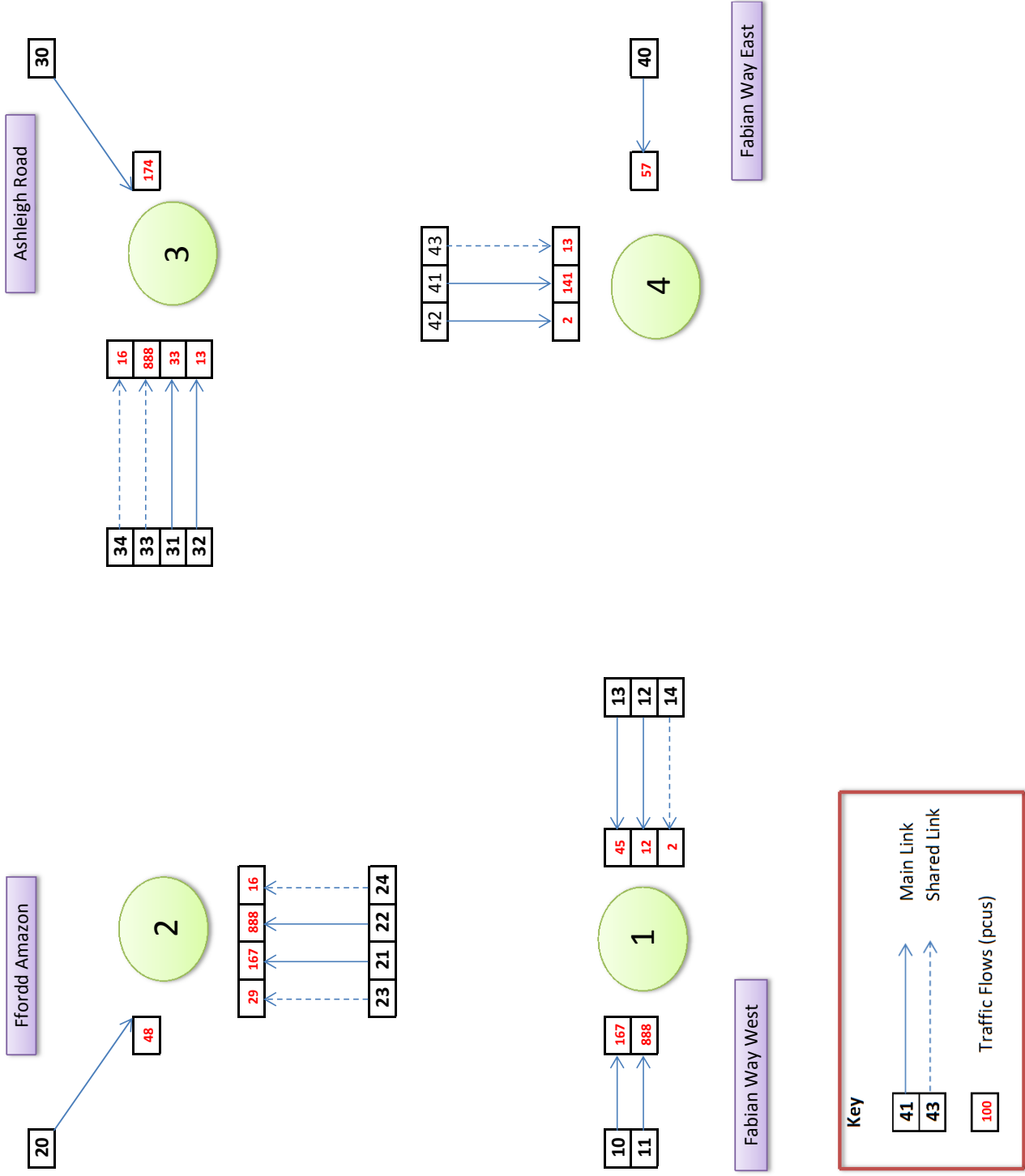
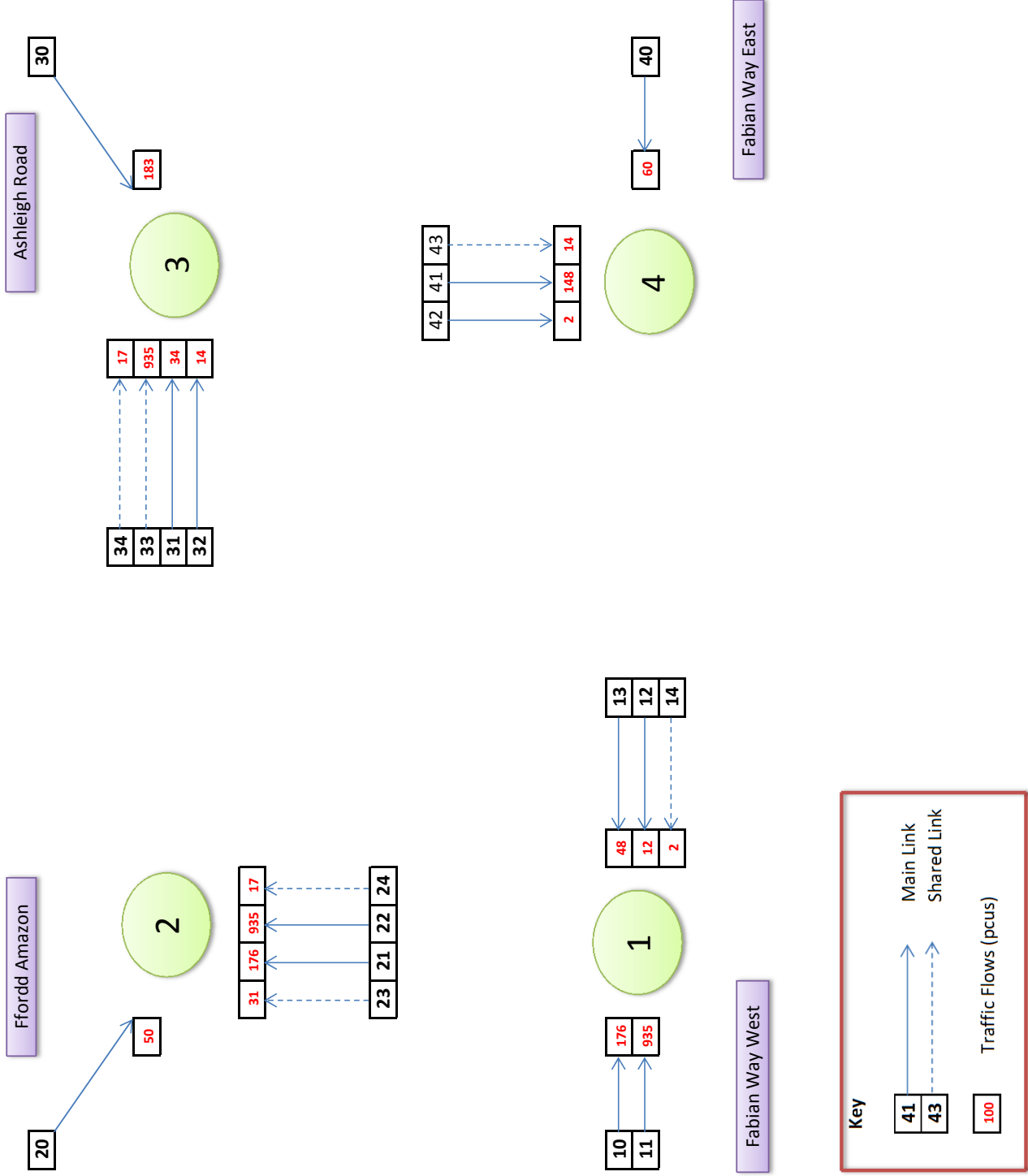
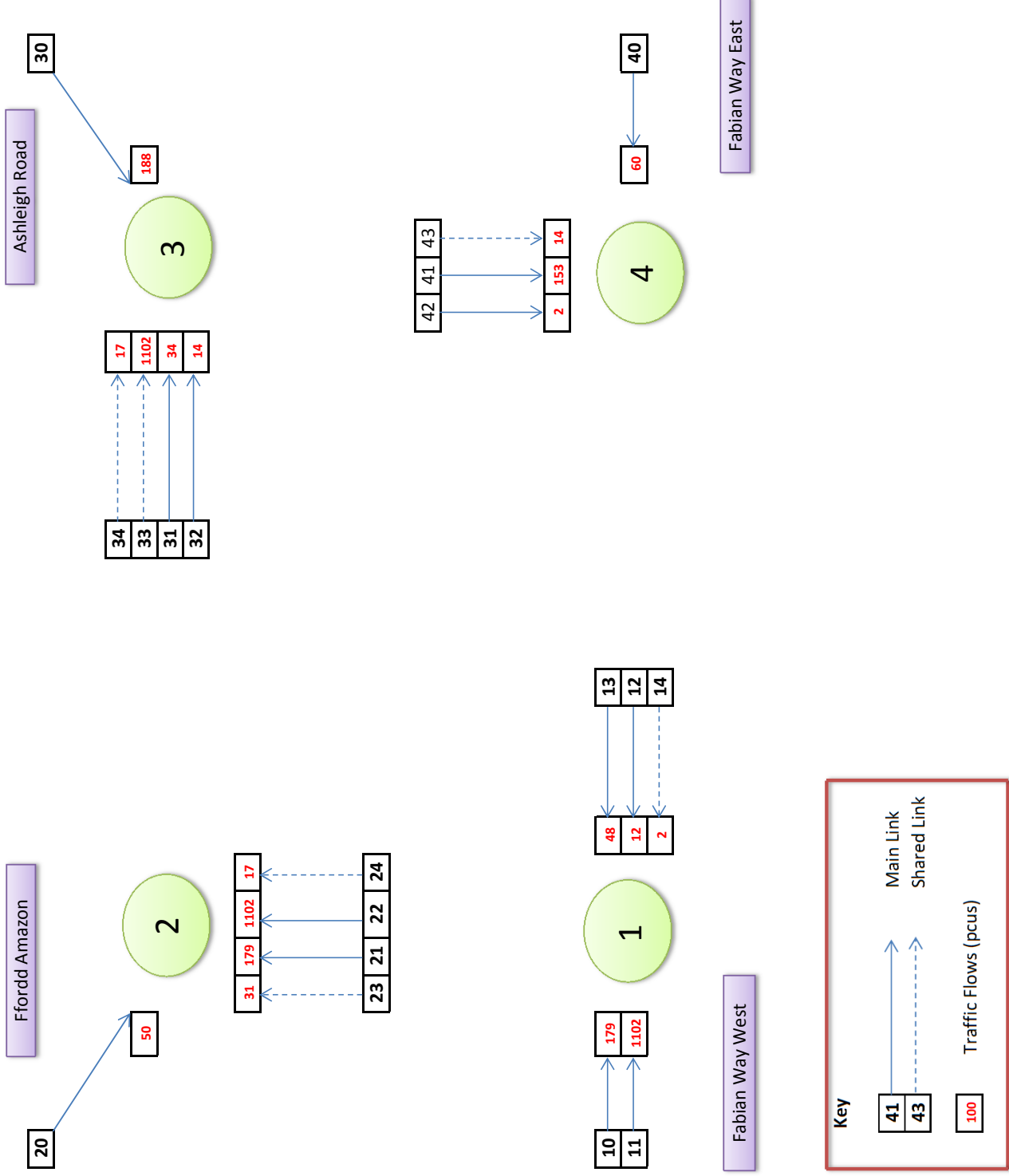


Appendix 15.10

Fabian Way/Ffordd Amazon/B4290 Junction Transyt Output







TRANSYT Link Node Diagram 2018 Saturday 12:00 to 13:00 With Event

T R A N S Y T 12

Traffic Network Study Tool

Analysis Program Release 5 (January 2007)
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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:- "2013 SAT 12_13 BASE.DAT" at 10:56 on 20131211

TRANSYT 12.0

2013 Base Traffic Flows Saturday 12:00 to 13:00

PARAMETERS CONTROLLING DIMENSIONS OF PROBLEM :

NUMBER OF NODES	=	4
NUMBER OF LINKS	=	19
NUMBER OF OPTIMISED NODES	=	4
MAXIMUM NUMBER OF GRAPHIC PLOTS	=	0
NUMBER OF STEPS IN CYCLE	=	60
MAXIMUM NUMBER OF SHARED STOPLINES	=	3
MAXIMUM NUMBER OF TIMING POINTS	=	2
MAXIMUM LINKS AT ANY NODE	=	4

CORE REQUESTED = 7162 WORDS
CORE AVAILABLE = 96000 WORDS

*****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
1	2	0	46								
2	2	0	14								
3	2	0	15								
4	2	0	16								

LINK NUMBER	FLOW INTO LINK	SAT FLOW	DEGREE OF SAT	MEAN PER CRUISE	TIMES PCU	-----DELAY----- UNIFORM (U+R+O=MEAN RANDOM+ Q) OVERSAT DELAY COST (\$/H)	-----STOPS----- MEAN COST STOPS OF /PCU STOPS (\$/H)	-----QUEUE----- MEAN MAX. AVERAGE EXCESS (PCU)	PERFORMANCE INDEX. WEIGHTED SUM OF () VALUES (\$/H)	EXIT NODE	GREEN START END 1ST (SECONDS)	TIMES START END 2ND (SECONDS)
10	167	2115	11	16.7	4.3	0.1 + 0.1 (2.8)*	29 (1.2)	1	0.6	1	5	46
11	888	4510	28	16.7	4.2	0.8 + 0.2 (14.6)*	32 (7.3)	6	2.9	1	5	46
12	12	1750S	9	11.3	43.0	0.1 + 0.0 (2.0)	113 (0.4)	0 (0.0)*	3.8	1	53	0
13	45	1750	19	11.3	44.5	0.4 + 0.1 (7.9)	115 (1.3)	1 (0.0)*	14.6	1	53	0
14	10	12L	9	11.3	26.6	0.0 + 0.0 (1.0)	113 (0.3)	0	1.3	1	53	0
20	48	4120	9	16.7	26.6	0.3 + 0.0 (5.0)*	88 (1.1)	1	1.0	2	7	14
21	167	1750S	16	3.8	6.0	0.2 + 0.1 (4.0)	46 (2.0)	1 (0.0)*	13.9	2	19	0
22	888	3900S	33	3.8	6.1	1.3 + 0.2 (21.3)	53 (12.1)	9 (0.6)*	116.1	2	19	0
23	29	21L	16	3.8	2.6	0.0 + 0.0 (0.3)	8 (0.1)	1	0.3	2	19	0
24	16	22L	33	3.8	1.8	0.0 + 0.0 (0.1)	6 (0.0)	9 +	0.1	2	19	0
30	174	3580f	32	16.7	27.7	1.1 + 0.2 (19.0)*	92 (4.1)	3	3.8	3	7	15
31	33	3900S	35	5.0	8.2	0.1 + 0.0 (1.1)	84 (0.7)	1 (0.0)*	4.6	3	20	0
32	13	1750	1	5.0	8.7	0.0 + 0.0 (0.4)	85 (0.3)	0 (0.0)*	1.9	3	20	0
33	888	31L	35	5.0	1.1	0.0 + 0.3 (3.8)	2 (0.4)	1	4.2	3	20	0
34	16	31L	35	5.0	15.0	0.1 + 0.0 (0.9)	83 (0.3)	1	1.3	3	20	0
40	57	2205	13	16.7	24.5	0.3 + 0.1 (5.5)*	85 (1.2)	1	1.1	4	5	16
41	141	1750S	14	6.0	11.9	0.4 + 0.1 (6.6)	95 (3.4)	3 (0.0)*	23.8	4	23	0
42	10	1750	1	6.0	9.8	0.0 + 0.0 (0.4)	88 (0.2)	0 (0.0)*	1.5	4	23	0
43	13	41L	14	6.0	3.1	0.0 + 0.0 (0.2)	40 (0.1)	3	0.3	4	23	0

*** 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)
394.2	16.0	24.6	5.3	1.5	(59.4) + (103.4)	+ (34.4)	=	197.1
TOTALS								

		CRUISE LITRES PER HOUR		DELAY LITRES PER HOUR		STOPS LITRES PER HOUR		TOTALS LITRES PER HOUR
FUEL CONSUMPTION PREDICTIONS		21.1	+	7.8	+	16.7	=	45.7

NO. OF ENTRIES TO SUBPT = 1
NO. OF LINKS RECALCULATED= 19

60 SECOND CYCLE 60 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :- 9
- (SECONDS)

1	2	18	4
2	2	0	14
3	2	9	24
4	2	51	7

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)
394.2	14.6	27.0	3.9	1.5	(39.3) + (37.1)	+ (0.0)	=	76.4

TOTALS

NO. OF ENTRIES TO SUBPT = 11
NO. OF LINKS RECALCULATED= 145

60 SECOND CYCLE 60 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :- 9 24
- (SECONDS)

1	2	18	4
2	2	0	14
3	2	9	24
4	2	51	7

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)
394.2	14.6	27.0	3.9	1.5	(39.3) + (37.1)	+ (0.0)	=	76.4

TOTALS

NO. OF ENTRIES TO SUBPT = 9
NO. OF LINKS RECALCULATED= 118

60 SECOND CYCLE 60 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :- 9 24 -1
- (SECONDS)

1	2	19	56
2	2	0	14
3	2	10	24
4	2	54	6

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)	
394.2	15.2	26.0	4.5	1.6	(30.9)	+ (16.2)	+ (0.0)	= 47.1	TOTALS

NO. OF ENTRIES TO SUBPT = 23
NO. OF LINKS RECALCULATED= 292

60 SECOND CYCLE 60 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :- 9 24 -1 9
- (SECONDS)

1	2	19	56
2	2	0	14
3	2	10	24
4	2	54	6

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)	
394.2	15.2	26.0	4.5	1.6	(30.9)	+ (16.2)	+ (0.0)	= 47.1	TOTALS

NO. OF ENTRIES TO SUBPT = 9
NO. OF LINKS RECALCULATED= 125

60 SECOND CYCLE 60 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :- 9 24 -1 9 24
- (SECONDS)

1	2	19	56
2	2	0	14
3	2	10	24
4	2	54	6

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)	
394.2	15.2	26.0	4.5	1.6	(30.9)	+ (16.2)	+ (0.0)	= 47.1	TOTALS

NO. OF ENTRIES TO SUBPT = 9
NO. OF LINKS RECALCULATED= 125

60 SECOND CYCLE 60 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :- 9 24 -1 9 24 1
- (SECONDS)

1	2	17	54
2	2	5	19
3	2	4	18
4	2	51	3

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)	
394.2	15.1	26.1	4.4	1.6	(29.8)	+ (13.5)	+ (0.0)	= 43.3	TOTALS

NO. OF ENTRIES TO SUBPT = 24
NO. OF LINKS RECALCULATED= 287

60 SECOND CYCLE 60 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :- 9 24 -1 9 24 1 -1
- (SECONDS)

1	2	17	55
2	2	5	19
3	2	4	18
4	2	51	3

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)	
394.2	15.0	26.4	4.2	1.5	(29.8)	+ (13.3)	+ (0.0)	= 43.1	TOTALS

NO. OF ENTRIES TO SUBPT = 12
NO. OF LINKS RECALCULATED= 161

60 SECOND CYCLE 60 STEPS

FINAL SETTINGS OBTAINED WITH INCREMENTS :- 9 24 -1 9 24 1 -1 1
- (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											
1	2	17	55																			
2	2	5	19																			
3	2	5	19																			
4	2	51	3																			
LINK NUMBER	FLOW INTO LINK	SAT FLOW	DEGREE OF SAT	MEAN PER PCU CRUISE	TIMES DELAY (SEC)	-----DELAY----- UNIFORM RANDOM+ COST OVERSAT OF			----STOPS---- MEAN COST STOPS OF		----QUEUE---- MEAN MAX. AVERAGE EXCESS		PERFORMANCE INDEX. WEIGHTED SUM OF () VALUES (\$/H)	EXIT NODE	GREEN TIMES START END 1ST 2ND (SECONDS)							
	(PCU/H)	(PCU/H)	(%)	(SEC)	(SEC)	(U+R+O=MEAN Q) (PCU-H/H)	(Q) (%)	DELAY (\$/H)	MEAN /PCU (%)	COST STOPS (\$/H)	(PCU)	(PCU)										
10	167	2115	14	16.7	7.9	0.3 +	0.1 (	5.2)*	44 (	1.9)	1		1.0	1	22 55							
11	888	4510	35	16.7	8.1	1.7 +	0.3 (	28.4)*	49 (	11.2)	8		5.7	1	22 55							
12	12	1750S	5	11.3	5.6	0.0 +	0.0 (	0.3)	10 (	0.0)	0	(0.0)*	0.4	1	2 17							
13	45	1750	10	11.3	5.8	0.0 +	0.1 (	1.0)	11 (	0.1)	0	(0.0)*	1.7	1	2 17							
14	10	12L	5	11.3	34.3	0.1 +	0.0 (	1.4)	107 (	0.3)	0		1.6	1	2 17							
20	48	4120	9	16.7	26.6	0.3 +	0.0 (	5.0)*	88 (	1.1)	1		1.0	2	12 19							
21	167	1750S	16	3.8	1.7	0.0 +	0.1 (	1.2)	3 (	0.1)	1	(0.0)*	1.8	2	24 5							
22	888	3900S	33	3.8	1.0	0.0 +	0.2 (	3.7)	4 (	0.9)	5	(0.0)*	8.2	2	24 5							
23	29	21L	16	3.8	13.2	0.1 +	0.0 (	1.5)	94 (	0.7)	1		2.2	2	24 5							
24	16	22L	33	3.8	12.5	0.1 +	0.0 (	0.8)	93 (	0.4)	5		1.2	2	24 5							
30	174	3780f	35	16.7	29.1	1.1 +	0.3 (	19.9)*	94 (	4.2)	3		4.0	3	12 19							
31	33	3900S	34	5.0	7.2	0.1 +	0.0 (	0.9)	80 (	0.7)	1	(0.0)*	4.3	3	24 5							
32	13	1750	1	5.0	7.6	0.0 +	0.0 (	0.4)	80 (	0.3)	0	(0.0)*	1.7	3	24 5							
33	888	31L	34	5.0	1.2	0.0 +	0.2 (	4.2)	3 (	0.6)	1		4.8	3	24 5							
34	16	31L	34	5.0	1.3	0.0 +	0.0 (	0.1)	3 (	0.0)	1		0.1	3	24 5							
40	57	2205	19	16.7	30.8	0.4 +	0.1 (	6.9)*	96 (	1.4)	1		1.4	4	56 3							
41	141	1750S	13	6.0	1.7	0.0 +	0.1 (	1.0)	4 (	0.1)	1	(0.0)*	1.7	4	10 51							
42	10	1750	1	6.0	1.5	0.0 +	0.0 (	0.1)	2 (	0.0)	0	(0.0)*	0.1	4	10 51							
43	13	41L	13	6.0	1.7	0.0 +	0.0 (	0.1)	3 (	0.0)	1		0.1	4	10 51							

*** 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)
394.2	14.9	26.4	4.2	1.5	(29.5) + (13.5)	+ (0.0)	=	43.0

TOTALS

ROUTE

	CRUISE LITRES PER HOUR	DELAY LITRES PER HOUR	STOPS LITRES PER HOUR	TOTALS LITRES PER HOUR
FUEL CONSUMPTION PREDICTIONS	21.1	+ 6.6	+ 11.0	= 38.8

NO. OF ENTRIES TO SUBPT = 9
NO. OF LINKS RECALCULATED= 125

PROGRAM TRANSYT FINISHED
===== end of file =====

[Printed at 10:57:02 on 11/12/2013]

T R A N S Y T 12

Traffic Network Study Tool

Analysis Program Release 5 (January 2007)
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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:- "2018 SAT 12_13 NO EVENT.DAT" at 11:03 on 20131211

TRANSYT 12.0

2018 Traffic Flows Saturday 12:00 to 13:00 No Event

PARAMETERS CONTROLLING DIMENSIONS OF PROBLEM :

~~~~~

|                                    |   |    |
|------------------------------------|---|----|
| NUMBER OF NODES                    | = | 4  |
| NUMBER OF LINKS                    | = | 19 |
| NUMBER OF OPTIMISED NODES          | = | 4  |
| MAXIMUM NUMBER OF GRAPHIC PLOTS    | = | 0  |
| NUMBER OF STEPS IN CYCLE           | = | 60 |
| MAXIMUM NUMBER OF SHARED STOPLINES | = | 3  |
| MAXIMUM NUMBER OF TIMING POINTS    | = | 2  |
| MAXIMUM LINKS AT ANY NODE          | = | 4  |

CORE REQUESTED = 7162 WORDS  
CORE AVAILABLE = 96000 WORDS

```
*****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 |
|---------|------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|
| 1       | 2                | 0       | 46      |         |         |         |         |         |         |         |          |
| 2       | 2                | 0       | 14      |         |         |         |         |         |         |         |          |
| 3       | 2                | 0       | 15      |         |         |         |         |         |         |         |          |
| 4       | 2                | 0       | 16      |         |         |         |         |         |         |         |          |

| LINK NUMBER | FLOW INTO LINK | SAT FLOW | DEGREE OF SAT | MEAN PER CRUISE | TIMES PCU DELAY (SEC) | -----DELAY-----<br>UNIFORM (U+R+O=MEAN<br>RANDOM+ Q) DELAY<br>OVERSAT OF (\$/H) | -----STOPS-----<br>MEAN COST OF STOPS<br>/PCU (\$/H) | -----QUEUE-----<br>MEAN MAX. AVERAGE<br>EXCESS (PCU) | PERFORMANCE INDEX.<br>WEIGHTED SUM OF ( ) VALUES (\$/H) | EXIT NODE | GREEN START<br>END 1ST | TIMES START<br>END 2ND |
|-------------|----------------|----------|---------------|-----------------|-----------------------|---------------------------------------------------------------------------------|------------------------------------------------------|------------------------------------------------------|---------------------------------------------------------|-----------|------------------------|------------------------|
| 10          | 176            | 2115     | 12            | 16.7            | 4.3                   | 0.1 + 0.1 ( 3.0)*                                                               | 29 ( 1.3)                                            | 1                                                    | 0.6                                                     | 1         | 5                      | 46                     |
| 11          | 935            | 4510     | 30            | 16.7            | 4.2                   | 0.9 + 0.2 ( 15.6)*                                                              | 32 ( 7.8)                                            | 6                                                    | 3.1                                                     | 1         | 5                      | 46                     |
| 12          | 12             | 1750S    | 9             | 11.3            | 43.0                  | 0.1 + 0.0 ( 2.0)                                                                | 114 ( 0.4)                                           | 0 ( 0.0)*                                            | 3.8                                                     | 1         | 53                     | 0                      |
| 13          | 48             | 1750     | 21            | 11.3            | 44.6                  | 0.5 + 0.1 ( 8.4)                                                                | 116 ( 1.4)                                           | 1 ( 0.0)*                                            | 15.6                                                    | 1         | 53                     | 0                      |
| 14          | 10             | 12L      | 9             | 11.3            | 26.0                  | 0.0 + 0.0 ( 1.0)                                                                | 111 ( 0.3)                                           | 0                                                    | 1.3                                                     | 1         | 53                     | 0                      |
| 20          | 50             | 4120     | 9             | 16.7            | 26.6                  | 0.3 + 0.1 ( 5.2)*                                                               | 88 ( 1.1)                                            | 1                                                    | 1.0                                                     | 2         | 7                      | 14                     |
| 21          | 176            | 1750S    | 17            | 3.8             | 6.1                   | 0.2 + 0.1 ( 4.2)                                                                | 47 ( 2.1)                                            | 2 ( 0.0)*                                            | 14.9                                                    | 2         | 19                     | 0                      |
| 22          | 935            | 3900S    | 35            | 3.8             | 6.2                   | 1.3 + 0.3 ( 22.8)                                                               | 53 ( 12.9)                                           | 10 ( 0.7)*                                           | 127.3                                                   | 2         | 19                     | 0                      |
| 23          | 31             | 21L      | 17            | 3.8             | 2.6                   | 0.0 + 0.0 ( 0.3)                                                                | 8 ( 0.1)                                             | 2                                                    | 0.4                                                     | 2         | 19                     | 0                      |
| 24          | 17             | 22L      | 35            | 3.8             | 1.8                   | 0.0 + 0.0 ( 0.1)                                                                | 7 ( 0.0)                                             | 10 +                                                 | 0.2                                                     | 2         | 19                     | 0                      |
| 30          | 183            | 3580f    | 34            | 16.7            | 27.8                  | 1.2 + 0.3 ( 20.1)*                                                              | 92 ( 4.3)                                            | 3                                                    | 4.0                                                     | 3         | 7                      | 15                     |
| 31          | 34             | 3900S    | 37            | 5.0             | 8.2                   | 0.1 + 0.0 ( 1.1)                                                                | 84 ( 0.7)                                            | 1 ( 0.0)*                                            | 4.8                                                     | 3         | 20                     | 0                      |
| 32          | 14             | 1750     | 1             | 5.0             | 8.7                   | 0.0 + 0.0 ( 0.5)                                                                | 85 ( 0.3)                                            | 0 ( 0.0)*                                            | 2.0                                                     | 3         | 20                     | 0                      |
| 33          | 935            | 31L      | 37            | 5.0             | 1.1                   | 0.0 + 0.3 ( 4.1)                                                                | 2 ( 0.5)                                             | 1                                                    | 4.5                                                     | 3         | 20                     | 0                      |
| 34          | 17             | 31L      | 37            | 5.0             | 15.1                  | 0.1 + 0.0 ( 1.0)                                                                | 84 ( 0.4)                                            | 1                                                    | 1.4                                                     | 3         | 20                     | 0                      |
| 40          | 60             | 2205     | 14            | 16.7            | 24.5                  | 0.3 + 0.1 ( 5.8)*                                                               | 85 ( 1.3)                                            | 1                                                    | 1.2                                                     | 4         | 5                      | 16                     |
| 41          | 148            | 1750S    | 15            | 6.0             | 11.9                  | 0.4 + 0.1 ( 7.0)                                                                | 95 ( 3.6)                                            | 3 ( 0.0)*                                            | 25.0                                                    | 4         | 23                     | 0                      |
| 42          | 10             | 1750     | 1             | 6.0             | 9.5                   | 0.0 + 0.0 ( 0.4)                                                                | 86 ( 0.2)                                            | 0 ( 0.0)*                                            | 1.5                                                     | 4         | 23                     | 0                      |
| 43          | 14             | 41L      | 15            | 6.0             | 3.6                   | 0.0 + 0.0 ( 0.2)                                                                | 44 ( 0.2)                                            | 3                                                    | 0.4                                                     | 4         | 23                     | 0                      |

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

| TOTAL<br>DISTANCE<br>TRAVELLED | TOTAL<br>TIME<br>SPENT | MEAN<br>JOURNEY<br>SPEED | TOTAL<br>UNIFORM<br>DELAY | TOTAL<br>RANDOM+<br>OVERSAT<br>DELAY | TOTAL<br>COST<br>OF<br>DELAY | TOTAL<br>COST<br>OF<br>STOPS | PENALTY<br>FOR<br>EXCESS<br>QUEUES | TOTAL<br>PERFORMANCE<br>INDEX |
|--------------------------------|------------------------|--------------------------|---------------------------|--------------------------------------|------------------------------|------------------------------|------------------------------------|-------------------------------|
| (PCU-KM/H)                     | (PCU-H/H)              | (KM/H)                   | (PCU-H/H)                 | (PCU-H/H)                            | (\$/H)                       | (\$/H)                       | (\$/H)                             | (\$/H)                        |
| 414.8                          | 16.9                   | 24.6                     | 5.6                       | 1.6                                  | ( 63.1) + ( 109.7)           | + ( 40.0)                    | =                                  | 212.9                         |
| TOTALS                         |                        |                          |                           |                                      |                              |                              |                                    |                               |
| *****                          |                        |                          |                           |                                      |                              |                              |                                    |                               |
| CRUISE                         |                        |                          | DELAY                     |                                      | STOPS                        |                              | TOTALS                             |                               |
| LITRES PER HOUR                |                        |                          | LITRES PER HOUR           |                                      | LITRES PER HOUR              |                              | LITRES PER HOUR                    |                               |
| FUEL CONSUMPTION PREDICTIONS   |                        |                          | 22.2                      | +                                    | 8.3                          | +                            | 17.7                               | = 48.3                        |

NO. OF ENTRIES TO SUBPT = 1  
NO. OF LINKS RECALCULATED= 19

60 SECOND CYCLE 60 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :- 9  
- (SECONDS)

|   |   |    |    |
|---|---|----|----|
| 1 | 2 | 18 | 4  |
| 2 | 2 | 0  | 14 |
| 3 | 2 | 9  | 24 |
| 4 | 2 | 51 | 7  |

| 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)                  |
| 414.8                    | 15.4             | 27.0               | 4.1                 | 1.6                         | ( 41.7) + ( 39.5)   | + ( 0.0)            | =                         | 81.2                    |

TOTALS

NO. OF ENTRIES TO SUBPT = 11  
NO. OF LINKS RECALCULATED= 145

60 SECOND CYCLE 60 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :- 9 24  
- (SECONDS)

|   |   |    |    |
|---|---|----|----|
| 1 | 2 | 18 | 4  |
| 2 | 2 | 0  | 14 |
| 3 | 2 | 9  | 24 |
| 4 | 2 | 51 | 7  |

| 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)                  |
| 414.8                    | 15.4             | 27.0               | 4.1                 | 1.6                         | ( 41.7) + ( 39.5)   | + ( 0.0)            | =                         | 81.2                    |

TOTALS

NO. OF ENTRIES TO SUBPT = 9  
NO. OF LINKS RECALCULATED= 118

```
NO. OF ENTRIES TO SUBPT = 12
NO. OF LINKS RECALCULATED= 163
```

60 SECOND CYCLE 60 STEPS

FINAL SETTINGS OBTAINED WITH INCREMENTS :- 9 24 -1 9 24 1 -1 1  
- (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 |
|---------|------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|
| 1       | 2                | 20      | 56      |         |         |         |         |         |         |         |          |
| 2       | 2                | 9       | 23      |         |         |         |         |         |         |         |          |
| 3       | 2                | 5       | 19      |         |         |         |         |         |         |         |          |
| 4       | 2                | 48      | 1       |         |         |         |         |         |         |         |          |

| LINK NUMBER | FLOW INTO LINK | SAT FLOW | DEGREE OF SAT | MEAN PER CRUISE | TIMES PCU | -----DELAY-----<br>UNIFORM OVERSAT | COST OF DELAY | -----STOPS-----<br>MEAN COST OF STOPS | -----QUEUE-----<br>MEAN AVERAGE | PERFORMANCE INDEX.<br>WEIGHTED SUM OF ( ) VALUES | EXIT NODE | GREEN TIMES<br>START END | TIMES<br>START END |
|-------------|----------------|----------|---------------|-----------------|-----------|------------------------------------|---------------|---------------------------------------|---------------------------------|--------------------------------------------------|-----------|--------------------------|--------------------|
|             | (PCU/H)        | (PCU/H)  | (%)           | (SEC)           | (SEC)     | (U+R+O=MEAN Q)<br>(PCU-H/H)        | (\$/H)        | (\$/H)                                | (PCU)                           | (PCU)                                            |           | 1ST<br>(SECONDS)         | 2ND<br>(SECONDS)   |
| 10          | 176            | 2115     | 16            | 16.7            | 9.0       | 0.3 + 0.1                          | ( 6.3)*       | 48 ( 2.2)                             | 2                               | 1.3                                              | 1         | 25                       | 56                 |
| 11          | 935            | 4510     | 39            | 16.7            | 9.5       | 2.1 + 0.3                          | ( 34.9)*      | 54 ( 13.1)                            | 9                               | 7.0                                              | 1         | 25                       | 56                 |
| 12          | 12             | 1750S    | 4             | 11.3            | 4.1       | 0.0 + 0.0                          | ( 0.2)        | 13 ( 0.0)                             | 0 ( 0.0)*                       | 0.4                                              | 1         | 3                        | 20                 |
| 13          | 48             | 1750     | 9             | 11.3            | 4.2       | 0.0 + 0.1                          | ( 0.8)        | 13 ( 0.2)                             | 0 ( 0.0)*                       | 1.6                                              | 1         | 3                        | 20                 |
| 14          | 10             | 12L      | 4             | 11.3            | 34.2      | 0.1 + 0.0                          | ( 1.3)        | 105 ( 0.3)                            | 0                               | 1.6                                              | 1         | 3                        | 20                 |
| 20          | 50             | 4120     | 9             | 16.7            | 26.6      | 0.3 + 0.1                          | ( 5.2)*       | 88 ( 1.1)                             | 1                               | 1.0                                              | 2         | 16                       | 23                 |
| 21          | 176            | 1750S    | 17            | 3.8             | 1.8       | 0.0 + 0.1                          | ( 1.2)        | 3 ( 0.2)                              | 1 ( 0.0)*                       | 2.0                                              | 2         | 28                       | 9                  |
| 22          | 935            | 3900S    | 35            | 3.8             | 1.1       | 0.0 + 0.3                          | ( 4.1)        | 6 ( 1.4)                              | 6 ( 0.0)*                       | 12.0                                             | 2         | 28                       | 9                  |
| 23          | 31             | 21L      | 17            | 3.8             | 8.3       | 0.1 + 0.0                          | ( 1.0)        | 47 ( 0.4)                             | 1                               | 1.4                                              | 2         | 28                       | 9                  |
| 24          | 17             | 22L      | 35            | 3.8             | 7.6       | 0.0 + 0.0                          | ( 0.5)        | 45 ( 0.2)                             | 6 +                             | 0.7                                              | 2         | 28                       | 9                  |
| 30          | 183            | 3780f    | 36            | 16.7            | 29.3      | 1.2 + 0.3                          | ( 21.1)*      | 94 ( 4.5)                             | 3                               | 4.2                                              | 3         | 12                       | 19                 |
| 31          | 34             | 3900S    | 36            | 5.0             | 3.5       | 0.0 + 0.0                          | ( 0.5)        | 53 ( 0.5)                             | 1 ( 0.0)*                       | 2.8                                              | 3         | 24                       | 5                  |
| 32          | 14             | 1750     | 1             | 5.0             | 4.0       | 0.0 + 0.0                          | ( 0.2)        | 53 ( 0.2)                             | 0 ( 0.0)*                       | 1.2                                              | 3         | 24                       | 5                  |
| 33          | 935            | 31L      | 36            | 5.0             | 1.3       | 0.1 + 0.3                          | ( 4.9)        | 4 ( 0.8)                              | 1                               | 5.7                                              | 3         | 24                       | 5                  |
| 34          | 17             | 31L      | 36            | 5.0             | 7.2       | 0.0 + 0.0                          | ( 0.5)        | 53 ( 0.2)                             | 1                               | 0.7                                              | 3         | 24                       | 5                  |
| 40          | 60             | 2205     | 18            | 16.7            | 29.0      | 0.4 + 0.1                          | ( 6.9)*       | 93 ( 1.4)                             | 1                               | 1.4                                              | 4         | 53                       | 1                  |
| 41          | 148            | 1750S    | 14            | 6.0             | 1.8       | 0.0 + 0.1                          | ( 1.0)        | 5 ( 0.2)                              | 1 ( 0.0)*                       | 1.9                                              | 4         | 8                        | 48                 |
| 42          | 10             | 1750     | 1             | 6.0             | 1.5       | 0.0 + 0.0                          | ( 0.1)        | 2 ( 0.0)                              | 0 ( 0.0)*                       | 0.1                                              | 4         | 8                        | 48                 |
| 43          | 14             | 41L      | 14            | 6.0             | 1.7       | 0.0 + 0.0                          | ( 0.1)        | 3 ( 0.0)                              | 1                               | 0.1                                              | 4         | 8                        | 48                 |

\*\*\* 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)                  |
| 414.8                    | 16.0             | 25.8               | 4.7                 | 1.7                         | ( 31.4) + (         | 14.6)               | + ( 1.1)                  | = 47.1                  |
| TOTALS                   |                  |                    |                     |                             |                     |                     |                           |                         |
| ROUTE                    |                  |                    |                     |                             |                     |                     |                           |                         |

\*\*\*\*\*

|                              | CRUISE<br>LITRES PER HOUR | DELAY<br>LITRES PER HOUR | STOPS<br>LITRES PER HOUR | TOTALS<br>LITRES PER HOUR |
|------------------------------|---------------------------|--------------------------|--------------------------|---------------------------|
| FUEL CONSUMPTION PREDICTIONS | 22.2                      | + 7.4                    | + 12.2                   | = 41.8                    |

NO. OF ENTRIES TO SUBPT = 9  
NO. OF LINKS RECALCULATED= 125

PROGRAM TRANSYT FINISHED

===== end of file =====

[Printed at 11:03:21 on 11/12/2013]

T R A N S Y T 12

Traffic Network Study Tool

Analysis Program Release 5 (January 2007)  
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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:- "2018 SAT 12\_13 WITH EVENT.DAT" at 11:08 on 20131211

TRANSYT 12.0

2018 Traffic Flows Saturday 12:00 to 13:00 Plus Event

PARAMETERS CONTROLLING DIMENSIONS OF PROBLEM :

|                                    |   |    |
|------------------------------------|---|----|
| NUMBER OF NODES                    | = | 4  |
| NUMBER OF LINKS                    | = | 19 |
| NUMBER OF OPTIMISED NODES          | = | 4  |
| MAXIMUM NUMBER OF GRAPHIC PLOTS    | = | 0  |
| NUMBER OF STEPS IN CYCLE           | = | 60 |
| MAXIMUM NUMBER OF SHARED STOPLINES | = | 3  |
| MAXIMUM NUMBER OF TIMING POINTS    | = | 2  |
| MAXIMUM LINKS AT ANY NODE          | = | 4  |

CORE REQUESTED = 7162 WORDS  
CORE AVAILABLE = 96000 WORDS

\*\*\*\*\*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 |
|---------|------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|
| 1       | 2                | 0       | 46      |         |         |         |         |         |         |         |          |
| 2       | 2                | 0       | 14      |         |         |         |         |         |         |         |          |
| 3       | 2                | 0       | 14      |         |         |         |         |         |         |         |          |
| 4       | 2                | 0       | 15      |         |         |         |         |         |         |         |          |

| LINK NUMBER | FLOW INTO LINK | SAT FLOW | DEGREE OF SAT | MEAN PER CRUISE | TIMES PCU | -----DELAY-----<br>UNIFORM (U+R+O=MEAN<br>RANDOM+ Q)<br>OVERSAT | COST OF DELAY (\$/H) | ----STOPS----<br>MEAN STOPS /PCU (%) | COST OF STOPS (\$/H) | ----QUEUE----<br>MEAN MAX. (PCU) | AVERAGE EXCESS (PCU) | PERFORMANCE INDEX. WEIGHTED SUM OF ( ) VALUES (\$/H) | EXIT NODE | GREEN START 1ST (SECONDS) | TIMES START 2ND (SECONDS) |
|-------------|----------------|----------|---------------|-----------------|-----------|-----------------------------------------------------------------|----------------------|--------------------------------------|----------------------|----------------------------------|----------------------|------------------------------------------------------|-----------|---------------------------|---------------------------|
| 10          | 179            | 2115     | 12            | 16.7            | 4.4       | 0.1 + 0.1 ( 3.1)*                                               | 29 ( 1.3)            | 1                                    |                      |                                  |                      | 0.6                                                  | 1         | 5                         | 46                        |
| 11          | 1102           | 4510     | 35            | 16.7            | 4.5       | 1.1 + 0.3 ( 19.4)*                                              | 34 ( 9.6)            | 7                                    |                      |                                  |                      | 3.9                                                  | 1         | 5                         | 46                        |
| 12          | 12             | 1750S    | 9             | 11.3            | 43.2      | 0.1 + 0.0 ( 2.0)                                                | 114 ( 0.4)           | 0                                    | ( 0.0)*              |                                  |                      | 3.8                                                  | 1         | 53                        | 0                         |
| 13          | 48             | 1750     | 21            | 11.3            | 44.8      | 0.5 + 0.1 ( 8.5)                                                | 116 ( 1.4)           | 1                                    | ( 0.0)*              |                                  |                      | 15.6                                                 | 1         | 53                        | 0                         |
| 14          | 10             | 12L      | 9             | 11.3            | 27.7      | 0.1 + 0.0 ( 1.1)                                                | 114 ( 0.3)           | 0                                    |                      |                                  |                      | 1.4                                                  | 1         | 53                        | 0                         |
| 20          | 50             | 4120     | 9             | 16.7            | 26.6      | 0.3 + 0.1 ( 5.2)*                                               | 88 ( 1.1)            | 1                                    |                      |                                  |                      | 1.0                                                  | 2         | 7                         | 14                        |
| 21          | 179            | 1750S    | 17            | 3.8             | 6.1       | 0.2 + 0.1 ( 4.3)                                                | 47 ( 2.2)            | 2                                    | ( 0.0)*              |                                  |                      | 15.2                                                 | 2         | 19                        | 0                         |
| 22          | 1102           | 3900S    | 41            | 3.8             | 6.6       | 1.7 + 0.3 ( 28.9)                                               | 57 ( 16.1)           | 12                                   | ( 1.2)*              |                                  |                      | 182.6                                                | 2         | 19                        | 0                         |
| 23          | 31             | 21L      | 17            | 3.8             | 2.6       | 0.0 + 0.0 ( 0.3)                                                | 8 ( 0.1)             | 2                                    |                      |                                  |                      | 0.4                                                  | 2         | 19                        | 0                         |
| 24          | 17             | 22L      | 41            | 3.8             | 1.9       | 0.0 + 0.0 ( 0.1)                                                | 7 ( 0.0)             | 12                                   | +                    |                                  |                      | 0.2                                                  | 2         | 19                        | 0                         |
| 30          | 188            | 3780f    | 37            | 16.7            | 29.4      | 1.2 + 0.3 ( 21.8)*                                              | 95 ( 4.6)            | 3                                    |                      |                                  |                      | 4.4                                                  | 3         | 7                         | 14                        |
| 31          | 34             | 3900S    | 42            | 5.0             | 7.3       | 0.1 + 0.0 ( 1.0)                                                | 80 ( 0.7)            | 1                                    | ( 0.0)*              |                                  |                      | 4.5                                                  | 3         | 19                        | 0                         |
| 32          | 14             | 1750     | 1             | 5.0             | 7.7       | 0.0 + 0.0 ( 0.4)                                                | 80 ( 0.3)            | 0                                    | ( 0.0)*              |                                  |                      | 1.9                                                  | 3         | 19                        | 0                         |
| 33          | 1102           | 31L      | 42            | 5.0             | 1.2       | 0.0 + 0.3 ( 5.1)                                                | 2 ( 0.6)             | 1                                    |                      |                                  |                      | 5.7                                                  | 3         | 19                        | 0                         |
| 34          | 17             | 31L      | 42            | 5.0             | 14.4      | 0.1 + 0.0 ( 1.0)                                                | 84 ( 0.4)            | 1                                    |                      |                                  |                      | 1.3                                                  | 3         | 19                        | 0                         |
| 40          | 60             | 2205     | 15            | 16.7            | 25.9      | 0.3 + 0.1 ( 6.1)*                                               | 87 ( 1.3)            | 1                                    |                      |                                  |                      | 1.2                                                  | 4         | 5                         | 15                        |
| 41          | 153            | 1750S    | 15            | 6.0             | 11.1      | 0.4 + 0.1 ( 6.7)                                                | 93 ( 3.7)            | 3                                    | ( 0.0)*              |                                  |                      | 25.0                                                 | 4         | 22                        | 0                         |
| 42          | 10             | 1750     | 1             | 6.0             | 8.8       | 0.0 + 0.0 ( 0.3)                                                | 85 ( 0.2)            | 0                                    | ( 0.0)*              |                                  |                      | 1.4                                                  | 4         | 22                        | 0                         |
| 43          | 14             | 41L      | 15            | 6.0             | 3.5       | 0.0 + 0.0 ( 0.2)                                                | 44 ( 0.2)            | 3                                    |                      |                                  |                      | 0.4                                                  | 4         | 22                        | 0                         |

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

| TOTAL<br>DISTANCE<br>TRAVELLED | TOTAL<br>TIME<br>SPENT | MEAN<br>JOURNEY<br>SPEED | TOTAL<br>UNIFORM<br>DELAY | TOTAL<br>RANDOM+<br>OVERSAT<br>DELAY | TOTAL<br>COST<br>OF<br>DELAY | TOTAL<br>COST<br>OF<br>STOPS | PENALTY<br>FOR<br>EXCESS<br>QUEUES | TOTAL<br>PERFORMANCE<br>INDEX |
|--------------------------------|------------------------|--------------------------|---------------------------|--------------------------------------|------------------------------|------------------------------|------------------------------------|-------------------------------|
| (PCU-KM/H)                     | (PCU-H/H)              | (KM/H)                   | (PCU-H/H)                 | (PCU-H/H)                            | (\$/H)                       | (\$/H)                       | (\$/H)                             | (\$/H)                        |
| 467.8                          | 19.0                   | 24.6                     | 6.3                       | 1.9                                  | ( 71.0) + ( 126.2)           | + ( 73.2)                    | =                                  | 270.4                         |
| TOTALS                         |                        |                          |                           |                                      |                              |                              |                                    |                               |
| *****                          |                        |                          |                           |                                      |                              |                              |                                    |                               |
| CRUISE                         |                        |                          | DELAY                     |                                      | STOPS                        |                              | TOTALS                             |                               |
| LITRES PER HOUR                |                        |                          | LITRES PER HOUR           |                                      | LITRES PER HOUR              |                              | LITRES PER HOUR                    |                               |
| FUEL CONSUMPTION PREDICTIONS   |                        |                          | 25.1                      | +                                    | 9.4                          | +                            | 20.3                               | = 54.7                        |

NO. OF ENTRIES TO SUBPT = 1  
NO. OF LINKS RECALCULATED= 19

60 SECOND CYCLE 60 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :- 9  
- (SECONDS)

|   |   |    |    |  |  |  |  |  |  |  |  |
|---|---|----|----|--|--|--|--|--|--|--|--|
| 1 | 2 | 18 | 4  |  |  |  |  |  |  |  |  |
| 2 | 2 | 0  | 14 |  |  |  |  |  |  |  |  |
| 3 | 2 | 9  | 23 |  |  |  |  |  |  |  |  |
| 4 | 2 | 51 | 6  |  |  |  |  |  |  |  |  |

| TOTAL DISTANCE TRAVELLED | TOTAL TIME SPENT | MEAN JOURNEY SPEED | TOTAL UNIFORM DELAY | TOTAL RANDOM+ OVERSAT DELAY | TOTAL COST OF DELAY (\$/H) | TOTAL COST OF STOPS (\$/H) | PENALTY FOR EXCESS QUEUES (\$/H) | TOTAL PERFORMANCE INDEX (\$/H) |
|--------------------------|------------------|--------------------|---------------------|-----------------------------|----------------------------|----------------------------|----------------------------------|--------------------------------|
| (PCU-KM/H)               | (PCU-H/H)        | (KM/H)             | (PCU-H/H)           | (PCU-H/H)                   | (\$/H)                     | (\$/H)                     | (\$/H)                           | (\$/H)                         |
| 467.8                    | 17.3             | 27.1               | 4.5                 | 1.9                         | ( 46.1) + ( 44.4)          | + ( 0.0)                   | =                                | 90.5                           |

TOTALS

NO. OF ENTRIES TO SUBPT = 11  
NO. OF LINKS RECALCULATED= 143

60 SECOND CYCLE 60 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :- 9 24  
- (SECONDS)

|   |   |    |    |  |  |  |  |  |  |  |  |
|---|---|----|----|--|--|--|--|--|--|--|--|
| 1 | 2 | 18 | 4  |  |  |  |  |  |  |  |  |
| 2 | 2 | 0  | 14 |  |  |  |  |  |  |  |  |
| 3 | 2 | 9  | 23 |  |  |  |  |  |  |  |  |
| 4 | 2 | 51 | 6  |  |  |  |  |  |  |  |  |

| TOTAL DISTANCE TRAVELLED | TOTAL TIME SPENT | MEAN JOURNEY SPEED | TOTAL UNIFORM DELAY | TOTAL RANDOM+ OVERSAT DELAY | TOTAL COST OF DELAY (\$/H) | TOTAL COST OF STOPS (\$/H) | PENALTY FOR EXCESS QUEUES (\$/H) | TOTAL PERFORMANCE INDEX (\$/H) |
|--------------------------|------------------|--------------------|---------------------|-----------------------------|----------------------------|----------------------------|----------------------------------|--------------------------------|
| (PCU-KM/H)               | (PCU-H/H)        | (KM/H)             | (PCU-H/H)           | (PCU-H/H)                   | (\$/H)                     | (\$/H)                     | (\$/H)                           | (\$/H)                         |
| 467.8                    | 17.3             | 27.1               | 4.5                 | 1.9                         | ( 46.1) + ( 44.4)          | + ( 0.0)                   | =                                | 90.5                           |

TOTALS

NO. OF ENTRIES TO SUBPT = 9  
NO. OF LINKS RECALCULATED= 118

## 60 SECOND CYCLE 60 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :- 9 24 -1  
- (SECONDS)

|   |   |    |    |
|---|---|----|----|
| 1 | 2 | 18 | 57 |
| 2 | 2 | 0  | 14 |
| 3 | 2 | 9  | 23 |
| 4 | 2 | 53 | 5  |

| TOTAL<br>DISTANCE<br>TRAVELLED | TOTAL<br>TIME<br>SPENT | MEAN<br>JOURNEY<br>SPEED | TOTAL<br>UNIFORM<br>DELAY | TOTAL<br>RANDOM+<br>OVERSAT<br>DELAY | TOTAL<br>COST<br>OF<br>DELAY | TOTAL<br>COST<br>OF<br>STOPS | PENALTY<br>FOR<br>EXCESS<br>QUEUES | TOTAL<br>PERFORMANCE<br>INDEX |        |
|--------------------------------|------------------------|--------------------------|---------------------------|--------------------------------------|------------------------------|------------------------------|------------------------------------|-------------------------------|--------|
| (PCU-KM/H)                     | (PCU-H/H)              | (KM/H)                   | (PCU-H/H)                 | (PCU-H/H)                            | (\$/H)                       | (\$/H)                       | (\$/H)                             | (\$/H)                        |        |
| 467.8                          | 17.7                   | 26.4                     | 4.9                       | 1.9                                  | ( 37.2)                      | + ( 23.9)                    | + ( 3.9)                           | = 65.0                        | TOTALS |

NO. OF ENTRIES TO SUBPT = 19  
NO. OF LINKS RECALCULATED= 247

## 60 SECOND CYCLE 60 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :- 9 24 -1 9  
- (SECONDS)

|   |   |    |    |
|---|---|----|----|
| 1 | 2 | 18 | 57 |
| 2 | 2 | 0  | 14 |
| 3 | 2 | 9  | 23 |
| 4 | 2 | 53 | 5  |

| TOTAL<br>DISTANCE<br>TRAVELLED | TOTAL<br>TIME<br>SPENT | MEAN<br>JOURNEY<br>SPEED | TOTAL<br>UNIFORM<br>DELAY | TOTAL<br>RANDOM+<br>OVERSAT<br>DELAY | TOTAL<br>COST<br>OF<br>DELAY | TOTAL<br>COST<br>OF<br>STOPS | PENALTY<br>FOR<br>EXCESS<br>QUEUES | TOTAL<br>PERFORMANCE<br>INDEX |        |
|--------------------------------|------------------------|--------------------------|---------------------------|--------------------------------------|------------------------------|------------------------------|------------------------------------|-------------------------------|--------|
| (PCU-KM/H)                     | (PCU-H/H)              | (KM/H)                   | (PCU-H/H)                 | (PCU-H/H)                            | (\$/H)                       | (\$/H)                       | (\$/H)                             | (\$/H)                        |        |
| 467.8                          | 17.7                   | 26.4                     | 4.9                       | 1.9                                  | ( 37.2)                      | + ( 23.9)                    | + ( 3.9)                           | = 65.0                        | TOTALS |

NO. OF ENTRIES TO SUBPT = 9  
NO. OF LINKS RECALCULATED= 125

## 60 SECOND CYCLE 60 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :- 9 24 -1 9 24  
- (SECONDS)

|   |   |    |    |
|---|---|----|----|
| 1 | 2 | 18 | 57 |
| 2 | 2 | 0  | 14 |
| 3 | 2 | 9  | 23 |
| 4 | 2 | 53 | 5  |

| TOTAL<br>DISTANCE<br>TRAVELLED | TOTAL<br>TIME<br>SPENT | MEAN<br>JOURNEY<br>SPEED | TOTAL<br>UNIFORM<br>DELAY | TOTAL<br>RANDOM+<br>OVERSAT<br>DELAY | TOTAL<br>COST<br>OF<br>DELAY | TOTAL<br>COST<br>OF<br>STOPS | PENALTY<br>FOR<br>EXCESS<br>QUEUES | TOTAL<br>PERFORMANCE<br>INDEX |        |
|--------------------------------|------------------------|--------------------------|---------------------------|--------------------------------------|------------------------------|------------------------------|------------------------------------|-------------------------------|--------|
| (PCU-KM/H)                     | (PCU-H/H)              | (KM/H)                   | (PCU-H/H)                 | (PCU-H/H)                            | (\$/H)                       | (\$/H)                       | (\$/H)                             | (\$/H)                        |        |
| 467.8                          | 17.7                   | 26.4                     | 4.9                       | 1.9                                  | ( 37.2)                      | + ( 23.9)                    | + ( 3.9)                           | = 65.0                        | TOTALS |

NO. OF ENTRIES TO SUBPT = 9  
NO. OF LINKS RECALCULATED= 122

## 60 SECOND CYCLE 60 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :- 9 24 -1 9 24 1  
- (SECONDS)

|   |   |    |    |
|---|---|----|----|
| 1 | 2 | 16 | 55 |
| 2 | 2 | 4  | 18 |
| 3 | 2 | 6  | 20 |
| 4 | 2 | 50 | 2  |

| TOTAL<br>DISTANCE<br>TRAVELLED | TOTAL<br>TIME<br>SPENT | MEAN<br>JOURNEY<br>SPEED | TOTAL<br>UNIFORM<br>DELAY | TOTAL<br>RANDOM+<br>OVERSAT<br>DELAY | TOTAL<br>COST<br>OF<br>DELAY | TOTAL<br>COST<br>OF<br>STOPS | PENALTY<br>FOR<br>EXCESS<br>QUEUES | TOTAL<br>PERFORMANCE<br>INDEX |        |
|--------------------------------|------------------------|--------------------------|---------------------------|--------------------------------------|------------------------------|------------------------------|------------------------------------|-------------------------------|--------|
| (PCU-KM/H)                     | (PCU-H/H)              | (KM/H)                   | (PCU-H/H)                 | (PCU-H/H)                            | (\$/H)                       | (\$/H)                       | (\$/H)                             | (\$/H)                        |        |
| 467.8                          | 17.6                   | 26.6                     | 4.8                       | 1.9                                  | ( 35.4)                      | + ( 20.0)                    | + ( 3.9)                           | = 59.3                        | TOTALS |

NO. OF ENTRIES TO SUBPT = 20  
NO. OF LINKS RECALCULATED= 239

## 60 SECOND CYCLE 60 STEPS

INTERMEDIATE SETTINGS - INCREMENTS SO FAR :- 9 24 -1 9 24 1 -1  
- (SECONDS)

|   |   |    |    |
|---|---|----|----|
| 1 | 2 | 16 | 57 |
| 2 | 2 | 4  | 18 |
| 3 | 2 | 6  | 20 |
| 4 | 2 | 50 | 2  |

| TOTAL<br>DISTANCE<br>TRAVELLED | TOTAL<br>TIME<br>SPENT | MEAN<br>JOURNEY<br>SPEED | TOTAL<br>UNIFORM<br>DELAY | TOTAL<br>RANDOM+<br>OVERSAT<br>DELAY | TOTAL<br>COST<br>OF<br>DELAY | TOTAL<br>COST<br>OF<br>STOPS | PENALTY<br>FOR<br>EXCESS<br>QUEUES | TOTAL<br>PERFORMANCE<br>INDEX |        |
|--------------------------------|------------------------|--------------------------|---------------------------|--------------------------------------|------------------------------|------------------------------|------------------------------------|-------------------------------|--------|
| (PCU-KM/H)                     | (PCU-H/H)              | (KM/H)                   | (PCU-H/H)                 | (PCU-H/H)                            | (\$/H)                       | (\$/H)                       | (\$/H)                             | (\$/H)                        |        |
| 467.8                          | 17.2                   | 27.1                     | 4.5                       | 1.9                                  | ( 35.2)                      | + ( 18.4)                    | + ( 1.4)                           | = 55.0                        | TOTALS |

NO. OF ENTRIES TO SUBPT = 13  
NO. OF LINKS RECALCULATED= 173

60 SECOND CYCLE 60 STEPS

FINAL SETTINGS OBTAINED WITH INCREMENTS :- 9 24 -1 9 24 1 -1 1  
- (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 |
|---------|------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|
| 1       | 2                | 16      | 57      |         |         |         |         |         |         |         |          |
| 2       | 2                | 4       | 18      |         |         |         |         |         |         |         |          |
| 3       | 2                | 8       | 22      |         |         |         |         |         |         |         |          |
| 4       | 2                | 50      | 2       |         |         |         |         |         |         |         |          |

| LINK NUMBER | FLOW INTO LINK | SAT FLOW | DEGREE OF SAT | MEAN PER CRUISE | TIMES PCU DELAY (SEC) | -----DELAY-----<br>UNIFORM (U+R+O=MEAN<br>RANDOM+ OVERSAT Q)<br>COST OF DELAY (\$/H) | ----STOPS----<br>MEAN COST OF STOPS<br>/PCU (\$/H) | ----QUEUE----<br>MEAN MAX. AVERAGE<br>EXCESS (PCU) (PCU) | PERFORMANCE INDEX.<br>WEIGHTED SUM OF ( ) VALUES (\$/H) | EXIT NODE | GREEN TIMES<br>START END<br>1ST 2ND<br>(SECONDS) |
|-------------|----------------|----------|---------------|-----------------|-----------------------|--------------------------------------------------------------------------------------|----------------------------------------------------|----------------------------------------------------------|---------------------------------------------------------|-----------|--------------------------------------------------|
| 10          | 179            | 2115     | 14            | 16.7            | 6.4                   | 0.2 + 0.1 ( 4.5)*                                                                    | 39 ( 1.8)                                          | 1                                                        | 0.9                                                     | 1         | 21 57                                            |
| 11          | 1102           | 4510     | 40            | 16.7            | 6.9                   | 1.8 + 0.3 ( 30.0)*                                                                   | 45 ( 12.9)                                         | 10                                                       | 6.0                                                     | 1         | 21 57                                            |
| 12          | 12             | 1750S    | 6             | 11.3            | 6.8                   | 0.0 + 0.0 ( 0.3)                                                                     | 12 ( 0.0)                                          | 0 ( 0.0)*                                                | 0.5                                                     | 1         | 4 16                                             |
| 13          | 48             | 1750     | 13            | 11.3            | 7.1                   | 0.0 + 0.1 ( 1.4)                                                                     | 13 ( 0.2)                                          | 0 ( 0.0)*                                                | 2.1                                                     | 1         | 4 16                                             |
| 14          | 10             | 12L      | 6             | 11.3            | 34.4                  | 0.1 + 0.0 ( 1.4)                                                                     | 110 ( 0.3)                                         | 0                                                        | 1.6                                                     | 1         | 4 16                                             |
| 20          | 50             | 4120     | 9             | 16.7            | 26.6                  | 0.3 + 0.1 ( 5.2)*                                                                    | 88 ( 1.1)                                          | 1                                                        | 1.0                                                     | 2         | 11 18                                            |
| 21          | 179            | 1750S    | 17            | 3.8             | 1.8                   | 0.0 + 0.1 ( 1.3)                                                                     | 3 ( 0.1)                                           | 1 ( 0.0)*                                                | 2.0                                                     | 2         | 23 4                                             |
| 22          | 1102           | 3900S    | 41            | 3.8             | 1.2                   | 0.0 + 0.3 ( 5.3)                                                                     | 5 ( 1.5)                                           | 6 ( 0.0)*                                                | 14.4                                                    | 2         | 23 4                                             |
| 23          | 31             | 21L      | 17            | 3.8             | 13.5                  | 0.1 + 0.0 ( 1.7)                                                                     | 97 ( 0.8)                                          | 1                                                        | 2.4                                                     | 2         | 23 4                                             |
| 24          | 17             | 22L      | 41            | 3.8             | 12.8                  | 0.1 + 0.0 ( 0.9)                                                                     | 95 ( 0.4)                                          | 6 +                                                      | 1.3                                                     | 2         | 23 4                                             |
| 30          | 188            | 3780f    | 37            | 16.7            | 29.4                  | 1.2 + 0.3 ( 21.8)*                                                                   | 95 ( 4.6)                                          | 3                                                        | 4.4                                                     | 3         | 15 22                                            |
| 31          | 34             | 3900S    | 42            | 5.0             | 11.3                  | 0.1 + 0.0 ( 1.5)                                                                     | 93 ( 0.8)                                          | 1 ( 0.0)*                                                | 5.6                                                     | 3         | 27 8                                             |
| 32          | 14             | 1750     | 1             | 5.0             | 11.6                  | 0.0 + 0.0 ( 0.6)                                                                     | 94 ( 0.3)                                          | 0 ( 0.0)*                                                | 2.3                                                     | 3         | 27 8                                             |
| 33          | 1102           | 31L      | 42            | 5.0             | 1.2                   | 0.0 + 0.3 ( 5.4)                                                                     | 2 ( 0.7)                                           | 1                                                        | 6.1                                                     | 3         | 27 8                                             |
| 34          | 17             | 31L      | 42            | 5.0             | 1.1                   | 0.0 + 0.0 ( 0.1)                                                                     | 2 ( 0.0)                                           | 1                                                        | 0.1                                                     | 3         | 27 8                                             |
| 40          | 60             | 2205     | 20            | 16.7            | 30.9                  | 0.4 + 0.1 ( 7.3)*                                                                    | 96 ( 1.5)                                          | 1                                                        | 1.5                                                     | 4         | 55 2                                             |
| 41          | 153            | 1750S    | 14            | 6.0             | 1.8                   | 0.0 + 0.1 ( 1.1)                                                                     | 5 ( 0.2)                                           | 1 ( 0.0)*                                                | 2.1                                                     | 4         | 9 50                                             |
| 42          | 10             | 1750     | 1             | 6.0             | 1.5                   | 0.0 + 0.0 ( 0.1)                                                                     | 2 ( 0.0)                                           | 0 ( 0.0)*                                                | 0.1                                                     | 4         | 9 50                                             |
| 43          | 14             | 41L      | 14            | 6.0             | 1.7                   | 0.0 + 0.0 ( 0.1)                                                                     | 3 ( 0.0)                                           | 1                                                        | 0.1                                                     | 4         | 9 50                                             |

\*\*\* 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 (\$/H) | TOTAL COST OF STOPS (\$/H) | PENALTY FOR EXCESS QUEUES (\$/H) | TOTAL PERFORMANCE INDEX (\$/H) |
|--------------------------|------------------|--------------------|---------------------|-----------------------------|----------------------------|----------------------------|----------------------------------|--------------------------------|
| (PCU-KM/H)               | (PCU-H/H)        | (KM/H)             | (PCU-H/H)           | (PCU-H/H)                   | (\$/H)                     | (\$/H)                     | (\$/H)                           | (\$/H)                         |
| 467.8                    | 17.2             | 27.2               | 4.4                 | 1.9                         | ( 34.7) + ( 18.4)          | + ( 1.4)                   | =                                | 54.5                           |

TOTALS

ROUTE

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|                              | CRUISE<br>LITRES PER HOUR | DELAY<br>LITRES PER HOUR | STOPS<br>LITRES PER HOUR | TOTALS<br>LITRES PER HOUR |
|------------------------------|---------------------------|--------------------------|--------------------------|---------------------------|
| FUEL CONSUMPTION PREDICTIONS | 25.1                      | + 7.3                    | + 12.5                   | = 44.8                    |

NO. OF ENTRIES TO SUBPT = 10  
NO. OF LINKS RECALCULATED= 135

PROGRAM TRANSYT FINISHED  
===== end of file =====

[Printed at 11:08:20 on 11/12/2013]