

Date	14 January 2013
Project No	VN501101
Project	Catford Town Centre Area Action Plan
Subject	<b>Catford Gyratory Modelling Summary</b>

---

## 1. Background

- 1.1 Lewisham Council are working up proposals to regenerate Catford Town Centre and the Shopping Centre.
- 1.2 As part of the regeneration of the town centre, options have been developed to improve the public realm, pedestrian journey times and bus journey times along A205 Catford Road and Catford Gyratory.
- 1.3 In order to improve access to the Shopping Centre, options have also been developed which revert Thomas Lane to two-way working and modify the existing junction with the A205 Catford Road.

## 2. Contents of this note

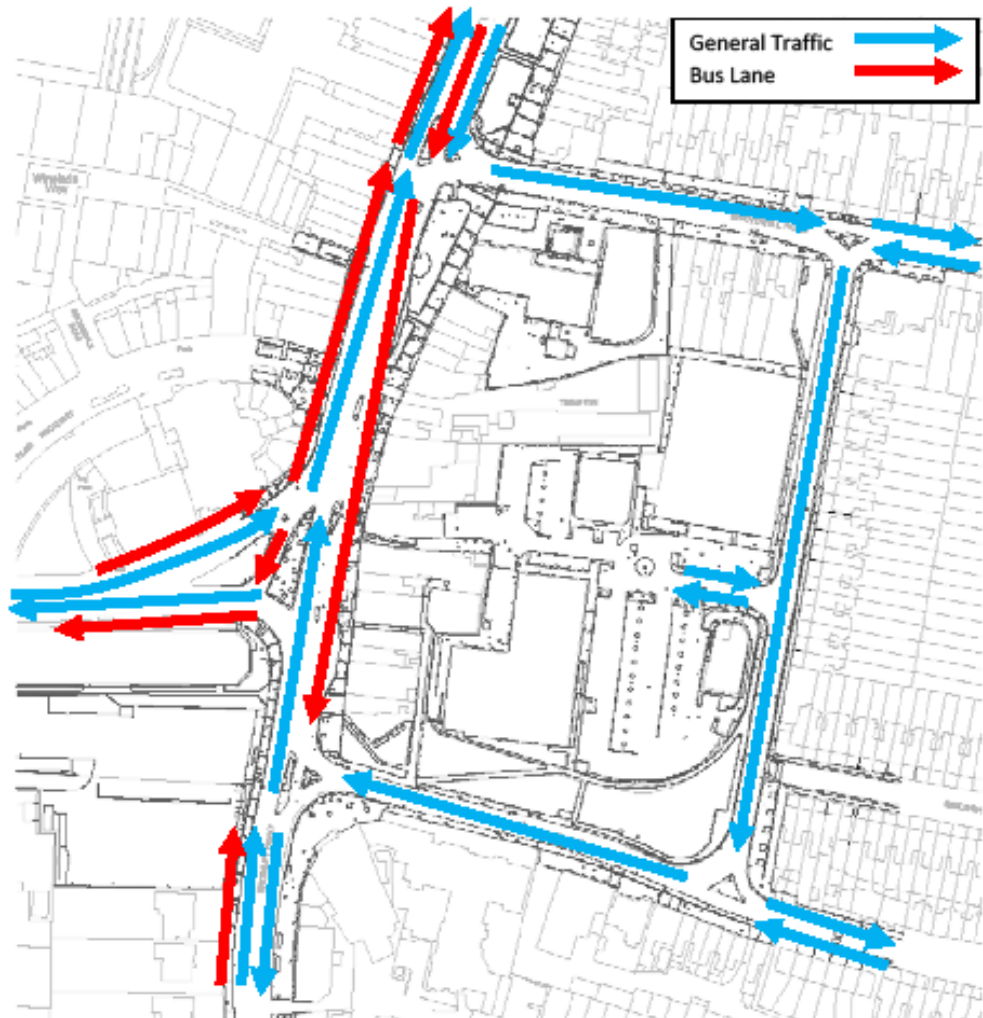
- 2.1 This technical note describes the proposed options developed for Catford Gyratory, Catford Road and the junction of Thomas Lane and Catford Road.

## 3. Existing Situation

- 3.1 The alignment of A205 South Circular runs through Catford Town centre in a one-way gyratory system that sees the eastbound traffic utilising Rushey Green northbound and Brownhill Road eastbound, while the westbound traffic utilises Plassy Road southbound and Sangley road westbound. The consequence is that the Plassy Island site suffers severance to the detrimental impact of the highway-dominated environment with fast flowing one-way traffic.
- 3.2 Similarly, the public realm adjacent to Catford Road and Rushey Green is dominated by the highway requirements to facilitate traffic flows through Catford, rather than servicing the town centre.
- 3.3 The existing traffic movements around Catford gyratory are shown in Figure 3-1.



Figure 3-1: Existing Traffic Movements



#### 4. Existing Traffic Flows

- 4.1 Origin and Destination Matrices supplied by TfL based on the 2007 traffic flow data are shown in Figure 4-1 and Figure 4-2.



Figure 4-1: AM Peak Base Flows

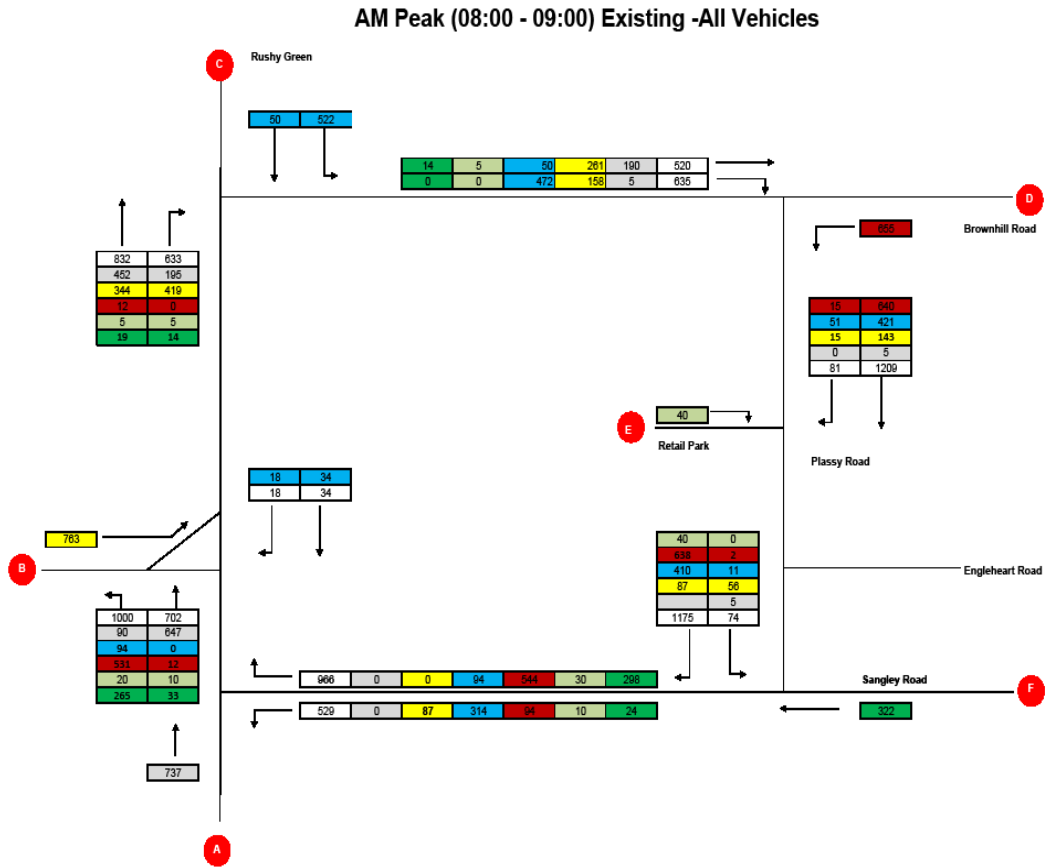
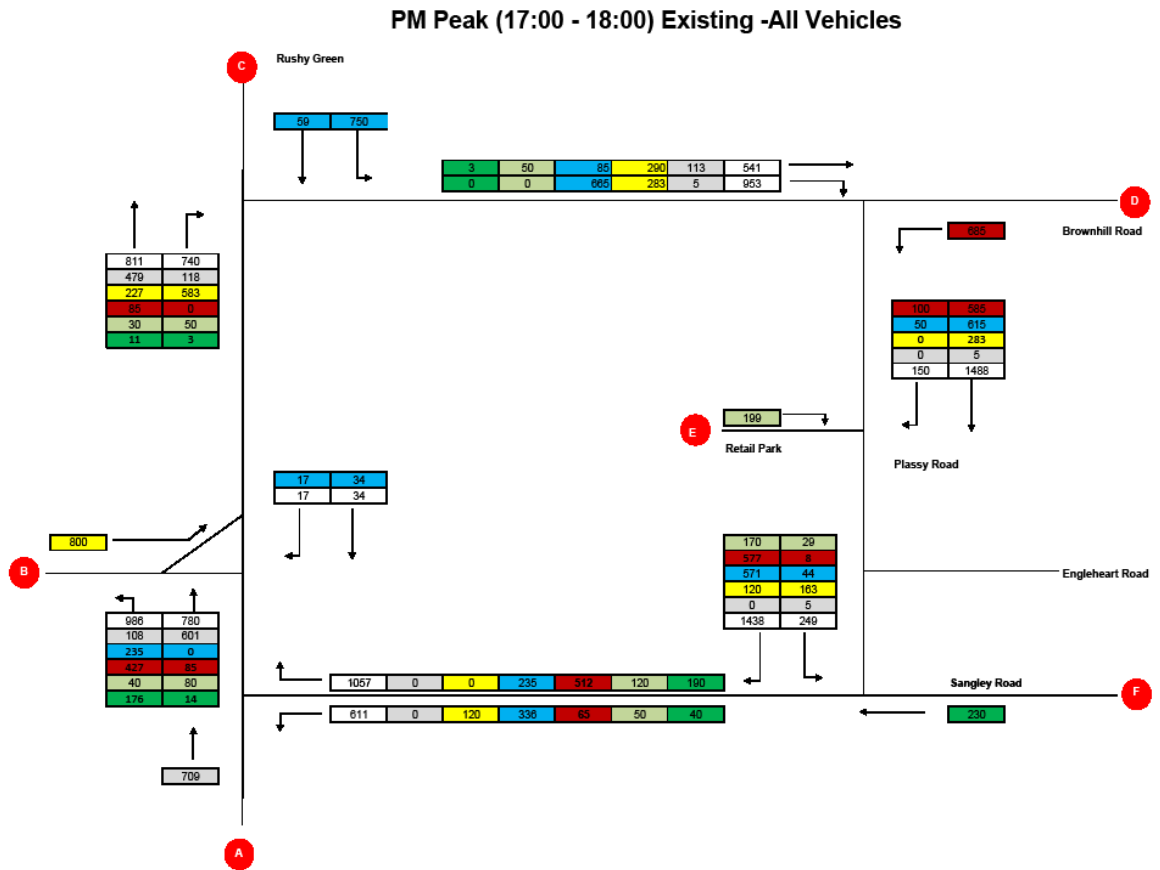




Figure 4-2: PM Peak Base Flows



- 4.2 Figures 4.1 and 4.2 show the distribution of traffic around the gyrotary with each approach assigned a different colour.
- 4.3 It can be seen for the Figures that the key movements are east/west between Catford Road and Brownhill Road and north/south between Rushey Green and Bromley Road, with Sangley Road, comparatively light in traffic.
- 4.4 In the AM and PM Peaks the two largest movements are the Brownhill Road to Catford Road flow (AM Peak-531 PCUs and PM Peak-427 PCUs) and the Bromley Road to Rushey Green movement (AM Peak-452 PCUs and PM Peak-479 PCUs).
- 4.5 The total flow entering the gyrotary is 3089 PCUs in the AM Peak and 3432 PCUs in the PM Peak, exiting traffic is 3036 in the AM Peak and 3348 in the PM Peak. The slight variance in entry and exit flow, relates to the retail car park on Plassy Road.



## 5. Existing Traffic Modelling

- 5.1 2007 origin and destination matrices and base TRANSYT models of the area have been supplied by TfL and have been used to assess the impact of the various options.
- 5.2 The TRANSYT model supplied by TfL covers the following network of junctions.
- Catford Road/Doggett Road (Priority Controlled)
  - 07/163 – Catford Road/Thomas Lane
  - 07/031 – Catford Road/Canadian Avenue
  - 07/33&34&188/340 – Catford Road/Rushey Green
  - 07/15&165 – Rushey Green/Brownhill Road
  - 07/79&80 – Rushey Green Pelican near Wildfell Road
  - 07/177&29 – Brownhill Road/Plassy Road
  - 07/156 – Plassy Road/Catford Island Development
  - Plassy Road/Sangley Road (Priority Controlled)
  - 07/030 – Bromley Road/Sangley Road
  - Bromley Road/Culverley Road (Priority Controlled)
  - Bromley Road/Canadian Avenue (Priority Controlled)
  - Canadian Avenue/Fordmill Road (Priority Controlled)
- 5.3 The results of the base modelling can be found in Appendix A.
- 5.4 The modelling shows that the junction of Catford Road/Rushey Green operates in excess of 90% in the PM Peak and at 89% in the AM Peak. At the Sangley Road/Rushey Green junction, similar levels of degree of saturation occur, with a maximum degree of saturation of 92% in the AM and 91% in the PM.
- 5.5 The remaining junctions on the gyratory operate with a reasonable degree of spare capacity, in the AM peak with a maximum degree of saturation of 76% at the Brownhill Road/Plassy Road junction.
- 5.6 In the PM peak the modelling shows the junction of Brownhill Road/Rushey Green to operate at 89% on the northbound right turn approach and 98% on the eastbound ahead approach at the junction of Brownhill Road/Plassy Road. In the AM and modelling shows that the junction of Catford Road/Rushey Green operates in excess of 90% in the PM Peak and at 89% in the AM Peak. At the Sangley Road/Rushey Green junction, similar levels of degree of saturation occur, with a maximum degree of saturation of 92% in the AM and 91% in the PM.
- 5.7 At the Thomas Lane/Catford Road/Canadian Avenue Junction the maximum degree of saturation in the AM Peak of 95% occurs on Canadian Avenue, with Catford Road operating at 84%. In the PM the junction operates at 88% on the eastbound approach to Canadian Avenue.



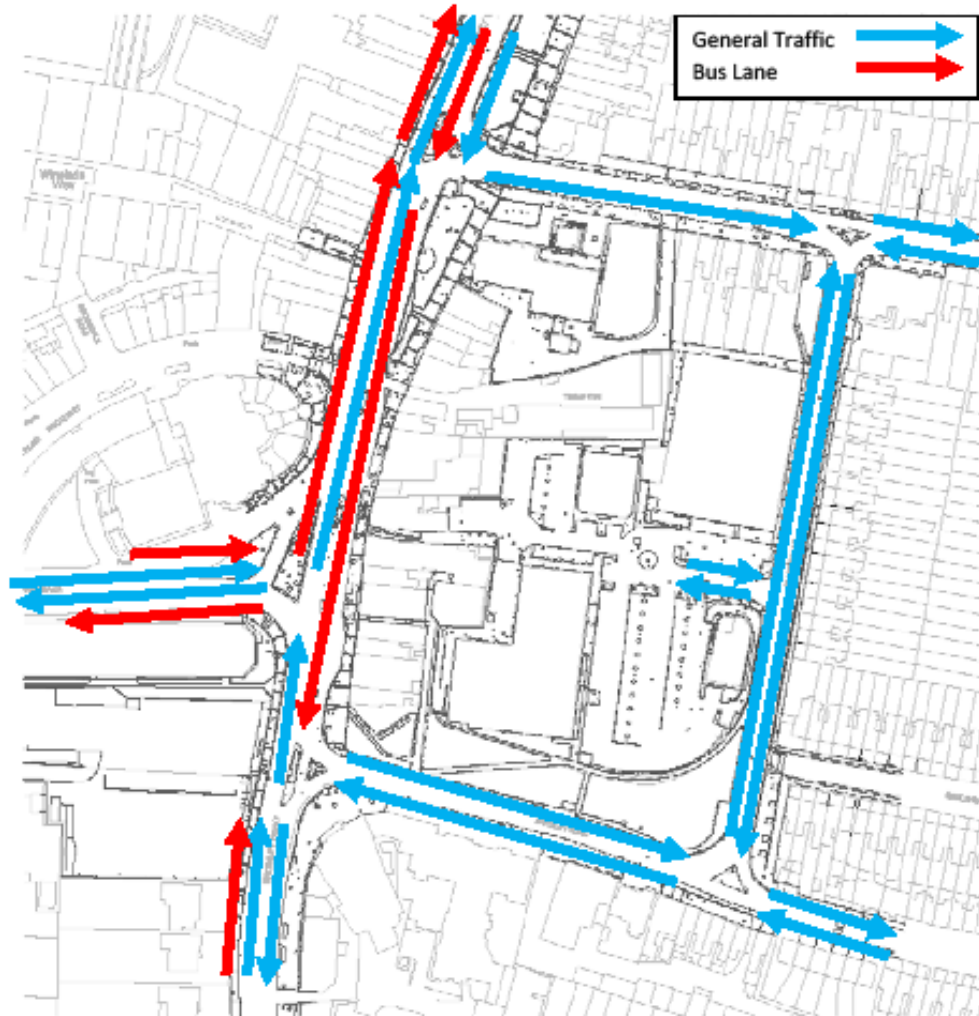
## 6. Proposed Options

- 6.1 This report considers various options for the re-alignment of South Circular partial two-way working and full two-way working.
- 6.2 There is a long-standing proposal (over 40 years) from TfL to divert the A205 (South Circular) from its current alignment north of Laurence House on Catford Road to a new alignment using the car park to the south and connecting to Plassy Road via Sangley Road. This would potentially remove the Catford Gyratory and reduce traffic flows in the town centre on Rushey Green and Catford Road. There is no clear timetable or funding strategy for this major project.
- 6.3 However, this option would not benefit a cohesive town centre since it would create an area between the frontage of the Broadway Theatre and the new alignment of Catford Road that would be too large for an appropriate public open space and too small an area to provide a viable development opportunity. It would also reduce the development potential of the remainder of the Laurence House car park site. Consequently this option is not explored further.
- 6.4 The options considered as part of the study are described below.
  - 1) Two way working on Plassy Road and Sangley Road
  - 2) Two way working on Rushey Green and Brownhill Road
  - 3) Contra-flow bus lanes on Brownhill Road
  - 4) Full Two Way Working
  - 5) Contra-flow bus lane of Sangley Road
- 6.5 All the options were assessed against the criteria of junction operation, improvement to bus and vehicle journey times.



## 7. Two way working on Plassy Road and Sangley Road

7.1 The proposed traffic movements for this option are shown in Figure 7-1 below.



**Figure 7-1: Two-way working on Plassy Road/Sangley Road Traffic Movements**

7.2 This option considered diverting the eastbound South Circular traffic via Sangley Road, from Catford Road, to reduce the traffic flows on Rushey Green. However, the initial modelling showed that banning general traffic from turning right from Rushey Green into Brownhill Road oversaturated the junction of Catford Road/Rushey Green, with significantly more traffic turning right to access Sangley Road. As a result of maintaining the movement, the journey time for south circular traffic would still be shorter via the current route on Rushey Green and Brownhill Road. Therefore, the only benefits, based on existing traffic flows, of introducing two-way working on Sangley Road and Plassy Road are for Catford Road to Sangley Road (AM 56, PM 163), Bromley Road to Sangley Road (AM 5, PM 5) and Sangley Road to Brownhill Road (AM 14, PM 3). It was felt that the

**SINCLAIR KNIGHT MERZ**

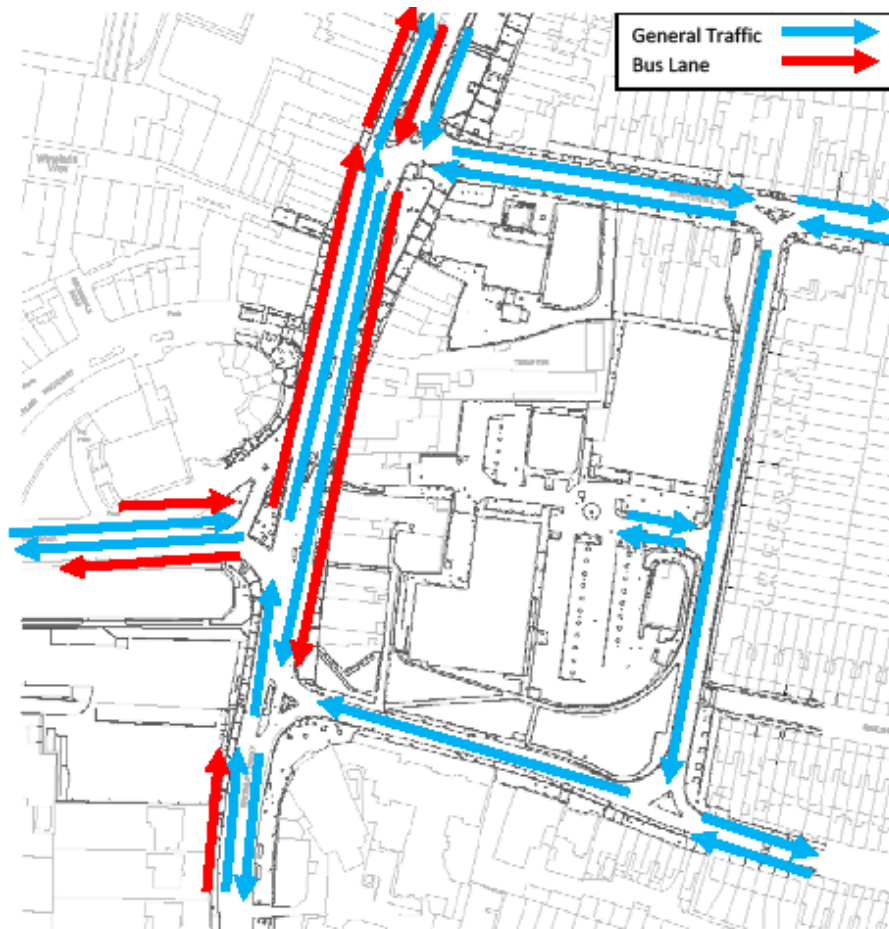
The SKM logo trade mark is a registered trade mark of Sinclair Knight Merz Pty Ltd.



resulting benefit to these movements did not outweigh the reduction in capacity at a number of junctions and the increased carriageway space required on Plassy Road to facilitate two-way working.

## 8. Two-way working on Rushey Green and Brownhill Road

8.1 The proposed traffic movements for this option are shown in Figure 8-1.



**Figure 8-1: Two-way working on Rushey Green and Brownhill Road Traffic Movements**

8.2 Two-way working on Rushey Green and Brownhill Road was not considered viable, as it would increase southbound traffic flows on Rushey Green by approximately 600 vehicles per hour during the peak periods, further segregating the retail frontages to the east and west of Rushey Green. It would also significantly reduce the capacity at the Brownhill Road/Rushey Green junction, increasing queuing on Rushey Green. Introducing two-way working on Brownhill Road in isolation would reduce the journey time for vehicles travelling from Brownhill Road to Rushey Green northbound. However the Origin and Destination survey shows that only 12 vehicles carry out this movement in the AM and 85 in the PM and therefore it was not considered beneficial given the

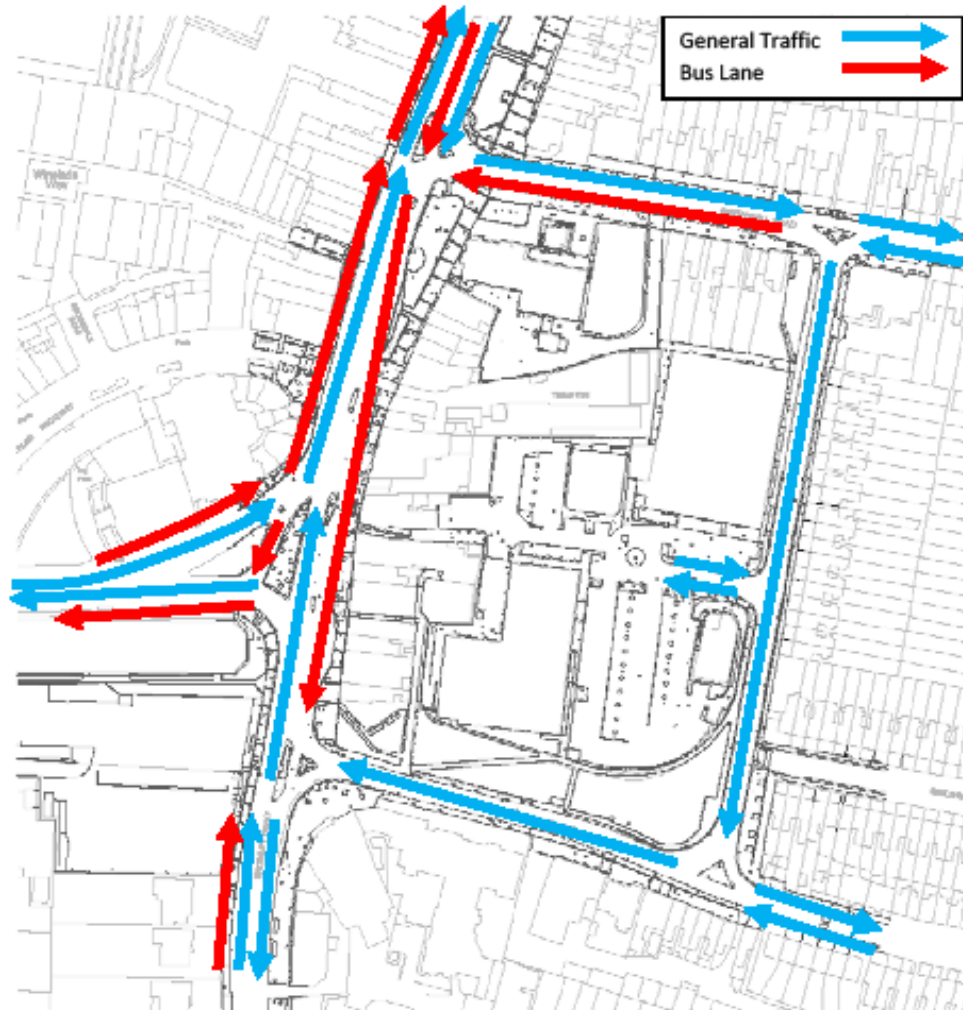




significant reduction in capacity at the Rushey Green/Brownhill Road junction, to facilitate the additional movements.

## 9. Contra-flow bus lanes on Brownhill Road

9.1 The proposed traffic movements for this option are shown in Figure 9-1.

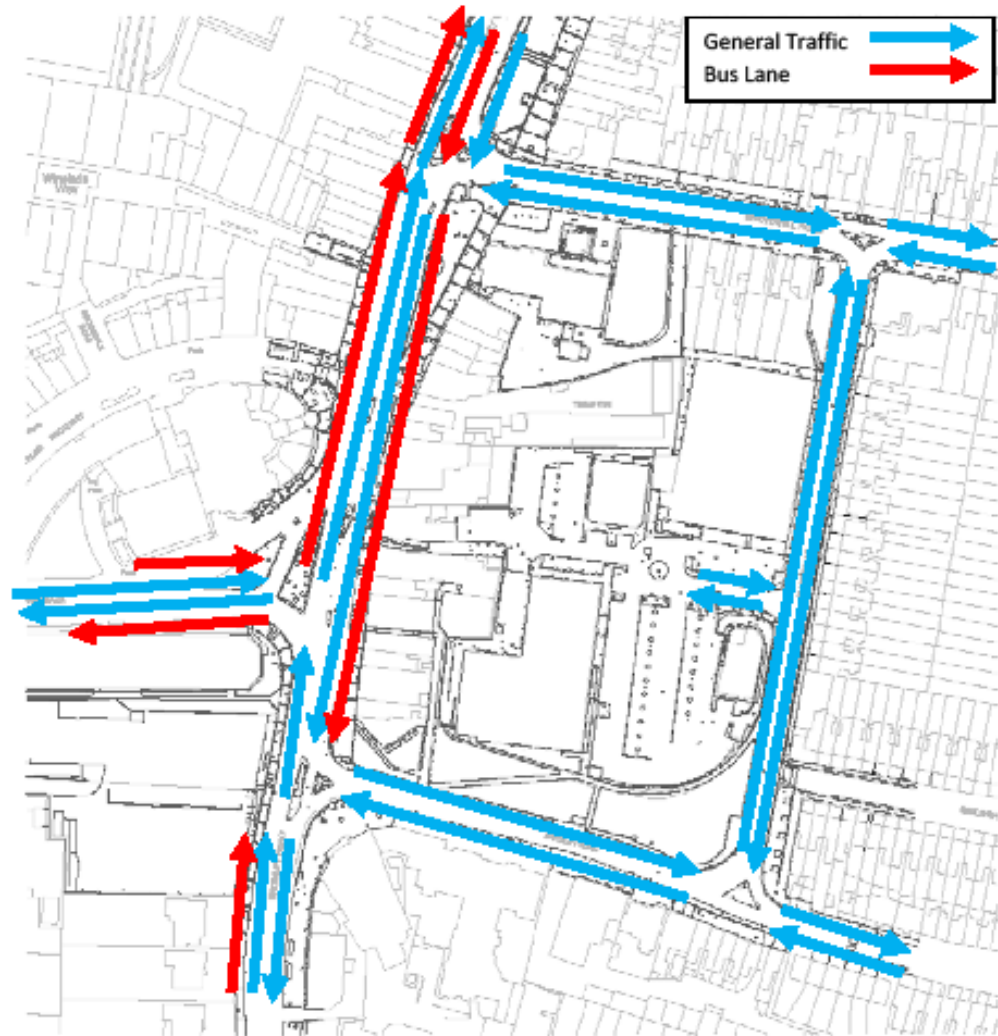


**Figure 9-1: Contra-Flow Bus Lane on Brown Hill Road Traffic Movements**

9.2 Consideration was given to introducing an eastbound contra-flow bus lane. However, this would only benefit the bus route 202 and as above, based on the modelling the loss in capacity at the junction of Brownhill Road and Rushey Green resulted in the option not being viable.

## 10. Full two way working

10.1 The proposed traffic movements for this option are shown in Figure 10-1.



**Figure 10-1: Full Two-way Scheme Traffic Movements**

- 10.2 This option considers the impacts of implementing two-way working on all arms of the current gyratory. It considers an alternative alignment to the TfL preferred option by not diverting the South Circular through the Laurence House car park, but maintaining the current alignment of Catford Road, and re-aligning Sangley Road to improve the operation of the proposed all movements junction of Rushey Green, Catford Road, Sangley Road and Bromley Road.
- 10.3 Rushey Green, Brownhill Road and Plassy Road would be converted to two way working and the junctions modified to accommodate the pedestrian crossings and all movements.
- 10.4 Though the highway improvements could be accommodated within the current highway boundaries, safeguarded areas and land within LBC's control, the initial traffic modelling, based on Option 1

**SINCLAIR KNIGHT MERZ**

The SKM logo trade mark is a registered trade mark of Sinclair Knight Merz Pty Ltd.



developed as part of the TfL study suggests that the Catford Road/Rushey Green Sangley Road junction would not operate satisfactorily.

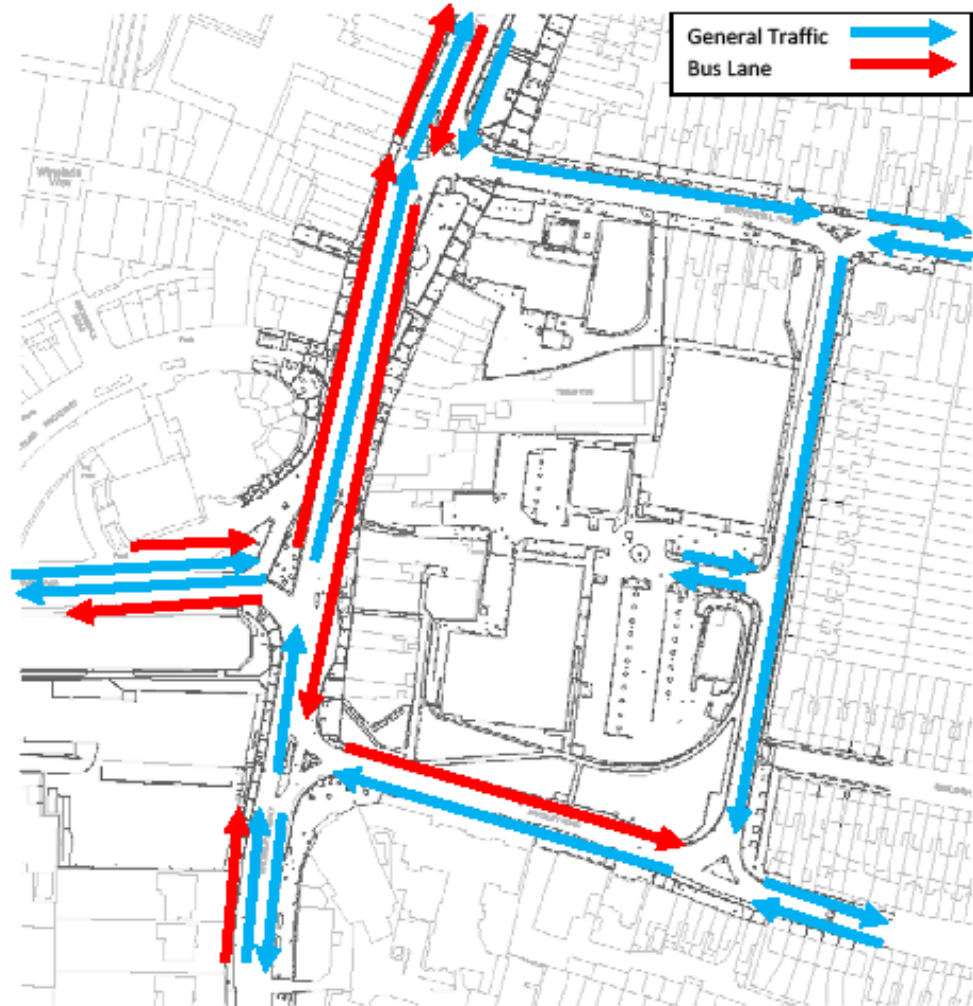
- 10.5 Moreover, the level of traffic on Rushey Green would increase significantly with the inclusion of all northbound and southbound traffic, and there would be no opportunity to relocate road space along Rushey Green to other modes. This would impact on the journey times for all north and southbound bus routes.

#### **Plassy Road and Brownhill Road**

- 10.6 As part of TfL's option development, an all-movement signalised junction between Brownhill Road and Plassy Road has been proposed, that requires the demolition of 16-22 Brownhill Road to the east and 12 and 14 Brownhill Road to the west.
- 10.7 As part of this study, a number of alternative options have been considered that minimise the land take around the junction. These include a mini-roundabout, priority controlled junction and a realign signal controlled junction, as shown in Appendix B.
- 10.8 The mini-roundabout option can be introduced with a reasonable level of spare capacity, with only 14 Brownhill Road required and the protecting triangular section of land forming part of 12 Brownhill Road. The priority controlled junction can operate within the existing highway boundary, with spare capacity. It is acknowledged that these options do not provide pedestrian crossing facilities at the junction. However, pedestrian crossing facilities could potentially be introduced on Brownhill Road to the west of the junction and at the Island Site access junction.
- 10.9 A further signalised option has been developed which also shows a reasonable level of spare capacity, with a similar land take requirement as the mini roundabout. To facilitate the inclusion of signalised pedestrian crossings at the junction, this would require the existing traffic flow movement from Catford Road to Brownhill Road to be maintained, with only a small amount of local and traffic from Bromley Road directed onto Plassy Road.

## **11. Contra Flow Bus Lane on Sangley Road**

- 11.1 The proposed traffic movements for this option are shown in Figure 10-1.



**Figure 11-1: Contra Flow Bus Lane on Sangley Road**

**Sangley Road**

11.2 At present four bus routes (124, 160, 181 and 284) currently travel from Catford Road to Sangley Road via Rushey Green, Brownhill Road and Plassy Road. It is proposed to introduce a contra-flow bus lane on Sangley Road to significantly reduce the journey time for these routes and to reduce the volume of buses on Rushey Green northbound. This has been facilitated by introducing an eastbound bus only right turn at the junction of Catford Road and Rushey Green. This movement also allows for the bus route (171) from Catford Road to Bromley Road, without having to travel round the gyratory. An eastbound bus stop has also been introduced on Sangley Road to service the routes 124, 160, 181 and 284 which currently stop at bus top F on Plassy Road. The existing westbound carriageway has been maintained, with two right turn and one left turn lanes.



#### **Plassy Road and Brownhill Road**

- 11.3 It is proposed to maintain one-way southbound operation on Plassy Road as existing, with a revised junction at the southern end, to facilitate the contra-flow bus lane on Sangley Road and to maintain the one-way southbound operation on Brownhill Road as existing.

#### **Rushey Green**

- 11.4 To improve the pedestrian permeability of Rushey Green a central median strip is proposed Catford Road and the access to Catford Centre. In addition, at the junctions of Rushey Green with Brownhill Road, Catford Road and Sangley Road the existing east-west crossing movements have been reduced from 3 phases to two.

#### **Thomas Lane Junction**

- 11.5 At present traffic access is via the A21 Rushey Green and residential streets to the north of the centre (Wildfell Road and Holbeach Road) and Doggett Road and Nelgarde Road to the south. The exit is via Thomas Lane to the A205 Catford Road. The future strategy is to enter and exit the centre from the A205 via Thomas Lane. This requires extensive junction remodelling. An assessment undertaken by SKM CB has demonstrated that works to the Thomas Lane/A205 junction can support all access to the new shopping centre, including a 'Format 40' Tesco store, without the need for a 'teardrop junction', which has been perceived as an unattractive option to the Council in the past due to its size. The scheme has been reviewed by LBL highways and TfL who support the proposal.
- 11.6 To reduce the conflicts in the vicinity of the proposed Thomas Lane junction, it is proposed to restrict Nelgarde Road to left turn exit only. Doggett Road would remain all movements, to facilitate the access for bus to stand AA. Traffic would access Nelgarde Road via Thomas Lane and Doggett Road.
- 11.7 A more detailed assessment of the impact on Thomas Lane, including a trip generation assessment for the super store has been undertaken, with the results shown in the Catford Road/Thomas Lane Junction Review Technical Note, previously issued.

#### **Catford Road**

- 11.8 As with Rushey Green, to facilitate improved pedestrian permeability on Catford Road a central median is proposed. A bus lane and general traffic lane has been introduced in both direction on Catford Road and 6m wide footways to improve the public realm. The widen footways extend from Catford station on both the north and south sides to improve the pedestrian routes to/from the station and the town centre.



## 12. Emerging Preferred Option Modelling Results

12.1 The 5 options discussed above have been considered in consultation with LBC and TfL. The Council supports deliverable transport and traffic improvements to Catford town centre and in particular the realignment of the South Circular (A205), and recommends the option described in Section 11.

12.2 This option can be summarised as follows:

- Sangley Road widened (making use of part of the existing highway reserve) to provide an eastbound contra-flow bus lane with associated improvements to the Bromley Road junction.
- The junction between Catford Road and Rushey Green altered to simplify pedestrian crossings, improve traffic flows and improve space outside the Broadway Theatre.
- Pedestrian facilities improved at the Rushey Green/Brownhill Road junction.
- Provision of central medians and or additional intermittent crossings on Rushey Green and Catford Road to assist pedestrian movement.
- Station to town centre route enhanced with a widened footway on the north side of Catford Road.
- General removal of inessential signage and guardrails.
- Re-positioning of bus stops servicing the station and town centre to maximise accessibility.

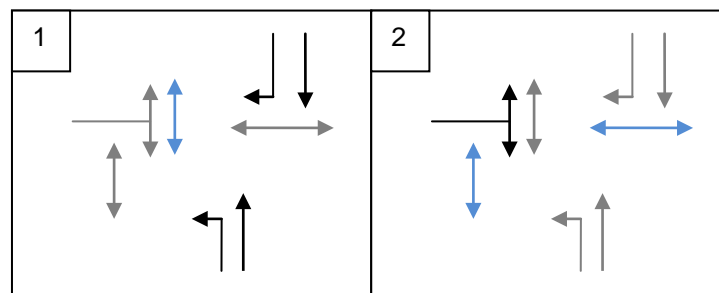
12.3 The modelling results for this option are discussed in more detail below. A layout of the preferred option can be found in Appendix C.

### Proposed Staging Arrangements

12.4 The proposed staging arrangements for the amended junctions, based on the preferred option are described below.

12.5 At the junction of Catford Road and Rushey Green the proposed staging arrangements contains two stages as shown in Figure 12-1.

**Figure 12-1: Proposed Catford Road/Rushey Green Staging Arrangement**



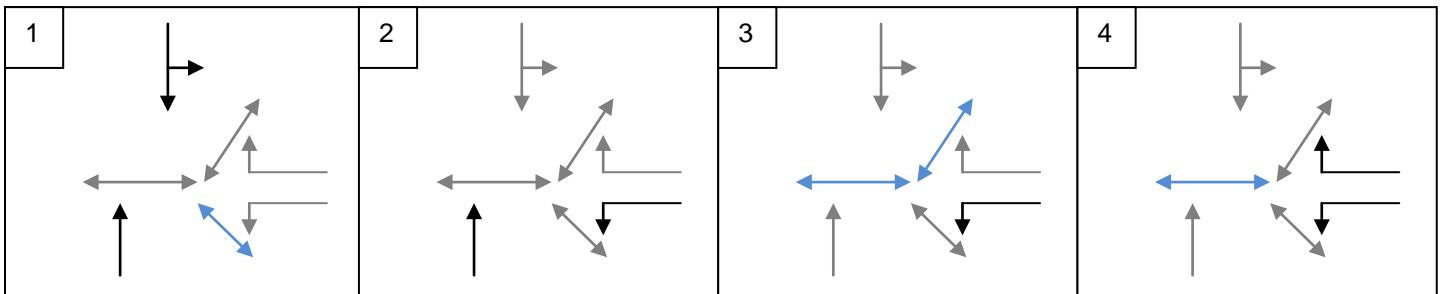
12.6 In Stage 1 both Rushey Green approaches are called, along with the crossing on the Catford Road approach. In Stage 2 the Catford Road approach is called along with the Catford Road exit crossing and the Rushey Green southbound crossing. The northbound crossing on Rushey Green has been set up as a separate stream, so that it can run on a demand dependent basis, to minimise



the impact on queues blocking back into the junction, although for the purposes of the modelling it has been called every cycle.

12.7 The staging arrangement for the junction of Rushey Green/Sangley Road is shown in Figure 12-2.

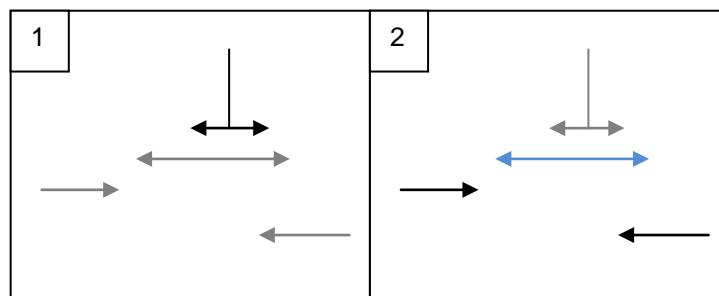
**Figure 12-2: Proposed Rushey Green/Sangley Road Staging Arrangement**



12.8 In Stage 1 both Rushey Green approaches are called, along with the crossing on the Sangley Road left turn exit. In Stage 2, the northbound Rushey Green arm continues to run with the Sangley Road left turn. In Stage 3, the Sangley Road left turn continues to run with the Rushey Green and Sangley Road right turn crossing. In the final stage both Sangley Road phases run, with the Rushey Green crossing.

12.9 The proposed staging arrangement for the junction of Sangley Road/Plassy Road is shown in Figure 12-3.

**Figure 12-3: Proposed Sangley Road/Plassy Road Staging Arrangement**

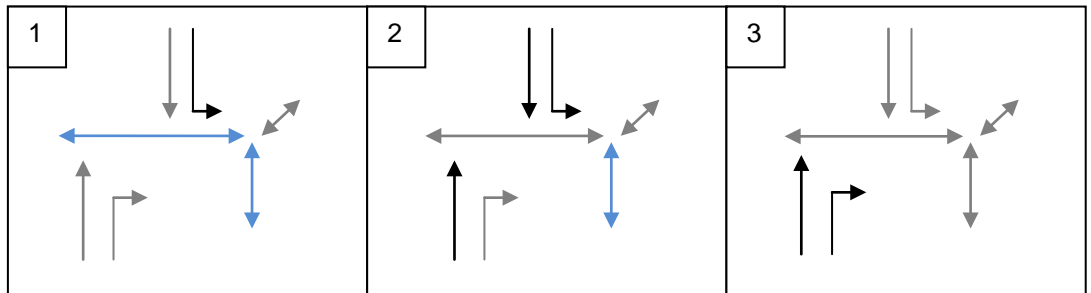


12.10 In Stage 1 the Plassy Road arm runs and in stage two, both Sangley Road approaches run, with the Plassy Road crossing.

12.11 The proposed staging arrangement for the junction of Rushey Green/Brownhill Road is shown in Figure 12-4.



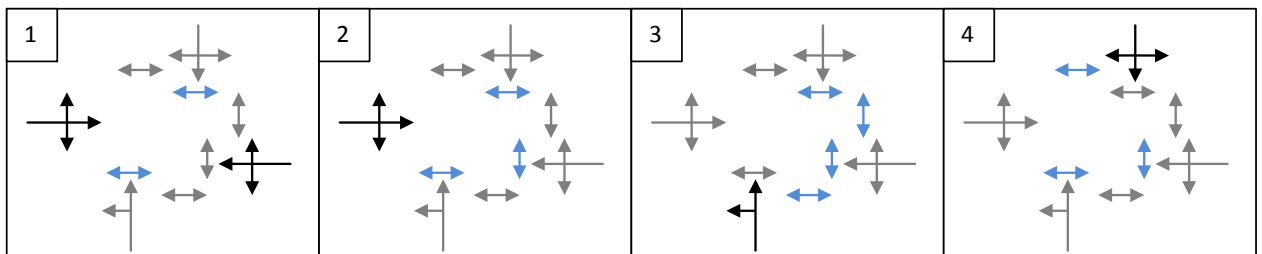
**Figure 12-4: Proposed Rushey Green/Brownhill Road Staging Arrangement**



12.12 In Stage 1 the southbound left turn runs with the Rushey Green and Brownhill Road exit crossings running. In Stage 2 the southbound ahead and left turn phases run along with the northbound ahead and Brownhill Road exit crossing. In Stage 3 the northbound ahead and right turn phases run.

12.13 The proposed staging arrangement for the Catford Road/Thomas Lane junction is shown in Figure 12-5.

**Figure 12-5: Proposed Catford Road/Thomas Lane Staging Arrangement**



12.14 Both Catford Road approaches run in Stage 1, with the eastbound approach continuing to run in Stage 2 to accommodate the volume of right turners. The Canadian Avenue and Thomas Lane approaches run in Stages 3 and 4 respectively. Because all the pedestrian crossings are staggered they run in at least one of the four stages. As the staging arrangement shows, a number of the crossings are able to run in more than one stage increasing the invitation period and reducing the pedestrian journey times.

12.15 The results of the modelling for the preferred option are shown in Appendix D. The key junctions of Catford Road/Rushey Green, Rushey Green/Sanglely Road and Catford Road/Thomas Lane are shown in Table 12-1 and 12-2. The network has been modelled with a cycle time of 64 in both peak periods, which reflects the existing PM Peak cycle time, the current AM Peak cycle time is 60 seconds.



**Table 12-1: Preferred Option AM Peak Modelling Results**

Junction	Link Num	DoS	Delay	Mean Max Queue
		(%)	Sec/PCU	PCU
<b>Catford Road/Rushey Green Junction</b>				
Catford Road Eastbound and flare	346	89	27	19
Bromley Road Northbound LT (Internal)	347	74	9	5
Bromley Road Northbound Ah & LT (Internal)	341	72	13	5
Bromley Road Northbound Ah (Internal)	342	40	9	2
Rushey Green Southbound Ah	343	7	26	1
Rushey Green Southbound Rt	344	12	38	0
Rushey Green Northbound Exit Nearside	82	64	11	8
Rushey Green Northbound Exit Offside	81	54	7	8
<b>Sangley Road/Rushey Green Junction</b>				
Bromley Road Southbound Ah (Internal)	301	53	49	3
Bromley Road Northbound Nearside and flare	306	70	29	9
Bromley Road Northbound Offside	307	69	35	6
Sangley Road Left Turn	305	46	7	4
Sangley Road Rt (middle)	303	85	39	12
Sangley Road Rt (offside)	302	87	44	12
<b>Brownhill Road/Rushey Green Junction</b>				
Rushey Green Southbound Left Turn	151	84	23	13
Rushey Green Southbound Bus Link	155	29	30	1
Rushey Green Northbound Right Turn	157	84	50	8
Rushey Green Northbound Ahead	1657	77	12	12
<b>Thomas Lane/Catford Road Junction</b>				
Catford Road Eastbound Ah & Lt	1635	78	21	18
Catford Road Eastbound Rt	1636	63	40	7
Thomas Lane	1631	87	65	12
Catford Road Westbound Ah & Lt	1633	85	26	13
Catford Road Westbound Ah	1632	67	14	6
Catford Road Westbound Rt	16321	61	76	2
Canadian Avenue	1634	73	46	11



Table 12-2: Preferred Option PM Peak Modelling Results

PM Peak	Link Num	DoS	Delay	Mean Max Queue
		(%)	Sec/PCU	PCU
<b>Catford Road/Rushey Green Junction</b>				
Catford Road Eastbound and flare	346	87	37	19
Bromley Road Northbound LT (Internal)	347	71	9	5
Bromley Road Northbound Ah & LT (Internal)	341	71	6	16
Bromley Road Northbound Ah (Internal)	342	50	12	4
Rushey Green Southbound Ah	343	7	11	0
Rushey Green Southbound Rt	344	14	37	0
Rushey Green Northbound Exit Nearside	82	76	14	8
Rushey Green Northbound Exit Offside	81	66	10	8
<b>Sangley Road/Rushey Green Junction</b>				
Bromley Road Southbound Ah (Internal)	301	53	49	3
Bromley Road Northbound Nearside and flare	306	64	27	8
Bromley Road Northbound Offside	307	75	38	7
Sangley Road Left Turn	305	57	14	9
Sangley Road Rt (middle)	303	85	43	11
Sangley Road Rt (offside)	302	87	47	11
<b>Brownhill Road/Rushey Green Junction</b>				
Rushey Green Southbound Left Turn	151	84	23	13
Rushey Green Southbound Bus Link	155	32	32	1
Rushey Green Northbound Right Turn	157	84	48	9
Rushey Green Northbound Ahead	1657	79	18	9
<b>Thomas Lane/Catford Road Junction</b>				
Catford Road Eastbound Ah & Lt	1635	78	25	17
Catford Road Eastbound Rt	1636	78	54	8
Thomas Lane	1631	86	54	15
Catford Road Westbound Ah & Lt	1633	77	20	12
Catford Road Westbound Ah	1632	57	12	5
Catford Road Westbound Rt	16321	38	36	1
Canadian Avenue	1634	58	41	8



- 12.16 The results of the modelling show the revised junctions all operate with degrees of saturation below 90% in both the AM and PM peak periods.
- 12.17 At the Catford Road/Rushey Green junction the maximum degree of saturation of 89% occurs on the Catford Road arm in the AM peak period. At the junction of Sangley Road/Rushey Green the maximum degree of saturation of 87% occurs on the Sangley Road right turn offside lane in the both peak periods. At the junction of Brownhill Road/Rushey Green the maximum degree of saturation of 84% occurs on the approaches onto Brownhill Road, in both the AM and PM peak periods. And at the Thomas Lane junction the maximum degree of saturation of 87% occurs on Thomas Lane in the AM Peak.

### 13. Recommendations and Conclusions

- 13.1 The options considered are summarised below

#### **Two way working on Plassy Road and Sangley Road**

- 13.2 Modelling shows that this scheme only benefits local traffic, based on existing traffic flows and reduces the capacity at a number of junctions, resulting in reduced journey times for some of the major traffic flow routes through the gyratory.

#### **Two-way working on Rushey Green and Brownhill Road**

- 13.3 Two-way working on Rushey Green and Brownhill Road is not considered viable, as it would increase southbound traffic flows on Rushey Green. Introducing two-way working on Brownhill Road in isolation only benefits a small amount of traffic and therefore is was not considered beneficial given the significant reduction in capacity at the Rushey Green/Brownhill Road junction, to facilitate the additional movements.

#### **Contra-flow bus lanes on Brownhill Road**

- 13.4 This option only benefits the bus route 202 and as above, based on the modelling the loss in capacity at the junction of Brownhill Road and Rushey Green resulted in the option not being viable.

#### **Full Two-Way working**

- 13.5 Modelling developed as part of the TfL study suggests that the Catford Road/Rushey Green Sangley Road junction would not operate satisfactorily. Also, the level of traffic on Rushey Green would increase significantly with the inclusion of all northbound and southbound traffic, and there would be no opportunity to relocate road space along Rushey Green to other modes.

#### **Preferred Option**

- 13.6 Converting Sangley Road to two-way bus operation significantly reduces bus journey times for the 4 routes to Sangley Road and the route to Bromley Road.
- 13.7 The introduction of a median strip on Rushey Green and improved pedestrian crossing facilities can be accommodated without over saturating the junctions at Catford Road and Brownhill Road on Rushey Green
- 13.8 Based on the modelling converting Thomas Lane to two-way is achievable, to improve access to the shipping centre, with the junction also providing improved crossing facilities for pedestrian in conjunction with wider footways to the east and west of the junction.



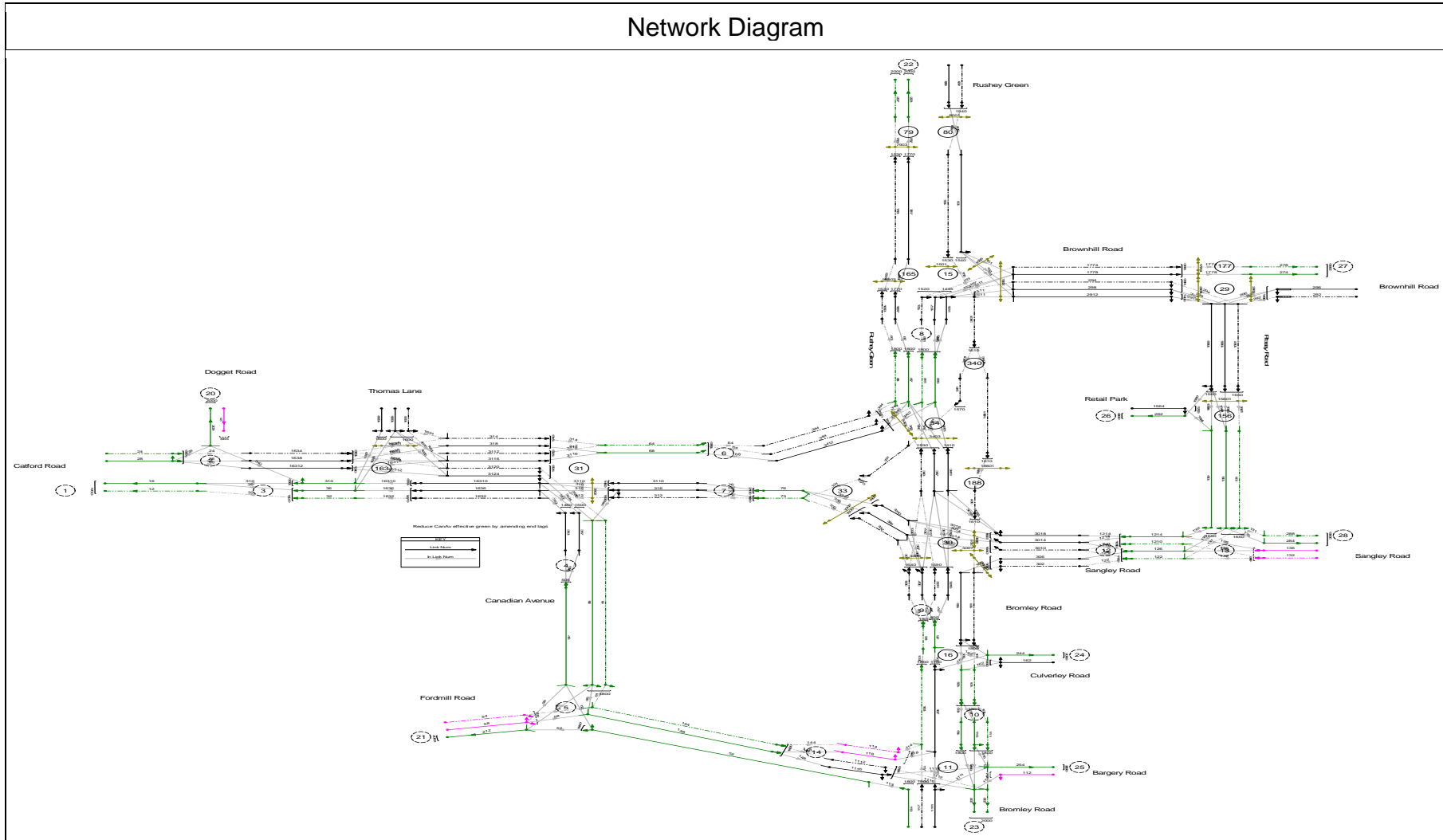
- 13.9 Following demolition of Laurence House, to facilitate improved pedestrian permeability on Catford Road a central median can be introduced along with a bus lane and general traffic lane in both directions on Catford Road and 6m wide footways to improve the public realm. The widened footways extend from Catford station on both the north and south sides to improve the pedestrian routes to/from the station and the town centre.
- 13.10 Based on the results of the modelling it is recommended that the preferred option is proposed as part of the Area Action Plan.
- 13.11 Further modelling will need to be carried out to update the models with current traffic flow data to achieve formal approval from TfL in line with the modelling guidelines. Once agreement of the scheme has been reached, it is recommended that this work be undertaken, so that more accurate models of the area can be developed and a greater accuracy in results can be produced.



## Appendix A: Base TRANSYT Results

# 2007 AM Peak Base Results

## Network Diagram





53)=	10	79	4	5
54)=	10	80	7	5
55)=	10	156	0	4
56)=	10	163	7	7
57)=	10	165	2	5
58)=	10	177	5	0
59)=	10	188	7	7
60)=	10	340	7	7

CARD		NODE		PRECEDING INTERSTAGE TIMES (WORKING)									
NO.	TYPE	NO.	NO.	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
61)=	11	11		2	2								
62)=	11	15		9	8	10							
63)=	11	16		2	30								
64)=	11	29		8	8								
65)=	11	30		8	8	8							
66)=	11	31		12	13								
67)=	11	33		10	10								
68)=	11	34		16	9								
69)=	11	79		7	4								
70)=	11	80		7	4								
71)=	11	156		9	10								
72)=	11	163		5	12								
73)=	11	165		8	5								
74)=	11	177		2	16								
75)=	11	188		8	5								
76)=	11	340		0	0								

CARD		NODE		STAGE CHANGE TIMES (WORKING)									
NO.	TYPE	NO.	Sq1/Db1 Cycled	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
77)=	12	11	1	10	51								
78)=	12	15	1	59	15	29							
79)=	12	16	1	49	15								
80)=	12	29	1	9	40								
81)=	12	30	1	38	53	9							
82)=	12	31	1	10	50								
83)=	12	33	1	4	47								
84)=	12	34	1	11	52								
85)=	12	79	1	3	54								
86)=	12	80	1	56	47								
87)=	12	156	1	25	11								
88)=	12	163	1	14	53								
89)=	12	165	1	50	40								
90)=	12	177	1	32	16								
91)=	12	188	1	29	4								
92)=	12	340	1	27	52								

CARD		LINK		LINK CARDS: GIVEWAY DATA											
NO.	TYPE	NO.	PRIORITY	LINK1 NO.	LINK2 NO.	LINK1 ONLY % FLOW	A1 X100	A2 X100	LINK LENGTH	STOP WT. X100	MAX FLOW	DELAY WT. X100	DISPSN X100		
93)=	30	21	28	310	80	19	17	0	0	0	200	0	665	0	0
94)=	30	54	0	0	0	0	0	0	0	0	500	0	722	0	0
95)=	30	58	52	55	65	22	19	0	0	0	200	0	722	0	0
96)=	30	112	115	1111	100	20	17	0	0	0	200	0	767	0	0
97)=	30	114	0	0	0	0	0	0	0	0	50	0	775	0	0
98)=	30	116	0	0	100	16	0	0	0	0	50	0	775	0	0
99)=	30	132	0	0	0	0	0	0	0	0	500	0	840	0	0
100)=	30	136	135	0	100	14	0	0	0	0	200	0	840	0	0

CARD		LINK		LINK CARDS: FIXED DATA												
NO.	TYPE	NO.	EXIT NODE	FIRST START STAGE	LAG	GREEN END STAGE	LAG	SECOND START STAGE	LAG	GREEN END STAGE	LAG	LINK LENGTH	STOP WT. X100	SAT FLOW	DELAY WT. X100	DISPSN X100
101)=	31	12	0	0	0	0	0	0	0	0	0	95	0	0	0	0
102)=	31	16	0	0	0	0	0	0	0	0	0	95	0	1700	0	0
103)=	31	24	0	0	0	0	0	0	0	0	0	60	0	0	0	0
104)=	31	28	0	0	0	0	0	0	0	0	0	60	0	1500	0	0
105)=	31	32	0	0	0	0	0	0	0	0	0	45	0	0	0	0
106)=	31	36	0	0	0	0	0	0	0	0	0	45	0	1500	0	0
107)=	31	43	0	0	0	0	0	0	0	0	0	445	0	505	0	0
108)=	31	51	0	0	0	0	0	0	0	0	0	505	0	0	0	0
109)=	31	52	0	0	0	0	0	0	0	0	0	165	0	1800	0	0
110)=	31	55	0	0	0	0	0	0	0	0	0	505	0	1800	0	0
111)=	31	64	0	0	0	0	0	0	0	0	0	95	0	0	0	0
112)=	31	68	0	0	0	0	0	0	0	0	0	95	0	1900	0	0
113)=	31	73	0	0	0	0	0	0	0	0	0	75	0	1800	0	0
114)=	31	76	0	0	0	0	0	0	0	0	0	75	0	2100	0	0
115)=	31	83	0	0	0	0	0	0	0	0	0	85	0	1800	0	0
116)=	31	87	0	0	0	0	0	0	0	0	0	85	0	1800	0	0
117)=	31	93	0	0	0	0	0	0	0	0	0	85	0	1800	0	0
118)=	31	97	0	0	0	0	0	0	0	0	0	85	0	800	0	0
119)=	31	101	0	0	0	0	0	0	0	0	0	255	0	0	0	0
120)=	31	105	0	0	0	0	0	0	0	0	0	255	0	1800	0	0
121)=	31	111	0	0	0	0	0	0	0	0	0	125	0	0	0	0
122)=	31	113	0	0	0	0	0	0	0	0	0	200	0	1800	0	0
123)=	31	115	0	0	0	0	0	0	0	0	0	125	0	1800	0	0
124)=	31	117	0	0	0	0	0	0	0	0	0	200	0	0	0	0
125)=	31	119	0	0	0	0	0	0	0	0	0	125	0	1800	0	0
126)=	31	122	0	0	0	0	0	0	0	0	0	70	0	0	0	0
127)=	31	126	0	0	0	0	0	0	0	0	0	65	0	1150	0	0
128)=	31	131	0	0	0	0	0	0	0	0	0	130	0	0	0	0
129)=	31	135	0	0	0	0	0	0	0	0	0	110	0	1650	0	0
130)=	31	139	0	0	0	0	0	0	0	0	0	110	0	1650	0	0
131)=	31	144	0	0	0	0	0	0	0	0	0	105	0	0	0	0
132)=	31	148	0	0	0	0	0	0	0	0	0	105	0	1800	0	0
133)=	31	151	15	1	9	3	5	0	0	0	0	170	0	1540	0	0
134)=	31	153	0	0	0	0	0	0	0	0	0	35	0	0	0	0
135)=	31	155	15	2	8	3	2	0	0	0	0	175	0	1530	0	0
136)=	31	157	15	3	10	1	2	0	0	0	0	45	0	1520	0	0
137)=	31	161	0	0	0	0	0	0	0	0	0	135	0	0	0	0
138)=	31	162	16	2	30	1	0	0	0	0	0	200	0	1650	0	0
139)=	31	163	0	0	0	0	0	0	0	0	0	365	0	1800	0	0
140)=	31	165	16	1	2	2	28	0	0	0	0	115	0	1800	500	0
141)=	31	167	16	1	4	2	0	0	0	0	0	365	0	1700	5000	0
142)=	31	203	0	0	0	0	0	0	0	0	0	50	0	2000	0	0
143)=	31	212	0	0	0	0	0	0	0	0	0	50	0	2000	0	0
144)=	31	223	0	0	0	0	0	0	0	0	0	50	0	2000	0	0
145)=	31	227	0	0	0	0	0	0	0	0	0	50	0	2000	0	0
146)=	31	231	0	0	0	0	0	0	0	0	0	50	0	2000	0	0
147)=	31	232	0	0	0	0	0	0	0	0	0	50	0	0	0	0
148)=	31	244	0	0	0	0	0	0	0	0	0	50	0	2000	0	0
149)=	31	254	0	0	0	0	0	0	0	0	0	50	0	2000	0	0
150)=	31	262	0	0	0	0	0	0	0	0	0	50	0	2000	0	0
151)=	31	274	0	0	0	0	0	0	0	0	0	50	0	2000	0	0
152)=	31	278	0	0	0	0	0	0	0	0	0	50	0	0	0	0
153)=	31	284	0	0	0	0	0	0	0	0	0	50	0	2000	0	0
154)=	31	288	0	0	0	0	0	0	0	0	0	50	0	0	0	0
155)=	31	292	0	0	0	0	0	0	0	0	0	200	0	0	0	0
156)=	31	294	0	0	0	0	0	0	0	0	0	140	0	0	0	0
157)=	31	296	29	2	8	1	3	0	0	0	0	200	0	1480	0	0







395)= 33 296 1410 5 0 0 0 0

USER-DEFINED ROUTES

CARD CARD ROUTE ROUTE  
NO. TYPE NUMBER DESCRIPTION

396)= 41 1 General Traffic Northbound

CARD CARD ROUTE LINK LINK LINK LINK LINK LINK LINK LINK LINK LINK LINK LINK LINK LINK  
NO TYPE NUMBER NO. NO. NO. NO. NO. NO. NO. NO. NO. NO. NO. NO. NO.

397)= 42 1 1111 167 97 3015

\*\*\*\*\*END OF SUBROUTINE TINPUT\*\*\*\*\*

60 SECOND CYCLE 60 STEPS

INITIAL SETTINGS  
- (SECONDS)

NODE NO	NUMBER OF STAGES	STAGE 1	STAGE 2	STAGE 3	STAGE 4	STAGE 5	STAGE 6	STAGE 7	STAGE 8	STAGE 9	STAGE 10
11	2	10	51								
15	3	59	15	29							
16	2	49	15								
29	2	9	40								
30	3	38	53	9							
31	2	10	50								
33	2	4	47								
34	2	11	52								
79	2	3	54								
80	2	56	47								
156	2	25	11								
163	2	14	53								
165	2	50	40								
177	2	32	16								
188	2	29	4								
340	2	27	52								

LINK NUMBER	FLOW INTO LINK (PCU/H)	SAT FLOW (PCU/H)	DEGREE OF SAT (%)	MEAN PER CRUISE (SEC)	TIMES PER PCU (SEC)	-----DELAY----- UNIFORM (PCU-H/H)	RANDOM+ OVERSATS (\$/H)	COST OF DELAY (\$/H)	----STOPS---- MEAN STOPS /PCU (%)	COST OF STOPS (\$/H)	----QUEUE---- MEAN AVERAGE EXCESS (PCU)	PERFORMANCE WEIGHTED SUM OF ( ) VALUES (\$/H)	EXIT NODE	GREEN START 1ST (SECONDS)	TIMES END 2ND (SECONDS)
12BL	126	161	98	36.2	33.2	0.2 + 1.0	( 16.5)	106	( 3.0)	40	+	19.5			
16	1537	1700S	98	7.0	33.3	2.0 + 12.2	(201.7)	107	( 52.9)	40	+	254.6			
21	10	665	3	18.0	5.0	0.0 + 0.0	( 0.2)	0	( 0.0)	0		0.2			
24BL	126	28L	85	26.0	7.6	0.0 + 0.3	( 3.8)	12	( 0.0)	3		3.8			
28	1144	1500S	85	5.0	7.6	0.0 + 2.4	(34.5)	12	( 3.6)	3		38.1			
32BL	126	36L	56	4.0	2.7	0.0 + 0.1	( 1.4)	6	( 0.2)	4		1.5			
36	711	1500S	56	3.1	2.8	0.0 + 0.5	( 7.8)	8	( 1.2)	4		9.0			
43	504	505	100	47.3	77.5	0.0 + 10.9	(154.2)	95	( 7.7)	11		161.9			
51BL	15	55L	20	83.1	1.3	0.0 + 0.0	( 0.1)	2	( 0.0)	0		0.1			
52	396	1800	22	20.0	1.3	0.0 + 0.1	( 2.0)	2	( 0.1)	0		2.1			
54BL	10	58L	41	45.0	5.0	0.0 + 0.0	( 0.2)	0	( 0.0)	0		0.2			
55	353	1800S	20	54.0	1.3	0.0 + 0.1	( 1.7)	2	( 0.1)	0		1.9			
58	241	722S	41	18.0	5.0	0.0 + 0.3	( 4.8)	0	( 0.0)	0		4.8			
64BL	138	68L	48	8.6	1.8	0.0 + 0.1	( 1.0)	3	( 0.1)	0		1.1			
68	765	1900S	48	9.0	1.8	0.0 + 0.4	( 5.4)	3	( 0.4)	0		5.9			
73BL	138	1800	8	55.3	1.1	0.0 + 0.0	( 0.6)	2	( 0.1)	0		0.6			
76	976	2100	46	6.0	2.2	0.2 + 0.4	( 8.3)	23	( 6.0)	11		14.4			
83BL	120	1800	7	26.3	1.1	0.0 + 0.0	( 0.5)	2	( 0.0)	0		0.6			
87	757	1800	42	7.7	1.7	0.0 + 0.4	( 5.1)	3	( 0.4)	0		5.6			
93BL	129	1800	7	51.3	1.1	0.0 + 0.0	( 0.5)	2	( 0.1)	0		0.6			
97	700	800	87	7.1	25.7	1.7 + 3.3	(71.0)	98	(13.8)	13	+	84.9			
101BL	135	105L	33	22.9	1.5	0.0 + 0.1	( 0.8)	2	( 0.1)	0		0.9			
105	462	1800S	33	17.0	1.5	0.0 + 0.2	( 2.7)	2	( 0.4)	0		3.1			
111BL	129	115L	25	11.3	1.3	0.0 + 0.0	( 0.7)	2	( 0.1)	0		0.7			
112	12	767	2	18.0	2.5	0.0 + 0.0	( 0.1)	0	( 0.0)	0		0.1			
114	389	1800	22	18.0	1.3	0.0 + 0.1	( 2.0)	2	( 0.2)	0		2.1			
114BL	10	118L	10	4.5	2.6	0.0 + 0.0	( 0.1)	0	( 0.0)	0		0.1			
115	322	1800S	25	8.0	1.3	0.0 + 0.1	( 1.7)	2	( 0.3)	0		2.0			
117BL	123	1111L	61	18.0	9.5	0.2 + 0.1	( 4.6)	54	( 1.5)	8		6.1	11	12	51
118	66	775S	10	5.0	2.6	0.0 + 0.0	( 0.7)	0	( 0.0)	0		0.7			
119	141	1800	8	8.0	1.1	0.0 + 0.0	( 0.6)	2	( 0.1)	0		0.7			
122BL	93	126L	72	6.3	6.5	0.0 + 0.1	( 2.4)	36	( 0.8)	7		3.1			

60 SECOND CYCLE 60 STEPS

LINK NUMBER	FLOW INTO LINK (PCU/H)	SAT FLOW (PCU/H)	DEGREE OF SAT (%)	MEAN PER CRUISE (SEC)	TIMES PER PCU (SEC)	-----DELAY----- UNIFORM (PCU-H/H)	RANDOM+ OVERSATS (\$/H)	COST OF DELAY (\$/H)	----STOPS---- MEAN STOPS /PCU (%)	COST OF STOPS (\$/H)	----QUEUE---- MEAN AVERAGE EXCESS (PCU)	PERFORMANCE WEIGHTED SUM OF ( ) VALUES (\$/H)	EXIT NODE	GREEN START 1ST (SECONDS)	TIMES END 2ND (SECONDS)
126	733	1150S	72	6.0	6.1	0.1 + 1.1	( 17.7)	27	( 3.9)	7		21.7			
131BL	114	135L	48	11.7	2.1	0.0 + 0.1	( 1.0)	6	( 0.2)	3		1.1			
132BL	48	136L	41	45.0	3.6	0.0 + 0.0	( 0.7)	0	( 0.0)	0		0.7			
135	670	1650S	48	11.0	2.1	0.0 + 0.4	( 5.6)	5	( 0.5)	3		6.1			
136	295	840S	41	18.0	3.6	0.0 + 0.3	( 4.2)	0	( 0.0)	0		4.2			
139	571	1650	35	11.1	1.7	0.0 + 0.3	( 3.8)	3	( 0.2)	0		4.0			
144BL	12	148L	21	9.4	1.3	0.0 + 0.0	( 0.1)	2	( 0.0)	0		0.1			
148	364	1800S	21	11.3	1.3	0.0 + 0.1	( 1.8)	2	( 0.1)	0		1.9			
151	527	1540	76	16.0	22.6	1.8 + 1.6	(47.0)	71	( 7.5)	7		54.5	15	8	34
153BL	114	157L	75	3.1	20.8	0.3 + 0.4	( 9.4)	91	( 2.3)	7	+	11.7	15	39	1
155BL	129	1530	56	15.8	38.8	0.8 + 0.6	(19.7)	107	( 3.1)	3		22.8	15	23	31
157	320	1520S	75	4.0	22.8	1.0 + 1.1	(28.8)	78	( 5.6)	7	+	34.4	15	39	1
161BL	138	165L	38	51.8	2.7	0.0 + 0.1	( 1.4)	17	( 0.5)	2		2.0	16	51	43
162	107	1650	78	18.0	80.4	0.8 + 1.6	(33.9)	164	( 3.7)	3		37.7	16	45	49
163BL	129	1800	7	32.8	1.1	0.0 + 0.0	( 0.5)	2	( 0.1)	0		0.6			
165	462	1800S	38	10.0	2.5	0.1 + 0.2	( 4.5)*	14	( 1.5)	2		24.2	16	51	43
167	652	1700	100	30.2	83.9	2.5 + 12.7	(215.7)*	178	(27.1)	23		10811.3	16	53	15
203	253	2000	13	5.0	1.0	0.0 + 0.1	( 1.0)	2	( 0.1)	0		1.1			
212	128	2000	6	5.0	1.0	0.0 + 0.0	( 0.5)	2	( 0.0)	0		0.5			
223	757	2000	38	5.0	1.4	0.0 + 0.3	( 4.3)	2	( 0.3)	0		4.6			
227BL	120	2000	6	4.5	0.0	0.0 + 0.0	( 0.5)	2	( 0.0)	0		0.5			
231	687	2000S	41	5.0	1.7	0.0 + 0.3	( 4.7)	11	( 1.3)	5		6.0			
232BL	135	231L	41	4.5	1.6	0.0 + 0.1	( 0.9)	7	( 0.2)	5		1.1			
244	39	2000	2	5.0	0.9	0.0 + 0.0	( 0.1)	2	( 0.0)	0		0.2			
254	106	2000	5	5.0	1.0	0.0 + 0.0	( 0.4)	2	( 0.0)	0		0.4			
262	81	2000	4	5.0	0.9	0.0 + 0.0	( 0.3)	2	( 0.0)	0		0.3			
274	590	2000S	30	5.0	1.3	0.0 + 0.2	( 3.0)	2	( 0.2)	0		3.2			
278BL	18	274L	30	4.5	1.3	0.0 + 0.0	( 0.1)	2	( 0.0)	0		0.1			
284	67	2000S	6	5.0	1.0	0.0 + 0.0	( 0.3)	2	( 0.0)	0		0.3			
288BL	51	284L	6	4.5	1.0	0.0 + 0.0	( 0.2)	2	( 0.0)	0		0.2			
292BL	24	296L	76	18.0	21.6	0.1 + 0.1	( 2.0)	83	( 0.4)	11		2.5	29	48	12
294BL	90	298L	71	12.6	31.4	0.6 + 0.2	(11.1)	115	( 2.3)	6		13.4	29	17	43



.....

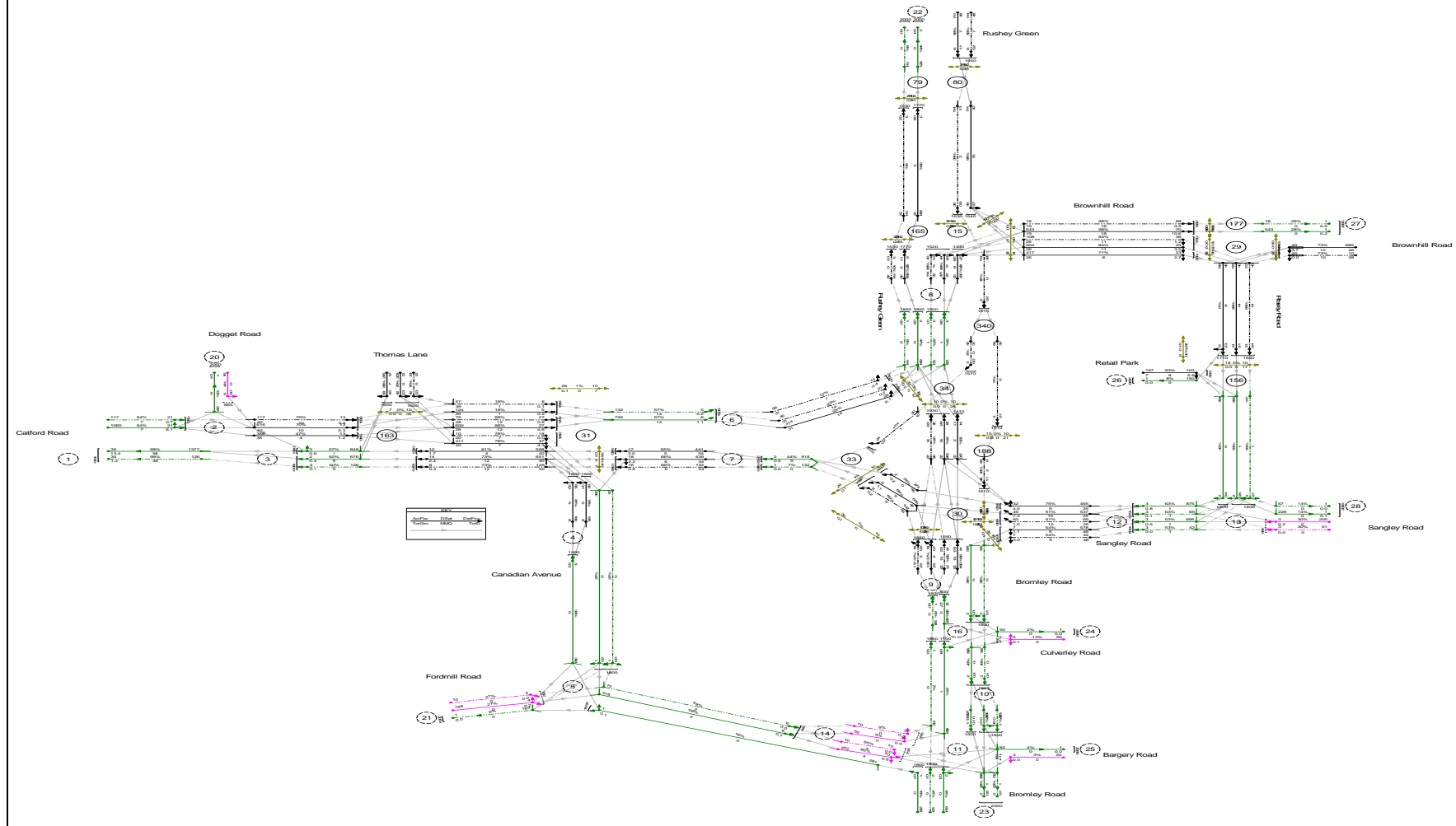
	CRUISE		DELAY		STOPS		TOTALS
	LITRES PER HOUR		LITRES PER HOUR		LITRES PER HOUR		LITRES PER HOUR
FUEL CONSUMPTION PREDICTIONS	244.4	+	190.1	+	188.4	=	622.9

NO. OF ENTRIES TO SUBPT = 1  
NO. OF LINKS RECALCULATED= 204

PROGRAM TRANSYT FINISHED

# 2007 PM Peak Base Results

## Network Diagram





53)=	10	156	7	6	5
54)=	10	163	7	7	
55)=	10	165	4	5	
56)=	10	177	7	0	
57)=	10	188	7	7	
58)=	10	340	7	7	

CARD NO.	CARD TYPE	NODE NO.	NODE CARDS:		PRECEDING INTERSTAGE TIMES (WORKING)								
			S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	
59)=	11	15	9	8	13								
60)=	11	29	8	8									
61)=	11	30	2	8	8	3							
62)=	11	31	5	16	4								
63)=	11	33	10	5									
64)=	11	34	16	9									
65)=	11	79	7	4									
66)=	11	80	7	4									
67)=	11	156	9	6	6								
68)=	11	163	5	12									
69)=	11	165	8	5									
70)=	11	177	6	0									
71)=	11	188	8	5									
72)=	11	340	0	0									

CARD NO.	CARD TYPE	NODE NO.	Sgl/Dbl Cycled	NODE CARDS:		STAGE CHANGE TIMES (WORKING)							
				S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
73)=	12	15	1	8	18	39							
74)=	12	29	1	20	51								
75)=	12	30	1	4	14	28	61						
76)=	12	31	1	27	57	16							
77)=	12	33	1	15	5								
78)=	12	34	1	26	6								
79)=	12	79	1	27	18								
80)=	12	80	1	57	48								
81)=	12	156	1	37	14	26							
82)=	12	163	1	23	63								
83)=	12	165	1	11	1								
84)=	12	177	1	57	18								
85)=	12	188	1	40	14								
86)=	12	340	1	42	6								

CARD NO.	CARD TYPE	LINK NO.	LINK1 NO.	LINK2 NO.	LINK1 GIVEWAY % FLOW	LINK GIVEWAY COEFFS.		LINK LENGTH	STOP WT.X100	MAX FLOW	DELAY WT.X100	DISPSN X100
						A1 X100	A2 X100					
87)=	30	21	28	310	80	19	17	0	0	0	0	0
88)=	30	54	0	0	0	0	0	0	0	500	0	0
89)=	30	58	52	55	65	22	19	0	0	0	0	0
90)=	30	112	115	1111	100	20	17	0	0	0	0	0
91)=	30	114	0	0	0	0	0	0	0	0	0	0
92)=	30	118	0	100	16	0	0	0	0	50	0	0
93)=	30	132	0	0	0	0	0	0	0	200	0	0
94)=	30	136	135	0	100	14	0	0	0	0	0	0
95)=	30	162	165	167	16	23	20	0	0	0	0	0
96)=	30	1112	0	0	0	0	0	0	0	155	0	0
97)=	30	1116	1111	119	0	18	16	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	EXIT NODE	LINK CARDS: FIXED DATA						LINK LENGTH	STOP WT.X100	SAT FLOW	DELAY WT.X100	DISPSN X100			
				FIRST GREEN		SECOND GREEN		LINK END LAG	STOP WT.X100						SAT FLOW	DELAY WT.X100	DISPSN X100
				START STAGE	END LAG	START STAGE	END LAG										
98)=	31	12	0	0	0	0	0	0	0	95	0	0	0	0			
99)=	31	16	0	0	0	0	0	0	0	95	0	1540	0	0			
100)=	31	24	0	0	0	0	0	0	0	60	0	0	0	0			
101)=	31	28	0	0	0	0	0	0	0	60	0	1250	0	0			
102)=	31	32	0	0	0	0	0	0	0	45	0	0	0	0			
103)=	31	36	0	0	0	0	0	0	0	45	0	1600	0	0			
104)=	31	43	0	0	0	0	0	0	0	445	0	1000	0	0			
105)=	31	51	0	0	0	0	0	0	0	505	0	0	0	0			
106)=	31	52	0	0	0	0	0	0	0	165	0	1800	0	0			
107)=	31	55	0	0	0	0	0	0	0	505	0	1800	0	0			
108)=	31	64	0	0	0	0	0	0	0	95	0	0	0	0			
109)=	31	68	0	0	0	0	0	0	0	95	0	1500	0	0			
110)=	31	73	0	0	0	0	0	0	0	75	0	1800	0	0			
111)=	31	76	0	0	0	0	0	0	0	75	0	2100	0	0			
112)=	31	83	0	0	0	0	0	0	0	85	0	1800	0	0			
113)=	31	87	0	0	0	0	0	0	0	85	0	1800	0	0			
114)=	31	93	0	0	0	0	0	0	0	85	0	1800	0	0			
115)=	31	97	0	0	0	0	0	0	0	85	0	800	0	0			
116)=	31	101	0	0	0	0	0	0	0	255	0	0	0	0			
117)=	31	105	0	0	0	0	0	0	0	255	0	1800	0	0			
118)=	31	111	0	0	0	0	0	0	0	125	0	0	0	0			
119)=	31	113	0	0	0	0	0	0	0	200	0	1800	0	0			
120)=	31	115	0	0	0	0	0	0	0	125	0	1800	0	0			
121)=	31	117	0	0	0	0	0	0	0	200	0	0	0	0			
122)=	31	119	0	0	0	0	0	0	0	125	0	1800	0	0			
123)=	31	122	0	0	0	0	0	0	0	70	0	0	0	0			
124)=	31	126	0	0	0	0	0	0	0	65	0	1400	0	0			
125)=	31	131	0	0	0	0	0	0	0	130	0	0	0	0			
126)=	31	135	0	0	0	0	0	0	0	110	0	1800	0	0			
127)=	31	139	0	0	0	0	0	0	0	110	0	1800	0	0			
128)=	31	144	0	0	0	0	0	0	0	105	0	0	0	0			
129)=	31	148	0	0	0	0	0	0	0	105	0	750	0	0			
130)=	31	151	15	1	9	3	8	0	0	170	0	1540	0	0			
131)=	31	153	0	0	0	0	0	0	0	35	0	0	0	0			
132)=	31	155	15	2	8	3	0	0	0	175	0	1530	0	0			
133)=	31	157	15	3	13	1	2	0	0	45	0	1520	0	0			
134)=	31	161	0	0	0	0	0	0	0	135	0	0	0	0			
135)=	31	163	0	0	0	0	0	0	0	365	0	1800	0	0			
136)=	31	165	0	0	0	0	0	0	0	115	0	1800	0	0			
137)=	31	167	0	0	0	0	0	0	0	365	0	1100	0	0			
138)=	31	203	0	0	0	0	0	0	0	50	0	2000	0	0			
139)=	31	212	0	0	0	0	0	0	0	50	0	2000	0	0			
140)=	31	223	0	0	0	0	0	0	0	50	0	2000	0	0			
141)=	31	227	0	0	0	0	0	0	0	50	0	2000	0	0			
142)=	31	231	0	0	0	0	0	0	0	50	0	2000	0	0			
143)=	31	232	0	0	0	0	0	0	0	50	0	0	0	0			
144)=	31	244	0	0	0	0	0	0	0	50	0	2000	0	0			
145)=	31	254	0	0	0	0	0	0	0	50	0	2000	0	0			
146)=	31	262	0	0	0	0	0	0	0	50	0	2000	0	0			
147)=	31	274	0	0	0	0	0	0	0	50	0	2000	0	0			
148)=	31	278	0	0	0	0	0	0	0	50	0	0	0	0			
149)=	31	284	0	0	0	0	0	0	0	50	0	2000	0	0			
150)=	31	288	0	0	0	0	0	0	0	50	0	0	0	0			
151)=	31	292	0	0	0	0	0	0	0	200	0	0	0	0			
152)=	31	294	0	0	0	0	0	0	0	140	0	0	0	0			
153)=	31	296	29	2	8	1	3	0	0	200	0	1480	0	0			
154)=	31	298	29	1	8	2	3	0	0	140	0	1720	0	0			
155)=	31	301	30	2	8	3	0	0	0	70	0	1610	0	0			
156)=	31	302	0	0	0	0	0	0	0	60	0	0	0	0			
157)=	31	303	0	0	0	0	0	0	0	40	0	0	0	0			



158)	=	31	306	30	3	5	2	3	0	0	0	0	85	0	1510	0	0
159)	=	31	307	30	1	2	3	3	0	0	0	0	35	0	1640	0	0
160)	=	31	310	0	0	0	0	0	0	0	0	0	45	0	1500	0	0
161)	=	31	312	0	0	0	0	0	0	0	0	0	55	0	0	0	0
162)	=	31	313	31	2	16	3	1	0	0	0	0	40	0	1600	0	0
163)	=	31	314	0	0	0	0	0	0	0	0	0	80	0	0	0	0
164)	=	31	316	31	1	5	2	9	0	0	0	0	55	0	1590	0	0
165)	=	31	317	31	2	16	3	1	0	0	0	0	40	0	1600	0	0
166)	=	31	318	31	1	2	2	11	0	0	0	0	80	0	1590	0	0
167)	=	31	331	33	2	5	1	5	0	0	0	0	25	0	1570	0	0
168)	=	31	332	0	0	0	0	0	0	0	0	0	55	0	0	0	0
169)	=	31	336	33	1	10	2	1	0	0	0	0	55	0	1600	0	0
170)	=	31	341	34	1	16	2	3	0	0	0	0	40	0	1570	0	0
171)	=	31	343	0	0	0	0	0	0	0	0	0	90	0	0	0	0
172)	=	31	344	34	1	16	2	3	0	0	0	0	45	0	1570	0	0
173)	=	31	347	34	2	9	1	11	0	0	0	0	90	0	1930	0	0
174)	=	31	348	0	0	0	0	0	0	0	0	0	45	0	0	0	0
175)	=	31	793	79	1	7	2	3	0	0	0	0	165	0	1530	0	0
176)	=	31	797	79	1	7	2	3	0	0	0	0	165	0	1770	0	0
177)	=	31	801	0	0	0	0	0	0	0	0	0	200	0	0	0	0
178)	=	31	805	80	1	7	2	0	0	0	0	0	200	0	1940	0	0
179)	=	31	811	0	0	0	0	0	0	0	0	0	85	0	0	0	0
180)	=	31	815	0	0	0	0	0	0	0	0	0	85	0	1500	0	0
181)	=	31	1111	0	0	0	0	0	0	0	0	0	200	0	1800	0	0
182)	=	31	1210	0	0	0	0	0	0	0	0	0	70	0	0	0	0
183)	=	31	1214	0	0	0	0	0	0	0	0	0	60	0	1500	0	0
184)	=	31	1501	15	3	5	2	0	0	0	0	0	10	0	10000	0	0
185)	=	31	1502	15	1	9	3	0	0	0	0	0	10	0	10000	0	0
186)	=	31	1505	15	3	13	1	0	0	0	0	0	10	0	10000	0	0
187)	=	31	1511	15	3	13	1	2	0	0	0	0	45	0	1445	0	0
188)	=	31	1561	0	0	0	0	0	0	0	0	0	110	0	0	0	0
189)	=	31	1564	156	2	5	3	0	0	0	0	0	200	0	1700	0	0
190)	=	31	1565	156	1	1	2	0	0	0	0	0	110	0	1650	0	0
191)	=	31	1569	156	1	1	2	0	0	0	0	0	110	0	1710	0	0
192)	=	31	1631	0	0	0	0	0	0	0	0	0	200	0	0	0	0
193)	=	31	1632	0	0	0	0	0	0	0	0	0	60	0	0	0	0
194)	=	31	1634	0	0	0	0	0	0	0	0	0	60	0	0	0	0
195)	=	31	1635	163	2	12	1	0	0	0	0	0	200	0	1600	0	0
196)	=	31	1636	163	1	5	2	5	0	0	0	0	60	0	1670	0	0
197)	=	31	1638	163	1	5	2	5	0	0	0	0	60	0	1630	0	0
198)	=	31	1639	163	2	12	1	0	0	0	0	0	200	0	1600	0	0
199)	=	31	1653	165	1	8	2	3	0	0	0	0	60	0	1530	0	0
200)	=	31	1657	165	1	8	2	3	0	0	0	0	60	0	1770	0	0
201)	=	31	1774	0	0	0	0	0	0	0	0	0	140	0	0	0	0
202)	=	31	1778	177	1	6	2	0	0	0	0	0	150	0	1840	0	0
203)	=	31	1881	188	1	8	2	0	0	0	0	0	30	0	1610	0	0
204)	=	31	2902	29	1	8	2	0	0	0	0	0	10	0	10000	0	0
205)	=	31	2904	29	2	8	1	0	0	0	0	0	10	0	10000	0	0
206)	=	31	2912	29	1	8	2	3	0	0	0	0	140	0	1400	0	0
207)	=	31	3002	30	2	8	3	0	0	0	0	0	10	0	10000	0	0
208)	=	31	3003	30	3	8	4	0	0	0	0	0	10	0	10000	0	0
209)	=	31	3006	30	1	2	3	0	0	0	0	0	10	0	10000	0	0
210)	=	31	3007	30	3	7	2	0	0	0	0	0	10	0	10000	0	0
211)	=	31	3010	0	0	0	0	0	0	0	0	0	60	0	0	0	0
212)	=	31	3011	0	0	0	0	0	0	0	0	0	40	0	0	0	0
213)	=	31	3014	30	3	8	4	0	0	0	0	0	85	0	1640	0	0
214)	=	31	3015	30	1	2	3	3	0	0	0	0	35	0	1590	0	0
215)	=	31	3018	30	3	8	4	0	0	0	0	0	85	0	1500	0	0
216)	=	31	3019	30	4	3	1	0	0	0	0	0	0	0	10000	0	0
217)	=	31	3102	31	2	16	3	0	0	0	0	0	10	0	10000	0	0
218)	=	31	3110	31	1	5	2	9	0	0	0	0	55	0	1460	0	0
219)	=	31	3112	0	0	0	0	0	0	0	0	0	80	0	0	0	0
220)	=	31	3116	31	1	2	2	0	0	0	0	0	80	0	1700	0	0
221)	=	31	3120	0	0	0	0	0	0	0	0	0	80	0	0	0	0
222)	=	31	3124	31	2	14	1	0	0	0	0	0	60	0	1650	0	0
223)	=	31	3125	31	3	4	1	0	0	0	0	0	0	0	10000	0	0
224)	=	31	3302	33	2	5	1	0	0	0	0	0	10	0	10000	0	0
225)	=	31	3310	33	1	10	2	1	0	0	0	0	55	0	1600	0	0
226)	=	31	3401	340	1	0	2	0	0	0	0	0	105	0	1610	0	0
227)	=	31	3403	34	1	16	2	0	0	0	0	0	10	0	10000	0	0
228)	=	31	3404	34	2	8	1	0	0	0	0	0	10	0	10000	0	0
229)	=	31	3411	34	2	9	1	11	0	0	0	0	90	0	1410	0	0
230)	=	31	3412	34	1	16	2	3	0	0	0	0	45	0	1750	0	0
231)	=	31	7903	79	2	4	1	0	0	0	0	0	10	0	10000	0	0
232)	=	31	8001	80	2	4	1	0	0	0	0	0	10	0	10000	0	0
233)	=	31	15601	156	2	6	1	0	0	0	0	0	10	0	10000	0	0
234)	=	31	15602	156	3	6	1	0	0	0	0	0	0	0	10000	0	0
235)	=	31	16301	163	1	5	2	0	0	0	0	0	10	0	10000	0	0
236)	=	31	16310	163	1	5	2	5	0	0	0	0	60	0	1530	0	0
237)	=	31	16312	163	1	5	2	0	0	0	0	0	60	0	1340	0	0
238)	=	31	16503	165	2	5	1	0	0	0	0	0	10	0	10000	0	0
239)	=	31	17704	177	2	0	1	0	0	0	0	0	10	0	10000	0	0
240)	=	31	18801	188	2	5	1	0	0	0	0	0	10	0	10000	0	0

LINK CARDS: FLOW DATA

CARD NO.	CARD TYPE	LINK NO.	TOTAL FLOW	UNIFORM FLOW	ENTRY 1			ENTRY 2			ENTRY 3			ENTRY 4			
					LINK NO.	FLOW	TIME	LINK NO.	FLOW	TIME	LINK NO.	FLOW	TIME	LINK NO.	FLOW	TIME	
241)	=	32	12	126	0	32	126	4023	0	0	0	0	0	0	0	0	0
242)	=	32	16	1377	0	36	676	7	310	701	7	0	0	0	0	0	0
243)	=	32	21	16	0	0	0	18	0	0	0	0	0	0	0	0	0
244)	=	32	24	117	0	0	0	4013	0	0	0	0	0	0	0	0	0
245)	=	32	28	1060	0	0	0	5	0	0	0	0	0	0	0	0	0
246)	=	32	32	126	0	1632	126	4000	0	0	0	0	0	0	0	0	0
247)	=	32	36	676	0	1636	650	3	1639	26	5	0	0	0	0	0	0
248)	=	32	43	343	0	52	260	47	58	83	48	0	0	0	0	0	0
249)	=	32	51	15	0	3120	10	4042	0	0	0	0	0	0	0	0	0
250)	=	32	52	281	0	113	278	20	0	0	0	0	0	0	0	0	0
251)	=	32	54	10	0	0	0	4000	0	0	0	0	0	0	0	0	0
252)	=	32	55	467	0	316	26	54	3124	412	54	0	0	0	0	0	0
253)	=	32	58	158	0	0	0	18	0	0	0	0	0	0	0	0	0
254)	=	32	64	132	0	314	57	4000	3112	75	4000	0	0	0	0	0	0
255)	=	32	68	725	0	318	124	9	3116	601	9	0	0	0	0</		



LINK CARDS : FLARE SATURATION FLOW DATA

CARD	LINK	SAT.	CAPAC.	SAT.	CAPAC.	SAT.	CAPAC.
TYPE	NO.	FLOW	VEH.	FLOW	VEH.	FLOW	VEH.
395)=	33	296	1410	5	0	0	0

\*\*\*\*\*END OF SUBROUTINE TINPUT\*\*\*\*\*

64 SECOND CYCLE 64 STEPS

INITIAL SETTINGS  
- (SECONDS)

NODE NO	NUMBER OF STAGES	STAGE 1	STAGE 2	STAGE 3	STAGE 4	STAGE 5	STAGE 6	STAGE 7	STAGE 8	STAGE 9	STAGE 10
15	3	8	18	39							
29	2	20	51								
30	4	4	14	28	61						
31	3	27	57	16							
33	2	15	5								
34	2	26	6								
79	2	27	18								
80	2	57	48								
156	3	37	14	26							
163	2	23	63								
165	2	11	1								
177	2	57	18								
188	2	40	14								
340	2	42	6								

LINK NUMBER	FLOW INTO LINK	SAT FLOW	DEGREE OF SAT	MEAN PER CRUISE	TIMES PER PCU	-----DELAY----- UNIFORM RANDOM+ (U+R+O=MEAN Q) DELAY	COST OF OVERSAT	----STOPS---- MEAN COST OF STOPS	----QUEUE---- MEAN AVERAGE EXCESS	PERFORMANCE INDEX. WEIGHTED SUM OF ( ) VALUES	EXIT NODE	GREEN START END	TIMES START 1ST 2ND
	(PCU/H)	(PCU/H)	(%)	(SEC)	(SEC)	(PCU-H/H)	(\$/H)	(%)	(PCU)	(\$/H)		(SECONDS)	
12BL	126	161	98	42.2	33.6	0.2 + 1.0	( 16.7)	103	( 2.9)	38	+		19.6
16	1377	1540S	98	7.0	35.0	2.2 + 11.2	(190.1)	111	( 48.9)	38	+		239.0
21	16	665	4	18.0	4.7	0.0 + 0.0	( 0.3)	0	( 0.0)	0			0.3
24BL	117	281	94	29.0	20.8	0.0 + 0.7	( 9.6)	30	( 0.0)	7			9.6
28	1060	1250S	94	5.0	20.8	0.0 + 6.1	( 86.9)	30	( 8.2)	7			95.1
32BL	126	361	50	4.0	2.5	0.0 + 0.1	( 1.2)	12	( 0.3)	9	+		1.5
36	676	1600S	50	3.1	2.4	0.0 + 0.4	( 6.5)	11	( 2.9)	9	+		9.4
43	343	1000	34	47.2	2.7	0.0 + 0.3	( 3.7)	4	( 0.2)	0			3.9
51BL	15	55L	27	98.1	1.4	0.0 + 0.0	( 0.1)	2	( 0.0)	0			0.1
52	281	1800	16	20.0	1.2	0.0 + 0.1	( 1.3)	2	( 0.1)	0			1.4
54BL	10	58L	27	45.0	3.9	0.0 + 0.0	( 0.2)	0	( 0.0)	0			0.2
55	467	1800S	27	54.0	1.4	0.0 + 0.2	( 2.5)	2	( 0.2)	0			2.7
58	158	722S	27	18.0	3.9	0.0 + 0.2	( 2.5)	0	( 0.0)	0			2.5
64BL	132	68L	57	8.6	5.2	0.1 + 0.1	( 2.7)	48	( 1.4)	14	+		4.1
68	725	1500S	57	9.0	5.5	0.5 + 0.6	( 15.6)	54	( 7.5)	14	+		23.1
73BL	132	1800	7	58.3	1.1	0.0 + 0.0	( 0.6)	2	( 0.0)	0			0.6
76	918	2100	44	6.0	1.7	0.1 + 0.4	( 6.2)	10	( 2.6)	9			8.8
83BL	114	1800	6	25.3	1.1	0.0 + 0.0	( 0.5)	2	( 0.0)	0			0.5
87	854	1800	47	7.7	1.9	0.0 + 0.5	( 6.4)	3	( 0.5)	0			6.9
93BL	138	1800	8	46.3	1.1	0.0 + 0.0	( 0.6)	2	( 0.1)	0			0.6
97	681	800	85	7.1	14.5	0.0 + 2.7	( 38.9)	21	( 2.9)	3			41.8
101BL	126	105L	40	22.9	1.6	0.0 + 0.1	( 0.8)	3	( 0.1)	0			0.9
105	585	1800S	40	17.0	1.7	0.0 + 0.3	( 3.8)	3	( 0.5)	0			4.3
111BL	126	115L	27	11.3	1.4	0.0 + 0.0	( 0.7)	2	( 0.1)	0			0.7
112	20	767	3	18.0	2.8	0.0 + 0.0	( 0.2)	0	( 0.0)	0			0.2
113	278	1800	15	18.0	1.2	0.0 + 0.1	( 1.3)	2	( 0.1)	0			1.4
114BL	10	118L	9	4.5	2.6	0.0 + 0.0	( 0.1)	0	( 0.0)	0			0.1
115	364	1800S	27	8.0	1.4	0.0 + 0.1	( 2.0)	2	( 0.3)	0			2.3
117BL	123	1111L	41	18.0	1.7	0.0 + 0.1	( 0.8)	3	( 0.1)	0			0.9
118	62	775S	9	5.0	2.6	0.0 + 0.0	( 0.6)	0	( 0.0)	0			0.6
119	227	1800	13	8.0	1.1	0.0 + 0.1	( 1.0)	2	( 0.2)	0			1.2
122BL	42	126L	53	6.3	2.7	0.0 + 0.0	( 0.4)	4	( 0.0)	1			0.5
126	695	1400S	53	6.0	2.7	0.0 + 0.5	( 7.4)	4	( 0.6)	1			8.0
131BL	117	135L	53	11.7	2.1	0.0 + 0.1	( 1.0)	3	( 0.1)	1			1.1

64 SECOND CYCLE 64 STEPS

LINK NUMBER	FLOW INTO LINK	SAT FLOW	DEGREE OF SAT	MEAN PER CRUISE	TIMES PER PCU	-----DELAY----- UNIFORM RANDOM+ (U+R+O=MEAN Q) DELAY	COST OF OVERSAT	----STOPS---- MEAN COST OF STOPS	----QUEUE---- MEAN AVERAGE EXCESS	PERFORMANCE INDEX. WEIGHTED SUM OF ( ) VALUES	EXIT NODE	GREEN START END	TIMES START 1ST 2ND
	(PCU/H)	(PCU/H)	(%)	(SEC)	(SEC)	(PCU-H/H)	(\$/H)	(%)	(PCU)	(\$/H)		(SECONDS)	
132BL	51	136L	30	18.0	3.1	0.0 + 0.0	( 0.6)	0	( 0.0)	0			0.6
135	830	1800S	53	11.1	2.1	0.0 + 0.5	( 6.9)	3	( 0.4)	1			7.3
136	205	840S	30	18.0	3.1	0.0 + 0.2	( 2.5)	0	( 0.0)	0			2.5
139	764	1800	42	11.2	1.7	0.0 + 0.4	( 5.2)	3	( 0.3)	0			5.5
144BL	15	148L	58	9.4	5.7	0.0 + 0.0	( 0.3)	9	( 0.0)	2			0.4
148	418	750S	58	11.2	5.7	0.0 + 0.7	( 9.4)	10	( 0.7)	2			10.1
151	711	1540	95	16.0	49.3	2.5 + 7.2	(138.2)	132	( 19.0)	19		15	17 47
153BL	114	157L	89	3.1	39.8	0.4 + 0.8	( 17.9)	119	( 3.0)	11	+	15	52 10
155BL	114	1530	34	15.8	26.2	0.6 + 0.3	( 11.8)	87	( 2.2)	2		15	26 39
157	371	1520S	89	4.0	43.6	1.8 + 2.7	( 63.8)	117	( 9.7)	11	+	15	52 10
161BL	126	165L	39	55.8	1.6	0.0 + 0.1	( 0.8)	3	( 0.1)	0			0.9
162	60	754	13	18.0	4.3	0.0 + 0.1	( 1.0)	0	( 0.0)	0			1.0
163BL	132	1800	7	32.8	1.1	0.0 + 0.0	( 0.6)	2	( 0.0)	0			0.6
165	578	1800S	39	10.0	1.6	0.0 + 0.3	( 3.7)	3	( 0.3)	0			4.1
167	666	1100	61	30.2	4.1	0.0 + 0.8	( 10.9)	6	( 1.0)	1			11.9
203	251	2000	13	5.0	1.0	0.0 + 0.1	( 1.0)	2	( 0.1)	0			1.1
212BL	154	2000	8	5.0	1.0	0.0 + 0.0	( 0.6)	2	( 0.1)	0			0.6
223	873	2000	44	5.0	1.6	0.0 + 0.4	( 5.5)	2	( 0.4)	0			5.9
227BL	114	2000	6	50.6	1.0	0.0 + 0.0	( 0.4)	1	( 0.0)	0			0.4
231	898	2000S	52	5.0	1.9	0.0 + 0.5	( 6.6)	3	( 0.4)	1			7.0
232BL	132	231L	52	4.5	1.9	0.0 + 0.1	( 1.0)	3	( 0.1)	1			1.0
244	50	2000	2	5.0	0.9	0.0 + 0.0	( 0.2)	1	( 0.0)	0			0.2
254	82	2000	4	5.0	0.9	0.0 + 0.0	( 0.3)	1	( 0.0)	0			0.3
262	150	2000	8	5.0	1.0	0.0 + 0.0	( 0.6)	2	( 0.0)	0			0.6
274	543	2000S	28	5.0	1.3	0.0 + 0.2	( 2.7)	2	( 0.2)	0			2.9
278BL	18	274L	28	4.5	1.3	0.0 + 0.0	( 0.1)	2	( 0.0)	0			0.1
284	228	2000S	14	5.0	1.0	0.0 + 0.1	( 0.9)	2	( 0.1)	0			1.0
288BL	57	284L	14	4.5	1.1	0.0 + 0.0	( 0.2)	2	( 0.0)	0			0.3
292BL	10	296L	73	18.0	19.7	0.0 + 0.0	( 0.8)	76	( 0.2)	10			0.9
294BL	108	298L	84	12.6	38.4	0.7 + 0.5	( 16.4)	122	( 2.9)	11			19.3
296	689	2100Sf	73	18.0	19.7	2.4 + 1.3	( 53.5)	76	( 11.1)	10		29	59 23
298	504	1720S	84	12.3	25.1	1.4 + 2.1	( 49.9)	79	( 9.3)	11		29	28 54
301BL	84	1610	48	56.9	46.1	0.6 + 0.5	( 15.3)	110	( 2.1)	2		29	22 28
302BL	42	306L	54	5.4	7.2	0.0 + 0.0	( 1.2)	41	( 0.4)	5		30	33 17
303BL	117	307L	37	3.6	17.6	0.4 + 0.1	( 8.1)	71	( 1.8)	3		30	6 31
306	578	1510S	54	8.0	7.2	0.6 + 0.5	( 16.5)	42	( 4.8)	5		30	33 17
307	129	1640S	37	3.0	17.5	0.5 + 0.2	( 8.9)	70	( 2.1)	3		30	6 31
310	848	1500	57	3.3	2.8	0.0 + 0.6	( 9.2)	4	( 0.8)	1			10.1
312BL	132	316L	66	4.9	16.3	0.4 + 0.2	( 8.5)	67	( 2.0)	6		31	32 2
313	182	1600	81	4.0	64.9	1.3 + 1.9	( 46.6)	143	( 4.4)	5		31	9 17
314BL	57	318L	18	7.2	5.9	0.1 + 0.0	( 1.3)	33	( 0.4)	1		31	29 4

316	439	1590S	66	4.0	18.0	1.5 + 0.7	( 31.2)	59	( 8.6)	6		39.8	31	32	2
317	178	1600	79	4.0	62.0	1.3 + 1.8	( 43.5)	139	( 4.2)	5		47.7	31	9	17
318	124	1590S	18	8.0	4.8	0.1 + 0.1	( 2.3)	16	( 0.3)	1		2.7	31	29	4
331BL	30	1570	11	2.3	23.9	0.1 + 0.1	( 2.8)	106	( 0.7)	1		3.5	33	10	20
332BL	102	336L	65	4.9	7.7	0.1 + 0.1	( 3.1)	45	( 1.0)	9	+	4.1	33	25	6
336	645	1600S	65	7.0	5.9	0.3 + 0.8	( 15.1)	34	( 2.4)	9	+	17.5	33	25	6
341BL	42	1570	5	3.6	2.6	0.0 + 0.0	( 0.4)	4	( 0.0)	0		0.5	34	42	9
343BL	96	347L	91	8.1	32.0	0.2 + 0.7	( 12.1)	108	( 2.3)	15		14.4	34	15	37
344BL	96	1570	12	50.8	13.1	0.3 + 0.1	( 4.9)	66	( 0.0)	1		5.0	34	42	9
347	538	1930S	91	9.3	37.6	1.7 + 3.9	( 79.8)	109	( 10.0)	15		89.9	34	15	37
348BL	36	3412L	93	4.0	27.2	0.0 + 0.2	( 3.9)	73	( 0.6)	14	+	4.5	34	42	9
793BL	114	1530	9	61.4	3.2	0.1 + 0.1	( 1.4)	22	( 0.6)	1		2.0	79	34	21
797	854	1770	59	14.0	3.4	0.1 + 0.7	( 11.5)	12	( 2.6)	3		14.1	79	34	21

64 SECOND CYCLE 64 STEPS

LINK NUMBER	FLOW INTO LINK	SAT FLOW	DEGREE OF SAT	MEAN PER CRUISE	TIMES PER PCU DELAY	UNIFORM DELAY	RANDOM OVERSAT	COST OF DELAY (\$/H)	MEAN STOPS /PCU (%)	COST OF STOPS (\$/H)	MEAN QUEUE MAX. (PCU)	AVERAGE EXCESS (PCU)	PERFORMANCE INDEX. WEIGHTED SUM OF (\$/H)	EXIT NODE	GREEN TIMES START 1ST (SECONDS)	GREEN TIMES START 2ND (SECONDS)
801BL	114	805L	56	18.0	5.8	0.1 + 0.1	( 2.6)	36	( 0.9)	7		3.5	80	0	48	
805	711	1940S	56	18.0	5.8	0.6 + 0.5	( 16.2)	36	( 5.4)	7		21.7	80	0	48	
811BL	123	815L	57	7.6	2.8	0.0 + 0.1	( 1.3)	5	( 0.1)	1		1.5				
815	728	1500S	57	7.3	2.8	0.0 + 0.6	( 8.0)	4	( 0.6)	1		8.6				
1111	614	1800S	41	18.0	1.7	0.0 + 0.3	( 4.1)	3	( 0.3)	0		4.4				
1112BL	10	1116L	65	13.9	9.5	0.0 + 0.0	( 0.4)	23	( 0.1)	4	+	0.4				
1116	352	724S	65	5.0	9.7	0.0 + 0.9	( 13.5)	31	( 1.9)	4	+	15.4				
1210BL	69	1214L	63	6.3	3.2	0.0 + 0.1	( 0.9)	5	( 0.1)	1		1.0				
1214	875	1500S	63	5.0	3.2	0.0 + 0.8	( 11.2)	5	( 1.1)	1		12.3				
1501	10	10000	0	10.0	5.4	0.0 + 0.0	( 0.2)	39	( 0.0)	0		0.2	15	44	18	
1502	10	10000	0	10.0	14.0	0.0 + 0.0	( 0.6)	65	( 0.0)	0		0.6	15	17	39	
1505	10	10000	0	10.0	15.3	0.0 + 0.0	( 0.6)	68	( 0.0)	0		0.6	15	52	8	
1511	357	1445	69	4.0	26.5	1.5 + 1.1	( 37.4)	84	( 6.6)	6		44.0	15	52	10	
1561BL	117	1565L	84	31.5	13.3	0.1 + 0.3	( 6.1)	48	( 1.3)	14		7.4	156	38	14	
1564	197	1700	93	18.0	103.4	1.5 + 4.1	( 80.4)	183	( 7.6)	8		88.0	156	19	26	
1565	773	1650S	84	10.0	14.2	0.8 + 2.3	( 43.3)	57	( 9.3)	14		52.6	156	38	14	
1569	776	1710	71	10.0	10.5	1.1 + 1.2	( 32.1)	54	( 8.8)	9		41.0	156	38	14	
1631BL	24	1635L	70	18.0	41.6	0.2 + 0.1	( 3.9)	113	( 0.6)	5		4.5	163	11	23	
1632BL	126	1638L	73	5.4	7.7	0.1 + 0.2	( 3.8)	38	( 1.1)	12	+	4.9	163	28	4	
1634BL	117	1638L	70	27.0	13.3	0.2 + 0.2	( 6.1)	65	( 0.1)	10	+	6.2	163	28	4	
1635	203	1600S	70	18.0	41.6	1.3 + 1.0	( 33.3)	113	( 4.9)	5		38.2	163	11	23	
1636	651	1670S	73	5.4	13.5	1.3 + 1.1	( 34.7)	66	( 7.3)	12	+	42.0	163	28	4	
1638	616	1630S	70	5.0	13.3	1.3 + 1.0	( 32.2)	65	( 10.3)	10	+	42.5	163	28	4	
1639	276	1600	85	18.0	57.8	1.9 + 2.6	( 63.0)	136	( 8.0)	7		70.9	163	11	23	
1653BL	114	1530	10	5.4	2.8	0.0 + 0.1	( 1.3)	14	( 0.4)	0		1.6	165	19	4	
1657	854	1770	62	4.0	4.8	0.3 + 0.8	( 16.1)	19	( 6.4)	3		22.4	165	19	4	
1774BL	18	1778L	98	25.2	88.0	0.2 + 0.3	( 6.3)	154	( 0.6)	18		6.9	177	63	18	
1778	543	1840S	98	14.8	70.0	1.9 + 8.7	( 149.9)	130	( 19.0)	18		168.9	177	63	18	
1881BL	84	1610	11	2.7	2.8	0.0 + 0.1	( 0.9)	9	( 0.2)	0		1.1	188	48	14	
2902	10	10000	0	10.0	13.3	0.0 + 0.0	( 0.5)	63	( 0.0)	0		0.5	29	28	51	
2904	10	10000	0	10.0	12.0	0.0 + 0.0	( 0.5)	60	( 0.0)	0		0.5	29	59	20	
2912	417	1400	71	12.8	23.3	1.5 + 1.2	( 38.3)	79	( 7.7)	6		46.0	29	28	54	
3002	10	10000	1	10.0	27.5	0.1 + 0.0	( 1.1)	91	( 0.0)	0		1.1	30	22	28	
3003	10	10000	0	10.0	12.0	0.0 + 0.0	( 0.5)	60	( 0.0)	0		0.5	30	36	61	
3006	10	10000	0	10.0	14.0	0.0 + 0.0	( 0.6)	65	( 0.0)	0		0.6	30	6	28	
3007	10	10000	0	10.0	3.5	0.0 + 0.0	( 0.1)	31	( 0.0)	0		0.1	30	35	14	
3010BL	69	3014L	91	5.4	50.1	0.5 + 0.5	( 13.6)	129	( 2.0)	15	+	15.6	30	36	61	
3011BL	21	3015L	89	3.6	40.7	0.1 + 0.1	( 3.4)	118	( 0.6)	13	+	3.9	30	6	31	
3014	537	1640S	91	7.0	48.9	3.4 + 3.9	( 103.6)	130	( 18.0)	15	+	121.6	30	36	61	
3015	554	1590S	89	3.0	40.7	2.7 + 3.6	( 89.0)	119	( 15.4)	13	+	104.4	30	6	31	
3018	455	1500	75	7.0	31.8	2.6 + 1.4	( 57.1)	105	( 12.3)	9		69.4	30	36	61	
3019	10	10000	1	10.0	30.0	0.1 + 0.0	( 1.2)	91	( 0.2)	0		1.4	30	0	4	
3102	10	10000	1	10.0	26.4	0.1 + 0.0	( 1.0)	89	( 0.0)	0		1.0	31	9	16	
3110	441	1460	55	4.0	16.8	1.4 + 0.6	( 29.2)	56	( 8.2)	5		37.4	31	32	2	
3112BL	75	3116L	88	7.2	26.8	0.2 + 0.4	( 7.9)	76	( 1.3)	12		9.2	31	29	57	
3116	600	1700S	88	8.1	27.3	1.6 + 3.0	( 64.6)	82	( 6.6)	12		71.2	31	29	57	
3120BL	10	3124L	78	7.2	17.5	0.0 + 0.0	( 0.7)	33	( 0.1)	7		0.8	31	7	27	
3124	411	1650S	78	5.3	36.9	2.6 + 1.7	( 59.9)	94	( 6.6)	7		66.5	31	7	27	
3125	10	10000	1	10.0	26.4	0.1 + 0.0	( 1.0)	85	( 0.2)	0		1.3	31	20	27	
3302	10	10000	1	10.0	28.7	0.1 + 0.0	( 1.1)	93	( 0.0)	0		1.1	33	10	15	
3310	273	1600	24	7.0	2.2	0.0 + 0.2	( 2.3)	4	( 0.1)	0		2.5	33	25	6	
3401BL	114	1610	16	27.0	4.8	0.1 + 0.1	( 2.1)	11	( 0.3)	0		2.4	340	42	6	
3403	10	10000	0	10.0	10.2	0.0 + 0.0	( 0.4)	55	( 0.0)	0		0.4	34	42	6	
3404	10	10000	0	10.0	21.6	0.1 + 0.0	( 0.9)	81	( 0.0)	0		0.9	34	14	26	

64 SECOND CYCLE 64 STEPS

LINK NUMBER	FLOW INTO LINK	SAT FLOW	DEGREE OF SAT	MEAN PER CRUISE	TIMES PER PCU DELAY	UNIFORM DELAY	RANDOM OVERSAT	COST OF DELAY (\$/H)	MEAN STOPS /PCU (%)	COST OF STOPS (\$/H)	MEAN QUEUE MAX. (PCU)	AVERAGE EXCESS (PCU)	PERFORMANCE INDEX. WEIGHTED SUM OF (\$/H)	EXIT NODE	GREEN TIMES START 1ST (SECONDS)	GREEN TIMES START 2ND (SECONDS)
3411	270	1410	53	9.2	14.0	0.5 + 0.6	( 14.9)	41	( 1.9)	2		16.8	34	15	37	
3412	774	1750S	93	5.0	28.3	1.0 + 5.1	( 86.3)	70	( 7.8)	14	+	94.0	34	42	9	
7903	10	10000	1	10.0	28.7	0.1 + 0.0	( 1.1)	93	( 0.0)	0		1.1	79	22	27	
8001	10	10000	1	10.0	28.7	0.1 + 0.0	( 1.1)	93	( 0.0)	0		1.1	80	52	57	
15601	10	10000	0	10.0	17.5	0.0 + 0.0	( 0.7)	73	( 0.0)	0		0.7	156	20	37	
15602	10	10000	1	10.0	28.7	0.1 + 0.0	( 1.1)	89	( 0.2)	0		1.4	156	32	37	
16301	10	10000	0	10.0	6.7	0.0 + 0.0	( 0.3)	44	( 0.0)	0		0.3	163	28	63	
16310	598	1530	61	5.2	10.1	0.9 + 0.8	( 23.7)	40	( 4.1)	4		27.8	163	28	4	
16312	356	1340	47	5.0	12.9	0.8 + 0.4	( 18.1)	59	( 5.5)	4		23.5	163	28	63	
16503	10	10000	1	10.0	28.7	0.1 + 0.0	( 1.1)	93	( 0.0)	0		1.1	165	6	11	
17704	10	10000	0	10.0	5.0	0.0 + 0.0	( 0.2)	38	( 0.0)	0		0.2	177	18	57	
18801	10	10000	0	10.0	14.6	0.0 + 0.0	( 0.6)	66	( 0.0)	0		0.6	188	19	40	

\*\*\* f - average saturation flow for flared link \*\*\*

TOTAL DISTANCE TRAVELLED (PCU-KM/H)	TOTAL TIME SPENT (PCU-H/H)	MEAN JOURNEY SPEED (KM/H)	TOTAL UNIFORM DELAY (PCU-H/H)	TOTAL RANDOM OVERSAT DELAY (PCU-H/H)	TOTAL COST OF DELAY (\$/H)	TOTAL COST OF STOPS (\$/H)	PENALTY FOR EXCESS QUEUES (\$/H)	TOTAL PERFORMANCE INDEX (\$/H)	TOTALS BUSES OTHER
4552.8	298.5	15.3	57.9	110.8	( 2395.4)	( 396.9)	( 0.0)	2792.4	TOTALS
487.8	42.2	11.6	5.9	9.0	( 212.0)	( 35.3)	( 0.0)	247.3	BUSES
4064.9	256.3	15.9	52.0	101.8	( 2183.4)	( 361.7)	( 0.0)	2545.1	OTHER

ROUTE

	CRUISE LITRES PER HOUR	DELAY LITRES PER HOUR	STOPS LITRES PER HOUR	TOTALS LITRES PER HOUR
FUEL CONSUMPTION PREDICTIONS	257.5	194.5	192.1	644.1

NO. OF ENTRIES TO SUBPT = 1  
NO. OF LINKS RECALCULATED= 302

PROGRAM TRANSYT FINISHED



## **Appendix B: Brownhill Road/Plassy Road junction options**

7

8

HILL ROAD

E

BUS STOP

10

1

11

21

23

25

27

Hall

2

Hall

10

12

21

PLASSY ROAD

TFL LAND SURPLUS TO HIGHWAY REQUIREMENTS

PLASSY ROAD /  
BROWN HILL ROAD -  
POTENTIAL OPTION  
1:500 @ A3  
12/12/12

TFL LAND SURPLUS TO HIGHWAY REQUIREMENTS

22 of 91

2

14

24

A

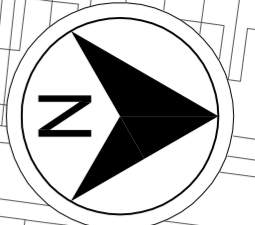
B

C



## Appendix C: Preferred Option Layout

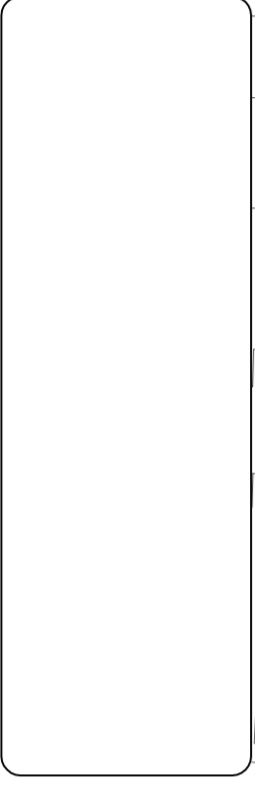




Produced by permission of the Ordnance Survey on behalf of Her Majesty's Stationery Office.  
 © Crown Copyright and database 2010.  
 Ordnance Survey Licence No. 100017719

This drawing has been produced by Colin Buchanan & Partners Ltd. It is the property of Colin Buchanan & Partners Ltd. and will be accepted for use of this drawing in any other project.  
 NOTE: DO NOT SCALE OFF THIS DRAWING.

REV	DATE	DRAWN	REVD	APPD	REVISION
A	08/09/12	M.A.R.H.	A.S.	A.C.	Revised Thomas Lane and Bowness Road Junctions



**SKM COLIN BUCHANAN**

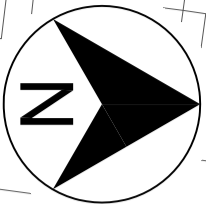
Skidder Knight Merz Colin Buchanan  
 New City Court  
 20 St. Thomas Street  
 SE1 9RS

Tel: +44(0)20 7339 6100  
 Fax: +44(0)20 7339 6100  
 Web: www.skmbuchanan.com

CLIENT		PROJECT	
LONDON BOROUGH OF LEWISHAM		CATFORD TOWN CENTRE STUDY	
DRAWN	R.H.	DRAWING CHECK	REVIEWED
DESIGNED	A.S./R.H.	DESIGN REVIEW	APPROVED
DATE	3 SEPT '12	DATE	DATE

TITLE	
CATFORD TOWN CENTRE LAYOUT	
SCALE	DRAWING NO
1:1000 @ A2	VN50110-ECC-SK-001
REV	A

FOR COMMENT ONLY



Prepared by the proprietor of the Ordnance Survey on behalf of Her Majesty's Stationery Office.  
 © Crown Copyright and database 2010.  
 Ordnance Survey Licence No. 100017710

This drawing has been produced by Colin Buchanan & Partners Limited. It is not to be used for any other project.  
 NOTE: DO NOT SCALE OFF THIS DRAWING.

REV	DATE	DRAWN	REV'D	APP'D	REVISION

Private Banks Sports Ground  
 Private Banks Sports Ground  
 Telephone Exchange  
 Montreal House

**SKM COLIN BUCHANAN**

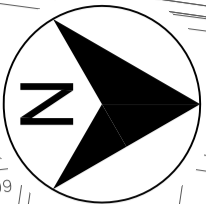
Stirling Knight Merz Colin Buchanan  
 New City Court  
 20 St. Thomas Street  
 SE1 9RS

Tel: +44(0)20 7539 6100  
 Fax: +44(0)20 7539 6100  
 Web: www.skmbuchanan.com

CLIENT		LONDON BOROUGH OF LEWISHAM	
PROJECT		CATFORD TOWN CENTRE STUDY	
DRAWN	R.H.	DRAWING CHECK	A.C.
DESIGNED	A.S./R.H.	DESIGN REVIEW	
		REVIEWED	
		DATE	3 SEPT '12
		APPROVED	
		DATE	

TITLE		CATFORD TOWN CENTRE LAYOUT	
SCALE	1:1000 @ A2	DRAWING NO	VN50110-ECC-SK-002
REV			

FOR COMMENT ONLY



Redrafted by permission of the Ordnance Survey on behalf of Her Majesty's Stationery Office.  
 © Crown Copyright and database 2010.  
 Ordnance Survey Licence No. 100017710

This drawing has been produced by Colin Buchanan & Partners Limited. It will be accepted for the use of this drawing in any other project.

NOTE: DO NOT SCALE OFF THIS DRAWING.

REV	DATE	DRAWN	REV'D	APP'D	REVISION
B	Dec '12	J.L.	A.S.	A.C.	Crossing removed on Sangley Road
A	Nov '12	R.H.	A.S.	A.C.	Revised following comments from LBC

REV	DATE	DRAWN	REV'D	APP'D	REVISION

Sinclair Knight Merz Colin Buchanan  
 New City Court  
 20 St. Thomas Street  
 SE1 8PS  
 Tel: +44(0)20 7539 6100  
 Fax: +44(0)20 7539 6100  
 Web: www.skmbuchanan.com

CLIENT	LONDON BOROUGH OF LEWISHAM
PROJECT	CATFORD TOWN CENTRE STUDY
DRAWN	J.L.
DESIGNED	A.C.
DRAWING CHECK	A.C.
REVIEWED	DATE 5 NOV '12
APPROVED	DATE 5 NOV '12

TITLE	CATFORD TOWN CENTRE LAYOUT
SCALE	1:1000 @ A2
DRAWING No	VN50110-ECC-SK-006
REV	B

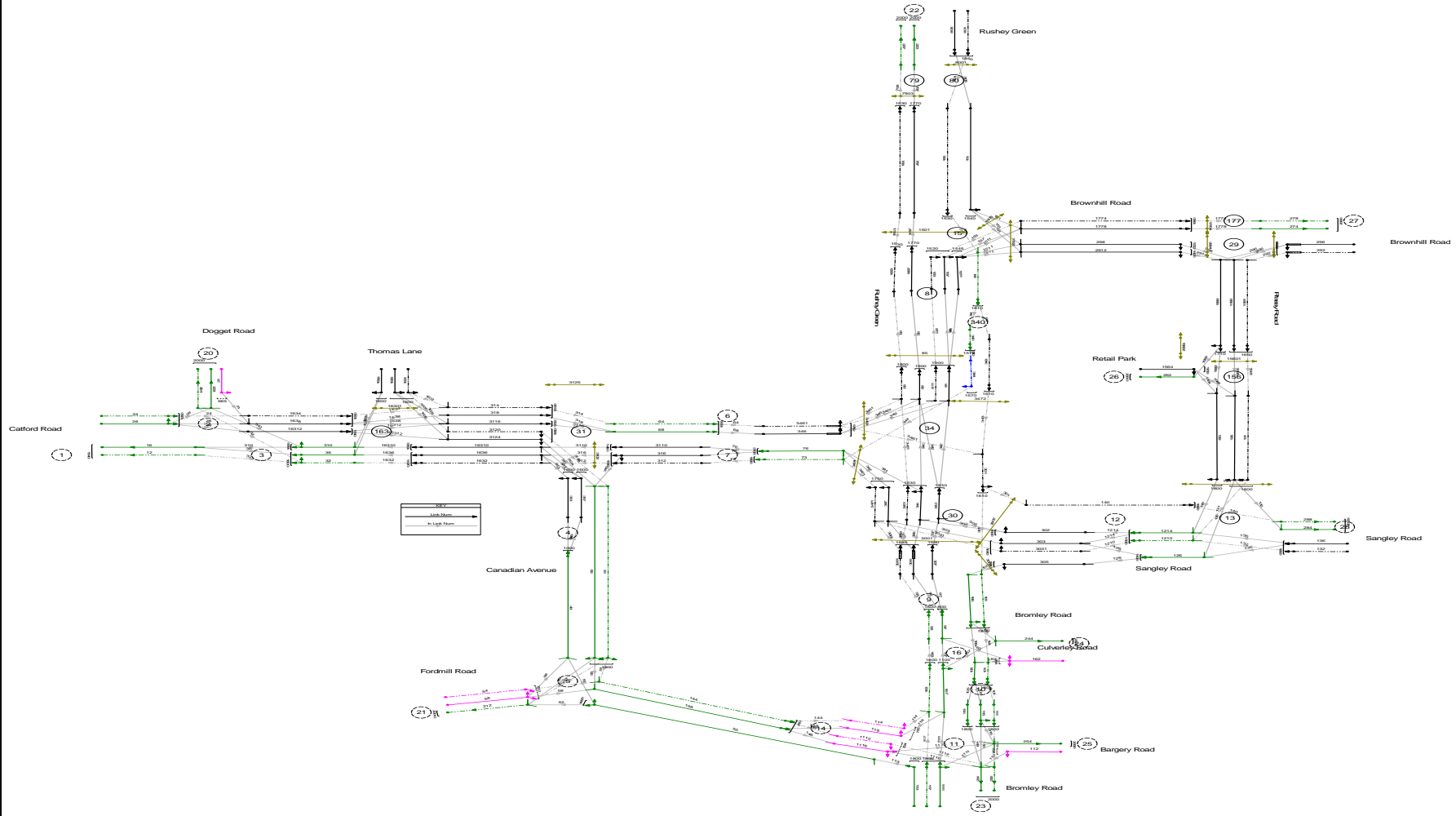
FOR COMMENT ONLY



## Appendix D: Proposed TRANSYT Results

# Preferred Option Proposed Results (Excluding Thomas Lane Option)

## Network Diagram





CARD NO.	CARD TYPE	NODE NO.	NODE CARDS: PRECEDING INTERSTAGE TIMES (WORKING)									
			S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
53)=	11	8	14	5								
54)=	11	13	13	5								
55)=	11	15	9	10	13							
56)=	11	29	8	8								
57)=	11	30	16	8	5	14						
58)=	11	31	5	16	4							
59)=	11	34	12	13								
60)=	11	79	7	4								
61)=	11	80	7	4								
62)=	11	156	9	6	6							
63)=	11	163	5	12								
64)=	11	177	6	0								

CARD NO.	CARD TYPE	NODE NO.	Sg1/Db1 Cycled	NODE CARDS: STAGE CHANGE TIMES (WORKING)									
				S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
65)=	12	8	1	28	17								
66)=	12	13	1	20	5								
67)=	12	15	1	8	23	43							
68)=	12	29	1	20	51								
69)=	12	30	1	27	51	30	0						
70)=	12	31	1	27	57	16							
71)=	12	34	1	8	50								
72)=	12	79	1	27	18								
73)=	12	80	1	57	48								
74)=	12	156	1	37	14	26							
75)=	12	163	1	23	63								
76)=	12	177	1	57	18								

LINK CARDS: GIVEWAY DATA																
CARD NO.	CARD TYPE	LINK NO.	PRIORITY	LINKS		LINK1 GIVEWAY		LINK2 GIVEWAY		COEFFS.		LINK LENGTH	STOP WT.X100	MAX FLOW	DELAY WT.X100	DISPSN X100
				LINK1 NO.	LINK2 NO.	ONLY %	A1 X100	A2 X100								
77)=	30	21	28	310	80	19	17	0	0	0	0	200	0	665	0	0
78)=	30	54	0	0	0	0	0	0	0	0	0	500	0	722	0	0
79)=	30	58	52	55	65	22	19	0	0	0	0	200	0	722	0	0
80)=	30	112	115	1111	100	20	17	0	0	0	0	200	0	767	0	0
81)=	30	114	0	0	0	0	0	0	0	0	0	50	0	775	0	0
82)=	30	118	0	0	100	16	0	0	0	0	0	50	0	775	0	0
83)=	30	162	165	167	16	23	20	0	0	0	0	200	0	754	0	0
84)=	30	344	342	341	0	33	33	0	0	0	0	25	0	1000	0	0
85)=	30	1112	0	0	0	0	0	0	0	0	0	155	0	724	0	0
86)=	30	1116	1111	119	0	18	16	0	0	0	0	50	0	724	0	0

LINK CARDS: FIXED DATA																
CARD NO.	CARD TYPE	LINK NO.	EXIT NODE	FIRST GREEN				SECOND GREEN				LINK LENGTH	STOP WT.X100	SAT FLOW	DELAY WT.X100	DISPSN X100
				START STAGE	LAG	END STAGE	LAG	START STAGE	LAG	END STAGE	LAG					
87)=	31	12	0	0	0	0	0	0	0	0	0	95	0	0	0	0
88)=	31	16	0	0	0	0	0	0	0	0	0	95	0	1540	0	0
89)=	31	24	0	0	0	0	0	0	0	0	0	60	0	0	0	0
90)=	31	28	0	0	0	0	0	0	0	0	0	60	0	1250	0	0
91)=	31	32	0	0	0	0	0	0	0	0	0	45	0	0	0	0
92)=	31	36	0	0	0	0	0	0	0	0	0	45	0	1600	0	0
93)=	31	43	0	0	0	0	0	0	0	0	0	445	0	1000	0	0
94)=	31	51	0	0	0	0	0	0	0	0	0	505	0	0	0	0
95)=	31	52	0	0	0	0	0	0	0	0	0	165	0	1800	0	0
96)=	31	55	0	0	0	0	0	0	0	0	0	505	0	1800	0	0
97)=	31	64	0	0	0	0	0	0	0	0	0	95	0	0	0	0
98)=	31	68	0	0	0	0	0	0	0	0	0	95	0	1500	0	0
99)=	31	73	0	0	0	0	0	0	0	0	0	75	0	1800	0	0
100)=	31	76	0	0	0	0	0	0	0	0	0	75	0	2100	0	0
101)=	31	81	8	1	14	2	0	0	0	0	0	85	0	1900	0	0
102)=	31	82	8	1	14	2	0	0	0	0	0	85	0	1900	0	0
103)=	31	83	8	1	14	2	0	0	0	0	0	85	0	1800	0	0
104)=	31	84	0	0	0	0	0	0	0	0	0	105	0	1610	0	0
105)=	31	85	8	2	5	1	0	0	0	0	0	10	0	10000	0	0
106)=	31	93	0	0	0	0	0	0	0	0	0	85	0	1800	0	0
107)=	31	97	0	0	0	0	0	0	0	0	0	85	0	800	0	0
108)=	31	101	0	0	0	0	0	0	0	0	0	255	0	0	0	0
109)=	31	105	0	0	0	0	0	0	0	0	0	255	0	1800	0	0
110)=	31	111	0	0	0	0	0	0	0	0	0	125	0	0	0	0
111)=	31	113	0	0	0	0	0	0	0	0	0	200	0	1800	0	0
112)=	31	115	0	0	0	0	0	0	0	0	0	125	0	1800	0	0
113)=	31	117	0	0	0	0	0	0	0	0	0	200	0	0	0	0
114)=	31	119	0	0	0	0	0	0	0	0	0	125	0	1800	0	0
115)=	31	126	0	0	0	0	0	0	0	0	0	65	0	1400	0	0
116)=	31	131	0	0	0	0	0	0	0	0	0	130	0	0	0	0
117)=	31	132	0	0	0	0	0	0	0	0	0	200	0	0	0	0
118)=	31	135	13	1	13	2	0	0	0	0	0	110	0	1800	0	0
119)=	31	136	13	2	5	1	0	0	0	0	0	200	0	1800	0	0
120)=	31	139	13	1	13	2	0	0	0	0	0	110	0	1800	0	0
121)=	31	140	13	2	5	1	0	0	0	0	0	120	0	1800	0	0
122)=	31	141	13	2	5	1	0	0	0	0	0	10	0	10000	0	0
123)=	31	144	0	0	0	0	0	0	0	0	0	105	0	0	0	0
124)=	31	148	0	0	0	0	0	0	0	0	0	105	0	750	0	0
125)=	31	151	15	1	9	3	8	0	0	0	0	170	0	1540	0	0
126)=	31	153	0	0	0	0	0	0	0	0	0	35	0	0	0	0
127)=	31	155	15	2	10	3	0	0	0	0	0	175	0	1530	0	0
128)=	31	157	15	3	13	1	2	0	0	0	0	45	0	1520	0	0
129)=	31	161	0	0	0	0	0	0	0	0	0	135	0	0	0	0
130)=	31	163	0	0	0	0	0	0	0	0	0	365	0	1800	0	0
131)=	31	165	0	0	0	0	0	0	0	0	0	115	0	1800	0	0
132)=	31	167	0	0	0	0	0	0	0	0	0	365	0	1100	0	0
133)=	31	203	0	0	0	0	0	0	0	0	0	50	0	2000	0	0
134)=	31	204	0	0	0	0	0	0	0	0	0	50	0	0	0	0
135)=	31	212	0	0	0	0	0	0	0	0	0	50	0	2000	0	0
136)=	31	223	0	0	0	0	0	0	0	0	0	50	0	2000	0	0
137)=	31	227	0	0	0	0	0	0	0	0	0	50	0	2000	0	0
138)=	31	231	0	0	0	0	0	0	0	0	0	50	0	2000	0	0
139)=	31	232	0	0	0	0	0	0	0	0	0	50	0	0	0	0
140)=	31	244	0	0	0	0	0	0	0	0	0	50	0	2000	0	0
141)=	31	254	0	0	0	0	0	0	0	0	0	50	0	2000	0	0
142)=	31	262	0	0	0	0	0	0	0	0	0	50	0	2000	0	0
143)=	31	274	0	0	0	0	0	0	0	0	0	50	0	2000	0	0
144)=	31	278	0	0	0	0	0	0	0	0	0	50	0	0	0	0
145)=	31	284	0	0	0	0	0	0	0	0	0	50	0	2000	0	0
146)=	31	288	0	0	0	0	0	0	0	0	0	50	0	0	0	0
147)=	31	292	0	0	0	0	0	0	0	0	0	200	0	0	0	0
148)=	31	296	29	2	8	1	3	0	0	0	0	200	0	1480	0	0
149)=	31	298	29	1	8	2	3	0	0	0	0	140	0	1720	0	0
150)=	31	301	30	1	16	2	0	0	0	0	0	70	0	1610	0	0
151)=	31	302	30	4	14	1	10	0	0	0	0	85	0	1600	0	0
152)=	31	303	30	4	14	1	10	0	0	0	0	85	0	1640	0	0
153)=	31	305	30	2	8	1	10	0	0	0	0	85	0	1510	0	0
154)=	31	306	30	1	16	3	0	0	0	0	0	35	0	1640	0	0
155)=	31	307	30	1	16	3	0	0	0	0	0	35	0	1590	0	0
156)=	31	310	0	0	0	0	0	0	0	0	0	45	0	1500	0	0
157)=	31	312	0	0	0	0	0	0	0	0	0	55	0	0	0	0

158)	=	31	313	31	2	16	3	1	0	0	0	0	40	0	1600	0	0
159)	=	31	314	0	0	0	0	0	0	0	0	0	80	0	0	0	0
160)	=	31	316	31	1	5	2	9	0	0	0	0	55	0	1590	0	0
161)	=	31	317	31	2	16	3	1	0	0	0	0	40	0	1600	0	0
162)	=	31	318	31	1	2	2	11	0	0	0	0	80	0	1590	0	0
163)	=	31	340	0	0	0	0	0	0	0	0	0	40	0	1570	0	0
164)	=	31	341	34	1	12	2	3	0	0	0	0	30	0	1930	0	0
165)	=	31	342	34	1	12	2	3	0	0	0	0	30	0	1930	0	0
166)	=	31	343	34	1	12	2	0	0	0	0	0	30	0	1610	0	0
167)	=	31	344	34	1	12	2	0	0	0	0	0	25	0	1570	0	0
168)	=	31	346	34	2	11	1	7	0	0	0	0	45	0	1750	0	0
169)	=	31	347	34	1	12	2	3	0	0	0	0	30	0	1750	0	0
170)	=	31	793	79	1	7	2	3	0	0	0	0	165	0	1530	0	0
171)	=	31	797	79	1	7	2	3	0	0	0	0	165	0	1770	0	0
172)	=	31	801	0	0	0	0	0	0	0	0	0	200	0	0	0	0
173)	=	31	805	80	1	7	2	0	0	0	0	0	200	0	1940	0	0
174)	=	31	811	0	0	0	0	0	0	0	0	0	85	0	0	0	0
175)	=	31	1111	0	0	0	0	0	0	0	0	0	200	0	1800	0	0
176)	=	31	1210	0	0	0	0	0	0	0	0	0	70	0	0	0	0
177)	=	31	1214	0	0	0	0	0	0	0	0	0	60	0	1500	0	0
178)	=	31	1501	15	1	5	2	0	0	0	0	0	10	0	10000	0	0
179)	=	31	1502	15	1	9	3	0	0	0	0	0	10	0	10000	0	0
180)	=	31	1505	15	3	13	1	0	0	0	0	0	10	0	10000	0	0
181)	=	31	1511	15	3	13	1	2	0	0	0	0	45	0	1445	0	0
182)	=	31	1561	0	0	0	0	0	0	0	0	0	110	0	0	0	0
183)	=	31	1564	156	2	5	3	0	0	0	0	0	200	0	1700	0	0
184)	=	31	1565	156	1	1	2	0	0	0	0	0	110	0	1650	0	0
185)	=	31	1569	156	1	1	2	0	0	0	0	0	110	0	1710	0	0
186)	=	31	1631	0	0	0	0	0	0	0	0	0	200	0	0	0	0
187)	=	31	1632	0	0	0	0	0	0	0	0	0	60	0	0	0	0
188)	=	31	1634	0	0	0	0	0	0	0	0	0	60	0	0	0	0
189)	=	31	1635	163	2	12	1	0	0	0	0	0	200	0	1600	0	0
190)	=	31	1636	163	1	5	2	5	0	0	0	0	60	0	1670	0	0
191)	=	31	1638	163	1	5	2	5	0	0	0	0	60	0	1630	0	0
192)	=	31	1639	163	2	12	1	0	0	0	0	0	200	0	1600	0	0
193)	=	31	1653	15	2	10	1	0	0	0	0	0	60	0	1530	0	0
194)	=	31	1657	15	2	10	1	0	0	0	0	0	60	0	1770	0	0
195)	=	31	1774	0	0	0	0	0	0	0	0	0	140	0	0	0	0
196)	=	31	1778	177	1	6	2	0	0	0	0	0	150	0	1840	0	0
197)	=	31	2902	29	1	8	2	0	0	0	0	0	10	0	10000	0	0
198)	=	31	2904	29	2	8	1	0	0	0	0	0	10	0	10000	0	0
199)	=	31	2912	29	1	8	2	3	0	0	0	0	140	0	1400	0	0
200)	=	31	3001	30	3	5	1	0	0	0	0	0	10	0	10000	0	0
201)	=	31	3002	30	2	8	4	0	0	0	0	0	10	0	10000	0	0
202)	=	31	3003	30	1	15	2	0	0	0	0	0	10	0	10000	0	0
203)	=	31	3031	0	0	0	0	0	0	0	0	0	60	0	0	0	0
204)	=	31	3061	0	0	0	0	0	0	0	0	0	40	0	0	0	0
205)	=	31	3102	31	2	16	3	0	0	0	0	0	10	0	10000	0	0
206)	=	31	3110	31	1	5	2	9	0	0	0	0	55	0	1460	0	0
207)	=	31	3116	31	1	2	2	0	0	0	0	0	80	0	1700	0	0
208)	=	31	3120	0	0	0	0	0	0	0	0	0	80	0	0	0	0
209)	=	31	3124	31	2	14	1	0	0	0	0	0	60	0	1650	0	0
210)	=	31	3125	31	3	4	1	0	0	0	0	0	0	0	10000	0	0
211)	=	31	3403	34	1	12	2	0	0	0	0	0	10	0	10000	0	0
212)	=	31	3404	34	2	13	1	0	0	0	0	0	10	0	10000	0	0
213)	=	31	3411	0	0	0	0	0	0	0	0	0	30	0	0	0	0
214)	=	31	3461	0	0	0	0	0	0	0	0	0	45	0	0	0	0
215)	=	31	3471	0	0	0	0	0	0	0	0	0	30	0	0	0	0
216)	=	31	3472	34	2	5	1	0	0	0	0	0	10	0	10000	0	0
217)	=	31	7903	79	2	4	1	0	0	0	0	0	10	0	10000	0	0
218)	=	31	8001	80	2	4	1	0	0	0	0	0	10	0	10000	0	0
219)	=	31	15601	156	2	6	1	0	0	0	0	0	10	0	10000	0	0
220)	=	31	15602	156	3	6	1	0	0	0	0	0	0	0	10000	0	0
221)	=	31	16301	163	1	5	2	0	0	0	0	0	10	0	10000	0	0
222)	=	31	16310	163	1	5	2	5	0	0	0	0	60	0	1530	0	0
223)	=	31	16312	163	1	5	2	0	0	0	0	0	60	0	1340	0	0
224)	=	31	17704	177	2	0	1	0	0	0	0	0	10	0	10000	0	0

## LINK CARDS:

## FLOW DATA

CARD NO.	CARD TYPE	LINK NO.	TOTAL FLOW	UNIFORM FLOW	ENTRY 1			ENTRY 2			ENTRY 3			ENTRY 4			
					LINK NO.	FLOW	CRUISE TIME	LINK NO.	FLOW	CRUISE TIME	LINK NO.	FLOW	CRUISE TIME	LINK NO.	FLOW	CRUISE TIME	
225)	=	32	12	70	0	32	70	4023	0	0	0	0	0	0	0	0	0
226)	=	32	16	1377	0	36	676	7	310	701	7	0	0	0	0	0	0
227)	=	32	21	16	0	0	0	18	0	0	0	0	0	0	0	0	0
228)	=	32	24	80	0	0	0	4013	0	0	0	0	0	0	0	0	0
229)	=	32	28	1060	0	0	0	28	0	0	0	0	0	0	0	0	0
230)	=	32	32	110	0	1632	110	4000	0	0	0	0	0	0	0	0	0
231)	=	32	36	676	0	1636	650	3	1639	26	5	0	0	0	0	0	0
232)	=	32	43	343	0	52	260	47	58	83	48	0	0	0	0	0	0
233)	=	32	51	15	0	3120	10	4042	0	0	0	0	0	0	0	0	0
234)	=	32	52	281	0	113	278	20	0	0	0	0	0	0	0	0	0
235)	=	32	54	10	0	0	0	4000	0	0	0	0	0	0	0	0	0
236)	=	32	55	467	0	316	26	54	3124	412	54	0	0	0	0	0	0
237)	=	32	58	158	0	0	0	18	0	0	0	0	0	0	0	0	0
238)	=	32	64	98	0	314	98	4000	0	0	0	0	0	0	0	0	0
239)	=	32	68	725	0	318	124	9	3116	601	9	0	0	0	0	0	0
240)	=	32	73	110	0	344	22	4041	3471	88	4000	0	0	0	0	0	0
241)	=	32	76	918	0	341	431	6	347	595	6	0	0	0	0	0	0
242)	=	32	81	636	0	342	106	5	346	530	5	0	0	0	0	0	0
243)	=	32	82	764	0	341	259	5	342	305	5	346	200	5	0	0	0
244)	=	32	83	76	0	3411	54	4007	3461	22	4000	0	0	0	0	0	0
245)	=	32	84	76	0	155	76	4007	0	0	0	0	0	0	0	0	0
246)	=	32	85	10	0	0	0	4	0	0	0	0	0	0	0	0	0
247)	=	32	93	92	0	163	92	4028	0	0	0	0	0	0	0	0	0
248)	=	32	97	699	0	162	39	8	167	642	7	0	0	0	0	0	0
249)	=	32	101	80	0	161	80	4000	0	0	0	0	0	0	0	0	0
250)	=	32	105	586	0	162	21	18	165	565	17	0	0	0	0	0	0
251)	=	32	111	80	0	101	126	4000	0	0	0	0	0	0	0	0	0
252)	=	32	112	20	0	0	0	18	0	0	0	0	0	0	0	0	0
253)	=	32	113	278	0	0	0	18	0	0	0	0	0	0	0	0	0
254)	=	32	114	10	0	144	10	4000	0	0	0	0	0	0	0	0	0
255)	=	32	115	365	0	10											





USER-DEFINED ROUTES

CARD NO.	CARD TYPE	ROUTE NUMBER	ROUTE DESCRIPTION
383)=	41	1	RT turn
384)=	41	2	Ahead
385)=	41	3	n/b

CARD NO.	CARD TYPE	ROUTE NUMBER	LINK NO.	LINK NO.	LINK NO.	LINK NO.	LINK NO.	LINK NO.	LINK NO.	LINK NO.	LINK NO.	LINK NO.	LINK NO.	LINK NO.	LINK NO.
386)=	42	1	303	347											
387)=	42	2	306	347											
388)=	42	3	341	82											

\*\*\*\*\*END OF SUBROUTINE TINPUT\*\*\*\*\*

64 SECOND CYCLE 64 STEPS

INITIAL SETTINGS  
- (SECONDS)

NODE NO.	NUMBER OF STAGES	STAGE 1	STAGE 2	STAGE 3	STAGE 4	STAGE 5	STAGE 6	STAGE 7	STAGE 8	STAGE 9	STAGE 10	LINK NUMBER	FLOW INTO LINK	SAT FLOW	DEGREE OF SAT	MEAN PER CRUISE	TIMES PCU DELAY	-----DELAY----- UNIFORM OVERSAT (U+R+O-MEAN Q)	RANDOM+ COST OF DELAY (\$/H)	----STOPS---- MEAN STOPS /PCU	COST OF STOPS (\$/H)	----QUEUE---- MEAN MAX. (PCU)	AVERAGE EXCESS (PCU)	PERFORMANCE INDEX. WEIGHTED SUM OF ( ) VALUES (\$/H)	EXIT NODE	GREEN START 1ST (SECONDS)	TIMES END 2ND (SECONDS)	
8	2	28	17																									
13	2	20	5																									
15	3	8	23	43																								
29	2	20	51																									
30	4	27	51	59	0																							
31	3	27	57	16																								
34	2	8	50																									
79	2	27	18																									
80	2	57	48																									
156	3	37	14	26																								
163	2	23	63																									
177	2	57	18																									

64 SECOND CYCLE 64 STEPS

LINK NUMBER	FLOW INTO LINK	SAT FLOW	DEGREE OF SAT	MEAN PER CRUISE	TIMES PCU DELAY	-----DELAY----- UNIFORM OVERSAT (U+R+O-MEAN Q)	RANDOM+ COST OF DELAY (\$/H)	----STOPS---- MEAN STOPS /PCU	COST OF STOPS (\$/H)	----QUEUE---- MEAN MAX. (PCU)	AVERAGE EXCESS (PCU)	PERFORMANCE INDEX. WEIGHTED SUM OF ( ) VALUES (\$/H)	EXIT NODE	GREEN START 1ST (SECONDS)	TIMES END 2ND (SECONDS)
12BL	70	16L	94	42.2	20.8	0.1 + 0.3	( 5.7)	75	( 1.2)	28	+	6.9			
16	1376	1540S	94	7.0	22.1	2.0 + 6.4	(120.0)	88	( 38.8)	28	+	158.7			
21	16	665	4	18.0	4.7	0.0 + 0.0	( 0.3)	0	( 0.0)	0		0.3			
24BL	80	28L	91	29.0	15.1	0.0 + 0.3	( 4.8)	22	( 0.0)	5		4.8			
28	1060	1250S	91	5.0	15.1	0.0 + 4.4	( 63.0)	22	( 6.1)	5		69.0			
32BL	110	36L	49	4.0	2.3	0.0 + 0.1	( 1.0)	5	( 0.1)	5		1.1			
36	676	1600S	49	3.1	2.3	0.0 + 0.4	( 6.1)	6	( 1.6)	5		7.6			
43	343	1000	34	47.2	2.7	0.0 + 0.3	( 3.7)	4	( 0.2)	0		3.9			
51BL	15	55L	27	98.1	1.4	0.0 + 0.0	( 0.1)	2	( 0.0)	0		0.1			
52	281	1800	16	20.0	1.2	0.0 + 0.1	( 1.3)	2	( 0.1)	0		1.4			
54BL	10	58L	27	45.0	3.9	0.0 + 0.0	( 0.2)	0	( 0.0)	0		0.2			
55	466	1800S	27	54.0	1.4	0.0 + 0.2	( 2.5)	2	( 0.2)	0		2.7			
56	158	722S	27	18.0	3.9	0.0 + 0.2	( 2.5)	0	( 0.0)	0		2.5			
64BL	98	68L	55	8.6	4.7	0.1 + 0.1	( 1.8)	44	( 1.0)	14	+	2.8			
68	725	1500S	55	9.0	5.1	0.5 + 0.5	( 14.6)	54	( 7.4)	14	+	22.0			
73BL	110	1800	6	17.1	1.1	0.0 + 0.0	( 0.5)	2	( 0.0)	0		0.5			
76	917	2100	44	6.0	1.7	0.0 + 0.4	( 6.0)	8	( 2.0)	7		8.0			
81	635	1900S	54	5.0	7.4	0.7 + 0.6	( 18.5)	41	( 13.5)	8	( 0.2)*	55.0	8	42	17
82	765	1900	64	5.0	11.2	1.5 + 0.9	( 33.7)	66	( 26.2)	11	( 1.0)*	159.0	8	42	17
83BL	76	1800	7	20.2	4.2	0.1 + 0.0	( 1.2)	18	( 0.3)	0		1.5	8	42	17
84BL	76	1610	5	27.0	1.2	0.0 + 0.0	( 0.4)	2	( 0.0)	0		0.4			
85	10	10000	1	4.0	27.5	0.1 + 0.0	( 1.1)	91	( 0.0)	0		1.1	8	22	28
93BL	92	1800	5	46.3	1.1	0.0 + 0.0	( 0.4)	2	( 0.0)	0		0.4			
97	699	800	87	7.1	16.8	0.0 + 3.3	( 46.4)	25	( 3.5)	3		49.9			
101BL	80	105L	37	22.9	1.6	0.0 + 0.0	( 0.5)	2	( 0.0)	0		0.5			
105	585	1800S	37	17.0	1.6	0.0 + 0.3	( 3.7)	2	( 0.5)	0		4.2			
111BL	80	115L	25	11.3	1.3	0.0 + 0.0	( 0.4)	2	( 0.0)	0		0.5			
112	20	767	3	18.0	2.7	0.0 + 0.0	( 0.2)	0	( 0.0)	0		0.2			
113	278	1800	15	18.0	1.2	0.0 + 0.1	( 1.3)	2	( 0.1)	0		1.4			
114BL	10	118L	9	4.5	2.6	0.0 + 0.0	( 0.1)	0	( 0.0)	0		0.1			
115	364	1800S	25	8.0	1.3	0.0 + 0.1	( 1.9)	2	( 0.3)	0		2.2			
117BL	76	111L	38	18.0	1.6	0.0 + 0.0	( 0.5)	3	( 0.0)	0		0.5			
118	62	775S	9	5.0	2.6	0.0 + 0.0	( 0.6)	0	( 0.0)	0		0.6			
119	227	1800	13	8.0	1.1	0.0 + 0.1	( 1.0)	2	( 0.2)	0		1.2			
126	733	1400	52	6.0	2.7	0.0 + 0.5	( 7.8)	4	( 0.6)	1		8.4			
131BL	10	135L	81	11.7	9.9	0.0 + 0.0	( 0.4)	18	( 0.0)	8		0.4	13	33	5

292BL	10	296L	73	18.0	19.7	0.0 + 0.0	( 0.8)	76	( 0.2)	10		0.9	29	59	23
296	689	2100SF	73	18.0	19.7	2.4 + 1.3	( 53.5)	76	( 11.1)	10		64.6	29	59	23
298	504	1720	69	12.3	16.4	1.2 + 1.1	( 32.7)	53	( 6.3)	6		39.0	29	28	54
301BL	120	1610	53	29.1	49.5	1.1 + 0.6	( 23.4)	116	( 3.1)	3	( 0.8)*	66.9	30	43	51
302	523	1600	87	7.0	43.6	3.2 + 3.1	( 90.0)	128	( 17.2)	12		107.2	30	14	37
303	475	1640S	85	7.0	38.4	2.6 + 2.5	( 71.9)	122	( 15.0)	12		86.8	30	14	37
305	468	1510	46	8.0	6.7	0.4 + 0.4	( 12.4)	42	( 3.9)	4		16.4	30	59	37
306	410	2698SF	70	3.0	28.9	2.3 + 0.9	( 46.7)	93	( 8.9)	9		55.6	30	43	59
307	290	1590	69	3.0	34.6	1.7 + 1.1	( 39.6)	103	( 7.0)	6	+	46.6	30	43	59
310	848	1500	57	3.3	2.8	0.0 + 0.6	( 9.2)	4	( 0.8)	1		10.0			
312BL	110	316L	63	4.9	7.7	0.1 + 0.2	( 3.4)	25	( 0.6)	4		4.0	31	32	2
313	182	1600	81	4.0	64.9	1.3 + 1.9	( 46.6)	143	( 4.4)	5		51.0	31	9	17
314BL	98	318L	22	7.2	5.6	0.1 + 0.1	( 2.2)	28	( 0.6)	1		2.8	31	29	4
316	439	1590S	63	4.0	6.3	0.1 + 0.7	( 10.9)	22	( 3.2)	4		14.1	31	32	2
317	178	1600	79	4.0	62.0	1.3 + 1.8	( 43.5)	139	( 4.2)	5		47.7	31	9	17
318	124	1590S	22	8.0	4.9	0.1 + 0.1	( 2.4)	16	( 0.3)	1		2.7	31	29	4
340BL	22	1570	1	3.6	1.2	0.0 + 0.0	( 0.1)	2	( 0.0)	0		0.1			
341	689	1930S	72	4.7	9.6	0.6 + 1.2	( 26.1)	34	( 0.9)	5	( 1.4)*	170.8	34	20	53
342	412	1930	40	3.9	8.8	0.7 + 0.3	( 14.3)	27	( 0.5)	2	( 0.4)*	52.6	34	20	53
343BL	54	1610	7	2.7	23.3	0.3 + 0.0	( 5.0)	99	( 1.2)	1		6.2	34	20	50
344BL	22	1570	12	2.3	34.7	0.1 + 0.1	( 3.0)	114	( 0.6)	0		3.6	34	20	50
346	762	3265SF	89	5.0	25.9	2.2 + 3.3	( 77.9)	109	( 11.9)	19	+	89.8	34	61	15
347	596	1750S	74	5.4	8.5	0.2 + 1.2	( 20.0)	29	( 0.7)	5	( 1.0)*	121.3	34	20	53

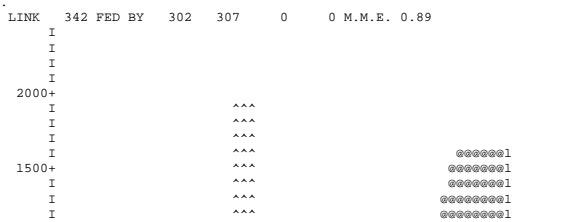
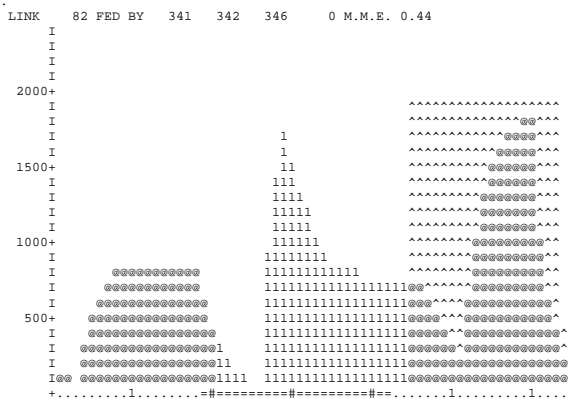
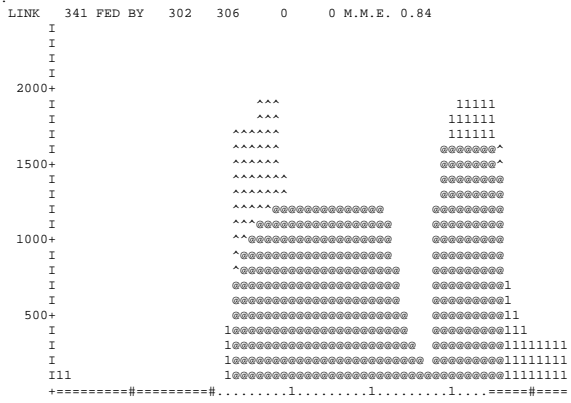
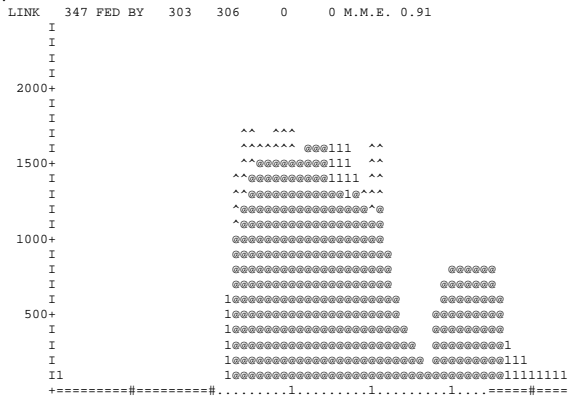
64 SECOND CYCLE 64 STEPS

LINK NUMBER	FLOW INTO LINK	SAT FLOW	DEGREE OF SAT	MEAN PER CRUISE	TIMES PCU DELAY	-----DELAY----- UNIFORM (U+R+O=MEAN Q)	RANDOM+ OVERSAT DELAY (\$/H)	COST OF DELAY	-----STOPS----- MEAN STOPS /PCU	COST OF STOPS (\$/H)	-----QUEUE----- MEAN MAX.	AVERAGE EXCESS OF ( ) VALUES (PCU)	PERFORMANCE INDEX, WEIGHTED SUM OF ( ) VALUES (\$/H)	EXIT NODE	GREEN START	TIMES END	START END 2ND (SECONDS)
793BL	76	1530	6	61.4	2.9	0.0 + 0.0	( 0.9)	18	( 0.3)	0		1.2	79	34	21		
797	855	1770	59	14.0	3.5	0.1 + 0.7	( 11.7)	9	( 1.8)	1		13.6	79	34	21		
801BL	76	805L	53	18.0	5.5	0.1 + 0.1	( 1.7)	35	( 0.6)	6		2.2	80	0	48		
805	711	1940S	53	18.0	5.5	0.6 + 0.5	( 15.5)	35	( 5.3)	6		20.8	80	0	48		
811BL	10	81L	54	7.6	9.5	0.0 + 0.0	( 0.4)	46	( 0.1)	8	+	0.5	8	42	17		
1111	614	1800S	38	18.0	1.6	0.0 + 0.3	( 3.9)	3	( 0.3)	0		4.3					
1112BL	10	1116L	64	13.9	9.0	0.0 + 0.0	( 0.4)	16	( 0.0)	3		0.4					
1116	352	724S	64	5.0	9.0	0.0 + 0.9	( 12.5)	18	( 1.1)	3		13.5					
1210BL	50	1214L	52	6.3	2.5	0.0 + 0.5	( 0.5)	4	( 0.0)	1		0.5					
1214	737	1500S	52	5.0	2.5	0.0 + 0.5	( 7.3)	4	( 0.8)	1		8.1					
1501	10	10000	1	10.0	23.4	0.1 + 0.0	( 0.9)	84	( 0.0)	0		0.9	15	13	23		
1502	10	10000	0	10.0	11.4	0.0 + 0.0	( 0.5)	58	( 0.0)	0		0.5	15	17	43		
1505	10	10000	0	10.0	18.3	0.0 + 0.0	( 0.7)	74	( 0.0)	0		0.7	15	56	8		
1511	356	1445	83	4.0	49.0	2.6 + 2.3	( 68.8)	109	( 8.7)	7	+	77.5	15	56	10		
1561BL	10	1565L	74	31.5	16.6	0.0 + 0.0	( 0.7)	91	( 0.2)	10		0.9	156	38	14		
1564	197	1700	93	18.0	103.4	1.5 + 4.1	( 80.4)	183	( 7.6)	8		88.0	156	19	26		
1565	773	1650S	74	10.0	10.9	0.9 + 1.4	( 33.2)	57	( 9.3)	10		42.5	156	38	14		
1569	775	1710	71	10.0	10.5	1.1 + 1.2	( 32.1)	54	( 8.9)	9		41.1	156	38	14		
1631BL	24	1635L	70	18.0	41.6	0.2 + 0.1	( 3.9)	113	( 0.6)	5		4.5	163	11	23		
1632BL	110	1636L	71	5.4	6.9	0.0 + 0.2	( 3.0)	18	( 0.5)	7		3.4	163	28	4		
1634BL	80	1638L	67	27.0	12.3	0.2 + 0.1	( 3.9)	62	( 0.0)	9		3.9	163	28	4		
1635	203	1600S	70	18.0	41.6	1.3 + 1.0	( 33.3)	113	( 4.9)	5		38.2	163	11	23		
1636	650	1670S	71	5.4	11.1	1.0 + 1.0	( 28.5)	47	( 5.2)	7		33.8	163	28	4		
1638	616	1630S	67	5.0	12.4	1.2 + 0.9	( 30.0)	62	( 9.8)	9		39.8	163	28	4		
1639	276	1600	85	18.0	57.8	1.9 + 2.6	( 63.0)	136	( 8.0)	7		70.9	163	11	23		
1653BL	76	1530	8	5.4	12.7	0.2 + 0.0	( 3.8)	59	( 1.0)	1		4.8	15	33	8		
1657	855	1770	77	4.0	12.4	1.3 + 1.7	( 41.7)	60	( 20.0)	12	+	61.7	15	33	8		
1774BL	10	1778L	96	25.2	79.8	0.1 + 0.1	( 3.1)	143	( 0.3)	13		3.5	177	63	18		
1778	543	1840S	96	14.8	63.7	2.3 + 7.3	( 136.5)	105	( 15.5)	13		152.0	177	63	18		
2902	10	10000	0	10.0	13.3	0.0 + 0.0	( 0.5)	63	( 0.0)	0		0.5	29	28	51		
2904	10	10000	0	10.0	12.0	0.0 + 0.0	( 0.5)	60	( 0.0)	0		0.5	29	59	20		
2912	416	1400	70	12.8	22.3	1.4 + 1.2	( 36.6)	81	( 7.9)	7		44.5	29	28	54		
3001	10	10000	0	10.0	10.8	0.0 + 0.0	( 0.4)	57	( 0.0)	0		0.4	30	0	27		
3002	10	10000	1	10.0	28.7	0.1 + 0.0	( 1.1)	93	( 0.0)	0		1.1	30	59	0		
3003	10	10000	1	10.0	24.4	0.1 + 0.0	( 1.0)	86	( 0.0)	0		1.0	30	42	51		
3031BL	50	303L	85	5.4	28.5	0.1 + 0.3	( 5.6)	112	( 1.3)	12		6.9	30	14	37		
3061BL	92	306L	70	3.6	28.6	0.5 + 0.2	( 10.4)	93	( 1.9)	9	+	12.3	30	43	59		
3102	10	10000	1	10.0	26.4	0.1 + 0.0	( 1.0)	89	( 0.0)	0		1.0	31	9	16		
3110	440	1460	55	4.0	5.6	0.1 + 0.6	( 9.7)	17	( 2.6)	2		12.3	31	32	2		
3116	600	1700	78	8.1	19.3	1.5 + 1.7	( 45.7)	61	( 4.9)	8		50.5	31	29	57		
3120BL	10	3124L	78	7.2	17.5	0.0 + 0.0	( 0.7)	33	( 0.1)	7		0.8	31	7	27		
3124	411	1650S	78	5.3	36.9	2.6 + 1.7	( 59.9)	94	( 6.6)	7		66.5	31	7	27		
3125	10	10000	1	10.0	26.4	0.1 + 0.0	( 1.0)	85	( 0.2)	0		1.3	31	20	27		
3403	10	10000	0	10.0	9.1	0.0 + 0.0	( 0.4)	52	( 0.0)	0		0.4	34	20	50		
3404	10	10000	1	10.0	24.4	0.1 + 0.0	( 1.0)	86	( 0.0)	0		1.0	34	63	8		
3411BL	54	341L	72	2.7	12.7	0.1 + 0.1	( 2.7)	46	( 0.6)	5	+	3.3	34	20	53		
3461BL	98	346L	89	4.0	27.1	0.3 + 0.4	( 10.5)	108	( 2.4)	19	+	12.8	34	61	15		
3471BL	88	347L	74	2.7	9.3	0.1 + 0.2	( 3.2)	32	( 0.6)	5	+	3.9	34	20	53		
3472	10	10000	0	4.0	17.5	0.0 + 0.0	( 0.7)	72	( 0.0)	0		0.7	34	55	8		
7903	10	10000	1	10.0	28.7	0.1 + 0.0	( 1.1)	93	( 0.0)	0		1.1	79	22	27		
8001	10	10000	1	10.0	28.7	0.1 + 0.0	( 1.1)	93	( 0.0)	0		1.1	80	52	57		
15601	10	10000	0	10.0	17.5	0.0 + 0.0	( 0.7)	73	( 0.0)	0		0.7	156	20	37		
15602	10	10000	1	10.0	28.7	0.1 + 0.0	( 1.1)	89	( 0.2)	0		1.4	156	32	37		
16301	10	10000	0	10.0	6.7	0.0 + 0.0	( 0.3)	44	( 0.0)	0		0.3	163	28	63		

64 SECOND CYCLE 64 STEPS

LINK NUMBER	FLOW INTO LINK	SAT FLOW	DEGREE OF SAT	MEAN PER CRUISE	TIMES PCU DELAY	-----DELAY----- UNIFORM (U+R+O=MEAN Q)	RANDOM+ OVERSAT DELAY (\$/H)	COST OF DELAY	-----STOPS----- MEAN STOPS /PCU	COST OF STOPS (\$/H)	-----QUEUE----- MEAN MAX.	AVERAGE EXCESS OF ( ) VALUES (PCU)	PERFORMANCE INDEX, WEIGHTED SUM OF ( ) VALUES (\$/H)	EXIT NODE	GREEN START	TIMES END	START END 2ND (SECONDS)	
16310	598	1530	61	5.2	8.2	0.6 + 0.8	( 19.4)	33	( 3.4)	4		22.8	163	28	4			
16312	356	1340	47	5.0	12.9	0.8 + 0.4	( 18.1)	59	( 5.5)	4		23.5	163	28	63			
17704	10	10000	0	10.0	5.0	0.0 + 0.0	( 0.2)	38	( 0.0)	0		0.2	177	18	57			
*** f - average saturation flow for flared link ***																		
TOTAL DISTANCE TRAVELLED	TOTAL TIME SPENT	MEAN JOURNEY SPEED	TOTAL UNIFORM DELAY	TOTAL RANDOM+ OVERSAT DELAY	TOTAL COST OF DELAY	TOTAL COST OF STOPS	TOTAL PENALTY FOR EXCESS QUEUES	TOTAL PERFORMANCE INDEX										
(PCU-KM/H)	(PCU-H/H)	(KM/H)	(PCU-H/H)	(PCU-H/H)	(\$/H)	(\$/H)	(\$/H)	(\$/H)										
4271.4	268.6	15.9	63.0	91.1	(2189.0)	+ ( 402.9)	+ ( 444.8)	= 3036.7	TOTALS									
308.7	25.0	12.4	4.8	4.8	( 136.9)	+ ( 23.8)	+ ( 40.4)	= 201.1	BUSES									
3962.7	243.7	16.3	58.2	86.3	(2052.0)	+ ( 379.1)	+ ( 404.4)	= 2835.6										

NO. OF ENTRIES TO SUBPT = 1  
NO. OF LINKS RECALCULATED= 249  
CYCLIC FLOW PROFILE GRAPHS







LINK CARDS: GIVEWAY DATA																
CARD NO.	CARD TYPE	LINK NO.	PRIORITY LINKS		LINK1 GIVEWAY ONLY			LINK2 GIVEWAY A1		LINK2 GIVEWAY A2		LINK LENGTH	STOP WT. X100	MAX FLOW	DELAY WT. X100	DISPSN X100
			LINK1 NO.	LINK2 NO.	NO.	% FLOW	X100	X100	X100	X100						
77)=	30	21	28	310	80	19	17	0	0	0	200	0	665	0	0	
78)=	30	54	0	0	0	0	0	0	0	0	50	0	722	0	0	
79)=	30	52	52	55	65	22	19	0	0	0	200	0	722	0	0	
80)=	30	112	115	1111	100	20	17	0	0	0	200	0	767	0	0	
81)=	30	114	0	0	0	0	0	0	0	0	50	0	775	0	0	
82)=	30	118	1111	0	100	16	0	0	0	0	50	0	775	0	0	
83)=	30	162	165	167	16	23	20	0	0	0	200	0	754	0	0	
84)=	30	344	342	341	0	33	33	0	0	0	25	0	1000	0	0	
85)=	30	1112	0	0	0	0	0	0	0	0	155	0	724	0	0	
86)=	30	1116	1111	119	0	18	16	0	0	0	50	0	724	0	0	

LINK CARDS: FIXED DATA														
CARD NO.	CARD TYPE	LINK NO.	EXIT NODE	FIRST GREEN			SECOND GREEN			LINK LENGTH	STOP WT. X100	SAT FLOW	DELAY WT. X100	DISPSN X100
				START STAGE	LAG	END STAGE	LAG	START STAGE	LAG					
87)=	31	12	0	0	0	0	0	0	0	95	0	0	0	0
88)=	31	16	0	0	0	0	0	0	0	95	0	1540	0	0
89)=	31	24	0	0	0	0	0	0	0	60	0	0	0	0
90)=	31	28	0	0	0	0	0	0	0	60	0	1250	0	0
91)=	31	32	0	0	0	0	0	32	0	45	0	0	0	0
92)=	31	36	0	0	0	0	0	0	0	45	0	1600	0	0
93)=	31	43	0	0	0	0	0	0	0	445	0	1000	0	0
94)=	31	51	0	0	0	0	0	0	0	505	0	0	0	0
95)=	31	52	0	0	0	0	0	0	0	165	0	1800	0	0
96)=	31	55	0	0	0	0	0	0	0	505	0	1800	0	0
97)=	31	64	0	0	0	0	0	0	0	95	0	0	0	0
98)=	31	68	0	0	0	0	0	0	0	95	0	1500	0	0
99)=	31	73	0	0	0	0	0	0	0	75	0	1800	0	0
100)=	31	76	0	0	0	0	0	0	0	75	0	2100	0	0
101)=	31	81	8	1	14	2	0	0	0	85	0	1900	0	0
102)=	31	82	8	1	14	2	0	0	0	85	0	1900	0	0
103)=	31	83	8	1	14	2	0	0	0	85	0	1800	0	0
104)=	31	84	0	0	0	0	0	0	0	105	0	1610	0	0
105)=	31	85	8	2	5	1	0	0	0	10	0	10000	0	0
106)=	31	93	0	0	0	0	0	0	0	85	0	1800	0	0
107)=	31	97	0	0	0	0	0	0	0	85	0	800	0	0
108)=	31	101	0	0	0	0	0	0	0	255	0	0	0	0
109)=	31	105	0	0	0	0	0	0	0	255	0	1800	0	0
110)=	31	111	0	0	0	0	0	0	0	125	0	0	0	0
111)=	31	113	0	0	0	0	0	0	0	200	0	1800	0	0
112)=	31	115	0	0	0	0	0	0	0	125	0	1800	0	0
113)=	31	117	0	0	0	0	0	0	0	200	0	0	0	0
114)=	31	119	0	0	0	0	0	0	0	125	0	1800	0	0
115)=	31	126	0	0	0	0	0	0	0	65	0	1400	0	0
116)=	31	131	0	0	0	0	0	0	0	130	0	0	0	0
117)=	31	132	0	0	0	0	0	0	0	200	0	0	0	0
118)=	31	135	13	1	13	2	0	0	0	110	0	1800	0	0
119)=	31	136	13	2	5	1	0	0	0	200	0	1800	0	0
120)=	31	139	13	1	13	2	0	0	0	110	0	1800	0	0
121)=	31	140	13	2	5	1	0	0	0	120	0	1800	0	0
122)=	31	141	13	2	5	1	0	0	0	10	0	10000	0	0
123)=	31	144	0	0	0	0	0	0	0	105	0	0	0	0
124)=	31	148	0	0	0	0	0	0	0	105	0	750	0	0
125)=	31	151	15	1	9	3	8	0	0	170	0	1540	0	0
126)=	31	153	0	0	0	0	0	0	0	35	0	0	0	0
127)=	31	155	15	2	10	3	0	0	0	175	0	1530	0	0
128)=	31	157	15	3	13	1	2	0	0	45	0	1520	0	0
129)=	31	161	0	0	0	0	0	0	0	135	0	0	0	0
130)=	31	163	0	0	0	0	0	0	0	365	0	1800	0	0
131)=	31	165	0	0	0	0	0	0	0	115	0	1800	0	0
132)=	31	167	0	0	0	0	0	0	0	365	0	1100	0	0
133)=	31	203	0	0	0	0	0	0	0	50	0	2000	0	0
134)=	31	204	0	0	0	0	0	0	0	50	0	0	0	0
135)=	31	212	0	0	0	0	0	0	0	50	0	2000	0	0
136)=	31	223	0	0	0	0	0	0	0	50	0	2000	0	0
137)=	31	227	0	0	0	0	0	0	0	50	0	2000	0	0
138)=	31	231	0	0	0	0	0	0	0	50	0	2000	0	0
139)=	31	232	0	0	0	0	0	0	0	50	0	0	0	0
140)=	31	244	0	0	0	0	0	0	0	50	0	2000	0	0
141)=	31	254	0	0	0	0	0	0	0	50	0	2000	0	0
142)=	31	262	0	0	0	0	0	0	0	50	0	2000	0	0
143)=	31	274	0	0	0	0	0	0	0	50	0	2000	0	0
144)=	31	278	0	0	0	0	0	0	0	50	0	0	0	0
145)=	31	284	0	0	0	0	0	0	0	50	0	2000	0	0
146)=	31	288	0	0	0	0	0	0	0	50	0	0	0	0
147)=	31	292	0	0	0	0	0	0	0	200	0	0	0	0
148)=	31	296	29	2	8	1	3	0	0	200	0	1480	0	0
149)=	31	298	29	1	8	2	3	0	0	140	0	1720	0	0
150)=	31	301	30	1	16	2	0	0	0	70	0	1610	0	0
151)=	31	302	30	4	14	1	10	0	0	85	0	1600	0	0
152)=	31	303	30	4	14	1	10	0	0	85	0	1640	0	0
153)=	31	305	30	2	8	1	10	0	0	85	0	1510	0	0
154)=	31	306	30	1	16	3	0	0	0	35	0	1640	0	0
155)=	31	307	30	1	16	3	0	0	0	35	0	1590	0	0
156)=	31	310	0	0	0	0	0	0	0	45	0	1500	0	0
157)=	31	312	0	0	0	0	0	0	0	55	0	0	0	0
158)=	31	313	31	2	16	3	1	0	0	40	0	1600	0	0
159)=	31	314	0	0	0	0	0	0	0	80	0	0	0	0
160)=	31	316	31	1	5	2	9	0	0	55	0	1590	0	0
161)=	31	317	31	2	16	3	1	0	0	40	0	1600	0	0
162)=	31	318	31	1	2	2	11	0	0	80	0	1590	0	0
163)=	31	340	0	0	0	0	0	0	0	40	0	1570	0	0
164)=	31	341	34	1	12	2	3	0	0	30	0	1930	0	0
165)=	31	342	34	1	12	2	3	0	0	30	0	1930	0	0
166)=	31	343	34	1	12	2	0	0	0	30	0	1610	0	0
167)=	31	344	34	1	12	2	0	0	0	25	0	1570	0	0
168)=	31	346	34	2	11	1	7	0	0	45	0	1750	0	0
169)=	31	347	34	1	12	2	3	0	0	30	0	1750	0	0
170)=	31	793	79	1	7	2	3	0	0	165	0	1530	0	0
171)=	31	797	79	1	7	2	3	0	0	165	0	1770	0	0
172)=	31	801	0	0	0	0	0	0	0	200	0	0	0	0
173)=	31	805	80	1	7	2	0	0	0	200	0	1940	0	0
174)=	31	811	0	0	0	0	0	0	0	85	0	0	0	0
175)=	31	1111	0	0	0	0	0	0	0	200	0	1800	0	0
176)=	31	1210	0	0	0	0	0	0	0	70	0	0	0	0
177)=	31	1214	0	0	0	0	0	0	0	60	0	1500	0	0
178)=	31	1501	15	1	5	2	0	0	0	10	0	10000	0	0
179)=	31	1502	15	1	9	3	0	0	0	10	0	10000	0	0
180)=	31	1505	15	3	13	1	0	0	0	10	0	10000	0	0
181)=	31	1511	15	3	13	1	2	0	0	45	0	1445	0	0
182)=	31	1561	0	0	0	0	0	0	0	110	0	0	0	0
183)=	31	1564	156	2	5	3	0	0	0	200	0	1700	0	0
184)=	31	1565	156	1	1	2	0	0	0	110	0	1650	0	0
185)=	31	1569	156	1	1	2	0	0	0	110	0	1710	0	0
186)=	31	1631	0	0	0	0	0	0	0	200	0	0	0	0
187)=	31	1632	0	0	0	0	0	0	0	60	0	0	0	0
188)=	31													

190)	=	31	1636	163	1	5	2	5	0	0	0	0	60	0	1670	0	0
191)	=	31	1638	163	1	5	2	5	0	0	0	0	60	0	1630	0	0
192)	=	31	1639	163	2	12	1	0	0	0	0	0	200	0	1600	0	0
193)	=	31	1653	15	2	10	1	0	0	0	0	0	60	0	1530	0	0
194)	=	31	1657	15	2	10	1	0	0	0	0	0	60	0	1770	0	0
195)	=	31	1774	0	0	0	0	0	0	0	0	0	140	0	0	0	0
196)	=	31	1778	177	1	6	2	0	0	0	0	0	150	0	1840	0	0
197)	=	31	2902	29	1	8	2	0	0	0	0	0	10	0	10000	0	0
198)	=	31	2904	29	2	8	1	0	0	0	0	0	10	0	10000	0	0
199)	=	31	2912	29	1	8	2	3	0	0	0	0	140	0	1400	0	0
200)	=	31	3001	30	3	5	1	0	0	0	0	0	10	0	10000	0	0
201)	=	31	3002	30	2	8	4	0	0	0	0	0	10	0	10000	0	0
202)	=	31	3003	30	1	15	2	0	0	0	0	0	10	0	10000	0	0
203)	=	31	3031	0	0	0	0	0	0	0	0	0	60	0	0	0	0
204)	=	31	3061	0	0	0	0	0	0	0	0	0	40	0	0	0	0
205)	=	31	3102	31	2	16	3	0	0	0	0	0	10	0	10000	0	0
206)	=	31	3110	31	1	5	2	9	0	0	0	0	55	0	1460	0	0
207)	=	31	3116	31	1	2	2	0	0	0	0	0	80	0	1700	0	0
208)	=	31	3120	0	0	0	0	0	0	0	0	0	80	0	0	0	0
209)	=	31	3124	31	2	14	1	0	0	0	0	0	60	0	1650	0	0
210)	=	31	3125	31	3	4	1	0	0	0	0	0	0	0	10000	0	0
211)	=	31	3403	34	1	12	2	0	0	0	0	0	10	0	10000	0	0
212)	=	31	3404	34	2	13	1	0	0	0	0	0	10	0	10000	0	0
213)	=	31	3411	0	0	0	0	0	0	0	0	0	30	0	0	0	0
214)	=	31	3461	0	0	0	0	0	0	0	0	0	45	0	0	0	0
215)	=	31	3471	0	0	0	0	0	0	0	0	0	30	0	0	0	0
216)	=	31	3472	34	2	5	1	0	0	0	0	0	10	0	10000	0	0
217)	=	31	7903	79	2	4	1	0	0	0	0	0	10	0	10000	0	0
218)	=	31	8001	80	2	4	1	0	0	0	0	0	10	0	10000	0	0
219)	=	31	15601	156	2	6	1	0	0	0	0	0	10	0	10000	0	0
220)	=	31	15602	156	3	6	1	0	0	0	0	0	0	0	10000	0	0
221)	=	31	16301	163	1	5	2	0	0	0	0	0	10	0	10000	0	0
222)	=	31	16310	163	1	5	2	5	0	0	0	0	60	0	1530	0	0
223)	=	31	16312	163	1	5	2	0	0	0	0	0	60	0	1340	0	0
224)	=	31	17704	177	2	0	1	0	0	0	0	0	10	0	10000	0	0

## LINK CARDS: FLOW DATA

CARD NO.	CARD TYPE	LINK NO.	TOTAL FLOW	UNIFORM FLOW	ENTRY 1		ENTRY 2		ENTRY 3		ENTRY 4	
					LINK NO.	FLOW	LINK NO.	FLOW	LINK NO.	FLOW	LINK NO.	FLOW
225)	=	32	12	70	0	32	70	4023	0	0	0	0
226)	=	32	16	1377	0	36	676	7	310	701	7	0
227)	=	32	21	15	0	0	0	18	0	0	0	0
228)	=	32	24	80	0	0	0	4013	0	0	0	0
229)	=	32	28	1060	0	0	0	5	0	0	0	0
230)	=	32	32	110	0	1632	110	4000	0	0	0	0
231)	=	32	36	676	0	1636	650	3	1639	26	5	0
232)	=	32	43	343	0	52	260	47	58	83	48	0
233)	=	32	51	15	0	3120	10	4042	0	0	0	0
234)	=	32	52	281	0	113	278	20	0	0	0	0
235)	=	32	54	10	0	0	0	4000	0	0	0	0
236)	=	32	55	467	0	316	26	54	3124	412	54	0
237)	=	32	58	158	0	0	0	18	0	0	0	0
238)	=	32	64	98	0	314	98	4000	0	0	0	0
239)	=	32	68	725	0	318	124	9	3116	601	9	0
240)	=	32	73	110	0	344	22	4041	3471	88	4000	0
241)	=	32	76	918	0	341	367	6	347	551	6	0
242)	=	32	81	728	0	342	228	5	346	486	5	0
243)	=	32	82	854	0	341	282	5	342	270	5	346
244)	=	32	83	76	0	3411	54	4007	3461	22	4000	288
245)	=	32	84	76	0	155	76	4007	0	0	0	0
246)	=	32	85	10	0	0	0	4	0	0	0	0
247)	=	32	93	92	0	163	92	4028	0	0	0	0
248)	=	32	97	681	0	162	39	8	167	642	7	0
249)	=	32	101	80	0	161	80	4000	0	0	0	0
250)	=	32	105	586	0	162	21	18	165	565	17	0
251)	=	32	111	80	0	101	126	4000	0	0	0	0
252)	=	32	112	20	0	0	0	18	0	0	0	0
253)	=	32	113	278	0	0	0	18	0	0	0	0
254)	=	32	114	10	0	144	10	4000	0	0	0	0
255)	=	32	115	365	0	105	365	8	0	0	0	0
256)	=	32	117	76	0	0	0	4000	0	0	0	0
257)	=	32	118	62	0	148	62	5	0	0	0	0
258)	=	32	119	227	0	105	227	8	0	0	0	0
259)	=	32	126	696	0	135	602	6	136	94	6	0
260)	=	32	131	10	0	1561	10	4000	0	0	0	0
261)	=	32	132	40	0	0	0	4000	0	0	0	0
262)	=	32	135	831	0	1564	57	12	1565	774	11	0
263)	=	32	136	205	0	0	0	18	0	0	0	0
264)	=	32	139	764	0	1564	139	12	1569	625	11	0
265)	=	32	140	40	0	301	40	4000	0	0	0	0
266)	=	32	141	10	0	0	0	4	0	0	0	0
267)	=	32	144	15	0	51	10	4000	54	10	4000	0
268)	=	32	148	419	0	55	344	11	58	75	12	0
269)	=	32	151	711	0	805	711	16	0	0	0	0
270)	=	32	153	10	0	811	10	4000	0	0	0	0
271)	=	32	155	76	0	801	76	4000	0	0	0	0
272)	=	32	157	372	0	81	372	4	0	0	0	0
273)	=	32	161	80	0	301	80	4033	0	0	0	0
274)	=	32	162	60	0	0	0	18	0	0	0	0
275)	=	32	163	92	0	114	10	4000	117	76	4000	0
276)	=	32	165	579	0	305	579	10	0	0	0	0
277)	=	32	167	666	0	118	62	32	1111	604	30	0
278)	=	32	203	250	0	28	103	5	310	147	5	0
279)	=	32	204	24	0	32	40	4000	0	0	0	0
280)	=	32	212	154	0	51	10	4000	52	21	5	55
281)	=	32	223	872	0	797	872	5	0	0	0	0
282)	=	32	227	76	0	793	76	4036	0	0	0	0
283)	=	32	231	900	0	112	20	5	115	362	5	119
284)	=	32	232	90	0	111	80	4000	1112	10	4000	0
285)	=	32	244	50	0	165	14	5	167	36	5	0
286)	=	32	254	82	0	115	10	5	1111	10	5	1116
287)	=	32	262	151	0	1569	151	5	0	0	0	0
288)	=	32	274	544	0	1778	544	5	0	0	0	0
289)	=	32	278	10	0	1774	10	4000	0	0	0	0
290)	=	32	284	228	0	135	228	5	0	0	0	0
291)	=	32	288	40	0	140	40	4000	0	0	0	0
292)	=	32	292	10	0	0	0	4000	0	0	0	0
293)	=	32	296	689	0	0	0	18	0	0	0	0
294)	=	32	298	505	0	151	427	12	1511	68	14	0
295)	=	32	301	120	0	343	54	4040	3461	66	4000	0
296)	=	32	302	521	0	1214	521	7	0	0	0	0
297)	=	32	303	471	0	126	117	7	1214	354	7	0
298)	=	32	305	579	0	126	579	8	0	0	0	0
299)	=	32	306	368	0	97	368	3	0	0	0	0
300)	=	32	307	316	0	97	316	3	0	0	0	0
301)	=	32	310	848	0	1639	250	4	16310	598	3	0
302)	=	32	312	110	0	73	105	4000	0	0	0	0
303)	=	32	313	182	0	43	182	4	0	0	0	0
304)	=	32	314	98	0	1631	18	4000	1634	80	4000	0
305)	=	32	316	438	0	76	438	4	0	0	0	0
306)	=	32	317	178	0	43	178	4	0	0	0	0
307)</												





31	3	27	57	16
34	2	21	62	
79	2	27	18	
80	2	57	48	
156	3	37	14	26
163	2	23	63	
177	2	57	18	

LINK NUMBER	FLOW INTO LINK	SAT FLOW	DEGREE OF SAT	MEAN PER CRUISE	TIMES PCU DELAY	-----DELAY----- UNIFORM OVERSAT COST (U+R+O=MEAN Q) DELAY (\$/H)	----STOPS---- MEAN COST OF STOPS (\$/H)	----QUEUE---- MEAN AVERAGE EXCESS (PCU)	PERFORMANCE INDEX. WEIGHTED SUM OF ( ) VALUES (\$/H)	EXIT NODE	GREEN START END 1ST 2ND (SECONDS)	TIMES START END 1ST 2ND (SECONDS)
12BL	70	16L	94	42.2	19.7	0.1 + 0.3 ( 5.4)	70 ( 1.1)	28 +	6.5			
16	1377	1540S	94	7.0	20.5	1.4 + 6.5 (111.3)	82 ( 36.1)	28 +	147.4			
21	16	665	4	18.0	4.7	0.0 + 0.0 ( 0.3)	0 ( 0.0)	0	0.3			
24BL	80	28L	91	29.0	15.1	0.0 + 0.3 ( 4.8)	22 ( 0.0)	5	4.8			
28	1060	1250S	91	5.0	15.1	0.0 + 4.4 ( 63.0)	22 ( 6.1)	5	69.0			
32BL	110	36L	49	4.0	2.2	0.0 + 0.1 ( 1.0)	4 ( 0.1)	4	1.1			
36	676	1600S	49	3.1	2.3	0.0 + 0.4 ( 6.0)	5 ( 1.4)	4	7.4			
43	343	1000	34	47.2	2.7	0.0 + 0.3 ( 3.7)	4 ( 0.2)	0	3.9			
51BL	15	55L	27	98.1	1.4	0.0 + 0.0 ( 0.1)	2 ( 0.0)	0	0.1			
52	281	1800	16	20.0	1.2	0.0 + 0.1 ( 1.3)	2 ( 0.1)	0	1.4			
54BL	10	58L	27	45.0	3.9	0.0 + 0.0 ( 0.2)	0 ( 0.0)	0	0.2			
55	467	1800S	27	54.0	1.4	0.0 + 0.2 ( 2.5)	2 ( 0.2)	0	2.7			
58	158	722S	27	18.0	3.9	0.0 + 0.2 ( 2.5)	0 ( 0.0)	0	2.5			
64BL	98	68L	55	8.6	4.7	0.1 + 0.1 ( 1.8)	44 ( 1.0)	14 +	2.8			
68	725	1500S	55	9.0	5.1	0.5 + 0.5 ( 14.6)	54 ( 7.4)	14 +	22.0			
73BL	110	1800	6	17.1	1.1	0.0 + 0.0 ( 0.5)	2 ( 0.0)	0	0.5			
76	918	2100	44	6.0	2.0	0.1 + 0.4 ( 7.1)	20 ( 4.8)	10	11.9			
81	728	1900S	62	5.0	8.7	1.0 + 0.8 ( 24.9)	40 ( 14.9)	7 ( 0.1)*	47.4	8	53	28
82	855	1900	72	5.0	12.2	1.6 + 1.3 ( 41.1)	64 ( 28.5)	12 ( 1.3)*	199.8	8	53	28
83BL	76	1800	7	20.2	4.6	0.1 + 0.0 ( 1.4)	18 ( 0.3)	0	1.7	8	53	28
84BL	76	1610	5	27.0	1.2	0.0 + 0.0 ( 0.4)	2 ( 0.0)	0	0.4			
85	10	10000	1	4.0	27.5	0.1 + 0.0 ( 1.1)	91 ( 0.0)	0	1.1	8	33	39
93BL	92	1800	5	46.3	1.1	0.0 + 0.0 ( 0.4)	2 ( 0.0)	0	0.4			
97	681	800	85	7.1	14.5	0.0 + 2.7 ( 38.9)	21 ( 2.9)	3	41.8			
101BL	80	105L	37	22.9	1.6	0.0 + 0.0 ( 0.5)	2 ( 0.0)	0	0.5			
105	585	1800S	37	17.0	1.6	0.0 + 0.3 ( 3.7)	2 ( 0.5)	0	4.2			
111BL	80	115L	25	11.3	1.3	0.0 + 0.0 ( 0.4)	2 ( 0.0)	0	0.5			
112	20	767	3	18.0	2.7	0.0 + 0.0 ( 0.2)	0 ( 0.0)	0	0.2			
113	278	1800	15	18.0	1.2	0.0 + 0.1 ( 1.3)	2 ( 0.1)	0	1.4			
114BL	10	118L	9	4.5	2.6	0.0 + 0.0 ( 0.1)	0 ( 0.0)	0	0.1			
115	364	1800S	25	8.0	1.3	0.0 + 0.1 ( 1.9)	2 ( 0.3)	0	2.2			
117BL	76	1111L	38	18.0	1.6	0.0 + 0.0 ( 0.5)	3 ( 0.0)	0	0.5			
118	62	775S	9	5.0	2.6	0.0 + 0.0 ( 0.6)	0 ( 0.0)	0	0.6			
119	227	1800	13	8.0	1.1	0.0 + 0.1 ( 1.0)	2 ( 0.2)	0	1.2			
126	695	1400	50	6.0	2.6	0.0 + 0.5 ( 7.0)	4 ( 0.6)	0	7.5			
131BL	10	135L	81	11.7	9.9	0.0 + 0.0 ( 0.4)	18 ( 0.0)	8	0.4	13	33	5

64 SECOND CYCLE 64 STEPS

LINK NUMBER	FLOW INTO LINK	SAT FLOW	DEGREE OF SAT	MEAN PER CRUISE	TIMES PCU DELAY	-----DELAY----- UNIFORM OVERSAT COST (U+R+O=MEAN Q) DELAY (\$/H)	----STOPS---- MEAN COST OF STOPS (\$/H)	----QUEUE---- MEAN AVERAGE EXCESS (PCU)	PERFORMANCE INDEX. WEIGHTED SUM OF ( ) VALUES (\$/H)	EXIT NODE	GREEN START END 1ST 2ND (SECONDS)	TIMES START END 1ST 2ND (SECONDS)
132BL	40	136L	79	18.0	51.9	0.3 + 0.3 ( 8.2)	128 ( 1.1)	6	9.3	13	10	20
135	830	1800S	81	11.1	16.5	1.8 + 2.0 ( 54.1)	54 ( 6.4)	8	60.4	13	33	5
136	205	1800S	79	18.0	51.9	1.4 + 1.5 ( 42.0)	128 ( 5.5)	6	47.5	13	10	20
139	764	1800	73	11.2	13.6	1.5 + 1.4 ( 40.9)	57 ( 6.2)	8	47.1	13	33	5
140BL	40	1800	13	10.8	12.4	0.1 + 0.1 ( 2.0)	87 ( 0.8)	1	2.7	13	10	20
141	10	10000	1	4.0	23.4	0.1 + 0.0 ( 0.9)	84 ( 0.0)	0	0.9	13	10	20
144BL	15	148L	58	9.4	5.7	0.0 + 0.0 ( 0.3)	9 ( 0.0)	2	0.4			
148	418	750S	58	11.2	5.7	0.0 + 0.7 ( 9.4)	10 ( 0.7)	2	10.1			
151	711	1540	84	16.0	22.5	1.8 + 2.6 ( 63.0)	89 ( 12.8)	13	75.8	15	17	51
153BL	10	157L	84	3.2	53.5	0.1 + 0.1 ( 2.1)	132 ( 0.3)	9 +	2.4	15	56	10
155BL	76	1530	32	15.8	32.0	0.4 + 0.2 ( 9.6)	99 ( 1.7)	1	11.3	15	34	43
157	371	1520S	84	4.0	47.9	2.5 + 2.5 ( 70.1)	122 ( 10.1)	9 +	80.2	15	56	10
161BL	80	165L	37	55.8	1.6	0.0 + 0.0 ( 0.5)	2 ( 0.0)	0	0.5			
162	60	754	12	18.0	4.2	0.0 + 0.1 ( 1.0)	0 ( 0.0)	0	1.0			
163BL	92	1800	5	32.9	1.1	0.0 + 0.0 ( 0.4)	2 ( 0.0)	0	0.4			
165	578	1800S	37	10.0	1.6	0.0 + 0.3 ( 3.6)	2 ( 0.3)	0	3.9			
167	666	1100	61	30.2	4.1	0.0 + 0.8 ( 10.9)	6 ( 1.0)	0	11.9			
203	251	2000S	14	5.0	1.0	0.0 + 0.0 ( 1.0)	2 ( 0.1)	0	1.1			
204BL	24	203L	14	4.5	1.0	0.0 + 0.0 ( 0.1)	2 ( 0.0)	0	0.1			
212BL	154	2000	8	5.0	1.0	0.0 + 0.0 ( 0.6)	2 ( 0.1)	0	0.6			
223	874	2000	44	5.0	1.6	0.0 + 0.4 ( 5.5)	2 ( 0.4)	0	5.9			
227BL	76	2000	4	50.6	0.9	0.0 + 0.0 ( 0.3)	1 ( 0.0)	0	0.3			
231	899	2000S	49	5.0	1.8	0.0 + 0.4 ( 6.3)	3 ( 0.4)	0	6.7			
232BL	90	231L	49	4.5	1.8	0.0 + 0.0 ( 0.6)	3 ( 0.1)	0	0.7			
244	50	2000	2	5.0	0.9	0.0 + 0.0 ( 0.2)	1 ( 0.0)	0	0.2			
254	82	2000	4	5.0	0.9	0.0 + 0.0 ( 0.3)	1 ( 0.0)	0	0.3			
262	150	2000	8	5.0	1.0	0.0 + 0.0 ( 0.6)	2 ( 0.0)	0	0.6			
274	543	2000S	28	5.0	1.2	0.0 + 0.2 ( 2.7)	2 ( 0.2)	0	2.8			
278BL	10	274L	28	4.5	1.2	0.0 + 0.0 ( 0.0)	2 ( 0.0)	0	0.1			
284	228	2000S	13	5.0	1.0	0.0 + 0.1 ( 0.9)	2 ( 0.1)	0	1.0			
288BL	40	284L	13	4.5	1.0	0.0 + 0.0 ( 0.2)	2 ( 0.0)	0	0.2			
292BL	10	296L	73	18.0	19.7	0.0 + 0.0 ( 0.8)	76 ( 0.2)	10	0.9			
296	689	2100Sf	73	18.0	19.7	2.4 + 1.3 ( 53.5)	76 ( 11.1)	10	64.6	29	59	23
298	504	1720	70	12.3	16.5	1.2 + 1.1 ( 32.8)	54 ( 6.3)	6	39.2	29	28	54
301BL	120	1610	53	29.1	48.6	1.1 + 0.6 ( 23.0)	118 ( 3.2)	3 ( 0.8)*	65.9	30	56	0
302	522	1600	87	7.0	46.9	3.7 + 3.1 ( 96.7)	117 ( 15.7)	11	112.4	30	27	50
303	470	1640S	85	7.0	43.0	3.3 + 2.4 ( 79.8)	113 ( 13.7)	11	93.5	30	27	50
305	578	1510	57	8.0	14.1	1.6 + 0.7 ( 32.1)	79 ( 9.3)	9	41.3	30	8	50
306	368	2698Sf	64	3.0	26.8	2.0 + 0.7 ( 38.8)	89 ( 7.7)	8 +	46.5	30	56	8
307	316	1590	75	3.0	37.7	1.9 + 1.4 ( 47.0)	109 ( 8.1)	7 +	55.1	30	56	8
310	848	1500	57	3.3	2.8	0.0 + 0.6 ( 9.2)	4 ( 0.8)	1	10.1			
312BL	110	316L	63	4.9	15.3	0.3 + 0.2 ( 6.7)	50 ( 1.2)	3	7.9	31	32	2
313	182	1600	81	4.0	64.9	1.3 + 1.9 ( 46.6)	143 ( 4.4)	5	51.0	31	9	17
314BL	98	318L	22	7.2	5.6	0.1 + 0.1 ( 2.2)	28 ( 0.6)	1	2.8	31	29	4
316	439	1590S	63	4.0	11.5	0.7 + 0.7 ( 19.8)	31 ( 4.6)	3	24.4	31	32	2
317	178	1600	79	4.0	62.0	1.3 + 1.8 ( 43.5)	139 ( 4.2)	5	47.7	31	9	17
318	124	1590S	22	8.0	4.9	0.1 + 0.1 ( 2.4)	16 ( 0.3)	1	2.7	31	29	4
340BL	22	1570	1	3.6	1.2	0.0 + 0.0 ( 0.1)	2 ( 0.0)	0	0.1			
341	650	1930S	71	4.6	11.6	1.0 + 1.1 ( 29.8)	47 ( 1.2)	6 ( 1.9)*	224.8	34	33	1
342	499	1930	50	4.1	11.9	1.2 + 0.5 ( 23.4)	38 ( 0.8)	4 ( 1.0)*	123.8	34	33	1
343BL	54	1610	7	2.7	15.6	0.2 + 0.0 ( 3.3)	52 ( 0.6)	1	3.9	34	33	62
344BL	22	1570	14	5.3	48.1	0.2 + 0.1 ( 4.2)	113 ( 0.6)	0	4.7	34	33	62
346	774	3190Sf	87	5.0	35.3	4.7 + 2.9 (107.9)	120 ( 13.2)	19 +	121.1	34	9	28
347	551	1750S	71	5.6	7.8	0.2 + 1.0 ( 17.1)	26 ( 0.6)	5 ( 0.8)*	92.6	34	33	1

64 SECOND CYCLE 64 STEPS

LINK NUMBER	FLOW INTO LINK	SAT FLOW	DEGREE OF SAT	MEAN PER CRUISE	TIMES PCU DELAY	-----DELAY----- UNIFORM OVERSAT COST (U+R+O=MEAN Q) DELAY (\$/H)	----STOPS---- MEAN COST OF STOPS (\$/H)	----QUEUE---- MEAN AVERAGE EXCESS (PCU)	PERFORMANCE INDEX. WEIGHTED SUM OF ( ) VALUES (\$/H)	EXIT NODE	GREEN START END 1ST 2ND (SECONDS)	TIMES START END 1ST 2ND (SECONDS)
-------------	----------------	----------	---------------	-----------------	-----------------	--	---	---	--	-----------	-----------------------------------	-----------------------------------

793BL	76	1530	6	61.4	2.8	0.0 + 0.0	( 0.9)	19	( 0.3)	0	1.2	79	34	21
797	855	1770	59	14.0	3.8	0.2 + 0.7	( 12.7)	11	( 2.4)	2	15.1	79	34	21
801BL	76	805L	53	18.0	5.5	0.1 + 0.1	( 1.7)	35	( 0.6)	6	2.2	80	0	48
805	711	1940S	53	18.0	5.5	0.6 + 0.5	( 15.5)	35	( 5.3)	6	20.8	80	0	48
811BL	10	81L	62	7.6	10.0	0.0 + 0.0	( 0.4)	39	( 0.1)	7	0.5	8	53	28
1111	614	1800S	38	18.0	1.6	0.0 + 0.3	( 3.9)	3	( 0.3)	0	4.3			
1112BL	10	1116L	64	13.9	9.0	0.0 + 0.0	( 0.4)	17	( 0.0)	3	0.4			
1116	352	724S	64	5.0	9.1	0.0 + 0.9	( 12.6)	22	( 1.3)	3	13.9			
1210BL	50	1214L	62	6.3	3.1	0.0 + 0.0	( 0.6)	5	( 0.1)	6	0.7			
1214	875	1500S	62	5.0	3.4	0.1 + 0.8	( 11.9)	16	( 3.6)	6	15.5			
1501	10	10000	1	10.0	22.5	0.1 + 0.0	( 0.9)	82	( 0.0)	0	0.9	15	13	24
1502	10	10000	0	10.0	11.4	0.0 + 0.0	( 0.5)	58	( 0.0)	0	0.5	15	17	43
1505	10	10000	0	10.0	18.3	0.0 + 0.0	( 0.7)	74	( 0.0)	0	0.7	15	56	8
1511	357	1445	83	4.0	47.1	2.4 + 2.3	( 66.3)	121	( 9.6)	8	75.9	15	56	10
1561BL	10	1565L	74	31.5	16.6	0.0 + 0.0	( 0.7)	91	( 0.2)	10	0.9	156	38	14
1564	197	1700	93	18.0	103.4	1.5 + 4.1	( 80.4)	183	( 7.6)	8	88.0	156	19	26
1565	773	1650S	74	10.0	10.9	0.9 + 1.4	( 33.3)	57	( 9.3)	10	42.5	156	38	14
1569	775	1710	71	10.0	10.5	1.1 + 1.2	( 32.2)	54	( 8.9)	9	41.1	156	38	14
1631BL	24	1635L	70	18.0	41.6	0.2 + 0.1	( 3.9)	113	( 0.6)	5	4.5	163	11	23
1632BL	110	1636L	71	5.4	6.1	0.0 + 0.2	( 2.7)	18	( 0.4)	8	3.1	163	28	4
1634BL	80	1638L	67	27.0	12.3	0.2 + 0.1	( 3.9)	62	( 0.0)	9	3.9	163	28	4
1635	203	1600S	70	18.0	41.6	1.3 + 1.0	( 33.3)	113	( 4.9)	5	38.2	163	11	23
1636	651	1670S	71	5.4	11.7	1.1 + 1.0	( 30.1)	51	( 5.6)	8	35.8	163	28	4
1638	616	1630S	87	5.0	12.4	1.2 + 0.9	( 30.0)	62	( 9.8)	9	39.8	163	28	4
1639	276	1600	85	18.0	57.8	1.9 + 2.6	( 63.0)	136	( 8.0)	7	70.9	163	11	23
1653BL	76	1530	8	5.4	9.0	0.1 + 0.0	( 2.7)	62	( 1.1)	1	3.7	15	34	8
1657	855	1770	79	4.0	17.9	2.4 + 1.9	( 60.3)	66	( 22.0)	9	82.3	15	34	8
1774BL	10	1778L	96	25.2	77.6	0.1 + 0.1	( 3.1)	133	( 0.3)	12	3.4	177	63	18
1778	543	1840S	96	14.8	63.7	2.2 + 7.4	( 136.4)	103	( 15.2)	12	151.5	177	63	18
2902	10	10000	0	10.0	13.3	0.0 + 0.0	( 0.5)	63	( 0.0)	0	0.5	29	28	51
2904	10	10000	0	10.0	12.0	0.0 + 0.0	( 0.5)	60	( 0.0)	0	0.5	29	59	20
2912	416	1400	71	12.8	22.5	1.4 + 1.2	( 37.0)	81	( 7.9)	7	44.9	29	28	54
3001	10	10000	0	10.0	10.8	0.0 + 0.0	( 0.4)	57	( 0.0)	0	0.4	30	13	40
3002	10	10000	1	10.0	28.7	0.1 + 0.0	( 1.1)	93	( 0.0)	0	1.1	30	8	13
3003	10	10000	1	10.0	24.4	0.1 + 0.0	( 1.0)	86	( 0.0)	0	1.0	30	55	0
3031BL	50	303L	85	5.4	37.8	0.3 + 0.2	( 7.4)	125	( 1.4)	11	8.8	30	27	50
3061BL	92	306L	64	3.6	26.9	0.5 + 0.2	( 9.8)	90	( 1.8)	8	11.6	30	56	8
3102	10	10000	1	10.0	26.4	0.1 + 0.0	( 1.0)	89	( 0.0)	0	1.0	31	9	16
3110	441	1460	55	4.0	10.8	0.7 + 0.6	( 18.8)	30	( 4.4)	2	23.2	31	32	2
3116	600	1700	78	8.1	19.3	1.5 + 1.7	( 45.7)	61	( 4.9)	8	50.5	31	29	57
3120BL	10	3124L	78	7.2	17.5	0.0 + 0.0	( 0.7)	33	( 0.1)	7	0.8	31	7	27
3124	411	1650S	78	5.3	36.9	2.6 + 1.7	( 59.9)	94	( 6.6)	7	66.5	31	7	27
3125	10	10000	1	10.0	26.4	0.1 + 0.0	( 1.0)	85	( 0.2)	0	1.3	31	20	27
3403	10	10000	0	10.0	9.7	0.0 + 0.0	( 0.4)	53	( 0.0)	0	0.4	34	33	62
3404	10	10000	1	10.0	23.4	0.1 + 0.0	( 0.9)	84	( 0.0)	0	0.9	34	11	21
3411BL	54	341L	71	2.7	16.0	0.1 + 0.1	( 3.4)	61	( 0.7)	6	4.1	34	33	1
3461BL	98	346L	87	4.0	36.5	0.6 + 0.4	( 14.1)	120	( 2.6)	19	16.7	34	9	28
3471BL	88	347L	71	2.7	9.1	0.1 + 0.2	( 3.2)	33	( 0.6)	5	3.8	34	33	1
3472	10	10000	0	4.0	16.8	0.0 + 0.0	( 0.7)	70	( 0.0)	0	0.7	34	3	21
7903	10	10000	1	10.0	28.7	0.1 + 0.0	( 1.1)	93	( 0.0)	0	1.1	79	22	27
8001	10	10000	1	10.0	28.7	0.1 + 0.0	( 1.1)	93	( 0.0)	0	1.1	80	52	57
15601	10	10000	0	10.0	17.5	0.0 + 0.0	( 0.7)	73	( 0.0)	0	0.7	156	20	37
15602	10	10000	1	10.0	28.7	0.1 + 0.0	( 1.1)	89	( 0.2)	0	1.4	156	32	37
16301	10	10000	0	10.0	6.7	0.0 + 0.0	( 0.3)	44	( 0.0)	0	0.3	163	28	63

64 SECOND CYCLE 64 STEPS

LINK NUMBER	FLOW INTO LINK	SAT FLOW	DEGREE OF SAT	MEAN PER CRUISE	TIMES PER PCU	-----DELAY----- UNIFORM RANDOM+ OVERSAT (U+R+O-MEAN Q) DELAY (PCU-H/H)	----STOPS---- MEAN COST OF STOPS (\$/H)	----QUEUE---- MEAN AVERAGE EXCESS (PCU)	PERFORMANCE INDEX WEIGHTED SUM OF ( ) VALUES (\$/H)	EXIT NODE	GREEN START END 1ST 2ND (SECONDS)
16310	598	1530	61	5.2	8.9	0.7 + 0.8 ( 21.0)	35 ( 3.6)	4	24.6	163	28 4
16312	356	1340	47	5.0	12.9	0.8 + 0.4 ( 18.1)	59 ( 5.5)	4	23.5	163	28 63
17704	10	10000	0	10.0	5.0	0.0 + 0.0 ( 0.2)	38 ( 0.0)	0	0.2	177	18 57

\*\*\* f - average saturation flow for flared link \*\*\*

TOTAL DISTANCE TRAVELLED (PCU-KM/H)	TOTAL TIME SPENT (PCU-H/H)	MEAN JOURNEY SPEED (KM/H)	TOTAL UNIFORM DELAY (PCU-H/H)	TOTAL RANDOM+ OVERSAT DELAY (PCU-H/H)	TOTAL COST OF DELAY (\$/H)	TOTAL COST OF STOPS (\$/H)	PENALTY FOR EXCESS QUEUES (\$/H)	TOTAL PERFORMANCE INDEX (\$/H)
4300.1	277.5	15.5	71.0	91.4	( 2306.1)	+ ( 422.0)	+ ( 545.9)	= 3274.1
308.7	25.3	12.2	5.3	4.8	( 142.2)	+ ( 24.3)	+ ( 39.7)	= 206.2
3991.4	252.1	15.8	65.7	86.7	( 2164.0)	+ ( 397.7)	+ ( 506.2)	= 3067.9

ROUTE								
56.6	8.6	6.6	3.4	3.4	( 96.8)	+ ( 14.3)	+ ( 75.0)	= 186.1
29.4	5.1	5.8	2.2	1.7	( 55.9)	+ ( 8.3)	+ ( 75.0)	= 139.2
92.1	7.0	13.1	2.6	2.4	( 70.9)	+ ( 29.7)	+ ( 324.1)	= 424.7

\*\*\*\*\*

FUEL CONSUMPTION PREDICTIONS	CRUISE LITRES PER HOUR	DELAY LITRES PER HOUR	STOPS LITRES PER HOUR	TOTALS LITRES PER HOUR
	244.6	187.1	199.8	631.5

NO. OF ENTRIES TO SUBPT = 1  
NO. OF LINKS RECALCULATED= 251

CYCLIC FLOW PROFILE GRAPHS

LINK 347 FED BY 303 306 0 0 M.M.E. 0.90

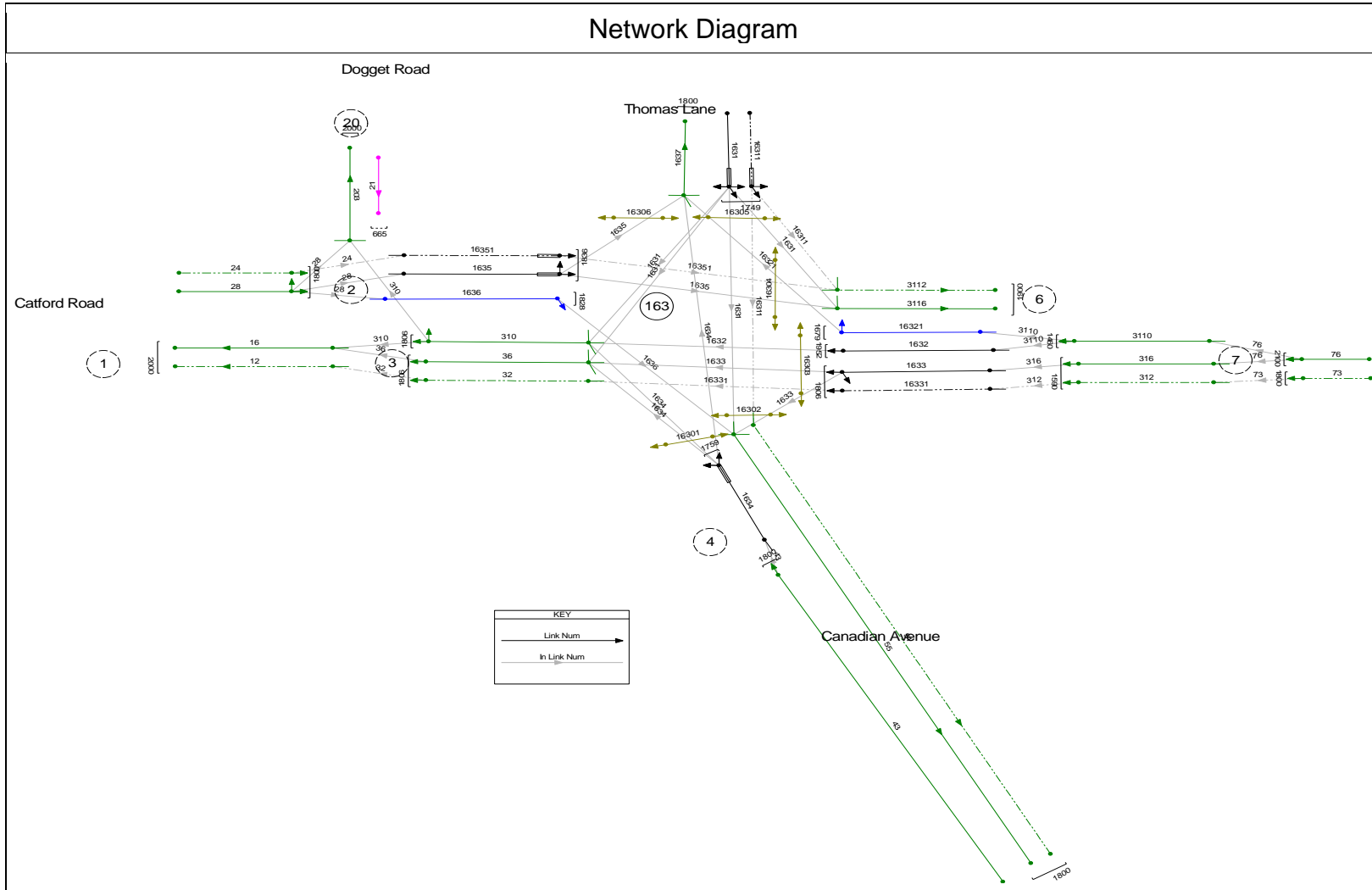






# Proposed Thomas Lane Junction Results

## Network Diagram



# PRT File

## AM Peak Prop Flows : Proposed Flows

1 TRANSVY 12

Traffic Network Study Tool

Analysis Program Release 6 (February 2007)  
(c) Copyright TRL Limited, 2004

For sales and distribution information,  
program advice and maintenance, contact:

TRL Limited Tel: +44 (0) 1344 770758  
Crowthorne House Fax: +44 (0) 1344 770864  
Nine Mile Ride Email: softwarebureau@trl.co.uk  
Wokingham, Berks. Web: www.trlsoftware.co.uk  
RG40 3GA, UK

-----  
THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS  
IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION  
-----

Run with file:- "PROPOSED OPTION 2.DAT" at 10:41 on 20130111

TRANSVY 12.0

Catford Road Proposed Option 2

PARAMETERS CONTROLLING DIMENSIONS OF PROBLEM :

-----  
NUMBER OF NODES = 1  
NUMBER OF LINKS = 36  
NUMBER OF OPTIMISED NODES = 1  
MAXIMUM NUMBER OF GRAPHIC PLOTS = 0  
NUMBER OF STEPS IN CYCLE = 88  
MAXIMUM NUMBER OF SHARED STOPLINES = 2  
MAXIMUM NUMBER OF TIMING POINTS = 4  
MAXIMUM LINKS AT ANY NODE = 23

CORE REQUESTED = 10616 WORDS  
CORE AVAILABLE = 72000 WORDS

DATA INPUT :-

CARD CARD

NO. TYPE

( 1) = TITLE:- Catford Road Proposed Option 2

CARD NO.	CARD TYPE	CYCLE TIME	NO. OF STEPS PER (SEC)	OF PERIOD 1-1200 (MINS.)	EFFECTIVE-GREEN START (SEC)	PERIOD END (SEC)	EQUISAT 0=NO 1=YES	UNEQUAL FLOW CYCLE %	CRUISE-SCALE 10-200	SPEEDS 0=TIMES 1=SPEEDS	OPTIMISE 1=0/SET 2=FULL	EXTRA COPIES FINAL OUTPUT	HILL-CLIMB 1=FULL	DELAY VALUE PCU-H	STOP PER VALUE
2)	1	88	88	60	2	3	0	1	100	100	0	0	0	1420	260

CARD CARD

NO. TYPE

3) = 2 163 0 0 0 0 0 0 0 0 0 0 0 0 0 0

LINKS HAVING SHARED STOPLINES

CARD NO.	CARD TYPE	FIRST SET	SECOND SET	THIRD SET
4)	7	16	12	0
5)	7	28	24	0
6)	7	36	32	0
7)	7	55	51	0
8)	7	316	312	0
9)	7	1631	1631	0
10)	7	1633	1633	0
11)	7	1635	1635	0
12)	7	3116	3112	0

NODE CARDS: MINIMUM STAGE TIMES (WORKING)

CARD NO.	CARD TYPE	NODE NO.	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
13)	10	163	7	4	5	5						

NODE CARDS: PRECEDING INTERSTAGE TIMES (WORKING)

CARD NO.	CARD TYPE	NODE NO.	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
14)	11	163	10	0	10	12						

NODE CARDS: STAGE CHANGE TIMES (WORKING)

CARD NO.	CARD TYPE	NODE NO.	Sgl/Dbl Cycled	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
15)	12	163	1	58	11	26	41						

LINK CARDS: GIVEWAY DATA

CARD NO.	CARD TYPE	LINK NO.	PRIORITY	LINK1 NO.	LINK2 NO.	LINK1 ONLY % FLOW	GIVEWAY X100	A1 X100	A2 X100	LINK LENGTH	STOP WT.X100	MAX FLOW	DELAY WT.X100	DISPSN X100
16)	30	21	28	310	80	19	17	0	0	0	0	200	0	665
17)	30	1636	1632	1633	0	50	50	0	0	0	0	10	0	850
18)	30	16321	1635	0	0	50	0	0	0	0	0	10	0	850

LINK CARDS: FIXED DATA

CARD NO.	CARD TYPE	LINK NO.	EXIT NODE	FIRST GREEN START	LAG	GREEN END	LAG	SECOND GREEN START	LAG	GREEN END	LAG	LINK LENGTH	STOP WT.X100	SAT FLOW	DELAY WT.X100	DISPSN X100
19)	31	12	0	0	0	0	0	0	0	0	0	95	0	0	0	0
20)	31	16	0	0	0	0	0	0	0	0	0	95	0	2000	0	0
21)	31	24	0	0	0	0	0	0	0	0	0	60	0	0	0	0
22)	31	28	0	0	0	0	0	0	0	0	0	60	0	1800	0	0
23)	31	32	0	0	0	0	0	0	0	0	0	45	0	0	0	0
24)	31	36	0	0	0	0	0	0	0	0	0	45	0	1806	0	0
25)	31	43	0	0	0	0	0	0	0	0	0	445	0	1800	0	0
26)	31	51	0	0	0	0	0	0	0	0	0	505	0	0	0	0
27)	31	55	0	0	0	0	0	0	0	0	0	505	0	1800	0	0
28)	31	73	0	0	0	0	0	0	0	0	0	75	0	1800	0	0
29)	31	76	0	0	0	0	0	0	0	0	0	75	0	2100	0	0
30)	31	203	0	0	0	0	0	0	0	0	0	50	0	2000	0	0
31)	31	310	0	0	0	0	0	0	0	0	0	45	0	1806	0	0
32)	31	312	0	0	0	0	0	0	0	0	0	55	0	0	0	0
33)	31	316	0	0	0	0	0	0	0	0	0	55	0	1590	0	0
34)	31	1631	163	4	8	1	4	0	0	0	0	200	0	1749	0	0





TOTAL DISTANCE TRAVELLED (PCU-KM/H)	TOTAL TIME SPENT (PCU-H/H)	MEAN JOURNEY SPEED (KM/H)	TOTAL UNIFORM DELAY (PCU-H/H)	TOTAL RANDOM+OVERSAT DELAY (PCU-H/H)	TOTAL COST OF DELAY (\$/H)	TOTAL COST OF STOPS (\$/H)	PENALTY FOR EXCESS QUEUES (\$/H)	TOTAL PERFORMANCE INDEX (\$/H)	
1186.9	72.7	16.3	23.9	15.8	( 564.5) + ( 97.6) + ( 0.0)		=	662.2	TOTALS
79.4	7.4	10.8	1.7	1.2	( 42.2) + ( 6.3) + ( 0.0)		=	48.5	BUSES
1107.5	65.4	16.9	22.2	14.6	( 522.3) + ( 91.3) + ( 0.0)		=	613.7	OTHER

88 SECOND CYCLE 88 STEPS

```

*****
                                CRUISE          DELAY          STOPS          TOTALS
                                LITRES PER HOUR  LITRES PER HOUR  LITRES PER HOUR  LITRES PER HOUR
FUEL CONSUMPTION PREDICTIONS      83.9          +          45.8          +          45.8          =          175.5
NO. OF ENTRIES TO SUBPT =         1
NO. OF LINKS RECALCULATED=       36
PROGRAM TRANSYT FINISHED

```

## PRT File PM Peak Prop Flow : Proposed Flows

1 T R A N S Y T 1 2

Traffic Network Study Tool

Analysis Program Release 6 (February 2007)  
(c) Copyright TRL Limited, 2004

For sales and distribution information,  
program advice and maintenance, contact:

TRL Limited                   Tel:   +44 (0) 1344 770758  
Crowthorne House            Fax:   +44 (0) 1344 770864  
Nine Mile Ride               Email: softwarebureau@trl.co.uk  
Wokingham, Berks.           Web:   www.trlsoftware.co.uk  
RG40 3GA,UK

THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS  
IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:- "PROPOSED OPTION 2.DAT" at 10:41 on 20130111

TRANSYT 12.0

Catford Road Proposed Option 2

### PARAMETERS CONTROLLING DIMENSIONS OF PROBLEM :

```

NUMBER OF NODES           = 1
NUMBER OF LINKS           = 36
NUMBER OF OPTIMISED NODES = 1
MAXIMUM NUMBER OF GRAPHIC PLOTS = 0
NUMBER OF STEPS IN CYCLE  = 88
MAXIMUM NUMBER OF SHARED STOPLINES = 2
MAXIMUM NUMBER OF TIMING POINTS = 4
MAXIMUM LINKS AT ANY NODE = 23

```

CORE REQUESTED = 10616 WORDS  
CORE AVAILABLE = 72000 WORDS

### DATA INPUT :-

```

CARD  CARD
NO.   TYPE
( 1)= TITLE:- Catford Road Proposed Option 2
CARD  CARD      CYCLE NO. OF  TIME EFFECTIVE-GREEN  EQUISAT 0=UNEQUAL FLOW  CRUISE-SPEEDS  OPTIMISE  EXTRA  HILL-  DELAY  STOP
NO.   TYPE  TIME  STEPS PER 1-1200 START END 0=NO 1=EQUAL 10-200 50-200 0=TIMES 1=0/SET  COPIES CLIMB  VALUE  VALUE
          (SEC)  CYCLE  MINS. (SEC) (SEC) 1=YES  CYCLE  %  % 1=SPEEDS 2=FULL  OUTPUT 1=FULL  PCU-H  100
2)= 1      88      88      60      2      3      0      1      100  100  0      0      0      0      1420  260
CARD  CARD
NO.   TYPE
3)= 2      163     0      0      0      0      0      0      0      0      0      0      0      0      0      0

                                LINKS HAVING SHARED STOPLINES
CARD  CARD      FIRST SET..... SECOND SET..... THIRD SET.....
NO.   TYPE
4)= 7      16      12      0      0      0      0      0      0      0      0      0      0      0      0      0
5)= 7      28      24      0      0      0      0      0      0      0      0      0      0      0      0      0
6)= 7      36      32      0      0      0      0      0      0      0      0      0      0      0      0      0
7)= 7      55      51      0      0      0      0      0      0      0      0      0      0      0      0      0
8)= 7      316     312     0      0      0      0      0      0      0      0      0      0      0      0      0
9)= 7      1631    1631    0      0      0      0      0      0      0      0      0      0      0      0      0
10)= 7     1633    1633    0      0      0      0      0      0      0      0      0      0      0      0      0
11)= 7     1635    1635    0      0      0      0      0      0      0      0      0      0      0      0      0
12)= 7     3116    3112    0      0      0      0      0      0      0      0      0      0      0      0      0

                                NODE CARDS: MINIMUM STAGE TIMES (WORKING)
CARD  CARD  NODE      S1  S2  S3  S4  S5  S6  S7  S8  S9  S10
NO.   TYPE  NO.
13)= 10   163      7  4  5  5

                                NODE CARDS: PRECEDING INTERSTAGE TIMES (WORKING)
CARD  CARD  NODE      S1  S2  S3  S4  S5  S6  S7  S8  S9  S10
NO.   TYPE  NO.
14)= 11   163      10  0  10  12

                                NODE CARDS: STAGE CHANGE TIMES (WORKING)
CARD  CARD  NODE  Sg1/Dbl  S1  S2  S3  S4  S5  S6  S7  S8  S9  S10

```

NO. TYPE NO. Cycled  
 15)= 12 163 1 72 19 30 45

LINK CARDS: GIVEWAY DATA

CARD NO.	CARD TYPE	LINK NO.	PRIORITY	LINKS LINK1	LINKS LINK2	LINK1 ONLY	GIVEWAY A1	GIVEWAY A2	COEFFS.	LINK LENGTH	STOP WT.X100	MAX FLOW	DELAY WT.X100	DISPSN X100
16)=	30	21	28	310	80	19	17	0	0	0	0	200	0	665
17)=	30	1636	1632	1633	0	0	50	50	0	0	0	10	0	850
18)=	30	16321	1635	0	0	0	50	0	0	0	0	10	0	850

LINK CARDS: FIXED DATA

CARD NO.	CARD TYPE	LINK NO.	EXIT NODE	FIRST START STAGE	FIRST LAG	GREEN END STAGE	GREEN LAG	SECOND START STAGE	SECOND LAG	GREEN END STAGE	GREEN LAG	LINK LENGTH	STOP WT.X100	SAT FLOW	DELAY WT.X100	DISPSN X100
19)=	31	12	0	0	0	0	0	0	0	0	0	95	0	0	0	0
20)=	31	16	0	0	0	0	0	0	0	0	0	95	0	2000	0	0
21)=	31	24	0	0	0	0	0	0	0	0	0	60	0	0	0	0
22)=	31	28	0	0	0	0	0	0	0	0	0	60	0	1800	0	0
23)=	31	32	0	0	0	0	0	0	0	0	0	45	0	0	0	0
24)=	31	36	0	0	0	0	0	0	0	0	0	45	0	1806	0	0
25)=	31	43	0	0	0	0	0	0	0	0	0	445	0	1800	0	0
26)=	31	51	0	0	0	0	0	0	0	0	0	505	0	0	0	0
27)=	31	55	0	0	0	0	0	0	0	0	0	505	0	1800	0	0
28)=	31	73	0	0	0	0	0	0	0	0	0	75	0	1800	0	0
29)=	31	76	0	0	0	0	0	0	0	0	0	75	0	2100	0	0
30)=	31	203	0	0	0	0	0	0	0	0	0	50	0	2000	0	0
31)=	31	310	0	0	0	0	0	0	0	0	0	45	0	1806	0	0
32)=	31	312	0	0	0	0	0	0	0	0	0	55	0	0	0	0
33)=	31	316	0	0	0	0	0	0	0	0	0	55	0	1590	0	0
34)=	31	1631	163	4	8	1	4	0	0	0	0	200	0	1749	0	0
35)=	31	1632	163	1	10	2	0	0	0	0	0	60	0	1952	0	0
36)=	31	1633	163	1	10	2	0	0	0	0	0	60	0	1806	0	0
37)=	31	1634	163	3	5	4	3	0	0	0	0	40	0	1759	0	0
38)=	31	1635	163	1	10	3	0	0	0	0	0	60	0	1836	0	0
39)=	31	1636	163	1	10	3	6	0	0	0	0	10	0	1828	0	0
40)=	31	1637	0	0	0	0	0	0	0	0	0	200	0	1800	0	0
41)=	31	3110	0	0	0	0	0	0	0	0	0	55	0	1460	0	0
42)=	31	3112	0	0	0	0	0	0	0	0	0	80	0	0	0	0
43)=	31	3116	0	0	0	0	0	0	0	0	0	80	0	1900	0	0
44)=	31	16301	163	4	9	2	0	0	0	0	0	10	0	10000	0	0
45)=	31	16302	163	3	10	4	0	0	0	0	0	10	0	10000	0	0
46)=	31	16303	163	3	0	1	0	0	0	0	0	10	0	10000	0	0
47)=	31	16304	163	3	10	4	0	0	0	0	0	10	0	10000	0	0
48)=	31	16305	163	1	10	3	0	0	0	0	0	10	0	10000	0	0
49)=	31	16306	163	4	12	1	0	0	0	0	0	10	0	10000	0	0
50)=	31	16311	0	0	0	0	0	0	0	0	0	200	0	0	0	0
51)=	31	16321	163	1	6	2	0	0	0	0	0	10	0	1679	0	0
52)=	31	16331	0	0	0	0	0	0	0	0	0	60	0	0	0	0
53)=	31	16351	0	0	0	0	0	0	0	0	0	60	0	0	0	0

LINK CARDS: FLOW DATA

CARD NO.	CARD TYPE	LINK NO.	TOTAL FLOW	UNIFORM FLOW	ENTRY 1 LINK NO.	ENTRY 1 FLOW	ENTRY 1 CRUISE TIME	ENTRY 2 LINK NO.	ENTRY 2 FLOW	ENTRY 2 CRUISE TIME	ENTRY 3 LINK NO.	ENTRY 3 FLOW	ENTRY 3 CRUISE TIME	ENTRY 4 LINK NO.	ENTRY 4 FLOW	ENTRY 4 CRUISE TIME
54)=	32	12	132	0	32	132	4017	0	0	0	0	0	0	0	0	0
55)=	32	16	1403	0	36	665	7	310	738	0	0	0	0	0	0	0
56)=	32	21	10	0	0	0	18	0	0	0	0	0	0	0	0	0
57)=	32	24	117	0	0	0	4010	0	0	0	0	0	0	0	0	0
58)=	32	28	1086	0	0	0	5	0	0	0	0	0	0	0	0	0
59)=	32	32	132	0	16331	132	4000	0	0	0	0	0	0	0	0	0
60)=	32	36	665	0	16311	213	4	1633	301	3	1634	171	6	0	0	0
61)=	32	43	367	0	0	0	18	0	0	0	0	0	0	0	0	0
62)=	32	51	10	0	16311	10	4000	0	0	0	0	0	0	0	0	0
63)=	32	55	502	0	16311	194	54	1633	19	54	1636	289	54	0	0	0
64)=	32	73	132	0	0	0	4000	0	0	0	0	0	0	0	0	0
65)=	32	76	852	0	0	0	18	0	0	0	0	0	0	0	0	0
66)=	32	203	264	0	28	117	5	310	147	5	0	0	0	0	0	0
67)=	32	310	885	0	16311	213	4	1632	480	3	1634	172	6	0	0	0
68)=	32	312	132	0	73	132	4000	0	0	0	0	0	0	0	0	0
69)=	32	316	320	0	76	320	4	0	0	0	0	0	0	0	0	0
70)=	32	1631	690	0	0	0	18	0	0	0	0	0	0	0	0	0
71)=	32	1632	480	0	3110	480	5	0	0	0	0	0	0	0	0	0
72)=	32	1633	320	0	316	320	5	0	0	0	0	0	0	0	0	0
73)=	32	1634	367	0	43	367	4	0	0	0	0	0	0	0	0	0
74)=	32	1635	680	0	28	680	5	0	0	0	0	0	0	0	0	0
75)=	32	1636	289	0	28	289	5	0	0	0	0	0	0	0	0	0
76)=	32	1637	134	0	1634	24	18	1635	58	18	16321	52	18	0	0	0
77)=	32	3110	532	0	76	532	4	0	0	0	0	0	0	0	0	0
78)=	32	3112	132	0	16311	15	4000	16351	117	4000	0	0	0	0	0	0
79)=	32	3116	692	0	16311	70	9	1635	622	8	0	0	0	0	0	0
80)=	32	16301	10	0	0	0	4	0	0	0	0	0	0	0	0	0
81)=	32	16302	10	0	0	0	4	0	0	0	0	0	0	0	0	0
82)=	32	16303	10	0	0	0	4	0	0	0	0	0	0	0	0	0
83)=	32	16304	10	0	0	0	4	0	0	0	0	0	0	0	0	0
84)=	32	16305	10	0	0	0	4	0	0	0	0	0	0	0	0	0
85)=	32	16306	10	0	0	0	4	0	0	0	0	0	0	0	0	0
86)=	32	16311	24	0	0	0	4000	0	0	0	0	0	0	0	0	0
87)=	32	16321	52	0	3110	52	5	0	0	0	0	0	0	0	0	0
88)=	32	16331	132	0	312	132	4000	0	0	0	0	0	0	0	0	0
89)=	32	16351	117	0	24	117	4012	0	0	0	0	0	0	0	0	0

LINK CARDS: FLARE SATURATION FLOW DATA

CARD TYPE	LINK NO.	SAT. FLOW	LANE 1 CAPAC. VEH.	LANE 2 CAPAC. VEH.	LANE 3 CAPAC. VEH.
90)=	33	1631	1742	9	0
91)=	33	1634	1752	8	0
92)=	33	1635	2000	4	0

\*\*\*\*\*END OF SUBROUTINE TINPUT\*\*\*\*\*

88 SECOND CYCLE 88 STEPS

INITIAL SETTINGS  
 - (SECONDS)

NODE NO	NUMBER OF STAGES	STAGE 1	STAGE 2	STAGE 3	STAGE 4	STAGE 5	STAGE 6	STAGE 7	STAGE 8	STAGE 9	STAGE 10
163	4	72	19	30	45						

LINK NUMBER	FLOW INTO LINK (PCU/H)	SAT FLOW (PCU/H)	DEGREE OF SAT (%)	MEAN PER CRUISE (SEC)	TIMES PER CRUISE (SEC)	DELAY (U+R+O=MEAN Q) (PCU-H/H)	-----DELAY----- MEAN UNIFORM RANDOM+ OVERSAT OF DELAY (\$/H)	----STOPS---- MEAN COST OF STOPS /PCU (\$/H)	----QUEUE---- MEAN EXCESS OF ( ) VALUES (PCU)	PERFORMANCE INDEX. WEIGHTED SUM OF ( ) VALUES (\$/H)	EXIT NODE	GREEN START END (SECONDS)	TIMES START 1ST 2ND
12BL	132	16L	77	36.2	5.3	0.1 + 0.1	( 2.8)	32 ( 0.9)	18 +	3.7			
16	1404	2000S	77	7.0	5.4	0.6 + 1.5	( 29.9)	36 ( 16.1)	18 +	46.0			
21	10	665	3	18.0	4.9	0.0 + 0.0	( 0.2)	0 ( 0.0)	0	0.2			
24BL	117	28L	67	26.0	3.0	0.0 + 0.1	( 1.4)	3 ( 0.0)	1	1.4			

28	1086	1800S	67	5.0	3.0	0.0 + 0.9	( 12.9)	3	( 0.9)	1		13.8						
32BL	132	36L	44	4.0	1.8	0.0 + 0.1	( 0.9)	2	( 0.1)	0		1.0						
36	665	1806S	44	4.1	1.8	0.0 + 0.3	( 4.7)	2	( 0.3)	0		5.0						
43	367	1800	20	18.0	1.3	0.0 + 0.1	( 1.8)	1	( 0.6)	0		2.4						
51BL	10	55L	28	45.5	1.4	0.0 + 0.0	( 0.1)	2	( 0.0)	0		0.1						
55	503	1800S	28	54.0	1.4	0.0 + 0.2	( 2.8)	2	( 0.1)	0		2.9						
73BL	132	1800	7	6.8	1.1	0.0 + 0.0	( 0.6)	1	( 0.0)	0		0.6						
76	852	2100	41	18.0	1.4	0.0 + 0.3	( 4.8)	2	( 0.0)	0		4.9						
203	264	2000	13	5.0	1.0	0.0 + 0.1	( 1.1)	1	( 0.1)	0		1.1						
310	886	1806	49	3.8	2.4	0.1 + 0.5	( 8.3)	18	( 3.5)	11	+	11.8						
312BL	132	316L	28	4.9	1.6	0.0 + 0.1	( 0.8)	2	( 0.1)	0		0.9						
316	320	1590S	28	4.0	1.6	0.0 + 0.1	( 2.0)	2	( 0.2)	0		2.2						
1631	690	3099Sf	84	18.0	42.5	5.6 + 2.5	(115.6)	101	( 14.8)	18		130.4	163	53	76			
1632	480	1952	83	5.0	46.7	3.9 + 2.4	( 88.4)	108	( 13.3)	13	+	101.7	163	82	19			
1633	320	1806S	85	5.0	49.9	2.6 + 1.8	( 63.0)	111	( 9.2)	13	+	72.1	163	82	19			
1634	367	3511f	66	4.0	44.1	3.5 + 0.9	( 63.8)	100	( 6.3)	9	+	70.1	163	35	48			
1635	680	2225Sf	85	5.0	32.7	3.8 + 2.4	( 87.7)	94	( 16.4)	20	+	104.2	163	82	30			
1636	289	1828	77	5.0	53.0	2.6 + 1.6	( 60.4)	115	( 0.2)	8	+	60.6	163	82	36			
1637	135	1800	7	18.0	1.1	0.0 + 0.0	( 0.6)	1	( 0.0)	0		0.6						
3110	532	1460	36	4.0	1.9	0.0 + 0.3	( 4.1)	2	( 0.4)	0		4.5						
3112BL	132	3116L	43	7.2	3.8	0.1 + 0.1	( 2.0)	48	( 1.4)	16	+	3.4						
3116	692	1900S	43	8.1	3.9	0.4 + 0.3	( 10.7)	50	( 4.6)	16	+	15.3						
16301	10	10000	0	4.0	7.1	0.0 + 0.0	( 0.3)	38	( 0.0)	0		0.3	163	54	19			
16302	10	10000	1	4.0	41.3	0.1 + 0.0	( 1.6)	96	( 0.0)	0		1.6	163	40	45			
16303	10	10000	0	4.0	12.1	0.0 + 0.0	( 0.5)	51	( 0.0)	0		0.5	163	30	72			
16304	10	10000	1	4.0	41.3	0.1 + 0.0	( 1.6)	96	( 0.0)	0		1.6	163	40	45			
16305	10	10000	0	4.0	15.5	0.0 + 0.0	( 0.6)	58	( 0.0)	0		0.6	163	82	30			
16306	10	10000	1	4.0	30.9	0.1 + 0.0	( 1.2)	82	( 0.0)	0		1.2	163	57	72			
16311BL	24	1631L	84	18.0	42.5	0.2 + 0.1	( 4.0)	101	( 0.5)	18		4.6	163	53	76			
16321	52	1679	65	5.0	98.2	0.5 + 0.9	( 20.1)	156	( 0.1)	2		20.2	163	78	19			
16331BL	132	1633L	85	5.4	49.9	1.1 + 0.8	( 26.0)	111	( 3.3)	13	+	29.2	163	82	19			
16351BL	117	1635L	85	28.0	32.7	0.7 + 0.4	( 15.1)	94	( 0.1)	20	+	15.2	163	82	30			

\*\*\* f - average saturation flow for flared link \*\*\*

TOTAL DISTANCE TRAVELLED	TOTAL TIME SPENT	MEAN JOURNEY SPEED	TOTAL UNIFORM DELAY	TOTAL RANDOM+ OVERSAT DELAY	TOTAL COST OF DELAY	TOTAL COST OF STOPS	PENALTY FOR EXCESS QUEUES	TOTAL PERFORMANCE INDEX											
(PCU-KM/H)	(PCU-H/H)	(KM/H)	(PCU-H/H)	(PCU-H/H)	(\$/H)	(\$/H)	(\$/H)	(\$/H)											
1216.6	79.2	15.4	26.2	19.0	( 642.2)	+ ( 93.5)	+ ( 0.0)	=	735.7	TOTALS									
78.0	8.1	9.6	2.1	1.7	( 53.6)	+ ( 6.4)	+ ( 0.0)	=	60.0	BUSES									
1138.6	71.1	16.0	24.1	17.3	( 588.6)	+ ( 87.1)	+ ( 0.0)	=	675.8	OTHER									

ROUTE

88 SECOND CYCLE 88 STEPS

FUEL CONSUMPTION PREDICTIONS	CRUISE LITRES PER HOUR	DELAY LITRES PER HOUR	STOPS LITRES PER HOUR	TOTALS LITRES PER HOUR
	83.2	+ 52.1	+ 44.0	= 179.4
NO. OF ENTRIES TO SUBPT =	1			
NO. OF LINKS RECALCULATED=	36			
PROGRAM TRANSYT FINISHED				