12	Note: TIAS Counts done during peak months, temporary condition will be during November-April when 2018 counts were down; April 12% most conservative															
June/August 2018 Seasonal Adjust		1.00	NHDOT monthly adjustment factors - Group 4															
PM Peak Hour 4:30 PM	2019 Counts (Raw data) [06/20/2019]	2019 Existing w/ Seasonal Adjustment reduction	Balance	2019 Existing	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031		
(29) US Route 4 at I93 NB on/off-ramp	(Int C)																	
Movement																		
EBL	104	92	+5	97	98.21	99.44	100.68	101.94	103.21	104.50	105.81	107.13	108.47	109.83	111.20	113		
EBT	156	137	+6	143	144.79	146.60	148.43	150.29	152.17	154.07	156.00	157.95	159.92	161.92	163.94	166		
WBT	177	156		156	157.95	159.92	161.92	163.94	165.99	168.06	170.16	172.29	174.44	176.62	178.83	181		
WBR	27	24		24	24.30	24.60	24.91	25.22	25.54	25.86	26.18	26.51	26.84	27.18	27.52	28		
SBL	85	75		75	75.94	76.89	77.85	78.82	79.81	80.81	81.82	82.84	83.88	84.93	85.99	87		
(28) US Route 4 at I93 NB off-ramp	(calculated-thru)																	
Movement																		
EBT	260	229	+11	240	243.00	246.04	249.12	252.23	255.38	258.57	261.80	265.07	268.38	271.73	275.13	279		
WBT	177	156	+5	161	163.01	165.05	167.11	169.20	171.32	173.46	175.63	177.83	180.05	182.30	184.58	187		
SBR	744	655	+20	675	683.44	691.98	700.63	709.39	718.26	727.24	736.33	745.53	754.85	764.29	773.84	784		
(26) US Route 4 at I93 SB off-ramp	(calculated)																	
Movement																		
EBT	218	192	+11	203	205.54	208.11	210.71	213.34	216.01	218.71	221.44	224.21	227.01	229.85	232.72	236		
WBT	921	810	+25	835	845.44	856.01	866.71	877.54	888.51	899.62	910.87	922.26	933.79	945.46	957.28	969		
NER	42	37		37	37.46	37.93	38.40	38.88	39.37	39.86	40.36	40.86	41.37	41.89	42.41	43		
(24) US Route 4 at I93 SB off-ramp	(calculated)																	
Movement																		
EBT	218	192	+11	203	205.54	208.11	210.71	213.34	216.01	218.71	221.44	224.21	227.01	229.85	232.72	236		
WBT	921	810	+25	835	845.44	856.01	866.71	877.54	888.51	899.62	910.87	922.26	933.79	945.46	957.28	969		
SBR	120	106	+3	109	110.36	111.74	113.14	114.55	115.98	117.43	118.90	120.39	121.89	123.41	124.95	127		
(21) US Route 4 at I93 SB on-ramp	(Int B)																	
Movement																		
EBT	218	192	+11	203	205.54	208.11	210.71	213.34	216.01	218.71	221.44	224.21	227.01	229.85	232.72	236		
WBL	52	46		46	46.58	47.16	47.75	48.35	48.95	49.56	50.18	50.81	51.45	52.09	52.74	53		
WBT	989	870	+28	898	909.23	920.60	932.11	943.76	955.56	967.50	979.59	991.83	1004.23	1016.78	1029.49	1042		
(20) US Route 4 at I93 SB on-ramp	(calculated)																	
Movement																		
EBL	218	192	+11	203	205.54	208.11	210.71	213.34	216.01	218.71	221.44	224.21	227.01	229.85	232.72	236		
EBT	407	358	+21	379	383.74	388.54	393.40	398.32	403.30	408.34	413.44	418.61	423.84	429.14	434.50	440		
SWR	989	870	+28	898	909.23	920.60	932.11	943.76	955.56	967.50	979.59	991.83	1004.23	1016.78	1029.49	1042		

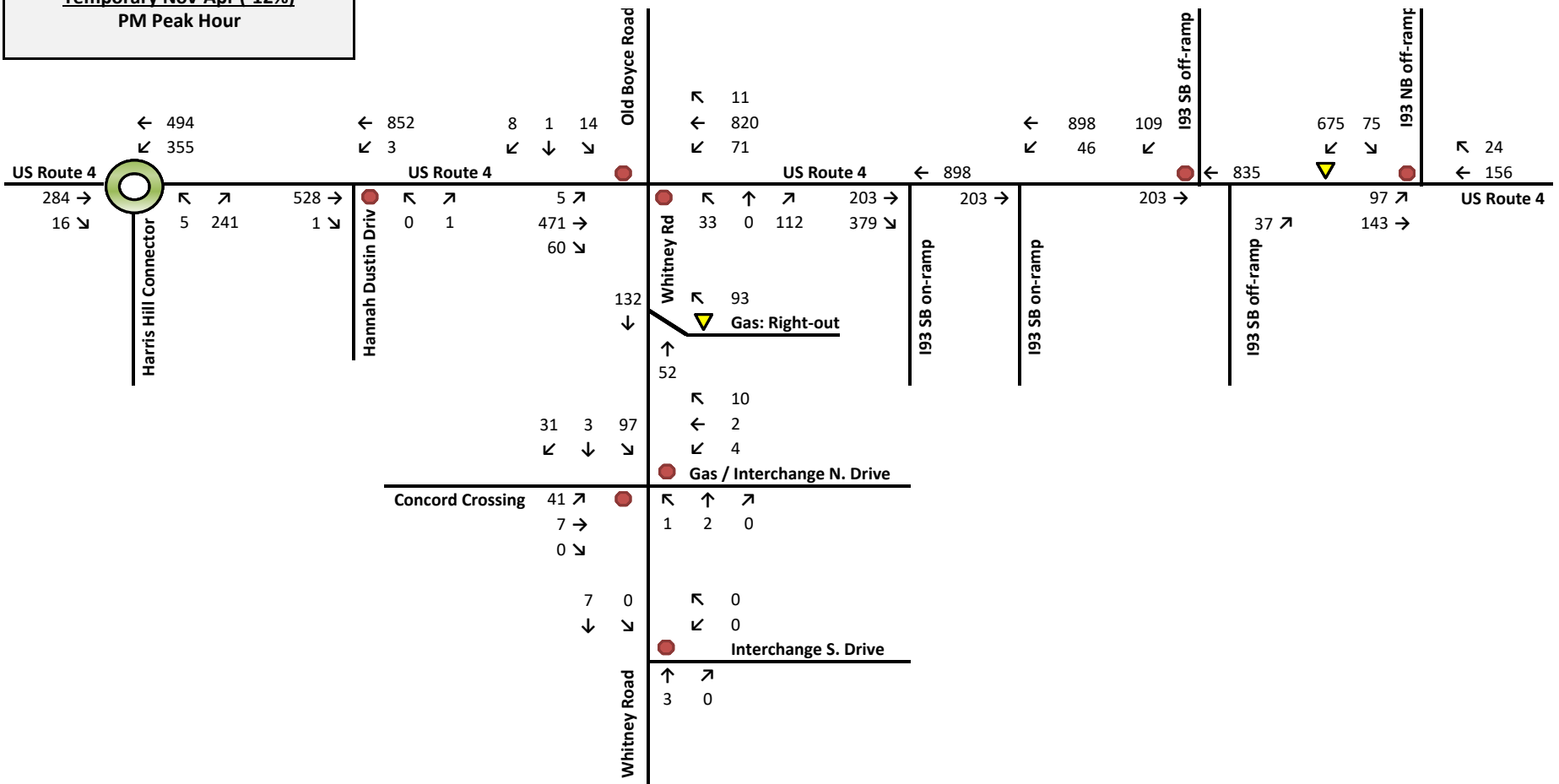
		2019 Counts (Raw data) [06/20/2019]	2019 Existing w/ Seasonal Adjustment reduction	Balance	2019 Existing	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
(3) US Route 4 at Whitney Road/Old Boyce Road																	
Movement																	
	EBL	6	5		5	5.06	5.12	5.18	5.24	5.31	5.38	5.45	5.52	5.59	5.66	5.73	5.80
	EBT	501	441	+30	471	476.89	482.85	488.89	495.00	501.19	507.45	513.79	520.21	526.71	533.29	539.96	546.71
	EBR	60	60		60	60	60	60	60	60	60	60	60	60	60	60	60
	WBL	71	71		71	71	71	71	71	71	71	71	71	71	71	71	71
	WBT	900	792	+28	820	830.25	840.63	851.14	861.78	872.55	883.46	894.50	905.68	917.00	928.46	940.07	951.82
	WBR	13	11		11	11.14	11.28	11.42	11.56	11.70	11.85	12.00	12.15	12.30	12.45	12.61	12.77
	NBL	32	32	+1	33	33	33	33	33	33	33	33	33	33	33	33	33
	NBT	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
	NBR	110	110	+2	112	112	112	112	112	112	112	112	112	112	112	112	112
	SBL	14	14		14	14	14	14	14	14	14	14	14	14	14	14	14
	SBT	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1
	SBR	8	8		8	8	8	8	8	8	8	8	8	8	8	8	8
		*No growth for Whitney Road or Old Boyce Road, all site trips (dead end)															
(4) Whitney Road at Gas: Right-out		2019 Counts (Raw data) [08/06/2019]															
Movement																	
	WBR	93	93		93	93	93	93	93	93	93	93	93	93	93	93	93
	NBT	52			52	52	52	52	52	52	52	52	52	52	52	52	52
	SBT	131	131	+1	132	132	132	132	132	132	132	132	132	132	132	132	132
(5) Whitney Road at Interchange North Site Driveway		2019 Counts (Raw data) [08/06/2019]															
Movement																	
	EBL	41	41		41	41	41	41	41	41	41	41	41	41	41	41	41
	EBT	7			7	7	7	7	7	7	7	7	7	7	7	7	7
	EBR	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
	WBL	4			4	4	4	4	4	4	4	4	4	4	4	4	4
	WBT	2			2	2	2	2	2	2	2	2	2	2	2	2	2
	WBR	10	10		10	10	10	10	10	10	10	10	10	10	10	10	10
	NBL	1			1	1	1	1	1	1	1	1	1	1	1	1	1
	NBT	2			2	2	2	2	2	2	2	2	2	2	2	2	2
	NBR	0			0	0	0	0	0	0	0	0	0	0	0	0	0
	SBL	96	96	+1	97	97	97	97	97	97	97	97	97	97	97	97	97
	SBT	3			3	3	3	3	3	3	3	3	3	3	3	3	3
	SBR	31	31		31	31	31	31	31	31	31	31	31	31	31	31	31
(7) Whitney Road at Interchange South Site Driveway		(calculated)															
Movement																	
	WBL																
	WBR																
	NBT	3	3		3	3	3	3	3	3	3	3	3	3	3	3	3
	NBR																
	SBL																
	SBT	7	7		7	7	7	7	7	7	7	7	7	7	7	7	7
(9) US Route 4 at Hannah Dustin Drive		(calculated @ 3)															
Movement																	
	EBT	566	498	+30	528	534.60	541.28	548.05	554.90	561.84	568.86	575.97	583.17	590.46	597.84	605.31	612.88
	EBR	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1
	WBL	3	3		3	3	3	3	3	3	3	3	3	3	3	3	3
	WBT	936	824	+28	852	862.65	873.43	884.35	895.40	906.59	917.92	929.39	941.01	952.77	964.68	976.74	988.95
	NBL	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
	NBR	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1
		*5 Trips estimated for the residences on Hannah Dustin Drive and distributed per ITE LUC 210 and US Route 4 ProRata															
(11) US Route 4 at Harris Hill Connector		2019 Counts (Raw data) [08/22/2019]	2019 Existing w/ Seasonal Adjustment reduction	Balance	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Movement																	
	EBT	323	284		284	287.55	291.14	294.78	298.46	302.19	305.97	309.79	313.66	317.58	321.55	325.57	329.64
	EBR	18	16		16	16.20	16.40	16.61	16.82	17.03	17.24	17.46	17.68	17.90	18.12	18.35	18.58
	WBL	403	355		355	359.44	363.93	368.48	373.09	377.75	382.47	387.25	392.09	396.99	401.95	406.97	412.06
	WBT	561	494		494	500.18	506.43	512.76	519.17	525.66	532.23	538.88	545.62	552.44	559.35	566.34	573.42
	NBL	6	5		5	5.06	5.11	5.16	5.21	5.26	5.31	5.36	5.41	5.46	5.51	5.57	5.63
	NBR	274	241		241	244.01	246.45	248.91	251.40	253.91	256.45	259.01	261.60	264.22	266.86	269.53	272.22



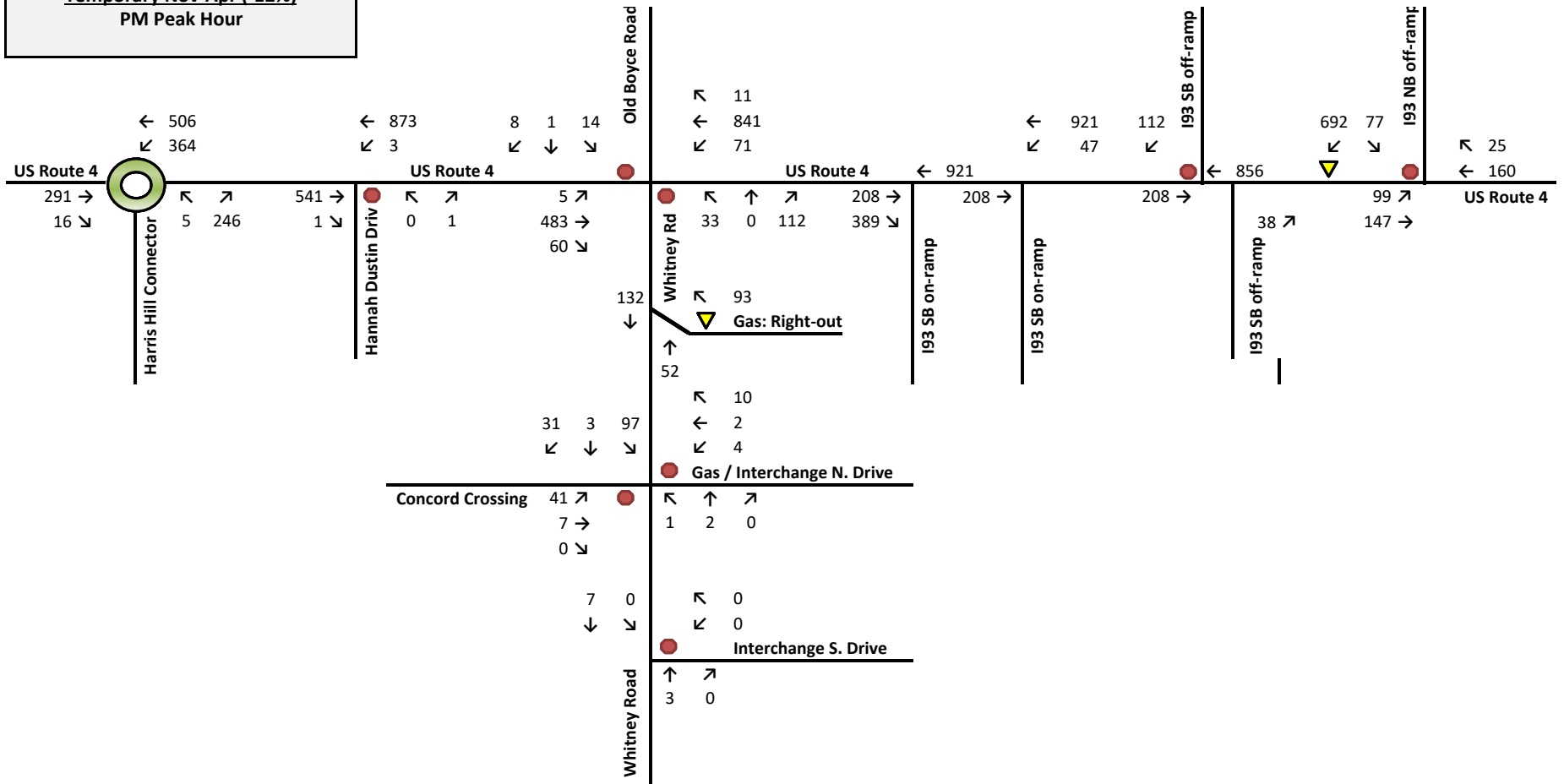
DO NOT ADJUST PHF OR HV FOR LIQUOR ONLY											
PM Peak Hour	PM PHF	2021/2031 PHF Adjust	PM %Heavy	PM #Heavy	2021/2031 % Heavy Adjust		PM Peak Hour	2019 Existing (Nov-Apr)	2021 No-Build (Temp. Nov-Apr)	Site Trip Distribution Interchange LIQUOR STORE	2021 Build (Temp. Nov-Apr)
(29) US Route 4 at I93 NB on/off-ramp							(29) US Route 4 at I93 NB on/off-ramp				
Movement							Movement			TRIPS	
EBL	-	-	2%	2	-		EBL	97	99	5	104
EBT	0.88	-	1%	1	-		EBT	143	147	2	149
WBT	-	-	2%	4	-		WBT	156	160	2	162
WBR	0.90	-	0%	0	-		WBR	24	25	0	25
SBL	0.71	-	0%	0	-		SBL	75	77	0	77
(28) US Route 4 at I93 NB off-ramp							(28) US Route 4 at I93 NB off-ramp				
Movement							Movement			TRIPS	
EBT	-	-	1%	3	-		EBT	240	246	8	254
WBT	-	-	2%	4	-		WBT	161	165	2	167
SBR	0.94	-	1%	11	-		SBR	675	692	6	698
(26) US Route 4 at I93 SB off-ramp							(26) US Route 4 at I93 SB off-ramp				
Movement							Movement			TRIPS	
EBT	-	-	1%	3	-		EBT	203	208	8	216
WBT	-	-	2%	15	-		WBT	835	856	9	865
NER	-	-	0%	0	-		NER	37	38	0	38
(24) US Route 4 at I93 SB off-ramp							(24) US Route 4 at I93 SB off-ramp				
Movement							Movement			TRIPS	
EBT	-	-	1%	3	-		EBT	203	208	8	216
WBT	-	-	2%	15	-		WBT	835	856	9	865
SBR	-	-	1%	1	-		SBR	109	112	4	116
(21) US Route 4 at I93 SB on-ramp							(21) US Route 4 at I93 SB on-ramp				
Movement							Movement			TRIPS	
EBT	0.80	-	1%	3	-		EBT	203	208	8	216
WBL	0.90	-	2%	1	-		WBL	46	47	0	47
WBT	-	-	2%	16	-		WBT	898	921	12	933
(20) US Route 4 at I93 SB on-ramp							(20) US Route 4 at I93 SB on-ramp				
Movement							Movement			TRIPS	
EBL	-	-	1%	3	-		EBL	203	208	8	216
EBT	-	-	3%	13	-		EBT	379	389	5	394
SWR	-	-	2%	16	-		SWR	898	921	12	933

(3) US Route 4 at Whitney Road/Old Boyce Road	PM PHF	2021/2031 PHF Adjust	PM %Heavy	PM #Heavy	2021/2031 % Heavy Adjust	(3) US Route 4 at Whitney Road/Old Boyce Road	2021 No-Build (Temp. Nov-Apr)	Site Trip Distribution Interchange LIQUOR STORE TRIPS	2021 Build (Temp. Nov-Apr)
<u>Movement</u>						<u>Movement</u>			
EBL			0%	0	-	EBL	5	5	5
EBT	0.78	0.92	2%	10	-	EBT	471	483	480
EBR			2%	1	1%	EBR	60	60	66
WBL			3%	2	1%	WBL	71	71	87
WBT	0.91	0.92	2%	15	-	WBT	820	841	837
WBR			8%	1	-	WBR	11	11	11
NBL			6%	2	2%	NBL	33	33	41
NBT	0.91	0.92	0%	0	-	NBT	0	0	0
NBR			5%	6	2%	NBR	112	112	128
SBL			0%	0	-	SBL	14	14	14
SBT	0.72	no change	100%	1	-	SBT	1	1	1
SBR			0%	0	-	SBR	8	8	8
(4) Whitney Road at Gas: Right-out						(4) Whitney Road at Gas: Right-out			
<u>Movement</u>						<u>Movement</u>		TRIPS	
WBR	0.80	-	3%	3	-	WBR	93	93	93
NBT	0.72	-	2%	1	-	NBT	52	52	76
SBT	0.91	-	1%	1	-	SBT	132	132	154
(5) Whitney Road at Interchange North Site Driveway						(5) Whitney Road at Interchange North Site Driveway			
<u>Movement</u>						<u>Movement</u>		TRIPS	
EBL			0%	0	-	EBL	41	41	41
EBT	0.67	no change	0%	0	-	EBT	7	7	7
EBR			0%	0	-	EBR	0	0	0
WBL			0%	0	-	WBL	4	4	4
WBT	0.57	0.92	0%	0	-	WBT	2	2	2
WBR			20%	2	2%	WBR	10	10	34
NBL			0%	0	-	NBL	1	1	1
NBT	0.38	0.92	0%	0	-	NBT	2	2	2
NBR			0%	0	-	NBR	0	0	0
SBL			1%	1	-	SBL	97	97	119
SBT	0.90	0.92	0%	0	-	SBT	3	3	3
SBR			0%	0	-	SBR	31	31	31
(7) Whitney Road at Interchange South Site Driveway						(7) Whitney Road at Interchange South Site Driveway			
<u>Movement</u>						<u>Movement</u>		TRIPS	
WBL	-	-			-	WBL	0	0	0
WBR	-	-			-	WBR	0	0	0
NBT	-	-	0%	0	-	NBT	3	3	3
NBR	-	-			-	NBR	0	0	0
SBL	-	-			-	SBL	0	0	0
SBT	-	-	0%	0	-	SBT	7	7	7
(9) US Route 4 at Hannah Dustin Drive						(9) US Route 4 at Hannah Dustin Drive			
<u>Movement</u>						<u>Movement</u>		TRIPS	
EBT	-	-	2%	11	-	EBT	528	541	544
EBR	-	-	0%		-	EBR	1	1	1
WBL	-	-	0%		-	WBL	3	3	3
WBT	-	-	2%	17	-	WBT	852	873	876
NBL	-	-	0%		-	NBL	0	0	0
NBR	-	-	0%		-	NBR	1	1	1
(11) US Route 4 at Harris Hill Connector	PM PHF	2021/2031 PHF Adjust	PM %Heavy	PM #Heavy	2021/2031 % Heavy Adjust	(11) US Route 4 at Harris Hill Connector			
<u>Movement</u>						<u>Movement</u>		TRIPS	
EBT	0.95	-	5%	15	-	EBT	284	291	292
EBR		-	0%	0	-	EBR	16	16	16
WBL		-	0%	2	-	WBL	355	364	366
WBT	0.90	-	3%	17	-	WBT	494	506	507
NBL		-	0%	0	-	NBL	5	5	5
NBR	0.78	-	2%	5	-	NBR	241	246	248

<p align="center"><b><u>2019 EXISTING</u></b></p> <p align="center"><b><u>Temporary Nov-Apr (-12%)</u></b></p> <p align="center"><b>PM Peak Hour</b></p>
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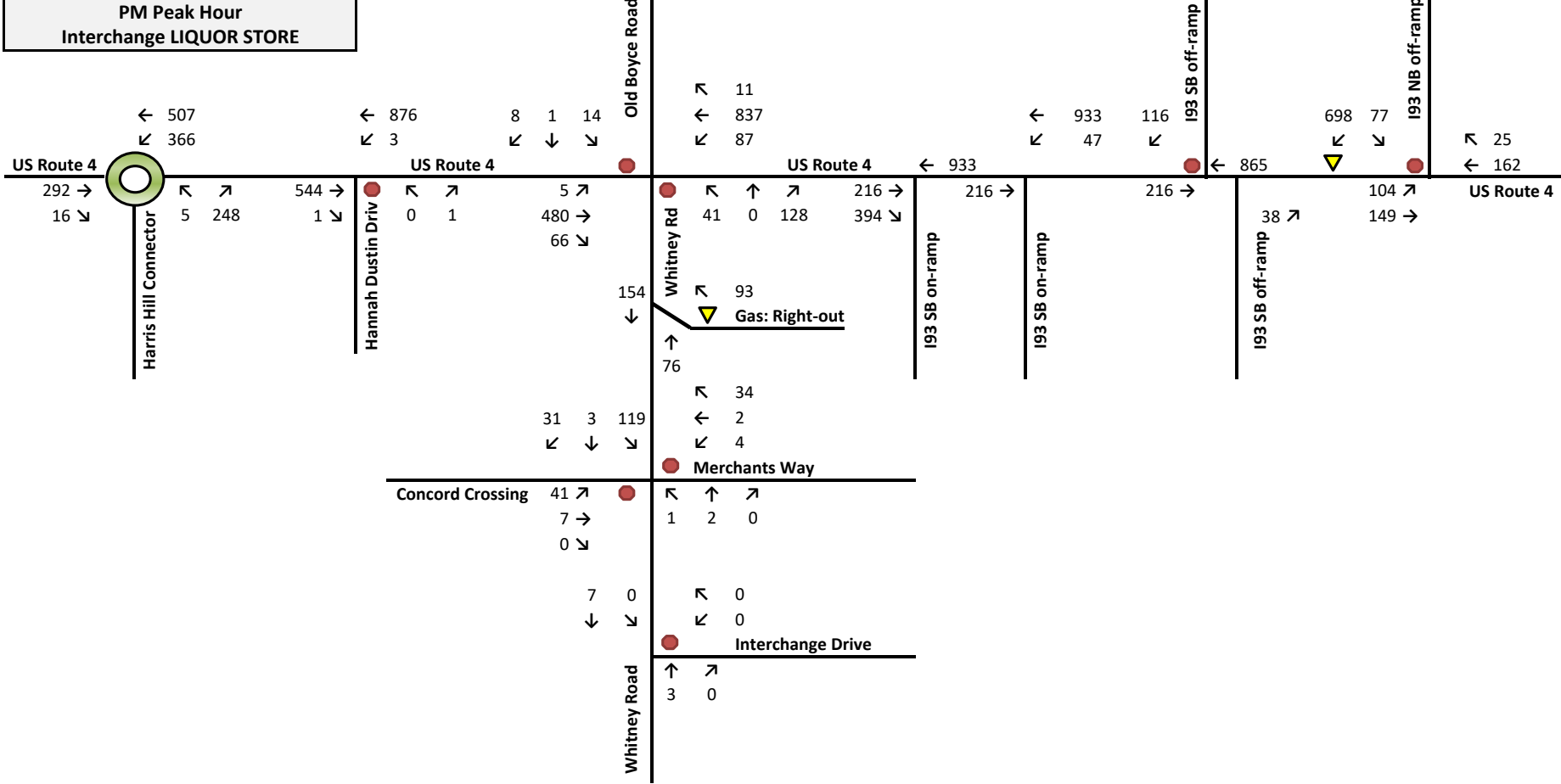


**2021 NoBUILD**  
**Temporary Nov-Apr (-12%)**  
**PM Peak Hour**















2021 BUILD TRIPS  
Temporary Nov-Apr (-12%)  
PM Peak Hour  
Interchange LIQUOR STORE



HCM 2010 TWSC  
3: Whitney Road/Old Boyce Road & US Route 4

2021 PM NoBuild Temp.syn  
2a) 2021 PM NoBuild Temp.Nov-Apr(-12%)

Intersection												
Int Delay, s/veh	5.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	483	60	71	841	11	33	0	112	14	1	8
Future Vol, veh/h	5	483	60	71	841	11	33	0	112	14	1	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	160	-	250	160	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	91	91	91	91	91	91	72	72	72
Heavy Vehicles, %	0	2	2	3	2	8	6	0	5	0	100	0
Mvmt Flow	6	619	77	78	924	12	36	0	123	19	1	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	936	0	0	696	0	0	1723	1723	619	1817	1794	930
Stage 1	-	-	-	-	-	-	631	631	-	1086	1086	-
Stage 2	-	-	-	-	-	-	1092	1092	-	731	708	-
Critical Hdwy	4.1	-	-	4.13	-	-	7.16	6.5	6.25	7.1	7.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.16	5.5	-	6.1	6.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.16	5.5	-	6.1	6.5	-
Follow-up Hdwy	2.2	-	-	2.227	-	-	3.554	4	3.345	3.5	4.9	3.3
Pot Cap-1 Maneuver	740	-	-	895	-	-	68	90	483	61	47	327
Stage 1	-	-	-	-	-	-	462	477	-	264	198	-
Stage 2	-	-	-	-	-	-	255	293	-	416	319	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	740	-	-	895	-	-	59	82	483	42	43	327
Mov Cap-2 Maneuver	-	-	-	-	-	-	59	82	-	42	43	-
Stage 1	-	-	-	-	-	-	458	473	-	262	181	-
Stage 2	-	-	-	-	-	-	223	268	-	307	316	-









Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.7			42.4			119.3		
HCM LOS							E			F		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	59	483	740	-	-	895	-	-	60
HCM Lane V/C Ratio	0.615	0.255	0.009	-	-	0.087	-	-	0.532
HCM Control Delay (s)	135.5	15	9.9	-	-	9.4	-	-	119.3
HCM Lane LOS	F	C	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	2.5	1	0	-	-	0.3	-	-	2.1

HCM 2010 TWSC  
3: Whitney Road/Old Boyce Road & US Route 4

2021 PM Build-LIQUOR ONLY Temp.syn  
2a) 2021 PM Build-LIQUOR ONLY Temp.Nov-Apr(-12%)

Intersection												
Int Delay, s/veh	8.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	480	66	87	837	11	41	0	128	14	1	8
Future Vol, veh/h	5	480	66	87	837	11	41	0	128	14	1	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	160	-	250	160	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	91	91	91	91	91	91	72	72	72
Heavy Vehicles, %	0	2	2	3	2	8	6	0	5	0	100	0
Mvmt Flow	6	615	85	96	920	12	45	0	141	19	1	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	932	0	0	700	0	0	1751	1751	615	1858	1830	926
Stage 1	-	-	-	-	-	-	627	627	-	1118	1118	-
Stage 2	-	-	-	-	-	-	1124	1124	-	740	712	-
Critical Hdwy	4.1	-	-	4.13	-	-	7.16	6.5	6.25	7.1	7.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.16	5.5	-	6.1	6.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.16	5.5	-	6.1	6.5	-
Follow-up Hdwy	2.2	-	-	2.227	-	-	3.554	4	3.345	3.5	4.9	3.3
Pot Cap-1 Maneuver	743	-	-	892	-	-	65	87	486	57	44	329
Stage 1	-	-	-	-	-	-	465	479	-	254	190	-
Stage 2	-	-	-	-	-	-	245	283	-	412	317	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	743	-	-	892	-	-	56	77	486	37	39	329
Mov Cap-2 Maneuver	-	-	-	-	-	-	56	77	-	37	39	-
Stage 1	-	-	-	-	-	-	461	475	-	252	169	-
Stage 2	-	-	-	-	-	-	210	252	-	290	314	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.9			56.3			141.6		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	56	486	743	-	-	892	-	-	54
HCM Lane V/C Ratio	0.805	0.289	0.009	-	-	0.107	-	-	0.592
HCM Control Delay (s)	184.1	15.4	9.9	-	-	9.5	-	-	141.6
HCM Lane LOS	F	C	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	3.5	1.2	0	-	-	0.4	-	-	2.3



*Victoria F. Sheehan*  
*Commissioner*

**THE STATE OF NEW HAMPSHIRE**  
**DEPARTMENT OF TRANSPORTATION**



*William Cass, P.E.*  
*Assistant Commissioner*

September 8, 2021

City of Concord  
c/o David Cedarholm  
City Hall, 41 Green Street  
Concord, NH 03301

To Whom It May Concern:

Your request to update/amend New Hampshire Department of Transportation Driveway Permit No. 05-099-0006 for your driveway(s) located on the south side of Route 4 in the City of Concord, for the purpose of constructing a State liquor store, has been reviewed. Conditions in this area have not substantially changed and, by this letter, Driveway Permit No. 05-099-0006 is renewed/revised for one year from this date. All other regulations and requirements of the original permit shall be adhered to by the applicant or his representative or successor. A copy of the original permit is enclosed for your use.

Sincerely,

A handwritten signature in blue ink, appearing to read "B. Desfosses", with a long horizontal flourish extending to the right.

Brian A. Desfosses, P.E.  
Assistant District Engineer

BAD/dlp

cc: MAJ  
SCL  
(525)  
File with Permit No. 05-099-0006

5/24/13



CHRISTOPHER D. CLEMENT,  
SR.  
COMMISSIONER

## STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION

District 5 Office, 16 East Point Drive, Bedford, NH 03110 603-666-3336



JEFF BRILLHART, P.E.  
ASSISTANT COMMISSIONER

### DRIVEWAY PERMIT

To: THOMAS J ASPELL JR.  
CITY OF CONCORD  
41 GREEN STREET  
CONCORD, NH 03301

City/Town: Concord  
Route/Road: US 4 (U0000004)  
Patrol Section: 525  
Tax Map: 06P  
Lot: 5  
Development: Town Road improvements for bus

Permit #: 05-099-0006  
District: 05  
Permit Date 5/16/2013

Permission is hereby granted to construct (alter) a driveway, entrance, exit or approach adjoining US 4 (U0000004), pursuant to the location and specifications as described below. Failure to adhere to the standards and engineering drawings previously approved shall render this instrument null and void. Failure to start or complete construction of said facility within one calendar year of the date of this permit shall require application for permit extension or renewal in accordance with the Driveway Access Rules. Facilities constructed in violation of the permit specifications or the rules, shall be corrected immediately upon notification by a Department representative. Any cost by the State to correct deficiencies shall be fully borne by the landowner. The landowner shall defend, indemnify and hold harmless the Department and its duly appointed agents and employees against any action for personal injury and/or property damage sustained by reason of the exercise of this permit.

#### **Drive 1**

Location: Approximately 0 miles from/ of Whitney Rd. on the west side of US 4 (U0000004).  
SLD Station: 3835 (left) GPS: 43.289014 N 71.581705 W.

Specifications: This permit authorizes a paved access to be used as a Town Road/ drive. Any change in use, increase in use or reconstruction of the driveway requires reapplication.

The right-of-way line is located 95 feet from and parallel to the centerline of the highway.  
The entrance shall be graded so that the surface of the drive drops (see plan) at a point (see plan) from US 4 (U0000004) edge of pavement to create a drainage swale.

The driveway shall not exceed (see plan) in width. The entrance of the drive may be flared; typically the flare radius is one half the driveway width.

These improvements to Whitney Road and U.S. Route 4 will serve a proposed gas station and convenience store located on the east side of Whitney Road, just south of U.S. Route 4.

Driveway and related roadway modifications are to be constructed as shown on plans prepared by MHF Design Consultants, Inc. dated May 13, 2013 for Drake Petroleum Co. Inc., on file in the District Five Office.

#### **Other Conditions:**

No structures, including buildings, permanent or portable signs, lights, displays, fences, walls, etc. shall be permitted on, over or under the Highway Right of Way.

No parking, catering or servicing shall be conducted within the Highway Right of Way.

The applicant shall comply with all applicable ordinances and regulations of the municipality or other State Agencies.

The Department has relied on the title and subdivision information provided by the landowner. The Department has not performed additional title research and makes no warranty or representation concerning landowner's legal right to access. In the event of a dispute about the landowner's legal right to the access provided herein, the landowner will defend and indemnify the Department.

No work in the State right-of-way shall be performed between November 15 and April 15, or during periods of inclement weather, unless otherwise directed or authorized by the District Engineer.

No additional surface drainage will enter upon the highway.

This permit to act relates solely to the use of the State right-of-way, and is not determinative of any rights of flowage between private land owners.

A copy of this permit shall be present at the site during construction of the drive(s).

All work is to be done by the applicant at no cost to the State of New Hampshire.

This permit does not include or approve the location or installation of underground utilities.

Drive(s) shall approach the highway at or about 90 degrees.

All work to be completed in accordance with this permit and accepted by the State prior to use of the drive by the public.

A pre-construction conference will be required prior to the start of any work within the highway right-of-way. Contact the District 5 office at (603) 666-3336 at least 2 weeks prior to the anticipated start date to schedule.

All materials and structures shall conform to the current version of the NHDOT Standard Specifications for Road and Bridge Construction, as amended.


During construction within the highway right-of-way, traffic shall be maintained in accordance with MUTCD standards and as directed by the District Engineer.

A yellow centerline shall be maintained at all times as approved by the District Engineer. When temporary tape or raised pavement markers are used, they shall be removable.

This permit supercedes Driveway Permit # 099-88-2, issued on June 3, 1988.

Copies: District, Town, Patrolman  
MHF DESIGN CONSULTANTS INC.  
HUSEYIN SEVINGIL  
44 STILES ROAD, SUITE ONE  
SALEM, NH 03079

Approved



Assistant District Engineer  
For Director of Administration