

TRAFFIC IMPACT AND SIGNAL WARRANT STUDY



Updated
October 29,
2021

Derby City Gaming
Planned 120 room Hotel & 400 Gaming Seats
4520 Poplar Level Road (KY 864)
Louisville – Jefferson County, Kentucky



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Study Area

This Traffic Impact and Signal Warrant Study reviews the existing Poplar Level Road KY 864 and Derby City Gaming entrance in south Louisville – Jefferson County. Derby City Gaming opened on September 14, 2018 with a new 85,000 square foot building and Churchill Downs investing \$65 million in 1,000 gaming machines with restaurants, music entertainment and has 225 full-time employees.

Derby City Gaming is an infill development project and repurposes the former Louisville Downs harness track and grandstand. Louisville Downs had a good run of success with 3,400 harness racing days from 1966 to 1991 and notable concerts held at 4520 Poplar Level Road. This study provides supporting Poplar Level Road traffic signal warrant data for the Derby City Gaming entrance, capacity analysis and accident information review.

Data Collection

A weekday twelve (12) hour turning movement count (7:00 am to 7:00 pm) was collected at Poplar Level Road (KY 864) existing unsignalized intersection with Derby City Gaming. Counts were collected by Vision Engineering on Thursday, August 12, 2021 while Jefferson County Public Schools were in session. Counts were collected using Jamar laptop computers / count boards.

The Kentucky Transportation Cabinet (KYTC) Division of Planning collected Poplar Level Road (KY 864) north and southbound through movement counts for a full week in mid-May 2018.

Poplar Level / Derby City Gaming turning movement counts were also collected on Saturday, August 29, 2020 and Saturday, September 12, 2020 by Vision Engineering. These counts consider weekend peak Derby City Gaming activity between 12 pm (noon) and 12 am (midnight). The counts were collected while Derby City Gaming was operating at a 50% capacity given the Kentucky Governor Executive Order (2020-586) dated July 9, 2020 regarding the novel coronavirus.

Durrett Lane and Breitenstein Avenue unsignalized tee intersection traffic was counted during the weekday AM and PM peak hours on Wednesday, 9/01/2021 and Thursday, 10/14/2021. Breitenstein Avenue (gate access) allow horse trailers, vehicles to reach the Churchill Downs training center barns and Derby City Gaming. Durrett Lane provides a connection in the west direction to a Preston Highway (KY 61) traffic signal, one-half (0.50) of a mile from the Derby City Gaming gate access.

Existing Conditions

The Poplar Level Road (KY 864) carries an Average Daily Traffic (ADT) of 28,333, data was collected from a May 2018 KYTC traffic count station 056776 just south of the Derby City Gaming entrance and the Cube Smart self-storage development. Truck traffic is 11% along Poplar Level Road. KY 864 is a 4-lane divided highway (2 through lanes in each direction) with twelve (12) foot travel lanes, a 12 foot paved two-way left turning lane (TWLTL) median to reach commercial, industrial driveways.

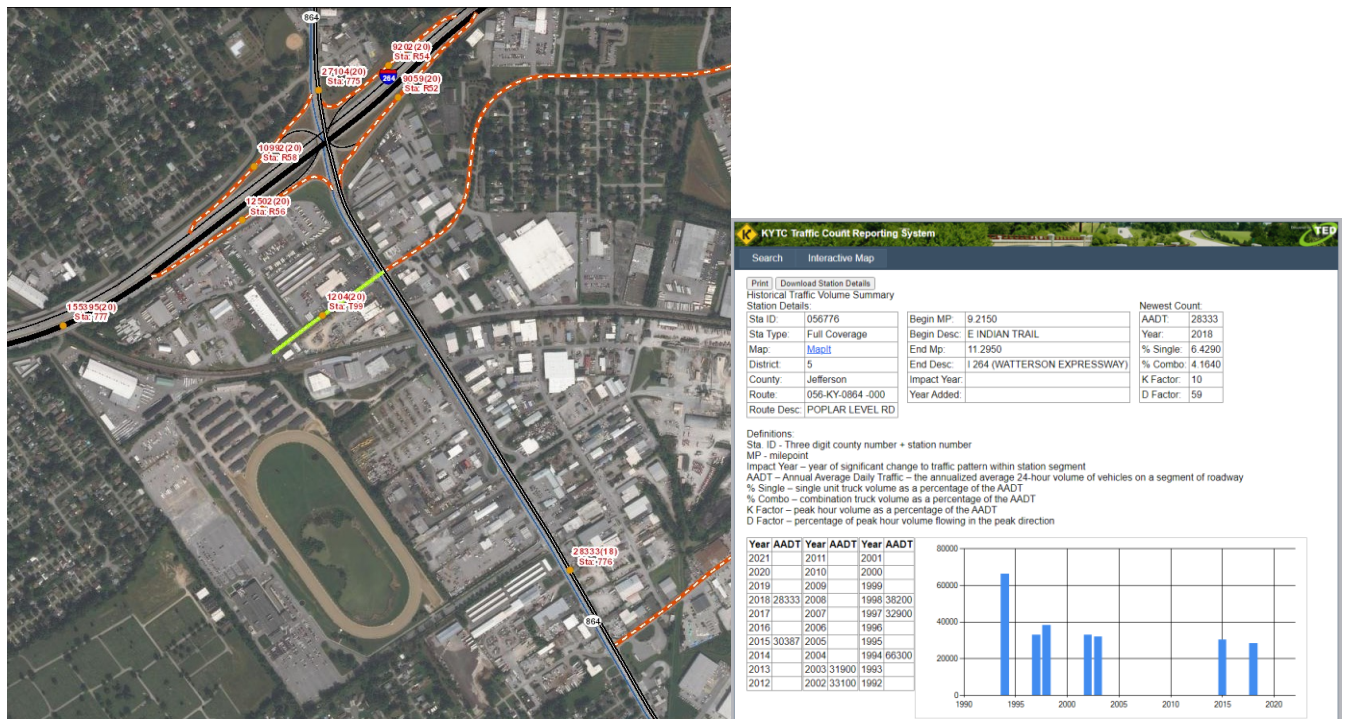
KY 864 is an Urban Minor Arterial roadway with a 40-mph posted speed from the Waterson Expressway (Interstate 264) to KY 1747 (Fern Valley Road). Poplar Level Road (KY 864) / Derby City Gaming intersection is approximately 3,600 feet (3/4 mile) distance south from the (I-264 single point urban interchange) and 1,000 feet north from the Tile Factory Lane – Bishop Lane, traffic signal.

Derby City Gaming access road is a quarter-mile in length and has with two (2) lanes exiting and two (2) vehicle lanes entering to allow for larger trucks at Poplar Level Road. The access road tapers from Poplar Level Road to three (3) lanes wide 600 feet from Poplar Level Road. Pavement speed humps and markings have been installed at two (2) locations: 675 feet and 1,325 feet from Poplar Level Road to reduce speeds. Posted speed limit along the road is 25 mph.

The Derby City Gaming access road has a dedicated sidewalk along the north side of the road and connects Poplar Level Road to the main entrance. The access road has been repaved and new lighting added since Churchill Downs purchased Louisville Downs in 1991.

Poplar Level Road is served by the Transit Authority of the River City (TARC) Route 43 and has a few dedicated buses throughout the weekday and weekend from Bank / 35th Street, Broadway downtown, Fern Valley and the Outer Loop area. Bus stop locations near Derby City Gaming includes a stop near Tile Factory Lane and Selinda Avenue.

A 26 acre Planned Employment Center (PEC) multipurpose district land use site will be redeveloped to an Amazon 142,000 square foot office and warehouse building, address is 1231 Durrett Lane / northeast corner of Preston Highway intersection. A Detailed District Development Plan (20-DDP-0033) was approved on December 23, 2020. An October 2020 Traffic Impact Study was submitted to Louisville Metro Planning and Design and was based on 24-hour counts from an existing Louisville Amazon site DKY6. The Traffic Impact Study estimated new traffic directed from Preston Highway (50% from the north, 50% from the south) and didn't anticipate Amazon traffic from the east on Durrett Lane. Development Plan Note 20 states that signage will be provided to prohibit heavy truck traffic on Durrett Lane east of the site. The Amazon Durrett Lane entrance is 750 feet from Preston Highway.



KY Transportation Cabinet Aerial Average Daily Traffic Count Map and Count History – Poplar Level Road (KY 864)

Trip Generation / Distribution

The Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th edition contains nationwide trip generation rates, average for different land uses. The manual was utilized for a planned 45,000 square foot ground floor building expansion that includes a 5-story 120 room hotel. The estimated trips (400 new gaming seats) are based on existing Derby City Gaming 1,000 gaming positions and a weekday August 12, 2021 KY 864 / Derby City main entrance twelve-hour count (7:00 am to 7:00 pm) and peak hour counts at Durrett Lane and Breitenstein Avenue (Derby City Gaming gate entrance).

A 2019 Maryland Department of Transportation study on three (3) casinos indicated a trip rate 0.30 per seat. The existing Derby City Gaming traffic rate per seat is higher in the afternoon peak hour.

Trip distribution percentages are based on the existing Poplar Level Road and Durrett Lane traffic and trips directed to the Derby City Gaming. Exhibits V-2 and V-3 contain the trip distribution and new assigned trips for the PM peak hour. Below is estimated planned development trip generation.

Louisville - Jefferson County Derby City Gaming		Trip Generation AM Peak Hour		Trip Generation PM Peak Hour	
Fall 2022 Opening	Size	Entering	Exiting	Entering	Exiting
Gaming Machines AM (0.174 trips per seat) PM (0.463 trips per seat)	400 Gaming Seats	47	23	107	78
Hotel ITE trip code 310	120 rooms	33	23	37	35
Total		80	46	144	113

Level of Service

Level of Service is a school grade describing traffic conditions as defined by the FHWA Highway Capacity Manual and a KYTC guideline. A traffic signal intersection Level of Service C / D is in the acceptable range that indicates moderate congestion with reduced speeds for some turning movements. Existing Poplar Level Road (KY 864) intersection traffic conditions are Level of Service B / C in the afternoon peak hour.

Sight distance is generally acceptable within KYTC, FHWA horizontal and vertical roadway curvature limits in the Poplar Level Road (KY 864) corridor between the Waterson Expressway (I-264) and Fern Valley Road (KY 1747). Roadway and individual commercial and industrial land use properties have entrances with access to Poplar Level Road causing for more vehicles to slow, making turning movements on the 40 mph posted speed roadway.

Capacity Analysis

Intersection traffic capacity analysis was conducted using the Trafficware Synchro version 10 software to view unsignalized and signalized intersection performance. The table below outlines average intersection delay per vehicle in the existing 2021 fall and future 2022 scenarios.

Acceptable signalized intersection level of service (LOS) B was determined for the Poplar Level Level (KY 864) and Derby City Gaming intersection in the Future Fall 2022 Development Year (with a Derby City Gaming entrance traffic signal) afternoon weekday peak hour.

A Poplar Level Road / Derby City Gaming entrance traffic signal installation in 2020 will not harm Level of Service (LOS A and B along mainline Poplar Level) and average delay time at 12 seconds per vehicle. Reference table below for the afternoon peak hour capacity analysis Level of Service, Average Vehicle Delay. Existing weekday summer 2021 pm peak hour indicate an unacceptable Level of Service F for Derby City Gaming exiting left turns without a signal.

Estimated Level of Service / Average Vehicle Delay

Poplar Level Road -- (KY 864)	August 2021	Fall 2022	Fall 2022
Level of Service and Intersection Movement Delays (seconds per vehicle)	Existing PM Peak (Unsignalized)	Weekday PM Peak with planned DCG hotel and 400 gaming seats	Existing PM with a Derby City Gaming traffic signal
Poplar Level Road at Derby City	No existing traffic signal	As Unsignalized Intersection	LOS B, 12 with a traffic signal
Derby City Gaming Eastbound Left Turn	LOS F, 105	LOS F, 476	LOS E, 63
Derby City Gaming Eastbound Right Turn	LOS C, 17	LOS C, 19	LOS B, 13
Poplar Level Northbound Left Turn	LOS C, 16	LOS C, 20	LOS B, 10
Poplar Level Southbound Right Turn	Yield movement	Yield movement – no traffic signal	Yield movement – LOS A, 2
Poplar Level Northbound Through Lanes	Free-flow movement	Free-flow movement	LOS A, 6
Poplar Level Southbound Through Lanes	Free-flow movement	Free-flow movement	LOS B, 13

Durrett Lane at Breitenstein Avenue (Derby City Gaming access) has acceptable Level of Service A and B grades and low vehicle delay times for turning movements at the unsignalized intersection. The Breitenstein Avenue (Derby City Gaming Gate Access) approach is stop-controlled, Durrett Lane has free-flow movements. Existing turning movement counts were collected during the weekday morning (7:00 to 11:30 a.m.) and the weekday afternoon (3:30 to 6:30 p.m.). With the anticipated additional hotel and gaming traffic, Durrett Lane / Breitenstein will continue to operate at acceptable, low delay times.

Estimated Level of Service / Average Vehicle Delay

Durrett Lane / Breitenstein Avenue Level of Service (LOS) & Intersection Movement Delays (seconds per vehicle)	Sept. 2021 Existing AM (8:15-9:15) (Unsignalized)	Oct. 2021 Existing AM (10:00-11:00) (Unsignalized)	Sept. 2021 Existing PM Peak Hour (4:45 to 5:45) (Unsignalized)	Fall 2022 Weekday PM Peak with planned DCG hotel and 400 gaming seats
Durrett Lane at Derby City Gate (Breitenstein Ave)	Unsignalized Intersection, Stop Control	Unsignalized Intersection, Stop Control	Unsignalized Intersection, Stop Control	Unsignalized Intersection, Stop Control
Durrett Lane WB Left at Breitenstein Ave	LOS A, 7	LOS A, 7	LOS A, 8	LOS A, 8
Breitenstein Ave NB Left at Durrett Lane	LOS A, 9	LOS B, 10	LOS B, 10	LOS B, 11

Preston Highway (KY 61) at Durrett Lane signalized intersection has an acceptable Level of Service (LOS) B and low delay times in the existing morning and afternoon peak hours. This is a three-leg, tee intersection between Interstate 264 Waterson Expressway overpass to the north and Male High School to the south. Preston southbound left movements to Durrett Lane has a protected-permitted phasing and Louisville Metro Government Traffic Operations has installed a Durrett Lane right turn overlap signal phase that provides protected green time during the Preston Highway southbound left turns protected phasing. The signal timing and phasing help reduce vehicle queues and delay time.

Preston Highway has a 45 mph posted speed with a 35 mph school flasher near Male High School. Louisville Male Traditional High (grades 9 through 12) has 1,950 students and school times are weekdays from 7:00 am to 4:00 pm. Preston Highway daily traffic generally increases from the morning to the highest hour day peak hour in the afternoon (4:30 to 5:30 pm), based on KYTC hour-by-hour counts in mid-July 2018 and late August 2020 (counts are attached in the Appendix).

Marathon gas and convenience store opened on August 7, 2021 at the Preston Highway / Durrett Lane northeast corner with eight (8) gas pumps and a 9,600 square foot C-store. Circle K gas and convenience store is located at the intersection southeast corner with eight (8) fuel pumps and a 1,000 square foot building. Both sites are accommodated with two (2) 30 foot or wider Preston Highway entrances and traffic doesn't need to rely on Durrett Lane for access. The Marathon estimated site trips were included in the previous October 2020 Amazon traffic study and in this report's traffic, capacity analysis.

Applying the highest Amazon peak hour from the existing Louisville DKY6 location and counts provided from the October 2020 Traffic Impact Study, Preston Highway at Durrett Lane will continue to operate at acceptable Level of Service C in the future morning and afternoon peak hours. Amazon will contribute 65% of the new trips, 25% from Marathon gas & convenience store and 10% from the new Derby City Gaming hotel and 400 additional gaming seats.

Estimated Level of Service / Average Vehicle Delay

Preston Hwy / Durrett Ln Level of Service (LOS) & Intersection Movement Delays (seconds per vehicle)	Sept. 2021 Existing AM (7:15-8:15)	Fall 2022 Future AM with highest Amazon peak, Marathon C-store and Derby City	Sept. 2021 Existing PM Peak Hour (4:30 to 5:30)	Fall 2022 Future PM with highest Amazon peak hour, Marathon C-store & Derby City Gaming
Preston Highway KY 61 at Durrett Ln, tee intersection	Signalized Intersection	Signalized Intersection	Signalized Intersection	Signalized Intersection
Preston Hwy at Durrett (overall intersection LOS) and without Derby City	LOS A, 7	LOS C, 29 LOS C, 27	LOS B, 11	LOS C, 28 LOS C, 24
Preston Hwy Northbound and without Derby City	LOS A, 8	LOS C, 29 & LOS C, 27	LOS B, 12	LOS C, 30 & LOS C, 24
Preston Hwy Southbound & without Derby City	LOS A, 3	LOS C, 23 & LOS C, 20	LOS A, 4	LOS B, 16 & LOS B, 12
Durrett Lane Westbound & without Derby City	LOS C, 28	LOS D, 43 & LOS D, 42	LOS D, 52	LOS D, 52 & LOS D, 52

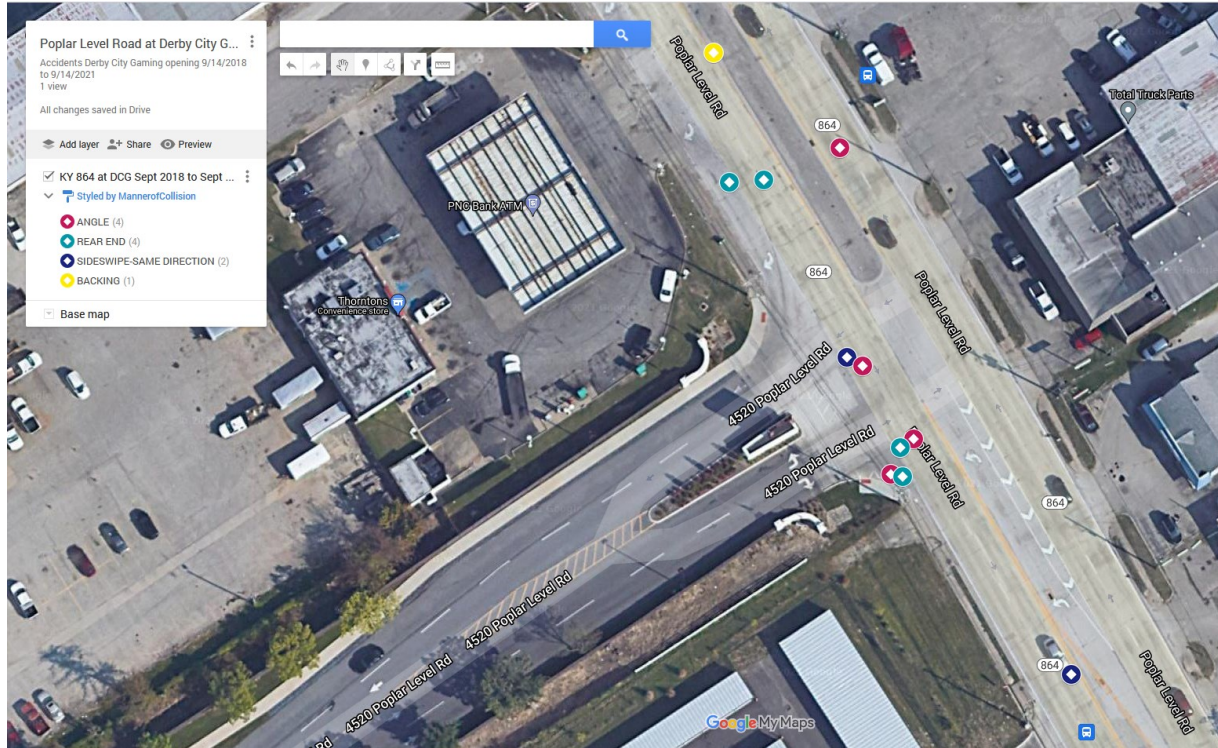
Traffic Safety

Reviewing the last three (3) years of Kentucky State Police accident history from September 2018 to September 2021 (since the Derby City Gaming opening) indicated eleven (11) property-damage only accidents, two (2) injury type of accidents and no fatal collisions at the Poplar Level Road (KY 864) / Derby City Gaming intersection. Most accidents occurring were angle (36%), rear-end (36%), sideswipe-same direction (18%) and backing in traffic (9%).

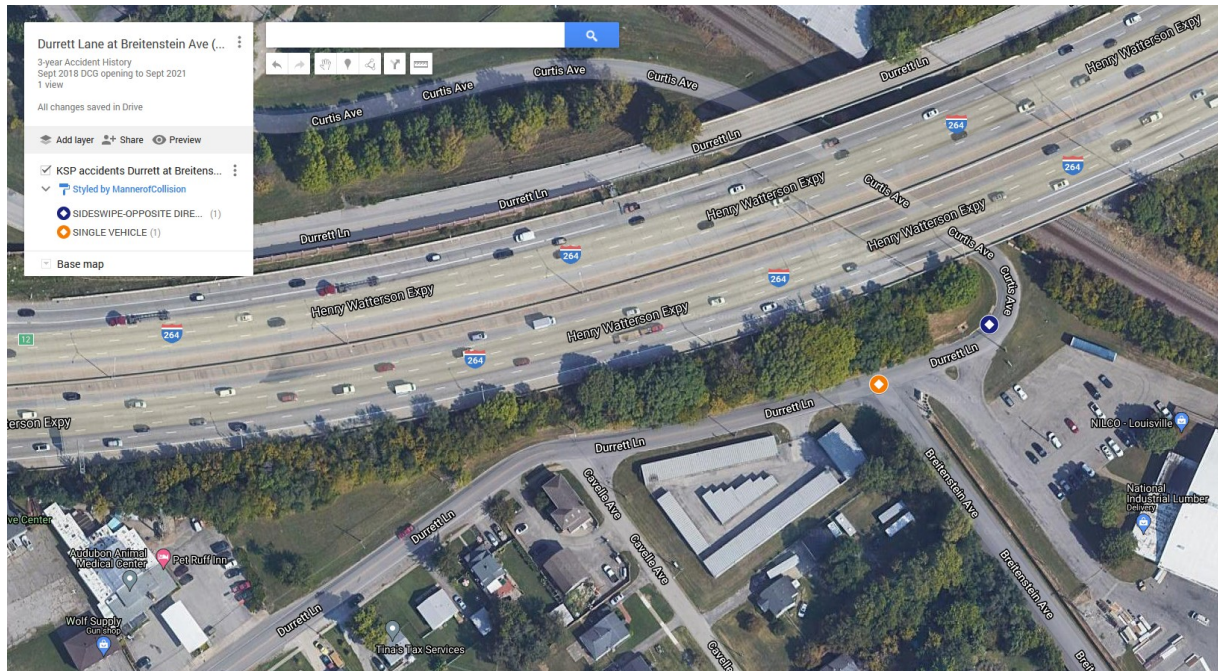
Based on recent Kentucky collision rates for an urban divided highway (two-way left turning lane) for the Poplar Level Road (KY 864) intersection area has a 25% higher rate than the statewide accident average. (Reference: University of Kentucky, Kentucky Transportation Center, Analysis of Traffic Crash Data in Kentucky (2015-2019)). The Federal Highway Administration (FHWA) Crash Modification Factor (CMF) research specifies a 33% angle type of accident reduction with a traffic signal installation on an urban roadway with 40 mph and greater posted speed limits.

Based on the last three years (September 2018 thru September 2021) of accident records from the Kentucky State Police database, two (2) accidents occurred near the Durrett Lane / Breitenstein Avenue (Derby City Gaming access) unsignalized intersection. A 26-year old that was driving under the influence with a 0.141 Blood Alcohol Content had a single vehicle collision with a fixed object on Friday, June 12, 2020 at 1:15 a.m.. The second accident was a sideswipe collision under wet road conditions on Monday, March 2, 2020 at 3:30 p.m.. Both accidents were property-damage only with no injuries.

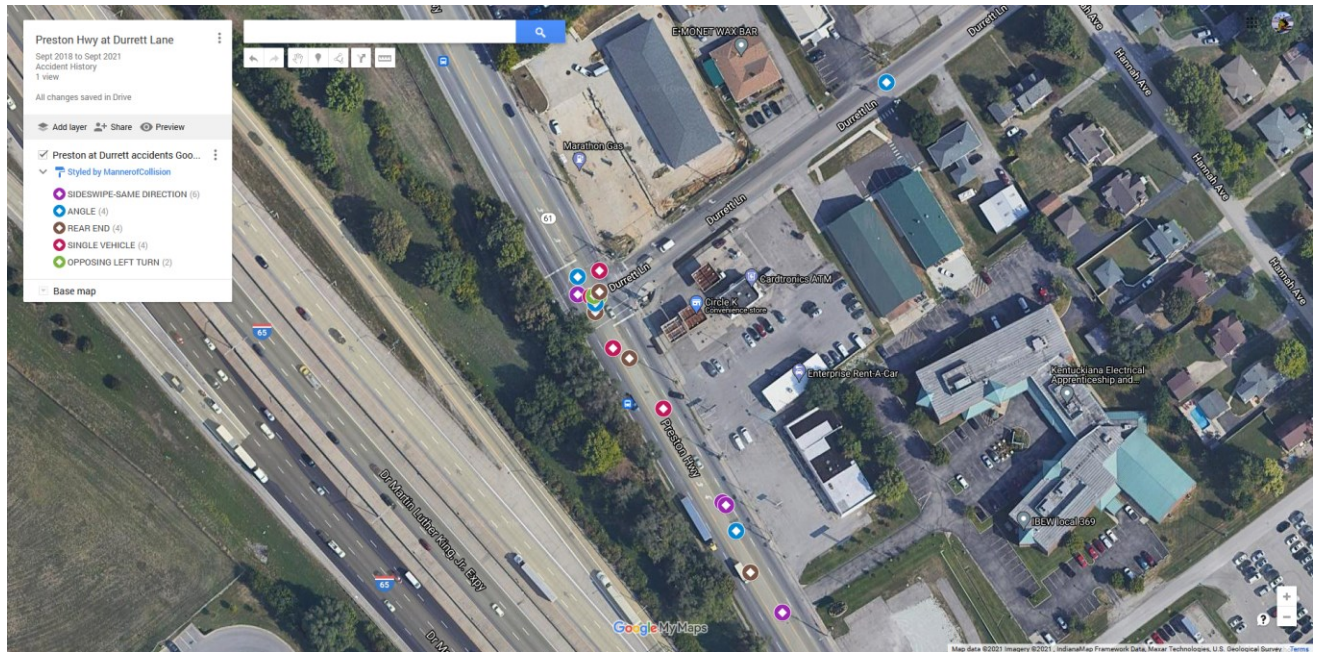
Preston Highway / Durrett Lane three (3) year accident history indicates twenty (20) accidents in the intersection area and meets the statewide average for a four-lane divided road (two-way median).



Poplar Level Road (KY 864) / Derby City Gaming entrance -- Sept. 2018 to September 2021 Accident Summary



Durrett Lane / Breitenstein Ave., Derby City Gaming access -- Sept. 2018 to September 2021 Accident Summary



Preston Highway (KY 61) / Durrett Lane, September 2018 to September 2021 Accident Summary

Sight Distance

Adjacent to the Derby City Gaming main entrance, Thornton's convenience store has twelve (12) gas pumps and a 65 foot wide Poplar Level entrance about 100 feet from the Derby City Gaming access road. Poplar Level Road has twelve (12) access points on the west side between Selinda Avenue and the Tile Factory – Bishop Lane intersection and nineteen (19) access points on the east side. The number of commercial and industrial entrances in this 1,580 foot (0.3 mile) segment allows a great number of vehicle turning movements and complicates driving despite minimal changes in elevation and a straight, tangent roadway.

Acceptable sight distance exists along the Poplar Level Road, KY 864 with minimal horizontal curve, less than two (2) percent vertical curvature at the Derby City Gaming intersection and between the Waterson Expressway (I-264) and Gilmore Lane (a one (1) mile distance). Sight distance is approximately 500 feet or greater in each north and south direction along Poplar Level Road from the Derby City Gaming entrance based on the KYTC highway data and field observations.

Durrett Lane at Breitenstein Avenue is an unsignalized intersection and provides Derby City Gaming access from Preston Highway and connections to local streets with the Waterson Expressway (I-264) underpass.

Preston Highway (KY 61) has acceptable sight distance of 600 feet and greater on approaches to the Durrett Lane signalized intersection. Preston Highway is a straight through road in the Durrett Lane area with minimal horizontal and vertical curve, elevation change.



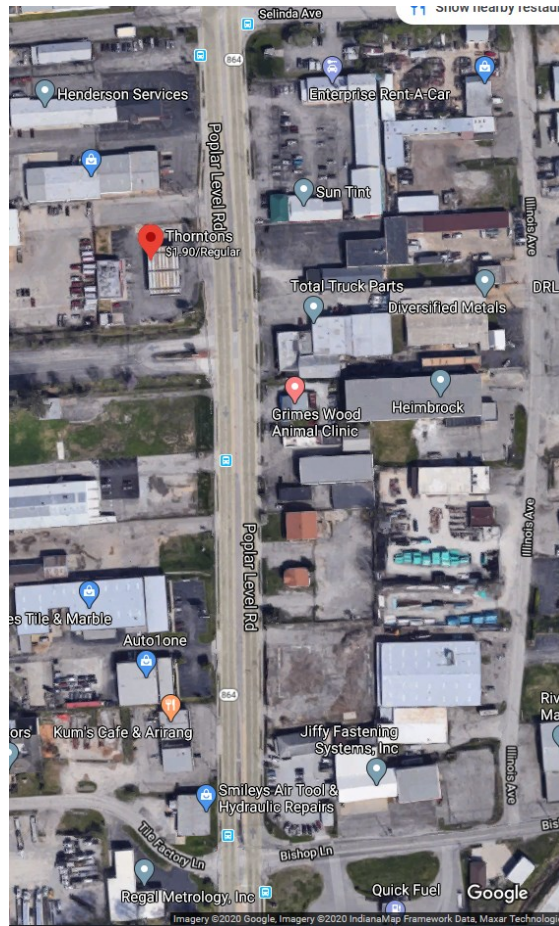
Derby City Gaming exiting traffic view to the north, in direction of the Waterson Expressway



Durrett Lane directed east at Breitenstein Avenue (Derby City Gaming access)



Preston Highway (KY 61) southbound view at Durrett Lane Traffic Signal



Poplar Level Road (KY 864) Aerial view – 12 access points on west side, 19 entrances on east side



Durrett Lane / Breitenstein Avenue Aerial view with Derby City Gaming access, near I-264 underpass

Signal Warrant

A traffic signal warrant 1A and 1B review, method accepted by the Kentucky Transportation Cabinet (KYTC), Department of Highways and the FHWA Manual on Uniform Traffic Control Devices (MUTCD) was prepared for the Poplar Level Road / Derby City Gaming tee intersection. Poplar Level Road (KY 864) posted speed is 40 mph between Waterson Expressway (I-264) and Fern Valley Road (KY 1747).

MUTCD Table 4C-1, Warrant 1 for an Eight Hour Vehicular Volume allows for a 30% reduction given the major street (Poplar Level Road KY 864) speed exceeds 40 mph. The 70% column with footnote c will be used in review. Weekday turning movement counts were conducted August 12, 2021 at the Poplar Level Road (KY 864) / Derby City Gaming intersection from 7:00 am to 7:00 pm. Jefferson County Public Schools were in session.

Based on the hour-by-hour analysis, the MUTCD Warrant 1B is reached for the scenarios presented. The Poplar Level Road (KY 864) through traffic movements for each weekday hour between 7:00 am and 7:00 pm has volumes that could bring long delay times and unsafe conflicts for the travelling public attempting to enter the major street from Derby City Gaming development.

KYTC Division of Planning Poplar Level Road (KY 864) weekday hour-by-hour counts in each north and southbound direction are used to provide a background check on the major street traffic volumes. (Tabulated traffic counts are attached in the Traffic Counts Appendix).

Table 4C-1. Warrant 1, Eight-Hour Vehicular Volume

Condition A—Minimum Vehicular Volume


Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100% ^a	80% ^b	70% ^c	56% ^d	100% ^a	80% ^b	70% ^c	56% ^d
1	1	500	400	350	280	150	120	105	84
2 or more	1	600	480	420	336	150	120	105	84
2 or more	2 or more	600	480	420	336	200	160	140	112
1	2 or more	500	400	350	280	200	160	140	112

Condition B—Interruption of Continuous Traffic

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100% ^a	80% ^b	70% ^c	56% ^d	100% ^a	80% ^b	70% ^c	56% ^d
1	1	750	600	525	420	75	60	53	42
2 or more	1	900	720	630	504	75	60	53	42
2 or more	2 or more	900	720	630	504	100	80	70	56
1	2 or more	750	600	525	420	100	80	70	56

^a Basic minimum hourly volume

^b Used for combination of Conditions A and B after adequate trial of other remedial measures

 ^c May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

^d May be used for combination of Conditions A and B after adequate trial of other remedial measures when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Referencing the MUTCD Section 4C.02 Warrant 1, Eight-Hour Vehicular Volume

*The Minimum Vehicular Volume, Condition A, is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The Interruption of Continuous Traffic, Condition B, is intended for application at locations where Condition A is not satisfied and where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street. It is intended that Warrant 1 be treated as a single warrant. If Condition A is satisfied, then Warrant 1 is satisfied and analyses of Condition B and the combination of Conditions A and B are not needed. **Similarly, if Condition B is satisfied, then Warrant 1 is satisfied** and an analysis of the combination of Conditions A and B is not needed.*

Poplar Level Road at Derby City Gaming entrance Thursday, August 12, 2021 Hour-by-Hour count

File Name: Poplar Level at Derby City Gaming_Thu 08.12.2021.ppd

Start Date: 8/12/2021

Start Time: 7:00:00 AM

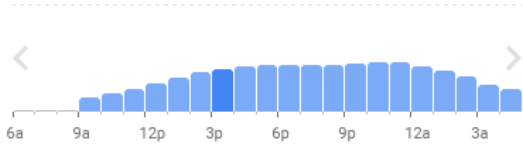
Condition: Jefferson County Public Schools (FCPS) in session

Weather: Partly Cloudy, Dry, Hot and Humid 80 deg F low and 93 deg F high

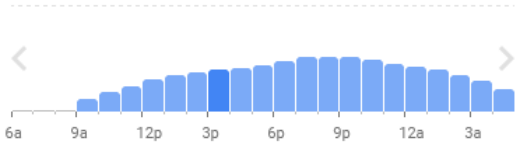
Start Time	Poplar Level Road KY 864 From North			Total Truck Parts From East			Poplar Level Road KY 864 From South			Derby City Gaming From West			TOTAL	Poplar Level from North	Poplar Level from South	Poplar Level Rd 2-way Volume	DCG Lefts from West
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		Turning Movement Counts Hourly Total			
7:00 AM	4	245	0	0	0	0	0	223	4	2	0	1	482	252	227		
7:15 AM	3	200	0	0	0	0	0	252	3	2	0	1	461	203	255		
7:30 AM	3	249	0	0	0	0	0	310	5	2	0	1	570	252	315		
7:45 AM	2	273	0	0	0	0	0	258	5	4	0	2	544	275	263		
														982	1060	2042	5
8:00 AM	1	230	2	0	0	1	0	219	3	4	0	4	464	233	222		
8:15 AM	4	218	1	0	0	3	0	263	4	2	0	2	497	223	267		
8:30 AM	4	196	0	0	0	0	0	259	4	4	0	1	468	200	263		
8:45 AM	11	252	0	0	0	1	1	236	5	1	0	2	509	263	242		
														919	994	1913	9
9:00 AM	21	224	0	0	0	3	0	223	8	3	0	3	485	245	231		
9:15 AM	13	225	1	2	0	0	0	224	4	2	0	4	475	239	228		
9:30 AM	13	201	0	0	0	0	0	196	14	3	0	7	434	214	210		
9:45 AM	27	200	1	0	0	3	0	205	8	6	0	4	454	228	213		
														926	882	1808	18
10:00 AM	13	188	1	2	0	1	0	225	12	6	0	11	459	202	237		
10:15 AM	17	216	0	0	0	5	2	169	15	7	0	7	438	233	186		
10:30 AM	16	214	0	0	0	3	1	182	12	8	0	9	445	230	195		
10:45 AM	15	212	0	1	0	1	0	196	9	9	0	11	454	227	205		
														892	823	1715	38
11:00 AM	23	173	0	0	0	2	1	184	11	19	0	16	429	196	196		
11:15 AM	28	222	2	1	0	3	0	211	15	10	0	6	498	252	226		
11:30 AM	15	210	2	0	0	1	1	226	15	11	0	22	503	227	242		
11:45 AM	16	198	0	2	0	1	0	138	4	8	0	8	375	214	142		
														889	806	1695	52
12:00 PM	26	202	0	3	0	2	1	202	7	4	0	16	463	228	210		
12:15 PM	13	236	2	1	0	2	0	198	5	10	0	14	481	251	203		
12:30 PM	22	224	2	1	0	1	0	216	8	17	1	7	499	248	224		
12:45 PM	18	207	1	1	0	0	0	201	9	14	1	9	461	226	210		
														953	847	1800	46
1:00 PM	14	189	0	1	2	3	1	186	11	12	1	11	431	203	198		
1:15 PM	17	177	3	3	0	2	1	169	7	12	1	9	401	197	177		
1:30 PM	22	200	1	3	0	1	3	152	7	14	0	18	421	223	162		
1:45 PM	14	237	2	2	0	1	1	158	6	12	0	13	446	253	165		
														876	702	1578	51
2:00 PM	26	263	1	1	0	2	1	224	12	8	0	14	552	290	237		
2:15 PM	17	276	1	1	0	1	1	235	15	14	0	17	578	294	251		
2:30 PM	8	290	2	2	0	1	0	246	20	20	0	22	611	300	266		
2:45 PM	11	346	0	0	0	0	0	294	6	21	0	22	700	357	300		
														1241	1054	2295	75
3:00 PM	19	395	1	2	0	0	0	364	8	19	0	19	827	415	372		
3:15 PM	23	307	0	3	0	1	0	289	8	19	0	24	674	330	297		
3:30 PM	20	398	2	1	0	2	1	369	22	11	0	11	837	420	392		
3:45 PM	16	372	2	1	0	1	2	341	21	14	0	13	783	390	364		
														1555	1425	2980	67
4:00 PM	10	356	3	0	0	1	3	313	22	18	0	15	741	369	338		
4:15 PM	15	416	2	2	0	2	2	316	9	22	0	20	806	433	327		
4:30 PM	13	376	0	4	0	2	2	243	9	17	0	30	696	389	254		
4:45 PM	20	384	0	0	0	1	1	322	20	18	0	10	776	404	343		
														1595	1262	2857	75
5:00 PM	22	386	1	0	0	0	0	331	26	13	1	24	804	409	357		
5:15 PM	32	317	1	0	0	1	0	274	22	14	1	18	680	350	296		
5:30 PM	44	248	1	2	0	2	0	216	19	14	1	13	560	293	235		
5:45 PM	31	252	2	0	0	0	0	166	18	17	0	22	508	285	184		
														1337	1072	2409	77
6:00 PM	31	234	0	0	0	0	0	185	24	11	0	22	507	265	209		
6:15 PM	35	191	0	2	0	0	0	206	19	22	1	26	502	226	225		
6:30 PM	32	182	0	0	0	0	0	167	14	20	0	24	439	214	181		
6:45 PM	26	193	0	0	0	0	0	152	16	14	2	34	437	219	168		
														924	783	1707	106

Derby City Gaming Google Hour-by-Hour Popular Bar Graphs

Popular times Mondays ▾

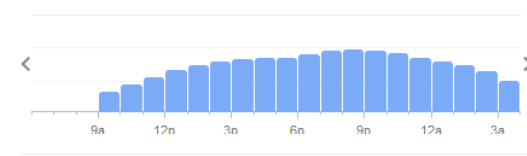


Popular times Tuesdays ▾

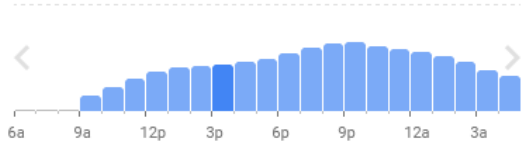


Popular times ?

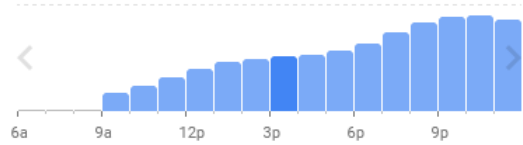
Wednesdays ⇅



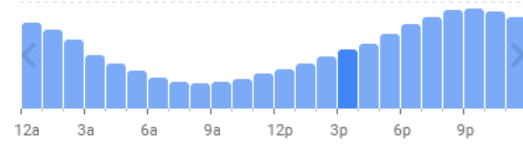
Popular times Thursdays ▾



Popular times Fridays ▾

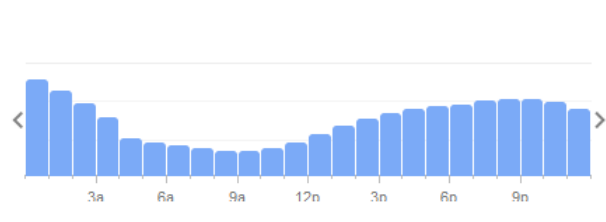


Popular times Saturdays ▾



Popular times ?

Sundays ⇅



Findings, Conclusion

A traffic signal is warranted at the Poplar Level Road (KY 864) at the Derby City Gaming entrance based on existing weekday August 2021 and weekend (Saturday) August and September 2020 turning movement counts and additional trips for a planned 120 room hotel and 400 additional gaming seats in the fall 2022. The MUTCD Warrant 1B and KYTC accepted methods are used to justify a traffic signal.

Based on more than 25 hours of vehicle turning movement counts and field observation during the weekday and weekend, Poplar Level Road vehicle speeds are greater than the posted 40 mph. With a 45 mph speed, MUTCD Warrants 1A and 1B are further reasons to install a signal for safer turning movements at the Derby City Gaming intersection. A KYTC speed study should be conducted to confirm a higher 85th percentile Poplar Level Road speed, especially during weekday, weekend off-peak times.

MUTCD Signal Warrant 1A at the Poplar Level Road / Derby City Gaming is met with typical gaming trips during weekend peak hour times. Eight (8) continuous hours of side street traffic, traffic exiting Derby City Gaming approach trips to the Poplar Level Road reaches Warrants 1A and 1B.

FHWA Crash Modification Factor (CMF) research determines that a traffic signal installation on an urban roadway with 40 mph posted speeds like Poplar Level Road can reduce angle accidents 33%.

Synchro and SimTraffic software analysis shows longer delays for Derby City Gaming exiting left turn traffic to Poplar Level Road in the weekday afternoon and weekend peak hours. Traffic signal installation would help provide safer, protected movements for existing conditions and in the future with the Derby City Gaming expansion, a planned 120 room hotel and 400 additional gaming machines, seats.

Typically a 7 to 10 second time gap in traffic is needed for a passenger vehicle to safely enter a 4-lane roadway. Poplar Level Road has several access points (12 on the west side and 19 on the east side) in the 1,580 foot (0.3 mile) segment at the Derby City Gaming entrance. The access spacing does not meet the recommended KYTC access spacing of 600 feet between driveways, intersections. A Poplar Level Road / Derby City Gaming traffic signal should have minimal impact on the surrounding intersection and may provide better traffic gaps for the unsignalized driveways in the commercial, industrial corridor.

Durrett Lane unsignalized intersection at Breitenstein Avenue (Derby City Gaming access road) operates at an acceptable Level of Service A and B with low delay times. The Durrett intersection with Derby City Gaming estimated hotel and gaming trips is expected to continue at Level of Service A and B with the 26 acre Amazon facility start-up (1231 Durrett Lane) and with the new Marathon gas and convenience store (opened March 2019) at the corner of Preston Highway / Durrett Lane.

Amazon approved Development Plan (20-DDP-0033) Binding Elements include traffic control signs along Durrett Lane to prohibit heavy truck traffic and possible Preston Highway / Durrett Lane improvements based on turning movement counts. Applying the highest Amazon peak hour from the Louisville DKY6 location counts (98 in and 217 out) and 50 / 50 traffic distribution splits at Preston Highway, Preston Highway / Durrett Lane will have a LOS C in the future morning and afternoon peak hours. Future peak hours include Marathon C-store and Derby City Gaming new trips. Amazon main Durrett Lane access is 750 feet from Preston Highway (KY 61). Durrett Lane / Breitenstein Avenue (Derby City Gaming access road) is 2,750 feet (1/2 mile) from Preston Highway signalized intersection.



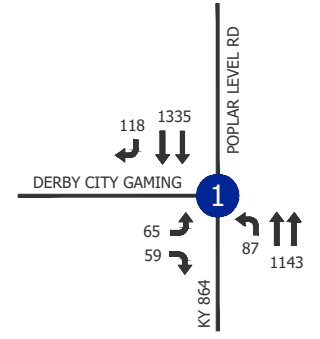
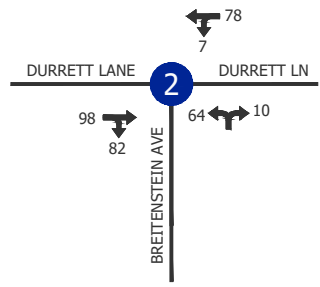
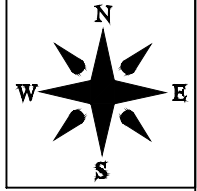
Derby City Gaming, 4520 Poplar Level Road, Louisville - Jefferson County KY

TRAFFIC EXHIBITS

- V-1 Existing August / September 2021 Weekday Afternoon, 4:45 to 5:45 PM Peak Hour
- V-2 Future Fall 2022 Trip Distribution percentages PM Peak (with new Hotel, 400 Gaming Seats)
- V-3 Future Fall 2022 Trip Assignment PM Peak (with new Hotel, 400 Gaming Seats)
- V-4 Future Fall 2022 Weekday Afternoon PM Peak (with new Hotel, 400 Gaming Seats)
- V-5 Existing September 2021 Weekday Morning 8:15 to 9:15 AM Peak Hour
- V-6 Existing October 2021 Weekday Morning 10:00 to 11:00 AM during Amazon DKY6 peak
- V-7 Existing Preston Highway at Durrett Lane AM and PM peak hours
- V-8 New Trips from 1231 Durrett Lane Amazon site and 1201 Durrett Lane Marathon C-store
- V-9 New Trips to Durrett Ln / Preston Highway from Derby City Gaming, 4520 Poplar Level Rd
- V-10 Future Fall 2022 Preston Highway at Durrett Lane AM and PM peak hours

LEGEND

--- PROPERTY



DERBY CITY GAMING
4520 POPLAR LEVEL ROAD

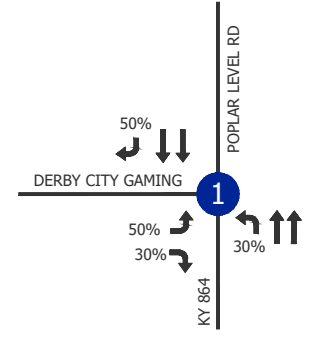
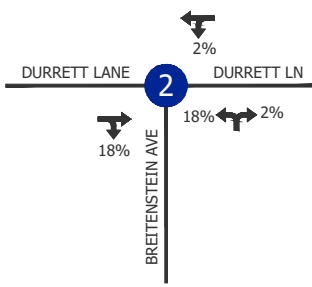
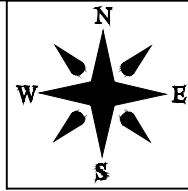
LOUISVILLE, KENTUCKY

EXISTING 2021 WEEKDAY PM PEAK
 4:45 to 5:45 PM

EXHIBIT V-1

LEGEND

--- PROPERTY



**DERBY CITY GAMING
4520 POPLAR LEVEL ROAD**

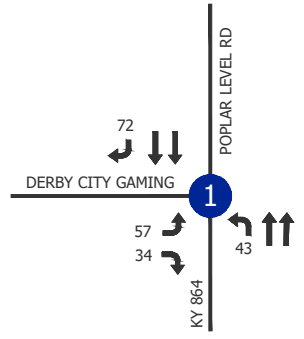
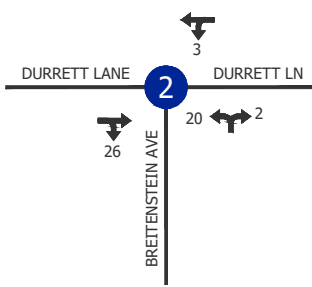
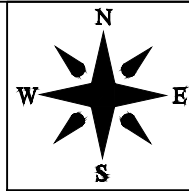
LOUISVILLE, KENTUCKY

FUTURE 2022 WEEKDAY PM PEAK
NEW TRIP DISTRIBUTION

EXHIBIT V-2

LEGEND

--- PROPERTY



DERBY CITY GAMING
4520 POPLAR LEVEL ROAD

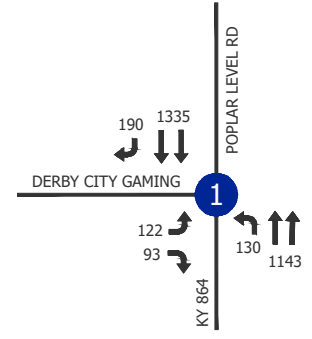
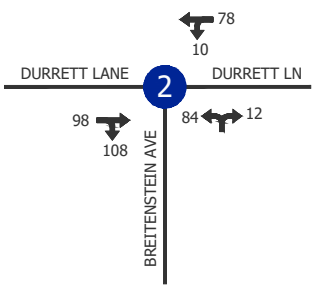
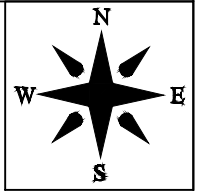
LOUISVILLE, KENTUCKY

FUTURE 2022 WEEKDAY PM PEAK
ESTIMATED NEW TRIPS

EXHIBIT V-3

LEGEND

--- PROPERTY

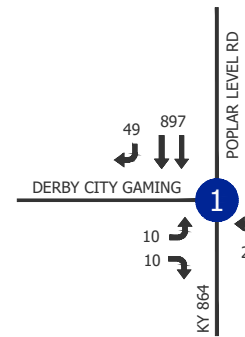
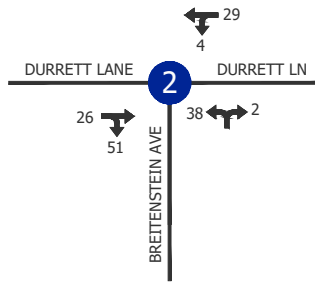
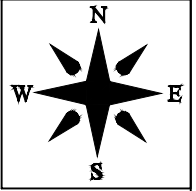


DERBY CITY GAMING
4520 POPLAR LEVEL ROAD
 LOUISVILLE, KENTUCKY

FUTURE 2022 WEEKDAY PM PEAK
WITH HOTEL & 400 GAMING SEATS
EXHIBIT V-4

LEGEND

--- PROPERTY



DERBY CITY GAMING
4520 POPLAR LEVEL ROAD

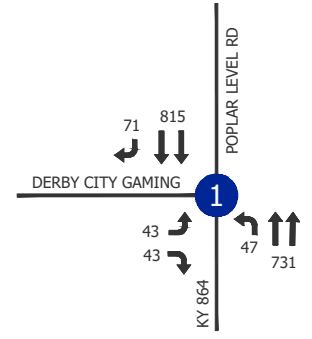
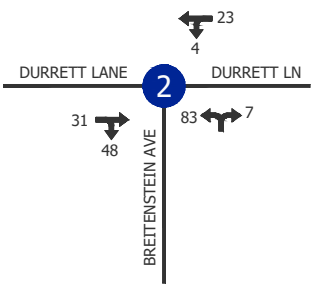
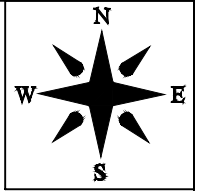
LOUISVILLE, KENTUCKY

EXISTING 2021 WEEKDAY AM PEAK
 8:15 to 9:15 AM

EXHIBIT V-5

LEGEND

--- PROPERTY



**DERBY CITY GAMING
4520 POPLAR LEVEL ROAD**

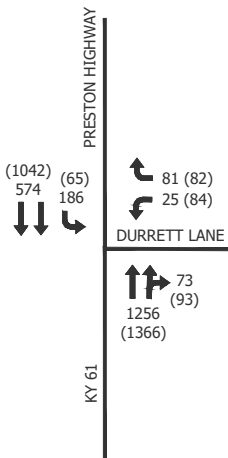
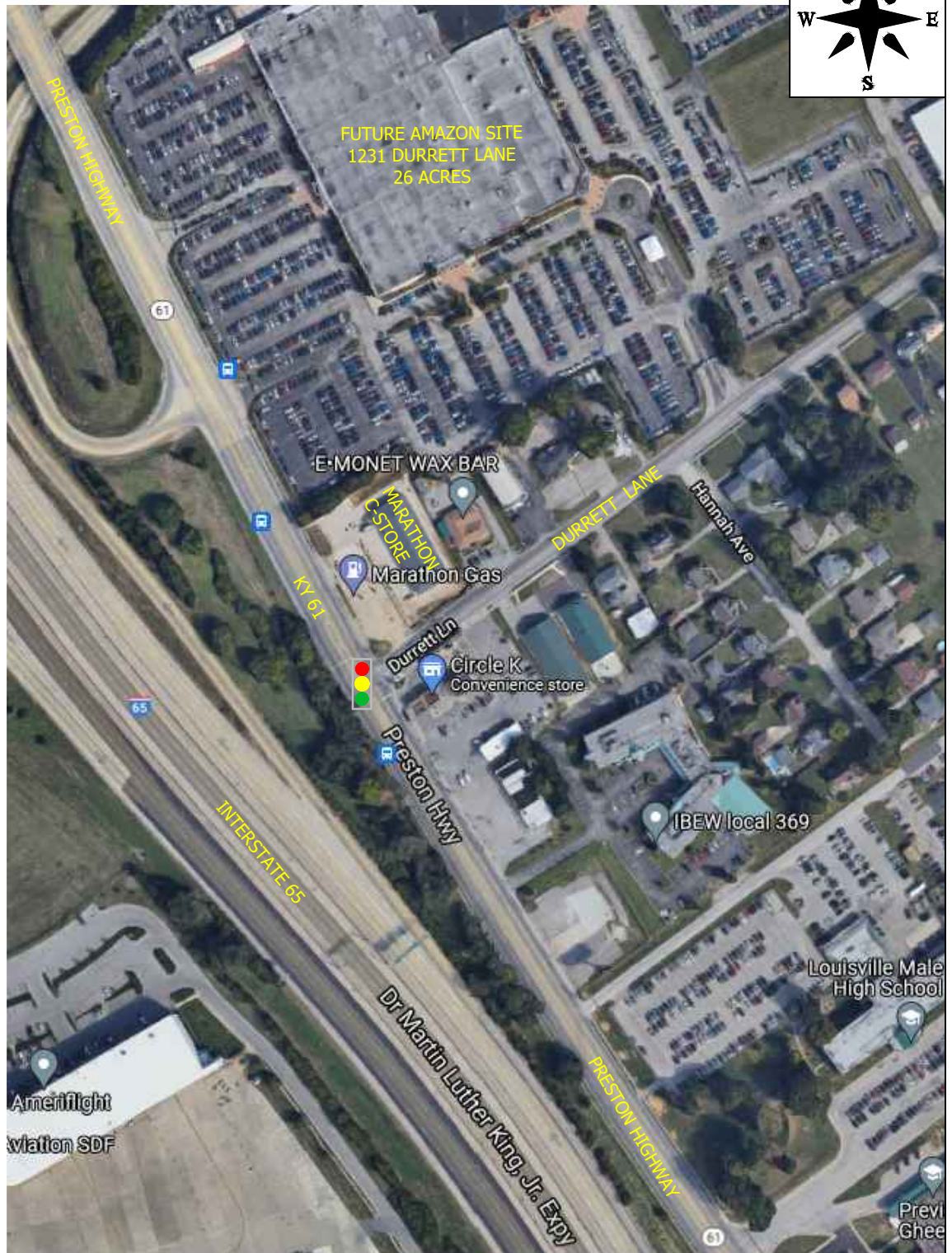
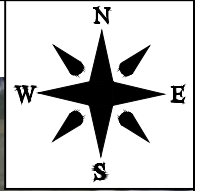
LOUISVILLE, KENTUCKY

EXISTING 2021 WEEKDAY AM PEAK
10:00 to 11:00 AM

EXHIBIT V-6

LEGEND

AM (PM) PEAK
 HOUR TRAFFIC



LEGEND

AM (PM) PEAK
 HOUR TRAFFIC



**PRESTON HIGHWAY (KY 61)
 AT DURRETT LANE**

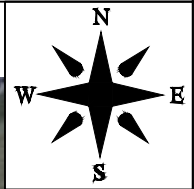
LOUISVILLE, KENTUCKY

EXISTING WEEKDAY PEAK HOURS

EXHIBIT V-7

LEGEND

AM (PM) PEAK
HOUR TRAFFIC



NEW TRIPS

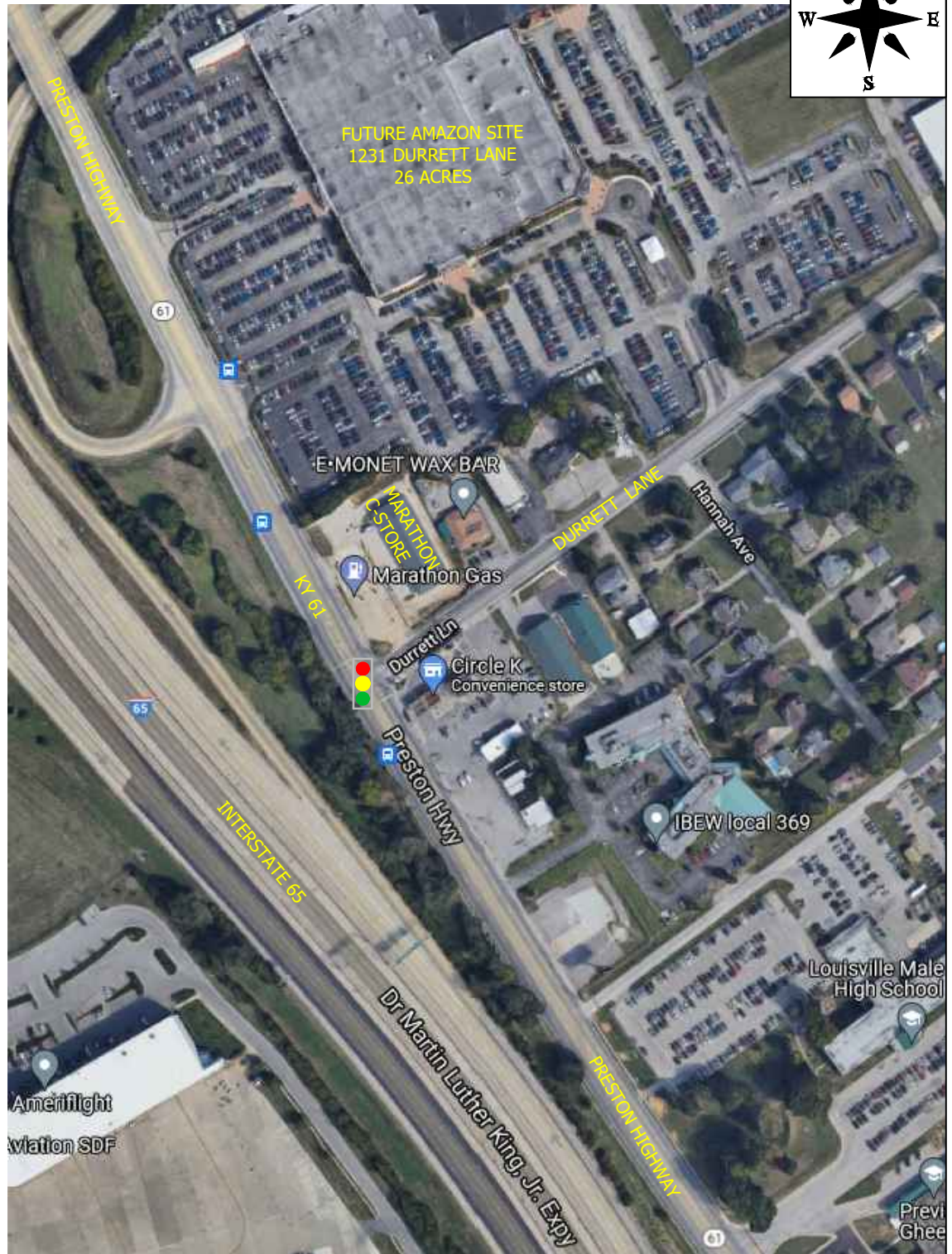
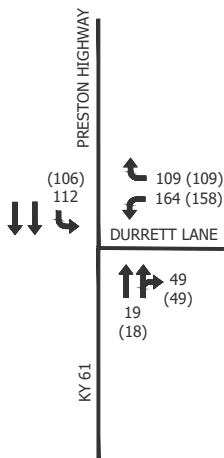
AMAZON HIGHEST
PEAK HOUR FROM
LOUISVILLE DKY6
LOCATION AND
APPLYING TO AM &
PM PEAK HOURS

98 ENTERING
217 EXITING

MARATHON GAS &
CONVENIENCE STORE
1201 DURRETT LANE

AM PEAK
82 ENTERING
56 EXITING

PM PEAK
75 ENTERING
50 EXITING



LEGEND

AM (PM) PEAK
HOUR TRAFFIC



**PRESTON HIGHWAY (KY 61)
AT DURRETT LANE**

LOUISVILLE, KENTUCKY

AMAZON & MARATHON C-STORE
NEW TRIPS WEEKDAY PEAK HOURS

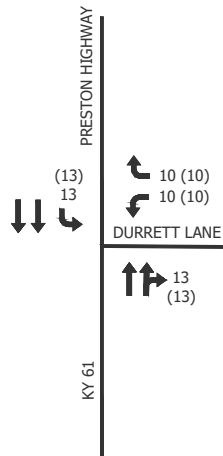
EXHIBIT V-8

NEW TRIPS

DERBY CITY GAMING
ESTIMATED AM AND PM
PEAK NEW TRIPS TO
DURRETT LANE FROM
120 ROOM HOTEL AND
400 GAMING SEATS

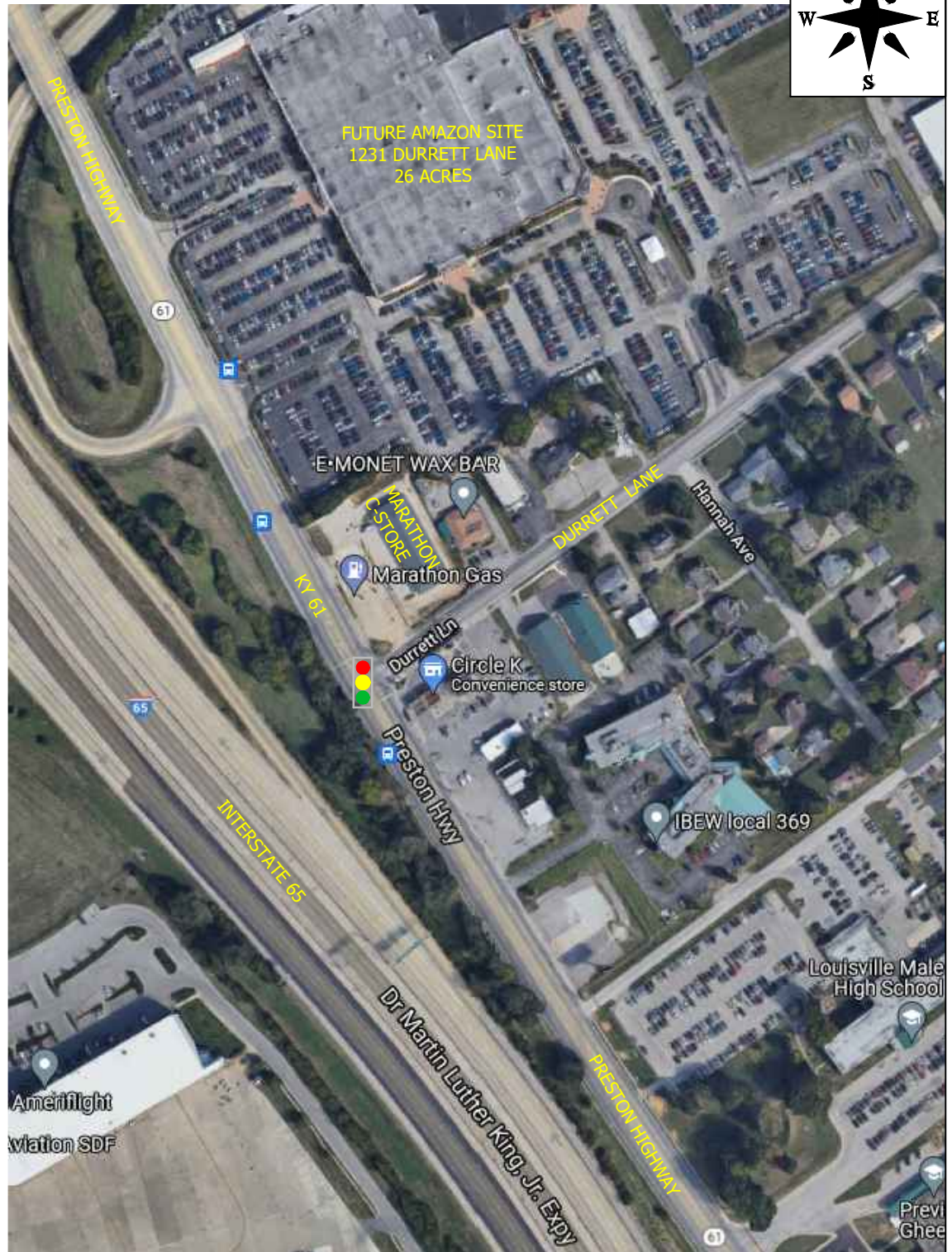
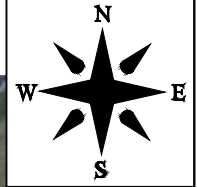
26 ENTERING
20 EXITING

USING HIGHER
PM PEAK HOUR
FOR MORNING AND
AFTERNOON ANALYSIS



LEGEND

AM (PM) PEAK
HOUR TRAFFIC



LEGEND

AM (PM) PEAK
HOUR TRAFFIC



PRESTON HIGHWAY (KY 61)
AT DURRETT LANE

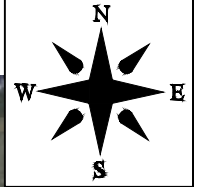
LOUISVILLE, KENTUCKY

DERBY CITY GAMING HOTEL & 400 SEATS
NEW TRIPS WEEKDAY PEAK HOURS

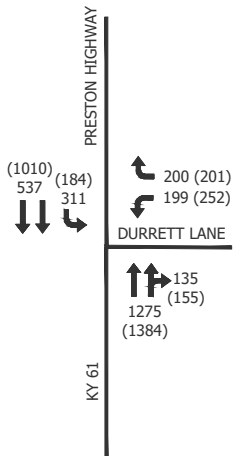
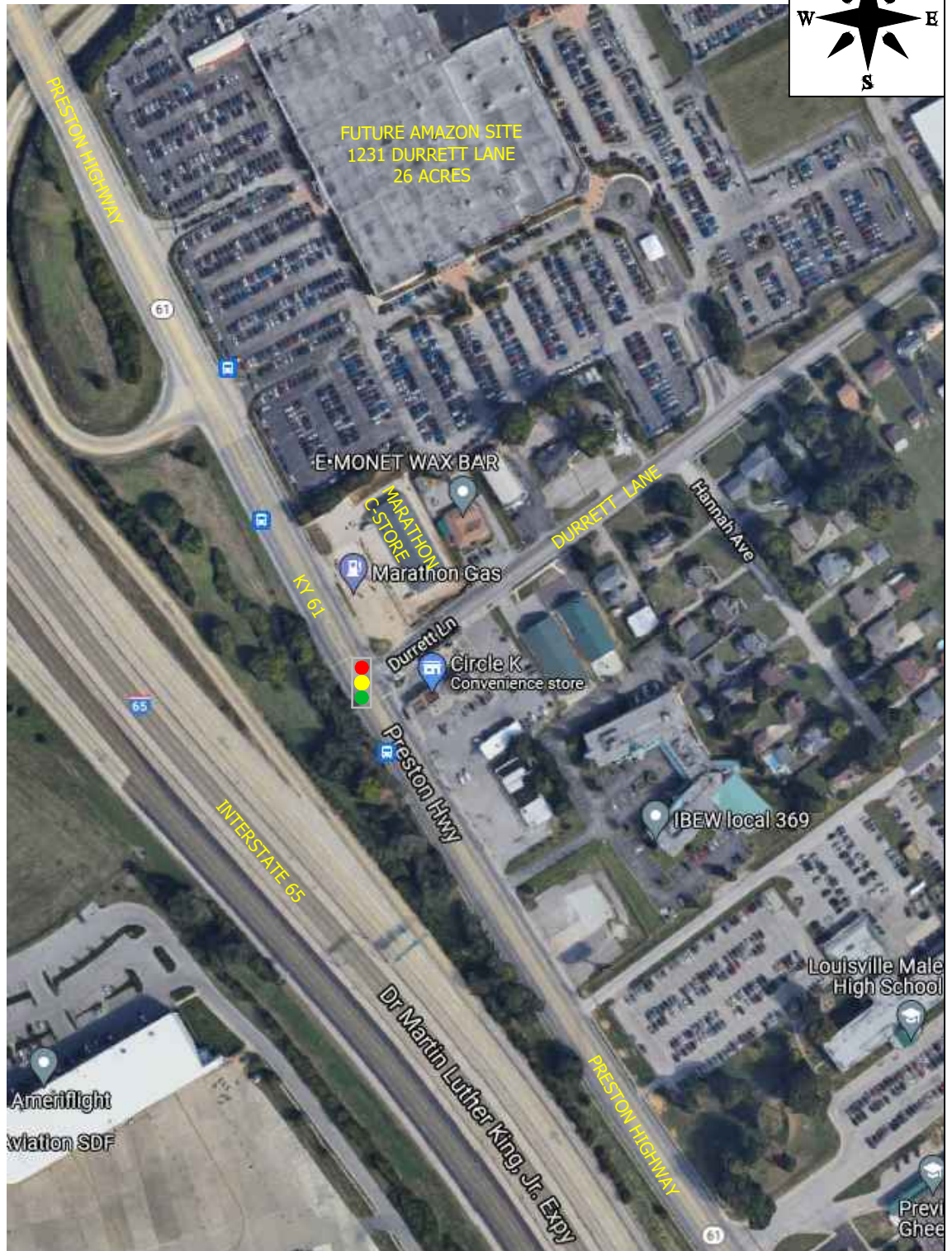
EXHIBIT V-9

LEGEND

AM (PM) PEAK
HOUR TRAFFIC



FUTURE PEAK
HOURS TRAFFIC
INCLUDE AMAZON
SITE, MARATHON
GAS & C-STORE
AND DERBY CITY
GAMING HOTEL,
400 ADDED SEATS



LEGEND

AM (PM) PEAK
HOUR TRAFFIC



**PRESTON HIGHWAY (KY 61)
AT DURRETT LANE**

LOUISVILLE, KENTUCKY

FUTURE FALL 2022
WEEKDAY PEAK HOURS

EXHIBIT V-10



Derby City Gaming, 4520 Poplar Level Road (KY 864)
Louisville – Jefferson County, Kentucky

TRAFFIC COUNTS

- KYTC hour-by-hour directional traffic counts on Poplar Level Road (KY 864)
- KYTC Poplar Level Road (KY 864) traffic count station 056776 history table, graphs
- KYTC Preston Highway (KY 61) traffic count station 056607 history table, graphs

Intersection Count Data Collected by Vision Engineering
Weekday (Thursday, August 12, 2021 with Jefferson County Public Schools in session)
Weekend (Saturdays - August 29th and September 12th in 2020)

- Poplar Level Road (KY 864) / Derby City Gaming entrance

Intersection Count Data Collected by Vision Engineering
Wednesday – September 1, 2021 and Thursday – October 14, 2021

- Durrett Lane / Breitenstein Avenue (Derby City Gaming Access Road)

TRIP GENERATION / DISTRIBUTION

Existing Preston Highway (KY 61) / Durrett Lane turning movements exhibit
Louisville Amazon DKY6 facility 24-hour count in 30-minute increments
Marathon Gas and Convenience Store estimated new trips from October 2020 Study

Hourly Distribution Entering and Existing Vehicle Trips for a Hotel, ITE 10th Trip Gen Manual

New Estimated Hour-by-Hour Derby City Gaming for 400 additional Gaming seats

Weekday and Weekend (Saturday) existing KY 864 at Derby City Gaming counts

Kentucky Transportation Cabinet

Short-term Hourly Traffic Volume for 05/09/201 through 05/16/2018

Site names: 056776
 County: Jefferson
 Funct Class: U Minor Arterial
 Location: 056-KY-0864 -000 @ 10.581 From: E INDIAN TRAIL To: I 264

Seasonal Factor Grp: 3
 Daily Factor Grp: 3
 Axle Factor Grp: 16
 Growth Factor Grp: 16

	Sun, May 6, 2018			Mon, May 7, 2018			Tue, May 8, 2018			Wed, May 9, 2018			Thu, May 10, 2018			Fri, May 11, 2018			Sat, May 12, 2018		
	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg
00:00													368	175	193	363	164	199	531	241	290
01:00													321	182	139	322	156	166	393	194	199
02:00													228	107	121	223	117	106	273	117	156
03:00													206	89	117	232	100	132	281	114	167
04:00													340	187	153	307	171	136	256	135	121
05:00													783	339	444	761	331	430	343	177	166
06:00													1,614	802	812	1,662	849	813	593	330	263
07:00													2,424	1,266	1,158	2,441	1,196	1,245	736	416	320
08:00													2,500	1,218	1,282	2,238	1,120	1,118	898	489	409
09:00													1,910	949	961	1,953	968	985	1,086	566	520
10:00									1,960	921	1,039	1,927	894	1,033	2,130	1,041	1,089	1,238	627	611	
11:00									2,029	924	1,105	1,958	925	1,033	2,138	970	1,168	1,424	710	714	
12:00									2,117	976	1,141	2,183	994	1,189	2,352	1,037	1,315	1,527	678	849	
13:00									2,083	1,002	1,081	2,191	985	1,206	2,349	1,072	1,277	1,515	660	855	
14:00									2,363	1,073	1,290	2,530	1,084	1,446	2,600	1,182	1,418	1,510	702	808	
15:00									2,467	1,141	1,326	2,584	1,171	1,413	2,742	1,159	1,583	1,449	642	807	
16:00									2,585	1,188	1,397	2,798	1,170	1,628	2,824	1,146	1,678	1,436	626	810	
17:00									2,430	1,132	1,298	2,354	1,062	1,292	2,331	1,085	1,246	1,406	650	756	
18:00									1,563	744	819	1,638	787	851	1,582	734	848	1,245	541	704	
19:00									1,228	519	709	1,291	567	724	1,349	594	755	1,185	502	683	
20:00									1,032	423	609	1,157	525	632	1,145	505	640	1,107	510	597	
21:00									895	360	535	982	383	599	1,037	438	599	931	435	496	
22:00									640	250	390	735	295	440	841	353	488	818	358	460	
23:00									428	182	246	481	199	282	640	264	376	706	328	378	
Total									23,820	10,835	12,985	35,503	16,355	19,148	36,562	16,752	19,810	22,887	10,748	12,139	
AM Peak Vol									0	0	0	2,500	1,266	1,282	2,441	1,196	1,245	1,424	710	714	
AM Peak Fct									0	0	0	1	1	1	1	1	1	1	1	1	
AM Peak Hr									:	:	:	8: 00	7: 00	8: 00	7: 00	7: 00	7: 00	11: 00	11: 00	11: 00	
PM Peak Vol									2,585	1,188	1,397	2,798	1,171	1,628	2,824	1,182	1,678	1,527	702	855	
PM Peak Fct									1	1	1	1	1	1	1	1	1	1	1	1	
PM Peak Hr									16: 00	16: 00	16: 00	16: 00	15: 00	16: 00	16: 00	14: 00	16: 00	12: 00	14: 00	13: 00	
Seasonal Fct									.949	.949	.949	.949	.949	.949	.949	.949	.949	.949	.949	.949	
Daily Fct									1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
Axle Fct									.482	.482	.482	.482	.482	.482	.482	.482	.482	.482	.482	.482	
Pulse Fct									2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	

Kentucky Transportation Cabinet

Short-term Hourly Traffic Volume for 05/09/201 through 05/16/2018

Site names: 056776
 County: Jefferson
 Funct Class: U Minor Arterial
 Location: 056-KY-0864 -000 @ 10.581 From: E INDIAN TRAIL To: I 264

Seasonal Factor Grp: 3
 Daily Factor Grp: 3
 Axle Factor Grp: 16
 Growth Factor Grp: 16

	Sun, May 13, 2018			Mon, May 14, 2018			Tue, May 15, 2018			Wed, May 16, 2018			Thu, May 17, 2018			Fri, May 18, 2018			Sat, May 19, 2018		
	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg
00:00	490	208	282	296	121	175	364	174	190	298	155	143									
01:00	358	167	191	218	95	123	308	157	151	279	148	131									
02:00	317	146	171	175	78	97	202	93	109	195	85	110									
03:00	256	111	145	180	90	90	218	99	119	208	97	111									
04:00	215	102	113	310	165	145	330	161	169	335	170	165									
05:00	187	97	90	715	296	419	819	362	457	800	341	459									
06:00	241	135	106	1,536	709	827	1,635	792	843	1,569	757	812									
07:00	341	171	170	2,414	1,201	1,213	2,464	1,231	1,233	2,449	1,247	1,202									
08:00	424	266	158	2,202	1,142	1,060	2,258	1,162	1,096	2,287	1,191	1,096									
09:00	687	389	298	2,009	982	1,027	2,015	1,012	1,003	2,032	1,001	1,031									
10:00	864	488	376	2,277	922	1,355	2,050	943	1,107	1,990	977	1,013									
11:00	1,114	538	576	2,194	979	1,215	2,129	977	1,152	2,035	918	1,117									
12:00	1,154	536	618	2,314	1,015	1,299	2,177	1,021	1,156	2,112	1,018	1,094									
13:00	1,274	618	656	2,371	1,034	1,337	2,186	1,008	1,178	2,108	1,003	1,105									
14:00	1,287	616	671	2,197	1,043	1,154	2,423	1,160	1,263												
15:00	1,276	533	743	2,523	1,163	1,360	2,646	1,215	1,431												
16:00	1,162	512	650	2,461	1,164	1,297	2,705	1,186	1,519												
17:00	1,239	533	706	2,506	1,109	1,397	2,344	1,094	1,250												
18:00	1,137	485	652	1,533	684	849	1,576	744	832												
19:00	986	463	523	1,159	520	639	1,185	504	681												
20:00	955	421	534	1,000	418	582	1,038	444	594												
21:00	851	366	485	847	340	507	878	371	507												
22:00	717	301	416	616	260	356	633	297	336												
23:00	415	171	244	477	185	292	437	175	262												
Total	17,947	8,373	9,574	34,530	15,715	18,815	35,020	16,382	18,638	18,697	9,108	9,589									
AM Peak Vol	1,114	538	576	2,414	1,201	1,355	2,464	1,231	1,233	2,449	1,247	1,202									
AM Peak Fct	1	1	1	1	1	1	1	1	1	1	1	1									
AM Peak Hr	11: 00	11: 00	11: 00	7: 00	7: 00	10: 00	7: 00	7: 00	7: 00	7: 00	7: 00	7: 00									
PM Peak Vol	1,287	618	743	2,523	1,164	1,397	2,705	1,215	1,519	0	0	0									
PM Peak Fct	1	1	1	1	1	1	1	1	1	0	0	0									
PM Peak Hr	14: 00	13: 00	15: 00	15: 00	16: 00	17: 00	16: 00	15: 00	16: 00	:	:	:									
Seasonal Fct	.949	.949	.949	.949	.949	.949	.949	.949	.949	.949	.949	.949									
Daily Fct	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000									
Axle Fct	.482	.482	.482	.482	.482	.482	.482	.482	.482	.482	.482	.482									
Pulse Fct	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000									

Search

Interactive Map

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Historical Traffic Volume Summary

Station Details:

Sta ID:	056776
Sta Type:	Full Coverage
Map:	MapIt
District:	5
County:	Jefferson
Route:	056-KY-0864 -000
Route Desc:	POPLAR LEVEL RD

Begin MP:	9.2150
Begin Desc:	E INDIAN TRAIL
End Mp:	11.2950
End Desc:	I 264 (WATTERSON EXPRESSWAY)
Impact Year:	
Year Added:	

Newest Count:

AADT:	28333
Year:	2018
% Single:	6.4290
% Combo:	4.1640
K Factor:	10
D Factor:	59

Definitions:

Sta. ID - Three digit county number + station number

MP - milepoint

Impact Year – year of significant change to traffic pattern within station segment

AADT – Annual Average Daily Traffic – the annualized average 24-hour volume of vehicles on a segment of roadway

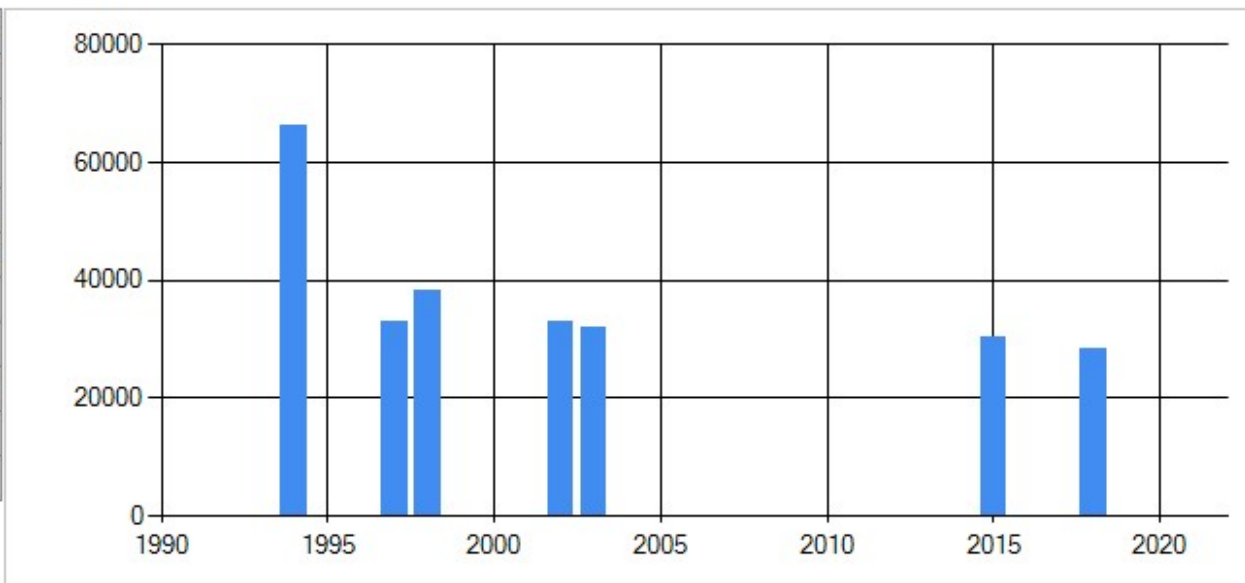
% Single – single unit truck volume as a percentage of the AADT

% Combo – combination truck volume as a percentage of the AADT

K Factor – peak hour volume as a percentage of the AADT

D Factor – percentage of peak hour volume flowing in the peak direction

Year	AADT	Year	AADT	Year	AADT
2021		2011		2001	
2020		2010		2000	
2019		2009		1999	
2018	28333	2008		1998	38200
2017		2007		1997	32900
2016		2006		1996	
2015	30387	2005		1995	
2014		2004		1994	66300
2013		2003	31900	1993	
2012		2002	33100	1992	



Kentucky Transportation Cabinet

Short-term Hourly Traffic Volume for 07/17/2018 through 07/19/2018

Site names:	056607	Seasonal Factor Grp:	3
County:	Jefferson	Daily Factor Grp:	3
Funct Class:	U Minor Arterial	Axle Factor Grp:	16
Location:	056-KY-0061 -000 @ 6.600 From: KY 1747	Growth Factor Grp:	16

	Sun, Jul 15, 2018			Mon, Jul 16, 2018			Tue, Jul 17, 2018			Wed, Jul 18, 2018			Thu, Jul 19, 2018			Fri, Jul 20, 2018			Sat, Jul 21, 2018		
	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg
00:00										272	132	140	262	127	135						
01:00										190	87	103	177	88	89						
02:00										125	58	67	117	61	56						
03:00										102	49	53	137	64	73						
04:00										247	118	129	226	124	102						
05:00										422	254	168	443	240	203						
06:00										834	556	278	797	527	270						
07:00										1,250	819	431	1,200	748	452						
08:00										1,231	706	525	1,225	703	522						
09:00										1,114	547	567	1,151	573	578						
10:00								1,357	647	710	1,283	642	641								
11:00								1,524	743	781	1,562	764	798								
12:00								1,729	840	889	1,758	858	900								
13:00								1,655	816	839	1,688	846	842								
14:00								1,773	844	929	1,790	815	975								
15:00								1,847	827	1,020	1,862	877	985								
16:00								2,049	884	1,165	2,078	906	1,172								
17:00								2,124	939	1,185	1,987	856	1,131								
18:00								1,675	780	895	1,639	774	865								
19:00								1,301	616	685	1,323	636	687								
20:00								1,147	577	570	1,156	564	592								
21:00								936	472	464	941	454	487								
22:00								654	314	340	623	305	318								
23:00								427	195	232	426	187	239								
Total								20,198	9,494	10,704	25,903	12,810	13,093	5,735	3,255	2,480					
AM Peak Vol											1,562	819	798								
AM Peak Fct											1	1	1								
AM Peak Hr											11: 00	7: 00	11: 00								
PM Peak Vol								2,124	939	1,185	2,078	906	1,172								
PM Peak Fct								1	1	1	1	1	1								
PM Peak Hr								17: 00	17: 00	17: 00	16: 00	16: 00	16: 00								
Seasonal Fct								.971	.971	.971	.971	.971	.971	.971	.971	.971					
Daily Fct								.943	.943	.943	1.003	1.003	1.003	.924	.924	.924					
Axle Fct								.500	.500	.500	.500	.500	.500	.500	.500	.500					
Pulse Fct								1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000					

Kentucky Transportation Cabinet

Short-term Hourly Traffic Volume for 08/25/2020 through 08/27/2020

Site names:	056607	Seasonal Factor Grp:	3
County:	Jefferson	Daily Factor Grp:	3
Funct Class:	U Minor Arterial	Axle Factor Grp:	16
Location:	056-KY-0061 -000 @ 6.600 From: KY 1747	Growth Factor Grp:	16

	Sun, Aug 23, 2020			Mon, Aug 24, 2020			Tue, Aug 25, 2020			Wed, Aug 26, 2020			Thu, Aug 27, 2020			Fri, Aug 28, 2020			Sat, Aug 29, 2020		
	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg
00:00										387	192	195	402	191	211						
01:00										366	246	120	331	175	156						
02:00										174	89	85	238	112	126						
03:00										142	71	71	145	73	72						
04:00										205	99	106	149	66	83						
05:00										354	200	154	272	134	138						
06:00										434	245	189	457	238	219						
07:00										696	441	255	666	414	252						
08:00										1,044	652	392	1,035	659	376						
09:00										1,158	647	511	1,210	671	539						
10:00										1,122	559	563	1,220	613	607						
11:00							1,324	653	671	1,357	612	745	1,367	663	704						
12:00							1,400	625	775	1,509	720	789									
13:00							1,576	748	828	1,700	816	884									
14:00							1,692	872	820	1,678	845	833									
15:00							2,034	1,165	869	1,873	1,007	866									
16:00							2,090	1,166	924	1,823	837	986									
17:00							2,150	1,138	1,012	1,965	915	1,050									
18:00							1,951	1,066	885	1,960	886	1,074									
19:00							1,634	881	753	1,655	822	833									
20:00							1,292	624	668	1,424	693	731									
21:00							1,080	556	524	1,253	592	661									
22:00							904	462	442	925	516	409									
23:00							562	301	261	757	347	410									
Total							19,689	10,257	9,432	25,961	13,049	12,912	7,492	4,009	3,483						
AM Peak Vol										1,357	686	745	1,367	717	704						
AM Peak Fct										.879	.942	.839	.84	.834	.715						
AM Peak Hr										11: 00	8: 30	11: 00	11: 00	8: 45	11: 00						
PM Peak Vol							2,152	1,259	1,012	1,990	1,073	1,074									
PM Peak Fct							.951	.931	.958	.989	.972	.942									
PM Peak Hr							15: 15	15: 30	17: 00	17: 15	14: 45	18: 00									
Seasonal Fct							.952	.952	.952	.952	.952	.952	.952	.952	.952						
Daily Fct							.957	.957	.957	.941	.941	.941	.921	.921	.921						
Axle Fct							.500	.500	.500	.500	.500	.500	.500	.500	.500						
Pulse Fct							2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000						

Search

Interactive Map

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Historical Traffic Volume Summary

Station Details:

Sta ID:	056607
Sta Type:	Classification
Map:	MapIt
District:	5
County:	Jefferson
Route:	056-KY-0061 -000
Route Desc:	PRESTON HWY

Begin MP:	5.3580
Begin Desc:	KY 1747 (HURSTBOURNE PKWY)
End Mp:	8.15
End Desc:	I 264 RAMPS 5 AND 6
Impact Year:	
Year Added:	

Newest Count:

AADT:	23281
Year:	2020
% Single:	2.40
% Combo:	0.8620
K Factor:	9.20
D Factor:	53

Definitions:

Sta. ID - Three digit county number + station number

MP - milepoint

Impact Year – year of significant change to traffic pattern within station segment

AADT – Annual Average Daily Traffic – the annualized average 24-hour volume of vehicles on a segment of roadway

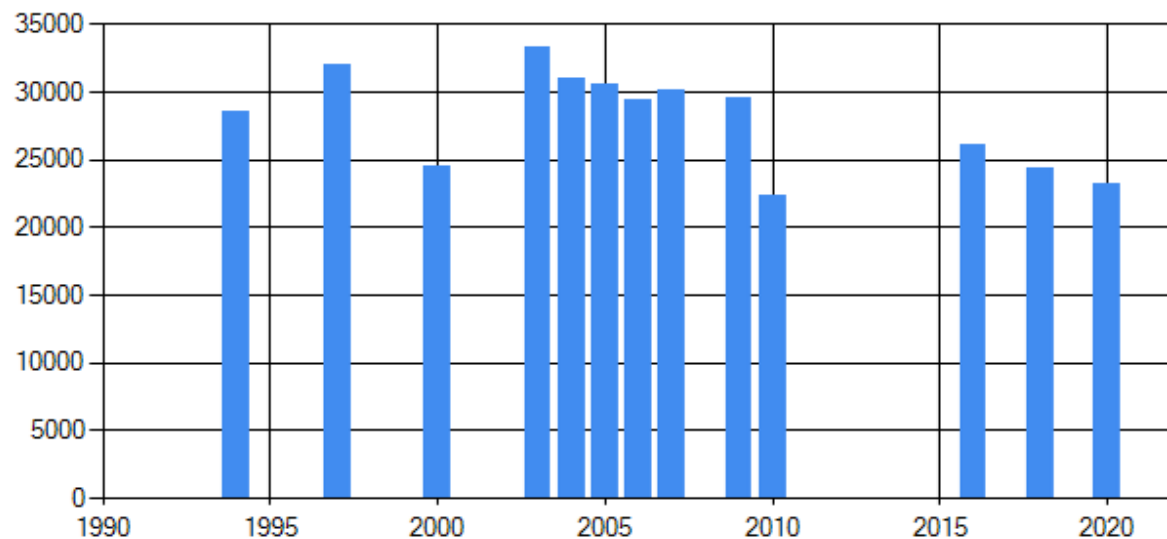
% Single – single unit truck volume as a percentage of the AADT

% Combo – combination truck volume as a percentage of the AADT

K Factor – peak hour volume as a percentage of the AADT

D Factor – percentage of peak hour volume flowing in the peak direction

Year	AADT	Year	AADT	Year	AADT
2021		2011		2001	
2020	23281	2010	22400	2000	24500
2019		2009	29600	1999	
2018	24434	2008		1998	
2017		2007	30200	1997	32000
2016	26046	2006	29500	1996	
2015		2005	30600	1995	
2014		2004	31000	1994	28500
2013		2003	33300	1993	
2012		2002		1992	



INTRODUCTION

The development plan for 1231 Durrett Lane in Louisville, KY shows a single building with 142,438 square feet. **Figure 1** displays a map of the site. Access to the development will be from an entrance on Preston Highway and two on Durrett Lane. The purpose of this study is to examine the traffic impacts of the development upon the adjacent highway system. For this study, the impact area was defined to be the intersection of Preston Highway at Durrett Lane and the proposed entrances.



Figure 1. Site Map

EXISTING CONDITIONS

Preston Highway, KY 61, is maintained by the Kentucky Transportation Cabinet with an estimated 2020 ADT of 26,000 vehicles per day between KY 1747 and I 264 Ramps, as provided by a 2018 Kentucky Transportation Cabinet count at station 607. The road is a four-lane highway with twelve-foot lanes, a two-way left turn lane and curb and gutter. The speed limit is 45 mph. There are sidewalks on both sides. The intersection with Durrett Lane is controlled with a traffic signal. At the intersection there is a dedicated left turn lane on Preston Highway and a dedicated right turn lane on Durrett Lane. The left turn lane on Durrett Lane is 175 feet in length.

Peak hour traffic counts for the intersection were obtained from the traffic impact study for 1201 Durrett Lane a convenience/gas station, dated May 15, 2018. The a.m. peak hour occurred between 7:15 and 8:15 a.m. The p.m. peak occurred between 4:30 and 5:30 p.m. **Figure 2** illustrates the existing a.m. and p.m. peak hour traffic volumes.

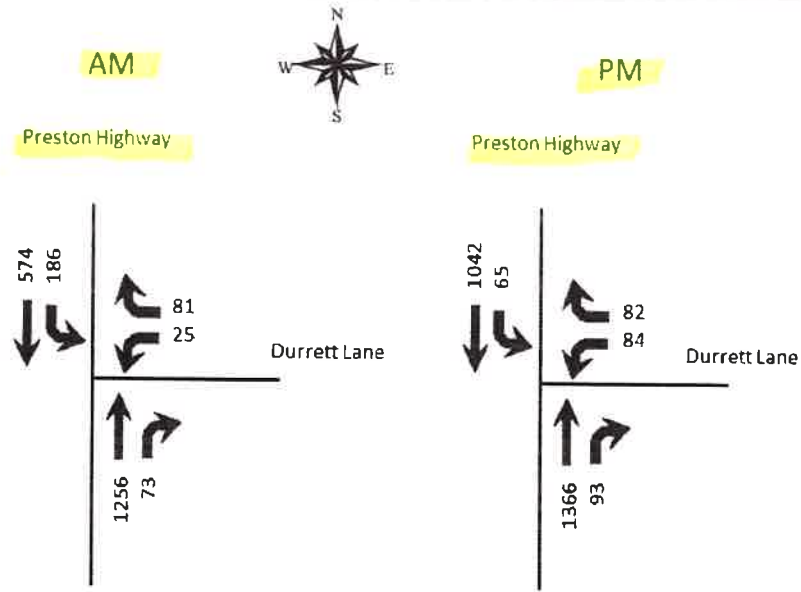


Figure 2. Existing (2018) Peak Hour Volumes

FUTURE CONDITIONS

The project completion date is 2021. An annual growth rate of 1.0 percent was applied to 2018 traffic volumes. This is based upon a review of historical traffic counts at station 607. The trip generation for the gas/convenience store under construction on the corner of Preston Highway and Durrett Lane was included. The trip generation for that site has been included in the appendix. Figure 3 displays the 2021 No Build peak hour volumes.

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Figure 4. Trip Distribution Percentages

FUTURE AMAZON SITE

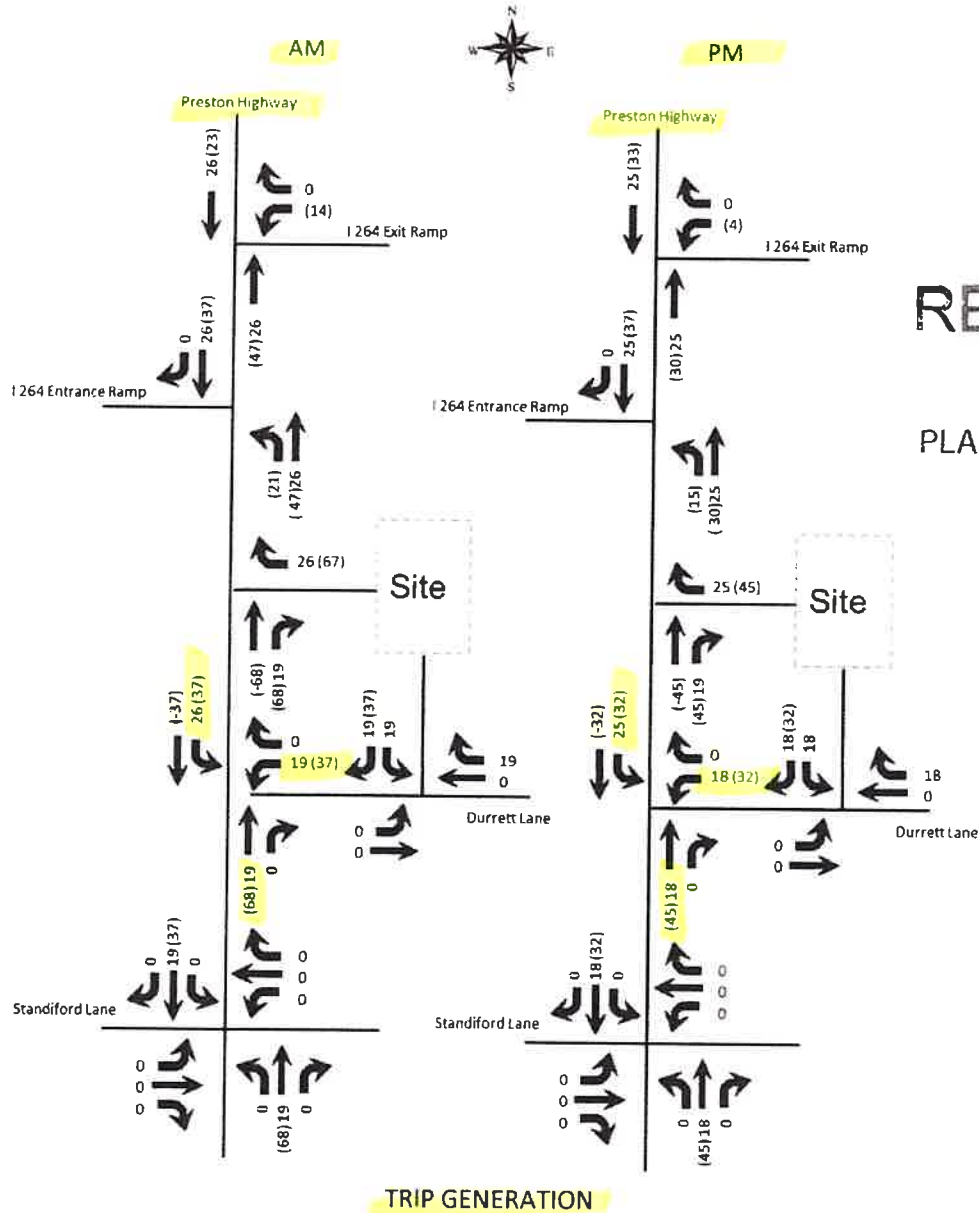
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PRESTON HWY NE CORNER
1201 DURRETT LANE
MARATHON C-STORE

Trip Generation from Durrett Lane Gas/Convenience dated May 15, 2018.

Land Use	A.M. Peak Hour			P.M. Peak Hour		
	Trips	In	Out	Trips	In	Out
Convenience Market with Gas (12 pumps)	337	169	168	276	138	138
Pass-by Trips	209	105	104	154	77	77
TOTAL New Trips	128	64	64	122	61	61



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Louisville
Amazon Site DKY6

Provided by Occupant
Half Hour Increments

DKY6 in Louisville, KY - Site Specific

Time	Associates			Trucks			DSP Drivers			DSP Vans			Flex			Total		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
00:00	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	1	1	2
00:30	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
01:00	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1
01:30	91	0	91	1	1	2	0	0	0	0	0	0	0	0	92	1	93	
02:00	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	1	
02:30	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	0	1	
03:00	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	1	
03:30	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	0	1	
04:00	0	0	0	1	1	2	0	0	0	0	0	0	0	0	1	1	2	
04:30	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	1	
05:00	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	0	1	
05:30	29	0	29	0	1	1	0	0	0	0	0	0	0	0	29	1	30	
06:00	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	0	1	
06:30	0	0	0	1	1	2	0	0	0	0	0	0	0	0	1	1	2	
07:00	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	1	
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:30	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	0	1	
09:00	0	0	0	0	1	1	22	0	22	0	0	0	0	0	22	1	23	
09:30	0	0	0	1	0	1	87	0	87	0	0	0	0	0	88	0	88	
10:00	0	0	0	0	1	1	90	0	90	0	72	72	0	0	90	73	163	
10:30	0	0	0	0	0	0	8	0	8	0	144	144	0	0	8	144	152	
11:00	0	0	0	1	0	1	0	0	0	0	13	13	0	0	1	13	14	
11:30	5	0	5	0	1	1	0	0	0	0	0	0	0	0	5	1	6	
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:30	0	91	91	0	0	0	0	0	0	0	0	0	0	0	0	91	91	
13:00	29	0	29	0	0	0	0	0	0	0	0	0	0	0	29	0	29	
13:30	23	0	23	0	0	0	0	0	0	0	0	0	0	0	23	0	23	
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
14:30	0	29	29	0	0	0	0	0	0	0	0	0	0	0	0	29	29	
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
16:00	0	0	0	0	0	0	0	0	0	0	0	0	60	0	60	0	60	
16:30	0	0	0	1	0	1	0	0	0	0	0	0	0	30	30	1	30	
17:00	0	0	0	0	1	1	0	0	0	0	0	0	0	30	30	0	31	
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
18:00	0	23	23	1	0	1	0	0	0	0	0	0	0	0	1	23	24	
18:30	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	1	
19:00	0	0	0	1	0	1	0	17	17	18	0	18	0	0	19	17	36	
19:30	0	0	0	1	1	2	0	34	34	90	0	90	0	0	91	35	126	
20:00	0	0	0	0	1	1	0	102	102	58	0	58	0	0	58	103	161	
20:30	0	0	0	1	0	1	0	34	34	62	0	62	0	0	63	34	97	
21:00	0	0	0	1	1	2	0	20	20	1	0	1	0	0	2	21	23	
21:30	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	1	
22:00	0	29	29	1	0	1	0	0	0	0	0	0	0	0	1	29	30	
22:30	0	5	5	1	1	2	0	0	0	0	0	0	0	0	1	6	7	
23:00	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	1	
23:30	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	0	1	
Total	177	177	354	21	21	42	207	207	414	229	229	458	60	60	120	694	694	1,388

10 to 11 AM
HIGHEST PEAK HOUR

10 to 11 AM PEAK
IN 98 OUT 217

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PLANNING & DESIGN SERVICES

7 AM 2022

File Name: Poplar Level at Derby City Gaming_Thu 08.12.2021.ppd
 Start Date: 8/12/2021
 Start Time: 7:00:00 AM
 Condition: Jefferson County Public Schools (FCPS) in session
 Weather: Partly Cloudy, Dry, Hot and Humid 80 deg F low and 93 deg F high

Start Time	Poplar Level Road KY 864 From North			Total Truck Parts From East			Poplar Level Road KY 864 From South			Derby City Gaming From West			TOTAL	Poplar Level from North	Poplar Level from South	Poplar Level Rd 2-way Volume	DCG Lefts from West
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		Turning	Movement	Counts	Hourly Total
7:00 AM	4	248	0	0	0	0	0	223	4	2	0	1	482	252	227		
7:15 AM	3	200	0	0	0	0	0	252	3	2	0	1	461	203	255		
7:30 AM	3	249	0	0	0	0	0	310	5	2	0	1	570	252	315		
7:45 AM	2	273	0	0	0	0	0	258	5	4	0	2	544	275	263		
														982	1060	2042	5
8:00 AM	1	230	2	0	0	1	0	219	3	4	0	4	464	233	222		
8:15 AM	4	218	1	0	0	3	0	263	4	2	0	2	497	223	267		
8:30 AM	4	196	0	0	0	0	0	259	4	4	0	1	468	200	263		
8:45 AM	11	252	0	0	0	1	1	236	5	1	0	2	509	263	242		
														919	994	1913	9
9:00 AM	21	224	0	0	0	3	0	223	8	3	0	3	485	245	231		
9:15 AM	13	225	1	2	0	0	0	224	4	2	0	4	475	239	228		
9:30 AM	13	201	0	0	0	0	0	196	14	3	0	7	434	214	210		
9:45 AM	27	200	1	0	0	3	0	205	8	6	0	4	454	228	213		
														926	882	1808	18
10:00 AM	13	188	1	2	0	1	0	225	12	6	0	11	459	202	237		
10:15 AM	17	216	0	0	0	5	2	169	15	7	0	7	438	233	186		
10:30 AM	16	214	0	0	0	3	1	182	12	8	0	9	445	230	195		
10:45 AM	15	212	0	1	0	1	0	196	9	9	0	11	454	227	205		
														892	823	1715	38
11:00 AM	23	173	0	0	0	2	1	184	11	19	0	16	429	196	196		
11:15 AM	28	222	2	1	0	3	0	211	15	10	0	6	498	252	226		
11:30 AM	15	210	2	0	0	1	1	226	15	11	0	22	503	227	242		
11:45 AM	16	198	0	2	0	1	0	138	4	8	0	8	375	214	142		
														889	806	1695	52
12:00 PM	26	202	0	3	0	2	1	202	7	4	0	16	463	228	210		
12:15 PM	13	236	2	1	0	2	0	198	5	10	0	14	481	251	203		
12:30 PM	22	224	2	1	0	1	0	216	8	17	1	7	499	248	224		
12:45 PM	18	207	1	1	0	0	0	201	9	14	1	9	461	226	210		
														953	847	1800	46
1:00 PM	14	189	0	1	2	3	1	186	11	12	1	11	431	203	198		
1:15 PM	17	177	3	3	0	2	1	169	7	12	1	9	401	197	177		
1:30 PM	22	200	1	3	0	1	3	152	7	14	0	18	421	223	162		
1:45 PM	14	237	2	2	0	1	1	158	6	12	0	13	446	253	165		
														876	702	1578	51
2:00 PM	26	263	1	1	0	2	1	224	12	8	0	14	552	290	237		
2:15 PM	17	276	1	1	0	1	1	235	15	14	0	17	578	294	251		
2:30 PM	8	290	2	2	0	1	0	246	20	20	0	22	611	300	266		
2:45 PM	11	346	0	0	0	0	0	294	6	21	0	22	700	357	300		
														1241	1054	2295	75
3:00 PM	19	395	1	2	0	0	0	364	8	19	0	19	827	415	372		
3:15 PM	23	307	0	3	0	1	0	289	8	19	0	24	674	330	297		
3:30 PM	20	398	2	1	0	2	1	369	22	11	0	11	837	420	392		
3:45 PM	16	372	2	1	0	1	2	341	21	14	0	13	783	390	364		
														1555	1425	2980	67
4:00 PM	10	356	3	0	0	1	3	313	22	18	0	15	741	369	338		
4:15 PM	15	416	2	2	0	2	2	316	9	22	0	20	806	433	327		
4:30 PM	13	376	0	4	0	2	2	243	9	17	0	30	696	389	254		
4:45 PM	20	384	0	0	0	1	1	322	20	18	0	10	776	404	343		
														1595	1262	2857	75
5:00 PM	22	386	1	0	0	0	0	331	26	13	1	24	804	409	357		
5:15 PM	32	317	1	0	0	1	0	274	22	14	1	18	680	350	296		
5:30 PM	44	248	1	2	0	2	0	216	19	14	1	13	560	293	235		
5:45 PM	31	252	2	0	0	0	0	166	18	17	0	22	508	285	184		
														1337	1072	2409	77
6:00 PM	31	234	0	0	0	0	0	185	24	11	0	22	507	265	209		
6:15 PM	35	191	0	2	0	0	0	206	19	22	1	26	502	226	225		
6:30 PM	32	182	0	0	0	0	0	167	14	20	0	24	439	214	181		
6:45 PM	26	193	0	0	0	0	0	152	16	14	2	34	437	219	168		
														924	783	1707	106

Start Time	Poplar Level Road KY 864 From North			Total Truck Parts From East			Poplar Level Road KY 864 From South			Derby City Gaming From West			TOTAL	KY 864 SB	KY 864 NB	DCG EB	DCG Lefts	Poplar Level Rd KY 864
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left						
9:00 AM	11	70	0	0	0	0	0	82	2	0	0	8	173	81	84	8		
9:15 AM	14	76	0	0	0	0	0	113	7	2	0	7	219	90	120	9		
9:30 AM	13	105	0	0	0	0	0	104	8	3	0	5	238	118	112	8		
9:45 AM	17	108	0	0	0	0	0	94	6	8	0	3	236	125	100	11		
												23		414	416	36	23	830
10:00 AM	11	108	0	0	0	0	0	99	7	4	0	10	239	119	106	14		
10:15 AM	16	123	0	0	0	0	0	102	8	8	0	4	261	139	110	12		
10:30 AM	21	117	0	0	0	0	0	124	13	5	0	7	287	138	137	12		
10:45 AM	18	137	0	0	0	0	0	111	10	7	0	5	288	155	121	12		
												26		551	474	50	26	1025
11:00 AM	13	155	0	0	0	0	0	142	10	7	0	12	339	168	152	19		
11:15 AM	15	182	0	0	0	0	0	146	8	3	0	10	364	197	154	13		
11:30 AM	16	157	0	0	0	0	0	163	13	10	0	3	362	173	176	13		
11:45 AM	12	178	0	0	0	0	0	149	6	7	0	10	362	190	155	17		
												35		728	637	62	35	1365
12:00 PM	13	172	0	0	0	0	0	150	11	8	0	9	363	185	161	17		
12:15 PM	14	166	0	0	0	0	0	152	16	7	0	8	363	180	168	15		
12:30 PM	15	152	0	0	0	0	0	134	5	15	0	9	330	167	139	24		
12:45 PM	25	184	0	0	0	0	0	146	10	10	0	19	394	209	156	29		
												45		741	624	85	45	1365
1:00 PM	16	164	0	0	0	0	0	153	8	7	0	13	361	180	161	20		
1:15 PM	20	162	0	0	0	0	0	137	9	8	0	12	348	182	146	20		
1:30 PM	17	161	0	0	0	0	1	131	13	11	0	17	351	178	144	28		
1:45 PM	26	151	0	0	0	0	0	139	11	16	0	12	355	177	150	28		
												54		717	601	96	54	1318
2:00 PM	21	184	0	0	0	0	0	160	10	8	0	13	396	205	170	21		
2:15 PM	27	164	0	0	0	0	0	139	11	10	0	15	366	191	150	25		
2:30 PM	23	175	0	0	0	0	0	145	13	14	1	9	380	198	158	23		
2:45 PM	14	180	0	0	0	0	0	131	11	18	0	19	373	194	142	37		
												56		788	620	106	56	1408
3:00 PM	20	206	0	0	0	0	0	143	12	17	0	15	413	226	155	32		
3:15 PM	30	203	0	0	0	0	0	162	8	14	0	16	433	233	170	30		
3:30 PM	18	185	0	0	0	0	0	146	11	18	0	23	401	203	157	41		
3:45 PM	22	167	1	0	0	0	0	143	8	12	0	19	372	189	151	31		
												73		851	633	134	73	1484
4:00 PM	23	180	0	0	0	0	0	125	16	6	0	18	368	203	141	24		
4:15 PM	21	154	0	0	0	1	0	147	14	8	0	12	357	175	161	20		
4:30 PM	21	175	0	1	0	0	0	130	7	16	0	16	366	196	137	32		
4:45 PM	26	150	0	0	0	0	0	135	10	11	0	15	347	176	145	26		
												61		750	584	102	61	1334
5:00 PM	21	166	1	1	0	0	0	126	9	13	0	13	350	187	135	26		
5:15 PM	36	188	0	0	0	0	0	138	10	12	0	15	399	224	148	27		
5:30 PM	25	174	0	0	0	0	0	134	6	8	0	20	367	199	140	28		
5:45 PM	30	172	0	0	0	0	0	116	13	15	0	22	368	202	129	37		
												70		812	552	118	70	1364
6:00 PM	25	203	0	0	0	0	0	131	10	13	0	18	400	228	141	31		
6:15 PM	24	171	1	0	0	0	0	139	10	5	0	31	381	195	149	36		
6:30 PM	24	175	0	0	0	0	0	142	10	13	0	19	383	199	152	32		
6:45 PM	20	161	0	0	0	0	0	108	16	8	0	28	341	181	124	36		
												96		803	566	135	96	1369
7:00 PM	25	163	0	0	0	0	0	105	14	15	0	25	347	188	119	40		
7:15 PM	30	165	0	0	0	0	0	107	15	21	0	23	361	195	122	44		
7:30 PM	28	169	0	0	0	0	0	106	11	9	0	23	346	197	117	32		
7:45 PM	24	145	0	0	0	0	0	126	21	9	0	20	345	169	147	29		
												91		749	505	145	91	1254
8:00 PM	39	155	0	0	0	0	0	127	13	11	0	27	372	194	140	38		
8:15 PM	26	142	0	0	0	0	0	121	10	6	0	23	328	168	131	29		
8:30 PM	31	150	0	0	0	0	0	116	13	9	0	16	335	181	129	25		
8:45 PM	26	147	0	0	0	0	0	103	19	10	0	25	330	173	122	35		
												91		716	522	127	91	1238
	1023	7597	3	2	0	1	1	6222	512	475	1	1351	17188	8620	6734	1826		

File Name: KY 864 at Derby City Gaming_730p to 1200a Saturday 09.12.2020.ppd

Start Date: Saturday, September 12, 2020

Time Frame: 7:30 PM to 12:00 AM (midnight)

Weather: Light Rain 7pm to 10pm, 82 deg F to 76 deg F, Cloudy 10pm to 12am 76 deg F

Start Time	Poplar Level Rd KY 864 From North			From East			Poplar Level Rd KY 864 From South			Derby City Gaming From West			Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:30 PM	34	140	0	0	0	0	0	112	12	11	0	21	330
7:45 PM	27	147	0	0	0	0	0	106	17	7	0	16	320
8:00 PM	24	135	0	0	0	0	0	81	15	15	0	22	292
8:15 PM	26	142	0	0	0	0	0	111	14	6	0	27	326
8:30 PM	43	116	0	0	0	0	0	93	14	14	0	20	300
8:45 PM	24	104	0	0	0	0	0	94	13	10	0	28	273
9:00 PM	28	100	0	0	0	0	0	82	8	12	0	18	248
9:15 PM	27	116	0	0	0	0	0	98	8	19	0	34	302
9:30 PM	24	92	0	0	0	0	0	97	8	6	0	28	255
9:45 PM	21	86	0	0	0	0	0	80	12	18	0	26	243
10:00 PM	16	87	0	0	0	0	0	85	10	12	0	37	247
10:15 PM	19	71	0	0	0	0	0	52	12	20	0	25	199
10:30 PM	34	83	0	0	0	0	0	65	9	22	0	33	246
10:45 PM	25	79	0	0	0	0	0	65	11	16	0	42	238
11:00 PM	23	78	0	0	0	0	0	60	4	16	0	33	214
11:15 PM	15	92	0	0	0	0	0	68	12	10	0	46	243
11:30 PM	28	77	0	0	0	0	1	48	9	16	0	33	212
11:45 PM	29	67	0	0	0	0	0	35	11	9	0	29	180

KY 864 SB	KY 864 NB	Derby City Gaming Eastbound	DCG Exit Left Turns	Poplar Level Road KY 864
174	124	32		
174	123	23	37	595
159	96	37		
168	125	33		
159	107	34		
128	107	38		
614	435	142	97	1049
128	90	30		
143	106	53		
116	105	34		
107	92	44		
494	393	161	106	887
103	95	49		
90	64	45		
117	74	55		
104	76	58		
414	309	207	137	723
101	64	49		
107	80	56		
105	57	49		
96	46	38		
409	247	192	141	656

File Name: Durrett at Breitenstein, DCG gate_Wed 09.01.2021 700-930 AM.ppd

Start Date: Wednesday -- September 1, 2021

Start Time: 7:00:00 AM

Weather: Partly Cloudy, 72 deg F

Start Time	DURRETT LANE From North			BREITENSTEIN AVE From East			DURRETT LN From South			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	0	6	0	2	0	13	5	5	0	31
7:15 AM	0	10	0	1	0	13	5	8	0	37
7:30 AM	0	4	0	0	0	6	7	10	0	27
7:45 AM	0	4	0	0	0	8	8	7	0	27
8:00 AM	0	3	0	0	0	8	9	3	0	23
8:15 AM	0	10	1	0	0	6	20	9	0	46
8:30 AM	0	6	2	0	0	7	12	7	0	34
8:45 AM	0	6	1	2	0	12	6	5	0	32
9:00 AM	0	7	0	0	0	13	13	5	0	38
9:15 AM	0	7	1	3	0	20	9	5	0	45
AM Peak Hour 8:15 to 9:15 AM	0	29	4	2	0	38	51	26	0	150

File Name: Durrett at Breitenstein, DCG gate_Wed 09.01.2021 330-600 PM.ppd

Start Date: Wednesday -- September 1, 2021

Start Time: 3:30:00 PM

Weather: Partly Cloudy, 84 deg F

Start Time	DURRETT LANE From North			BREITENSTEIN AVE From East			DURRETT LANE From South			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
3:30 PM	0	13	1	2	0	13	10	12	0	51
3:45 PM	0	9	3	1	0	16	14	13	0	56
4:00 PM	0	12	2	1	0	15	8	13	0	51
4:15 PM	0	14	0	2	0	20	8	14	0	58
4:30 PM	0	11	1	1	0	16	11	16	0	56
4:45 PM	0	14	2	1	0	17	15	12	0	61
5:00 PM	0	22	1	2	0	10	12	14	0	61
5:15 PM	0	14	0	1	0	20	20	12	0	67
5:30 PM	0	19	2	1	0	20	10	13	0	65
5:45 PM	0	8	3	0	0	18	8	9	0	46
PM Peak Hour 4:45 to 5:45 PM	0	69	5	5	0	67	57	51	0	254

File Name: Louisville Durrett Lane at Breitenstein Ave, Thursday 10.14.2021 815 to 1130 AM.ppd

Start Date: Thursday, 10/14/2021

Count Time: 8:15 AM to 11:30 AM

Weather: Mostly Cloudy 69 deg F to 76 deg F

Start Time	From North			DURRETT LANE From East			BREITENSTEIN AVE From South			DURRETT LANE From West			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
8:15 AM	0	0	0	0	7	0	1	1	9	11	5	0	34
8:30 AM	0	0	0	0	12	0	1	0	9	6	3	0	31
8:45 AM	0	0	0	0	4	0	2	0	21	12	4	0	43
9:00 AM	0	0	0	0	10	0	0	0	14	16	5	0	45
9:15 AM	0	0	0	0	7	0	0	0	15	8	4	0	34
9:30 AM	0	0	0	0	6	2	4	0	16	4	3	0	35
9:45 AM	0	0	0	0	10	1	1	0	18	14	8	0	52
10:00 AM	0	0	0	0	6	3	1	0	21	13	12	0	56
10:15 AM	0	0	0	0	8	1	3	0	23	14	5	0	54
10:30 AM	0	0	0	0	2	0	2	0	18	8	6	0	36
10:45 AM	0	0	0	0	7	0	1	0	21	13	8	0	50
11:00 AM	0	0	0	0	4	0	0	0	14	9	7	0	34
11:15 AM	0	0	0	0	9	1	1	0	11	10	11	0	43
10 to 11 AM Peak Hour	0	0	0	0	23	4	7	0	83	48	31	0	196

File Name: Louisville Durrett Lane at Breitenstein Ave, Thursday 10.14.2021 330 to 630 PM.ppd

Start Date: Thursday, 10/14/2021

Count Time: 3:30 PM to 6:30 PM

Weather: Mostly Cloudy, 82 deg F to 85 deg F

Start Time	From North			DURRETT LANE From East			BREITENSTEIN AVE From South			DURRETT LANE From West			Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
3:30 PM	0	0	0	0	16	0	1	0	15	14	8	0	54
3:45 PM	0	0	0	0	13	0	3	0	18	11	14	0	59
4:00 PM	0	0	0	0	13	1	2	0	10	14	17	0	57
4:15 PM	0	0	0	0	18	1	3	0	24	16	21	0	83
4:30 PM	0	0	0	0	19	3	0	0	21	13	18	0	74
4:45 PM	0	0	0	0	19	2	2	0	15	25	29	0	92
5:00 PM	0	0	0	0	21	2	3	0	12	15	23	0	76
5:15 PM	0	0	0	0	15	2	3	0	10	29	28	0	87
5:30 PM	0	0	0	0	23	1	2	0	27	13	18	0	84
5:45 PM	0	0	0	0	12	2	2	0	17	7	12	0	52
6:00 PM	0	0	0	0	8	0	1	0	13	15	14	0	51
6:15 PM	0	0	0	0	11	0	2	0	13	10	16	0	52
4:45 to 5:45 PM Peak Hour	0	0	0	0	78	7	10	0	64	82	98	0	339

Hourly Distribution of Entering and Exiting Vehicle Trips by Land Use

Source: ITE Trip Generation Manual , 10th Edition

Land Use Code	312								
Land Use	Business Hotel								
Setting	General Urban/Suburban								
Time Period	Weekday								
Trip Type	Vehicle								
# Data Sites	8								
	% of 24-Hour Traffic								
Time	Entering		Trips In	Exiting	Exit percentage	Trips Out	DCG Exit Lefts	DCG Exit Rights	
12-1 AM	1.7	0.017	9	1.2	0.012	7			
1-2 AM	0.9	0.009	5	0.9	0.009	5			
2-3 AM	0.6	0.006	3	0.5	0.005	3			
3-4 AM	0.4	0.004	2	0.7	0.007	4			
4-5 AM	1.1	0.011	6	1.4	0.014	8			
5-6 AM	1.6	0.016	9	2.5	0.025	14			
6-7 AM	2.9	0.029	16	4.8	0.048	26			
7-8 AM	4.8	0.048	26	9.4	0.094	52	31	21	
8-9 AM	3.6	0.036	20	7.6	0.076	42	25	17	
9-10 AM	3.1	0.031	17	6.3	0.063	35	21	14	
10-11 AM	2.8	0.028	15	5.4	0.054	30	18	12	
11-12 PM	3.4	0.034	19	3.9	0.039	21	13	9	
12-1 PM	3.9	0.039	22	3.9	0.039	21	13	9	
1-2 PM	3.4	0.034	19	3.6	0.036	20	12	8	
2-3 PM	5.0	0.050	28	3.9	0.039	21	13	9	
3-4 PM	5.5	0.055	30	4.8	0.048	26	16	11	
4-5 PM	6.1	0.061	34	5.2	0.052	29	17	11	
5-6 PM	7.5	0.075	41	6.3	0.063	35	21	14	
6-7 PM	7.3	0.073	40	6.6	0.066	36	22	15	
7-8 PM	9.3	0.093	51	6.2	0.062	34	20	14	
8-9 PM	7.8	0.078	43	5.1	0.051	28	17	11	
9-10 PM	7.3	0.073	40	3.8	0.038	21	13	8	
10-11 PM	6.2	0.062	34	3.1	0.031	17	10	7	
11-12 AM	3.5	0.035	19	2.7	0.027	15	9	6	
			550			550			

File Name: Poplar Level at Derby City Gaming_Thu 08.12.2021.ppd
 Start Date: 8/12/2021
 Start Time: 7:00:00 AM
 Condition: Jefferson County Public Schools (FCPS) in session
 Weather: Partly Cloudy, Dry, Hot and Humid 80 deg F low and 93 deg F high

Start Time	Poplar Level from North	Poplar Level from South	Poplar Level Rd 2-way Volume	DCG Lefts from West	DCG Entering	DCG % Exiting Lefts	Estimated DCG Left Turns Fall 2022	DCG Exiting
Turning Movement Counts Hourly Total								
7:00 AM	252	227			8			3
7:15 AM	203	255			6			3
7:30 AM	252	315			8			3
7:45 AM	275	263			7			6
	982	1060	2042	5	29	0.45%	2	15
8:00 AM	233	222			4			8
8:15 AM	223	267			8			4
8:30 AM	200	263			8			5
8:45 AM	263	242			16			3
	919	994	1913	9	36	0.80%	4	20
9:00 AM	245	231			29			6
9:15 AM	239	228			17			6
9:30 AM	214	210			27			10
9:45 AM	228	213			35			10
	926	882	1808	18	108	1.61%	7	32
10:00 AM	202	237			25			17
10:15 AM	233	186			32			14
10:30 AM	230	195			28			17
10:45 AM	227	205			24			20
	892	823	1715	38	109	3.39%	15	68
11:00 AM	196	196			34			35
11:15 AM	252	226			43			16
11:30 AM	227	242			30			33
11:45 AM	214	142			20			16
	889	806	1695	52	127	4.64%	21	100
12:00 PM	228	210			33			20
12:15 PM	251	203			18			24
12:30 PM	248	224			30			24
12:45 PM	226	210			27			23
	953	847	1800	46	108	4.10%	18	91
1:00 PM	203	198			25			23
1:15 PM	197	177			24			21
1:30 PM	223	162			29			32
1:45 PM	253	165			20			25
	876	702	1578	51	98	4.55%	20	101
2:00 PM	290	237			38			22
2:15 PM	294	251			32			31
2:30 PM	300	266			28			42
2:45 PM	357	300			17			43
	1241	1054	2295	75	115	6.69%	30	138
3:00 PM	415	372			27			38
3:15 PM	330	297			31			43
3:30 PM	420	392			42			22
3:45 PM	390	364			37			27
	1555	1425	2980	67	137	5.98%	27	130
4:00 PM	369	338			32			33
4:15 PM	433	327			24			42
4:30 PM	389	254			22			47
4:45 PM	404	343			40			28
	1595	1262	2857	75	118	6.69%	30	150
5:00 PM	409	357			48			37
5:15 PM	350	296			54			32
5:30 PM	293	235			63			27
5:45 PM	285	184			49			39
	1337	1072	2409	77	214	6.87%	31	135
6:00 PM	265	209			55			33
6:15 PM	226	225			54			48
6:30 PM	214	181			46			44
6:45 PM	219	168			42			48
	924	783	1707	106	197	9.46%	42	173

DCG Entering 7am to 7pm	DCG Exiting 7am to 7pm
1288	1121

WEEKDAY

55.22%

247

DCG Exiting Full Day EX Estimate

2242

Daily Exit Trips per Gaming Seat

2.24

Future Fall 2022 400 Gaming Seats Daily Trips Exit

897

50% Exit Trips During 7a to 7p

448

File Name: Derby City Gaming Louisville/Poplar Level Rd KY 864 at Derby City Gaming_9 am to 3 pm_08.29.2020.ppd
 Start Date: Saturday, August 29, 2020
 Start Time: 9:00:00 AM
 Weather: Cloudy, Mostly Cloudy 75 deg F start, 87 deg F high at 6pm, 77 deg F finish
 Comment:

Start Time	KY 864 SB	KY 864 NB	Derby City Gaming Entering	DCG EB, Exits	DCG Left Turn Exiting	Poplar Level Rd KY 864	DCG Exit Left %'s	Future Fall 2022 DCG Exiting Left Turns
9:00 AM	81	84		8				
9:15 AM	90	120		9				
9:30 AM	118	112		8				
9:45 AM	125	100		11				
10:00 AM	414	416	78	36	23	830	0.01	9
10:15 AM	119	106		14				
10:30 AM	139	110		12				
10:45 AM	138	137		12				
11:00 AM	155	121		12				
11:15 AM	551	474	104	50	26	1025	0.01	10
11:30 AM	168	152		19				
11:45 AM	197	154		13				
12:00 PM	173	176		13				
12:15 PM	190	155		17				
12:30 PM	728	637	93	62	35	1365	0.02	14
12:45 PM	185	161		17				
1:00 PM	190	168		15				
1:15 PM	167	139		24				
1:30 PM	209	156		29				
1:45 PM	741	624	109	85	45	1365	0.02	18
2:00 PM	180	161		20				
2:15 PM	182	146		20				
2:30 PM	178	144		28				
2:45 PM	177	150		28				
3:00 PM	717	601	120	96	54	1318	0.02	22
3:15 PM	205	170		21				
3:30 PM	191	150		25				
3:45 PM	198	158		23				
4:00 PM	194	142		37				
4:15 PM	788	620	130	106	56	1408	0.03	22
4:30 PM	226	155		32				
4:45 PM	233	170		30				
5:00 PM	203	157		41				
5:15 PM	189	151		31				
5:30 PM	851	633	129	134	73	1484	0.03	29
5:45 PM	203	141		24				
6:00 PM	175	161		20				
6:15 PM	196	137		32				
6:30 PM	176	145		26				
6:45 PM	750	584	138	102	61	1334	0.03	24
7:00 PM	187	135		26				
7:15 PM	224	148		27				
7:30 PM	199	140		28				
7:45 PM	202	129		37				
8:00 PM	812	552	150	118	70	1364	0.03	28
8:15 PM	228	141		31				
8:30 PM	195	149		36				
8:45 PM	199	152		32				
9:00 PM	181	124		36				
9:15 PM	803	596	139	135	96	1369	0.04	38
9:30 PM	188	119		40				
9:45 PM	195	122		44				
10:00 PM	197	117		32				
10:15 PM	169	147		29				
10:30 PM	749	505	168	145	91	1254	0.04	36
10:45 PM	194	140		38				
11:00 PM	168	131		29				
11:15 PM	181	129		25				
11:30 PM	173	122		35				
11:45 PM	716	522	177	127	91	1238	0.04	36
	8620	6734		1826	721		0.33	288
			1535	DCG Saturday Entering 9a- 9p 1535	DCG Saturday Exits 9a- 9p 1826			
				DCG Entering 9p to midnight 560	DCG Exiting 9p to midnight 384			
				DCG Sat. 9a - 12a 2095	DCG Sat. 9a - 12a 2210			Exit Trips per Seat 2.21
								Future Fall 2022, 400 Gaming Seats Daily Trips Exiting 884

File Name: Saturday, September 12th - 2020
 Start Date: Count from 7:30 pm to 12:00 am (midnight)
 Time Frame: Light Rain and Cloudy
 Weather:

Start Time	KY 864 SB	KY 864 NB	Derby City Gaming Eastbound	DCG Exit Left Turns	Poplar Level Road KY 864	DCG Entering	DCG Exit Left Turn %'s	Future Fall 2022 DCG Exiting Left Turns
7:30 PM	174	124	32					
7:45 PM	174	123	23	37	595			
8:00 PM	159	96	37					
8:15 PM	168	125	33					
8:30 PM	159	107	34					
8:45 PM	128	107	38					
9:00 PM	614	435	142	97	1049			
9:15 PM	128	90	30					
9:30 PM	143	106	53					
9:45 PM	116	105	34					
10:00 PM	107	92	44					
10:15 PM	494	393	161	106	887	136	0.05	42
10:30 PM	103	95	49					
10:45 PM	90	64	45					
11:00 PM	117	74	55					
11:15 PM	104	76	58					
11:30 PM	414	309	207	137	723	136	0.06	55
11:45 PM	101	64	49					
	107	80	56					
	105	57	49					
	96	46	38					
	409	247	192	141	656	131	0.06	56
			560	384				154
			DCG Exiting 9p to midnight 560	DCG Exiting 9p to midnight				



Louisville - Jefferson County Kentucky

Traffic Signal Warrant Analysis / KYTC-MUTCD spreadsheet

Existing Weekday 2021 PM Afternoon Peak Hour

August 12, 2021 Weekday 12-hour counts with 40 mph posted speed and 45 mph

- Existing KY 864 at Derby City Gaming 12 hour turning movement counts
- Poplar Level Road (KY 864) at Derby City Gaming with future 2022 Hotel, Gaming

Existing Weekend 2020 (12 pm to 12 am midnight)

August 29, 2020 & September 12, 2020 with 12-hour turning movement counts

40 mph posted speed and 45 mph

- Existing KY 864 at Derby City Gaming 12 hour turning movement counts
- Poplar Level Road (KY 864) at Derby City Gaming future 2022 Hotel, Gaming



Kentucky Transportation Cabinet
 Division of Traffic Operations
 TRAFFIC SIGNAL WARRANT ANALYSIS

TC 72-6
 10/2013

COUNTY JEFFERSON DATE August 12, 2021 DAY OF WEEK Thursday
 CITY LOUISVILLE MILEPOST 10.633 NO. OF CORRECTIBLE CRASHES IN 12 MONTH PERIOD 3
 MAJOR STREET NAME POPLAR LEVEL ROAD KY 864 NO. OF MAJOR STREET APPROACH LANES 2
 MINOR STREET NAME DERBY CITY GAMING NO. OF MINOR STREET APPROACH LANES 1
 POSTED SPEED LIMIT MAJOR SREET 40 MPH POPULATION < 10,000 YES NO
 POSTED SPEED LIMIT MINOR SREET 25 MPH REDUCED WARRANTS BASED UPON SPEED POPULATION

TIME	MAJOR STREET TWO WAY VOLUME	MINOR STREET HIGHEST VOLUME APPROACH Are Side Street Rights Included? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Warrant 1 Condition A		Warrant 1 Condition B		Warrant 7 - CRASH EXPERIENCE (Warrant 1 Condition A or B 80% Satisfied) AND (5 or More Correctible Crashes in 12 Month Period)			
			Minimum Vehicular Volume		Interruption of Continuous Traffic		Warrant 1 Condition A - 80%		Warrant 1 Condition B - 80%	
			MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR
			500 (1)	150 (1)	750 (1)	75 (1)	400 (1)	120 (1)	600 (1)	60 (1)
			600 (2)	200 (2)	900 (2)	100 (2)	480 (2)	160 (2)	720 (2)	80 (2)
REDUCED WARRANTS				REDUCED WARRANTS (56% Reduction)						
350 (1)	105 (1)	525 (1)	53 (1)	280 (1)	84 (1)	420 (1)	42 (1)			
420 (2)	140 (2)	630 (2)	70 (2)	336 (2)	112 (2)	504 (2)	56 (2)			
(1) = ONE LANE APPROACH				(2) = TWO LANE APPROACH						
7-8 am	2,042	5	X		X		X		X	
8-9 am	1,913	9	X		X		X		X	
9-10 am	1,808	18	X		X		X		X	
10-11 am	1,715	38	X		X		X		X	
11-12 am	1,695	52	X		X		X		X	
12-1 pm	1,800	46	X		X		X		X	
1-2 pm	1,578	51	X		X		X		X	
2-3 pm	2,295	75	X		X	X	X		X	X
3-4 pm	2,980	67	X		X		X		X	X
4-5 pm	2,857	75	X		X	X	X		X	X
5-6 pm	2,409	77	X		X	X	X		X	X
6-7 pm	1,707	106	X		X	X	X		X	X
NUMBER OF HOURS			0		4		0		5	
COMPLIANCE			NO		NO		NO			



Kentucky Transportation Cabinet
 Division of Traffic Operations
 TRAFFIC SIGNAL WARRANT ANALYSIS

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 10/2013

COUNTY **JEFFERSON** DATE **Fall '22 Hotel +400 games** DAY OF WEEK **Thursday**
 CITY **LOUISVILLE** MILEPOST **10.633** NO. OF CORRECTIBLE CRASHES IN 12 MONTH PERIOD **3**
 MAJOR STREET NAME **POPLAR LEVEL ROAD KY 864** NO. OF MAJOR STREET APPROACH LANES **2**
 MINOR STREET NAME **DERBY CITY GAMING** NO. OF MINOR STREET APPROACH LANES **1**
 POSTED SPEED LIMIT MAJOR SREET **40** MPH POPULATION < 10,000 YES NO
 POSTED SPEED LIMIT MINOR SREET **25** MPH REDUCED WARRANTS BASED UPON SPEED POPULATION

TIME	MAJOR STREET TWO WAY VOLUME	MINOR STREET HIGHEST VOLUME APPROACH Are Side Street Rights Included? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Warrant 1 Condition A		Warrant 1 Condition B		Warrant 7 - CRASH EXPERIENCE (Warrant 1 Condition A or B 80% Satisfied) AND (5 or More Correctible Crashes in 12 Month Period)			
			Minimum Vehicular Volume		Interruption of Continuous Traffic		Warrant 1 Condition A - 80%		Warrant 1 Condition B - 80%	
			MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR
			500 (1)	150 (1)	750 (1)	75 (1)	400 (1)	120 (1)	600 (1)	60 (1)
			600 (2)	200 (2)	900 (2)	100 (2)	480 (2)	160 (2)	720 (2)	80 (2)
REDUCED WARRANTS				REDUCED WARRANTS (56% Reduction)						
350 (1)	105 (1)	525 (1)	53 (1)	280 (1)	84 (1)	420 (1)	42 (1)			
420 (2)	140 (2)	630 (2)	70 (2)	336 (2)	112 (2)	504 (2)	56 (2)			
(1) = ONE LANE APPROACH				(2) = TWO LANE APPROACH						
7-8 am	2,042	38	X		X		X		X	
8-9 am	1,913	38	X		X		X		X	
9-10 am	1,808	46	X		X		X		X	
10-11 am	1,715	71	X		X		X		X	X
11-12 am	1,695	86	X		X	X	X		X	X
12-1 pm	1,800	77	X		X	X	X		X	X
1-2 pm	1,578	83	X		X	X	X		X	X
2-3 pm	2,295	118	X		X	X	X		X	X
3-4 pm	2,980	110	X		X	X	X		X	X
4-5 pm	2,857	122	X		X	X	X	X	X	X
5-6 pm	2,409	129	X		X	X	X	X	X	X
6-7 pm	1,707	170	X	X	X	X	X	X	X	X
NUMBER OF HOURS			1		8		3		9	
COMPLIANCE			NO		YES		NO			



Kentucky Transportation Cabinet
 Division of Traffic Operations
 TRAFFIC SIGNAL WARRANT ANALYSIS

TC 72-6
 10/2013

COUNTY **JEFFERSON** DATE **Fall '22 Hotel +400 games** DAY OF WEEK **Thursday**
 CITY **LOUISVILLE** MILEPOST **10.633** NO. OF CORRECTIBLE CRASHES IN 12 MONTH PERIOD **3**
 MAJOR STREET NAME **POPLAR LEVEL ROAD KY 864** NO. OF MAJOR STREET APPROACH LANES **2**
 MINOR STREET NAME **DERBY CITY GAMING** NO. OF MINOR STREET APPROACH LANES **1**
 POSTED SPEED LIMIT MAJOR SREET **45** MPH POPULATION < 10,000 YES NO
 POSTED SPEED LIMIT MINOR SREET **25** MPH REDUCED WARRANTS BASED UPON SPEED POPULATION

TIME	MAJOR STREET TWO WAY VOLUME	MINOR STREET HIGHEST VOLUME APPROACH Are Side Street Rights Included? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Warrant 1 Condition A		Warrant 1 Condition B		Warrant 7 - CRASH EXPERIENCE (Warrant 1 Condition A or B 80% Satisfied) AND (5 or More Correctible Crashes in 12 Month Period)			
			Minimum Vehicular Volume		Interruption of Continuous Traffic		Warrant 1 Condition A - 80%		Warrant 1 Condition B - 80%	
			MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR
			500 (1)	150 (1)	750 (1)	75 (1)	400 (1)	120 (1)	600 (1)	60 (1)
			600 (2)	200 (2)	900 (2)	100 (2)	480 (2)	160 (2)	720 (2)	80 (2)
REDUCED WARRANTS				REDUCED WARRANTS (56% Reduction)						
350 (1)	105 (1)	525 (1)	53 (1)	280 (1)	84 (1)	420 (1)	42 (1)			
420 (2)	140 (2)	630 (2)	70 (2)	336 (2)	112 (2)	504 (2)	56 (2)			
(1) = ONE LANE APPROACH				(2) = TWO LANE APPROACH						
7-8 am	2,042	38	X		X		X			
8-9 am	1,913	38	X		X		X			
9-10 am	1,808	46	X		X		X		X	
10-11 am	1,715	71	X		X	X		X	X	
11-12 am	1,695	86	X		X	X	X	X	X	
12-1 pm	1,800	77	X		X	X		X	X	
1-2 pm	1,578	83	X		X	X		X	X	
2-3 pm	2,295	118	X	X	X	X	X	X	X	
3-4 pm	2,980	110	X	X	X	X	X	X	X	
4-5 pm	2,857	122	X	X	X	X	X	X	X	
5-6 pm	2,409	129	X	X	X	X	X	X	X	
6-7 pm	1,707	170	X	X	X	X	X	X	X	
NUMBER OF HOURS			5		9		6		10	
COMPLIANCE			NO		YES		NO			



Kentucky Transportation Cabinet
 Division of Traffic Operations
 TRAFFIC SIGNAL WARRANT ANALYSIS

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COUNTY Jefferson DATE 8/29/20 and 9/12/20 DAY OF WEEK Saturday
 CITY Louisville MILEPOST 10.633 NO. OF CORRECTIBLE CRASHES IN 12 MONTH PERIOD 3
 MAJOR STREET NAME Poplar Level Road KY 864 NO. OF MAJOR STREET APPROACH LANES 2
 MINOR STREET NAME Derby City Gaming NO. OF MINOR STREET APPROACH LANES 1
 POSTED SPEED LIMIT MAJOR SREET 40 MPH POPULATION < 10,000 YES NO
 POSTED SPEED LIMIT MINOR SREET 25 MPH REDUCED WARRANTS BASED UPON SPEED POPULATION

TIME	MAJOR STREET TWO WAY VOLUME	MINOR STREET HIGHEST VOLUME APPROACH Are Side Street Rights Included? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Warrant 1 Condition A		Warrant 1 Condition B		Warrant 7 - CRASH EXPERIENCE (Warrant 1 Condition A or B 80% Satisfied) AND (5 or More Correctible Crashes in 12 Month Period)			
			Minimum Vehicular Volume		Interruption of Continuous Traffic		Warrant 1 Condition A - 80%		Warrant 1 Condition B - 80%	
			MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR
			500 (1)	150 (1)	750 (1)	75 (1)	400 (1)	120 (1)	600 (1)	60 (1)
			600 (2)	200 (2)	900 (2)	100 (2)	480 (2)	160 (2)	720 (2)	80 (2)
REDUCED WARRANTS				REDUCED WARRANTS (56% Reduction)						
350 (1)	105 (1)	525 (1)	53 (1)	280 (1)	84 (1)	420 (1)	42 (1)			
420 (2)	140 (2)	630 (2)	70 (2)	336 (2)	112 (2)	504 (2)	56 (2)			
(1) = ONE LANE APPROACH				(2) = TWO LANE APPROACH						
12-1 pm	1,365	45	X		X		X			
1-2 pm	1,318	54	X		X		X			
2-3 pm	1,408	56	X		X		X			
3-4 pm	1,484	73	X		X		X		X	
4-5 pm	1,334	61	X		X		X		X	
5-6 pm	1,364	70	X		X		X		X	
6-7 pm	1,369	96	X		X	X	X	X	X	
7-8 pm	1,254	91	X		X	X	X	X	X	
8-9 pm	1,238	91	X		X	X	X	X	X	
9-10 pm	887	106	X		X	X	X	X	X	
10-11 pm	723	137	X		X	X	X	X	X	
11-12 am	657	141	X		X	X	X	X	X	
NUMBER OF HOURS			0		3		2		8	
COMPLIANCE			NO		NO		NO			



Kentucky Transportation Cabinet
 Division of Traffic Operations
 TRAFFIC SIGNAL WARRANT ANALYSIS

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 10/2013

COUNTY Jefferson DATE Fall '22 Hotel +400 games DAY OF WEEK Saturday
 CITY Louisville MILEPOST 10.633 NO. OF CORRECTIBLE CRASHES IN 12 MONTH PERIOD 3
 MAJOR STREET NAME Poplar Level Road KY 864 NO. OF MAJOR STREET APPROACH LANES 2
 MINOR STREET NAME Derby City Gaming NO. OF MINOR STREET APPROACH LANES 1
 POSTED SPEED LIMIT MAJOR SREET 40 MPH POPULATION < 10,000 YES NO
 POSTED SPEED LIMIT MINOR SREET 25 MPH REDUCED WARRANTS BASED UPON SPEED POPULATION

TIME	MAJOR STREET TWO WAY VOLUME	MINOR STREET HIGHEST VOLUME APPROACH Are Side Street Rights Included? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Warrant 1 Condition A		Warrant 1 Condition B		Warrant 7 - CRASH EXPERIENCE (Warrant 1 Condition A or B 80% Satisfied) AND (5 or More Correctible Crashes in 12 Month Period)			
			Minimum Vehicular Volume		Interruption of Continuous Traffic		Warrant 1 Condition A - 80%		Warrant 1 Condition B - 80%	
			MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR
			500 (1)	150 (1)	750 (1)	75 (1)	400 (1)	120 (1)	600 (1)	60 (1)
			600 (2)	200 (2)	900 (2)	100 (2)	480 (2)	160 (2)	720 (2)	80 (2)
REDUCED WARRANTS				REDUCED WARRANTS (56% Reduction)						
350 (1)	105 (1)	525 (1)	53 (1)	280 (1)	84 (1)	420 (1)	42 (1)			
420 (2)	140 (2)	630 (2)	70 (2)	336 (2)	112 (2)	504 (2)	56 (2)			
(1) = ONE LANE APPROACH				(2) = TWO LANE APPROACH						
12-1 pm	1,365	76	X		X	X	X	X	X	
1-2 pm	1,318	88	X		X	X	X	X	X	
2-3 pm	1,408	91	X		X	X	X	X	X	
3-4 pm	1,484	118	X		X	X	X	X	X	
4-5 pm	1,334	102	X		X	X	X	X	X	
5-6 pm	1,364	119	X		X	X	X	X	X	
6-7 pm	1,369	156	X	X	X	X	X	X	X	
7-8 pm	1,254	147	X		X	X	X	X	X	
8-9 pm	1,238	144	X		X	X	X	X	X	
9-10 pm	887	161	X	X	X	X	X	X	X	
10-11 pm	723	202	X	X	X	X	X	X	X	
11-12 am	657	206	X	X	X	X	X	X	X	
NUMBER OF HOURS			4		9		6		11	
COMPLIANCE			NO		YES		NO			



Kentucky Transportation Cabinet
 Division of Traffic Operations
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COUNTY Jefferson DATE Fall '22 Hotel +400 games DAY OF WEEK Saturday
 CITY Louisville MILEPOST 10.633 NO. OF CORRECTIBLE CRASHES IN 12 MONTH PERIOD 3
 MAJOR STREET NAME Poplar Level Road KY 864 NO. OF MAJOR STREET APPROACH LANES 2
 MINOR STREET NAME Derby City Gaming NO. OF MINOR STREET APPROACH LANES 1
 POSTED SPEED LIMIT MAJOR SREET 45 MPH POPULATION < 10,000 YES NO
 POSTED SPEED LIMIT MINOR SREET 25 MPH REDUCED WARRANTS BASED UPON SPEED POPULATION

TIME	MAJOR STREET TWO WAY VOLUME	MINOR STREET HIGHEST VOLUME APPROACH Are Side Street Rights Included? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Warrant 1 Condition A		Warrant 1 Condition B		Warrant 7 - CRASH EXPERIENCE (Warrant 1 Condition A or B 80% Satisfied) AND (5 or More Correctible Crashes in 12 Month Period)			
			Minimum Vehicular Volume		Interruption of Continuous Traffic		Warrant 1 Condition A - 80%		Warrant 1 Condition B - 80%	
			MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR
			500 (1)	150 (1)	750 (1)	75 (1)	400 (1)	120 (1)	600 (1)	60 (1)
			600 (2)	200 (2)	900 (2)	100 (2)	480 (2)	160 (2)	720 (2)	80 (2)
REDUCED WARRANTS						REDUCED WARRANTS (56% Reduction)				
350 (1)	105 (1)	525 (1)	53 (1)	280 (1)	84 (1)	420 (1)	42 (1)			
420 (2)	140 (2)	630 (2)	70 (2)	336 (2)	112 (2)	504 (2)	56 (2)			
(1) = ONE LANE APPROACH						(2) = TWO LANE APPROACH				
12-1 pm	1,365	76	X		X	X	X	X	X	
1-2 pm	1,318	88	X		X	X	X	X	X	
2-3 pm	1,408	91	X		X	X	X	X	X	
3-4 pm	1,484	118	X	X	X	X	X	X	X	
4-5 pm	1,334	102	X		X	X	X	X	X	
5-6 pm	1,364	119	X	X	X	X	X	X	X	
6-7 pm	1,369	156	X	X	X	X	X	X	X	
7-8 pm	1,254	147	X	X	X	X	X	X	X	
8-9 pm	1,238	144	X	X	X	X	X	X	X	
9-10 pm	887	161	X	X	X	X	X	X	X	
10-11 pm	723	202	X	X	X	X	X	X	X	
11-12 am	657	206	X	X	X	X	X	X	X	
NUMBER OF HOURS			8		12		11		12	
COMPLIANCE			YES		YES		NO			



Louisville - Jefferson County Kentucky

Trafficware Synchro version 10 Capacity Analysis

Unsignalized Intersections:

- Poplar Level Road (KY 864) at Derby City Gaming entrance – existing conditions
- Durrett Lane at Breitenstein Avenue (Derby City Gaming entrance)

Signalized Intersection:

- Poplar Level Road (KY 864) at Derby City Gaming entrance, future 2022 condition
- Preston Highway (KY 61) at Durrett Lane

Capacity Analysis Worksheets Order

Existing Weekday 2021 PM Afternoon Peak Hour

Future Weekday 2021 PM Peak Hour, with new 120 room Hotel and 400 Gaming machines

Existing Weekday Durrett Lane at Breitenstein Avenue (Derby City Gaming access road) with morning peak hours analyzed according to existing road traffic peak and anticipated Amazon peak hour (10:00 to 11:00 am) given hour-by-hour Amazon counts at the DKY6 Louisville site from the October 2020 Traffic Impact Study

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↙	↗	↙	↑↑	↑↑	↗
Traffic Vol, veh/h	65	59	87	1143	1335	118
Future Vol, veh/h	65	59	87	1143	1335	118
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	200	-	-	250
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	6	6	2
Mvmt Flow	71	64	95	1242	1451	128

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	2262	726	1579	0	-	0
Stage 1	1451	-	-	-	-	-
Stage 2	811	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	~ 35	367	413	-	-	-
Stage 1	182	-	-	-	-	-
Stage 2	397	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 27	367	413	-	-	-
Mov Cap-2 Maneuver	98	-	-	-	-	-
Stage 1	140	-	-	-	-	-
Stage 2	397	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	63	1.2	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	413	-	98	367	-	-
HCM Lane V/C Ratio	0.229	-	0.721	0.175	-	-
HCM Control Delay (s)	16.3	-	104.9	16.9	-	-
HCM Lane LOS	C	-	F	C	-	-
HCM 95th %tile Q(veh)	0.9	-	3.7	0.6	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection						
Int Delay, s/veh	3					
Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Traffic Vol, veh/h	51	57	5	69	67	5
Future Vol, veh/h	51	57	5	69	67	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	55	62	5	75	73	5

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	117	0	171
Stage 1	-	-	-	-	86
Stage 2	-	-	-	-	85
Critical Hdwy	-	-	4.15	-	6.45
Critical Hdwy Stg 1	-	-	-	-	5.45
Critical Hdwy Stg 2	-	-	-	-	5.45
Follow-up Hdwy	-	-	2.245	-	3.545
Pot Cap-1 Maneuver	-	-	1453	-	812
Stage 1	-	-	-	-	930
Stage 2	-	-	-	-	931
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1453	-	809
Mov Cap-2 Maneuver	-	-	-	-	809
Stage 1	-	-	-	-	926
Stage 2	-	-	-	-	931

Approach	EB	WB	NW
HCM Control Delay, s	0	0.5	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NWLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	818	-	-	1453	-
HCM Lane V/C Ratio	0.096	-	-	0.004	-
HCM Control Delay (s)	9.9	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Intersection						
Int Delay, s/veh	3.3					
Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Traffic Vol, veh/h	51	85	8	69	87	7
Future Vol, veh/h	51	85	8	69	87	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	55	92	9	75	95	8

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	147	0	194
Stage 1	-	-	-	-	101
Stage 2	-	-	-	-	93
Critical Hdwy	-	-	4.15	-	6.45
Critical Hdwy Stg 1	-	-	-	-	5.45
Critical Hdwy Stg 2	-	-	-	-	5.45
Follow-up Hdwy	-	-	2.245	-	3.545
Pot Cap-1 Maneuver	-	-	1417	-	788
Stage 1	-	-	-	-	916
Stage 2	-	-	-	-	923
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1417	-	782
Mov Cap-2 Maneuver	-	-	-	-	782
Stage 1	-	-	-	-	910
Stage 2	-	-	-	-	923

Approach	EB	WB	NW
HCM Control Delay, s	0	0.8	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NWLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	792	-	-	1417	-
HCM Lane V/C Ratio	0.129	-	-	0.006	-
HCM Control Delay (s)	10.2	-	-	7.6	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Intersection						
Int Delay, s/veh	2.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	106	67	73	710	800	124
Future Vol, veh/h	106	67	73	710	800	124
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	200	-	-	250
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	6	6	2
Mvmt Flow	115	73	79	772	870	135

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1414	435	1005	0	-	0
Stage 1	870	-	-	-	-	-
Stage 2	544	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	129	569	685	-	-	-
Stage 1	370	-	-	-	-	-
Stage 2	546	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 114	569	685	-	-	-
Mov Cap-2 Maneuver	225	-	-	-	-	-
Stage 1	327	-	-	-	-	-
Stage 2	546	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	27.3	1	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	685	-	225	569	-	-
HCM Lane V/C Ratio	0.116	-	0.512	0.128	-	-
HCM Control Delay (s)	10.9	-	36.7	12.3	-	-
HCM Lane LOS	B	-	E	B	-	-
HCM 95th %tile Q(veh)	0.4	-	2.6	0.4	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection						
Int Delay, s/veh	1.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	73	61	39	594	761	90
Future Vol, veh/h	73	61	39	594	761	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	200	-	-	250
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	6	6	2
Mvmt Flow	79	66	42	646	827	98

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1234	414	925	0	-	0
Stage 1	827	-	-	-	-	-
Stage 2	407	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	169	587	734	-	-	-
Stage 1	390	-	-	-	-	-
Stage 2	641	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	159	587	734	-	-	-
Mov Cap-2 Maneuver	275	-	-	-	-	-
Stage 1	368	-	-	-	-	-
Stage 2	641	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.1	0.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	734	-	275	587	-	-
HCM Lane V/C Ratio	0.058	-	0.289	0.113	-	-
HCM Control Delay (s)	10.2	-	23.3	11.9	-	-
HCM Lane LOS	B	-	C	B	-	-
HCM 95th %tile Q(veh)	0.2	-	1.2	0.4	-	-

Intersection						
Int Delay, s/veh	2.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	91	54	61	444	642	107
Future Vol, veh/h	91	54	61	444	642	107
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	200	-	-	250
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	6	6	2
Mvmt Flow	99	59	66	483	698	116

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1072	349	814	0	-	0
Stage 1	698	-	-	-	-	-
Stage 2	374	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	215	647	809	-	-	-
Stage 1	455	-	-	-	-	-
Stage 2	666	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	197	647	809	-	-	-
Mov Cap-2 Maneuver	310	-	-	-	-	-
Stage 1	418	-	-	-	-	-
Stage 2	666	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.9	1.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	809	-	310	647	-	-
HCM Lane V/C Ratio	0.082	-	0.319	0.091	-	-
HCM Control Delay (s)	9.8	-	22	11.1	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0.3	-	1.3	0.3	-	-

Intersection						
Int Delay, s/veh	2.7					
Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Traffic Vol, veh/h	26	51	4	29	38	2
Future Vol, veh/h	26	51	4	29	38	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	28	55	4	32	41	2

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	83	0	96
Stage 1	-	-	-	-	56
Stage 2	-	-	-	-	40
Critical Hdwy	-	-	4.15	-	6.45
Critical Hdwy Stg 1	-	-	-	-	5.45
Critical Hdwy Stg 2	-	-	-	-	5.45
Follow-up Hdwy	-	-	2.245	-	3.545
Pot Cap-1 Maneuver	-	-	1495	-	896
Stage 1	-	-	-	-	959
Stage 2	-	-	-	-	975
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1495	-	893
Mov Cap-2 Maneuver	-	-	-	-	893
Stage 1	-	-	-	-	956
Stage 2	-	-	-	-	975

Approach	EB	WB	NW
HCM Control Delay, s	0	0.9	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NWLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	898	-	-	1495	-
HCM Lane V/C Ratio	0.048	-	-	0.003	-
HCM Control Delay (s)	9.2	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection						
Int Delay, s/veh	4.5					
Movement	EBT	EBR	WBL	WBT	NWL	NWR
Lane Configurations						
Traffic Vol, veh/h	31	48	4	23	83	7
Future Vol, veh/h	31	48	4	23	83	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	34	52	4	25	90	8

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	86	0	93
Stage 1	-	-	-	-	60
Stage 2	-	-	-	-	33
Critical Hdwy	-	-	4.15	-	6.45
Critical Hdwy Stg 1	-	-	-	-	5.45
Critical Hdwy Stg 2	-	-	-	-	5.45
Follow-up Hdwy	-	-	2.245	-	3.545
Pot Cap-1 Maneuver	-	-	1492	-	900
Stage 1	-	-	-	-	955
Stage 2	-	-	-	-	982
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1492	-	897
Mov Cap-2 Maneuver	-	-	-	-	897
Stage 1	-	-	-	-	952
Stage 2	-	-	-	-	982

Approach	EB	WB	NW
HCM Control Delay, s	0	1.1	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NWLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	904	-	-	1492	-
HCM Lane V/C Ratio	0.108	-	-	0.003	-
HCM Control Delay (s)	9.5	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Intersection

Int Delay, s/veh 3.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	137	70	42	267	320	94
Future Vol, veh/h	137	70	42	267	320	94
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	200	-	-	250
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	6	6	2
Mvmt Flow	149	76	46	290	348	102

Major/Minor

	Minor2	Major1	Major2			
Conflicting Flow All	585	174	450	0	-	0
Stage 1	348	-	-	-	-	-
Stage 2	237	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	442	839	1107	-	-	-
Stage 1	686	-	-	-	-	-
Stage 2	780	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	423	839	1107	-	-	-
Mov Cap-2 Maneuver	508	-	-	-	-	-
Stage 1	657	-	-	-	-	-
Stage 2	780	-	-	-	-	-

Approach

	EB	NB	SB
HCM Control Delay, s	13.2	1.1	0
HCM LOS	B		

Minor Lane/Major Mvmt

	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1107	-	508	839	-	-
HCM Lane V/C Ratio	0.041	-	0.293	0.091	-	-
HCM Control Delay (s)	8.4	-	15	9.7	-	-
HCM Lane LOS	A	-	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	1.2	0.3	-	-

Intersection						
Int Delay, s/veh	20.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	122	93	130	1143	1335	190
Future Vol, veh/h	122	93	130	1143	1335	190
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	200	-	-	250
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	6	6	2
Mvmt Flow	133	101	141	1242	1451	207

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	2354	726	1658	0	-	0
Stage 1	1451	-	-	-	-	-
Stage 2	903	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	~ 30	367	385	-	-	-
Stage 1	182	-	-	-	-	-
Stage 2	356	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 19	367	385	-	-	-
Mov Cap-2 Maneuver	~ 76	-	-	-	-	-
Stage 1	~ 115	-	-	-	-	-
Stage 2	356	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	277.8	2	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	385	-	76	367	-	-
HCM Lane V/C Ratio	0.367	-	1.745	0.275	-	-
HCM Control Delay (s)	19.7	-	475.5	18.5	-	-
HCM Lane LOS	C	-	F	C	-	-
HCM 95th %tile Q(veh)	1.7	-	11.4	1.1	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

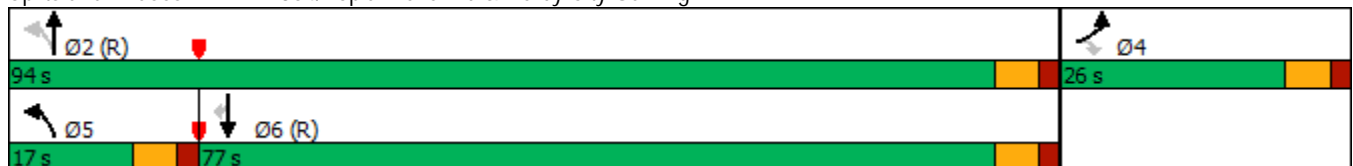


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↗	↖	↑↑	↑↑	↗
Traffic Volume (vph)	122	93	130	1143	1335	190
Future Volume (vph)	122	93	130	1143	1335	190
Satd. Flow (prot)	1770	1583	1770	3406	3406	1583
Flt Permitted	0.950		0.119			
Satd. Flow (perm)	1770	1583	222	3406	3406	1583
Satd. Flow (RTOR)		101				207
Lane Group Flow (vph)	133	101	141	1242	1451	207
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Total Split (s)	26.0	26.0	17.0	94.0	77.0	77.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Act Effct Green (s)	14.3	14.3	93.7	93.7	79.5	79.5
Actuated g/C Ratio	0.12	0.12	0.78	0.78	0.66	0.66
v/c Ratio	0.63	0.36	0.51	0.47	0.64	0.18
Control Delay	63.2	12.5	10.2	5.6	14.5	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.2	12.5	10.2	5.6	14.5	1.7
LOS	E	B	B	A	B	A
Approach Delay	41.3			6.0	12.9	
Approach LOS	D			A	B	
Queue Length 50th (ft)	100	0	22	145	314	0
Queue Length 95th (ft)	159	50	46	223	483	31
Internal Link Dist (ft)	1571			869	1101	
Turn Bay Length (ft)			200			250
Base Capacity (vph)	295	348	316	2660	2257	1119
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.29	0.45	0.47	0.64	0.18

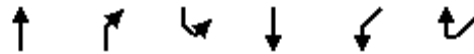
Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.64
 Intersection Signal Delay: 12.0
 Intersection LOS: B
 Intersection Capacity Utilization 65.9%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 1: KY 864/Poplar Level Rd & Derby City Gaming



Lanes, Volumes, Timings Future AM peak w- highest Amazon peak, Marathon C-store & DCG
 1: Preston & Durrett 10/31/2021

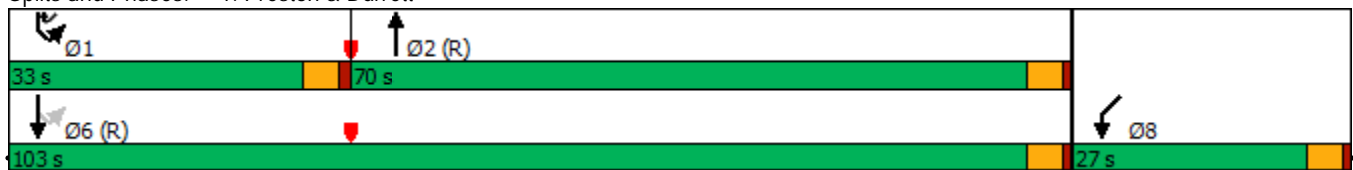


Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations	↑↑		↘	↑↑	↘	↗
Traffic Volume (vph)	1275	135	311	537	199	200
Future Volume (vph)	1275	135	311	537	199	200
Satd. Flow (prot)	3423	0	1736	3471	1736	1553
Flt Permitted			0.065		0.950	
Satd. Flow (perm)	3423	0	119	3471	1736	1553
Satd. Flow (RTOR)	12					217
Lane Group Flow (vph)	1533	0	338	584	216	217
Turn Type	NA		pm+pt	NA	Prot	Over
Protected Phases	2		1	6	8	1
Permitted Phases			6			
Total Split (s)	70.0		33.0	103.0	27.0	33.0
Total Lost Time (s)	4.5		4.5	4.5	4.5	4.5
Act Effect Green (s)	72.3		101.1	101.1	19.9	24.3
Actuated g/C Ratio	0.56		0.78	0.78	0.15	0.19
v/c Ratio	0.80		0.86	0.22	0.82	0.47
Control Delay	28.6		55.4	4.3	76.4	8.8
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	28.6		55.4	4.3	76.4	8.8
LOS	C		E	A	E	A
Approach Delay	28.6			23.0	42.5	
Approach LOS	C			C	D	
Queue Length 50th (ft)	556		210	63	176	0
Queue Length 95th (ft)	704		#324	83	#278	67
Internal Link Dist (ft)	590			751	677	
Turn Bay Length (ft)			300		180	
Base Capacity (vph)	1909		447	2699	300	509
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.80		0.76	0.22	0.72	0.43

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.86
 Intersection Signal Delay: 28.9 Intersection LOS: C
 Intersection Capacity Utilization 79.0% ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Preston & Durrett



Lanes, Volumes, Timings
1: Preston & Durrett

Existing 4:30 to 5:30 PM peak hour

10/29/2021

	↑	↗	↘	↓	↙	↖
Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations	↑↑		↘	↑↑	↘	↖
Traffic Volume (vph)	1366	93	65	1042	84	82
Future Volume (vph)	1366	93	65	1042	84	82
Satd. Flow (prot)	3436	0	1736	3471	1736	1553
Flt Permitted			0.112		0.950	
Satd. Flow (perm)	3436	0	205	3471	1736	1553
Satd. Flow (RTOR)	10					89
Lane Group Flow (vph)	1586	0	71	1133	91	89
Turn Type	NA		pm+pt	NA	Prot	Over
Protected Phases	2		1	6	8	1
Permitted Phases			6			
Total Split (s)	100.0		16.0	116.0	29.0	16.0
Total Lost Time (s)	6.0		6.0	6.0	6.0	6.0
Act Effct Green (s)	106.6		120.1	120.1	12.9	7.5
Actuated g/C Ratio	0.74		0.83	0.83	0.09	0.05
v/c Ratio	0.63		0.29	0.39	0.59	0.54
Control Delay	11.5		5.5	3.8	78.2	24.7
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	11.5		5.5	3.8	78.2	24.7
LOS	B		A	A	E	C
Approach Delay	11.5			3.9	51.7	
Approach LOS	B			A	D	
Queue Length 50th (ft)	335		10	116	84	0
Queue Length 95th (ft)	516		23	174	140	55
Internal Link Dist (ft)	590			751	677	
Turn Bay Length (ft)			300		180	
Base Capacity (vph)	2528		278	2874	275	192
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.63		0.26	0.39	0.33	0.46

Intersection Summary

Cycle Length: 145
 Actuated Cycle Length: 145
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.63
 Intersection Signal Delay: 10.9
 Intersection LOS: B
 Intersection Capacity Utilization 64.5%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 1: Preston & Durrett



Lanes, Volumes, Timings
1: Preston & Durrett

Future PM peak with highest Amazon hr, Marathon & DCG

10/29/2021

	↑	↗	↘	↓	↙	↖
Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations	↑↑		↘	↑↑	↘	↖
Traffic Volume (vph)	1384	155	184	1010	252	201
Future Volume (vph)	1384	155	184	1010	252	201
Satd. Flow (prot)	3419	0	1736	3471	1736	1553
Flt Permitted			0.053		0.950	
Satd. Flow (perm)	3419	0	97	3471	1736	1553
Satd. Flow (RTOR)	13					218
Lane Group Flow (vph)	1672	0	200	1098	274	218
Turn Type	NA		pm+pt	NA	Prot	Over
Protected Phases	2		1	6	8	1
Permitted Phases			6			
Total Split (s)	85.0		24.0	109.0	36.0	24.0
Total Lost Time (s)	6.0		6.0	6.0	6.0	6.0
Act Effct Green (s)	84.7		106.4	106.4	26.6	15.7
Actuated g/C Ratio	0.58		0.73	0.73	0.18	0.11
v/c Ratio	0.84		0.81	0.43	0.86	0.60
Control Delay	30.3		59.0	8.5	81.9	14.5
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	30.3		59.0	8.5	81.9	14.5
LOS	C		E	A	F	B
Approach Delay	30.3			16.3	52.0	
Approach LOS	C			B	D	
Queue Length 50th (ft)	691		124	201	250	0
Queue Length 95th (ft)	832		#233	251	#371	80
Internal Link Dist (ft)	590			751	677	
Turn Bay Length (ft)			300		180	
Base Capacity (vph)	2002		274	2546	359	383
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.84		0.73	0.43	0.76	0.57

Intersection Summary

Cycle Length: 145

Actuated Cycle Length: 145

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 28.1

Intersection LOS: C

Intersection Capacity Utilization 82.3%

ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Preston & Durrett



Lanes, Volumes, Timings
1: Preston & Durrett

Future PM peak w- highest Amazon peak, Marathon, w-o DCG

10/31/2021

	↑	↗	↘	↓	↙	↖
Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations	↑↑		↘	↑↑	↘	↖
Traffic Volume (vph)	1384	142	171	1010	242	191
Future Volume (vph)	1384	142	171	1010	242	191
Satd. Flow (prot)	3423	0	1736	3471	1736	1553
Flt Permitted			0.068		0.950	
Satd. Flow (perm)	3423	0	124	3471	1736	1553
Satd. Flow (RTOR)	12					208
Lane Group Flow (vph)	1658	0	186	1098	263	208
Turn Type	NA		pm+pt	NA	Prot	Over
Protected Phases	2		1	6	8	1
Permitted Phases			6			
Total Split (s)	87.0		23.0	110.0	35.0	23.0
Total Lost Time (s)	4.5		4.5	4.5	4.5	4.5
Act Effect Green (s)	90.7		109.9	109.9	26.1	14.7
Actuated g/C Ratio	0.63		0.76	0.76	0.18	0.10
v/c Ratio	0.77		0.72	0.42	0.84	0.60
Control Delay	24.3		41.9	7.2	80.4	15.0
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	24.3		41.9	7.2	80.4	15.0
LOS	C		D	A	F	B
Approach Delay	24.3			12.2	51.5	
Approach LOS	C			B	D	
Queue Length 50th (ft)	587		88	176	241	0
Queue Length 95th (ft)	772		177	234	338	77
Internal Link Dist (ft)	590			751	677	
Turn Bay Length (ft)			300		180	
Base Capacity (vph)	2145		299	2631	365	379
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.77		0.62	0.42	0.72	0.55

Intersection Summary

Cycle Length: 145
 Actuated Cycle Length: 145
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.84
 Intersection Signal Delay: 23.5
 Intersection LOS: C
 Intersection Capacity Utilization 76.9%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 1: Preston & Durrett

