

TRAFFIC ANALYSIS OF AN UNSIGNALISED INTERSECTION IN BOPAL AHMEDABAD

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ABSTRACT :

At an unsignalised intersection at bopal Ahmadabad in Gujarat . This paper purpose new way to study the traffic flow and analysis . the actual safety situation of considerations of unsignalized intersections and powerful support of high technology, There number of vehicle are passing the particular intersection (bopal Ahmadabad). The data collection are using vedigraphy method to use number of vehicle passing the intersection. the actual safety situation of considerations of unsignalized intersections and powerful support of high technology, the requirements for prevention strategies at unsignalized intersections are presented in this study. A number of previous studies in this area are also summarized. With focusing on typical double-sided two-lane crossing unsignalized intersection, , the vehicle on the road will send signal to the vehicle on the minor road., The method is able to mimic many features of traffic, for which traffic analysis.

Keyword: *unsingnalised intersection , dynamic factor , classified volume, pilot survey*

1.INTRODUCTION

Traffic on the existing roads increasing due to rapid urbanization and industrialization has caused extreme growth of vehicles. Due to this, some problems like congestion, delay and pollution remain in question if the signal is not coordinated. In the urban traffic network, the intersections are the “impediment. point” of road network capacity. The basic function of most arterial streets, which are the main body in road network, is to move traffic safely and efficiently with minimum delay. They are the key factor which guarantees the normal operation of the city’s social and economic activities. The main source of delay and congestion along most arterial streets and roadways are traffic signals. Too often motorists are required to make unnecessary stops because adjacent traffic signals bear no relationship to each other. This results in longer travel times and increased vehicle emissions and fuel consumption which on the other hand results in increased air and noise pollution. Coordination of signal is achieved when a platoon achieves green phase at successive intersections. Coordination is done by time space diagram of various cycle lengths.

1.2 STUDY AREA

A 1.428 km. road stretch has been a connecting link between Bopal cross road and purshotam nagar areas of Ahmadabad, which has been selected as study area These intersections face major problems like traffic congestion, increased delay time frequently, which results in overall inefficiency of present road facility. Road Inventory Data and Traffic Volume Count has been performed in order to determine the need for traffic signals at unsignalized intersections. Traffic Volume Data has been converted into static PCU values based on % vehicular composition.

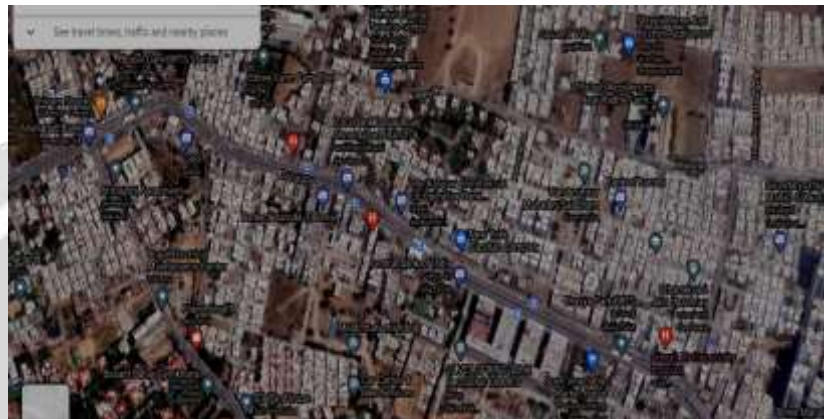


Figure 1 Study area bopal ahmedabad



Figure 2 intersection A

2.METHODOLOGY

Data Collection includes the study of traffic movements along all the intersections, in order to determine traffic volume. Traffic volume study is carried out with the help of Video graphy method on intersections A (8am to 8 pm).The width of the roadways varies considerably along the road stretch Thus, the road widths at particular locations in between every two intersections were measured GIs map Software Tools.

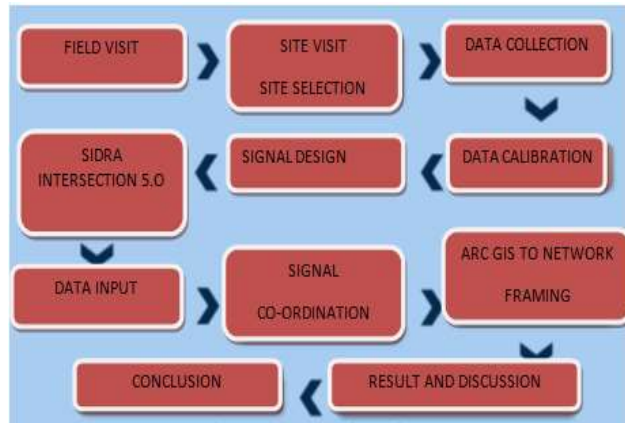


Figure 3: Hourly PCU Values

3. DATA COLLECTION

This process are establishes to gathering to data collection method are required to this analysis (1) rotary data collection (2) traffic volume data collection.

Table 1 Rotary data collection

1	Junction	Approaches	Road Type	Approach Length (m)	Approach Width (m)
2	A	A1	2-lane undivided	348	8
3		A2	4-lane divided	978	15
4		A3	2-lane divided	448	12
5		A4	4-lane divided	500	15

3.1 Traffic Volume Study

12 hourly traffic volume study was carried out with the help of videography method at intersections- A and Following is a sample excel sheet of traffic movements at intersection A-lane A1. Traffic study is done in 5-min interval and hourly volume is calculated.

Time	Vehicles																								PCU
	2W			3W			4W			LCV			HCV			BUS			M.V.			OTHERS			
	L	S	R	L	S	R	L	S	R	L	S	R	L	S	R	L	S	R	L	S	R	L	S	R	
08:00-09	56	83	48	13	10	11	23	42	15	9	13	8	4	7	5	2	5	1	4	3	2	3	6	3	450
09:00-10	67	120	51	16	18	14	30	51	21	10	16	13	7	10	9	3	6	3	3	5	3	4	7	6	730
10:00-11	73	105	55	15	18	15	28	48	19	11	15	10	8	12	9	2	4	2	2	4	3	3	6	5	660
11:00-12	61	86	68	11	12	13	21	36	17	9	12	9	6	9	7	1	3	1	2	4	2	4	6	4	620
12:00-13	57	81	54	10	10	11	17	35	16	8	10	10	5	8	6	1	3	1	1	3	1	3	5	4	560
13:00-14	49	78	43	13	9	9	16	28	15	7	9	8	4	7	5	1	3	1	1	3	1	2	5	3	450
14:00-15	41	67	41	9	8	8	15	25	14	6	7	7	7	7	4	1	2	2	1	2	1	2	5	3	430
15:00-16	51	61	38	7	6	9	13	26	17	7	9	7	7	6	4	1	2	1	2	2	1	1	4	3	520
16:00-17	56	59	35	10	10	11	16	28	18	9	10	8	8	9	5	2	4	2	2	3	1	2	4	3	560
17:00-18	61	75	41	11	11	12	18	29	19	10	11	10	9	7	6	2	5	2	3	4	2	2	5	4	67
18:00-19	69	83	46	16	14	14	20	38	25	11	15	12	9	9	8	3	5	3	4	3	2	3	5	5	810
19:00-20	64	70	51	14	15	16	25	45	28	11	17	14	10	10	9	4	7	3	3	5	3	4	7	6	785
20:00-21	56	80	48	11	12	14	24	38	24	9	14	12	8	9	6	3	6	2	2	2	2	4	6	4	575
21:00-22	37	72	37	8	10	11	17	32	18	7	10	3	6	7	4	1	4	1	1	2	1	2	4	2	505

Figure 4: Hourly PCU Values

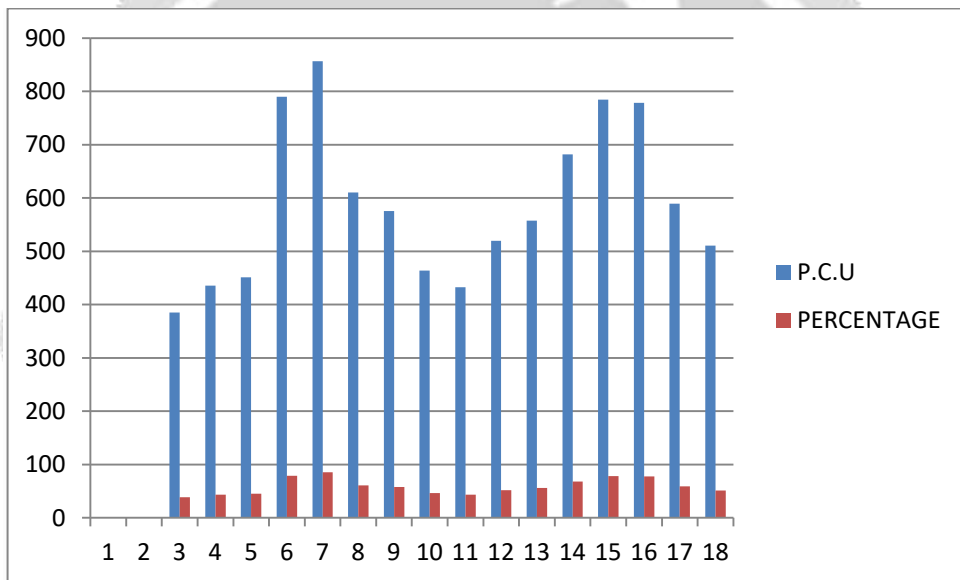


Chart-1 Hourly % vehicular composition graph at A

4. CONCLUSION

This process are to used determinate to traffic volume flow to use sidra intersection 5 pluse and analysis to traffic delay. This intersection are the traffic congestion of vehicular are before the 69 % and after the less delay to 57 % are there the traffic analysis at intersection at a. They are 12 % more fastest and less time to delay the traffic at bopal Ahmadabad.

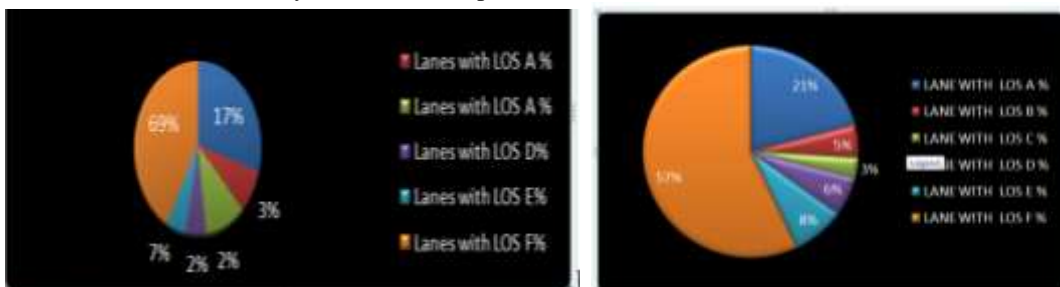


Figure 5: % Lane-LOS before and after signal co-ordination (Delay)
Conclusion :

5.REFERENCES

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