

Agenda



THE TRAFFIC AND TRANSPORTATION COMMISSION

Date: September 24, 2015
Time: 6:30 P.M.
Place: City Council Chambers, Centennial Building,
12 S. 5th, Yukon, Oklahoma.

The City of Yukon strives to accommodate the needs of all citizens, including those who may be disabled. If you would like to attend this meeting, but find it difficult to do so because of a disability or an architectural barrier, please notify Doug Shivers at 350-3919 or 500 W. Main, Yukon, OK by 12:00 am September 23, 2015.

Call to Order: Invocation and Flag Salute

Roll Call: Darrell Goulden
John Knuppel
Charlie Lee
James Montgomery
Jay Tallant

Item 1: Discuss and approve the minutes of the August 11, 2015
Traffic Commission Meeting.

Item 2: Visitors

Item 3: Consider accepting the Traffic Signal Warrant Analysis Final Report
for Garth Brooks Boulevard at Andrew Dr. from Lee Engineering

Item 4: Presentation by Joe Davis, Triad Engineering, regarding possible
improvements within the Garth Brooks Blvd traffic corridor, 10th
Street, and Holly Ave and related discussion.

Item 5: Discussion and possible action regarding Vandament and
Ridgeway Dr traffic concerns.

Item 6: Discuss Traffic Concerns

Item 7: Date for next Meeting: Tuesday, November 10, 2015

Item 8: Adjournment

Minutes

THE TRAFFIC AND TRANSPORTATION COMMISSION

THE TRAFFIC AND TRANSPORTATION COMMISSION MET IN REGULAR SESSION ON **AUGUST 11, 2015** AT THE CENTENNIAL BUILDING IN THE CITY COUNCIL CONFERENCE ROOM. THE MEETING WAS HELD AT 6:30 PM.

INVOCATION: Jay Tallant

FLAG SALUTE: Jay Tallant

ROLL CALL: Darrell Goulden
 John Knuppel
 Charlie Lee
 James Montgomery
 Jay Tallant

CITY OFFICIALS: Doug Shivers, City Clerk
 Sara Hancock, Deputy City Clerk
 Mitch Hoskins, Police Captain

ITEM 1: **DISCUSS AND APPROVE THE MINUTES OF THE JULY 14, 2015 TRAFFIC COMMISSION MEETING.**

Motion for minutes to be approved:

Motion – Charlie Lee

Second – James Montgomery

Ayes – Knuppel, Lee, Montgomery, Tallant, Goulden

Nays - None

ITEM 2: **VISITORS**

Lori Phillips, 712 Victoria, is concerned about exiting the neighborhood during Christmas due to access on Holly, as well as, it is still hard to pull out from Holly onto 10th, as it is. She would recommend a three way stop.

Eric Fredrickson, 621 Victoria, is concerned about Holly and 10th. Not excited about a right turn only. It will place 5 extra miles to get onto highway. Left turn can be difficult, but doable. Other option is Andrew exit. He originally bought his house because of easy access. New proposal will be hindering neighborhood.

Judy Chancellor, 1209 Kingston, has lived here since 1980. Post Office sent out survey about mail being placed curbside. This was done respectfully, but City has made a decision without asking. They do not know nightmare they are causing by boxing neighborhood in. Three - way stop light is good idea and lowering of speed limit is another good option.

John Urban, 612 St. James, concerned about safety of children. Shedeck traffic during school is a concern. He suggests a traffic light. Could help release problem.

Tate Smith, 1317 Kingsgate, main concern about 10th street would be adding more wear and tear on his vehicle. May seem little, but over time it will add a lot. Access and convenience was one reason he bought house. People may cut through store parking lot and cause even more problems. It definitely needs a light.

Janie Crane, 1500 Summerton, stated cutting through parking lot is illegal. Traffic lines up down Holly, as people try to get onto 10th St. Concern is safety.

Jim Pogue, 113 S. Terrace, is owner of Santa's Toy Shop. He stated May of this year his wife was in the Homeland parking lot at 10th & Cornwell. A young man cut through the parking lot, while trying to avoid 10th & Holly traffic and t-boned Mrs. Pogue.

Betty Kilgore, 1029 Montreal, stated people will start finding other places to cut through the neighborhood streets causing more problems.

Michelle Ellison, 804 Victoria, stated at various times of the day, the sun causes visibility issues, when trying to get onto 10th St. from Holly.

Jenny Schwarz, 333 E. Platt, thinks a light at Holly would be a good option.

Shirley Day, 1129 Montreal, stated logically a right turn only on 10th St. is not a good idea. Homeland will end up barricading, like Wal-Mart to keep people from cutting through parking lot.

Donny Dickerson, 729 Park, Holly and 10th needs a light. It is illogical to make a right hand turn only. He grew up in this town and growth is positive. However, most people work in OKC and spend tax money in Yukon. He loves this town, but stated towns that thrive have easy access.

ITEM 3:

DISCUSS ANDREW/GARTH BROOKOS TRAFFIC CONCERNS

Fran Britton, 624 St. James, distributed maps to the Traffic Commissioners. She stated it is getting more and more difficult to

get out of Andrews. Leaving the area is now dangerous due to no light, it is a safety concern. She recommends synchronization, light back, better traffic enforcement, or signage stating no blocking intersection.

Jenny Crane, 1500 Summerton, has petition with 300 signatures. She has talked to business managers and employees; no light is a safety concern. Pedestrians cannot walk, it is insufficient and inconvenient.

Paul Phillips, 712 Victoria, lived here before light, when it was still Cemetery Rd. It was horrendous with no light. The light has saved lives. He does like to walk to Wal-Mart and Braums. Safety is the issue.

Jenny Crane, 801 Victoria, owns this house, as well. She states it is empty and uses it for different meetings. She challenges us to live there and drive where they drive. Safety and property value is a concern.

Rachel Hollowell, 600 Victoria, stated access to the hospital is a great concern via Garth Brooks. As well as, Christmas time traffic causes issues and you cannot access Holly. If the light is taken away, don't know remedy.

Gary Miller, 721 Woodlawn, agrees with all the problems. The answer is not what is being proposed by the City. It is going to box the neighborhood in. He suggests the Traffic Engineer to come up with 2-3 ideas. Look at more police. Proposal of removal of light is going to be worse.

Mr. Shivers told crowd a traffic study is being done and results should be available by middle of next week.

Lori Phillips, 712 Victoria, believes the light being removed is already a done deal. The Yukon Review stated the light would be removed when I-40 and Garth Brooks project completed. Who do we go to ask questions? She has also heard it has been decided for the right turn only onto 10th St. She would like to know who they need to talk to. There is also confusion about part being ordered. What is fact or fiction?

Gary Miller, 721 Woodlawn, stated the area is expanding and there is more and more traffic. We need a permanent solution.

Warren Blacketter, 620 Brandon Pl, likes to ride his bicycle. However, he can no longer use intersection. There is lots of speeding. He would like to know, if traffic study was done before or after removal of light. Mr. Shivers stated after.

Katie Ellison, 1330 Summerton, stated there is an increase in traffic and has been avoiding this light. She believes the study is inadequate count, since it was done after the removal of light.

Connie Fisher, 816 Victoria, stated she depends on stop light. She stated it looks like we are catering to businesses vs. people.

Phil Abbot, 1008 Montreal, gave approximate numbers of people and drivers. There is a lot of traffic. It can take 5-10 minutes to get onto Garth Brooks from Andrew. Tulsa has a lot of traffic and there are no problems there. No crosswalk is dangerous. Removing the light forces traffic down other areas where young children play. This is a safety concern for children, as well as, at Holly and in front of Shedeck. Traffic control may be needed.

Betty Kilgore, 1029 Montreal, stated they will be unable to navigate four lane road with no traffic light. Her concern is on how to get around, it causes a longer route. We won't need new access road, because we won't be able to access it. She's unable to get to hospital, as well. The issue needs to be dealt with and not put a band aid on it. There are a lot of frustrated citizens.

Tate Smith, 1317 Kingston, is concerned for people's safety and fear of the lowering of property value due to doing away with easy access. Convenience is prime. Traffic light is a big thing, convenience is a must.

Ethel Barnett, 709 S. 8th, picked Yukon for size, regulation, and caring people. She used to work in Oklahoma City and traffic was doable. Doing away with light for ingress and egress is important.

Jenny Crane, 1500 Summerton, stated there will be no three way, because it will slow traffic on I-40. This should not be a concern, traffic is like that on I-40 already at Meridian, Council, etc. The bigger we get, we have to realize it will happen here, as well. Traffic on I-40 can wait.

Wendell Kilgore, 1029 Montreal, stated Sports Complex and developments will draw more people to town and will add more traffic and problems.

Cynthia Clary, 812 Woodlawn, really has to watch the six lanes of traffic. It is a huge safety concern.

Shirley Day, 1129 Montreal, stated there is confusion over signage. What good is it for visitors to come with no safety?

ITEM 4:

DISCUSS TRAFFIC CONCERNS

Mr. Lee stated the northbound light at 10th and Garth Brooks is out. Yukon Parkway and Main St. light seems to be hanging on

when no one is there. South side of Garth Brook and I-40 needs to be checked out, could be timing or detector out.

Mr. Lee stated the tracks at 3rd and Main St. has a chunk out. Mr. Shivers stated Union Pacific has been called.

ITEM 5: **DATE FOR NEXT MEETING**

September 8, 2015

ITEM 6: **ADJOURNMENT**

Traffic Signal Warrant Analysis

FINAL REPORT

Garth Brooks Boulevard at Andrew Drive Yukon, OK

Prepared for:



City of Yukon

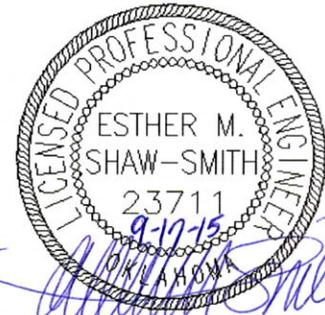
500 W. Main Street
Yukon, Oklahoma 73099

Prepared by:



LEE ENGINEERING

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Esther M. Shaw-Smith, P.E.
OK PE # 23711



September 2015

INTRODUCTION

The City of Yukon has requested that an analysis be conducted for the intersection of Garth Brooks Boulevard and Andrew Drive to determine if signalization is still warranted. This intersection is currently signalized, however the signal is not in operation and the intersection is functioning with two-way stop control. This report summarizes the results of the traffic signal warrant analysis conducted for this intersection.

The analysis was performed using existing approach volumes collected over a 12-hour period on Wednesday, September 9, 2015 and are summarized in **Table 1**. Based on observation, the 12 hours of collected data represent the highest volume periods for both Garth Brooks Boulevard and Andrew Drive, thus, the entire 24 hours of volume data was not necessary for the warrant analysis.

The traffic signal warrant analysis presented in this report is based on the traffic signal warrants contained in Chapter 4C, "Traffic Control Signal Needs Studies," of the *2009 Manual on Uniform Traffic Control Devices (MUTCD)*. Nine warrants are included in the manual for warranting a traffic signal installation. These warrants are:

- Warrant 1 – Eight-Hour Vehicular Volume;
- Warrant 2 – Four-Hour Vehicular Volume;
- Warrant 3 – Peak Hour;
- Warrant 4 – Pedestrian Volume;
- Warrant 5 – School Crossing;
- Warrant 6 – Coordinated Signal System;
- Warrant 7 – Crash Experience;
- Warrant 8 – Roadway Network;
- Warrant 9 – Intersection Near a Grade Crossing

The current population estimate for the City of Yukon is estimated at 22,709 (U.S. Census Bureau, *2010 City Population and Housing Occupancy Status*).

In the area of the study intersection, Garth Brooks Boulevard is a four-lane divided roadway with left-turn lanes present at major intersections and driveways. The roadway runs north-south and has posted speed limit of 35 miles per hour (mph) within the study area. Andrew Drive is the westbound approach to the intersection, and is a two-lane undivided roadway with an assumed speed limit of 25 mph and it connects Garth Brooks Boulevard with a retail shopping center, a hotel, and a residential neighborhood. The eastbound approach to the intersection is a driveway that connects Garth Brooks Boulevard with a Braum's restaurant parking lot through which other retail and restaurant businesses may also be accessed. The *Oklahoma City Urban Area Boundary and Functional Classification Map* provided by the Oklahoma Department of Transportation (ODOT) classifies Garth Brooks Boulevard as a Urban Minor Arterial, while Andrew Drive is classified as a Local Road.

At the intersection, the westbound (Andrew Drive) approach is a single lane approach. The eastbound (Braums Driveway) approach has a two lane approach with enough width for an exclusive right-turn lane. Garth Brooks Boulevard is a north-south roadway and Andrew Drive/Braums Driveway is an east-west roadway. The intersection of these two streets is currently stop-controlled on Andrew Drive/Braums Driveway. Based on the traffic volumes at this intersection and functional classifications of the roadways, Garth Brooks Boulevard is considered the *Major Roadway* for this analysis and a roadway with two lanes for each approach. Andrew Drive/Braums Driveway will be considered a *Minor Roadway*. An aerial photograph of the intersection is provided in **Figure 1**.

Table 1: Warrant Summary

Garth Brooks Blvd & Andrew Dr									
Hour Begin	Garth Brooks Blvd			Andrew Dr			Meets Warrant Volume		
	NB	SB	TOTAL	EB	WB	HIGHER	1A	1B	2
0	0	0	0	0	0	0	-	-	-
1	0	0	0	0	0	0	-	-	-
2	0	0	0	0	0	0	-	-	-
3	0	0	0	0	0	0	-	-	-
4	0	0	0	0	0	0	-	-	-
5	0	0	0	0	0	0	-	-	-
6	0	0	0	0	0	0	-	-	-
7	617	576	1,193	47	36	47	-	-	-
8	646	562	1,208	56	36	56	-	-	-
9	665	636	1,301	21	57	57	-	-	-
10	833	846	1,679	33	58	58	-	-	-
11	1,015	942	1,957	42	84	84	-	Y	Y
12	857	807	1,664	46	68	68	-	-	-
13	934	736	1,670	50	63	63	-	-	-
14	994	954	1,948	51	63	63	-	-	-
15	1,042	836	1,878	50	58	58	-	-	-
16	1,152	955	2,107	55	62	62	-	-	-
17	947	834	1,781	51	84	84	-	Y	Y
18	740	711	1,451	63	66	66	-	-	-
19	0	0	0	0	0	0	-	-	-
20	0	0	0	0	0	0	-	-	-
21	0	0	0	0	0	0	-	-	-
22	0	0	0	0	0	0	-	-	-
23	0	0	0	0	0	0	-	-	-
TOTAL	10,442	9,395	19,837	565	735	766	0	2	2

Figure 1: Garth Brooks Boulevard at Andrew Drive/Braums Driveway



TRAFFIC SIGNAL WARRANT ANALYSIS

Warrant 1 – Eight-Hour Vehicular Volume

Warrant 1 is based on the volumes from both approaches on the major street and the higher approach volume on the minor street. It also uses the number of lanes for moving traffic on each approach. Either Condition A or Condition B of this warrant must be met for Warrant 1 to be satisfied.

The *MUTCD* allows for the use of a reduced warranting threshold (80%) for intersections where the posted or 85th-percentile speed exceeds 40 mph or if the intersection is located in a community with a population under 10,000. Since the posted speed on the major street (Garth Brooks Boulevard) does not exceed 40 mph and the population of Yukon is greater than 10,000, the reduced threshold was not used for this warrant.

Condition A of Warrant 1 is met when, for each of any eight hours of an average day, the warranting volumes exist on the major street and on the higher-volume minor street approach to the intersection during the same eight hours. The warranting threshold for a two-lane approach on the major street and a single-lane approach on the higher-volume minor street is:

Major Street: 600 vph (total for both directions)
Minor Street: 150 vph (higher volume approach)

Note that the warranting threshold for a two-lane approach on the major street and a two-lane approach on the higher-volume minor street is higher for the minor approach, however, based the data collected, the westbound approach, Andrew Drive, had a higher-volume for every hour collected except for two hours. Thus, the minor street thresholds that correspond to single-lane approaches will be used in every instance.

Warrant 1A threshold volumes are not exceeded for any hours of the day on the minor street. Eight (8) hours are required for this warrant condition. Warrant 1A is not satisfied at this location.

Condition B of Warrant 1 applies to operating conditions where the major street traffic is so heavy that it creates excessive delay or hazardous conditions for minor street traffic when entering or crossing the major street. The warrant condition is met when, for each of any eight hours of an average day, the warranting volumes exist on the major street and on the higher-volume minor street approach to an intersection. The warranting threshold for a two-lane approach on the major street and a single lane approach on the minor street is:

Major Street: 900 vph (total for both directions)
Minor Street: 75 vph (higher volume approach)

Warrant 1B threshold volumes are exceeded for 2 hours of the day. Eight (8) hours are required for this warrant condition. Warrant 1B is not satisfied at this location.

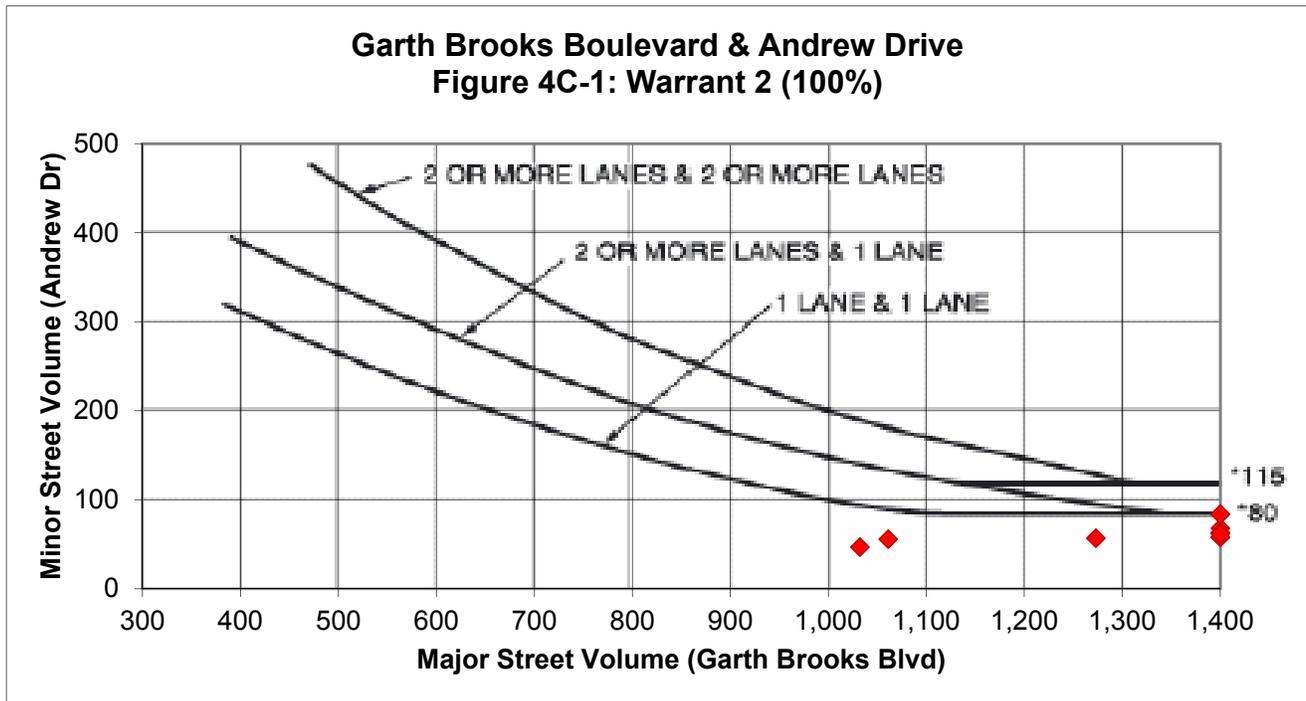
Based on these results and as shown in Table 1, **Warrant 1 is NOT MET for this intersection.**

Warrant 2 – Four-Hour Volumes

Warrant 2 is satisfied when the volumes for any four (4) hours of an average day, when plotted on Figure 4C-1 (or 4C-2 when applicable) of the *MUTCD*, fall above the curve for the appropriate number of lanes. Based on the posted speed limit on Garth Brooks Boulevard (40 mph), the reduced warrant threshold was not used for this warrant and Figure 4C-1 was used for this analysis. **Figure 2** shows the results of this analysis. Note that 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

Based on the traffic volumes presented in Table 1 and plotted in Figure 2, only 2 hours of the day fall above the curve for the appropriate number of lanes when plotted on Figure 4C-1 of the *MUTCD* for this intersection. Four (4) hours are required for this warrant condition. **Warrant 2 is NOT MET for this intersection.**

Figure 2: Four-Hour Vehicular Volume Warrant (Warrant 2)



Warrant 3 – Peak Hour Volume

Warrant 3 is intended for application when traffic conditions are such that for at least one (1) hour of the day, the minor street traffic experiences undue delays entering or crossing the major street. Warrant 3 is satisfied when either of the following conditions is met:

1. *If all three of the following conditions exist for the same 1 hour (any four consecutive 15-minute periods) of an average day:*
 - a. *The delay experienced by the traffic on the minor-street approach controlled by a STOP sign equals or exceeds 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach, and*
 - b. *The volume on the same minor-street approach equals or exceeds 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes, and*
 - c. *The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches or 800 vehicles per hour for intersections with four or more approaches.*
2. *The plotted point representing the vehicles 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) for 1 hour (any four consecutive 15-minute periods) of an average day falls above the applicable curve in Figure 4C-3 (or Figure 4C-4) for the existing combination of approach lanes.*

As further specified in the MUTCD:

This signal warrant shall be applied only in unusual cases such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.

Traffic characteristics at this intersection do not fall under the unusual cases identified above. Therefore, **Warrant 3 is NOT APPLICABLE for this intersection.**

Warrant 4 – Minimum Pedestrian Volume

Warrant 4 applies to conditions where the major street traffic is so heavy that pedestrians experience excessive delay in crossing the major street. It is intended for application at an intersection or midblock location and requires that one (1) of the following conditions be met:

1. *For each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) fall above the curve in Figure 4C-5 (or Figure 4C-6); or*
2. *For one (1) hour (any four consecutive 15-minute periods) of an average day, the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) fall above the curve in Figure 4C-7 (or Figure 4C-8).*

This warrant applies only to those locations where the nearest traffic signal along the major street is greater than 300 feet and where a new traffic signal at the study intersection would not unduly restrict platooned flow of traffic.

Pedestrian count data was collected at this intersection. During the peak hour for pedestrian crossing volumes, a total of four (4) pedestrians were observed crossing the intersection on any approach. Pedestrian volumes of the levels required to satisfy this warrant (107 pedestrians during the 4th-highest hour or 133 pedestrians during the peak hour) were not observed crossing the roadways at this intersection. Therefore, **Warrant 4 is NOT MET for this intersection.**

Warrant 5 – School Crossing

This warrant applies at an established school crossing where a traffic engineering study of the frequency and adequacy of gaps in the vehicular traffic stream as related to the number and size of groups of school children at the school crossing shows that the number of adequate gaps in the traffic during the period when the children are using the crossing is less than the number of minutes in the same period.

Since this intersection is not an established school crossing, **Warrant 5 is NOT APPLICABLE.**

Warrant 6 – Coordinated Signal System

Progressive movement control sometimes requires traffic signal installations at intersections where they would not otherwise be warranted in order to maintain proper platooning of vehicles and effectively regulate group speed. This warrant is met when one (1) of the following requirements are met:

- 1. On a one-way street or a street which has predominantly unidirectional traffic, the adjacent signals are so far apart that they do not provide the required degree of platooning.*
- 2. On a two-way street, adjacent signals do not provide the necessary degree of platooning and the proposed and adjacent signals could constitute a progressive signal system.*

This warrant should not be applied where the ultimate signal spacing would be less than 1,000 feet. The nearest signalized intersections along Garth Brooks Boulevard are located approximately 680 feet to the north (Wal-Mart Driveway) and approximately 320 feet to the south (I-40 WB Ramps).

Based on the signal spacing recommendations, a signal at this intersection is not necessary to provide proper platooning and **Warrant 6 is NOT MET at this intersection.**

Warrant 7 – Crash Experience

The crash experience warrant is satisfied when all of the following three conditions are met:

1. *Adequate trial of less restrictive remedies with satisfactory observance and enforcement has failed to reduce the crash frequency*
2. *Five or more reported crashes, of types susceptible to correction by traffic signal control, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash*
3. *For each of any 8 hours of an average day, the vehicles per hour (vph) given in both of the 80 percent columns of Condition A in Table 4C-1, or the vph in both of the 80 percent columns of Condition B in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80 percent of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours. If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, the traffic volumes in the 70 percent columns in Table 4C-1 may be used in place of the 80 percent columns.*

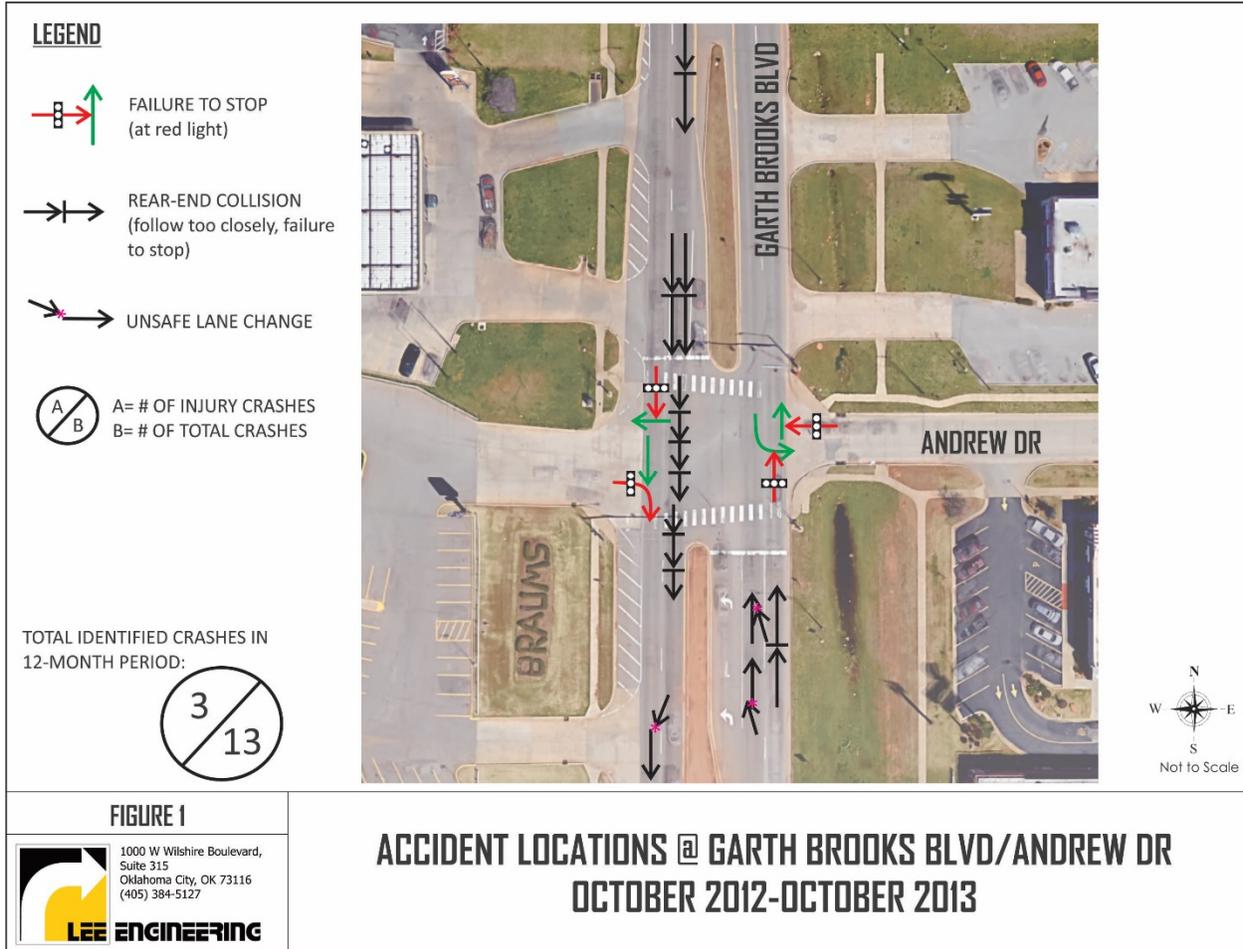
Collision data was obtained for the intersection from the City of Yukon Police Department. Data was obtained from the previous 36 months (September 2012 to September 2015). The data obtained included police reports and crash diagrams made at the scene during the accident. From the data provided, the worst case 12-month period occurred from October 2012 to October 2013. During this time period, a total of thirteen (13) collisions occurred. Of these collisions, six (6) were rear-end collisions, four (4) were angled collisions, and three (3) were due to unsafe lane changes. Out of these reported collisions, a total of three (3) injury crashes were identified. A crash diagram depicting the location and cause of the collisions is provided in Figure 3.

The turning type of collisions are generally considered by this warrant as the type susceptible to correction by a traffic signal. Since only four (4) angled collisions occurred during this period, condition two of this warrant, requiring five (5) collisions, is not met.

Also, for the third condition of this warrant to be satisfied, Condition A or B for Warrant 1 must be met at the 80% threshold. Based on the data provided for Warrant 1 of this report, Condition B is met at the 80% threshold for seven (7) hours of the day, which does not meet the minimum of eight (8) required hours for this condition.

Based on the data obtained, **Warrant 7 is NOT MET for this intersection.**

Figure 3: Crash Diagram for Garth Brooks Blvd and Andrew Drive



Warrant 8 – Roadway Network

The roadway network warrant is intended to encourage concentration and organization of traffic flow networks. This warrant is applicable when the common intersection of two major routes meets one or both of the following criteria:

1. *Has a total existing, or immediately projected, entering volume of at least 1,000 vehicles during the peak hour of a typical weekday and has five-year projected traffic volumes, based on an engineering study, which meet one or more of Warrants 1, 2, and 3 during an average weekday; or*
2. *Has a total existing or immediately projected entering volume of at least 1,000 vehicles for each of any five hours of a Saturday and/or Sunday.*

A major route as used in this signal warrant shall have one or more of the following characteristics:

1. *It is part of the street or highway system that serves as the principal roadway network for through traffic flow; or*
2. *It includes rural or suburban highways outside, entering or traversing a City; or*
3. *It appears as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study; or*
4. *It connects areas of principal traffic generation; or*
5. *It has street freeway or expressway ramp terminals.*

The *Oklahoma City Urban Area Boundary and Functional Classification Map* provided by the Oklahoma Department of Transportation (ODOT) classifies Garth Brooks Boulevard as a Urban Minor Arterial, while Andrew Drive is classified as a Local Road. Since Andrew Drive is classified as a Local Road, it would not be considered a major route. Therefore, the study intersection is not an intersection of two major routes and the warranting volumes were not further evaluated.

Warrant 8 is NOT APPLICABLE for this intersection.

Warrant 9 – Intersection Near a Grade Crossing

This signal warrant is intended for use at a location where none of the conditions described in the other eight traffic signal warrants are met, but the proximity to the intersection of a grade crossing on an intersection approach controlled by a STOP or YIELD sign is the principal reason to consider installing a traffic control signal.

The need for a traffic control signal shall be considered if an engineering study finds that both of the following criteria are met:

- 1. A grade crossing exists on an approach controlled by a STOP or YIELD sign and the center of the track nearest to the intersection is within 140 feet of the stop line or yield line on the approach; and*
- 2. During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the minor-street approach that crosses the track (one direction only, approaching the intersection) falls above the applicable curve in Figure 4C-9 or 4C-10 for the existing combination of approach lanes over the track and the distance D , which is the clear storage distance as defined in Section 1A.13 of the MUTCD.*

A railroad grade crossing is not located within 140 feet of this intersection. Therefore, **Warrant 9 is NOT APPLICABLE for this intersection.**

CONCLUSION

Based on the existing traffic volumes, collision data, and this traffic signal warrant analysis, traffic signal warrants are currently not satisfied for the intersection of Garth Brooks Boulevard and Andrew Drive. A summary of the traffic signal warrants is provided in **Table 2**.

Table 2: Warrant Summary

Warrant	Warrant Met?	Notes
1 – Eight-Hour Vehicular Volume	NO	2 hours met (8 required)
2 – Four-Hour Vehicular Volume	NO	2 hours met (4 required)
3 – Peak Hour	N/A	Not a “special generator”
4 – Pedestrian Volume	NO	No significant pedestrian volumes
5 – School Crossing	N/A	Not an established school crossing
6 – Coordinated Signal System	NO	Platooning is provided by adjacent signals
7 – Crash Experience	NO	Crash data obtained shows only four (4) angled crashes
8 – Roadway Network	N/A	Not an intersection of two major routes
9 – Near a Grade Crossing	N/A	Not adjacent to a grade crossing

Based on the results of this traffic signal warrant analysis, traffic signal warrants are currently not met at the intersection of Garth Brooks Blvd and Andrew Drive.

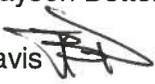
If any additional information from the City of Yukon Police Department is obtained with respect to collision data at the intersection or if additional development/redevelopment in the area changes traffic patterns at or near the intersection, this signal warrant analysis should be reevaluated.



MEMORANDUM

Date: September 23, 2015

To: Mr. Grayson Bottom

From: Joe Davis 

Re: Garth Brooks Blvd. Corridor Review

Triad is reviewing the Garth Brooks Boulevard Corridor from 10th Street to Vandament Avenue. Development through this one mile corridor has created congestion and traffic delays. Compounding the issues in the corridor is the I-40 angled diamond interchange crossing at approximately the quarter section line. Commercial development in the corridor ranges from automotive uses and restaurants to large box stores including Walmart, Target, Lowe's, Kohl's, and Hobby Lobby to strip malls including Chisholm Shopping Center. Major intersections along Garth Brooks include 10th street, Target Drive, Health Center Parkway/West End Pointe, East I-40, West I-40, Andrew Drive, Walmart, and Vandament Avenue.

Observation of the four lane corridor indicates heavy traffic with delays. The type of development generates high trip counts. The high trip counts along with the I-40 interchange results in high average daily traffic (ADT) and is adversely impacting the corridor.

With Lee Engineering completing the Andrew Drive Traffic Signal Warrant Analysis, Triad is coordinating with Lee Engineering on the corridor analysis. The analysis is developing the current level of service and will develop options through the corridor to improve the current level of service along with the future level of service. Modifications to the corridor will be analyzed for improvement to the level of service. Cost opinions will be developed for these modifications. Preliminary modifications to be analyzed include signal interconnection and controller modification, an additional southbound lane from north of I-40 to Health Center Parkway and the addition of a dedicated left turn lane on Andrew Drive.

Changes to the Garth Brooks Boulevard Corridor could result in traffic pattern changes to Vandament Avenue and 10th Street. As part of the corridor study, Triad will additionally review traffic patterns on Vandament Avenue and 10th Street.



N.W. 10TH STREET

N.W. 10TH STREET

TARGET DRIVE

HEALTH CENTER PARKWAY

EASTBOUND I-40 SERVICE ROAD

GARTH BROOKS BOULEVARD

40

ANDREWS DRIVE

WESTBOUND I-40 SERVICE ROAD

VANDAMENT AVENUE

VANDAMENT AVENUE

WALMART ENTRANCE

CITY OF YUKON

DATE: 09-23-2015
SCALE: AS SHOWN
DRWN BY: MTD

LOCATION MAP

GARTH BROOKS BOULEVARD FROM
N.W. 10TH TO VANDAMENT AVENUE



FIGURE 1





GARTHBOOKS BOULEVARD

GARTHBOOKS BOULEVARD

VANDAMENT AVENUE

KINGSTON DRIVE

HOLLY AVENUE

HOLLY AVENUE



CITY OF YUKON

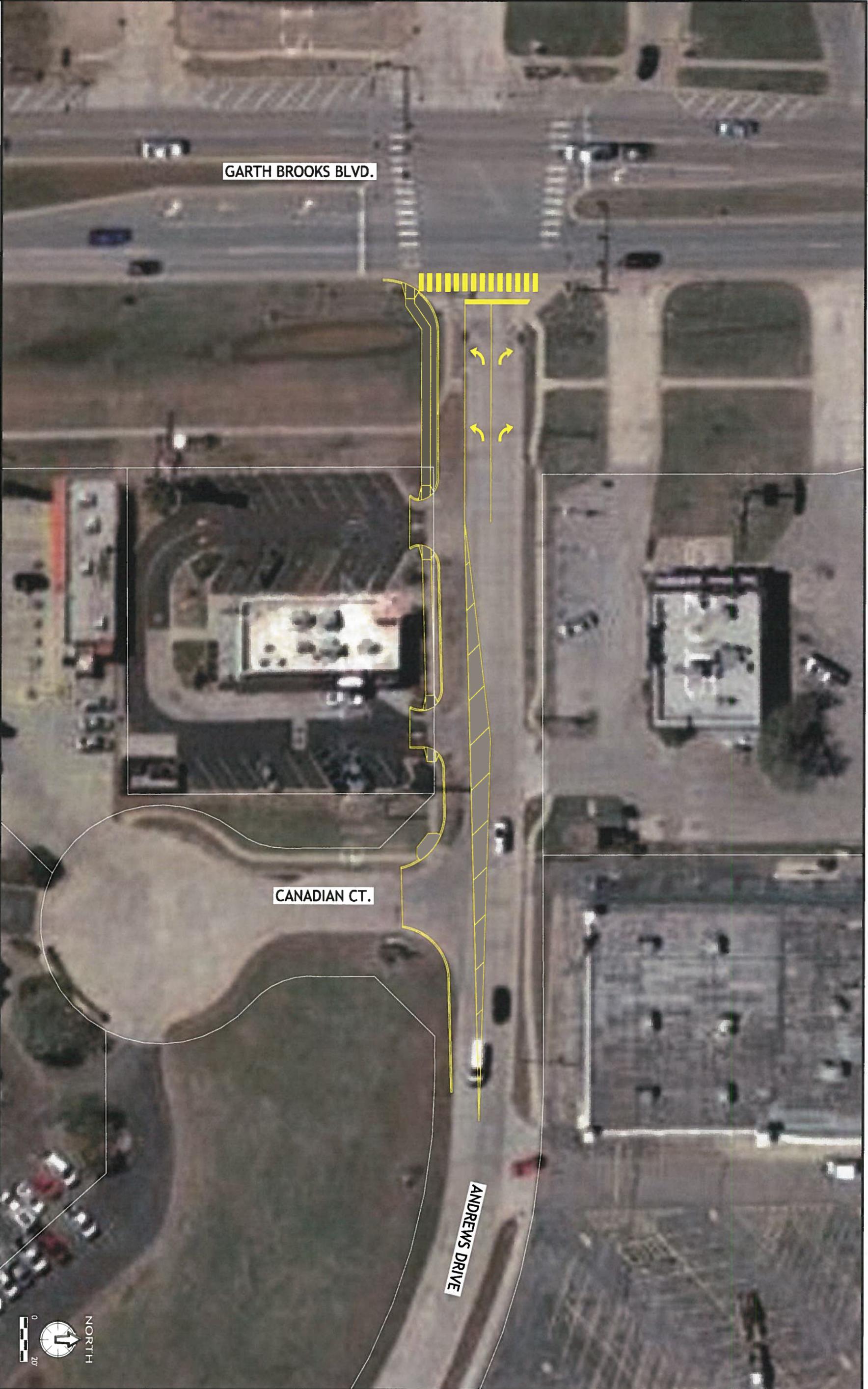
DATE: 09-23-2015
SCALE: AS SHOWN
DRWN BY: MTD

LOCATION MAP

VANDAMENT AVENUE FROM
GARTHBOOKS BOULEVARD
TO HOLLY AVENUE



FIGURE 2



GARTH BROOKS BLVD.

CANADIAN CT.

ANDREWS DRIVE

CITY OF YUKON

DATE: 09-21-2015
SCALE: AS SHOWN
DRWN BY: MTD

PROPOSED SITE PLAN

ROADWAY IMPROVEMENTS
ALONG ANDREWS DRIVE
YUKON, OKLAHOMA



FIGURE 3



Vandament & Ridgeway

Subject: FW: Do not block Intersection sign

From: Ken Silk
Sent: Thursday, September 10, 2015 11:17 AM
To: Doug Shivers
Cc: Mitchell Hort; Charles Hauck
Subject: RE: Do not block Intersection sign

His name is Jimmy Camp, his # is 405-406-3944.
There was only a verbal complaint received by phone earlier this morning.
It was my understanding his complaint is that the Vandament east bound south lane is blocking traffic out of Ridgeway Drive. He specifically is wanting to enter on to Vandament on to the east bound north lane/center lane, so he might be able to go east. But the east bound south lane on Vandament is not allowing access to Vandament from Ridgeway would also theoretically be blocking west bound traffic on Vandament.

Kenneth W. Silk
Code Enforcement Inspector
Development Services
P.O. Box 850500
Yukon, Oklahoma 73085
T: 405.354.3994
F: 405.350.8929
www.cityofyukonok.gov



From: Doug Shivers
Sent: Thursday, September 10, 2015 11:05 AM
To: Ken Silk
Cc: Mitchell Hort; Charles Hauck; Sara Hancock
Subject: RE: Do not block Intersection sign

Ken,

I will place this on the next Traffic Commission agenda as an action item.

- 1) Did the person provide you with a written complaint? If so, could I get a copy?
- 2) Is the traffic blocking Ridgeway only the eastbound traffic along Vandament? If so, then only one sign should be needed?

It also sounds like we will need enforcement at the intersection should a sign be installed.

If he calls back, I would like to know his contact information if possible.

Doug Shivers

City Clerk
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From: Ken Silk
Sent: Thursday, September 10, 2015 10:58 AM
To: Doug Shivers
Cc: Mitchell Hort; Charles Hauck
Subject: Do not block Intersection sign

Mr. Doug Shivers, Street Commissioner
Receive complaint from resident who lives in Sky View 2nd addition on Pawnee Drive.
The complaint is that in mornings starting around 7 am people trying to drop off kids to Independence School on Vandament, continually block intersection at Vandament at Ridgeway Dr., they will not yield to let people coming from south on Ridgeway to exit onto Vandament, in order that they may get to work, etc. The problem is repeated again at the end of the day, but does not affect as many residents because it is prior to folks coming home from work.
Compliant is requesting a sign be posted to say "Do not block Intersection" or something like that. I originally sent this complaint notice to Public Works, but Arnold reminded me that it needed to be sent to you.

The Complaint had already been bounced around a few times on phone before he was sent to me. I did not want to have to push him off on someone else again and create more frustration. I am assuming this is not the first complaint that you all have received on this matter. If he calls back should I just have him call you or do you already have plan/answer for this type of complaint that I can share with him?

Respectfully,

Kenneth W. Silk

Code Enforcement Inspector

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