

MEMORANDUM

To: Steve Perry
Police Chief
City of Hutchins

From: Caroline L. Karns, P.E., RSP₁

Date: April 28, 2026

Subject: Dowdy Ferry Road & Trout Road
Traffic Control Analysis

PRELIMINARY	
Kimley»Horn	
This document is released for the purposes of interim review under the authority of Caroline Leonard and not for construction, bidding, or permit purposes.	
Engineer	Caroline L. Karns
P.E. No.	150400
Date	4/28/2026

Introduction

The City of Hutchins has retained Kimley-Horn to evaluate a traffic control analysis for the intersection of Dowdy Ferry Road & Trout Road under existing (2026) conditions and future (2040) conditions. This memorandum serves as documentation of the analysis and recommendations.

Study Intersection

The intersection of Dowdy Ferry Road & Trout Road is currently a three-leg intersection with minor street stop-control. Dowdy Ferry Road is the major road, running east-west with a speed limit of 40 mph and one lane in each direction. Trout Road is stop-controlled running north-south with a speed limit of 30 mph and one lane in each direction. The study intersection is shown below in **Figure 1**.

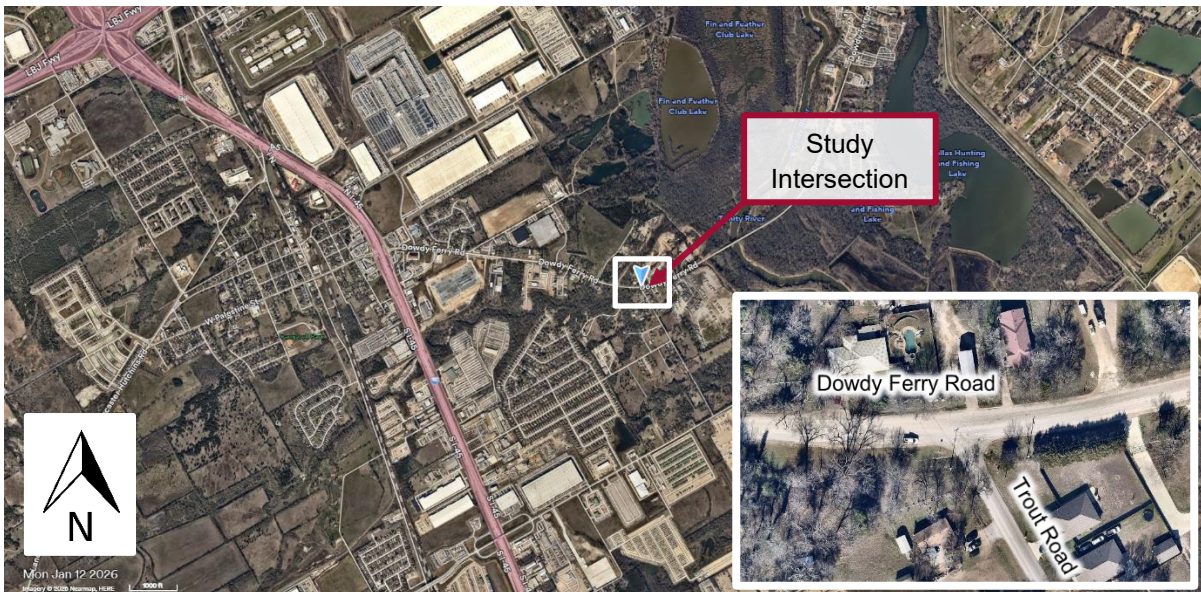


Figure 1 – Dowdy Ferry Road & Trout Road

Existing Conditions (2026)

Turning movement counts were collected for 24 hours on Wednesday, April 1, 2026, for use in the warrant analysis. The observed morning peak hour was 6:45-7:45 AM and the observed evening peak hour was 4:45-5:45 PM. The daily distribution of traffic is shown in **Figure 2**. The collected traffic counts can be found in **Attachment A**.

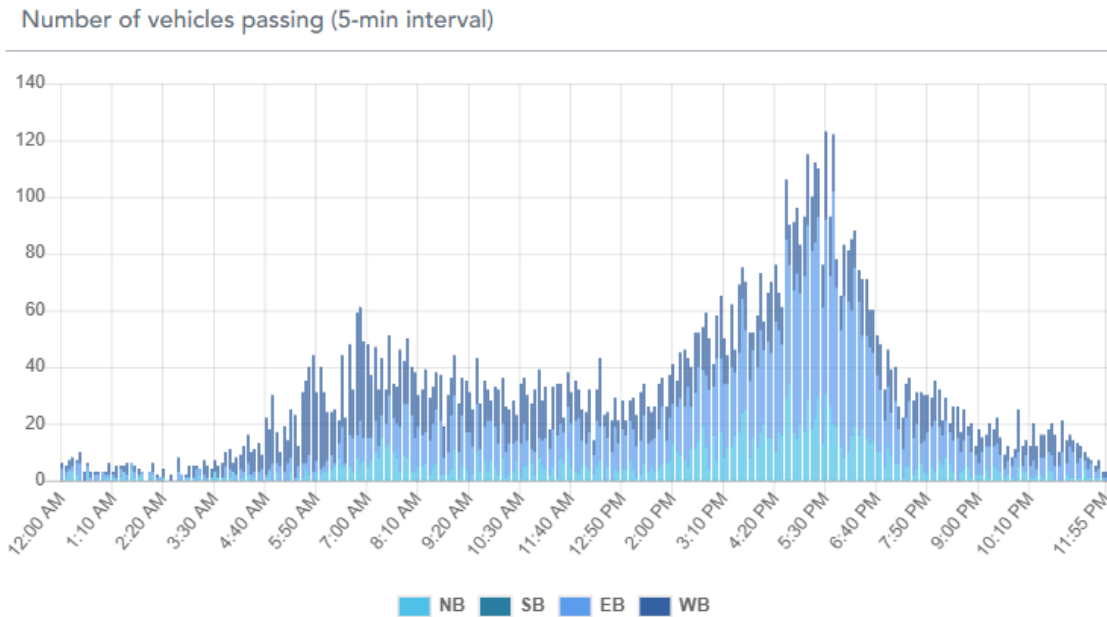


Figure 2 – Daily Distribution of Traffic Counts

Future Conditions (2040)

Under future conditions (2040), it is assumed that Dowdy Ferry Road will be expanded to four lanes (two in each direction) through the study intersection. Additionally, traffic volumes are expected to increase according to projected growth trends.

The historic counts near the study intersection were compared to find expected growth trends within the study area. Historical traffic counts were found from TxDOT’s public Traffic Count Database Center (TCDS). Based on the recent growth and development in the area, an annual growth rate of 5% was determined. **Table 1** shows the historical volumes along Dowdy Ferry Road west of the study intersection.

To generate 2040 projected traffic, a 5% annual growth rate was applied to the existing traffic counts.

Table 1 – Historical Volumes and Growth Rate

Dowdy Ferry Rd West of Trout Rd				
Record	Year	Source	24-Hour Volume	Annual Growth Rate
1	2014	TxDOT	3,022	-
2	2019	TxDOT	3,717	4.2%
3	2024	TxDOT	4,956	5.9%
Average Growth 2014 - 2024:				5.07%
Assumed Annual Growth				5.0%

Traffic Signal Warrant Evaluations

The *Texas Manual on Uniform Traffic Control Devices* (TMUTCD) provides guidelines for performing a signal warrant analysis in *Chapter 4C: Traffic Control Signal Needs Studies*. A traffic signal may be warranted based on traffic volume, pedestrian volume, school crossing, vehicle progression, crash history, roadway network, or nearby grade crossings. This study evaluated all signal warrant criteria as defined in the TMUTCD, except the following warrants:

- **Warrant 3 (Peak Hour):** Not applicable because traffic at this intersection is not generated by office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.
- **Warrant 4 (Pedestrian Volume):** Not applicable because there was a maximum of one pedestrian observed in any given hour.
- **Warrant 5 (School Crossing):** Not applicable because school children do not cross the street at this location.
- **Warrant 9 (Intersection Near a Grade Crossing):** Not applicable because the intersection is not in close proximity to a grade crossing.

The satisfaction of a warrant is not a requirement that a signal be installed; warrants “define the minimum conditions under which installing traffic control signals might be justified,” per the TMUTCD.

The following sections summarize the individual warrant results for Existing (2026) and Future (2040) scenarios. Detailed analysis is included in **Attachment C**.

EXISTING WARRANT RESULTS (2026)

Warrant 1: Eight-Hour Vehicular Volume (Not Met)

In reference to *Table 4C-1* from the TMUTCD, Warrant 1 is met when at least eight hours meet a series of volume threshold criteria. The existing traffic volumes exceed these thresholds for four of the required eight hours, which **does not satisfy the warrant**.

Warrant 2: Four-Hour Vehicular Volume (Not Met)

In reference to *Figure 4C-1* from the TMUTCD, Warrant 2 is met when at least four of the plotted points representing the vehicle per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor street approach (one direction only) all fall above the applicable curve for the existing lane configuration. As shown in **Figure 3**, the existing traffic volumes only met for two of the required four hours, which **does not satisfy the warrant**.

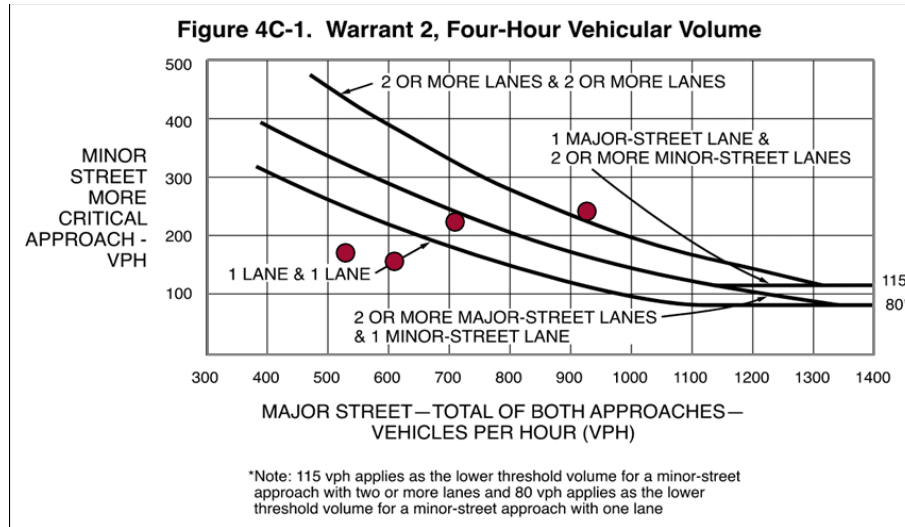


Figure 3 – Plotted Four-Hour Traffic Volumes (2026 Existing)

Warrant 6: Coordinated Signal System (Not Met)

In reference to *Section 4C.07* from the TMUTCD, Warrant 6 is met when a traffic signal is necessitated by the need to maintain proper platooning of vehicles. This is not true for the study intersection, which **does not satisfy the warrant**.

Warrant 7: Crash Experience (Not Met)

In reference to *Table 4C-2* and *Table 4C-3* from the TMUTCD, Warrant 7 is satisfied if reported angle and pedestrian crashes in a one-year or three-year period exceed stated thresholds. Crash data was downloaded using TxDOT's Crash Record Information System (CRIS) for the latest three years (2023-2025). The summary of crash data can be found in **Attachment B**. Within the latest three years of available crash data, there was one angle crash and zero pedestrian crashes, which **does not satisfy the warrant**.

Warrant 8: Roadway Network (Met)

In reference to *Section 4C.09* from the TMUTCD, Warrant 8 is satisfied if installing a traffic signal would encourage concentration and organization of traffic flow on a roadway network. Dowdy Ferry Road is classified as a Major Arterial and the existing peak hour volume at the intersection exceeds 1,000 vehicles, which **satisfies the warrant**.

FUTURE WARRANT RESULTS (2040)

Warrant 1: Eight-Hour Vehicular Volume (Not Met)

In reference to *Table 4C-1* from the TMUTCD, Warrant 1 is met when at least eight hours meet a series of volume threshold criteria. The future traffic volumes exceed these thresholds for six of the required eight hours, which **does not satisfy the warrant**.

Warrant 2: Four-Hour Vehicular Volume (Met)

In reference to *Figure 4C-1* from the TMUTCD, Warrant 2 is met when at least four of the plotted points representing the vehicle per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor street approach (one direction only) all fall above the applicable curve for the existing lane configuration. As shown in **Figure 4**, the future traffic volumes met for at least four of the required four hours, which **satisfies the warrant**.

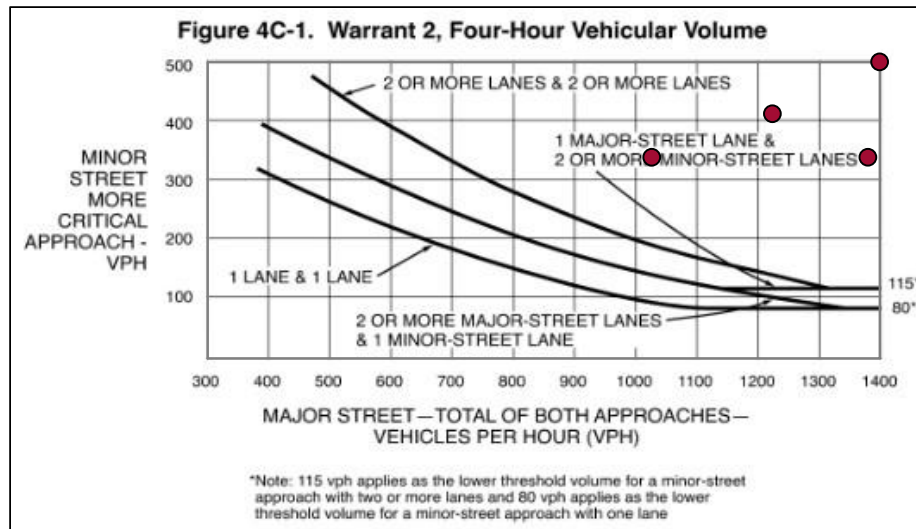


Figure 4 – Plotted Four-Hour Traffic Volumes (2040 Future)

Warrant 6: Coordinated Signal System (Not Met)

In reference to *Section 4C.07* from the TMUTCD, Warrant 6 is met when a traffic signal is necessitated by the need to maintain proper platooning of vehicles. This is not true for the study intersection, which **does not satisfy the warrant**.

Warrant 7: Crash Experience (Not Met)

In reference to *Table 4C-2* and *Table 4C-3* from the TMUTCD, Warrant 7 is satisfied if reported angle and pedestrian crashes in a one-year or three-year period exceed stated thresholds. Crash data was downloaded using TxDOT's Crash Record Information System (CRIS) for the latest three years (2023-2025). The summary of crash data can be found in **Attachment B**. Within the latest three years of available crash data, there was one angle crash and zero pedestrian crashes, which **does not satisfy the warrant**.



Warrant 8: Roadway Network (Met)

In reference to *Section 4C.09* from the TMUTCD, Warrant 8 is satisfied if installing a traffic signal would encourage concentration and organization of traffic flow on a roadway network. Dowdy Ferry Road is classified as a Major Arterial and the existing peak hour volume at the intersection exceeds 1,000 vehicles, which **satisfies the warrant**.

All-Way Stop Warrant Evaluation

The TMUTCD provides guidelines for performing an all-way stop control warrant analysis in *Section 2B.12 All-Way Stop Control*. All-way stop control may be warranted based on traffic volume, pedestrian volume, crash history, sight distance, and other factors. The Existing (2026) Scenario was evaluated for all-way stop control warrants, as summarized below. Detailed analysis is included in **Attachment D**.

A three-leg intersection may warrant all-way stop control if there were five or more crashes in a 12-month period or six or more crashes in a 36-month period that were of a type susceptible to correction by the installation of all-way stop control, like angle or turning crashes. The summary of crash data can be found in **Attachment B**. Within the latest three years of available crash data, there was one angle crash and one left turn crash, which **does not satisfy the warrant**.

All-Way stop control may also be considered if volumes exceed thresholds for eight hours of the day. Only three hours of existing traffic volumes exceed these thresholds, which **does not satisfy the warrant**.

Additionally, all-way stop control may be warranted if there is insufficient sight distance, if there is high pedestrian traffic, to avoid left-turn conflicts, or at an intersection of two residential collectors. This intersection does not meet those criteria, which **does not satisfy the warrant**.



Summary and Recommendations

The results of the traffic signal warrant analysis are shown in **Table 2**.

Under existing conditions, only Warrant 8 is met. Warrant 8 alone should not be used to justify the installation of a traffic signal. Additionally, the intersection does not warrant all-way stop control. Therefore, it is not recommended to change the traffic control of the intersection under existing conditions.

Under future conditions, with the planned expansion of Dowdy Ferry Road and the increased traffic volumes, both Warrant 4 and Warrant 8 are met. This indicates that traffic will become more significantly impacted if the intersection remains stop-controlled. Therefore, it is recommended to install a traffic signal in conjunction with the roadway expansion by 2040.

Table 2 – Results of Traffic Signal and All-Way Stop Warrant Analysis

Warrant	Description	Warrant Met?	
		Existing (2026)	Future (2040)
Signal Warrants			
1	Eight-Hour Volume	Warrant Not Met	Warrant Not Met
2	Four-Hour Volume	Warrant Not Met	Warrant Met
3	Peak Hour Volume	N/A	N/A
4	Pedestrian Volume	N/A	N/A
5	School Crossing	N/A	N/A
6	Coordinated Signal System	Warrant Not Met	Warrant Not Met
7	Crash Experience	Warrant Not Met	Warrant Not Met
8	Roadway Network	Warrant Met	Warrant Met
9	Intersection Near a Grade Crossing	N/A	N/A
All-Way Stop Control Warrant			
All-Way Stop Control		Warrant Not Met	Not Evaluated
Conclusions		Do Not Install a New Traffic Signal or All-Way Stop Control	Install a New Traffic Signal

END

Attachments:

Attachment A: Traffic Count Data

Attachment B: Crash Report Summaries

Attachment C: Traffic Signal Warrant Analysis Worksheets

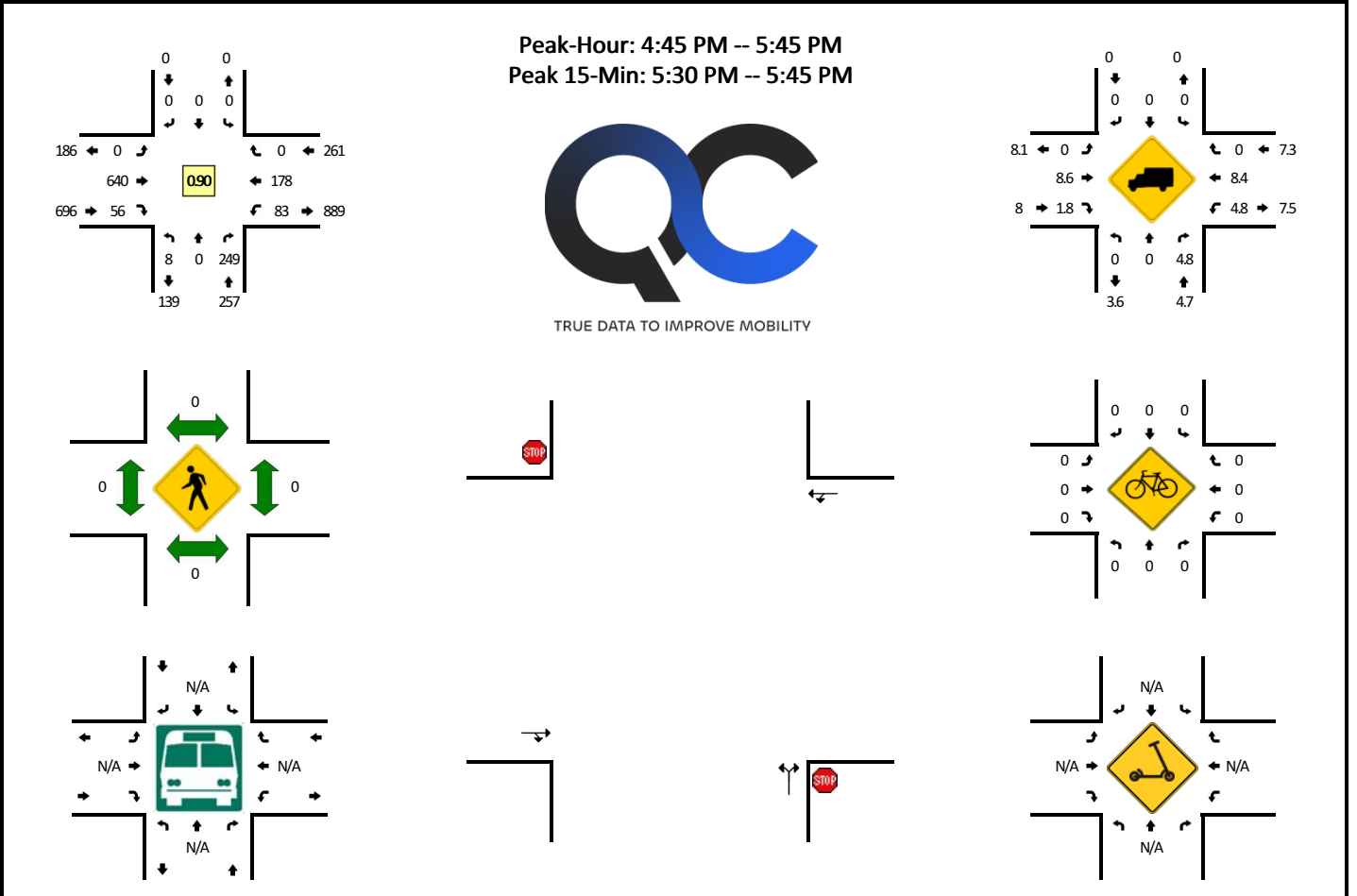
Attachment D: All-Way Stop Control Warrant Analysis Worksheet



Attachment A: Traffic Count Data

LOCATION: Trout Drive -- Dowdy Ferry Road
CITY/STATE: Hutchins, TX

QC JOB #: 17525601
DATE: Wed, Apr 1 2026



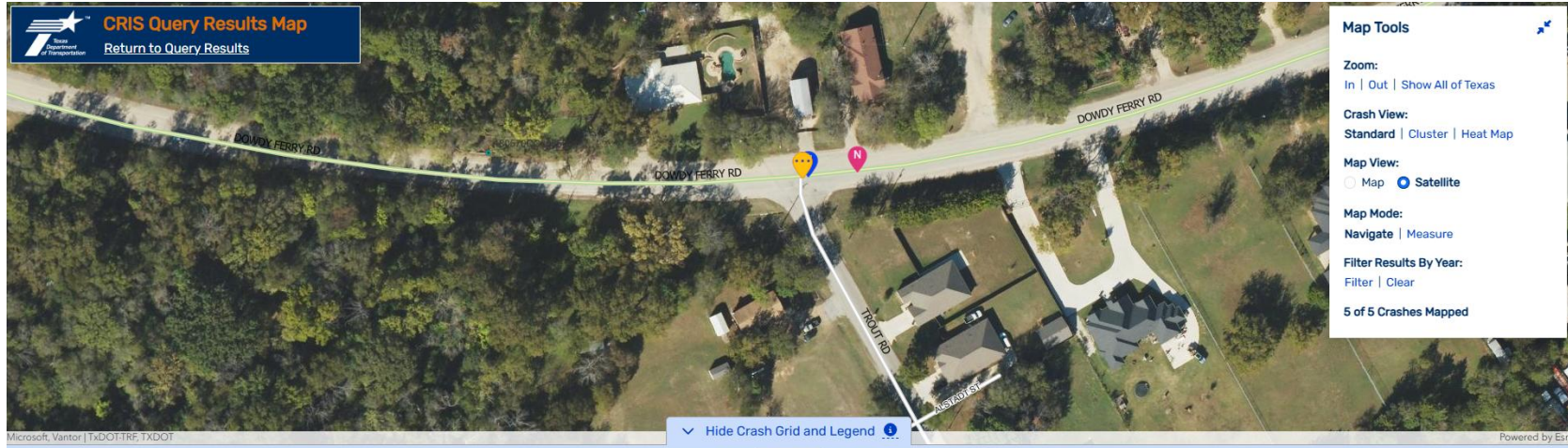
15-Min Count Period Beginning At	Trout Drive (Northbound)				Trout Drive (Southbound)				Dowdy Ferry Road (Eastbound)				Dowdy Ferry Road (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
12:00 AM	1	0	3	0	0	0	0	0	0	1	6	0	3	4	0	0	18	
12:15 AM	0	0	5	0	0	0	0	0	0	8	4	0	1	7	0	0	25	
12:30 AM	0	0	3	0	0	0	0	0	0	2	1	0	3	3	0	0	12	
12:45 AM	0	0	0	0	0	0	0	0	0	4	3	0	0	2	0	0	9	64
1:00 AM	0	0	3	0	0	0	0	0	0	3	0	0	2	4	0	0	12	58
1:15 AM	0	0	4	0	0	0	0	0	0	3	1	0	2	5	0	0	15	48
1:30 AM	0	0	5	0	0	0	0	0	0	6	0	0	0	6	0	0	17	53
1:45 AM	1	0	2	0	0	0	0	0	0	2	0	0	0	2	0	0	7	51
2:00 AM	0	0	2	0	0	0	0	0	0	3	2	0	0	4	0	0	11	50
2:15 AM	0	0	1	0	0	0	0	0	0	1	0	0	0	3	0	0	5	40
2:30 AM	0	0	0	0	0	0	0	0	0	2	1	0	1	6	0	0	10	33
2:45 AM	0	0	2	0	0	0	0	0	0	1	1	0	0	5	0	0	9	35
3:00 AM	0	0	3	0	0	0	0	0	0	5	1	0	2	3	0	0	14	38
3:15 AM	0	0	1	0	0	0	0	0	0	3	0	0	2	10	0	0	16	49
3:30 AM	0	0	5	0	0	0	0	0	0	0	0	0	5	8	0	0	18	57
3:45 AM	1	0	4	0	0	0	0	0	0	7	0	0	10	5	0	0	27	75
4:00 AM	0	0	2	0	0	0	0	0	0	7	0	0	7	13	0	0	29	90
4:15 AM	1	0	2	0	0	0	0	0	0	6	2	0	9	17	0	0	37	111
4:30 AM	0	0	1	0	0	0	0	0	0	6	2	0	10	25	0	0	44	137
4:45 AM	1	0	5	0	0	0	0	0	0	6	4	0	24	25	0	0	65	175
5:00 AM	0	0	0	0	0	0	0	0	0	13	1	0	4	25	0	0	43	189
5:15 AM	1	0	3	0	0	0	0	0	0	9	1	0	15	31	0	0	60	212
5:30 AM	2	0	5	0	0	0	0	0	0	9	5	0	31	54	0	0	106	274
5:45 AM	0	0	5	0	0	0	0	0	0	5	4	0	41	60	0	0	115	324
6:00 AM	3	0	7	0	0	0	0	0	0	9	2	0	14	44	0	0	79	360
6:15 AM	3	0	15	0	0	0	0	0	0	14	6	0	17	35	0	0	90	390
6:30 AM	6	0	7	0	0	0	0	0	0	15	9	0	27	38	0	0	102	386
6:45 AM	4	0	17	0	0	0	0	0	0	23	8	0	48	69	0	0	169	440
7:00 AM	2	0	20	0	0	0	0	0	0	22	7	0	32	49	0	0	132	493
7:15 AM	6	0	29	0	0	0	0	0	0	16	4	0	15	37	0	0	107	510
7:30 AM	7	0	24	0	0	0	0	0	0	31	10	0	14	32	0	0	118	526
7:45 AM	4	0	16	0	0	0	0	0	0	35	18	0	23	42	0	0	138	495
8:00 AM	1	0	10	0	0	0	0	0	0	28	18	0	11	40	0	0	108	471
8:15 AM	3	0	10	0	0	0	0	0	0	21	13	0	24	29	0	0	100	464
8:30 AM	2	0	11	0	0	0	0	0	0	38	15	0	19	23	0	0	108	454
8:45 AM	2	0	6	0	0	0	0	0	0	26	7	0	11	33	0	0	85	401
9:00 AM	7	0	10	0	0	0	0	0	0	31	15	0	16	28	0	0	107	400
9:15 AM	1	0	5	0	0	0	0	0	0	30	10	0	10	35	0	0	91	391

15-Min Count Period Beginning At	Trout Drive (Northbound)				Trout Drive (Southbound)				Dowdy Ferry Road (Eastbound)				Dowdy Ferry Road (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
9:30 AM	3	0	17	0	0	0	0	0	0	30	7	0	21	27	0	0	105	388
9:45 AM	7	0	8	0	0	0	0	0	0	38	8	0	14	18	0	0	93	396
10:00 AM	4	0	7	0	0	0	0	0	0	26	6	0	13	37	0	1	94	383
10:15 AM	3	0	9	0	0	0	0	0	0	25	3	0	11	25	0	0	76	368
10:30 AM	1	0	10	0	0	0	0	0	0	28	8	0	16	37	0	0	100	363
10:45 AM	7	0	9	0	0	0	0	0	0	19	1	0	13	49	0	0	98	368
11:00 AM	3	0	8	0	0	0	0	0	0	21	8	0	6	33	0	0	79	353
11:15 AM	5	0	9	0	0	0	0	0	0	29	11	0	10	37	0	0	101	378
11:30 AM	9	0	13	0	0	0	0	0	0	31	10	0	3	25	0	0	91	369
11:45 AM	1	0	9	0	0	0	0	0	0	32	15	0	9	26	0	0	92	363
12:00 PM	2	0	9	0	0	0	0	0	0	23	5	0	8	23	0	0	70	354
12:15 PM	1	0	11	0	0	0	0	0	0	33	14	0	16	23	0	0	98	351
12:30 PM	2	0	7	0	0	0	0	0	0	26	9	0	7	23	0	0	74	334
12:45 PM	2	0	9	0	0	0	0	0	0	19	17	0	11	12	0	0	70	312
1:00 PM	2	0	10	0	0	0	0	0	0	35	4	0	3	26	0	0	80	322
1:15 PM	3	0	8	0	0	0	0	0	0	32	7	0	13	28	0	0	91	315
1:30 PM	4	0	8	0	0	0	0	0	0	25	10	0	16	21	0	0	84	325
1:45 PM	4	0	15	0	0	0	0	0	0	35	8	0	14	23	0	0	99	354
2:00 PM	5	0	27	0	0	0	0	0	0	43	7	0	10	29	0	0	121	395
2:15 PM	4	0	19	0	0	0	0	0	0	49	13	0	15	29	0	0	129	433
2:30 PM	6	0	38	0	0	0	0	0	0	62	4	0	13	35	0	0	158	507
2:45 PM	2	0	30	0	0	0	0	0	0	60	10	0	20	28	0	0	150	558
3:00 PM	0	0	32	0	0	0	0	0	0	73	15	0	16	37	0	0	173	610
3:15 PM	4	0	36	0	0	0	0	0	0	50	22	0	12	28	0	0	152	633
3:30 PM	4	0	62	0	0	0	0	0	0	80	16	0	16	36	0	0	214	689
3:45 PM	2	0	33	0	0	0	0	0	0	67	19	0	17	24	0	0	162	701
4:00 PM	3	0	49	0	0	0	0	0	0	80	16	0	17	30	0	0	195	723
4:15 PM	0	0	42	0	0	0	0	0	0	97	15	0	18	40	0	0	212	783
4:30 PM	4	0	75	0	0	0	0	0	0	105	25	0	16	32	0	0	257	826
4:45 PM	2	0	50	0	0	0	0	0	0	145	9	0	23	41	0	0	270	934
5:00 PM	1	0	63	0	0	0	0	0	0	163	16	0	16	49	0	0	308	1047
5:15 PM	1	0	63	0	0	0	0	0	0	157	17	0	11	49	0	0	298	1133
5:30 PM	4	0	73	0	0	0	0	0	0	175	14	0	33	39	0	0	338	1214
5:45 PM	0	0	39	0	0	0	0	0	0	128	19	0	7	33	0	0	226	1170
6:00 PM	1	0	44	0	0	0	0	0	0	141	12	0	17	39	0	0	254	1116
6:15 PM	5	0	44	0	0	0	0	0	0	100	16	0	25	26	0	0	216	1034
6:30 PM	3	0	34	0	0	0	0	0	0	74	18	0	10	32	0	0	171	867
6:45 PM	2	0	25	0	0	0	0	0	0	45	14	0	15	25	0	0	126	767
7:00 PM	1	0	20	0	0	0	0	0	0	40	9	0	10	25	0	0	105	618
7:15 PM	0	0	11	0	0	0	0	0	0	41	9	0	7	24	0	0	92	494
7:30 PM	0	0	12	0	0	0	0	0	0	21	15	0	11	31	0	0	90	413
7:45 PM	1	0	9	0	0	0	0	0	0	20	20	0	10	29	0	0	89	376
8:00 PM	4	0	11	0	0	0	0	0	0	27	14	0	11	21	0	0	88	359
8:15 PM	4	0	13	0	0	0	0	0	0	24	11	0	10	13	0	0	75	342
8:30 PM	0	0	7	0	0	0	0	0	0	19	13	0	10	19	0	0	68	320
8:45 PM	1	0	7	0	0	0	0	0	0	15	12	0	6	10	0	0	51	282
9:00 PM	0	0	8	0	0	0	0	0	0	10	10	0	11	10	0	0	49	243
9:15 PM	3	0	7	0	0	0	0	0	0	7	20	0	9	14	0	0	60	228
9:30 PM	1	0	5	0	0	0	0	0	0	9	5	0	5	11	0	0	36	196
9:45 PM	0	0	6	0	0	0	0	0	0	8	9	0	11	10	0	0	44	189
10:00 PM	0	0	7	0	0	0	0	0	0	7	5	0	3	16	0	0	38	178
10:15 PM	1	0	4	0	0	0	0	0	0	8	6	0	6	23	0	0	48	166
10:30 PM	0	0	8	0	0	0	0	0	0	16	3	0	7	20	0	0	54	184
10:45 PM	0	0	0	0	0	0	0	0	0	19	1	0	6	21	0	0	47	187
11:00 PM	0	0	4	0	0	0	0	0	0	18	6	0	6	10	0	0	44	193
11:15 PM	2	0	4	0	0	0	0	0	0	12	3	0	5	9	0	0	35	180
11:30 PM	0	0	3	0	0	0	0	0	0	4	6	0	3	4	0	0	20	146
11:45 PM	0	0	1	0	0	0	0	0	0	2	3	0	6	1	0	0	13	112
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	16	0	292	0	0	0	0	0	0	700	56	0	132	156	0	0	1352	
Heavy Trucks	0	0	12		0	0	0		0	40	0		0	4	0		56	
Buses																		
Pedestrians		0				0				0				0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scooters																		

Comments:



Attachment B: Crash Data (2023-2025)



Crashes

Crash Reports

[Select Columns](#) | [Export CSV](#)

Legend	Crash ID	Crash Date	Crash Severity	First Harmful Event	Intersection Related	Manner of Collision
	19320767	2023-01-03	N - NOT INJURED	MOTOR VEHICLE IN TRANSPORT	INTERSECTION	SAME DIRECTION - ONE STRAIGHT-...
	19390500	2023-02-15	N - NOT INJURED	MOTOR VEHICLE IN TRANSPORT	INTERSECTION RELATED	SAME DIRECTION - BOTH GOING ST...
	19485951	2023-04-11	N - NOT INJURED	FIXED OBJECT	INTERSECTION RELATED	ONE MOTOR VEHICLE - TURNING LEFT
	19634201	2023-07-01	N - NOT INJURED	MOTOR VEHICLE IN TRANSPORT	INTERSECTION	ANGLE - BOTH GOING STRAIGHT
	20725128	2025-03-26	N - NOT INJURED	MOTOR VEHICLE IN TRANSPORT	INTERSECTION	SAME DIRECTION - BOTH GOING ST...



Attachment C: Traffic Signal Warrant Analysis Worksheets

TRAFFIC SIGNAL WARRANT ANALYSIS FINDINGS

Scenario: Existing (2026)

	Included?	Warrant Satisfied?	Notes and Comments:
Warrant 1, Eight-Hour Vehicular Volume	Yes	No	
Warrant 2, Four-Hour Vehicular Volume	Yes	No	
Warrant 3, Peak Hour	Yes	N/A	Warrant Not Applicable
Warrant 4, Pedestrian Volume	Yes	N/A	Warrant Not Applicable
Warrant 5, School Crossing	Yes	N/A	Warrant Not Applicable
Warrant 6, Coordinated Signal System	Yes	No	
Warrant 7, Crash Experience	Yes	No	
Warrant 8, Roadway Network	Yes	Yes	
Warrant 9, Intersection Near a Grade Crossing	Yes	N/A	Warrant Not Applicable

Conclusion: Do Not Install New Traffic Signal

Notes:

Results by Scenario									
Scenario	W1	W2	W3	W4	W5	W6	W7	W8	W9
Existing (2026)	No	No	N/A	N/A	N/A	No	No	Yes	N/A
Future (2040)	No	Yes	N/A	N/A	N/A	No	No	Yes	N/A

WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME

Intersection Name: Trout Rd & Dowdy Ferry Rd
 Jurisdiction: Hutchins, TX
 Scenario: Existing (2026)

Warrant Met: **No**

Number of Lanes for Moving Traffic on Each Approach	
Major Street (EB/WB)	1 Lane
Minor Street 1 (NB)	1 Lane
Minor Street 2 (SB)	N/A

Notes:

Apply 70% Reduction to Warrant Thresholds? **No**

Lanes	Adjusted Volumes			Condition A						Condition B						Combination A/B											
	Major Street (EB/WB)	Minor Street 1 (NB)	Minor Street 2 (SB)	100%			70%			100%			70%			80%			80%			56%			56%		
				Maj.	Min. 1	Min. 2				Maj.	Min. 1	Min. 2				Maj.	Min. 1	Min. 2	Maj.	Min. 1	Min. 2				Maj.	Min. 1	Min. 2
1 / 1	X	X		500	150	150				750	75	75				400	120	120	600	60	60						
2+ / 1				600	150	150				900	75	75				480	120	120	720	60	60						
2+ / 2+				600	200	200				900	100	100				480	160	160	720	80	80						
1 / 2+	X			500	200	200				750	100	100				400	160	160	600	80	80						
HOURS MET				4	4					2	2					6	5		3	3							
WARRANT SATISFIED (8+ Hours)?				NO						NO						NO											
12:00 AM	52	12	0																								
12:15 AM	47	11	0																								
12:30 AM	38	10	0																								
12:45 AM	41	12	0																								
1:00 AM	36	15	0																								
1:15 AM	36	14	0																								
1:30 AM	29	11	0																								
1:45 AM	27	6	0																								
2:00 AM	30	5	0																								
2:15 AM	32	6	0																								
2:30 AM	43	6	0																								
2:45 AM	46	11	0																								
3:00 AM	61	14	0																								
3:15 AM	77	13	0																								
3:30 AM	96	15	0																								
3:45 AM	126	11	0																								
4:00 AM	163	12	0																								
4:15 AM	179	10	0																								
4:30 AM	201	11	0																								
4:45 AM	257	17	0																								
5:00 AM	308	16	0																								
5:15 AM	334	26	0																								
5:30 AM	350	40	0																								
5:45 AM	340	46	0																								
6:00 AM	378	62	0																								
6:15 AM	419	74	0																								
6:30 AM	419	91	0													X											
6:45 AM	417	109	0																								
7:00 AM	387	108	0																								
7:15 AM	374	97	0																								
7:30 AM	389	75	0																								
7:45 AM	397	57	0																								
8:00 AM	356	45	0																								
8:15 AM	349	51	0																								
8:30 AM	347	44	0																								
8:45 AM	337	51	0																								
9:00 AM	338	58	0																								
9:15 AM	331	52	0																								
9:30 AM	310	58	0																								
9:45 AM	314	49	0																								
10:00 AM	318	50	0																								
10:15 AM	303	50	0																								
10:30 AM	326	52	0																								
10:45 AM	306	63	0																								
11:00 AM	306	57	0																								
11:15 AM	297	57	0																								
11:30 AM	296	55	0																								
11:45 AM	292	42	0																								

WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME

Intersection Name: Trout Rd & Dowdy Ferry Rd
 Jurisdiction: Hutchins, TX
 Scenario: Existing (2026)

Warrant Met: No

Number of Lanes for Moving Traffic on Each Approach	
Major Street (EB/WB)	1 Lane
Minor Street 1 (NB)	1 Lane
Minor Street 2 (SB)	N/A

Notes:

Apply 70% Reduction to Warrant Thresholds? No

Lanes	Adjusted Volumes			Condition A						Condition B						Combination A/B											
	Major/Minor	Major Street (EB/WB)	Minor Street 1 (NB)	100%			70%			100%			70%			80%			80%			56%			56%		
				Maj.	Min. 1	Min. 2				Maj.	Min. 1	Min. 2				Maj.	Min. 1	Min. 2	Maj.	Min. 1	Min. 2						
1 / 1	X	X		500	150	150				750	75	75				400	120	120	600	60	60						
2+ / 1				600	150	150				900	75	75				480	120	120	720	60	60						
2+ / 2+				600	200	200				900	100	100				480	160	160	720	80	80						
1 / 2+	X			500	200	200				750	100	100				400	160	160	600	80	80						
HOURS MET				4	4					2	2					6	5		3	3							
WARRANT SATISFIED (8+ Hours)?				NO						NO						NO											
12:00 PM	269	43	0																								
12:15 PM	278	44	0																								
12:30 PM	272	43	0																								
12:45 PM	279	46	0																								
1:00 PM	300	54	0																								
1:15 PM	321	74	0																								
1:30 PM	347	86	0																								
1:45 PM	389	118	0																								
2:00 PM	427	131	0																								
2:15 PM	479	131	0													X	X		X								
2:30 PM	485	148	0																								
2:45 PM	519	170	0	X	X	X																					
3:00 PM	528	173	0													X	X		X								
3:15 PM	530	193	0																								
3:30 PM	588	195	0																								
3:45 PM	618	208	0	X	X	X													X	X		X					
4:00 PM	709	225	0													X	X		X								
4:15 PM	810	237	0							X	X	X															
4:30 PM	874	259	0																								
4:45 PM	957	257	0	X	X	X													X	X		X					
5:00 PM	926	244	0													X	X		X								
5:15 PM	891	225	0							X	X	X															
5:30 PM	824	210	0																								
5:45 PM	697	170	0	X	X	X													X	X		X					
6:00 PM	609	158	0													X	X		X								
6:15 PM	484	134	0																								
6:30 PM	398	96	0																								
6:45 PM	342	71	0																								
7:00 PM	322	54	0																								
7:15 PM	311	48	0																								
7:30 PM	288	54	0																								
7:45 PM	271	49	0																								
8:00 PM	235	47	0																								
8:15 PM	203	40	0																								
8:30 PM	195	33	0																								
8:45 PM	164	32	0																								
9:00 PM	159	30	0																								
9:15 PM	149	29	0																								
9:30 PM	142	24	0																								
9:45 PM	158	26	0																								
10:00 PM	167	20	0																								
10:15 PM	176	17	0																								
10:30 PM	162	18	0																								
10:45 PM	133	13	0																								
11:00 PM	98	14	0																								
11:15 PM	58	10	0																								
11:30 PM	29	4	0																								
11:45 PM	12	1	0																								

WARRANT 2, FOUR-HOUR VEHICULAR VOLUME

Intersection Name: Trout Rd & Dowdy Ferry Rd
 Jurisdiction: Hutchins, TX
 Scenario: Existing (2026)

Warrant Met: No

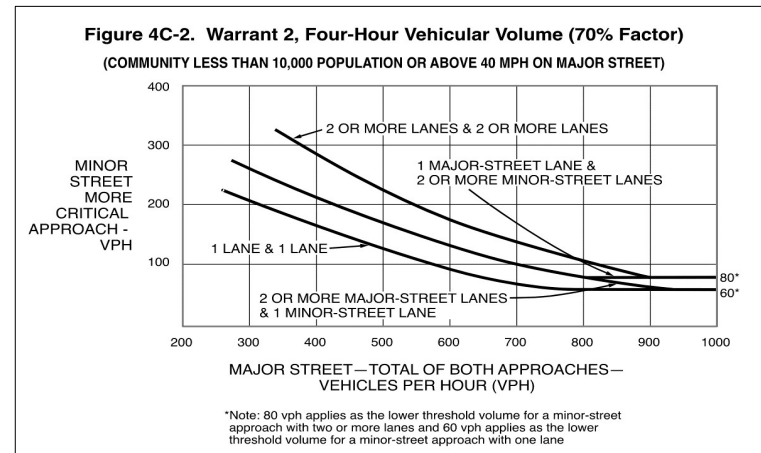
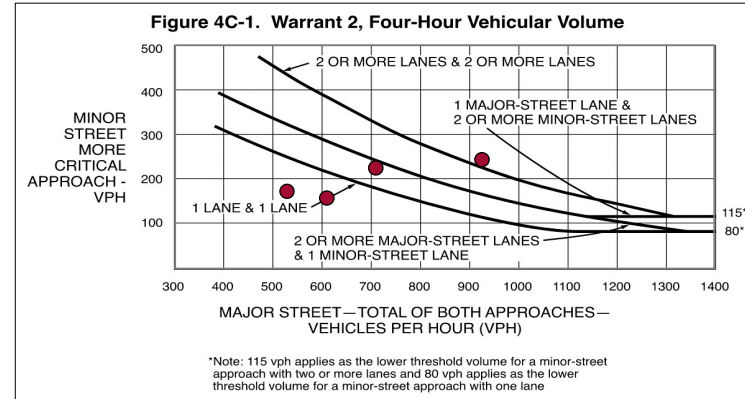
Number of Lanes for Moving Traffic on Each Approach	
Major Street (EB/WB)	1 Lane
Minor Street 1 (NB)	1 Lane
Minor Street 2 (SB)	N/A

Apply 70% Reduction to Warrant Thresholds? No

Total Number of Unique Hours Met on Figure 4C-1	2
Total Number of Unique Hours Met on Figure 4C-2 (70% Factor)	N/A

Hour Interval Beginning At	Approach Vehicles Per Hour (VPH)				Total Major Approach Volumes	Hour Met?	Hour Met? (70% Factor)
	Major		Minor 1	Minor 2			
	Eastbound	Westbound	Northbound	Southbound			
12:00 AM	29	23	12	0	52		
12:15 AM	25	22	11	0	47		
12:30 AM	17	21	10	0	38		
12:45 AM	20	21	12	0	41		
1:00 AM	15	21	15	0	36		
1:15 AM	17	19	14	0	36		
1:30 AM	14	15	11	0	29		
1:45 AM	11	16	6	0	27		
2:00 AM	11	19	5	0	30		
2:15 AM	12	20	6	0	32		
2:30 AM	14	29	6	0	43		
2:45 AM	11	35	11	0	46		
3:00 AM	16	45	14	0	61		
3:15 AM	17	60	13	0	77		
3:30 AM	22	74	15	0	96		
3:45 AM	30	96	11	0	126		
4:00 AM	33	130	12	0	163		
4:15 AM	40	139	10	0	179		
4:30 AM	42	159	11	0	201		
4:45 AM	48	209	17	0	257		
5:00 AM	47	261	16	0	308		
5:15 AM	44	290	26	0	334		
5:30 AM	54	296	40	0	350		
5:45 AM	64	276	46	0	340		
6:00 AM	86	292	62	0	378		
6:15 AM	104	315	74	0	419		
6:30 AM	104	315	91	0	419		
6:45 AM	121	296	109	0	417		
7:00 AM	143	244	108	0	387		
7:15 AM	160	214	97	0	374		
7:30 AM	174	215	75	0	389		
7:45 AM	186	211	57	0	397		
8:00 AM	166	190	45	0	356		
8:15 AM	166	183	51	0	349		
8:30 AM	172	175	44	0	347		
8:45 AM	156	181	51	0	337		
9:00 AM	169	169	58	0	338		
9:15 AM	155	176	52	0	331		
9:30 AM	143	167	58	0	310		
9:45 AM	142	172	49	0	314		
10:00 AM	116	202	50	0	318		
10:15 AM	113	190	50	0	303		
10:30 AM	125	201	52	0	326		
10:45 AM	130	176	63	0	306		
11:00 AM	157	149	57	0	306		
11:15 AM	156	141	57	0	297		
11:30 AM	163	133	55	0	296		
11:45 AM	157	135	42	0	292		
12:00 PM	146	123	43	0	269		
12:15 PM	157	121	44	0	278		
12:30 PM	149	123	43	0	272		
12:45 PM	149	130	46	0	279		
1:00 PM	156	144	54	0	300		
1:15 PM	167	154	74	0	321		
1:30 PM	190	157	86	0	347		
1:45 PM	221	168	118	0	389		
2:00 PM	248	179	131	0	427		
2:15 PM	286	193	131	0	479		
2:30 PM	296	189	148	0	485		

Legend
● Minor Street 1 (NB)



WARRANT 2, FOUR-HOUR VEHICULAR VOLUME

Intersection Name: Trout Rd & Dowdy Ferry Rd
 Jurisdiction: Hutchins, TX
 Scenario: Existing (2026)

Warrant Met: No

Number of Lanes for Moving Traffic on Each Approach	
Major Street (EB/WB)	1 Lane
Minor Street 1 (NB)	1 Lane
Minor Street 2 (SB)	N/A

Apply 70% Reduction to Warrant Thresholds? No

Total Number of Unique Hours Met on Figure 4C-1	2
Total Number of Unique Hours Met on Figure 4C-2 (70% Factor)	N/A

Legend
● Minor Street 1 (NB)

Hour Interval Beginning At	Approach Vehicles Per Hour (VPH)				Total Major Approach Volumes	Hour Met?	Hour Met? (70% Factor)
	Major		Minor 1	Minor 2			
	Eastbound	Westbound	Northbound	Southbound			
2:45 PM	326	193	170	0	519		
3:00 PM	342	186	173	0	528		
3:15 PM	350	180	193	0	530		
3:30 PM	390	198	195	0	588		
3:45 PM	424	194	208	0	618		
4:00 PM	492	217	225	0	709	Min. 1 Met	
4:15 PM	575	235	237	0	810		
4:30 PM	637	237	259	0	874		
4:45 PM	696	261	257	0	957		
5:00 PM	689	237	244	0	926	Min. 1 Met	
5:15 PM	663	228	225	0	891		
5:30 PM	605	219	210	0	824		
5:45 PM	508	189	170	0	697		
6:00 PM	420	189	158	0	609		
6:15 PM	316	168	134	0	484		
6:30 PM	250	148	96	0	398		
6:45 PM	194	148	71	0	342		
7:00 PM	175	147	54	0	322		
7:15 PM	167	144	48	0	311		
7:30 PM	152	136	54	0	288		
7:45 PM	148	123	49	0	271		
8:00 PM	135	100	47	0	235		
8:15 PM	114	89	40	0	203		
8:30 PM	106	89	33	0	195		
8:45 PM	88	76	32	0	164		
9:00 PM	78	81	30	0	159		
9:15 PM	70	79	29	0	149		
9:30 PM	57	85	24	0	142		
9:45 PM	62	96	26	0	158		
10:00 PM	65	102	20	0	167		
10:15 PM	77	99	17	0	176		
10:30 PM	78	84	18	0	162		
10:45 PM	69	64	13	0	133		
11:00 PM	54	44	14	0	98		
11:15 PM	30	28	10	0	58		
11:30 PM	15	14	4	0	29		
11:45 PM	5	7	1	0	12		

Top Hours for Figure 4C-1 - Minor Street 1 (NB)				
	Start Time	End Time	Major Street	Minor Street
Top Hour	5:00 PM	6:00 PM	926	244
2nd Highest Hour	4:00 PM	5:00 PM	709	225
3rd Highest Hour	6:00 PM	7:00 PM	609	158
4th Highest Hour	3:00 PM	4:00 PM	528	173

Top Hours for Figure 4C-1 - Minor Street 2 (SB)				
	Start Time	End Time	Major Street	Minor Street
Top Hour	N/A	N/A	N/A	N/A
2nd Highest Hour	N/A	N/A	N/A	N/A
3rd Highest Hour	N/A	N/A	N/A	N/A
4th Highest Hour	N/A	N/A	N/A	N/A

WARRANT 6, COORDINATED SIGNAL SYSTEM

Intersection: Trout Rd & Dowdy Ferry Rd
Jurisdiction: Hutchins, TX
Scenario: Existing (2026)

Warrant Met:

On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.

WARRANT 7, CRASH EXPERIENCE

Intersection: Trout Rd & Dowdy Ferry Rd
 Jurisdiction: Hutchins, TX
 Scenario: Existing (2026)

Warrant Met: No

Number of Lanes for Moving Traffic on Each Approach	
Major Street (EB/WB)	1 Lane
Minor Street 1 (NB)	1 Lane
Minor Street 2 (SB)	N/A
Number of Legs	3

Has adequate trial of alternative with satisfactory observance and enforcement failed to reduce the crash frequency? Yes

Use increased crash count threshold tables? No

Table 4C-2. Minimum Number of Reported Crashes in a One-Year Period

Number of through lanes on each approach				Total of angle and pedestrian crashes (all severities)		Total of fatal-and-injury angle and pedestrian crashes	
Major/Minor	Major Street (EB/WB)	Minor Street 1 (NB)	Minor Street 2 (SB)	Four Legs	Three Legs	Four Legs	Three Legs
1 / 1	X	X		5	4	3	3
2+ / 1				5	4	3	3
2+ / 2+				5	4	3	3
1 / 2+	X			5	4	3	3
Crash History				1		0	
Threshold Met?				No		No	

Table 4C-3. Minimum Number of Reported Crashes in a Three-Year Period

Number of through lanes on each approach				Total of angle and pedestrian crashes (all severities)		Total of fatal-and-injury angle and pedestrian crashes	
Major/Minor	Major Street (EB/WB)	Minor Street 1 (NB)	Minor Street 2 (SB)	Four Legs	Three Legs	Four Legs	Three Legs
1 / 1	X	X		6	5	4	4
2+ / 1				6	5	4	4
2+ / 2+				6	5	4	4
1 / 2+	X			6	5	4	4
Crash History				1		0	
Threshold Met?				No		No	

For each of any 8 hours of an average day, the vehicles per hour given in both the 80% columns of Condition A in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection. If in a built-up isolated community with less than 10,000 population or above 40 mph on major street, the 56% columns may be used. No

For each of any 8 hours of an average day, the vehicles per hour given in both the 80% columns of Condition B in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection. If in a built-up isolated community with less than 10,000 population or above 40 mph on major street, the 56% columns may be used. No

The volume of pedestrian traffic is 80% or more of the requirements specified in Warrant 4, the Pedestrian Volume warrant. No

WARRANT 8, ROADWAY NETWORK

Intersection: Trout Rd & Dowdy Ferry Rd

Jurisdiction: Hutchins, TX

Scenario: Existing (2026)

Warrant Met: Yes

Does the intersection have a total existing, or immediately projected, entering volume of at least 1,000 vehicles per hour during the peak hour of a typical weekday and has 5-year projected traffic volumes, based on an engineering study, that meet one or more of Warrants 1, 2, and 3, during the average weekday? Yes

Does the intersection have a total existing or immediately projected entering volume of at least 1,000 vehicles per hour for each of any 5 hours of a non-normal business day (Saturday or Sunday)? No

Is the major street part of the street or highway system that serves as the principal roadway network for through traffic flow? No

Does the major street include rural or suburban highways outside, entering, or traversing a city? No

Does the major street appear as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study? Yes

TRAFFIC SIGNAL WARRANT ANALYSIS FINDINGS

Scenario: Future (2040)

	Included?	Warrant Satisfied?	Notes and Comments:
Warrant 1, Eight-Hour Vehicular Volume	Yes	No	
Warrant 2, Four-Hour Vehicular Volume	Yes	Yes	Figure 4C-1 (100%).
Warrant 3, Peak Hour	Yes	N/A	Warrant Not Applicable
Warrant 4, Pedestrian Volume	Yes	N/A	Warrant Not Applicable
Warrant 5, School Crossing	Yes	N/A	Warrant Not Applicable
Warrant 6, Coordinated Signal System	Yes	No	
Warrant 7, Crash Experience	Yes	No	
Warrant 8, Roadway Network	Yes	Yes	
Warrant 9, Intersection Near a Grade Crossing	Yes	N/A	Warrant Not Applicable

Conclusion: Install New Traffic Signal

Notes:

Results by Scenario									
Scenario	W1	W2	W3	W4	W5	W6	W7	W8	W9
Existing (2026)	No	No	N/A	N/A	N/A	No	No	Yes	N/A
Future (2040)	No	Yes	N/A	N/A	N/A	No	No	Yes	N/A

WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME

Intersection Name: Trout Rd & Dowdy Ferry Rd
 Jurisdiction: Hutchins, TX
 Scenario: Future (2040)

Warrant Met: **No**

Number of Lanes for Moving Traffic on Each Approach	
Major Street (EB/WB)	2 or More Lanes
Minor Street 1 (NB)	1 Lane
Minor Street 2 (SB)	N/A

Notes:

Apply 70% Reduction to Warrant Thresholds? **No**

Lanes	Adjusted Volumes			Condition A						Condition B						Combination A/B											
	Major Street (EB/WB)	Minor Street 1 (NB)	Minor Street 2 (SB)	100%			70%			100%			70%			80%			80%			56%			56%		
				Maj.	Min. 1	Min. 2				Maj.	Min. 1	Min. 2				Maj.	Min. 1	Min. 2	Maj.	Min. 1	Min. 2				Maj.	Min. 1	Min. 2
1 / 1				500	150	150				750	75	75				400	120	120	600	60	60						
2+ / 1	X	X		600	150	150				900	75	75				480	120	120	720	60	60						
2+ / 2+	X			600	200	200				900	100	100				480	160	160	720	80	80						
1 / 2+				500	200	200				750	100	100				400	160	160	600	80	80						
HOURS MET				14	6					5	5				16	8		7	7								
WARRANT SATISFIED (8+ Hours)?				NO						NO					NO												
12:00 AM	103	24	0																								
12:15 AM	94	22	0																								
12:30 AM	76	20	0																								
12:45 AM	82	24	0																								
1:00 AM	72	30	0																								
1:15 AM	72	28	0																								
1:30 AM	58	22	0																								
1:45 AM	54	12	0																								
2:00 AM	60	10	0																								
2:15 AM	64	12	0																								
2:30 AM	85	12	0																								
2:45 AM	91	22	0																								
3:00 AM	121	28	0																								
3:15 AM	153	26	0																								
3:30 AM	191	30	0																								
3:45 AM	249	22	0																								
4:00 AM	322	24	0																								
4:15 AM	354	20	0																								
4:30 AM	398	22	0																								
4:45 AM	509	34	0												X												
5:00 AM	610	32	0	X																							
5:15 AM	661	51	0																								
5:30 AM	693	79	0												X												
5:45 AM	673	91	0																X	X							
6:00 AM	748	123	0	X																							
6:15 AM	830	147	0																								
6:30 AM	830	180	0												X	X		X									
6:45 AM	826	216	0												X	X		X									
7:00 AM	766	214	0	X	X		X											X	X								
7:15 AM	741	192	0																X	X							
7:30 AM	771	149	0												X												
7:45 AM	786	113	0																								
8:00 AM	705	89	0	X																							
8:15 AM	691	101	0																								
8:30 AM	688	87	0																								
8:45 AM	667	101	0												X												
9:00 AM	670	115	0	X																							
9:15 AM	655	103	0																								
9:30 AM	614	115	0																								
9:45 AM	622	97	0												X												
10:00 AM	630	99	0	X																							
10:15 AM	600	99	0																								
10:30 AM	646	103	0																								
10:45 AM	605	125	0												X	X		X									
11:00 AM	606	113	0	X																							
11:15 AM	588	113	0																								
11:30 AM	586	109	0																								
11:45 AM	578	83	0												X												

WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME

Intersection Name: Trout Rd & Dowdy Ferry Rd
 Jurisdiction: Hutchins, TX
 Scenario: Future (2040)

Warrant Met: No

Number of Lanes for Moving Traffic on Each Approach	
Major Street (EB/WB)	2 or More Lanes
Minor Street 1 (NB)	1 Lane
Minor Street 2 (SB)	N/A

Notes:

Apply 70% Reduction to Warrant Thresholds? No

Lanes	Adjusted Volumes			Condition A						Condition B						Combination A/B											
	Major/Minor	Major Street (EB/WB)	Minor Street 1 (NB)	100%			70%			100%			70%			80%			80%			56%			56%		
				Maj.	Min. 1	Min. 2				Maj.	Min. 1	Min. 2				Maj.	Min. 1	Min. 2	Maj.	Min. 1	Min. 2				Maj.	Min. 1	Min. 2
1 / 1				500	150	150				750	75	75				400	120	120	600	60	60						
2+ / 1	X	X		600	150	150				900	75	75				480	120	120	720	60	60						
2+ / 2+	X			600	200	200				900	100	100				480	160	160	720	80	80						
1 / 2+				500	200	200				750	100	100				400	160	160	600	80	80						
HOURS MET				14	6					5	5				16	8		7	7								
WARRANT SATISFIED (8+ Hours)?				NO						NO					NO												
12:00 PM	533	85	0																								
12:15 PM	551	87	0																								
12:30 PM	539	85	0																								
12:45 PM	552	91	0												X												
1:00 PM	594	107	0																								
1:15 PM	636	147	0	X																							
1:30 PM	687	170	0																								
1:45 PM	771	234	0												X	X		X	X	X				X			
2:00 PM	845	259	0																								
2:15 PM	948	259	0	X	X		X			X	X		X														
2:30 PM	960	293	0																								
2:45 PM	1027	337	0												X	X		X	X	X				X			
3:00 PM	1045	343	0																								
3:15 PM	1049	382	0	X	X		X			X	X		X														
3:30 PM	1164	386	0																								
3:45 PM	1224	412	0												X	X		X	X	X				X			
4:00 PM	1404	446	0																								
4:15 PM	1604	469	0	X	X		X			X	X		X														
4:30 PM	1730	513	0																								
4:45 PM	1895	509	0												X	X		X	X	X				X			
5:00 PM	1833	483	0																								
5:15 PM	1764	446	0	X	X		X			X	X		X														
5:30 PM	1632	416	0																								
5:45 PM	1380	337	0												X	X		X	X	X				X			
6:00 PM	1206	313	0																								
6:15 PM	959	265	0	X	X		X			X	X		X														
6:30 PM	788	190	0																								
6:45 PM	677	141	0																								
7:00 PM	638	107	0												X	X		X									
7:15 PM	616	95	0	X																							
7:30 PM	570	107	0																								
7:45 PM	537	97	0												X												
8:00 PM	465	93	0																								
8:15 PM	402	79	0																								
8:30 PM	386	65	0																								
8:45 PM	324	63	0																								
9:00 PM	314	59	0																								
9:15 PM	295	57	0																								
9:30 PM	281	48	0																								
9:45 PM	313	51	0																								
10:00 PM	331	40	0																								
10:15 PM	348	34	0																								
10:30 PM	320	36	0																								
10:45 PM	264	26	0																								
11:00 PM	194	28	0																								
11:15 PM	114	20	0																								
11:30 PM	58	8	0																								
11:45 PM	24	2	0																								

WARRANT 2, FOUR-HOUR VEHICULAR VOLUME

Intersection Name: Trout Rd & Dowdy Ferry Rd
 Jurisdiction: Hutchins, TX
 Scenario: Future (2040)

Warrant Met: **Yes**

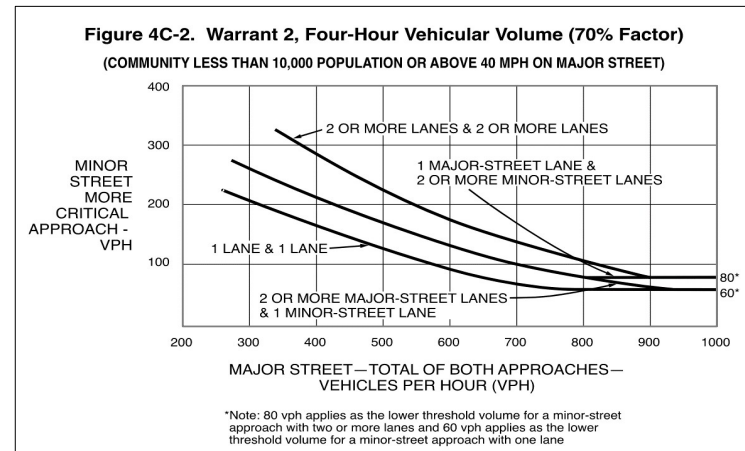
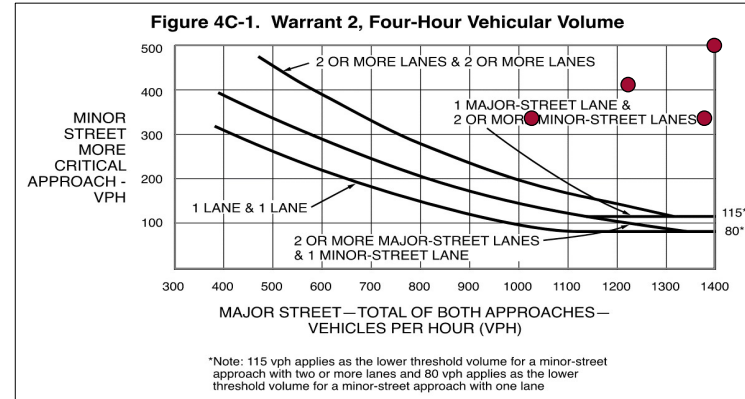
Number of Lanes for Moving Traffic on Each Approach	
Major Street (EB/WB)	2 or More Lanes
Minor Street 1 (NB)	1 Lane
Minor Street 2 (SB)	N/A

Apply 70% Reduction to Warrant Thresholds? **No**

Total Number of Unique Hours Met on Figure 4C-1	6
Total Number of Unique Hours Met on Figure 4C-2 (70% Factor)	N/A

Hour Interval Beginning At	Approach Vehicles Per Hour (VPH)				Total Major Approach Volumes	Hour Met?	Hour Met? (70% Factor)
	Major		Minor 1	Minor 2			
	Eastbound	Westbound	Northbound	Southbound			
12:00 AM	57	46	24	0	103		
12:15 AM	50	44	22	0	94		
12:30 AM	34	42	20	0	76		
12:45 AM	40	42	24	0	82		
1:00 AM	30	42	30	0	72		
1:15 AM	34	38	28	0	72		
1:30 AM	28	30	22	0	58		
1:45 AM	22	32	12	0	54		
2:00 AM	22	38	10	0	60		
2:15 AM	24	40	12	0	64		
2:30 AM	28	57	12	0	85		
2:45 AM	22	69	22	0	91		
3:00 AM	32	89	28	0	121		
3:15 AM	34	119	26	0	153		
3:30 AM	44	147	30	0	191		
3:45 AM	59	190	22	0	249		
4:00 AM	65	257	24	0	322		
4:15 AM	79	275	20	0	354		
4:30 AM	83	315	22	0	398		
4:45 AM	95	414	34	0	509		
5:00 AM	93	517	32	0	610		
5:15 AM	87	574	51	0	661		
5:30 AM	107	586	79	0	693		
5:45 AM	127	546	91	0	673		
6:00 AM	170	578	123	0	748		
6:15 AM	206	624	147	0	830		
6:30 AM	206	624	180	0	830		
6:45 AM	240	586	216	0	826	Min. 1 Met	
7:00 AM	283	483	214	0	766		
7:15 AM	317	424	192	0	741		
7:30 AM	345	426	149	0	771		
7:45 AM	368	418	113	0	786		
8:00 AM	329	376	89	0	705		
8:15 AM	329	362	101	0	691		
8:30 AM	341	347	87	0	688		
8:45 AM	309	358	101	0	667		
9:00 AM	335	335	115	0	670		
9:15 AM	307	348	103	0	655		
9:30 AM	283	331	115	0	614		
9:45 AM	281	341	97	0	622		
10:00 AM	230	400	99	0	630		
10:15 AM	224	376	99	0	600		
10:30 AM	248	398	103	0	646		
10:45 AM	257	348	125	0	605		
11:00 AM	311	295	113	0	606		
11:15 AM	309	279	113	0	588		
11:30 AM	323	263	109	0	586		
11:45 AM	311	267	83	0	578		
12:00 PM	289	244	85	0	533		
12:15 PM	311	240	87	0	551		
12:30 PM	295	244	85	0	539		
12:45 PM	295	257	91	0	552		
1:00 PM	309	285	107	0	594		
1:15 PM	331	305	147	0	636		
1:30 PM	376	311	170	0	687		
1:45 PM	438	333	234	0	771	Min. 1 Met	
2:00 PM	491	354	259	0	845		
2:15 PM	566	382	259	0	948		
2:30 PM	586	374	293	0	960		

Legend
 ● Minor Street 1 (NB)



WARRANT 2, FOUR-HOUR VEHICULAR VOLUME

Intersection Name: Trout Rd & Dowdy Ferry Rd
 Jurisdiction: Hutchins, TX
 Scenario: Future (2040)

Warrant Met: Yes

Number of Lanes for Moving Traffic on Each Approach	
Major Street (EB/WB)	2 or More Lanes
Minor Street 1 (NB)	1 Lane
Minor Street 2 (SB)	N/A

Apply 70% Reduction to Warrant Thresholds? No

Total Number of Unique Hours Met on Figure 4C-1	6
Total Number of Unique Hours Met on Figure 4C-2 (70% Factor)	N/A

Legend
● Minor Street 1 (NB)

Hour Interval Beginning At	Approach Vehicles Per Hour (VPH)				Total Major Approach Volumes	Hour Met?	Hour Met? (70% Factor)
	Major		Minor 1	Minor 2			
	Eastbound	Westbound	Northbound	Southbound			
2:45 PM	645	382	337	0	1027	Min. 1 Met	
3:00 PM	677	368	343	0	1045		
3:15 PM	693	356	382	0	1049		
3:30 PM	772	392	386	0	1164		
3:45 PM	840	384	412	0	1224	Min. 1 Met	
4:00 PM	974	430	446	0	1404		
4:15 PM	1139	465	469	0	1604		
4:30 PM	1261	469	513	0	1730		
4:45 PM	1378	517	509	0	1895	Min. 1 Met	
5:00 PM	1364	469	483	0	1833		
5:15 PM	1313	451	446	0	1764		
5:30 PM	1198	434	416	0	1632		
5:45 PM	1006	374	337	0	1380	Min. 1 Met	
6:00 PM	832	374	313	0	1206		
6:15 PM	626	333	265	0	959		
6:30 PM	495	293	190	0	788		
6:45 PM	384	293	141	0	677		
7:00 PM	347	291	107	0	638		
7:15 PM	331	285	95	0	616		
7:30 PM	301	269	107	0	570		
7:45 PM	293	244	97	0	537		
8:00 PM	267	198	93	0	465		
8:15 PM	226	176	79	0	402		
8:30 PM	210	176	65	0	386		
8:45 PM	174	150	63	0	324		
9:00 PM	154	160	59	0	314		
9:15 PM	139	156	57	0	295		
9:30 PM	113	168	48	0	281		
9:45 PM	123	190	51	0	313		
10:00 PM	129	202	40	0	331		
10:15 PM	152	196	34	0	348		
10:30 PM	154	166	36	0	320		
10:45 PM	137	127	26	0	264		
11:00 PM	107	87	28	0	194		
11:15 PM	59	55	20	0	114		
11:30 PM	30	28	8	0	58		
11:45 PM	10	14	2	0	24		

Top Hours for Figure 4C-1 - Minor Street 1 (NB)				
	Start Time	End Time	Major Street	Minor Street
Top Hour	4:45 PM	5:45 PM	1895	509
2nd Highest Hour	3:45 PM	4:45 PM	1224	412
3rd Highest Hour	5:45 PM	6:45 PM	1380	337
4th Highest Hour	2:45 PM	3:45 PM	1027	337

Top Hours for Figure 4C-1 - Minor Street 2 (SB)				
	Start Time	End Time	Major Street	Minor Street
Top Hour	N/A	N/A	N/A	N/A
2nd Highest Hour	N/A	N/A	N/A	N/A
3rd Highest Hour	N/A	N/A	N/A	N/A
4th Highest Hour	N/A	N/A	N/A	N/A

WARRANT 6, COORDINATED SIGNAL SYSTEM

Intersection: Trout Rd & Dowdy Ferry Rd
Jurisdiction: Hutchins, TX
Scenario: Future (2040)

Warrant Met:

On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.

WARRANT 7, CRASH EXPERIENCE

Intersection: Trout Rd & Dowdy Ferry Rd
 Jurisdiction: Hutchins, TX
 Scenario: Future (2040)

Warrant Met: No

Number of Lanes for Moving Traffic on Each Approach	
Major Street (EB/WB)	2 or More Lanes
Minor Street 1 (NB)	1 Lane
Minor Street 2 (SB)	N/A
Number of Legs	3

Has adequate trial of alternative with satisfactory observance and enforcement failed to reduce the crash frequency? Yes

Use increased crash count threshold tables? No

Table 4C-2. Minimum Number of Reported Crashes in a One-Year Period

Number of through lanes on each approach				Total of angle and pedestrian crashes (all severities)		Total of fatal-and-injury angle and pedestrian crashes	
Major/Minor	Major Street (EB/WB)	Minor Street 1 (NB)	Minor Street 2 (SB)	Four Legs	Three Legs	Four Legs	Three Legs
1 / 1				5	4	3	3
2+ / 1	X	X		5	4	3	3
2+ / 2+	X			5	4	3	3
1 / 2+				5	4	3	3
Crash History				1		0	
Threshold Met?				No		No	

Table 4C-3. Minimum Number of Reported Crashes in a Three-Year Period

Number of through lanes on each approach				Total of angle and pedestrian crashes (all severities)		Total of fatal-and-injury angle and pedestrian crashes	
Major/Minor	Major Street (EB/WB)	Minor Street 1 (NB)	Minor Street 2 (SB)	Four Legs	Three Legs	Four Legs	Three Legs
1 / 1				6	5	4	4
2+ / 1	X	X		6	5	4	4
2+ / 2+	X			6	5	4	4
1 / 2+				6	5	4	4
Crash History				1		0	
Threshold Met?				No		No	

For each of any 8 hours of an average day, the vehicles per hour given in both the 80% columns of Condition A in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection. If in a built-up isolated community with less than 10,000 population or above 40 mph on major street, the 56% columns may be used. Yes

For each of any 8 hours of an average day, the vehicles per hour given in both the 80% columns of Condition B in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection. If in a built-up isolated community with less than 10,000 population or above 40 mph on major street, the 56% columns may be used. No

The volume of pedestrian traffic is 80% or more of the requirements specified in Warrant 4, the Pedestrian Volume warrant. No

WARRANT 8, ROADWAY NETWORK

Intersection: Trout Rd & Dowdy Ferry Rd

Jurisdiction: Hutchins, TX

Scenario: Future (2040)

Warrant Met: Yes

Does the intersection have a total existing, or immediately projected, entering volume of at least 1,000 vehicles per hour during the peak hour of a typical weekday and has 5-year projected traffic volumes, based on an engineering study, that meet one or more of Warrants 1, 2, and 3, during the average weekday? Yes

Does the intersection have a total existing or immediately projected entering volume of at least 1,000 vehicles per hour for each of any 5 hours of a non-normal business day (Saturday or Sunday)? No

Is the major street part of the street or highway system that serves as the principal roadway network for through traffic flow? No

Does the major street include rural or suburban highways outside, entering, or traversing a city? No

Does the major street appear as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study? Yes



Attachment D: All-Way Stop Control Warrant Analysis Worksheet

Multi-Way Stop Application

TMUTCD Section 2B.12

- | | |
|--|---|
| <p>A. Where traffic control signals are justified, the multi-way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.</p> | <p>Warranted ?</p> <p style="border: 1px solid black; padding: 2px; display: inline-block;">No</p> |
| <p>B. For a three-leg intersection, there are four or more reported crashes in a 12-month period or five or more reported crashes in a 36-month period that were of a type susceptible to correction by the installation of all-way stop control (angle or turning crashes)</p> | <p style="border: 1px solid black; padding: 2px; display: inline-block;">No</p> |
| <p>C. Minimum Volumes:</p> <p>1 The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day.</p> | <p style="border: 1px solid black; padding: 2px; display: inline-block;">Yes</p> |
| <p>2 The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour.*</p> <p>*If this condition is satisfied, there must also be an average delay of at least 30 seconds per vehicle during the peak hour.</p> | <p style="border: 1px solid black; padding: 2px; display: inline-block;">No</p> |
| <p>3 If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum volume warrants are 70 percent of the values provided in Items 1 and 2.</p> | <p style="border: 1px solid black; padding: 2px; display: inline-block;">No</p> |
| <p>D. Where no single criterion is satisfied, but where Criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.</p> | <p style="border: 1px solid black; padding: 2px; display: inline-block;">No</p> |
| <p>Other criteria that may be considered in an engineering study include:</p> <p>A. The need to control left-turn conflicts;</p> | <p style="border: 1px solid black; padding: 2px; display: inline-block;">No</p> |
| <p>B. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;</p> | <p style="border: 1px solid black; padding: 2px; display: inline-block;">No</p> |
| <p>C. Locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop; and</p> | <p style="border: 1px solid black; padding: 2px; display: inline-block;">No</p> |
| <p>D. An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multi-way stop control would improve traffic operational characteristics of the intersection.</p> | <p style="border: 1px solid black; padding: 2px; display: inline-block;">No</p> |
| <p>Are the requirements for Multi-Way Stop Satisfied?:</p> | <p style="border: 1px solid black; padding: 2px; display: inline-block;">No</p> |

Hutchins Trout Road All-Way Stop Warrant

AUTOCALC table								
Each hour is individually checked and tallied if "met"								
Lanes Major/ Minor	ADJUSTED VOLUMES		Condition C.1		Condition C.2		Condition D	
	MAJOR	MINOR	100%		70%		80%	
Required Volumes			MAJ.	MIN.	MAJ.	MIN.	MAJ.	MIN.
			300	200			240	160
6:00 AM	378	62	1				1	
6:15 AM	419	74						
6:30 AM	419	91						
6:45 AM	417	109						
7:00 AM	387	108	1				1	
7:15 AM	374	97						
7:30 AM	389	75						
7:45 AM	397	57						
8:00 AM	356	45	1				1	
8:15 AM	349	51						
8:30 AM	347	44						
8:45 AM	337	51						
9:00 AM	338	58	1				1	
9:15 AM	331	52						
9:30 AM	310	58						
9:45 AM	314	49						
10:00 AM	318	50	1				1	
10:15 AM	303	50						
10:30 AM	326	52						
10:45 AM	306	63						
11:00 AM	306	57	1				1	
11:15 AM	297	57						
11:30 AM	296	55						
11:45 AM	292	42						
12:00 PM	269	43					1	
12:15 PM	278	44						
12:30 PM	272	43						
12:45 PM	279	46						
1:00 PM	300	54	1				1	
1:15 PM	321	74						
1:30 PM	347	86						
1:45 PM	389	118						
2:00 PM	427	131	1				1	
2:15 PM	479	131						
2:30 PM	485	148						
2:45 PM	519	170						
3:00 PM	528	173	1				1	1
3:15 PM	530	193						
3:30 PM	588	195						
3:45 PM	618	208						
4:00 PM	709	225	1	1			1	1
4:15 PM	810	237						
4:30 PM	874	259						
4:45 PM	957	257						
5:00 PM	926	244	1	1			1	1
5:15 PM	891	225						
5:30 PM	824	210						
5:45 PM	697	170						
6:00 PM	609	158	1				1	
6:15 PM	484	134						
6:30 PM	398	96						
6:45 PM	342	71						
7:00 PM	322	54	1				1	
7:15 PM	311	48						
7:30 PM	288	54						
7:45 PM	271	49						
8:00 PM	235	47						
8:15 PM	203	40						
8:30 PM	195	33						
8:45 PM	164	32						
9:00 PM	159	30						
9:15 PM	149	29						
9:30 PM	142	24						
9:45 PM	158	26						
10:00 PM	167	20						
10:15 PM	176	17						
10:30 PM	162	18						
10:45 PM	133	13						
11:00 PM	98	14						
11:15 PM	58	10						
11:30 PM	29	4						
11:45 PM	12	1						
HOURS MET			13	2			14	3
CONDITION SATISFIED?			NO				NO	