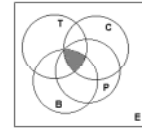


THE INFLUENCE OF STAKEHOLDERS ON TRAFFIC PLANNING IN TRADE AREAS

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B is the concern of the Business Sector
C is the concern of the General Public
P is the concern of the Politician
T is the concern of the Traffic Manager
E is the environment for trade activity

The shaded area represents the mutual interests of all the stakeholders

FIGURE 1 VENN DIAGRAM SHOWING STAKEHOLDER RELATIONSHIPS FOR TRAFFIC FLOW ON TRADE ACTIVITIES



Traffic Planning in Trade Areas to:

- Maximize traffic flow for the business sector;
- Maximize convenience for the general public;
- Minimize negative feedback for the politician; and,
- Minimize congestion for the traffic manager;



ANALYSIS SHEET

No.	Activity	Likelihood Score	Impact	Significance Score
The Business Sector:				
1	Use of the roadway segment by both through- and local-traffic		+	
2	Traffic routing options on the roadway segment		+	
3	Traffic speeds in the trade area		-	
4	On-street parking opportunities		+	
5	Off-street parking requirements		-	
6	Communal- or shared-type off-street parking arrangements		+	
7	Crime in the trade area		-	
8	People-presence in the trade area		+	
	Sub-total			
The General Public:				
9	Safety and ease in parking and un-parking within the trade area		+	
10	Ease in getting to their business destination		+	
11	Public transport accessibility		+	
12	Effects of noise pollution		-	
13	Effects of air pollution		-	
14	Effects of visual pollution		-	
15	Employment opportunities for residents		+	
16	Delay for through-traffic in the trade area		-	
	Sub-total			



ANALYSIS SHEET cont'd

No.	Activity	Likelihood Score	Impact	Significance Score
The Politician:				
17	Protests in the media		-	
18	Openings of new and upgraded businesses in the trade area		+	
19	Employment opportunities for residents		+	
20	State resources		-	
21	Corporate sponsorship		+	
	Sub-total			
The Traffic Manager:				
22	Separation of through-traffic routes from local traffic routes		+	
23	Traffic enforcement		-	
24	Traffic accidents		-	
25	Public transport facilities and usage		+	
26	Service roads to service business developments		+	
27	On-street parking		-	
28	Off-street parking		+	
29	Pedestrian-vehicular conflicts		-	
	Sub-total			
	TOTAL			



Coffee Street, San Fernando

- Coffee Street is a three-lane wide road, approximately one kilometre in length.
- In 1982 about half of the street was converted from two-way traffic into a one-way system. The business sector protested that sales were reduced because of the conversion, to the point that several of them went out of business.
- In 1987, the traffic system was re-examined, and the entire street was made one-way.
- Protests revived in 1996, which then saw the reinstatement of the former half of the street for two-way traffic, for particular periods of the day.
- Then in 1997, the time-based arrangement was removed.
- The situation is still not over, with some business operators on the street calling for a one-way system once again.



COFFEE STREET				
No.	Activity	Likelihood Score	Impact	Significance Score
The Business Sector:				
1	Use of the roadway segment by both through- and local-traffic	3	+	3
2	Traffic routing options on the roadway segment	1	+	1
3	Traffic speeds in the trade area	1	-	-1
4	On-street parking opportunities	1	+	1
5	Off-street parking requirements	1	-	-1
6	Communal- or shared-type off-street parking arrangements	0	+	0
7	Crime in the trade area	1	-	-1
8	People-presence in the trade area	1	+	1
	Sub-total			3
The General Public:				
9	Safety and ease in parking and un-parking within the trade area	1	+	1
10	Ease in getting to their business destination	1	+	1
11	Public transport accessibility	1	+	1
12	Effects of noise pollution	1	-	-1
13	Effects of air pollution	1	-	-1
14	Effects of visual pollution	1	-	-1
15	Employment opportunities for residents	1	+	1
16	Delay for through-traffic in the trade area	3	-	-3
	Sub-total			-2

COFFEE STREET cont'd				
No.	Activity	Likelihood Score	Impact	Significance Score
The Politician:				
17	Protests in the media	0	-	0
18	Openings of new and upgraded businesses in the trade area	1	+	1
19	Employment opportunities for residents	1	+	1
20	State resources	0	-	0
21	Corporate sponsorship	0	+	0
	Sub-total			2
The Traffic Manager:				
22	Separation of through-traffic routes from local traffic routes	0	+	0
23	Traffic enforcement	0	-	0
24	Traffic accidents	1	-	-1
25	Public transport facilities and usage	0	+	0
26	Service roads to service business developments	0	+	0
27	On-street parking	1	-	-1
28	Off-street parking	0	+	0
29	Pedestrian-vehicular conflicts	3	-	-3
	Sub-total			-5
	TOTAL			-2

Coffee Street Significance Score

The total significance score of -2 is about $(-2 - (-39)) \times 100 / (45 - (-39))$ or 44 percent of the range of significance of the influence of the stakeholders.

Chaguanas Main Road

- The controversial segment of Chaguanas Main Road is three lanes wide, approximately 200 metres in length.
- In the late 1970s, it was converted from two-way traffic into a one-way system.
- It is an example of a road exhibiting all the categories of road classification. It serves a movement function for through-traffic wishing to travel between Chaguanas east and west, because of the insufficient road infrastructure. There is a collector road attribute as it links the neighbourhood roads. It also serves as a local road for access to individual premises.
- This road is subjected to severe congestion on a daily basis, assisted by undisciplined plying and stopping by taxis, and increasing illegal vending on the sidewalks with the result that pedestrians are forced to interact with moving vehicles.
- The situation is aggravated every Christmas season, when two of the three lanes are closed to vehicular traffic for vendors to legally conduct their trade.

CHAGUANAS MAIN ROAD				
No.	Activity	Likelihood Score	Impact	Significance Score
The Business Sector:				
1	Use of the roadway segment by both through- and local-traffic	3	+	3
2	Traffic routing options on the roadway segment	0	+	0
3	Traffic speeds in the trade area	3	-	-3
4	On-street parking opportunities	0	+	0
5	Off-street parking requirements	0	-	0
6	Communal- or shared-type off-street parking arrangements	0	+	0
7	Crime in the trade area	1	-	-1
8	People-presence in the trade area	3	+	3
	Sub-total			2
The General Public:				
9	Safety and ease in parking and un-parking within the trade area	0	+	0
10	Ease in getting to their business destination	0	+	0
11	Public transport accessibility	1	+	1
12	Effects of noise pollution	1	-	-1
13	Effects of air pollution	1	-	-1
14	Effects of visual pollution	3	-	-3
15	Employment opportunities for residents	1	+	1
16	Delay for through-traffic in the trade area	3	-	-3
	Sub-total			-6

CHAGUANAS MAIN ROAD cont'd				
No.	Activity	Likelihood Score	Impact	Significance Score
The Politician:				
17	Protests in the media	0	-	0
18	Openings of new and upgraded businesses in the trade area	1	+	1
19	Employment opportunities for residents	1	+	1
20	State resources	0	-	0
21	Corporate sponsorship	0	+	0
	Sub-total			2
The Traffic Manager:				
22	Separation of through-traffic routes from local traffic routes	0	+	0
23	Traffic enforcement	0	-	0
24	Traffic accidents	1	-	-1
25	Public transport facilities and usage	0	+	0
26	Service roads to service business developments	0	+	0
27	On-street parking	0	-	0
28	Off-street parking	0	+	0
29	Pedestrian-vehicular conflicts	3	-	-3
	Sub-total			-4
	TOTAL			-6

Chaguanas Main Road Significance Score

The total significance score of -6 is about $(-6 - (-39)) \times 100 / (45 - (-39))$ or 39 percent of the range of significance of the influence of the stakeholders.



MODIFICATION FOR CHAGUANAS MAIN ROAD

No.	Activity	Likelihood Score	Impact	Significance Score
The Business Sector:				
1	Use of the roadway segment by both through- and local-traffic	3	+	3
2	Traffic routing options on the roadway segment	0	+	0
3	Traffic speeds in the trade area	3	-	-3
4	On-street parking opportunities	1	+	1
5	Off-street parking requirements	0	-	0
6	Communal- or shared-type off-street parking arrangements	3	+	3
7	Crime in the trade area	0	-	0
8	People-presence in the trade area	3	+	3
Sub-total				
The General Public:				
9	Safety and ease in parking and un-parking within the trade area	3	+	3
10	Ease in getting to their business destination	3	+	3
11	Public transport accessibility	3	+	3
12	Effects of noise pollution	1	-	-1
13	Effects of air pollution	1	-	-1
14	Effects of visual pollution	1	-	-1
15	Employment opportunities for residents	3	+	3
16	Delay for through-traffic in the trade area	1	-	-1
Sub-total				
9				



MODIFICATION FOR CHAGUANAS MAIN ROAD cont'd

No.	Activity	Likelihood Score	Impact	Significance Score
The Politician:				
17	Protests in the media	0	-	0
18	Openings of new and upgraded businesses in the trade area	1	+	1
19	Employment opportunities for residents	1	+	1
20	State resources	0	-	0
21	Corporate sponsorship	0	+	0
Sub-total				
2				
The Traffic Manager:				
22	Separation of through-traffic routes from local traffic routes	0	+	0
23	Traffic enforcement	0	-	0
24	Traffic accidents	0	-	0
25	Public transport facilities and usage	3	+	3
26	Service roads to service business developments	1	+	1
27	On-street parking	0	-	0
28	Off-street parking	3	+	3
29	Pedestrian-vehicular conflicts	0	-	0
Sub-total				
7				
TOTAL				
24				



Chaguanas Main Road Modified Significance Score

- To achieve an improvement of at least 75 percent of the range of significance of the influence of the stakeholders,
- Then modify the result to reach at least a total significance score of $(75/100) \times (45 - (-39)) - 39$ or 24.



A TYPICAL SHOPPING MALL

No.	Activity	Likelihood Score	Impact	Significance Score
The Business Sector:				
1	Use of the roadway segment by both through- and local-traffic	0	+	0
2	Traffic routing options on the roadway segment	3	+	3
3	Traffic speeds in the trade area	0	-	0
4	On-street parking opportunities	0	+	0
5	Off-street parking requirements	0	-	0
6	Communal- or shared-type off-street parking arrangements	3	+	3
7	Crime in the trade area	0	-	0
8	People-presence in the trade area	3	+	3
Sub-total				
9				
The General Public:				
9	Safety and ease in parking and un-parking within the trade area	3	+	3
10	Ease in getting to their business destination	3	+	3
11	Public transport accessibility	3	+	3
12	Effects of noise pollution	1	-	-1
13	Effects of air pollution	1	-	-1
14	Effects of visual pollution	0	-	0
15	Employment opportunities for residents	3	+	3
16	Delay for through-traffic in the trade area	0	-	0
Sub-total				
10				



A TYPICAL SHOPPING MALL cont'd

No.	Activity	Likelihood Score	Impact	Significance Score
The Politician:				
17	Protests in the media	0	-	0
18	Openings of new and upgraded businesses in the trade area	3	+	3
19	Employment opportunities for residents	3	+	3
20	State resources	0	-	0
21	Corporate sponsorship	2	+	2
Sub-total				
8				
The Traffic Manager:				
22	Separation of through-traffic routes from local traffic routes	3	+	3
23	Traffic enforcement	0	-	0
24	Traffic accidents	0	-	0
25	Public transport facilities and usage	3	+	3
26	Service roads to service business developments	3	+	3
27	On-street parking	0	-	0
28	Off-street parking	3	+	3
29	Pedestrian-vehicular conflicts	1	-	-1
Sub-total				
11				
TOTAL				
38				



Shopping Mall result

- The total significance score of 38 is about $(38 - (-39)) \times 100 / (45 - (-39))$ or 92 percent of the range of significance of the influence of the stakeholders.



Conclusion

- A simple, quantitative, and integrated methodology has been presented for analyzing the concerns of the four key stakeholders
- It is subjective, but may be useful in testing existing and proposed traffic schemes.
- It provides a systematic approach to identify and adjust the individual interests of the key stakeholders to maximise their influence in the planning and management of traffic in trade districts.
- The approach may, perhaps, be extended to other types of land use activities, such as civic centres and schools, and adjusting the activity factors as appropriate.

